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Vishay Dale

# Low Profile, High Current IHLP<sup>®</sup> Inductors



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STANDARD ELECTRICAL SPECIFICATIONS							
L <sub>0</sub> 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) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>	SRF TYP. (MHz)		
1.0	1.65	1.77	40	26	33.4		
1.2	1.98	2.12	29	24.5	32.0		
1.5	2.4	2.57	27.5	23.5	29.2		
1.8	2.75	2.94	26	22.5	25.9		
2.2	3.43	3.67	25.5	21.5	23.3		
3.3	5.08	5.44	20.2	16.7	17.8		
4.7	7.41	7.93	17.4	18.5	15.8		
5.6	8.51	9.11	13.8	13.8	12.3		
6.8	11.3	12.09	14.2	8.7	13.4		
7.8	12.6	13.48	13.5	8.5	13.6		
8.2	13.2	14.12	13.2	7.6	10.3		
10	16.60	17.76	10.9	7.2	10.7		
12	19.00	20.33	10.6	6.9	7.59		
15	24.00	25.68	8.7	6.8	8.30		
22	31.30	33.49	8.3	5.5	6.43		

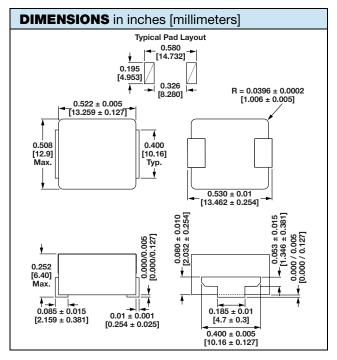
- Operating temperature range -55 °C to +155 °C
- The part temperature (ambient + temp. rise) should not exceed °C under worst case operating conditions. Circuit design, 155 component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- Maximum recommended operating voltage (across inductor) = 75 V
- (1) DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- DC current (A) that will cause L<sub>0</sub> to drop approximately 20 % (2)

#### **FEATURES**

- High temperature, up to 155 °C
- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz. Filter inductor applications up the SRF (see Standard Electrical Specifications table).
- Lowest DCR/µH, in this package size
- · Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- IHLP design. PATENT(S): <u>www.vishav.com/patents</u>
- Tin / lead SnPb plated (not dipped) terminals

#### **APPLICATIONS**

- PDA / 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)



DESCRIPTION				
IHLP-5050FD-5L	4.7 μH	± 20 %	RZ	
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	
GLOBAL PART NUM	IBER			
I H L P	5 0 5 0	F D R Z 4 R	7 M 5 L	
MODEL	SIZE			

#### PATENT(S): www.vishay.com/patents This Vishay product is protected by one or more United States and International patents.

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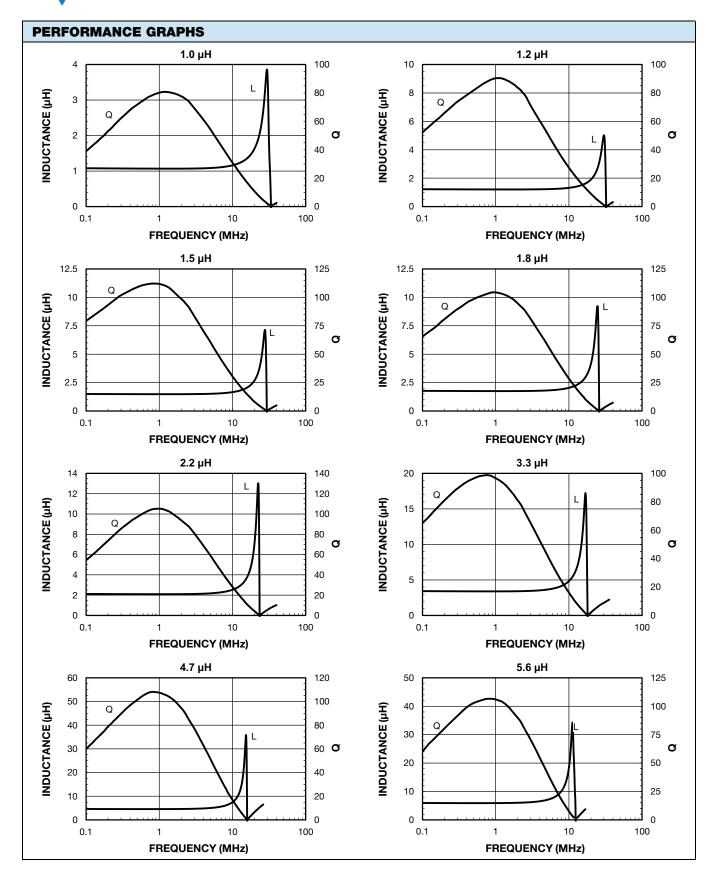
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All test data is referenced to 25 °C ambient

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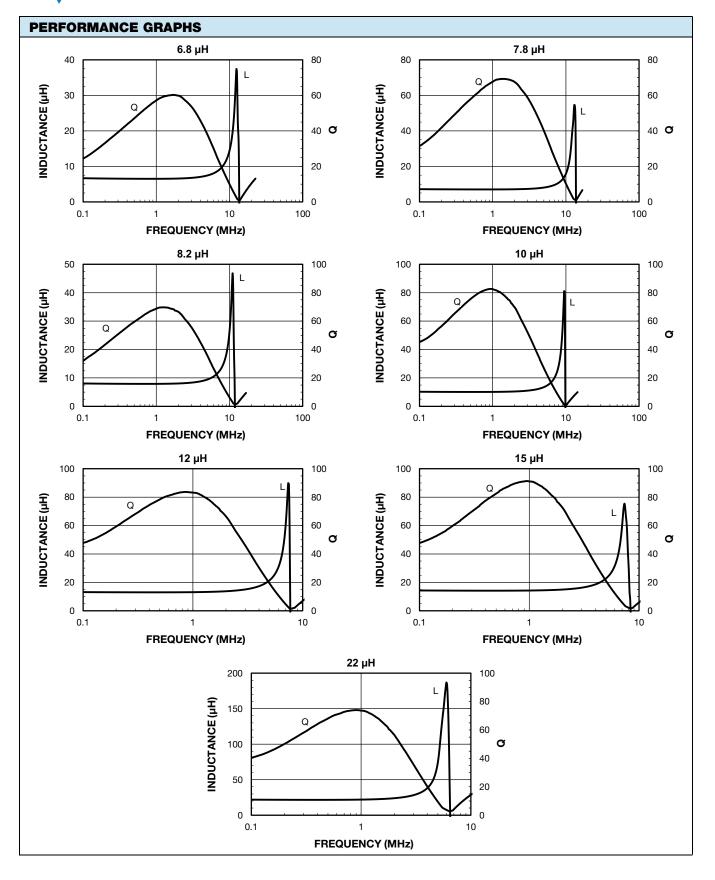
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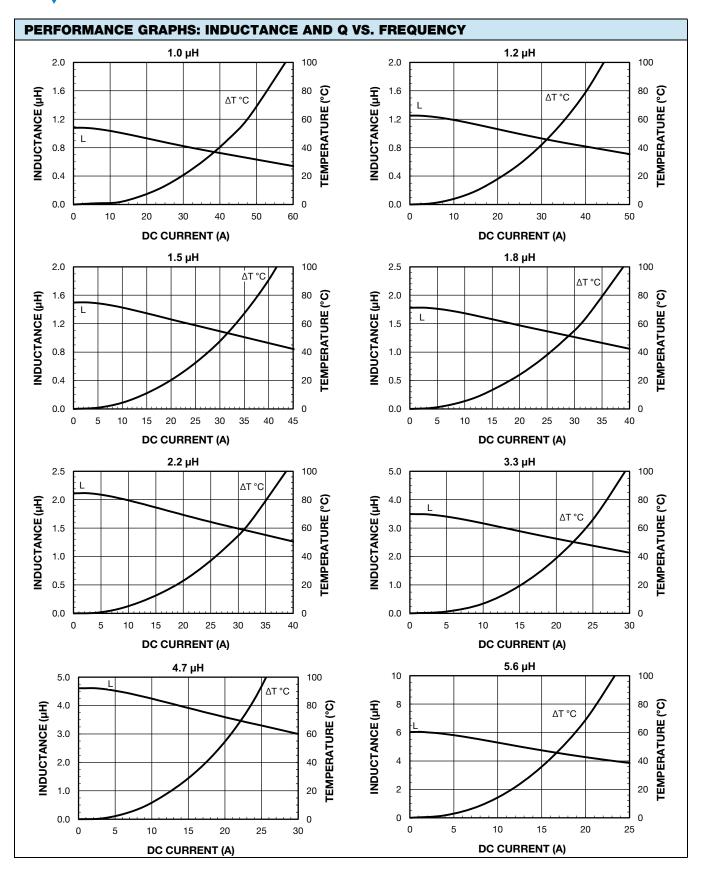
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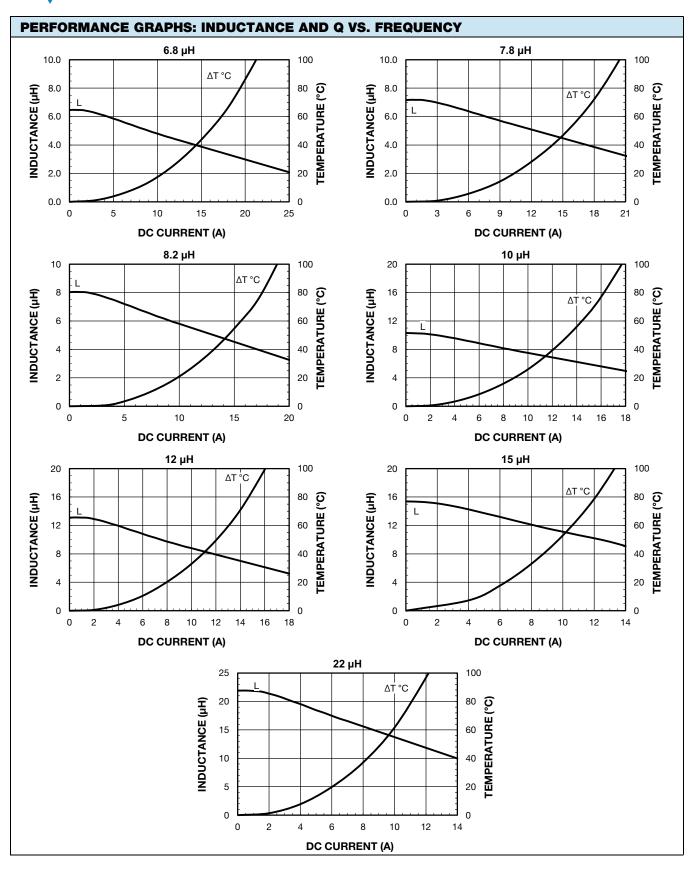
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