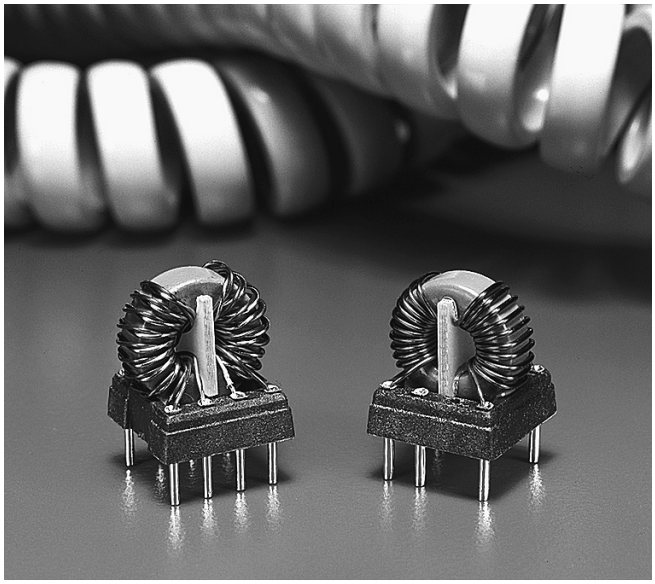
Tip and Ring Common Mode Filters



These economical filters are designed to help telecommunications equipment engineers meet FCC and CCITT requirements. Available in 1 or 2 line (2 or 4 wire) versions, Coilcraft tip and ring filters provide >20 dB attenuation of common mode noise over the 3 to 300 MHz frequency range.

Core material Ferrite

Terminations Tin-silver over tin over phos bronze

Ambient temperature –40°C to +85°C

Storage temperature Component: –40°C to +85°C.
Tray packaging: –40°C to +80°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)
60 per billion hours / 16,666,667 hours, calculated per Telcordia SR-332

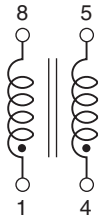
Packaging 100 per tube

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

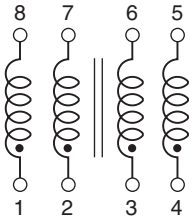
Part number	Lines	Common mode peak impedance (kOhms)	Cutoff frequency[1] (MHz)	Inductance[2] min (µH)	DCR max[3] (mOhms)	Isolation[4] (Vrms)	Current max (mA)
TRF 2000L	1	3.00 @ 97 MHz	13	20	65	1500	500
TRF 4000L	2	2.54 @ 84 MHz	18	20	65	1500	500

1. Frequency at which the differential mode attenuation equals –3 dB
2. Inductance is per winding.
3. DCR is specified per winding.
4. For TRF 2000, isolation measured from pins 1,8 to 4,5. For TRF 4000, isolation measured from pins 1,2,7,8 to pins 3,4,5,6. Isolation (hipot) tested for one minute.
5. Electrical specifications at 25°C.

TRF 2000L



TRF 4000L



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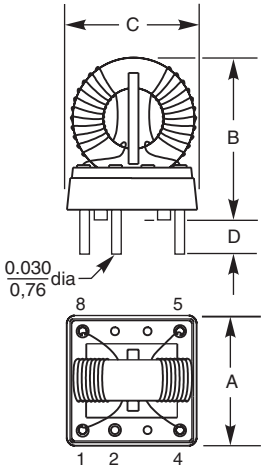
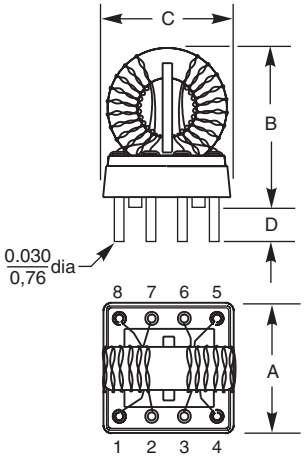
PRELIMINARY

Tip and Ring Common Mode Filters – TRF 2000, TRF 4000

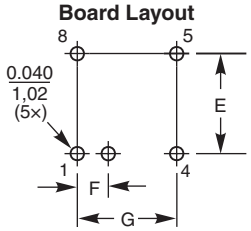
TRF 2000L



TRF 4000L



Recommended Board Layout



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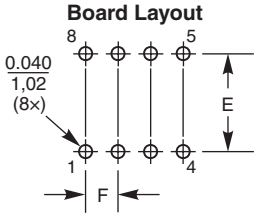
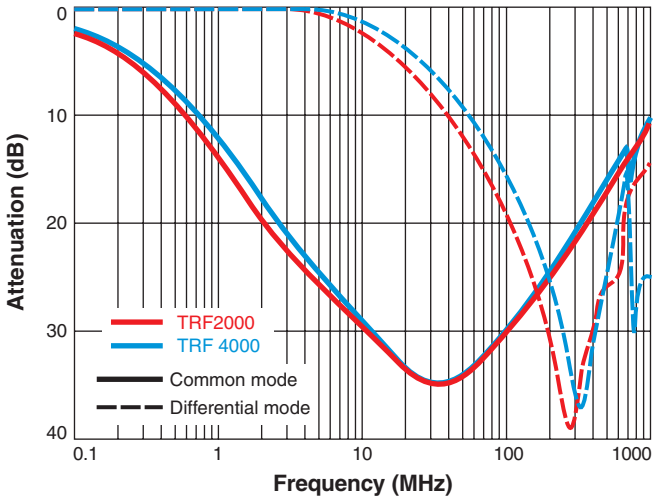
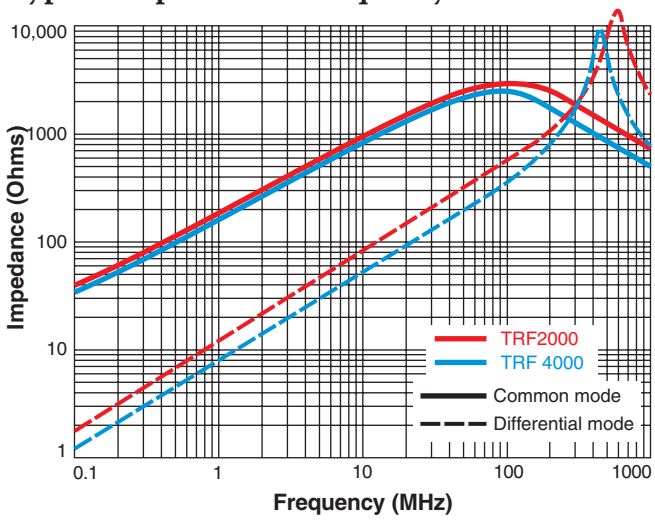


A max	B max	C max	D	E	F	G	
0.425	0.550	0.475	0.115	0.300	0.100	0.300	inches
10,80	13,97	12,07	2,92	7,62	2,54	7,62	mm

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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