

Vishay Dale

# Low Profile, High Current IHLP® Inductors





Manufactured under one or more of the following: **US Patents**; **6,198,375/6,204,744/6,449,829/6,460,244.** Several foreign patents, and other patents pending.

| STANDARD ELECTRICAL SPECIFICATIONS  |                              |                              |   |   |
|---|------------------------------|------------------------------|---|---|
| L <sub>0</sub><br>INDUCTANCE<br>± 20 % 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) (3) | SATURATION<br>CURRENT<br>DC TYP.<br>(A) (4) |
| 0.33  | 0.61                         | 0.67                         | 75.5  | 55  |
| 0.47  | 0.78                         | 0.87                         | 64.5  | 62  |
| 0.56  | 0.83                         | 0.91                         | 61  | 66  |
| 0.82  | 0.98                         | 1.08                         | 56.5  | 45  |
| 1.0   | 1.21                         | 1.27                         | 55.5  | 32  |
| 1.5   | 1.54                         | 1.62                         | 48  | 31  |
| 2.2   | 1.85                         | 1.98                         | 43.5  | 28  |
| 3.3   | 2.79                         | 2.93                         | 35  | 27  |
| 4.7   | 3.98                         | 4.18                         | 30  | 21  |
| 5.6   | 4.23                         | 4.44                         | 28  | 21  |
| 6.8   | 5.86                         | 6.15                         | 22.5  | 18.5  |
| 8.2   | 7.71                         | 8.10                         | 21  | 18  |
| 10.0  | 8.89                         | 9.33                         | 19  | 17  |
| 15.0  | 13.7                         | 14.4                         | 14  | 12  |
| 22.0  | 20.0                         | 21.0                         | 12  | 9.5   |
| 33.0  | 35.1                         | 37.0                         | 10.7  | 9   |
| 47.0  | 40.7                         | 42.7                         | 8.7   | 8.6   |
| 56.0  | 55                           | 57.8                         | 7.2   | 4.2   |
| 68.0  | 72.1                         | 75.7                         | 6.1   | 4.5   |
| 82.0  | 87.3                         | 91.7                         | 5.5   | 4.5   |
| 100.0   | 105                          | 110                          | 5.0   | 4.0   |

#### Notes

- $^{(1)}$  All test data is referenced to 25  $^{\circ}\text{C}$  ambient
- (2) Operating temperature range 55 °C to + 125 °C
- $^{(3)}$  DC current (A) that will cause an approximate  $\Delta T$  of 40 °C  $^{(4)}$  DC current (A) that will cause L0 to drop approximately 20 %
- (5) 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.

#### **FEATURES**

- Shielded construction
- Frequency range up to 750 kHz
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without saturation

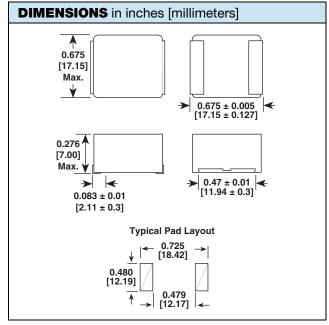


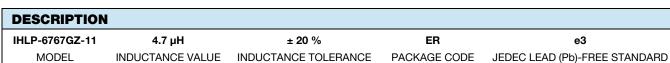
COMPLIANT HALOGEN

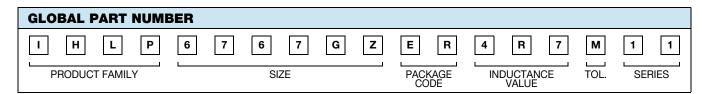
- Ultra low buzz noise, due to composite construction
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition

#### **APPLICATIONS**

- PDA/notebook/desktop/server applications
- High current POL converters
- Low profile, high current power supplies
- · Battery powered devices
- DC/DC converters in distributed power systems
- DC/DC converter for Field Programmable Gate Array (FPGA)



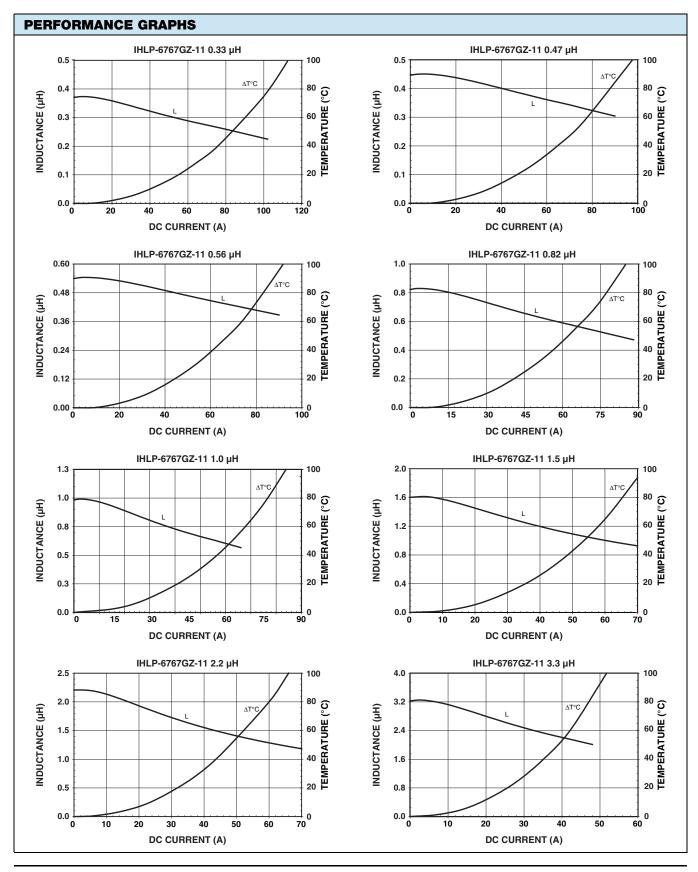


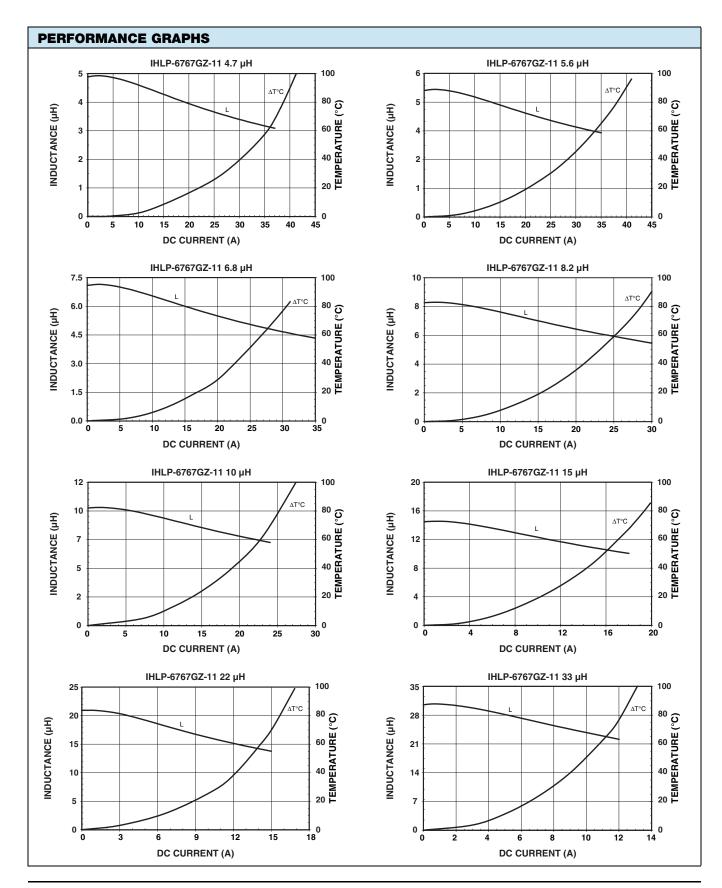


Document Number: 34282 Revision: 18-Mar-11

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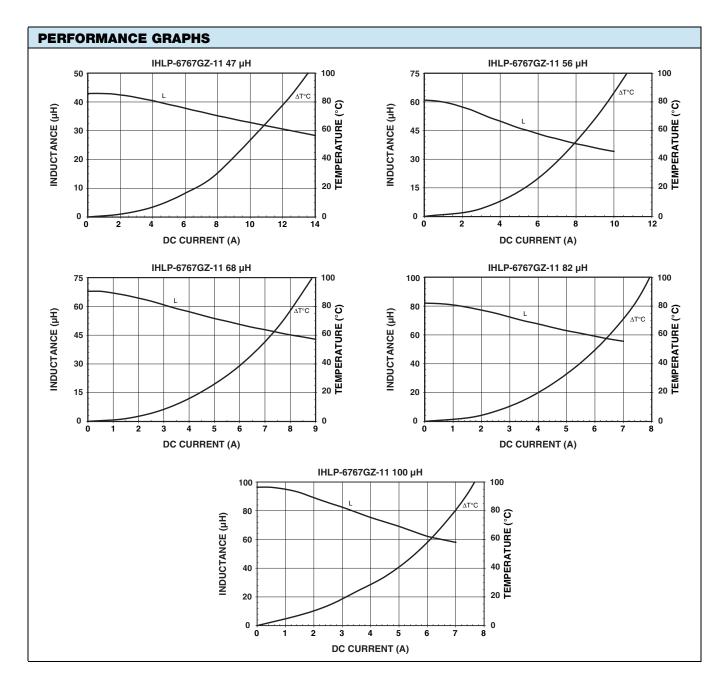




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Revision: 11-Mar-11