

Features

- Shielded construction for low radiation
- Dual winding inductors
- Extremely high current
- Inductance range: 70 to 170 nH
- RoHS compliant* and halogen free**

Applications

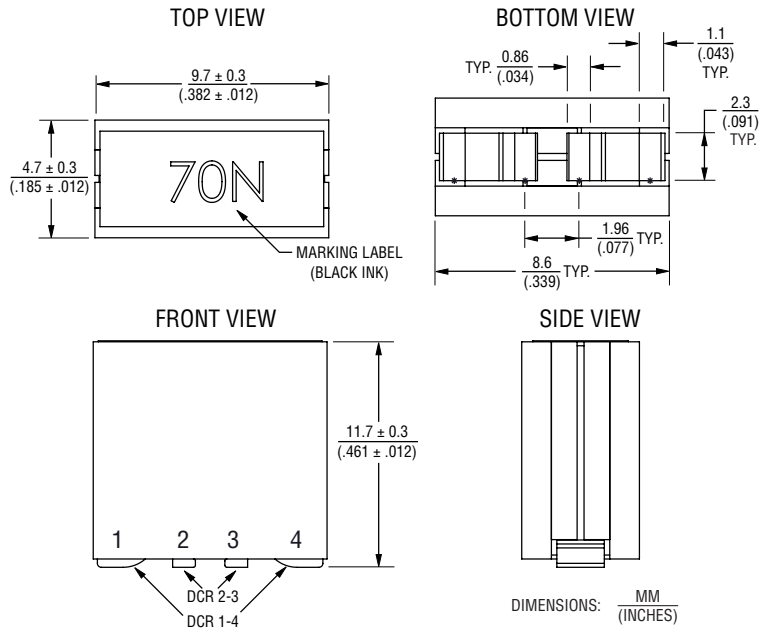
- Servers and workstations
- Data centers
- Data networking and storage systems
- Notebook and desktop computers
- Graphic cards and battery powered systems
- Multi-phase regulators
- Voltage Regulator Modules (VRMs)

TLVR1005T Series – Trans-Inductor Voltage Regulator (TLVR) Inductors

Electrical Specifications @ 25 °C

Bourns Part Number	Inductance Pin 1-4 / Pin 2-3		Inductance @Isat1 Min. Pin 1-4	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	
TLVR1005T-70NK	70	±10	50	0.125	0.450	75	35	127	110	100	0.93
TLVR1005T-80NK	80	±10	57	0.125	0.450	75	35	111	96	87	0.94
TLVR1005T-90NK	90	±10	64	0.125	0.450	75	35	98	85	77	0.95
TLVR1005T-R10K	100	±10	72	0.125	0.450	75	35	89	77	70	0.95
TLVR1005T-R12K	120	±10	86	0.125	0.450	75	35	74	64	58	0.96
TLVR1005T-R15K	150	±10	108	0.125	0.450	75	35	59	51	46	0.96
TLVR1005T-R17K	170	±10	122	0.125	0.450	75	35	52	45	41	0.97

Product Dimensions



Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

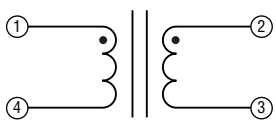
General Specifications

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

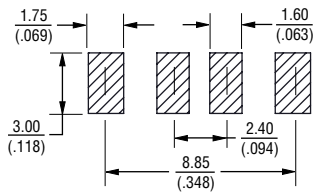
Materials

Core.....Ferrite
Wire .....Enameled copper
Terminal Finish .....Sn
Packaging.....300 pcs. per reel

Electrical Schematic



Recommended Layout



How to Order

TLVR1005T - 70NK

Model
Value Code (see table)

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

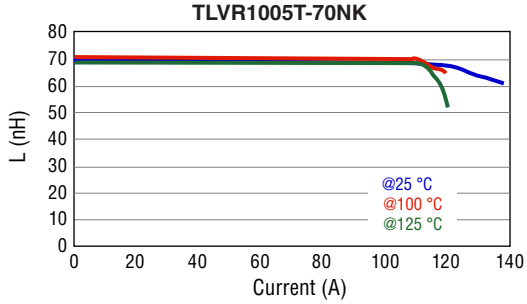
* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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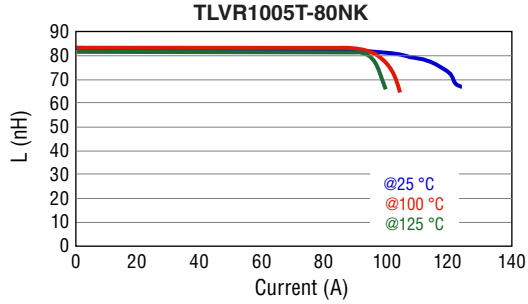
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Typical Inductance vs. Current Curves

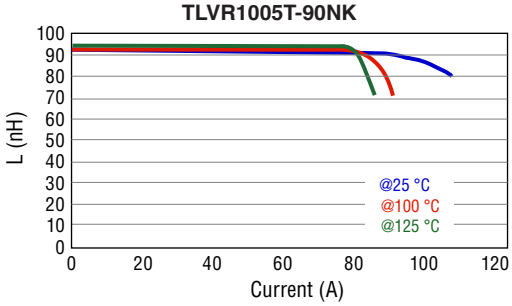
TLVR1005T-70NK



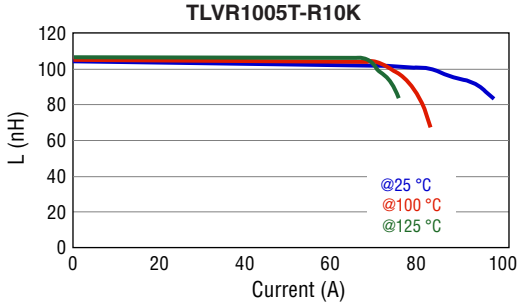
TLVR1005T-80NK



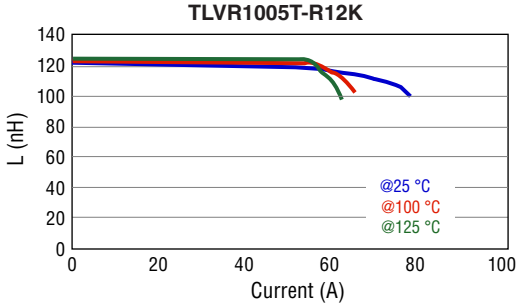
TLVR1005T-90NK



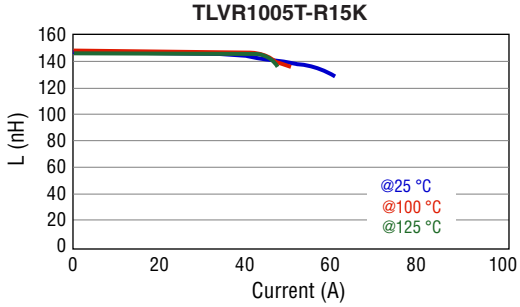
TLVR1005T-R10K



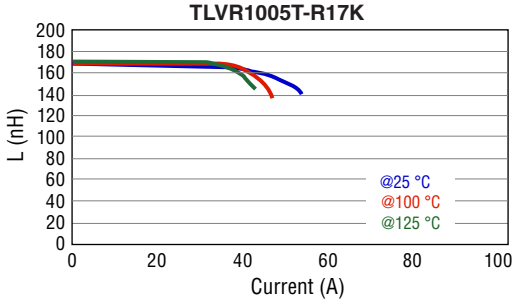
TLVR1005T-R12K



TLVR1005T-R15K



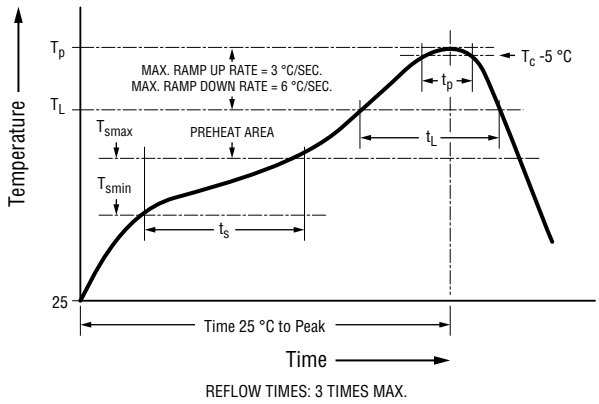
TLVR1005T-R17K



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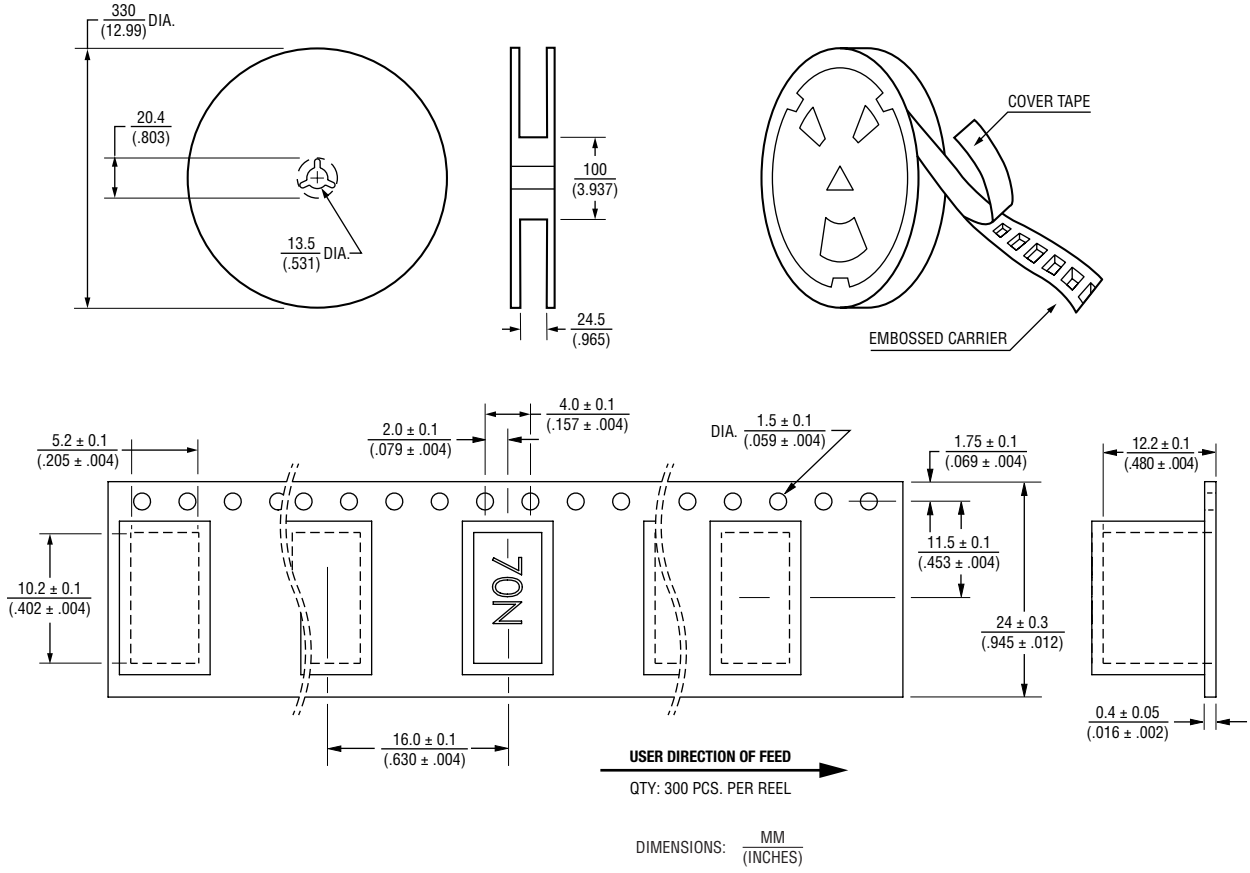
Soldering Profile



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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