

NEW PRODUCT BRIEF

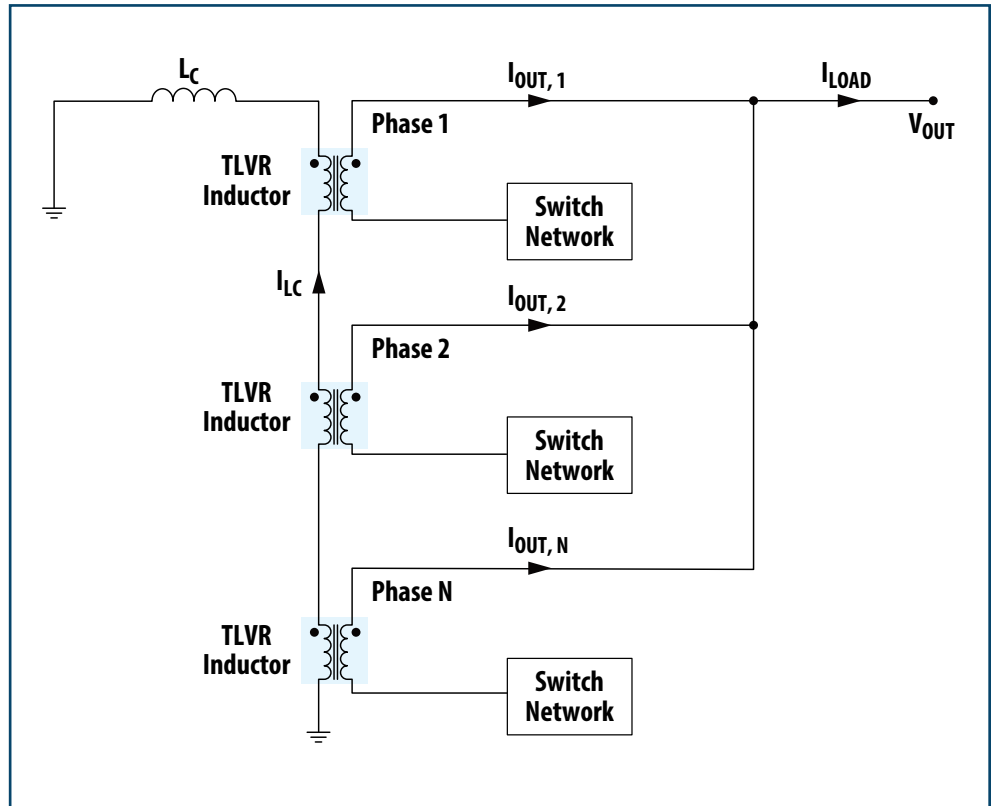


Bourns® Model TLVR (Trans-Inductor Voltage Regulator) Inductors

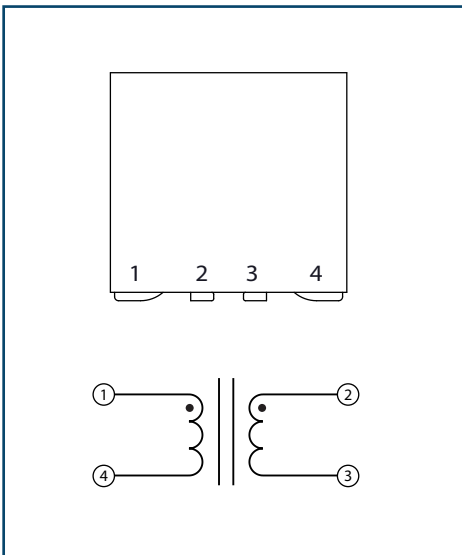
INTRODUCTION

With the introduction of the new Model TLVR Series, Bourns makes available a breakthrough line of multiphase Trans-Inductor Voltage Regulator (TLVR) Inductors designed to meet the fast response to load and high throughput required for today's data driven and power-hungry applications. Engineered with a dual-winding structure and clip type coil, the Bourns® Model TLVR Series delivers the low inductance and extremely high current capabilities needed in a new generation of multiphase power solutions.

The TLVR architecture provides the advantage of phase coupling, enabling extremely fast transient response to sudden increases in load output that can scale to CPU, FPGA, and ASIC load requirements in amperage and bandwidth. The adoption of the TLVR architecture is gaining popularity for allowing designers to develop robust systems without sacrificing other critical design parameters such as board space, system efficiency, power density, or BOM costs.



CIRCUIT DIAGRAM



FEATURES

- Shielded construction for low radiation
- Extremely high current capabilities (Irms up to 77 A and Isat up to 160 A)
- Inductance range: 70 to 200 nH
- Operating temperature range: -40 to 125 °C
- RoHS compliant* and halogen free**

BENEFITS

Compared with traditional VRs (Voltage Regulators), by adopting TLVR topology and using TLVR inductors, developers can cost-effectively increase reliability while meeting circuit design specifications and performance goals.

APPLICATIONS

TLVR inductors are suitable for TLVR topology in CPU, GPU, FPGAs, and ASICs that are broadly used in the following applications:

- Servers and workstations
- Data centers and storage systems
- Desktop computers
- Graphics cards
- Variety of battery-powered systems

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

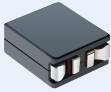

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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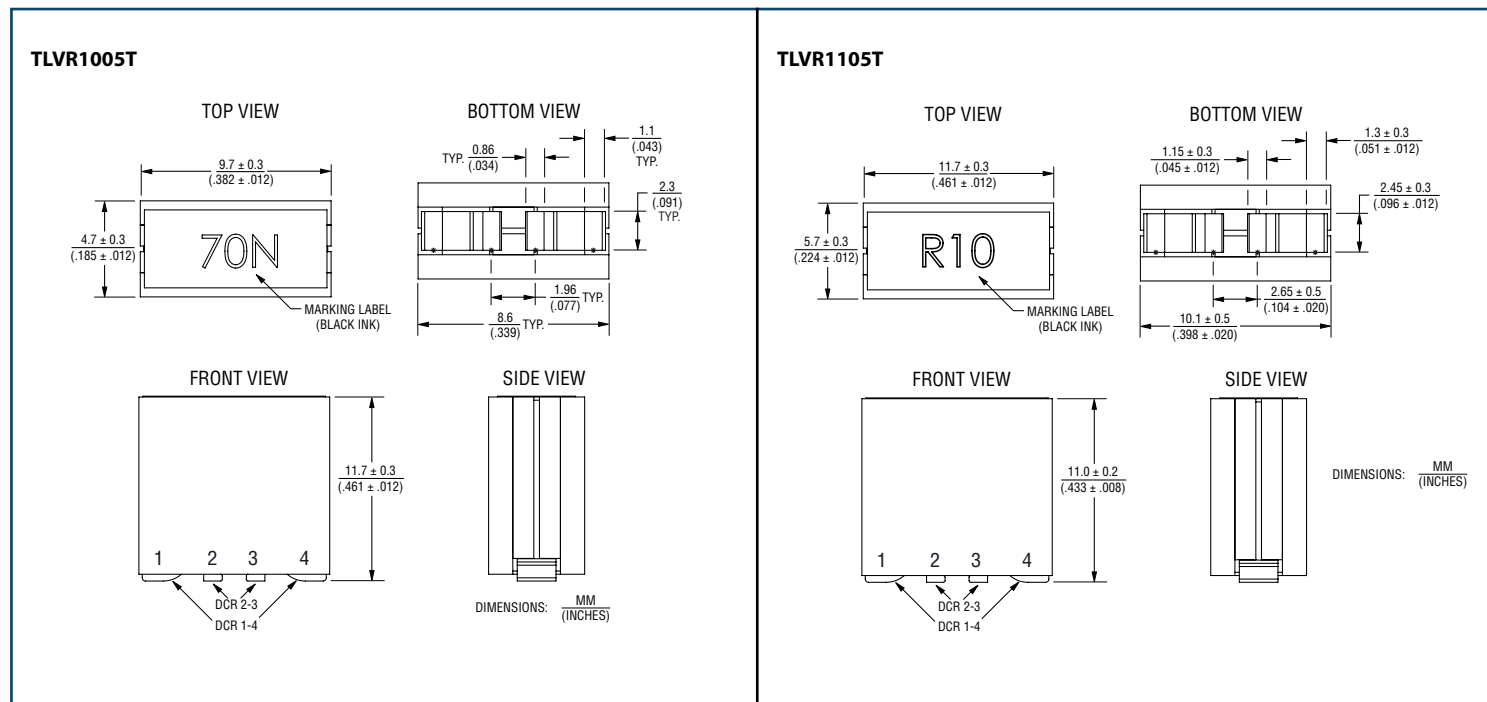


ELECTRICAL CHARACTERISTICS

Series	Photo	Size (mm)	Inductance (nH)	Heating Current I _{rms} (A)	Saturation Current I _{sat} (A)	Operating Temperature
TLVR1005T		9.7 x 4.7 x 11.7	70 - 170	75 & 35	52 - 127	-40 to +125 °C
TLVR1105T		11.7 x 5.7 x 11	70 - 200	77 & 45	58 - 160	-40 to +125 °C

For full characteristics, see data sheets

PRODUCT DIMENSIONS



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