TIGHTpak™Toroidal Common Mode Line Choke

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Actown's Toroid style of common mode chokes are designed with patented TIGHTpak technology. Within a single layer winding 70% more turns are achievable over a traditional winding using the same size core and wire gauge.

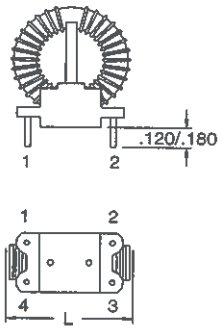
Parts are constructed to an industry standard footprint. Materials comply with 94V-0 flammability specifications. A 3mm spacer between each winding provides creepage and clearance to comply with UL, CSA, and IEC safety specifications.



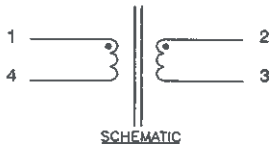
TIGHTpak winding



Traditional winding



Recommended Board Layout



RoHS COMPLIANT

Part Number	Inductance min (mH)	Current Rating Amps	Leakage Inductance max (uH)	SRF typ (Khz)	DCR max (ohms)	L Max	W Max	H Max	X (inches)	Y (inches)	Lead Diameter Nom	PC Board Hole Diameter
TPCM-2.8-3	2.83	3	50	755	0.049	1.15	0.70	1.15	0.80	0.40	0.029	0.047
TPCM-3.9-3	3.93	3	71	550	0.063	1.20	0.70	1.30	0.80	0.40	0.029	0.047
TPCM-1.7-5	1.73	5	31	1070	0.025	1.15	0.70	1.15	0.80	0.40	0.036	0.055
TPCM-2.4-5	2.41	5	45	775	0.036	1.20	0.70	1.30	0.80	0.40	0.036	0.055
TPCM-6.6-5	6.61	5	94	450	0.059	1.50	1.00	1.50	1.20	0.70	0.036	0.055
TPCM-1.0-8	1.00	8	18	1500	0.013	1.15	0.70	1.15	0.80	0.40	0.045	0.067
TPCM-4.4-8	4.35	8	60	545	0.036	1.50	1.00	1.50	1.20	0.70	0.045	0.067
TPCM-7.0-8	6.96	8	109	350	0.044	1.70	1.00	1.80	1.20	0.70	0.045	0.067
TPCM-0.8-10	0.80	10	14	1480	0.010	1.15	0.70	1.15	0.80	0.40	0.051	0.070
TPCM-3.3-10	3.27	10	49	635	0.022	1.50	1.00	1.50	1.20	0.70	0.051	0.070
TPCM-5.6-10	5.57	10	83	400	0.031	1.70	1.00	1.80	1.20	0.70	0.051	0.070
TPCM-3.8-13	3.78	13	65	510	0.021	1.75	1.00	1.75	1.20	0.70	0.057	0.079

Current rating based on 250 circular mils/amp
Inductance measured @ 10Khz .10Vrms
Electrical specifcations at 25C
Operating temperatures -40C to 85C
1500 Vrms dielectric between windings
RoHS compliant

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Are Your Toroids Too Hot?

Traditional Toroid
Temperature Rise 57°c





TIGHTpak™ Toroids are Cooler!
Temperature Rise 23°c
Temperature Rise Reduced 60%

Same Inductance ▲ Same Size ▲ Both Single Layer ▲ Same Start/Finish Gap

Are Your Toroids Too Big?

Traditional Toroid
Volume 0.408in³





TIGHTpak™ Toroids are Smaller!
Volume 0.202in³
Size Reduced 50%

Same Inductance ▲ Same DCR ▲ Both Single Layer ▲ Same Start/Finish Gap

Are Your Toroids Too Noisy?

Traditional Toroid
No Start/Finish Gap
Multiple Layers





TIGHTpak™ Toroids are Quieter!
Start/Finish Gap
Single Layer

Same Inductance ▲ Same Size ▲ Same DCR

Do Your Toroids Need More Inductance?

Traditional Toroid
30.3uH





TIGHTpak™ Toroids have More Inductance
83.2uH (3X More)

Same Size ▲ Same Wire Gauge ▲ Both Single Layer ▲ Same Start/Finish Gap

The closest to ideal you can get.

New Technology Revolutionizes Toroidal Design

Most engineers would rather work with ideal components than with more complex, real-world components. The calculations would be simpler and the headaches would be less severe. Seldom do engineers have that choice.

Now they do.
Actown Electrocoil, Inc. introduces a new technology that brings toroidal inductors one step closer to ideal. TIGHTpak toroids are designed to allow more turns per single layer of windings, allowing the engineer to work with components that exhibit behavior closer to ideal than previously possible.

Ideal inductors are purely inductive with no capacitance. Operation becomes much more complex in inductors with multiple layers of windings because of the effects of parasitic capacitance now magnified by the multiple layers. EMI concerns, reduced circuit predictability, and a lower SRF (Self Resonant Frequency) all contribute to more complex and usually unattractive circuit behavior. Keeping a toroid's geometry to a single layer minimizes complexity and maximizes design efficiency.

TIGHTpak toroids can keep your toroidal geometry to a single layer, making design and manufacturing more ideal.

Actown Electrocoil, Inc. was formed back in 1952, as a modest coil-winding house in the suburbs of Chicago. Through strategic acquisitions, partnerships, joint ventures, and internal growth, Actown Electrocoil, Inc. has grown into a leading transformer and coil supplier with extensive global design, manufacturing, and procurement capabilities.

TIGHTpak™Toroid.com
Visit for details of this new toroidal technology

PATENT PENDING

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Transforming the Future™
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Transformers ▲ Coils ▲ Inductors ▲ Worldwide Manufacturing ▲ Local Support