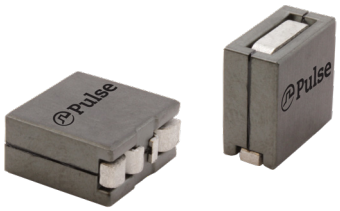
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SMT Power Inductors

Trans-Inductor Voltage Regulator (TLVR) - PAL6374.XXXHLT Series

Pulse a YAGEO company





- **Current Rating:** 71 A TYP
- **Inductance Range:** 70nh to 180nH
- **Height:** 12.0mm Max
- **Footprint:** 10.0mm x 5.0mm Max

Electrical Specifications @ 25°C — Operating Temperature - 40°C to +130°C [7]

Part Number	Inductance[1] @ 0ADC (nH +/- 15%)	Inductance[2] @ I sat (nH MIN)	DCR (1-4) (+/- 10%)	DCR (2-3) MAX	DCR (1-2) MIN	Saturation Current[5] (A TYP)		Heating Current (1-4) A TYP	Heating Current[3] (+/- 10%)
						25°C	100°C		
PAL6374.700HLT	70	49	0.135 mOhm	0.45 mOhms	1.0kOhms	134	114	71	38
PAL6374.800HLT	80	56				117	100		
PAL6374.900HLT	90	63				105	90		
PAL6374.101HLT	100	70				96	82		
PAL6374.121HLT	120	84				77	66		
PAL6374.151HLT	150	105				58	50		
PAL6374.181HL	180	126				47	40		

NOTES:

1. Inductance measured at 100kHz, 1.0mVrms.
2. Inductance at Irated is the value of the inductance at 25°C at the listed rated current.
3. Rated Current is the DC current which causes the part temperature to increase by approximately 40C. It is a calculated value and will vary within application based on ambient temperature, air flow, surrounding component temperature and heat sinking. Part temperature should not exceed 125C under worst case operating conditions. Part temperature should be verified in the end application.
4. The nominal DCR is measured at point 2., as shown below on the mechanical drawing.
5. The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C, 100°C). This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effects) to the component.
6. In high volt*time applications, additional heating in the component can occur due to core losses in the inductor which may neccessitate derating the current in order to limit the temperature rise of the component. To determine the approximate total losses (or temperature rise) for a given application, the coreloss and temperature rise curves can be used.In high volt*time applications, additional heating in the component can occur due to core losses in the inductor which may neccessitate derating the current in order to limit the temperature rise of the component. To determine the approximate total losses (or temperature rise) for a given application, the coreloss and temperature rise curves can be used.
7. Parts with the HLT suffix are sold in tape and reel packaging. Pulse complies to industry standard tape and reel specification EIA-481.
   The tape and reel for this product has a width (W=24mm), pitch (Po=12mm) and depth (Ko=12.2mm). Samples of these parts can be ordered by removing the HLT suffix and replacing with HL.
8. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
9. Sample Value only. Guaranteed by Design and not tested in production

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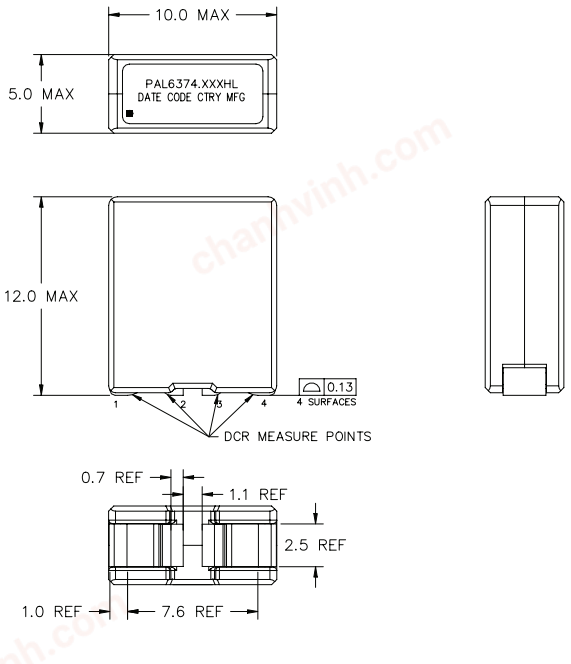
Trans-Inductor Voltage Regulator (TLVR) - PAL6374.XXXHLT Series

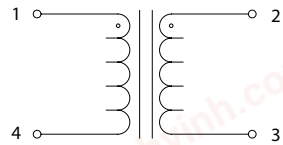
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Mechanical

Schematic

PAL6374.XXXHLT





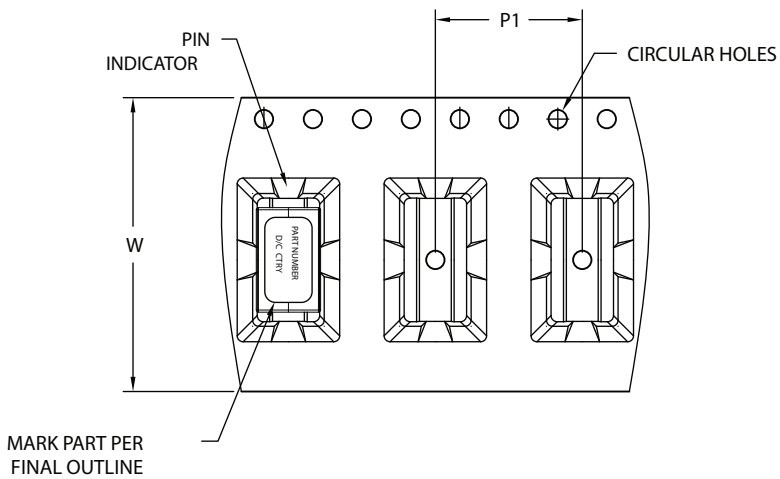
Weight: 2.74grms

Tape &Reel: 320/ Reel

Dimensions: mm

Unless otherwise specified , all tolerances are ± 0.25

TAPE & REEL INFO

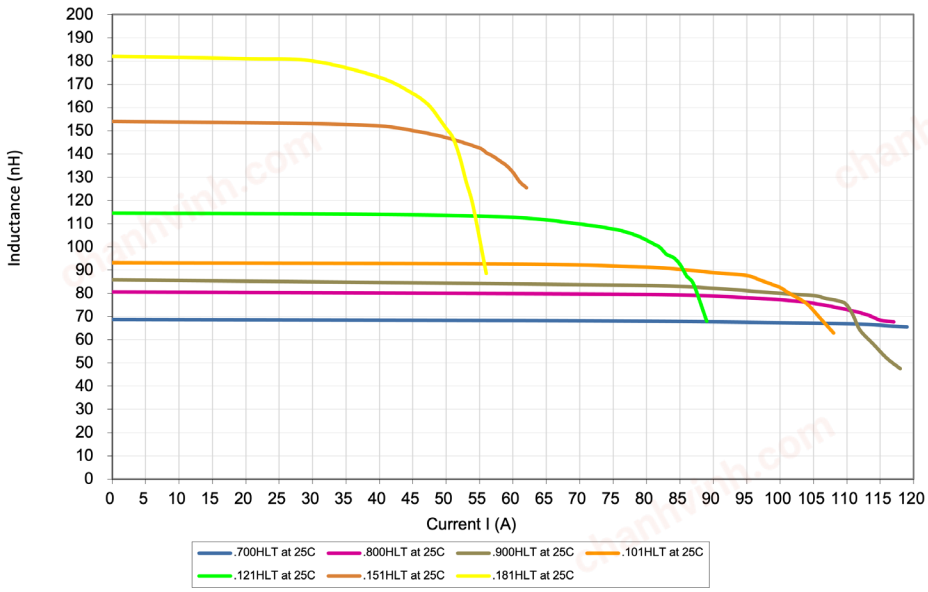


SURFACE MOUNTING TYPE, REEL/TAPE LIST

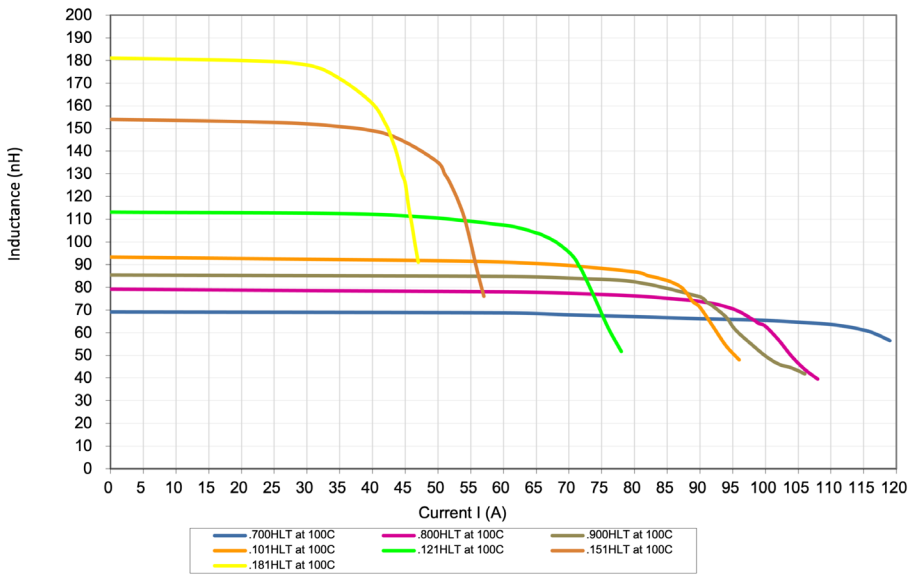
TYPE	REEL SIZE (mm)			QTY
	W ± 0.30	P0 ± 0.1	K0	PCS/REEL
PAL6374.XXXHLT	24.0	12.0	12.2	320

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PAL6374.XXXHLT, L vs I, Curve 25°C



PAL6374.XXXHLT, L vs I, Curve 100°C

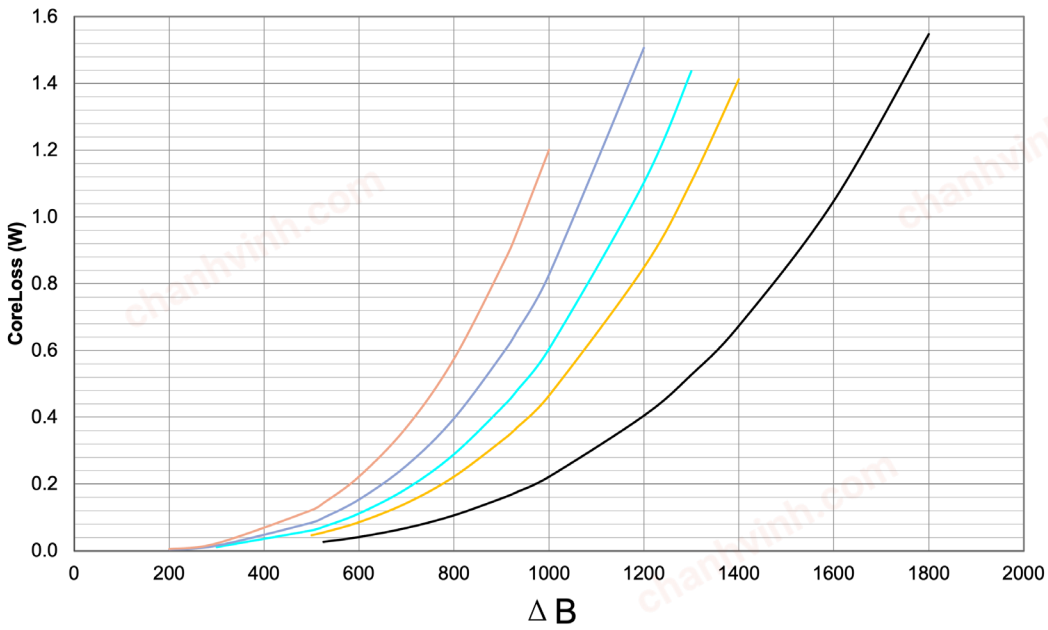


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Power Beads - PAL6374.XXXHLT Series

PAL6374.XXXHLT, Core Loss



where $\Delta B = 0.31 * L(nH) * \Delta I$

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For More Information:

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