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Vishay Dale

RoHS

COMPLIANT

**HALOGEN** FREE

**GREEN** 

(5-2008)

# IHLP® Commercial Inductors, High Temperature (155 °C) Series



#### **ADDITIONAL RESOURCES**





| STANDARD ELECTRICAL SPECIFICATIONS   |                              |                              |   |   |                      |
|--|------------------------------|------------------------------|---|---|----------------------|
| L <sub>0</sub><br>INDUCTANCE<br>± 20 %<br>AT 100 kHz,<br>0.25 V, 0 A<br>(μH) | DCR<br>TYP.<br>25 °C<br>(mΩ) | DCR<br>MAX.<br>25 °C<br>(mΩ) | HEAT<br>RATING<br>CURRENT<br>DC TYP.<br>(A) (1) | SATURATION<br>CURRENT<br>DC TYP.<br>(A) (2) | SRF<br>TYP.<br>(MHz) |
| 0.47   | 0.56                         | 0.67                         | 80.0  | 100.0                                       | 47.5                 |
| 1.0  | 0.82                         | 0.89                         | 69.0  | 71.0  | 25.7                 |
| 2.2  | 1.15                         | 1.25                         | 58.0  | 48.0  | 17.5                 |
| 3.3  | 1.63                         | 1.77                         | 49.0  | 41.0  | 12.8                 |
| 4.7  | 1.69                         | 1.84                         | 47.0  | 37.0  | 10.2                 |
| 6.8  | 2.84                         | 3.09                         | 36.0  | 36.0  | 8.03                 |
| 10   | 4.04                         | 4.14                         | 28.0  | 28.0  | 6.04                 |
| 15   | 5.62                         | 6.11                         | 23.5  | 24.0  | 4.71                 |
| 22   | 10.60                        | 10.80                        | 17.5  | 16.0  | 3.88                 |
| 33   | 15.10                        | 15.40                        | 15.5  | 10.5  | 3.01                 |
| 47   | 17.30                        | 17.70                        | 13.5  | 10.0  | 2.99                 |
| 75   | 29.76                        | 32.35                        | 12.0  | 12.0  | 2.01                 |
| 82   | 31.46                        | 34.20                        | 10.2  | 9.0   | 2.07                 |
| 100  | 36.25                        | 39.40                        | 9.1   | 7.0   | 2.01                 |

#### Notes

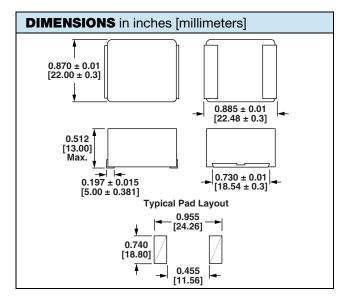
- All test data is referenced to 25 °C ambient Operating temperature range -55 °C to +155 °C
- The part temperature (ambient + temp. rise) should not exceed 155 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application
- Rated operating voltage (across inductor) = 75 V
- DC current (A) that will cause an approximate ΔT of 40 °C
- DC current (A) that will cause L<sub>0</sub> to drop approximately 20 %

#### **FEATURES**

- High temperature rating, up to 155 °C
- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz, Filter inductor applications up the SRF (see Standard Electrical Specifications table).
- Lowest DCR/µH, in this package size
- · Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- IHLP design. PATENT(S): <a href="https://www.vishay.com/patents">www.vishay.com/patents</a>
- · Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>

#### **APPLICATIONS**

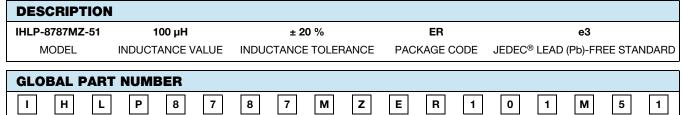
- · Low profile, high current power supplies
- · High current POL converters
- DC/DC converters in distributed power systems
- Servers
- Solar inverters
- Industrial lighting
- Industrial power supplies



INDUCTANCE

TOL.

SERIES



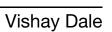
PATENT(S): www.vishay.com/patents

PRODUCT FAMILY

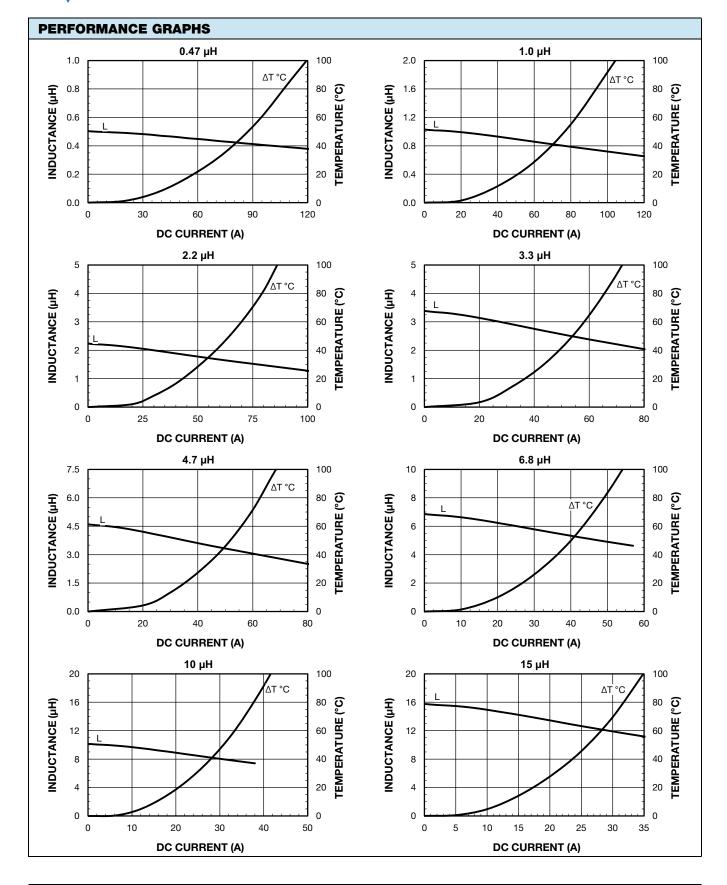
This Vishay product is protected by one or more United States and international patents.

SIZE

**PACKAGE** CODE

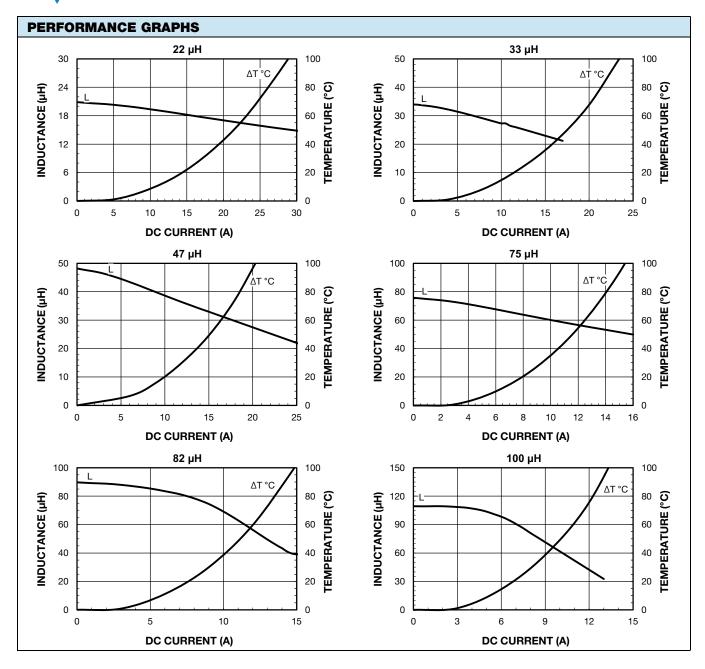


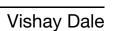




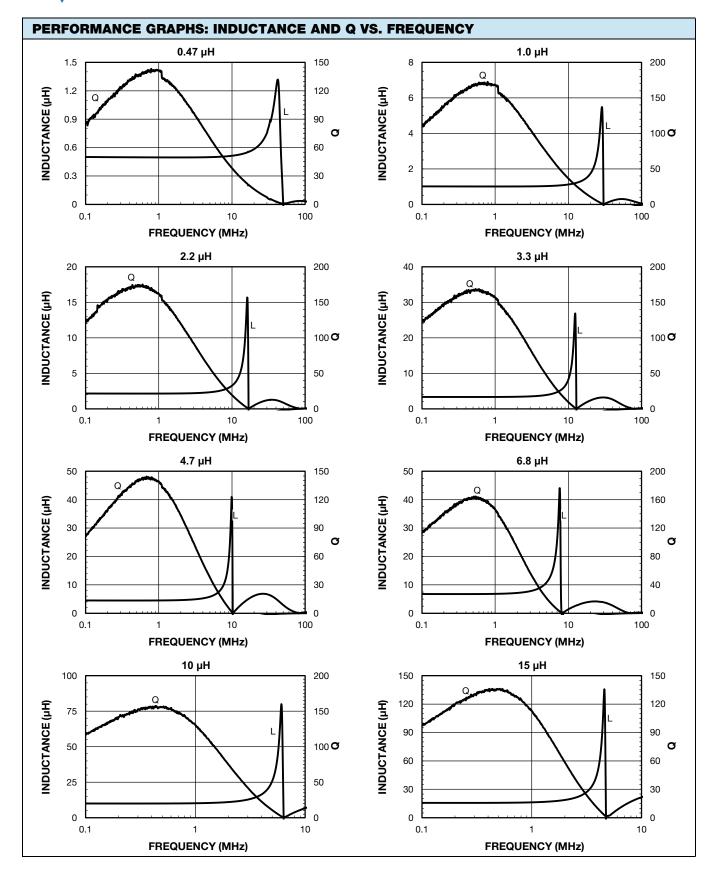


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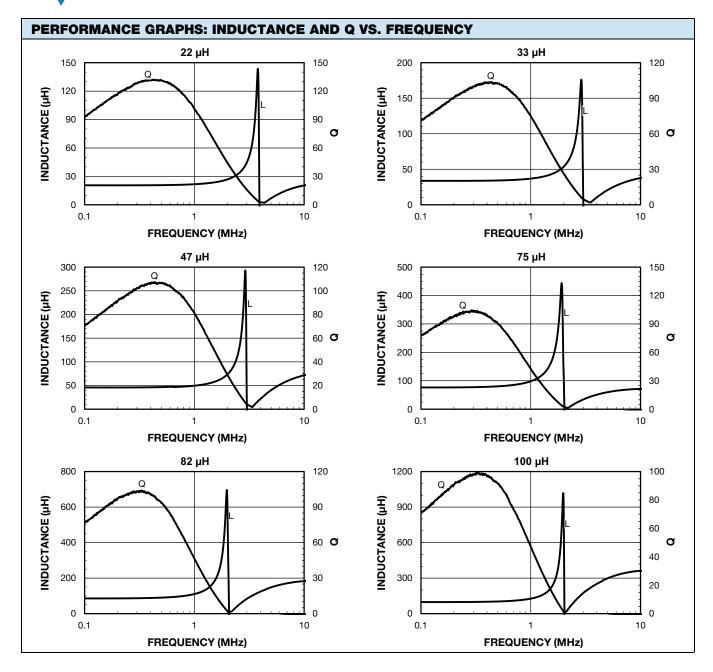






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