

www.vishay.com

Vishay Dale

RoHS

COMPLIANT

HALOGEN FREE GREEN

(5-2008)

# IHLP® Commercial Inductors, High Saturation Series





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





STANDARD ELECTRICAL SPECIFICATIONS					
L <sub>0</sub> 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) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>	SRF TYP. (MHz)
0.10	8.06	8.76	11.02	20.58	385
0.22	13.35	14.68	8.14	9.82	225
0.47	23.50	25.08	6.29	9.28	148
1.0	37.95	42.93	4.99	6.92	87
1.5	57.75	62.81	4.08	5.96	63
2.2	73.10	80.37	3.55	4.93	50
3.3	90.05	98.48	3.30	4.50	41.6

#### Notes

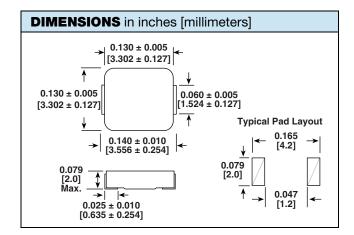
- All test data is referenced to 25 °C ambient
- Operating temperature range -55 °C to +125 °C
- The part temperature (ambient + temp. rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- Rated operating voltage (across inductor) = 50 V
- $^{(1)}$  DC current (A) that will cause an approximate  $\Delta T$  of 40  $^{\circ}C$
- (2) DC current (A) that will cause L<sub>0</sub> to drop approximately 20 %

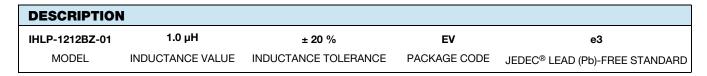
#### **FEATURES**

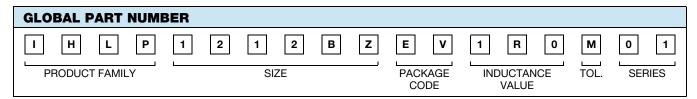
- Shielded construction
- Frequency range up to 5.0 MHz
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without
  seturation.
- Ultra low buzz noise, due to composite construction
- IHLP design; PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912"><u>www.vishay.com/doc?99912</u></a>

#### **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)





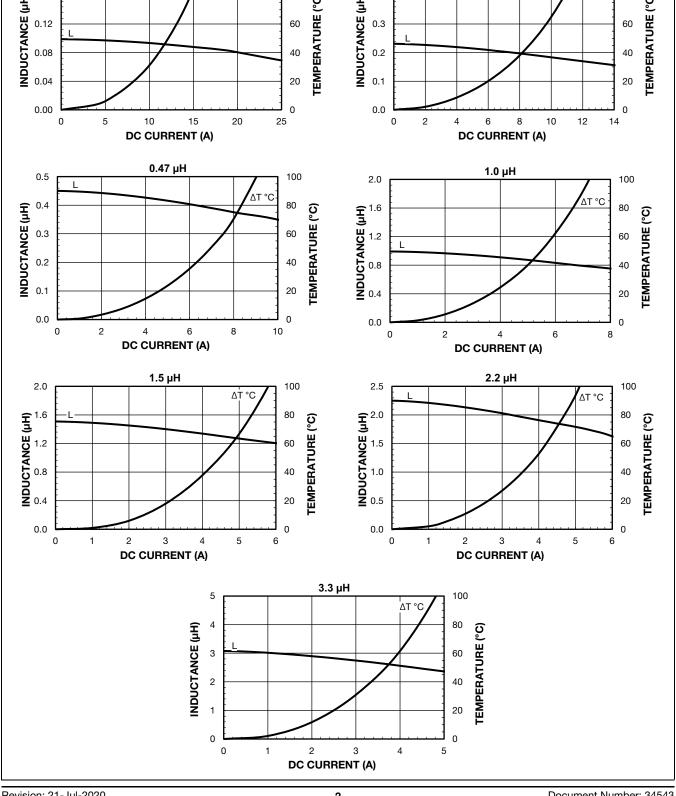


PATENT(S): www.vishay.com/patents

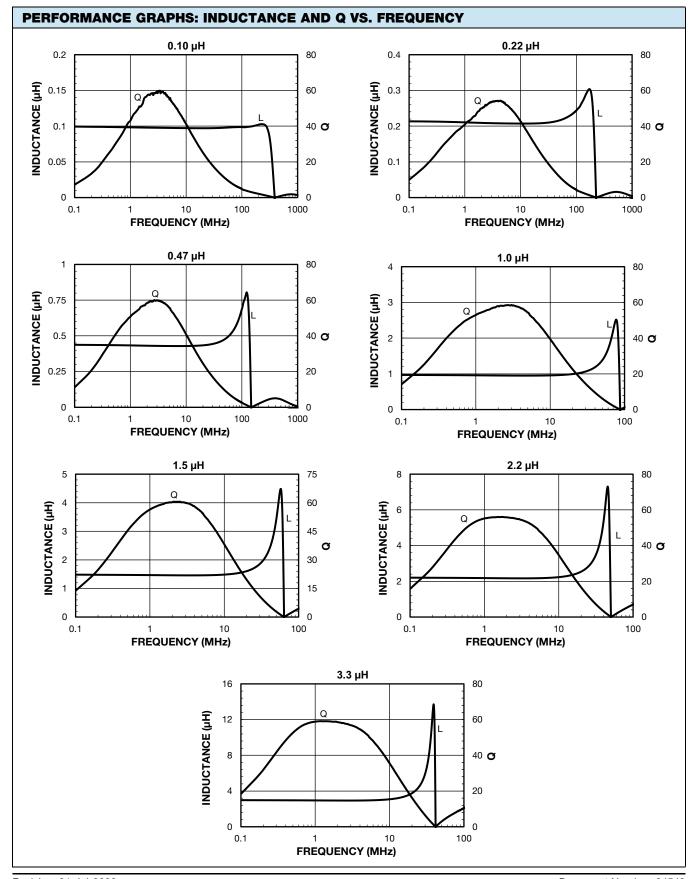
This Vishay product is protected by one or more United States and international patents.



**PERFORMANCE GRAPHS** 0.10 µH 0.22 µH 0.20 100 100 0.5 ΔT °C ΔΤ°C 0.4 80 0.16 80 INDUCTANCE (µH) INDUCTANCE (µH) TEMPERATURE (°C) TEMPERATURE (°C) 60 0.12 60 0.3 40 0.2 40 0.08 0.04 20 0.1 0.00 0 0.0 5 10 20 25 0 2 8 14 0 15 6 10 12 DC CURRENT (A) DC CURRENT (A) 0.47 µH 1.0 µH 0.5 100 2.0 100 0.4 INDUCTANCE (µH) **FEMPERATURE** (°C) 1.6 (nH) 1.2 0.8 0.4 80 TEMPERATURE (°C) 0.3 60 60 0.2 40 0.1 20 20 0.0 0.0 8 0 2 6 10 0 2 6 8 DC CURRENT (A) DC CURRENT (A) 1.5 µH 2.2 µH 100 100 2.0 2.5  $\Delta T$  °C ΔT °C 80 80 1.6 1.2 0.8 0.4 1.5 1.0 1.0 0.5 TEMPERATURE (°C) TEMPERATURE (°C) 60 60 40 40 20 20 0 0.0 0.0 3 5 6 0 1 2 0 3 5 6 1 DC CURRENT (A) DC CURRENT (A)









### **Legal Disclaimer Notice**

Vishay

### **Disclaimer**

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

## **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Fixed Inductors category:

Click to view products by Vishay manufacturer:

Other Similar products are found below:

CR43NP-680KC CR54NP-820KC CR54NP-8R5MC CTX32CT-100 70F224AI MGDQ4-00004-P MHL1ECTTP18NJ MHL1JCTTD12NJ PE-51506NL PE-53601NL PE-53602NL PE-53630NL PE-53824SNLT PE-92100NL PG0434.801NLT PG0936.113NLT 9310-16 PM06-2N7 PM06-39NJ A01TK 1206CS-471XJ HC2-2R2TR HC2LP-R47-R HC3-2R2-R 1206CS-151XG RCH664NP-140L RCH664NP-4R7M RCH8011NP-221L RCP1317NP-332L RCP1317NP-391L RCR1010NP-470M RCR110DNP-331L DH2280-4R7M DS1608C-106 ASPI-4020HI-R10M-T B10TJ B82477P4333M B82498B3101J000 B82498B3680J000 ELJ-RE27NJF2 1812CS-153XJ 1812CS-183XJ 1812CS-223XJ 1812LS-104XJ 1812LS-105XJ 1812LS-124XJ 1812LS-154XJ 1812LS-223XJ 1812LS-224XJ 1812LS-563XJ