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# IHLP® Automotive Inductors, High Saturation Series



## FEATURES

- Shielded construction
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- Excellent DC/DC energy storage up to 5 MHz. Filter inductor applications up to SRF (see "Standard Electrical Specifications" table)
- AEC-Q200 qualified
- IHLP design. PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

## DESIGN SUPPORT TOOLS AVAILABLE

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) | SRF TYP. (MHz) |
|---|---|---|---|---|---|
| 0.10 | 8.60 | 9.20 | 10.50 | 19.21 | 475 |
| 0.22 | 13.34 | 14.42 | 8.14 | 9.84 | 270 |
| 0.47 | 35.90 | 37.97 | 4.81 | 7.25 | 140 |
| 1.0 | 63.61 | 66.38 | 3.47 | 5.23 | 95 |

**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

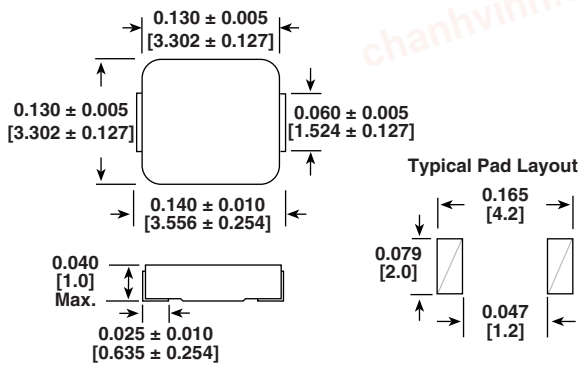
(1) DC current (A) that will cause an approximate ΔT of 40 °C

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

## 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 blower / HID lighting
- LED drivers

## DIMENSIONS in inches [millimeters]




## DESCRIPTION

| IHLP-1212AZ-A1 | 0.47 µH | ± 20 % | EV | e3 |
|---|---|---|---|---|
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

## GLOBAL PART NUMBER

| I | H | L | P | 1 | 2 | 1 | 2 | A | Z | E | V | R | 4 | 7 | M | A | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCT FAMILY | | | | SIZE | | | | | | PACKAGE CODE | | INDUCTANCE VALUE | | | TOL. | SERIES | |

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

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



For technical questions, contact: magnetics@vishay.com

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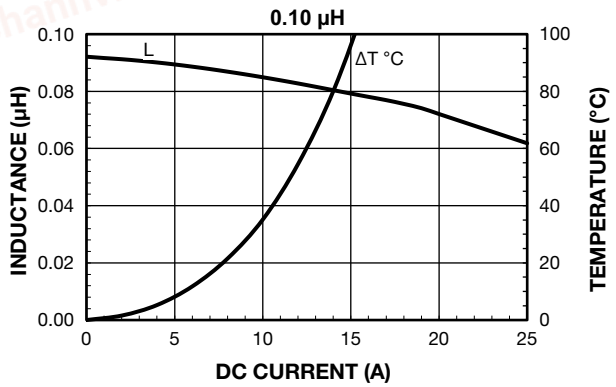
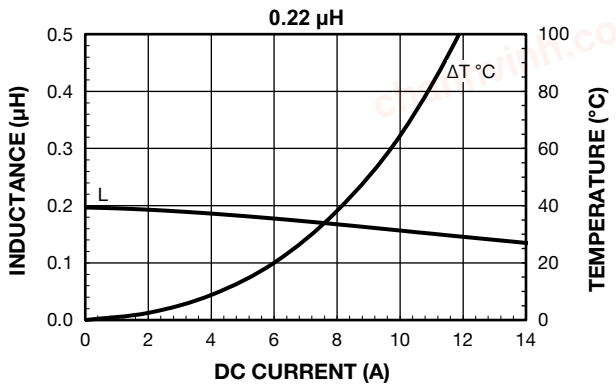
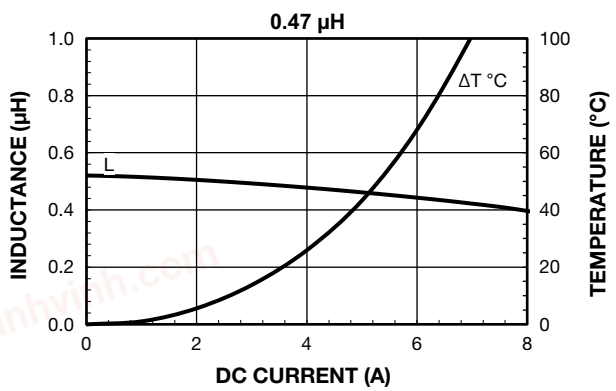
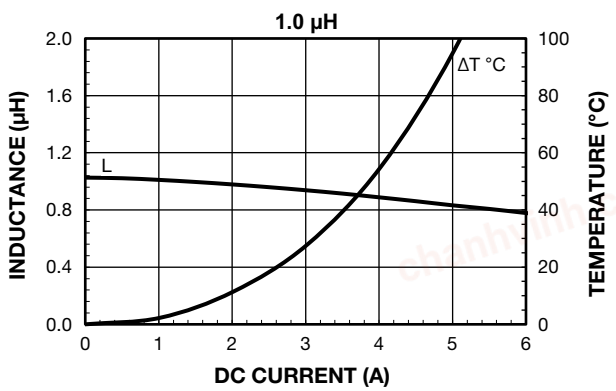
## PERFORMANCE GRAPHS





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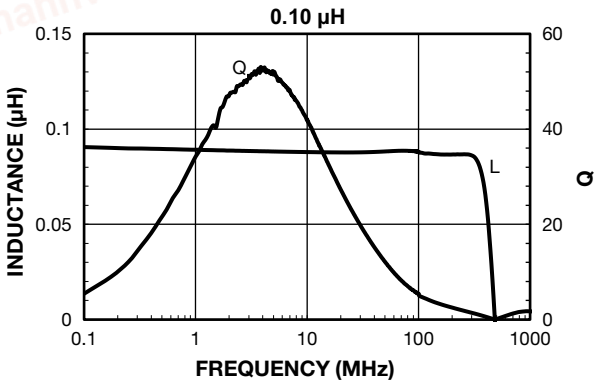
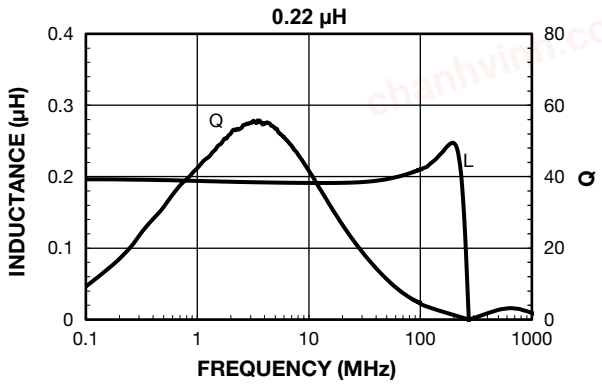
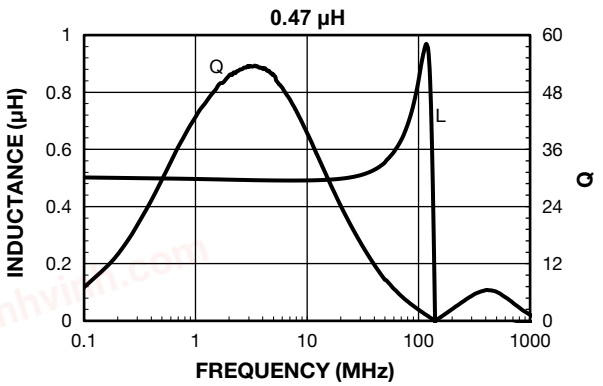
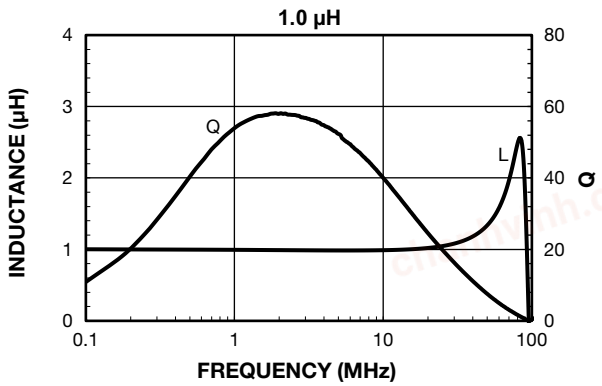
## PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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