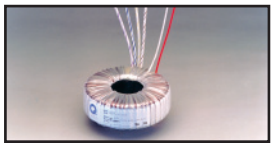
CUSTOM TOROIDS



In today's rapidly evolving technological society, Q-Tran's toroidal transformers are widely accepted as the industry standard. Q-Tran's toroids are smaller, quieter, safer, more efficient products possessing such attributes that only serve to increase its demand. Lighter weight, compact dimensions and low stray magnetic fields, enable Q-Tran to be the premier manufacturer of toroids.

Electrical Efficiency...

Toroids are more efficient than conventional EI laminated transformers because the core of a toroidal transformer is made of a single strip of grain oriented silicon steel. Since the grain oriented is parallel with magnetic flux everywhere in the core, toroids can be designed for higher flux density, usually around 15-17kGA compared to 11-13kGA in stacked laminations. Reducing the mean length of copper wire wound around the entire core circumference means that the toroid design requires less steel and copper wire, resulting in less core and copper losses.

Reduced Size and Weight...

Due to a toroidal transformer's higher efficiency, its size and weight can be reduced by almost 50%. The diameter-to-height ratio of a toroid can be altered to accommodate mechanical design.

Low Stray Fields...

Toroids generate very little Electro Magnetic Radiation because of the absence of air-gaps in the core and its uniform windings. In some applications where further EMR reduction is needed, we can provide a magnetic shield around the circumference of the transformer.

Low Mechanical Noise (Hum)...

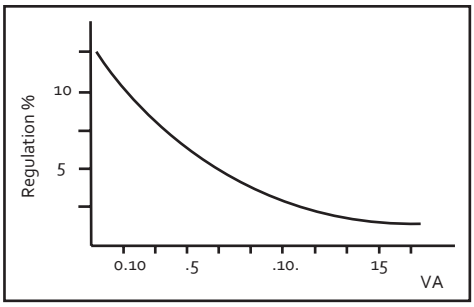
Evenly distributed winding around the core and the absence of air gaps in the core reduce the Magnetostriction, which is the main source of the "hum" in stack-laminated transformers.

Reduced No-Load Losses...

Toroids exibit extremely low no-load losses when compared to the traditional EI transformers. This can be significant in energy cost savings where a circuit sits in "stand-by" mode for long periods.

Voltage Regulation...

[Regulation vs VA] Due to good coupling between the primary and secondary windings, toroids have superior regulation typically about 5%. This can be further reduced by using a larger magnet wire.



- Ease of Installation...

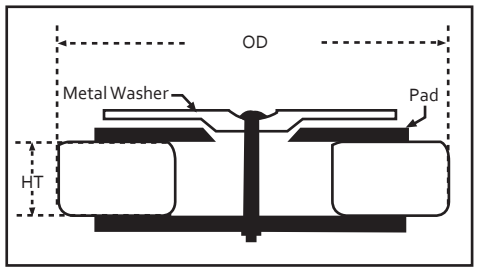
Toroids require less parts and assembly time than the conventional transformers. The toroid can be mounted very simply using a single center screw.

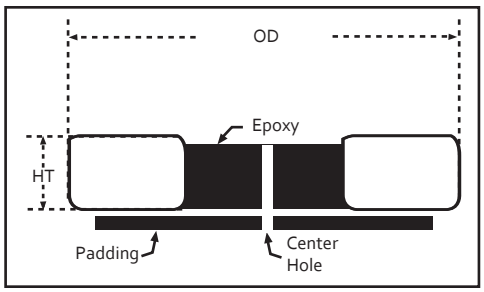
- Mounting Washer...

The most economical method of installing the transformer horizontally is through the use of a metal washer and rubber pads. This method is most useful for mounting smaller transformers.

- Potted Center...

For larger transformers, the washer method may cause height problems. An Epoxy potting with a center hole is therefore recommended. A precisely located center hole is then drilled where the mounting bolt will be inserted.





CUSTOM TOROIDS CONTINUED

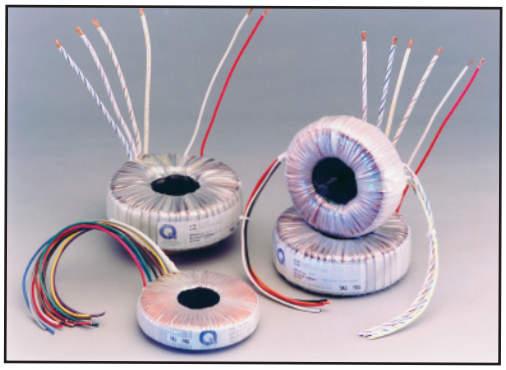
Thermal Protector...
An auto-resetable thermal protector (120 C) is used in series with primary to protect the transformer against overload.

Electrostatic Screen (Optional)...
In some applications, especially medical, it is important to minimize the capacitance coupling between the primary and secondary. Fully enclosed copper foil is wound over the primary and terminated at one end with a flexible lead wire.

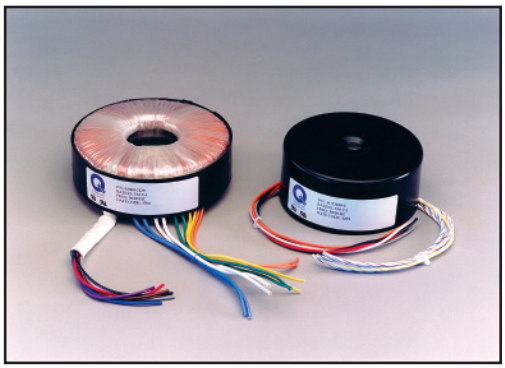
Electromagnetic Shield (Optional)...
Applications where transformers are mounted very closely to electronic components that are sensitive to stray fields, it is appropriate to have a shield around the circumference of the transformer to attenuate the field. The shield is normally made of three to four layers of insulated silicon steel.

Quality and Safety...
Q-Tran's Quality Assurance and Research and Developement Departments have been established to comply with all industry standards. All of Q-Tran's transformers are approved for UL and CUL standards.

Custom



Custom Audio



Every component built into the Q-Tran Power Supply Center is the finest material available in the marketplace today. Because we use the highest quality materials, high-tech manufacturing equipment, and computerized testing equipment, Q-Tran offers a 5 year warranty on all of its products. Q-Tran is far superior to any other transformer in the marketplace today.

Customer Service...
Our highly experienced and skilled design engineers are willing and ready to answer any questions that you may have. We can design and produce to your exacting specifications.

Other specification, certification and safety requirement marks found on Q-Tran products include.

What is CE?
- Conformite Europeene CE

To market electrical products within the European (EU), product conformity and proper use of the CE mark on machines and control equipment is critical. As a major supplier to global companies serving customers in the EU, Q-Tran pays special attention to meeting the EU specification and certification requirements. These global companies need the guarantee of free trade of goods, elimination of trade restrictions and harmonization of technical regulations to sell their products to EU member countries. All Q-Tran products that meet or exceed the requirements of these directives are desiginated by the CE Mark.

- UL Recognized Component Mark
This mark means that the component alone meets the requirements for a limited, specified use. Applies only to Q-Tran Transformers because they are components to be used in a complete end products or systems listed by UL.

- C-UL US Classification Mark c UL us
UL introduced this new Classification Mark in early 1998. It indicates compliance with both Canadian and U.S. requirements. The Canadian / U.S. UL Mark is optional. UL encourages those manufacturers with products certified for both countries to use this new, combined Mark, but they may continue using separate UL Marks for the United States and Canada.