

# High Frequency, Low Profile, High Current IHLP® Inductors



## FEATURES

- Shielded construction
- Extended frequency range up to 10 MHz
- Lowest losses above 1 MHz
- 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](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

## LINKS TO ADDITIONAL RESOURCES



## APPLICATIONS

- Notebook / desktop applications
- High current POL converters
- Low profile, high current power supplies
- Battery powered devices
- PMIC for sensors and cameras

STANDARD ELECTRICAL SPECIFICATIONS							
PART NUMBER	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>	SATURATION CURRENT DC TYP. (A) <sup>(3)</sup>	SRF TYP. (MHz)
IHLP1616BZERR10M0H	0.10	5.5	5.9	14.0	36.0	45.0	485
IHLP1616BZERR47M0H	0.47	15.4	16.5	8.5	13.0	15.5	140
IHLP1616BZER1R0M0H	1.00	26.6	28.5	6.1	10.3	13.0	91

### 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) = 50 V
- (1) DC current (A) that will cause an approximate ΔT of 40 °C  
 (2) DC current (A) that will cause L<sub>0</sub> to drop approximately 20 %  
 (3) DC current (A) that will cause L<sub>0</sub> to drop approximately 30 %

DIMENSIONS in inches [millimeters]	
<p>0.160 ± 0.010 [4.06 ± 0.254]</p> <p>0.160 ± 0.010 [4.06 ± 0.254]</p> <p>0.175 ± 0.010 [4.45 ± 0.254]</p> <p>0.080 ± 0.002 [2.0 ± 0.05]</p>	<p>0.079 [2.0] Max.</p> <p>0.030 ± 0.012 [0.76 ± 0.30]</p>
<p>Typical Pad Layout</p> <p>0.222 [5.639]</p> <p>0.090 [2.286]</p> <p>0.076 [1.930]</p>	

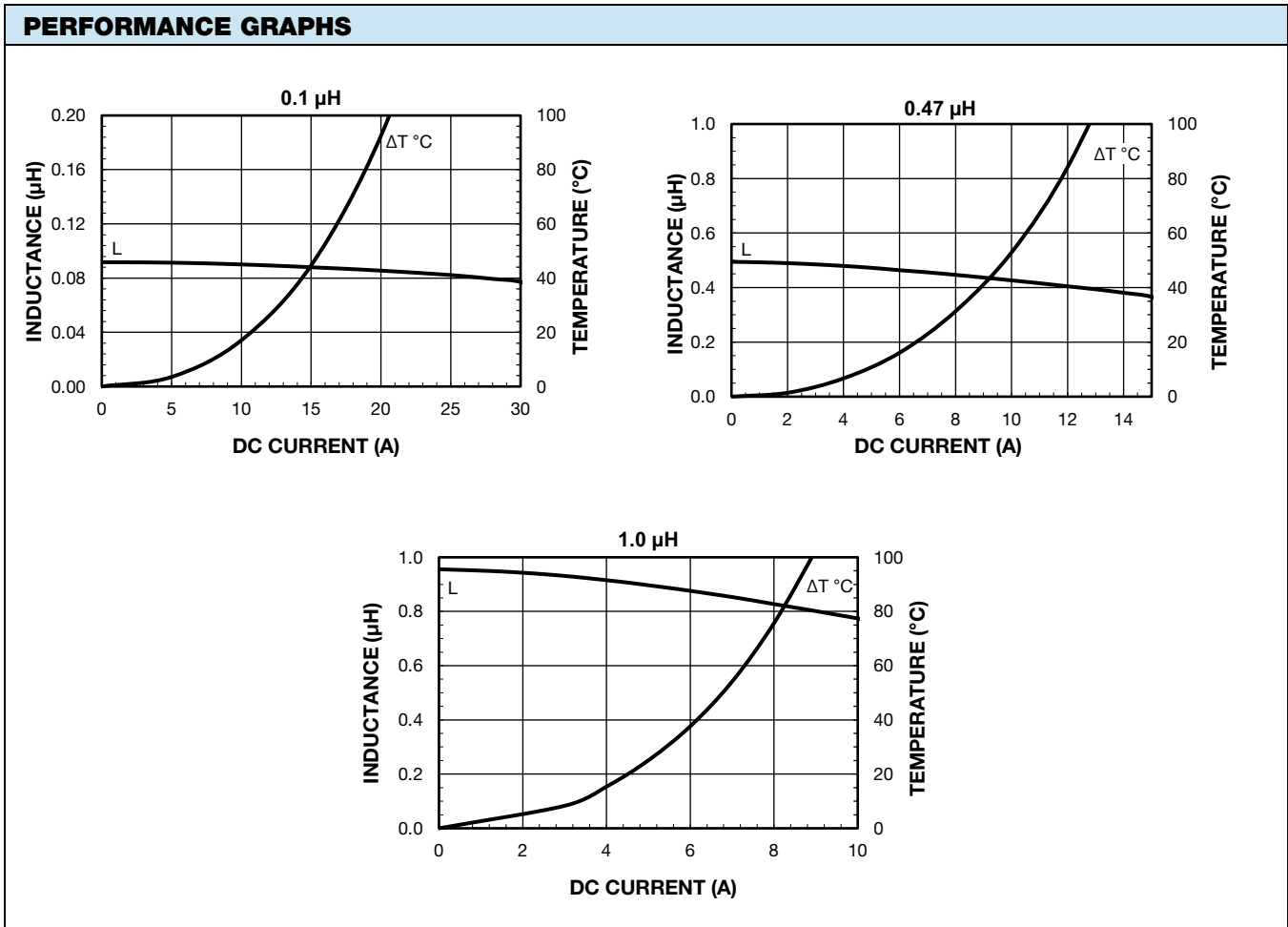
PATENT(S): [www.vishay.com/patents](http://www.vishay.com/patents)

This Vishay product is protected by one or more United States and international patents.



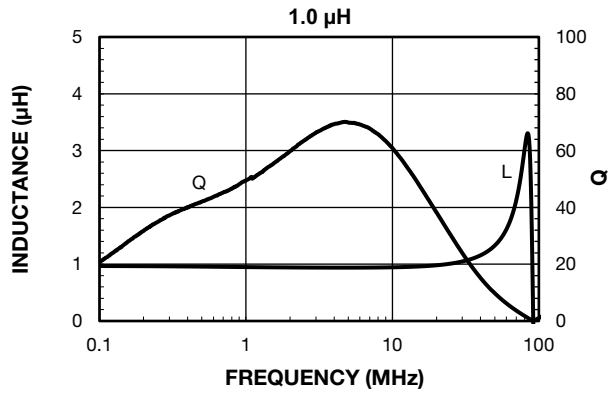
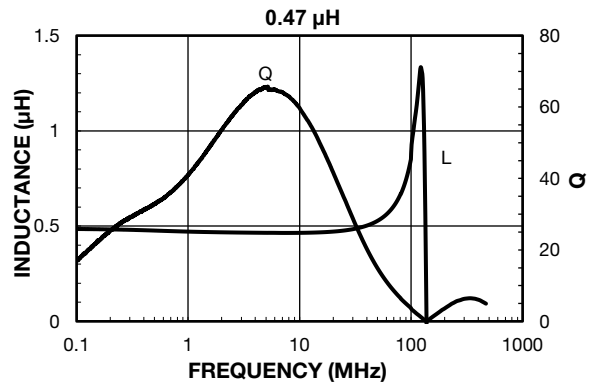
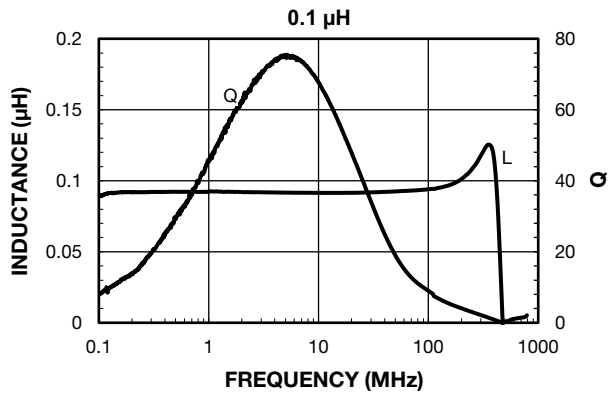
DESCRIPTION					
IHLP-1616BZ-0H	0.47 $\mu$ H	$\pm 20\%$	ER	e3	
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD	

GLOBAL PART NUMBER					
I H L P	1 6 1 6 B Z	E R	R 4 7	M	0 H
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	TOLERANCE	SERIES
		ER = tape and reel	R47 = 0.47 $\mu$ H	M = 20 %	





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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