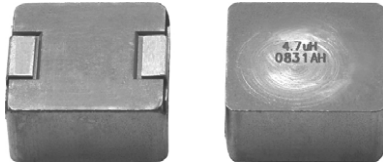


IHLP® Automotive Inductors, High Saturation Series



LINKS TO ADDITIONAL RESOURCES



3D Models



Design Tools

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	0.47	0.50	60.0	120.0
0.15	0.53	0.60	55.0	118.0
0.22	0.63	0.70	53.0	112.0
0.30	0.70	0.80	48.0	72.0
0.33	0.83	0.90	46.0	65.0
0.40	0.90	1.0	44.0	64.0
0.47	1.0	1.2	41.0	63.0
0.56	1.2	1.4	37.0	62.0
0.68	1.4	1.6	35.0	60.0
0.82	1.6	1.9	33.0	50.0
1.0	1.7	2.0	32.0	49.0
1.2	2.1	2.5	30.0	48.0
1.5	2.5	3.0	27.0	45.0
1.8	2.8	3.2	24.0	41.0
2.2	3.5	4.2	22.0	40.0
3.3	5.7	6.8	18.0	35.0
4.7	9.3	11.2	13.5	30.0
5.6	9.3	10	13.5	26.5
6.8	13.1	14	11.5	16.5
8.2	14.5	15.5	10.5	16.0
10	16.4	17.2	10.0	15.5
15	27.6	29.7	7.7	15.0

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, PCB 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 L₀ to drop approximately 20 %

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
- Excellent temperature stability for inductance and saturation
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

 AUTOMOTIVE
GRADE

RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

- Engine and transmission control units
- Diesel injection drivers
- DC/DC converters for entertainment / navigation systems
- Noise suppression for motors
 - Windshield wipers
 - Power seats
 - Power mirrors
 - Heating and ventilation blowers
 - HID lighting
- LED drivers



DESCRIPTION					
IHLP-5050FD-A1	1.0 μ H	$\pm 20\%$	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 F D	E K	1 R 0	M	A 1
PRODUCT FAMILY		SIZE	PACKAGE CODE	INDUCTANCE	INDUCTANCE TOLERANCE
			EK = tape and reel	1R0 = 1.0 μ H	M = $\pm 20\%$
					SERIES

PACKAGE CODE OPTIONS
EK = tape and reel packaging (500 pcs on 13-inch reel)
ER = tape and reel packaging (250 pcs on 13-inch reel)

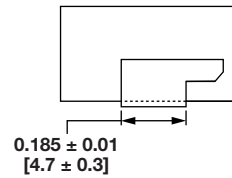
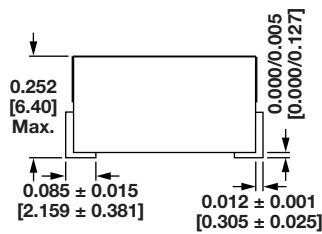
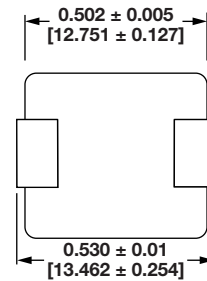
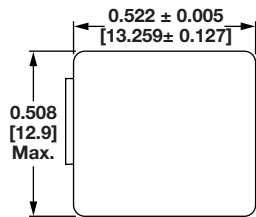
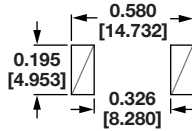
Note

- For additional packaging details see "[Packaging Methods](#)"

DIMENSIONS in inches [millimeters]

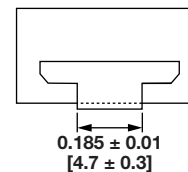
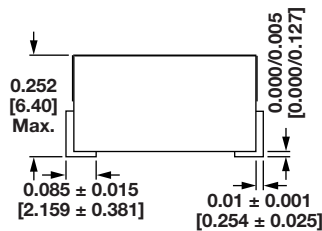
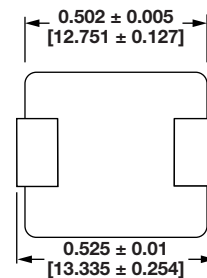
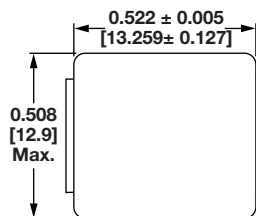
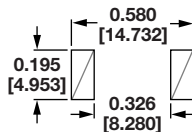
Values 0.82 μ H and lower

Typical Pad Layout



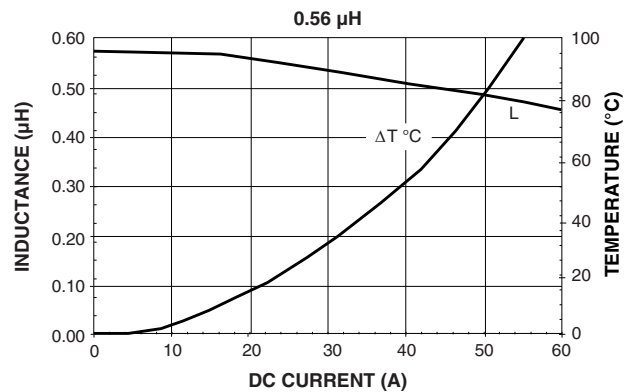
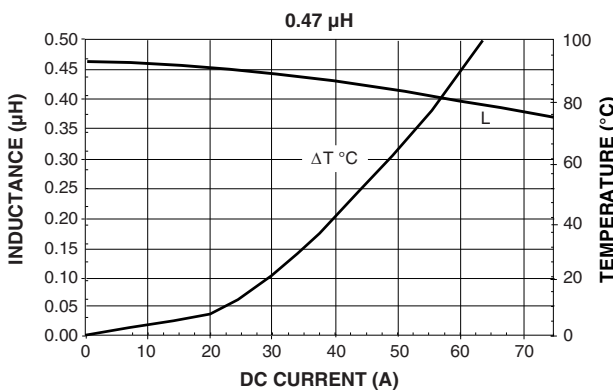
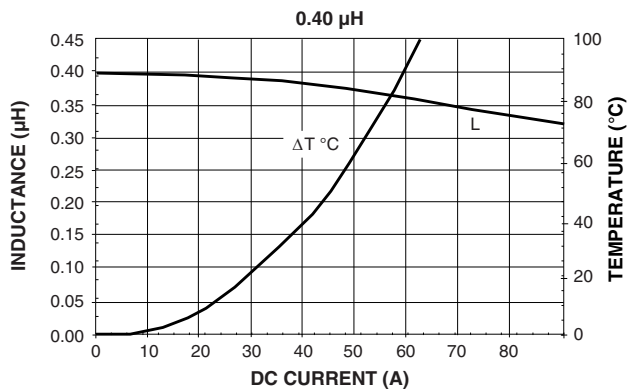
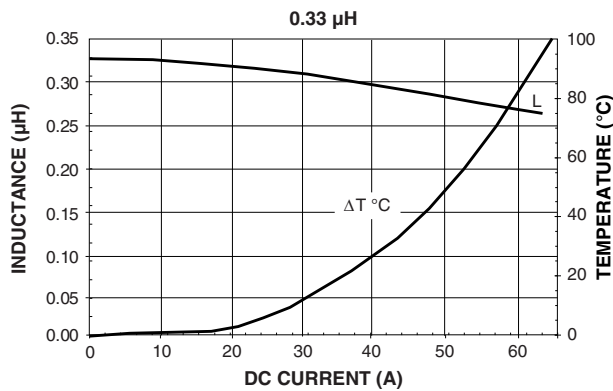
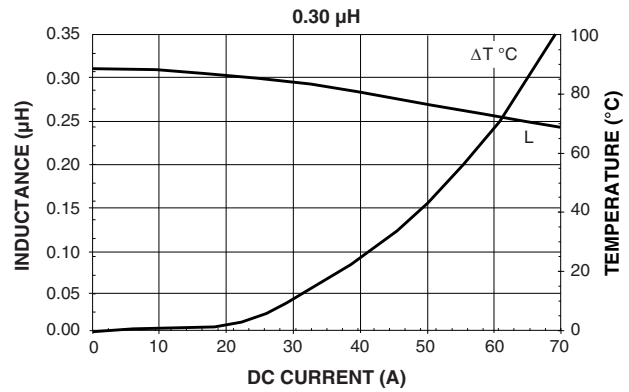
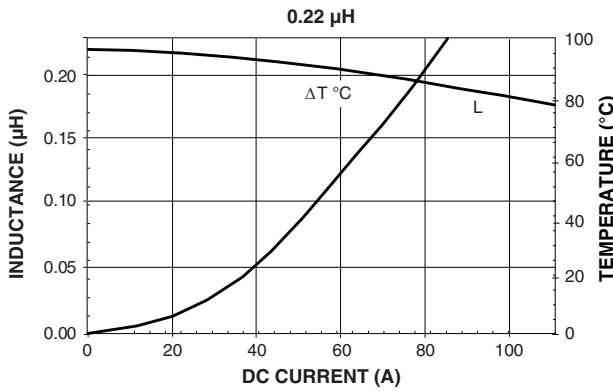
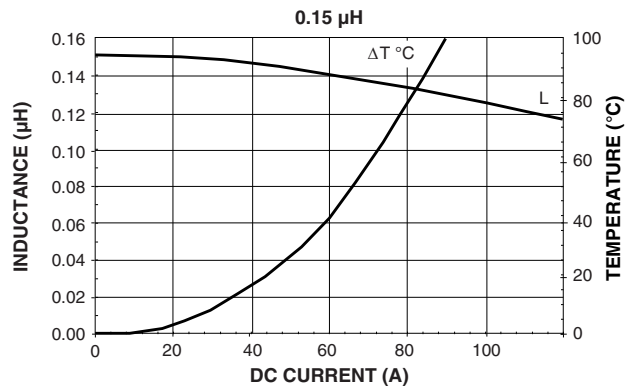
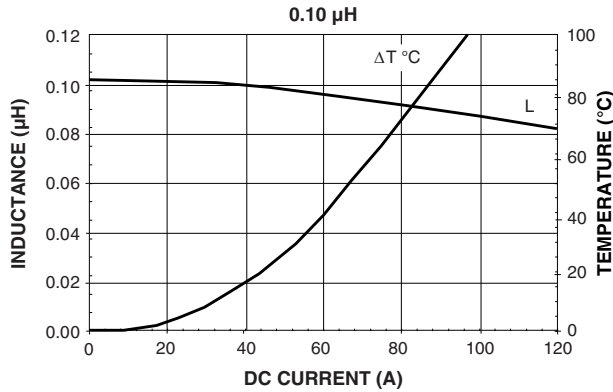
Values 1.0 μ H and higher

Typical Pad Layout



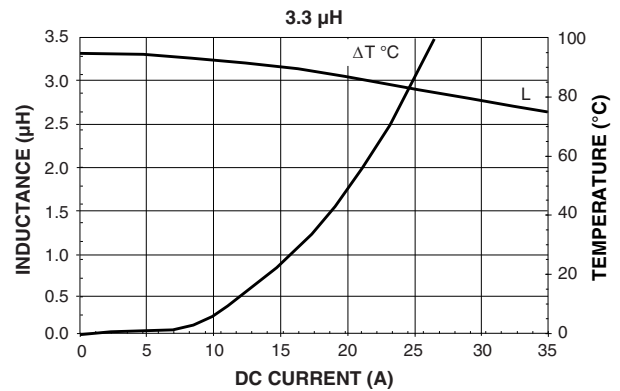
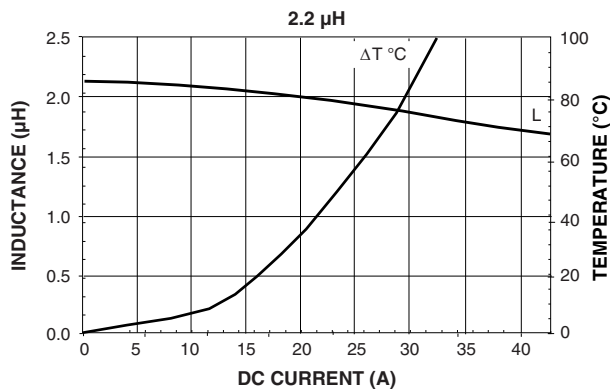
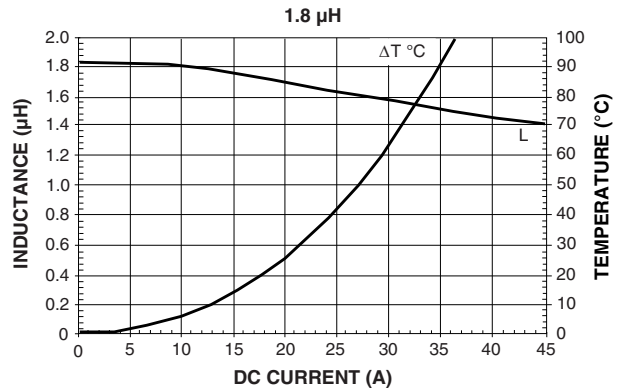
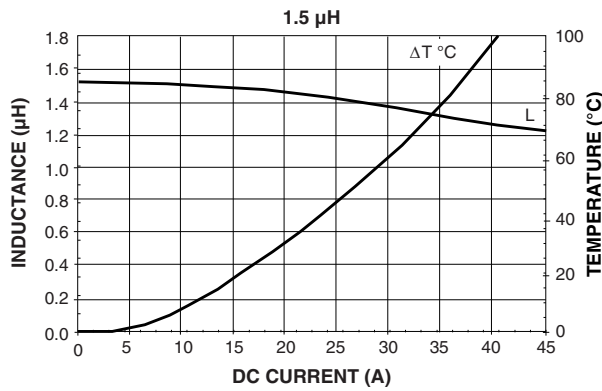
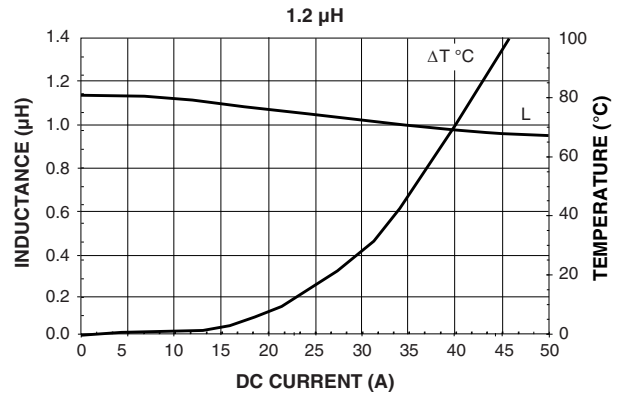
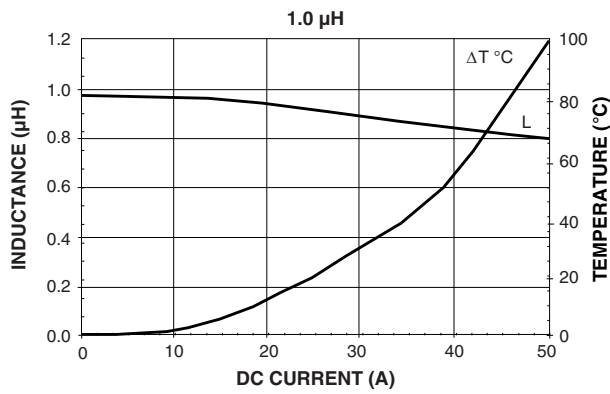
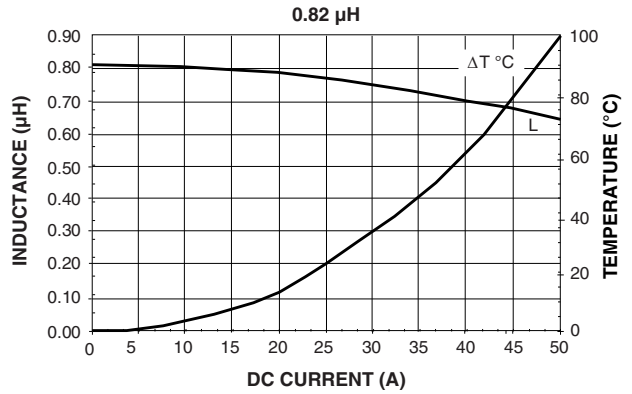
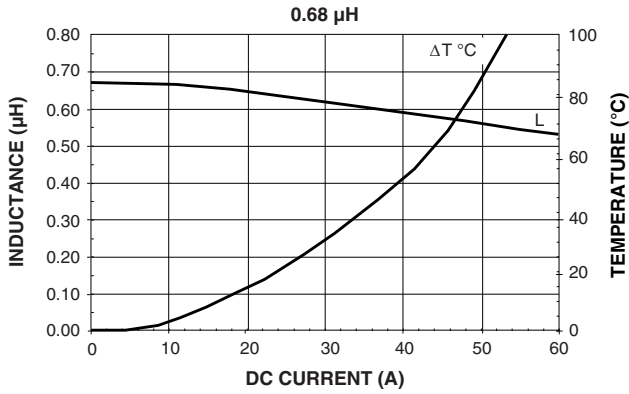


PERFORMANCE GRAPHS



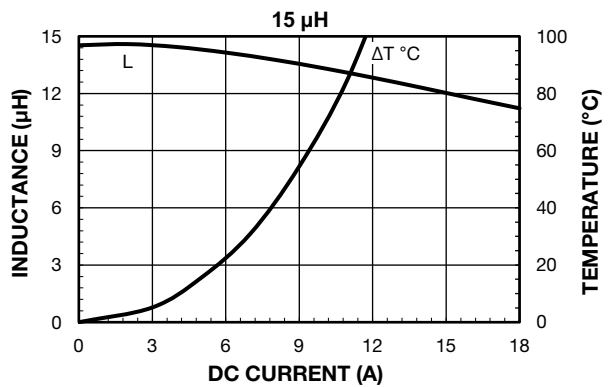
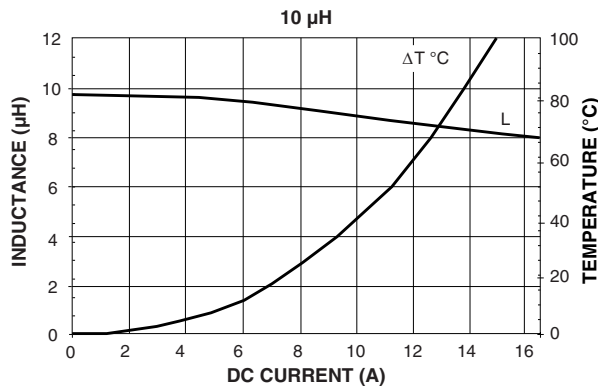
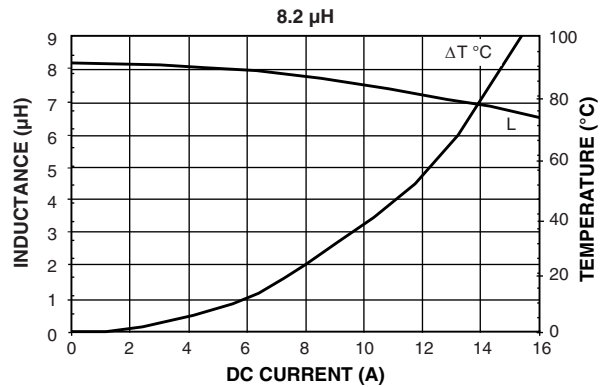
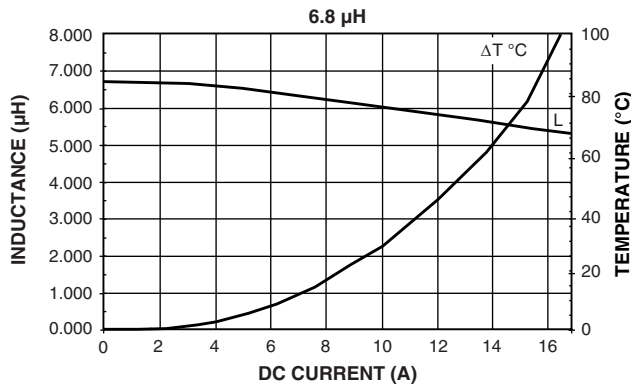
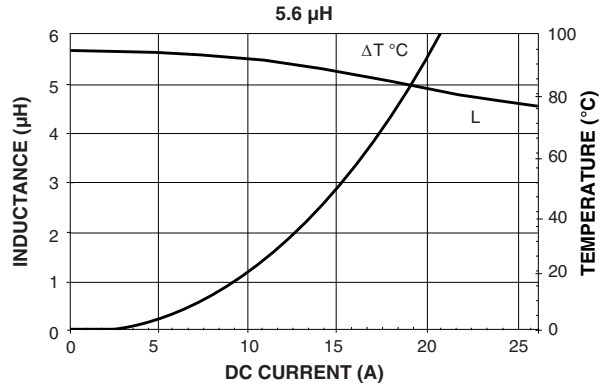
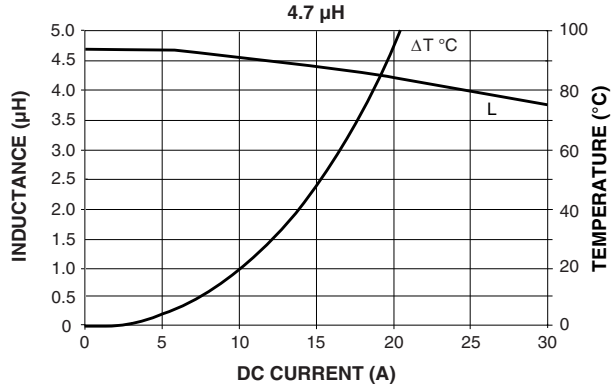


PERFORMANCE GRAPHS





PERFORMANCE GRAPHS





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