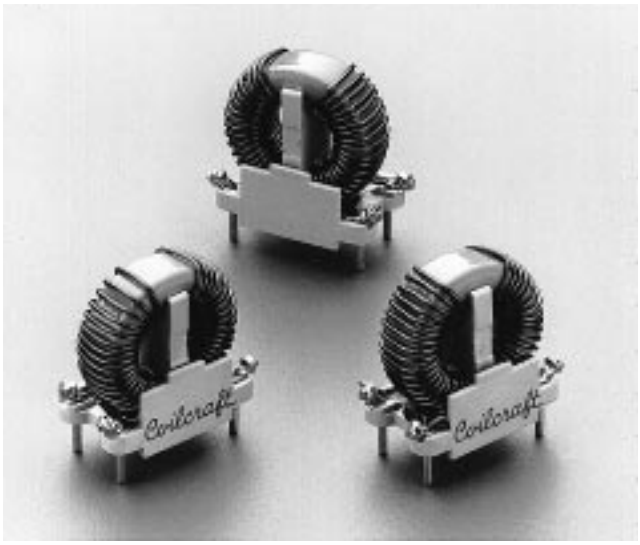
Common Mode Line Chokes

Standard Series
High L Series



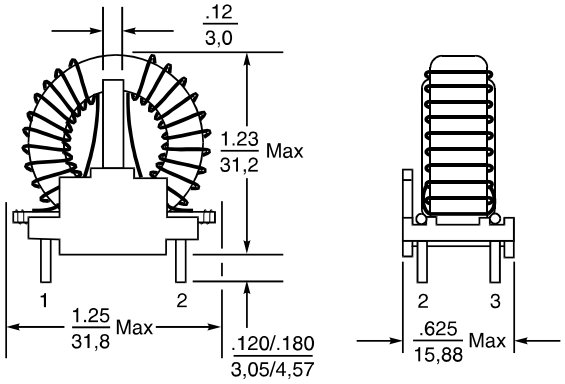
Coilcraft's Toroid Style common mode chokes are designed for optimum performance. Their single layer windings provide for the highest common mode impedance over the widest frequency range.

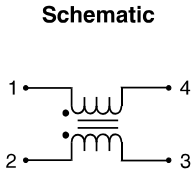
Spacers, specially designed by Coilcraft, provide 3 mm creepage and clearance spacings for compatibility with UL, CSA, and IEC safety specifications.

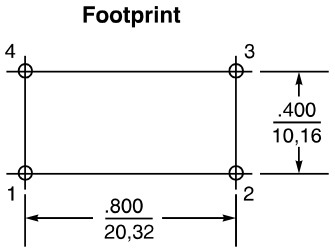
These common mode line chokes come in two series: Standard and High Inductance. Both are particularly suitable for switching power supplies operating in the 100-300 kHz range of switching frequencies.

Coilcraft **Designer's Kit No. P202** contains samples of 8 standard EE and toroidal common mode line chokes. To order, please contact Coilcraft.

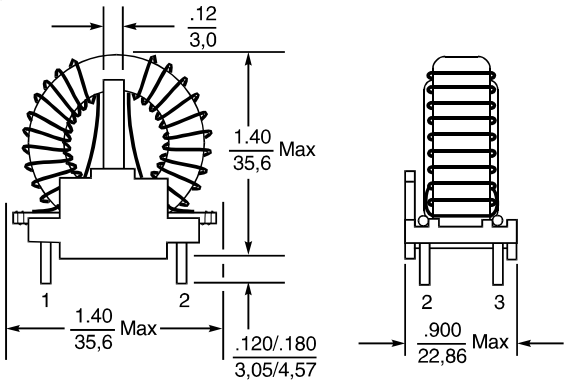
Standard Series

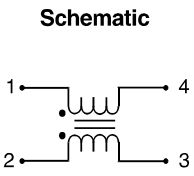


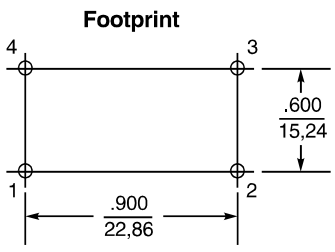




High Inductance Series







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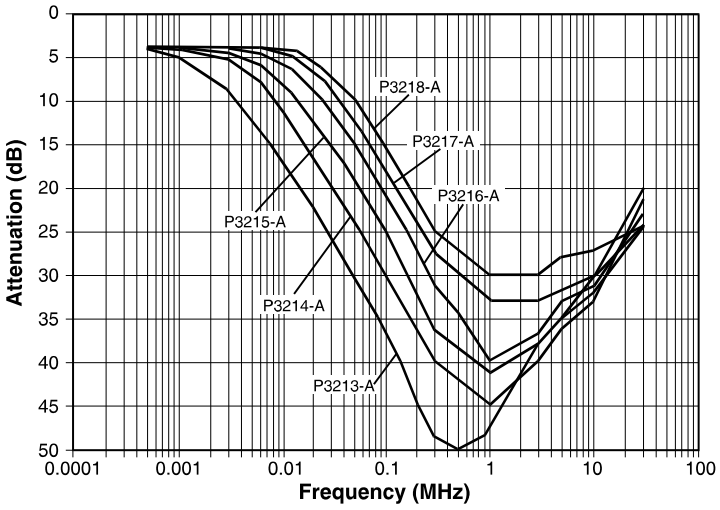
Standard Series

Part Number	Inductance Min	Current Rating (Amps)	Leakage Inductance Max (μH)	SRF Typ	R_{DC} Max (Ohms)	Interwinding Isolation (Volts rms)
P3213-A	3.5 mH	1.3	62	500 kHz	.150	1250
P3214-A	1.7	2.0	32	850	.065	1250
P3215-A	1.0	3.2	22	1.25 MHz	.036	1250
P3216-A	**750μH**	**5.0**	**19**	**1.30**	.022	**1250**
P3217-A	**425**	**8.1**	**10**	**1.75**	.012	**1250**
P3218-A	275	13.0	8	2.00	.008	1250

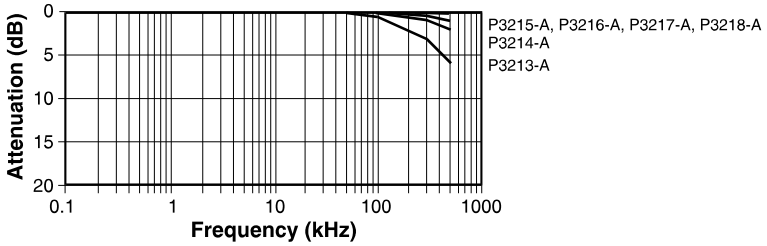
All parts have #16 AWG tinned copper wire leads except P3217-A, which has #18 AWG leads.
Parts in bold type are included in Coilcraft Designer's Kit No. P202.

Shown here are typical common mode frequency plots of each part number. The plots indicate the relative performance of each part over the frequency range of most interest for designers of equipment that must meet FCC and VDE noise regulations. It is important to note that only a common mode signal will be attenuated as shown. Differential mode power such as 50/60 Hz power line currents or data signals will pass through unimpeded by the common mode impedance. The insertion loss for differential signals is shown in the lower graph. These data were taken in a 50Ω system. All parts should be tested using an appropriate Line Impedance Stabilization Network (LISN) when testing EMI/RFI performance of off-line power converters.

Common Mode Attenuation*



Differential Mode Insertion Loss*



*measured on HP3577A network analyzer.

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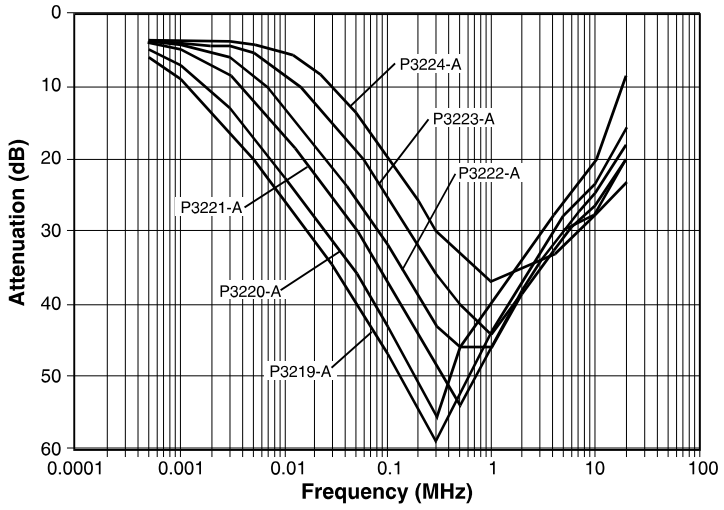
High Inductance Series

Part Number	Inductance Min (mH)	Current Rating (Amps)	Leakage Inductance Max (μH)	SRF Typ (kHz)	R_{DC} Max (Ohms)	Interwinding Isolation (Volts rms)
P3219-A	10.8	1.3	165	125	.29	1250
P3220-A	7.0	2.0	100	225	.15	1250
P3221-A	3.7	3.2	60	400	.08	1250
P3222-A	2.2	5.0	35	600	.04	1250
P3223-A	1.1	8.1	20	900	.02	1250
P3224-A	.58	13.0	10	1150	.01	1250

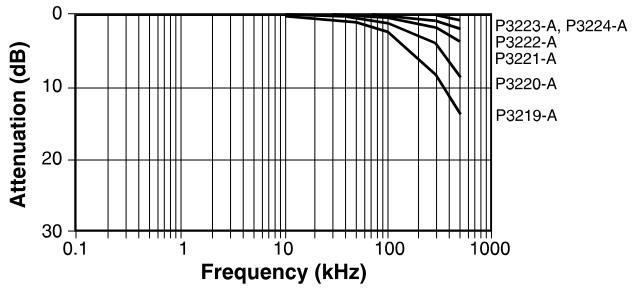
All parts have #16 AWG tinned copper wire leads except P3223-A, which has #18 AWG leads.

Shown here are typical common mode frequency plots of each part number. The plots indicate the relative performance of each part over the frequency range of most interest for designers of equipment that must meet FCC and VDE noise regulations. It is important to note that only a common mode signal will be attenuated as shown. Differential mode power such as 50/60 Hz power line currents or data signals will pass through unimpeded by the common mode impedance. The insertion loss for differential signals is shown in the lower graph. These data were taken in a 50Ω system. All parts should be tested using an appropriate Line Impedance Stabilization Network (LISN) when testing EMI/RFI performance of off-line power converters.

Common Mode Attenuation*



Differential Mode Insertion Loss*



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