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Vishay Dale

## IHLP® Commercial Inductors, High Saturation Series, 10 % DCR Tolerance





#### **LINKS TO ADDITIONAL RESOURCES**





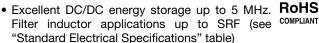
STANDARD ELECTRICAL SPECIFICATIONS				
L <sub>0</sub> INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (μH)	DCR ± 10 % AT 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) (1)	SATURATION CURRENT DC TYP. (A) (2)	SRF TYP. (MHz)
0.10	1.35	32.5	60	400
0.20	2.34	24	41	150
0.33	3.20	20	30	100
0.47	3.86	17.5	26	75
0.68	5.20	15.5	25	62
0.82	7.41	13	24	60
1.0	8.84	11	22	55
1.5	14.50	9	18	40
2.2	17.73	8	14	38
3.3	28.21	6	13.5	30
4.7	37.11	5.5	10	25
8.2	61.47	4	7.5	17
10	97.71	3	7.0	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) = 75 V
- (1) DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- (2) DC current (A) that will cause L<sub>0</sub> to drop approximately 20 %

#### **FEATURES**

- · Lowest height (3.0 mm) in this package footprint
- Shielded construction

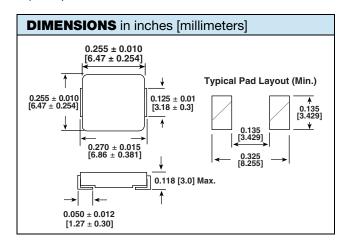


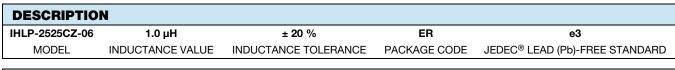


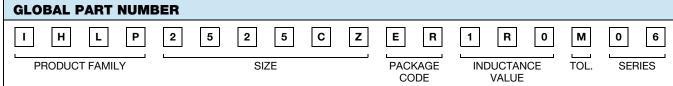
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- IHLP design; PATENT(S): www.vishay.com/patents
- · Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

#### APPLICATIONS

- Tolerance DCR for current sense applications
- Improved current balance in phased power supplies
- Improved thermal management
- PDA / notebook / desktop / server and battery powered
- · High current, low profile POL converters
- DC/DC converters in distributed power systems
- DC/DC converter for field programmable gate array (FPGA)





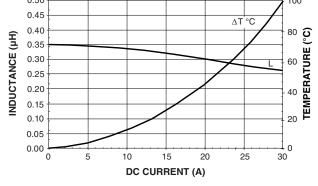


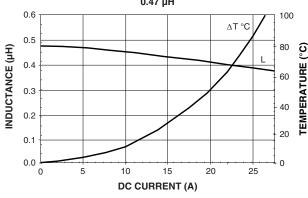
PATENT(S): www.vishay.com/patents

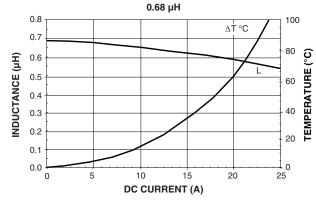
This Vishay product is protected by one or more United States and international patents.

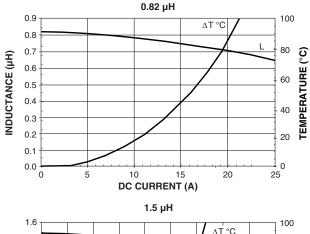


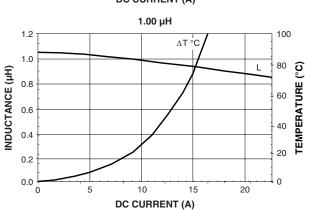
Vishay Dale www.vishay.com **PERFORMANCE GRAPHS** 0.10 µH 0.20 µH 0.120 100 100 0.25 ΔT°C ΔΤ<sup>'</sup> °C 0.100 80 0.20 ပ္ TEMPERATURE (°C) INDUCTANCE (µH) INDUCTANCE (µH) 0.080 TEMPERATURE ( 0.15 60 0.060 0.10 40 0.040 20 0.05 20 0.020 0.000 0 0.00 10 20 30 40 50 60 10 20 40 25 30 35 DC CURRENT (A) DC CURRENT (A) 0.33 µH 0.47 µH 0.50 100 0.6 100 ΔT°C 0.45 ΔT<sup>°</sup>C 0.5 0.40 ပ္ 80 80 ပ္ပ

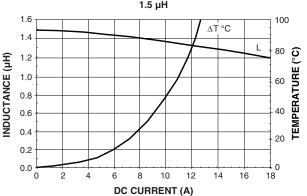






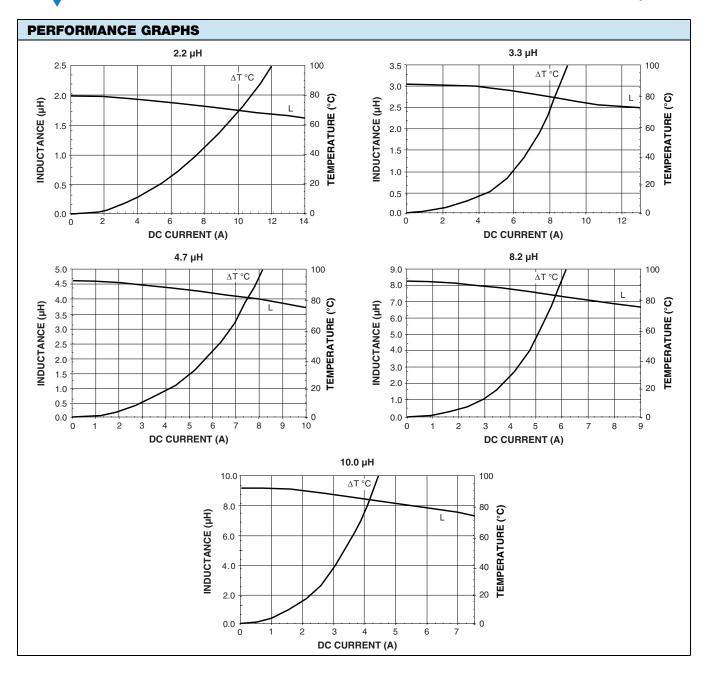




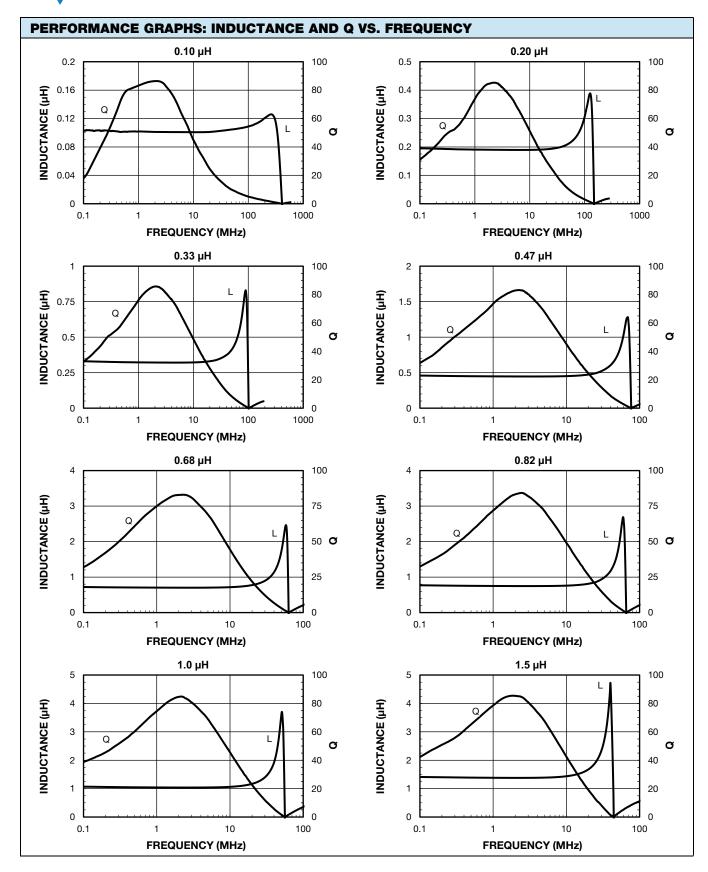




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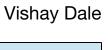


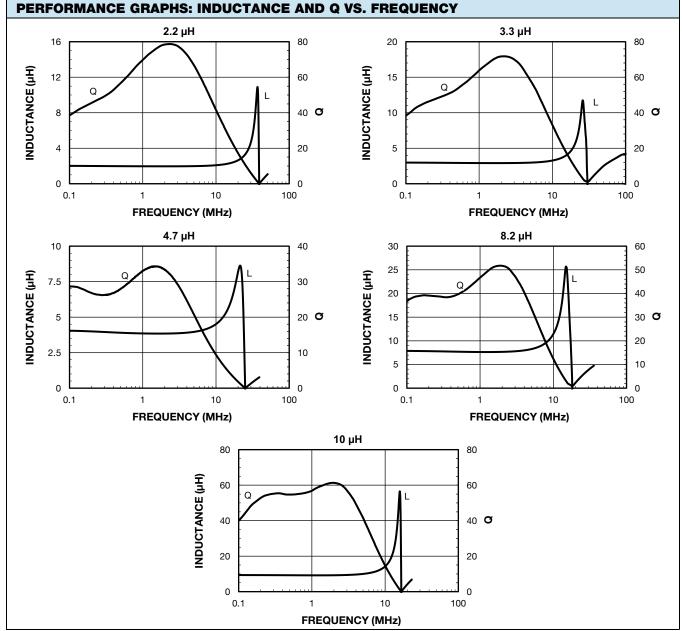






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