

EMC, Filters & Suppression

Latest Products from...

Snap Ferrites with Flexible Cable Fixing



See page 1313

3 Terminal Filters for Signal Line



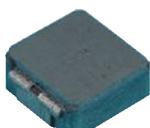
See page 1265

Current Compensated Frame Core Double Chokes



See page 1303

Low profile high current inductors



See page 1294

	Page
Aerial Protector	1247
Chokes – Suppression	1298
Contact Suppressors	1266
Data Line Protectors	1246
EMC Shielding Products	1317
Ferrite Inductors & Beads	1281
Ferrite Shielding Products	1309
Filter/Suppression Modules	1243
Filters – Capacitive	1259
Filters – DC Power	1267
Filters – Equipment	1236
Filters – Installation	1243
Filters – PCB 3 Terminal	1262
Filters – Power Entry	1248
Filters – Signal Line Noise	1268
Gas Discharge Tubes	1249
Inductors – Axial	1287
Inductors – Power Supply	1289
Inductors – SMD	1269
Inductors – Suppression Chokes	1298
Technical Books	1320
Varistors	1251
Passive Components Linecard	1423

Filters

- For maximum efficiency it is recommended that the filter current rating be as close to, but greater than the maximum circuit current, i.e. for a circuit with a maximum current of 0.5A select a 1A filter.
- Attenuation curves shown for filters are measured in the asymmetrical mode (common mode). This is where measurement is carried out between the phase and neutral connected together, and the protection earth.

213832

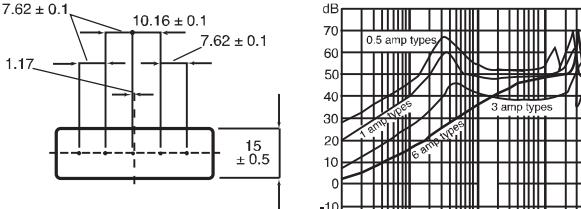
Equipment Filters

Ultra-Compact PCB Mounting



- High performance aluminium cased PCB mounted filter for equipment applications where PCB footprint space is at a premium.
- Approved to VDE, SEV, CSA and IEC950 compliant
- UL recognised

H=29.5, W=15, D=45
Pins: L=7, W=0.8, D=0.8



Voltage rating 250V @ 0 to 400Hz
Earth leakage current @ 250V ac 2 x 0.21mA
Capacitance 1 x 0.01μF(X) + 2 x 2200pF(Y)

Operating temperature -25°C to +85°C

Mfrs. List No. FN406-X/02/ where X=Rating in Amps

204032

8

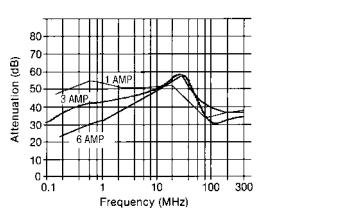
Price Each

Rating	Order Code	1+	10+	50+	100+
0.5A	119-1336●	7.40	6.29	5.54	4.89
1A	119-1337●	7.40	6.29	5.54	4.89
3A	119-1338●	8.51	7.22	6.37	5.63
6A	119-1339●	8.51	7.22	6.37	5.63

PCB Mounting



H=19.5
Pins: L=7.0, Dia=0.8



- PCB mounted filter designed to provide effective reduction of broadband line-to-ground (common mode) interference.
- VDE, SEV and CSA approved.
- UL recognised
- Designed to meet IEC950.

Voltage rating 250V @ 0 to 400Hz
Earth leakage current @ 250V ac 2 x 0.2mA
Capacitance 1 x 0.015μF(X) + 2 x 2200pF(Y)
Inductance 24mH (0.5A)
10mH (1A)
2mH (3A)
0.8mH (6A)
Operating temperature -25°C to +85°C

Mfrs. List No. FN 405-0.5/02 = 119-1332 FN 405-1/02 = 119-1333 FN 405-3/02 = 119-3334
FN 405-6/02 = 119-1335

203993

Rating	Order Code	1+	10+	50+	100+
0.5A	119-1332●	10.09	8.58	7.57	6.67
1A	119-1333●	10.09	8.58	7.57	6.67
3A	119-1334●	10.09	8.58	7.57	6.67
6A	119-1335●	13.66	11.26	9.78	7.40

Help us to help the environment



This catalogue has been printed on paper certified from a sustainable source.

Please recycle after use.

PCB Mounting

FN402 Series



0.5 amp types

- Compact PCB mounting filters
- Very low profile
- Approved to VDE, CSA and SEMKO
- UL recognised

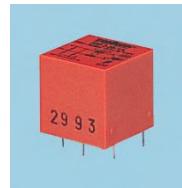
Voltage rating 250V 0/400Hz
Leakage current 190μA

Rating	Capacitors	Inductance	Dimensions	Mfrs. List No.	Order Code
0.5	100nF 2 x 2.2nF	40	16.5 45 28	FN 402-0.5/02	119-1324
1	100nF 2 x 2.2nF	10	16.5 45 28	FN 402-1/02	119-1326
1.6	100nF 2 x 2.2nF	6	16.5 45 28	FN 402-1.6/02	119-1325
2.5	100nF 2 x 2.2nF	2	16.5 45 28	FN 402-2.5/02	119-1327
4	100nF 2 x 2.2nF	1	16.5 45 28	FN 402-4/02	119-1328
6.5	100nF 2 x 2.2nF	1	16.5 45 28	FN 402-6.5/02	119-1331

333792

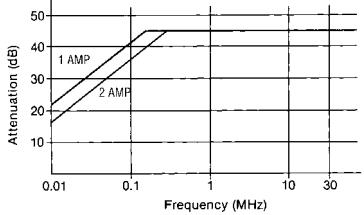
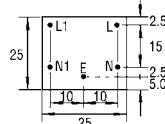
Rating	Order Code	1+	10+	20+	60+	120+
0.5A	119-1324●	5.84	4.97	4.38	3.80	3.51
1A	119-1326●	5.84	4.97	4.63	4.53	3.55
1.6A	119-1325●	5.55	4.72	4.16	3.67	3.37
2.5A	119-1327●	6.47	5.50	4.84	4.27	3.90
4A	119-1328●	6.47	5.50	5.12	5.01	4.89
6.5A	119-1331●	6.47	5.50	5.12	5.01	4.42

PCB Mounting, 1" Cube



H=25,
Pins: L=15, Dia=0.6

- Compact PCB mounting filter
- Designed to meet the requirements of VDE and IEC.
- Approved to SEV, CSA, VDE and EN 133 200, IEC950 compliant
- UL recognised

**SCHURTER** ELECTRONIC COMPONENTS

Voltage rating 115V to 250V ac
Earth leakage current <0.5mA
Capacitance 1 x 0.015μF (X) + 2 x 2200pF (Y)

Inductance 2 x 10mH (150-490)
2 x 4mH (248-400)
Operating temperature -25 to +85°C
Mfrs. List No. FPP2-25-1/A=116-2774
FPP2-25-2/A=116-2775

204102

Rating	Order Code	1+	10+	50+	100+	500+
1A	116-2774●	9.94	9.37	8.99	7.98	7.19
2A	116-2775●	9.94	9.37	8.99	7.98	7.19

HP1 Series



- Miniature general purpose PCB mount filter
- Small PCB footprint
- Designed for 2 wire systems
- For 3 wire systems Y capacitors can be added separately
- UL, CSA, TUV, SEMCO Approved

Maximum operating voltage 250V @ 0-60Hz
Maximum leakage current 10μA
Capacitance Cx Line 0.1μF
Operating temperature -25 to +85°C
Inductance 1A = 11μH
1.6A = 6.0μH
2.5A = 2.5μH
3.6A = 3.6μH

L=28, W=20.5, D=20.5 495555

PCB Mount Low Cost Current Rating	Order Code	1+	10+	25+	100+	+
1A	150-6655●	3.19	2.68	2.35	2.06	--
1.6A	150-6656●	3.19	2.68	2.35	2.06	--
2.5A	150-6657●	3.19	2.68	2.35	2.06	--
3.6A	150-6658●	3.19	2.68	2.35	2.06	--

700 products added online every week



See our pick of the hottest products and latest technologies in 'What's New?' at www.farnell.co.uk

PCB Mounting, 2 Stage Ultra High Performance



H=19, W=33, D=72
Pins L=7.0, Th=0.8 x 0.8 mm
Fixing centres = 60 x 30

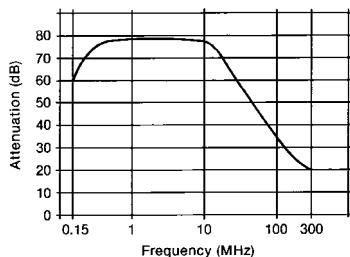
- 2 stage pcb mounting filter designed to provide excellent attenuation over a wide frequency range.

Voltage rating 250V @ 0 to 400Hz
Earth leakage current 2 x 0.21mA

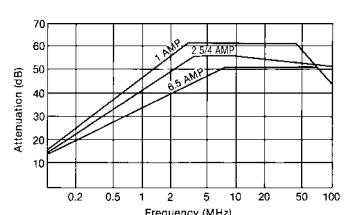
Capacitance 0.033μF (x) + 2 x 2200pF (y)

Mfrs. List No. FN410XX/02 where XX=Rating in Amps

SCHAFFNER



Bracket Mounting



Body: L = 49 (excl. 10mm tabs)
W=30 (45 incl. bracket),

Thickness = 16 (18 incl. bracket).
Solder terminations.

- General purpose filters combining a low profile compact case, with good performance
- Complies with IEC950.
- Flexible mounting

- Conforms to BS613
- Approved to VDE and CSA
- UL recognised

Voltage rating 250V @ 50 to 400Hz
Earth leakage current < 0.25mA @ 250V ac, 50Hz

Capacitance 1 x 0.1μF (X)

Mfrs. List No. RX730AE+CLIP = 118-7656,
RX730CR+CLIP = 118-7657,

RX730-CLIP = 118-7652,

204228

Rating	Order Code	1+	25+	50+	100+	250+
1A	118-7656●	9.14	8.40	7.12	6.78	6.19
4A	118-7652●	9.14	8.40	7.12	6.78	6.19
6.5A	118-7657●	9.14	8.40	7.12	6.78	6.19

EDP Series



tyco / electronics / corcom

- Available up to 10 amps
- Low leakage current for European safety
- Cost effective alternative to on board components
- Compact design allowing PC mounting with minimal space requirements

The EDP series RFI filters provide enhanced differential mode performance for applications requiring more line-to-line protection.

Operating voltage 250VAC
Operating frequency 50Hz to 60Hz

Maximum leakage current, each line-to-ground:

@ 120 VAC 60 Hz:

@ 250 VAC 50 Hz:

0.22mA
0.38mA

Current Rating	H	Dimensions	Mfrs. List No.	Order Code
3A	24.15	31.5	3EDP	958-5796
10A	24.15	31.5	10EDP	958-5818

411277

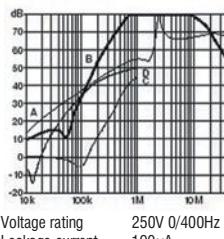
Mfrs List No.	Order Code	1+	10+	50+	100+
3EDP	958-5796●	9.22	8.79	7.95	6.86
10EDP	958-5818●	18.10	11.55	10.05	9.22

PCB Mounting for DC/DC Converters

FN409 Series



3 amp type



- Very compact PCB mounting filters
- Exceptional attenuation performance

- Designed for DC/DC converter, IT and telecom applications

Rating (A)	Capacitors Cx Cy	Inductance (mH) L L1	Dimensions H W D	Mfrs. List No.	Order Code
3	4700nF 2 x 4.7nF	2.9	11.7 50.8 27.9	FN 409-3/02	119-1341
6.5	4700nF 2 x 4.7nF	0.5	—	FN 409-65/02	120-9500
13	4700nF 2 x 4.7nF	0.08	0.18	FN 409-13/02	119-1340

333805

Rating	Order Code	1+	10+	20+	50+	100+
3A	119-1341●	37.51	35.43	34.24	31.90	29.26
6.5A	120-9500●	38.42	36.28	35.55	33.33	30.55
13A	119-1340●	38.22	36.10	35.38	33.17	30.41



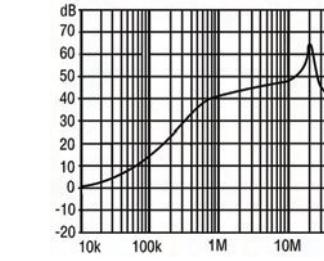
40,000 PRICES REDUCED

Chassis Mounting - General Purpose

FN2010 Series



SCHAFFNER



- Economic solution to general purpose filter requirements
- Good attenuation over a wide frequency range
- UL recognised, VDE, CSA and SEV approved, IEC950 compliant

Voltage rating 250Vac
Leakage current 0.4mA/phase
Tabs 6.35mm x 0.8mm
Frequency range DC to 400Hz

Current rating	Inductance (mH)	H	Weight (g)	Mfrs. List No.	Order Code	
1	12	24.3	64	54	FN2010-1/06	
3	2.5	24.3	64	54	FN2010-3/06	
6	1	24.3	64	54	FN2010-6/06	
10	0.8	29.3	64	54	FN2010-10/06	
16	0.65	29.3	46.6	71	140	FN2010-16/06
						119-1361

204113

Rating	Order Code	1+	10+	30+	60+	90+	270+
1A	119-1358●	10.77	9.16	8.08	6.29	5.96	5.26
3A	119-1363●	10.77	9.16	8.08	6.29	6.18	5.45
6A	119-1364●	10.77	9.16	8.08	6.29	6.18	5.45
10A	119-1360●	11.25	9.56	8.44	6.57	6.40	5.65
16A	119-1361●	13.27	11.27	9.94	8.62	6.34	6.18

Chassis Mounting

FN2020 Series



SCHAFFNER



- Similar to the FN2010 Series above but with additional phase to neutral capacitance for improved differential mode performance
- UL recognised, VDE, CSA and SEV approved. IEC950 compliant

Voltage rating 250Vac
Leakage current 0.4mA/phase
Tabs 6.35mm x 0.8mm
Frequency range DC to 400Hz

204113

Equipment Filters - continued

Chassis Mounting - continued

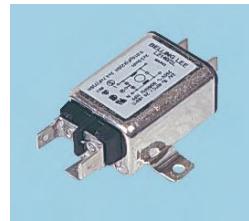
FN2020 Series - continued

Current rating	Inductance (mH)	W (excl. tabs)	D FC	Weight (g)	Mfrs. List No.	Order Code
1A	12	29.3	35	64 54 80	FN2020-1/06	119-1365
3A	2.5	29.3	35	64 54 80	FN2020-3/06	119-1372
6A	1	29.3	35	64 54 80	FN2020-6/06	119-1373
10A	0.8	29.3	35	64 54 85	FN2020-10/06	119-1367
16A	0.65	29.3	46.6	71 61 140	FN2020-16/06	119-1368
20A	0.6	30.3	85	54 75 210	FN2020-20/06	119-1370

204114

Rating	Order Code	Price Each					
		1+	10+	30+	60+	240+	480+
1A	119-1365●	12.18	10.35	9.13	8.41	7.99	7.05
3A	119-1372●	12.18	10.35	9.13	8.41	7.99	7.05
6A	119-1373●	12.18	10.35	9.13	8.41	7.99	7.05
10A	119-1367●	12.18	10.35	9.13	8.41	7.99	7.05
16A	119-1368●	16.14	13.72	12.10	11.15	10.60	9.35
20A	119-1370●	29.40	24.99	22.34	20.15	19.16	17.11

Chassis Mounting

H = 21.3, W = 28.5, D = 62,
Tabs = 6.3 x 0.8 F.C = 37

FN2030 Series



EMI Filter with High Attenuation Performance

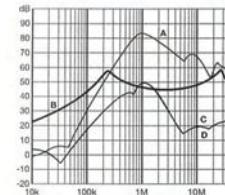


- High performance filter attenuation
- High differential mode attenuation
- Designed for easy and fast chassis mounting
- Optional medical versions (B type)
- UL recognised, CSA and ENEC approved

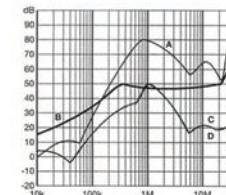
Typical Attenuation

Per CISPR 17: A = 50Ω/50Ω sym; B = 50Ω/50Ω asym; C = 0.1Ω/100Ω sym; D = 100Ω/0.1Ω sym

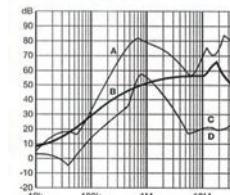
1 to 4A types



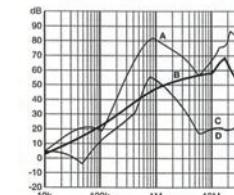
6 to 10A types



12 to 20A types



30A type

Voltage rating 250Vac
Frequency range DC to 400Hz
Operating temperature -25°C to 100°C

Current rating	Inductance (mH)	Leakage Current (mA)	Resistance (kΩ)	H	D	Mfrs. List No.	Order Code
1	20	0.34	1000	64 35 24.3	FN2030-1-06	130-4843	
4	14	0.52	1000	71 46.6 22.3	FN2030-4-06	130-4844	
6	8	0.73	680	71 46.6 22.3	FN2030-6-06	130-4845	
10	8	0.73	680	85 54 30.3	FN2030-10-06	130-4846	
16	4	0.87	330	85 54 40.3	FN2030-16-06	130-4848	
30	2	0.87	330	85 54 40.3	FN2030-30-08	130-4849	

451934

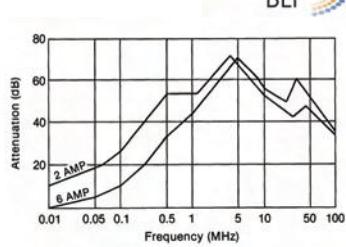
Rating	Order Code	Price Each					
		1+	10+	30+	90+	180+	
1A	130-4843●	14.53	12.44	10.89	9.68	8.72	
4A	130-4844●	16.64	14.25	12.47	11.08	9.98	
6A	130-4845●	16.63	14.26	12.48	11.09	9.98	
10A	130-4846●	18.09	15.51	13.56	12.06	10.86	
16A	130-4848●	21.75	18.66	16.31	14.50	13.05	
30A	130-4849●	55.62	47.69	41.72	37.09	33.39	

451934

Over 480,000 products online



Chassis Mounting

H = 21.3, W = 28.5, D = 62,
Tabs = 6.3 x 0.8 F.C = 37

- Compact chassis mounting filter

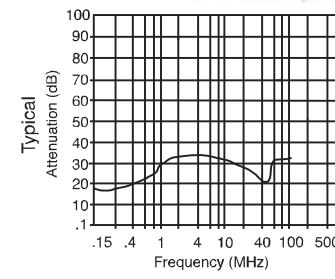
Voltage rating	250V ac @ 0 to 400Hz	Inductance	+ 2 x 4700pF (Y)
Earth leakage current	< 0.75mA @ 250V 50Hz	Operating temperature	-25°C to +70°C
Capacitance	1 x (X) (y)	Mfrs. List No.	L2140/2L = 943-3767
			L2140/6L = 943-3775

204114

Rating	Order Code	1+	25+	100+	500+	1K+
2A	943-3767●	14.30	12.11	11.30	10.66	9.71
6A	943-3775●	14.44	12.19	11.39	10.74	9.80

204114

Medical - Chassis Mounting

H=22, W=28, D=62
Tabs=6.3 x 0.8 FC=37

- A range of equipment filters with very low leakage currents for medical applications.
- CSA and VDE approved.
- UL recognised

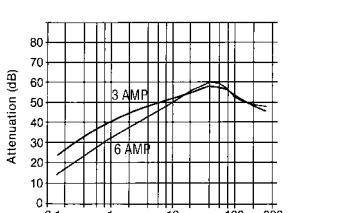
Operating temperature	-25°C to +85°C	Operating voltage	250V ac L+N to ground 2700V dc 2s
Operating frequency	Up to 400Hz	Test voltage	
Bleed resistor	5MΩ		
Current rating	Inductance (mH)	Leakage Current @ 250V 50Hz	
1A	3.5	5µA	Mfrs. List No. SF4120M-1/01 Order Code 943-3880
3A	2	5µA	SF4120M-3/01 943-3899
6A	0.8	5µA	SF4120M-6/01 943-3902
10A	0.2	5µA	SF4120M-10/01 943-3910

204058

Rating	Order Code	1+	25+	50+	100+	250+
1A	943-3880●	14.24	12.29	11.50	10.24	9.32
3A	943-3899●	14.11	12.20	11.40	10.14	9.26
6A	943-3902●	14.11	12.20	11.40	10.14	9.26
10A	943-3910●	14.11	12.20	11.40	10.14	9.26

204058

Chassis Mounting

Body: H=23, W=28, D=41 (excl. tabs)
Fixing centres=37, Tabs=6.3 x 0.8

- Chassis mounting filter providing good attenuation
- Also prevents unwanted equipment generated interference from reaching mains
- Approved to VDE, SEV and CSA
- IEC950 and EN133200 compliant
- UL recognised

Voltage rating	110 - 250V ac 50/60Hz	Capacitance	1 x µF (X)
Earth leakage current	<0.5mA	Inductance	+ 2 x 2200pF(Y)
Operating temperature	-25°C to +85°C	2 x 2mH (3A), 2 x 0.8mH (6A)	

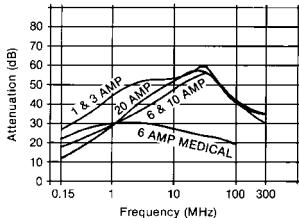
204198

Rating	Order Code	1+	10+	20+	100+	250+
5500.2040	3A 116-2772●	12.63	10.74	9.48	8.36	7.38
5500.2041	6A 116-2773●	13.03	11.59	10.50	8.74	8.12

204198

Chassis Mounting

Tabs=6.3 x 0.8

SCHAFFNER

- General purpose chassis mounting filter providing good attenuation in a compact design
- The 6A device is available in a version suitable for use in medical equipment
- Approved to VDE, SEV, SEMKO and CSA
- Designed to meet IEC95
- UL recognised

Note: The 20A unit carries approvals rated at 16A and does not cover SEMKO.

Voltage rating	250V @ 0 to 400Hz
Earth leakage current	2 x 0.21mA (standard), 2 x 2µA (medical)
Operating temperature	-25°C to +85°C
Capacitance	0.033µF (X) + 2 x 2200pF (Y) (standard), 0.033µF (X) (medical) 0.033µF
Current rating	Inductance (mH) Leakage Current
1A	3 H 19 W 35 D 64 FC 54
3A	2 H 19 W 35 D 64 FC 54
6A	0.75 H 19 W 35 D 64 FC 54
6A (Medical)	0.75 H 19 W 35 D 64 FC 54
10A	0.45 H 29 W 35 D 64 FC 54
20A	0.48 H 29 W 50.5 D 71 FC 61

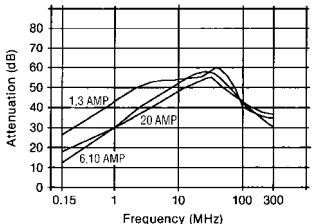
204259

Price Each

Rating	Order Code	1+	10+	50+	100+	250+
1A	119-1346●	13.59	11.55	10.19	9.39	9.11
3A	119-1349●	20.39	17.33	15.29	14.09	13.67
6A	119-1350●	20.39	17.33	15.29	14.09	13.67
6A (Medical)	119-1351●	24.05	19.89	15.48	12.02	11.36
10A	119-1347●	22.43	19.07	16.82	15.50	15.03
20A	119-1348●	20.58	17.49	15.43	14.22	13.79

Chassis Mounting, High Performance**SCHAFFNER**

Tabs=6.3 x 0.8



- Chassis mounting filter providing very high attenuation
- Designed to meet IEC950.
- Approved to VDE, SEV and CSA
- UL recognised

Voltage rating 250V @ 0-400Hz Capacitance 2 x 0.1µF(X) + 2 x 2200pF(Y)
Earth leakage current 2 x 0.21mA Operating temperature -25°C to +85°C

Current rating	Inductance (mH)	Dimensions	H	W	D	FC	Mfrs. List No.	Order Code
1A	3	22	46.6	71	61		FN 612-1/06	119-1352
6A	0.75	29	46.6	71	61		FN 612-6/06	119-1356
10A	0.45	29	46.6	71	61		FN 612-10/06	119-1353
20A	0.48	40	54	85	75		FN 612-20/06	119-1355

204003

Price Each

Rating	Order Code	1+	10+	25+	50+	100+
1A	119-1352●	21.32	20.16	19.77	17.61	14.87
6A	119-1356●	20.81	19.67	19.29	17.19	14.49
10A	119-1353●	21.32	20.16	19.77	17.61	14.87
20A	119-1355●	34.11	29.48	26.46	23.72	21.09

Single Phase - Chassis Mounting**EPCOS**

- Chassis mounting filter range offering choice of performance
- Shielded aluminium case
- Approved to EN133 221, CSA and UL recognised

Case Size	Length O/A	Width O/A	Height
A1	76.5	70	22.3
B1	76.5	45	28.6
B3	89.5	50.8	28.6
B4	89.5	50.8	38.1
B7	125	84	38.1
B8	89.5	50.8	38.1

Leakage current <0.5mA
IEC climatic category 25/85/21
Voltage rating 250V ac 50/60Hz**Type A for normal attenuation**

Rating	Capacitance	L _N	Case Size	Mfrs. List No.	Order Code
3A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 1.5mH	A1	B84111AA30	975-1980
2A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 1.5mH	A1	B84111AA20	975-2099
10A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 820µH	B1	B84111AB110	975-2005
6A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 1.8mH	B1	B84111AB60	975-2030

Type B for enhanced attenuation

Rating	Capacitance	L _N	Case Size	Mfrs. List No.	Order Code
6A	2 x 0.33µF(X2) 2 x 4700pF(Y2)	2 x 3.3mH	B1	B84112BB60	975-1920
10A	2 x 0.47µF(X2) 2 x 4700pF(Y2)	2 x 1.8mH	B1	B84112BB110	975-1939
20A	2 x 0.68µF(X2) 2 x 4700pF(Y2)	2 x 1.8mH	B3	B84112BB120	975-1955
2A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 10mH	B3	B84112BB20	975-1998
1A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 10mH	B4	B84112BB110	975-2064
3A	2 x 0.22µF(X2) 2 x 4700pF(Y2)	2 x 10mH	B7	B84112BB30	975-2072

Type C for high attenuation

Rating	Capacitance	L _N	Case Size	Mfrs. List No.	Order Code
10A	2 x 0.1µF(X2) 2 x 4700pF(Y2)	2 x 3.6mH	B4	B84113CB110	975-1963
3A	2 x 0.47µF(X2) 2 x 4700pF(Y2)	2 x 4.7mH	B8	B84113CB30	975-1912

Type D for high attenuation

Rating	Capacitance	L _N	Case Size	Mfrs. List No.	Order Code
3A	2 x 0.47µF(X2) 2 x 4700pF(Y2)	2 x 5.6mH	B3	B84114DB30	975-1971

Type E for high attenuation below 100kHz

Rating	Capacitance	L _N	Case Size	Mfrs. List No.	Order Code
3A	2 x 0.47µF(X2) 2 x 4700pF(Y2)	2 x 270µH	A4	B84115EB30	975-1947
10A	2 x 0.47µF(X2) 2 x 22nF(Y2)	2 x 16mH	B1	B84115EB110	975-2021
6A	2 x 0.47µF(X2) 2 x 22nF(Y2)	2 x 47µH	A4	B84115EB60	975-2048

204012

Price Each

Rating	Order Code	1+	10+	20+	50+
3A	975-1980●	8.07	7.48	7.01	6.70
2A	975-2099●	8.07	7.48	7.01	6.44
10A	975-2005●	10.79	9.78	9.21	8.72
6A	975-2030●	9.11	8.44	7.92	7.27
6A	975-1920●	11.77	10.49	10.01	9.75
10A	975-1933●	13.12	11.89	11.19	10.85
20A	975-1955●	31.61	28.68	27.93	27.21
2A	975-1998●	10.49	9.60	9.34	9.11
3A	975-2072●	11.23	10.27	9.83	9.59
10A	975-1963●	28.26	26.16	24.49	23.08
3A	975-1912●	12.43	11.24	10.95	10.67
3A	975-1971●	28.83	27.01	25.60	24.41
3A	975-1947●	20.43	20.07	19.56	18.48
10A	975-2021●	32.62	30.18	29.39	28.63
6A	975-2048●	25.35	24.77	24.02	22.53

484043

Price Each

Rating	Order Code	1+	8+	48+	96+	192+
3A	146-7058●	9.23	8.31	7.02	5.97	5.07
6A	146-7059●	9.02	8.13	6.85	5.82	4.96
10A	146-7060●	9.60	8.63	7.29	6.20	5.26
16A	146-7061●	12.56	11.29	9.53	8.09	6.89
20A	146-7063●	15.77	14.21	11.99	10.18	8.65

£ € 40,000 PRICES REDUCED



Equipment Filters - continued

SIFI-G 250V EMC Filters

High Insertion Loss



- Optimized leakage current
- Compact design
- Cost-optimized construction
- Applications include switched-mode power supplies for industrial electronics, telecom systems and data systems, DC applications

Current rating	Capacitance (mH)	Inductance (mH)	H	W	D	Mfrs. List No.	Order Code	
3A	0.22μF	4700pF	10	89.5	52	29	B84112GB30	146-7064
6A	0.47μF	4700pF	3.3	89.5	52	29	B84112GB60	146-7065
10A	0.68μF	4700pF	1.8	89.5	52	29	B84112GB110	146-7066
16A	0.47μF	4700pF	1.8	89.5	52	29	B84112GB116	146-7067
20A	1.0μF	4700pF	1.8	135	52	43	B84112GG120	146-7068
25A	1.0μF	4700pF	1.6	135	52	43	B84112GG125	146-7069
36A	1.5μF	4700pF	0.75	135	52	43	B84112GG136	146-7070

484944

Current Rating	Order Code	1+	8+	48+	96+	192+
3A	146-7064●	10.20	8.67	8.16	7.91	7.65
6A	146-7065●	11.90	10.65	9.39	8.52	8.36
10A	146-7066●	14.83	12.60	11.12	10.14	9.74
16A	146-7067●	19.83	13.57	12.01	11.26	10.83
20A	146-7068●	33.92	29.86	26.78	24.28	23.56
25A	146-7069●	35.85	32.08	29.06	26.80	26.52
36A	146-7070●	38.76	34.68	31.42	28.97	27.64

SIFI-H 250V 2-Line Filters

Enhanced Insertion Loss



- Optimized leakage current
- Compact design
- Cost-optimized construction
- Applications include switched-mode power supplies for industrial electronics, telecom systems and data systems

Current rating	Capacitance (mH)	Inductance (mH)	H	W	D	Mfrs. List No.	Order Code	
3A	0.1μF	4700pF	5.9	84.5	52	38	B84113HB30	146-7071
6A	0.1μF	4700pF	3.6	84.5	52	38	B84113HB60	146-7072
10A	1.5μF	4700pF	3.9	117.5	52	43	B84113HB110	146-7073
16A	1.5μF	4700pF	1.3	117.5	52	43	B84113HB116	146-7075
20A	2.2μF	22nF	1.2	133	59	53	B84113HG120	146-7076
25A	2.2μF	22nF	0.8	133	59	53	B84113HG125	146-7077
36A	3.3μF	22nF	0.5	133	59	53	B84113HG136	146-7078

484947

Current Rating	Order Code	1+	8+	48+	96+	192+
3A	146-7071●	20.91	18.81	15.88	13.50	11.48
6A	146-7072●	21.53	19.37	16.35	13.90	11.82
10A	146-7073●	21.53	19.37	16.35	13.90	11.82
16A	146-7075●	28.54	25.68	21.67	18.42	15.66
20A	146-7076●	40.25	36.24	30.57	25.98	22.08
25A	146-7077●	54.52	49.07	41.39	35.19	29.91
36A	146-7078●	60.62	54.55	46.02	39.12	33.25

484947

B Series

tuco / Electronics / corcom



- General purpose common-mode filters
- Provides RFI control of line-to-ground noise in a small size at low cost
- Available in a broad selection of current ratings and termination styles
- Very low leakage current required by VDE portable equipment, and (120 Volt) UL544 non-patient medical equipment

Operating voltage 250VAC
Operating frequency 50Hz to 60Hz

Maximum leakage current, each line-to-ground:
@ 120 VAC 60 Hz: 0.21mA
@ 250 VAC 50 Hz: 0.36mA

RL Re-reeling available



Current Rating	L	W	H	Mfrs. List No.	Order Code
1A	16.8	64.3	57.2	1EB1	958-6040
3A	19.8	64.3	66.3	3EB1	958-6059
5A	19.8	64.3	66.3	5EB1	958-6067
10A	29.5	64.3	66.3	10EB1	958-6075
1A	16.8	64.3	24.4	1EB3	958-6083
3A	19.8	64.3	33.5	3EB3	958-6091
10A	29.5	64.3	33.5	10EB3	958-6113

411287

Mfrs. List No.	Order Code	1+	10+	50+	100+
1EB1	958-6040●	17.20	16.10	14.90	13.71
3EB1	958-6059●	17.20	16.10	14.90	13.71
5EB1	958-6067●	15.13	10.06	9.30	8.56
10EB1	958-6075●	17.20	16.10	14.90	13.71
1EB3	958-6083●	13.36	12.51	11.57	10.65
3EB3	958-6091●	17.20	16.10	14.90	13.71
10EB3	958-6113●	17.20	16.10	14.90	13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

3EB1 958-6059● 17.20 16.10 14.90 13.71

5EB1 958-6067● 15.13 10.06 9.30 8.56

10EB1 958-6075● 17.20 16.10 14.90 13.71

1EB3 958-6083● 13.36 12.51 11.57 10.65

3EB3 958-6091● 17.20 16.10 14.90 13.71

10EB3 958-6113● 17.20 16.10 14.90 13.71

Mfrs. List No. Order Code Price Each

1EB1 958-6040● 17.20 16.10 14.90 13.71

Q Series



tyco / Electronics / corcom

The **Q Series** RFI power line filters has been developed specifically for switching power supplies and is designed to be all the power line filtering needed to control conducted emissions all the way down to 10kHz. High attenuation is provided for both common mode and differential mode interference throughout the frequency range with no degradation of performance due to the large peak currents drawn by switching power supplies.

- Very low leakage current
- Offers higher common mode performance
- Ideal choice for applications meeting emission limits below 150kHz, as well as the limits above 150kHz
- Well suited for bringing ISM equipment into compliance with the limits of FCC Part 18, from 10kHz to 30MHz

Operating voltage 250VAC
Operating frequency 50Hz to 60Hz

Maximum leakage current, each line-to-ground:
@ 120 VAC 60 Hz: 0.22mA
@ 120 VAC 60 Hz: 0.29mA
@ 250 VAC 50 Hz: 0.38mA
@ 250 VAC 50 Hz: 0.51mA

Current Rating	Dimensions W	H	L	Mfrs. List No.	Order Code
3A	52.6	45.2	97.8	3EQ1	958-6210
6A	57.7	45.7	126.8	6EQ1	958-6229
20A	52.6	57.9	168.1	20EQ1	958-6237

411289

Mfrs List No.	Order Code	1+	5+	10+	25+
3EQ1	958-6210●	53.50	31.86	27.74	25.45
6EQ1	958-6229●	77.57	46.22	40.22	36.92
20EQ1	958-6237●	99.10	59.04	51.38	47.15

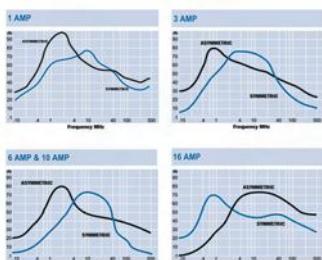
411289

Chassis Mount 2 Stage High Performance



H = 40, W = 53, D = 75mm

Dialight BLP



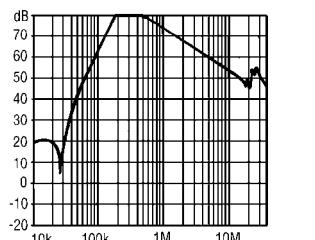
- Transient voltage protection
- Earth line choke
- Compact design providing very high performance
- Fitted with 1MΩ bleed resistor
- 6.3 x 0.8 Faston output terminals
- Approved to **VDE** and **CSA**
- UL** recognised

Operating temperature	-25°C to +85°C	Operating voltage	250V
Test voltage (L+N to ground)	2700V dc, 2 sec.	Operating frequency	0 to 400Hz
Current Rating (A)	Inductance L1 (mH)	Leakage Current (mA)	Mfrs. List No.
3	2.2	0.2	PPF4200E-3/01
10	1.0	0.3	PPF4200E-10/01

311390

Rating	Order Code	1+	10+	50+
3A	942-7244●	28.98	23.32	19.08
10A	942-7260●	29.24	23.51	19.27

Multi stage - High Performance FN2070 Series



RoHS Compliant
Non-compliant

- Multi stage filters with high values of capacitors and inductors for excellent differential and common mode attenuation
- 'M' suffix models have higher filter performance and lower leakage current
- UL** recognised, **VDE**, **CSA** and **SEV** approved, **IEC950** compliant

FN2070 Series insertion loss

Voltage rating	250V ac	Frequency Range	DC to 400Hz
Leakage current	0.4mA/phase	Capacitance (FN2070)	(Y) = 2 x 4.7nF
Tabs	6.3 x 0.8	FN2070M	(Y) = 2 x 47nF
Current Rating (mH)	Inductance Cx (μF)	Weight H (g)	Mfrs. List No. Order Code
1A	22	0.33	30.3 54 85 75 200 FN2070-1/06 119-1386
3A	9.8	0.47	40.3 54 85 75 250 FN2070-3/06 119-1392
6A	7.8	1	45.4 57.5 113.5 103 450 FN2070-6/06 119-1394
10A	4.5	1	45.4 57.5 156 143 730 FN2070-10/06 119-1387
12A	3.25	1	45.4 57.5 156 143 730 FN2070-12/06 119-1388
16A	2.8	1	57.6 85.5 119 109 1000 FN2070-16/06 119-1389

FN2070M Series : The parameters are the same as the standard range above

Mfrs. List No. FN2070M-X/06 where X=Rating in Amps

204111

Rating	Order Code	1+	10+	40+	160+	250+	500+
FN2070 Series							
1A	119-1386●	21.87	18.58	16.40	15.11	14.36	12.69
3A	119-1392●	30.70	26.10	23.03	21.22	20.16	17.79
6A	119-1394●	37.25	31.67	27.94	25.74	24.45	21.57
10A	119-1387●	52.23	44.39	39.18	36.10	34.29	30.27
12A	119-1388●	60.10	54.20	48.75	44.09	40.25	37.93
16A	119-1389●	85.29	72.50	63.97	58.95	56.01	49.42
FN2070M Series							
6A	119-1395●	31.97	27.82	26.38	24.04	22.05	19.71

tyco / Electronics / corcom

EMC Series



The **EMC Series** of RFI filters has been developed to reduce conducted noise to acceptable limits for equipment that must comply with the requirements of CISPR in Europe and the FCC specifications in the USA. The EMC Series was designed to address the need for more differential mode attenuation in the lower frequency range while still maintaining high common mode performance. This type of performance is typically needed for motor drives and switch mode power supplies with increased operating frequencies.

The EMC Series is ideal for applications that require a high level of performance in a compact, cost effective package.

Operating voltage 250VAC
Operating frequency 50Hz to 60Hz

Maximum leakage current, each line-to-ground:

Current Rating	Dimensions (mm)	Mfrs. List No.	Order Code
3,6,10 Amp	29.5 46 85.1	3EMC1	958-6458
15,20,30 Amp	29.5 52.6 97.8	6EMC1	958-6466
10,15,20 Amp	38.9 52.6 97.8	10EMC1	958-6474
15,20 Amp	45.2 57.2 126.2	15EMC1	958-6482
20 Amp	45.2 57.2 126.2	20EMC1	958-6490

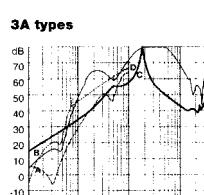
411291

Mfrs List No.	Order Code	1+	10+	50+	100+
3EMC1	958-6458●	20.74	12.35	10.75	9.87
6EMC1	958-6466●	27.46	22.80	21.41	19.72
10EMC1	958-6474●	21.90	14.24	13.37	12.31
15EMC1	958-6482●	44.12	40.55	35.16	29.50
20EMC1	958-6490●	48.23	41.77	38.01	30.33

Multi stage - High Performance

FN 2080 Series

SCHAFFNER



- Very high differential and common mode attenuation
- VDE** and **SEV** approved, **UL** and **CSA** recognised
- IEC950** compliant

Voltage rating 250V ac
Leakage current 0.4mA/ph
Capacitance Cy = 4.7nF

Inductance Current (mH)	Capacitor Cx (μF)	Weight H (g)	Mfrs. List No.	Order Code
1A 22	0.49	0.33	30.3 54 85 75 200	FN2080-1/06 119-1396
3A 9.8	0.16	0.47	40.3 54 85 75 270	FN2080-3/06 119-1400
6A 7.8	0.11	1	45.4 57.5 113.5 103 470	FN2080-6/06 119-1401
10A 4.5	0.06	1	45.4 57.5 156 143 750	FN2080-10/06 119-1397

RL Re-reeling available



08447 11 11 11

Fax: 08447 11 11 12

1241

Equipment Filters - continued

Multi stage - High Performance - continued

FN 2080 Series - continued

Rating	Order Code	Price Each			
		1+	10+	50+	100+
1A	119-1395●	24.86	19.28	17.07	14.15
3A	119-1400●	29.46	25.05	22.61	20.40
6A	119-1401●	69.23	58.85	53.12	30.65
10A	119-1397●	85.13	72.36	65.31	36.60

FN2090 Series



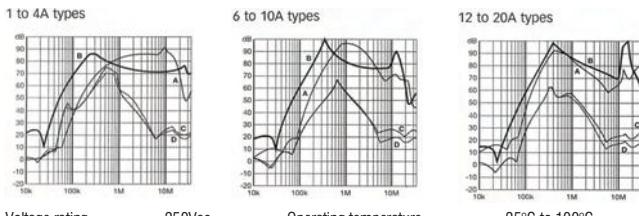
EMI Filter with Excellent Attenuation Performance



- Two stage filter
- Very high differential and common mode attenuation
- Designed for easy and fast chassis mounting
- Optional medical versions (B type)
- UL recognised, CSA and ENEC approved

Typical Attenuation

Per CISPR 17: A = 50Ω/50Ω sym; B = 50Ω/50Ω asym; C = 0.1Ω/100Ω sym; D = 100Ω/0.1Ω sym

Voltage rating 250VAC
Frequency range DC to 400Hz

Operating temperature -25°C to 100°C

Current rating	Inductance (mH)	Leakage Current (mA)	Resistance (kΩ)	H	D	Mfrs. List No.	Order Code	
Standard Version								
1	20	0.5	680	71	46.6	22.3	FN2090-1-06	130-4856
4	14	0.5	470	85	54	30.3	FN2090-4-06	130-4857
6	8	0.67	330	85	54	30.3	FN2090-6-06	130-4858
10	8	0.67	330	113.5	57.5	45.4	FN2090-10-06	130-4861
16	4	1.02	220	113.5	57.5	45.4	FN2090-16-06	130-4862
20	2.7	1.02	220	113.5	57.5	45.4	FN2090-20-08	130-4863
Medical Version								
6	8	0.002	330	85	54	30.3	FN2090B-6-06	130-4866
10	8	0.002	330	113.5	57.5	45.4	FN2090B-10-06	130-4867
16	4	0.002	220	113.5	57.5	45.4	FN2090B-16-06	130-4868
20	2.7	0.002	220	113.5	57.5	45.4	FN2090B-20-08	130-4869

451943

Rating	Order Code	1+	10+	30+	90+	180+
Standard Version						
1A	130-4856●	23.06	19.77	17.29	15.36	13.84
4A	130-4857●	29.03	24.88	21.77	19.35	17.41
6A	130-4858●	30.08	25.79	22.57	20.05	18.05
10A	130-4861●	40.29	34.53	30.23	26.86	24.18
16A	130-4862●	38.88	33.33	29.17	25.92	23.33
20A	130-4863●	61.65	52.85	46.24	41.11	37.00
Medical Version						
6A	130-4866●	30.46	26.11	22.84	20.30	18.28
10A	130-4867●	38.88	33.33	29.17	25.92	23.33
16A	130-4868●	48.51	41.59	36.38	32.34	29.11
20A	130-4869●	51.79	44.40	38.84	34.53	31.08

451943

Single Stage



FN9675 Series

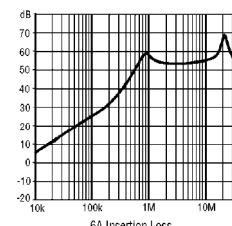


- Single stage filter offering good attenuation
- Applications include switch mode power supplies and equipment where space is at a premium
- CSA, SEV and VDE approved
- UL recognised

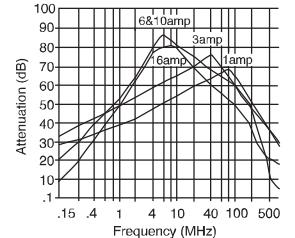
Leakage current 410µA Max
Terminals 6.3 x 0.8 Fastons up to 6A

Current Rating	Inductance (mH)	Dimensions H	W	D	FC	Weight (g)	Mfrs. List No.	Order Code
3A	18	40	54	85	75	270	FN9675-3/06	120-9502
6A	3	40	54	85	75	270	FN9675-6/06	120-9503

204158



Rating	Order Code	Price Each					
		1+	5+	10+	25+	50+	100+
3A	120-9502●	51.77	49.29	44.46	41.49	34.95	30.27
6A	120-9503●	53.61	51.03	44.63	42.17	35.31	30.42

Chassis Mounting, 2 Stage with Earth Line Choke
Ultra High Performance

- Ultra high performance chassis mounting two stage filter with earth line choke
- Provides excellent attenuation over a wide frequency range on all three mains lines

Voltage Rating 250V @ 0 to 400Hz

Current Rating	Inductance (mH)			Mfrs. List No.	Order Code
	L1	L2	L3		
1A	4.3	4.3	0.3	SF4240-1/01	943-3783
3A	2.2	2.2	0.3	SF4240-3/01	943-3791
6A	1.3	1.3	0.3	SF4240-6/01	943-3805
10A	1	1	0.3	SF4240-10/01	943-3813
16A	0.45	0.45	0.3	SF4240-16/01	943-3821

204036

Rating	Order Code	Price Each			
		1+	10+	50+	100+
1A	943-3783●	23.74	20.36	18.47	15.90
3A	943-3791●	28.54	23.92	22.19	19.12
6A	943-3805●	28.62	24.55	22.29	19.22
10A	943-3813●	32.55	27.90	25.37	21.79
16A	943-3821●	33.26	28.51	25.89	22.30

204036

AYO Series



The AYO series filters are designed for 3-phase, four wire, WYE applications providing filtering in each of the three lines plus neutral. These lower current RFI filters provide filtering to industrial 3-phase applications.



Operating voltage phase-to-phase 440VAC
phase-to-neutral/ground 250VAC
Operating frequency 50Hz to 60Hz
Maximum leakage current, each line-to-ground 3, 6, 10A
@ 120 VAC 60 Hz: 2mA
@ 250 VAC 50 Hz: 3mA

Current Rating	Dimensions W	H	L	Mfrs. List No.	Order Code	Price Each			
						1+	5+	20+	50+
3A	52.5	81.5	85.6	3AY01	958-6156	28.76	25.45	23.34	22.69
6A	52.5	81.5	85.6	6AY01	958-6164	33.45	29.60	27.14	26.38
10A	52.5	81.5	85.6	10AY01	958-6172	38.02	33.65	30.85	29.99
20A	52.5	81.5	85.6	20AY01	958-6180●	42.73	26.68	23.22	21.29

411288

Chassis Mounting - Multi stage - Earth Line Choke



H=30, W=69, D=70

FC = 60, Tabs = 6.3 x 0.8

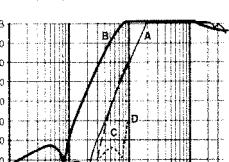
- Two stage filter with earth line choke
- UL and CSA recognised
- VDE and SEV approved

Voltage Rating 250V @ 50/60Hz

Leakage current 190µA



3 amp types



- Two stage filter with earth line choke
- UL and CSA recognised
- VDE and SEV approved

Voltage Rating 250V @ 50/60Hz

Leakage current 190µA



Current Rating	Inductance (mH)			Mfrs. List No.	Order Code
3A	L1 1.1	L2 2	L3 0.4	FN 343-3/05	119-1316
6A	0.43	0.77	0.4	FN 343-6/05	119-1318
10A	0.27	0.66	0.4	FN 343-10/05	119-1315

204191

Operating Voltage (Vac)	Maximum Voltage Ratings (Vac/Vdc)		Transient Energy (10/1000μs) (Joules)	Peak Transient Current (8/20μs) (A)	Mfrs. List No.	Order Code
	(Vac)	(Vdc)				
24	30	38	8.8	1000	DVS024	118-7675
240	275	369	140	6500	DVS240	118-7677

220486

Rating	Order Code	Price Each			
		1+	10+	50+	100+
3A	119-1316●	32.75	28.00	27.16	26.34
6A	119-1318●	33.05	30.45	29.53	26.70
10A	119-1315●	33.05	30.45	29.53	26.70

220486

Filter/Suppression Modules

High Performance Modules



- These devices can be incorporated, or mounted close to, individual items of electrical equipment, providing immediate local protection against surges and electrical noise
- Can be used in conjunction with the MA3100 Series to provide IEC Class III protection levels
- Combines high quality filtering with ring suspension
- Added thermal protection

DIN Rail Mounting H=93, W=79, D=25

Filter Can H=40, W=75, D=40

Plastic Enclosure H=28, W=75, D=110

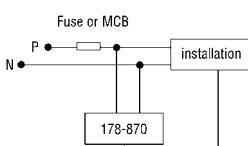
Voltage rating	240V	Operating temp.	-25°C to +65°C
Earth Leakage	<0.3mA	Clamping voltage	<700V
Peak surge current	6,500A	Stop baud attenuation	Exceeds (8/20μs Waveform) 60dB in the range 100kHz to 50MHz

452209

Mfrs List No.	Rating	Order Code	1+	5+	10+	25+	50+	Price Each
DIN Rail Mounting								
MA05/D/2	5A	262-640	69.41	65.93	62.47	58.99	56.02	
MA10/D/2	10A	772-513	83.57	78.00	73.11	68.83	65.01	
Metal Filter Can								
MA05/SC/2	5A	453-640	49.32	46.19	43.34	41.99	38.19	
MA10/SC/2	10A	772-525	56.53	53.70	50.87	48.04	45.20	
Plastic Enclosure								
MA05/I/2	5A	158-082	46.37	43.57	40.80	38.36	35.81	

Suppression Module

DIN Rail Mounting



H=90, W=35, D=54.5

- Provides over-voltage protection for electronic equipment
- Rapid response time and clear indication of failure (short circuit to earth)
- Rated at 16A when used with suitable MCB
- An amber neon indicates normal supply
- Flame retardant ABS housing conforms to UL94V-0 and the dimensional requirements of DIN43880
- Can either be mounted on symmetric 35mm DIN rail or screw mounted using 2 x M4 screws

Supply Voltage	240V ac @ 50/60 Hz	Operating temperature	-15°C to +55°C
Current rating	16A when used with suitable MCB	Response time	≤25ns
Electrical life	100A for 2ms, 5000A for 8μs		

204243

Mfrs List No.	Order Code	1+	5+	10+	Price Each
M3SPD	960-9946●	53.83	45.34	39.82	

MOV Suppression Modules



DIN Rail Mounting



- Slimline DIN rail surge suppressors comprising two isolated high energy metal oxide varistors
- Reduces high transient voltage spikes by connecting across the load or the supply

Line frequency	DC to 440Hz
Operating temperature	-25°C to +85°C

H=55, W=78, D=12.5
Terminals=2.5mm

Installation Filters

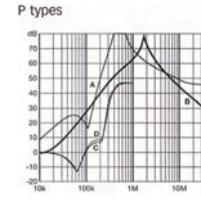
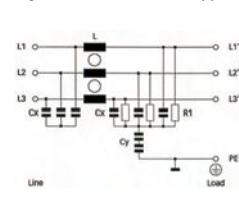
FN3025/3026 Series



3-Phase Filters



- Advanced EMC/RFI Filter Concept with Minimum Leakage Current
- Compact state-of -the-art filter concept with a lightweight plastic enclosure design
- Revolutionary embedded filter terminals
- Chassis (FN3025) or DIN-rail (FN3026) mounting options
- Selectable performance level
- UL recognised, CSA and ENEC approved

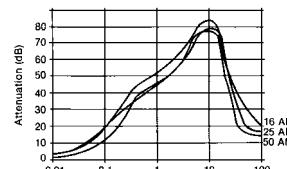


Typical Attenuation
Per CISPR 17: A = 50Ω/50Ω sym; B = 50Ω/50Ω asym; C = 0.1Ω/100Ω sym; D = 100Ω/0.1Ω sym
Voltage rating 3 x 520/300Vac
Frequency range DC to 60Hz
Operating temperature -25°C to 100°C

Current rating	Power Rating (kW)	Leakage Current (mA)	H	D	Mfrs. List No.	Order Code
FN3025 - Chassis Mounting						
20		11	2.5	150 50 78	FN3025HP-20-71	130-4870
30		18	2.5	150 50 78	FN3025HP-30-71	130-4871
50		30	2.5	177 65 84	FN3025HP-50-72	130-4873
FN3025 - DIN-Rail Mounting						
20	11	2.5	150 50 78	FN3026HP-20-71	130-4874	451946

Current Rating	Order Code	1+	5+	10+	25+	Price Each
FN3025 - Chassis Mounting						
20A	130-4870●	78.00	69.33	62.40	52.01	
30A	130-4871●	88.20	78.39	70.56	58.82	
50A	130-4873●	120.39	107.00	96.31	80.29	
FN3026 - DIN-Rail Mounting						
20A	130-4874●	84.26	74.88	67.40	56.17	

Three Phase with Neutral



- High performance three phase chassis mounting filters in a very compact package
- Suitable for use in installations which require a highly attenuated three phase mains supply, e.g. communication installations, computer rooms, laboratories and industrial control systems
- Connections are 6.3 x 0.8 fast-ons for the 16A unit, M6 screw terminals for the 25A, 36A, and 50A units and M10 for the 100A unit. Approved to SEV and CSA
- Designed to meet IEC950.

Voltage rating	440/250V @ 0 to Earth	Operating temperature	-25°C to +85°C
----------------	-----------------------	-----------------------	----------------

Current Rating	Leakage Current (mA)	Inductance (mH)	Dimensions (H x W x D mm)	Weight (g)	Mfrs. List No.	Order Code
40°C	25°C					
16A	18.4A	2.85	1.2 x 50 x 104	1.6	FN 356-16/06	119-1322
25A	28.7A	2.85	1.3 x 80 x 105	1.5	FN356-25/24	120-9482
36A	41.5A	2.58	0.95 x 80 x 105	1.2	FN 356-36-24	119-1323
50A	57.5A	2.85	0.55 x 102 x 122	2.3	FN356-50/24	120-9483

Installation Filters - continued

Three Phase with Neutral - continued

Rating	Order Code	Price Each				204256
		1+	5+	10+	25+	
16A	119-1322●	111.78	107.66	105.49	94.00	
25A	120-9482●	156.58	144.34	141.44	136.54	
36A	119-1323●	174.84	161.59	158.34	152.84	
50A	120-9483●	257.86	226.88	222.36	215.53	

Three Phase and Neutral

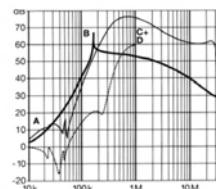


- Designed for asymmetrical loads
- High attenuation
- Small leakage current

Current Rating	Leakage Current (mA)	Inductance (mH)	Dimensions H W D (g)	Weight	Mfrs. List No.	Order Code
50°C 40°C						
16A	18.1A	3.4	1.14	80 120 115 1100	FN 256-16/46	120-9485
25A	28.3A	3.4	1.57	115 130 125 1400	FN 256-25/47	120-9487
36A	40.8A	3.4	1.1	115 130 125 1500	FN 256-36/47	120-9488
64A	72.6A	3.4	1	125 140 125 2200	FN 256-64/52	120-9489

204200

8 amp types



- Compact design
- Approved to SEMKO

Single and Three Phase

ROXBURGH EMC

Single phase
H=55, W=116, D=174
FC=80 x 101Three phase
H=55, W=143, D=230
FC=120 x 128

- Compact high performance industrial filters built to satisfy IEC950 safety standards which when installed correctly will allow compliance with VDE0871, EN55011 (Industrial) and EN55022 (Domestic) EMC emission levels
- IHF range is available in single phase or three phase (with neutral), feature a maximum leakage current of 3.5mA and are suitable for all general purpose applications
- The MDF range is available in single phase or three phase (without neutral) and feature higher performance than the standard IHF range
- Primarily designed for use with Motor Drive Inverters they are suitable for all applications without a neutral conductor where leakage current is not a limiting factor

Termination is via colour coded M6 studs.

Voltage rating	250V ac single phase 440/250V ac three phase	Operating temperature Test voltage	-25°C to +85°C 2kV ac
Line frequency	50/60Hz		

- Compact high performance industrial filters built to satisfy IEC950 safety standards which when installed correctly will allow compliance with VDE0871, EN55011 (Industrial) and EN55022 (Domestic) EMC emission levels
- IHF range is available in single phase, features a maximum leakage current of 3.5mA and is suitable for all general purpose applications
- Primarily designed for use with Motor Drive Inverters they are suitable for all applications without a neutral conductor where leakage current is not a limiting factor

Termination is via colour coded M6 studs.

Rating	Inductance (mH)	Resistance per Winding (mΩ)	Dimensions H W D	Mfrs. List No.	Order Code
IHF Series					
18A, single phase	6.4	15	55 116 174	IHF18	118-7699
25A, single phase	4.4	8.5	55 116 174	IHF25	118-7678
36A, single phase	2.5	3.8	55 116 174	IHF36	118-7700
50A, single phase	1.1	2	55 116 174	IHF50	118-7679
8A, three phase with neutral	2.8	64	38 220 120	IHF408	118-7695
25A, three phase with neutral	1.1	4	55 143 230	IHF425	118-7680
36A, three phase with neutral	0.55	1.65	55 143 230	IHF436	118-7696
50A, three phase with neutral	0.28	1	55 143 230	IHF450	118-7681
70A, three phase with neutral	0.72	0.52	85 182 238	IHF470	118-7698
100A, three phase with neutral	0.4	0.3	85 238 182	IHF4100	118-7716

Rating	Inductance (mH)	Resistance per Winding (mΩ)	Dimensions H W D	Mfrs. List No.	Order Code
MDF Series					
18A, single phase	0.4	15	55 120 174	MDF18	118-7701
25A, single phase	4.4	8.5	55 120 174	MDF25	118-7682
36A, single phase	2.5	3.8	55 120 174	MDF36	118-7702
50A, single phase	1.1	2	55 120 174	MDF50	118-7684
36A, three phase	0.96	2.4	55 147 230	MDF336	118-7705
50A, three phase	0.55	1.8	55 147 230	MDF350	118-7687
70A, three phase	1.1	2.1	85 180 230	MDF370	118-7706
100A, three phase	0.71	1.7	85 180 230	MDF3100	118-7707
150A, three phase	0.45	0.5	80 290 280	MDF3150	118-7708

20398

Order Code	1+	5+	10+	25+
IHF Series				
18A, single phase	118-7699●	75.81	68.53	60.44
25A, single phase	118-7678●	95.58	83.64	67.36
36A, single phase	118-7700●	94.25	85.20	72.83
50A, single phase	118-7679●	102.78	89.93	72.43
8A, three phase with neutral	118-7695●	74.14	72.39	63.83
25A, three phase with neutral	118-7680●	157.84	138.16	109.18
36A, three phase with neutral	118-7696●	155.69	140.70	118.09
50A, three phase with neutral	118-7681●	173.60	144.74	116.57
70A, three phase with neutral	118-7698●	237.40	214.53	185.68
100A, three phase with neutral	118-7716●	263.78	246.38	219.81

196.19

Voltage Suppression Units

ROXBURGH EMC



552-860
H=40, W=40, D=35
3 x 275V VDR

552-872
H=40, W=40, D=35
5 x 275V VDR

552-884
H=40, W=40, D=35
7 x 275V VDR

Mfrs List No.	Order Code	1+	5+	10+	25+	50+
VSU2W	118-7709●	15.12	14.35	12.17	11.59	10.30
VSU3W	118-7710●	21.64	20.40	17.32	16.60	14.94
VSU4W	118-7711●	21.64	20.40	17.32	16.60	14.94

220471

Motor Drive Filters

ROXBURGH EMC



Single phase L=150, W=65, H=48. Three phase L=220 W=120 H=38

- Compact single and three phase multistage filters
- Designed to meet IEC950, UL, CSA and VDE requirements

Order Code	6A Single Phase 581-203		16A Single Phase 581-215		8A Three Phase 581-227	
	Common Mode	Differential Mode	Common Mode	Differential Mode	Common Mode	Differential Mode
30K	13	—	13	—	20	—
100K	55	36	55	31	62	30
150K	69	50	70	45	76	44
300K	>80	>60	>80	>55	>85	>54
10M	>80	>60	>80	>55	>85	>54
Mfrs. List No.	MDF06-GS = 118-7719		MDF16-GS = 118-7720		MDF308-GS = 118-7721	

204037

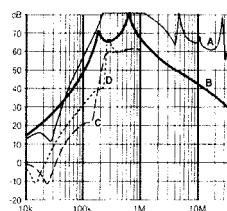


Motor Drive Filter

FN350 Series



12 amp types



- Compact design
- Ideal for a large variety of motor drive applications

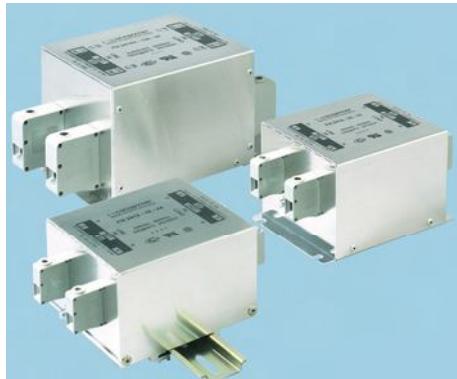
- Designed to meet IEC950
- Approved to VDE
- UL and CSA recognised

Voltage rating	250V @ 50/60Hz	Leakage current	4.9mA for 8A, 12A and 20A
Operating frequency	DC to 60Hz		5.2mA for 30A
			11mA for 55A

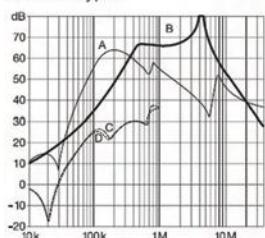
Current Rating	Inductance L (mA)	Dimensions H W D	Weight (kg)	Fixing	Centres	Mfrs. List No.	Order Code
8A	10	57 99.5 84.5	700	95	51	FN 350-8/29	120-9490
12A	7.5	57 99.5 84.5	0.7	95	51	FN 350-12/29	119-1319
20A	3.2	57 99.5 84.5	0.7	95	51	FN 350-20/29	119-1320
30A	1.3	60 115 85	0.7	115	100	FN 350-30/33	119-1321
55A	1	60 115 85	1800	115	100	FN 350-55/33	120-9491

204190

Rating	Order Code	Price Each			
		1+	5+	10+	25+
8A	120-9490●	72.72	71.59	69.45	67.37
12A	119-1319●	88.63	87.24	84.64	82.09
20A	119-1320●	91.06	84.64	81.30	75.50
30A	119-1321●	86.01	78.84	75.72	70.34
55A	120-9491●	106.80	103.13	100.34	94.57

Single phase EMC/RFI filter
FN 2410/2412 Series

8 to 45A types



- Excellent filter performance for applications with high interference levels
- Available from 8 to 100A
- Industrial grade terminal blocks for unsurpassed electrical safety
- FN2410 designed for chassis mounting, FN2412 suitable for DIN rail mounting

Voltage rating	250V
Operating temperature	-25°C to +100°C

Current rating	Dimensions H W D	Mfrs. List No.	Order Code
8A	130 93 62	FN2410-8-44	110-0353
16A	130 93 62	FN2410-16-44	110-0354
25A	130 93 62	FN2410-25-33	110-0355
32	130 93 76	FN2410-32-33	110-0356
45A	130 93 76	FN2410-45-33	110-0357
60A	165 115 100	FN2410-60-34	110-0358
16	110 93 73	FN2412-16-44	110-0363
25A	110 93 87	FN2412-25-33	110-0364
45A	110 93 87	FN2412-45-33	110-0366

419711

Rating	Order Code	1+	5+	10+	25+	+
8A	110-0353●	61.28	55.73	54.06	52.43	--
16A	110-0354●	92.77	84.36	81.83	79.37	--
25A	110-0355●	111.83	101.71	98.66	95.71	--
32A	110-0356●	126.45	115.00	111.56	108.21	--
45A	110-0357●	136.34	124.97	118.49	112.06	--
60A	110-0358●	155.80	141.70	137.45	133.32	--
16A	110-0363●	89.25	82.24	79.77	77.38	--
25A	110-0364●	110.61	101.93	98.88	95.91	--
45A	110-0366●	128.41	118.33	114.78	111.34	--

Motor Inverter Filters

Single and Three Phase

ROXBURGH EMC



- Motor inverter high performance filters designed to enable inverters to meet the most stringent EMC limits as laid down in EN55022B
- Flexible mounting options ensure minimal panel space occupation
- Finger proof terminals are used up to 30A, and insulating boots cover stud terminals above 30A
- Designed to meet IEC950

Operating voltage	250V ac Single phase
Operating frequency	50Hz to 60Hz
Overload current	150% 1 minute, 200% 1 second
Typical worst case insertion loss	70-80dB
Rating	L W H
Single Phase	
3A	170 90 25
16A	214 145 40
Three Phase	
16A	214 204 47
30A	360 175 50
50A	618 230 70
100A	785 275 80

204061

Rating	Order Code	1+	5+	Price Each	10+	25+
Single Phase						
3A	118-7726●	64.56	62.17	57.21	52.56	49.99
16A	118-7730●	108.94	104.89	98.33	95.97	91.23
Three Phase						
16A	118-7732●	150.25	144.65	140.08	137.27	132.17
30A	118-7734●	159.94	153.98	141.70	121.16	115.25
50A	118-7735●	199.32	191.91	179.87	167.99	159.75
100A	118-7736●	331.09	318.88	298.93	288.49	274.31

Three Phase Filters - B84143 Series



8A to 150A



- Low leakage current
- Compact and easy to install
- Optimised for long motor cables and full load operation
- Construction complies with EN 133200, CSA 22.2 No. 8 1986
- UL recognised
- Safe to touch terminal connections

Operating voltage 520V
 Operating frequency 50Hz to 60Hz
 Overload capability 1.5 x Rated Current for 3 min/hour or 2.5 x Rated Current for 30 sec/hour
 Climate category 25/08/21

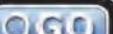
Current rating	Leakage Current @ 40°C (mA)	Dimensions L (O/A)	Dimensions W (mm)	Dimensions H (mm)	Weight (kg)	Mfrs. List No.	Order Code
8A	12	165	51.4	63	0.58	B84143A8R105	975-1157
16A	14	231	46.4	70	0.9	B84143A16R105	975-1165
25A	14	231	46.4	83	1.1	B84143A25R105	975-1173
36A	14	265	58	90	1.75	B84143A36R105	975-1181

234222

Rating	Order Code	1+	5+	10+	25+
8A	975-1157●	44.90	41.07	39.98	38.96
16A	975-1165●	49.44	44.08	42.93	41.83
25A	975-1173●	60.91	51.78	50.74	49.73
36A	975-1181●	86.29	78.91	76.83	74.86

234222

Over 480,000 products online

RoHS Compliant
Non-compliant

08447 11 11 11

Fax: 08447 11 11 12 1245



Installation Filters - continued

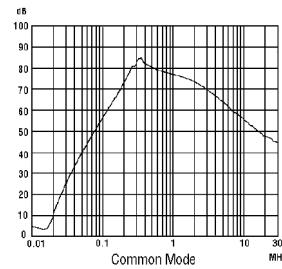
KMF Range Optimum Performance Three Phase

ROXBURGH EMC



967-076

- Industrial three phase filters designed to meet the requirements of **UL1283**, **EN133200**, and enable users to meet **EN55011A** and **EN55022B** legislation.
- High performance, lightweight, small footprint and IP rated terminal blocks
- Book end case style ensures easy fitting into cabinets and panel



Operating temperature	-25°C to +100°C	Voltage rating	500V ac up to 25A 520V ac above
Rating	Leakage Current (mA)	Dimensions L W H (kg)	Weight Mfrs. List No. Order Code
18A	30	229 55 114	1.2 KMF 318 118-7741
25A	42	229 55 224	1.2 KMF 325 118-7742
36A	42	272 74 161	2.7 KMF 336 118-7743
50A	90	272 74 161	2.9 KMF 350 118-7744
70A	90	312 93 190	4.1 KMF 370 118-7745
100A	198	319 93 190	4.5 KMF 3100 118-7746

204157

Rating	Order Code	1+	5+	10+	25+	50+
18A	118-7741●	91.22	82.25	72.39	66.79	56.11
25A	118-7742●	103.39	93.23	82.03	75.69	63.60
36A	118-7743●	133.82	120.64	106.17	97.94	82.30
50A	118-7744●	135.48	122.11	107.47	99.15	83.32
70A	118-7745●	164.69	148.45	130.66	120.53	101.29
100A	118-7746●	191.26	172.42	151.73	139.99	117.62

3 Phase Inverter Filters FN3258 Series



- 3 Phase filters for industrial frequency inverters and motor drive systems
- Exceptional attenuation from 150kHz to 30MHz
- Designed to meet **EN133200**, **UL1283** and **CSA 22.2 No. 8 1986**
- Ultra-compact bookend style case for vertical or horizontal mounting
- Input and output via terminal blocks.

Operating voltage 480V
Overload capability 4 x Rated Current at switch on, 1.5 x Rated Current for 1 min/hour
Operating frequency DC to 60Hz @ 50°C
Flame retardant to UL94V-4

Rating @ 50°C	Leakage Current (mA)	Dimensions L(O/A) W H	Fixing Centres	Weight (kg)	Mfrs. List No.	Order Code
7A	33.04	190 40 70	180 x 20	0.5	FN 3258-7/45	120-9494
30A	33.04	270 50 85	225 x 30	1.2	FN 3258-30/47	119-1403

233490

Rating	Order Code	1+	5+	10+	25+
7A	120-9494●	60.57	55.33	53.27	47.93
30A	119-1403●	118.96	108.66	104.82	94.21

DIN Rail Filters



- General purpose DIN rail mounting filter for use in industrial applications and rack mounted equipment
 - Compact design which offers high performance and VDR protection
 - Can be used in conjunction with Roxburgh DIN rail surge suppressors
 - Designed to meet **IEC 950**, **UL**, **CSA** and **VDE** requirements.
- H=74, W=80, D=22.5

Rating	Inductance (mH)	Resistance Per Winding (MΩ)	Mfrs. List No.	Order Code
1A	18	640	DRF01	118-7690
3A	3.2	71	DRF03	118-7691
6A	1.4	19	DRF06	118-7692
8A	1.5	15	DRF08	118-7694

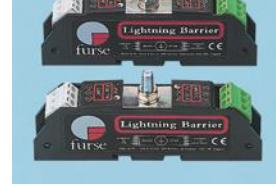
Voltage rating	250V ac -25°C to + +85°C	Line frequency	DC to 440Hz	204052
Rating	Order Code	1+	10+	25+
1A	118-7690●	37.57	36.46	32.96
3A	118-7691●	39.29	38.12	34.46
6A	118-7692●	39.29	38.12	34.46
8A	118-7694●	42.41	41.15	36.48
				31.48 29.11

Data Line Protectors

Data and Signal Line Protectors



- Use on data and signal lines to protect connected equipment from lightning and transient overvoltage damage
- Ultra low in-line resistance and extra high running current with **ESP 06E**, **ESP 15E**, **ESP 30E** and **ESP 50E** versions
- DIN rail or flat base/side mounting
- Simultaneous mounting and earthing kits for up to 4 or 8 protectors



H=55, W=120, D=19

- Colour coded terminals for quick and easy installation check
- IP66** enclosure available for up to 4 protectors (plus mounting kit)
- Fully tested to **BS 6651** and Ofot approval **NS/G/1235/W/100025**

Mfrs. List No.	Max Voltage	In-line Resistance	Max Line Current	Peak let-through voltage	Max Surge Current	Max Surge Bandwidth	Order Code
ESP06DFN.	7.79V	9.4Ω	300mA	10.5V	10kA	800kHz	188-487
ESP15DFN.	19V	9.4Ω	300mA	23.8V	10kA	2.5MHz	188-499
ESP30DFN.	37.1V	9.4Ω	300mA	43.4V	10kA	4MHz	188-505
ESP06EFN.	7.79V	1Ω	1.25A	10.8V	10kA	1.5MHz	188-529
ESP15EFN.	16.7V	1Ω	1.25A	26.2V	10kA	>10MHz	188-530
ESP30EFN.	36.7V	1Ω	1.25A	44.3V	10kA	>10MHz	188-542

204170

Mfrs. List No.	Protectors	Order Code	Price Each
ESP06DFN.	188-487	1+	5+
ESP15DFN.	188-499	60.66	57.74
ESP30DFN.	188-505	60.66	57.74
ESP06EFN.	188-529	74.84	71.25
ESP15EFN.	188-530	74.84	71.28
ESP30EFN.	188-542	58.70	55.90

204170

Telephone Line Protectors



- Use to protect telecom systems and equipment from lightning and transient overvoltage damage
- High performance long lifetime protection
- ESP TN** for use on single pair telemetry or network lines (Order code: 188-566)
- ESP TN/BX** offers all the protection of ESP TN boxed to IP66



Max. working voltage	296V	Max. line current	300mA
Peak 'let-through' voltage	200V	Max. surge current	10kA
In-line resistance	4-4Ω	Bandwidth	15MHz

204172

Mfrs. List No.	Dimensions H W D	Order Code	Price Each
ESPTN/BX.	58 110 75	188-578	76.14 72.47
ESPTN/IP.	31 132 62	188-580	92.90 88.43
ESPTN.	55 120 19	188-566	49.28 41.89

204172

CCTV Systems Protector



- Use to protect CCTV cameras and systems from lightning and transient overvoltage on coaxial CCTV cables
- Provides repeated and impairment free protection and suitable for both earthed/isolated screen systems (188-621) or ESP 415 M1 (188-633)
- Protect external cameras in conjunction with a protector for twisted pair lines (e.g. ESP 15D) for telemetry input and low current protector (e.g. ESP 240-5A) for the mains input
- DIN rail or flat base/side mounting
- Fully tested to **BS 6651**



H=54, W=19, D=120

- DIN rail or flat base/side mounting
- Fully tested to **BS 6651**



Max. working voltage Peak 'let-through' voltage In-line resistance	6.45V 17V 1Ω	Max. line current Max. surge current	300mA 10kA	
Mfrs. List No. ESP CCTV/B.	Order Code 188-591	Price Each 74.84	204156	5+

SDX Series DIN Rail Mounting - 7mm Wide



H-102, W=7, D=99

Peak surge current 10kA (6.5kA SD150X & 275X) Leakage current 5μA (250μA SD150X & 275X)
 Max. line current 400mA Operating temperature -30°C to +75°C
 In-line resistance 4.2Ω (0.1Ω SD150X & 275X)

Mfrs. List No.	Clamping Voltage	Order Code	1+	5+	10+	25+	50+	Price Each
SD32X	32V	772-471	72.57	66.45	63.79	62.20	61.15	
SD150X	120V (ac rms)	772-495	58.29	54.52	51.22	48.01	45.33	

MA3100 Series



MA3145-230-1-R



MA3145-230-4-R

The MA3100 Series offers cost effective surge protection for applications described by IEC 61312 where the surge protector could carry a partial share of the lightning surge current.

- Space saving design, DIN rail mounting
- IEC Class I, II and III products available
- Single pole Ipeak of 60kA (10/350μs) for Class I devices
- Multiple pole Ipeak of >100kA (10/350μs) for Class I devices
- Full range of AC mains power applications
- Coordinated surge protection to IEC 61312; rated according to IEC 61643

Mfrs List No.	Voltage Rating (AC)	Strike Voltage	Surge Current	Peak Pulse Current	Leakage Current	Response Time	Order Code
MA3145-230-1-R	120V	150V	10kA	10kA	0.3mA	<25ns	130-8573
MA3145-230-4-R	230V	270V	45kA	45kA	0.3mA	<25ns	130-8574

452232

Mfrs. List No.	Order Code	1+	5+	10+	Price Each
MA3145-230-1-R	130-8573	76.00	72.20	68.40	
MA3145-230-4-R	130-8574	205.00	194.75	184.50	

SAPN Line Transient Barriers



175-016 mounted on 175-017

- Protects electronic equipment and systems against surges on signal and I/O cabling
- Multistage hybrid protection circuitry - 10 kA peak current capability
- Easily installed
- Where the barrier is to protect a telephone line, the SAPN should be used
- IP65 enclosures are available containing mountings for 2 barriers
- DIN rail mounting kits are available for 2 barriers

Barrier: L=140, W=24, H=25, excluding M5 x 10 stud 175-017: L=125, W=32, H=19, excl. earth stud	Peak surge current In-line resistance	10kA SA - 43Ω
	Maximum line current	PC - 1Ω SA - 500mA

452211

Type	Clamping Voltage	Order Code	1+	5+	10+	25+	Price Each
SAPN	200V	175-016	91.41	86.85	80.48	72.61	
Din Rail Kit	2 way	175-017	21.59	21.27	20.77	18.52	
IP65 enclosure	2 barriers	176-171	62.08	57.20	52.89	43.98	

SDPSTN Series

 A Member of the MTL Instruments Group plc


- Suitable for PSTN telecom/modem applications
- Ultra slim space saving design
- Automatic earthing with simple DIN rail mounting
- Installation is easy - one simple manual operation clamps the SDPSTN securely on to the DIN rail
- High integrity earth connection

L = 101.3, W = 99, D = 7
 Current rating 550mA
 Leakage current 5mA
 Voltage rating a.c. 114V

452231

Mfrs. List No.	Order Code	1+	5+	10+	25+	50+	Price Each
SDPSTN	130-8571	82.62	78.49	74.56	70.83	67.29	

MSAPN Weatherproof Line Transient Barriers

 A Member of the MTL Instruments Group plc


L = 120 (165 incl. glands), W = 80, H = 55

452212

Type	Clamping Voltage	Order Code	1+	5+	10+	Price Each
MSAPN	200V	262-638	81.49	73.13	62.46	

 A Member of the MTL Instruments Group plc

DP200/BT Telecom Lightning Protector



H=75, W=110, D=28
 Fixing centres=90 x 55, 4mm dia
 Cable length=0.37m

Surge protection
In-line resistance

10000A
5Ω per line

452213

Mfrs. List No.	Order Code	1+	5+	10+	Price Each
DP200/BT	304-7714	109.46	100.69	95.68	

Aerial Protector

CA90/B/50 Antennae Protection

 A Member of the MTL Instruments Group plc
L=60, W=25, H=25
(excluding mounting bracket)

- High current devices for the protection of radio transmitters and receivers connected to coaxial feeders
- High energy coax arrestor with a very high bandwidth and low voltage standing wave ratio (VSWR)
- Protects vulnerable equipment without effecting normal operation
- The unit with BNC connectors is easily mounted and precision engineered from nickel plated aluminium to resist corrosion even in severe conditions
- It will protect receivers or transmitters from lightning, NEMP (Nuclear Electro-Magnetic Pulse) and other surges picked up by aerial installations
- Built to satisfy both JIS and MIL standards

Clamping voltage Characteristic impedance Surge rating Max. transmitter power	90V 50Ω 10kA (8/20μs) 60W	Bandwidth VSWR Insertion loss Mfrs. List No.	<1.2 <0.3dB CA90/B
--	------------------------------------	---	--------------------------

452215

Order Code	1+	5+	10+	25+	50+	Price Each
178-738	69.41	65.75	62.46	59.05	55.95	

Aerial Protector - continued**NexTek****PTR Series Gas Discharge Tube Lightning Arrestors**

With Replaceable Protective Element



- Choice of N, BNC and TNC connections
- Multiple strike capability
- Bi-directional protection
- Rugged and water resistant

Operating temperature 40 to 90°C
Protection voltage 90V
Let through voltage 600V
RF Power 37W
Impedance 50ohm

N Connector BNC Connector TNC Connector

Connector Type	Through Current (A)	Surge Protection (kA)	Length	Dia.	Mfrs. List No.	Order Code
N	10	40	71.3	26	PTRONMONFO9S	130-5448
BNC	7.5	50	50.3	25.9	PTRBNMBNF09S	130-5449
TNC	7.5	40	56	25.9	PTRTNMTNF09S	130-5450

452040

Order Code	Price Each			
	1+	3+	5+	10+
All Values ●	73.24	67.61	63.92	58.61

PTC-F01

Lightning Arrestor



- DC pass
- Multiple Strike Capability
- Rugged and Waterproof
- Bi-directional Protection
- Compatible with RG-6 cable

Frequency max. 2.5GHz RF Power 25W
Surge protection 20kA Impedance 75ohm
Through current 3A Operating temperature 40 to 90°C
Protection voltage 48V Dimensions (L x Ø) 56.6 x 18.8mm
Let through voltage 600V

452046

Order Code	Price Each			
	1+	3+	5+	10+
130-5452●	25.01	23.09	21.83	20.02

PTCSAFSAF20G

Gas Discharge Tube Type Arrestor



- Superior RF Performance
- Normal and reverse polarity SMA connectors
- Multiple Strike Capability
- Rugged and Waterproof
- Bi-directional Protection

Frequency max. 12.5GHz Surge protection 20kA
Through current 5A Protection voltage 65V
Let through voltage 475V RF Power 100W
Impedance 50ohm Operating temperature 40 to 90°C
Dimensions (L x Ø) 36.2 x 16.6mm

452048

Order Code	Price Each			
	1+	3+	5+	10+
130-5454●	66.57	61.46	58.11	53.28

Need a better price?

Buy more and save more with our volume pricing service.

Contact us now:

Web: www.farnell.co.uk
Phone: 08447 111111**N to N Quarter Wave Protectors****NexTek****QSS Series**

- Low VSWR
- Low insertion loss
- Extremely high transient capability
- Available in normal and reverse polarity
- Bi-directional protection
- Rugged and weatherproof

Operating temperature 40 to 90°C

Maximum transient 60kA

Let through voltage 7V

RF Power 4000W

Impedance 50ohm

Operating temperature 40 to 90°C

Operating temperature 62.2 x 32mm

QSSNMFY00 QSSNMNFO400

Frequency Range (GHz)	Let Through (V)	Mfrs. List No.	Order Code
2.2 to 2.6	7	QSSNMFY00	130-5455
2.4 to 6	11	QSSNMNFO400	130-5456

452049

Order Code	Price Each			
	1+	3+	5+	10+
All Values ●	100.79	93.05	87.97	80.66

L=90, W=175, H=60 L=176, W=110, H=72

Power Entry Filters**Bowthorpe****Distribution Surge Protectors**

- Provides an economic means of preventing damage to electrical distribution systems from mains borne transient voltages. These can occur when capacitive or inductive loads are switched, or as a result of a nearby lightning strike.
- Housed in an epoxy painted steel case. Designed to meet **BS6651 1992 Appendix C Location Category C** Primary Protection

Single current handling Response time	Max. (8/20μs) 20kA <10ns	Terminals Operating temp	16mm² -40°C to 70°C
Single Phase	Three Phase		
Voltage rating 230V	400V		
Leakage current 200μA	600μA		

Mfrs. List No. DSP1BOW=580-120

Mfrs. List No. DSP1BOW=580-120, DSP3-BOW=580-132

204038

Order Code	Price Each			
	1+	5+	10+	
Single Phase 580-120	237.00	217.87	198.13	
Three Phase 580-132	443.75	407.32	365.88	

Surge Protector**Bowthorpe****6651C1/3**

H=61, W=81, D=182, Lead Length=500 FC=168 x 36 Dia 5

- Distribution system protection from mains borne voltage spikes and surges
- High energy elements absorb or re-direct mains borne transients
- 2 stage varistor protection
- Lights indicate status of protection
- Quick and easy to install, no complicated by-pass wiring
- Can be installed at any angle, as close as possible to distribution panel
- Designed to meet **BS6651 1992 Appendix C Location Category C**

	Single Phase 6651C/1	Three Phase 6651C/3
Voltage rating	230V rms	400V rms
Max surge handling (8/20μs)	10kA	10kA
Response time	<10ns	<10ns
Cable supplied (0.5m)	3 core 2.5mm ²	5 core 2.5mm ²
Indicator lights	Green - Full protection Red/Green - reduced protection Red - no protection	Green - Full protection Red/Green - reduced protection Red - no protection
IP Rating	IP54	IP54

204110

	Order Code	1+	5+	10+	25+	50+	Price Each
Single Phase	869-569	165.88	152.31	130.16	119.64	109.20	
Three Phase	869-570	351.82	325.51	278.19	265.90	233.40	

Low Current Mains Protectors

- Use to protect mains equipment fused at 5A or less from lightning and transient overvoltage damage
- Very low 'let through' voltage between all conductors
- DIN rail mounting, ESP 120-5A & ESP240-5A, with removable foot
- Series connection and long lifetime
- Fully tested to BS 6651, IEEE C62.41, AS 1768



Mfrs. List No.	Working Voltage (rms)	Max. Operating Current	Peak 'let-through' Voltage	Peak Discharge Current	Outer Enclosure	Order Code
ESP240-5A.	200-280V	40-60Hz	5A	590V	10kA	—

204171

Mfrs. List No.	Dimensions H x W x D	Order Code	1+	5+	10+	Price Each
Din Rail Mounting	38 120 54	188-645	71.29	60.60	53.87	

Mains Distribution Protectors

- Use on mains distribution systems to protect equipment from lightning and transient overvoltage
- Simple parallel connection makes protectors suitable for all supply currents
- Very low 'let-through' voltage between all conductors
- 3-way visual indication of protector status
- Remote status indication
- Sovtrip™ multiple thermal disconnect system
- Flashing warning of neutral to earth supply faults



- Maintenance free and long lifetime
- Optional IP66 (WBX 4) and IP67 (WBX3) enclosures available
- Fully tested to BS 6651, IEEE C62.41, AS1768

Mfrs. List No.	Working Voltage (rms)	Max. Operating Current	Peak 'let-through' Voltage	Peak Discharge Current	Dimensions (mm)	Order Code
ESP240M1.	200-280V	40-60Hz	5A	600V	30kA	180 x 60 x 60
ESP415M1.	90150V	4060Hz	5A	390V	10kA	180 x 110 x 60

204055

Mfrs. List No.	Protectors	Order Code	1+	5+	10+	Price Each
ESP240M1.	Single phase	188-621	251.61	246.59	223.67	
ESP415M1.	Three phase	188-633	503.24	493.18	447.31	

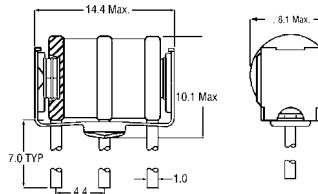
Gas Discharge Tubes**Greentube****14A, and 21A Styles**

- Used for the suppression of high transient voltages e.g. lightning induced spikes, thyristor control units and contactor changeover induced spikes
- The 21A style has the advantage of a thermally operated short circuiting bar to dissipate extreme transients
- All units use a totally non-radioactive construction.

Note: When used in conjunction with BT equipment, all appropriate regulations must be adhered to.

Reference	121-9727	120-0441
Insulation resistance (min)	GDT14A	GDT21A
dc sparkover voltage	100MΩ	100MΩ
Impulse sparkover voltage (max)	210 to 310V	150 to 250V
Alternating discharge current	800V	450V
Impulse discharge current	5A	5A
Capacitance (max)	5kA	5kA
Holdover voltage (max)	5pF	5pF
Mfrs. List No.	100V	100V
	SL1021/260/RA	SL1021/200/RFA

Order Code	1+	25+	100+	250+
121-9727●	2.90	2.77	2.41	2.11
120-0441●	3.06	2.82	2.54	2.30

Hybrid Arrestor

- Incorporates gas discharge tube technology and transient voltage suppressor diodes
- No extra component cost
- Combines high current handling with fast response
- Compatible with most GDT connection systems
- Suitable for most telecom and electronic applications

Alternating discharge current	5A	Impulse discharge current	5A
Insulation resistance	1 x 10 ⁸ Ω	Capacitance	200pF max
Nominal Voltage (V)	DC Sparkover Voltage (V)	Max Impulse Sparkover (V)	Holdover (V)
200V	140-250	250	120
450V	420-600	600	135

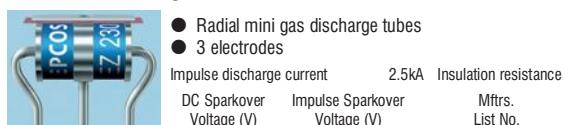
Nominal Voltage	Order Code	1+	25+	100+	250+	500+	1K+	Price Each
200V	120-0442●	3.87	3.64	3.50	2.96	2.81	2.47	
450V	120-0443●	2.51	2.37	2.28	1.91	1.80	1.61	

Mini Gas Discharge Tubes 2.5kA - 2 Electrode

L = 6, Dia. = 5.5, Lead length = 27, Lead dia. = 0.8

- Axial mini gas discharge tubes
 - 2 electrodes
- | DC Sparkover Voltage (V) | Impulse Sparkover Voltage (V) | Mfrs. List No. | Order Code |
|--------------------------|-------------------------------|----------------|------------|
| 90 | <350 | B88069X190S102 | 129-9953 |

Mfrs. List No.	Order Code	1+	25+	50+	100+	250+	Price Each
B88069X190S102	129-9953●	1.93	1.61	1.42	1.24	1.06	

Mini Gas Discharge Tubes 2.5kA - 3 Electrode

● Radial mini gas discharge tubes

● 3 electrodes

Impulse discharge current 2.5kA

Insulation resistance 1GΩ

DC Sparkover Voltage (V)	Impulse Sparkover Voltage (V)	Mfrs. List No.	Order Code
230	<600	B88069X2591B502	129-9960

Mfrs. List No.	Order Code	1+	25+	50+	100+	250+	Price Each
B88069X2591B502	129-9960●	1.95	1.62	1.42	1.24	1.06	
	129-9960●	2.87	2.45	2.15	1.87	1.62	

DC Sparkover Voltage (V)	Impulse Sparkover Voltage (V)	Mfrs. List No.	Order Code
90	<400	B88069X8300B502	129-9961
230	<450	B88069X8910B502	129-9962

Mfrs. List No.	Order Code	1+	25+	50+	100+	250+	Price Each
B88069X8300B502	129-9961●	1.89	1.74	1.54	1.47	1.39	
B88069X8910B502	129-9962●	2.87	2.45	2.15	1.87	1.62	



£ € 40,000 PRICES REDUCED

Gas Discharge Tubes - continued

Short Circuit Gas Discharge Tubes 10kA



- Short circuit gas discharge tubes
- 3 electrodes



Impulse discharge current	10kA	Insulation resistance	10GΩ
DC Sparkover Voltage (V)	Impulse Sparkover Voltage (V)	Mfrs. List No.	Order Code
230	<400	B88069X8680B502	129-9964
230	<450	B88069X9420B502	129-9963
L = 13.4, Dia. = 8, Lead dia. = 1			452148

Gas Discharge Tubes – 5kA Ceramic



- Ceramic insulator surge arresters for overvoltage protection in telecom and control systems
- Button cell, radial and axial lead types available up to 600V



Impulse discharge current: 5kA
Insulation resistance: >10GΩ
Capacitance: <2pF

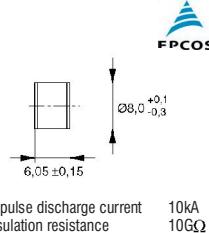


D.C. Sparkover Voltage	Impulse Sparkover Voltage	Type	Mfrs. List No.	Order Code
90	<600	Axial	EC90X	304-3174
150	<700	Axial	B88069X880S102	121-8962
230	<700	Axial	EC230X	304-3216
350	<900	Axial	EC350X	304-3228
600	<1300	Axial	EC600X	304-3230
260	<600	Radial	ES260XP	521-2467
300	<600	Radial	ES300XP	521-2479

204179

Style	Order Code	1+	25+	50+	100+	Price Each
Axial						
EC90X	304-3174●	1.63	1.57	1.49	1.29	
B88069X880S102	121-8962●	1.52	1.30	1.14	0.99	
EC230X	304-3216●	1.57	1.19	0.92	0.77	
EC350X	304-3228●	1.57	1.19	0.92	0.77	
EC600X	304-3230●	1.99	1.65	1.60	1.37	
Radial						
ES260XP	521-2467●	1.86	1.60	1.45	1.32	
ES300XP	521-2479●	1.82	1.56	1.42	1.29	

Gas Discharge Tubes - 10kA



- Metal ceramic gas discharge tubes
- N80 type is button cell, N81 types axial lead

DC Sparkover Voltage (V)	Impulse Sparkover Voltage (V)	Mfrs. List No.	Order Code
90	<600	N81-A90X	564-023
230	<500	B88069X4930S102	129-9956
350	<950	N81-A350X	564-047
600	<1100	B88069X2830S102	129-9957

220479

Mfrs. List No.	Order Code	1+	25+	50+	100+	Price Each
N81-A90X	564-023●	2.14	1.70	1.45	1.23	
B88069X4930S102	129-9956●	2.22	1.85	1.61	1.41	
N81-A350X	564-047●	1.94	1.48	1.13	0.94	
B88069X2830S102	129-9957●	1.77	1.46	1.29	1.12	

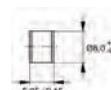
Technical information at your fingertips

Over 352,000 technical datasheets available online.

Visit www.farnell.co.uk and look for the Tech Info heading in your search results.

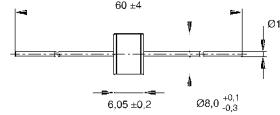


Gas Discharge Tube - 20kA



- 20kA metal ceramic gas discharge tubes
- A81 types have axial leads

Impulse discharge current 20kA
Insulation resistance >10GΩ
Capacitance <1.5pF



220478

Mfrs. List No.	Order Code	1+	25+	50+	100+	Price Each
B88069X1380S102	NEW 129-9958●	2.39	1.94	1.55	1.34	
A81-C90X	564-060●	2.28	1.73	1.34	1.11	
A81-A230X	434-292●	2.02	1.65	1.58	1.36	
A81-A350X	564-084●	2.61	2.39	2.06	1.92	
B88069X2880S102	NEW 129-9959●	2.61	2.18	1.90	1.65	

Gas Discharge Tubes 3 Electrode - 20kA

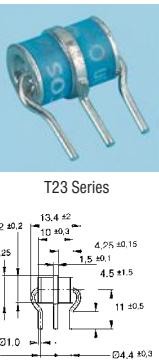
T20 Series



T21 Series



T23 Series



- 3 electrode ceramic insulator gas discharge tubes

Impulse discharge current 20kA
Insulation resistance >10GΩ
Capacitance <1.5pF

DC Sparkover Voltage (V) 20kA
Impulse Sparkover Voltage (V) <350
Mfrs. List No. T21-A230X
Order Code 976-260

DC Sparkover Voltage (V) 230
Impulse Sparkover Voltage (V) <300
Mfrs. List No. T23-A230X
Order Code 564-199

DC Sparkover Voltage (V) 350
Impulse Sparkover Voltage (V) <700
Mfrs. List No. T23-A350X
Order Code 564-205

204139

Mfrs. List No.	Order Code	1+	25+	50+	100+	Price Each
T21-A230X	976-260●	3.50	3.18	3.02	2.75	
T23-A230X	564-199●	3.74	2.86	2.19	1.83	
T23-A350X	564-205●	3.17	2.62	2.38	2.01	

Gas Discharge Tubes - 90V



- Gas discharge tubes
- 2 and 3 electrodes

Order Code	H	W	D
151-1743	6.6mm	5.4mm	5mm
151-1744	9.3mm	8.3mm	6.05mm
151-1745	8mm	5mm	5.6mm

2 Electrodes

Impulse discharge current 5kA
Insulation resistance 1Gohm
DC Sparkover Voltage 90V
Impulse Voltage 600V
Mfrs. List No. B88069X1640T902Gohm
Order Code 151-1743

Impulse discharge current 20kA
Insulation resistance 10Gohm
DC Sparkover Voltage 90V
Impulse Voltage 600V
Mfrs. List No. B88069X1630T602Gohm
Order Code 151-1744

Mfrs. List No.	Order Code	1+	25+	50+	100+	250+
B88069X1640T902	151-1743●	1.95	1.67	1.51	1.31	1.16
B88069X1630T602	151-1744●	2.48	2.12	1.91	1.65	1.48

3 Electrodes

Impulse discharge current 5kA	Insulation resistance 1Gohm	DC Sparkover Voltage 90V	Impulse Voltage 700V	Mfrs. List No. B88069X4051T902Gohm	Order Code 151-1745	452148
Price Each						
B88069X4051T902	151-1745●	3.02	2.58	2.32	2.01	1.82

SMD Surge Arrestors


New  

● 2 electrodes						
● Fast response time						
● Extremely small size						
Impulse discharge current 2kA						
DC Sparkover Voltage (V)	Impulse Sparkover Voltage (V)	Mfrs. List No.	Order Code			
150	<600	B88069X6071T203	168-8766			
400	<950	B88069X5211T203	168-8767			
L = 4.5, W = 3.2, D = 2.7			528795			
Price Each						
Mfrs. List No.	Order Code	1+	25+	50+	100+	250+
B88069X6071T203	168-8766●	0.79	0.70	0.63	0.53	0.48
B88069X5211T203	168-8767●	0.79	0.70	0.63	0.53	0.48

Varistors**Varistor Safety Precautions**

Should the varistor be subjected to surge currents and energy levels in excess of maximum ratings it may physically fail by package rupture or expulsion of material.

If not fused the varistor should be located away from other components or be physically shielded from them.

213829

SMD Varistors– MLV Standard Series


● Suitable for ESD protection
● Surge currents up to 1200 A
● Bidirectional clamping
● Case sizes ranging from 0603 to 1210

Max. AC Op. Volt. (V)	Trans Energy (2ms) Volt. (J)	Peak Surge Current 8/20us A	Varistor Volt W 1mA (V)	Max. Clamp. Voltage V A	Toler.Vv (1mA) %	Mfrs List No.	Order Code
0402 Case Size							
4	5.5	7.5mJ	20	10	24 @ 1A ±20%	B72590T0040M060	168-8759
11	14	7.5mJ	20	18.4	35 @ 1A ±10%	B72590T0110S160	168-8760
14	16	10mJ	20	23.5	46 @ 1A ±15%	B72590T0140L060	168-8761
17	19	10mJ	20	32	59 @ 1A ±25%	B72590T0170S160	168-8762
0603 Case Size							
4	5.5	0.1	30	9.6	19 @ 1A ±20%	B72500T40M60	883-2374
6	8	0.1	30	13.2	27 @ 1A ±20%	B72500T60M60	883-2382
7	9	0.1	30	30 @ 1A	±20%	B72500T70M60	883-2390
11	14	0.2	30	19.8	35 @ 1A ±10%	B72500T110K60	883-2412
14	18	0.2	30	24.2	40 @ 1A ±10%	B72500T140K60	883-2420
17	22	0.2	30	29.7	46 @ 1A ±10%	B72500T170K60	883-2439
20	26	0.2	30	36.3	56 @ 1A ±10%	B72500T200K60	883-2447
25	31	0.3	30	42.9	67 @ 1A ±10%	B72500T250K60	883-2455
0805 Case Size							
4	5.5	0.1	100	9.6	19 @ 1A ±20%	B72510T40M62	883-2463
6	8	0.2	120	13.2	27 @ 1A ±20%	B72510T60M62	883-2471
8	11	0.2	120	17.25	33 @ 1A ±15%	B72510T80L62	883-2480
11	14	0.2	120	19.8	35 @ 1A ±10%	B72510T110K62	883-2498
14	18	0.3	120	24.2	40 @ 1A ±10%	B72510T140K62	883-2501
17	22	0.3	120	29.7	46 @ 1A ±10%	B72510T170K62	883-2510
20	26	0.3	80	36.3	56 @ 1A ±10%	B72510T200K62	883-2528
25	31	0.3	80	42.9	67 @ 1A ±10%	B72510T250K62	883-2536
30	38	0.3	80	51.7	77 @ 1A ±10%	B72510T300K62	883-2544
1206 Case Size							
4	5.5	0.3	150	9.6	17 @ 1A ±20%	B72520T40M62	883-2552
6	8	0.4	200	13.2	25 @ 1A ±20%	B72520T60M62	883-2560
8	11	0.5	200	17.25	30 @ 1A ±15%	B72520T80L62	883-2579
11	14	0.5	200	19.8	33 @ 1A ±10%	B72520T110K62	883-2587
14	18	0.5	200	24.2	38 @ 1A ±10%	B72520T140K62	883-2595
17	22	0.6	200	29.7	44 @ 1A ±10%	B72520T170K62	883-2609
20	26	0.7	200	36.3	54 @ 1A ±10%	B72520T200K62	883-2617
25	31	1	200	42.9	65 @ 1A ±10%	B72520T250K62	883-2625
30	38	1.1	200	51.7	77 @ 1A ±10%	B72520T300K62	883-2633
35	45	0.4	100	61.6	90 @ 1A ±10%	B72520T350K62	883-2641
40	56	0.5	100	74.8	110 @ 1A ±10%	B72520T400K62	883-2650
50	65	0.6	100	90.2	135 @ 1A ±10%	B72520T500K62	883-2668
60	85	0.7	100	110	165 @ 1A ±10%	B72520T600K62	883-2676
1210 Case Size							
4	5.5	0.4	250	9.6	17 @ 2.5A ±20%	B72530T40M62	883-2684
6	8	0.7	300	13.2	25 @ 2.5A ±20%	B72530T60M62	883-2692
11	14	1.2	400	19.8	33 @ 2.5A ±10%	B72530T110K62	883-2714
20	26	1.9	400	36.3	54 @ 2.5A ±10%	B72530T200K62	883-2749
25	31	1.7	300	42.9	65 @ 2.5A ±10%	B72530T250K62	883-2757

Max. AC Op. Volt. (V)	Trans Energy (2ms) Volt. (J)	Peak Surge Current 8/20us A	Varistor Volt W 1mA (V)	Max. Clamp. Voltage V A	Toler.Vv (1mA) %	Mfrs List No.	Order Code
1210 Case Size							
30	38	2	300	51.7	77 @ 2.5A ±10%	B72530T300K62	883-2765
35	45	2	250	61.6	90 @ 2.5A ±10%	B72530T350K62	883-2773
60	85	2	200	110	165 @ 2.5A ±10%	B72530T600K62	883-2803

Max. AC Op. Volt. (V)	Trans Energy (2ms) Volt. (J)	Peak Surge Current 8/20us A	Varistor Volt W 1mA (V)	Max. Clamp. Voltage V A	Toler.Vv (1mA) %	Mfrs List No.	Order Code
1812 Case Size							
4	5.5	0.8	500	8	17 @ 1A ±20%	B72580V0040M062	168-8742
6	8	1	500	11	25 @ 1A ±20%	B72580V0060M062	168-8744
11	14	1.9	800	18	33 @ 1A ±10%	B72580V0110K062	168-8746
14	18	2.3	800	22	38 @ 1A ±10%	B72580V0140K062	168-8748
17	22	2.7	800	27	44 @ 1A ±10%	B72580V0170K062	168-8750
20	26	3	800	33	54 @ 1A ±10%	B72580V0200K062	168-8752
25	31	3.7	800	39	65 @ 1A ±10%	B72580V0250K062	168-8755
30	38	4.2	800	47	77 @ 1A ±10%	B72580V0300K062	168-8757

Max. AC Op. Volt. (V)	Trans Energy (2ms) Volt. (J)	Peak Surge Current 8/20us A	Varistor Volt W 1mA (V)	Max. Clamp. Voltage V A	Toler.Vv (1mA) %	Mfrs List No.	Order Code
2220 Case Size							
4	5.5	1.4	1000	8	17 @ 1A ±20%	B72540V0040M062	168-8743
6	8	3.6	1200	11	25 @ 1A ±20%	B72540V0060M062	168-8745
11	14	5.4	1200	18	33 @ 1A ±10%	B72540V0110K062	168-8747
14	18	5.8	1200	22	38 @ 1A ±10%	B72540V0140K062	168-8749
17	22	7.2	1200	27	44 @ 1A ±10%	B72540V0170K062	168-8751
20	26	7.8	1200	33	54 @ 1A ±10%	B72540V0200K062	168-8754
25	31	9.6	1200	39	65 @ 1A ±10%	B72540V0250K062	168-8756
30	38	12	1200	47	77 @ 1A ±10%	B72540V0300K062	168-8758

386505

Case Size	Order Code	5+	20+	50+	100+	250+	500+
0402	NEW All Values ● RL	0.150	0.140	0.120	0.100	0.100	0.080
0603	All Values ● RL	0.340	0.320	0.310	0.280	0.240	0.187
0805	All Values ● RL	0.390	0.370	0.350	0.320	0.300	0.260
1206	All Values ● RL	0.450	0.410	0.380	0.350	0.320	0.270
1812	NEW All Values ● RL	1.090	0.980	0.860	0.740	0.690	0.590
2220	NEW All Values ● RL	1.950	1.770	1.550	1.330	1.240	1.060

Max. AC Op. Volt. (V)	Trans Energy (2ms) Volt. (J)	Peak Surge Current 8/20us A	Varistor Volt W 1mA (V)	Max. Clamp. Voltage V A	Toler.Vv (1mA) %	Mfrs List No.	Order Code
3225 Case Size							
130	170	4.2	400	205	340 @ 5A ±10%	B72650M131K72	995-8509
175	225	5.6					

Varistors - continued										
Multilayer Chip Varistors - continued										
Max. Op. Volt (AC) (DC)	Peak Surge Current 8/20μs A	Varistor Voltage @ 1mA (min) (max)	Clamp. Voltage V (8/20μs)	Mfrs List No.	Order Code	Working Voltage, V _{WM} (V)	Break- down Voltage, V _B (V)	Clamping Voltage, V _C (V)	Peak Current 8/20μs I _P (A)	Transient Energy Max. E _{TRAN} (J)
0402 Case Size										
4	5.5	2	10	14	22 @ 1A	VRS0402SR55R220N	130-5119			
4	5.5	6	10	14	22 @ 1A	VRS0402SR55R500N	130-5120			
4	5.5	11	10	14	22 @ 1A	VRS0402SR55R101N	130-5121			
4	5.5	65	10	14	22 @ 1A	VRS0402SR55R601N	130-5122			
7	9	20	10.2	13.8	22 @ 1A	VRS0402KR090500N	130-5123			
0603 Case Size										
4	5.5	30	6.4	9.6	15 @ 1A	VRS0603MR55R681N	130-5131			
4	5.5	30	6.4	9.6	15 @ 1A	VRS0603MR55R301N	130-5129			
										452118
Order Multiple=5										
Case Size	Order Code	5+	20+	50+	250+	500+				
0402	All Values ●	0.210	0.194	0.185	0.132	0.108				
0603	All Values ●	0.310	0.280	0.270	0.199	0.167				

ESD Suppressors



Panasonic
ideas for life



- ESD protection of high-speed data lines
- Low capacitance
- Good ESD suppression characteristics
- Good ESD withstanding

Operating temperature -55°C to +125°C
Voltage rating a.c. 15V
Clamping voltage 100V
Peak voltage 500V

Case Size	Rated Current Max. (mA)	Capacitance (pF)	Mfrs. List No.	Order Code
0402	1	0.05	EZAEG2A50AX	129-2691
0603	2	0.1	EZAEG3A50AV	129-2692
Case size	Order Code	10+	50+	Price Each
0402	SMD129-2691● RL	0.280	0.174	0.113 0.090 0.088
0603	SMD129-2692● RL	0.310	0.200	0.132 0.102 0.099

'Transguard' MLV – Surface Mount



0603 case size L=1.6 ± 0.15, W=0.8 ± 0.15, H=0.9 max.
0805 case size L=2.0 ± 0.2, W=1.25 ± 0.2, H=1.02 max.
1206 case size L=3.2 ± 0.2, W=1.6 ± 0.2, H=1.02 max.
1210 case size L=3.2 ± 0.2, W=2.49 ± 0.2, H=1.7 max.

Supplied on 8mm embossed tape

Working Voltage, V _{WM} (V)	Break-down Voltage, V _B (V)	Clamping Voltage, V _C (V)	Peak Current 8/20μs I _P (A)	Transient Energy Max. E _{TRAN} (J)	Capacitance Inductance nF nH		Mfrs. List No.	Order Code
					Max. 8/20μs	Max. 10/1000μs		
0402 Case Size								
5.6	7.6 - 9.3	15.5	20	0.05	0.175	1	VC040205X150WP	130-1916
14	16.5 - 20.3	30	20	0.05	0.1	1	VC040214X300WP	130-1917
18	22.9 - 28.8	40	20	0.05	0.065	1	VC040218X400WP	130-1918
0603 Case Size								
3.6	4.0 - 5.5	10	30	0.1	1.5	1.0	VC060303A100RP	118-9308
5.6	7.6 - 9.3	15.5	30	0.1	1	1.0	VC060305A150RP	118-9309
9	11 - 14	20	30	0.1	0.55	1	VC060309A200DP	130-1919
14	16.5 - 20.3	30	30	0.1	0.5	1.0	VC060314A300RP	118-9310
18	22.9 - 28.0	40	30	0.1	0.275	1.0	VC060318A400RP	118-9312
26	31 - 37.9	58	30	0.1	0.155	1	VC060326A580DP	130-1920
30	37 - 46	65	30	0.1	0.125	1	VC060330A650DP	130-1921
0805 Case Size								
3.6	4.0 - 5.5	10	40	0.1	1.775	1.5	VC080503A100DP	118-9313
5.6	7.6 - 9.3	15.5	40	0.1	1.1	1.5	VC080505A150DP	118-9314
5.6	7.1 - 8.7	15.5	120	0.3	2.75	1.5	VC080505C150DP	118-9315
9	11 - 14	20	40	0.1	0.75	1.5	VC080509A200DP	130-1924
14	16.5 - 20.3	30	40	0.1	0.43	1.5	VC080514A300DP	118-9316
14	15.9 - 19.4	30	120	0.3	0.9	1.5	VC080514C300DP	130-1927
18	22.9 - 28	40	30	0.1	0.225	1.5	VC080518A400DP	130-1928
18	22.5 - 27.5	40	100	0.3	0.55	1.5	VC080518C400DP	130-1929
26	-	50	30	0.1	0.80	1.5	VC08L1C18A500DP	165-8893
26	31 - 37.9	58	30	0.1	0.12	1.5	VC080526A580DP	130-1930
26	30.5 - 37.3	58	100	0.3	0.25	1.5	VC080526C580DP	130-1931

Working Voltage, V _{WM} (V)	Break-down Voltage, V _B (V)	Clamping Voltage, V _C (V)	Peak Current 8/20μs I _P (A)	Transient Energy Max. E _{TRAN} (J)	Capacitance nF	Inductance nH	Order Code
0402 Case Size							
30	37 - 46	65	30	0.1	0.09	1.5	VC080530A650DP
1206 Case Size							
5.6	7.6 - 9.3	15.5	40	0.1	1.2	1.7	VC120605A150DP
5.6	7.1 - 8.7	15.5	150	0.4	3	1.7	VC120605D150DP
14	16.5 - 20.3	30	40	0.1	0.6	1.7	VC120614A300DP
14	15.9 - 19.4	30	150	0.4	1.05	1.7	VC120614D300DP
18	22.9 - 28	40	30	0.1	0.4	1.7	VC120618A400DP
18	22.5 - 27.5	40	150	0.4	0.15	1.7	VC120618C400DP
26	30.5 - 37.3	58	120	0.4	0.55	1.7	VC120626D580DP
30	36.0 - 45.0	65	120	0.4	0.5	1.7	VC120630D650DP
38	42.3 - 51.7	77	200	1.1	0.35	1.7	VC120638N770DP
48	56 - 68	100	100	0.4	0.225	1.7	VC120648D101DP
56	61.2 - 74.8	110	100	0.7	0.18	1.7	VC120656F111DP
1210 Case Size							
18*	21.5 - 26.5	39	500	1.5	3.1	2.0	VC121018J390DP
30	36.9 - 45.1	67	280	1.2	1850	2	VC121030H620DP
60	68.4 - 83.6	120	250	1.5	400	2	VC121060J121DP

*Withstands 24.5V dc for 5 minutes (automotive applications)

204019

FREE technical support

Our trained engineers are here to help!

08447 11 11 22

techsales@farnell.co.uk

Live technical chat at
www.farnell.co.uk

Multiguard MLV Arrays

2 & 4 Elements



AVXs Transient Voltage Suppression (TVS) Arrays address six trends in today's electronic circuits:

- Mandatory ESD protection
- Mandatory EMI control
- Signal integrity improvement
- PCB down-sizing
- Reduced component placement costs
- Protection from induced slow speed transient voltages and currents

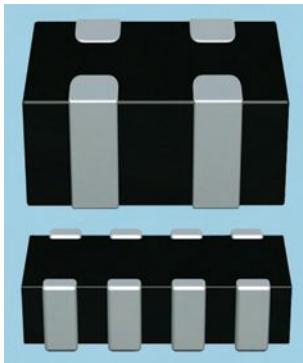


AVXs MultiGuard products offer numerous advantages, which include a faster turn-on-time (<1nS), repetitive strike capability, and space savings. In some cases, MultiGuard consumes less than 75% of the PCB real estate required for the equivalent number of discrete chips. This size advantage coupled with the savings associated with placing only one chip, makes MultiGuard the TVS component of choice for ESD protection of I/O lines in portable equipment and programming ports in cellular phones. Other applications include differential data line protection, ASIC protection and LCD driver protection for portable computing devices.

Element	Working Voltage (V)	Breakdown voltage (V)	Clamping voltage (V)	Peak current (A)	Transient energy (J)	Mfrs. List No.	Order Code
2	5.6	6.8 to 10.3	17.5	20	50	MG042505X150DP	756-8690
2	18	20.4 to 28	42	20	50	MG042L18V500RP	756-8703
4	5.6	6.8 to 9.3	15.5	30	0.1	MG054S05X150DP	756-8711
4	5.6	7.6 to 9.3	15.5	20	0.05	MG064S05A150DP	474-2072

339460

Elements	Case Size	Order Code	Price Each				
			5+	50+	250+	1K+	2K+
2	0405	SMD756-8690●	0.49	0.41	0.38	0.31	0.26
2	0405	SMD756-8703●	0.42	0.34	0.32	0.26	0.22
4	0508	SMD756-8711●	0.64	0.54	0.50	0.41	0.32
4	0612	SMD474-2072●	0.94	0.79	0.70	0.59	0.47

SMD Varistors Arrays

- Bidirectional protection
- Low capacitance
- No signal distortion
- Suitable for lead-free soldering

Max. AC Op. Volt. (V)	Trans. Energy (2ms) (mJ)	Peak Surge Current 8/20us A	Varistor Volt W 1mA (V)	Max. Clamp. Voltage V A	Mfrs. List No.	Order Code
2-Fold Array - 0405 Case Size						
17	22	10	10	40	50 @ 1A	B72762A2170S160
4-Fold Array - 0612 Case Size						
17	22	75	30	40	50 @ 1A	B72724A2170S162

528811

Case Size	Order Code	1+	20+	50+	100+	250+	500+
0405	SMD168-8764●	0.24	0.22	0.19	0.17	0.15	0.13
0612	SMD168-8763●	0.37	0.34	0.30	0.25	0.24	0.20

VC32 Series

- Surface mount single layer varistors
- Higher voltage ratings and transient energy ratings than typical MLVs
- Replacement for radial MOVs
- Applications include electric meters, industrial equipment, mains PSUs, telecommunications and consumer electronics

Operating temperature	-55 to 125°C	Dimensions (LxWxH)	8.51 x 5.26 x 2.03mm
V_{RMS}	V_p (A)	V_{DC} (Nominal)	Transient Energy (J)
175	225	455	270
230	300	595	360
250	330	650	390
275	368	710	430
			15
			200
			100
			90
			80

451428

Order Code	5+	25+	500+	1K+	3K+	+
All Values ●	0.450	0.340	0.250	0.220	0.158	--

ML Series – Surface Mount

- Transient surge suppressors to protect electronic devices from high voltage transients
- Manufactured from ceramic which offers rugged protection, excellent energy absorption and high internal heat dissipation
- Chip form eliminates lead conductance which ensures a fast response
- Low capacitance types do not reduce bandwidth of high speed signal lines
- Designed to fail short circuit when over stressed to protect associated equipment

Operating temperature -55°C to +125°C

Maximum Continuous Working Voltage (Vdc)	Maximum Non-repetitive Surge Current (A)	Maximum Energy (8/20μs)	Non-repetitive Surge Energy (10/1000μs)	Nominal DC Test Current (mA)	Maximum Voltage at 1mA (V)	Clamping Voltage at 10A (V)	Typical Cap. (nF)	Order Code
3.5	2.5	120	0.3	3.7	5.5	10 at 5A	2.75	V3.5MLA0805H
3.5	2.5	40	0.1	3.7	5.5	10 at 2A	1.2	V3.5MLA0805LH
5.5	4	120	0.3	7.1	9.3	15.5 at 5A	2.5	V5.5MLA0805H
5.5	4	40	0.1	7.1	9.3	15.5 at 2A	1.1	V5.5MLA0805LH
14	10	120	0.3	15.9	20.3	30 at 5A	0.45	V14MLA0805H
14	10	40	0.1	15.9	20.3	30 at 2A	0.45	V14MLA0805LH
18	14	120	0.3	22.5	28	40 at 5A	0.65	V18MLA0805H
18	14	40	0.1	22.5	28	40 at 2A	0.35	V18MLA0805LH

Order Code	5+	25+	100+	1K+
V3.5MLA0805H	0.49	0.38	0.30	0.24
V3.5MLA0805LH	0.49	0.38	0.30	0.24
V5.5MLA0805H	0.49	0.38	0.30	0.24
V5.5MLA0805LH	0.49	0.38	0.30	0.24
V14MLA0805H	0.49	0.38	0.30	0.24
V14MLA0805LH	0.49	0.38	0.30	0.24
V18MLA0805H	0.65	0.45	0.35	0.22
V18MLA0805LH	0.35	0.25	0.15	0.12

204035

Order Code	5+	25+	100+	1K+
SMD105-7215●	0.49	0.38	0.30	0.24
SMD105-7216●	0.49	0.38	0.30	0.24
SMD105-7217●	0.49	0.38	0.30	0.24
SMD105-7218●	0.49	0.38	0.30	0.24
SMD105-7220●	0.49	0.38	0.30	0.24
SMD105-7221●	0.49	0.38	0.30	0.24
SMD105-7222●	0.49	0.38	0.30	0.24
SMD105-7223●	0.49	0.38	0.30	0.24
SMD105-7225●	0.93	0.73	0.58	0.46
SMD105-7226●	0.93	0.73	0.58	0.46
SMD105-7227●	0.51	0.43	0.31	0.26
SMD105-7228●	0.82	0.68	0.58	0.46
SMD105-7229●	0.93	0.73	0.58	0.46
SMD105-7230●	0.93	0.73	0.58	0.46
SMD105-7231●	0.93	0.73	0.58	0.46
SMD105-7232●	0.93	0.73	0.58	0.46
SMD105-7233●	1.11	0.87	0.70	0.55
SMD105-7234●	0.77	0.61	0.53	0.44

'Transguard'

L=4.32 (446-762=4.83), Dia.=2.54 (446-762=3.56), Lead length=30min, Lead dia.=0.5

- Ultra compact high energy multilayer transient suppressors providing an ultra fast clamping time of less than 1ns for all low voltage DC applications.

Operating temperature: -55°C to +125°C

Working Voltage (V)	Breakdown Voltage (V _B)	Peak Current (I _p A)	Capacitance (C _{TRAN} J)	Inductance (nH)	Order Code
5.6	7.6 - 9.3	15.5	40	0.1	VA100005A150D
5.6	7.1 - 8.7	15.5	150	0.4	VA100005D150D
14	16.5 - 20.3	30	40	0.1	VA100014A300D
14	15.9 - 19.4	30	150	0.4	VA100014D300D
18	22.9 - 28	40	40	0.1	VA100018A400D
18	22.5 - 27.4	40	150	0.4	VA100018D400D
26	30.5 - 37.3	58	120	0.4	VA100026D580D
60	67 - 83	120	300	2	VA20060K121D

Varistors - continued

'Transguard' - continued

204271

Working Voltage (V)	Order Code	Price Each				
		1+	50+	100+	500+	1K+
5.6	131-6523●	0.73	0.63	0.51	0.37	0.32
5.6	131-6524●	0.85	0.74	0.58	0.44	0.37
14	131-6525●	0.73	0.63	0.51	0.37	0.32
14	131-6526●	0.85	0.74	0.58	0.44	0.37
18	131-6528●	0.73	0.63	0.51	0.37	0.32
18	131-6529●	0.85	0.74	0.58	0.44	0.37
26	131-6530●	0.85	0.74	0.58	0.44	0.37
60	131-6531●	1.13	0.98	0.80	0.57	0.49

Metal Oxide Varistors

7mm Disc (Nominal Diameter)



- The voltage dependent characteristics enable varistors to protect against high transient voltage spikes
- The varistor impedance changes to a low value clamping the transient to a safe level
- UL recognised, CSA approved

Tolerance: ±10%

Operating Temperature: -40°C to +85°C

Mfrs. List No.	Lead Pitch (offset)	Disc Dia.	Disc W	Disc H	Lead L	Lead D	Price Each				
							5	7	3.5-4.1	9.5	30
SIOV-B72205S111K101-40											
V _{RMS}	V _{DC}	V _{V(1mA)}	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code					
11	14	18	0.3	100	B72205S110K101	100-4348					
14	18	22	0.4	100	B72205S140K101	100-4303					
17	22	27	0.5	100	B72205S170K101	100-4334					
20	26	33	0.6	100	B72205S200K101	100-4308					
25	31	39	0.7	100	B72205S250K101	100-4277					
30	38	47	0.9	100	B72205S300K101	100-4279					
35	45	56	1.1	100	B72205S350K101	100-4295					
40	56	68	1.3	100	B72205S400K101	100-4330					
50	65	82	1.8	400	B72205S500K101	100-4313					
75	100	120	2.5	400	B72205S750K101	100-4343					
95	125	150	3.4	400	B72205S950K101	100-4341					
115	150	180	3.4	400	B72205S111K101	100-4345					
130	170	205	4.2	400	B72205S131K101	100-4315					
150	200	240	4.9	400	B72205S151K101	100-4329					
175	225	270	5.6	400	B72205S171K101	100-4344					
230	300	360	7.2	400	B72205S231K101	100-4353					
250	320	390	8.2	400	B72205S251K101	100-4290					
275	350	430	8.6	400	B72205S271K101	100-4358					
300	385	470	9.6	400	B72205S301K101	100-4399					
385	505	620	13.5	400	B72205S381K101	100-4366					
420	560	680	14	400	B72205S421K101	100-4317					
460	615	750	18	400	B72205S461K101	100-4346					

AC Voltage	Order Code	Price Each					
		1+	10+	25+	250+	500+	1K+
11	100-4348●	0.340	0.290	0.260	0.220	0.195	0.171
14	100-4303●	0.310	0.270	0.240	0.200	0.177	0.157
17	100-4334●	0.310	0.270	0.260	0.200	0.197	0.166
20	100-4308●	0.310	0.270	0.240	0.200	0.177	0.157
25	100-4277●	0.310	0.270	0.240	0.200	0.177	0.157
30	100-4279●	0.300	0.260	0.220	0.193	0.170	0.149
35	100-4295●	0.310	0.270	0.240	0.200	0.177	0.157
40	100-4330●	0.310	0.270	0.260	0.200	0.197	0.166
50	100-4313●	0.310	0.270	0.260	0.200	0.197	0.166
75	100-4343●	0.310	0.270	0.260	0.200	0.197	0.166
95	100-4341●	0.240	0.200	0.196	0.157	0.152	0.129
115	100-4345●	0.310	0.270	0.260	0.200	0.197	0.166
130	100-4315●	0.310	0.270	0.260	0.200	0.197	0.166
150	100-4329●	0.240	0.200	0.196	0.157	0.152	0.129
175	100-4344●	0.310	0.270	0.260	0.200	0.197	0.166
230	100-4353●	0.340	0.290	0.270	0.200	0.197	0.166
250	100-4290●	0.310	0.270	0.240	0.200	0.177	0.157
275	100-4358●	0.400	0.340	0.300	0.270	0.240	0.200
300	100-4399●	0.310	0.270	0.260	0.200	0.197	0.166
385	100-4366●	0.340	0.290	0.270	0.200	0.197	0.166
420	100-4317●	0.310	0.270	0.250	0.198	0.192	0.165
460	100-4346●	0.310	0.270	0.260	0.200	0.197	0.166

Mfrs. List No.	Lead Pitch (offset)	Disc Dia.	Disc W	Disc H	Lead L	Lead D	Price Each				
							5	9	3.5-4.1	11.5	30
B72207S110K101-40											
V _{RMS}	V _{DC}	V _{V(1mA)}	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code					
11	14	18	0.8	250	B72207S110K101	100-4338					
14	18	22	0.9	250	B72207S140K101	100-4369					
17	22	27	1.1	250	B72207S170K101	100-4339					
20	26	33	1.3	250	B72207S200K101	100-4314					
25	31	39	1.6	250	B72207S250K101	100-4370					
30	38	47	2.0	250	B72207S300K101	100-4350					
35	45	56	2.5	250	B72207S350K101	100-4373					
40	56	68	3.0	250	B72207S400K101	100-4291					
50	65	82	4.2	1200	B72207S500K101	100-4312					
60	85	100	4.8	1200	B72207S600K101	100-4285					
75	100	120	5.9	1200	B72207S750K101	100-4310					
115	150	180	8.4	1200	B72207S111K101	100-4380					
130	170	205	9.5	1200	B72207S131K101	100-4292					
175	225	270	13.0	1200	B72207S171K101	100-4388					
230	300	360	17.0	1200	B72207S231K101	100-4307					

Mfrs. List No.	Lead Pitch (offset)	Disc Dia.	Disc W	Disc H	Lead L	Lead D	Price Each				
							7.5	16.5	4.1-4.9	19	30
B72214S110K101-40											
V _{RMS}	V _{DC}	V _{V(1mA)}	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code					
11	14	18	3.2	1000	B72214S110K101	100-4324					
14	18	22	4	1000	B72214S140K101	100-4294					
20	26	33	6	1000	B72214S200K101	100-4306					
25	31	39	7	1000	B72214S250K101	100-4349					
30	38	47	9	1000	B72214S300K101	100-4371					
35	45	56	10	1000	B72214S350K101	100-4374					
40	56	68	13	1000	B72214S400K101	100-4375					
50	65	82	15	4500	B72214S500K101	100-4376					
60	85	100	17	4500	B72214S600K101	100-4377					
75	100	120	20	4500	B72214S750K101	100-4378					
95	125	150	25	4500	B72214S950K101	100-4379					
115	150	180	30	4500	B72214S111K101	100-4382					
130	170	205	34	4500	B72214S131K101	100-4385					

Prices are in £ sterling & exclusive of VAT

| AC Voltage | Order Code | Transient | | |
<th colspan="
| --- | --- | --- | --- | --- |



V _{RMS}	V _{DC}	V _(1mA)	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code
140	180	220	36	4500	B72214S141K101	100-4333
175	225	270	46	4500	B72214S171K101	100-4327
230	300	360	60	4500	B72214S231K101	100-4389
250	320	390	65	4500	B72214S251K101	100-4356
275	350	430	71	4500	B72214S271K101	100-4362
300	385	470	76	4500	B72214S301K101	100-4391
320	420	510	84	4500	B72214S321K101	100-4318
385	505	620	80	4500	B72214S381K101	100-4367
420	560	680	90	4500	B72214S421K101	100-4368
460	615	750	100	4500	B72214S461K101	100-4273

AC Voltage	Order Code	Price Each					
		1+	10+	25+	250+	500+	1K+
11	100-4324●	0.47	0.41	0.35	0.31	0.28	0.25
14	100-4294●	0.44	0.38	0.33	0.29	0.26	0.22
20	100-4306●	0.47	0.40	0.35	0.31	0.28	0.25
25	100-4349●	0.49	0.42	0.37	0.33	0.29	0.26
30	100-4371●	0.53	0.45	0.40	0.35	0.31	0.28
35	100-4374●	0.57	0.48	0.43	0.37	0.33	0.30
40	100-4375●	0.51	0.44	0.38	0.34	0.30	0.27
50	100-4376●	0.51	0.44	0.38	0.34	0.30	0.27
60	100-4377●	0.53	0.45	0.40	0.35	0.31	0.28
75	100-4378●	0.51	0.44	0.38	0.34	0.30	0.27
95	100-4379●	0.51	0.44	0.38	0.32	0.31	0.27
115	100-4382●	0.52	0.45	0.39	0.33	0.32	0.28
130	100-4385●	0.48	0.41	0.36	0.32	0.26	0.22
140	100-4333●	0.36	0.33	0.31	0.27	0.26	0.21
175	100-4327●	0.46	0.42	0.38	0.33	0.32	0.27
230	100-4389●	0.49	0.43	0.37	0.31	0.30	0.26
250	100-4356●	0.69	0.59	0.52	0.46	0.26	0.22
275	100-4362●	0.73	0.62	0.55	0.48	0.43	0.37
300	100-4391●	0.70	0.63	0.59	0.43	0.34	0.29
320	100-4318●	0.63	0.60	0.59	0.44	0.35	0.29
385	100-4367●	1.12	1.04	0.94	0.75	0.66	0.49
420	100-4368●	1.03	0.88	0.78	0.68	0.52	0.46
460	100-4273●	0.76	0.63	0.56	0.50	0.44	0.39

21.5mm Disc (Nominal Diameter)

Mfrs. List No.	Lead Pitch (offset)	Disc Dia.	Disc W	Disc H	Lead L	Lead D	Peak Transient Current (A)		Mfrs. List No.	Order Code
							22.5	4.5-5.4	26	
B72220S110K101-40	10									
V _{RMS}	V _{DC}	V _(1mA)	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code				
11	14	18	10	2000	B72220S110K101	100-4331				
14	18	22	12	2000	B72220S140K101	100-4336				
17	22	27	14	2000	B72220S170K101	100-4319				
20	26	33	18	2000	B72220S200K101	100-4325				
25	31	39	26	2000	B72220S250K101	100-4284				
30	38	47	26	2000	B72220S300K101	100-4275				
35	45	56	33	2000	B72220S350K101	100-4321				
40	56	68	37	2000	B72220S400K101	100-4316				
50	65	82	27	6500	B72220S500K101	100-4301				
60	85	100	33	6500	B72220S600K101	100-4280				
75	100	120	40	6500	B72220S750K101	100-4302				
95	125	150	50	6500	B72220S950K101	100-4304				
115	150	180	60	6500	B72220S111K101	100-4383				
130	170	205	74	8000	B72220S131K101	100-4282				
140	180	220	78	8000	B72220S141K101	100-4387				
150	200	240	85	8000	B72220S151K101	100-4289				
175	225	270	98	8000	B72220S171K101	100-4352				
230	300	360	130	8000	B72220S231K101	100-4287				
250	320	360	140	8000	B72220S251K101	100-4357				
275	350	430	151	8000	B72220S271K101	100-4363				
300	385	470	173	8000	B72220S301K101	100-4392				
320	420	510	184	8000	B72220S321K101	100-4305				
385	505	220	150	8000	B72220S381K101	100-4393				
420	560	680	175	8000	B72220S421K101	100-4394				
460	615	750	195	8000	B72220S461K101	100-4272				
510	670	820	190	6500	B72220S511K101	100-4395				
625	825	1000	230	6500	B72220S621K101	100-4397				

204010

AC Voltage	Order Code	Price Each					
		1+	10+	25+	250+	500+	1K+
11	100-4331●	0.56	0.46	0.41	0.37	0.33	0.29
14	100-4336●	0.77	0.64	0.57	0.50	0.45	0.39
17	100-4319●	0.75	0.62	0.55	0.49	0.44	0.38
20	100-4325●	0.71	0.60	0.53	0.47	0.42	0.36
25	100-4284●	0.77	0.64	0.57	0.50	0.45	0.39
30	100-4275●	0.77	0.64	0.57	0.50	0.45	0.39
35	100-4321●	0.75	0.62	0.55	0.49	0.44	0.38
40	100-4316●	0.77	0.64	0.57	0.50	0.45	0.39
50	100-4301●	0.77	0.64	0.57	0.50	0.45	0.39
60	100-4280●	0.77	0.64	0.57	0.50	0.45	0.39
75	100-4302●	0.71	0.60	0.53	0.47	0.42	0.36
95	100-4304●	0.77	0.64	0.57	0.50	0.45	0.39
115	100-4383●	0.84	0.71	0.63	0.56	0.49	0.44
130	100-4282●	0.72	0.61	0.54	0.48	0.42	0.37
140	100-4387●	0.84	0.71	0.63	0.56	0.49	0.44
150	100-4289●	0.77	0.64	0.57	0.50	0.45	0.39
175	100-4352●	0.84	0.75	0.71	0.66	0.65	0.56
230	100-4287●	0.75	0.62	0.55	0.49	0.44	0.38
250	100-4357●	0.92	0.78	0.69	0.61	0.54	0.47
275	100-4363●	0.86	0.72	0.64	0.57	0.51	0.44
300	100-4392●	0.84	0.71	0.63	0.56	0.49	0.44
320	100-4305●	0.77	0.64	0.57	0.50	0.45	0.39
385	100-4393●	0.83	0.71	0.64	0.62	0.61	0.54
420	100-4394●	0.78	0.66	0.58	0.51	0.47	0.43
460	100-4272●	0.89	0.83	0.77	0.70	0.63	0.57
510	100-4395●	2.09	1.97	1.69	1.31	1.03	0.94
625	100-4397●	1.93	1.64	1.45	1.29	1.13	1.00

Over 480,000 products online

**25mm Disc (Nominal Diameter)**

Mfrs. List No.	Lead Pitch (offset)	Disc Dia.	Disc W	Disc H	Lead L	Lead D	Transient Energy (J)		Peak Transient Current (A)	Mfrs. List No.	Order Code
							25.7	9.7			
B72225S4321K101-40	12.7	27.5	9.7	9.7	31	10	6.3	496465			
V _{RMS}	V _{DC}	V _(1mA)	Transient Energy (J)	Peak Transient Current (A)	Mfrs. List No.	Order Code					
320	420	510	700	20000	B72225S4321K101	151-1734					
275	350	430	600	20000	B72225S4271K101	151-1735					
130	170	205	240	20000	B72225S4131K101	151-1736					
550	745	910	940	20000	B72225S4551K101	151-1738					
750	1060	1200	1250	20000	B72225S4751K101	151-1739					

496465

Order Code	All Values	Price Each					
		1+	10+	25+	250+	500+	1K+
100-4265●	0.75	0.70	0.65	0.59	0.48	0.38	
100-4266●	0.75	0.70	0.65	0.59	0.48	0.38	
100-4267●	0.86	0					

Varistors - continued



VE Series

7, 9, 13 and 17mm Discs (Nominal Diameter)



- Radial zinc oxide varistors
- Provide an excellent protective device for limiting surge voltages and absorbing energy pulses
- Widely used as protective devices in the telecommunications, industrial, automotive and consumer markets
- Operating temperature -40°C to 85°C
- 0.25ns response time

	∅	Disc Thickness	Pitch	Leads Length	∅
VE07	7	3.8	5.08	30	0.6
VE09	9	0.2	5.08	30	0.6
VE13	13	0.4	7.62	30	0.8
VE17	17	4.4	7.62	30	0.8

V _{RMS}	V _{Dc}	V _p (A)	V _{Min.}	V _{Nom.}	V _{Max.}	V _{V(1ms)}	V _{V(1ma)}	V _{V(1ma)}	Transient Energy (J)	Peak Current (A)	Capacitance (pF)	Mfrs. List No.	Order Code
7mm Disc													
30	38	93	42	47	52	0.9	100	580				VE07M00300K--125-1543	
31	31	77	35	39	43	1.6	250	1250				VE09M00250K--138-0921	
30	39	93	42	47	52	2	250	1050				VE09M00300K--125-1546	
35	45	110	50	56	62	2.5	250	850				VE09M00350K--125-1547	
50	65	135	73	82	91	4.2	1200	530				VE09M00500K--125-1548	
75	100	200	108	120	132	5.9	1200	400				VE09M00750K--125-1549	
275	350	710	387	430	473	21	1200	120				VE09M02750K--125-1544	
9mm Disc													
31	31	77	35	39	43	7	100	4600				VE13M00300K--125-1553	
30	39	93	42	47	52	9	1000	3500				VE13M00231K--125-1550	
250	320	645	351	390	429	38	2500	230				VE13M00251K--125-1551	
275	350	710	387	430	473	43	2500	210				VE13M02750K--125-1552	
460	615	1240	675	750	824	45	2500	110				VE13M00461K--125-1554	
550	715	1420	774	860	946	57	2500	90				VE13M00551K--125-1555	
13mm Disc													
30	39	93	42	47	52	4.4	500	2150				VE17M00300K--125-1553	
230	300	595	324	360	396	36	2500	250				VE13M00231K--125-1550	
250	320	645	351	390	429	38	2500	230				VE17M00251K--125-1551	
275	350	710	387	430	473	43	2500	210				VE17M02750K--125-1552	
460	615	1240	675	750	824	45	2500	110				VE17M00461K--125-1554	
550	715	1420	774	860	946	57	2500	90				VE17M00551K--125-1555	
17mm Disc													
25	31	77	35	39	43	7	100	4600				VE17M00250K--125-1556	
30	39	93	42	47	52	9	1000	3500				VE17M00300K--125-1560	
250	320	645	351	390	429	65	4500	500				VE17M00251K--125-1558	
275	350	710	387	430	473	71	4500	450				VE17M02750K--125-1559	
300	385	775	423	470	517	45	2500	180				VE17M00301K--125-1561	

451410

AC Voltage	Order Code	5+	25+	100+	250+	500+	+	Price Each
7mm Disc								
30	125-1543●	0.320	0.290	0.260	0.240	0.193	--	
9mm Disc								
31	138-0921●	0.320	0.290	0.260	0.240	0.193	--	
30	125-1546●	0.320	0.290	0.260	0.240	0.193	--	
35	125-1547●	0.320	0.290	0.260	0.240	0.193	--	
50	125-1548●	0.320	0.290	0.260	0.240	0.193	--	
75	125-1549●	0.220	0.188	0.171	0.157	0.129	--	
275	125-1544●	0.320	0.290	0.260	0.240	0.194	--	
13mm Disc								
30	125-1553●	0.220	0.195	0.169	0.143	0.124	--	
230	125-1550●	0.113	0.106	0.102	0.096	0.092	--	
250	125-1551●	0.630	0.540	0.480	0.410	0.350	--	
275	125-1552●	0.470	0.400	0.370	0.300	0.260	--	
460	125-1554●	0.630	0.540	0.480	0.410	0.350	--	
550	125-1555●	0.420	0.370	0.320	0.270	0.240	--	
17mm Disc								
25	125-1556●	0.570	0.480	0.420	0.380	0.370	--	
30	125-1560●	0.790	0.670	0.610	0.510	0.400	--	
250	125-1558●	0.830	0.790	0.640	0.550	0.460	--	
275	125-1559●	0.570	0.480	0.420	0.380	0.370	--	
300	125-1561●	0.175	0.166	0.158	0.151	0.143	--	

AVX Varistor Designer Kits



A range of varistor designer kits giving the user maximum range choice with enough samples to be useful during test and development. Once used, each product in the kits can be replenished through Farnell InOne. Also included with the kit is a full range card and a data CD Rom. 5 of each capacitance value (within the stated range) is supplied in each kit.

Description	No. of Values	Mfrs List No.	Order Code	Price Each
Transguard	30 Values	ADVTRANS001	130-1915	46.39
Zinc Oxide	24 Values	ADVMVO001	130-1943	41.42

452082

£ 40,000 PRICES REDUCED



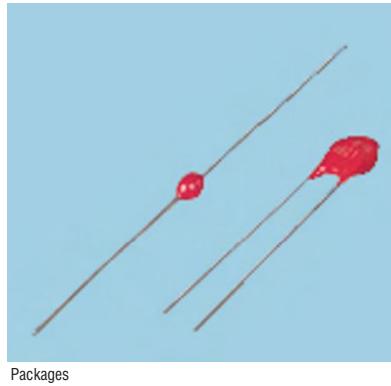
Littelfuse Varistors



These varistors are voltage dependent, symmetrical, metal oxide semiconductor devices. Their characteristics enable them to protect against high transient voltage spikes (when properly selected) to meet anticipated loads. When the protected equipment or circuit encounters high voltage spikes, the varistor impedance changes from a very high standby value to a very low conducting value, thus clamping the transient voltage to a protective level. The excess energy of the incoming high voltage pulse is absorbed by the varistor, protecting voltage sensitive components against damage.

204216

Metal Oxide Varistors – MA/LA/ZASeries



Package a	Packages b, c, d, e, g, h.	Lead W	Lead Dia. L	Lead Dia. A	Lead Spacing B
a	b, c, d, e, g, h.	4	3.68	29	0.83
b	b, c, d, e, g, h.	5.6	12.5	25.4	0.86
c	b, c, d, e, g, h.	5.6	8.7	25.4	0.68
d	b, c, d, e, g, h.	5.6	16.4	25.4	0.86
e	b, c, d, e, g, h.	5.6	22.5	25.4	0.86
f	b, c, d, e, g, h.	7.3	16.4	25.4	0.86
g	b, c, d, e, g, h.	7.3	22.5	25.4	0.86
h	b, c, d, e, g, h.	7.3	22.5	25.4	4.0



MA Series	LA/ZA Series	Operating ambient temperature	-55°C to +75°C	-55°C to +85°C
Test withstand voltage			1000V dc	2500V dc
Insulation resistance			>1000MΩ	>1000MΩ
Voltage temp. coefficient			-0.03%/°C	-0.05%/°C

204218

ZA Series (Radial Lead Package)	Maximum Ratings (25°C)	Transient Energy (10/1000μs (1000μs Joules))	Peak Transient Current (8/20μs (8/20μs A))	Varistor Voltage @ 1mA dc	Device Marking	Mfrs. List No.	Order Code
				V min	V nom	V max	
				6	8.2	11	0821 V8ZA1P
				6	8.2	11	0822 V8ZA2P
				9	12	16	1222 V12ZA2P
				10	14	18	1821 V18ZA1P
				10	14	18	1823 V18ZA3P
				14	18	22	2221 V22ZA1P
				14	18	22	2223 V22ZA3P
				14	18	24	24250 V24ZA50P
				17	22	1	2721 V27ZA1P
				17	22	5	2724 V27ZA4P
				20	26	1.2	250
				20	26	6	29.5
				21	27	150	33.5
				21	27	2000	33.6
				25	31	20	33.7
				25	31	25	33.8
				25	31	25	33.9
				25	31	25	33.10
				25	31	25	33.11
				25	31	25	33.12
				25	31	25	33.13
				25	31	2	

AC Working Voltage (V)	DC Working Voltage (V)	Transient Energy (10/1000μs)		Peak Current (8/20μs)		Varistor Voltage @ 1mA dc			Device Marking	Mfrs. List No.	Order Code
		V min (Joules)	V max (A)	V min (V)	V nom (V)	V max (V)					
40	56	13	1000	61	68	75	68Z10	V68ZA10P	105-7176		
50	66	4	250	74	82	91	82Z2	V82ZA2P	105-7177		
50	66	15	4500	73	82	91	82Z12	V82ZA12P	105-7139		
60	81	20	4500	90	100	110	100Z15	V100ZA15P	105-7140		
60	81	5	1200	90	100	110	100Z	V100ZA3P	105-7178		
75	102	6	1200	108	120	132	120Z	V120ZA1P	105-7179		
75	102	22	4500	108	120	132	120Z6	V120ZA6P	105-7141		
95	127	30	4500	135	150	165	150Z8	V150ZA8P	105-7142		
115	153	10	1200	162	180	198	180Z	V180ZA1P	105-7143		
115	153	35	4500	162	180	198	180Z10	V180ZA10P	105-7144		

Mfrs. List No

204221

Order Multiple=5											
AC Voltage (V)	Energy (Joules)	Pack-age	Order Code	5+	25+	100+	1K+	Price Each			
4	0.4	b	105-7154●	0.220	0.188	0.171	0.139				
4	0.8	b	105-7155●	1.280	1.050	0.890	0.730				
6	1.2	b	105-7156●	1.280	1.050	0.890	0.730				
10	0.8	c	105-7158●	0.154	0.137	0.119	0.107				
10	3.5	d	105-7159●	0.980	0.830	0.700	0.540				
14	0.9	c	105-7160●	0.160	0.137	0.119	0.114				
14	4	d	105-7161●	0.530	0.460	0.410	0.310				
14	100	e	105-7162●	0.550	0.480	0.430	0.340				
17	1	c	105-7137●	0.240	0.196	0.163	0.141				
17	5	d	105-7163●	0.520	0.450	0.390	0.300				
20	1.2	c	105-7164●	0.144	0.119	0.104	0.080				
20	6	d	105-7166●	0.500	0.430	0.360	0.300				
21	150	e	105-7167●	0.550	0.480	0.430	0.340				
25	1.5	c	105-7168●	0.158	0.131	0.113	0.101				
25	7.2	d	105-7171●	0.330	0.280	0.240	0.196				
30	1.8	c	105-7172●	0.147	0.123	0.110	0.091				
30	8.8	d	105-7173●	0.320	0.270	0.220	0.174				
35	2.3	c	105-7174●	0.147	0.123	0.108	0.091				
35	10	d	105-7175●	0.520	0.450	0.390	0.300				
40	3	c	105-7138●	0.147	0.142	0.110	0.091				
40	13	d	105-7176●	0.380	0.320	0.290	0.210				
50	4	c	105-7177●	0.131	0.108	0.093	0.074				
50	15	d	105-7139●	1.060	0.870	0.800	0.630				
60	20	c	105-7140●	0.280	0.200	0.186	0.153				
60	5	d	105-7178●	0.163	0.137	0.121	0.114				
75	6	c	105-7179●	0.300	0.240	0.197	0.170				
75	22	d	105-7141●	0.610	0.510	0.460	0.360				
95	30	c	105-7142●	0.850	0.710	0.610	0.490				
115	10	b	105-7143●	0.300	0.240	0.198	0.170				
115	35	b	105-7144●	0.610	0.510	0.460	0.360				

LA Series (Radial Lead Package)



Maximum Ratings (25°C)

AC Working Voltage (V)	DC Working Voltage (V)	Transient Energy (10/1000μs)		Peak Current (8/20μs)		Varistor Voltage @ 1mA dc			Device Marking	Mfrs. List No.	Order Code
		V (μs)	Joules	A (μs)	V (V)	Nominal	Max				
130	175	11	1200	184	200	228	1302	V130LA2P	105-7180		
130	175	20	2500	184	200	228	1305	V130LA5P	105-7181		
130	175	38	4500	184	200	228	130L10	V130LA10P	105-7183		
130	175	70	6500	184	200	228	130L20	V130LA20P	105-7184		
130	175	70	6500	184	200	220	130L20B	V130LA20B	105-7185		
150	200	13	1200	212	240	268	1502	V150LA2P	105-7186		
150	200	25	2500	212	240	268	1505	V150LA5P	105-7187		
150	200	45	4500	212	240	268	150L10	V150LA10P	105-7188		
150	200	80	6500	212	240	268	150L20	V150LA20P	105-7189		
150	200	80	6500	212	240	243	150L20B	V150LA20B	105-7190		
175	225	55	4500	247	270	303	175L10	V175LA10P	105-7146		
230	300	20	1200	324	360	396	2304	V230LA4P	105-7147		
230	300	70	4500	324	360	396	230L20	V230LA20P	105-7148		
250	330	21	1200	354	390	473	2502	V250LA2P	105-7191		
250	330	21	1200	354	390	429	2504	V250LA4P	105-7192		
250	330	40	2500	354	390	429	250L	V250LA10P	105-7193		
250	330	72	4500	354	390	429	250L20	V250LA20P	105-7195		
250	330	130	6500	354	390	429	250L40	V250LA40P	105-7197		
250	330	130	6500	354	390	413	250L40B	V250LA40B	105-7198		
275	369	23	1200	389	430	515	2752	V275LA2P	105-7149		
275	369	23	1200	389	430	473	2754	V275LA4P	105-7199		
275	369	45	2500	389	430	473	275L	V275LA10P	105-7201		
275	369	75	4500	389	430	473	275L20	V275LA20P	105-7202		
275	369	140	6500	389	430	473	275L40	V275LA40P	105-7203		
320	420	90	4500	462	510	565	320L20	V320LA20P	105-7205		
320	420	160	6500	462	510	540	320L40	V320LA40P	105-7150		
420	560	45	2500	610	680	748	420L	V420LA20P	105-7206		
420	560	90	4500	610	680	748	420L20	V420LA40P	105-7151		
480	640	105	4500	670	750	825	480L40	V480LA40P	105-7207		
480	640	180	6500	670	750	790	480L80	V480LA80P	105-7208		
510	675	110	4500	735	820	910	510L40	V510LA40P	105-7209		
575	730	120	4500	805	910	1000	575L40	V575LA40P	105-7210		
575	730	220	6500	805	910	960	575L80	V575LA80P	105-7213		
660	850	140	4500	940	1050	1210	660L50	V660LA50P	105-7214		
1000	1200	360	6500	1425	1600	1600	1000L160	V1000LA160P	105-7153		

204222

RoHS Compliant Non-compliant

08447 11 11 11

Fax: 08447 11 11 12 1257

Metal Oxide Block Varistors – SIOV Series



Block encapsulated, symmetrical characteristic, metal oxide varistors for high power transient suppression. Their resistance value decreases with increased voltage, thus 'short-circuiting' a further rise in overvoltage, safeguarding sensitive electronic equipment. UL recognised and CSA approved.

AC Working Voltage (V)	DC Working Voltage (V)	Transient Energy (10/1000μs)		Peak Current (8/20μs)		Varistor Voltage @ 1mA	Nominal	Maximum Clamping Voltage @ 100A	Mfrs. List No.	Order Code
		V (μs)	Joules	A (μs)	V (V)					
130	170	210	25000	205	340	1302	25000	130	B72232B131K001	120-0450
230	300	300	25000	360	595	2302	25000	230	B72232B231K001	120-0451
250	320	330	25000	390	650	2502	25000	250	B72232B251K001	120-0453
275	350	350	40000	430	710	2752	40000	275	B7240B271K001	120-0454

Varistors - continued

Voltage Dependent Resistors - continued

AC Working Voltage	DC Working Voltage	Transient Energy (10/1000μs)	Varistor Voltage @ 1mA	Clamping V @ 100A	Max Mfrs.
300	385	40	423	517	800
460	615	63	675	825	1240
60	85	8.3	90	110	165
275	350	63	387	473	710
275	350	104	387	473	710
460	615	135	675	825	1240
					204226

Order Multiple=5						
AC Voltage	Energy (Joules)	Order Code	5+	100+	1K+	3K+
60	2.9	118-7044●	0.380	0.290	0.240	0.194
275	12	118-7045●	0.380	0.290	0.240	0.194
130	17	118-7046●	0.470	0.330	0.280	0.240
150	20	118-7047●	0.300	0.210	0.176	0.150
250	33	118-7048●	0.470	0.330	0.290	0.260
275	36	118-7050●	0.360	0.250	0.200	0.173
300	40	118-7051●	0.350	0.250	0.200	0.182
460	63	118-7052●	0.470	0.330	0.290	0.260
60	8.3	118-7054●	0.470	0.330	0.280	0.240
275	63	118-7055●	0.620	0.440	0.350	0.320
275	104	118-7056●	1.000	0.720	0.600	0.500
460	135	118-7057●	0.990	0.710	0.590	0.490

WESURGE Disk Varistors

WE-VD Series



New



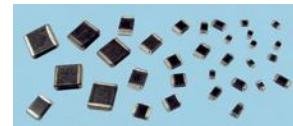
- Fast response time
- Low leakage current
- Low clamping voltage
- Wide range of voltages available
- Almost no energy consumption in stand-by mode
- After a surge impulse the varistor works immediately in

- Normal mode so there is no slip current
- Excellent absorption at surge impulses
- For 12-48 VDC distribution or 110-400 V power supply

Disk Ø	Operating Voltage	R _{DC} max	Clamp.voltage	Transient	I _{MAX}	Capacity	Mfrs.	List No.	Order Code
(mm)	max. VTRMS	V _{DC}	max. (V)	energy (J)	(A)	(pF)			
5	25	31	86	1.2	100	830	820552501	163-6401	
5	40	56	150	2.1	100	500	820554001	163-6402	
5	130	170	355	7.1	400	135	820551311	163-6403	
7	14	18	43	1.4	250	2930	820571406	163-6404	
7	25	31	77	2.4	250	1820	820572501	163-6405	
7	40	56	135	4.3	250	1120	820574001	163-6407	
7	50	65	135	7	1750	640	820475001	163-6408	
7	60	85	165	7	1200	540	820576001	163-6409	
7	115	150	300	13	1200	220	820571111	163-6410	
7	130	170	340	14.3	1200	210	820571311	163-6411	
10	20	26	65	4.4	500	4250	820512001	163-6412	
10	20	26	65	4.8	1000	4250	820412001	163-6413	
10	25	31	77	4.7	500	3660	820512501	163-6414	
10	30	38	93	6	500	3140	820513001	163-6415	
10	130	170	340	28	2500	410	820511311	163-6416	
14	14	18	43	5.4	1000	11960	820541406	163-6417	
14	25	31	77	9.4	1000	7620	820542501	163-6419	
14	30	38	93	12	1000	6420	820543001	163-6421	
14	130	170	340	57	4500	840	820541311	163-6422	
14	130	170	340	70	6000	840	820441311	163-6423	
20	130	170	340	114	6500	1830	820521311	163-6424	
20	275	350	710	303	10000	860	820422711	163-6425	
20	320	418	842	382	10000	760	820423211	163-6426	
20	420	560	1120	344	6500	570	82052421B	163-6427	

WESURGE Power Varistors

WE-VS Series



- Fast response time
- Low leakage current and clamping voltage
- Wide range of voltages available
- Almost no energy consumption in stand-by mode
- After a surge impulse the varistor works immediately in
- Normal mode so there is no slip current
- Excellent absorption at surge impulses
- Protection of DC distribution, power supplies, bus systems and communication lines
- Limiting of over-voltages, protection of semiconductors

Clamp.Voltage max. (V)	Operating Voltage max. V _{TRMS}	V _{DC}	Transient energy (J)	I _{MAX} (A)	Capacity (pF)	Mfrs.	List No.	Order Code
0402	10	2.5	3.3	0.04	20	180	82537259	163-6428
	16	4	5.5	0.04	20	220	82537040	163-6429
	30	7	9	0.05	20	120	82537070	163-6430
	30	11	14	0.02	20	70	82537110	163-6432
0603	10	2.5	3.3	0.1	30	180	82536259	163-6433
	16	4	5.5	0.1	30	200	82536040	163-6434
	30	7	9	0.1	30	200	82536070	163-6435
	30	11	14	0.1	30	100	82536110	163-6436
	45	14	18	0.1	30	100	82536140	163-6437
	45	17	22	0.1	30	235	82556170	163-6438
0805	16	4	5.5	0.1	80	1600	82550040	163-6439
	20	6	9	0.1	80	1180	82550060	163-6440
	30	11	14	0.1	100	750	82550110	163-6441
	40	14	18	0.2	100	550	82550140	163-6442
	54	20	26	0.3	100	350	82550200	163-6444
	65	25	30	0.3	100	310	82550250	163-6445
1206	16	4	5.5	0.4	100	3600	82531040	163-6446
	35	11	14	0.5	200	1500	82541110	163-6447
	40	14	18	0.3	100	900	82551140	163-6448
	45	14	18	0.5	200	1160	82541140	163-6449
	54	20	26	0.5	100	490	82551200	163-6450
	72	25	30	1	200	620	82541250	163-6451
	85	30	38	1.1	200	550	82541300	163-6452
	110	40	56	1	100	180	82531400	163-6453
1210	16	4	5.5	0.4	250	6200	82553040	163-6454
	45	14	18	1.4	400	2380	82543140	163-6456
	60	20	26	1.9	400	1400	82543200	163-6457
	85	30	38	2	400	1000	82543300	163-6458
	110	40	56	2.3	250	390	82553400	163-6459
1812	40	14	18	1.7	500	3930	82555140	163-6460
	72	25	30	3.7	800	2950	82545250	163-6461
	85	30	38	4.2	800	2550	82545300	163-6462
2220	45	14	18	5.8	1200	13600	82542140	163-6463
	72	25	30	9.6	1200	8900	82542250	163-6464
	85	30	38	12	1200	5700	82542300	163-6465
	100	35	45	12	1200	4800	82542350	163-6466

Clamp.Voltage max. (V)	Order Code	1+	10+	50+	100+	250+
0402	SMD 163-6428●	0.34	0.31	0.29	0.27	0.26
	SMD 163-6429●	0.34	0.31	0.29	0.27	0.26
	SMD 163-6430●	0.34	0.31	0.29	0.27	0.26
	SMD 163-6432●	0.34	0.31	0.29	0.27	0.26
0603	10 SMD 163-6433●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6434●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6435●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6436●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6437●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6438●	0.45	0.43	0.40	0.37	0.35
0805	16 SMD 163-6439●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6440●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6441●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6442●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6444●	0.45	0.43	0.40	0.37	0.35
	SMD 163-6445●	0.45	0.43	0.40	0.37	0.35
1206	16 SMD 163-6446●	0.54	0.51	0.48	0.45	0.42
	SMD 163-6447●	0.54	0.51	0.48	0.45	0.42
	SMD 163-6448●	0.54	0.51	0.48	0.45	0.42
	SMD 163-6449●	0.54	0.51	0.48	0.45	0.42
	SMD 163-6450●	0.54	0.51	0.48	0.45	0.42
	SMD 163-6451●	0.54	0.51	0.48	0.45	0.42
	SMD 163-6452●	0.54	0.51	0.48	0.45	0.42
	SMD 163-6453●	0.54	0.51	0.48	0.45	0.42


 muRata
Innovator in Electronics


Clamp.Voltage max. (V)	Order Code	1+	10+	Price Each	50+	100+	250+
1210							
16	SMD163-6454●	0.66	0.62	0.58	0.55	0.51	
45	SMD163-6456●	0.66	0.62	0.58	0.55	0.51	
60	SMD163-6457●	0.66	0.62	0.58	0.55	0.51	
85	SMD163-6458●	0.66	0.62	0.58	0.55	0.51	
110	SMD163-6459●	0.66	0.62	0.58	0.55	0.51	
1812							
40	SMD163-6460●	0.99	0.91	0.83	0.78	0.73	
72	SMD163-6461●	0.99	0.91	0.83	0.78	0.73	
85	SMD163-6462●	0.99	0.91	0.83	0.78	0.73	
2220							
45	SMD163-6463●	1.24	1.16	1.07	1.01	0.95	
72	SMD163-6464●	1.24	1.16	1.07	1.01	0.95	
85	SMD163-6465●	1.24	1.16	1.07	1.01	0.95	
100	SMD163-6466●	1.24	1.16	1.07	1.01	0.95	

Capacitive Filters

LFB Series

Bandpass Filters for Communication Equipment


 muRata
Innovator in Electronics


- Ultra-small, low-profiled, light-weight bandpass filters
- Absolutely no adjustment required
- Reflow solderable



Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Mfrs. List No.	Order Code
0603 Case Size				
2450	100	2.2	LFB182G45SG9A246	129-4673
5787.5	125	2.2	LFB185G78SGA713	129-4674
0805 Case Size				
1906.5	27	2.2	LFB211G90SG8B704	129-4675
2450	100	3.5	LFB212G45BA1A220	129-4676
2450	100	3.5	LFB212G45BA1A234	129-4677
2450	100	3.5	LFB212G45BA1B763	129-4678
2450	100	3	LFB212G45SG8A127	129-4679
2450	100	1.5	LFB212G45SG8A166	129-4680
2450	100	1.4	LFB212G45SG8A192	129-4681
5125	550	2.6	LFB215G12SG8A178	129-4682
5125	550	1.5	LFB215G12SG8A183	129-4683
5250	200	1.5	LFB215G25SG8A144	129-4685
5375	950	2.8	LFB215G37SG8A1233	129-4686
5375	950	1.5	LFB215G37SG8A180	129-4687
5375	950	1.8	LFB215G37SG8A185	129-4688
5512	726	2.2	LFB215G51SG8A132	129-4689
5512	726	1.9	LFB215G51SG8A154	129-4690
1008 Case Size				
1906.5	27	2.2	LFB2H1G90SG6A157	129-4711
2450	100	1.5	LFB2H2G45SG7A134	129-4712
2450	100	1.7	LFB2H2G45SG7A135	129-4713
2450	100	2.7	LFB2H2G45SG7A158	129-4715
2450	100	1.2	LFB2H2G45SG7A159	129-4716
2450	100	2.1	LFB2H2G45SG7B734	129-4717
5787.5	100	3	LFB2H5G78SG7A175	129-4718
1210 Case Size				
205.5	63	1.5	LFB32205MSK1-948	129-4693
1472	40	1.3	LFB321G47SJ1-794	129-4692
5787.5	125	1.5	LFB215G78SGA170	129-4691

LFL Series

Lowpass Filters for Communication Equipment

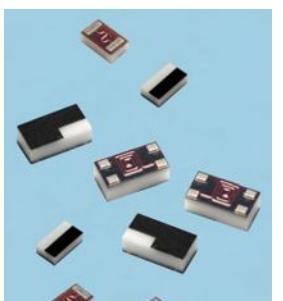


- Ultra-small, low-profiled, lightweight chip filters based on ceramic multi-layer technology
- Offer stable high selectivity up to very high frequency
- Absolutely no adjustment required
- Reflow solderable

MHz	Order Code	5+	25+	100+	250+	500+
0603 Case Size						
2450	129-4673●	0.300	0.210	0.173	0.143	0.122
5787.5	129-4674●	0.220	0.161	0.131	0.107	0.092
0805 Case Size						
1906.5	129-4675●	0.260	0.187	0.152	0.128	0.108
2450	129-4676●	0.510	0.410	0.350	0.340	0.280
2450	129-4677●	0.280	0.210	0.186	0.178	0.150
2450	129-4678●	0.300	0.240	0.199	0.192	0.161
2450	129-4679●	0.330	0.260	0.220	0.173	0.153
2450	129-4680●	0.330	0.260	0.220	0.173	0.153
2450	129-4681●	0.270	0.200	0.180	0.139	0.122
5125	129-4682●	0.330	0.260	0.220	0.173	0.153
5125	129-4683●	0.330	0.260	0.220	0.173	0.153
5250	129-4685●	0.250	0.192	0.168	0.131	0.115
5375	129-4686●	0.280	0.210	0.186	0.178	0.150
5375	129-4687●	0.250	0.192	0.168	0.131	0.115
5375	129-4688●	0.330	0.260	0.220	0.173	0.153
5512	129-4689●	0.220	0.178	0.157	0.121	0.107
5512	129-4690●	0.300	0.240	0.200	0.156	0.138
1008 Case Size						
1906.5	129-4711●	0.280	0.210	0.186	0.178	0.150
2450	129-4712●	0.340	0.260	0.200	0.162	0.140
2450	129-4713●	0.340	0.250	0.200	0.162	0.136
2450	129-4715●	0.380	0.280	0.220	0.184	0.153
2450	129-4716●	0.380	0.280	0.220	0.184	0.153
2450	129-4717●	0.340	0.260	0.200	0.162	0.140
5787.5	129-4718●	0.340	0.250	0.200	0.165	0.138
1210 Case Size						
205.5	129-4693●	0.750	0.560	0.450	0.380	0.320
1472	129-4692●	0.950	0.710	0.570	0.500	0.400
5787.5	129-4691●	0.250	0.192	0.168	0.131	0.115

LP Series

Thin-Film Low Pass Filters



- These filters are based on thin-film multilayer technology. This technology provides a miniature part with excellent high frequency performance and rugged construction for reliable automatic assembly.
- They are offered in a variety of frequency bands compatible with various types of high frequency wireless systems


New

Bandwidth (MHz)	Frequency (MHz)	Insertion Loss (dB)	Mfrs. List No.	Order Code
0402 Case				
1950	1980 - 1920	0.3	LP0402N1950ANTR/500	167-2702
2442	2484 - 2400	0.35	LP0402N2442ANTR/500	167-2703
5500	5650 - 5350	-0.2	LP0402N5500ANTR/500	167-2704

Capacitive Filters - continued

LP Series - continued

Thin-Film Low Pass Filters - continued

0603 Case

902	915 - 890	0.35	LP0603A0902ANTR/500	167-2706
947	960 - 935	0.35	LP0603A0947ANTR/500	167-2707
1747	1785 - 1710	0.3	LP0603A1747ANTR/500	167-2709
1842	1880 - 1805	0.3	LP0603A1842ANTR/500	167-2711
3599	-	-	LP0603N3599ANTR/500	167-2712
3500	3600 - 3400	-0.3	LP0603N3500ANTR/500	167-2713
5200	5350 - 5050	-0.2	LP0603N5200ANTR/500	167-2714
5500	5650 - 5350	-0.2	LP0603N5500ANTR/500	167-2705

528700

MHz	Order Code	Price Each			
		1+	50+	100+	500+
0402 Case Size					
1950	167-2702● RU	0.71	0.55	0.46	0.40
2442	167-2703● RU	0.80	0.62	0.51	0.45
5500	167-2704● RU	0.73	0.56	0.47	0.40
0603 Case Size					
902	167-2706● RU	1.12	0.98	0.82	0.71
947	167-2707● RU	1.12	0.98	0.82	0.71
1747	167-2709● RU	1.01	0.89	0.75	0.64
1842	167-2711● RU	1.01	0.89	0.75	0.64
3599	167-2712● RU	1.01	0.89	0.75	0.64
3500	167-2713● RU	1.10	0.97	0.81	0.70
5200	167-2714● RU	1.00	0.87	0.73	0.63
5500	167-2705● RU	0.87	0.67	0.56	0.49

528700

DFCB Series

Dielectric Filters (GIGAFIL®)



- Low insertion loss for using high Q-value dielectric resonators
- Small and light for using high dielectric constant ceramics
- Excellent temperature stability for temperature compensated dielectric constant ($0 \pm 5\text{ppm}/\text{degree C}$ max.)
- Excellent mechanical stability without vibratile structure
- SMD and reflow soldering is available
- Mountable by automatic placing machine

Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Attenuation (dB)	Mfrs. List No.	Order Code
836.5	25	2.6	6.5	DFCB2836MLDJAA	129-4728
836.5	25	3	12	DFCB2836MLDJAA	129-4728
836.5	25	2.6	9	DFCB3836MLDJAA	129-4737
881.5	25	3	15	DFCB2881MLDJAA	129-4729
881.5	25	2.5	27	DFCB3881MLDJAA	129-4739
915	26	3	15	DFCB2915MLDJAA	129-4730
915	26	2.6	27	DFCB3915MLDJAA	129-4741
947.5	25	3	45	DFCB2947MLDJAA	129-4731
947.5	25	3.5	45	DFCB3947MLDJAA	129-4742
1747.5	75	2	20	DFCB31G74LBJAA	129-4732
1842.5	75	3.5	45	DFCB21G84LBJAA	129-4725
1842.5	75	3.5	35	DFCB31G84LBJAA	129-4733
1950	60	1.5	17	DFCB21G95LBJAA	129-4734
1960	60	3.7	5	DFCB21G96LBJAA	129-4727
1960	60	3.7	30	DFCB31G96LBJAA	129-4735
2140	60			DFCB32G14LBJAA	129-4736

452096

Frequency	Order Code	1+	25+	100+	250+	500+
836.5MHz	129-4728●	1.75	1.43	1.16	1.08	1.01
836.5MHz	129-4737●	1.99	1.61	1.33	1.22	1.14
881.5MHz	129-4729●	1.75	1.43	1.16	1.08	1.01
881.5MHz	129-4739●	1.99	1.61	1.33	1.22	1.14
915MHz	129-4732●	1.83	1.45	1.20	1.12	1.05
915MHz	129-4741●	2.80	2.23	1.86	1.72	1.61
947.5MHz	129-4731●	1.99	1.61	1.33	1.22	1.14
947.5MHz	129-4742●	1.99	1.61	1.33	1.22	1.14
1747.5MHz	129-4732●	2.14	1.71	1.43	1.31	1.23
1842.5MHz	129-4725●	1.54	1.22	1.02	0.96	0.89
1842.5MHz	129-4733●	2.22	1.78	1.48	1.37	1.28
1950MHz	129-4734●	1.59	1.39	1.23	1.10	1.00
1960MHz	129-4727●	1.59	1.40	1.24	1.12	1.03
1960MHz	129-4735●	2.80	2.23	1.86	1.72	1.61
2140MHz	129-4736●	1.96	1.57	1.31	1.20	1.12

452096

Need a better price?

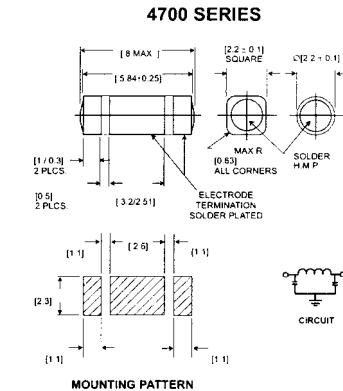
Buy more and save more with our volume pricing service.

Contact us now:
Web: www.farnell.co.uk
Phone: 08447 11 11 11

Surface Mount Pi-Section Filters

TUSONIX

SMD

Supplied on 16mm
blister tape

- Pi-section filters in compact surface mount package
- High current rating 10A
- Designed for use near to noise generating components to suppress interference at source
- Applications include radio and telecommunications, signal processing, disc drives, TV set-top equipment, sensors and instrumentation

Operating Temperature	-55°C to +125°C				Current Rating	10A
	Capacitance (pF)	Voltage Rating @ 125°C (V)	Attenuation dB (50Ω system)	Mfrs. List No.		
1000	100	7	40	65	70	4700-005LF
2000	100	10	45	70	70	4700-003LF
4000	100	13	52	70	70	4700-008LF
8200	100*	20	65	70	70	4701-001LF

*100V @ 85°C

204193

pF	Order Code	Price Each			
		1+	10+	50+	100+
1000	SMD118-6429●	2.37	1.67	1.34	1.05
2000	SMD118-6430●	2.37	1.67	1.34	1.05
4000	SMD118-6431●	2.37	1.67	1.34	1.05
8200	SMD118-6432●	2.53	1.80	1.43	1.12

TUSONIX

4702 Series

Square Style "C" Filters



L = 8.0, W = 2.29, H = 2.29

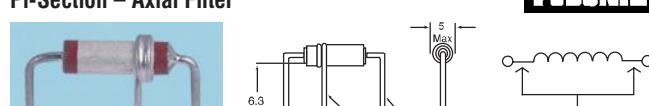
Current Rating	20A			Voltage Rating	100V
	-20% + 80%	10MHz	100MHz	1GHz	
Capacitance (pF)				Mfrs. List No.	Order Code
1000	3	20	35	4702-002 LF	130-5429
2500	10	25	50	4702-004 LF	130-5430
4000	15	30	45	4702-005 LF	130-5431

451988

Order Code	Price Each			
	1+	5+	25+	100+
All Values ●	1.56	1.22	1.13	1.05
0.99				

Pi-Section – Axial Filter

TUSONIX



Capacitance pF (min)	Order Code	Price Each			
		1+	10+	50+	100+
5000	118-6436●	7.34	5.55	4.52	3.73

204030





Sub-miniature Capacitive - 4400 Series

TUSONIX

- Sub-miniature ceramic lead-through capacitors for low pass filtering applications
- M3 mounting thread

Operating Temperature -55°C to +125°C
 Current Rating 10A
 Mounting hole dia.=3.0, Body length=7.0,
 Body dia.=4.0 (Hex),
 Lead dia.=0.79, Thread=M3 x 0.5

Capacitance (pF)	Voltage Rating @ 125°C (V)	Attenuation dB (50Ω system)					Mfrs. List No.	Order Codes
		1MHz	10MHz	100MHz	1GHz	10GHz		
1000	200	-	5	20	35	45	4400-095LF	118-6433
4700	100	-	15	30	45	55	4400-094LF	118-6434
10000	50	4	21	35	50	55	4400-093LF	118-6435

204192

Price Each					
pF	Order Code	1+	10+	50+	100+
1000	118-6433●	4.21	3.60	3.47	3.10
4700	118-6434●	4.08	3.48	3.34	2.98
10000	118-6435●	4.64	3.96	3.81	3.42

Shoulder Feed-Thru Capacitors

TUSONIX

2461 Series



- Solder mount feed-thru capacitors
- Silver finish on leads

L = 4.19, Dia = 4.19, Lead length = 6.35, Lead dia. = 1.3

Operating temperature	-55°C to +125°C	Dielectric characteristic	X7R
Insulation resistance	10GΩ	Voltage rating	100V dc
Capacitance	1000pF	Mfrs. List No.	2461-001-X7V0-102AA LF

451995

Price Each					
pF	Order Code	1+	5+	25+	100+
1000	130-5442●	1.51	1.16	1.09	1.01

Shoulder Feed-Thru Capacitors

TUSONIX

2463 Series



- Solder mount feed-thru capacitors
- Silver finish on leads

L = 3.93, Dia = 2.51, Lead length = 6.35,
 Lead dia. = 0.81

Operating temperature	-55°C to +125°C	Dielectric characteristic	X5U
Tolerance	-0%/+100%	Voltage rating	200V dc
Capacitance	1500pF	Mfrs. List No.	2463-002-X5U0-152P LF

452000

Price Each					
pF	Order Code	1+	5+	25+	100+
1500	130-5443●	1.00	0.79	0.73	0.67

Capacitive – 2499 Series

TUSONIX

- Ceramic lead-through capacitors for low pass filtering applications, where chassis mounting is required and where space is at a premium.

Mounting hole dia.=5.4, Body length=11.9, Body dia.=6.35 (Hex),
 Lead thickness=1.29, Thread=1½-NF-2A

Voltage rating	500V	Power Factor	0.03 (106-772=0.001)
Operating Temperature	-55°C to +125°C	Current Rating	10A
Temperature Coefficient	+22% to +56%	Insertion Loss (50Ω system)	Mfrs. List No.
(pF) 100	+22% to +56%	10MHz 0.1	2499-003-U2M0-101KL F 118-6421
	-55°C to +85°C	100MHz 5	
1000	+22% to 56%	1GHz 23	2499-003-X5U0-102PL F 118-6422
	-55°C to +85°C		
10000	+22% to 56%		2499-003-X5W0-103ZLF 118-6423
	-55°C to +85°C		

204233

Price Each					
pF	Order Code	1+	10+	50+	100+
100	118-6421●	5.13	4.52	3.09	2.76
1000	118-6422●	3.36	2.83	1.91	1.70
10000	118-6423●	3.36	2.83	1.91	1.70

Pi-Section – 4101 & 4209 Series

TUSONIX

Solder mount 106-775 106-776 Body length=10.3, Body diameter=4.95, Max height above panel=7.9, Max height below panel=10.3 (106-775) 18.0 (106-776), Mounting hole dia.=4.0

Bush mount 106-777 106-778 Body length=12.3, Body diameter=6.35, Thread=M5 x 0.8, Max height above panel=9.5, Max height below panel=23.4, Mounting hole dia.=5.1

- Pi-section suppression filters in both chassis and solder mount styles
- Combines a ceramic capacitor with a ferrite inductor
- Can be used to suppress unwanted EMI/RFI in a wide range of applications where a high insertion loss is required from 10MHz to 10GHz

Current Rating 10A Operating Temperature -55°C to +125°C °C

Solder Mount

Capacitance pF (min)	Voltage Rating @ 85°C (V)	Attenuation dB (50Ω System)					Mfrs. List No.	Order Code
		85°C	125°C	10MHz	100MHz	1GHz		
1500	350	200	5	45	70	70	4101-001LF	118-6424
5500	140	70	15	55	70	70	4101-008LF	118-6426

Chassis Mount

Capacitance pF (min)	Voltage Rating @ 85°C (V)	Attenuation dB (50Ω System)					Mfrs. List No.	Order Code
		85°C	125°C	10MHz	100MHz	1GHz		
1500	350	200	5	45	70	70	4209-003LF	118-6427
5000	200	100	20	65	70	70	4209-053LF	118-6428

204235

pF	Order Code	Price Each			Mfrs. List No.	Order Code
		1+	10+	50+		
1500	118-6424●	3.72	3.36	2.94	2.67	
5500	118-6426●	3.40	3.09	2.70	2.44	
1500	118-6427●	4.10	3.68	3.23	2.94	
5000	118-6428●	4.29	3.88	3.32	2.83	

452004

Solder Mount Pi Filters

TUSONIX

4106 Series



- Eyelet style EMI filter
- L = 17.44, Dia = 7.92, Lead length = 7

Current rating	25A	Insulation resistance	
Capacitance	3000pF	Attenuation @ 100MHz/1GHz/10GHz	
Voltage rating	500V dc	Mfrs. List No.	10Gohm

452004

Price Each					
pF	Order Code	1+	5+	25+	100+
3000	130-5445●	3.24	2.52	2.37	2.19

Bush Mount Pi Filters

TUSONIX

4206 Series



- EMI low pass filter
- L = 35.32, W = 9.52, D = 9.52, Lead length = 7.93

Current rating	25A	Attenuation @ 10MHz	
Capacitance	3000pF	Attenuation @ 100MHz	55dB
Voltage rating	1000V dc	Attenuation @ 1GHz/10GHz	70dB
Thread size	24 UNF-2A	Mfrs. List No.	4206-001 LF
Insulation resistance	10Gohm		

452009

Price Each					
pF	Order Code	1+	5+	25+	100+
3000	130-5444●	6.31	4.92	4.61	4.25

4306 Series

TUSONIX

Press In Filters



- Press-in EMI and line feed thru filters
- Gold plated case and lead
- Epoxy sealed on opposite end from glass seal

Operating Temperature	-55°C to +125°C
Current Rating	5A
Tolerance	-0%/+100%
Capacitance	Voltage
(pF) 100	@ 85°C (V)
100	300
500	300
1000	300
2700	150
5000	150

451989

Price Each					
pF	Order Code	1+	5+	25+	100+
100	130-5434●	4.04	3.79	3.49	3.31
500	130-5435●	4.13	3.88	3.58	3.39
1000	130-5436●	4.27	4.00	3.70	3.50
2700	130-5437●	3.56	3.35	3.08	2

Capacitive Filters - continued

4600 Series

Coaxial Broadband "C"



- Coaxial broadband filters
- 4600-000 LF has a C circuit containing a capacitor
- 4600-050 LF has an L circuit containing a capacitor and an inductor

L = 17.6, Dia = 9.78

TUSONIX

Current rating	15A	Attenuation @ 1MHz	44dB
Capacitance	1.4μF	Attenuation @ 10MHz	60dB
Voltage rating	100V dc	Attenuation @ 1GHz	70dB
Insulation resistance	10Gohm		452017

Mfrs. List No.	Order Code	1+	5+	25+	100+	250+	Price Each
4600-000 LF	130-5447●	11.99	11.23	10.37	9.80	8.99	
4600-050 LF	130-5446●	12.12	11.36	10.49	9.91	9.09	

SLT Series



Current Rating
Voltage Rating
Recommended Mounting Hole

OXLEY



New

L=11, Dia=4.7mm, Lead length=15.5, Lead dia=0.7

- Pi-section suppression filters in solder mount style
- Combines a ceramic capacitor with a ferrite inductor
- Can be used to suppress unwanted EMI / RFI in a wide range of applications where a high insertion loss is required from 10MHz to 10GHz

Capacitance (pF)	10MHz	Attenuation dB	100MHz	1GHz	10GHz	Mfrs. List No.	Order Code
1500	5	45	70	70	70	SLT/P/1500/ROHS	157-0098
5000	20	65	70	70	70	SLT/P/5000/ROHS	157-0099

507010

Order Code	1+	10+	50+	100+	250+	Price Each
All Values ●	9.72	8.33	7.29	5.83	5.08	

DLT Series



- Ceramic lead-through capacitors for low pass filtering applications where chassis mounting is required and where space is at a premium

Operating Temperature
Voltage Rating
Recommended Mounting Hole
Chassis Thickness (max)

OXLEY



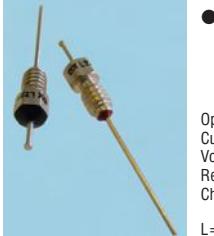
New

L=11.5, Lead length=27, Lead dia=0.9

507032

pF	pF	Order Code	1+	10+	50+	100+	250+	Price Each
DLT/100/ROHS	100	157-0087●	6.94	5.95	5.20	4.16	3.62	
DLT/680/ROHS	680	157-0088●	6.94	5.95	5.20	4.16	3.62	
DLT/1000/ROHS	1000	157-0089●	9.76	8.36	7.32	5.86	5.10	
DLT/10000/ROHS	10000	157-0090●	9.05	7.75	6.78	5.43	4.72	

DLT4/C Series



- Ceramic lead-through capacitors for low pass filtering applications where chassis mounting is required and where space is at a premium

Operating Temperature
Current Rating
Voltage Rating
Recommended Mounting Hole
Chassis Thickness (max)

OXLEY



New

L=9.1, Lead length=14, Lead dia=0.7

Capacitance (pF)	10MHz	Attenuation dB	100MHz	1GHz	Mfrs. List No.	Order Code
330	2	18	35		DLT4/C/330/ROHS	157-0095
4700	20	36	50		DLT4/C/4700/ROHS	157-0096
22000	30	50	68		DLT4/C/22000/ROHS	157-0097

507011

Order Code	1+	10+	50+	100+	250+	Price Each
All Values ●	9.66	8.28	7.24	5.79	5.05	

DLT4/L Series



- Ceramic lead-through capacitors for low pass filtering applications where chassis mounting is required and where space is at a premium

Operating Temperature
Current Rating
Voltage Rating
Recommended Mounting Hole
Chassis Thickness (max)



New

L=9.1, Lead length=14, Lead dia=0.7

Capacitance (pF)	1MHz	Attenuation dB	10MHz	100MHz	1GHz	Mfrs. List No.	Order Code
330	—	2	20	38	38	DLT4/L/330/ROHS	157-0091
4700	3	21	38	56	56	DLT4/L/4700/ROHS	157-0093
22000	12	31	54	75	75	DLT4/L/22000/ROHS	157-0094

507032

pF	Order Code	1+	10+	50+	100+	250+	Price Each
330	157-0091●	9.53	8.16	7.14	5.71	4.98	
4700	157-0093●	9.73	8.34	7.30	5.83	5.08	
22000	157-0094●	9.73	8.34	7.30	5.83	5.08	



New

FLTM Series



- Pi-section suppression filters in chassis mount style
- Combines a ceramic capacitor with a ferrite inductor
- Can be used to suppress unwanted EMI / RFI in a wide range of applications where a high insertion loss is required from 10MHz to 10GHz

Operating Temperature
Current Rating
Voltage Rating
Recommended Mounting Torque
Recommended Mounting Hole
Chassis Thickness (max)

-55°C to +85°C
10A
350V
0.35Nm
Ø5.1mm
3.1mm

L=12, Dia=6.35mm, Lead length=10.5, Lead dia=0.7

Capacitance (pF)	10MHz	Attenuation dB	100MHz	1GHz	10GHz	Mfrs. List No.	Order Code
1500	5	45	70	70	70	FLTM/P/1500/ROHS	157-0100
5000	20	65	70	70	70	FLTM/P/5000/ROHS	157-0101

507005

Order Code	1+	10+	50+	100+	250+	Price Each
All Values ●	9.72	8.33	7.29	5.83	5.08	

muRata
innovate in electronics

Standard

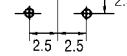


- Three terminal T-networks offer a lower residual inductance than that of standard two terminal capacitors
- Bypass capacitor provides a path for high frequency noise to earth and ensures excellent high frequency attenuation
- Typical applications include noise suppression in office equipment, computers, TV, VCR and automotive electronics
- Note: DSS types have ferrite beads on input and output leads

Rating	6A	Operating Temperature	Effective Frequency Range (50Ω Series) 20dB min) MHz	Voltage Rating	Ferrite Beads	Mfrs. List No.	Order Code
Capacitance pF	Tolerance		600 to 1050	dc	No	DSN6NC51H1102Q55B	952-7354
100	±20%		90 to 1000	50	No	DSN6NC51H222Q55B	952-7362
1000	±20%		50 to 1000	50	No	DSN6NC51H222Q55B	952-7370
2200	±20%		8 to 1000	50	No	DSN6NC81H1103Q55B	952-7389
10000	+80% to -20%		40 to 900	50	No	DSN9NC51C122Q55B	952-7400
22000	±50%		40 to 900	16	No	DSN9NC51C104Q55B	952-7397
100000	+20% to -20%		8 to 1000	100	Yes	DSS6NC52A2220Q55B	952-7435
22	±20%		800 to 1100	100	Yes	DSS6NC52A470Q55B	952-7460
47	±20%		400 to 1100	100	Yes	DSS6NC52A2210Q55B	952-7419
100	±20%		200 to 1050	100	Yes	DSS6NC52A2210Q55B	952-7443
220	±20%		110 to 1000	100	Yes	DSS6NC52A271Q55B	952-7451
270	±20%		90 to 1000	100	Yes	DSS6NC52A271Q55B	952-7540
270	+20% to -20%		90 to 1000	100	Yes	DSS9NC52A271Q55B	952-7540
470	±20%		70 to 1000	100	Yes	DSS6NC52A471Q55B	952-7478
1000	±20%		20 to 1000	100	Yes	DSS6NC52A1202Q55B	952-7427
2200	+80% to -20%		10 to 1000	100	Yes	DSS6NE52A2220Q55B	952-7486
2200	+20% to -20%		20 to 1100	250	Yes	DSS9HB32E2220Q55B	952-7516
2200	±20%		20 to 1000	100	Yes	DSS9NC52A2220Q55B	952-7532
10000	±30%		7 to 1000	100	Yes	DSS6NZ282A1030Q55B	952-7508
22000	+80% to -20%		2 to 1000	16	Yes	DSS6NF31C2230Q55B	952-7494
22000	±50%		3 to 1000	50	Yes	DSS9NC51H2230Q55B	952-7524



Varistor



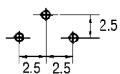
H=10.5, W=12.0, Lead L=25.0

- Three terminal T-networks consisting of a capacitor which provides a varistor function combined with two internal ferrite bead inductors
- The varistor capacitor not only acts as a bypass capacitor but also provides a path for high voltage surges to flow to earth
- Efficiently removes fast surges and high frequency noise above 60MHz
- Self-healing properties ensure effective operation in circuits having 600V surges

Rating	7A @ 12V	Insulation resistance	1MΩ
Maximum varistor voltage	22V±20% (1mA)	Operating temperature	-40°C to +100°C
Capacitance	22000pF ±50%, -20%	Mfrs. List No.	VFS9VD31B223Q55B
Inductance	0.8μH x 2 (1kHz)		

204046

310 Series



H=10.5 W=12.0, Lead L=25.0

Wide band noise suppression filter made with high performance ferrite material. High attenuation over a wide band. Available with and without ferrite beads.

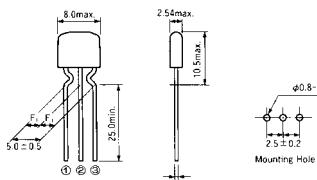
Rating 7A Operating Temperature -25°C to +85°C

Capacitance pF	Tolerance	Effective Frequency range (50Ω Series 20 dB min) MHz		Voltage Rating dc	Ferrite Beads	Mfrs. List No.	Order Code
		20 to 900	16 to 1000				
22000	+50% to -20%	40 to 900	50	No	DSN9NC51H223Q55B	952-7400	
100000	±20%	0.8 to 1000	16	No	DSN9NC51C104Q55B	952-7397	
2200	±20%	20 to 1100	250	Yes	DSS9HB32E222Q55B	952-7516	

204045

Order Multiple=5	Price Each
pf Volts dc Order Code	5+ 50+ 100+ 1K+
22000 50 952-7400● RL	0.158 0.138 0.117 0.095
100000 16 952-7397● RL	0.320 0.280 0.240 0.189
2200 250 952-7516●	0.460 0.390 0.350 0.310

Varistor



- Three terminal T-network consisting of a capacitor which provides a varistor function combined with two internal ferrite bead inductors
- Designed to eliminate noise and protect semiconductors.

Voltage rating 25V dc Peak pulse current 100A
 Varistor voltage 50V dc Capacitance 220pF ±20%
 Current rating 6A Operating temperature -40°C to +105°C

Mfrs. List No. VF56VD8IE221T51B

204041

Order Multiple=5	Price Each
Order Code 581-069●	0.59 0.46 0.40 0.34

Varistor 3 Terminal



- 3 terminal varistor designed to protect CMOS and TTL IC's from electro-static discharge
- Small size and 2.5mm pitch for densely populated circuit boards.

Voltage rating 25V dc
 Varistor voltage 50Vdc
 Current rating 20mA dc
 Capacitance 130pF ±20%
 Operating temperature -25°C to +85°C
 Mfrs. List No. VFR3VD31E131T51B

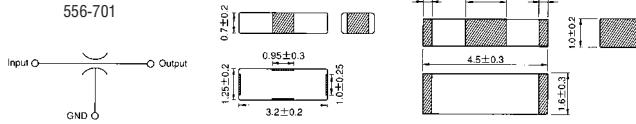
204042

Order Multiple=5	Price Each
Order Code 581-197●	0.85 0.72 0.63 0.56

Capacitor – 3 Terminal



- 3 terminal capacitors in chip form which offer a high level of noise suppression and excellent high frequency characteristics
- Applications include suppression of EMI in signal circuits and DC power lines.
- Supplied on tape.



NFM3212R Series

Voltage rating	50V dc	Current rating	300mA
Capacitance tolerance	1000MΩ min.	Insulation resistance	1000
Operating temperature	125-55°C to +7°C	DC resistance	0.3Ω max
Capacitance pF	Mfrs. List No.	Order Code	Capacitance pF
220	NFM3DCC221R1H3L	952-8253	2200 NFM3DCC222R1H3L
1000	NFM3DCC102R1H3L	952-8245	22000 NFM3DCC223R1H3L

NFM4516R Series

Voltage rating	100V dc	Current rating	300mA
Capacitance tolerance	1000MΩ min.	Insulation resistance	1000MΩ min.
Operating temperature	-55°C to +125°C	DC resistance	0.3Ω max
Capacitance pF	Mfrs. List No.	Order Code	Capacitance pF
470	NFM41CC471R2A3L	952-8350	2200 NFM41CC222R2A3L
1000	NFM41CC102R2A3L	952-8318	22000 NFM41CC223R2A3L

NFM40R Series

Voltage rating	25V dc	Current rating	200mA
Insulation resistance	1000MΩ min.	DC resistance	0.6Ω max
Operating temperature	-55°C to +125°C		
Capacitance pF	Tolerance %	Mfrs. List No.	Order Code
47	+50 to -20	NFM3DC470U1H3L	952-8288
100	+50 to -20	NFM3DCC101U1H3L	952-8237
100	+80 to -20	NFE31PT101C1E9L	952-8148
1500	+50 to -20	NFE31PT15221E9L	952-8156
220	+50 to -20	NFE31PT221D1E9L	952-8164
470	+50 to -20	NFE31PT471F1E9L	952-8180
470	+50 to -20	NFM3DCC471R1H3L	952-8296
2200	+50 to -50	NFE31PT222Z1E9L	952-8172

NFM41R Series

Voltage rating	100V dc	Current rating	300mAdc
Insulation resistance	1000MΩ	DC resistance	0.3Ω max
Operating temperature	-55°C to +125°C		
Capacitance pF	Tolerance %	Mfrs. List No.	Order Code
22	+50 to -20	NFM41CC220U2A3L	952-8326

204064

Order Multiple=5	Price Each
Order Code All Values●	0.550 0.520 0.470 0.410 0.300
Order Code All Values●	0.680 0.650 0.580 0.510 0.370
Order Code All Values●	0.210 0.187 0.158 0.140 0.128
Order Code All Values●	1.020 0.870 0.770 0.670 0.590

Need a better price?

Buy more and save more with our volume pricing service.

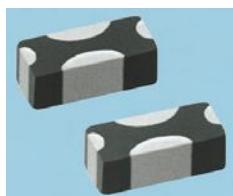
Contact us now:

Web: www.farnell.co.uk

Phone: 08447 11 11 11

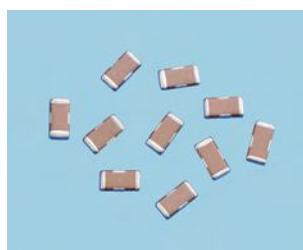


NFM Series



Capacitance	Voltage Rating	Tolerance	Mfrs. List No.	Order Code
Case Style 0603				
1μF	6.3V	-20% to +20%	NFM18PC105R0J3D	168-6505
1μF	6.3V	-20% to +20%	NFM18PS105R0J3D	168-6506
0.1μF	16V	-20% to +20%	NFM18PC104R1C3D	168-6508
0.1μF	16V	-20% to +20%	NFM18PS474R0J3D	168-6509
0.22μF	16V	-20% to +20%	NFM18PC224R0J3D	168-6510
0.47μF	16V	-20% to +20%	NFM18PC474R0J3D	168-6511
Case Style 0805				
2.2μF	6.3V	-20% to +20%	NFM21PC225B0J3D	168-6512
1μF	10V	-20% to +20%	NFM21PC105B1A3D	168-6514
0.22μF	16V	-20% to +20%	NFM21PC224R1C3D	168-6515
0.47μF	16V	-20% to +20%	NFM21PC474R1C3D	168-6516
1μF	16V	-20% to +20%	NFM21PC105B1C3D	168-6517
0.1μF	25V	-20% to +20%	NFM21PC104R1E3D	168-6518
Case Style 1205				
22μF	50V	-20% to +20%	NFM3DPC223R1H3L	168-6519
Case Style 1806				
1.5μF	25V	-20% to +80%	NFM41PC155B1E3L	168-6520
0.2μF	50V	-20% to +20%	NFM41PC204F1H3L	168-6521
Case Style 2220				
1.5μF	50V	-20% to +80%	NFM55PC155F1H4L	168-6522

W3F Series Feedthrough Filters



- 1206 case size nickel barrier terminations
- Broad band RFI attenuation
- Ultra low inductance ground connection
- Supplied on tape



Capacitance pF	Volt dc	Tolerance %	Mfrs. List No.	Order Code
1000	50	+50-20	W3F15C1028AT1A	121-6396
2200	50	+50-20	W3F15C2228AT1A	121-6397
22000	50	+50-20	W3F15C2238AT1A	121-6398
22	100	+50-20	W3F11A2208AT1A	121-6400
47	100	+50-20	W3F11A4708AT1A	121-6401
100	100	+50-20	W3F11A1018AT1A	121-6402
220	100	+50-20	W3F11A2218AT1A	121-6403
470	100	+50-20	W3F11A4718AT1A	121-6404

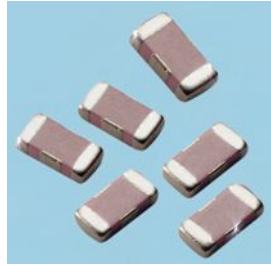
204159

Order Multiple=5 pF	Order Code	Price Each				
		5+	50+	100+	250+	500+
50 Volt dc						
1000	SMD121-6396●	0.470	0.410	0.400	0.310	0.230
2200	SMD121-6397●	0.470	0.410	0.400	0.310	0.220
22000	SMD121-6398●	0.470	0.410	0.400	0.310	0.230
100 Volt dc						
22	SMD121-6400●	0.420	0.380	0.370	0.290	0.197
47	SMD121-6401●	0.260	0.240	0.220	0.168	0.118
100	SMD121-6402●	0.420	0.380	0.370	0.290	0.200
220	SMD121-6403●	0.440	0.380	0.370	0.290	0.210
470	SMD121-6404●	0.310	0.270	0.260	0.200	0.151

Order Multiple=5 μF	Order Code	5+	50+	100+	250+	500+	4K+	Price Each
Case Style 0603								
1	168-6505● RL	0.200	0.163	0.145	0.124	0.112	0.059	
1	168-6506● RL	0.220	0.178	0.159	0.137	0.122	0.065	
0.1	168-6508● RL	0.260	0.197	0.175	0.150	0.143	0.071	
0.1	168-6509● RL	0.220	0.178	0.159	0.137	0.122	0.065	
0.22	168-6510● RL	0.270	0.210	0.185	0.158	0.143	0.075	
0.47	168-6511● RL	0.290	0.220	0.199	0.170	0.153	0.081	
Case Style 0805								
2.2	168-6512● RL	0.280	0.210	0.191	0.163	0.153	0.078	
1	168-6514● RL	0.200	0.160	0.143	0.122	0.112	0.058	
0.22	168-6515● RL	0.290	0.220	0.199	0.170	0.163	0.082	
0.47	168-6516● RL	0.290	0.220	0.199	0.170	0.163	0.082	
1	168-6517● RL	0.240	0.185	0.164	0.141	0.133	0.067	
0.1	168-6518● RL	0.194	0.154	0.137	0.117	0.112	0.056	
Case Style 1205								
22	168-6519● RL	0.540	0.430	0.390	0.330	0.310	0.156	
Case Style 1806								
1.5	168-6520● RL	1.120	0.890	0.790	0.670	0.620	0.330	
0.2	168-6521● RL	0.830	0.650	0.570	0.490	0.460	0.240	
Case Style 2220								
1.5	168-6522● RL	6.830	5.570	4.640	3.710	3.150	--	

W2H/W3H Series

0805 & 1206 Case Sizes



High current feedthru filters are designed as a broadband EMI filter that is specially designed to have high current handling capability.

These SMD feedthru filters offer an optimised frequency response with high attenuation across a wide RF spectrum due to optimised parallel and series inductances. They can also replace discrete L/C filter networks.

- Low parallel inductance provides significant noise reduction in circuits with operating frequencies up to 5GHz
- Broad frequency response with high attenuation
- Compact size
- High rated current

0805 Case Size

nF	Mfrs. List No.	Order Code	1+	25+	500+	1K+	3K+	Price Each
100 Volt d.c. NPO								
0.022	W2H11A2208AT1A	SMD125-1588●	0.270	0.210	0.151	0.133	0.092	
0.047	W2H11A4708AT1A	SMD125-1590●	0.210	0.167	0.121	0.106	0.074	
0.1	W2H11A1018AT1A	SMD125-1587●	0.300	0.240	0.169	0.149	0.103	
0.22	W2H11A2218AT1A	SMD125-1589●	0.300	0.240	0.169	0.149	0.103	
0.47	W2H11A4718AT1A	SMD125-1591●	0.300	0.240	0.169	0.149	0.103	
25 Volt d.c. X7R								
100	W2H13C1048AT1A	SMD125-1592●	0.300	0.240	0.169	0.149	0.103	
50 Volt d.c. X7R								
1	W2H15C1028AT1A	SMD125-1593●	0.300	0.240	0.169	0.149	0.103	
10	W2H15C1038AT1A	SMD125-1595●	0.210	0.162	0.118	0.103	0.072	
22	W2H15C2238AT1A	SMD125-1596●	0.300	0.240	0.169	0.149	0.103	
47	W2H15C4738AT1A	SMD125-1597●	0.300	0.240	0.169	0.149	0.103	

1206 Case Size

nF	Mfrs. List No.	Order Code	5+	50+	100+	500+	1K+	Price Each
100 Volt d.c. NPO								
0.1	W3H11A1018AT1A	SMD125-1577●	0.480	0.380	0.270	0.240	0.168	
0.022	W3H11A2208AT1A	SMD125-1578●	0.540	0.420	0.300	0.260	0.188	
0.22	W3H11A2218AT1A	SMD125-1579●	0.480	0.380	0.270	0.240	0.182	
0.047	W3H11A4708AT1A	SMD125-1580●	0.500	0.390	0.280	0.240	0.176	
25 Volt d.c. X7R								
100	W3H13C1048AT1A	SMD125-1583●	0.480	0.380	0.270	0.240	0.168	
50 Volt d.c. X7R								
10	W3H15C1038AT1A	SMD125-1584●	0.540	0.420	0.300	0.260	0.188	
22	W3H15C2238AT1A	SMD125-1585●	0.540	0.420	0.300	0.260	0.188	
47	W3H15C4738AT1A	SMD125-1586●	0.810	0.630	0.460	0.380	0.290	

451435



AVX Feedthrough Capacitor Designer Kits


No. of Values	Resistance Values	Mfrs List No.	Order Code	
26 Values	22 pF to 100 nF	ADVFEEDTHRU001	130-1944	452083

Order Code	Price Each
130-1944●	46.39


ACF Series
SMD 3-terminal Filters for Signal Lines


- Superior attenuation characteristics, in which the T-type filter circuit is magnetically shielded with ferrite
- Even greater attenuation characteristics when used in a stable circuit on the ground
- Ideal for high-density circuit design
- Suitable for reflow soldering



Frequency MHz	DC Res. Max. (Ω)	Current rating (mA)	Mfrs. List No.	Order Code
---------------	------------------	---------------------	----------------	------------

1210 Case		1+	50+	100+	500+	1K+
11 - 55	0.15	300	ACF321825-223-TD01	166-9222		
17 - 60	0.15	300	ACF321825-103-TD01	166-9215		
22 - 75	0.15	300	ACF321825-682-TD01	166-9233		
30 - 85	0.15	300	ACF321825-472-TD01	166-9228		
37 - 90	0.15	300	ACF321825-332-TD01	166-9225		
45 - 105	0.15	300	ACF321825-222-TD01	166-9221		
60 - 115	0.15	300	ACF321825-152-TD01	166-9218		
80 - 140	0.15	300	ACF321825-102-TD01	166-9214		
95 - 150	0.15	300	ACF321825-681-TD01	166-9232		
120 - 180	0.15	300	ACF321825-471-TD01	166-9227		
130 - 210	0.15	300	ACF321825-331-TD01	166-9224		
170 - 250	0.15	300	ACF321825-221-TD01	166-9220		
205 - 280	0.15	300	ACF321825-151-TD01	166-9216		
265 - 340	0.15	300	ACF321825-101-TD01	166-8890		
340 - 420	0.15	300	ACF321825-680-TD01	166-9231		
420 - 500	0.15	300	ACF321825-470-TD01	166-9226		
500 - 600	0.15	300	ACF321825-330-TD01	166-9223		
600 - 700	0.15	300	ACF321825-220-TD01	166-9219		

1812 Case		1+	50+	100+	500+	1K+
7 - 60	0.15	300	ACF451832-333-TD01	166-9248		
9 - 65	0.15	300	ACF451832-223-TD01	166-9244		
11 - 70	0.15	300	ACF451832-153-TD01	166-9239		
15 - 75	0.15	300	ACF451832-103-TD01	166-9236		
20 - 85	0.15	300	ACF451832-682-TD01	166-9255		
25 - 90	0.15	300	ACF451832-472-TD01	166-9251		
35 - 100	0.15	300	ACF451832-332-TD01	166-9247		
40 - 110	0.15	300	ACF451832-222-TD01	166-9243		
50 - 130	0.15	300	ACF451832-152-TD01	166-9238		
65 - 150	0.15	300	ACF451832-102-TD01	166-9235		
75 - 160	0.15	300	ACF451832-681-TD01	166-9253		
95 - 180	0.15	300	ACF451832-471-TD01	166-9250		
115 - 205	0.15	300	ACF451832-331-TD01	166-9246		
150 - 250	0.15	300	ACF451832-221-TD01	166-9241		
190 - 290	0.15	300	ACF451832-151-TD01	166-9237		
235 - 335	0.15	300	ACF451832-101-TD01	166-9234		
295 - 395	0.15	300	ACF451832-680-TD01	166-9252		
360 - 460	0.15	300	ACF451832-470-TD01	166-9249		
450 - 550	0.15	300	ACF451832-330-TD01	166-9245		
550 - 650	0.15	300	ACF451832-220-TD01	166-9240		

528705

Order Code	1+	50+	100+	500+	1K+
1210 Case All Values ●	0.410	0.290	0.240	0.194	0.173
1812 Case All Values ●	0.500	0.360	0.280	0.220	0.194

ACH Series
SMD 3-terminal Filters for Power Lines


- Superior attenuation characteristics, in which the T-type filter circuit is magnetically shielded with ferrite
- Even greater attenuation characteristics when used in a stable circuit on the ground
- Ideal for high-density circuit design

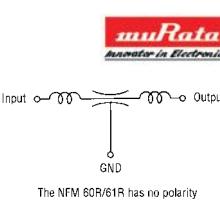


Frequency MHz	DC Res. Max. (Ω)	Current rating (A)	Mfrs. List No.	Order Code
---------------	------------------	--------------------	----------------	------------

1210 Case	11 - 55	0.06	1.5	ACH3218-223-TD01	166-9264
	17 - 60	0.06	1.5	ACH3218-103-TD01	166-9258
	22 - 75	0.06	1.5	ACH3218-682-TD01	166-9274
	30 - 85	0.06	1.5	ACH3218-472-TD01	166-9271
	37 - 90	0.06	1.5	ACH3218-332-TD01	166-9268
	45 - 105	0.06	1.5	ACH3218-222-TD01	166-9263
	60 - 115	0.06	1.5	ACH3218-152-TD01	166-9260
	80 - 140	0.06	1.5	ACH3218-102-TD01	166-9257
	95 - 150	0.06	1.5	ACH3218-681-TD01	166-9254
	120 - 180	0.06	1.5	ACH3218-471-TD01	166-9251
	130 - 210	0.06	1.5	ACH3218-331-TD01	166-9248
	170 - 250	0.06	1.5	ACH3218-221-TD01	166-9245
	205 - 280	0.06	1.5	ACH3218-151-TD01	166-9242
	265 - 340	0.06	1.5	ACH3218-101-TD01	166-8890
	340 - 420	0.06	1.5	ACH3218-680-TD01	166-9239
	420 - 500	0.06	1.5	ACH3218-470-TD01	166-9236
	500 - 600	0.06	1.5	ACH3218-330-TD01	166-9233
	600 - 700	0.06	1.5	ACH3218-220-TD01	166-9230

528711

1812 Case	All Values ●	0.410	50+	100+	500+	1K+
			0.290	0.240	0.194	0.173
			0.360	0.280	0.220	0.194



- 3 terminal surface mount capacitor with ferrite bead on input and output leads
- High current rating and low DC resistance make them suitable for suppression of DC power rails
- Flow or reflow solder except 869-909 which can only be reflow soldered

NFE31Series	Voltage rating	25V dc	Current rating	6A dc
	Insulation resistance	1000Mohm	DC resistance	0.01Ω
	Operating temperature	-40°C to +85°C	Reel quantity	2000 pcs
	Capacitance pF	Tolerance %	Mfrs. List No.	Order Code

NFE61Series	Voltage rating	50V dc	Current rating	2A
	Insulation resistance	1000Mohm	Quantity	2500 pcs
	Operating temperature	-25°C to +85°C		
	Capacitance pF	Tolerance %	Mfrs. List No.	Order Code

Order Multiple=5	Order Code	5+	50+	100+	500+	1K+	2K+
NFE31Series	All Values ●	0.49	0.38	0.33	0.27	0.25	0.22
NFE61Series	All Values ●	0.81	0.62	0.55	0.45	0.42	0.36

204088

Troubleshooting tips


Chat live online to one of our technical engineers at
www.farnell.co.uk



3 Terminal PCB Filters - continued

EXCCET Series

Chip EMI Filters



- Eight capacitance values in a wide range, related to the noise frequency
- Suitable for narrow pitch insertion
- Suitable for applications requiring thin design

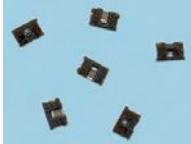
Tolerance 20%
 Voltage rating d.c. 50V
 Current rating 2A
 Resistance 50ohm
 Operating temperature -25°C to +80°C

Panasonic
ideas for life



pF	Order Code	1+	50+	250+	500+	1K+	Price Each
22	SMD129-2714●	0.58	0.49	0.43	0.38	0.35	
47	SMD129-2718●	0.57	0.48	0.42	0.37	0.34	
100	SMD129-2711●	0.61	0.42	0.36	0.32	0.29	
270	SMD129-2716●	0.59	0.50	0.44	0.39	0.36	
470	SMD129-2719●	0.61	0.42	0.36	0.33	0.32	
1000	SMD129-2712●	0.61	0.42	0.36	0.31	0.30	
2200	SMD129-2715●	0.61	0.42	0.36	0.33	0.32	
10000	SMD129-2713●	0.61	0.43	0.38	0.33	0.32	

452172

ELKE Series
EMI Filters

Panasonic
ideas for life



- No variation in attenuation characteristics as current changes
- Stable P/N marking using laser technology on the top face of product
- Recommended for data lines, secondary power supply lines (DC lines) for game, digital AV and communications equipment

Case size	3218	Operating temperature	-20°C to +85°C
Capacitance pF	Frequency max. (MHz)	Rated Current Max. (A)	Voltage (V d.c.)
10	250	2	50
22	200	2	50
47	100	2	50
100	50	2	50
220	25	2	50
470	10	2	50
1000	5	2	50
2200	2	2	50
10000	0.5	2	50
33000	0.2	2	25

452182

Order Code	5+	100+	250+	500+	1K+	Price Each
All Values ●	0.69	0.64	0.59	0.45	0.43	

EXC24CP Series
2 Mode Noise Filters

Panasonic
ideas for life



- Improves acoustic quality of mobile phones and portable audio equipment (burst noise suppression)
- Suppression for both common and normal mode noise
- Small size and lightweight (about 3 mg)

Case Size	Impedance @ 100MHz (Ω)	Impedance Tolerance %	Rated Current Max. (mA)	DC Resistance Max. (Ω)	Mfrs. List No.	Order Code
0504	120	25	500	0.3	EXC24CP121U	129-2693
0504	220	25	350	0.4	EXC24CP221U	129-2694

452169

Impedance	Order Code	1+	50+	250+	500+	1K+	Price Each
120	SMD129-2693● RL	0.36	0.31	0.28	0.25	0.21	
220	SMD129-2694● RL	0.36	0.31	0.28	0.25	0.21	

W2F4/W3F4 Series
Feedthru Filter Arrays

- Ideal choice for EMI suppression, broadband I/O filtering, LCD filtering and V_{cc} power line conditioning
- Unique construction provides low parallel inductance and offers excellent decoupling capabilities
- Contains four elements with a common ground connection, making it ideal for multi-line designs



Case Size	Capacitance pF	Volt dc	Tolerance %	Mfrs. List No.	Order Code
0805	22	25	-20/+50	W2F43A2208AT1A	125-1568
0805	47	25	-20/+50	W2F43A4708AT1A	125-1571
1206	220	50	-20/+50	W3F45C2218AT1A	125-1575
1206	470	50	-20/+50	W3F45C4718AT1A	125-1576
1206	22	100	-20/+50	W3F41A2208AT1A	125-1573
1206	47	100	-20/+50	W3F41A4708AT1A	125-1574
1206	100	100	-20/+50	W3F41A1018AT1A	125-1572

451439

Order Multiple=5		Order Code	Price Each			
Case Size	5+		25+	500+	1K+	3K+
0805	0.350	SMD125-1568●	0.290	0.210	0.181	0.129
1206	0.420	SMD125-1572●	0.330	0.250	0.210	0.156

Contact Suppressors

AMPOHM
WOUND PRODUCTS LTD

FE-SP-CR Series – Contact Suppressors



Voltage rating AC 250V
 Operating temperature -40°C to +85°C
 Tolerance ±10%

Dimensions:
 L = 25 mm, D = 18.5 mm, W = 9 mm, Lead pitch = 22.5 mm
 NB. 0.48μF case size:
 L = 32.5 mm, D = 24 mm, W = 13.5 mm, Lead pitch = 28 mm
 Lead Length = 20 mm

- Designed to suppress interference caused by the switching of reactive loads whilst at the same time increasing contact life.
- Constructed using a class X2 capacitor in accordance with BS and V. D. E. specifications in series with a high quality resistor.
- Can also be used in SCR and triac protection.

482118

FE-SP-HDR Series – Contact Suppressors

AMPOHM
WOUND PRODUCTS LTD



Voltage rating AC 250V
 Operating temperature -40°C to +85°C
 Tolerance ±10%

Dimensions:
 L = 25 mm, D = 18.5 mm, W = 9 mm
 NB. 0.48μF case size L = 32.5 mm, D = 24 mm, W = 13.5 mm
 Lead Length = 105 mm

- Designed to suppress interference caused by the switching of reactive loads whilst at the same time increasing contact life.
- Constructed using a class X2 capacitor in accordance with BS and V. D. E. specifications in series with a high quality resistor.
- Can also be used in SCR and triac protection.

482120

μF	Ω	Order Code	1+	50+	100+	250+	1K+	Price Each
0.047	47	143-8453●	1.81	1.64	1.41	1.34	1.24	
0.047	100	143-8454●	1.81	1.64	1.41	1.34	1.24	
0.1	22	143-8455●	1.81	1.64	1.41	1.34	1.24	
0.1	47	143-8456●	1.81	1.64	1.41	1.34	1.24	
0.1	100	143-8457●	1.81	1.64	1.41	1.34	1.24	
0.1	470	143-8458●	1.81	1.64	1.41	1.34	1.24	
0.22	22	143-8459●	1.85	1.68	1.45	1.38	1.28	
0.22	47	143-8460●	1.85	1.68	1.45	1.38	1.28	
0.22	100	143-8461●	1.85	1.68	1.45	1.38	1.28	
0.22	470	143-8462●	1.85	1.68	1.45	1.38	1.28	
0.47	47	143-8464●	2.57	2.34	2.17	1.93	1.67	
0.47	100	143-8465●	2.57	2.34	2.17	1.93	1.67	
0.47	220	143-8466●	2.57	2.34	2.17	1.93	1.67	

FE-SP-B-HDR Series – Contact Suppressors

AMPOHM
WOUND PRODUCTS LTD



Voltage rating AC 250V
 Operating temperature -40°C to +85°C
 Tolerance ±10%

Dimensions:
 L = 25 mm, D = 18.5 mm, W = 9 mm
 NB. 0.48μF case size L = 32.5 mm, D = 24 mm, W = 13.5 mm
 Lead Length = 105 mm

- Designed to suppress interference caused by the switching of reactive loads whilst at the same time increasing contact life.
- Constructed using a class X2 capacitor in accordance with BS and V. D. E. specifications in series with a high quality resistor.
- Can also be used in SCR and triac protection.

482117



				Price Each			
μF	Ω	Order Code	1+	50+	100+	250+	1K+
0.1	100	143-8467●	2.17	1.86	1.66	1.55	1.45
0.22	100	143-8468●	2.15	1.86	1.65	1.55	1.45
0.47	47	143-8469●	2.78	2.54	2.36	2.07	1.95
0.47	100	143-8470●	2.78	2.54	2.36	2.07	1.95

FE-SC Series – Delta Suppressor



- Designed for the interference suppression of small motors, business machines and a wide range of domestic appliances.
- The capacitors arranged in a delta configuration employ an impregnated paper dielectric with aluminium electrodes.
- Housed in a fully insulated resin filled plastic case.

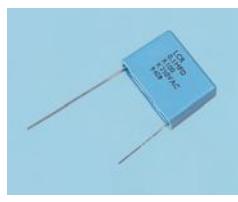
Diameter = 16 mm
Length = 42 mm
Lead length = 155 mm

Capacitance 0.005 μF
Voltage rating AC 250V
Operating temperature -10°C to $+70^\circ\text{C}$
Tolerance $\pm 20\%$

482116

Mfrs. List No.	Order Code	1+	50+	100+	250+	1K+	Price Each
FE-SC-CA-SW	143-8478●	3.21	2.89	2.57	2.45	2.33	
With insulated bracket	FE-SC-B-CA-SW NEW 163-6719●	3.61	3.20	2.98	2.88	2.54	

RC Network – PCB Mounting



- PCB mounting contact arc suppressor which will suppress interference across switch and relay contacts when switching reactive loads.

H=19, W=25, D=8
Lead pitch=22.5, Lead dia.=0.8, Lead length=20

Power rating 0.5W @ 250V ac
Operating temperature -55°C to $+100^\circ\text{C}$ 0.1 μF
Construction C=0.1 μF class X $\pm 10\%$
R=100 Ω $\pm 10\%$

204007

Order Code	1+	50+	100+	500+	1K+	Price Each
952-0996●	1.43	1.39	1.25	0.93	0.82	

RC Network – PCB Mounting and Flying Leads



PCB mounting
H=17.5
W=23.5
D=8.5
Lead pitch=20
Lead dia.=0.8
Lead length=15.

Flying leads
H=23
W=19
D=8.5
Lead pitch=15
Lead dia.=20 AWG
Lead length=100.

- RC Networks consisting of a capacitor in series with a high quality metal film resistor
- PCB mounting style or with flying leads
- Applications include suppression when switching reactive loads and as a snubber network in SCR and triac protection. Approved to VDE, SEMKO, DEMKO, NEMKO and CSA.

● UL recognised

Power rating 0.5W @ 250V ac
Operating temperature -40°C to $+85^\circ\text{C}$
Construction C=0.1 μF class X $\pm 20\%$
R=120 Ω $\pm 30\%$

204237

Order Code	1+	50+	100+	500+	1K+	Price Each
PCB Mounting 118-7649●	1.99	1.82	1.64	1.37	1.16	
Flying Leads 118-7659●	2.82	2.58	2.37	2.05	1.72	

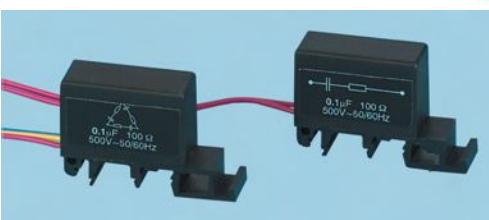
Power rating 0.5W @ 250V ac
Operating temperature -40°C to $+85^\circ\text{C}$
Construction C=0.01 μF class X $\pm 20\%$
R=120ohm $\pm 30\%$

495527

Order Code	1+	50+	100+	500+	1K+	Price Each
PCB Mounting 150-6659●	1.32	1.13	1.07	1.02	0.95	
Flying Leads 150-6660●	2.40	2.06	1.96	1.86	1.72	
150-6661●	2.40	2.06	1.96	1.72	1.40	
150-6662●	3.42	2.94	2.79	2.46	2.00	

Over 480,000 products online

Spark Quenchers - DIN Rail Mounting



- Single and three phase suppressors designed to reduce arcing when switching inductive loads
- May also be used to reduce dv/dt across thyristors and other solid state devices

Mfrs. List No.	Capacitance	Capacitive Tolerance	Resistors	Operating voltage	Supply frequency	Operating temperature	Insulation resistance	Single Phase	Three Phase
FP005	0.1 μF	$\pm 10\%$	100ohm $\pm 5\%$, 4W	500V RMS (max)	50/60Hz	-40°C to $+70^\circ\text{C}$	100Mohm 500V	FP006	0.1 μF x 3

233764

Mfrs. List No.	Order Code	1+	10+	50+	100+	250+	Price Each
Single Phase FP005	952-0848●	7.62	7.47	7.00	6.55	6.28	
Three Phase FP006	952-0856●	11.53	11.28	10.60	9.88	9.49	

Spark Quenchers - Chassis Mounting



- Single and three phase suppressors designed to reduce arcing when switching inductive loads
- May also be used to reduce dv/dt across thyristors and other solid state devices

Mfrs. List No.	Capacitance	Capacitive Tolerance	Resistors	Operating voltage	Supply frequency	Operating temperature	Insulation resistance	Single Phase	Three Phase
FP012	0.33 μF	$\pm 10\%$	33ohm $\pm 30\%$, 6W	500V RMS (max)	50/60Hz	-40°C to $+70^\circ\text{C}$	100Mohm 500V	FP012	0.33 μF x 3

233810

Mfrs. List No.	Order Code	1+	10+	50+	100+	250+	Price Each
Single Phase FP012	952-0864●	6.93	6.80	6.37	5.95	5.71	
Three Phase FP013	952-0872●	15.10	14.80	13.88	12.97	12.43	

DC Power Filters



Surface Mount - BNX Series



- Large rated current (10A) and Low DC Resistance
- High insertion loss characteristic over a wide frequency range of 1MHz to 1GHz
- Mounting area and volume is reduced
- Application includes Amusement equipment, PC and peripherals

Insulation Resistance 500M Ω

Ratings (dc) Current (A)	Voltage (V)	Mfrs. List No.	Order Code
10	50	BNX022-01	111-4996

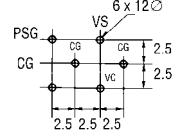
423515

Order Code	1+	10+	25+	50+	100+	Price Each
111-4996●	4.44	4.18	3.69	3.07	2.47	

Standard BNX Series



VS=Voltage supply
VC=Voltage circuit
PSG=Power supply ground
CG=Circuit ground



DC Power Filters - continued

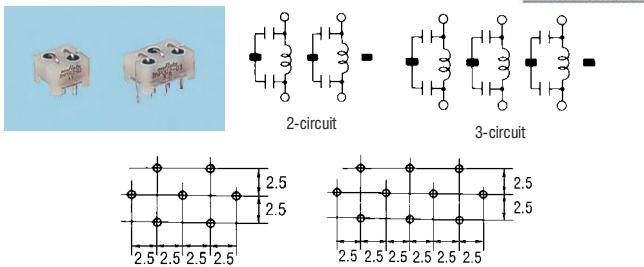
Standard BNX Series - continued

- Compact PCB mounting dc power filters incorporating a large value four terminal capacitor, a feed-through capacitor and ferrite bead inductors
- Provides excellent attenuation over a very wide frequency band.
- Typical applications include the suppression of noise in digital equipment, engine control units, computer terminals and the output lines of switching power supplies.

Ratings (dc) Current (A)	Voltage (V)	Dielectric Strength (V)	Insertion Loss 1GHz - 1MHz	Mfrs. List No.	Order Code
10	50	125	1GHz - 1MHz	BNX002-01	952-6943
10	150	375	5MHz - 1GHz	BNX003-01	952-6951
15	50	125	1MHz - 1GHz	BNX005-01	952-6960
Insulation Resistance		100MΩ	Insertion Loss	40dB min	204212

Order Code	1+	10+	25+	50+	100+
952-6943●	4.79	4.08	3.59	3.16	2.78
952-6951●	4.06	3.91	3.55	3.09	2.87
952-6960●	5.08	4.32	3.81	3.36	2.96

Pi-Style BNP Series



- Compact PCB mounting dc power filters incorporating ferrite bead inductors and feed-through capacitors
- Available in two and three circuit styles suitable for multiple supply lines
- They provide excellent attenuation over a wide frequency range of 15MHz to 1GHz and are suitable for use in high impedance circuits.
- Typical applications include the suppression of noise in signal lines and dc power sources in engine control units, digital equipment, computer terminals and car electronics.

Rating 10A @ 50V Operating temperature -40°C to +100°C

Insulation resistance 100MΩ

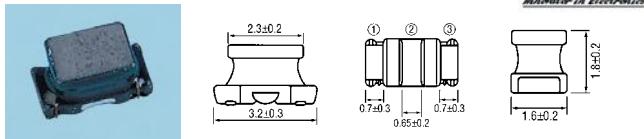
No. of Circuits	H	W	D	Attenuation dB (50Ω System)	1MHz	10MHz	100MHz	1GHz
2	12	12	11	5	35	70	55	
3	12	17	11	5	35	70	55	

204213

No. of Circuits	Order Code	1+	10+	25+	50+	100+
2	952-6927●	2.25	2.11	1.89	1.84	1.77
3	952-6935●	2.47	2.31	2.07	2.03	1.95

Signal Line Noise Filters

NFW31xxx Series



- Chip suppression filter, suitable for high speed digital circuits where signal harmonics are prone to becoming sources of noise
- Effective in applications where signal and noise frequencies are close to each other
- Applications include noise suppression in high speed processing circuits, high frequency clock and RGB circuits.

Rating 200mA @ 25V dc Reel quantity 2000 pcs

Operating temperature -40°C to +85°C

Cut-off Frequency MHz	10MHz	20MHz	50MHz	100MHz	200MHz	500MHz	1GHz	Mfrs. List No.	Order Code
10	*	5	25	25	25	30	30	NFW31SP106X1E4L	952-8369
20	-	*	5	25	25	30	30	NFW31SP206X1E4L	952-8385
50	-	-	*	10	30	30	30	NFW31SP506X1E4L	952-8407
100	-	-	-	*	5	20	30	NFW31SP107X1E4L	952-8377
200	-	-	-	-	*	10	30	NFW31SP207X1E4L	952-8393

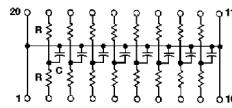
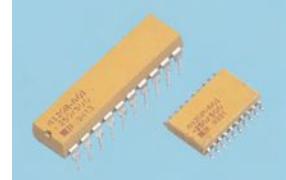
* 6dB Max.

204097

Order Multiple=5	Order Code	5+	50+	100+	500+	1K+	2K+	Price Each
NFM51R	All Values ●	0.70	0.52	0.46	0.38	0.33	0.28	

601 Series RC Network T-Filter

BOURNS®
Reliable Electronic Solutions



Standard H=4.57, W=7.87, L=27.05 Surface Mount H=2.78, W=10.34, L=12.95
Lead spacing = 2.54 x 8.64 Lead spacing = 1.27 x 10.34

- Low pass noise filters designed to filter out the high frequency noise content of digital signals at board level
- Can be used to filter a maximum of eight signal lines
- Flame retardant case to UL94V-0.

Voltage Rating	50V	Capacitance voltage	25V
Resistance temperature coefficient	±300ppm/°C	Capacitance tolerance	±30%
Capacitance temperature coefficient	Z5U		

pF	Ω	10MHz	20MHz	100MHz	200MHz	1GHz	Mfrs. List No.	Order Code
50	25	3dB	4dB	7dB	14dB	19dB	4120R-601-250/500L	935-6029
200	25	4dB	7dB	15dB	40dB	17dB	4120R-601-250/201L	935-6010
50	25	3dB	4dB	7dB	14dB	19dB	4420P-T06-250/500L	935-6045
200	25	4dB	7dB	15dB	40dB	17dB	4420P-T06-250/201L	935-6037

204275

pF	Ω	Order Code	1+	25+	50+	100+	250+
Standard							
50	25	935-6029●	2.72	2.33	2.05	1.78	1.77
200	25	935-6010●	2.72	2.33	2.05	1.78	1.77
Order Multiple=5			5+	25+	50+	100+	250+
Surface Mount							
50	25	SMD 935-6045●	4.95	4.32	3.82	3.30	3.23
200	25	SMD 935-6037●	4.95	4.32	3.82	3.30	3.23

SMD Line Filter

WE-SLM Series, Common Mode

New

WE WÜRTH ELECTRONIK



- Small size, High current up to 300mA
- Nominal Voltage: 80V DC (42V AC)
- Operating temperature: -40°C to +125°C
- Recommended soldering profile: Reflow

Inductance (μH)	Induct. Tolerance (%)	R _{DC} max. (Ω)	Current rating (mA)	Impedance max. (kΩ)	Mfrs. List No.	Order Code
11	+50%, -30%	0.18	300	800	744242110	163-6264
51	+50%, -30%	0.32	300	2500	744242510	163-6265
100	+50%, -30%	0.58	300	4000	744242101	163-6266

522475

Inductance (μH)	Order Code	1+	10+	50+	100+	250+
11	163-6264●	1.98	1.82	1.65	1.55	1.46
51	163-6265●	1.98	1.82	1.65	1.55	1.46
100	163-6266●	1.98	1.82	1.65	1.55	1.46

522475

Common mode Chokes

WE-SL2 Series, for Signal Lines

New

WE WÜRTH ELECTRONIK



- For distortion-free removal of noise from transmitted electrical signals
- Double current-compensated choke
- Offering a wide bandwidth with the core materials NiZn / MnZn
- Ambient temperature: -40°C to +85°C
- Nominal voltage: 80V DC (42V AC)
- UL compliant housing
- for current compensated choke for data and signal lines, power supply systems, filter for measurement signals

Inductance (μH)	Inductance tolerance (%)	R _{DC} max. (Ω)	Current rating (A)	Impedance max. (kΩ)	Mfrs. List No.	Order Code
51	±30%	0.16	1	5.5	744227	163-6267
6.5	±50%	0.95	0.4	18.4	744229	163-6268
10	±30%	0.08	1.6	0.92	744226	163-6269
25	±30%	0.12	1	2.8	744228	163-6270
51	±30%	0.16	1	5.5	744227S	163-6271

522475

2x Inductance (μ H)	Inductance tolerance	R _{DC} max (Ω)	Current rating (A)	Impedance max. (k Ω)	Mfrs. List No.	Order Code
250	$\pm 50\%$	0.13	1.2	1.8	744224	163-6272
500	$\pm 50\%$	0.15	1	3.3	744223	163-6274
1	$\pm 50\%$	0.31	0.8	6	744222	163-6275
2	$\pm 50\%$	0.42	0.6	9.2	744221	163-6276
4.7	$\pm 50\%$	0.75	0.5	20	744220	163-6277

522476

2x Inductance (μ H)	Order Code	1+	10+	50+	100+	250+	Price Each
51	163-6267●	1.74	1.61	1.49	1.40	1.31	
6.5	163-6268●	1.74	1.61	1.49	1.40	1.31	
10	163-6269●	1.74	1.61	1.49	1.40	1.31	
25	163-6270●	1.74	1.61	1.49	1.40	1.31	
51	163-6271●	1.74	1.61	1.49	1.40	1.31	
250	163-6272●	1.74	1.61	1.49	1.40	1.31	
500	163-6274●	1.74	1.61	1.49	1.40	1.31	
1	163-6275●	1.74	1.61	1.49	1.40	1.31	
2	163-6276●	1.74	1.61	1.49	1.40	1.31	
4.7	163-6277●	1.74	1.61	1.49	1.40	1.31	

SMD Noise Suppressor WE-CNSW Series



- High common-mode noise suppression at high frequency
- Small influence for high speed signals through winding symmetry
- For USB 2.0, Firewire/IEEE 1394, LVDS, High speed data lines, common Mode Filters

Impedance @ 100MHz (Ω)	Voltage rating (V)	R _{DC} max (Ω)	Current rating (mA)	Mfrs. List No.	Order Code
67	50	0.25	400	744231061	163-6468
90	50	0.3	370	744231091	163-6469
120	50	0.3	0.4	744231121	163-6470
180	50	0.35	0.33	744231181	163-6471
260	50	0.4	0.3	744231261	163-6472
370	50	0.45	0.28	744231371	163-6473
90	50	0.3	370	744232090	163-6474
160	50	0.4	340	744232161	163-6475
260	50	0.5	310	744232261	163-6476
600	50	0.8	260	744232601	163-6477
1	50	1	230	744232102	163-6478
2.2	50	1.2	0.4	744232222	163-6481

523300

Impedance @ 100MHz (Ω)	Order Code	1+	10+	50+	100+	250+	Price Each
67	SMD 163-6468●	0.68	0.62	0.57	0.54	0.50	
90	SMD 163-6469●	0.68	0.62	0.57	0.54	0.50	
120	SMD 163-6470●	0.68	0.62	0.57	0.54	0.50	
180	SMD 163-6471●	0.68	0.62	0.57	0.54	0.50	
260	SMD 163-6472●	0.68	0.62	0.57	0.54	0.50	
370	SMD 163-6473●	0.68	0.62	0.57	0.54	0.50	
90	SMD 163-6474●	0.74	0.60	0.55	0.51	0.48	
160	SMD 163-6475●	0.74	0.60	0.55	0.51	0.48	
260	SMD 163-6476●	0.74	0.60	0.55	0.51	0.48	
600	SMD 163-6477●	0.74	0.60	0.55	0.51	0.48	
1	SMD 163-6478●	0.74	0.60	0.55	0.51	0.48	
2.2	SMD 163-6481●	0.74	0.60	0.55	0.51	0.48	

523300

SMD Inductors



3640 Series 0402 & 0603 Case Sizes



- Thin film technology surface mount RF inductors
- 0402 and 0603 case sizes
- Tight tolerances with narrow distributions
- High Q factor
- Suitable for telecommunications applications

H=0.5, W=0.8, L=1.6
Supplied on 8mm tape (reel=500pcs)Operating temperature
-40°C to +85°CTemperature coefficient
0 to +125ppm/°CSelf resonant frequency
6000MHz

Inductance (nH)	Q	Test. Freq. (MHz)	DC Res. (Ω)	Current Max. (mA)	Mfrs. List No.	Order Code
1	± 0.2 nH	13	300	0.1	700	36401E1N0A 117-4118
1.5	± 0.2 nH	13	300	0.2	700	36401E1N5A 117-4119
2.2	± 0.2 nH	13	300	0.3	440	36401E2N2A 117-4120
3.3	± 0.2 nH	13	300	0.4	380	36401E3N3A 117-4121
4.7	± 0.2 nH	13	300	0.6	320	36401E4N7A 117-4122
6.8	± 0.2 nH	13	300	0.9	260	36401E6N8A 117-4123
8.2	± 0.2 nH	13	300	1.1	220	36401E8N2A 117-4124
10	$\pm 5\%$	13	300	1.3	200	36401E10NJ 117-4126
22	$\pm 5\%$	13	300	2.6	90	36401E22NJ 117-4127
33	$\pm 5\%$	13	200	3.6	130	36401E33NJ 117-4128

0603 Case Size

1	± 0.2 nH	15	300	0.2	800	36401J1N0A 117-4040
1.5	± 0.2 nH	15	300	0.2	800	36401J1N5A 117-4041
2.2	± 0.2 nH	15	300	0.2	300	36401J2N2A 117-4042
3.3	± 0.2 nH	15	300	0.2	300	36401J3N3A 117-4043
4.7	± 0.2 nH	15	300	0.2	300	36401J4N7A 117-4044
6.8	± 0.2 nH	15	300	0.5	300	36401J6N8A 117-4045

Inductance (nH)	Tolerance	Q Min.	Test. Freq. (MHz)	DC Res. (Ω)	Current Max. (mA)	Mfrs. List No.	Order Code
0603 Case Size							
10	$\pm 2\%$	15	300	1	300	36401J10NG	117-4047
15	$\pm 2\%$	15	300	1	300	36401J15NG	117-4048
22	$\pm 2\%$	15	300	2	250	36401J22NG	117-4049
33	$\pm 2\%$	15	200	2	250	36401J33NG	117-4050
39	$\pm 2\%$	15	200	3	200	36401J39NG	117-4051
47	$\pm 2\%$	15	200	3	200	36401J47NG	117-4052
68	$\pm 2\%$	15	200	5	150	36401J68NG	117-4053
100	$\pm 2\%$	15	200	8.5	100	36401JR10G	117-4054

204184

Order Multiple = 5	Case Size	Order Code	5+	50+	100+	500+	Price Each
	0402	All Values ● RL	0.210	0.182	0.161	0.140	
	0603	All Values ● RL	0.147	0.137	0.126	0.093	

204182

LQP15 Series – 0402 Case Size	Order Code	1+	3+	Price Each
	117-4055●	69.87	62.89	

204182

Inductance μ H	Resistance Ω	Current mA	Resonant Frequency MHz	Mfrs. List No.	Order Code
LQP15 Series $\pm 0.05\text{nH}$					
1	0.1	400	6000	LQP15MN1N0W02D	151-5345
1.1	0.1	390	6000	LQP15MN1N1W02D	151-5346
1.2	0.1	390	6000	LQP15MN1N2W02D	151-5347
1.4	0.2	280	6000	LQP15MN1N4W02D	151-5348
1.5	0.2	280	6000	LQP15MN1N5W02D	151-5349
1.7	0.2	280	6000	LQP15MN1N7W02D	151-5350
1.9	0.3	220	6000	LQP15MN1N9W02D	151-5351
2.1	0.3	220	6000	LQP15MN2N1W02D	151-5355
2.6	0.3	220	6000	LQP15MN2N6W02D	151-5357
2.9	0.4	190	6000	LQP15MN2N9W02D	151-5358
3.2	0.4	190	6000	LQP15MN3N2W02D	151-5360
3.5	0.5	170	6000	LQP15MN3N5W02D	151-5361
3.9	0.5	170	6000	LQP15MN3N9W02D	151-5363

LQP15 Series $\pm 0.1\text{nH}$	Order Code	5+	50+	100+	250+	500+	Price Each
	1.0 μ H to 3.9 μ H	0.184	0.143	0.112	0.082	0.061	
	4.3 μ H to 8.2 μ H	0.163	0.133	0.092	0.071	0.061	
	10 μ H to 33 μ H	0.173	0.143	0.102	0.082	0.061	

SMD Inductors - continued

LQG18 Series



- 0603 chip coils for high frequency applications

LQG18 0603 Case Size $\pm 0.3\text{nH}$

Inductance nH	Resistance Ω	Current mA	Resonant Frequency MHz	Q Factor	Mfrs. List No.	Order Code
1.2 $\pm 0.3\text{nH}$	0.1	500	6000	12	LQG18HN1N2S00D	151-5377
1.5 $\pm 0.3\text{nH}$	0.1	500	6000	12	LQG18HN1N5S00D	151-5379
1.8 $\pm 0.3\text{nH}$	0.1	500	6000	12	LQG18HN1N8S00D	151-5381
2.2 $\pm 0.3\text{nH}$	0.1	500	6000	12	LQG18HN2N2S00D	151-5384
2.7 $\pm 0.3\text{nH}$	0.15	500	6000	12	LQG18HN2N7S00D	151-5385
3.3 $\pm 0.3\text{nH}$	0.15	500	6000	12	LQG18HN3N3S00D	151-5388
3.9 $\pm 0.3\text{nH}$	0.15	450	6000	12	LQG18HN3N9S00D	151-5389
5.6 $\pm 0.3\text{nH}$	0.2	430	5000	12	LQG18HN5N6S00D	151-5393

Inductance nH	Order Code	5+	50+	100+	250+	500+	Price Each
1.2	151-5377●	0.189	0.133	0.114	0.102	0.085	
1.5	151-5379●	0.189	0.133	0.114	0.102	0.085	
1.8	151-5381●	0.189	0.133	0.114	0.102	0.085	
2.2	151-5384●	0.189	0.133	0.114	0.102	0.085	
2.7	151-5385●	0.189	0.133	0.114	0.102	0.085	
3.3	151-5388●	0.189	0.133	0.114	0.102	0.085	
3.9	151-5389●	0.230	0.155	0.134	0.119	0.099	
5.6	151-5393●	0.189	0.133	0.114	0.102	0.085	

LQG18 0603 Case Size $\pm 5\%$

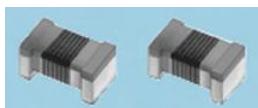
Inductance nH	Resistance Ω	Current mA	Resonant Frequency MHz	Q Factor	Mfrs. List No.	Order Code
6.8 $\pm 5\%$	0.25	430	5000	12	LQG18HN6N8J00D	151-5395
8.2 $\pm 5\%$	0.25	400	4000	12	LQG18HN8N2J00D	151-5397
10 $\pm 5\%$	0.3	400	3500	12	LQG18HN10N10J00D	151-5373
12 $\pm 5\%$	0.35	400	3000	12	LQG18HN12N10J00D	151-5374
15 $\pm 5\%$	0.4	350	2800	12	LQG18HN15N10J00D	151-5375
18 $\pm 5\%$	0.45	350	2600	12	LQG18HN18N10J00D	151-5376
22 $\pm 5\%$	0.5	300	2300	12	LQG18HN22N10J00D	151-5382
27 $\pm 5\%$	0.55	300	2000	12	LQG18HN27N10J00D	151-5383
33 $\pm 5\%$	0.6	300	1700	12	LQG18HN33N10J00D	151-5386
39 $\pm 5\%$	0.65	300	1500	12	LQG18HN39N10J00D	151-5387
47 $\pm 5\%$	0.7	300	1200	12	LQG18HN47N10J00D	151-5390
56 $\pm 5\%$	0.75	300	1100	12	LQG18HN56N10J00D	151-5392
68 $\pm 5\%$	0.8	300	1000	12	LQG18HN68N10J00D	151-5394
82 $\pm 5\%$	0.85	300	900	12	LQG18HN82N10J00D	151-5396
100 $\pm 5\%$	0.9	300	800	12	LQG18HN10J00D	151-5398

496430

Inductance nH	Order Code	5+	50+	100+	250+	500+	Price Each
6.8	151-5395●	0.189	0.133	0.114	0.102	0.085	
8.2	151-5397●	0.189	0.133	0.114	0.102	0.085	
10	151-5373●	0.210	0.173	0.133	0.102	0.082	
12	151-5374●	0.210	0.173	0.133	0.102	0.082	
15	151-5375●	0.210	0.173	0.133	0.102	0.082	
18	151-5376●	0.210	0.173	0.133	0.102	0.082	
22	151-5382●	0.210	0.173	0.133	0.102	0.082	
27	151-5383●	0.210	0.173	0.133	0.102	0.082	
33	151-5386●	0.210	0.173	0.133	0.102	0.082	
39	151-5387●	0.260	0.200	0.153	0.112	0.092	
47	151-5390●	0.260	0.200	0.153	0.112	0.092	
56	151-5392●	0.260	0.200	0.153	0.112	0.092	
68	151-5394●	0.260	0.200	0.153	0.112	0.092	
82	151-5396●	0.280	0.220	0.163	0.122	0.102	
100	151-5398●	0.280	0.220	0.163	0.122	0.102	

496430

LQW04A Series



H=0.8mm, W=0.4mm, D=0.06mm

The LQW04A series consists of air core chip coil using a miniature alumina core. The LQW04A series has high Q value in high frequency range and high self resonant frequency. It is suitable for high frequency circuits which are used in telecommunications equipment.

Features:

- Resin-coated surface enables excellent mounting
- Low DC resistance design is ideal for low loss, high output and low power consumption

Applications:

- Mobile phones such as GSM, CDMA, PDC, etc.
- WLAN & Bluetooth
- High frequency circuits in general

Inductance nH	Resistance Ω	Current mA	Mfrs. List No.	Order Code
1.1	0.028	990	LQW04AN1N1D00D	111-5001
1.8	0.056	700	LQW04AN1N8D00D	111-5002
2.7	0.07	570	LQW04AN2N7D00D	111-5003
3.6	0.098	530	LQW04AN3N6D00D	111-5006
3.9	0.098	530	LQW04AN3N9D00D	111-5007
4.7	0.14	440	LQW04AN4N7D00D	111-5009
5.6	0.112	470	LQW04AN5N6D00D	111-5011

Inductance nH	Resistance Ω	Current mA	Mfrs. List No.	Order Code
6.2	0.182	390	LQW04AN6N2D00D	111-5012
6.8	0.14	440	LQW04AN6N8D00D	111-5013
7.5	0.14	440	LQW04AN7N5D00D	111-5014
10	0.252	330	LQW04AN10N10D00D	111-5018
11	0.28	310	LQW04AN11N10D00D	111-5019
12	0.28	310	LQW04AN12N10D00D	111-5020
15	0.476	240	LQW04AN15N10D00D	111-5022
18	0.532	220	LQW04AN18N10D00D	111-5024
22	0.63	200	LQW04AN22N10D00D	111-5026

42332

Order Code	10+	100+	500+	1K+	2K+
All Values ●	0.199	0.175	0.152	0.129	0.105

LQW1608A Series
0603 Case Size

- Miniature SMD inductors with alumina core
- Unique winding technology minimises stray capacitance leading to increased SRF
- High Q and stable inductance at high frequencies
- Low DC resistance
- 0603 case size allows high density mounting

Operating temperature -55°C to +105°C Test Frequency 100MHz

Inductance nH	Inductance Tolerance	Q Factor	DC Resistance Ω Max.	Self Resonance Freq. MHz Min	Allowable Current mA	Order Code
5.6	$\pm 2\%$	35	0.082	6000	750	952-8016
10	$\pm 2\%$	35	0.11	6000	650	952-7958
12	$\pm 2\%$	35	0.13	6000	600	952-7966
15	$\pm 2\%$	40	0.13	6000	600	952-7974
22	$\pm 2\%$	40	0.17	4600	500	952-7982
33	$\pm 2\%$	40	0.23	3200	420	952-7990
47	$\pm 2\%$	38	0.29	2600	380	952-8008
68	$\pm 2\%$	38	0.38	2200	340	952-8024
100	$\pm 2\%$	34	0.68	1800	220	952-8032
150	$\pm 2\%$	32	1.5	1400	160	952-8040
220	$\pm 2\%$	25	2.5	1200	120	952-8059

227185

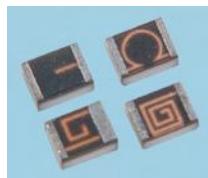
Order Multiple=5	Order Code	5+	50+	100+	500+	1K+
All Values ●	0.350	0.270	0.250	0.200	0.162	

LQG21N Series
0805 Case Size

- Miniature SMD inductors using multilayer process technology and magnetic materials
- Magnetically shielded design – ideal for high density mounting
- Approximately $\frac{1}{4}$ the size of conventional chip coils while still retaining high reliability
- 0805 case size

L=2.0, W=1.25, H=0.85
(3.3, 4.7 μH =1.25)

Inductance μH	Inductance Tolerance	Q Factor	DC Resistance Ω Max.	Self Resonance Freq. MHz Min	Allowable Current mA	Order Code
0.1	$\pm 10\%$	20	0.26	340	250	952-7893
0.15	$\pm 10\%$	20	0.32	270	250	952-7907
0.22	$\pm 10\%$	20	0.38	220	250	952-7915
0.33	$\pm 10\%$	20	0.48	180	250	952-7923
0.47	$\pm 10\%$	25				

Accu-L® Series – Surface Mount
0805 Case Size

L=2.11±0.1, W=1.5±0.1,
H=0.91±0.13

- Ultra-compact high frequency SMD inductors especially designed to meet the ever increasing demands within the telecommunications industry for extended frequencies
- Construction based on thin-film multilayer technology which provides a high consistency of physical and electrical characteristics, resulting in reliable batch repeatability.

Supplied on 8mm embossed tape



AKYOCERA GROUP COMPANY

		Inductance Q Factor (Test frequency 450MHz)	Inductance nH	Typical Tolerance	Min. Self Res. (MHz)	Max. Res. (MHz)	Max. DC Current (1) mA	Max. DC Current (2) mA	Mfrs. List No.	Order Code
0402 Case Size										
1	50	[PlusMinus]	0.05 nH	20000	0.15	500	-	L04021R0AHNTR/500	165-8826	
1.2	45	[PlusMinus]	0.05 nH	20000	0.2	400	-	L04021R2AHNTR/500	165-8828	
1.5	40	[PlusMinus]	0.05 nH	18000	0.2	400	-	L04021R5AHNTR/500	165-8829	
1.8	40	[PlusMinus]	0.05 nH	16000	0.2	400	-	L04021R8AHNTR/500	165-8830	
2.2	40	[PlusMinus]	0.05 nH	15000	0.2	400	-	L04022R2AHNTR/500	165-8831	
2.7	40	[PlusMinus]	0.05 nH	9500	0.25	250	-	L04022R7AHNTR/500	165-8832	
3.3	40	[PlusMinus]	0.1 nH	8500	0.4	250	-	L04023R3BHNT/500	165-8833	
3.9	30	[PlusMinus]	0.1 nH	8000	0.45	250	-	L04023R9BHNT/500	165-8834	
4.7	30	[PlusMinus]	0.1 nH	7500	0.45	250	-	L04024R7BHNT/500	165-8835	
5.6	30	[PlusMinus]	0.1 nH	7000	0.65	200	-	L04025R6BHNT/500	165-8836	
6.8	30	[PlusMinus]	0.1 nH	6500	0.9	200	-	L04026R8BHNT/500	165-8837	
0.82	70	[PlusMinus]	0.05 nH	20000	0.06	500	-	L0402R82AHNTR/500	165-8825	
0603 Case Size										
1.2	49	± 0.1 nH	10000	0.04	1000	-	L06031R2BGSTR	134-3797		
1.5	26	± 0.1 nH	10000	0.06	1000	-	L06031R5BGSTR	134-3799		
2.2	20	± 0.1 nH	10000	0.08	1000	-	L06032R2BGSTR	134-3801		
2.7	21	± 0.1 nH	9000	0.08	750	-	L06032R7BGSTR	134-3802		
3.3	24	± 0.1 nH	8400	0.08	750	-	L06033R3BGSTR	134-3803		
3.9	25	± 0.1 nH	6500	0.12	500	-	L06033R9BGSTR	134-3805		
4.7	23	± 0.1 nH	5500	0.15	500	-	L06034R7BGSTR	134-3806		
5.6	26	± 0.2 nH	5000	0.25	300	-	L06035R6CGSTR	134-3807		
6.8	23	± 0.2 nH	4500	0.3	300	-	L06036R8CGSTR	134-3808		
8.2	23	± 0.2 nH	3800	0.35	300	-	L06038R2CGSTR	134-3809		
10	28	± 2%	3500	0.45	300	-	L0603100GGSTR	134-3810		
12	28	± 2%	3000	0.5	300	-	L0603120GGSTR	134-3811		
15	28	± 2%	2500	0.6	300	-	L0603150GGSTR	134-3812		
0805 Case Size										
2.7	42	± 0.5 nH	10000	0.08	1000	2000	L08052R7DESTR	110-0442		
3.3	38	± 0.5 nH	10000	0.11	750	1500	L08053R3DESTR	110-0443		
4.7	43	± 0.5 nH	5500	0.1	750	1500	L08054R7DESTR	110-0444		
5.6	50	± 0.5 nH	4600	0.1	750	1500	L08055R6DESTR	110-0445		
6.8	43	± 0.5 nH	4500	0.11	750	1500	L08056R8DESTR	110-0446		
8.2	43	± 0.5 nH	3500	0.12	750	1500	L08058R2DESTR	110-0447		
10	46	± 5%	2500	0.13	750	1500	L0805100JESTR	110-0448		
15	36	± 5%	2200	0.2	750	1500	L0805150JESTR	110-0449		
22	36	± 5%	1400	0.4	500	1000	L0805220JESTR	110-0450		

(1) DC current measured for 15°C rise at 25°C ambient temperature

(2) DC current measured for 70°C rise at 25°C ambient temperature

Operating temperature -55°C to +125°C

CM32 Series

Inductance	Q	Test Freq (MHz)	Min. Self Res. (MHz)	Max. DC Res. Ω	Test Freq (MHz)	Min. Self Res. Frequency	Max. DC Res. Ω	Max DC Current	Max DC Current
3.3		±10%	30	7.96		65	1.2	180	935-7947
4.7		±10%	30	7.96		55	1.5	165	935-7963
6.8		±10%	30	7.96		45	1.8	150	935-7980
10		±10%	30	2.52		36	2.1	140	935-7866
15		±10%	30	2.52		30	2.8	120	935-7882
22		±10%	30	2.52		25	3.7	105	935-7912
33		±10%	30	2.52		20	5.6	85	935-7939
47		±10%	30	2.52		15	7	75	935-7955
68		±10%	30	2.52		15	9	65	935-7971
100		±10%	20	0.796		10	10	60	935-7874

CM45 Series

Inductance	Q	Test Freq (MHz)	Min. Self Res. (MHz)	Max. DC Res. Ω	Test Freq (MHz)	Min. Self Res. Frequency	Max. DC Res. Ω	Max DC Current	Max DC Current
0.1		±20%	35	25.2		300	0.18	800	935-8188
0.22		±20%	40	25.2		200	0.25	665	935-8196
0.33		±20%	40	25.2		165	0.28	605	935-8200
0.47		±20%	40	25.2		145	0.32	545	935-8218
0.68		±20%	40	25.2		135	0.4	500	935-8226
1		±10%	50	7.96		100	0.5	450	935-8072
2.2		±10%	50	7.96		55	0.7	380	935-8102
4.7		±10%	50	7.96		35	1	315	935-8153
10		±10%	50	2.52		20	1.6	250	935-8048
15		±10%	50	2.52		17	2.5	200	935-8064
22		±10%	50	2.52		13	3.2	180	935-8080
33		±10%	50	2.52		11	4	160	935-8110
47		±10%	50	2.52		10	5	140	935-8137
68		±10%	50	2.52		9	6	130	935-8161
100		±10%	40	0.796		8	8	110	935-8056

204027

Type	Order Code	10+	50+	100+	500+	1K+
CM32 Series	All Values ● RL	0.49	0.43	0.42	0.39	0.38
CM45 Series	All Values ● RL	0.39	0.38	0.35	0.31	0.29

Inductor Kits – Surface Mount



- Surface Mount wire wound inductor kits containing a range of values from the Bourns CM45 series. Suitable for use in research and development laboratories
- Popular values can be refilled from stock

Kits contain 10 pieces of each value in the E6 series of values.

CM453232-LAB1: 0.0µH to 1000µH (25 values)

204028

Mfrs. List No.	Order Code	1+	5+	10+
CM453232-LAB1	120-0087	55.30	50.29	47.13

FREE Re-reeling service



Only buy what you need and improve assembly efficiency. Look for the **RL** logo or find out more:
www.farnell.co.uk / 08447 11 11 11

3650 Series

0402 Case Size



- Wire wound coil technology
- surface mount RF inductors
- 0402 case size
- Standard tolerances
- High Q factor
- Suitable for RF applications

Operating temperature -40°C to +125°C

Temperature coefficient 0 to +125ppm/°C



Re-reeling available

SMD Inductors - continued**3650 Series - continued****0402 Case Size - continued**

Inductance (nH)	Tolerance	Q	Test. Freq. (MHz)	DC Res. (Ω)	Current Max. (mA)	Mfrs. List No.	Order Code
2.2	±5%	19	250	0.07	960	36501E250NJ	117-4130
3.3	±5%	19	250	0.066	840	36501E3N3J	117-4131
3.9	±5%	19	250	0.066	840	36501E3N9J	117-4132
5.6	±5%	20	250	0.083	760	36501E5N6J	117-4133
8.2	±5%	22	250	0.104	680	36501E8N2J	117-4134
36	±5%	24	250	0.403	320	36501E36NJ	117-4138
47	±5%	24	250	0.45	320	36501E47NJ	117-4139

234366

Order Multiple=5

Order Code

All Values ●

Price Each

5+

50+

100+

500+

0.33

Price Each

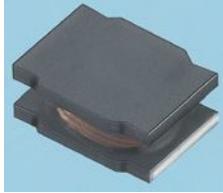
50+

100+

0.30

0.23

0.21

LQH2 Series - 0806 Case Size

- Compact 0806 case size
- Wirewound construction
- Applications included DC-DC converters

**LQH2 0806 Case Size ±10%**

Inductance μH	Resistance Ω	Current mA	Resonant Frequency MHz	Mfrs. List No.	Order Code
10	1.2	225	48	LQH2MCN100K02L	151-5546
12	1.4	210	44	LQH2MCN120K02L	151-5547
15	1.6	200	40	LQH2MCN150K02L	151-5549
18	1.8	190	35	LQH2MCN180K02L	151-5551
22	2.1	185	30	LQH2MCN220K02L	151-5554
27	2.5	180	30	LQH2MCN270K02L	151-5555
33	2.8	160	28	LQH2MCN330K02L	151-5557
39	4.4	125	24	LQH2MCN390K02L	151-5558
47	5.1	120	18	LQH2MCN470K02L	151-5560
56	5.7	110	17	LQH2MCN560K02L	151-5563
68	6.6	100	14	LQH2MCN680K02L	151-5565

496431

Order Code

All Values ●

5+

50+

100+

250+

500+

0.490

Price Each

50+

100+

250+

500+

0.390

0.300

0.220

0.176

LQH2 0806 Case Size ±20%

Inductance μH	Resistance Ω	Current mA	Resonant Frequency MHz	Mfrs. List No.	Order Code
1	0.3	485	100	LQH2MCN1ROM02L	151-5552
1.5	0.4	445	95	LQH2MCN1R5M02L	151-5553
2.2	0.48	425	70	LQH2MCN2R2M02L	151-5556
3.3	0.6	375	65	LQH2MCN3R3M02L	151-5559
4.7	0.8	300	60	LQH2MCN4R7M02L	151-5562
5.6	0.9	280	60	LQH2MCN5R6M02L	151-5564
6.8	1	255	55	LQH2MCN6R8M02L	151-5566

496431

Order Code

All Values ●

5+

50+

100+

250+

500+

0.370

Price Each

50+

100+

250+

500+

0.300

0.220

0.163

0.133

LQH31 Series - 1206 Case size

- Wirewound construction
- 1206 case size

**LQH31HN Series ±10%**

Inductance nH	Resistance Ω	Current mA	Resonant Frequency MHz	Q Factor	Mfrs. List No.	Order Code
54	0.035	920	800	50	LQH31HN54NK03L	151-5413
95	0.047	790	650	60	LQH31HN95NK03L	151-5414
145	0.061	700	60	60	LQH31HNR14K03L	151-5415
215	0.11	520	430	60	LQH31HNR21K03L	151-5416
290	0.17	420	360	60	LQH31HNR29K03L	151-5417
390	0.26	330	300	60	LQH31HNR39K03L	151-5418
500	0.44	260	270	60	LQH31HNR61K03L	151-5419
610	0.48	250	240	60	LQH31HNR61K703L	151-5420
750	0.79	190	220	60	LQH31HNR75K03L	151-5422
880	0.86	180	200	60	LQH31HNR88K03L	151-5423

**Inductance
nH****LQH31CN Series ±10%**

Inductance nH	Resistance Ω	Current mA	Resonant Frequency MHz	Q Factor	Mfrs. List No.	Order Code
10	1.3	230	20	-	LQH31CN100K03L	151-5399
22	3	160	14	-	LQH31CN220K03L	151-5403
47	8	100	10	-	LQH31CN470K03L	151-5405
100	12	80	7	-	LQH31CN101K03L	151-5400

Inductance nH	Resistance Ω	Current mA	Resonant Frequency MHz	Q Factor	Mfrs. List No.	Order Code
LQH31CN Series ±20%						
0.12	0.08	970	250	-	LQH31CN12M03L	151-5407
0.22	0.1	850	250	-	LQH31CN22M03L	151-5409
0.47	0.15	700	180	-	LQH31CN47M03L	151-5412
1	0.28	510	100	-	LQH31CN1R0M03L	151-5401
2.2	0.41	430	50	-	LQH31CN2R2M03L	151-5404
4.7	0.65	340	31	-	LQH31CN4R7M03L	151-5406
LQH31MN Series ±10%						
0.15	0.39	250	250	20	LQH31MN15K03L	151-5453
0.33	0.45	230	250	30	LQH31MN33K03L	151-5454
0.56	0.61	200	180	30	LQH31MN56K03L	151-5455
0.68	0.67	190	160	30	LQH31MN68K03L	151-5456
0.82	0.73	185	120	30	LQH31MN82K03L	151-5458
1	0.49	175	100	35	LQH31MN1R0K03L	151-5441
1.2	0.9	165	90	35	LQH31MN1R2K03L	151-5443
1.5	1	155	75	35	LQH31MN1R5K03L	151-5442
1.8	1.6	150	60	35	LQH31MN1R8K03L	151-5444
2.2	0.7	140	50	35	LQH31MN2R2K03L	151-5447
2.7	0.55	135	43	35	LQH31MN2R7K03L	151-5448
3.3	1.4	130	38	35	LQH31MN3R3K03L	151-5449
3.9	1.5	125	35	35	LQH31MN3R9K03L	151-5442
4.7	1.7	120	31	35	LQH31MN4R7K03L	151-5446
5.6	1.8	115	28	35	LQH31MN5R6K03L	151-5445
6.8	2	110	25	35	LQH31MN8R8K03L	151-5440
8.2	2.2	105	23	35	LQH31MN8R2K03L	151-5443
10	2.5	100	20	35	LQH31MN100K03L	151-5445
12	2.7	95	18	35	LQH31MN120K03L	151-5446
15	3	90	16	35	LQH31MN150K03L	151-5447
18	3.4	85	15	35	LQH31MN180K03L	151-5449
22	3.1	85	14	40	LQH31MN220K03L	151-5445
27	3.4	85	13	40	LQH31MN270K03L	151-5446
33	3.8	80	12	40	LQH31MN330K03L	151-5447
39	7.2	55	11	40	LQH31MN390K03L	151-5448
47	8	55	10	40	LQH31MN470K03L	151-5449
56	8.9	50	9	40	LQH31MN560K03L	151-5447
68	9.9	50	8.5	40	LQH31MN680K03L	151-5449
82	11	45	7.5	40	LQH31MN820K03L	151-5451
100	12	45	7	40	LQH31MN101K03L	151-5425

496432

Inductance nH	Order Code	1+	50+	100+	250+	500+
54	151-5413●	1.12	0.90	0.67	0.50	0.41
95	151-5414●	1.16	0.93	0.69	0.52	0.42
145	151-5415●	1.22	0.98	0.73	0.55	0.44
215	151-5416●	1.22	0.98	0.73	0.55	0.44
290	151-5417●	1.09	0.87	0.65	0.49	0.39
390	151-5418●	1.22	0.98	0.73	0.55	0.44
500	151-5419●	1.22	0.98	0.73	0.55	0.44
610	151-5420●	1.22	0.98	0.73	0.55	0.44
7						



Inductance μH	Inductance Tolerance	Q Factor	DC Resistance Ω Max.	Self Resonance Freq. MHz	Allowable Current mA	Order Code
3.3	10%	20	1	38	300	952-2018
4.7	10%	20	1.2	31	270	952-2026
6.8	10%	20	1.5	25	240	952-2034
10	5%	35	1.8	20	190	952-2042
22	5%	35	2.8	14	150	952-2069
33	5%	40	3.5	12	115	952-2077
47	5%	40	4.3	11	100	952-2085
68	5%	40	5.5	9	80	952-2093
100	5%	40	7	8	80	952-2107
100	5%	40	9.3	7	70	952-2115
220	5%	40	11.8	5.5	65	952-2123
330	5%	40	13	5	65	952-2131
470	5%	50	25	5	45	952-2140

Mfrs. List No.

LQH32MN3R3K23L = 952-2018 LQH32MN330J23L = 952-2077 LQH32MN151J23L = 952-2115
 LQH32MN4R7K23L = 952-2026 LQH32MN470J23L = 952-2085 LQH32MN221J23L = 952-2123
 LQH32MN6R8K23L = 952-2034 LQH32MN680J23L = 952-2093 LQH32MN331J23L = 952-2131
 LQH32MN100J23L = 952-2042 LQH32MN101J23L = 952-2107 LQH32MN471J23L = 952-2140
 LQH32MN220J23L = 952-2069

227189

Order Multiple=5

Order Code

Price Each

5+

50+

100+

500+

1K+

All Values ● RL

0.290

0.260

0.250

0.200

0.172

LQH3C Series

1210 Case Size



Innovator in Electronics



- 1210 size chip inductors (wire wound on ferrite)
- Features low DC resistance to combine high inductance with high current capacity
- High impedance
- Excellent for use as choke coils in DC power supply circuits

L=3.2, W=2.5, H=2.0

Operating temperature	-25°C to +85°C	Test Frequency	1MHz (1kHz 470μH)	
Inductance μH	Inductance Tolerance	Q Factor	DC Resistance Ω Max.	Self Resonance Freq. MHz
0.15	±20%	20	0.028	400
0.47	±20%	20	0.042	150
1	±20%	20	0.06	100
2.2	±20%	35	0.097	64
4.7	±20%	35	0.15	43
10	±10%	35	0.3	26
47	±10%	40	1.3	15
100	±10%	40	3.5	10
220	±10%	40	8.4	70
330	±10%	40	10	5.6
470	±10%	40	19	5
				Allowable Current mA
				Order Code

* Low DC resistance types

Mfrs. List No.

LQH32CNR15M33L = 952-2158 LQH32CN4R7M33L = 952-2190 LQH32CN221K23L = 952-2239
 LQH32CNR47M33L = 952-2166 LQH32CN100K33L = 952-2204 LQH32CN331K23L = 952-2247
 LQH32CN1R0M33L = 952-2174 LQH32CN470K23L = 952-2212 LQH32CN471K23L = 952-2255
 LQH32CN2R2M33L = 952-2182 LQH32CN101K23L = 952-2220

227194

Order Code

5+

50+

100+

500+

1K+

All Values ● RL

0.270

0.240

0.220

0.189

0.165

LQH43 Series – 1812 Case Size

Innovator in Electronics



- Wirewound construction
- 1812 case size

Inductance μH	Resistance Ω	Current mA	Resonant Frequency MHz	Q Factor	Mfrs. List No.	Order Code
LQH43CN Series ±10%						
10	0.24	650	23	–	LQH43CN100K03L	151-5459
15	0.32	570	20	–	LQH43CN150K03L	151-5461
22	0.6	420	15	–	LQH43CN220K03L	151-5465
33	1	310	12	–	LQH43CN330K03L	151-5468
47	1.1	280	10	–	LQH43CN470K03L	151-5473
68	1.7	220	8.4	–	LQH43CN680K03L	151-5476
100	2.2	190	6.8	–	LQH43CN101K03L	151-5460
150	3.5	130	5.5	–	LQH43CN151K03L	151-5462
220	4	110	4.5	–	LQH43CN221K03L	151-5466
330	6.8	100	3.6	–	LQH43CN331K03L	151-5471
470	8.5	90	3	–	LQH43CN471K03L	151-5474
LQH43CN Series ±20%						
1	0.08	1080	100	–	LQH43CN1R0M03L	151-5463
1.5	0.09	1000	85	–	LQH43CN1R5M03L	151-5464
2.2	0.11	900	60	–	LQH43CN2R2M03L	151-5467
3.3	0.13	800	47	–	LQH43CN3R3M03L	151-5472
4.7	0.15	750	35	–	LQH43CN4R7M03L	151-5475
LQH43MN Series ±5%						
180	4.5	120	5	40	LQH43MN181J03L	151-5477
270	6.8	100	4	40	LQH43MN271J03L	151-5481
390	9.7	90	3.3	40	LQH43MN391J03L	151-5484
470	11.8	80	3	40	LQH43MN471J03L	151-5486

Inductance μH	Resistance Ω	Current mA	Resonant Frequency MHz	Q Factor	Mfrs. List No.	Order Code
560	14.5	70	2.7	40	LQH43MN561J03L	151-5487
680	17	65	2.5	40	LQH43MN681J03L	151-5488
820	20.5	60	2.2	40	LQH43MN821J03L	151-5489
LQH43MN Series ±20%						
1	0.2	500	120	20	LQH43MN1R0M03L	151-5478
1.2	0.2	500	100	20	LQH43MN1R2M03L	151-5479
1.5	0.3	500	85	20	LQH43MN1R5M03L	151-5480
2.2	0.3	500	62	20	LQH43MN2R2M03L	151-5483
3.3	0.35	500	47	20	LQH43MN3R3M03L	151-5485

496433

Inductance	Order Code	1+	50+	Price Each		
				100+	250+	500+
LQH43CN ±10%						
10	151-5459●	0.570	0.400	0.350	0.280	0.230
15	151-5461●	0.480	0.390	0.290	0.210	0.173
22	151-5465●	0.480	0.390	0.290	0.210	0.173
33	151-5468●	0.470	0.380	0.280	0.210	0.170
47	151-5473●	0.480	0.390	0.290	0.210	0.173
68	151-5476●	0.570	0.400	0.350	0.280	0.230
100	151-5460●	0.510	0.410	0.310	0.220	0.184
150	151-5462●	0.510	0.410	0.310	0.220	0.184
220	151-5466●	0.510	0.410	0.310	0.220	0.184
330	151-5471●	0.590	0.420	0.370	0.300	0.240
470	151-5474●	0.590	0.420	0.370	0.300	0.240
LQH43CN ±20%						
1	151-5463●	0.570	0.400	0.350	0.280	0.230
1.5	151-5464●	0.480	0.390	0.290	0.210	0.173
2.2	151-5467●	0.570	0.400	0.350	0.280	0.230
3.3	151-5472●	0.570	0.400	0.350	0.280	0.230
4.7	151-5475●	0.480	0.390	0.290	0.210	0.173
LQH43MN ±5%						
180	151-5477●	0.640	0.510	0.390	0.290	0.240
270	151-5481●	0.640	0.510	0.390	0.290	0.240
390	151-5484●	0.640	0.510	0.390	0.290	0.240
470	151-5486●	0.640	0.510	0.390	0.290	0.240
560	151-5487●	0.640	0.510	0.390	0.290	0.240
680	151-5488●	0.640	0.510	0.390	0.290	0.240
LQH43MN ±20%						
1	151-5478●	0.630	0.510	0.380	0.290	0.220
1.2	151-5479●	0.630	0.510	0.380	0.290	0.220
1.5	151-5480●	0.630	0.510	0.380	0.290	0.220
2.2	151-5483●	0.630	0.510	0.380	0.290	0.220
3.3	151-5485●	0.630	0.510	0.380	0.290	0.220

Inductance μH	Resistance Ω	Current mA	Resonant Frequency MHz	Mfrs. List No.	Order Code
0.12	0.007	6000	450	LQH55DN1R2M03L	151-5516
0.47	0.013	4800	200	LQH55DN4R7M03L	151-5518
1	0.019	4000	150	LQH55DN1R0M03L	151-5498
1.5	0.022	3700	110	LQH55DN1R5M03L	151-5499
2.2	0.029	3200	80	LQH55DN2R2M03L	151-5504
3.3	0.036	2900	40	LQH55DN3R3M03L	151-5507

SMD Inductors - continued**LQH66 Series – 2525 Case size**

- High current SMD chokes
- 2525 case sizes

Tolerance 20%



Inductance μH	Resistance Ω	Current mA	Resonant Frequency MHz	Mfrs. List No.	Order Code
0.27	0.007	6000	300	LQH66SNR27M03L	151-5544
0.68	0.01	5300	180	LQH66SNR68M03L	151-5545
1	0.013	4700	150	LQH66SN1R0M03L	151-5526
1.5	0.016	3800	110	LQH66SN1R5M03L	151-5527
2.2	0.019	3300	80	LQH66SN2R2M03L	151-5531
3.3	0.022	2600	40	LQH66SN3R3M03L	151-5535
4.7	0.025	2200	30	LQH66SN4R7M03L	151-5540
6.8	0.029	1800	25	LQH66SN6R8M03L	151-5543
10	0.036	1600	20	LQH66SN10M03L	151-5519
15	0.069	1300	17	LQH66SN15M03L	151-5523
22	0.087	1100	15	LQH66SN22M03L	151-5528
33	0.14	860	12	LQH66SN33M03L	151-5532
47	0.17	760	10	LQH66SN47M03L	151-5537
68	0.29	600	7.6	LQH66SN68M03L	151-5541
100	0.36	520	6.5	LQH66SN101M03L	151-5520
150	0.63	420	5	LQH66SN151M03L	151-5525
220	0.79	350	4	LQH66SN221M03L	151-5529
330	1.8	280	3.2	LQH66SN331M03L	151-5534
470	2.2	240	2.5	LQH66SN471M03L	151-5538
680	3.9	200	2	LQH66SN681M03L	151-5542
1000	4.9	160	1.7	LQH66SN102M03L	151-5521
2200	9.4	100	1.2	LQH66SN222M03L	151-5530
4700	19.5	70	0.8	LQH66SN472M03L	151-5539
10000	39.7	50	0.5	LQH66SN103M03L	151-5522

496728

Order Code All Values ●	1+	50+	100+	250+	500+
	2.54	1.91	1.59	1.28	1.14

LQP03T_04 Series

0201 Case Size



- Ultra small 0201 size chip inductor
- Small size enables easy impedance at both RF and IF circuits
- High Q in high frequency range
- Au electrodes



Operating temperature	-40°C to +85°C		Test Frequency	500MHz (<27nH) 300MHz (>33nH)		
Inductance nH	Q Factor	DC Resistance Ω Max.	Self Resonance Freq. MHz	Allowable Current mA	Mfrs. List No.	Order Code
0.6	± 0.1nH	0.08	6000	420	LQP03TN0N6B04D	134-3119
0.6	± 0.2nH	0.08	6000	420	LQP03TN0N6C04D	134-3120
0.7	± 0.1nH	0.09	6000	410	LQP03TN0N7B04D	134-3121
0.8	± 0.1nH	0.09	6000	410	LQP03TN0N8B04D	134-3122
0.8	± 0.2nH	0.09	6000	410	LQP03TN0N8C04D	134-3123
0.9	± 0.1nH	0.1	6000	400	LQP03TN0N9B04D	134-3124
1	± 0.1nH	0.1	6000	400	LQP03TN1N0B04D	134-3125
1	± 0.2nH	0.1	6000	400	LQP03TN1N0C04D	134-3126
1.1	± 0.1nH	0.13	6000	280	LQP03TN1N1B04D	134-3127
1.2	± 0.1nH	0.13	6000	280	LQP03TN1N2B04D	134-3128
1.2	± 0.2nH	0.13	6000	280	LQP03TN1N2C04D	134-3131
1.3	± 0.1nH	0.16	6000	280	LQP03TN1N3B04D	134-3132
1.4	± 0.1nH	0.16	6000	280	LQP03TN1N4B04D	134-3133
1.5	± 0.1nH	0.16	6000	280	LQP03TN1N5B04D	134-3134
1.5	± 0.2nH	0.16	6000	280	LQP03TN1N5C04D	134-3135
1.6	± 0.1nH	0.16	6000	280	LQP03TN1N6B04D	134-3136
1.7	± 0.1nH	0.16	6000	280	LQP03TN1N7B04D	134-3137
1.8	± 0.1nH	0.16	6000	280	LQP03TN1N8B04D	134-3138
1.8	± 0.2nH	0.16	6000	280	LQP03TN1N8C04D	134-3139
1.9	± 0.1nH	0.18	6000	220	LQP03TN1N9B04D	134-3140
2	± 0.1nH	0.18	6000	220	LQP03TN2N0B04D	134-3141
2.1	± 0.1nH	0.18	6000	220	LQP03TN2N1B04D	134-3143
2.2	± 0.1nH	0.18	6000	220	LQP03TN2N2B04D	134-3144
2.2	± 0.2nH	0.18	6000	220	LQP03TN2N2C04D	134-3145
2.3	± 0.1nH	0.2	6000	220	LQP03TN2N3B04D	134-3146
2.4	± 0.1nH	0.2	6000	220	LQP03TN2N4B04D	134-3147
2.5	± 0.1nH	0.2	6000	220	LQP03TN2N5B04D	134-3149
2.6	± 0.1nH	0.2	6000	220	LQP03TN2N6B04D	134-3150
2.7	± 0.1nH	0.2	6000	220	LQP03TN2N7B04D	134-3151
2.7	± 0.2nH	0.2	6000	220	LQP03TN2N7C04D	134-3152
2.8	± 0.1nH	0.2	6000	220	LQP03TN2N8B04D	134-3153
2.9	± 0.1nH	0.2	6000	220	LQP03TN2N9B04D	134-3155
3	± 0.1nH	0.2	6000	190	LQP03TN3N0B04D	134-3156
3.1	± 0.1nH	0.2	6000	190	LQP03TN3N1B04D	134-3157
3.2	± 0.1nH	0.2	6000	190	LQP03TN3N2B04D	134-3158
3.3	± 0.1nH	0.2	6000	190	LQP03TN3N3B04D	134-3159
3.3	± 0.2nH	0.2	6000	190	LQP03TN3N3C04D	134-3160
3.4	± 0.1nH	0.3	6000	190	LQP03TN3N4B04D	134-3161
3.5	± 0.1nH	0.3	6000	190	LQP03TN3N5B04D	134-3162
3.6	± 0.1nH	0.3	6000	170	LQP03TN3N6B04D	134-3163
3.7	± 0.1nH	0.3	6000	170	LQP03TN3N7B04D	134-3164

RL Re-reeling available

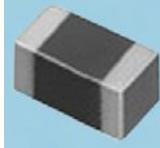
Farnell

Inductance nH	Q Factor	DC Resistance Ω Max.	Self Resonance Freq. MHz	Allowable Current mA	Mfrs. List No.	Order Code
3.8	± 0.1nH	0.08	6000	170	LQP03TN3N8B04D	134-3165
3.9	± 0.1nH	0.08	6000	170	LQP03TN3N9B04D	134-3167
3.9	± 0.2nH	0.08	6000	170	LQP03TN3N9C04D	134-3168
4.3	± 3%	0.13	0.4	160	LQP03TN4N3H04D	134-3169
4.7	± 3%	0.13	0.4	160	LQP03TN4N7H04D	134-3170
5.1	± 3%	0.13	0.55	140	LQP03TN5N1H04D	134-3171
5.6	± 3%	0.13	0.55	140	LQP03TN5N6H04D	134-3173
5.6	± 5%	0.13	0.55	140	LQP03TN5N6J04D	134-3174
6.2	± 3%	0.13	0.6	130	LQP03TN6N2H04D	134-3175
6.2	± 5%	0.13	0.6	130	LQP03TN6N2J04D	134-3176
6.8	± 3%	0.13	0.6	130	LQP03TN6NBH04D	134-3177
6.8	± 5%	0.13	0.6	130	LQP03TN6N8J04D	134-3179
7.5	± 3%	0.13	0.65	110	LQP03TN7N5H04D	134-3181
8.2	± 3%	0.13	0.65	110	LQP03TN7N5J04D	134-3182
8.2	± 5%	0.13	0.86	110	LQP03TN8N2H04D	134-3183
9.1	± 3%	0.13	0.86	100	LQP03TN9N1H04D	134-3185
9.1	± 5%	0.13	1.1	100	LQP03TN9N1J04D	134-3186
10	± 3%	0.13	1.1	100	LQP03TN10N1H04D	134-3187
10	± 5%	0.13	1.1	100	LQP03TN10N1J04D	134-3188
12	± 3%	11	1.15	90	LQP03TN12NH04D	134-3189
12	± 5%	11	1.15	90	LQP03TN12NJ04D	134-3190
15	± 3%	11	1.4	90	LQP03TN15NH04D	134-3192
15	± 5%	11	1.4	90	LQP03TN15NJ04D	134-3193
18	± 3%	11	1.6	80	LQP03TN18NH04D	134-3194
18	± 5%	11	1.6	80	LQP03TN18NJ04D	134-3201
22	± 3%	11	2.55	70	LQP03TN22NH04D	134-3196
22	± 5%	11	2.55	70	LQP03TN22NJ04D	134-3197
27	± 3%	11	2.9	70	LQP03TN27NH04D	134-3198
27	± 5%	11	2.9	70	LQP03TN27NJ04D	134-3199
33	± 5%	8	2.95	60	LQP03TN33N9J04D	134-3200
39	± 5%	8	3.35	60	LQP03TN39N9J04D	134-3204
47	± 5%	8	3.6	50	LQP03TN47NJ04D	134-3202
56	± 5%	8	4.3	50	LQP03TN56NJ04D	134-3203



Operating temperature	-40°C to +85°C		Test Frequency	500MHz (<27nH) 300MHz (>33nH)		
Inductance nH	Q Factor	DC Resistance Ω Max.	Self Resonance Freq. MHz	Allowable Current mA	Mfrs. List No.	Order Code
1	± 0.3nH	0.1	6000	300	LQG15HN1N0S02D	134-3054
1.1	± 0.3nH	0.1	6000	300	LQG15HN1N1S02D	134-3056
1.2	± 0.3nH	0.1	6000	300	LQG15HN1N2S02D	134-3057
1.3	± 0.3nH	0.1	6000	300	LQG15HN1N3S02D	134-3058
1.5	± 0.3nH	0.1	6000	300	LQG15HN1N5S02D	134-3059
1.6	± 0.3nH	0.1	6000	300	LQG15HN1N6S02D	134-3060
1.8	± 0.3nH	0.19	6000	300	LQG15HN1N3NS02D	134-3068
2	± 0.3nH	0.12	6000	300	LQG15HN1N2NS02D	134-3062
2.2	± 0.3nH	0.15	6000	300	LQG15HN1N2S02D	134-3064
2.4	± 0.3nH	0.16	6000	300	LQG15HN1N4S02D	134-3070
3.9	± 0.3nH	0.19	6000	300	LQG15HN1N9S02D	134-3071
4.3	± 0.3nH	0.21	6000	300	LQG15HN1N4NS02D	134-3071
4.7	± 0.3nH	0.23	6000	300	LQG15HN1N7S02D	134-3072

Order Multiple=10						
Order Code	10+	100+	Price Each	5K+	10K+	
All Values ● RL	0.200	0.173	0.153	0.133	0.122	

LQM18N Series
0603 Case Size


muraRata
Advanced in Electronics

- Magnetically shielded chip coil providing excellent characteristics in crosstalk and magnetic coupling
- Suitable for high density mounting due to compact size
- External electrodes with nickel barrier structure provide excellent solder heat resistance for both flow and reflow soldering

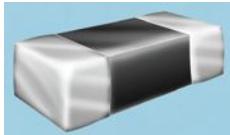
Operating temperature -40°C to +85°C

Inductance nH	Q Factor	Test Frequency MHz	DC Resistance Ω	Self Resonance Max. Freq. MHz	Allowable Current mA	Mfrs. List No.	Order Code
47	±20%	10	50	0.3	260	50	LQM18NN47NM00D 134-3096
68	±20%	10	50	0.3	250	50	LQM18NN68NM00D 134-3097
82	±20%	10	50	0.3	245	50	LQM18NN82NM00D 134-3098
100	±10%	15	25	0.5	240	50	LQM18NNR10K00D 134-3100
120	±10%	15	25	0.5	205	50	LQM18NNR12K00D 134-3101
150	±10%	15	25	0.6	180	50	LQM18NNR15K00D 134-3102
180	±10%	15	25	0.6	165	50	LQM18NNR18K00D 134-3103
220	±10%	15	25	0.8	150	50	LQM18NNR22K00D 134-3104
270	±10%	15	25	0.8	136	50	LQM18NNR27K00D 134-3106
330	±10%	15	25	0.85	125	35	LQM18NNR33K00D 134-3107
390	±10%	15	25	1	110	35	LQM18NNR39K00D 134-3108
470	±10%	15	25	1.35	105	35	LQM18NNR47K00D 134-3109
560	±10%	15	25	1.55	95	35	LQM18NNR56K00D 134-3110
680	±10%	15	25	1.7	90	35	LQM18NNR68K00D 134-3111
820	±10%	15	25	2.1	85	35	LQM18NNR82K00D 134-3112
1000	±10%	35	10	0.6	75	25	LQM18NNR10K00D 134-3113
1200	±10%	35	10	0.8	65	25	LQM18NNR12K00D 134-3114
1500	±10%	35	10	0.8	60	25	LQM18NNR15K00D 134-3115
1800	±10%	35	10	0.95	55	25	LQM18NNR18K00D 134-3116
2200	±10%	35	10	1.15	50	15	LQM18NNR22K00D 134-3118

463345

Order Multiple=5

Order Code	5+	100+	Price Each	500+	1K+	4K+
All Values ● RL	0.270	0.250	0.220	0.161	0.122	

L-RMS Series
0603 Case Size


KEMET
CHARGED.
New
Operating temperature -40°C to +85°C
Tolerance 0.3nH (up to 5.6 nH)
±5% (6.8 nH to 470 nH)

- Multilayer inductor made of advanced ceramics with low resistivity silver used as internal conductors, provides excellent Q and SRF characteristics
- Multilayer block structure ensures outstanding reliability, high productivity and excellent product quality
- Designed to address surface mount inductor needs for applications above 100MHz
- Mobile phones and pagers, high frequency circuits, EMI counter measures in high frequency circuits

Inductance nH	Q Factor	DC Resistance Ω	Self-Resonant Freq. (MHz)	Max. Current (mA)	Mfrs. List No.	Order Code
1	±0.3nH	8	0.015	13000	300	L0603C1N0SRMST 145-7762
1	±0.3nH	8	0.015	13000	300	L0603C1N2SRMST 145-7766
1.5	±0.3nH	8	0.03	13000	300	L0603C1N5SRMST 145-7770
1.8	±0.3nH	8	0.06	13000	300	L0603C1N8SRMST 145-7772
2.2	±0.3nH	8	0.06	12000	300	L0603C2N2SRMST 145-7775
2.7	±0.3nH	10	0.06	11000	300	L0603C2N7SRMST 145-7778
3.3	±0.3nH	10	0.06	9000	300	L0603C3N3SRMST 145-7783
3.9	±0.3nH	10	0.07	8000	300	L0603C3N9SRMST 145-7786
4.7	±0.3nH	10	0.08	6500	300	L0603C4N7SRMST 145-7788
5.6	±0.3nH	10	0.09	5800	300	L0603C5N6SRMST 145-7791
6.8	±5%	10	0.11	5600	300	L0603C6N8JRMST 145-7795
8.2	±5%	12	0.13	5200	300	L0603C8N2JRMST 145-7798
10	±5%	12	0.16	4600	300	L0603C10N1JRMST 145-7801
12	±5%	12	0.17	4000	300	L0603C12N1JRMST 145-7803
15	±5%	12	0.2	3400	300	L0603C15N1JRMST 145-7806
18	±5%	12	0.21	3000	300	L0603C18N1JRMST 145-7808
22	±5%	12	0.25	2900	300	L0603C22N1JRMST 145-7813
27	±5%	12	0.28	2200	300	L0603C27N1JRMST 145-7815
33	±5%	12	0.35	1800	300	L0603C33N1JRMST 145-7818
39	±5%	12	0.38	1600	300	L0603C39N1JRMST 145-7820
47	±5%	12	0.45	1600	300	L0603C47N1JRMST 145-7823
56	±5%	12	0.5	1400	300	L0603C56N1JRMST 145-7827
68	±5%	12	0.55	1200	300	L0603C68N1JRMST 145-7830
82	±5%	12	0.6	1100	300	L0603C82N1JRMST 145-7832
100	±5%	12	0.65	1000	300	L0603CR10JRMST 145-7836
120	±5%	8	0.68	800	300	L0603CR12JRMST 145-7839
150	±5%	8	0.73	800	300	L0603CR15JRMST 145-7842
180	±5%	8	0.85	700	300	L0603CR18JRMST 145-7844

Inductance nH	Inductance Tolerance	Q Min.	DC Resistance (Ω)	Self-Resonant Freq. (MHz)	Max. Current (mA)	Mfrs. List No.	Order Code
220	±5%	8	0.95	600	300	L0603CR22JRMST 145-7848	
270	±5%	8	1.34	550	150	L0603CR27JRMST 145-7850	
330	±5%	8	1.53	480	150	L0603CR33JRMST 145-7852	
390	±5%	8	1.72	410	150	L0603CR39JRMST 145-7853	
470	±5%	8	2.04	360	150	L0603CR47JRMST 145-7854	

500217

Order Multiple=5	Order Code	5+	100+	Price Each	250+	500+	1K+	4K+
All Values ●		0.310	0.290	0.270	0.250	0.250	0.210	0.155

L-DWI Series						
SMD KEMET CHARGED. New						
Operating temperature -25°C to +105°C						
Tolerance ±20%						
● Small size wound chip inductor with high current capability						
● Applications include DC-DC converters, digital cameras, digital video cameras, PDA's and other portable digital equipment						

Inductance μH	Inductance Tolerance	DC Resistance (Ω)	Self-Resonant Freq. (MHz)	Max. Current * (mA)	Mfrs. List No.	Order Code
1	±20%	0.19	100	840	L0805C1R0MDWIT 145-7855	
2.2	±20%	0.33	70	640	L0805C2R2MDWIT 145-7856	
4.7	±20%	0.5	45	520	L0805C4R7MDWIT 145-7857	
10	±20%	1.2	40	340	L0805C100MDWIT 145-7859	
22	±20%	3.7	16	190	L0805C220MDWIT 145-7861	
47	±20%	5.8	11	150	L0805C470MDWIT 145-7862	

* Current value to guarantee component temperature within ΔT = 40°C

Order Multiple=5	Order Code	5+	100+	Price Each	500+	1K+	2K+
All Values ●		0.410	0.330	0.310	0.210	0.175	

RF Series - 0402 Case Size	Inductance (nH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
	2.7	21	5500	0.1	400	ELJRF2N7DFB 130-5090	
	3.3	21	5500	0.12	400	ELJRF3N3DFB 130-5091	
	3.9	20	5200	0.15	360	ELJRF3N9DFB 130-5092	
	5.6	20	4600	0.19	340	ELJRF5N6DFB 130-5093	
	6.8	19	4000	0.3	320	ELJRF6N8JFB 130-5094	
	8.2	19	3500	0.35	320	ELJRF8N2JFB 130-5095	
	10	19	2800	0.41	320	ELJRF10N1JFB 130-5096	

Order Multiple=5	Order Code	5+	50+	Price Each	250+	500+	1K+
All Values ● RL		0.260	0.250	0.210	0.198	0.166	

RE Series - 0603 Case Size	Inductance (nH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
	3.9	9	5500	0.15	450	ELJRE3N9JFA 119-8370	
	5.6	9	4600	0.18	430</td		

SMD Inductors - continued**RF/RE/ND Series - continued**

Non Magnetic Core - continued

RE Series - 0603 Case Size

18	10	2300	0.45	350	ELJRE18NJFA	119-8379
22	10	2000	0.5	300	ELJRE22NJFA	119-8381
27	10	2000	0.55	300	ELJRE27NJFA	119-8382
33	10	1800	0.6	300	ELJRE33NJFA	119-8383
39	11	1800	0.8	300	ELJRE39NJFA	119-8384
47	11	1800	0.95	250	ELJRE47NJFA	119-8386
56	12	1800	1.2	250	ELJRE56NJFA	119-8387
82	12	1500	1.5	250	ELJRE82NJFA	119-8389
100	12	1300	1.8	200	ELJERER10JFA	119-8390

Order Multiple=5

Order Code

5+

Price Each

All Values ● RL

0.095

0.076

0.063

0.057

0.047

ND Series - 0805 Case Size

Inductance (nH)	Q	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
33	15	2050	0.39	395	ELJND33NJF	119-8399
39	15	2000	0.41	390	ELJND39NJF	119-8400
56	15	1550	0.51	360	ELJND56NJF	119-8401
68	15	1450	0.57	340	ELJND68NJF	119-8402
100	8	800	0.86	285	ELJNDR10JF	119-8405
120	8	600	0.99	275	ELJNDR12JF	119-8406
270	10	300	1.95	165	ELJNDR27JF	119-8410
330	10	200	2.16	160	ELJNDR33JF	119-8411
390	10	150	2.37	150	ELJNDR39JF	119-8412
470	10	150	2.56	145	ELJNDR47JF	119-8413
560	10	100	2.69	140	ELJNDR56JF	119-8414
680	10	100	3.02	130	ELJNDR68JF	119-8416
1000	8	80	3.88	120	ELJNDR10JF	119-8418

234172

Order Code

1+

Price Each

All Values ● RL

0.390

0.310

0.270

0.250

0.189

FC/FA/FB Series

Regular Type



- High Q
- ±5% tolerance

Panasonic
ideas for life

**FC Series - 1008 Case Size**

Inductance (μH)	Q	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
1	25	115	0.65	195	ELJFC1R0JF	119-8419
1.5	25	90	0.85	170	ELJFC1R5JF	119-8420
2.2	25	80	1.05	155	ELJFC2R2JF	119-8422
3.3	25	65	1.3	135	ELJFC3R3JF	119-8423
10	25	32	3.5	80	ELJFC100JF	119-8424
12	25	30	3.8	75	ELJFC120JF	119-8425
22	25	22	5.8	60	ELJFC220JF	119-8426
33	20	20	7.1	110	ELJFC330JF	119-8428

Order Code

10+

Price Each

All Values ● RL

0.240

0.171

0.162

0.150

0.130

FA Series - 1210 Case Size

Inductance (μH)	Q	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
1	30	115	0.69	230	ELJFA1R0JF	119-8443
1.2	30	100	0.75	215	ELJFA1R2JF	119-8444
1.5	30	90	0.75	210	ELJFA1R5JF	119-8445
1.8	30	85	0.82	200	ELJFA1R8JF	119-8446
2.2	30	80	0.95	190	ELJFA2R2JF	119-8447
2.7	30	75	1.1	180	ELJFA2R7JF	119-8448
3.3	30	65	1.2	180	ELJFA3R3JF	119-8449
3.9	30	60	1.3	175	ELJFA3R9JF	119-8450
4.7	30	55	1.5	165	ELJFA4R7JF	119-8451
5.6	30	50	1.6	160	ELJFA5R6JF	119-8453
6.8	30	45	1.8	150	ELJFA6R8JF	119-8454
8.2	30	40	2	140	ELJFA8R2JF	119-8455
10	30	36	2.1	140	ELJFA100JF	119-8456
12	30	33	2.5	125	ELJFA120JF	119-8457
15	30	30	2.8	120	ELJFA150JF	119-8458
18	30	27	3.3	110	ELJFA180JF	119-8459
22	30	25	3.7	105	ELJFA220JF	119-8460
27	30	22	5	90	ELJFA270JF	119-8461
33	30	20	5.6	85	ELJFA330JF	119-8462
39	30	20	6.4	80	ELJFA390JF	119-8463
47	30	15	7	75	ELJFA470JF	119-8465
56	30	15	8	70	ELJFA560JF	119-8466
68	30	15	9	65	ELJFA680JF	119-8467
100	20	10	10	60	ELJFA101JF	119-8469
150	20	8	15	50	ELJFA151JF	119-8471
220	20	7	21	45	ELJFA221JF	119-8473

RL Re-reeling available

Order Code All Values ●	10+ 0.240	Price Each				
		50+ 0.171	100+ 0.129	500+ 0.109	1K+ 0.094	

FB Series - 1812 Case Size

Inductance (μH)	Q Min.	Resonant Freq. (MHz)	DC Res. (Ω)	DC current Max. (mA)	Mfrs. List No.	Order Code
2.2±10%	30	45	0.61	410	ELJFB2R2KF	119-8486
3.3±10%	50	39	0.66	380	ELJFB3R3KF	119-8489
4.7±10%	50	33	0.81	350	ELJFB4R7KF	119-8492
5.6±10%	50	30	0.88	330	ELJFB5R6KF	119-8493
6.8±10%	50	26	1	310	ELJFB6R8KF	119-8494
	15	18	2.1	215	ELJFB150JF	119-8496
	47	50	4.2	130	ELJFB470JF	119-8501
	56	40	4.7	125	ELJFB560JF	119-8502
	82	40	7.5	5.9	ELJFB820JF	119-8504
	100	40	8.8	105	ELJFB101JF	119-8505
	150	40	5.5	95	ELJFB151JF	119-8507
	220	40	4.5	85	ELJFB221JF	119-8508
	270	40	4.1	80	ELJFB271JF	119-8509
	680	30	2.5	50	ELJFB681JF	119-8515
	820	30	2.4	45	ELJFB821JF	119-8516
	1000	30	2.1	53	ELJFB102JF	119-8517

234175

PC/PA Series

High Power type



- High Power types that can handle large dc currents
- Suitable for use as power line choke coil
- ±10% tolerance

L = 6mm, W = 6.4mm, H = 2.5mm

Panasonic
ideas for life

SMD

PC Series - 1008 Case Size

Inductance (μH)	Q Min.	Resonant Freq. (MHz)	DC resistance Max.(Ω)	DC Current Max.(mA)	Mfrs. List No.	Order Code
1±20%	10	95	0.45	475	ELJPC1R0MF	119-8430
4.7±20%	8	43	1.2	285	ELJPC4R7MF	119-8434
	10	32	2.2	210	ELJPC150KF	119-8436
	22	18	4	160	ELJPC220KF	119-8441
	33	16	6.5	120	ELJPC330KF	119-8442

234180

Order Multiple=5**Order Code**

5+

Price Each

All Values ● RL

0.240

0.171

0.169

0.150

0.130

PA 1210 Series

Inductance (μH)	Q Min.	Resonant Freq. (MHz)	DC resistance Max.(Ω)	DC Current Max.(mA)	Mfrs. List No.	Order Code
10	15	23	0.5	240	ELJPA100KF	119-8474
15	15	18	0.74	220	ELJPA150KF	119-8475
33	15	12	1.65	155	ELJPA330KF	119-8480
47	15	9.5	2.25	135	ELJPA470KF	11

	Test	Self Res.					
0.047	26	100	1200	0.3	450	NLV32T-047J-PF	962-1440
0.1	28	100	700	0.44	450	NLV32T-R10J-PF	962-1458
0.33	30	25.2	300	0.4	450	NLV32T-R33J-PF	962-1466
0.68	30	25.2	160	0.6	450	NLV32T-R68J-PF	962-1474
0.82	30	25.2	140	0.65	450	NLV32T-R82J-PF	962-1482
1	30	7.96	120	0.7	400	NLV32T-1R0J-PF	962-1490
1.5	30	7.96	85	0.85	370	NLV32T-1R5J-PF	962-1504
1.8	30	7.96	80	0.9	350	NLV32T-1R8J-PF	962-1512
2.2	30	7.96	75	1	320	NLV32T-2R2J-PF	962-1520
3.3	30	7.96	60	1.2	260	NLV32T-3R3J-PF	962-1539

Order Multiple = 5	Price Each				
Order Code	5+	50+	100+	500+	1K+
All Values RL	0.260	0.184	0.158	0.140	0.117

204166

FREE Re-reeling service



Only buy what you need and improve assembly efficiency. Look for the **RL** logo or find out more:
www.farnell.co.uk / **08447 11 11 11**

SIMID 0603 Series

0603 Case Size



- Ceramic cored SMD inductors in 0603 size case
 - Same frequency of measure for L and Q values
 - Suitable for IR, vapour phase and wave soldering
 - Tolerance $\pm 0.3\text{nH}$ up to 3.3mH and 5% above
 - Climatic category 40/085/56
 - Supplied on 8mm embossed tape

H=0.8, W=1.6, D=0.8

nH	Max. (Ω)	Current mA	(min)	Frequency MHz	Frequency MHz	Order Code
SIMID 0603C Series 0603 Case Size						
1.2	0.06	1800	7	100	6000	387-6949
1.5	0.07	1500	8	100	6000	387-6950
1.8	0.08	1500	8	100	6000	387-6962
3.3	0.12	1200	9	100	5500	387-6986
4.7	0.17	800	9	100	4800	387-6998
5.6	0.18	700	9	100	4600	387-7000
6.8	0.2	700	9	100	3550	387-7012
10	0.32	600	10	100	2800	387-7024
15	0.41	420	10	100	2500	387-7036
22	0.5	380	10	100	2000	387-7048
47	0.95	270	11	100	1800	387-7061
100	1.8	200	12	100	1300	387-7085
150	4.5	130	5	25.2	1100	387-7097
180	6.5	120	4	25.2	1000	387-7103
220	7.5	110	4	25.2	900	387-7115

115

Order Multiple=5	Order Code	5+	100+	250+	500+	1K+
SIMID 0603C Series	All Values  	0.159	0.105	0.094	0.084	0.073

SIMID 0805B Series



- Ceramic or ferrite cored inductors in 0805 package
 - L and Q values measured at one frequency ($f_{Q/L}$)
 - Suitable for IR, vapour phase and wave soldering
 - Supplied on 8mm embossed tape

Tolerance $\pm 5\%$ Climatic category 55/125/56

H=1.6 W=22 D=14

LN	Rmax nH	Current Ω	fQ/fL mA	Frequency MHz	MHz	Q	Order Code
2.7	0.03	1000	250	6000	20	400-0341	
6.8	0.05	800	250	5500	30	400-0353	
8.2	0.06	700	250	5000	35	400-0365	
10	0.06	700	250	4500	40	400-0377	
12	0.06	700	250	4000	40	400-0389	
15	0.07	670	250	3500	45	400-0390	
18	0.07	670	250	3300	45	400-0407	
22	0.09	600	250	2600	45	400-0419	
33	0.12	520	250	2150	45	400-0420	
39	0.1	560	250	2050	50	400-0432	
47	0.13	500	200	1900	45	400-0444	
68	0.19	410	200	1550	45	400-0456	
82	0.21	390	150	1430	40	400-0468	
100	0.26	350	150	1310	40	400-0470	
120	0.44	270	150	1210	40	400-0481	
150	0.44	270	100	1120	35	400-0493	
180	0.47	260	100	1030	35	400-0500	
220	0.55	240	100	950	35	400-0511	
330	1	180	100	800	35	400-0523	
390	1.9	130	100	730	35	400-0535	

08447 11 11 11

 Compliant
 Non-compliant

Fax: 08447 111112 1277

RL Re-reeling available



SMD Inductors - continued

SIMID 1008, 1812, 1210 & 2220 Series - continued

Inductance μH	Tolerance %	DC Resistance Max. Ω	Max. dc Current mA	Q factor	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
SIMID 1210A Series 1210 Case size							
0.22	10	0.64	280	20	30	700	608-257
0.68	10	2.7	140	20	30	400	608-282
1	10	0.34	380	20	7.96	320	608-294
1.5	10	0.42	340	20	7.96	270	608-300
2.2	10	0.75	270	25	7.96	230	608-312
4.7	10	2.2	150	25	7.96	145	608-336
6.8	10	2.8	135	25	7.96	115	608-348
10	10	1.6	180	25	2.52	21	608-350
15	10	1.8	165	25	2.52	17.5	608-361
22	10	2.5	145	25	2.52	14	608-373
33	10	4.4	110	25	2.52	11.5	608-385
47	10	7	85	25	2.52	8	608-397
68	10	7.7	80	25	2.52	7.5	608-403
100	10	11.5	65	20	2.52	6	608-415
SIMID 1210T Series 1210 Case size							
0.1	10	0.31	450	28	100	900	387-7127
0.22	10	0.23	450	30	25.2	500	387-7140
0.33	10	0.31	450	4	100	900	387-7152
0.47	10	0.34	450	30	25.2	300	387-7164
0.82	10	0.38	450	30	25.2	300	387-7188
1	10	0.6	400	30	7.96	300	387-7190
2.2	10	0.8	320	30	7.96	100	387-7206
3.3	10	1.2	260	30	7.96	60	387-7218
4.7	10	1.5	220	30	7.96	50	387-7220
10	10	2.1	150	27	2.52	30	387-7231
22	10	3.5	110	27	2.52	20	387-7243
33	10	5.6	70	27	2.52	17	387-7255
47	10	7	60	27	2.52	15	387-7267
68	10	9	60	27	2.52	9	387-7279
100	10	11	60	20	7.96	8	
150	10	17	50	20	7.96	7	387-7309
220	10	22	45	20	7.96	6	387-7322
330	10	34	40	20	7.96	4	387-7346
SIMID 2220 Series 2220 Case Size							
1	10	0.03	1800	10	7.96	95	870-092
2.2	10	0.048	1300	10	7.96	42	158-720
3.3	10	0.08	1120	10	7.96	34	870-109
4.7	10	0.088	950	10	7.96	29	158-732
6.8	10	0.12	810	10	7.96	24	158-744
10	10	0.21	690	10	2.52	19	870-110
22	10	0.35	480	10	2.52	13	158-768
33	10	0.62	400	10	2.52	10.5	870-122
47	10	0.68	340	10	2.52	8.5	158-770
68	10	0.96	290	10	2.52	7	158-781
100	10	1.6	250	20	0.796	6	870-134
220	10	2.72	170	20	0.796	3.9	158-800
330	10	3.92	140	20	0.796	3.2	158-811
470	10	5.6	120	20	0.796	2.6	158-823
1000	10	12	85	30	0.252	1.8	158-847
1500	10	16	70	30	0.252	1.4	158-859
2200	10	28	55	30	0.252	1.2	158-860
4700	10	62.4	36	30	0.252	0.9	158-872
10000	10	120	25	30	0.0796	0.5	158-884
SIMID 2220H series High Current 2220 Case Size							
Inductance μH	Tolerance %	DC Resistance Max. Ω	Max. dc Current A	Q factor	Test Frequency (MHz)	Self Res Frequency MHz	Order Code
1	10	0.024	2.5	10	7.96	95	387-7360
2.2	10	0.048	1.8	10	7.96	42	387-7371
4.7	10	0.088	1.35	10	7.96	29	387-7395
6.8	10	0.12	1.13	10	7.96	24	387-7401
10	10	0.168	1	10	2.52	19	387-7413
15	10	0.24	0.81	10	2.52	16	387-7425
22	10	0.35	0.67	10	2.52	13	387-7437
100	10	1.28	0.35	20	0.796	6	158-896
220	10	2.72	0.24	20	0.796	3.9	387-7450
330	10	3.92	0.2	20	0.796	3.2	158-902
1000	10	12	0.12	30	0.252	1.8	158-914
3300	10	48	0.055	30	0.252	1	158-926
4700	10	62.4	0.05	30	2.52	0.9	387-7474
10000	10	120	0.035	30	0.0796	0.5	158-938

204067

Order Multiple=10		Order Code	10+	100+	250+	500+	1K+	Price Each
SIMID 1008 Series	All Values	● RL	0.550	0.370	0.350	0.290	0.280	
SIMID 1812A Series	All Values	● RL	0.700	0.600	0.520	0.460	0.410	
SIMID 1812T Series	All Values	● RL	0.710	0.560	0.480	0.460	0.440	
SIMID 1210A Series	All Values	● RL	0.450	0.370	0.360	0.350	0.240	
SIMID 1210T Series	All Values	● RL	0.163	0.136	0.130	0.120	0.080	
SIMID 2220 Series	All Values	● RL	0.960	0.790	0.650	0.590	0.490	
SIMID 2220H Series	All Values	● RL	1.430	1.210	0.890	0.800	0.610	

Order Code

SIMID 1210-H Series		EPCOS
Case size	1210	
Tolerance	±10%	

Inductance nH	Rmax Ω	Current Rating mA	Frequency KHz	Q	Mfrs. List	Order Code
1	0.1	1150	150	8	B82422H1102K	129-9970
2.2	0.16	800	90	8	B82422H1222K	129-9971
3.3	0.18	770	70	8	B82422H1332K	129-9972
4.7	0.25	700	46	8	B82422H1472K	129-9974
10	0.46	500	30	12	B82422H103K	129-9975
22	1	330	21	12	B82422H1223K	129-9976
33	1.4	280	15	15	B82422H1333K	129-9977
47	2.1	230	12	15	B82422H1473K	129-9978
68	3.4	180	10	15	B82422H1683K	129-9981
100	4.8	150	8	20	B82422H1104K	129-9982
330	13	90	4.5	20	B82422H1334K	129-9983
680	31	61	3	20	B82422H1684K	129-9984

452149

Order Multiple=10	Order Code	10+	100+	250+	500+	1K+	Price Each
SIMID 1210-H Series	All Values ● RL	0.44	0.35	0.34	0.33	0.22	

FREE Re-reeling service



Only buy what you need and improve assembly efficiency. Look for the RL logo or find out more: www.farnell.co.uk / 08447 11 11 11



SIMID Kits

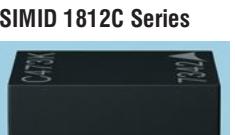
SIMID 0603, 0805, 1210, 1812T & 2220 Series



- SMD inductor kits containing the most popular values in 0603, 0805, 1210 and 2220 packages
 - All values refillable from stock
 - Suitable for development and research
- SIMID 0603** kit contains 20 each of 1.5, 1.8, 2.2, 3.3, 3.9, 4.7, 5.6, 6.8, 8.2, 10, 12, 15, 18, 22, 27, 33, 39, 47, 56, 68, 82 and 100nH
- SIMID 1210** kit contains 15 each of 0.015, 0.022, 0.033, 0.047, 0.068, 0.1, 0.15, 0.22, 0.33, 0.47, 0.68, 1.0, 1.5, 2.2, 3.3, 4.7, 6.8, 10, 15, 22, 33, 47, 68 and 100μH
- SIMID 1812T** kit contains 6 each of 1, 1.5, 1.8, 2.2, 3.3, 3.9, 4.7, 6.8, 8.2, 10, 15, 18, 22, 33, 39, 47, 68, 100, 150, 220, 330, 470, 680 and 1000μH
- SIMID 2220** Kit contains 6 each of 1.0, 4.7, 10, 47, 100, 330*, 470, 1000, 1000*, 4700 and 100000uH
- (*denotes items from SIMID 2220H Series)

204167

SIMID 1812C Series



H=3.2 W=3.2 D=4.5

Tolerance 10%

LN	Rmax Ω	Current mA	Frequency MHz	Q	Mfrs. List No.	Order Code
10	0.98	320	28	40	B82432C1103K000	164-4381
15	1.25	280	21	30	B82432C1153K000	164-4386
22	1.45	260	16	30	B82432C1223K000	164-4389
33	1.85	230	13	30	B82432C1333K000	164-4391
47	2.3	210	12	30	B82432C1473K000	164-4393
68	2.8	190	10	30	B82432C1683K000	164-4395
100	4.7	145	8	30	B82432C1104K000	164-4382
150	6.1	130	7	30	B82432C1154K000	164-4388





LN	Rmax	Current	Frequency	Mfrs.	
220	7.5	115	6	30	882432C1224K000 164-4390
330	14.1	85	4.5	30	882432C1334K000 164-4392
470	17.5	75	4	30	882432C1474K000 164-4394
680	25	65	3.3	30	882432C1684K000 164-4396
1000	32	55	2.8	30	882432C1105K000 164-4384

528639

Order Multiple=5		Price Each				
Order Code		5+	50+	100+	500+	1K+
SIMID 1812C Series	All Values ●	0.88	0.62	0.55	0.44	0.35

SIMID 2220A Series

- Very high current handling capability
- High L values
- Ferrite drum core
- Temperature range up to 150 °C
- Suitable for lead-free reflow soldering
- Qualified to AEC-Q200



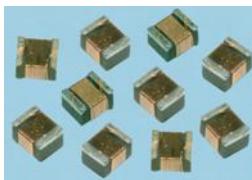
Tolerance 20%
H=5 W=5 D=5.6



LN	Rmax	Current	Frequency	Mfrs.		Order Code
μH	Ω	mA	MHz	Q	List No.	
1	0.025	3510	111	15	882442T1102M050	164-4424
1.5	0.033	3020	60	15	882442T1152M050	164-4430
2.2	0.038	2710	46	15	882442T1222M050	164-4434
3.3	0.046	2460	36	15	882442T1332M050	164-4438
4.7	0.073	1950	30	15	882442T1472M050	164-4444
6.8	0.106	1680	23	15	882442T1682M050	164-4448
10	0.132	1510	19	15	882442T1103K050	164-4425
15	0.19	1260	16	15	882442T1153K050	164-4431
22	0.238	1040	13	15	882442T1233K050	164-4435
33	0.36	840	11	15	882442T1333K050	164-4441
47	0.519	700	8	15	882442T1473K050	164-4445
68	0.781	570	7	15	882442T1683K050	164-4449
100	0.99	510	6.1	20	882442T1104K050	164-4426
150	1.5	410	4.6	20	882442T1154K050	164-4432
220	2.21	330	3.9	20	882442T1224K050	164-4436
330	3.29	280	3.4	20	882442T1334K050	164-4442
470	4.73	240	2.6	20	882442T1474K050	164-4446
680	5.87	210	2.3	20	882442T1684K050	164-4450
1000	9.5	150	1.8	20	882442T1105K050	164-4428
1500	14.9	130	1.5	20	882442T1155K050	164-4433
2200	22.5	100	1.2	20	882442T1225K050	164-4437
3300	32.8	85	1	20	882442T1335K050	164-4443
4700	48.6	73	0.8	20	882442T1475K050	164-4447
6800	60.3	65	0.6	20	882442T1685K050	164-4451
10000	112	46	0.5	20	882442T1106K050	164-4429

528643

Order Code		Price Each				
Order Code		1+	50+	100+	500+	1K+
SIMID 2220A Series	All Values ●	1.31	1.14	0.96	0.72	0.57

3650 Series

- Low inductance, high frequency chip inductors
- 0402, 0603, 0805 and 1008 case sizes
- Smooth top aids placement
- High Q factor and S.R.F.



Operating temperature -40°C to +125°C

0402 Case Size

Inductance	Q	S.R.F.	DC Res.	Current	Mfrs.	List No.	Order Code
(nH)	Tolerance	Min. (GHz)	(Ω)	Max. (mA)			
1	±10%	16	12.7	0.045	1360	3650 0402 1N0 10%	126-5391
1.9	±5%	16	11.3	0.07	1040	3650 0402 1N9 5%	126-5392
2	±5%	16	11.1	0.07	1040	3650 0402 2N0 5%	126-5393
2.2	±5%	19	10.8	0.07	960	3650 0402 2N2 5%	126-5394
2.4	±5%	15	10.5	0.07	790	3650 0402 2N4 5%	126-5395
2.7	±5%	16	10.4	0.12	640	3650 0402 2N7 5%	126-5396
3.3	±5%	19	7	0.066	840	3650 0402 3N3 5%	126-5397
3.6	±5%	19	6.8	0.066	840	3650 0402 3N6 5%	126-5399
3.9	±5%	19	5.8	0.066	840	3650 0402 3N9 5%	126-5400
4.3	±5%	18	6	0.091	700	3650 0402 4N3 5%	126-5401
4.7	±5%	15	4.7	0.13	640	3650 0402 4N7 5%	126-5402
5.1	±5%	20	4.8	0.083	800	3650 0402 5N1 5%	126-5405
5.6	±5%	20	4.8	0.083	760	3650 0402 5N6 5%	126-5406
6.2	±5%	20	4.8	0.083	760	3650 0402 6N2 5%	126-5407
6.8	±5%	20	4.8	0.083	680	3650 0402 6N8 5%	126-5408
7.5	±5%	22	4.8	0.104	680	3650 0402 7N5 5%	126-5409
8.2	±5%	22	4.4	0.104	680	3650 0402 8N2 5%	126-5410
8.7	±5%	18	4.1	0.2	480	3650 0402 8N7 5%	126-5411
9	±5%	22	4.16	0.104	680	3650 0402 9N0 5%	126-5412
9.5	±5%	18	4	0.2	480	3650 0402 9N5 5%	126-5413
10	±5%	21	3.9	0.195	480	3650 0402 10N 5%	126-5414
11	±5%	24	3.68	0.12	640	3650 0402 11N 5%	126-5417
12	±5%	24	3.6	0.12	640	3650 0402 12N 5%	126-5418
13	±5%	24	3.45	0.21	440	3650 0402 13N 5%	126-5419
15	±5%	24	3.28	0.172	560	3650 0402 15N 5%	126-5420
16	±5%	24	3.1	0.22	560	3650 0402 16N 5%	126-5421
18	±5%	24	3.1	0.23	420	3650 0402 18N 5%	126-5422
19	±5%	24	3.04	0.202	480	3650 0402 19N 5%	126-5423
20	±5%	25	3	0.25	420	3650 0402 20N 5%	126-5424

200

±5% 50 860 0.66 400

±5% 50 860 0.66 400

Inductance	Q	S.R.F.	DC Res.	Current	Mfrs.	List No.	Order Code
(nH)	Tolerance	Min. (GHz)	(Ω)	Max. (mA)			
22	±5%	25	2.8	0.3	400	3650 0402 22N 5%	126-5425
23	±5%	22	2.72	0.3	400	3650 0402 23N 5%	126-5426
24	±5%	25	2.7	0.3	400	3650 0402 24N 5%	126-5427
27	±5%	24	2.48	0.3	400	3650 0402 27N 5%	126-5429
30	±5%	25	2.35	0.35	400	3650 0402 30N 5%	126-5431
33	±5%	24	2.35	0.35	400	3650 0402 33N 5%	126-5432
36	±5%	24	2.32	0.44	320	3650 0402 36N 5%	126-5433
39	±5%	25	2.1	0.55	200	3650 0402 39N 5%	126-5434
43	±5%	25	2.03	0.81	100	3650 0402 43N 5%	126-5436
47	±5%	20	2.1	0.83	150	3650 0402 47N 5%	126-5437
51	±5%	25	1.75	0.82	100	3650 0402 51N 5%	126-5438
56	±5%	22	1.76	0.97	100	3650 0402 56N 5%	126-5439
68	±5%	22	1.62	1.12	100	3650 0402 68N 5%	126-5440

Order Multiple=5		Price Each				
Order Code		5+	100+	250+	1K+	
All Values ●		0.32	0.28	0.25	0.22	

Inductance	Q	S.R.F.	DC Res.	Current	Mfrs.	List No.	Order Code
(nH)	Tolerance	Min. (GHz)	(Ω)	Max. (mA)			
3.3	±5%	50	6000	0.08	600	3650 0603 1N8 5%	126-5442
5.6	±5%	65	5500	0.08	600	3650 0603 5N6 5%	126-5443
6.8	±5%	50	5500	0.11	600	3650 0603 6N8 5%	126-5444
7.5	±5%	50	4500	0.14	600	3650 0603 7N5 5%	126-5500
8.2	±5%	50	4700	0.12	600	3650 0603 8N2 5%	126-5501
8.7	±5%	50	3900	0.21	400	3650 0603 8N7 5%	126-5502
10	±5%	60	4200	0.1	600	3650 0603 10N 5%	126-5503
12	±5%	50	4000	0.15	600	3650 0603 12N 5%	126-5504
15	±5%	50	3400	0.17	600	3650 0603 15N 5%	126-5505
18	±5%	50	3300	0.2	600	3650 0603 18N 5%	126-5506
22	±5%	50	2600	0.22	500	3650 0603 22N 5%	126-5507
27	±5%	50	2000	0.2	200	3650	

SMD Inductors - continued**3650 Series - continued****0402 Case Size - continued**

Inductance (nH)	Tolerance	Q	S.R.F.	DC Res. (Ω)	Current Max. (mA)	Mfrs. List No.	Order Code
220	±5%	50	850	0.7	400	3650 0805 R22 5%	126-5530
240	±5%	44	690	1	350	3650 0805 R24 5%	126-5531
250	±5%	45	680	1	350	3650 0805 R25 5%	126-5533
270	±5%	48	650	1	350	3650 0805 R27 5%	126-5534
300	±5%	48	620	1.2	330	3650 0805 R30 5%	126-5535
330	±5%	48	600	1.4	310	3650 0805 R33 5%	126-5536
360	±5%	48	580	1.45	300	3650 0805 R36 5%	126-5537
390	±5%	48	560	1.5	290	3650 0805 R39 5%	126-5538
430	±5%	33	430	1.7	230	3650 0805 R43 5%	126-5539
470	±5%	33	375	1.7	220	3650 0805 R47 5%	126-5540
560	±5%	23	340	1.9	210	3650 0805 R56 5%	126-5541
620	±5%	23	220	2.2	210	3650 0805 R62 5%	126-5542
680	±5%	23	200	2.2	190	3650 0805 R68 5%	126-5543
750	±5%	23	200	2.3	180	3650 0805 R75 5%	126-5545
820	±5%	23	200	2.35	180	3650 0805 R82 5%	126-5546
1000	±5%	20	100	2.5	170	3650 0805 R10 5%	126-5547
1200	±5%	18	100	2.5	170	3650 0805 R12 5%	126-5548
1500	±5%	16	100	2.5	170	3650 0805 R15 5%	126-5549
1800	±5%	16	80	2.5	170	3650 0805 R18 5%	126-5550
2200	±5%	16	60	2.7	160	3650 0805 R22 5%	126-5551
2700	±5%	16	50	2.95	150	3650 0805 R27 5%	126-5552

Order Multiple=5

Order Code	5+	100+	250+	1K+	2K+
All Values ●	0.31	0.27	0.24	0.21	0.11

1008 Case Size

Inductance (nH)	Tolerance	Q	S.R.F.	DC Res. (Ω)	Current Max. (mA)	Mfrs. List No.	Order Code
5.6	±5%	50	4000	0.15	1000	3650 1008 5N6 5%	126-5553
10	±5%	50	4100	0.08	1000	3650 1008 10N 5%	126-5554
12	±5%	50	3300	0.09	1000	3650 1008 12N 5%	126-5555
15	±5%	50	2500	0.11	1000	3650 1008 15N 5%	126-5557
18	±5%	50	2400	0.12	1000	3650 1008 18N 5%	126-5558
22	±5%	55	2400	0.12	1000	3650 1008 22N 5%	126-5559
24	±5%	55	1900	0.12	1000	3650 1008 24N 5%	126-5560
27	±5%	55	1600	0.13	1000	3650 1008 27N 5%	126-5561
33	±5%	60	1600	0.14	1000	3650 1008 33N 5%	126-5562
39	±5%	60	1500	0.15	1000	3650 1008 39N 5%	126-5563
47	±5%	65	1500	0.16	1000	3650 1008 47N 5%	126-5564
56	±5%	65	1300	0.18	1000	3650 1008 56N 5%	126-5565
62	±5%	65	1250	0.2	1000	3650 1008 62N 5%	126-5566
68	±5%	65	1300	0.2	1000	3650 1008 68N 5%	126-5567
75	±5%	60	1100	0.21	1000	3650 1008 75N 5%	126-5569
82	±5%	60	1000	0.22	1000	3650 1008 82N 5%	126-5571
100	±5%	60	1000	0.56	650	3650 1008 R10 5%	126-5572
120	±5%	60	950	0.63	650	3650 1008 R12 5%	126-5573
150	±5%	45	850	0.7	580	3650 1008 R15 5%	126-5574
180	±5%	45	750	0.77	620	3650 1008 R18 5%	126-5575
220	±5%	45	700	0.84	500	3650 1008 R22 5%	126-5576
240	±5%	45	650	0.88	500	3650 1008 R24 5%	126-5577
270	±5%	45	600	0.91	500	3650 1008 R27 5%	126-5578
300	±5%	45	585	1	450	3650 1008 R30 5%	126-5579
330	±5%	45	570	1.05	450	3650 1008 R33 5%	126-5580
360	±5%	45	530	1.1	470	3650 1008 R36 5%	126-5582
390	±5%	45	500	1.12	470	3650 1008 R39 5%	126-5583
470	±5%	45	450	1.19	470	3650 1008 R47 5%	126-5585
560	±5%	45	415	1.33	400	3650 1008 R56 5%	126-5586
620	±5%	45	375	1.4	300	3650 1008 R62 5%	126-5587
680	±5%	45	375	1.47	400	3650 1008 R68 5%	126-5588
750	±5%	45	360	1.54	360	3650 1008 R75 5%	126-5589
820	±5%	45	350	1.61	400	3650 1008 R82 5%	126-5590
910	±5%	35	320	1.68	380	3650 1008 R91 5%	126-5591
1000	±5%	35	290	1.75	370	3650 1008 R10 5%	126-5592
1200	±5%	35	250	2	310	3650 1008 R12 5%	126-5594
1500	±5%	28	200	2.3	330	3650 1008 R15 5%	126-5595
1800	±5%	28	160	2.6	300	3650 1008 R18 5%	126-5596
2200	±5%	28	160	2.8	280	3650 1008 R22 5%	126-5597
2700	±5%	22	140	3.2	290	3650 1008 R27 5%	126-5598
3300	±5%	22	110	3.4	290	3650 1008 R33 5%	126-5599
3900	±5%	20	100	3.6	260	3650 1008 R39 5%	126-5601
4700	±5%	20	90	4	260	3650 1008 R47 5%	126-5602
5600	±5%	16	20	4	240	3650 1008 R56 5%	126-5604
6800	±5%	15	40	4.9	200	3650 1008 R68 5%	126-5605
8200	±5%	15	25	6	170	3650 1008 R82 5%	126-5606
10000	±5%	15	20	9	150	3650 1008 R103 5%	126-5607
12000	±5%	15	18	10.5	130	3650 1008 R123 5%	126-5608
15000	±5%	15	15	11.5	120	3650 1008 R153 5%	126-5609

451386

Order Multiple=5

Order Code	5+	100+	250+	1K+	2K+
All Values ●	0.37	0.31	0.28	0.25	0.11

3650 Series - Design Kits

- Designs kits for 3650 Series inductors
 - Kits can be replenished from Farnell stock
- Case size
- 0402 Kit contains 50 each of all 43 values
 - 0603 Kit contains 50 each of all 46 values
 - 0805 Kit contains 50 each of all 52 values
 - 1008 Kit contains 50 each of all 50 values

494120



Order Code	Price Each 1+
0402 Lab Kit, 43 Indukt.werte a 50 Stk.	150-2947● 266.44
0603 Lab Kit, 46 Indukt.werte a 50 Stk.	150-2948● 266.44
0805 Lab Kit, 52 Indukt.werte a 50 Stk.	150-2949● 266.44
1008 Lab Kit, 50 Indukt.werte a 50 Stk.	150-2950● 266.44

3613C Series**1812 Case Size, Fully Encapsulated**

- Ferrite cored wound chip inductor suitable for dip and reflow soldering
- Excellent Q factor
- Encapsulated in thermoset plastic body with copper lead terminations
- Full reels to IEC 286 Pt 3

Supplied on 8mm embossed tape, individually marked (reel = 500 pcs)

Note: 1 Inductance tolerance marking M±20% K±10%

2 The 3613C replaces the Meggit Sigma 3613A which is now obsolete

Inductance μH	Inductance Tolerance %	DC Resistance Ω	Max DC Current (mA)	Q factor Min	Test. Frequency MHz	Self Res MHz	Order Code
0.1	0.027	3500	50	25	550	117-4504	
0.22	0.035	2570	50	25	415	117-4506	
0.47	0.08	1700	50	25	300	117-4507	
1	0.25	930	50	25	200	117-4508	
2.2	0.9	505	35	7.9	140	117-4509	
4.7	0.21	1050	35	7.9	60	117-4510	
10	0.6	620	35	7.9	42	117-4511	
100	4.9	216	55	2.5	8	117-4513	
220	7.5	175	60	0.79	5.8	117-4515	
470	11	144	60	0.79	4	117-4516	
1000	16.5	118	60	0.79	2.5	117-4517	

227205

Order Multiple=10

Order Code	Price Each 10+	100+	500+	1K+
All Values ● RL	0.29	0.23	0.21	0.15

Mfrs. List No. 3615A + value + K

204121

Electronics Design World

...it's where Design Engineers go!

For the latest news, technology and support tools, visit:

www.electronicsdesignworld.com

LQW31H Series

1206 Case Size


murata
innovator in electronics

- Alumina core type chip inductor for high frequency circuits
- Suitable for hand held telecommunications equipment due to low dc resistance and high Q
- Can be used in high frequency range

SMD

Operating temperature		-25°C to +85°C		Test Frequency - Inductance		100MHz
Inductance	Q Factor	DC Resistance	Self Resonance Freq. MHz	Allowable Current mA	Mfrs. List No.	Order Code
nh	Tolerance	Min. Ω Max.	kHz Min	mA		
8.5	±10%	50 0.029	1000	750	LQW31HN8N8K03L	134-3204
14.7	±10%	60 0.035	1000	680	LQW31HN15NK03L	134-3205
17	±10%	60 0.037	1000	650	LQW31HN17NK03L	134-3206
23	±10%	60 0.046	1000	590	LQW31HN23NK03L	134-3207
27	±10%	60 0.051	1000	560	LQW31HN27NK03L	134-3209
33	±10%	60 0.057	1000	530	LQW31HN33NK03L	134-3211
39	±10%	60 0.067	1000	490	LQW31HN39NK03L	134-3212
47	±10%	60 0.11	1000	380	LQW31HN47NK03L	134-3213
56	±10%	60 0.14	1000	330	LQW31HN56NK03L	134-3214
64	±10%	60 0.18	1000	290	LQW31HN64NK03L	134-3215
84	±10%	60 0.28	1000	240	LQW31HN84NK03L	134-3216
100	±10%	60 0.3	900	230	LQW31HNR10K03L	134-3217
8.8	±5%	50 0.029	1000	750	LQW31HN8N8J03L	134-3218
14.7	±5%	60 0.035	1000	680	LQW31HN15NJ03L	134-3219
17	±5%	60 0.037	1000	650	LQW31HN17NJ03L	134-3220
23	±5%	60 0.046	1000	590	LQW31HN23NJ03L	134-3222
27	±5%	60 0.051	1000	560	LQW31HN27NJ03L	134-3223
33	±5%	60 0.057	1000	530	LQW31HN33NJ03L	134-3224
39	±5%	60 0.067	1000	490	LQW31HN39NJ03L	134-3225
47	±5%	60 0.11	1000	380	LQW31HN47NJ03L	134-3226
56	±5%	60 0.14	1000	330	LQW31HN56NJ03L	134-3227
64	±5%	60 0.18	1000	290	LQW31HN64NJ03L	134-3228
84	±5%	60 0.28	1000	240	LQW31HN84NJ03L	134-3229
100	±5%	60 0.3	900	230	LQW31HNR10J03L	134-3230

463406

Order Multiple=5

Order Code	5+	100+	500+	2K+	4K+
All Values ● RL	0.270	0.250	0.220	0.161	0.122

Price Each

Design Kits Chokes
SMD


- Kit selection recommended by Linear Technology, National Semiconductor, Texas Instruments, Fairchild Semiconductor and STMicroelectronics
- Wide range of case sizes and current ratings
- Shielded and unshielded SMD chokes available

For example:

Texas Instruments

- Starting Software, select Design , select Inductance
- Analysing simulation and integrate selected choke
- Kit of 35 values and 176 components

National Semiconductors

- Nomogramm selection in the data sheet, operation range selection, extracting inductance code
- Inductance selection, start simulation and integrate selected choke
- 35 values and 190 components

Linear Technology

- Selection of needed and design-recommended inductance
- Start software starten, select IC, inductance selection according to related software recommendation
- Kit of 35 values and 239 components

Fairchild Semiconductors

- Inductance selection through exact matching between Fairchild part.no. and Wuerth components
- 35 values and 230 components
- For switch mode family FAN

523192



08447 11 11 11

Fax: 08447 11 11 12


RoHS Compliant
Non-compliant

Manufacturer Kit	Order Code	Price Each
Linear Technology	163-6326●	1+
Texas Instruments	163-6328●	98.29
Fairchild Semiconductors	163-6329●	98.29
STMicroElectronics	163-6330●	98.29
National Semiconductors	163-6331●	98.29

Variable Inductors
TOKO
5P and 5PH Series

- Variable coils
- Low profile for tight-spaced designs

Tolerance 5%

H=6.2, W=6.2, D=6.2
Lead L=2.3, dia=0.4, pitch=3.5

5P

Inductance μH	Q min	Test freq (MHz)	Mfrs. List No.	Order Code
47	40	2.52	#5PNR-3509Z	151-6081
100	40	0.796	#5PNR-3513Z	151-6082
470	40	0.796	#5PNR-3520Z	151-6083
680	40	0.796	#5PNR-3538Z	151-6084

Order Code	1+	10+	50+	250+	500+
All Values ●	1.07	0.90	0.76	0.67	0.60

494624

Order Code	1+	10+	50+	250+	500+
All Values ●	1.07	0.90	0.76	0.67	0.60

204206

Ferrite Inductors & Beads
SPC **multicomp**
SMD
Ferrite Bead Inductors

- Chip ferrite inductors
- Applications include filtering circuits in digital equipment

Current rating 5A
Reel Quantity 500 pieces

Impedance Min. (Ω) @ 25MHz	DC Resistance Max. (mΩ)	Dimensions L W H	Solder Pad 3 x 3	Distance Between Pads 1.9	Order Code
20	35	0.6	4 3 2.55	3 x 3	926-5260
45	85	0.9	8.5 3 2.55	3 x 3	926-5279

Order Multiple=5	Order Code	5+	25+	100+	250+	500+
	SMD 926-5260●	0.320	0.290	0.260	0.200	0.187
	SMD 926-5279●	0.310	0.270	0.260	0.200	0.187

FREE Re-reeling service

Only buy what you need and improve assembly efficiency. Look for the **RL** logo or find out more:

www.farnell.co.uk / 08447 11 11 11
Help us to help the environment

This catalogue has been printed on paper certified from a sustainable source.

Please recycle after use.



Farnell

1281

Ferrite Inductors & Beads - continued

BMB Series - Ferrite Chip Beads

0805 Case Size



H=0.9, W=1.2, L=2.0
Supplied on 8mm tape (reel=500pcs)

Tyco Electronics



- Surface mount ferrite noise reduction beads
- 0805 case size
- Types A and L for general use
- Type B for high frequency to minimise signal waveform attenuation
- Type R for low frequency to prevent signal ringing in digital circuits

Type	Impedance @ 100MHz (Ω)	DC Res. Max. (Ω)	Current rating (mA)	Mfrs. List No.	Order Code
A	120	0.6	200	BMB2A0120AN1	119-3413
A	120	0.3	300	BMB2A0120AN4	119-3414
A	150	0.6	200	BMB2A0150AN1	119-3415
A	220	0.5	200	BMB2A0220AN4	119-3416
A	300	1	200	BMB2A0300AN1	119-3418
L	60	0.1	700	BMB2A0060LN2	119-3419
L	300	0.2	400	BMB2A0300LN2	119-3420
L	1000	0.3	300	BMB2A1000LN2	119-3421
B	120	0.4	300	BMB2A0120BN3	119-3422
B	600	0.5	200	BMB2A0600BN3	119-3423
B	1000	0.7	200	BMB2A1000BN3	119-3424
R	600	0.5	200	BMB2A0600RS2	119-3425

204185

Order Multiple=10

	Order Code	10+	100+	500+	1K+	Price Each
Type A	All Values ● RL	0.114	0.091	0.068	0.047	
Type L and B	All Values ● RL	0.171	0.137	0.102	0.070	
Type R	All Values ● RL	0.230	0.172	0.148	0.093	

204185

BMB - Laboratory Kit

Tyco Electronics



- Surface mount ring binder laboratory kit
- 0805 size ferrite beads
- Can be easily restocked
- Also contains 0603 size

Kit contains 20 of each inductance value (Ω)

0805 case size Type A: 120, 120, 150, 220, 330.
Type B: 5, 56, 120, 200, 300, 600, 750, 1000
Type R: 120, 430, 600
Type L: 60, 300, 1000
0603 case size Type B: 5, 70, 120, 200, 300, 420, 600,
Type R: 120, 240, 600

204183

MLS Series

FERROXCUBE



0603 case size: L=1.6±0.15, W=0.8±0.15,
H=0.74±0.15, Tape width=8.0, Reel=4000pcs
0805 case size: L=2.0±0.2, W=0.8±0.2,
H=0.74±0.2, Tape width=8.0, Reel=3000pcs
1206 case size: L=3.2±0.2, W=1.6±0.2,
H=1.1±0.2, Tape width=8.0, Reel=3000pcs
1806 case size: L=4.5±0.25, W=1.6±0.25,
H=1.6±0.25, Tape width=12, Reel=2000pcs

- Ferrite chip bead suppressors
- 0603, 0805, 1206 and 1806 case sizes
- Suitable for EMI/RFI attenuation in electronic equipment
- Applications include computers, audio/video, automotive, digital communications, mobile phones etc.

Case Size	Impedance @ 100MHz (Ω)	Rated Current Max. (mA)	DC Resistance Max. (Ω)	Mfrs. List No.	Order Code	Operating temperature -55°C to +125°C	Impedance tolerance ±25%
0603	60	300	0.4	MLS0603-4S7-600	305-6491		
0603	120	200	0.8	MLS0603-4S7-121	305-6466		
0603	150	200	0.9	MLS0603-4S7-151	305-6478		
0603	300	150	1.2	MLS0603-4S7-301	305-6480		
0603	600	150	1.8	MLS0603-4S7-601	305-6508		
0805	30	600	0.1	MLS0805-4S4-300	305-6510		
0805	60	400	0.2	MLS0805-4S4-600	305-6521		
0805	120	300	0.3	MLS0805-4S7-121	305-6545		
0805	300	200	0.3	MLS0805-4S7-301	305-6557		
0805	600	200	0.6	MLS0805-4S7-601	305-6569		
0805	1000	150	0.8	MLS0805-4S7-102	305-6533		
1206	30	600	0.1	MLS1206-4S4-300	305-6582		
1206	70	400	0.2	MLS1206-4S4-700	305-6600		
1206	90	400	0.2	MLS1206-4S4-900	305-6612		
1206	120	300	0.2	MLS1206-4S4-121	305-6570		
1206	600	200	0.4	MLS1206-4S4-601	305-6594		
1206	1000	150	0.6	MLS1206-4S7-102	305-6624		
1806	80	600	0.1	MLS1806-4S4-800	305-6648		
1806	150	500	0.2	MLS1806-4S4-151	305-6636		

204194

Case size	Order Code	5+	30+	100+	300+	500+	Price Each
0603	All Values ●	0.320	0.290	0.250	0.196	0.133	
0805	All Values ●	0.300	0.260	0.250	0.210	0.179	
1206	All Values ●	0.300	0.260	0.250	0.210	0.179	
1806	All Values ●	0.540	0.470	0.420	0.340	0.220	

BLM15 Series – 0402 Case Size

muRata



- Miniature ferrite beads for space saving
- 0402 case size
- Wide variety of applications

Operating temperature -55°C to +125°C

Impedance, typical @ 100MHz Ω	Resistance Ω	Current mA	Mfrs. List No.	Order Code
BLM15 AG Series – General Use				
10	0.05	1000	BLM15AG100SN1D	151-5758
70	0.15	500	BLM15AG700SN1D	151-5763
120	0.25	500	BLM15AG121SN1D	151-5760
220	0.35	300	BLM15AG221SN1D	151-5761
600	0.6	300	BLM15AG601SN1D	151-5762
1000	1	200	BLM15AG102SN1D	151-5759
BLM15 BB Series – High Speed Signal Lines				
5	0.08	500	BLM15BB050SN1D	151-5764
10	0.1	300	BLM15BB100SN1D	151-5765
22	0.2	300	BLM15BB220SN1D	151-5768
47	0.35	300	BLM15BB470SN1D	151-5770
75	0.4	300	BLM15BB750SN1D	151-5771
120	0.55	300	BLM15BB121SN1D	151-5766
220	0.8	200	BLM15BB221SN1D	151-5769
BLM15 BD Series – High Speed Signal Lines				
75	0.2	300	BLM15BD750SN1D	151-5778
120	0.3	300	BLM15BD121SN1D	151-5773
220	0.4	300	BLM15BD221SN1D	151-5775
470	0.6	200	BLM15BD471SN1D	151-5776
600	0.65	200	BLM15BD601SN1D	151-5777
1000	0.9	200	BLM15BD102SN1D	151-5772
1800	1.4	100	BLM15BD182SN1D	151-5774
BLM15 EG Series – GHz Noise				
120	0.095	1500	BLM15EG121SN1D	151-5781
220	0.28	700	BLM15EG221SN1D	151-5782
BLM15 HB Series				
120	0.7	300	BLM15HB121SN1D	151-5783
220	1	250	BLM15HB221SN1D	151-5784
BLM15 HD Series – GHz Band High Speed Signal Line				
600	0.85	300	BLM15HD601SN1D	151-5787
1000	1.25	250	BLM15HD102SN1D	151-5785
1800	2.2	200	BLM15HD182SN1D	151-5786
BLM15 HG Series – GHz Band General Use				
600	0.7	300	BLM15HG601SN1D	151-5789
1000	1.1	250	BLM15HG102SN1D	151-5788

496195

Impedance	Order Code	5+	50+	100+	250+	500+	Price Each
BLM15 AG	All Values ●	0.051	0.044	0.036	0.029	0.020	
BLM15 BB	All Values ●	0.051	0.044	0.036	0.029	0.020	
BLM15 BD							
75	151-5778●	0.051	0.044	0.036	0.029	0.020	
120	151-5773●	0.051	0.044	0.036	0.029	0.020	
220	151-5775●	0.051	0.044	0.036	0.029	0.020	
470	151-5776●	0.051	0.044	0.036	0.029	0.020	
600	151-5777●	0.062	0.045	0.040	0.033	0.027	
1000	151-5772●	0.062	0.045	0.040	0.033	0.027	
1800	151-5774●	0.061	0.051	0.041	0.031	0.020	
BLM15 EG	All Values ●	0.155	0.114	0.101	0.084	0.072	
BLM15 HB	All Values ●	0.126	0.093	0.082	0.068	0.059	
BLM15 HD							
600	151-5787●	0.126	0.093	0.082	0.068	0.059	
1000	151-5785●	0.126	0.093	0.082	0.068	0.059	
1800	151-5786●	0.173	0.143	0.102	0.082	0.061	
BLM15 HG	All Values ●	0.126	0.093	0.082	0.068	0.059	

BLM18T Series - 0603 Case

muRata



The chip ferrite beads BLM series is designed to function nearly as a resistor at noise frequencies, which greatly reduces the possibility of resonance and leaves signal wave forms undistorted.

The BLM series is effective in circuits without stable ground lines because the BLM series does not need a connection to ground.

- Excellent solder heat resistance
- Effective in noise suppression in a wide frequency range (10MHz to several hundred MHz)



Impedance Ω	Tolerance %	Resistance Ω	Current A	Current A	Order Code
120	25	0.25	200	BLM18TG121TN1D	111-5048
220	25	0.3	200	BLM18TG221TN1D	111-5049
600	25	0.45	200	BLM18TG601TN1D	111-5050
1000	25	0.6	100	BLM18TG102TN1D	111-5051
					423248
Order Code		Price Each			
10+	50+	100+	500+	1K+	
All Values ●	0.125	0.105	0.084	0.063	0.042

BLM18 Series – 0603 Case Size

muRata
innovate in electronics



- Compact ferrite beads
- 0603 case size
- Wide variety of applications

Operating temperature -55°C to +125°C

Impedance, typical @ 100MHz Ω	Resistance Ω	Current mA	Mfgs. List No.	Order Code
BLM18 AG Series – General Use				
120	0.2	200	BLM18AG121SN1D	151-5672
150	0.25	200	BLM18AG151SN1D	151-5673
220	0.3	200	BLM18AG221SN1D	151-5674
330	0.45	220	BLM18AG331SN1D	151-5675
470	0.5	200	BLM18AG471SN1D	151-5677
470	0.5	200	BLM18AG471SN1D	151-5678
600	0.5	200	BLM18AG601SN1D	151-5679
1000	0.7	100	BLM18AG102SN1D	151-5671
BLM18 BA Series – High Speed Signal Lines				
5	0.2	500	BLM18BA050SN1D	151-5680
10	0.25	500	BLM18BA100SN1D	151-5681
22	0.35	500	BLM18BA220SN1D	151-5683
47	0.55	300	BLM18BA470SN1D	151-5684
75	0.7	300	BLM18BA750SN1D	151-5685
120	0.9	200	BLM18BA121SN1D	151-5682
BLM18 BB Series – High Speed Signal Lines				
5	0.1	700	BLM18BB050SN1D	151-5686
10	0.15	500	BLM18BB100SN1D	151-5687
22	0.25	500	BLM18BB220SN1D	151-5694
47	0.3	500	BLM18BB470SN1D	151-5697
60	0.35	200	BLM18BB600SN1D	151-5699
75	0.35	200	BLM18BB750SN1D	151-5700
120	0.5	200	BLM18BB121SN1D	151-5689
140	0.55	200	BLM18BB141SN1D	151-5691
150	0.55	200	BLM18BB151SN1D	151-5693
220	0.65	200	BLM18BB221SN1D	151-5695
330	0.75	200	BLM18BB331SN1D	151-5696
470	1	50	BLM18BB471SN1D	151-5698
BLM18 BD Series – High Speed Signal Lines				
120	0.4	200	BLM18BD121SN1D	151-5702
150	0.4	200	BLM18BD151SN1D	151-5703
220	0.45	200	BLM18BD221SN1D	151-5707
330	0.5	200	BLM18BD331SN1D	151-5710
420	0.55	200	BLM18BD421SN1D	151-5711
470	0.55	200	BLM18BD471SN1D	151-5712
600	0.65	200	BLM18BD601SN1D	151-5713
1000	0.85	100	BLM18BD102SN1D	151-5701
1500	1.2	50	BLM18BD152SN1D	151-5704
1800	1.5	50	BLM18BD182SN1D	151-5705
2200	1.5	50	BLM18BD222SN1D	151-5708
2500	1.5	50	BLM18BD252SN1D	151-5709
BLM18 EG Series – GHz Band Low Rdc Type				
100	0.045	2000	BLM18EG101TN1D	151-5714
120	0.04	2000	BLM18EG121TN1D	151-5715
220	0.05	2000	BLM18EG221TN1D	151-5716
220	0.15	1000	BLM18EG221TN1D	151-5717
330	0.21	500	BLM18EG331TN1D	151-5719
390	0.3	500	BLM18EG391TN1D	151-5721
470	0.21	500	BLM18EG471TN1D	151-5722
600	0.35	500	BLM18EG601TN1D	151-5723
BLM18 GG Series – High GHz Band General Use				
470	1.3	200	BLM18GG471SN1D	151-5724
BLM18 HB Series – GHz Band High Speed Signal Line				
120	0.5	200	BLM18HB121SN1D	151-5725
220	0.8	100	BLM18HB221SN1D	151-5726
BLM18 HD Series – GHz Band High Speed Signal Lines				
470	1.2	100	BLM18HD471SN1D	151-5728
600	1.5	100	BLM18HD601SN1D	151-5729
1000	1.8	50	BLM18HD102SN1D	151-5727
BLM18 HG Series – GHz Band General Use				
470	0.85	200	BLM18HG471SN1D	151-5732
600	1	200	BLM18HG601SN1D	151-5733
1000	1.6	100	BLM18HG102SN1D	151-5730
BLM18 HK Series – GHz Band Digital Interface				
330	0.5	200	BLM18HK331SN1D	151-5735
470	0.7	200	BLM18HK471SN1D	151-5736
600	0.9	100	BLM18HK601SN1D	151-5737
1000	1.5	50	BLM18HK102SN1D	151-5734
BLM18 PG Series – Power Supplies				
30	0.05	1000	BLM18PG300SN1D	151-5741
33	0.025	3000	BLM18PG330SN1D	151-5742
60	0.1	500	BLM18PG600SN1D	151-5746
120	0.05	2000	BLM18PG121SN1D	151-5738
180	0.09	1500	BLM18PG181SN1D	151-5739
220	0.1	1400	BLM18PG221SN1D	151-5740
330	0.15	1200	BLM18PG331SN1D	151-5744
470	0.2	1000	BLM18PG471SN1D	151-5745
BLM18 RK Series – Digital Interface				
120	0.25	200	BLM18RK121SN1D	151-5748
220	0.3	200	BLM18RK221SN1D	151-5749

Impedance, typical @ 100MHz Ω	Resistance Ω	Current mA	Mfgs. List No.	Order Code
BLM18 SG Series – Power Supplies				
26	0.007	6000	BLM18SG260TN1D	151-5754
70	0.02	4000	BLM18SG700TN1D	151-5757
120	0.025	3000	BLM18SG121TN1D	151-5751
220	0.04	2500	BLM18SG221TN1D	151-5753
330	0.07	1500	BLM18SG331TN1D	151-5756

496260

BLM21 Series – 0805 Case Size

muRata
innovate in electronics



- Ferrite beads
- 0805 case size

Operating temperature -55°C to +125°C

Impedance, typical @ 100MHz Ω	Resistance Ω	Current mA	Mfgs. List No.	Order Code
BLM21 AG Series – General Use				
120	0.15	200	BLM21AG121SN1D	151-5617
150	0.15	200	BLM21AG151SN1D	151-5618
220	0.2	200	BLM21AG221SN1D	151-5619
330	0.25	200	BLM21AG331SN1D	151-5620
470	0.25	200	BLM21AG471SN1D	151-5621
600	0.3	200	BLM21AG601SN1D	151-5622
1000	0.45	200	BLM21AG102SN1D	151-5616
BLM21 BB Series – High Speed Signal Lines				
5	0.07	500	BLM21BB050SN1D	151-5623
60	0.2	200	BLM21BB600SN1D	151-5634
75	0.25	200	BLM21BB750SN1D	151-5635
120	0.25	200	BLM21BB121SN1D	151-5624
150	0.25	200	BLM21BB151SN1D	151-5625
200	0.35	200	BLM21BB201SN1D	151-5626
330	0.4	200	BLM21BB331SN1D	151-5632
470	0.45	200	BLM21BB471SN1D	151-5633
BLM21 BD Series – High Speed Signal Lines				
120	0.25	200	BLM21BD121SN1D	151-5637
330	0.3	200	BLM21BD331SN1D	151-5648
420	0.3	200	BLM21BD421SN1D	151-5651
600	0.35	200	BLM21BD601SH1	151-5654
600	0.35	200	BLM21BD601SN1D	151-5655
750	0.4	200	BLM21BD751SN1D	151-5657
1000	0.4	200	BLM21BD102SN1D	151-5636
1500	0.45	200	BLM21BD152SN1D	151-5641
1800	0.5	200	BLM21BD182SN1D	151-5642
2200	0.6	200	BLM21BD222SN1L	151-5644
2200	0.6	200	BLM21BD222TN1D	151-5645
2700	0.8	200	BLM21BD272SH1L	151-5646
2700	0.8	200	BLM21BD272SN1L	151-5647
BLM21 PG Series – Power Supplies				

496260

Ferrite Inductors & Beads - continued

BLM21 Series – 0805 Case Size - continued

Impedance, typical @ 100MHz	Resistance Ω	Current mA	Mfrs.	List No.	Order Code
22	0.01	6000	BLM21PG220SN1D	151-5658	
22	0.01	6000	BLM21PG220SN1D	151-5659	
30	0.015	3000	BLM21PG300SN1D	151-5662	
60	0.025	3000	BLM21PG600SN1D	151-5665	
220	0.05	2000	BLM21PG221SH1D	151-5666	
220	0.05	2000	BLM21PG221SN1D	151-5661	
330	0.09	1500	BLM21PG331SN1D	151-5663	
BLM21 RK Series – Digital Interface					
600	0.3	200	BLM21RK601SN1D	151-5670	
1000	0.5	200	BLM21RK102SN1D	151-5666	

496319

Ferrite Bead Arrays

BLA Series


muRata
innovator in Electronics

- Four ferrite beads in a single case
- Reduces PCB placement costs and board space

Operating temperature -55°C to +125°C

SMD

0804 Case Size

General Use

Impedance, typical @ 100MHz	Resistance Ω	Current mA	Mfrs.	List No.	Order Code
120	0.5	100	BLA2AAG121SN4D	151-5791	
600	1.1	50	BLA2AAG601SN4D	151-5793	
1000	1.3	50	BLA2AAG102SN4D	151-5790	

Order Code	1+	50+	Price Each	100+	250+	500+
All Values ●	0.420	0.310	0.270	0.230	0.196	

High Speed Signal Lines

Impedance, typical @ 100MHz	Resistance Ω	Current mA	Mfrs.	List No.	Order Code
470	0.65	100	BLA2ABD471SN4D	151-5795	
600	0.8	100	BLA2ABD601SN4D	151-5796	
1000	1	50	BLA2ABD102SN4D	151-5794	

Order Code	1+	50+	Price Each	100+	250+	500+
All Values ●	0.420	0.310	0.270	0.230	0.196	

1206 Case Size

General Use

Impedance, typical @ 100MHz	Resistance Ω	Current mA	Mfrs.	List No.	Order Code
30	0.1	200	BLA31AG300SN4D	151-5800	
60	0.15	200	BLA31AG600SN4D	151-5801	
120	0.2	150	BLA31AG121SN4D	151-5798	
220	0.25	150	BLA31AG221SN4D	151-5799	
600	0.35	100	BLA31AG601SN4D	151-5802	
1000	0.45	50	BLA31AG102SN4D	151-5797	

Order Code	1+	50+	Price Each	100+	250+	500+
All Values ●	0.490	0.400	0.300	0.220	0.187	

High Speed Signal Lines

Impedance, typical @ 100MHz	Resistance Ω	Current mA	Mfrs.	List No.	Order Code
120	0.3	150	BLA31BD121SN4D	151-5804	
220	0.35	150	BLA31BD221SN4D	151-5805	
470	0.4	100	BLA31BD471SN4D	151-5806	
600	0.45	100	BLA31BD601SN4D	151-5807	
1000	0.55	50	BLA31BD102SN4D	151-5803	

496149

Order Code	1+	50+	Price Each	100+	250+	500+
All Values ●	0.78	0.62	0.47	0.35	0.28	

Solid Inductor – Surface Mount

muRata
innovator in Electronics

SMD


- Solid ferrite inductor, designed to reduce spurious oscillations in high frequency amplifiers.

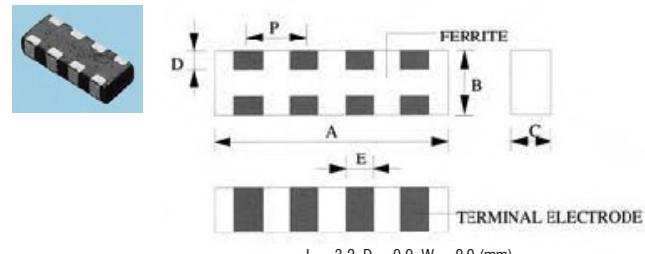
Mfrs.	Impedance, Ω @ 100MHz	Rated Current (mA)	DC Resistance (Ω max.)	L	W	H
BLM31AF700SN1L	70	200	0.5	3.2	1.6	1.1
BLM31AJ601SN1L	600	200	1	3.2	1.6	1.1
BLM41AF151SN1L	150	200	0.7	4.5	1.6	1.6
BLM41PG600SN1L	60	6000	0.01	4.5	1.6	1.6
BLM41PG750SN1L	75	3000	0.03	4.5	1.6	1.6
BLM41PF800SN1L	80	1000	0.15	4.5	1.6	1.6
BLM41AF800SN1L	80	500	0.3	4.5	1.6	1.6

204044

Order Multiple = 10

Mfrs. List No.	Order Code	10+	50+	100+	500+	1K+
BLM31AF700SN1L	SMD952-6854● RL	0.290	0.210	0.192	0.158	0.147
BLM31AJ601SN1L	SMD952-6862● RL	0.410	0.310	0.260	0.210	0.197
BLM41AF151SN1L	SMD952-6870● RL	0.390	0.300	0.260	0.210	0.200
BLM41PG600SN1L	SMD952-6900● RL	0.280	0.240	0.210	0.182	0.162
BLM41PG750SN1L	SMD952-6919● RL	0.260	0.220	0.195	0.176	0.150
BLM41PF800SN1L	SMD952-6897● RL	0.195	0.169	0.150	0.129	0.114
BLM41AF800SN1L	SMD952-6889● RL	0.290	0.200	0.190	0.157	0.146

Ferrite Bead Array

KITAGAWA


L = 3.2, D = 0.9, W = 0.9 (mm)

Tol: ±0.20

Features include:

- Combines 4 single ferrite beads into a 1206 package, which reduces board space and placement time
- Wide range of impedance values from 30~1000 ohms
- Wide operating temperature range -55 to 125 °C
- Suitable for Re-flow or flow soldering method

Applications include:

- Filtering between analogue and digital circuits
- Clock generation circuitry
- I/O interconnects
- Isolation between RF noisy circuits and logic devices
- Power supply filtering to prevent RF energy from corrupting the power generation circuitry
- High frequency EMI prevention for computers, TV, mobile phone, etc

Insulation Resistance	IDC (mA) max.	Mfrs List No.	Order Code
0.4ohm	30	MLB-3216-0030M4-N2	941-5980
0.4ohm	60	MLB-3216-0060M4-N2	941-5998
0.8ohm	120	MLB-3216-0120M4-N2	941-6005
0.8ohm	240	MLB-3216-0240M4-N2	941-6013
0.8ohm	300	MLB-3216-0300M4-N2	941-6021
1ohm	470	MLB-3216-0470M4-N2	941-6030
1.5ohm	600	MLB-3216-0600M4-N2	941-6048
1.7ohm	1000	MLB-3216-1000M4-N2	941-6056

411298

Order Multiple=5	Order Code	5+	25+	100+	250+	500+	Price Each
Mfrs List No.							
MLB-3216-0030M4-N2	941-5980●	0.44	0.41	0.37	0.34	0.31	
MLB-3216-0060M4-N2	941-5998●	0.44	0.41	0.37	0.34	0.31	
MLB-3216-0120M4-N2	941-6005●	0.45	0.42	0.38	0.35	0.32	
MLB-3216-0240M4-N2	941-6013●	0.44	0.41	0.37	0.34	0.31	
MLB-3216-0300M4-N2	941-6021●	0.45	0.42	0.38	0.35	0.32	
MLB-3216-0470M4-N2	941-6030●	0.44	0.41	0.37	0.34	0.31	
MLB-3216-0600M4-N2	941-6048●	0.45	0.42	0.38	0.35	0.32	
MLB-3216-1000M4-N2	941-6056●	0.45	0.42	0.38	0.35	0.32	

EXC Series

Chip Bead Cores



- Effective noise suppression for power lines and high speed signal lines
- Easy pattern layout on PC Board
- For flow soldering and reflow soldering

Panasonic
ideas for life



Impedance @ 100MHz (Ω)	Impedance %	Rated Current Max. (mA)	DC Resistance Max. (Ω)	Mfrs. List No.	Order Code
0603 Case Size					
60	25	1000	0.07	EXC3BP60H	129-2700
120	25	500	0.1	EXC3BP121H	129-2698
220	25	200	0.3	EXC3BB221H	129-2696
600	25	100	0.8	EXC3BB601H	129-2697
1000	25	50	1	EXC3BB102H	129-2695
0805 Case Size					
27	25	4000	0.006	EXCML16A27U0	129-2701
39	25	4000	0.008	EXCML20A39U0	129-2703
1206 Case Size					
25	25	2000	0.05	EXCCL3216U1	129-2721
68	25	3000	0.012	EXCML32A68U0	129-2704
1210 Case Size					
45	25	2000	0.05	EXCCL3225U1	129-2722
1806 Case Size					
91	25	3000	0.016	EXCML45A910H	129-2706
1812 Case Size					
115	25	2000	0.1	EXCCL4532U1	129-2723

452170

Impedance	Order Code	1+	50+	250+	500+	1K+	Price Each
0603 Case Size							
60	SMD-129-2700● RL	0.154	0.092	0.067	0.062	0.061	
120	SMD-129-2698● RL	0.154	0.092	0.065	0.061	0.060	
220	SMD-129-2696● RL	0.135	0.081	0.067	0.065	0.064	
600	SMD-129-2697● RL	0.135	0.081	0.067	0.063	0.061	
1000	SMD-129-2695● RL	0.135	0.081	0.067	0.062	0.061	
0805 Case Size							
27	SMD-129-2701● RL	0.210	0.140	0.092	0.073	0.066	
39	SMD-129-2703● RL	0.230	0.140	0.092	0.076	0.074	
1206 Case Size							
25	SMD-129-2721● RL	0.570	0.480	0.420	0.370	0.360	
68	SMD-129-2704● RL	0.230	0.139	0.103	0.095	0.093	
1210 Case Size							
45	SMD-129-2722● RL	0.890	0.760	0.660	0.590	0.530	
1806 Case Size							
91	SMD-129-2706● RL	0.250	0.182	0.162	0.152	0.148	
1812 Case Size							
115	SMD-129-2723● RL	0.700	0.600	0.530	0.470	0.460	

451968

MMZ Series	TDK
Chip Beads for Signal Lines	
0603 Type (0201): H=0.6, W=0.3, L=0.3	
1005 Type (0402): H=1.0, W=0.5, L=0.5	



- High reliability due to an entirely monolithic structure
- Closed magnetic circuit structure allows high-density installation while preventing cross-talk between circuits
- Low DC resistance structure of electrode prevents wasteful electric power consumption
- Size standardized for use by automatic assembly equipment - no preferred orientation

Material Code	Description
R	For wide frequency applications calling for broad impedance characteristics
S	Standard type that features impedance characteristics similar to those of a ferrite core
Y	High frequency range type intended for the 100MHz region and above
D	For applications calling for low insertion loss at low frequencies and sharply increasing impedance at high frequencies
F	Inherits the characteristic of our D material, namely its sharp impedance rise time, and its impedance peak frequency has been shifted higher into range

Impedance @ DC Res. Material
100MHz (Ω) Max. (Ω) Current rating (mA) Code Mfrs. List No. Order Code

0603 Type (0201 Case Size)		10	0.8	200	F	MMZ0603F100C	166-9652
33		1	100		D	MMZ0603D330C	166-9651
600		1.5	100		S	MMZ0603S601C	166-9653

1005 Type (0402 Case Size)		10	0.1	500	D	MMZ1005D100C	166-9658
22		0.2	400		D	MMZ1005D220C	166-9660
33		0.35	400		D	MMZ1005D330C	166-9662
47		0.8	100		F	MMZ1005F470C	166-9665
68		0.55	400		D	MMZ1005D680C	166-9663
120		0.75	350		D	MMZ1005D121C	166-9659
240		1.2	200		D	MMZ1005D241C	166-9661
470		0.5	250		Y	MMZ1005Y471C	166-9681
1000		0.74	200		Y	MMZ1005Y102C	166-9673
1500		1.15	100		Y	MMZ1005Y152C	166-9675

1608 Type (0603 Case Size)		15	0.05	1500	R	MMZ1608R150A	166-9696
15		0.05	1500		R	MMZ1608Y150B	166-9712
30		0.05	1500		R	MMZ1608R300A	166-9697
30		0.05	1500		R	MMZ1608Y300B	166-9714
60		0.1	800		R	MMZ1608R600A	166-9699
60		0.15	500		Y	MMZ1608Y600B	166-9716
120		0.18	500		R	MMZ1608R121A	166-9695
300		0.25	500		B	MMZ1608R301C	166-9686
300		0.25	500		R	MMZ1608R301A	166-9678
300		0.3	500		R	MMZ1608Y301B	166-9715
600		0.4	500		Y	MMZ1608Y601BTAA0	130-1668
600		0.4	500		Y	MMZ1608Y601CTAH0	130-1669
1000		0.5	400		R	MMZ1608R102A	166-9694
1000		0.5	400		Y	MMZ1608Y102B	166-9708
1200		0.12	800		R	MMZ2012R121A	166-9720
300		0.5	400		D	MMZ2012D301BTAA0	130-1670
300		0.15	600		R	MMZ2012R301A	166-9724
300		0.15	600		Y	MMZ2012Y301B	166-9732
600		0.2	500		R	MMZ2012R601AT000	130-1672
600		0.3	500		S	MMZ2012S601AT000	130-1673
600		0.2	500		Y	MMZ2012Y601BTAA0	166-9728
1000		0.3	500		R	MMZ2012R102A	166-9719
1000		0.3	500		Y	MMZ2012Y102B	166-9727
1500		0.4	500		Y	MMZ2012Y152BTAA0	130-1674
2000		0.5	400		Y	MMZ2012Y202B	166-9730

2012 Type (0805 Case Size)		15	0.05	1500	Y	MMZ2012Y150B	166-9729
15		0.05	1500		Y	MMZ2012R150A	166-9721
30		0.05	1500		R	MMZ2012Y300A	166-9723
30		0.05	1500		Y	MMZ2012Y300B	166-9731
60		0.1	1000		Y	MMZ2012Y600B	

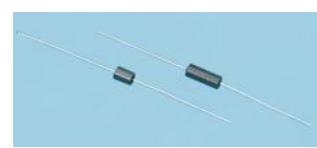
Ferrite Inductors & Beads - continued**MPZ Series - continued**

Chip Beads for Power Lines - continued

Impedance @ 100MHz (Ω)	DC Res. Max. (Ω)	Current rating (mA)	Material Code	Mfrs. List No.	Order Code
1005 Type (0402 Case Size)					
10	0.04	2	S	MPZ1005S100C	166-9736
30	0.05	1.7	S	MPZ1005S300C	166-9738
60	0.07	1.5	S	MPZ1005S600C	166-9739
120	0.09	1.2	S	MPZ1005S121C	166-9737
1608 Type (0603 Case Size)					
30	0.06	1.8	D	MPZ1608D300B	166-9741
30	0.01	5	S	MPZ1608S300A	166-9744
60	0.1	1.2	D	MPZ1608D600B	166-9742
60	0.02	3.5	S	MPZ1608S600A	166-9745
60	0.03	2.3	Y	MPZ1608Y600B	166-9750
100	0.15	1	D	MPZ1608D101B	166-9740
100	0.03	3	S	MPZ1608S101A	166-9743
100	0.04	2	Y	MPZ1608Y101B	166-9748
150	0.05	1.8	Y	MPZ1608Y151B	166-9749
220	0.05	2	S	MPZ1608S221ATA00	130-1677
390	0.12	1.2	R	MPZ1608R391ATA00	130-1675
600	0.15	1	S	MPZ1608S601A	166-9747
2012 Type (0805 Case Size)					
30	0.01	5	S	MPZ2012S300AT000	130-1678
100	0.02	4	S	MPZ2012S101A	166-9751
220	0.04	0.04	S	MPZ2012S221A	166-9752
330	0.05	2.5	S	MPZ2012S331AT000	130-1679
600	0.1	0.1	S	MPZ2012S601A	166-9753

Ferrite Bead Inductors

- Axial ferrite bead inductors
- Applications include suppression in digital equipment and clock circuits



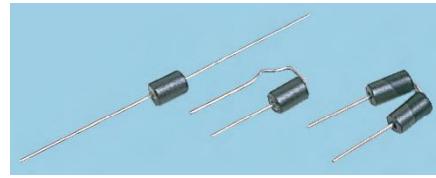
Supplied bandoliered on reels of 5000 suitable for automatic insertion

Min. Impedance (Ω) @ 10MHz	Bead Dimensions @ 100MHz	L	Dia.	Current rating	Order Code
25	65	6	3.5	3A	926-5236
30	75	7.5	3.5	3A	926-5244
40	105	9	3.5	3A	926-5252

204207

Order Multiple = 10 Bead Length (mm)	Order Code	Price Each				
		10+	50+	100+	250+	1K+
6	926-5236●	0.073	0.061	0.049	0.039	0.034
7.5	926-5244●	0.073	0.067	0.061	0.054	0.048
9	926-5252●	0.073	0.061	0.049	0.039	0.034

204207

Bead Inductors

- 108-267 Body L=5.0 H=7.5, W=7.1 H=7.5, W=9.0 581-124
 Body dia.=3.6 Ø=3.5 Ø=3.4 H=6.5, W=8.3
 Lead L=20 Lead pitch=5.0 Lead pitch=5.0 Ø=2.3
 Lead dia.=0.65 Lead dia.=0.65 Lead pitch=5.0
 Lead dia.=0.65 Lead dia.=0.65 Lead dia.=0.6
- Ferrite bead inductors available in axial or radial styles, the radial version being available with single or double bead to provide even more effective suppression.
 - Typical applications include high frequency suppression in low impedance circuits, e.g. power supplies, high speed amplifier circuits, high speed digital circuits, clocks.

Mfrs. List No.	range (Z=50 Ω min.)	Current rating	Mfrs. List No.	range (Z=50 Ω min.)	Current rating
BL01RN1A1D2B	20MHz to 1000MHz	7A	BL02RN2R1M2B	4MHz to 1000MHz	7A
BL02RN1R2M2B	20MHz to 1000MHz	7A			

204239

Order Multiple = 10	Order Code	Price Each				
		10+	50+	100+	1K+	3K+
Axial	952-6820●	0.082	0.076	0.069	0.051	0.048
Radial (Single)	952-6838●	0.102	0.088	0.084	0.075	0.070
Radial (Double)	952-6846●	0.133	0.112	0.099	0.088	0.076

204239

Wound EMI beads

- 6 hole wound ferrite beads
 - Wire is oxygen free high conductivity copper
 - Winding is 0.53mm (24AWG) dia. and tin plated
-

Length (mm, body)	Diameter (mm (A))	Weight (g)	Impedance Ω @ 25 MHz	Impedance Ω @ 100 MHz	Diag. No.	Mfrs. List No.	Order Code
10	6	1.4	850	550	1-5	2944666631	119-1415
10	6	1.3	310	375	1-1	2944666661	120-9495
10	6	1.4	700	580	1.3	2944666671	119-1416
10	6	1.4	650	625	1-5	2961666631	119-1312
10	6	1.3	250	425	1-1	2961666661	119-1313
10	6	1.4	600	675	1-3	2961666671	119-1314

233506

Order Multiple = 10	Order Code	Price Each				
		10+	100+	400+	800+	
2944666631	119-1415●	0.65	0.54	0.50	0.46	
2944666661	120-9495●	0.63	0.53	0.49	0.45	
2944666671	119-1416●	0.65	0.54	0.50	0.46	
2961666631	119-1312●	0.85	0.71	0.65	0.60	
2961666661	119-1313●	0.82	0.68	0.63	0.58	
2961666671	119-1314●	0.85	0.71	0.65	0.60	

233506

Axial Ferrite Bead

- Body = 13, Dia. 6.2, Lead Length 45, Wire Gauge 0.5mm
- 6 aperture ferrite bead with wire passed through to form an RF inductor. Approved to VDE0565-2.
 - Suitable for interference suppression in the HF and VHF range.

Case size	Order Code	10+	100+	500+	1K+	+	Price Each
0603	All Values ●	0.172	0.117	0.075	0.055	--	
0805	All Values ●	0.182	0.130	0.085	0.065	--	
1206	All Values ●	0.200	0.140	0.097	0.075	--	

452201



40,000 PRICES REDUCED



Max Current (A)		Impedance at Resonance (Ω)	Self Res. Frequency MHz	Mfrs List No	Order Code	204079
1	B82114RA4	900	60	B82114RA4	975-3397	
1	B82114RA1	800	100	B82114RA1	975-2226	

Order Multiple=5	Inductance μH	Order Code	5+	50+	100+	250+	500+
0.1μH to 100μH	All Values ●	0.99	0.74	0.52	0.42	0.41	
150μH to 1000μH	All Values ●	1.39	1.03	0.75	0.54	0.53	

B78108S Series – RF Inductors



L=9.2, Dia=4.0 max

Lead Length=25, Dia =0.63

- Ferrite drum cored inductors with flame retardant encapsulation

L _N (mH)	Tol. (%)	f _L (MHz)	f ₀ (MHz)	R _{max} (Ω)	f _{res} (MHz)	Mfrs List No.	Order Code	
1200	1	±10 1	55	0.0796	0.16	205	B78108S1102K	608-427
1030	1.8	±10 1	55	7.96	0.22	155	B78108S1182K	508-573
1000	2.2	±10 1	55	7.96	0.25	140	B78108S1222K	608-440
900	3.3	±10 1	60	7.96	0.29	115	B78108S1332K	608-452
820	4.7	±10 1	60	7.96	0.34	95	B78108S1472K	608-464
780	5.6	±10 1	60	7.96	0.38	85	B78108S1562K	509-929
680	10	±10 0.1	70	2.52	0.49	35	B78108S1103K	608-488
610	15	±10 0.1	60	2.52	0.6	20	B78108S1153K	608-506
560	22	±10 0.1	55	2.52	0.74	13	B78108S1223K	511-614
500	33	±10 0.1	55	2.52	0.92	9	B78108S1333K	608-518
470	39	±10 0.1	50	2.52	1.02	8	B78108S1393K	511-626
450	47	±3 0.1	45	2.52	1.1	7.5	B78108S1473J	608-520
410	68	±5 0.1	40	2.52	1.35	6.5	B78108S1683J	608-531
390	82	±5 0.1	35	2.52	1.54	6	B78108S1823J	511-638
370	100	±5 0.1	70	0.796	1.7	5	B78108S1104J	608-543
300	120	±5 0.1	70	0.796	2.4	4.5	B78108S1124J	608-555
280	150	±5 0.1	70	0.796	2.8	4.2	B78108S1154J	608-567
250	220	±5 0.1	70	0.796	3.3	3.7	B78108S1224J	511-651
190	330	±5 0.1	70	0.796	6.4	2.7	B78108S1334J	608-579
170	470	±5 0.1	70	0.796	7.9	2.2	B78108S1474J	608-580
160	560	±5 0.1	60	0.796	8.8	2	B78108S1564J	511-675
150	680	±5 0.1	55	0.796	10	1.9	B78108S1684J	608-592
130	1000	±5 0.1	55	0.252	14	1.6	B78108S1105J	608-609
80	2200	±5 0.1	40	0.252	34.7	1.1	B78108S1225J	608-622
62	3300	±5 0.1	40	0.252	59.5	0.9	B78108S1335J	608-634
55	4700	±5 0.1	35	0.252	78	0.7	B78108S1475J	608-646

204143

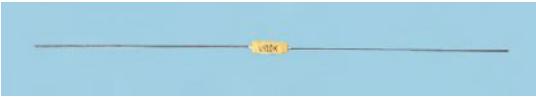
Order Multiple=5	Inductance μH	Order Code	5+	100+	500+	1K+	2K5+
1.0μH to 39μH	All Values ●	0.173	0.153	0.143	0.122	0.112	
47μH to 820μH	All Values ●	0.163	0.143	0.133	0.112	0.099	
1000μH to 4700μH	All Values ●	0.240	0.210	0.187	0.142	0.121	

8

Axial Inductors

C30 Series – 0.25 Watt

Tyco Electronics

Body L=7.0 max., Dia.=2.8 max.
Lead length=25.0 min, Lead dia.=0.6

- Popular range of miniature RF inductors encapsulated in a flame retardant resin sleeve providing protection against extremes of temperature, mechanical vibration and abrasion
- Tolerance ±10%

Body Colour: Yellow

Inductance μH	Max. dc Res Ω 20°C	Max dc Current(mA) 70°C	Q factor Min	Test Frequency MHz	Self Res Frequency MHz	Order Code
0.1	0.08	1240	35	25	625	117-3894
0.12	0.09	1240	35	25	625	117-4250
0.15	0.1	1240	35	25	625	117-4251
0.18	0.12	1240	35	25	625	117-4252
0.22	0.14	940	33	25	470	117-3895
0.27	0.16	940	33	25	430	117-4254
0.33	0.22	750	30	25	380	117-3896
0.39	0.3	750	30	25	365	117-4255
0.47	0.35	590	30	25	310	117-3897
0.56	0.5	590	30	25	800	117-4256
0.68	0.6	540	28	25	275	117-4257
0.82	0.85	380	28	25	230	117-3898
1	1	350	25	25	210	117-3860
1.5	0.22	895	28	7.9	140	117-4258
2.2	0.4	550	30	7.9	105	117-3861
2.7	0.55	470	37	7.9	92	117-3899
3.3	0.85	380	45	7.9	83	117-3862
3.9	1	380	45	7.8	80	117-4259
4.7	1.2	320	45	7.9	69	117-3863
5.6	1.8	260	50	7.9	60	117-3901
6.8	2	260	50	7.9	60	117-4260
8.2	2.7	215	55	7.9	50	117-3902
10	3.7	180	55	7.9	46	117-3864
15	2.8	210	45	2.5	32	117-3903
22	3.3	195	50	2.5	23	117-3865
33	3.4	190	45	2.5	20	117-3866
39	3.6	190	45	2.5	20	117-4261
47	4.5	165	45	2.5	17	117-3867
56	5.2	148	45	2.5	15	117-3869
68	6.7	148	50	2.5	15	117-4262
100	8	124	50	2.5	11	117-3871
150	15	91	30	0.79	9	117-3872
220	21	77	30	0.79	7.5	117-3873
330	28	66	30	0.79	6	117-3875
470	42	54	30	0.79	5.1	117-3876
560	46	52	30	0.79	4.2	117-3904
820	65	43	30	0.79	3.2	117-3905
1000	72	41	30	0.79	2.9	117-3878

204141

Order Multiple=5	Inductance μH	Order Code	5+	50+	100+	500+	1K+
1	513-532●	0.300	0.270	0.240	0.210	0.194	
4.7	515-036●	0.290	0.260	0.250	0.240	0.200	
10	515-565●	0.330	0.310	0.290	0.260	0.200	0.173
22	516-533●	0.300	0.270	0.240	0.210	0.194	
47	516-545●	0.300	0.270	0.240	0.210	0.194	
100	516-570●	0.300	0.270	0.240	0.210	0.194	
220	516-995●	0.300	0.270	0.240	0.210	0.194	
470	517-070●	0.300	0.270	0.240	0.210	0.194	
1000	517-896●	0.320	0.290	0.260	0.220	0.200	
2200	517-902●	0.350	0.330	0.310	0.210	0.185	
4700	517-914●	0.320	0.290	0.260	0.220	0.200	
10000	517-926●	0.320	0.290	0.260	0.220	0.200	
22000	517-938●	0.340	0.310	0.270	0.250	0.210	
100000	518-300●	0.430	0.390	0.370	0.260	0.240	

1582 Series



L=11.4 Dia.=5.2 Lead length=35.0 min, Lead dia.=0.73

- A range of RF inductors having a ferrite core encapsulated in a moulded polypropylene coating suitable for use in telecommms, medical, automotive circuits and in most other applications where RF suppression is required
- Lead terminations are tinned copper
- Temperature range -55°C to +85°C. Tolerance ±10%.

Inductance (μH)	Resistance dc (Ω)	Max. dc Current (A)	Q Factor Nom	Self Res. Frequency MHz	Order Code
1	0.04	2.2	45	15	118-6786
2.2	0.06	1.8	60	8	118-6787
4.7	0.12	1.3	50	8	118-6788
10	0.35	0.75	50	8	118-6789
22	1.1	0.43	65	2.5	118-6790
47	2.5	0.27	70	2.5	118-6791
100	4	0.22	65	1.5	118-6792
220	7.3	0.2	80	0.8	118-6793
470	20	0.12	80	0.8	118-6794
1000	30	0.1	85	0.8	118-6795

204270

Order Multiple=5 Order Code	5+	50+	100+	250+	500+
118-6786● to 118-6787●	1.50	1.39	1.36	1.19	1.08
118-6788● to 118-6790●	1.57	1.46	1.43	1.25	1.16
118-6791● to 118-6792●	1.85	1.70	1.66	1.46	1.34
118-6793● to 118-6795●	3.29	2.98	2.92	2.55	2.36

REACH - SVHCs



Products containing **Substances of Very High Concern** under REACH can now be easily identified online. Look for this logo to access supporting safety datasheets at www.farnell.co.uk

Axial Inductors - continued

B82130 Series – RF Inductors



- Single layer winding on a carbonyl iron core with insulating sleeve
- Approved to VDE 565-2

Voltage rating IEC Climatic category	500V ac/dc 55/125/56	Tolerance	±20%
L _N (μH)	f _{res} (MHz)	Dimensions Dia. x L	Mfrs. List No.
80	0.15	0.11	22 5 x 14
27	0.4	0.1	40 5 x 14
50	0.4	0.1	37 5.5 x 19
150	0.4	0.1	3.5 7.5 x 29
14	0.7	0.1	0.76 53 5 x 14
23	0.7	0.1	0.73 55 5.5 x 19
6	1.5	1	0.19 84 5 x 14
25	1.5	0.1	0.32 40 7.5 x 24
3	2	1	0.9 113 5 x 14
6	2	1	0.11 108 5.5 x 19
14	2	0.1	0.13 57 7.5 x 24
2	3	1	0.038 147 5 x 14
10	3	1	0.077 69 7.5 x 24
12	3	0.1	0.09 75 7.5 x 24
1	4	1	0.015 199 5 x 14
2	4	1	0.02 186 5.5 x 19

204140

1585 Series



Lead length=18 mm, Lead dia.=0.7 max

- A range of inductors wound on ferrite cores and insulated by a PVC sleeve, suitable for use in automotive circuits and other general applications where noise suppression is required
- Inductance value and current rating are clearly marked on each inductor. Temperature range -55°C to +85°C
- Tolerance ±20%

Inductance (μH)	Resistance dc (Ω)	Max. dc Current (A)	Self Res. Frequency MHz	Inductor Body Dia. Length	Order Code
4	0.013	3	110	4.5 25	118-6797
10	0.025	3	70	7.5 25	118-6798
25	0.045	3	40	8.5 35	118-6799
50	0.06	3	3	11.5 27	118-6800
100	0.09	3	2.5	11.5 27	118-6801
500	0.2	3	1	15 45	118-6803

204011

Order Multiple=5 Order Code	5+	50+	100+	250+	500+
118-6797●	1.71	1.36	1.29	0.91	0.86
118-6798●	1.71	1.36	1.29	0.91	0.86
118-6799●	1.71	1.36	1.29	0.91	0.86
118-6800●	2.49	2.03	1.88	1.50	1.42
118-6801●	2.76	2.28	2.06	1.64	1.58
118-6803●	2.95	2.68	2.39	1.94	1.90

B82500 Series – Low Current



- Ferrite cored multilayer wound Inductors

- Voltage rating 250V ac/dc
- IEC climatic category 55/125/126.

L _N (μH)	I _N (A)	f _{res} (MHz)	R _{typ} (Ω)	Body Dimensions Dia. L	Mfrs. List No.	Order Code
3900	0.2	1.8	20	10	32	B82500CA2
820	0.5	3	2.5	10	32	B82500CA5
330	1	4.2	0.6	10	32	B82500CA8
120	2	5.8	0.15	10	32	B82500CA10

204150

Order Code All Values ●	1+	10+	50+	100+	250+
	3.23	2.91	2.59	2.32	1.99

B82111E Series – Medium Current



- Single layer winding on ferrite core with insulation sleeving

- Approved to VDE 565-2
- Tolerance ±20%

Voltage rating	500 V ac/dc	IEC climatic category	55/125/126
L _N (μH)	I _N (A)	f _{res} (MHz)	R _{typ} (Ω)
470	0.3	25	6.5
220	0.5	32	6.5
100	1	55	6.5
56	1.5	70	0.3
40	2	90	0.18
22	3	110	0.07
12	4	140	0.04
7	6	180	0.02

204081

Order Code All Values ●	1+	25+	100+	250+	500+
	0.71	0.64	0.57	0.51	0.43

B82111B Series – up to 10A



- Wound inductor on a ferrite core

- Approved to VDE 565-2

Voltage Rating	500V ac/dc	IEC climatic category	55/125/56
Tolerance	±20%		
L _N (μH)	I _N (A)	f _{res} (MHz)	R _{typ} (Ω)
B82111BC14	17	2	100
B82111BC13	8	3	145
B82111BC20	20	3	125
B82111BC24	25	3	85
B82111BC18	11	4	150

204081

	L_N (μ H)	I_N (A)	f_{res} (MHz)	R_{typ} (Ω)	Body Dimensions Dia. L	Mfrs. List No.	Order Code
B82111BC23	15	4	120	0.024	8.5 34	B82111BC23	975-2137
B82111BC11	4	6	205	0.014	7.5 24	B82111BC11	975-2200
B82111BC17	6	6	200	0.01	7 29	B82111BC17	975-2170
B82111BC22	9	6	150	0.012	9 34	B82111BC22	975-2161
B82111BC16	3	9	220	0.006	7.5 29	B82111BC16	975-4113
B82111BC21	5	10	175	0.005	9.5 34	B82111BC21	975-2129

204151

VLF Series

Inductor Coils for Power Lines



- Miniature size
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection
- Available for automatic mounting in tape and reel package

 $L = 3.7\text{mm}, W = 3.5\text{mm}, H = 1.2\text{mm}$

Inductance (μ H)	Tolerance \pm %	DC resistance Max. (Ω)	DC Current Max. (A)	Mfrs. List No.	Order Code
1.5	20	0.09	1.8	VLF4012AT-1R5M1R6	130-1682
3.3	20	0.1	1.3	VLF4012AT-3R3M1R3	130-1686
4.7	20	0.14	1.1	VLF4012AT-4R7M1R1	130-1689
6.8	20	0.2	0.96	VLF4012AT-6R8MR96	130-1691
10	20	0.3	0.8	VLF4012AT-100MR73	130-1680
15	20	0.46	0.63	VLF4012AT-150MR63	130-1681
22	20	0.71	0.52	VLF4012AT-220MR51	130-1683
33	20	1.2	0.44	VLF4012AT-330MR39	130-1685
47	20	2	0.36	VLF4012AT-470MR30	130-1687

451977

Power Inductors**Transponder Coils****B82450 Series** $L = 11.4, W = 3.5, H = 2.4$ 

- Ferrite core
- Enamel copper winding
- Moulded case
- High mechanical resistance

Operating temperature		-40°C to +125°C		Tolerance	$\pm 3\%$
Inductance (mH)	Resonant Frequency (KHz)	Q Factor	DC resistance Max. (Ω)	Mfrs. List No.	Order Code
1	2700	33	15	B82450A1004A	129-9965
2.36	2000	34	25	B82450A2364A	129-9966
7	1100	34	70	B82450A7004A	129-9968

452106

Helically wound power inductor**HPI B82559 Series**

- Very high rated current
- Extremely low DC resistance
- Suitable for pick and place processes
- Applications includes energy storage chokes for DC/DC & POL converter

DC resistance Measured at 20°C ambient temperature
 Operating temperature -40°C to 130°C
 Tolerance $\pm 10\%$
 Weight 2.2g

Inductance (μ H)	Current max. (I dc)	Dimensions (mm)	R_{max} (Ω)	Mfrs. List No.	Order Code
0.5	30	13.1 11 4.95	1.1	B82559A0501A013	111-2809
0.95	25	13.1 11 5.95	1.4	B82559A0951A013	111-2810
1.1	20	13.1 11 4.95	2.2	B82559A0112A013	111-2811
1.4	22	13.1 11 5.95	1.8	B82559A0142A013	111-2812
2.2	15	13.1 11 4.95	4.2	B82559A0222A013	111-2813
2.4	16.5	13.1 11 5.95	3.2	B82559A0242A013	111-2814
3	13	13.1 11 4.95	5.1	B82559A0302A013	111-2815
3.9	12	13.1 11 5.95	6	B82559A0392A013	111-2816

423468

Order Code	5+	25+	100+	250+	1K5+
All Values ●	1.41	1.16	1.00	0.78	0.63

Power Inductor Kit**B82559A Series**

- Suitable for development and research (R&D)
 - Values refillable from stock
- Kit contains 2 each of 0.5, 0.95, 1.1, 1.4, 2.2, 2.4, 3.0 and 3.9 μ H

423485

Order Code	1+	3+
111-2817 ●	38.85	35.16

Over 480,000 products online

**VLF Series**

Inductor Coils for Power Lines



- Miniature size
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection
- Available for automatic mounting in tape and reel package

 $L = 3.7\text{mm}, W = 3.5\text{mm}, H = 1.2\text{mm}$

Inductance (μ H)	Tolerance \pm %	DC resistance Max. (Ω)	DC Current Max. (A)	Mfrs. List No.	Order Code
1.5	20	0.09	1.8	VLF4012AT-1R5M1R6	130-1682
3.3	20	0.1	1.3	VLF4012AT-3R3M1R3	130-1686
4.7	20	0.14	1.1	VLF4012AT-4R7M1R1	130-1689
6.8	20	0.2	0.96	VLF4012AT-6R8MR96	130-1691
10	20	0.3	0.8	VLF4012AT-100MR73	130-1680
15	20	0.63	0.63	VLF4012AT-150MR63	130-1681
22	20	0.52	0.52	VLF4012AT-220MR51	130-1683
33	20	1.2	0.44	VLF4012AT-330MR39	130-1685
47	20	2	0.36	VLF4012AT-470MR30	130-1687

451977

Low Profile Power Inductors 6x6mm**B82462*2 Series**

- Low profile of 2.5mm
- Size: 6x6mm
- Choice of shielded or unshielded
- Winding: enamel copper wire, welded to terminals
- Wide temperature range
- Very high rated current, low DC resistance
- Suitable for reflow soldering

Measured with HP4294A, measuring voltage 100mV					
Max permissible DC with temperature increase of $\leq 40\text{K}$ @ 85°C					
Max permissible DC with inductance decrease $\Delta L/L_0 \approx 10\%$					
Measured with network analyser HP8753 (-55°C/+125°C/56 days damp heat test)					
5d, 235°C, wetting >90% acc. o IEC 60068-2-58, leadfree reflow soldering profile					
Resistance to soldering heat					
DC resistance R_{max}					
Weight					
Inductance (μ H)	Freq. (MHz)	Tolerance (%)	I_R (A)	R_{max} (Ω)	Mfrs. List No.
Shielded					
3.3	0.1	$\pm 20\%$	2	0.04	B82462G2332M000
4.7	0.1	$\pm 20\%$	1.6	0.061	B82462G2472M000
6.8	0.1	$\pm 20\%$	1.45	0.078	B82462G2682M000
10	0.1	$\pm 20\%$	1.25	0.106	B82462G2103M000
15	0.1	$\pm 20\%$	1.02	0.16	B82462G2153M000
22	0.1	$\pm 20\%$	0.83	0.245	B82462G2223M000
33	0.1	$\pm 20\%$	0.68	0.345	B82462G2333M000
47	0.1	$\pm 20\%$	0.62	0.42	B82462G2473M000
68	0.1	$\pm 20\%$	0.48	0.635	B82462G2683M000
100	0.1	$\pm 20\%$	0.41	0.95	B82462G2104M000
150	0.1	$\pm 20\%$	0.33	1.48	B82462G2154M000
220	0.1	$\pm 20\%$	0.28	2.1	B82462G2224M000
330	0.1	$\pm 20\%$	0.22	3.25	B82462G2334M000
Unshielded					
1	0.1	$\pm 20\%$	3	0.024	B82462A2102M000
1.5	0.1	$\pm 20\%$	2.55	0.032	B82462A2152M000
2.2	0.1	$\pm 20\%$	2.1	0.048	B82462A2222M000
3.3	0.1	$\pm 20\%$	1.8	0.065	B82462A2332M000
3.3	0.1	$\pm 20\%$	2	0.06	B82462A4332M000
4.7	0.1	$\pm 20\%$	1.55	0.084	B82462A2472M000
6.8	0.1	$\pm 20\%$	1.28	0.125	B82462A2682M000
10	0.1	$\pm 20\%$	1.03	0.18	B82462A2103M000
15	0.1	$\pm 10\%$	0.86	0.26	B82462A2153K000
22	0.1	$\pm 10\%$	0.73	0.35	B82462A2223K000
33	0.1	$\pm 10\%$	0.6	0.47	B82462A2333K000
47	0.1	$\pm 10\%$	0.49	0.69	B82462A2473K000
68	0.1	$\pm 10\%$	0.39	1.1	B82462A2683K000
100	0.1	$\pm 10\%$	0.3	1.6	B82462A2104K000
150	0.1	$\pm 10\%$	0.25	2.55	B82462A2154K000
220	0.1	$\pm 10\%$	0.21	3.8	B82462A2224K000
330	0.1	$\pm 10\%$	0.17	5.05	B82462A2334K000

528645

Order Code	1+	10+	Price
------------	----	-----	-------

Power Inductors - continued

Power Inductors 6x6mm

B82462 Series

EPCOS

SMD

- Size: 6x6mm
- Choice of shielded or unshielded
- Shielded is better for high density population as can be placed closer to other components
- Winding: enamel copper wire, welded to terminals
- Wide temperature range
- Very high rated current, low DC resistance
- Suitable for reflow soldering

Rated Inductance L_R Measured with HP4294A, measuring voltage 100mV
 Rated Current I_R Max permissible DC with temperature increase of $\leq 40k @ 85^\circ C$
 Saturation Current I_{sat} Max permissible DC with inductance decrease $\Delta L/L_0 \approx 10\%$
 Self-resonance frequency f_{res} Measured with network analyser HP8753
 Climatic category In accordance with IEC 60068-1 55/125/56 (-55°C/+125°C/56 days damp heat test)

Solderability 5d, 235°C, wetting >90%
 Resistance to soldering heat acc. to IEC 60068-2-58, leadfree reflow soldering profile

DC resistance R_{max} Measured at 20 ambient temperature

Weight Unshielded: 0.75g, shielded: 1.5g

Inductance (μH)	Freq. (MHz)	Tolerance (%)	I_{sat} (A)	I_R (A)	R_{max} (Ω)	f_{res} (MHz)	Mfrs. List No.	Order Code
Shielded								
1	0.1	20	4.40	3.4	0.016	180	B82462G4102M	742-9967
1.5	0.1	20	3.60	3.1	0.02	100	B82462G4152M	742-9975
2.2	0.1	20	2.60	2.55	0.025	75	B82462G4222M	742-9983
3.3	0.1	20	2.15	2.3	0.031	60	B82462G4332M	742-9991
4.7	0.1	20	1.80	2	0.04	55	B82462G4472M	743-0000
6.8	0.1	20	1.50	1.65	0.05	40	B82462G4682M	743-0019
10	0.1	20	1.30	1.5	0.062	31	B82462G4103M	743-0027
15	0.1	20	1.05	1.25	0.097	23	B82462G4153M	743-0035
22	0.1	20	0.85	1.05	0.15	20	B82462G4223M	743-0043
33	0.1	20	0.72	0.85	0.23	16	B82462G4333M	743-0051
47	0.1	20	0.60	0.75	0.34	13	B82462G4473M	743-0060
68	0.1	20	0.50	0.65	0.42	10	B82462G4683M	743-0078
100	0.1	20	0.42	0.53	0.58	8.5	B82462G4104M	743-0086
150	0.1	20	0.33	0.38	0.96	6.5	B82462G4154M	743-0094
220	0.1	20	0.28	0.35	1.35	5.5	B82462G4224M	743-0108
330	0.1	20	0.24	0.27	2.3	4.5	B82462G4334M	743-0116

349820

Order Multiple=5	Price Each				
Order Code	5+	10+	50+	250+	2K5+
Shielded					
All Values ●	1.15	1.00	0.95	0.84	0.73

Unshielded					
All Values ●	0.96	0.82	0.71	0.64	0.53

Power Inductor Kit

B82462 Series

EPCOS

- Suitable for development and research (R&D)
- Values refillable from stock

Kit contains 5 each of 1, 1.5, 2.2, 3.3, 4.7, 6.8, 10, 15, 22, 33, 47, 68, 100, 150, 220 and 330 μH

423493

Order Code	1+	3+	Price Each
111-2822●	74.06	70.41	

ELLATV Series Choke Coils

Magnetic shielded structure



- Low DC resistance and large current capability
- Small physical dimensions

Applications

- DC-DC converter circuitry for computer peripherals and mobile phones
- Chopper circuit decoupling chokes for DC-DC converter circuitry

L = 6mm, W = 6.4mm

Inductance (μH)	Tolerance	DC resistance (mΩ)	DC Current Max.(A)	Mfrs. List No.	Order Code
3.3	±30%	8.8	5.35	ELLATV3R3N	153-9532
5.1	±30%	14	4.35	ELLATV5R1N	153-9537
6.8	±30%	16	4	ELLATV6R8N	153-9539
8.2	±30%	18	3.7	ELLATV8R2N	153-9542
10	±20%	23	3.3	ELLATV100M	153-9522
12	±20%	25	2.3	ELLATV120M	153-9524
22	±20%	45	2.2	ELLATV220M	153-9525
47	±20%	94	1.53	ELLATV470M	153-9535
100	±20%	18	1	ELLATV101M	153-9523
220	±20%	36	0.7	ELLATV221M	153-9527

526981

Panasonic

ideas for life

New

SMD

ELL6 Series Choke Coils

Magnetic shielded type



- Separated terminal and internal connection provides high reliability
- Small physical dimensions
- Capable of handling large currents
- 105°C max. operating temperature (including self-temperature rise)

Suitable for in dc/dc converter circuits and choke coils in chopper circuit decoupling. Applications include videos, audio, mobile communications and electric battery driving equipment.

Inductance (μH)	Device Marking	Tolerance	DC resistance Max.(Ω)	DC Current Max.(mA)	Mfrs. List No.	Order Code
ELL6RH (H=2.5mm)						
1	1R0	±20%	0.019	3000	ELL6RH1ROM	119-8589
2.7	2R7	±20%	0.039	1800	ELL6RH2R7M	119-8590
3.3	3R3	±20%	0.044	1600	ELL6RH3R3M	119-8591
6.2	6R2	±20%	0.062	1400	ELL6RH6R2M	119-8593
8.2	8R2	±20%	0.087	1200	ELL6RH8R2M	119-8594
10	100	±20%	0.095	1100	ELL6RH100M	119-8595
15	150	±20%	0.15	850	ELL6RH150M	119-8596
18	180	±20%	0.17	800	ELL6RH180M	119-8597
22	220	±20%	0.22	700	ELL6RH220M	119-8598
33	330	±20%	0.38	600	ELL6RH330M	119-8599
47	470	±20%	0.48	500	ELL6RH470M	119-8601
68	680	±20%	0.77	400	ELL6RH680M	119-8602
82	820	±20%	0.87	350	ELL6RH820M	119-8603
100	101	±20%	1	300	ELL6RH101M	119-8604
150	151	±20%	1.8	250	ELL6RH151M	119-8605
220	221	±20%	2.3	200	ELL6RH221M	119-8606

234166

Order Code	1+	50+	100+	500+	1K+
ELL6RH - All Values ●	1.09	0.77	0.58	0.50	0.44
NEW ELL6SH - All Values ●	0.71	0.62	0.55	0.48	0.42

234166

**HM72A Series**

High Power Molded SMD Inductor



- Compact inductor
- Molded construction



BI Technologies

**Case Size - 06**

Inductance (μ H)	DC resistance Max.(m Ω)	DC Current Max.(A)	Mfrs. List No.	Order Code
0.2	3	70	HM72A-06R20LFLTR	150-3585
0.33	3.9	40	HM72A-06R33LFLTR	150-3586
0.47	4.2	38	HM72A-06R47LFLTR	150-3587
0.68	5.5	32	HM72A-06R68LFLTR	150-3588
0.82	8	30	HM72A-06R82LFLTR	150-3589
1	10	26	HM72A-06R10LFLTR	150-3590
1.5	15	18	HM72A-06R15LFLTR	150-3591
2.2	20	20	HM72A-06R22LFLTR	150-3592
3.3	33	15	HM72A-06R33LFLTR	150-3593
4.7	40	12	HM72A-06R47LFLTR	150-3594
6.8	46	8	HM72A-06R68LFLTR	150-3596
10	105	7.5	HM72A-06R100LFLTR	150-3597
22	241	2	HM72A-06R220LFLTR	150-3598
33	332	2	HM72A-06R330LFLTR	150-3599

Price Each

Order Code	1+	10+	50+	100+	500+
All Values ●	0.95	0.83	0.73	0.66	0.55

Case Size - 10

Inductance (μ H)	DC resistance Max.(m Ω)	DC Current Max.(A)	Mfrs. List No.	Order Code
0.1	0.63	29	HM72A-10R10LLFLTR	150-3600
0.15	0.82	80	HM72A-10R15LFLTR	150-3602
0.24	0.72	44	HM72A-10R24LFLTR	150-3603
0.36	0.95	48	HM72A-10R36LFLTR	150-3604
0.47	1.2	40	HM72A-10R47LFLTR	150-3605
0.56	1.34	48	HM72A-10R56LFLTR	150-3606
1	3.3	33	HM72A-10R100LFLTR	150-3607
1.5	5	27	HM72A-10R150LFLTR	150-3608
1.8	5	16	HM72A-10R80LFLTR	150-3609
3.3	12.1	18	HM72A-10R330LFLTR	150-3610
4.7	15.2	16	HM72A-10R47LFLTR	150-3611

Price Each

Order Code	1+	10+	50+	100+	500+
All Values ●	1.68	1.55	1.47	1.38	1.27

Case Size - 12

Inductance (μ H)	DC resistance Max.(m Ω)	DC Current Max.(A)	Mfrs. List No.	Order Code
0.47	1.43	60	HM72A-12R47LLFLTR	150-3612
0.68	2	50	HM72A-12R68LLFLTR	150-3614
0.82	3	42	HM72A-12R82LLFLTR	150-3615
1	3.6	42	HM72A-12R100LLFLTR	150-3616
4.7	20.3	18	HM72A-12R47LLFLTR	150-3617
5.6	24.75	17	HM72A-12R56LLFLTR	150-3618
0.5	1.02	39	HM72A-12R50LLFLTR	150-3619
0.56	1.5	55	HM72A-12R56LLFLTR	150-3620
2.2	5.5	34	HM72A-12R22R2LFLTR	150-3621
1	2	55	HM72A-12R120RHLFLTR	150-3622
2.2	3.85	36	HM72A-12R22R2LFLTR	150-3623
3.3	4.95	26	HM72A-12R33RHLFLTR	150-3624
4.7	7.92	22	HM72A-12R47R7HLFLTR	150-3626

490827

Price Each

Order Code	1+	10+	50+	100+	500+
HM72A-12xxxL	1.89	1.73	1.61	1.51	1.38
HM72A-12xxx	1.98	1.85	1.73	1.62	1.49
HM72A-12xxxH	2.09	1.96	1.84	1.70	1.58

Power Inductor Kit

B82464 Series



- B82464 shielded
- Shielded is better for high density population as can be placed closer to other components
- Inductance range: 1-1000 μ H
- 3 pieces for each value

Kit contains 3 each of 10x10mm 1, 1.5, 2.2, 3.3, 4.7, 6.8, 10, 15, 22, 33, 47, 68, 100, 150, 220, 330, 470, 680 and 1000 μ H in both shielded and unshielded.

349482

Order Code	1+	3+	5+
742-9371●	155.30	151.12	146.43

Power Inductors 10x10mm

B82464 Series



- Size: 10x10mm

- Choice of shielded or unshielded

- Shielded is better for high density population as can be placed closer to other components

- Wide temperature range

- Very high rated current, low DC resistance

- Suitable for reflow soldering

Rated Inductance L_R Measured with HP4294A, measuring voltage 100mV
 Rated Current I_R Max permissible DC with temperature increase of ≤ 40 @ 85°C
 Saturation Current I_{sat} Max permissible DC with inductance decrease $\Delta L/L_0 \approx 10\%$
 Self-resonance frequency f_{res} Typical self-resonance frequency measured with network analyser HP8753
 Climatic category In accordance with IEC 60068-1 55/125/56

(-55°C/+125°C/56 days damp heat test)
 Solderability 5d, 235°C, wetting >90%
 Resistance to soldering heat acc. o IEC 60068-2-58, leadfree reflow soldering profile

DC resistance R_{max} Measured at 20 ambient temperature

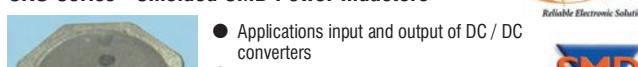
Weight Unshielded: 1.5g, shielded: 2g

Inductance (μ H)	Freq. (MHz)	Tolerance (%)	I_{sat} (A)	I_R (A)	R_{max} (m Ω)	f_{res} (MHz)	Mfrs. List No.	Order Code
--------------------------	----------------	------------------	------------------	--------------	----------------------------	--------------------	----------------	------------

Shielded								
1	0.1	20	10	7.5	0.007	135	B82464G4102M	742-9380
2.2	0.1	20	7.00	6.5	0.01	72	B82464G4222M	742-9401
3.3	0.1	20	5.90	5.5	0.012	50	B82464G4332M	742-9410
4.7	0.1	20	5.20	4.9	0.015	37	B82464G4472M	742-9428
6.8	0.1	20	4.60	4.3	0.02	28	B82464G4682M	742-9436
10	0.1	20	3.50	3.4	0.03	22	B82464G4103M	742-9444
15	0.1	20	3.10	2.75	0.04	15	B82464G4153M	742-9452
22	0.1	20	2.50	2.25	0.052	13	B82464G4223M	742-9460
33	0.1	20	2.10	1.85	0.075	10	B82464G4333M	742-9479
47	0.1	20	1.80	1.55	0.095	9	B82464G4473M	742-9487
68	0.1	20	1.45	1.3	0.13	8	B82464G4683M	742-9495
100	0.1	20	1.15	1.05	0.22	6.5	B82464G4104M	742-9509
220	0.1	20	0.75	0.7	0.44	4	B82464G4224M	742-9525
330	0.1	20	0.65	0.59	0.65	3.2	B82464G4334M	742-9533
470	0.1	20	0.55	0.5	1.27	3.2	B82464G4474M	742-9541
1000	0.1	20	0.38	0.33	3	2	B82464A4105K	742-9568

349533

Order Code	1+	10+	50+	250+	750+
All Values ●	2.33	1.99	1.28	1.08	0.84
All Values ●	1.99	1.68	1.49	1.29	1.01

SRU Series - Shielded SMD Power Inductors

- Applications input and output of DC / DC converters
- Power supplies for portable communication equipment, camcorders, LCD TVs, car radios

Operating temperature -40°C to +125°C

Inductance (μ H)	I_{sat} (A)	I_R (A)	R_{max} (m Ω)	f_{res} (MHz)	Tolerance	Q Factor	Mfrs. List No.	Order Code
SRU1028 Series								
Dimensions: L=10mm, H = 2.8mm, W = 10mm								
10	2.4	2.8	40	25	±30 %	20	SRU1028-100Y	136-2001
15	2	2	69	22	±30 %	26	SRU1028-150Y	136-2004
22	1.4	1.6	104	16	±30 %	26	SRU1028-220Y	136-2006
33	1.2	1.25	139	12	±30 %	24	SRU1028-330Y	136-2007
47	1.1	1.3	167	11	±30 %	20	SRU1028-470Y	136-2009
68	0.9	1	232	9	±30 %	20	SRU1028-680Y	136-2011
82	0.85	0.9	323	8	±30 %	20	SRU1028-820Y	136-2012
100	0.8	0.85	365	7	±30 %	20	SRU1028-101Y	136-2002
120	0.7	0.65	428	6	±30 %	18	SRU1028-121Y	136-2003
150	0.65	0.7	518	5	±30 %	18	SRU1028-151Y	136-2005

Power Inductors - continued

SRU Series - Shielded SMD Power Inductors - continued

Inductance	I_{sat}	I_R	R_{max}	f_{res}	Q	
SRU1048 Series						
Dimensions: L=10mm, H = 4.8mm, W = 10mm						
10	3.7	4.5	18.5	16	$\pm 30\%$	26
15	2.7	3.2	29	14	$\pm 30\%$	30
22	2	2.6	42	12	$\pm 30\%$	22
33	1.7	2.1	63	10	$\pm 30\%$	24
47	1.5	1.7	94	8	$\pm 30\%$	26
68	1.25	1.4	127	6	$\pm 30\%$	24
100	1	1.2	160	5	$\pm 30\%$	26
150	0.8	1	235	4.5	$\pm 30\%$	24
220	0.7	0.8	350	4	$\pm 30\%$	20
330	0.52	0.65	490	3	$\pm 30\%$	18
SRU2009 Series						
Dimensions: L=2.8mm, H = 1mm, W = 2.8mm						
2.2	0.8	1.1	210	120	$\pm 30\%$	7
10	0.35	0.4	1080	50	$\pm 30\%$	10
SRU2016 Series						
Dimensions: L=2.8mm, H = 1.8mm, W = 2.8mm						
1	1.6	2.2	60	250	$\pm 30\%$	8
2.2	1	1.6	105	120	$\pm 30\%$	8
3	0.87	1.5	135	90	$\pm 30\%$	8
4.7	0.74	1.15	215	80	$\pm 30\%$	8
6	0.63	0.9	250	70	$\pm 30\%$	9
10	0.52	0.87	430	45	$\pm 30\%$	9
47	0.22	0.31	1650	20	$\pm 30\%$	15
100	0.15	0.19	4900	10	$\pm 30\%$	8
SRU3017 Series						
Dimensions: L=3.5mm, H = 1.8mm, W = 3.5mm						
2.2	1.7	0.98	35	100	$\pm 30\%$	8
3.3	1.45	0.8	55	80	$\pm 30\%$	8
4.7	1.1	0.63	68	60	$\pm 30\%$	10
10	0.85	0.47	120	40	$\pm 30\%$	15
15	0.68	0.35	175	35	$\pm 30\%$	20
47	0.36	0.21	540	18	$\pm 30\%$	18
SRU3028 Series						
Dimensions: L=3.5mm, H = 2.8mm, W = 3.5mm						
10	0.86	0.72	160	35	$\pm 30\%$	20
33	0.48	0.47	450	10	$\pm 30\%$	20
47	0.38	0.32	815	8	$\pm 30\%$	20
68	0.28	0.24	1400	7	$\pm 30\%$	20
SRU5018 Series						
Dimensions: L=5.2mm, H = 1.8mm, W = 5.2mm						
1	2.85	2.8	12.5	200	$\pm 30\%$	9
3.5	1.7	2.1	32	90	$\pm 30\%$	9
4.7	1.55	2	36	80	$\pm 30\%$	8.5
10	1.05	1.25	65	50	$\pm 30\%$	12
15	0.8	0.95	100	40	$\pm 30\%$	12
22	0.65	0.68	160	28	$\pm 30\%$	12
68	0.36	0.37	480	16	$\pm 30\%$	12
100	0.31	0.32	620	15	$\pm 30\%$	15
SRU5028 Series						
Dimensions: L=5.2mm, H = 2.8mm, W = 5.2mm						
3.3	2.1	2.8	24	90	$\pm 30\%$	10
4.7	1.85	2.2	32	50	$\pm 30\%$	9
10	1.4	1.8	63	25	$\pm 30\%$	18
15	1	1.1	108	23	$\pm 30\%$	18
22	0.85	0.95	162	18	$\pm 30\%$	15
33	0.68	0.8	203	16	$\pm 30\%$	15
47	0.62	0.7	285	13	$\pm 30\%$	13
100	0.42	0.47	625	8	$\pm 30\%$	15
SRU6018 Series						
Dimensions: L=5.2mm, H = 2.8mm, W = 5.2mm						
1.8	2.3	3	28	90	$\pm 30\%$	8
3.3	1.7	2.5	36	60	$\pm 30\%$	8
4.7	1.4	2.2	42	50	$\pm 30\%$	8
6.8	1.2	1.9	60	40	$\pm 30\%$	8
SRU6025 Series						
Dimensions: L=6.2mm, H = 2.8mm, W = 6.2mm						
1.2	3.2	4	19	120	$\pm 30\%$	8
3.3	2	3.2	27	50	$\pm 30\%$	8
4.7	1.55	2.7	35	42	$\pm 30\%$	8
6.8	1.3	2.4	42	36	$\pm 30\%$	8
10	1.05	2	57	25	$\pm 30\%$	8
15	0.92	1.8	86	22	$\pm 30\%$	12
22	0.7	1.6	130	18	$\pm 30\%$	12
33	0.64	1.2	180	12	$\pm 30\%$	12
47	0.48	1	250	10	$\pm 30\%$	12
100	0.35	0.7	500	7	$\pm 30\%$	24
150	0.28	0.54	770	5	$\pm 30\%$	30
220	0.24	0.42	1250	4	$\pm 30\%$	20
SRU8043 Series						
Dimensions: L=8mm, H = 4.3mm, W = 8mm						
3.9	4	4.8	14.6	42	$\pm 30\%$	15
4.7	3.6	4.6	17	36	$\pm 30\%$	13
6.8	3.1	3.8	22.4	30	$\pm 30\%$	12
10	2.7	3.5	30	20	$\pm 30\%$	27
15	2	2.7	46	15	$\pm 30\%$	26

Inductance I_{sat} I_R R_{max} f_{res} Q

SRU8043 Series

Dimensions: L=8mm, H = 4.3mm, W = 8mm						
22	1.7	2.2	72.5	12	$\pm 30\%$	24
33	1.4	1.7	100	11	$\pm 30\%$	21
47	1.2	1.5	120	9	$\pm 30\%$	21
68	1	1.2	192	7	$\pm 30\%$	20
100	0.8	1	287	6	$\pm 30\%$	50

473567

SRU	Order Code	Price Each				
		1+	50+	100+	500+	1K+
1028	All Values	1.80	1.62	1.43	1.08	0.90
1048	All Values	1.80	1.62	1.43	1.08	0.90
2009	All Values	1.37	1.23	1.08	0.82	0.68
2016	All Values	1.37	1.23	1.08	0.82	0.68
3017	All Values	1.37	1.23	1.08	0.82	0.68
3028	All Values	1.37	1.23	1.08	0.82	0.68
5018	All Values	1.37	1.23	1.08	0.82	0.68
5028	All Values	1.37	1.23	1.08	0.82	0.68
6018	All Values	1.58	1.43	1.26	0.95	0.80
6025	All Values	1.58	1.43	1.26	0.95	0.80
8043	All Values	1.72	1.56	1.37	1.03	0.87

Bourns Inductor Kits

SRU Series



SRU10 Kit

Kit contains 3 each of 10mm × 10mm 0.8, 1.0, 1.5, 2.2, 3.0, 4.7, 5.0, 10.0, 33.0, 47.0, 68.0, 100.0, 150.0, 220.0 μ H.

Order Code	Price Each				
	1+	3+	10+	30+	100+
SMD136-1997●	31.64				

SRU30 Kit

Kit contains 3 each of 2.8mm × 2.8mm 1.5, 2.2, 2.5, 3.3, 4.7, 6.8, 10.0, 22.0, 33.0, 47.0, 68.0, 100.0 μ H.

Order Code	Price Each				
	1+	3+	10+	30+	100+
SMD136-1998●	31.64				

Power Inductors 12x12mm

B24277 Series



- Size: 12x12mm
- Magnetically shielded - better for high density population as can be placed closer to other components
- Winding: enamel copper wire, welded to terminals
- Wide temperature range
- Very high rated current, low DC resistance
- Suitable for reflow soldering

Inductance (μ H)	Freq. (MHz)	Tolerance (%)	I_R (A)	R_{max} (Ω)	Mfrs. List No.	Order Code
1	100	20	9.8	0.007	B24277G4102M	743-0299
2.2	100	20	8	0.01	B24277G4222M	743-0302
3.9	100	20	7.5	0.0125	B24277G4392M	743-0310
4.7	100	20	6.8	0.014	B24277G4472M	743-0329
6.8	100	20	6.5	0.0185	B24277G4682M	743-0345

Inductance (μ H)	Freq. _L (MHz)	Tolerance (%)	I _R (A)	R _{max} (Ω)	Mfrs. List No.	Order Code
10	100	20	5.4	0.022	B82477G4103M	743-0353
15	100	20	4.5	0.027	B82477G4153M	743-0370
22	100	20	3.6	0.038	B82477G4223M	743-0388
33	100	20	3	0.053	B82477G4333M	743-0396
47	100	20	2.5	0.082	B82477G4473M	743-0400
82	100	20	1.9	0.145	B82477G4823M	743-0426
100	100	20	1.7	0.165	B82477G4104M	743-0434
150	100	20	1.42	0.225	B82477G4154M	743-0442
220	100	20	1.16	0.38	B82477G4224M	743-0450
330	100	20	0.95	0.6	B82477G4334M	743-0469
470	100	20	0.8	0.79	B82477G4474M	743-0477
1000	100	20	0.55	1.68	B82477G4105M	743-0493

350160

Price Each

Order Code	1+	10+	50+	200+	400+
All Values ●	2.79	2.37	2.08	1.69	1.27

SRR Series - Shielded High Power Inductors



- Applications include input and output of DC / DC converters
- Power supplies for portable communication equipment, camcorders, LCD TVs, car radios

Operating temperature -40°C to +125°C

Inductance (μ H)	I _{sat} (A)	I _R (A)	R _{max} (m Ω)	f _{res} (MHz)	Tolerance	Q Factor	Mfrs. List No.	Order Code
--------------------------	-------------------------	-----------------------	-----------------------------------	---------------------------	-----------	----------	----------------	------------

SRR1206 Series

Dimensions: L=12.7mm, H = 6.5mm, W = 12.7mm

33	3.10	1.9	90	9	±15 %	21	SRR1206-330YL	136-2133
47	2.50	1.6	130	7	±15 %	22	SRR1206-470YL	136-2135
56	2.50	1.45	155	7	±15 %	21	SRR1206-560YL	136-2139
220	1.20	0.7	460	4	±10 %	11	SRR1206-221KL	136-2132
330	1.00	0.6	660	3	±10 %	11	SRR1206-331KL	136-2134
470	0.83	0.5	970	2.5	±10 %	12	SRR1206-471KL	136-2138
100	1.90	1.1	220	6	±15 %	13	SRR1206-101YL	136-2131

SRR1208 Series

Dimensions: L=12.7mm, H = 8.5mm, W = 12.7mm

2.5	10.0	7.5	0.0011	40	±20 %	20	SRR1208-2R5ML	136-2146
4.5	10.0	6.5	0.014	35	±20 %	24	SRR1208-4R5ML	136-2153
6.5	8.40	6	0.018	32	±20 %	25	SRR1208-6R5ML	136-2156
10	6.70	5	0.021	28	±20 %	20	SRR1208-100ML	136-2140
15	5.60	4	0.036	26	±20 %	21	SRR1208-150ML	136-2142
18	4.00	3.8	0.04	24	±20 %	21	SRR1208-180ML	136-2143
22	4.00	3.5	0.043	21	±20 %	23	SRR1208-220ML	136-2144
33	3.80	2.8	6.2	19	±15 %	23	SRR1208-330YL	136-2147
47	3.10	2.2	0.085	17	±15 %	24	SRR1208-470YL	136-2151
56	2.80	2	0.11	16	±15 %	23	SRR1208-560YL	136-2154
68	2.60	1.8	0.135	15	±15 %	20	SRR1208-680YL	136-2155
100	2.10	1.5	0.17	13	±15 %	15	SRR1208-101YL	136-2141
220	1.45	1.1	0.38	12	±10 %	13	SRR1208-221KL	136-2145
330	1.12	0.85	0.65	11	±10 %	13	SRR1208-331KL	136-2149
470	0.95	0.7	0.85	10	±10 %	14	SRR1208-471KL	136-2152

SRR1240 Series

Dimensions: L=12.5mm, H = 4.0mm, W = 12.5mm

4.7	5.60	6	18	33	±20 %	16	SRR1240-4R7ML	136-2160
10	4.00	4	32	27	±20 %	17	SRR1240-100M	136-2157
47	1.80	2	135	13	±20 %	19	SRR1240-470ML	136-2159
100	1.20	1.25	300	8	±20 %	14	SRR1240-101M	136-2158

SRR1260 Series

Dimensions: L=12.5mm, H = 6.0mm, W = 12.5mm

22	3.70	4	43	13.4	±20 %	29	SRR1260-220M	136-2163
33	2.80	3	60	9.97	±20 %	27	SRR1260-330M	136-2165
47	2.50	2.6	86	7.63	±20 %	22	SRR1260-470M	136-2167
56	2.20	2.3	100	7.92	±20 %	24	SRR1260-560M	136-2170
100	1.70	1.7	180	6.07	±20 %	26	SRR1260-100M	136-2162
220	1.30	1.38	380	4.2	±10 %	22	SRR1260-221K	136-2164
330	1.10	1.15	580	3.2	±10 %	22	SRR1260-331K	136-2166
470	0.90	0.95	820	2.6	±10 %	18	SRR1260-471K	136-2169

SRR1280 Series

Dimensions: L=12.5mm, H = 7.5mm, W = 12.5mm

2.5	10.50	9.2	10	45	±30 %	20	SRR1280-2R4Y	136-2178
4.5	9.00	8.5	13.5	34	±30 %	20	SRR1280-4R7Y	136-2183
10	6.30	6	19.5	17	±20 %	24	SRR1280-100M	136-2171
15	5.00	5.2	28.5	13	±20 %	26	SRR1280-150M	136-2174
18	4.60	4.8	35	12	±20 %	24	SRR1280-180M	136-2175
22	4.10	4.3	38.6	11	±20 %	20	SRR1280-220M	136-2176
33	3.30	3.5	57	9.5	±20 %	28	SRR1280-330M	136-2179
47	2.80	2.9	80	7.5	±20 %	24	SRR1280-470M	136-2181
56	2.50	2.6	100	7	±20 %	24	SRR1280-560M	136-2184
68	2.30	2.4	120	6.5	±20 %	20	SRR1280-680M	136-2186
100	2.00	2.1	150	4.5	±20 %	18	SRR1280-101M	136-2172
220	1.70	1.6	400	3.4	±10 %	24	SRR1280-221K	136-2177
330	1.40	1.1	600	2.9	±10 %	18	SRR1280-331K	136-2180
470	1.25	0.9	880	2.2	±10 %	20	SRR1280-471K	136-2182

473423

Price Each

SRR	Order Code	1+	25+	50+	100+	200+
1206	All Values	2.85	2.73	2.45	2.08	1.87
1208	All Values	2.85	2.73	2.45	2.08	1.87
1240	All Values	3.48	3.33	2.99	2.52	2.25
1260	All Values	3.48	3.33	2.99	2.52	2.25
1280	All Values	3.15	3.03	2.71	2.31	2.07

HM36 Series

High Power Molded SMD Inductor



- Compact inductor
- Molded construction



SMD

Power Inductors - continued**HM76 Series - continued**

Drum Core - Surface Mount Inductors - continued

411293

Order Code	1+	25+	50+	100+	500+
Case size 10 ●	1.33	1.25	1.15	1.04	0.97
Case size 20 ●	1.62	1.54	1.45	1.26	1.12
Case size 30 ●	2.53	2.38	2.20	2.00	1.58
Case size 40 & 50 ●	1.49	1.43	1.31	1.18	1.03

Power Choke Coils - ETQP

- Surface mount high power choke coils
- Variety of different case sizes
- Molded resin construction

Supplied on 24mm embossed tape (reel=500pcs)

Panasonic
ideas for life



Operating temperature -40°C to +100°C Insulation resistance 10MΩ

Inductance @ 25°C (μH)	Tolerance	DC Current Max. (mA)	Max DC resistance @ 20°C (mΩ)	Dimensions H W D	Mfrs. List No.	Order Code
0.2	±20%	28	0.7	11.5 10 4	ETQP4LR19WFC	153-9575
0.37	±20%	24	1.1	11.5 10 4	ETQP4LR36WFC	153-9576
0.5	±20%	27	0.8	14.5 12.5 5	ETQP5LR50XFA	153-9579
0.58	±20%	19	1.44	12.5 12.5 6	ETQP6F0R6BFA	153-9581
0.6	±20%	21	1.56	11.5 10 4	ETQP4LR56WFC	153-9578
0.6	±20%	30	1.1	14.5 12.5 5	ETQP5LR60XFA	153-9580
0.7	±30%	22.6	1	17.2 16.8 9	ETQPAF0R7EFA	153-9588
1.06	±20%	16	2.24	12.5 12.5 6	ETQP6F1R1BFA	153-9582
1.2	±30%	22.6	1	17.2 16.8 9	ETQPAF1R2HFA	153-9591
1.2	±30%	14.3	2.24	12.5 12.5 5.7	ETQP6F1R2HFA	969-4145
1.3	±25%	17.5	1.56	17.2 16.8 9	ETQPAF1R3EFA	153-9592
1.71	±20%	14	3.3	12.5 12.5 6	ETQP6F1R8BFA	153-9583
2	±30%	10.7	3.3	12.5 12.5 5.7	ETQP6F2R0HFA	969-4153
2.45	±20%	12	4.92	12.5 12.5 6	ETQP6F2R5BFA	153-9584
2.45	±20%	4.5	7.6	8.5 8 5.4	ETQP5M2R5YFC	153-9596
2.5	±20%	5.6	7.73	10 10 4.95	ETQP5M2R5YFC	153-9600
2.5	±30%	11.3	4.92	12.5 12.5 5.7	ETQP6F2R5SFA	969-4161
2.7	±30%	17.5	1.56	17.2 16.8 9	ETQPAF2R7HFA	153-9587
3.2	±25%	8.6	4.92	12.5 12.5 5.7	ETQP6F3R2HFA	969-4170
3.32	±20%	10	6.48	12.5 12.5 6	ETQP6F3R4BFA	153-9585
4.6	±25%	7.3	6.48	12.5 12.5 5.7	ETQP6F4R6HFA	969-4188
4.8	±30%	14.4	2.29	17.2 16.8 9	ETQPAF4R8HFA	153-9586
6.4	±25%	6.2	8.64	12.5 12.5 5.7	ETQP6F6R4HFA	969-4196
7.2	±30%	12	3.31	17.2 16.8 9	ETQPAF7R2HFA	153-9593
10.2	±25%	4.7	13.3	12.5 12.5 5.7	ETQP6F102HFA	969-4200
22	±20%	1.6		8.5 8 5.4	ETQP5M220YFK	153-9597
47	±20%	1.1	127	8.5 8 5.4	ETQP5M470YFM	153-9599
48	±20%	1	156	7.5 7 5.4	ETQP5M470YFM	153-9595

204187

Inductance μH	Order Code	1+	5+	10+	50+	100+
0.2 NEW SMD 153-9575 ● RL	4.28	3.95	3.65	3.26	3.07	
0.37 NEW SMD 153-9576 ●	4.28	3.95	3.65	3.26	3.07	
0.5 NEW SMD 153-9579 ●	1.53	1.41	1.31	1.16	1.09	
0.58 NEW SMD 153-9581 ● RL	1.67	1.54	1.43	1.28	1.19	
0.6 NEW SMD 153-9578 ●	4.28	3.95	3.65	3.26	3.07	
0.6 NEW SMD 153-9580 ●	1.53	1.41	1.31	1.16	1.09	
0.7 NEW SMD 153-9588 ● RL	7.14	6.59	6.10	5.45	5.11	
1.06 NEW SMD 153-9582 ● RL	1.67	1.54	1.43	1.28	1.19	
1.2 NEW SMD 153-9591 ● RL	7.14	6.59	6.10	5.45	5.11	
1.2 SMD 969-4145 ●	2.98	2.26	2.06	1.85	1.73	
1.3 NEW 153-9592 ● RL	7.14	6.59	6.10	5.45	5.11	
1.71 NEW 153-9583 ● RL	1.67	1.54	1.43	1.28	1.19	
2 SMD 969-4153 ●	3.08	2.84	2.59	2.33	2.17	
2.45 NEW SMD 153-9584 ●	1.67	1.54	1.43	1.28	1.19	
2.45 NEW SMD 153-9596 ● RL	0.92	0.85	0.79	0.70	0.65	
2.5 NEW SMD 153-9600 ●	0.92	0.85	0.79	0.70	0.65	
2.5 SMD 969-4161 ●	3.00	2.77	2.53	2.26	2.12	
2.7 NEW SMD 153-9587 ●	7.14	6.59	6.10	5.45	5.11	
3.2 SMD 969-4170 ●	2.98	2.26	2.06	1.83	1.78	
3.32 NEW SMD 153-9585 ●	1.67	1.54	1.43	1.28	1.19	
4.6 SMD 969-4188 ●	2.98	2.26	2.06	1.83	1.78	
4.8 NEW SMD 153-9586 ●	7.14	6.59	6.10	5.45	5.11	
6.4 SMD 969-4196 ●	2.98	2.46	2.26	2.06	1.91	
7.2 NEW SMD 153-9593 ●	7.14	6.59	6.10	5.45	5.11	
10.2 SMD 969-4200 ●	2.98	2.26	2.06	1.83	1.78	
22 NEW SMD 153-9597 ● RL	0.92	0.85	0.79	0.70	0.65	
47 NEW SMD 153-9599 ●	0.92	0.85	0.79	0.70	0.65	
48 NEW SMD 153-9595 ●	0.92	0.85	0.79	0.70	0.65	

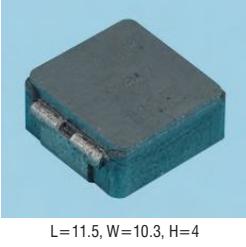
Inductance μH	Inductance Tolerance %	DC Resistance Ω	Saturation Current A dc	Test Frequency kHz	Mfrs. List No. A	Order Code
0.1	20	1.7	60	100	IHL2525CZERR10M01	118-7058
0.2	20	3	41	100	IHL2525CZERR20M01	118-7059
0.47	20	4	26	100	IHL2525CZERR47M01	118-7060
0.68	20	5.2	25	100	IHL2525CZERR68M01	118-7061
1	20	10	22	100	IHL2525CZERR10M01	118-7062
1.5	20	15	18	100	IHL2525CZERR15M01	118-7063
2.2	20	20	14	100	IHL2525CZERR2R2M01	118-7064
3.3	20	30	13.5	100	IHL2525CZERR3R3M01	118-7066
4.7	20	40	10	100	IHL2525CZERR47M01	118-7067

234780

Inductance	Order Code	1+	10+	50+	100+	250+
0.1μH to 1μH	All Values ●	1.32	1.18	1.09	1.01	0.93
1.5μH to 4.7μH	All Values ●	1.02	0.93	0.84	0.78	0.70

**IHL4040 Series**

IHL4040DZ-01 and IHL4040DZ-11 Models



- Low profile high current inductors,
- Shielded construction
- Lowest DCR/μH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction

Operating temperature -55°C to +125°C
Tolerance ±20%

Inductance (μH)	DC Res. (mΩ @ 25°C)	Saturation Current Max. (A)	Mfrs. List No.	Order Code
IHL4040DZ-11 - 1MHz				
0.19	0.7	46	IHL4040DZERR19M11	154-7042
0.24	0.85	44	IHL4040DZERR24M11	154-7043
0.36	1.05	30	IHL4040DZERR36M11	154-7044
0.47	1.53	30	IHL4040DZERR47M11	154-7046
0.56	1.6	22	IHL4040DZERR56M11	154-7047
0.78	1.8	22	IHL4040DZERR78M11	154-7048
1	2.3	20	IHL4040DZER1R0M11	154-7050
1.8	4.5	16	IHL4040DZER1R8M11	154-7051
2	5.2	14	IHL4040DZER2R0M11	154-7052
4.7	12.9	7.6	IHL4040DZER4R7M11	154-7053
6.8	17.5	7.5	IHL4040DZER6R8M11	154-7054
10	27.8	7.1	IHL4040DZER100M11	154-7055
15	40.9	6	IHL4040DZER150M11	154-7056
22	60.4	4.5	IHL4040DZER220M11	154-7058
47	132	3	IHL4040DZER470M11	154-7059
100	249	2.25	IHL4040DZER101M11	154-7060

527058

Order Code	1+	10+	50+	100+	250+
All Values ●	1.37	1.22	1.12	1.03	0.94

IHL5050 Series

IHL5050CE-01 and IHL5050FD-01 Models



- Low profile high current inductors,
- Shielded construction
- Frequency range up to 5.0 MHz
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- Choice of two case sizes

Operating temperature -55°C to +125°C
Self resonant frequency 20%

Inductance (μH)	DC Res. (mΩ @ 25°C)	Saturation Current Max. (A)	Mfrs. List No.	Order Code
IHL5050CE-01				
0.1	0.8	84	IHL5050CEERR10M01	128-9477
0.15	1	75	IHL5050CEERR15M01	128-9478
0.22	1.1	65	IHL5050CEERR22M01	128-9479
0.33	1.3	62	IHL5050CEERR33M01	128-9480
0.47	1.6	55	IHL5050CEERR47M01	128-9481
0.6	1.8	51	IHL5050CEERR60M01	128-9485
0.68	2.3	49	IHL5050CEERR68M01	128-9486
0.82	2.6	44	IHL5050CEERR82M01	128-9487

527058

IHL2525 Series

Low profile - high current



- Ferrite cored wound surface mount inductors
- Shielded construction
- Low profile, high current rating
- Low loss and dc resistance up to 5MHz
- Applications include DC/DC converters and energy storage in mobile phones, computers, digital cameras and other handheld electronic devices

Inductance (μ H)	DC Res. (m Ω @ 25°C)	Saturation Current Max. (A)	Mfrs. List No.	Order Code
IHLP-5050CE-01				
1	3.3	40	IHLP5050CEER1R0M01	128-9466
1.5	5.1	35	IHLP5050CEER1R5M01	128-9483
1.8	6.5	30	IHLP5050CEER1R8M01	128-9467
2.2	7.2	29	IHLP5050CEER2R2M01	128-9468
3.3	11	27	IHLP5050CEER3R3M01	128-9472
4.7	14.3	24	IHLP5050CEER4R7M01	128-9473
5.6	18.3	19	IHLP5050CEER5R6M01	128-9474
6.8	19.8	18	IHLP5050CEER6R8M01	128-9475
8.2	24.8	16	IHLP5050CEER8R2M01	128-9476
10	30.4	14	IHLP5050CEER100M01	128-9465

Inductance (μ H)	DC Res. (m Ω @ 25°C)	Saturation Current Max. (A)	Mfrs. List No.	Order Code
IHLP-5050FD-01				
0.1	0.47	120	IHLP5050FDERR10M01	128-9454
0.22	0.63	112	IHLP5050FDERR22M01	128-9456
0.3	0.7	72	IHLP5050FDERR30M01	128-9458
0.33	0.83	65	IHLP5050FDERR33M01	128-9459
0.4	0.9	64	IHLP5050FDERR40M01	128-9460
0.47	1	63	IHLP5050FDERR47M01	128-9461
0.56	1.2	62	IHLP5050FDERR56M01	128-9462
0.68	1.4	60	IHLP5050FDERR68M01	128-9463
0.82	1.6	50	IHLP5050FDERR82M01	128-9464
1.2	2.1	48	IHLP5050FDER1R2M01	128-9443
1.5	2.5	45	IHLP5050FDER1R5M01	128-9444
1.8	2.8	41	IHLP5050FDER1R8M01	128-9446
2.2	3.5	40	IHLP5050FDER2R2M01	128-9447
3.3	5.7	35	IHLP5050FDER3R3M01	128-9448
4.7	9.3	30	IHLP5050FDER4R7M01	128-9449
5.6	9.3	26.5	IHLP5050FDER5R6M01	128-9450
6.8	13.1	16.5	IHLP5050FDER6R8M01	128-9452
8.2	14.5	16	IHLP5050FDER8R2M01	128-9453
10	15.8	15.5	IHLP5050FDER100M01	128-9442

451779

Price Each					
Model	Order Code	1+	10+	50+	100+
IHLP-5050CE-01	All Values ●	1.54	1.38	1.23	1.10
IHLP-5050FD-01	All Values ●	2.44	2.20	2.04	1.87

1.00

1.72

Power Inductors - B82476/8/9 Series

A range of surface mount power inductors designed for filtering supply voltages, coupling/decoupling, dc/dc converters, telecommunications and automotive electronics



- High current rating
- Low dc resistance
- Suitable for reflow soldering (IR and vapour phase)

B82476 - L = 9.4mm, W = 12.9mm, H = 5.08mm

B82478 - L = 11.6mm, W = 12.6mm, H = 8.5mm

B82479 - L = 15.24mm, W = 18.54mm, H = 7.11mm

Inductance uH	Inductance Tolerance %	DC Resistance Max. (Ω)	Max dc Current mA	Test Frequency MHz	Self Res. Frequency MHz	Order Code
B82476						
10	20	0.025	3800	100	20	387-7486
22	20	0.05	2600	100	20	387-7498
47	20	0.12	1600	100	20	387-7504
100	20	0.23	1200	100	20	387-7516
220	20	0.53	800	100	20	387-7528
330	20	0.81	600	100	20	387-7530
470	20	1.1	500	100	20	387-7541
B82478						
10	20	0.06	3500	10	20	387-7565
22	20	0.1	2600	10	20	387-7577
33	20	0.12	2300	10	20	387-7589
47	20	0.17	1950	10	20	387-7590
100	20	0.35	1400	10	20	387-7607
220	20	0.73	950	10	20	387-7619
330	20	1.15	800	10	20	387-7620
470	20	1.48	650	10	20	387-7632
1000	20	3	460	10	20	387-7644
B82479						
10	20	0.032	4300	100	20	387-7656
22	20	0.047	3500	100	20	387-7668
33	20	0.066	3000	100	20	387-7670
47	20	0.087	2600	100	20	387-7681
100	20	0.19	1800	100	20	387-7693
220	20	0.38	1200	100	20	387-7700
330	20	0.56	1000	100	20	387-7711
470	20	0.85	820	100	20	387-7723
1000	20	1.8	560	100	20	387-7735

234192

Price Each					
Type	Order Code	5+	50+	100+	1K+
B82476	All Values ●	2.31	2.20	2.07	1.67
B82478	All Values ●	3.03	2.49	2.31	1.93
B82479	All Values ●	3.31	3.17	2.90	2.36

1.67

1.93

2.36

High Power Series - ELC09

Panasonic
ideas for life



- High power fixed inductors for line noise filtering
- Compact size due to high permeability and high flux density ferrite cores
- Wide inductance range
- Applications include TV, VCR, PCs, Audio, Fax machines etc.

Height above PCB=13, Dia.=10
Lead length=4.0, Lead dia.=1.0, Fixing pitch=5.0

Inductance (μ H)	Tolerance %	Max. DC Current @ 20°C (A)	DC resistance @ 20°C(Ω)	Mfrs. List No.	Order Code
ELC09					
2.2	±20	3.5	0.012	ELC09D2R2F	809-4810
3.3	±20	3.2	0.015	ELC09D3R3F	809-4861
4.7	±20	3.1	0.016	ELC09D3R9F	809-4870
6.8	±20	3	0.018	ELC09D4R7F	809-4942
8.2	±20	2.8	0.021	ELC09D6R8F	809-4985
10	±20	2.6	0.024	ELC09D8R2F	809-5035
15	±20	2.5	0.027	ELC09D10F	809-4756
22	±10	2.1	0.035	ELC09D15F	809-4799
33	±10	1.8	0.051	ELC09D22F	809-4829
47	±10	1.6	0.058	ELC09D27F	809-4853
68	±10	1.4	0.081	ELC09D33F	809-4888
100	±10	1.2	0.11	ELC09D47F	809-4950
150	±10	1	0.14	ELC09D68F	809-4993
220	±10	0.74	0.32	ELC09D101F	809-4764
330	±10	0.58	0.41	ELC09D221F	809-4842
470	±10	0.49	0.65	ELC09D331F	809-4896
680	±10	0.39	0.98	ELC09D471F	809-4969
1000	±10	0.34	1.4	ELC09D681F	809-5000
2200	±10	0.28	2.1	ELC09D102F	809-4772
3300	±10	0.17	4.4	ELC09D222F	809-4845
3900	±10	0.14	7	ELC09D332F	809-4900
10000	±10	0.08	18.8	ELC09D392F	809-4934

204189

Order Code	5+	50+	100+	500+	1K+
All Values ●	0.48	0.41	0.37	0.33	0.44

8

ELC10 Series

Panasonic
ideas for life



- High power fixed inductors for line noise filtering
- Shielded construction
- Compact size due to high permeability and high flux density ferrite cores
- Applications include TV, VCR, PCs, Audio, Fax machines etc.

Height above PCB=15, Dia.=10.5
Lead length=4.0, Lead dia.=0.6, Fixing pitch=5.0

Inductance (μ H)	Tolerance %	Max. DC Current @ 20°C (A)	DC resistance @ 20°C(Ω)	Mfrs. List No.	Order Code
ELC10					
330	±10	1	0.35	ELC11D331F	130-8463
390	±10	0.95	0.4	ELC11D391F	130-8465
680	±10	0.64	0.78	ELC11D681F	130-8466
820	±10	0.62	0.87	ELC11D821F	130-8467
1000	±10	0.57	1.1	ELC11D102F	130-8468
1500	±10	0.43	1.7	ELC11D152F	130-8469

RL

Re-reeling available

Power Inductors - continued

ELC11 Series - continued

Order Code	1+	25+	50+	100+	500+
All Values ●	0.68	0.59	0.54	0.47	0.44

451838

ELC18 Series



Panasonic
ideas for life

- High power fixed inductors for line noise filtering
- Applications include TV, VCR, PCs, Audio, Fax machines etc.

Height above PCB=27, Dia.=18
Lead length=5.0, Lead dia.=1.0, Fixing pitch=7.5

Inductance (μ H)	Tolerance %	Max. DC Current @ 20°C (A)	DC resistance @ 20°C (Ω)	Mfrs. List No.	Order Code
47	±10	4.3	0.037	ELC18B470L	130-8470
100	±10	3.2	0.05	ELC18B101L	130-8471
150	±10	2.7	0.072	ELC18B151L	130-8472
820	±10	1.3	0.34	ELC18B821L	130-8473
1500	±10	0.85	0.58	ELC18B152L	130-8474
10000	±10	0.36	3.9	ELC18B103L	130-8475

451843

Order Code	1+	25+	50+	100+	500+
All Values ●	1.54	1.34	1.23	1.09	1.01

451843

High Current – 1400 Series

CD TECHNOLOGIES
Power Solutions



Fixing hole dia.=4.5
Lead length=10

- A range of high current bobbin core inductors for switching regulators, filter and power line applications
- The core is manufactured from a high saturation flux density material, the winding is insulated by a heatshrink sleeve
- The inductors may be PCB mounted or alternatively chassis mounted using the bobbin centre fixing hole
- Tolerance ±10%.

Inductance (μ H)	Current (cont.)*	Resistance Ω	Dimensions		
			H	Dia. (overall)	Lead Dia.
22	11	0.012	14.5	24	1.3
47	8.5	0.023	14.5	24	1.3
68	6.2	0.035	14.5	24	1.1
100	5.4	0.046	14.5	24	1.1
100	7.8	0.033	20.5	30	1.3
150	4	0.076	14.5	24	1.1
220	3.5	0.106	14.5	24	1.1
220	5.5	0.063	20.5	30	1.3
300	3	0.14	14.5	24	1.1
330	2.8	0.165	14.5	24	0.8
330	4.5	0.1	20.5	30	1.1
470	2.3	0.244	14.5	24	0.8
470	4	0.129	20.5	30	1.1
680	2	0.304	14.5	24	0.8
1000	1.6	0.461	14.5	24	0.8
2200	0.9	1.01	14.5	24	0.5

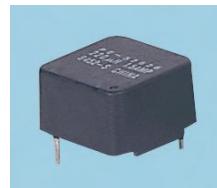
* For a temperature rise of <30°C from ambient

204074

Value (μ H)	Current (A)	Order Code	Price Each				
			1+	10+	25+	50+	100+
22	11	107-7056●	2.86	2.80	2.74	2.45	2.40
47	8.5	107-7058●	2.86	2.80	2.74	2.45	2.40
68	6.2	107-7059●	2.86	2.80	2.74	2.45	2.40
100	5.4	107-7015●	2.68	2.54	2.49	2.38	2.32
100	7.8	107-7020●	4.33	4.13	4.04	3.83	3.74
150	4	107-7024●	2.86	2.80	2.74	2.45	2.40
220	3.5	107-7017●	2.68	2.54	2.49	2.38	2.32
220	5.5	107-7021●	4.33	4.13	4.04	3.83	3.74
300	3	107-7025●	2.86	2.80	2.74	2.45	2.40
330	2.8	107-7018●	2.68	2.54	2.49	2.38	2.32
330	4.5	107-7022●	4.33	4.13	4.04	3.83	3.74
470	2.3	107-7019●	2.68	2.54	2.49	2.38	2.32
470	4	107-7023●	4.33	4.13	4.04	3.83	3.74
680	2	107-7026●	2.86	2.80	2.74	2.45	2.40
1000	1.6	107-7027●	2.89	2.75	2.64	2.38	2.32
2200	0.9	107-7060●	2.86	2.80	2.74	2.45	2.40

204074

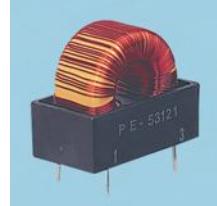
Designed for National Semiconductor Simple Switcher™



Case Style A

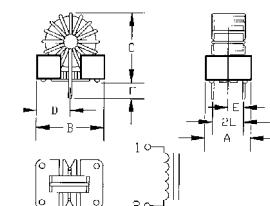
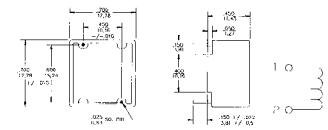


Case Style B-E



Case Style F

PULSE ENGINEERING



- Fixed inductors specifically designed to be used in National Semiconductor, Simple Switcher™ voltage regulator applications
- Pulse part numbers are listed in the National Semiconductor datasheet
- Base materials meet the flammability requirements of UL94V-0.

Typical Inductance (μ H)	DA Current (A)	Pin Diameter	Case Style	Inductor Code	Pulse Part No.	Order Code
47	3	0.64	B	L47	PE53112NL	120-9544
68	3	1.02	D	L68	PE92114KNL	120-9545
100	3	0.81	D	L100	PE92108KNL	120-9546
150	2	0.64 SQ	D	L150	PE53113NL	120-9547
220	1.4	0.64	A	L220	PE52626NL	120-9548
220	1.4	0.51	C	L220	PE53145NL	120-9549
330	0.9	0.64 SQ	A	L330	PE52627NL	120-9550
330	0.9	0.64	C	L330	PE53146NL	120-9551
470	0.64	0.64	D	L470	PE53114NL	120-9552
680	0.42	0.64 SQ	A	L680	PE52629NL	120-9554
150	3	0.64	D	H150	PE53115NL	120-9555
220	3	0.81	E	H220	PE53116NL	120-9557
330	3	0.64	E	H330	PE53117NL	120-9558
470	2	0.64	E	H470	PE53118NL	120-9559
680	1.3	0.64	E	H680	PE53119NL	120-9560
1000	0.95	0.64	E	H1000	PE53120NL	120-9561
2200	0.42	0.81	F	H2200	PE53122NL	120-9562

204077

Typical Inductance μ H	Order Code	Price Each				
		1+	10+	50+	100+	
47	120-9544●	4.66	4.03	3.60	2.74	
68	120-9545●	3.47	3.02	2.67	2.02	
100	120-9546●	2.74	2.39	2.11	1.62	
150	120-9547●	5.08	4.42	3.90	2.98	
220	120-9548●	4.60	4.01	3.58	2.72	
220	120-9549●	3.87	3.39	3.00	2.30	
330	120-9550●	4.32	3.75	3.32	2.55	
330	120-9551●	4.93	4.30	3.81	2.90	
470	120-9552●	5.19	4.54	3.99	3.05	
680	120-9554●	4.50	3.91	3.49	2.65	
150	120-9555●	5.30	4.61	4.11	3.12	
220	120-9557●	5.55	4.83	4.28	3.27	
330	120-9558●	4.44	3.85	3.42	2.61	
470	120-9559●	3.16	2.74	2.44	1.86	
680	120-9560●	4.58	3.99	3.54	2.69	
1000	120-9561●	4.74	4.15	3.67	2.81	

Flat Wire Inductors

WE-HC series, High Current



New



- Low stray field, extremely low profile design
- Current capability up to 40 A
- Operating temperature: -40°C to +150°C/155°C
- Recommended soldering profile: reflow
- 30% less deficit compared to standard material at 500kHz, no thermal aging

- For graphic cards, Laptops, Industrial computers, Motherboards, High current switching regulators, High temperature electronics, Polyphase-switching regulators
- Recommended for applications with ICs of National, Linear Tech., TI, Fairchild and STM

Inductance (μ H)	Tolerance	Selfres. frequency (MHz)	R _{DC} typ. (m Ω)	Current rating (A)	Mfrs.	List No.	Order Code
0.095	$\pm 20\%$	596	0.97	22	744312011	163-6179	
0.21	$\pm 20\%$	275	1.86	18	744312025	163-6180	
0.35	$\pm 20\%$	175	3	16	744312047	163-6181	
0.58	$\pm 20\%$	150	7.2	12	744312072	163-6183	
0.75	$\pm 20\%$	110	8.11	11	744312100	163-6184	
1.17	$\pm 20\%$	87	9.57	9	744312150	163-6186	
0.11	$\pm 20\%$	400	0.91	22	744310013	163-6187	
0.22	$\pm 20\%$	220	1.6	18	744310024	163-6188	
0.43	$\pm 20\%$	140	3.7	14	744310055	163-6189	
0.52	$\pm 20\%$	105	3.1	17	74431068	163-6190	
1.12	$\pm 20\%$	72	6.6	11	744311150	163-6191	
1.75	$\pm 20\%$	52	11.4	9	744311220	163-6192	
2.75	$\pm 20\%$	43	17.2	6.5	744311330	163-6193	
3.5	$\pm 20\%$	33	19.5	6	744311470	163-6195	
2.2	$\pm 20\%$	65	9	9	744314330	163-6196	
3.4	$\pm 20\%$	56	14.5	6.5	744314490	163-6197	
4.5	$\pm 20\%$	50	22.5	6	744314650	163-6198	
0.14	$\pm 20\%$	363	0.62	24	744324015	163-6199	
0.3	$\pm 20\%$	174	1.36	22	744324033	163-6201	
0.62	$\pm 20\%$	110	2.89	18	744324063	163-6202	
1	$\pm 20\%$	77	4.48	14	744324100	163-6203	
1.5	$\pm 20\%$	54	5.35	13	744324140	163-6204	
1.8	$\pm 20\%$	n.D.	4.6	14	744325240	163-6205	
2.4	$\pm 20\%$	n.D.	5.9	12	744325330	163-6206	
3.3	$\pm 20\%$	33	7.1	11	744325420	163-6207	
4.3	$\pm 20\%$	30	10.3	10	744325550	163-6208	
1.45	$\pm 20\%$	48	5.6	14	744313180	163-6209	
1.75	$\pm 20\%$	40	5.7	14	744313220	163-6210	
2.45	$\pm 20\%$	30	8.1	12	744313330	163-6211	
0.55	$\pm 20\%$	112	1.25	25	744315067	163-6213	
1	$\pm 20\%$	87	3	18	744315120	163-6214	
0.9	$\pm 20\%$	64	1.79	22	744318120	163-6215	
1.4	$\pm 20\%$	68	3.19	18	744318180	163-6216	
2.15	$\pm 20\%$	39	4	16	744318270	163-6217	

522390

Inductance (μ H)	Order Code	1+	10+	50+	100+	250+	Price Each
0.095	163-6179●	2.40	2.23	2.07	1.94	1.83	
0.21	163-6180●	2.40	2.23	2.07	1.94	1.83	
0.35	163-6181●	2.40	2.23	2.07	1.94	1.83	
0.58	163-6183●	2.40	2.23	2.07	1.94	1.83	
0.75	163-6184●	2.40	2.23	2.07	1.94	1.83	
1.17	163-6186●	2.40	2.23	2.07	1.94	1.83	
0.11	163-6187●	2.40	2.23	2.07	1.94	1.83	
0.22	163-6188●	2.40	2.23	2.07	1.94	1.83	
0.43	163-6189●	2.48	2.31	2.15	2.02	1.90	
0.52	163-6190●	2.48	2.31	2.15	2.02	1.90	
1.12	163-6191●	2.48	2.31	2.15	2.02	1.90	
1.75	163-6192●	2.48	2.31	2.15	2.02	1.90	
2.75	163-6193●	2.48	2.31	2.15	2.02	1.90	
3.5	163-6195●	2.48	2.31	2.15	2.02	1.90	
2.2	163-6196●	2.48	2.31	2.15	2.02	1.90	
3.4	163-6197●	2.48	2.31	2.15	2.02	1.90	
4.5	163-6198●	2.48	2.31	2.15	2.02	1.90	
0.14	163-6199●	2.56	2.40	2.23	2.10	1.97	
0.3	163-6201●	2.56	2.40	2.23	2.10	1.97	
0.62	163-6202●	2.56	2.40	2.23	2.10	1.97	
1	163-6203●	2.56	2.40	2.23	2.10	1.97	
1.5	163-6204●	2.56	2.40	2.23	2.10	1.97	
1.8	163-6205●	2.64	2.48	2.31	2.17	2.04	
2.4	163-6206●	2.64	2.48	2.31	2.17	2.04	
3.3	163-6207●	2.64	2.48	2.31	2.17	2.04	
4.3	163-6208●	2.64	2.48	2.31	2.17	2.04	
1.45	163-6209●	2.64	2.48	2.31	2.17	2.04	
1.75	163-6210●	2.64	2.48	2.31	2.17	2.04	
2.45	163-6211●	2.64	2.48	2.31	2.17	2.04	
0.55	163-6213●	2.56	2.48	2.31	2.17	2.04	
1	163-6214●	2.56	2.48	2.31	2.17	2.04	
0.9	163-6215●	2.56	2.48	2.31	2.17	2.04	
1.4	163-6216●	2.56	2.48	2.31	2.17	2.04	
2.15	163-6217●	2.56	2.48	2.31	2.17	2.04	

High Current Inductors WE-HCB series, shielded



- Flat wire high current inductor
- Very low RDC tolerance
- Magnetically shielded
- Operating temperature range -40°C to +125°C



- For constant current flows of up to 30A
- Core material: WE-PERM2
- For DC/DC Converter or filter

Inductance (μ H)	Tolerance	Selfres. frequency (MHz)	R _{DC} typ. (m Ω)	Current rating (A)	Mfrs.	List No.	Order Code
0.82	$\pm 20\%$	85	0.54	41.5	7443556082	163-6218	
1.3	$\pm 20\%$	78	0.94	34.5	7443556130	163-6219	
1.9	$\pm 20\%$	51	1.2	32.5	7443556190	163-6220	
2.6	$\pm 20\%$	42	1.58	31.5	7443556260	163-6221	
3.5	$\pm 20\%$	38	3.1	22.5	7443556350	163-6222	
4.5	$\pm 20\%$	35	3.4	20.5	7443556450	163-6223	
5.6	$\pm 20\%$	28	3.7	19	7443556560	163-6225	
6.8	$\pm 20\%$	24	4.1	18.5	7443556680	163-6226	

522402

Inductance (μ H)	Order Code	1+	10+	50+	100+	250+	Price Each
0.82	163-6218●	3.72	3.55	3.39	3.18	2.99	
1.3	163-6219●	3.72	3.55	3.39	3.18	2.99	
1.9	163-6220●	3.72	3.55	3.39	3.18	2.99	
2.6	163-6221●	3.72	3.55	3.39	3.18	2.99	
3.5	163-6222●	3.72	3.55	3.39	3.18	2.99	
4.5	163-6223●	3.72	3.55	3.39	3.18	2.99	
5.6	163-6225●	3.72	3.55	3.39	3.18	2.99	
6.8	163-6226●	3.72	3.55	3.39	3.18	2.99	

New

Inductance (μ H)	Order Code	1+	10+	50+	100+	250+	Price Each
0.19	163-6227●	2.40	2.23	2.07	1.94	1.83	
0.47	163-6228●	2.40	2.23	2.07	1.94	1.83	
0.9	163-6229●	2.40	2.23	2.07	1.94	1.83	
1.4	163-6230●	2.40	2.23	2.07	1.94	1.83	
2.3	163-6231●	2.40	2.23	2.07	1.94	1.83	
3.2	163-6232●	2.40	2.23	2.07	1.94	1.83	
6	163-6233●	2.40	2.23	2.07	1.94	1.83	
0.2	163-6234●	2.40	2.23	2.07	1.94	1.83	
0.47	163-6235●	2.40	2.23	2.07	1.94	1.83	
0.82	163-6237●	2.40	2.23	2.07	1.94	1.83	
2	163-6238●	2.40	2.23	2.07	1.94	1.83	
3.7	163-6239●	2.40	2.23	2.07	1.94	1.83	
7.3	163-6241●	2.40	2.23	2.07	1.94	1.83	
9.2	163-6242●	2.40	2.23	2.07	1.94	1.83	
15.4	163-6243●	2.40	2.23	2.07	1.94	1.83	
0.15	163-6244●	2.23	2.07	1.90	1.78	1.68	
0.3	163-6245●	2.23	2.07	1.90	1.78	1.68	
0.56	163-6246●	2.23	2.07	1.90	1.78	1.68	
1	163-6247●	2.23	2.07	1.90	1.78	1.68	
1.5	163-6249●	2.23	2.07	1.90	1.78	1.68	
2.8	163-6251●	2.23	2.07	1.90	1.78	1.68	
4.3	163-6252●	2.23	2.07	1.90	1.78	1.68	

522403

Inductance (μ H)	Order Code	1+	10+	50+	100+	250+	Price Each

<tbl_r cells="8" ix="3" maxc

Power Inductors - continued

High current choke assortment WE-HC & WE-HCA series



- Assortment of shielded flat WE-HC & WE-HCA high current chokes

Mfrs. List No. dimensions (mm)

744355	7 x 6.9 x 3 / 6.6 x 7.3 x 3.4 / 7 x 6.9 x 4 / 10.5 x 10 x 3.9 / 10.2 x 10.2 x 4
744356	14.2 x 12.8 x 5.5 / 14 x 12.8 x 5 / 12.9 x 12.8 x 3.5 / 14 x 12.8 x 4.8 / 14 x 12.8 x 5.3

523252

Mfrs. List No.	Order Code	Price Each
744355	163-6338●	106.55
744356	163-6341●	106.55

High Current Inductors WE-HCFT Series, Shielded



- Round-wire high current inductor THT
- Very low RDC tolerance
- Magnetically shielded
- Operating temperature range -40°C to +125°C
- Very high inductance at high currents
- For DC/DC Converter, filter, Class-D audio

Inductance (μH)	Tolerance ±20%	Selfres. frequency (MHz)	R _{DC} ±%	Current rating (A)	Mfrs. List No.	Order Code	Price Each
10	±20%	11.8	7.2	12.4	744371010	163-6253	
22	±20%	13.9	12.4	9.7	744371022	163-6254	
27	±20%	11.5	13.3	9.3	744371027	163-6255	
33	±20%	5.8	15.5	8.7	744371033	163-6256	

522461

Inductance (μH)	Order Code	1+	10+	50+	100+	250+	Price Each
10	163-6253●	3.97	3.72	3.47	3.26	3.06	
22	163-6254●	3.97	3.72	3.47	3.26	3.06	
27	163-6255●	3.97	3.72	3.47	3.26	3.06	
33	163-6256●	3.97	3.72	3.47	3.26	3.06	

High Current Inductors WE-HCM Series



- Low core losses (MnZn)
- Higher Saturation current up to 60A
- Extrem low RDC, low RDC Tolerance
- Operating Temperature Range -40°C to +125°C

- Recommended soldering profile: Re-flow
- For Polyphase/ Multiphase Switching Regulators, CPU/ RAM Power supply or Power PC's

Inductance (μH)	Tolerance ±20%	Selfres. frequency (MHz)	R _{DC} ±7% (mΩ)	Current rating (A)	Mfrs. List No.	Order Code	Price Each
72	±20%	155	0.235	30	744302007	163-6257	
105	±20%	105	0.235	30	744302010	163-6258	
150	±20%	75	0.235	30	744302015	163-6259	
120	±20%	125	0.325	31	744303012	163-6260	
155	±20%	110	0.325	31	744303015	163-6262	
220	±20%	80	0.325	31	744303022	163-6263	

522473

Inductance (μH)	Order Code	1+	10+	50+	100+	250+	Price Each
72	163-6257●	1.32	1.16	0.99	0.93	0.88	
105	163-6258●	1.32	1.16	0.99	0.93	0.88	
150	163-6259●	1.32	1.16	0.99	0.93	0.88	
120	163-6260●	1.32	1.16	0.99	0.93	0.88	
155	163-6262●	1.32	1.16	0.99	0.93	0.88	
220	163-6263●	1.32	1.16	0.99	0.93	0.88	

522473

Technical information at your fingertips

Over 352,000 technical datasheets available online.

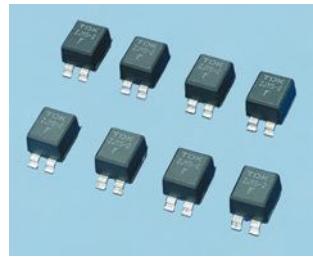
Visit www.farnell.co.uk and look for the Tech Info heading in your search results.



Suppression Chokes

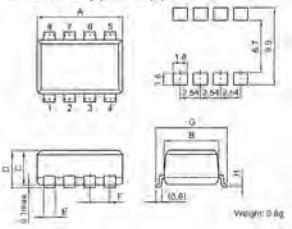


ZJYS Series - Common Mode Choke Coils for Signal Lines

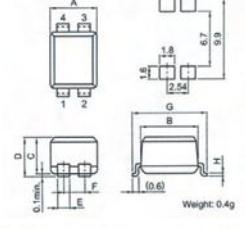


- Common-mode filters for distortion free noise removal from transmitted signals
 - Optimised for the transmission of high quality signals
 - Ideal for countering common mode noise resulting from data signal processing
 - Surface mount packages for miniaturisation in portable applications
 - High current handling of up to 5A allows use in power line noise reduction
- Key applications include, PC's, Telephones, LAN's, ISDN, Digital PBX, electronics games and portable electronic equipment
- ZJYS81R5 is a high inductance version for CANBus applications

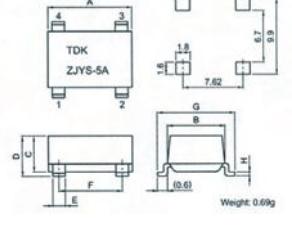
ZJYS51R5-4P(T), -M4PA(T)



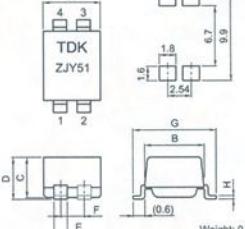
ZJYS51R5-2P(T), -2PB(T), -2PL(T), 5103-2PL(T)



ZJYS5103-2PL(T)



ZJYS81R5-2PL25(T)-G, -2PL51(T)-G



CIRCUIT DIAGRAMS



A	B	C	D	E	F	G	H	Style
max	max	max	max					
5.5	6.86	4.57	5.08	1.3	2.54	9	0.25	ZJYS51R5-2P/5103
10.5	6.86	4.57	5.08	1.3	2.54	9	0.25	ZJYS51R5-4P
10.5	7.5	4.57	5.08	1.3	7.62	9	0.25	ZJYS5105
6	7.1	4.5	5	1.3	2.54	9	0.25	ZJYS81R5
Voltage	Current	Test	Insulation	DC	Impedance	Oper.		
(V)	(dc)	(A)	Res. (MΩ)	Res. (Ω)	(Q)	Temp. (°C)	Mfrs. List No.	Order Code
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-2PT-01	962-1261
50	2	125	100	0.06	200	-25 to +85	ZJYS51R5-2PT	962-1326
50	2	250	100	0.1	100	-25 to +85	ZJYS51R5-2PL	167-0134
50	0.5	125	100	0.2	200	-25 to +85	ZJYS51R5-M4PAT-01	962-1334
80	0.5	200	100	0.25	600	-40 to +125	ZJYS81R5-2PL25T-G01	962-1300
80	0.5	200	100	0.3	1000	-40 to +125	ZJYS81R5-2PL51T-G01	962-1318

*1 Enhanced low frequency impedance characteristics

*2 Separate windings for communications

24229

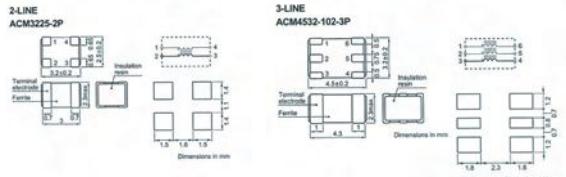
Mfrs. List No.	Order Code	1+	50+	100+	250+	500+
ZJYS51R5-2PT-01	SMD 962-1261● RL	2.14	1.82	1.60	1.42	1.24
ZJYS51R5-4PT-01	SMD 962-1326● RL	3.32	2.82	2.49	2.20	1.95
NEW 167-0134●	1.15	1.07	0.99	0.87	0.79	
ZJYS51R5-M4PAT-01	SMD 962-1334● RL	3.31	2.81	2.48	2.19	1.94
ZJYS81R5-2PL25T-G01	SMD 962-1300● RL	2.09	1.78	1.57	1.39	1.23
ZJYS81R5-2PL51T-G01	SMD 962-1318● RL	2.09	1.78	1.57	1.39	1.23

ACM Series - Common Mode Choke Coils for Signal Lines



- Ultra-miniature wire wound chip filters with performance levels usually associated with much larger devices
- Common mode inductance >1000Ω @ 100MHz
- Virtually no effect upon high speed signal shape due to ultra low differential mode impedance
- Ideally suited to suppression of both radiated and common mode emissions
- Applications include USB, IEEE1394 and LVDS link lines for LCD panels





Impedance (typ) (Ω) @ 100MHz	DC resistance (Ω) max.	Voltage (V) dc	Current (A)	Mfrs. List No.	Order Code
2 Line 1000	0.5	20	0.2	ACM3225-102-2P-T001	962-1350
3 Line 1000	0.6	20	0.2	ACM4532-102-3P-T001	962-1369
243230					
Mfrs. List No.	Order Code	1+	50+	Price Each	
2 Line ACM3225-102-2P-T001	SMD 962-1350 ● RL	1.75	1.53	1.35	1.19
3 Line ACM4532-102-3P-T001	SMD 962-1369 ● RL	1.77	1.56	1.37	1.22
				1.08	1.09

ACM Series - Common Mode Choke Coils for DC Power Lines


SHAPES AND DIMENSIONS ACM3225, 4532 TYPES		CIRCUIT DIAGRAM	

● Common mode chip filters for high current applications
● Common mode impedance >600 to 800Ω at 100MHz
● Exceptional noise suppression in a small package ideally suited for miniaturised or portable equipment
● Perform extremely well in countering adaptor/battery noise
● Ideal for power line noise suppression in any electronic device

Impedance (typ) (Ω) @ 100MHz	DC resistance (Ω) max	Voltage (V) dc	Current (A)	Mfrs. List No.	Order Code
600	0.2	50	1	ACM3225-601-2P-T001	962-1377
600	0.1	50	1.5	ACM4532-601-2P-T001	962-1385
800	0.1	50	1	ACM4532-801-2P-T001	962-1393

243231

Mfrs. List No.	Order Code	1+	50+	100+	250+	500+
ACM3225-601-2P-T001	SMD 962-1377 ● RL	1.80	1.57	1.38	1.21	1.10
ACM4532-601-2P-T001	SMD 962-1385 ● RL	2.90	2.54	2.22	1.98	1.78
ACM4532-801-2P-T001	SMD 962-1393 ● RL	2.64	2.32	2.03	1.80	1.62

ACM Series Common Mode Filters


Operating temperature -25°C to +85°C

Features

- A chip-type common mode filter for large current applications
- Capable of handling the highest current (up to 10A) of any chip-type common mode filter
- Applicable for the miniaturization required to reduce the size and weight of portable equipment

Applications

- Used for power line noise suppression for any electrical devices.
- Used to counter adapter/battery line noise for relatively large electronic devices such as notebook PCs

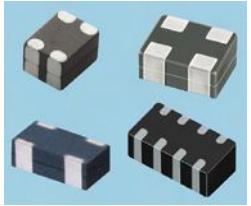
Impedance	Current	Resistance	Dimensions (mm)	Mfrs.	Order Code
@ 100 MHz	Max.	(Ω)	L W H	List No.	
300ohm	5A	10mohm	7mm 6mm	3.5mm	ACM7060-301-2PLmm
700ohm	4A	15mohm	7mm 6mm	3.5mm	ACM7060-701-2PLmm
700ohm	5A	10mohm	9mm 7mm	4.5mm	ACM9070-701-2PLmm
700ohm	8A	6mohm	9mm 6mm	6.0mm	ACM1211-701-2PLmm
1000ohm	6A	14mohm	12mm 11mm	6mm	ACM1211-102-2PLmm
550ohm	10A	4mohm	15mm 13mm	6mm	ACM1513-551-2PLmm

490788

	Order Code	1+	10+	100+	500+	1K+
ACM7060	All Values ●	1.68	1.46	1.27	1.20	1.11
ACM9070	All Values ●	1.79	1.55	1.35	1.28	1.18
ACM1211	All Values ●	1.99	1.63	1.43	1.35	1.24
ACM1513	All Values ●	2.35	1.73	1.53	1.42	1.29

40,000 PRICES REDUCED
Common Mode Chokes

DLP Series



- Common mode chokes for surface mounting
- Wirewound construction

Operating temperature -40°C to +85°C
Resonant frequency 100MHz

Impedance, typical @ 100MHz Ω	Resistance Ω	Current mA	Voltage DC V	Mfrs. List No.	Order Code
DLP0NS Series – 03025 Case Size 90	3	100	5	DLP0NSN900HL2L	151-5568
DLP11SN Series – 0504 Case Size 120	2	140	5	DLP11SN121SL2L	151-5569
160	2.7	120	5	DLP11SN161SL2L	151-5570
200	3.1	110	5	DLP11SN201HL2L	151-5571
240	3.5	100	5	DLP11SN241HL2L	151-5572
280	4.2	90	5	DLP11SN281HL2L	151-5573
330	4.9	80	5	DLP11SN331SL2L	151-5574
67	1.3	180	5	DLP11SN670SL2L	151-5576
DLP2AD Series – 0804 Case Size 120	2	120	5	DLP2ADN121HL4L	151-5577
DLP31DN Series – 1206 Case Size 130	1.6	120	10	DLP31DN131ML4L	151-5578
200	2.2	100	10	DLP31DN201ML4L	151-5579
320	3.5	80	10	DLP31DN321ML4L	151-5580
440	4.3	70	10	DLP31DN441ML4L	151-5581
90	1.1	160	10	DLP31DN900ML4L	151-5582
DLP31SN Series – 1206 Case Size 550	3.6	100	16	DLP31SN551ML2L	151-5583

496329

Series	Order Code	1+	50+	100+	250+	500+
DLP0NS	All Values ●	0.57	0.46	0.34	0.26	0.20
DLP11SN	All Values ●	0.75	0.60	0.45	0.34	0.27
DLP2AD	All Values ●	1.24	0.99	0.75	0.56	0.45
DLP31DN	All Values ●	1.30	1.03	0.85	0.70	0.61
DLP31SN	All Values ●	1.92	1.54	1.16	0.86	0.70


Common Mode Chokes

DLW Series



- Common mode chokes for surface mounting
- Wirewound construction

Operating temperature -40°C to +85°C
Resonant frequency 100MHz

Impedance, typical @ 100MHz Ω	Resistance Ω	Current mA	Voltage DC V	Mfrs. List No.	Order Code
DLW21HN Series – 0805 Case Size 67	0.35	330	125	DLW21HN670SQ2L	151-5587
90	0.35	330	125	DLW21HN900SQ2L	151-5588
120	0.45	280	125	DLW21HN121SQ2L	151-5584
180	0.5	250	125	DLW21HN181SQ2L	151-5586
DLW21SN Series – 0805 Case Size 67	0.25	400	125	DLW21SN670SQ2L	151-5593
90	0.35	330	125	DLW21SN900SQ2L	151-5594
120	0.3	370	125	DLW21SN121SQ2L	151-5589
180	0.35	330	125	DLW21SN181SQ2L	151-5590
260	0.4	300	125	DLW21SN261SQ2L	151-5591
370	0.45	280	125	DLW21SN371SQ2L	151-5592
DLW31SH Series – 1206 Case Size 2200	1.6	80	125	DLW31SH222SQ2L	151-5595
DLW31SN Series – 1206 Case Size 90	0.3	370	125	DLW31SN900SQ2L	151-5602
160	0.4	340	125	DLW31SN161SQ2L	151-5598
260	0.5	310	125	DLW31SN261SQ2L	151-5600
600	0.8	260	125	DLW31SN601SQ2L	151-5601
1000	1	230	125	DLW31SN102SQ2L	151-5596
2200	1.2	200	125	DLW31SN222SQ2L	151-5599

Order Code	1+	50+	100+	250+	500+
DLW21HN	All Values ●	0.53	0.39	0.34	0.29
DLW21SN	All Values ●	0.96	0.77	0.58	0.43
DLW31SH	All Values ●	2.09	1.67	1.26	0.94
DLW31SN	All Values ●	1.07	0.85	0.64	0.52

Impedance, typical @ 100MHz Ω	Resistance Ω	Current mA	Voltage DC V	Mfrs. List No.	Order Code
DLW5AHN Series – 2014 Case Size 4000	3	200	125	DLW5AHN402SQ2L	151-5604
DLW5BSN Series – 2020 Case Size 190	0.02	5000	125	DLW5BSN191SQ2L	151-5607
350	0.04	2000	125	DLW5BSN351SQ2L	151-5609
1000	0.06	1500	125	DLW5BSN102SQ2L	151-5605
1500	0.1	1000	125	DLW5BSN152SQ2L	151-5606

Suppression Chokes - continued

Common Mode Chokes - continued

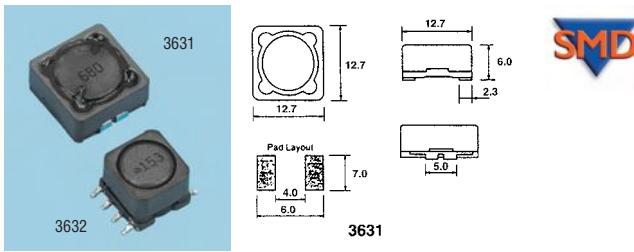
DLW Series - continued

3000	0.3	500	125	DLW5BSN302SQ2L	151-5608
DLW5BTN Series - 2020 Case Size					
100	0.009	6000	125	DLW5BTN101SQ2L	151-5610
250	0.014	5000	125	DLW5BTN251SQ2L	151-5613
500	0.019	4000	125	DLW5BTN501SQ2L	151-5614
1000	0.024	2000	125	DLW5BTN102SQ2L	151-5611
1400	0.04	1500	125	DLW5BTN142SQ2L	151-5612
496333					

Impedance	Order Code	1+	50+	100+	250+	500+	Price Each
DLW5AHN	All Values ●	2.62	2.10	1.57	1.18	0.94	
DLW5BSN							
190	151-5607●	3.28	2.63	1.97	1.48	1.18	
350	151-5609●	1.90	1.52	1.22	1.02	0.81	
1000	151-5605●	2.09	1.68	1.25	1.02	0.81	
1500	151-5606●	2.99	2.39	1.80	1.35	1.07	
3000	151-5608●	2.99	2.39	1.80	1.35	1.07	
DLW5BTN	All Values ●	1.55	1.24	0.93	0.70	0.56	

3631/3632 Series - Shielded Signal Line Chokes

Tyco Electronics



- High power, ferrite cored surface mount inductors
- Fully shielded moulded construction
- Suitable for switching regulators, filter and power line applications and power decoupling

Operating temperature	-20°C to +80°C					
Inductance (μH)	Tolerance %					
L Test Frequency	DC resistance Max.(Ω)					
DC Current Max.(A)	Mfrs. List No.					
	Order Code					
2.5	20	1kHz	0.016	6.2	3631B2R5ML	117-4023
10	20	1kHz	0.035	3.3	3631B100ML	117-4025
22	20	1kHz	0.062	2.3	3631B220ML	117-4026
33	15	1kHz	0.09	1.9	3631B330LL	117-4027
47	15	1kHz	0.13	1.6	3631B470LL	117-4028
100	15	1kHz	0.22	1.1	3631B101LL	117-4029
220	15	1kHz	0.46	0.7	3631B221K	117-4030
330	15	1kHz	0.66	0.6	3631B331K	117-4031
470	15	1kHz	0.97	0.5	3631B471K	117-4032
820	15	1kHz	1.7	0.35	3631B821K	117-4035
1000	15	0.252MHz	2.5	0.3	3632B102LL	117-4036
2200	15	0.252MHz	5	0.2	3632B222LL	117-4037
10000	15	79.6MHz	26	0.095	3632B103LL	117-4038

204188

Order Code	1+	25+	100+	500+	Price Each
3631 Series All Values ● RL	1.70	1.40	1.23	0.95	
3632 Series All Values ● RL	2.03	1.74	1.45	1.19	

CANBus Inductors - B82799 Series

EPCOS SMD



- Case flame retardant to UL94V-0
- Operation up to 150°C
- Suitable for reflow soldering and conductive adhesion

Voltage Rating 42 Vac, 80 Vdc
Inductive Tolerance ±30%
Climatic category 40/125/56
Rated current @ 50 Hz, 60°C 100mA

L=3.2mm, W=4.5mm, H=3.2mm

A range of current compensated ring core double choke with ferrite core devices for suppression of interference on data and signal lines. Bifilar winding (B82799C) and sector winding (B82799S) available.

B82799C - Suppression of asymmetrical interference coupled in on lines, whereas data signals up to some MHz can pass unaffectedly.

B82799S - Suppression of asymmetrical and symmetrical interference coupled in on lines. The high frequency portions of the symmetrical data signal are decreased so far that EMC problems can be significantly reduced.

Inductance nH	Stray inductance nH	DC Resistance Max. (Ω)	Mfrs. List No.	Order Code
11	45	150	B82799C113N1	387-7747
22	1300	200	B82799S223N1	387-7759
51	2700	300	B82799S513N1	387-7772

234193

Order Multiple=5 All Values ●	5+	50+	100+	500+	1K+	Price Each
	2.84	2.67	2.42	2.26	2.13	

Power Inductor Kit

B82799 Series



- Suitable for development and research (R&D)
- Values refillable from stock

Kit contains 11, 22, 33, 51, 100, 220, 330 and 470µH

EPCOS

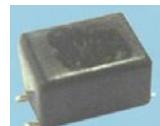
423489

Order Code	1+	3+	Price Each
111-2819●	54.40	49.23	

BOURNS®
Reliable Electronic Solutions

Surface Mount Data Line Chokes

DR331 Series



- Surface mount data line chokes for the suppression of EMI in data and signal lines (e.g. CAN Bus)

Operating temperature -40°C to 135°C
Temperature rise 30°C

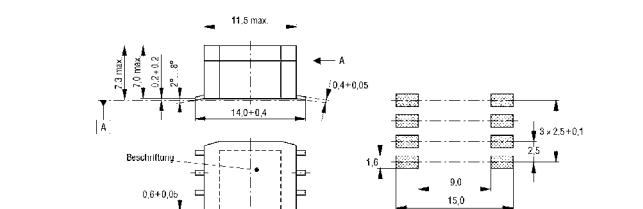
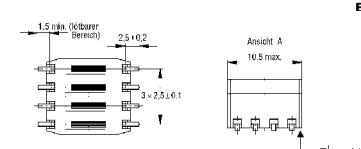
L=9.00mm, W=5.40mm, H=4.70mm

Inductance (μH)	Resistance (Ω)	RMS current max (A)	Voltage ratings DC	Mfrs. List No.	Order Code
51	0.3	0.5	80 AC 42	DR331-513AE	136-2187

476119

Order Code	1+	25+	100+	250+	250+	Price Each
All Values ●	2.04	1.93	1.72	1.58	1.58	

Data and Signal Line Chokes



- Ring core double and Quad chokes in a UL94V-0 flame retardant case
- Applications include CAN-BUS and telecom systems

SMD

Voltage rating 80Vdc/42Vac
IEC climatic category 40/125/56

L _N (mH)	I _N (A)	L _S (μH)	Application	Mfrs. List No.	Order Code
Double Chokes					
0.011	0.5	0.05	4 CAN-Bus	B82790C113N201	975-2234
0.051	0.5	1.5	4 CAN-Bus	B82790S513N201	975-2250
1	0.5	0.2	4 Telecom	B82790C105N240	975-2277
4.7	0.5	0.25	4 Telecom	B82790C475N265	975-2285
4.7	0.2	0.25	8 Telecom	B82792C475N365	524-657
6.8	0.5	0.3	8 Telecom	B82792C685N365	524-839
10	0.2	0.4	8 Telecom	B82792C106N365	524-840
Quad Chokes					
0.47	0.5	0.15	8 ISDN	B82792C2474N315	524-852
1	0.5	0.2	8 ISDN	B82792C2105N365	524-876
4.7	0.2	0.3	8 ISDN	B82792C2475N365	524-943

204146

Order Multiple=5 Mfrs. List No.	Order Code	5+	10+	25+	50+	100+	Price Each
Double chokes							
B82790C113N201	SMD975-2234●	1.80	1.74	1.70	1.59	1.47	
B82790S513N201	SMD975-2250●	2.11	2.07	2.01	1.91	1.75	
B82790C105N240	SMD975-2277●	2.10	2.06	2.01	1.90	1.73	
B82790C475N265	SMD975-2285●	2.41	2.37	2.29	2.18	1.99	
B82792C475N365	SMD524-657●	2.26	2.19	2.13	1.95	1.89	
B82792C685N365	SMD524-839●	2.49	2.45	2.37	2.12	2.04	
B82792C106N365	SMD524-840●	2.63	2.53	2.43	2.21	2.13	
Quad chokes							
B82792C2474N315	SMD524-852●	3.18	3.11	3.03	2.85	2.64	
B82792C2105N365	SMD524-876●	3.36	3.30	3.20	3.02	2.79	
B82792C2475N365	SMD524-943●	4.40	4.32	4.19	3.99	3.66	

Power Inductor Design Kit

B82790 Series



- Suitable for development and research (R&D)
- Values refillable from stock

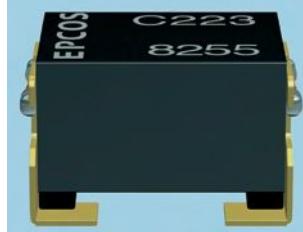
Kit contains 11, 25, 51, 470, 1000, 2200 and 4700 μ H

423490

Order Code	1+	3+
111-2821●	54.40	49.23

Data Line Choke

B82789 Series



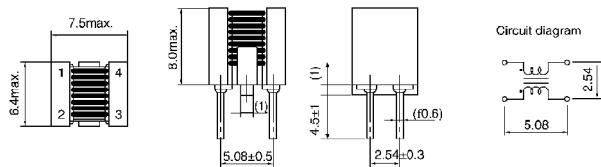
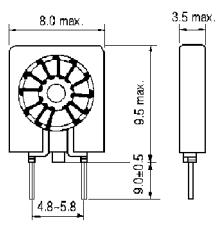
- Current compensated double choke with ferrite core
- Suitable for automatic placement
- Suitable for reflow soldering
- Supression of asymmetrical interface coupled in on lines, whereas data signals up to several MHz can pass unaffected
- Tinned terminals



Rated Voltage	42V (50/60 Hz), 80V DC
Rated Current	Referred to 50Hz and 85°C ambient temperature
Rated Inductance	Measured with HP4275A at 100kHz, 0.1A
Inductance Tolerance	-30%/+50%
Stray Inductance	typical value measured with HP4275A at 100kHz, 5mA
DC resistance	typical value measured at 20°C ambient temperature
Operating Temperature	-40°C to +125°C
Test Voltage	250V-, 2s

Inductance	Leakage Inductance	Current RMS	Test Voltage	Resistance max	Mfrs.	List No.	Order Code
(μ H)	(nH)	(mA)	(V-, 2s)	(m Ω)			
11	60	300	250	200	B82789C113N2	743-0507	
22	100	250	250	500	B82789C223N2	743-0515	
22	3000	250	250	550	B82789S223N2	743-0523	
51	100	250	250	450	B82789C513N2	743-0531	
100	250	150	250	1000	B82789C104N2	743-0540	

Order Multiple=5	Order Code	5+	10+	Price Each	250+	2K5+
All Values ●		1.16	0.99	0.87	0.77	0.71

PCB Mounting

- A range of compact data line filters employing a high performance toroidal core
- These common mode and differential mode chokes have a plastic carrier for ease of PCB mounting.

Voltage rating 50V	Current rating	500mA	
Operating temperature	Differential mode chokes	25°C to +85°C	
Inductance @ 1kHz/ μ H	Inductance Tolerance %	Resistance m Ω	Order Code
Differential Mode			
5.6	± 50	<25	925-3556
20	± 35	<35	925-3564
56	± 35	<35	925-3548
Common Mode			
40	± 35	40	926-5783
80	± 35	55	926-5791

204017

Order Multiple=5	Inductance μ H	Order Code	5+	50+	100+	500+	1K+	Price Each
Differential Mode								
5.6	925-3556●	0.54	0.43	0.37	0.32	0.29		
20	925-3564●	0.54	0.43	0.37	0.32	0.29		
56	925-3548●	0.54	0.43	0.37	0.32	0.29		
Common Mode								
40	926-5783●	1.16	0.88	0.74	0.60	0.56		
80	926-5791●	1.25	0.94	0.79	0.65	0.60		

RoHS Compliant
Non-compliant**SBC Series**
Common and Differential Mode Chokes

KE KITAGAWA

**SBC-75 Series**

- Common mode
- Easy mounting on pc board
- L-element circuit ensures excellent attenuation characteristics over a wide frequency range
- Dimensions (HxWxD) = 9.5 x 7.5 x 6.4

SBC-90/95 Series

- Common mode
- Compact size high performance and low cost
- Large impedance at high frequencies
- Excellent high frequency characteristics
- Dimensions (HxWxD) = 8 x 10.5 x 7.5

SBC-80 Series

- Differential mode
- Unique configuration
- Ideal for EMI filters
- Core is Ni-Zn ferrite
- Base material is Phenolic
- Highly accurate dimensions and taped for automatic inserting
- Dimensions (HxWxD) = 9 x 7.5 x 2.7

Operating temperature -25°C to +85°C

Inductance @ 1kHz/ μ H	Inductance Tolerance %	Impedance Ω min.	Resistance m Ω	Order Code
----------------------------	------------------------	-------------------------	-----------------------	------------

Differential Mode SBC-75 Series

16	± 50	380@100MHz	0.03	130-8795
35	± 50	400@100MHz	0.03	130-8796
60	± 35	800@80MHz	0.045	130-8797
100	± 35	1100@50MHz	0.055	130-8799

SBC-90/95 Series

20	± 50	540@250MHz	0.026	130-8807
100	± 35	1200@100MHz	0.07	130-8808
17	± 20	390@300MHz	0.025	130-8809
27	± 50	900@50MHz	0.03	130-8810

Differential Mode

8	± 50	165@300MHz	15	130-8800
10	± 50	205@200MHz	15	130-8801
60	± 50	1360@60MHz	30	130-8802
80	± 50	1680@60MHz	35	130-8803
120	± 50	250@50MHz	95	130-8805
150	± 50	3960@30MHz	110	130-8806

452206

Order Multiple=5	Order Code	5+	50+	100+	500+	1K+	Price Each
Common Mode ●		0.830	0.640	0.540	0.430	0.420	
Differential Mode ●		0.390	0.310	0.260	0.220	0.194	

Miniature, Low Current – 2200R Series

- Low cost, small outline inductors suitable for general use, such as power decoupling, low power switching regulators and LF tuned circuits
- Open wound ferrite bobbin construction, insulated with flame retardant sleeving.

L	Rdc Ω	I _{max} mA	Mfrs.	Order Code
10 μ H	0.05	1.62	22R103C	107-7049
15 μ H	0.07	1.35	22R153C	107-7050
22 μ H	0.09	1.08	22R223C	107-7051
33 μ H	0.14	900	22R333C	107-7052
47 μ H	0.22	770	22R473C	107-7054
68 μ H	0.28	770	22R683C	107-7055
100 μ H	0.39	670	22R104C	107-7029
150 μ H	0.54	520	22R154C	107-7031
220 μ H	0.83	430	22R224C	107-7032
330 μ H	1.21	380	22R334C	107-7033
470 μ H	1.65	310	22R474C	107-7034
680 μ H	2.64	250	22R684C	107-7035

204070

Order Multiple=10	Inductance	Order Code	10+	100+	500+	500+	1K+	Price Each
10 μ H to 68mH	All Values ●		0.54	0.52	0.51	0.51	0.44	

Over 480,000 products online



08447 11 11 11

Fax: 08447 11 11 12 1301

Suppression Chokes - continued

Low Current – 10RB Series



Inductance (mH)	Resistance (Ω)	I _{max} (mA)	Inductance (mH)	Resistance (Ω)	I _{max} (mA)
39	45	15	82	71	10
47	52	13	100	82	9
56	58	12	120	97	8
68	67	11			

Dia=10.5, H=14, Lead=4
Lead Dia.=0.7, Fixing pitch=5
Q>100 @ 50kHz

204073



Inductance mH	Order Code	1+	25+	Price Each	100+	250+	500+
39	119-3625●	1.16	1.06		1.01	0.85	0.78
47	119-3626●	1.07	0.98		0.95	0.85	0.78
56	119-3627●	1.16	1.06		1.01	0.85	0.78
68	119-3628●	1.16	1.06		1.01	0.85	0.78
82	119-3629●	1.16	1.06		1.01	0.85	0.78
100	119-3630●	1.07	0.98		0.95	0.85	0.78
120	119-3631●	1.16	1.06		1.01	0.85	0.78

204073

Low Current – 8RBS/8RB Series



- A range of fixed inductors suitable for power decoupling in logic circuits and a wide variety of LF tuned circuit applications
- Construction employs an open wound ferrite bobbin insulated by a heatshrun sleeve
- Tolerance is $\pm 10\%$.

Dia=8, H=6.2 (0.1mH to 12mH), 11.2 (22mH to 36mH),
Lead L=2.4, Dia=0.7, Fixing pitch=5

Q>60(@ 796kHz)			Q>80(@ 252kHz)			Q>100(22-36mH) @ 79.6kHz		
Inductance (mH)	Resistance (Ω)	I _{max} (mA)	Inductance (mH)	Resistance (Ω)	I _{max} (mA)	Inductance (mH)	Resistance (Ω)	I _{max} (mA)
0.1	2	200	1	9	50	10	55	20
0.22	3	150	2.2	14	50	12	65	20
0.47	5	100	4.7	32	40	22	80	30
			5.6	36	30	27	80	30
					36			

204073

Inductance mH	Order Code	1+	25+	Price Each	100+	250+	500+
0.1	119-3611●	0.88	0.79		0.73	0.65	0.59
0.22	119-3613●	0.88	0.79		0.73	0.65	0.59
0.47	119-3614●	0.88	0.79		0.73	0.65	0.59
1	119-3615●	0.88	0.79		0.73	0.65	0.59
2.2	119-3616●	0.88	0.79		0.73	0.65	0.59
4.7	119-3617●	0.88	0.79		0.73	0.65	0.59
5.6	119-3618●	0.74	0.67		0.64	0.52	0.48
10	119-3619●	0.88	0.79		0.73	0.65	0.59
12	119-3620●	0.95	0.87		0.82	0.67	0.62
22	119-3621●	0.88	0.79		0.73	0.65	0.59
27	119-3622●	0.95	0.87		0.82	0.67	0.62
36	119-3623●	0.95	0.87		0.82	0.67	0.62

204073

8RHB Series



- Fixed inductor for noise filtering applications in power supplies used in computers, TV etc
- Low profile and high saturation flux density ferrite core insulated with a heatshrun sleeve.

Tolerance $\pm 10\%$

Dia=8.5, H=11
Lead L=5, Dia=0.62, Fixing pitch=5

Inductance μH	Resistance Ω	I _{max} (A)	Q min	Q Test freq (MHz)	Order Code
47	0.16	1.4	30	2.52	119-3632
100	0.28	0.91	20	0.796	119-3633
220	0.68	0.64	20	0.796	119-3634
470	1.1	0.46	20	0.796	119-3635
1000	2.9	0.29	50	0.796	119-3637

204072

Inductance μH	Order Code	1+	25+	Price Each	100+	250+	500+
47	119-3632●	0.88	0.81		0.79	0.69	0.63
100	119-3633●	0.88	0.81		0.79	0.69	0.63
220	119-3634●	0.88	0.81		0.79	0.69	0.63
470	119-3635●	0.88	0.81		0.79	0.69	0.63
1000	119-3637●	0.88	0.81		0.79	0.69	0.63

Current Rating Order Code Min. Inductance (mH) Mfrs. List No. Order Code

0.4A 119-3632● 26 ELF15N004A 969-4218

0.5A 119-3633● 19 ELF15N005A 969-4226

0.7A 119-3634● 10 ELF15N007A 969-4234

1.1A 119-3637● 4 ELF15N011A 969-4242

Operating temperature -20°C to +115°C

Height above PCB=21.5, W=22.7, D=15

Drilling=13 x 10, Dia.=1.2

204072

Open Toroidal



- Toroidal Suppression chokes designed for triac control circuits used in speed control, lighting dimmer and similar applications.

Voltage rating
Lead length
240V
40mm

Power Handling @ 240V	Inductance (mH)±20%	Resistance DCΩ	Inner Dia.	Outer Dia.	Height	Order Code
100W	4	1.8	7.5	20	8	118-7722
250W	4	0.9	7.5	25	10	118-7723
400W	2.9	0.5	10	30	12.5	118-7724
500W	2.4	0.4	10	32	12.5	118-7725

204264

Value (mH)	Order Code	1+	10+	25+	50+	100+
4	118-7722●	2.08	1.95	1.70	1.57	1.45
4	118-7723●	2.20	2.12	1.88	1.71	1.59
2.9	118-7724●	2.79	2.58	2.32	2.11	1.96
2.4	118-7725●	2.43	2.24	2.01	1.87	1.69

SU10V Series

Current Rating (A)	Inductance (mH) min.	DC resistance (Ω/line)	Mfrs. List No.	Order Code
0.1A	10	8	SU9V-01100	926-5813
0.5A	2	1	SU9V-05020	926-5821
0.7A	1	0.6	SU9V-07010	926-5830
1A	0.5	0.3	SU9V-10005	926-5848
0.5A	5	1.5	SU10V-05050	926-5856
1.5A	1	0.2	SU10V-15010	926-5864
2A	0.6	0.15	SU10V-20006	926-5872

204082

Current Rating SU9V Series	Order Code	1+	10+	50+	100+
0.1A	926-5813●	1.71	1.58	1.54	1.29
0.5A	926-5821●	1.71	1.58	1.54	1.29
0.7A	926-5830●	1.22	1.13	1.10	0.92
1A	926-5848●	1.71	1.58	1.54	1.29

Current Rating SU10V Series	Order Code	1+	10+	50+	100+
0.5A	926-5856●	1.84	1.63	1.54	1.29
1.5A	926-5864●	1.84	1.63	1.54	1.29
2A	926-5872●	1.84	1.63	1.59	1.34

204186

Over 480,000 products online



Common Mode
PLA10 Series


H=17.5, W=18, D=16
Drilling=13 x 10, Dia.=1.2

- Compact, high performance common mode choke coils
- Standard or sectional winding options
- Sectional winding type for improved higher frequency operation
- Compact size, with profile 17.5mm max above PCB
- Ideal for switching power supplies, electric ballasts (AC-AC Converter) and TV use

Voltage rating 300V ac/dc
Insulation resistance 100MΩ at 500-25°C+120°C
Operating temperature -25°C to +120°C

Inductance mH
min. Current A rms

DC Resistance Ω
max. Mfrs List No. Order Code

Standard Winding Type

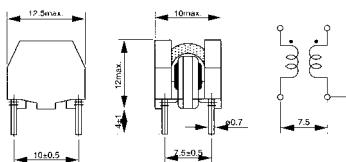
43	0.3	4	PLA10AN4330R3R2B	952-8512
30	0.4	2.7	PLA10AN3030R4R2B	952-8482
20	0.5	1.8	PLA10AN2030R5R2B	952-8440
10	0.7	0.86	PLA10AN1030R7R2B	952-8415
7.4	0.8	0.64	PLA10AN7420R8R2B	952-8539
5.5	1	0.46	PLA10AN5521R0R2B	952-8520
3.6	1	0.44	PLA10AN3621R0D2B	121-9009
3	1.3	0.26	PLA10AN3021R3R2B	952-8474
2.2	1.5	0.22	PLA10AN2221R5R2B	952-8458
1.5	2	0.15	PLA10AN1522R0R2B	952-8423

Sectional Winding Type

36	0.3	4.5	PLA10AN3630R3D2B	952-8504
22	0.4	2.7	PLA10AN2230R4D2B	952-8466
7.7	0.7	1.6	PLA10AN7720R7D2B	952-8547
1.8	1.5	0.21	PLA10AN1821R5D2B	952-8431
0.9	2	0.12	PLA10AN9012R0D2B	952-8555

227220

Order Code	1+	10+	50+	100+	250+	Price Each
All Values ●	1.04	1.02	1.00	0.98	0.92	

PCB Mounting – 3A**TOKIN**

- Common mode chokes wound on a high performance ferrite core suitable for the attenuation of common mode noise in switch mode power supplies, AC adaptors, microprocessor systems etc

Operating temperature -25°C to +80°C
Insulation resistance <10MΩ

Voltage Rating 150V dc
Test Voltage 600Vdc (2 seconds between lines)

204065

Order Code	1+	50+	100+	500+	Price Each
926-5805●	1.65	1.43	1.28	1.04	

B82732/3F Series
Power Line Chokes
**EPCOS****New**

- Current-compensated double choke
- Closed magnetic circuit with frame construction
- 4-section winding with direct winding of the core
- Excellent differential-mode suppression
- High pulse-handling capability
- Tolerance = +30%, -50%

Inductance(mH)	Current (A)	Resistance Typical (Ω)	Dimensions H	W	D	Mfrs. List No.	Order Code
----------------	-------------	------------------------	--------------	---	---	----------------	------------

B82732F Series							
10	1.6	0.29	13.5	24.5	14.5	B82732F2162B001	164-4856
15	1.3	0.43	13.5	24.5	14.5	B82732F2132B001	164-4855
27	0.9	0.77	13.5	24.5	14.5	B82732F2901B001	164-4861
39	0.8	1.1	13.5	24.5	14.5	B82732F2801B001	164-4860
47	0.7	1.26	13.5	24.5	14.5	B82732F2701B001	164-4859
68	0.6	1.97	13.5	24.5	14.5	B82732F2601B001	164-4858
100	0.45	2.93	13.5	24.5	14.5	B82732F2451B001	164-4857

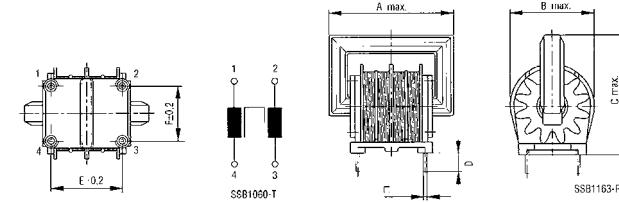
B82733F Series							
10	2.3	0.188	14	26.5	24.8	B82733F2232B001	164-4870
15	1.9	0.279	14	26.5	24.8	B82733F2192B001	164-4869
27	1.4	0.44	14	26.5	24.8	B82733F2142B001	164-4868
39	1.2	0.696	14	26.5	24.8	B82733F2122B001	164-4867
47	1.1	0.804	14	26.5	24.8	B82733F2112B001	164-4866
68	0.9	1.1	14	26.5	24.8	B82733F2901B001	164-4872
100	0.7	1.81	14	26.5	24.8	B82733F2701B001	164-4871

528662

Inductance mH	Order Code	Price Each			
		1+	50+	100+	500+
88	164-4856●	1.91	1.69	1.59	1.18
3.3	164-4855●	1.91	1.69	1.59	1.18
27	164-4861●	1.91	1.69	1.59	1.18
39	164-4860●	1.91	1.69	1.59	1.18
47	164-4859●	1.91	1.69	1.59	1.18
68	164-4858●	1.91	1.69	1.59	1.18
100	164-4857●	1.91	1.69	1.59	1.18

Common Mode - D Core - Vertical**EPCOS**

- Common mode chokes with vertical core for reduced PCB footprint
- 4 section polycarbonate coil former flame retardant to UL94-V-0
- Suitable for attenuation of RFI in switch mode power supplies in audio and computer equipment



Voltage Rating 250V ac/dc IEC climatic category 40/125/56

L _N (mH)	I _N (A)	R _{HP} (mΩ)	Dimensions	Mfrs. List No.	Order Code
88	0.4	2400	20 20.5 15	B82731M2401A30	121-9118
3.3	2.2	110	23 24 16	B82732R2222B30	121-9123
27	1.7	320	31 32.5 21	B82734R2172B30	121-9126
15	2.3	185	31 32.5 21	B82734R2232B30	121-9127
10	2.6	130	31 32.5 21	B82734R2262B30	121-9128
6.8	3.2	85	31 32.5 21	B82734R2322B30	121-9129
3.3	4.6	46	31 32.5 21	B82734R2462B30	121-9130

204118

Inductance mH	Order Code	1+	10+	50+	Price Each
88	121-9118●	2.48	2.28	2.13	
3.3	121-9123●	2.08	1.43	1.30	
27	121-9126●	3.22	3.04	2.76	
15	121-9127●	3.40	3.21	2.92	
10	121-9128●	3.31	3.11	2.83	
6.8	121-9129●	1.96	1.35	1.20	
3.3	121-9130●	2.54	1.80	1.61	

PLY17 Series**murata**
innovator in Electronics

Dimensions (HxWxD): 24.5 x 22.5 x 12.5mm Pin out: 15 x 12.5

- Integration of choke coil function to suppress differential mode/ Low and High Frequency common mode noise
- Low Profile (H=<13mm)

Applications include:

- For AC power supply, AC adapter
- Low profile equipment such as lighting equipment, FPD, Digital Amplifier

Resistance Ω	Current A	Volts V (ac)	Volts V (dc)	Order Code
61	3	300	PLY17BN1023R0B2	111-5047
66	2.4	300	PLY17BN4912R4B2	111-5046
170	1.5	300	PLY17BN1821R5B2	111-5043
360	1	300	PLY17BN3721R0B2	111-5040
530	0.8	300	PLY17BN5520R8B2	111-5039

Suppression Chokes - continued

PLY17 Series - continued

423337

Order Code	1+	25+	Price Each	50+	100+	500+
All Values ●	2.17	1.81	1.40	1.36	1.09	

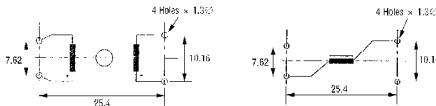
Open Former

ROXBURGH EMC



CMV Series Common mode
H=32, W=32, D=12

SMV Series Differential mode
H=35, W=32, D=13



- Open former common mode and differential mode suppression chokes constructed using a wound ferrite ring mounted vertically onto a flame retardant PCB mounting plastic carrier.

Voltage Rating	250V ac	Operating temperature		-25°C to +100°C	
Line Frequency	DC to 440Hz			Mfrs.	Order Code
Current Rating	Inductance*	Resistance*	(mH)	(mΩ)	
Common Mode - CMV Series					
1A	18	640	CMV10	118-7664	
2A	7.5	160	CMV20	118-7665	
3A	3.2	71	CMV30	118-7717	
4A	2.4	40	CMV40	118-7666	
6A	1.4	19	CMV60	118-7667	
8A	0.74	9.6	CMV80	118-7668	
Differential mode - SMV Series					
1A	1.17	1470	SMV10	118-7669	
2A	0.5	370	SMV20	118-7670	
3A	0.26	140	SMV30	118-7718	
4A	0.21	100	SMV40	118-7671	
6A	0.12	40	SMV60	118-7672	
8A	0.085	25	SMV80	118-7674	

* Per phase

203996

Current Rating	Order Code	1+	10+	Price Each	25+	50+	100+
Common Mode - CMV Series							
1A	118-7664●	3.06	2.85	2.50	2.21	1.88	
2A	118-7665●	3.06	2.85	2.50	2.21	1.88	
3A	118-7717●	3.06	2.85	2.50	2.21	1.88	
4A	118-7666●	3.04	2.72	2.42	2.25	2.10	
6A	118-7667●	3.04	2.72	2.42	2.25	2.10	
8A	118-7668●	3.04	2.72	2.42	2.25	2.10	
Differential Mode - SMV Series							
1A	118-7669●	3.33	3.06	2.69	2.44	2.05	
2A	118-7670●	3.33	3.06	2.69	2.44	2.05	
3A	118-7718●	3.33	3.06	2.69	2.44	2.05	
4A	118-7671●	3.33	3.06	2.69	2.44	2.05	
6A	118-7672●	3.33	3.06	2.69	2.44	2.05	
8A	118-7674●	3.33	3.06	2.69	2.44	2.05	

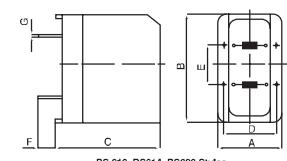
Differential/Symmetrical Mode

SCHAFFNER

RS Series



Compact PCB mounting suppression chokes in a UL94V-0 flame retardant housing for general purpose differential/symmetrical mode applications. Approved to VDE and UL recognised



Package style	A	B	C	D	E	F	G (dia)
RS512	17.1	17.7	12.5	10	15	4	0.8
RS514	21.5	22.5	13.2	12.5	20.1	4	0.8
RS522	27	28	16.5	15	25	4	0.8
RS612	12.5	18	20	10	15	4	0.8
RS614	15.5	23	25	12.5	10	4	0.8
RS622	18	31	29.3	15	12.5	4.7	0.8

Voltage rating Test voltage (winding to winding)		250V ac		Operating temperature 1500V ac (1 min)		-40°C to +125°C	
Current Rating (A) @ 40°C	Typical Inductance (μH)	Resistance per Winding (Ω)	Resonance Frequency (MHz)	Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
2	13	0.03	25	RS512-2/02	119-1404		
4	3	0.01	33	RS512-4/02	119-1406		
2	30	0.05	16	RS514-2/02	119-1407		
4	8	0.02	22	RS514-4/02	119-1409		
2	30	0.05	16	RS614-2/02	119-1413		
4	15	0.03	13	RS622-4/02	120-9499		

204034

Package Style	Order Code	1+	10+	50+	100+	500+
RS512	13	119-1404●	3.72	2.94	2.81	2.18
RS512	3	119-1406●	3.72	2.94	2.81	2.18
RS514	30	119-1407●	4.00	3.19	3.02	2.34
RS514	8	119-1409●	3.90	3.11	2.94	2.27
RS614	30	119-1413●	4.00	3.19	3.02	2.55
RS622	15	120-9499●	5.20	4.13	3.94	3.04

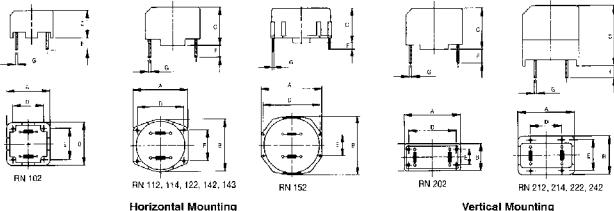
Common/Asymmetrical Mode

SCHAFFNER

RN Series



Horizontal Mounting Vertical Mounting



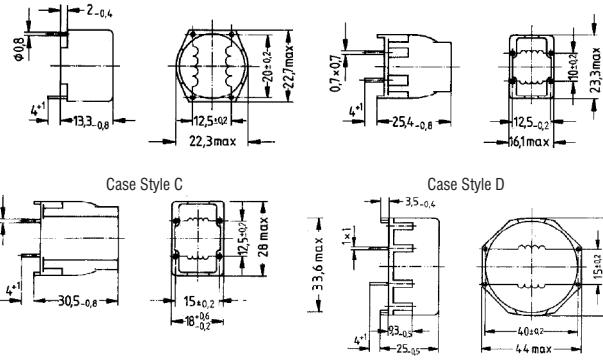
Package style	A	B	C	D	E	F	G (Dia)
Horizontal Mounting							
RN112	17.1	17.1	12.6	15	10	4	0.8
RN114	21.5	22.5	13.2	20.1	12.5	4	0.8
RN122	27	28	16.5	25	15	4	0.8
RN142/3	33.1	32.5	19.7	30	20	4.3	0.8
RN152	43	41.8	25	40	15	4.5	1.2
Vertical Mounting							
RN202	18.2	8.8	13.5	15.21	5.08	4.5	0.8
RN212	12.5	18	20	15	10	4	0.8
RN214	15.5	23	25	10	12.5	4	0.8
RN222	18	31	29.3	12.5	15	4.7	0.8
RN242	31	18	34.3	12.5	15	4.2	0.8

Voltage rating	250V ac	Operating temperature	-40°C to +125°C
Test voltage (winding to winding)	1500V ac (2 seconds)	Common mode resonance frequencies	

Current Rating (A) @ 45°C	Typical Inductance (mH)	Resistance per Winding (Ω)	Mfrs. List No.	Order Code
Horizontal Mounting				
0.3	12	1.275	RN102-0.3/02	119-1459
0.6	4.4	0.385	RN102-0.6/02	119-1461
1	3	0.205	RN102-1.0/0.2	119-1462
1.5	1.1	0.1	RN102-1.5/0.2	119-1463
2	1.1	0.07	RN102-2/02	119-1464
0.4	39	2	RN112-0.4/02	119-1465
0.5	27	1.25	RN112-0.5/0.2	119-1466
0.6	15	0.83	RN112-0.6/0.2	119-1467
0.8	10	0.37	RN112-0.8/0.2	119-1468
1.2	6.8	0.245	RN112-1.2/0.2	119-1471
1.5	3.3	0.17	RN112-1.5/0.2	119-1472
2	1.8	0.075	RN112-2/02	119-1473
4	0.7	0.035	RN112-4/0.2	119-1474
0.3	47	1.75	RN114-0.3/0.2	119-1475
0.8	27	0.5	RN114-0.8/0.2	119-1476
1	15	0.375	RN114-1/0.2	119-1479
1.2	10	0.2	RN114-1.2/0.2	119-1477
1.5	6.8	0.13	RN114-1.5/0.2	119-1478
2	4.2	0.14	RN114-2/0.2	119-1481
2.5	3.3	0.072	RN114-2.5/0.2	119-1480
3	2	0.055	RN114-3.0/0.2	119-1483
4	1.5	0.035	RN114-4/0.2	119-1484
0.6	47	1.18	RN122-0.6/0.2	119-1485
0.8	39	1	RN122-0.8/0.2	119-1486
1.5	10	0.22	RN122-1.5/0.2	119-1487
2	6.8	0.13	RN122-2/0.2	119-1489
2.5	5.6	0.105	RN122-2.5/0.2	119-1488
3	4.5	0.08	RN122-3/0.2	119-1490
4	3.3	0.04	RN122-4/0.2	119-1491
6	1.8	0.02	RN142-6/0.2	119-1492
2	10	0.23	RN143-2/0.2	119-1493
Vertical Mounting				
0.3	12	1.275	RN202-0.3/0.2	119-1499

Current Rating (A) @ 45°C	Typical Inductance (mH)	Resistance per Winding (Ω)	Mfrs. List No.	Order Code
Vertical Mounting				
0.6	4.4	0.385	RN202-0.6/02	119-1501
1	3	0.205	RN202-1/02	119-1503
1.5	1.6	0.1	RN202-1.5/02	119-1502
2	1.1	0.07	RN202-2/02	119-1504
0.4	39	1.5	RN212-0.4/02	119-1505
0.5	27	1.25	RN212-0.5/02	119-1506
0.6	15	0.8	RN212-0.6/02	119-1507
0.8	10	0.37	RN212-0.8/02	119-1508
1.2	6.8	0.245	RN212-1.2/02	119-1509
1.5	3.3	0.15	RN212-1.5/02	119-1510
2	1.8	0.075	RN212-2/02	119-1511
4	0.7	0.03	RN212-4/02	119-1513
0.8	27	0.5	RN214-0.8/02	119-1514
2.5	3.3	0.072	RN214-2.5/02	119-1515
3	2	0.055	RN214-3/02	119-1517
4	1.5	0.035	RN214-4/02	119-1518
1	18	0.61	RN222-1.0/02	119-1519
2	6.8	0.147	RN222-2/02	119-1521
2.5	5.6	0.12	RN222-2.5/02	119-1520
3	4.5	0.08	RN222-3.0/02	119-1522
4	3.3	0.06	RN222-4/02	119-1523
4	3.3	0.066	RN242-4/02	119-1526
6	1.8	0.02	RN242-6/02	119-1527

220484



LH (mH)	IN (A)	R typ (mΩ)	Dimensions	Pin Spacing	Mfrs List No.	Order Code
Vertical						
39	0.4	2000	20.3 13.2 18.2	10	15	B82721K2401N20
10	0.7	600	20.3 13.2 18.2	10	15	B82721K2701N20
6.8	1.2	280	20.3 13.2 18.2	10	15	B82721K2122N20
0.4	3.6	35	20.3 13.2 18.2	10	15	B82721K2362N1
Vertical						
10	1	480	25.4 16.1 23.3	12.5	10	B82722J2102N1
2.2	2	130	25.4 16.1 23.3	12.5	10	B82722J2202N1
1.2	3	56	25.4 16.1 23.3	12.5	10	B82722J2302N1
Vertical						
27	1	750	30.5 18.6 28	15	12.5	B82723J2102N1
5.6	2	160	30.5 18.6 28	15	12.5	B82723J2202N1
2.7	4	60	30.5 18.6 28	15	12.5	B82723J2402N1
Vertical						
27	1.4	500	33.2 18.5 31.3	15	12.5	B82724J2142N1
3.3	4	66	33.2 18.5 31.3	15	12.5	B82724J2402N1
Horizontal						
10	2	230	25.0 33.1 32.6	20	30	B82724B2202N1
1.8	6	23	25.0 33.1 32.6	20	30	B82724B2602N1
18	2	350	25.0 44.0 42.4	20	30	B82725A2202N1
2.7	8	22	25.0 44.0 42.4	20	30	B82725A2802N1
1.8	10	14	25.0 44.0 42.4	20	30	B82725A2103N1

204075

Inductance mH	Order Code	1+	10+	25+	50+	100+	500+
Vertical							
39	121-9099●	3.24	2.81	2.47	2.14	1.85	1.28
10	121-9100●	2.72	2.38	2.08	1.79	1.52	1.04
6.8	121-9097●	1.95	1.34	1.02	0.87	0.82	0.80
0.4	121-9098●	2.58	2.24	2.02	1.73	1.53	1.00
Vertical							
10	121-9101●	1.90	1.32	1.05	0.93	0.84	0.82
2.2	121-9102●	2.74	2.38	2.10	1.85	1.58	1.06
1.2	121-9103●	1.90	1.32	1.05	0.93	0.84	0.82
Vertical							
27	121-9104●	3.66	3.19	2.80	2.46	2.16	1.45
5.6	121-9105●	2.54	2.20	1.95	1.70	1.49	1.00
2.7	121-9106●	3.52	3.05	2.68	2.37	2.07	1.39
Vertical							
27	121-9112●	3.89	3.38	2.97	2.62	2.26	1.56
3.3	121-9114●	3.72	3.31	2.94	2.67	2.46	1.66
Horizontal							
10	121-9107●	3.83	3.42	3.17	2.68	2.48	1.65
1.8	121-9109●	4.17	3.77	3.54	3.05	2.87	2.00
18	121-9116●	4.29	3.89	3.63	3.14	2.95	2.06
2.7	121-9117●	5.77	3.97	2.95	2.50	2.44	2.39
1.8	121-9115●	5.41	4.94	4.58	4.25	4.12	3.92

Shielded Power Inductors

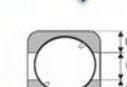
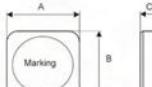
WE-TPC Series, Extremely Flat



New



SMD



- Extremely flat power inductor
- High current capability
- High reliability and perfect soldering characteristics because of an integrated soldering pad
- Magnetically shielded which results in a low leakage field
- Operating temperature range: -40°C up to +125°C
- For portable applications like PDA, digital camera, PCMCIA-cards, displays or DC/DC-converter
- Recommended for switching regulator IC's from Linear Techn., National Semiconductor, TI and Fairchild Semiconductor

	A	B	C	D	E
Type T	2.8	2.8	1.1	0.9	0.9
Type TH	2.8	2.8	1.35	0.9	0.9
Type XS	3.3	3.5	0.95	1.1	0.5
Type S	3.8	3.8	1.65	1.3	1.2
Type M	4.8	4.8	1.8	1.6	1.6
Type MH	4.8	4.8	2.8	1.6	1.6

Current Compensated

Twin Coil



- Current compensated, ferrite ring core chokes
- Case flame retardant to UL94V-0
- Approved to VDE 565-2

EPCOS

Case Style A

Case Style B

Suppression Chokes - continued

Shielded Power Inductors - continued

WE-TPC Series, Extremely Flat - continued

Dimensions (mm)						
	A	B	C	D	E	
Type L	5.8	5.8	1.8	1.9	2	
Type LH	5.8	5.8	2.8	1.9	2	
Type X	6.8	6.8	2.3	2.3	2.2	
Type XMH	8	8	2	3.2	2.4	
Type XL	10	10	2.8	3.2	7.4	
Type XLH	10	10	3.8	3.2	7.4	
Inductance (μ H)	Tolerance	Selfres. frequency (MHz)	R_{DC} (Ω)	Current rating (A)	Mftrs.	
					List No.	Order Code
Type T						
0.11	$\pm 35\%$	2000	0.013	4.6	74402800011	163-5818
0.47	$\pm 35\%$	350	0.036	2.5	74402800047	163-5819
1	$\pm 30\%$	150	0.065	1.9	744028001	163-5820
4.7	$\pm 30\%$	70	0.265	0.9	744028004	163-5821
10	$\pm 30\%$	45	0.55	0.63	744028100	163-5822
Type TH						
0.11	$\pm 35\%$	1000	0.011	4.8	74402900011	163-5823
0.47	$\pm 35\%$	350	0.029	2.8	74402900047	163-5824
1	$\pm 30\%$	150	0.045	2.5	744029001	163-5825
4.7	$\pm 30\%$	65	0.17	1.2	744029004	163-5826
10	$\pm 30\%$	40	0.39	0.75	744029100	163-5828
Type XS						
1.2	+20%, -35%	210	0.095	1	744030001	163-5829
4.7	$\pm 30\%$	100	0.252	0.48	744030004	163-5830
10	$\pm 30\%$	60	0.58	0.28	744030100	163-5831
22	$\pm 30\%$	40	1.39	0.22	744030220	163-5832
Type S						
1.5	$\pm 30\%$	125	0.04	1.75	744031001	163-5833
4.7	$\pm 30\%$	75	0.09	1.2	744031004	163-5834
10	$\pm 30\%$	45	0.185	0.74	744031100	163-5835
47	$\pm 30\%$	20	0.94	0.39	744031470	163-5836
100	$\pm 30\%$	10	1.93	0.25	744031101	163-5837
Type M						
1	$\pm 30\%$	177	0.028	2.7	744042001	163-5838
4.7	$\pm 30\%$	70	0.07	1.72	744042004	163-5841
10	$\pm 30\%$	45	0.12	1.3	744042100	163-5842
22	$\pm 30\%$	26	0.255	0.88	744042220	163-5843
100	$\pm 30\%$	10	1.06	0.4	744042101	163-5844
Type MH						
1.2	$\pm 30\%$	150	0.017	3.1	7440430012	163-5845
4.7	$\pm 30\%$	60	0.052	1.55	744043004	163-5846
10	$\pm 30\%$	40	0.095	1.19	744043100	163-5847
22	$\pm 30\%$	20	0.155	0.925	744043220	163-5848
100	$\pm 30\%$	11	0.52	0.51	744043101	163-5849
470	$\pm 30\%$	3	2.31	0.24	744043471	163-5850
Type L						
1.2	$\pm 30\%$	120	0.02	3	7440520012	163-5851
5	$\pm 30\%$	55	0.047	1.65	744052005	163-5853
10	$\pm 30\%$	40	0.106	1.1	744052100	163-5854
22	$\pm 30\%$	25	0.21	0.8	744052220	163-5855
47	$\pm 30\%$	18	0.47	0.77	744052470	163-5856
68	$\pm 30\%$	14	0.66	0.64	744052680	163-5857
220	$\pm 30\%$	7	1.89	0.23	744052221	163-5858
470	$\pm 30\%$	N/A	4.175	0.14	744052471	163-5859
Type LH						
2.6	$\pm 30\%$	55	0.022	3	744053002	163-5860
4.7	$\pm 30\%$	40	0.03	2.4	7440530047	163-5861
10	$\pm 30\%$	35	0.05	1.5	744053100	163-5862
22	$\pm 30\%$	20	0.095	1.15	744053220	163-5863
47	$\pm 30\%$	13	0.22	0.82	744053470	163-5865
100	$\pm 30\%$	10	0.36	0.45	744053101	163-5866
220	$\pm 30\%$	20	0.92	0.3	744053221	163-5867
Type X						
1	+20%, -40%	110	0.01	4.8	744062001	163-5868
5	$\pm 30\%$	50	0.038	2.15	744062005	163-5869
10	$\pm 30\%$	35	0.053	1.6	744062100	163-5870
22	$\pm 30\%$	20	0.09	1.22	744062220	163-5871
47	$\pm 30\%$	12	0.237	0.73	744062470	163-5872
100	$\pm 30\%$	10	0.44	0.55	744062101	163-5873
1000	$\pm 30\%$	2	4.69	0.16	744062102	163-5874
Type XMH						
0.18	$\pm 30\%$	600	0.00351	8.5	74407000018	163-5875
0.47	$\pm 30\%$	300	0.0058	7	74407000047	163-5877
1.2	$\pm 30\%$	150	0.0125	4.6	74407000112	163-5878
4.7	$\pm 30\%$	65	0.037	3	74407000047	163-5879
10	$\pm 30\%$	30	0.078	2	74407001000	163-5880
22	$\pm 30\%$	16	0.166	1.3	7440700220	163-5881
Type XL						
1	$\pm 30\%$	100	0.0058	8	744065001	163-5882
4.7	$\pm 30\%$	40	0.02	4.6	7440650047	163-5883
10	$\pm 30\%$	25	0.045	3	744065100	163-5884
22	$\pm 30\%$	16	0.11	1.8	744065220	163-5885
47	$\pm 30\%$	11	0.18	1.4	744065470	163-5886
100	$\pm 30\%$	7	0.33	1	744065101	163-5887
150	$\pm 30\%$	5	0.53	0.85	744065151	163-5889
Type XLH						
1.5	$\pm 30\%$	65	0.0062	7.2	7440660015	163-5891
5	$\pm 30\%$	30	0.0165	4.9	744066005	163-5892
10	$\pm 30\%$	20	0.028	3.6	744066100	163-5893
22	$\pm 30\%$	12	0.06	2.5	744066220	163-5894
47	$\pm 30\%$	8	0.132	1.75	744066470	163-5896
100	$\pm 30\%$	6	0.255	1.2	744066101	163-5897
220	$\pm 30\%$	6	0.57	0.75	744066221	163-5898
680	$\pm 30\%$	2	1.65	0.46	744066681	163-5899

Order Code	Order Code	1+	10+	50+	100+	250+
Type T	All Values	0.60	0.56	0.52	0.49	0.46
Type TH	All Values	0.60	0.56	0.52	0.49	0.46
Type XS	All Values	0.60	0.56	0.52	0.49	0.46
Type S	All Values	0.60	0.56	0.52	0.49	0.46
Type M	All Values	0.56	0.52	0.48	0.45	0.42
Type MH	All Values	0.56	0.52	0.48	0.45	0.42
Type L	All Values	0.55	0.50	0.46	0.44	0.41
Type LH	All Values	0.56	0.52	0.48	0.45	0.42
Type X	All Values	0.60	0.56	0.52	0.49	0.46
Type XMH	All Values	0.68	0.64	0.60	0.57	0.54
Type XL	All Values	0.65	0.61	0.59	0.55	0.52
Type XLH	All Values	0.65	0.61	0.59	0.55	0.52

Choke Assortment

WE-TPC Series



- Assortment of WE-TPC SMD chokes in small, medium and large case sizes
- Small kit: 35 values, 10 pieces of each
- Medium kit: 35 values, 10 pieces of each
- Large kit: 35 values, 5 pieces of each

523200

Kit	Case Size	Order Code	Price Each
		1+	
WE-TPC Kit	Small	163-6332●	81.77
WE-TPC Kit	Medium	163-6333●	81.77
WE-TPC Kit	Large	163-6334●	81.77

Dimensions (mm)				
A	B	C	D	E
Type L	12	12	6	8
Type XL	12	12	8	8
Type XXL	12	12	10	7.6
Type XS	5.9	6.2	3.3	1.5
Type S	7.3	3.2	1.5	1.5
Type M	7.3	4.5	1.5	1.5

Inductance (μ H)	Tolerance	Selfres. frequency (MHz)	Current rating (mA)	Mftrs.
				List No.
Type L				Order Code
1.5	$\pm 20\%$	60	4	744771001
2.2	$\pm 20\%$	50	5	744771002
4.7	$\pm 20\%$	35	8	744771004
8.2	$\pm 20\%$	25	14	744771008
10	$\pm 20\%$	21.5	18	5
15	$\pm 20\%$	16.6	25	3.75
22	$\pm 20\%$	13	31	3.37
47	$\pm 20\%$	8	72	2.21
68	$\pm 20\%$	6	96	1.91
100	$\pm 20\%$	4.9	150	1.53
150	$\pm 20\%$	4.4	185	1.21
220	$\pm 20\%$	3.8	290	0.96
470	$\pm 20\%$	2.6	660	0.64
680	$\pm 20\%$	2.3	880	0.55
1000	$\pm 20\%$	1.9	1430	0.43
Type XL				Order Code
0.47	+20%, -25%	120	2.9	74477009
1.2	+40%, -20%	45	5	74477001
2.4	+40%, -20%	41	9	10.1
4.7	+40%, -20%	31.2	12	8.5
6.1	+40%, -20%	25	15	7.6
10	$\pm 20\%$ </td			



Inductance (μ H)	Tolerance	Sel.fres. frequency (MHz)	R_{DC} (m Ω)	Current rating (mA)	Mfrs.	List No.	Order Code
Type XL							
470	$\pm 20\%$	2.6	496	0.9	744770247	163-5935	
680	$\pm 20\%$	2.2	840	0.7	744770268	163-5936	
1000	$\pm 20\%$	1.8	1040	0.6	74477030	163-5937	
Type XXL							
1	$\pm 20\%$	120	3.86	13	7447709001	163-5938	
2.2	+40%, -20%	65	4.94	11.5	7447709002	163-5939	
4.7	$\pm 20\%$	38	7.42	9.3	7447709004	163-5940	
6.8	$\pm 20\%$	23	9.1	8.4	7447709006	163-5941	
10	$\pm 20\%$	21	12.94	7.1	7447709100	163-5942	
15	$\pm 20\%$	17	20.75	6.5	7447709150	163-5944	
22	$\pm 20\%$	10	23.3	5.3	7447709220	163-5945	
47	$\pm 20\%$	6.5	45.93	3.8	7447709470	163-5946	
68	$\pm 20\%$	6	68.64	3.2	7447709680	163-5947	
100	$\pm 20\%$	6	100	2.5	7447709101	163-5948	
150	$\pm 20\%$	5.5	151	2.1	7447709151	163-5949	
220	$\pm 20\%$	2.2	193	1.8	7447709221	163-5950	
470	$\pm 20\%$	2	437	1.4	7447709471	163-5951	
680	$\pm 20\%$	1.5	660	1.1	7447709681	163-5952	
1000	$\pm 20\%$	N/A	930	0.9	7447709102	163-5953	
1500	$\pm 20\%$	0.9	1800	0.9	7447709152	163-5956	
Type XS							
1	$\pm 25\%$	192	31	3.5	7447785001	163-5957	
2.2	$\pm 25\%$	93	43	2.9	7447785002	163-5958	
4.7	$\pm 25\%$	60	60	2.2	7447785004	163-5959	
6.8	$\pm 25\%$	45	79	2.3	7447785006	163-5960	
10	$\pm 25\%$	37	100	1.9	744778510	163-5961	
15	$\pm 25\%$	28	165	1.6	7447785115	163-5962	
22	$\pm 25\%$	23	210	1.35	7447785122	163-5963	
47	$\pm 25\%$	16.5	500	0.85	7447785147	163-5964	
100	$\pm 25\%$	11	950	0.65	744778520	163-5965	
Type S							
1	$\pm 20\%$	42	10	5.37	7447789001	163-5966	
2.2	$\pm 20\%$	36	19	4.02	7447789002	163-5968	
4.7	$\pm 20\%$	30	33	2.9	7447789004	163-5969	
6.8	$\pm 20\%$	26	41.5	2.5	7447789006	163-5970	
10	$\pm 20\%$	23	64	1.83	744778910	163-5971	
15	$\pm 20\%$	20.8	100	1.51	7447789115	163-5972	
22	$\pm 20\%$	18	119	1.38	7447789122	163-5973	
47	$\pm 20\%$	13	315	0.85	7447789147	163-5974	
68	$\pm 20\%$	10.2	427	0.74	7447789168	163-5975	
100	$\pm 20\%$	7	585	0.62	744778920	163-5976	
150	$\pm 20\%$	6.5	720	0.56	7447789215	163-5977	
220	$\pm 20\%$	5.6	1350	0.43	7447789222	163-5978	
470	$\pm 20\%$	3.8	2600	0.3	744778924	163-5981	
680	$\pm 20\%$	3	4500	0.22	744778926	163-5982	
1000	$\pm 20\%$	2	5570	0.2	744778930	163-5983	
Type M							
1	$\pm 20\%$	49	10	5.3	7447790001	163-5984	
2.2	$\pm 20\%$	43	16	4.2	7447790002	163-5985	
4.7	$\pm 20\%$	35	28	3.16	7447790004	163-5986	
6.8	$\pm 20\%$	30	33	2.91	7447790006	163-5987	
10	$\pm 20\%$	23	45	2	7447791910	163-5988	
15	$\pm 20\%$	19	70	1.6	7447791915	163-5989	
22	$\pm 20\%$	15	90	1.41	7447791922	163-5991	
47	$\pm 20\%$	10	190	1.03	7447791947	163-5993	
68	$\pm 20\%$	9	239	0.87	7447791968	163-5994	
100	$\pm 20\%$	7	290	0.79	74477920	163-5995	
150	$\pm 20\%$	6.3	529	0.52	744779215	163-5996	
220	$\pm 20\%$	4.8	920	0.44	744779222	163-5997	
470	$\pm 20\%$	3.8	1600	0.29	74477924	163-5998	
680	$\pm 20\%$	3.2	2600	0.23	74477926	163-5999	
1000	$\pm 20\%$	2.3	3270	0.2	74477930	163-6000	

Unshielded Power Inductors

WE-PD2 Series

New

Würth Elektronik

SMD



- Non magnetically shielded
- Operating temperature: -40°C to +85°C
- 1kHz test frequency
- For switching regulators with low operating voltage (computer, laptop, mobiles, pagers)
- For integrated DC/DC-converter
- Perfectly suitable for switching regulators e.g. from National Semiconductor, Linear Technology, Texas Instruments, STMicroelectronics, Maxim, Micrel, Semtech
- Perfectly suitable for switching regulators with extremely high efficiency or graphics cards

	A	B	C	D
Type S	4	4.5	3.2	1
Type M	5.2	5.8	4.5	2
Type MS	5.2	5.8	2	2
Type L	7	7.8	5	3
Type XL	9	10	5.4	3.5

Inductance (μ H)	Tolerance	Sel.fres. frequency (MHz)	R_{DC} (m Ω)	Current- rating (A)	Mfrs.	List No.	Order code
--------------------------	-----------	---------------------------------	---------------------------	------------------------	-------	----------	------------

Type S	1	$\pm 20\%$	110	14	4	7447730	163-6001
2.2	$\pm 20\%$	74	34	2.5	744773022	163-6002	
4.7	$\pm 20\%$	45	59	1.82	744773047	163-6003	
6.8	$\pm 20\%$	35	76	1.54	744773068	163-6004	
10	$\pm 20\%$	30	118	1.45	744773110	163-6006	
15	$\pm 20\%$	27	204	1.2	744773115	163-6007	
22	$\pm 20\%$	20	261	1	744773122	163-6008	
47	$\pm 10\%$	12	523	0.68	744773147	163-6009	
68	$\pm 10\%$	11	754	0.56	744773168	163-6010	

Type M	2.2	$\pm 20\%$	54	26	4.6	744774022	163-6011
4.7	$\pm 20\%$	33	56	3	744774047	163-6012	
6.8	$\pm 20\%$	28	71	2.4	744774068	163-6013	
10	$\pm 20\%$	26	78	2.2	744774110	163-6014	
15	$\pm 20\%$	20	89	1.53	744774115	163-6015	
22	$\pm 20\%$	16	109	1.28	744774122	163-6016	
47	$\pm 15\%$	10	260	0.86	744774147	163-6018	
68	$\pm 10\%$	10	313	0.64	744774168	163-6019	
100	$\pm 10\%$	7	510	0.57	744774200	163-6020	
150	$\pm 10\%$	6	720	0.46	744774215	163-6021	
220	$\pm 10\%$	5	945	0.42	744774222	163-6023	

Type MS	0.12	$\pm 20\%$	250	2.5	10	74477450012	163-6024
0.27	$\pm 20\%$	180	4.4	8.2	8	7447745027	163-6025
0.56	$\pm 20\%$	145	7.8	6.5	7	7447745056	163-6026
1.2	$\pm 20\%$	96	17	4.8	6	7447745012	163-6027
2.2	$\pm 20\%$	64	30	3.6	5	7447745022	163-6028
6.8	$\pm 20\%$	42	57	2.5	4	7447745047	163-6031
10	$\pm 20\%$	30	80	2.1	3	7447745062	163-6032
15	$\pm 20\%$	28	120	1.7	2	7447745100	163-6033
22	$\pm 20\%$	10	480	0.9	1	7447745330	163-6034

Type L	10	$\pm 10\%$	23	44	2.3	74477510	163-6035
15	$\pm 10\%$	18	44	1.93	1.93	744775115	163-6036
22	$\pm 10\%$	15	65	1.76	1.76	744775122	163-6037
47	$\pm 10\%$	10	134	1.17	1.17	744775147	163-6038
68	$\pm 10\%$	8	218	0.99	0.99	744775168	163-6039
100	$\pm 10\%$	7	208	0.77	0.77	744775200	163-6040
150	$\pm 10\%$	6	467	0.6	0.6	744775215	163-6041
220	$\pm 10\%$	5	614	0.51	0.51	744775222	163-6043
470	$\pm 10\%$	3	1370	0.36	0.36	744775247	163-6044

Type XL	10	$\pm 20\%$	2

Suppression Chokes - continued

Shielded Power Inductor

WE-PD3 Series



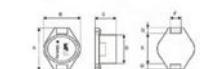
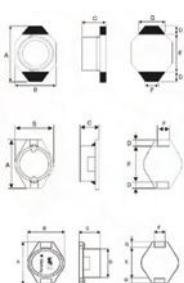
New



WÜRTH ELEKTRONIK



- Magnetically shielded version which results in a low leakage field
- Extremely low profile of type M: 2.7mm
- Low inherent losses, high storage capacity
- Operating temperature: -40°C to +125°C
- Operating frequencies up to 10 MHz
- EMI-filter, perfectly suitable for switching regulators e.g. of National Semiconductor, Linear Technology, Texas Instruments, STMicroelectronics, Maxim, Micrel, Semtech
- Perfectly suitable for switching regulators with extremely high efficiency



Dimensions (mm)						
Type S	A 6.6	B 4.45	C 2.92	D 1	E 4.32	F 3.05
Type M	12.7 ±0.2	10.3 ±0.2	2.7 ±0.3	2.4 ±0.2	7.6 ±0.3	2.5 ±0.2
Type L	12.7 ±0.2	10.0 ±0.2	4.9 ±0.3	2.4 ±0.2	7.6 ±0.3	2.0 ref.
Type X	18.54	15.24	7.62	2.54	12.7	2.54

Inductance (μH)	Tolerance	Selfres. frequency (MHz)	R_{DC} typ. (Ω)	Current rating (A)	Mfrs.	
					List No.	Order Code
Type S						
1	±20%	250	0.014	3	7445101	163-6057
2.2	±20%	120	0.021	1.8	74451022	163-6058
4.7	±20%	105	0.045	1.4	74451047	163-6060
6.8	±20%	50	0.055	1.2	74451068	163-6061
10	±20%	38	0.056	1	7445110	163-6062
15	±20%	33	0.075	0.8	74451115	163-6063
22	±20%	25	0.09	0.7	74451122	163-6064
47	±20%	20	0.16	0.5	74451147	163-6065
68	±20%	15	0.221	0.4	74451168	163-6067
100	±20%	10	0.393	0.3	7445120	163-6068
150	±20%	9	0.41	0.26	74451215	163-6069
220	±20%	6	0.58	0.22	74451222	163-6070
470	±20%	4	1.7	0.19	74451247	163-6071
Type M						
1.5	±20%	78	0.029	3	7445301	163-6072
2.2	±20%	68	0.037	2.76	7445302	163-6073
4.7	±20%	43	0.065	1.9	7445304	163-6074
					7445306	163-6075
10	±20%	36	0.117	1.24	74453010	163-6076
15	±20%	29	0.17	1	74453115	163-6077
22	±20%	21	0.248	0.8	74453122	163-6079
47	±20%	13	0.481	0.6	74453147	163-6081
68	±20%	12	0.62	0.48	74453168	163-6082
100	±20%	9.3	1.164	0.4	7445320	163-6083
Type L						
2.2	±20%	108	0.023	3.8	7445402	163-6084
4.7	±20%	30.4	0.034	2.7	7445404	163-6085
6.8	±20%	23.3	0.041	2.2	74454068	163-6086
10	±20%	20	0.048	2	74454010	163-6087
15	±20%	14.6	0.064	1.7	74454115	163-6088
22	±15%	13.5	0.076	1.4	74454122	163-6089
47	±15%	9.3	0.158	1	74454147	163-6090
68	±15%	6.9	0.285	0.82	74454168	163-6092
100	±10%	5.9	0.373	0.68	7445420	163-6093
150	±10%	4.8	0.456	0.55	74454215	163-6094
220	±10%	4	0.683	0.45	74454220	163-6095
470	±10%	2.9	1.35	0.3	74454247	163-6096
680	±10%	2.6	1.94	0.26	74454268	163-6097
1000	±10%	1.9	2.75	0.22	7445430	163-6098
Type X						
10	±20%	30	0.023	3.9	74459010	163-6099
15	±20%	20	0.03	3.5	74459115	163-6100
22	±20%	18	0.048	3.4	74459122	163-6101
47	±20%	10	0.085	2.8	74459147	163-6102
68	±20%	9	0.105	2.2	74459168	163-6103
100	±20%	7	0.151	1.7	7445920	163-6104
150	±20%	6	0.209	1.3	74459215	163-6105
220	±20%	5	0.311	1.2	74459222	163-6106
470	±20%	3	0.661	0.8	74459247	163-6107
680	±20%	2.5	1.059	0.7	74459268	163-6109
1000	±20%	2	1.427	0.6	7445930	163-6111

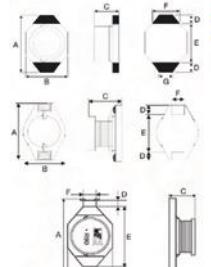
35 Amp Power Inductors

WE-PD4 series

New

WE
WÜRTH ELEKTRONIK

SMD



- Current loading up to 35A
- Compact size, industry standardized size
- Low-loss ferrite core and high storage capacity
- Operating temperature: -40°C to +125°C
- application frequency range up to 10MHz
- For noise suppression
- Perfectly suitable for switching regulators e.g. from National Semiconductor, Linear Technology, TI, STMicroelectronics, Maxim, Micrel, Semtech or for switching regulators with extremely high efficiency

Dimensions (mm)						
Type S	A 6.6	B 4.45	C 2.92	D 1	E 4.32	F 3.05
Type L	12.7	10	5	2.4	7.6	2
Type X	18.54	15.24	7.11	12.7	13.15	2.54
Type XL	22	15	7	2.3	15	8

Inductance (μH)	Tolerance	Selfres. frequency (MHz)	R_{DC} typ. (mΩ)	Current rating (A)	Mfrs.
Type S					
1	±20%	130	17	2.9	7445501
2.2	±20%	90	28	2.4	74455022
4.7	±20%	50	63	1.5	74455047
6.8	±20%	45	92	1.4	74455068
10	±20%	35	121	1.2	7445510
15	±20%	30	176	1.1	74455115
22	±20%	20	255	0.8	74455122
47	±20%	14	556	0.5	74455147
68	±20%	11	790	0.4	74455168
100	±20%	9	1080	0.3	7445520
150	±20%	6	1450	0.25	74455215
220	±20%	5.5	2580	0.2	74455222
470	±20%	3.8	5580	0.16	74455247
1000	±20%	2	11500	0.07	7445530

Type	Inductance (μH)	Tolerance	Selfres. frequency (MHz)	R_{DC} typ. (mΩ)	Current rating (A)	Mfrs.
Type L						
1	±20%	170	4.1	8.6	7445601	163-6127
2.5	±20%	65	8.9	5.8	74456025	163-6128
4.7	±20%	45	14.6	5	74456047	163-6129
6.8	±20%	35	26	3.8	74456068	163-6130
10	±20%	25	34.9	3.3	7445610	163-6131
15	±20%	23	43.2	2.9	74456115	163-6132
22	±20%	18	71	2.6	74456122	163-6134
47	±10%	12	142.1	1.8	74456147	163-6135
68	±10%	10	187	1.6	74456168	163-6136
100	±10%	8	253	1.4	7445620	163-6137
150	±10%	6	447.6	1	74456215	163-6138
220	±10%	5	601	0.9	74456222	163-6139
470	±10%	3.5	1315	0.6	74456247	163-6140
680	±10%	3	1942	0.5	74456268	163-6141
1000	±10%	2	2940	0.4	7445630	163-6142

Type	Inductance (μH)	Tolerance	Selfres. frequency (MHz)	R_{DC} typ. (mΩ)	Current rating (A)	Mfrs.
Type X						
1	±20%	80	5	8.6	74458001	163-6143
2.2	±20%	45	8	7.1	7445802	163-6144
5.6	±20%	30	12	5.3	74458005	163-6146
10	±20%	20	21	4.3	74458010	163-6147
15	±20%	15	30	4	74458115	163-6149
22	±20%	14	43	3.5	74458122	163-6150
47	±20%	9	76	2.6	74458147	163-6152
68	±20%	7	110	2.3	74458168	163-6153
100	±20%	6	141	1.8	7445820	163-6154
150	±20%	4	210	1.5	74458215	163-6155
220	±20%	3.5	326	1.2	74458220	163-6156
470	±20%	2.5	633	0.82	74458247	163-6158
680	±20%	2.2	954	0.72	74458268	163-6159
1000	±20%	2	1370	0.56	7445830	163-6160

Type	Inductance (μH)	Tolerance	Selfres. frequency (MHz)	R_{DC} typ. (mΩ)	Current rating (A)	Mfrs.
Type XL						
0.47	±20%	134.3	1.3	18	74457006	163-6161
1	±25%	72.7	3.1	15	74457010	163-6162
2.7	±20%	51				



New

Common mode choke assortment

WE-CMB series



- Assortment of general purpose WE-CMB common mode chokes

Kit contains:

- 10 values, 4 pieces
- 5 values, 3 pieces
- 10 values, 2 pieces
- 5 values, 1 piece

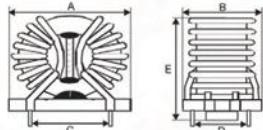
523258

Mfrs.	List No.	Order Code	Price Each
	744820	163-6342●	1+ 81.77

Chokes - Current Compensated WE-CMB Series

New

WE-Elektronik



Chokes - Current Compensated WE-CMB Series

New



- High suppression of asymmetric interferences even at low frequencies
- Broadband screening because of ant capacitive coiling technique
- Very compact design
- Highest possible current with small sizes
- For Power electronics, Power line in- and output filter, filtering of devices without a stable ground connection
- Radio interference suppression in motors

	Dimensions (mm)						
	A	B	C	D	E	F	G
Type XS	15	7.5	10	4.5	18	2.5	0.7
Type S	17.5	13	7.7	5	7.6	22	3
Type M	23	17	7.5	10.7	28	3	0.7
Type L	27.5	18.5	10	12	33	5	1
Type XL	30	21	25	15	35	5	1
Type XXL	43	23.5	10.5	18.5	43	3	1.5
NiZn Type XS	16	7.5	10	4.5	17.5	-	-

Inductance (mH)	R _{DC} typ. (mΩ)	Current rating (A)	Mfrs.	List No.	Order Code

Type XS	1	45	2	744821201	163-6278
	4	140	1.5	744821240	163-6279
	10	350	0.7	744821110	163-6280
	20	1000	0.5	744821120	163-6281
	39	3000	0.3	744821039	163-6282

Type S	1	35	3	744822301	163-6283
	3.3	120	1.5	744822233	163-6284
	10	360	1	744822110	163-6286
	20	540	0.5	744822120	163-6287

Type M	1	13	6	744823601	163-6288
	3.3	60	2.5	744823333	163-6289
	10	125	2	744823210	163-6290
	20	270	1.5	744823220	163-6291

Type L	1	7	10	744824101	163-6292
	2.2	20	6	744824622	163-6293
	3.3	35	4	744824433	163-6294
	10	105	3	744824310	163-6295
	20	220	2	744824220	163-6296

Type XL	1	9	12	7448251201	163-6298
	3.3	25	6	7448256033	163-6299
	10	55	5	744825510	163-6300
	20	160	3	744825320	163-6301

Type XXL	1.8	7.9	14	7448261418	163-6302
	1.3	4.7	20	7448262013	163-6304
	1	3.6	25	7448262510	163-6305
	0.5	1.7	35	7448263505	163-6306

Type NiZn XS	14	15	4	744841414	163-6307
	30	26	3	744841330	163-6308
	47	40	2	744841247	163-6309
	100	80	1.5	744841210	163-6310

522496

		Price Each				
Order Code	Order Code	1+	10+	25+	100+	250+
Type XS	All Values	2.40	2.23	2.07	1.94	1.83
Type S	All Values	2.73	2.56	2.40	2.26	2.12
Type M	All Values	2.89	2.73	2.56	2.40	2.26
Type L	All Values	3.14	2.89	2.64	2.49	2.34
Type XL	All Values	3.39	3.14	2.89	2.72	2.55
Type XXL	All Values	10.24	9.83	9.42	8.86	8.32
Type NiZn-XS	All Values	1.74	1.57	1.40	1.32	1.24

522496

700 products added online every week

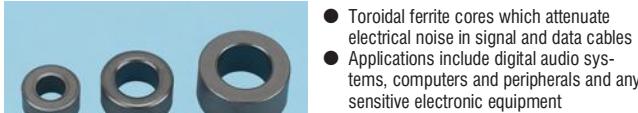


See our pick of the hottest products and latest technologies in 'What's New?' at www.farnell.co.uk

8

Ferrite Shielding Products

EMI Cores

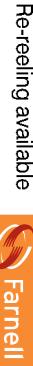


- Toroidal ferrite cores which attenuate electrical noise in signal and data cables
- Applications include digital audio systems, computers and peripherals and any sensitive electronic equipment

Dimensions	ID	H	Typical Impedance (Ω)	Code
16	10	14	40	964-0380
20	10	10	45	964-0398
25	15	12	40	964-0401
28	16	13	50	964-0410
28	16	20	70	964-0428
31.5	19	16	55	964-0436

204208

Order Multiple = 5	Order Code	5+	25+	100+	250+	500+
	964-0380●	1.02	0.94	0.88	0.71	0.63
	964-0398●	1.08	1.02	0.94	0.77	0.69
	964-0401●	1.12	1.04	0.95	0.80	0.71
	964-0410●	1.48	1.39	1.29	0.98	0.94
	964-0428●	1.87	1.78	1.65	1.36	1.23
	964-0436●	1.87	1.78	1.65	1.36	1.23



Ferrite Shielding Products - continued

EMI Sleeves

- Ferrite sleeves which will provide attenuation of EMI on power and data cables, without affecting data transmitted through the cable
- Suitable for use on computers, peripherals, digital audio systems etc.

Note: To enable the cable to pass smoothly through the sleeve an allowance should be made for tolerances in the OD of the cable and the ID of the sleeve.

OD	ID	H	Dimensions	Min. Impedance (Ω)	Order Code
14.2	6.35	28.5		130	185
14.2	7.0	28.5		130	210
16	9.0	17		60	140
14.2	8.0	28.5		110	210
17.5	9.5	28.5		90	150
17.5	10.7	28.5		90	160
26	13	28.5		130	200

204153

Order Multiple=5	ID x H	Order Code	Dimensions	Price Each
6.35 x 28.5	964-0495●	1.05	0.94	0.85
7.0 x 28.5	964-0509●	1.24	1.15	1.03
9.0 x 17	964-0517●	1.12	1.01	0.89
8.0 x 28.5	964-0525●	1.17	1.04	0.93
9.5 x 28.5	964-0533●	1.32	1.20	1.05
10.7 x 28.5	964-0541●	1.32	1.20	1.05
13 x 28.5	964-0550●	2.42	2.19	1.92

Ferroxcube Magnetic Materials

- Ferroxcube have developed a new ferrite material for their new range of cable shielding products. 3S4 is a new high resistivity manganese zinc ferrite which offers excellent interference suppression into the high MHz regions. 3S4 is **Nickel Free** to protect the environment.
- Available in 2 materials, 3S4 and 4S2

213823

Tubular Cable Shields

- Tubular ferrite cable shields
- Available in 2 material grades, 3S2 and 4S2
- Provide attenuation of RFI over a wide frequency range
- Cost effective as they reduce the need for more complex shielding measures or costly PCB re-designs

Dimensions	O/D	I/D	H	Type Impedance (Ω)	25MHz	100MHz	Mfrs. List No.	Order Code
3S4 Material								
8	5.3	10	32		50	CST7.8/5.3/9.8-3S4	898-340	
8.3	3.5	10	70		96	CST8.3/3.5/10-3S4	898-351	
9.5	5.1	14	66		110	CST9.5/5.1/15-3S4	898-363	
17.2	11	60	200		320	CST17/11/60-3S4	898-375	
17.45	9.53	12.7	55		88	CST17/9.5/13-3S4	898-387	
17.45	9.53	28.55	125		200	CST17/9.5/29-3S4	898-399	
19	10.6	11.5	50		75	CST19/11/12-3S4	898-405	
4S2 Material								
9.5	4.75	6.3	23		50	CST9.5/4.8/6.4-4S2	898-417	
9.5	4.75	10.4	53		80	CST9.5/4.8/10-4S2	898-429	
9.5	4.75	19.05	100		145	CST9.5/4.8/19-4S2	898-430	
9.65	5.0	5.05	26		43	CST9.7/5.1/4S2	898-442	
14.3	6.35	28.6	170		250	CST14/6.4/29-4S2	898-454	
14.3	7.25	28.6	143		215	CST14/7.3/29-4S2	898-466	
16.25	7.9	14.3	70		113	CST16/7.9/14-4S2	898-478	
16.25	7.9	28.6	130		213	CST16/7.9/29-4S2	898-480	
17.45	9.5	12.7	55		88	CST17/9.5/13-4S2	898-491	
19	10.15	28.6	128		196	CST19/10/29-4S2	898-510	
25.9	12.8	28.6	145		225	CST26/13/29-4S2	898-521	
29	19	7.5	28		47	CST29/19/7.5-4S2	898-533	

204115

Order Multiple=5	ID x H	Order Code	Dimensions	Price Each
3S4 Material				
5.3 x 10	898-340●	0.193	0.159	0.145
3.5 x 10	898-351●	0.220	0.183	0.166
5.1 x 14	898-363●	0.620	0.530	0.490
11 x 60	898-375●	4.400	3.730	3.410
9.53 x 12.7	898-387●	0.830	0.670	0.620
9.53 x 28.55	898-399●	1.890	1.590	1.460
10.6 x 11.5	898-405●	1.050	0.860	0.780
4S2 Material				
4.75 x 6.3	898-417●	0.188	0.155	0.147
4.75 x 10.4	898-429●	0.310	0.260	0.230
4.75 x 19.05	898-430●	0.530	0.450	0.430
5.0 x 5.05	898-442●	0.152	0.125	0.114
6.35 x 28.6	898-454●	1.500	1.270	1.150
7.25 x 28.6	898-466●	1.530	1.260	1.100
7.9 x 14.3	898-478●	0.780	0.650	0.590

Order Multiple=5 ID x H	Order Code	Price Each				
		5+	50+	100+	250+	500+
4S2 Material						
7.9 x 28.6	898-480●	1.830	1.540	1.400	1.150	1.050
9.5 x 12.7	898-491●	0.780	0.650	0.590	0.490	0.450
10.15 x 28.6	898-510●	2.090	1.740	1.580	1.320	1.190
12.8 x 28.6	898-521●	4.430	3.720	3.370	2.820	2.570
19 x 7.5	898-533●	1.010	0.850	0.770	0.640	0.570

Hinged Clamp Cores



- A range of easy to fit data line filters providing a simple solution to the problems of radiated noise emissions generated by electronic equipment
- The filter simply clips around the cable to be shielded and locks closed with no need to disconnect the cable or remove connectors
- No grounding is required unlike cable shields.

Frequency range 10MHz to 300MHz
Insulation resistance 10MΩ (min) between case and cores
Case material Black Nylon 66 to UL94V-0

Cable Diameter	Typical Impedance (Ω)	Dimensions	Order Code
25MHz	100MHz	L W H	
6.5	135	220	32 19.519964-0444
10	90	190	32 24.523964-0452
13	105	190	32 31.530964-0460

L Dia

Oval	Dimensions	Order Code
3.5	4.5	115 25.214.5 964-0479
5.0	45	115 29.6 16 964-0487

204024

Cable Diameter	Order Code	Dimensions	Price Each	
6.5	964-0444●	3.19	2.74	2.35
10	964-0452●	4.41	3.90	3.39
13	964-0460●	5.69	4.95	4.23
3.5	964-0479●	2.36	1.97	1.90
5.0	964-0487●	2.56	2.31	2.05

Hinged Clamp Cores



- Employs high-performance Nickel-Zinc ferrites
- Nylon 6/6 cases are UL94V-0 (except TRCN series UL94V-2)
- SFC/RFC and USB series employ patented designs to ensure tight grip of the cable and secure closure
- USB series has been designed to provide high impedance over a wide frequency range
- Available in both natural and black colours

Dimensions (mm)		Min. Impedance (Ω)			Mfrs List No.	Order Code
Width	Depth	25MHz	100MHz			
13.4	13.2	18.9	45	80	SFC-3	941-5688
13.9	13.6	27	122	168	USB-4	941-5700
16.3	15	29.5	96	138	SFC-4	941-5718
21	17.5	32	177	242	SFC-5	941-5726
23.5	20	32	139	207	SFC-6	941-5734
23.5	20	32	137	204	SFC-8	941-5742
32.6	29	32	149	266	SFC-10	941-5750
31.7	29.4	41	200	270	RFC-H13	941-5769

411299

Mfrs List No.	Order Code	1+	10+	50+	100+	500+
SFC-3	941-5688●	2.08	1.67	1.38	1.16	1.00
USB-4	941-5700●	2.72	2.04	1.69	1.44	1.27
SFC-4	941-5718●	3.46	2.54	2.09	1.77	1.41
SFC-5	941-5726●	3.57	2.68	2.23	1.90	1.59
SFC-6	941-5734●	3.86	3.11	2.58	2.20	1.95
SFC-8	941-5742●	4.38	3.46	3.04	2.71	2.41
SFC-10	941-5750●	6.45	5.06	4.30	3.73	3.44
RFC-H13	941-5769●	6.76	5.52	4.68	4.07	3.44

411299

ZCAT Series

- Unique plastic case ensures simple, convenient installation and includes a self-holding mechanism to prevent slippage on cables
- Ferrite core provides excellent absorption of high-frequency EMC
- Highly effective as countermeasure against common mode EMC without adverse effect on signal quality
- Large core size prevents saturation during large signal surges

Oval	Dimensions (mm)		Impedance Ω min.	Mfrs List No.	Order Code
	L	Dia. External Dia.			
22		15	7	35	ZCAT1518-0730 130-1648
21		20	9	35	ZCAT2017-0930 130-1653
36		19.5	9	80	ZCAT2032-0930 130-1655
36		20.5	11	50	ZCAT2132-1130 130-1657
39		30	13	100	ZCAT3035-1330 130-1661

Cable Fixed (with lock mechanism)

Cable Fixed	25	15	4	50	ZCAT1525-0430AP 130-1649
	25	12.8	5	50	ZCAT1325-0530A 130-1647
	30	16.5	7	50	ZCAT1730-0730A 130-1650
	35	19.5	9	80	ZCAT2035-0930A 130-1656
	35	21.5	10	80	ZCAT2235-1030A 130-1658
	36	23.5	13	50	ZCAT2436-1330A 130-1659

Clamp Fixed

Clamp Fixed	21	20	9	35	ZCAT2017-0930B 130-1654
	49	19.5	4.5	80	ZCAT2749-0430C 130-1660

Sleeve Core Type

Sleeve Core Type	30.1	12.3	5	40	ZCAT1229-0530E-F 130-1645
	36.7	16.8	6	80	ZCAT1736-0630E 130-1651

Flat Cable Type

Flat Cable Type	Length	Depth	Slot Width		
	33.5	17.5	26	30	ZCAT3618-2630D 130-1662
	45.5	24.5	34	35	ZCAT4625-3430D 130-1663
	67.5	18.5	52	35	ZCAT6819-5230D 130-1665

Flat Cable Type (with adhesive pad)

Flat Cable Type (with adhesive pad)	Length	Depth	Slot Width		
	33.5	17.5	26	30	ZCAT3618-2630DT 150-3720
	45.5	24.5	34.5	35	ZCAT4625-3430DT 150-3721
	67.5	18.5	52		ZCAT6819-5230DT 150-3722

451949

Mfrs List No.	Order Code	1+	10+	Price Each	25+	50+	250+
Oval							
ZCAT1518-0730	130-1648●	1.74	1.39	1.15	0.99	0.86	
ZCAT2017-0930	130-1653●	1.85	1.49	1.23	1.05	0.92	
ZCAT2032-0930	130-1655●	4.66	3.73	3.09	2.65	2.32	
ZCAT2132-1130	130-1657●	3.29	2.63	2.17	1.87	1.63	
ZCAT3035-1330	130-1661●	7.30	6.49	5.36	4.60	4.03	
Cable Fixed (with locking mechanism)							
ZCAT1525-0430AP	130-1649●	2.73	2.18	1.81	1.55	1.36	
Cable Fixed							
ZCAT1325-0530A	130-1647●	1.74	1.39	1.15	0.99	0.86	
ZCAT1730-0730A	130-1650●	1.93	1.55	1.27	1.10	0.96	
ZCAT2035-0930A	130-1656●	2.97	2.38	1.97	1.69	1.48	
ZCAT2235-1030A	130-1658●	3.09	2.48	2.04	1.76	1.53	
ZCAT2436-1330A	130-1659●	3.78	3.04	2.50	2.15	1.88	
Clamp Fixed							
ZCAT2017-0930B	130-1654●	2.18	1.75	1.45	1.24	1.09	
Cable Coil Securing Type							
ZCAT2749-0430C	130-1660●	5.16	4.12	3.41	2.93	2.56	
Sleeve Core Type							
ZCAT1229-0530E-F	130-1645●	1.82	1.46	1.20	1.03	0.90	
ZCAT1736-0630E	130-1651●	2.13	1.69	1.41	1.20	1.05	
Flat Cable Type							
ZCAT3618-2630D	130-1662●	4.93	4.12	3.41	2.93	2.56	
ZCAT4625-3430D	130-1663●	7.89	6.31	5.21	4.47	3.92	
ZCAT6819-5230D	130-1665●	11.83	9.46	7.81	6.70	5.87	
Flat Cable Type (with adhesive pad)							
ZCAT3618-2630DT	150-3720●	3.03	2.62	2.30	2.17	2.00	
ZCAT4625-3430DT	150-3721●	4.45	3.85	3.37	3.18	2.93	
ZCAT6819-5230DT	150-3722●	6.67	5.77	5.06	4.77	4.40	

451949

FREE technical support

Our trained engineers are here to help!

08447 11 11 22

@ techsales@farnell.co.uk

Live technical chat at
www.farnell.co.uk

£ € 40,000 PRICES REDUCED

Ferrite Shielding Products - continued

One Piece Flat Cable Cores



KE KITAGAWA

- High performance nickel zinc ferrite material
- Suitable for flat printed circuit cables and ribbon cables
- Offer good attenuation over wide frequency range
- PVC mounting brackets parts with adhesive backing for stabilising on flat cable

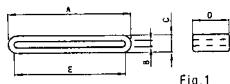
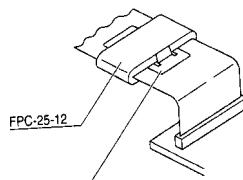


Fig.1



Style 1

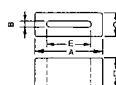


Fig.2

PVC Mounted

Style	Dimensions				Impedance (Ω)		Mfrs. List No.	Order Code
	A	B	C	D	25MHz	100MHz		
1	16	0.5	5	12	11.5	42	FPC-16-12K	353-8345
1	24.5	0.5	5	12	20	30	FPC-25-12K	353-8357
1	31	0.5	5	12	27	66	FPC-31-12K	353-8369
2	21	1.3	6.5	15	15	60	SSC-21-6.8-8B	353-8382
1	33.5	1.3	6.5	20	27	50	SSC-33.5-20M	353-8394
1	40	1.3	6.5	10	35	23	SSC-40-10M	353-8400
1	40	1.3	6.5	12	35	27	SSC-40-12M	353-8412
1	45.2	1.3	6.5	12	40	26	SSC-45-12M	353-8424
1	45.2	1.3	6.5	8	40	19	SSC-45-8M	353-8436
1	49.6	1.3	6.5	12	44	25	SSC-50-12M	353-8448
1	57.6	1.3	6.5	12	52	25	SSC-58-12M	353-8450

Adhesive PVC Mounts

No. of stops	Application Cores	Mfrs. List No.	Order Code
2	FPC-16-12, FPC-25-12	FPCK-12A	353-8722
4	FPC-31-12, FPC-56-12	FPCK-12B	353-8734

227234

Style	'D'	Order Code	Price Each				
			1+	10+	100+	500+	1K+
1	12	353-8345●	1.210	0.990	0.740	0.550	0.470
1	12	353-8357●	1.490	1.200	0.920	0.680	0.600
1	12	353-8369●	2.290	1.840	1.400	1.020	0.890
2	15	353-8382●	0.720	0.600	0.440	0.320	0.280
1	20	353-8394●	1.860	1.490	1.130	0.810	0.720
1	10	353-8400●	1.320	1.050	0.800	0.590	0.490
1	12	353-8412●	1.490	1.200	0.920	0.680	0.600
1	12	353-8424●	1.820	1.460	1.100	0.790	0.710
1	8	353-8436●	1.240	0.990	0.760	0.560	0.470
1	12	353-8448●	1.710	1.390	1.050	0.750	0.670
1	12	353-8450●	2.580	2.080	1.570	1.130	1.000
2 stop PVC Mount	353-8722●	0.450	0.370	0.280	0.220	0.177	
4 stop PVC mount	353-8734●	0.580	0.450	0.340	0.260	0.230	

Two Piece Flat Cable Cores



KE KITAGAWA

- Unique construction permits close mounting to FPC cable providing high attenuation over a wide frequency range
- Maintains uniform performance across the full width of cable
- Can be installed before or after product assembly

Max Cable Width	Dimensions				Impedance (Ω)		Mfrs. List No.	Order Code	
	A	B	C	D	25MHz	100MHz			
20.5	25.0	21.0	12.0	2.8	20.5	12.0	25	56	FPO-25-12-3 353-8321 227236

Cable Width	Order Code	Price Each			
		1+	10+	50+	100+
20.5	353-8321●	2.03	1.70	1.49	1.33

Over 480,000 products online



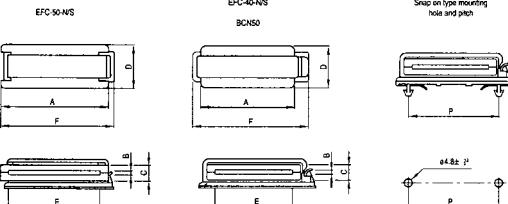
Clamp Mounting Two Piece Flat Cable Cores

KE KITAGAWA

Flat Cable Cores



- Split construction permits easy assembly
- Unique mounting clamp supports ferrite and aids location
- Supplied as a pair with plastic clamp



Max Cable Width	A	B	C	D	E	F	25MHz	100MHz	Mfrs. List No.	Order Code
51	63.0	2.0	13.0	28.5	52.0	77.0	72	175	353-8230	353-8230
63.5	76.5	2.0	13.0	28.5	64.5	90.7	63	185	353-8254	353-8254

*PCB mounting pitch 64.5mm

227237

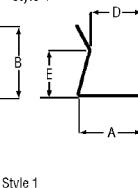
Cable Width	Order Code	Price Each			
		1+	10+	100+	500+
51	353-8230●	11.26	9.85	8.41	7.00
63.5	353-8254●	10.66	9.31	7.93	6.64

Ribbon Cable Cores

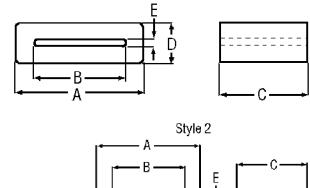
FERROXCUBE



Style 4



Style 3



Style 1



- Cable Shields for ribbon cable applications
- 1 piece shields suitable for fitting in production runs
- 2 piece shields for retro fitting in test houses and laboratories
- Excellent attenuation over a wide frequency range
- Manufactured from **nickel free** 3S4 material

Style	C Dimension	Order Code	Dimensions			Impedance (Ω)		Mfrs. List No.	Code
			2+	20+	100+	500+	1K+		
1	12.7	898-5454●	2.90	2.42	2.20	1.84	1.65	CSU76/6.4/13-3S4	898-545
1	15	898-5574●	3.24	2.71	2.47	2.05	1.87	CSU76/6.4/15-3S4	898-557
1	28.6	898-5694●	5.29	4.43	4.04	3.37	3.04	CSU76/6.4/29-3S4	898-569
4	-	898-5704●	0.70	0.59	0.52	0.45	0.41	CL1-CSU6.4	898-570

Order Multiple = 2	Order Code	Price Per 1/2 Core				
		2+	20+	100+	500+	
2	25.4	898-5824●	3.29	2.73	2.64	2.36
3	25.4	898-5944●	4.26	3.59	3.26	2.72
Order Multiple = 1		1+	10+	50+	100+	
2	25.4	898-5824●	3.29	2.73	2.64	2.36
3	25.4	898-5944●	4.26	3.59	3.26	2.72

Prices are in £ sterling & exclusive of VAT

'D' Connector Ferrite Plate



KE KITAGAWA

- Ferrite plate for use with 'D' subminiature connectors
- EMI suppression is achieved by inserting onto the pins of the connector
- Suitable for Serial PC Mouse, RS232C interface, etc

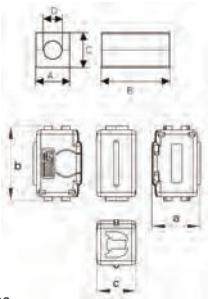
thickness=2.8, hole pitch=2.77

227233

No. of Ways	Mfrs. List No.	Order Code	1+	10+	50+	100+	500+
9	FH9-14.5X7.6X2.8	353-8291●	1.08	0.83	0.70	0.63	0.43
15	FH15-22.65X7.6X2.8	353-8308●	1.64	1.30	1.05	0.92	0.67
25	FH25-36.4X7.6X2.8	353-8310●	1.06	0.82	0.69	0.61	0.43

Snap Ferrites with Flexible Cable Fixing
Star Fix Series with Key Technology

New



- Prefixing cable system eases the cable assembling process
- Patented case design prevents air gaps for a perfect EMI suppression
- Security lock guarantees electromagnetic compatibility because only authorized persons can unlock the snap ferrite with the STAR-TEC key
- Ferrite core made of NiZn for broadband suppression from 30 MHz - 1.5 GHz
- Material: plastic case PA 6, UL 94 V-0, operating temperature: -25°C to 105°C
- For internal and external computer data and power cable
- Perfect for cables with difficult access
- Reusable because of the key technology therefore perfect for test and measuring purposes

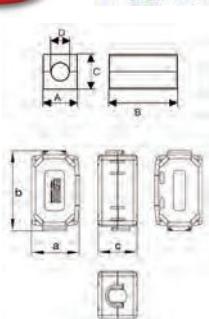
Cable width (mm)	Impedance (Ω) 1Wdg.	Dimensions	Mfrs.
width (mm)	@ 25MHz @ 100MHz	a b c A B C D	List No. Order Code
4.5 - 8	145 246	22.5 35 19 16 28 16 9 74271733	163-5391
8.5 - 12.5	145 246	31.5 35 28 25 28 25 13 74271722	163-5392

520335

Cable \varnothing	Order Code	1+	10+	50+	100+	250+
4.5 - 8mm	163-5391●	1.98	1.57	1.32	1.24	1.17
8.5 - 12.5mm	163-5392●	2.40	2.15	1.90	1.78	1.68

STAR-TEC Cable Snap Ferrites
With Safety Key Technology

New



- Prefixing cable system eases the cable assembling process
- Patented case design prevents air gaps for a perfect EMI suppression
- ferrite core is made of NiZn, a material which provides broadband suppression from 30 MHz - 1.5 GHz
- Material: plastic case PA 6, UL 94 V-0
- Operating temperature: -25°C to 105°C
- For Internal and external computer data and power cable
- Perfect for cables with difficult access because of easy installation and removal
- Reusable because of the key technology therefore perfect for test and measuring purposes

Cable \varnothing (mm)	Impedance (Ω) 1 turn	Dimensions	Mfrs.
	25MHz 100MHz	a b c A B C D	List No. Order Code
3.5 - 5	175 320	23.7 36.9 18.2 15 28.5 15 6.6 74271111	163-5393
4.5 - 6	176 321	23.7 36.9 18.2 15 28.5 15 6.6 74271112	163-5394
6 - 7.5	145 246	24.2 36.4 20.1 16 28 16 9 74271131	163-5617
7 - 8.5	141 241	24.2 36.3 19.7 16 28 16 9 74271132	163-5618
8.5 - 10.5	151 270	33.6 37.7 29.5 25 28 25 13 74271221	163-5619
10.5 - 12.5	145 265	33.5 37.6 28.8 25 28 25 13 74271222	163-5620

520433

RoHS Compliant
Non-compliant

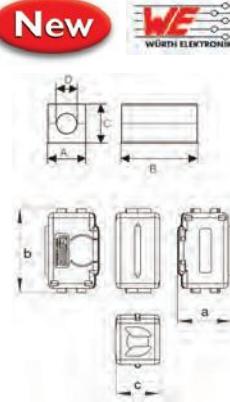
08447 11 11 11

Fax: 08447 11 11 12 1313

Cable \varnothing	Order Code	1+	10+	Price Each		
				50+	100+	250+
3.5 - 5mm	163-5393●	2.31	2.15	1.98	1.87	1.75
4.5 - 6mm	163-5394●	2.31	2.15	1.98	1.87	1.75
6 - 7.5mm	163-5617●	2.40	2.23	2.07	1.94	1.83
7 - 8.5mm	163-5618●	2.48	2.31	2.15	2.02	1.90
8.5 - 10.5mm	163-5619●	2.89	2.73	2.56	2.40	2.26
10.5 - 12.5mm	163-5620●	2.89	2.73	2.56	2.40	2.26

Snap Ferrites
Star-Gap Series

New

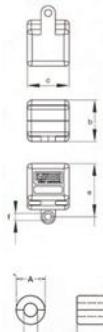


- Worldwide first split case ferrite with defined air-gap (patent pending)
- Helpful for EMI problems from 100 MHz up to 2.5 GHz
- Data signals up to 100 MHz will not be effected
- Best performance (impedance) especially with 2 windings (2 cable through)
- Low magnetic saturation of the material because of high DC current apply and therefore only low reduction of impedance because of DC current
- Pre fixing and cable protection system makes it easier to assemble and save time
- Not possible to remove from the cable without the WE key
- Non visible locking in closed conditions
- With each packing unit 2 WE keys for free
- UL 94 V-0 plastic material for the case working temperature: -25°C to 105°C
- For high speed data lines, especially LAN network CAT 5 and higher
- Less influence from mobile phone radiations, bluetooth and wireless LAN
- Reduce disturbance by USB 2.0 and other fast digital signals
- Minimize the interference by fast circuits and switching power supply
- Suppression of the harmonic waves and no damping for the signal below 100 MHz
- Better performance for high DC current applications with interference problems like power supply, motor and drives

Cable width (mm)	Impedance (Ω) 2 win.	Dimensions	Mfrs.
	@ 25MHz @ 100MHz	a b c A B C D	List No. Order Code
4.5 - 8	90 400	22.5 35 19.3 16 28 16 9 742716335	163-5622
8.5 - 12.5	135 640	31.5 35 28.3 25 28 25 13 742716225	163-5623

520647

Cable \varnothing	Order Code	1+	10+	50+	100+	250+
4.5 - 8mm	163-5622●	3.47	3.22	2.97	2.79	2.63
8.5 - 12.5mm	163-5623●	3.47	3.22	2.97	2.79	2.63

Snap Ferrites
STAR-RING Series with Key Technology

- Patented no spring design which eliminates air gaps
- Prefixing cable system eases the cable assembling process
- Patented case design prevents air gaps for a perfect EMI suppression
- Security lock guarantees electromagnetic compatibility because only authorized persons can unlock the snap ferrite
- Innovative sleek design without any sharp edges
- Ferrite core NiZn provides broadband suppression from 30 MHz - 1.5 GHz
- Material: plastic case PA 6, UL 94 V-0
- Operating temperature: -25°C to 105°C
- For computer data and power cable
- Perfect for cables with difficult access
- Reusable because of the key technology therefore perfect for T&M purposes

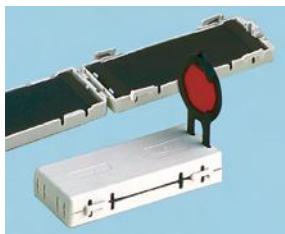
Cable \varnothing	Impedance max. (Ω) 2 win.	Dimensions	Mfrs.
(mm)	@ 25MHz @ 100MHz	a b c d e f \varnothing A \varnothing B \varnothing	List No. Order Code
8	304 572	23 20 20 30 25.5 3.5 8.15 17	7427153 163-5624
14.5	242 443	32 30 20 40 36.5 3.5 15 17	7427151 163-5625
16	271 495	35 32 20 43 39.5 3.5 16.3 17	7427154 163-5626
27	205 401	48 44 20 55 51.5 3.5 27.5 17	7427155 163-5627



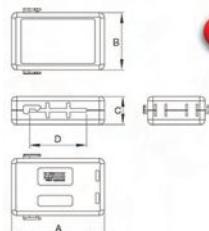
Ferrite Shielding Products - continued**Snap Ferrites - continued****STAR-RING Series with Key Technology - continued**

520653

Cable Ø max.	Order Code	1+	10+	50+	100+	250+	Price Each
8mm	163-5624●	2.40	2.23	2.07	1.94	1.83	
14.5mm	163-5625●	2.81	2.64	2.48	2.33	2.19	
16mm	163-5626●	3.22	3.06	2.89	2.72	2.55	
27mm	163-5627●	3.39	3.22	3.06	2.87	2.70	

Ribbon Cable Snap Ferrites**STAR-Flat Series with Key Technology**

- Patented no spring design
- STAR-FLAT's ribbon cable holding feature prevents sliding and cable crimping
- Prefixing cable system eases the cable assembling process
- Patented case design prevents air gaps for a perfect EMI suppression
- Security lock guarantees electromagnetic compatibility
- Innovative sleek design without any sharp edges
- Ferrite core for broadband suppression from 30 MHz - 1.5 GHz
- Material: plastic case PA 6, UL V-0
- Operating temperature: -25°C to 130°C
- For computer and power cable, cable with difficult access, medical technology
- Reusable



Cable size (mm)	Impedance (Ω) @ 25MHz	Impedance (Ω) @ 100MHz	Dimensions (mm)	Mfrs.	List No.	Order Code
26	97	194	53.3 33.1 16 34	7427246	163-5628	
40	78	180	71.3 33.1 16 52	7427248	163-5629	
50	72	192	84.5 33.1 16 64.5	7427247	163-5630	

520679

Cable Size	Order Code	1+	10+	50+	100+	250+	Price Each
26	163-5628●	5.29	5.04	4.79	4.50	4.23	
40	163-5629●	7.02	6.77	6.53	6.14	5.77	
50	163-5630●	8.18	7.85	7.52	7.06	6.64	

Toroidal Ferrites**EMI Suppression**

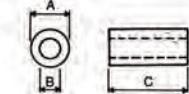
- Ferrite core made of NiZn, a material which works in a broadband frequency range
- Many different types and grades of material (NiZn) for the best possible interference suppression
- For wires, coaxial cables, wire-wrapping cables, multiconductor wires or power supplies, data and gage signal lines

Cable Ø max. (mm)	Impedance (Ω) 2 win. @ 25MHz	Dimensions (mm)		Mfrs.	List No.	Order Code
A	B	C	List No.	Order Code		
4.6	195	370	9.5 5	742701121	163-5631	
4.7	105	170	10 5	74270176	163-5632	
7.6	330	513	16.5 8	7427010	163-5634	
9.6	215	343	14 10	74270117	163-5635	
10.3	237	307	17.5 10.7	74270181	163-5636	
11.8	342	471	23.5 12.6	7427012	163-5637	
13.3	187	398	22.5 13.8	74270119	163-5638	
15.5	411	550	28 16	74270104	163-5639	
18.5	133	251	31.7 19	74270112	163-5640	
24.8	165	350	35.6 25.4	74270191	163-5641	
N/A	390	650	61 35.5	74270112	163-5642	
4.5	134	203	9 5	74270172	163-5644	

520734

Cable Ø max. (mm)	Order Code	1+	10+	50+	100+	250+	Price Each
4.6	163-5631●	0.290	0.250	0.220	0.210	0.198	
4.7	163-5632●	0.300	0.280	0.260	0.240	0.220	
7.6	163-5634●	0.580	0.540	0.490	0.450	0.430	
9.6	163-5635●	0.370	0.330	0.310	0.290	0.270	
10.3	163-5636●	0.580	0.540	0.490	0.450	0.430	
11.8	163-5637●	0.790	0.740	0.700	0.660	0.620	
13.3	163-5638●	0.500	0.470	0.440	0.410	0.390	

Cable Ø max. (mm)	Order Code	1+	10+	50+	100+	250+	Price Each
15.5	163-5639●	2.070	1.900	1.740	1.630	1.540	
18.5	163-5640●	1.160	0.990	0.830	0.780	0.730	
24.8	163-5641●	1.240	1.070	0.910	0.850	0.800	
N/A	163-5642●	3.390	3.140	2.890	2.720	2.550	
4.5	163-5644●	0.410	0.370	0.350	0.320	0.310	

Axial Ferrite Beads

- Ferrite core made of NiZn, a material which works in a broadband frequency range
- Many different types and grades of materials (NiZn) for the best possible interference suppression
- Suitable for interference suppression within the RF and microwave range
- For wires, coaxial cables, wire-wrapping cables, multiconductor wires, power supplies, data signal lines

Impedance (Ω) 2 win. @ 25MHz	Dimensions (mm)	Mfrs.	List No.	Order Code		
@ 100MHz	A	B	C			
243	501	9.5	4.75	9.5	74270033	163-5643
320	418	11.5	5	18.5	74270030	163-5646
6.8	625	11.5	5	20.5	74270031	163-5647
703	1001	11.5	5	25	74270032	163-5648
602	958	10.5	5.5	28.5	74270036	163-5649
204	382	12	5.6	20	74270037	163-5650
1049	614	12	6.1	45	74270062	163-5651
518	714	14.1	6.3	18	74270060	163-5652
767	709	14.1	6.3	28.6	7427004	163-5653
331	430	9.9	6.35	19.5	74270061	163-5654
535	845	14.2	7.2	25	74270045	163-5655
70	130	12.7	7.92	12.7	74270063	163-5656
354	568	16	8	28.5	74270053	163-5658
339	577	16	9	17	74270054	163-5659
649	632	17.5	9.5	28.5	74270049	163-5660
270	450	17.5	10.7	18	74270094	163-5661
843	808	19	11.5	50.8	74270057	163-5662
459	577	28	18	28.5	74270095	163-5663
35	50	3.5	1.2	4	74270073	163-5664
39	58	3.5	1.3	5	742700713	163-5665
39	47	4.1	1.6	4	74270012	163-5666
50	95	4	2	10	74270015	163-5667
72	119	7.6	3.18	10	74270024	163-5668
35	59	6	4	10	74270022	163-5671

520841

Cable Ø max. (mm)	Order Code	1+	10+	50+	100+	250+	Price Each
4.75	163-5643●	0.410	0.370	0.350	0.320	0.310	
5	163-5646●	0.410	0.400	0.370	0.350	0.330	
5	163-5647●	0.410	0.400	0.370	0.350	0.330	
5	163-5648●	0.440	0.410	0.400	0.370	0.350	
5.5	163-5649●	0.500	0.460	0.440	0.410	0.390	
5.6	163-5650●	0.500	0.460	0.440	0.410	0.390	
6.1	163-5651●	0.760	0.700	0.660	0.620	0.590	
6.3	163-5652●	0.790	0.740	0.710	0.670	0.630	
6.3	163-5653●	0.790	0.740	0.710	0.670	0.630	
6.35	163-5654●	0.580	0.550	0.520	0.490	0.460	
7.2	163-5655●	0.700	0.670	0.640	0.600	0.560	
7.92	163-5656●	1.070	0.910	0.790	0.740	0.690	
8	163-5658●	0.830	0.760	0.710	0.670	0.630	
9	163-5659●	0.830	0.760	0.710	0.670	0.630	
9.5	163-5660●	0.830	0.760	0.710	0.670	0.630	
10.7	163-5661●	0.910	0.810	0.760	0.710	0.670	
11.5	163-5662●	2.890	2.560	2.310	2.170	2.040	
18	163-5663●	2.970	2.640	2.400	2.260	2.120	
1.2	163-5664●	0.290	0.250	0.220	0.210	0.198	
1.3	163-5665●	0.290	0.250	0.220	0.210	0.198	
1.6	163-5666●	0.330	0.300	0.270	0.260	0.240	
2	163-5667●	0.330	0.300	0.270	0.260	0.240	
3.18	163-5668●	0.370	0.350	0.320	0.310	0.280	
4	163-5671●	0.290	0.250	0.220	0.210	0.198	

520841

FREE technical support

Our trained engineers are here to help!



08447 11 11 22



techsales@farnell.co.uk

Live technical chat at
www.farnell.co.uk

SMD Ferrites - EMI Suppression

WE-CBF series



New

SMD

These chip bead ferrites can be put directly on the printed circuit board. They offer excellent anti-EMI properties and low DC-resistance. Placed very close next to the interference source even with smallest size 0402, maximal impedances at 660 W can be reached.

- Reliable Ni-Sn electrodes
- Suitable for wave and reflow soldering as well as pasting

- Perfect as data lined filter and for uncoupling of distribution voltage
- High rated current up to 6A
- Highly extended spectrum

0402 case size

Impedance (Ω) @ 100MHz	R_{DC} (Ω)	I_N DC max. (mA)	Mfrs.	List No.	Order Code
20	0.2	300	74279273	163-5672	
40	0.3	300	74279270	163-5673	
60	0.35	300	74279276	163-5674	
70	0.35	300	74279277	163-5675	
120	0.4	300	74279271	163-5676	
240	0.7	200	74279278	163-5677	
300	0.8	200	74279272	163-5678	
600	1	200	74279279	163-5679	

0402

Order Code	1+	10+	50+	100+	250+	Price Each
163-5672●	0.124	0.107	0.091	0.083	0.074	
163-5673●	0.124	0.107	0.091	0.083	0.074	
163-5674●	0.124	0.107	0.091	0.083	0.074	
163-5675●	0.124	0.107	0.091	0.083	0.074	
163-5676●	0.124	0.107	0.091	0.083	0.074	
163-5677●	0.124	0.107	0.091	0.083	0.074	
163-5678●	0.124	0.107	0.091	0.083	0.074	
163-5679●	0.124	0.107	0.091	0.083	0.074	

0603 case size

Impedance (Ω) @ 100MHz	R_{DC} (Ω)	I_N DC max. (mA)	Mfrs.	List No.	Order Code
15	0.1	500	74279268	163-5680	
47	0.1	500	742792608	163-5681	
60	0.3	500	74279267	163-5683	
80	0.3	200	74279261	163-5684	
200	0.35	200	74279264	163-5685	
600	0.65	300	742792653	163-5686	
120	0.3	500	74279262	163-5687	
180	0.3	500	742792622	163-5688	
220	0.3	500	74279263	163-5689	
470	0.45	200	742792642	163-5690	
600	0.45	200	74279265	163-5691	
750	0.35	400	742792656	163-5692	
1000	0.6	200	74279266	163-5693	
1200	0.7	50	74279269	163-5695	
1500	0.7	50	742792691	163-5696	
1800	0.8	50	742792692	163-5697	
2200	0.8	50	742792693	163-5698	
2500	1	50	742792695	163-5699	
22	0.05	1000	742792604	163-5701	
28	0.03	4000	742792603	163-5702	
30	0.04	3000	742792609	163-5703	
60	0.04	3000	742792602	163-5704	
300	0.15	2000	742792641	163-5705	
600	0.2	1000	742792651	163-5706	

0603

Order Code	1+	10+	50+	100+	250+	Price Each
163-5680●	0.107	0.091	0.083	0.074	0.066	
163-5681●	0.107	0.091	0.083	0.074	0.066	
163-5683●	0.107	0.091	0.083	0.074	0.066	
163-5684●	0.107	0.091	0.083	0.074	0.066	
163-5685●	0.107	0.091	0.083	0.074	0.066	
163-5686●	0.107	0.091	0.083	0.074	0.066	
163-5687●	0.107	0.091	0.083	0.074	0.066	
163-5688●	0.107	0.091	0.083	0.074	0.066	
163-5689●	0.107	0.091	0.083	0.074	0.066	
163-5690●	0.107	0.091	0.083	0.074	0.066	
163-5691●	0.107	0.091	0.083	0.074	0.066	
163-5692●	0.107	0.091	0.083	0.074	0.066	
163-5693●	0.107	0.091	0.083	0.074	0.066	
163-5695●	0.107	0.091	0.083	0.074	0.066	
163-5696●	0.107	0.091	0.083	0.074	0.066	
163-5697●	0.107	0.091	0.083	0.074	0.066	
163-5698●	0.107	0.091	0.083	0.074	0.066	
163-5699●	0.107	0.091	0.083	0.074	0.066	
163-5701●	0.124	0.107	0.091	0.083	0.074	
163-5702●	0.124	0.107	0.091	0.083	0.074	
163-5703●	0.124	0.107	0.091	0.083	0.074	
163-5704●	0.124	0.107	0.091	0.083	0.074	
163-5705●	0.124	0.107	0.091	0.083	0.074	
163-5706●	0.124	0.107	0.091	0.083	0.074	

0805 case size

Impedance (Ω) @ 100MHz	R_{DC} (Ω)	I_N DC max. (mA)	Mfrs.	List No.	Order Code
11	0.15	600	7427920	163-5707	
32	0.15	500	74279201	163-5708	
40	0.15	500	74279208	163-5709	
75	0.2	300	742792064	163-5710	
120	0.1	500	74279202	163-5711	
150	0.25	300	74279203	163-5713	
220	0.3	300	742792034	163-5714	
300	0.3	300	742792035	163-5715	
600	0.5	200	742792042	163-5716	
600	0.65	200	742792043	163-5717	
300	0.3	200	742792036	163-5718	
600	0.35	200	74279204	163-5719	
600	0.4	200	742792041	163-5720	
1000	0.45	200	74279205	163-5721	
1200	0.55	200	74279209	163-5722	
1500	0.55	200	742792091	163-5723	
1800	0.4	200	742792090	163-5725	
2200	0.6	200	742792093	163-5726	
10	0.03	3000	742792011	163-5727	
22	0.008	6000	742792021	163-5728	
30	0.025	3000	742792026	163-5729	
60	0.025	3000	742792063	163-5730	
100	0.15	1000	74279207	163-5731	
120	0.03	3000	742792023	163-5732	
220	0.05	2000	742792022	163-5733	
300	0.05	3000	742792031	163-5734	
600	0.15	2000	742792040	163-5735	
1000	0.3	1000	742792096	163-5737	
1500	0.3	1000	742792097	163-5738	

Order Code	1+	10+	50+	100+	250+	Price Each
163-5707●	0.149	0.124	0.107	0.099	0.091	
163-5708●	0.149	0.124	0.107	0.099	0.091	
163-5709●	0.149	0.124	0.107	0.099	0.091	
163-5710●	0.149	0.124	0.107	0.099	0.091	
163-5711●	0.149	0.124	0.107	0.099	0.091	
163-5713●	0.149	0.124	0.107	0.099	0.091	
163-5714●	0.149	0.124	0.107	0.099	0.091	
163-5715●	0.149	0.124	0.107	0.099	0.091	
163-5716●	0.149	0.124	0.107	0.099	0.091	
163-5717●	0.149	0.124	0.107	0.099	0.091	
163-5718●	0.149	0.124	0.107	0.099	0.091	
163-5720●	0.149	0.124	0.107	0.099	0.091	
163-5721●	0.149	0.124	0.107	0.099	0.091	
163-5722●	0.149	0.124	0.107	0.099	0.091	
163-5723●	0.149	0.124	0.107	0.099	0.091	
163-5725●	0.149	0.124	0.107	0.099	0.091	
163-5726●	0.149	0.124	0.107	0.099	0.091	
163-5727●	0.165	0.140	0.116	0.107	0.099	
163-5728●	0.165	0.140	0.116	0.107	0.099	
163-5729●	0.165	0.140	0.116	0.107	0.099	
163-5730●	0.165	0.140	0.116	0.107	0.099	
163-5731●	0.165	0.140	0.116	0.107	0.099	
163-5732●	0.165	0.140	0.116	0.107	0.099	
163-5733●	0.165	0.140	0.116	0.107	0.099	
163-5734●	0.165	0.140	0.116	0.107	0.099	
163-5735●	0.165	0.140	0.116	0.107	0.099	
163-5737●	0.165	0.140	0.116	0.107	0.099	
163-5738●	0.165	0.140	0.116	0.107	0.099	

Order Code	1+	10+	50+	10
------------	----	-----	-----	----

Ferrite Shielding Products - continued**SMD Ferrites - EMI Suppression - continued**

WE-CBF series - continued

	Price Each				
Order Code	1+	10+	50+	100+	250+
1206					
163-5755●	0.220	0.190	0.173	0.165	0.157
163-5756●	0.220	0.190	0.173	0.165	0.157
163-5757●	0.220	0.190	0.173	0.165	0.157
163-5758●	0.220	0.190	0.173	0.165	0.157
163-5759●	0.220	0.190	0.173	0.165	0.157

1210 case size

Impedance (Ω) @ 100MHz	R _{DC} (Ω)	I _N DC max. (mA)	Mfrs. List No.	Order Code	Price Each
					1+
					10+
32	0.3	400	74279230	163-5760	
60	0.3	400	74279231	163-5762	
90	0.3	400	74279232	163-5763	
30	0.05	3000	742792310	163-5764	
65	0.03	3000	742792312	163-5765	
1210					
Order Code	1+	10+	50+	100+	250+
163-5760●	0.198	0.173	0.157	0.149	0.140
163-5762●	0.198	0.173	0.157	0.149	0.140
163-5763●	0.198	0.173	0.157	0.149	0.140
163-5764●	0.220	0.190	0.173	0.165	0.157
163-5765●	0.220	0.190	0.173	0.165	0.157

1806 case size

Impedance (Ω) @ 100MHz	R _{DC} (Ω)	I _N DC max. (mA)	Mfrs. List No.	Order Code	Price Each
					1+
					10+
60	0.3	400	7427924	163-5766	
80	0.3	400	74279241	163-5767	
150	0.5	200	74279242	163-5768	
60	0.01	6000	742792410	163-5769	
75	0.025	3000	74279243	163-5770	
80	0.04	3000	742792411	163-5771	
110	0.35	4000	74279245	163-5772	
850	0.1	1500	74279244	163-5774	

1806 case size

Impedance (Ω) @ 100MHz	R _{DC} (Ω)	I _N DC max. (mA)	Mfrs. List No.	Order Code	Price Each
					1+
					10+
163-5766●	0.230	0.210	0.190	0.182	0.165
163-5767●	0.230	0.210	0.190	0.182	0.165
163-5768●	0.230	0.210	0.190	0.182	0.165
163-5769●	0.250	0.220	0.210	0.198	0.182
163-5770●	0.250	0.220	0.210	0.198	0.182
163-5771●	0.250	0.220	0.210	0.198	0.182
163-5772●	0.250	0.220	0.210	0.198	0.182
163-5774●	0.250	0.220	0.210	0.198	0.182

1812 case size

Impedance (Ω) @ 100MHz	R _{DC} (Ω)	I _N DC max. (mA)	Mfrs. List No.	Order Code	Price Each
					1+
					10+
120	0.3	300	7427925	163-5775	
70	0.3	300	74279250	163-5776	
70	0.03	6000	742792510	163-5777	
120	0.05	3000	742792511	163-5778	
530	0.05	3000	742792515	163-5779	
600	0.04	3000	742792514	163-5780	
880	0.035	4000	74279252	163-5781	

520871

1812 case size

Impedance (Ω) @ 100MHz	R _{DC} (Ω)	I _N DC max. (mA)	Mfrs. List No.	Order Code	Price Each
					1+
					10+
163-5775●	0.230	0.210	0.190	0.182	0.165
163-5776●	0.230	0.210	0.190	0.182	0.165
163-5777●	0.250	0.220	0.210	0.198	0.182
163-5778●	0.250	0.220	0.210	0.198	0.182
163-5779●	0.250	0.220	0.210	0.198	0.182
163-5780●	0.250	0.220	0.210	0.198	0.182
163-5781●	0.250	0.220	0.210	0.198	0.182

5-Hole Ferrite Beads

WE-SUKW Series

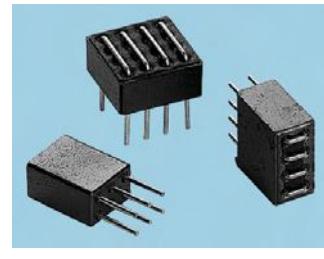
Impedance (Ω) @ 25MHz	R _{DC} (Ω)	Dimensions (mm)	Mfrs. List No.	Order Code	Price Each					
		A	B	C						
272	416	5	4.6	5.5	2	8	0.5	7427511	163-5782	
425	580	4.65	5	8.5	2	11	0.5	7427512	163-5783	

- Maximum current up to 5 Amp
- Low DC resistance with 3 mΩ
- Impedances up to 400Ω
- For SMD construction for easy installation on the PCB
- Protection against radio frequency interferences of components on PCBs of PCs, text processing and other digital devices



Order Code	1+	10+	50+	100+	250+	Price Each
163-5782●	0.79	0.70	0.58	0.55	0.51	
163-5783●	0.79	0.70	0.58	0.55	0.51	

520957

Multiline Ferrite
WE-MLS Series, EMI Suppression

- Filter for common mode or differential mode
- High impedance common mode inductor with 2x2 win. made by PCB line connection
- High rated current with typ. 4 A
- Broadband filtering because of the NiZn- ferrite core
- RF-common mode inductor for 2, 3 or 4 lines in one component
- Perfect suitable for EMC-absorption of common or differential mode
- For high-current DC output filters of power supplies e.g. battery chargers, industrial power supplies

Impedance (Ω) @ 25MHz	Dimensions (mm)	Mfrs. List No.	Order Code					
@ 100MHz	A	B	C	D	E	F		
212	264	7.62	5.08	10	5.8	2.54	74273001	163-5786
209	249	10.88	5.49	10	3.19	2.54	74273002	163-5787
208	248	11.2	11.2	8	3.5	2.54	742730022	163-5788

521028

Order Code	1+	10+	50+	100+	250+	Price Each
3 line	163-5786●	0.70	0.58	0.50	0.46	0.44
4 line	163-5787●	0.70	0.58	0.50	0.46	0.44
4 line	163-5788●	1.07	0.91	0.74	0.70	0.66

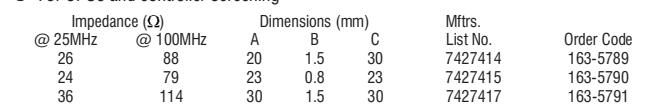
521166

Impedance (Ω) @ 25MHz	Dimensions (mm)	Mfrs. List No.	Order Code			
@ 100MHz	A	B	C	D	E	F
26	88	20	1.5	30	7427414	163-5789
24	79	23	0.8	23	7427415	163-5790
36	114	30	1.5	30	7427417	163-5791
25	84	40	1.5	18	7427418	163-5792
27	85	50	1.5	18	7427419	163-5793

521166

Order Code	1+	10+	50+	100+	250+	Price Each
20 x 30	163-5789●	1.16	0.99	0.83	0.78	0.73
23 x 23	163-5790●	0.99	0.83	0.66	0.62	0.59
30 x 30	163-5791●	1.40	1.24	1.07	1.01	0.95
40 x 18	163-5792●	1.40	1.24	1.07	1.01	0.95
50 x 18	163-5793●	1.40	1.24	1.07	1.01	0.95

521166



- High saturation core material
- Small size
- Standardized lead spacing is 5mm
- Maximum current up to 7.5A
- Operating temperature: -40°C to +125°C
- For signal filtering, NF-switches, switches, switching power supply for small and medium voltage, power supply filter

Dimensions (mm)						
A	B	C	D	E	F	
7.8	9.5	5	3	5	0.7 typ.	
Inductance (μH)	Tolerance	R _{DC} (Ω)	I _{DC} (A)	Mfrs. List No.	Order Code	
1	±20%	0.006	7.5	744772010	163-5794	
4.7	±20%	0.018	4	744772047	163-5795	
10	±20%	0.04	2.6	744772100	163-5796	
22	±10%	0.055	2.3	744772220	163-5798	
47	±10%	0.1	1.3	744772470	163-5799	
100	±10%	0.19	0.9	744772101	163-5800	
470	±10%	0.89	0.43	744772471	163-5801	
1000	±10%	1.84	0.3	744772102	163-5802	
10000	±10%	24	0.14	744772103	163-5804	

521169

Discrete EMI Absorber – 'Cho Drop'®

CHOMERICS®



L=13.97, D=4.7,
Lead length=27.94,
Lead dia.=0.64
Supplied bandoliered on tape.

- Discrete EMI absorbers are designed to reduce radiation from digital signal lines without significantly adding to propagation delay
- They will normally suppress radiation from a given lead by 10dB to 15dB and have a propagation delay of less than 10ns, while their flat absorption characteristics eliminate the 'ringing' found with ferrite beads. Leads are tinned copper wire.

Current capacity 500mA Mfrs List No. 80-10-9714-1000

204245

Order Multiple=5	Order Code	5+	50+	100+	250+	500+
80-10-9714-1000	121-8464●	1.20	1.15	1.09	1.02	0.92

Cable Earthing Clamp

KE KITAGAWA



- Flexible moulded earthing clamps
- Simultaneously fastens and earths
- Resin clamp provides excellent elasticity resulting in no damage to the cable
- For use with outer or inner* earth shielding braid
- M3 screw mounting

*cut away cable insulation material to expose inner shielding braid

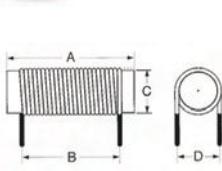
227239

Rodcore Inductors

WE-SD Series



New



- Broadband screening of symmetric interferences
- High mechanical stability
- High current
- Operating temperature: -40°C to +150°C
- For noise reduction of power electronics e.g. motors and switch mode power supplies

Inductance (μH)	Dimensions (mm)	I _N (A)	R _{DC} (mΩ)	Mfrs. List No.	Order Code
2	12.3 7.8 2	2.6	2.5	11	744710203
6	15.4 11.5 3	3.6	2.5	22	744710603
10	18.5 13.5 4	4.6	2.5	33	744711003
2	14 9.7 4	4.9	5	6.5	744710205
6	20.5 14.8 5	5.9	5	11.7	744710605
10	22.5 19 5	5.9	5	15.1	744711005
2	15.4 12.2 5	6.3	10	3.8	744710210
6	25.7 18 6	7.3	10	6.5	744710610
10	30.9 24.9 6	7.3	10	8.8	744711010
2	25.7 17.5 6	8	15	1.7	744710215
6	30 24.9 10	12	15	3.5	744710615
10	30.8 29.2 12	14	15	5.7	744711015

521492

Inductance (μH)	Order Code	1+	10+	50+	100+	250+	Price Each
2	163-5805●	1.03	0.93	0.86	0.81	0.76	
6	163-5806●	1.03	0.93	0.86	0.81	0.76	
10	163-5807●	1.03	0.93	0.86	0.81	0.76	
2	163-5808●	1.12	0.98	0.91	0.85	0.80	
6	163-5809●	1.12	0.98	0.91	0.85	0.80	
10	163-5810●	1.03	0.93	0.86	0.81	0.76	
2	163-5811●	1.03	0.93	0.86	0.81	0.76	
6	163-5812●	1.12	0.98	0.91	0.85	0.80	
10	163-5813●	1.12	0.98	0.91	0.85	0.80	
2	163-5814●	1.12	0.98	0.91	0.85	0.80	
6	163-5816●	1.57	1.40	1.24	1.17	1.10	
10	163-5817●	2.40	2.23	2.07	1.94	1.83	

EMC Shielding Products

- The following products can be used to help electrical and electronic apparatus in meeting the requirements of the EMC (electromagnetic compatibility) directive
- The directive covers all apparatus liable to cause electromagnetic disturbance, or the performance of which is liable to be affected by such disturbance.

204244

Over 480,000 products online



IRJ04 Series - For High Frequency

Dimensions (mm)	Recommended frequency range	Mfrs List No.	Order Code
L 300mm W 200mm H 0.13mm	50MHz to 10GHz	IRJ04AB 300X200X0.13	150-3731
300mm 200mm 0.25mm	10MHz to 3GHz	IRJ08AB 300X200X0.25	150-3732

Mfrs List No.	Order Code	1+	3+	10+	Price Each
IRJ08 Series	IRJ08AB 300X200X0.13	150-3731●	54.59	49.62	45.50
	IRJ08AB 300X200X0.25	150-3732●	80.84	73.48	67.38

IRJ04 Series

IRJ04AB 300X200X0.1	150-3733●	45.96	41.78	38.31
IRJ04AB 300X200X0.25	150-3734●	53.90	48.99	44.92
IRJ04AB 300X200X0.5	150-3735●	80.84	73.48	67.38
IFL04AT 300X200X0.05	150-3736●	63.83	58.02	53.20
IFL04AR 300X200X0P1	150-3737●	51.06	46.42	42.57

8

Help us to help the environment

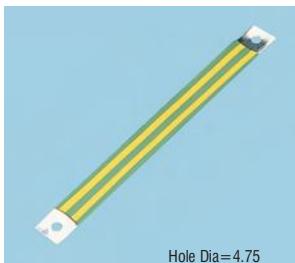


This catalogue has been printed on paper certified from a sustainable source.

Please recycle after use.

RL Re-reeling available



EMC Shielding Products - continued**Earthing Straps**

- Earthing straps designed to provide low impedance paths for EMI generated currents
- The strap overcomes the problems associated with conventional round earth wires, of an increased inductive resistance at high frequencies, due to the "Skin effect"
- Manufactured from tin plated copper with Green/Yellow insulation.

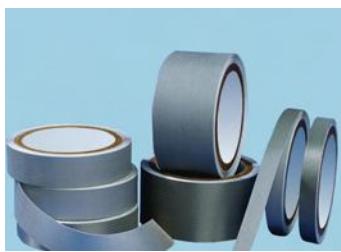
Copper thickness 2µm
Insulation material Polyolefin
Insulation colour
Tin plate thickness 2µm
Dielectric strength 10KV DC
Operating temperature -55°C to +135°C

386536

Laird TECHNOLOGIES

Dimensions Length (mm)	Width (mm)	Order code	Price Each			
			1+	5+	10+	25+
76.2		121-9162●	1.65	1.55	1.43	1.10
152.4		121-9163●	2.20	2.08	1.92	1.47
228.6		121-9161●	1.86	1.74	1.65	1.54
304.8		121-9164●	3.00	2.84	2.60	2.02

386536

Shielding Foil Tape

Note: Reel length tolerance ±10%

Laird TECHNOLOGIES

- Shielding tapes are available in tinned copper, Aluminum, Adhesive copper and nickel fabric version
- Shielding tapes offers strong conductivity, strong adhesive and durability in a thin lightweight and flexible shielding design and application
- Also offers superior abrasion and corrosion resistance
- Tinned copper version allows direct soldering to the tape
- Copper tape meets the requirements of MIL-T-47012 and the tinned copper foil tape meets MIL-T-10727 for corrosion resistance

386546

Dimension (W x L)	Order Code	Price Each			
		1+	5+	10+	25+
Tin-plated Copper					
12.7mm x 15m	886-8506●	28.82	26.19	24.26	20.38
25.4mm x 15m	886-8514●	54.74	49.77	46.08	38.70
Aluminium					
12.7mm x 15m	886-8549●	11.68	10.63	9.84	8.26
25.4mm x 15m	886-8557●	20.33	18.48	17.12	14.38
50.8mm x 15m	886-8565●	42.74	38.85	35.98	30.22
101.6mm x 15m	886-8573●	91.40	83.08	76.93	64.63
Copper					
12.7mm x 15m	886-8581●	21.77	19.78	18.32	15.40
25.4mm x 15m	886-8590●	40.02	36.38	33.68	28.29
50.8mm x 15m	886-8603●	46.10	41.91	38.79	32.59
Copper, Conductive Adhesive 2 Sides					
25.4mm x 15m	886-8646●	43.23	39.29	36.38	30.55
Nickel-plated Fabric					
25.4mm x 15m	886-8662●	159.75	145.20	134.45	112.93
50.8mm x 15m	886-8670●	285.24	259.25	240.06	201.63

386546

Shielding Foil Tape – 'CHO-FOIL'®

- Economical EMI shielding solution for variety of commercial uses
- Pressure-sensitive adhesive (PSA). Adhesive contains a uniform dispersion of unique oxidation resistant conductive particles that produce a very low resistance through the tape
- Copper tape meets the requirements of MIL-T-47012 and the tinned copper foil tape meets MIL-T-10727 for corrosion resistance
- Tinned copper version allows direct soldering to the tape

Note: Reel length tolerance ±10%

204250

Dimension (W x L)	Order Code	Price Each			
		1+	5+	10+	25+
Tin-plated Copper					
12.7mm x 16.4m	121-8470●	30.42	25.86	20.69	18.82
25.4mm x 16.4m	121-8466●	57.66	49.49	40.80	34.82
50.8mm x 16.4m	121-8471●	115.73	98.37	78.69	71.53
101.6mm x 16.4m	121-8472●	151.32	128.62	102.89	93.54
Aluminium					
12.7mm x 16.4m	121-8473●	11.94	10.42	8.65	7.67
25.4mm x 16.4m	121-8474●	20.93	18.25	15.15	13.43
50.8mm x 16.4m	121-8476●	42.21	35.88	28.70	26.10
101.6mm x 16.4m	121-8477●	84.41	71.75	57.42	52.17

204250

Dimension (W x L)	Order Code	Price Each			
		1+	5+	10+	25+
Copper					
12.7mm x 16.4m	121-8478●	17.05	14.87	12.34	10.95
25.4mm x 16.4m	121-8465●	42.49	38.10	35.00	31.23
50.8mm x 16.4m	121-8479●	62.87	53.46	42.76	38.86
Copper, Non-conductive Adhesive					
12.7mm x 16.4m	121-8480●	16.64	14.52	12.05	10.68
25.4mm x 16.4m	121-8481●	30.60	26.02	20.81	18.91
50.8mm x 16.4m	121-8482●	61.19	52.02	41.61	37.83
Copper, Conductive Adhesive 2 Sides					
25.4mm x 16.4m	121-8483●	50.10	42.60	34.08	30.98
50.8mm x 16.4m	121-8484●	100.20	85.17	68.15	61.95
Aluminium, Conductive Adhesive 2 Sides					
25.4mm x 32.8m	121-8485●	35.24	29.95	23.96	21.79

Shielding Foils

3M



- 3M Scotch™ Foil Shielding Tapes are designed for applications requiring reliable point-to-point electrical contact, particularly EMI shielding, grounding and static charge draining
- The tapes have multitude of uses in electronic design and test laboratories for prototyping, design and troubleshooting.
- Also available as an engineering kit, which offers easy access to all 9 foil tapes in the 3M range
- Dispenser box serves as a source of reference for tapes, as basic technical information about each tape appears on the box

All rolls are 19mm wide and 3.66m long

Mfrs. List No.	Order Code	Description
1170	120-8990	Plain aluminium foil, conductive adhesive solderable. Total thickness 0.08mm Plain aluminium foil, conductive adhesive solderable. Total thickness 0.08mm
1181	120-8991	Plain Copper foil, conductive adhesive, solderable. Total thickness 0.07mm
1182	120-8993	Plain Copper foil, conductive adhesive on both sides of foil, solderable. Total thickness 0.09mm.
1183	120-8994	Tin Plated Copper foil, oxidation resistant for long term EMI Shielding. Conductive adhesive. Total thickness 0.07mm.
1194	120-8995	Plain Copper foil, electrically non-conductive adhesive. Total thickness 0.08mm.
1245	120-8996	Embossed Copper foil, conductive adhesive. Solderable. Total thickness 0.1mm.
1345	120-8999	Embossed Tin Plated Copper foil, Conductive adhesive. Oxidation resistant for long term EMI shielding. Total thickness 0.1mm.
Foil Engineering Kit	120-8988	1 roll of each of the above foils.

204090

Mfrs. List No.	Order Code	1+	12+	24+	36+
1170	120-8990●	17.34	14.18	12.61	11.13
1181	120-8991●	16.19	13.22	11.75	10.37
1182	120-8993●	16.00	13.04	11.62	10.63
1183	120-8994●	20.33	16.50	14.66	12.94
1194	120-8995●	7.89	6.46	5.75	5.06
1245	120-8996●	14.81	12.06	10.72	9.47
1345	120-8999●	19.12	16.22	14.08	12.44
Foil Engineering Kit	120-8988●	104.02	99.48	89.96	81.15

XYZ Axis Tape

3M



XYZ-Axis electrically conductive adhesive transfer tapes have all the qualities required for reliable and effective attachment of EMI/RFI shields and gaskets to electronic devices. 9712 tape is for applications with moderate electrical requirements. For critical electrical requirements use 9713 tape.

It's in the fibres:

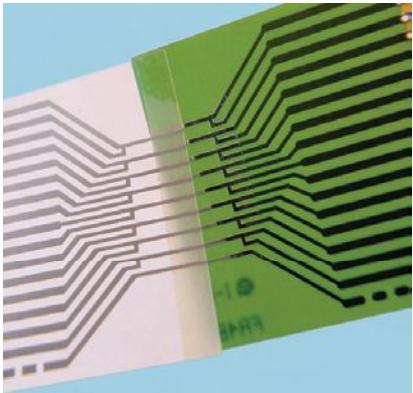
- Wiping action creates good electrical contact
- Spring-loaded tension maintains electrical contact
- Reinforcement gives the tape excellent handling characteristics
- Eliminates gaps along device/shield interface to prevent emission leaks
- Isotropic conductance
- Non-corrosive adhesive increases life of shield and allows attachment of dissimilar metals. Long-lasting adhesion

- Low resistance for increased shielding effectiveness
- Fast assembly

Typically used for:

- Attaching foil laminate EMI shields to electronic and electrical devices
- Can be applied in strips or die-cut to specific shapes and sizes
- Compared to screws or other mechanical connector provides reduced assembly time and a solid bond-line with no gaps for EMI emission

Adhesive:	9712 Tape	9713 Tape
Contact Ω (foil/rigid plate)	Acrylic	
Aluminium / Aluminium	< 24 Ω	< 1 Ω
Aluminium / Stainless steel	< 24 Ω	< 1 Ω
Copper / Stainless steel	-	< 0.5 Ω
Tape only thickness:	0.127mm	0.0762mm
Liner thickness:	0.1mm	
Conductive material:	Conductive fibres	
Operating temperature:	15 to 70°C	
		451739
Mfrs. List No.	Order Code	Price Each
9712 12MM X 33MTR	130-7065●	53.80
9712 25MM X 33MTR	130-7066●	78.62
9713 25MM X 33MTR	130-7067●	100.68
		47.22 40.77 38.80 73.29 68.63 64.53 92.17 84.00 77.40

Electrically Conductive Tape 9703

A permanently tacky system consisting of a pressure sensitive adhesive (PSA) matrix with aligned conductive particles, the PSA properties make it easy to handle and apply without the need for thermal bonding. Many applications require mechanical back-up to achieve long-term electrical reliability.

- Pressure sensitive adhesive (PSA) transfer tape with anisotropic electrical conductivity
- PSA tack properties provide an instant bond with minimal pressure and make for ease of use in assembly operations
- Good adhesion to common PCB substrates such as copper, gold, polyimide, polyester, Kapton™, FR-4 epoxy

Typically used for:

- Interconnection of silver ink/polyester flexible circuits
- A membrane touch switch to flex circuit attachment
- EMI/RFI shield attach

Adhesive:	Acrylic	
Contact resistance/resistivity:	1.25 $\mu\Omega$ -inch ² / 1.6 Ω -cm	
Minimum suggested gap between contacts:	0.4mm	
Minimum suggested contact area (per pad):	0.005 inch ²	
Tape only thickness	0.05mm	
Liner thickness	0.127mm	
Conductive material	Particle	
Operating temperature	15 to 70°C	
Reel dimensions (LxW)	33m x 25mm	
	451721	
Mfrs. List No.	Order Code	Price Each
9703 25MM X 33MTR	130-7064●	83.07
		76.02 71.43 64.51

Knitted Wire Mesh Tape

- Monel mesh tape providing excellent RFI/EMI shielding for electronic cables and harness assemblies.
- When wrapped firmly around cables with a 50% overlap and earthed at both ends, provides an effective shield in compliance with BS6527, VDE and FCC radiation limits.

204249

Reel Width	Order Code	Price Per Reel
25mm	121-9141●	13.56
50mm	121-9142●	20.26
		5+ 10+ 11.53 19.03 17.28



40,000 PRICES REDUCED

Raybraid-101 – Shielding Braid

- Tinned copper shielding braid for harness systems
- Supplied on easily removed plastic tube former
- Minimum 93% optical coverage
- Super flexible with high expansion ratio

Note: Tube former must be removed from braid before use.

Bundle Diameter Max.	Former Diameter Min.	Braid Size mm	Mfrs. List No.	Order Code
5.0	2.5	3mm ± 0.13mm	0.1	38 RAY-101-3.0
7.5	3.5	4mm ± 0.25mm	0.13	36 RAY-101-4.0
9.5	4.5	6mm ± 0.25mm	0.13	36 RAY-101-6.0
14	7	7.5mm ± 0.25mm	0.13	36 RAY-101-7.5
22	8	10mm ± 0.25mm	0.13	36 RAY-101-10.0
24	11	12.5mm ± 0.25mm	0.13	36 RAY-101-12.5
38	16	20mm ± 0.38mm	0.13	36 RAY-101-20.0

204176

10m Coils Order Code	Price Each
121-8642●	21.68
121-8643●	36.06
121-8644●	51.43
121-8646●	52.01
121-8647●	62.90
121-8648●	71.30
121-8649●	104.40
	10+ 20.38 19.16 18.01 16.93 33.90 31.87 29.95 28.17 48.34 45.44 42.72 40.15 48.89 45.96 43.21 40.62 59.12 55.56 52.22 49.09 67.04 63.02 59.26 55.71 98.14 92.25 86.72 81.52

'WS' Monel/Silicone Shielding Material

Sheet size
H=900, W=100, Th=1.5

- This shielding material is a composite of monel wires embedded in a solid silicone, and orientated to a matrix of 100 per square centimetre
- Provides excellent RF attenuation through wire point contact on both sides of the gasket and will also provide environmental sealing to IP65 or IP66 depending on seal compression.
- Small gaskets can be made simply by cutting the sheet using a blade
- Larger gaskets can be formed by cutting the material into strips, and gluing using a good cyanoacrylate (super glue), into a g'picture frame style'.
- Holes can be cut or punched as required.

Monel wires 0.11mm dia. Operating temperature -55°C to +125°C 204251

Order Code	Price Each
121-9144●	27.42
	1+ 5+ 10+ 22.60 20.35

Gasket Strip-Extra Soft

- Extra Soft Shielding Strip for commercial enclosures, cabinets and panels requiring minimum closure force or where wide tolerance gaps exist.
- Constructed from a single layer of fine monel wire, knitted over a closed cell neoprene sponge
- Excellent shielding performance when compressed by 25%, compression up to 50% can be applied to improve environmental sealing
- Pressure-sensitive adhesive backing ensures easy application

Monel wire thickness 80 μ m Operating temperature -40°C to +80°C 213822

Size A x B	Order Code	Price Per Reel
6 x 4	121-9154●	26.07
9 x 6	121-9155●	29.28
6 x 4	121-9156●	50.16
9 x 6	121-9158●	55.74
		10+ 24.18 21.79 17.39 26.47 22.99 18.80 46.63 41.37 32.74 51.84 46.00 36.40

EMC Shielding Products - continued

Knitted Gasket

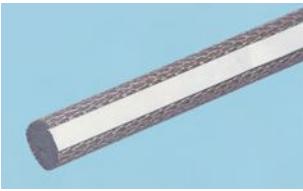


- Designed to provide an economic EMI seal for commercial electronic enclosures
- **Shielding Performance:** >70dB attenuation from 20MHz to 10GHz
- **Closure Force:** Requires <0.175 N/mm (1lb./inch) closure force
- Self terminating - simply cut to length
- Pressure-sensitive adhesive (PSA) for ease-of-use and quick mounting
- Supplied in packs of 1m lengths

386622

Dimensions W x H	Pack Qty	Order Code	Per Pack				
			1+	5+	10+	25+	
Square Shape							
6.4mm x 6.4mm	5	883-3842●	16.87	15.54	14.43	13.07	
D Shape							
3.6mm x 2.5mm	5	883-3850●	37.99	35.01	32.50	28.76	
Rectangular Shape							
12.7mm x 6.4mm	5	883-3893●	55.68	51.29	47.63	42.13	

Knitted Yarn Gasket – ‘Soft-Shield 2000’



CHOMERICSK

- Designed to provide an economic EMI seal for commercial electronic enclosures.
- **Shielding Performance:** >70dB attenuation from 20MHz to 10GHz
- **Closure Force:** Requires <0.175 N/mm (1lb./inch) closure force
- Self terminating - simply cut to length
- Pressure-sensitive adhesive (PSA) for ease-of-use and quick mounting

204272

Dimensions W x H	Reel Length	Gasket Profile	Order Code	1+	Price Each		
					5+	10+	25+
Square Shape							
6.4mm x 6.4mm	3m	6791	121-8492●	31.48	27.30	22.47	18.96
D Shape							
3.6mm x 2.5mm	5m	6903	121-8486●	42.93	37.58	30.05	27.32
9.5mm x 6.4mm	5m	6792	121-8488●	23.07	20.82	16.66	15.60
12.7mm x 9.5mm	5m	6902	121-8489●	58.11	50.86	40.67	36.98
Rectangular Shape							
6.4mm x 3.3mm	5m	6794	121-8490●	28.16	25.27	20.98	18.64

EMC Foam Gasket



Laird TECHNOLOGIES

- UL 94VO and HB flame retardant
- Ideal for applications requiring low pressure force
- High conductivity and shielding attenuation
- High abrasion and shear resistance
- Self-terminating cut-to-lengths of 1m

386520

Dimensions (mm) W x H	Order Code	1+	Price Each		
			5+	10+	25+
Square Shape					
5 x 5	883-3508●	9.07	8.27	6.62	6.07
6 x 6	883-3516●	9.18	8.37	6.70	6.15
9.5 x 9.5	883-3524●	8.39	7.67	6.14	5.62
Rectangular Shape					
3.3 x 4.8	883-3532●	8.00	7.31	5.85	5.37
6.4 x 9.5	883-3540●	10.28	9.37	7.50	6.87
9.5 x 12.7	883-3559●	14.40	13.15	10.54	9.65
D Shape					
6.4 x 3.6	883-3575●	8.10	7.41	5.93	5.44
9.5 x 6.4	883-3583●	6.16	5.63	4.51	4.12

Fabric Wrapped Foam Gasket

Soft-Shield® 5000



CHOMERICSK

- **Shielding performance** >90dB attenuation from 20MHz to 10GHz
- **Closure force** <0.175N/mm (1lb/inch), 5 times lower than standard gaskets
- Asymmetrical profiles as well as C and D shapes
- Self terminating nickel-plated silver woven nylon rip-stop fabric jacket
- Pressure sensitive adhesive (PSA) for ease-of-use and quick mounting
- Standard 1 metre length

- **Shielding performance** >90dB attenuation from 20MHz to 10GHz
- **Closure force** <0.175N/mm (1lb/inch), 5 times lower than standard gaskets
- Asymmetrical profiles as well as C, V and D shapes
- Self terminating nickel-plated silver woven nylon rip-stop fabric jacket
- Pressure sensitive adhesive (PSA) for ease-of-use and quick mounting
- Standard 1 metre length

204056

Dimensions W x H	Chomerics Gasket Profile	Order Code	1+	Price Each		
				5+	10+	25+
Square Shape						
5.1 x 5.1	74017	121-8450●	9.96	8.79	7.16	5.75
6 x 6	74022	121-8452●	10.10	8.91	7.25	5.82
9.5 x 9.5	74024	121-8453●	11.77	10.35	8.44	6.78
Rectangular Shape						
4.8 x 3.3	74015	121-8454●	8.74	7.69	6.28	5.05
9.5 x 6.4	74016	121-8455●	11.30	9.98	8.13	6.55
12.7 x 9.5	74021	121-8456●	13.36	11.76	9.58	7.72
D Shape						
2.3 x 2.3	74019	121-8457●	8.86	7.79	6.37	5.10
6.4 x 3.6	74006	121-8458●	8.86	7.79	6.37	5.10
9.5 x 6.4	74011	121-8459●	11.88	10.49	8.53	6.87
V Shape						
10.7 x 9.8	74008	121-8460●	15.67	13.81	11.24	9.06
14.7 x 17.1	74010	121-8461●	22.18	19.53	15.91	12.80

EMC Technical Books										
EMC Filters Data Book										
EMC Filters Data Book										
<ul style="list-style-type: none"> ● Represents the current EPCOS range of EMC filters ● Contains index of types, selector guide, full technical datasheets and application notes ● Also contains detailed information sections explaining fundamentals of EMC, terms and definitions, environmental issues quality assurance and how to meet requirements of the EMC Directive 										
<table border="1"> <thead> <tr> <th>Order Code</th> <th>Price Each</th> </tr> <tr> <th>410-0086</th> <th>1+ 7.31</th> </tr> </thead> </table>							Order Code	Price Each	410-0086	1+ 7.31
Order Code	Price Each									
410-0086	1+ 7.31									

Need a better price?



Buy more and save more with our volume pricing service.

Contact us now:
Web: www.farnell.co.uk
Phone: 08447 11 11 11



Specialist Services for Contract Manufacturers

- **Fast quote turnaround** - stocked items quoted within 4 hours
- **Over 480,000 products in stock** from a guaranteed supply source with a best in class product range
- **Industry leading component manufacturers** - new products and suppliers added online weekly
- **Next day delivery** on all stocked items
- **Prototyping requirements?** No minimum order quantities
- **Competitive pricing** - from prototyping to production
- **Free re-reeling service** on over 15,000 surface mount components
- **Talk to us about our wide range of innovative packaging solutions**

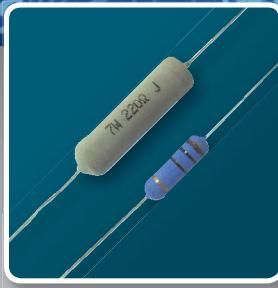
To see how Farnell can support
you, visit: **www.farnell.com**



A Premier Farnell Company



Design with confidence...



...choose SPC Multicomp for Resistors

- Excellent value for money
- High quality and reliability
- Industry standard product range
- Order from Farnell for next day delivery with fast, reliable service and support

For the full range and technical information visit
www.farnell.com



multicomp