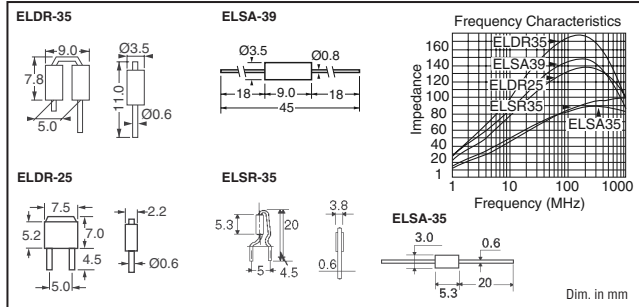


Panasonic®

EMI Bead Cores (For Electromagnetic Interference)



SPECIFICATIONS: • DC Resistance: 10mΩ maximum • Insulation Resistance: 10MΩ minimum



Description	Imp. (Ω) 100 MHz	Digi-Key Part No.	10	100	Pricing 1,000	2,000	Panasonic Part No.
Radial Dual Type (Tape and Box)	140 min.	P9817TB-ND	—	—	63.89	59.53/M	EXC-ELDR35V
Radial Dual Type (Bulk)	140 min.	P9817BK-ND	1.30	10.59	—	—	EXC-ELDR35C
Axial Single Type (Tape and Box)	110 min.	P9818TB-ND	—	—	42.11	—	EXC-ELSA39V
Axial Single Type (Bulk)	110 min.	P9818BK-ND	.92	7.51	—	—	EXC-ELSA39C
Radial Dual Type (Tape and Box)	100 min.	P9819TB-ND	—	—	—	59.53/M	EXC-ELDR25V
Radial Dual Type (Bulk)	100 min.	P9819BK-ND	1.26	10.22	82.76	—	EXC-ELDR25C
Axial Single Type (Tape and Box)	60 min.	P9820TB-ND	—	—	42.11	—	EXC-ELSA35V
Axial Lead Type (Bulk)	60 min.	P9820BK-ND	.92	6.37	—	—	EXC-ELSA35C
Radial Single Type (Tape and Box)	60 min.	P9821TB-ND	—	—	42.11	—	EXC-ELSR35T
Radial Form Type (Bulk)	60 min.	P9821BK-ND	.92	6.37	—	—	EXC-ELSR35S

Surface Mount Bead Cores



0603
FEATURES: EXC-3BB Series: • High impedance for high speed signal line • Increase the A characteristics sharply above 40MHz and is applicable for radiated noise in the 100MHz ~ 300MHz range EXC-3BP Series: • Reduced DC resistance for EMI suppression • High current rating • Effective noise suppression at high frequency, up to 2GHz
APPLICATIONS: Clock line, signal line, I/O interface circuit

Imp. 100 MHz ±25%	I (mA)	Rdc (Ω)	Digi-Key Part No.	10	100	500	Cut Tape Pricing 100	500	Digi-Key Part No.	10	100	500	Tape & Reel Pricing 4,000	Panasonic Part No.
220Ω	200	0.3	P10188CT-ND	1.10	7.43	25.16	—	—	P10188TR-ND	—	—	—	32.67/M	EXC-3BB221H
600Ω	100	0.8	P10189CT-ND	1.10	7.43	25.16	—	—	P10189TR-ND	—	—	—	32.67/M	EXC-3BB601H
1000Ω	50	1	P10190CT-ND	1.10	7.43	25.16	—	—	P10190TR-ND	—	—	—	32.67/M	EXC-3BB102H
60Ω	1000	0.07	P10749CT-ND	1.25	8.78	30.35	—	—	P10749TR-ND	—	—	—	47.92/M	EXC-3BP600H
120Ω	500	0.1	P10750CT-ND	1.25	8.78	30.35	—	—	P10750TR-ND	—	—	—	47.92/M	EXC-3BP121H

High Current

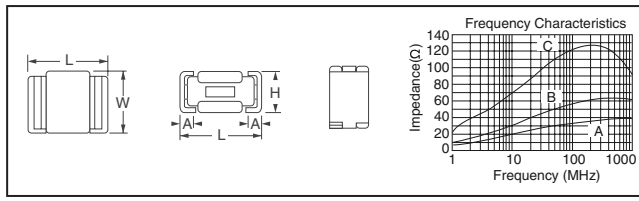
FEATURES:
 • Super small, high self-resonant frequency and excellent tolerance
SPECIFICATIONS:
 • Tolerance: ±25% • Test Frequency: 100MHz

Size	Imp (Ω)	I (A)	Rdc (mΩ)	Dim. (mm) A B C	Digi-Key Part No.	10	100	500	Cut Tape Pricing 3,000	4,000	Tape & Reel Pricing 8,000	Panasonic Part No.
0603	27	4	6	1.6 0.8 0.8	P10436CT-ND	1.89	13.38	46.21	—	63.17/M	—	EXC-ML16A270U
0805	39	4	8	2.0 1.2 0.9	P10191CT-ND	1.89	13.38	46.21	—	63.17/M	—	EXC-ML20A390U
1206	68	3	12	3.2 1.6 0.9	P10437CT-ND	1.86	13.25	47.70	74.06/M	—	—	EXC-ML32A680U
1806	91	3	16	4.5 1.6 1.1	P11956CT-ND	2.05	14.61	52.60	87.85/M	—	—	EXC-ML45A910H

* For Tape and Reel part number, change CT-ND to TR-ND.
Surface Mount Bead Core Assortment Kit:
 EXC1-KIT-ND 20 each of 9 values (180 pieces) (RoHS Compliant)..... 44.98

Surface Mount Bead Cores

SPECIFICATIONS: • Tolerance: ±25% • Test Frequency: 100MHz • Rated Current: 2 (A) • Flow/Reflow Soldering



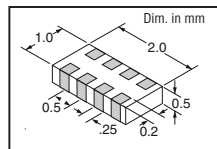
Imp. (Ω)	Dimensions (mm) L W H A	Digi-Key Part No.	Cut Tape Price Each 10 100	Digi-Key Part No.	10	100	Tape and Reel Pricing 2,000 10,000	Panasonic Part No.
A 25	3.2 1.6 1.6 0.5	P9810CT-ND	.30 .22	P9810TR-ND	125.60/M	116.16/M	EXC-CL3216U1	
B 45	3.2 2.5 1.6 0.5	P9811CT-ND	.39 .28	P9811TR-ND	160.45/M	148.83/M	EXC-CL3225U1	
C 115	4.5 3.2 1.8 0.5	P9812CT-ND	.45 .33	P9812TR-ND	—	174.24/M	EXC-CL4532U1	

• RoHS Compliant

Surface Mount Bead Core Array



0804 (0402x4)
FEATURES: • .02 inch (0.51mm) height, lightweight (typically only 5mg), narrow pitch, compatible with SSOP pitch



EXC-28BB Series: • Suitable for high speed signals (over 50MHz), excellent cross talk characteristics (100MHz: <-25dB) **APPLICATIONS:** • PC, LCD, DSC, Printer, PDA, MD, CD, NAVI

EXC-28BA Series: • Suitable for ring suppression while maintaining wave form, excellent cross talk characteristics (100MHz: <-30dB) **APPLICATIONS:** • HDD, E-IDE (Ultra DMA 33), DVD, CD-ROM, C-DR, CDR-RW

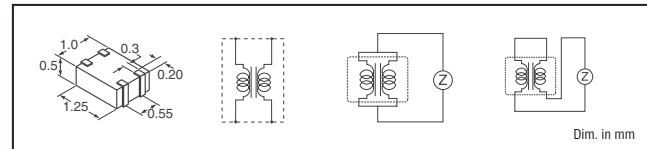
Imp. 100 MHz ±25%	I (mA)	Rdc (Ω)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel Pricing 5,000		Panasonic Part No.
				10	100	500		216.35/M	216.35/M	
120Ω	100	0.5	P10751CT-ND	.52	.38	.28	P10751TR-ND	216.35/M	EXC-28BB121U	
220Ω	100	0.7	P10752CT-ND	.52	.38	.28	P10752TR-ND	216.35/M	EXC-28BB221U	
120Ω	100	0.5	P10753CT-ND	.52	.38	.28	P10753TR-ND	216.35/M	EXC-28BA121U	
220Ω	100	0.7	P10754CT-ND	.52	.38	.28	P10754TR-ND	216.35/M	EXC-28BA221U	

Common Mode Noise Filter



0504
Features: • Low profile • Low DC resistance • High reliability and high mounting efficiency due to multilayer construction

Applications: General electronic equipment
Specifications: Temperature Range: -40°C ~ 85°C



Imp. @ 100MHz Common Mode	Differential Mode	Rated Volt. (V DC)	Rated Current (mA DC)	Rdc (Ω Max.)	Digi-Key Part No.	Cut Tape Price Each			Tape & Reel Pricing* 5,000	Panasonic Part No.
						1	10	100		
90Ω	15Ω	5	160	1.75	P12972CT-ND	.44	.33	.25	139.40/M	EXC-24CE900U
120Ω	18Ω	5	140	2.20	P12970CT-ND	.44	.33	.25	139.40/M	EXC-24CE121U
200Ω	20Ω	5	130	2.70	P12971CT-ND	.44	.33	.25	139.40/M	EXC-24CE201U

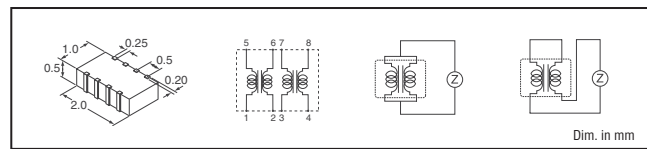
* For Tape and Reel part number, change CT-ND to TR-ND.

Common Mode Noise Filter Array



0804
Features: • Low profile • Low DC resistance • High reliability and high mounting efficiency due to multilayer construction

• 2 filters in one small package
Applications: General electronic equipment
Specifications: Temperature Range: -40°C ~ 85°C



Imp. @ 100MHz Common Mode	Differential Mode	Rated Volt. (V DC)	Rated Current (mA DC)	Rdc (Ω Max.)	Digi-Key Part No.	Cut Tape Price Each			Tape & Reel Pricing* 5,000	Panasonic Part No.
						1	10	100		
90Ω	15Ω	5	160	1.5	P12975CT-ND	.64	.48	.36	201.11/M	EXC-28CE900U
120Ω	18Ω	5	140	2.0	P12973CT-ND	.64	.48	.36	201.11/M	EXC-28CE121U
200Ω	20Ω	5	130	2.5	P12974CT-ND	.64	.48	.36	201.11/M	EXC-28CE201U

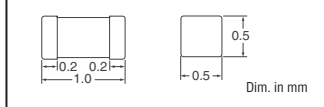
* For Tape and Reel part number, change CT-ND to TR-ND.

LC/LR Composite Devices



Features:
 • Effective for noise and ESD at the same time
 • Simple pattern without connecting GND pattern

Applications:
 • Information/communication devices with LCD displays



Inductance @ 100MHz ±20% Nom.	Q Min.	Imp. @ 100 MHz Nom.	SRF @ ±50MHz Nom. (MHz)	RDC Max. (Ω)	IDC Max. (mA)	Digi-Key Part No.	Cut Tape Pricing			Tape & Reel Pricing* 10,000	Panasonic Part No.
							1	10	100		
99nH	4	1500Ω	850	10	90	P13345CT-ND	.12	.98	7.68	44.29/M	ELW-CF800F01

Inductance @ 100MHz ±5% Nom.	DCR @ ±20% Nom.	SRF Min. (MHz)	IDC Max. (mA)	Digi-Key Part No.	Cut Tape Pricing			Tape & Reel Pricing* 10,000	Panasonic Part No.
					1	10	100		
100nH	100Ω	1200	23	P13346CT-ND	.11	.91	7.17	41.39/M	ELW-RFR10101F

* For Tape and Reel part number, change CT-ND to TR-ND.

Free shipping on orders over £50! All prices are in British pound sterling and include duties.

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