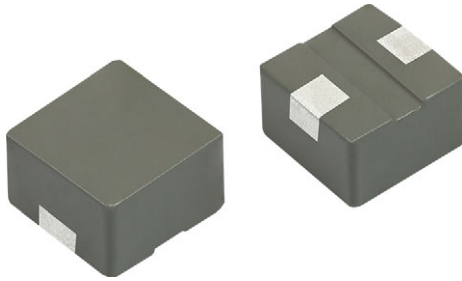




IHLP® Power Inductors, Low DCR Series



FEATURES

- 3.0 mm x 3.0 mm footprint
- Available in three height profiles (1.2 mm, 1.5 mm, 2.0 mm)
- Magnetically shielded construction
- Handles high transient current spikes without saturation
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

LINKS TO ADDITIONAL RESOURCES



Product Page

APPLICATIONS

- Energy storage for low profile DC/DC converters
- Battery powered devices
- Power line noise suppression and filtering

MECHANICAL SPECIFICATIONS

- Terminations: pure tin electroplating over nickel underlayer over copper base
- Weight: 0.066 g (1.2 mm height), 0.087 g (1.5 mm height), 0.112 g (2.0 mm height)

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | | |
|------------------------------------|---|---------------------------|---------------------------|---|-----------------------------------|--------------------------|-------------------|
| PART NUMBER | L ₀ INDUCTANCE ± 20 % AT 1 MHz, 1 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) | | SRF TYP. (MHz) |
| | | | | | 20 % DROP ⁽²⁾ | 30 % DROP ⁽³⁾ | |
| 1.2 mm HEIGHT | | | | | | | |
| IHLP1212ABEZR22M1Z | 0.22 | 8.6 | 10.3 | 11.1 | 9.5 | 12.4 | 185 |
| IHLP1212ABEZR33M1Z | 0.33 | 10.8 | 12.9 | 9.9 | 8.9 | 11.6 | 140 |
| IHLP1212ABEZR47M1Z | 0.47 | 14.7 | 17.6 | 8.5 | 7.2 | 9.4 | 115 |
| IHLP1212ABEZR56M1Z | 0.56 | 16.8 | 19.8 | 8.0 | 6.9 | 9.0 | 110 |
| IHLP1212ABEZR68M1Z | 0.68 | 20.3 | 22.5 | 7.5 | 5.7 | 7.4 | 85 |
| IHLP1212ABEZ1R0M1Z | 1.0 | 29.4 | 33.8 | 6.1 | 5.1 | 6.7 | 66 |
| 1.5 mm HEIGHT | | | | | | | |
| IHLP1212AEEZR22M1Z | 0.22 | 8.6 | 10.3 | 11.1 | 11.0 | 14.3 | 202 |
| IHLP1212AEEZR33M1Z | 0.33 | 10.4 | 12.4 | 10.1 | 9.0 | 11.7 | 144 |
| IHLP1212AEEZR47M1Z | 0.47 | 11.4 | 13.5 | 9.7 | 8.1 | 10.6 | 102 |
| IHLP1212AEEZR56M1Z | 0.56 | 15.3 | 18.4 | 8.3 | 7.5 | 9.8 | 100 |
| IHLP1212AEEZR68M1Z | 0.68 | 16.6 | 19.8 | 8.0 | 6.8 | 8.8 | 97 |
| IHLP1212AEEZR82M1Z | 0.82 | 20.3 | 23.4 | 7.3 | 6.0 | 7.8 | 92 |
| IHLP1212AEEZ1R0M1Z | 1.0 | 26.6 | 29.7 | 6.5 | 5.8 | 7.5 | 74 |
| IHLP1212AEEZ1R5M1Z | 1.5 | 36.9 | 41.4 | 5.5 | 5.0 | 6.5 | 51 |



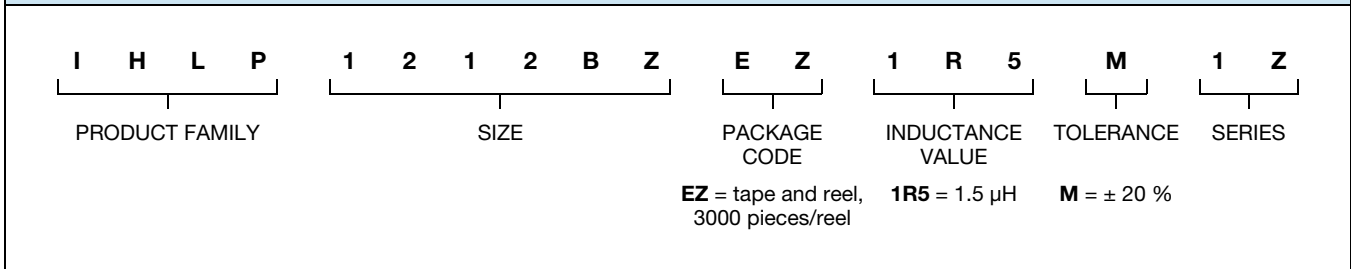
STANDARD ELECTRICAL SPECIFICATIONS

| PART NUMBER | L ₀ INDUCTANCE ± 20 % AT 1 MHz, 1 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) | | SRF TYP. (MHz) |
|----------------------|---|---------------------------|---------------------------|---|-----------------------------------|--------------------------|-------------------|
| | | | | | 20 % DROP ⁽²⁾ | 30 % DROP ⁽³⁾ | |
| 2.0 mm HEIGHT | | | | | | | |
| IHLP1212BZEZR22M1Z | 0.22 | 8.6 | 10.3 | 11.1 | 10.5 | 13.7 | 214 |
| IHLP1212BZEZR36M1Z | 0.36 | 10.4 | 12.4 | 10.1 | 10.0 | 13.0 | 161 |
| IHLP1212BZEZR56M1Z | 0.56 | 11.7 | 14.9 | 9.2 | 8.4 | 10.9 | 90 |
| IHLP1212BZEZR68M1Z | 0.68 | 12.6 | 15.8 | 8.9 | 8.2 | 10.7 | 85 |
| IHLP1212BZEZR88M1Z | 0.88 | 14.0 | 16.7 | 8.7 | 8.0 | 10.4 | 65 |
| IHLP1212BZEZ1R0M1Z | 1.0 | 18.0 | 20.0 | 8.4 | 7.6 | 9.8 | 55 |
| IHLP1212BZEZ1R2M1Z | 1.2 | 20.7 | 23.4 | 7.3 | 6.8 | 8.8 | 50 |
| IHLP1212BZEZ1R5M1Z | 1.5 | 22.5 | 25.2 | 7.1 | 6.0 | 7.9 | 47 |
| IHLP1212BZEZ2R2M1Z | 2.2 | 36.0 | 40.5 | 5.7 | 5.3 | 6.9 | 35 |
| IHLP1212BZEZ3R3M1Z | 3.3 | 50.4 | 54.9 | 4.5 | 3.7 | 4.8 | 30 |

Notes

- All test data is referenced to 25 °C ambient
 - Inductance test condition: 1 MHz, 1 V
 - 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, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application
- (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 %

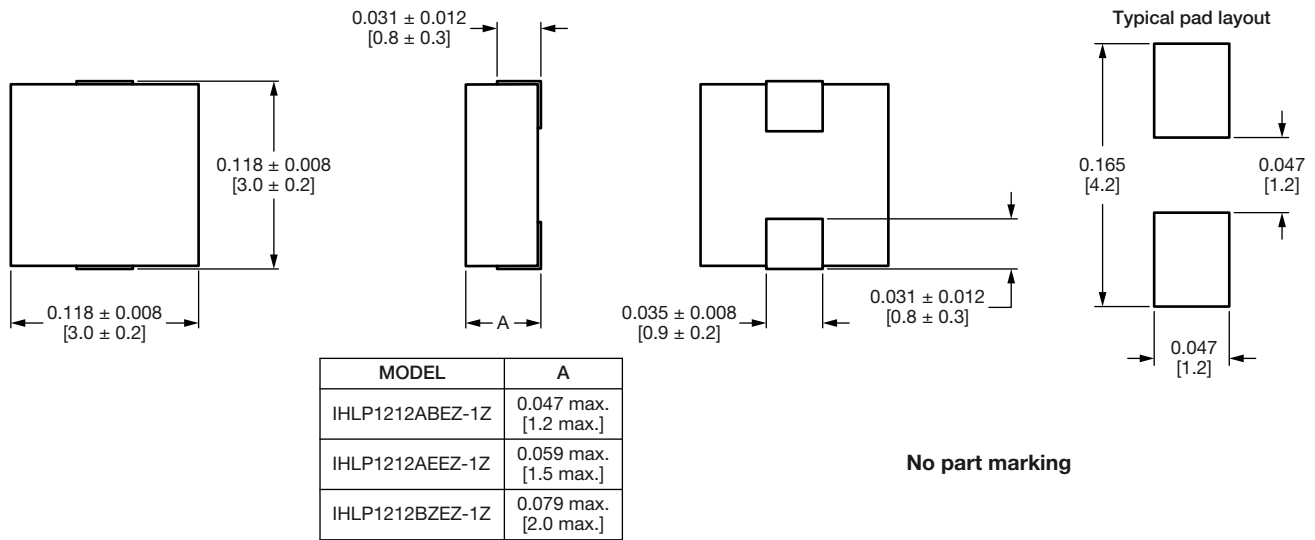
GLOBAL PART NUMBER



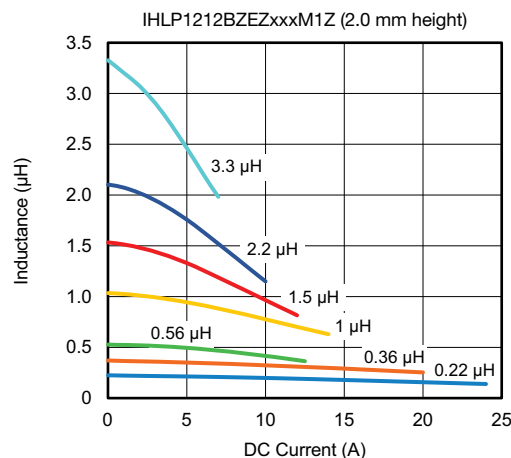
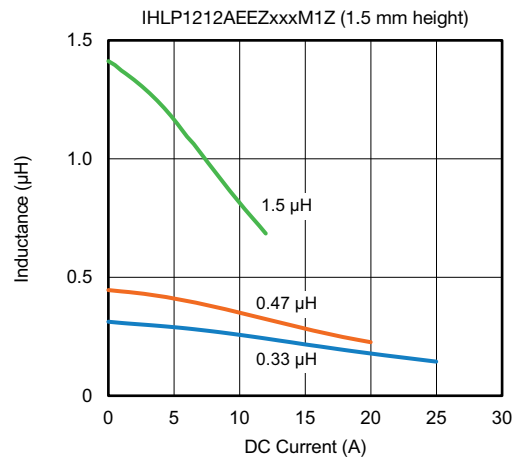
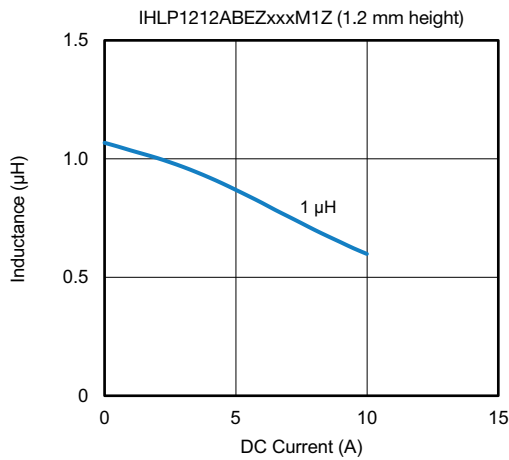
DESCRIPTION

| | | | |
|-----------------|------------------|----------------------|--------------|
| IHLP1212BZEZ-1Z | 1.5 µH | ± 20 % | EZ |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE |

DIMENSIONS in inches [millimeters]

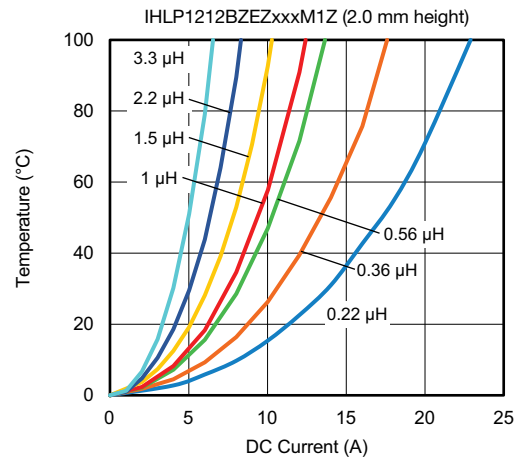
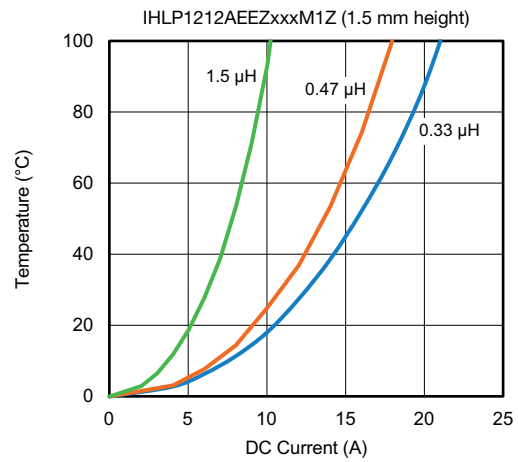
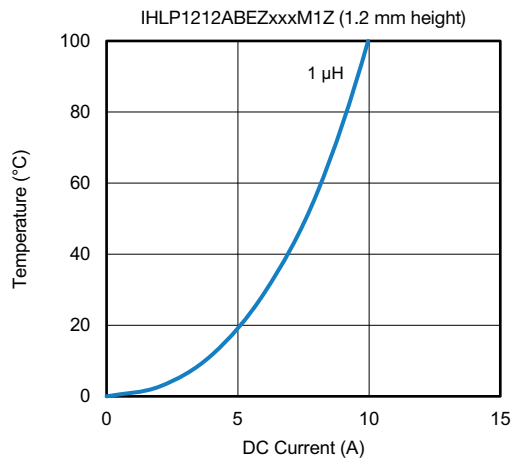


PERFORMANCE GRAPHS: INDUCTANCE VS. DC CURRENT



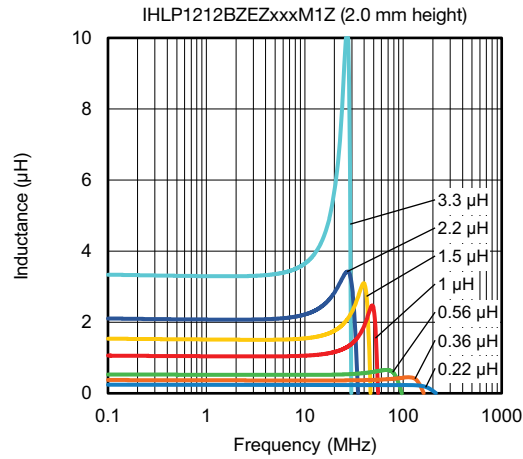
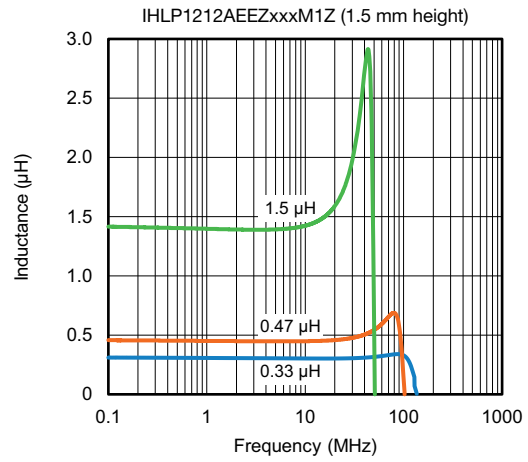
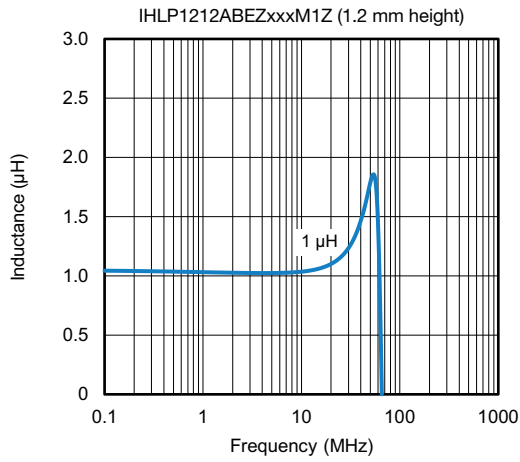


PERFORMANCE GRAPHS: TEMPERATURE RISE VS. DC CURRENT





PERFORMANCE GRAPHS: INDUCTANCE VS. FREQUENCY





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