

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



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 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⁾ | SATURATION CURRENT DC TYP. (A) ⁽³⁾ | 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 L₀ to drop approximately 20 %
 (3) DC current (A) that will cause L₀ 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> | |

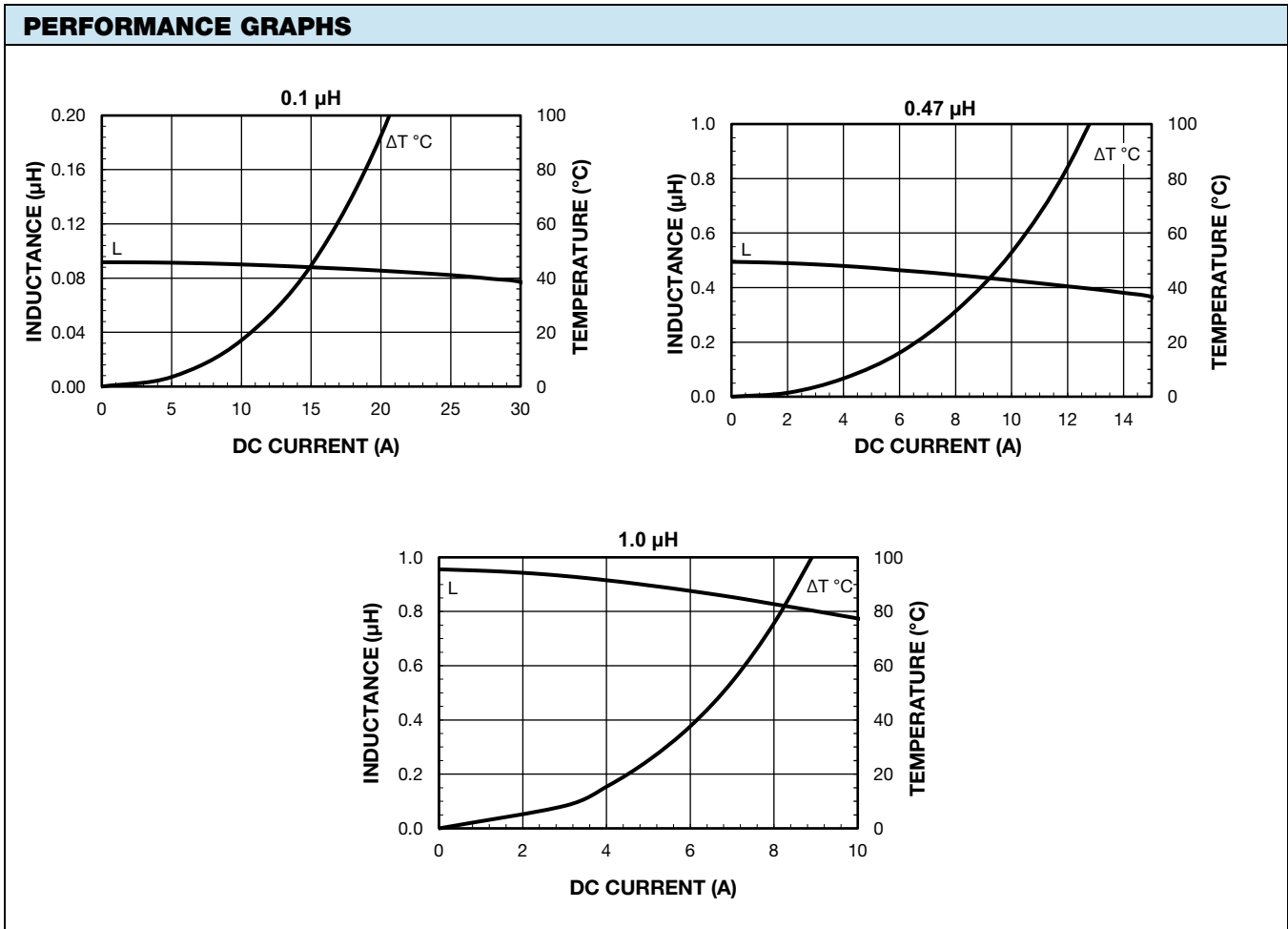
PATENT(S): www.vishay.com/patents

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



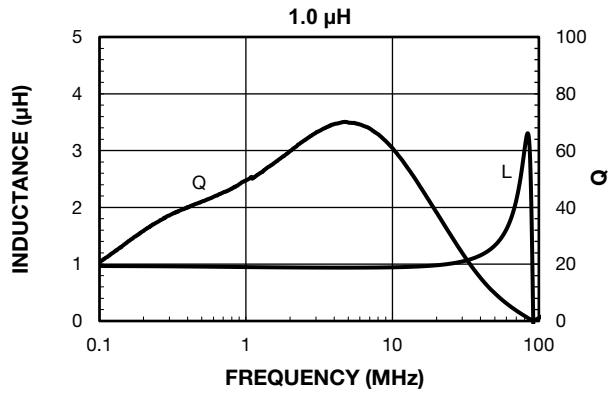
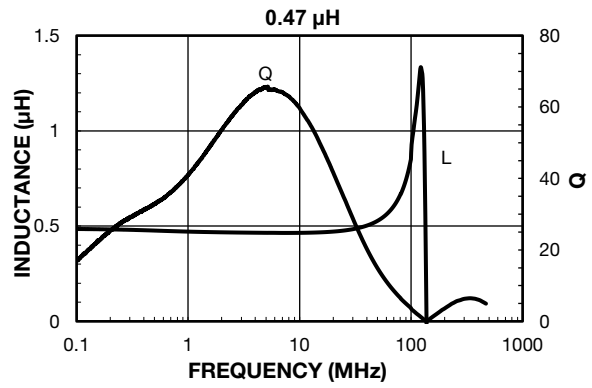
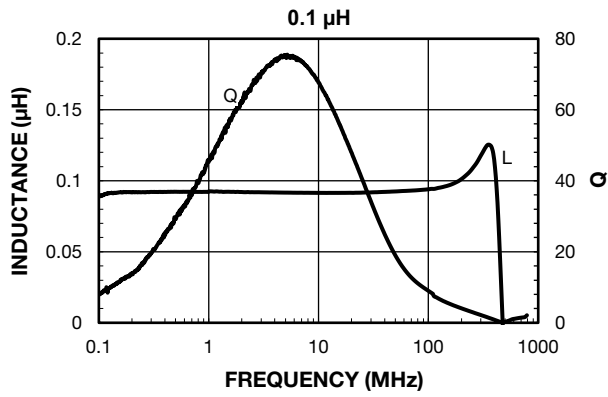
| DESCRIPTION | | | | | |
|----------------|------------------|----------------------|--------------|--------------------------------|--|
| IHLP-1616BZ-0H | 0.47 μ H | $\pm 20\%$ | ER | e3 | |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD | |

| 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 μ H | M = 20 % | |





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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