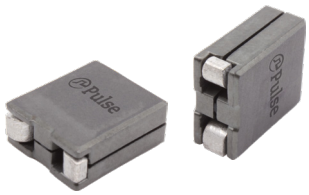
SMT Power Inductors

Voltage Regulator (VR) - PAL6374.XXXAHLT Series

Pulse a YAGEO company



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

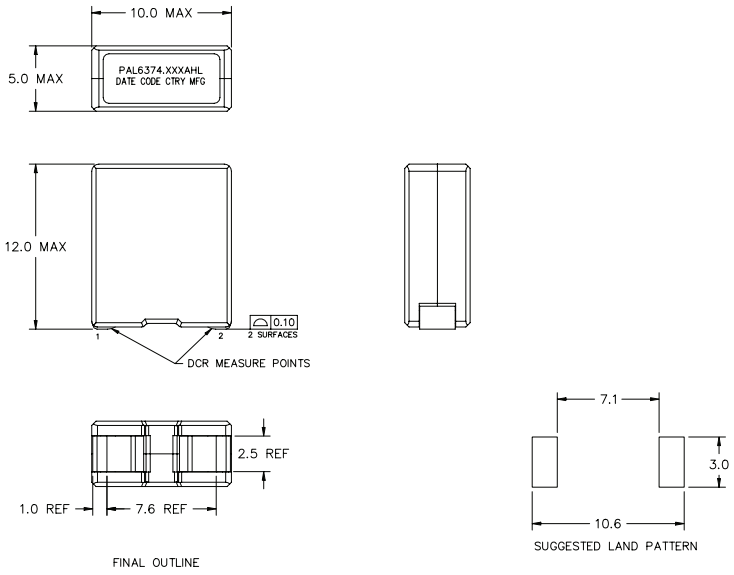
Electrical Specifications @ 25°C — Operating Temperature -40°C to +130°C [7]						
Part Number	Inductance[1] @ 0ADC (nH +/- 15%)	Inductance[2] @ I sat (nH MIN)	DCR (1-2) (+/- 10%)	Saturation Current[5] (A TYP)		Rated Current[3] (A TYP)
				25°C	100°C	
PAL6374.700AHLT	70	49	0.135 mOhm	134	114	77
PAL6374.800AHLT	80	56		117	100	
PAL6374.900AHLT	90	63		105	90	
PAL6374.101AHLT	100	70		96	82	
PAL6374.121AHLT	120	84		77	66	
PAL6374.151AHLT	150	105		58	50	
PAL6374.181AHLT	180	126		47	40	

NOTES:

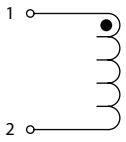
1. Inductance measured at 100kHz, 1.0 Vrms.
2. Inductance at Irated is the value of the inductance at 25°C at the listed rated current.
3. Rated Current is the DC current which causes the part temperature to increase by approximately 40C. It is a calculated value and will vary within application based 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.
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

PAL6374.XXXAHL

Mechanical



Schematic



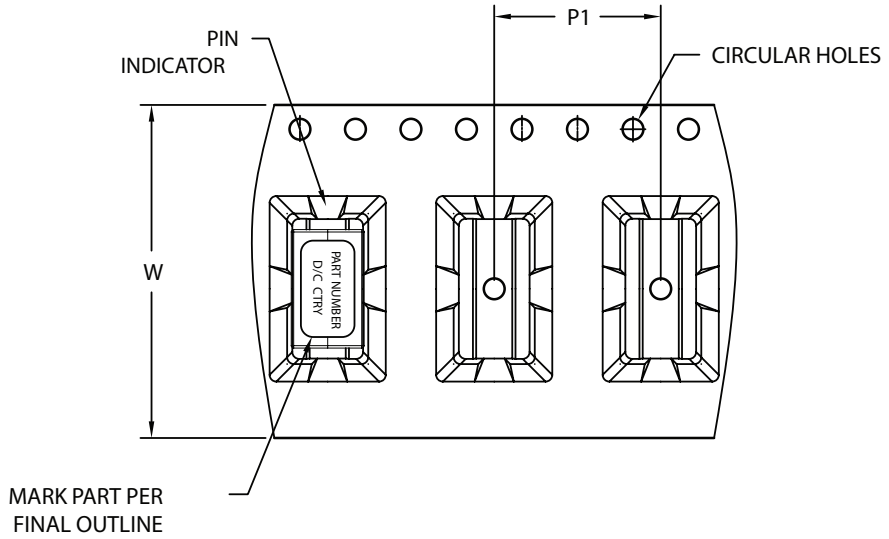
Weight: 2.74grms

Tape &Reel: 320/ Reel

Dimensions: mm

Unless otherwise specified , all tolerances are ± 0.25

TAPE & REEL INFO

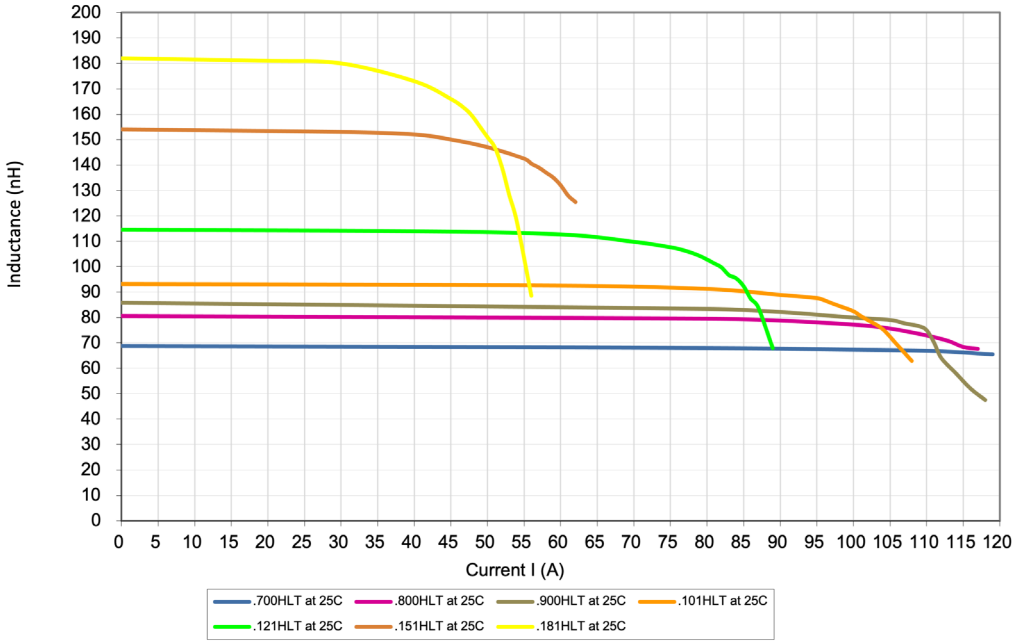


USER DIRECTION OF FEED

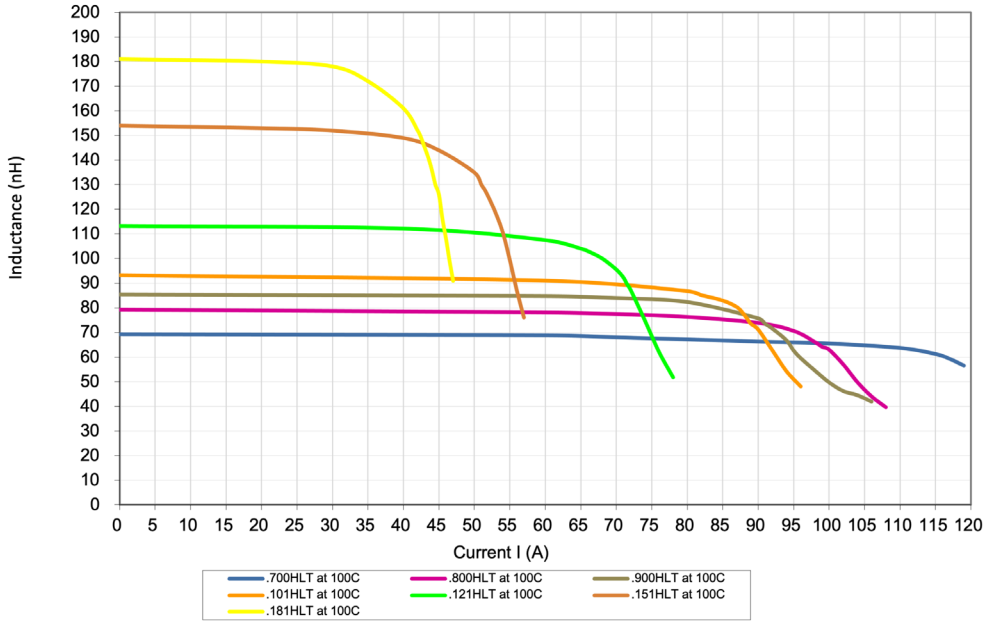
SURFACE MOUNTING TYPE, REEL/TAPE LIST

TYPE	REEL SIZE (mm)			QTY
	W ± 0.30	P1 ± 0.1	(K0)	PCS/REEL
PAL6374.XXXAHL	24.0	12.0	12.2	350

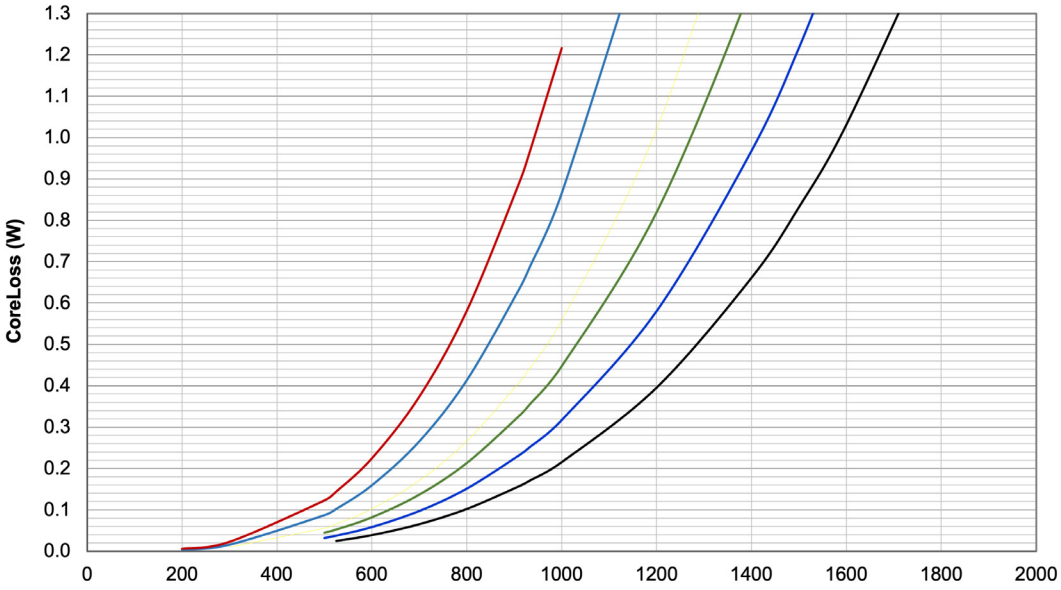
PAL6374.XXXAHLT, L vs I, Curve 25°C



PAL6374.XXXAHLT, L vs I, Curve 100°C



PAL6374.XXXAHLT, Core Loss



where $\Delta B = 0.43 * L(nH) * \Delta I$

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