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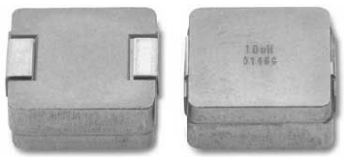
IHLP® Commercial Inductors, High Saturation Series



LINKS TO ADDITIONAL RESOURCES

3D Models Design Tools

FEATURES

- Shielded construction
- Frequency range up to 5.0 MHz
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free
RoHS COMPLIANT
HALOGEN FREE Available
GREEN (5-2008) Available

APPLICATIONS

- Notebook / desktop / server applications
- High current POL converters
- Low profile, high current power supplies
- Battery powered devices
- DC/DC converters in distributed power systems
- DC/DC converter for field programmable gate array (FPGA)

STANDARD ELECTRICAL SPECIFICATIONS

L_0 INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) (1)	SATURATION CURRENT DC TYP. (A) (2)
0.10	0.53	0.60	55	118
0.22	0.64	0.80	51	110
0.33	0.85	1.1	42	80
0.47	1.1	1.3	38	65
0.56	1.3	1.5	36	55
0.68	1.5	1.7	34	54
0.82	2.0	2.3	31	53
1.0	2.1	2.5	29	50
1.5	3.4	4.1	23	48
1.8	4.2	4.9	19	40
2.2	4.6	5.5	20	32
3.3	7.7	9.2	15	32
4.7	12.8	15.0	12	27
5.6	14.0	16.5	11.5	22
6.8	15.4	18.5	11	21
7.8	17.2	20.5	10	18
8.2	18.9	22.5	9.5	18
10	21.4	25.5	9.0	16

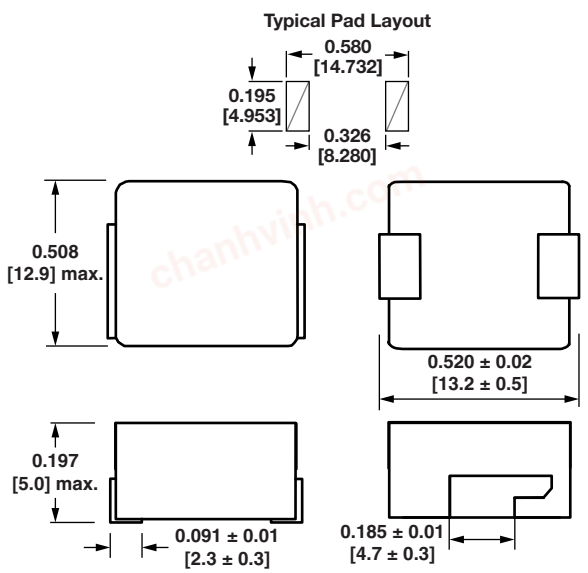
Notes

- 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 ΔT of 40 °C

(2) DC current (A) that will cause L_0 to drop approximately 20 %

DIMENSIONS in inches [millimeters]



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DESCRIPTION

IHLP-5050EZ-01	1.0 µH	± 20 %	EK	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

I H L P	5 0 5 0 E Z	E K	1 R 0	M	0 1
PRODUCT FAMILY	SIZE	PACKAGE CODE **EK** = tape and reel	INDUCTANCE VALUE **1R0** = 1.0 µH	INDUCTANCE TOLERANCE **M** = ± 20 % **N** = ± 30 %	SERIES

PACKAGE CODE OPTIONS

EK = tape and reel packaging (750 pcs on 13-inch reel)

ER = tape and reel packaging (250 pcs on 13-inch reel)

Note

- For additional packaging details see "Packaging Methods"

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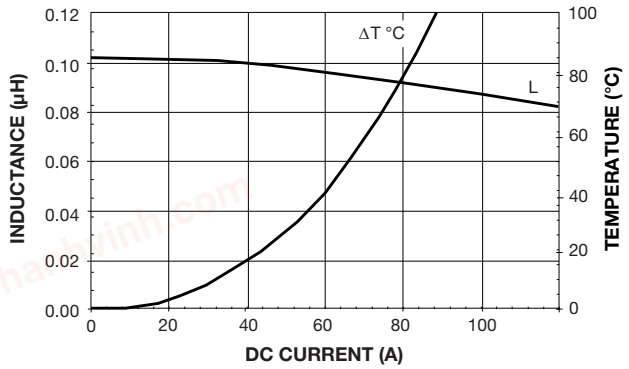
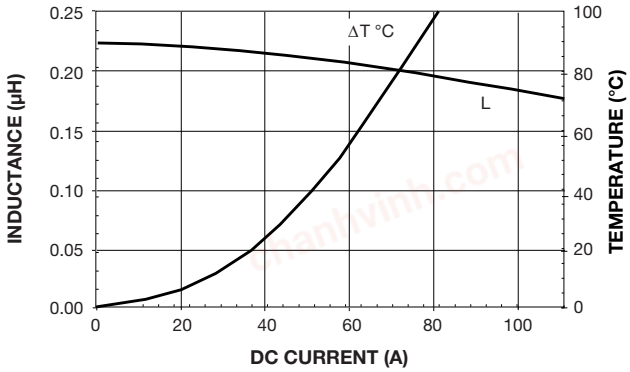
PERFORMANCE GRAPHS

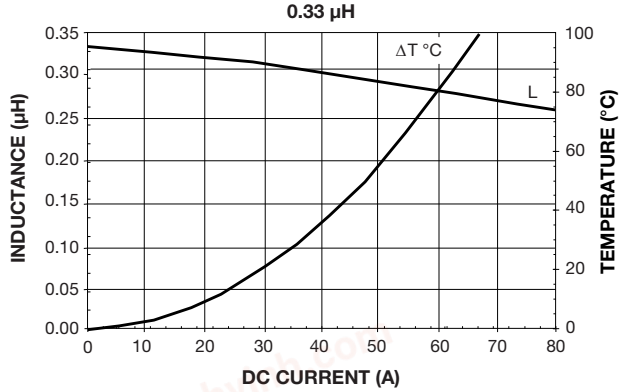
0.10 µH



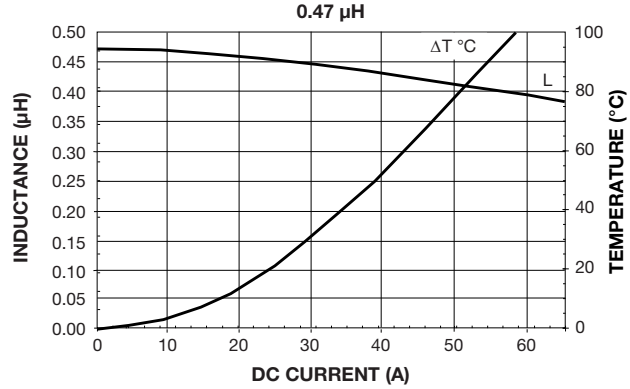
0.22 µH



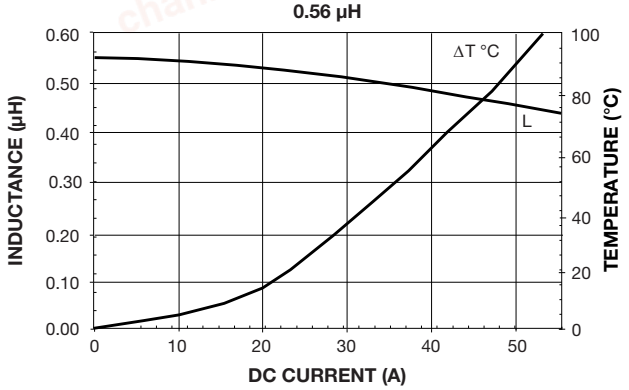
0.33 µH



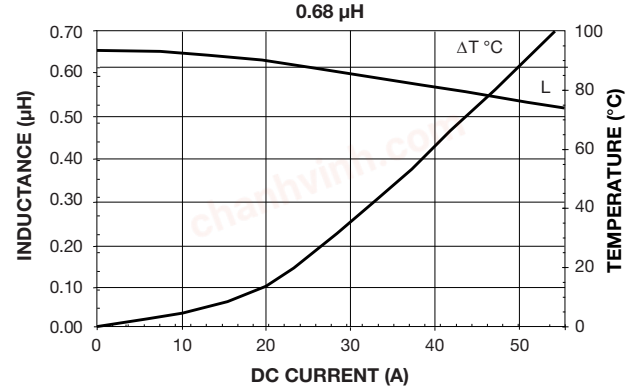
0.47 µH



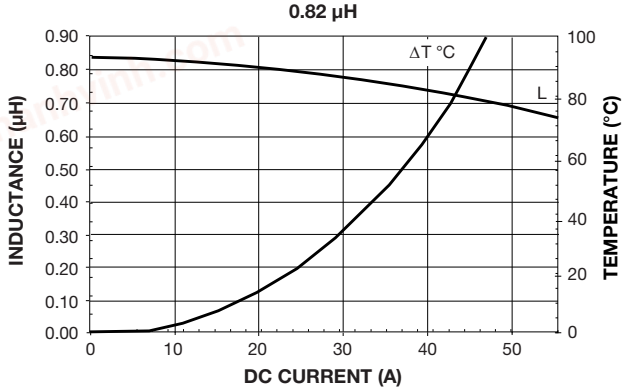
0.56 µH



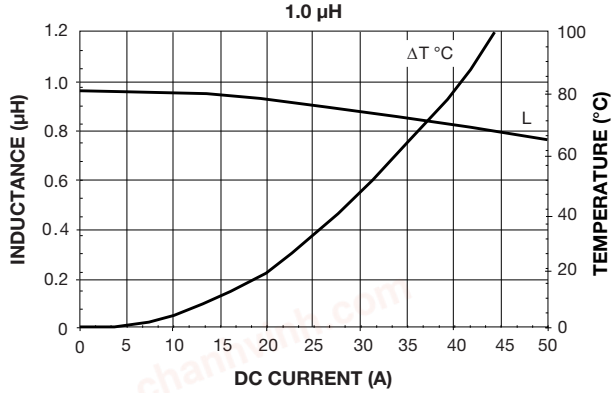
0.68 µH



0.82 µH



1.0 µH



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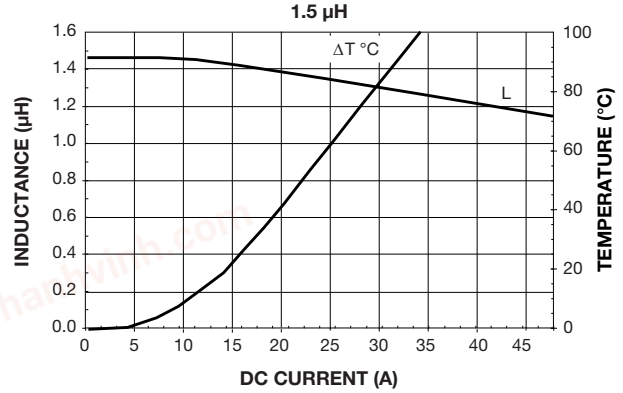
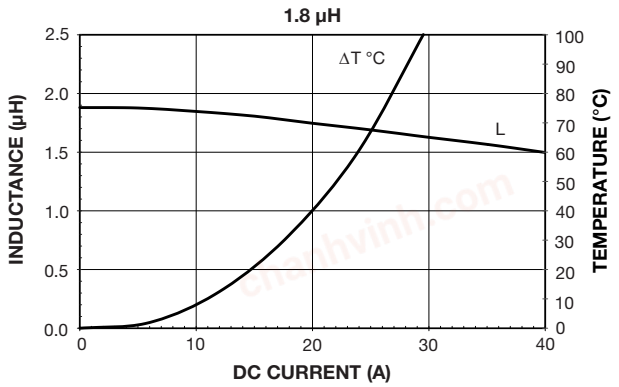
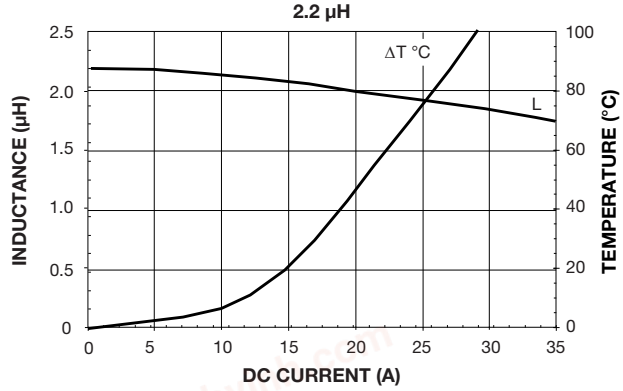
1.5 µH



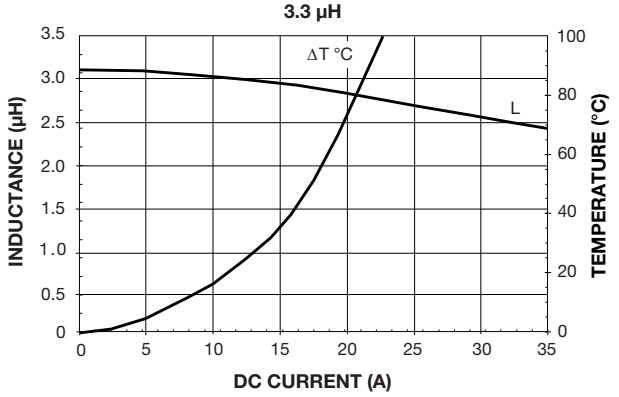
1.8 µH



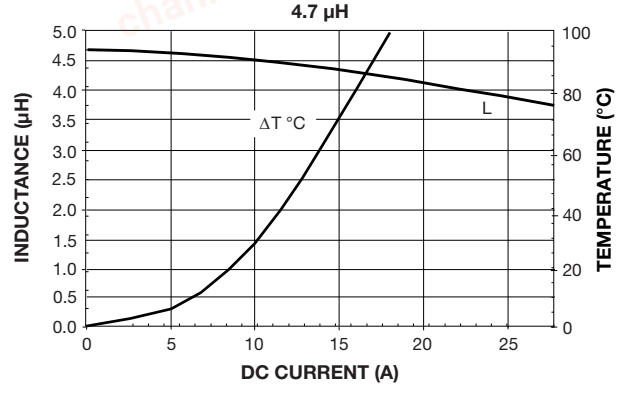
2.2 µH



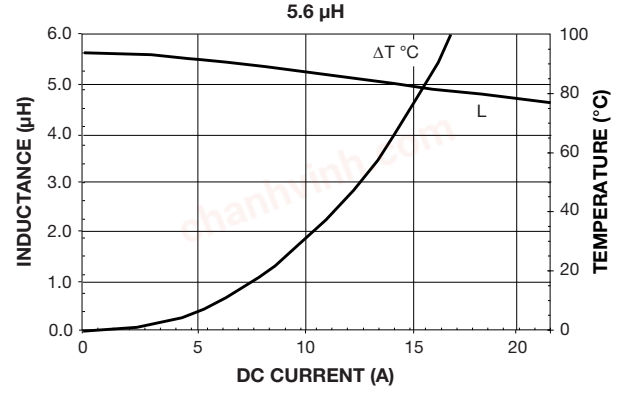
3.3 µH



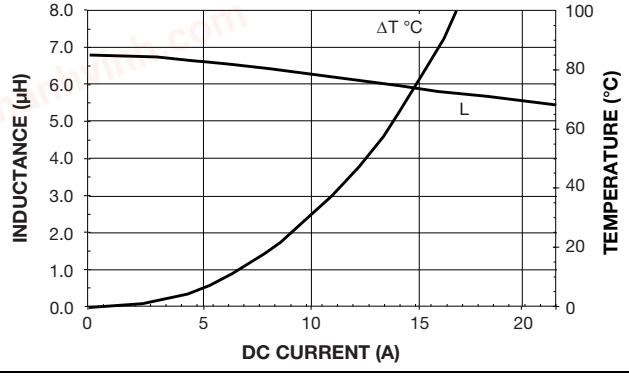
4.7 µH



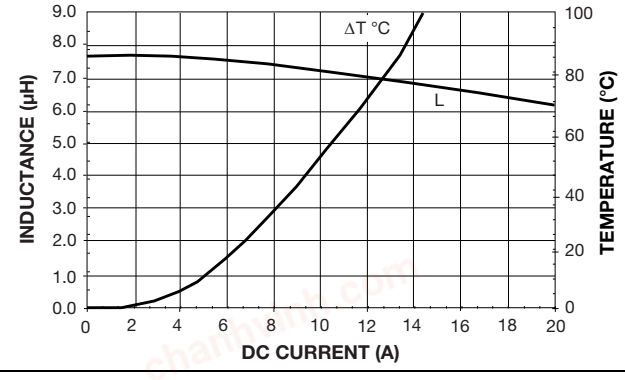
5.6 µH



6.8 µH



7.8 µH



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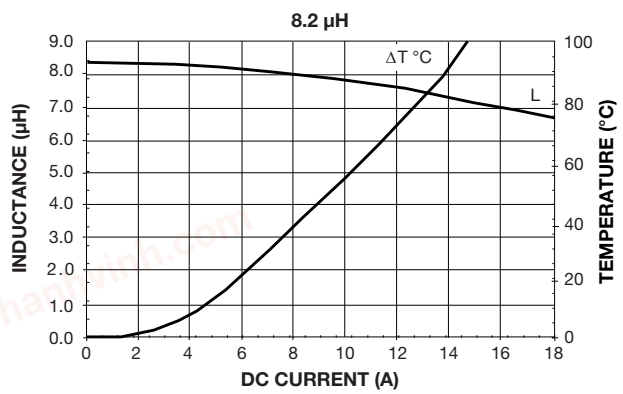

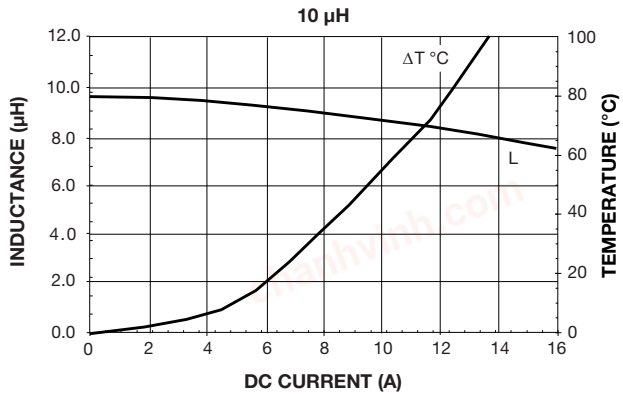

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