

Features

- Shielded construction for low radiation
- Dual winding inductors
- Extremely high current
- Inductance range: 70 to 200 nH
- RoHS compliant* and halogen free**

Applications

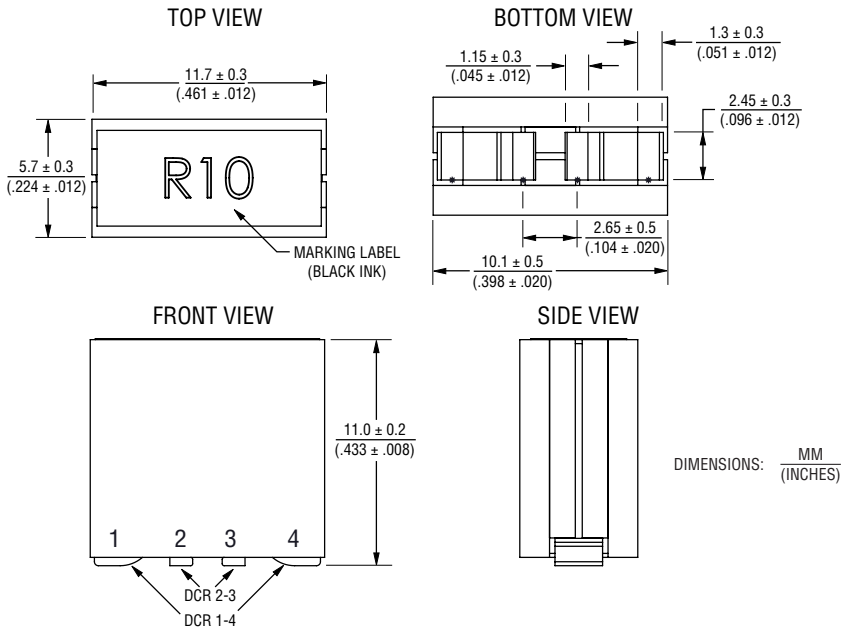
- Servers and workstations
- Data centers
- Data networking and storage systems
- Notebook and desktop computers
- Graphic cards and battery powered systems
- Multi-phase regulators
- Voltage Regulator Modules (VRMs)

TLVR1105T Series – Trans-Inductor Voltage Regulator (TLVR) Inductors

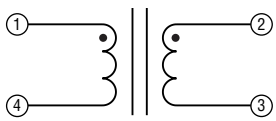
Electrical Specifications @ 25 °C

Bourns Part Number	Inductance		DCR ±10 % (mΩ)		Irms (A)		Isat1 (A)	Isat2 (A)	Isat3 (A)	Kps Typ.
	L (nH)	Tol. (%)	Pin 1-4	Pin 2-3	Pin 1-4	Pin 2-3	@25 °C	@100 °C	@125 °C	
TLVR1105T-70NY	70	±15	0.125	0.37	77	45	160	140	130	0.92
TLVR1105T-80NY	80	±15	0.125	0.37	77	45	150	120	110	0.93
TLVR1105T-90NY	90	±15	0.125	0.37	77	45	135	115	105	0.93
TLVR1105T-R10Y	105	±15	0.125	0.37	77	45	125	106	98	0.94
TLVR1105T-R12Y	120	±15	0.125	0.37	77	45	102	87	80	0.95
TLVR1105T-R15Y	150	±15	0.125	0.37	77	45	84	71	58	0.96
TLVR1105T-R17Y	170	±15	0.125	0.37	77	45	70	60	53	0.96
TLVR1105T-R20Y	200	±15	0.125	0.37	77	45	58	50	43	0.96

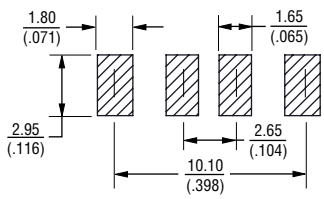
Product Dimensions



Electrical Schematic



Recommended Layout



Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

General Specifications

Operating Temperature
..... -40 °C to +125 °C
(Temperature rise included)
Storage Temperature
..... -40 °C to +125 °C
Temperature Rise
.....40 °C typ. at rated Irms
Rated Current
..... Inductance drops 20 % at Isat
Moisture Sensitivity Level.....1
ESD Classification (HBM).....N/A

Materials

Core.....Ferrite
Wire .....Enameled copper
Terminal Finish .....Sn
Packaging..... 400 pcs. per reel

How to Order

TLVR1105T - 70NY

Model
Value Code (see table)

CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant.
See www.P65Warnings.ca.gov

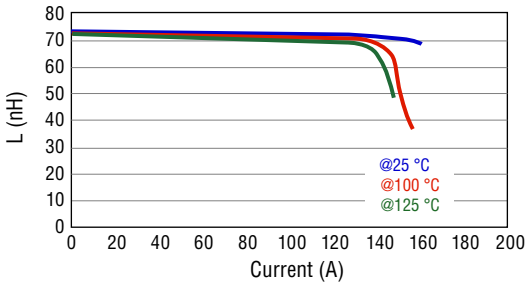
* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.
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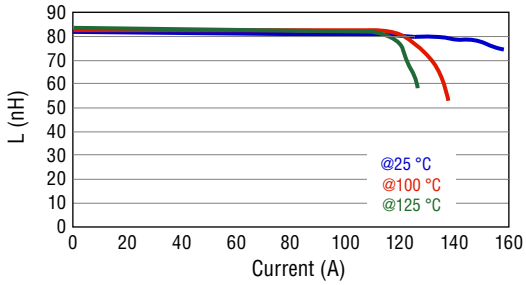
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Typical Inductance vs. Current Curves

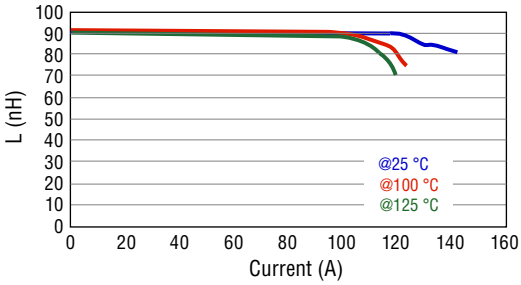
TLVR1105T-70NY



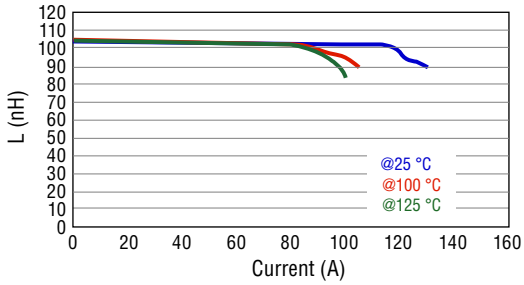
TLVR1105T-80NY



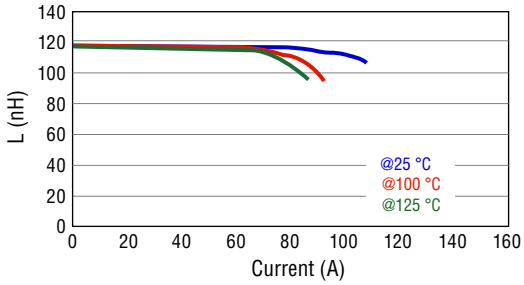
TLVR1105T-90NY



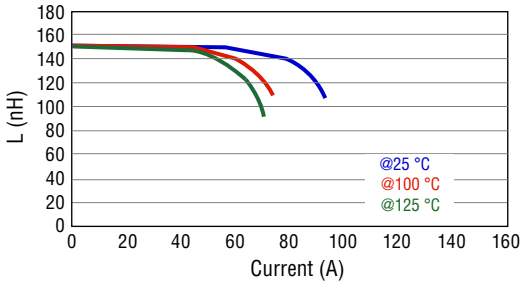
TLVR1005T-R10Y



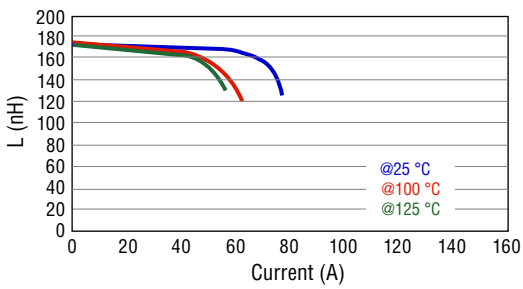
TLVR1105T-R12Y



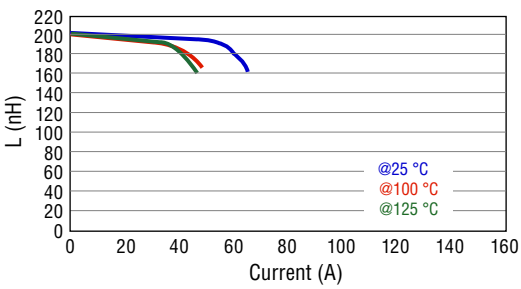
TLVR1105T-R15Y



TLVR1105T-R17Y



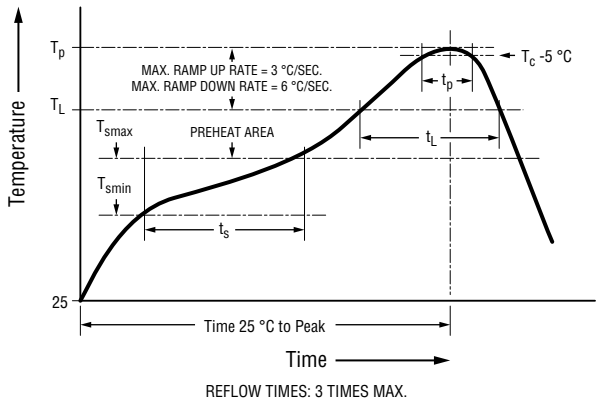
TLVR1005T-R20Y



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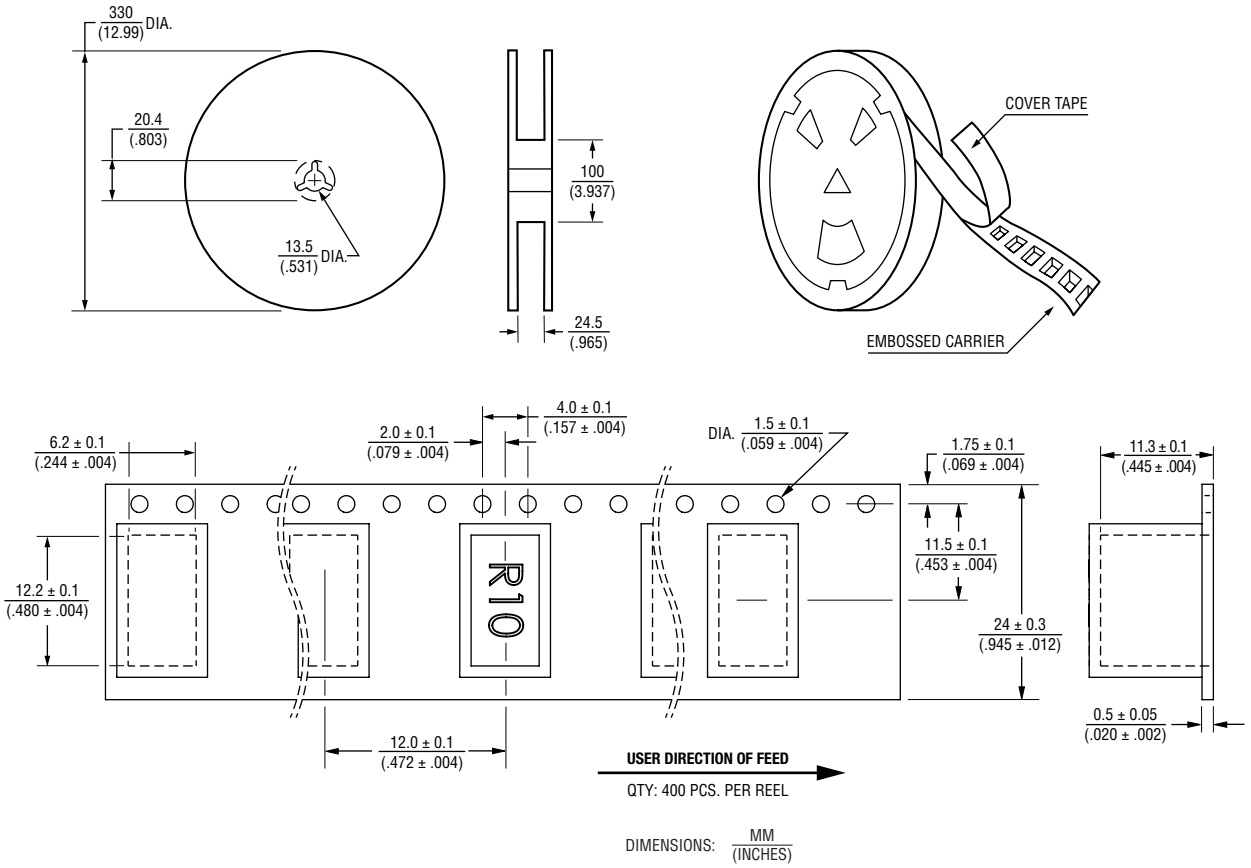
Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time(t_s) from T_{smin} to T_{smax}	 150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217 °C 60-150 seconds
Peak package body temperature (T_p)	245 °C
Time (t_p) at T_c - 5 °C (T_p should be equal to or less than T_c)	< 30 seconds
Ramp-Down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

Packaging Specifications



REV. 09/25

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