## IHLP-5050CE-06



Vishay Dale

### IHLP<sup>®</sup> Commercial Inductors, High Saturation Series, 10 % DCR Tolerance



DESIGN SUPPORT TOOLS click logo to get started



Design Tools Available

STANDARD ELECTRICAL SPECIFICATIONS						
L <sub>0</sub> INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (μH)	DCR ± 10 % AT 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>			
0.60	1.85	29	51			
0.68	2.34	28	49			
1.0	3.21	24	40			
1.5	4.97	19	35			
2.2	7.20	16	29			
3.3	10.69	12	27			
4.7	14.27	10	24			
5.6	18.19	9.5	19			
10	30.86	7	14			

#### Notes

- All test data is referenced to 25 °C ambient
- Operating temperature range -55 °C to +125 °C
- The part temperature (ambient + temp. rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application
- Rated operating voltage (across inductor) = 75 V
- $^{(1)}$  DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- $^{(2)}$  DC current (A) that will cause  $L_0$  to drop approximately 20 %

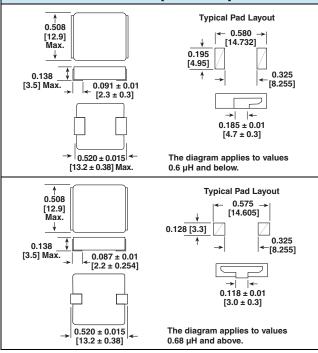
#### FEATURES

- Lowest height (3.5 mm) in this package footprint
- Shielded construction
- Frequency range up to 5.0 MHz
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without COMPLIANT saturation
- Ultra low buzz noise, due to composite construction
- IHLP design. PATENT(S): <u>www.vishay.com/patents</u>
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

### APPLICATIONS

- Tolerance DCR for current sense applications
- Improved current balance in phased power supplies
- Improved thermal management
- PDA / notebook / desktop / server and battery powered devices
- High current, low profile POL converters
- DČ/DC converters in distributed power systems
- DC/DC converter for Field Programmable Gate Array (FPGA)

#### **DIMENSIONS** in inches [millimeters]



DESCRIPTION								
IHLP-5050CE-06	1.0 μH	± 20 %	ER	e3				
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC <sup>®</sup> LEAD (	Pb)-FREE STANDARD			
GLOBAL PART NUMBER								
I H L	P 5 0	5 0 C E	E R 1	R 0	M 0 6			
PRODUCT FAM	nily	SIZE	PACKAGE IN CODE	IDUCTANCE VALUE	TOL. SERIES			

PATENT(S): <u>www.vishay.com/patents</u> This Vishay product is protected by one or more United States and international patents.

Revision: 14-Jul-17

1 For technical questions, contact: <u>magnetics@vishay.com</u> Document Number: 34165

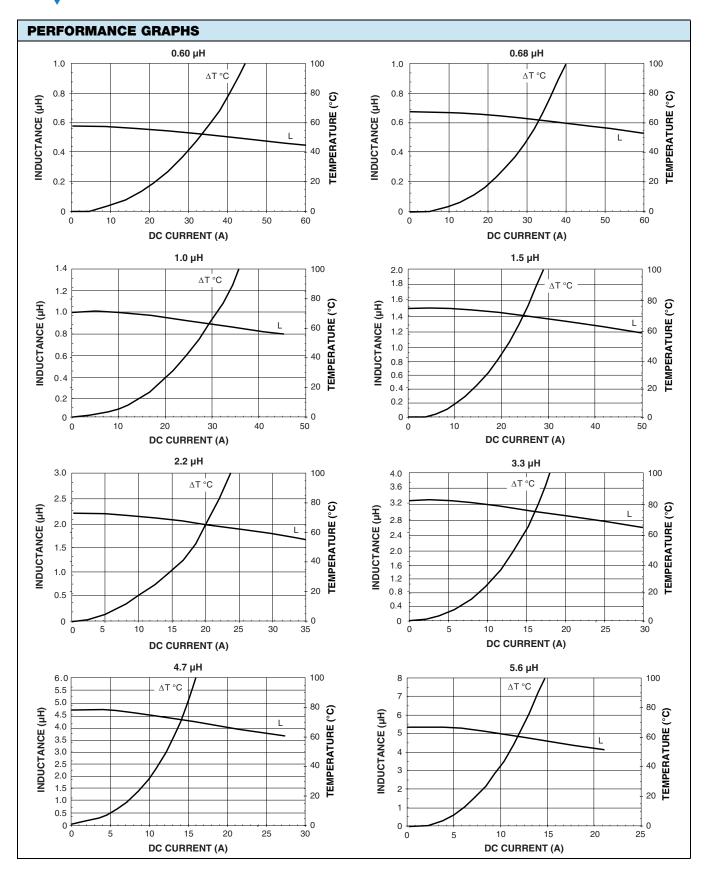
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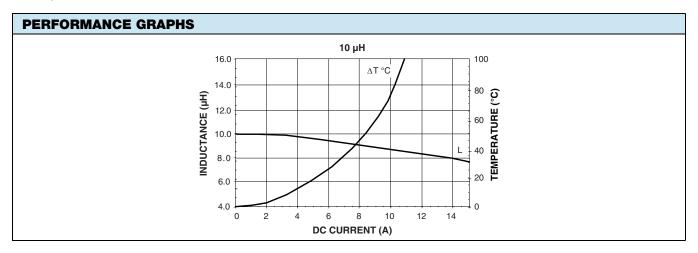
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