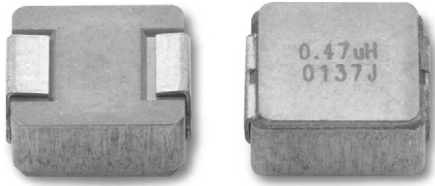


IHLP[®] Automotive Inductors, Low DCR Series



LINKS TO ADDITIONAL RESOURCES



| 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. | | SRF TYP. (MHz) |
| | | | | (A) ⁽²⁾ | (A) ⁽³⁾ | |
| 0.1 | 2.6 | 2.9 | 26.3 | 20.5 | 31.7 | 312 |
| 0.22 | 3.5 | 3.9 | 20.0 | 8.8 | 13.4 | 144 |
| 0.33 | 4.5 | 5.0 | 18.5 | 8.7 | 13.0 | 121 |
| 0.47 | 5.4 | 6.0 | 15.4 | 7.4 | 11.0 | 89 |
| 1.0 | 10.0 | 11.0 | 11.6 | 6.4 | 9.4 | 62 |
| 1.5 | 17.1 | 18.5 | 9.0 | 5.2 | 7.6 | 46 |
| 2.2 | 22.5 | 25.0 | 8.5 | 4.9 | 7.2 | 35 |
| 3.3 | 36.4 | 40.4 | 6.3 | 4.7 | 6.8 | 30 |
| 4.7 | 54.0 | 60.0 | 5.1 | 3.7 | 5.4 | 25 |
| 5.6 | 63.0 | 70.6 | 4.2 | 3.0 | 4.4 | 21 |
| 10 | 122.1 | 131.9 | 3.2 | 1.4 | 2.1 | 16 |

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) = 40 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 %

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 temperature stability for inductance and saturation
- Excellent DC/DC energy storage up to 1 MHz to 2 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

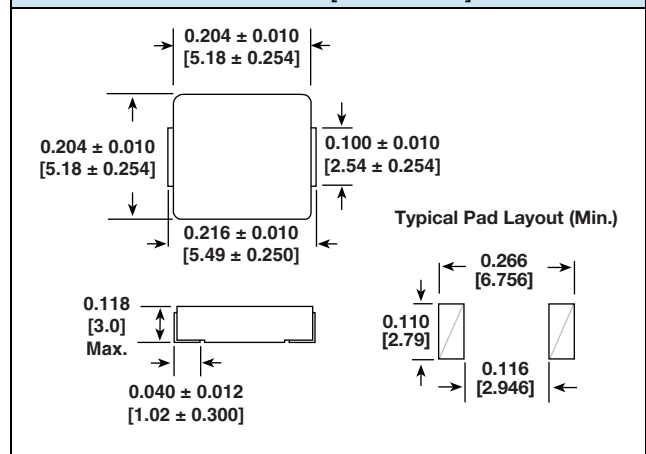
 AUTOMOTIVE
GRADE

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 blower / HID lighting
- LED drivers

DIMENSIONS in inches [millimeters]



DESCRIPTION

| | | | | |
|----------------|------------------|----------------------|--------------|--------------------------------------------|
| IHLP-2020CZ-1A | 4.7 µH | ± 20 % | ER | e3 |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC [®] LEAD (Pb)-FREE STANDARD |

GLOBAL PART NUMBER

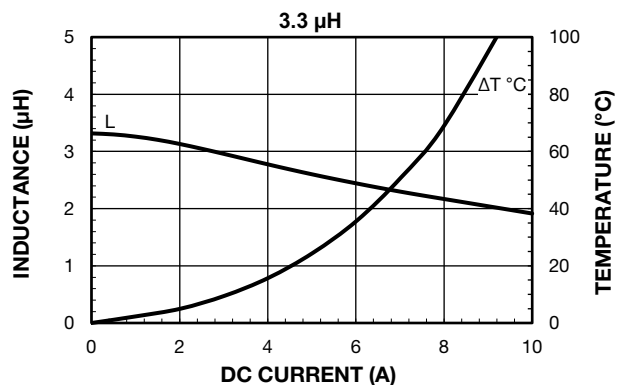
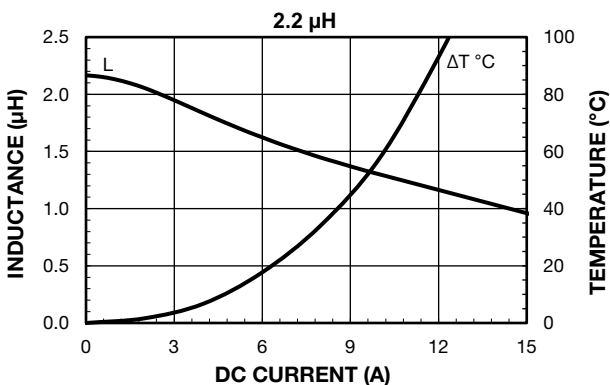
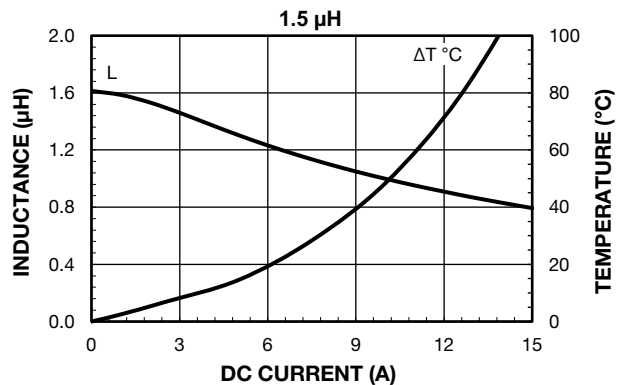
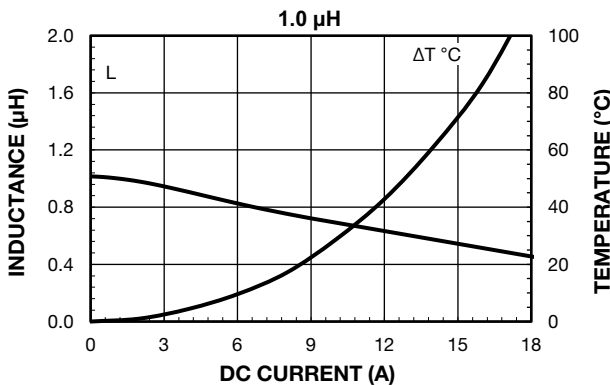
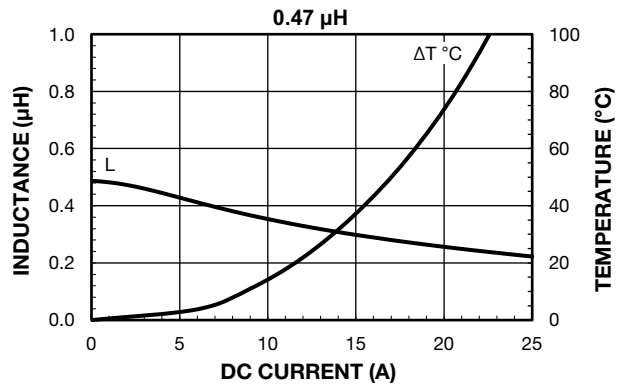
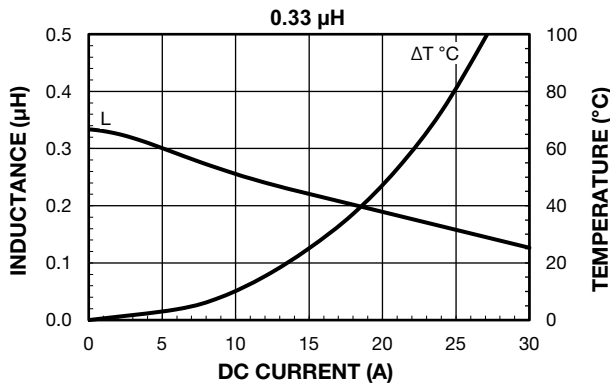
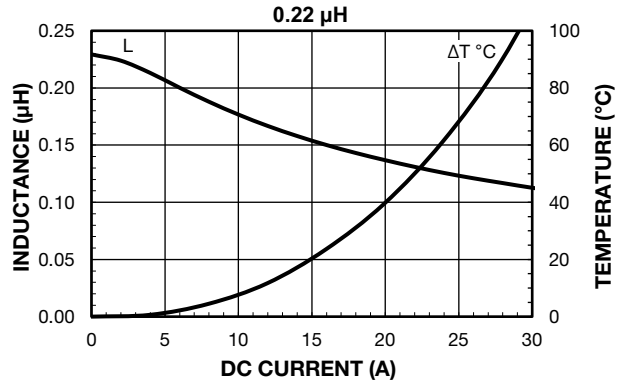
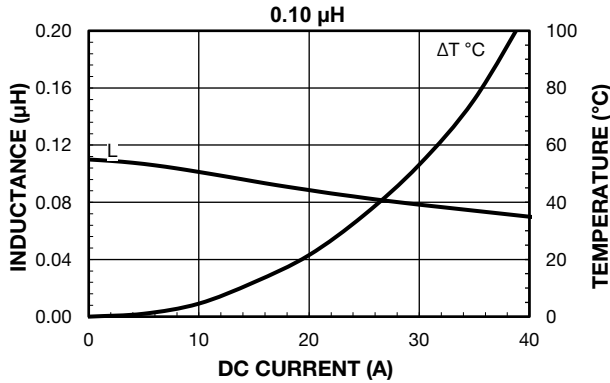
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|----------------|---|---|---|------|---|---|---|--------------|---|------------------|---|---|------|--------|---|---|---|
| I | H | L | P | 2 | 0 | 2 | 0 | C | Z | E | R | 4 | R | 7 | M | 1 | A |
| PRODUCT FAMILY | | | | SIZE | | | | PACKAGE CODE | | INDUCTANCE VALUE | | | TOL. | SERIES | | | |

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

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

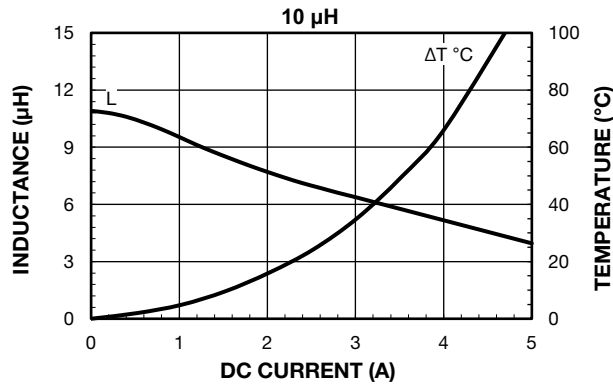
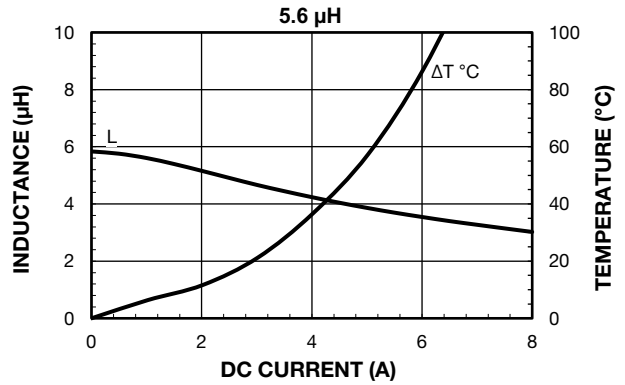
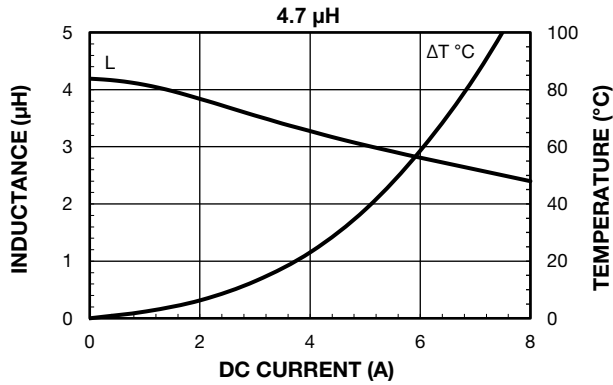


PERFORMANCE GRAPHS



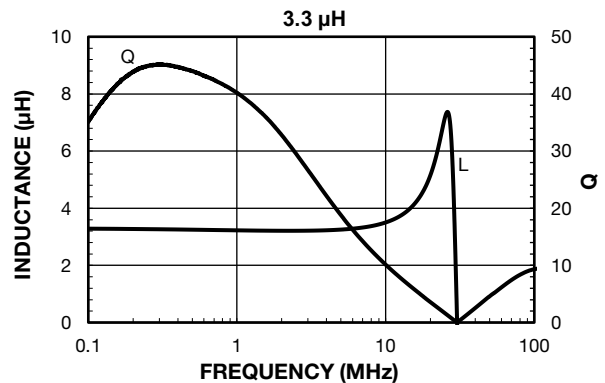
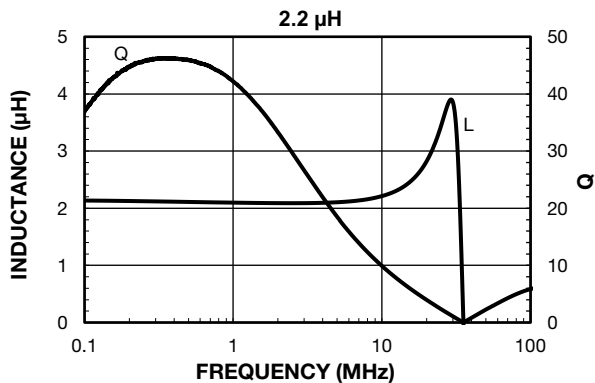
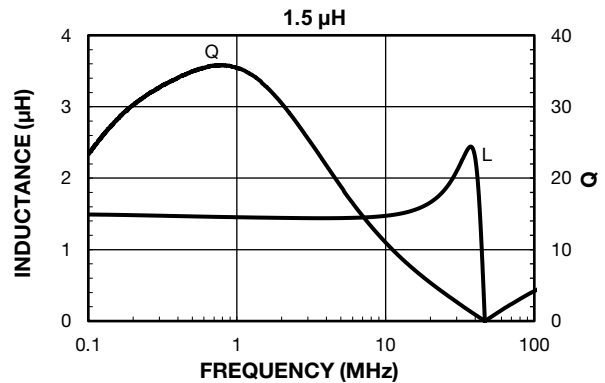
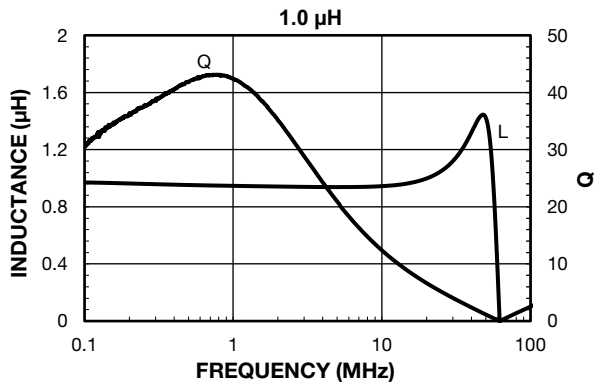
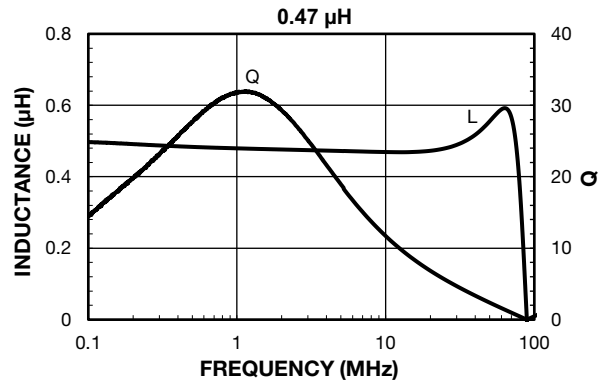
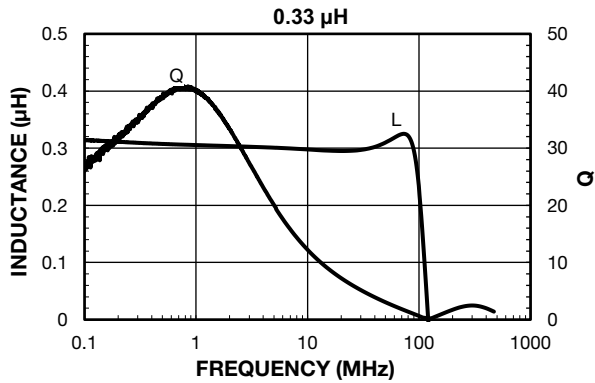
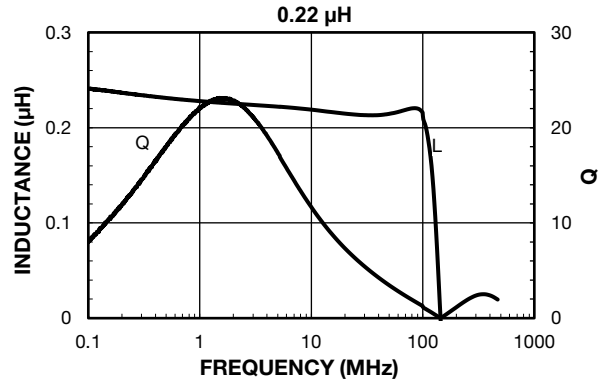
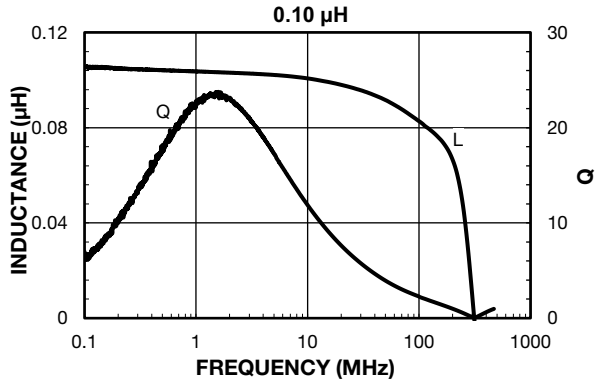


PERFORMANCE GRAPHS



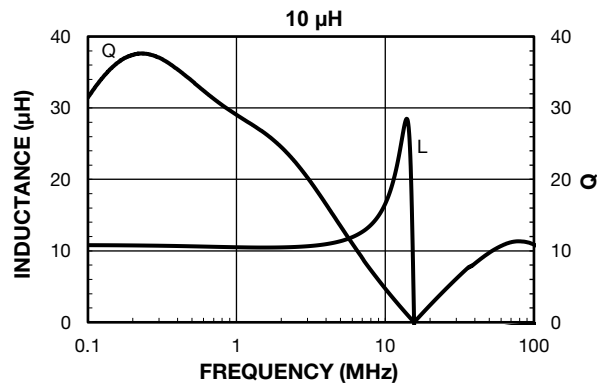
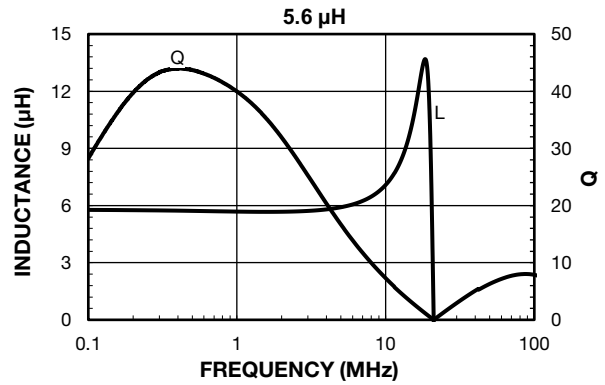
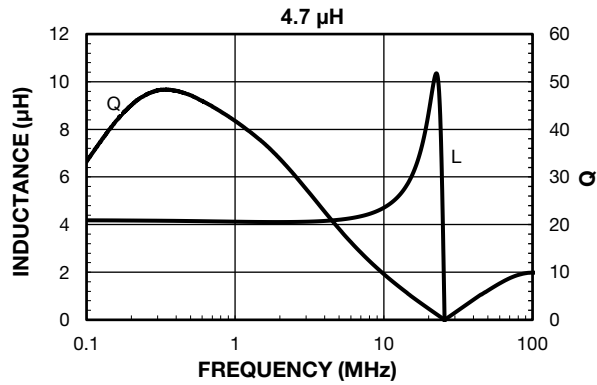


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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