

Miniature, Surface Mount Common Mode Chokes

U.S. Patent #6288626

Up to 10 AMPs / 1812 & 3312 Size

Laird Technologies, monolithic surface mount common mode chokes are designed for power and data line EMI filtering where high current, small size or high frequency performance is required. This family of compact ferrite parts provides EMI suppression on conductors such as PC board traces (tracks) and high speed input/output circuitry (including network and storage subsystems).

Features:

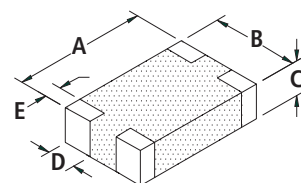
- Monolithic • Compact • High current carrying capability (up to 10 amps continuous) • Excellent high frequency performance • Very low DCR • Smaller, lighter and less susceptible to vibration than old-style wire-wound chokes
- More effective than multiple differential mode chokes • Impedance does not drop or shift under bias or full load current • Lead free and RoHS compliant

Applications:

- Filtering DC power on PC boards, especially in applications of greater than 3.0 amps • Filtering common mode EMI on high speed data lines • PCMCIA products • Filtering for Bellcore Telecom applications • Filtering on USB power lines • Disk Drives • Printers • Laptops

PART NUMBERING SYSTEM EXAMPLE

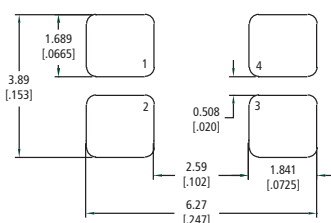
<u>CM</u>	<u>1812</u>	<u>X</u>	<u>330</u>	<u>R</u>	<u>-10</u>
Product Series Code	Part Size Code	Rated Current Code	Impedance Value Code	Packaging Code	Additional Description



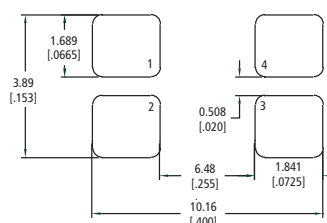
PART NUMBER	DIMENSIONS mm (inches)					TYPICAL IMPEDANCE (Ω)				Typical Peak Impedance (Ω)	Typical Peak Impedance Frequency (MHz)	DCR MAX (Ω)	Rated I MAX (continuous) mA
	A	B	C	D	E	Z @ 25 MHz	Z @ 100 MHz	Z @ 500 MHz	Z @ 1 GHz				
CM1812X330R-10	4.57 (0.180)	3.05 (0.120)	1.60 (0.063)	1.14 (0.045)	0.58 (0.023)	18	33	62	74	88	2359	0.0030	10,000
CM1812R600R-10	4.57 (0.180)	3.05 (0.120)	2.36 (0.093)	1.14 (0.045)	0.58 (0.023)	22	60	112	138	146	1519	0.0005	5,000
CM3312R111R-10	8.50 (0.335)	3.05 (0.120)	2.36 (0.093)	1.14 (0.045)	0.58 (0.023)	44	110	168	165	170	800	0.0050	5,000



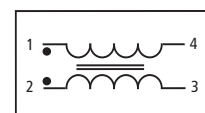
1812 Land Pattern



3312 Land Pattern

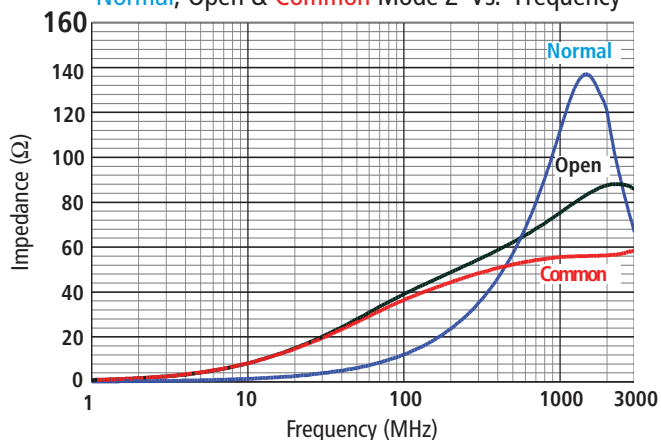


Equivalent Circuit



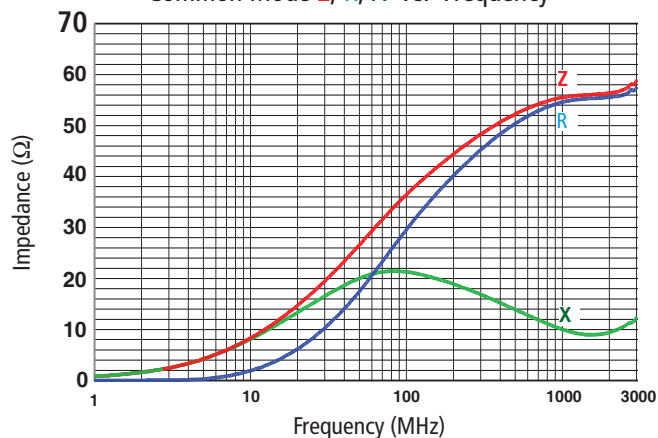
CM1812X330R-10

Normal, Open & Common Mode Z Vs. Frequency



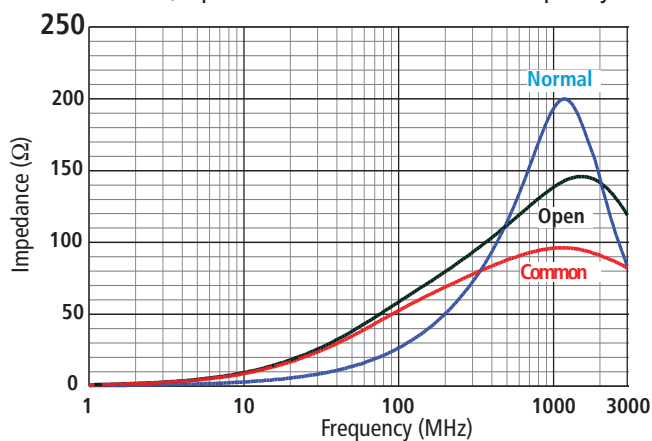
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Common Mode Z, R, X Vs. Frequency



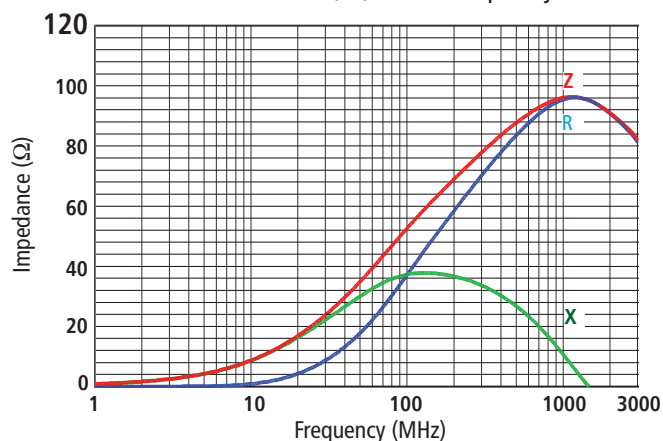
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Normal, Open & Common Mode Z Vs. Frequency



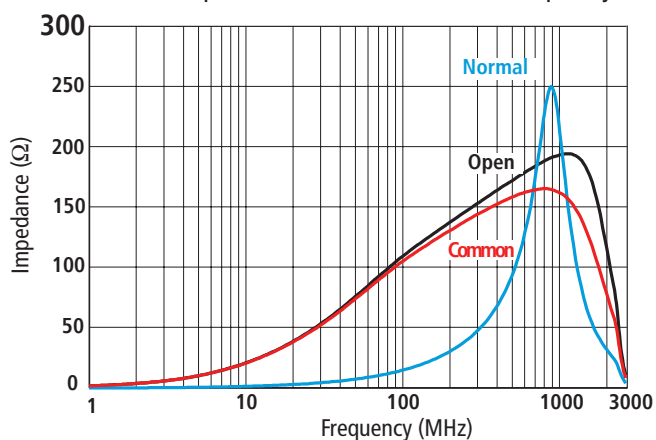
CM1812R600R-10

Common Mode Z, R, X Vs. Frequency



CM3312R111R-10

Normal, Open & Common Mode Z Vs. Frequency



CM3312R111R-10

Common Mode Z, R, X Vs. Frequency

