www.vishay.com

Vishay Dale

IHLP[®] Commercial Inductors, Low DCR Series



DESIGN SUPPORT TOOLS click logo to get started



Design Tools

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | | |
|---|------------------------------|------------------------------|--|--|--|--|--|
| L ₀ 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) ⁽¹⁾ | SATURATION CURRENT DC TYP. (A) ⁽²⁾ | | | |
| 1.0 | 7.6 | 8.0 | 12.5 | 9.5 | | | |
| 2.2 | 15.7 | 16.5 | 9.0 | 7.0 | | | |
| 3.3 | 24.8 | 26.0 | 7.0 | 6.5 | | | |
| 4.7 | 31.8 | 33.4 | 6.0 | 4.0 | | | |
| 6.8 | 44.6 | 46.8 | 5.5 | 4.0 | | | |
| 8.2 | 52.3 | 54.9 | 5.0 | 4.0 | | | |
| 10 | 67.8 | 71.2 | 4.0 | 3.5 | | | |
| 22 | 128.9 | 135.0 | 2.9 | 2.5 | | | |

Notes

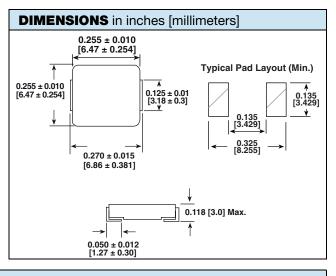
- All test data is referenced to 25 °C ambient
- Operating temperature range -55 °C to +125 °C
- The part temperature (ambient + temp. rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions 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 ΔT of 40 °C
- $^{(2)}$ DC current (A) that will cause L_0 to drop approximately 20 %

FEATURES

- Shielded construction
- Frequency range up to 1.0 MHz
- Lowest DCR/µH, in this package size
- Powered iron composition provides soft saturation
- Handles high transient current spikes without hard saturation
- Ultra low buzz noise, due to composite construction
- IHLP design. PATENT(S): <u>www.vishay.com/patents</u>
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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)



| DESCRIPTION | | | | | | | |
|--------------------|--|----------------------------------|-----------------------|--|-----------|--|--|
| IHLP-2525CZ-11 | 1.0 µH | ± 20 % | ER | e3 | | | |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE PACKAGE COD | | JEDEC [®] LEAD (Pb)-FREE STANDARD | | | |
| GLOBAL PART NUMBER | | | | | | | |
| I H L | P 2 5 | 2 5 C Z | E R 1 | R 0 M | | | |
| PRODUCT FAN | /ILY | SIZE | PACKAGE IN CODE | NDUCTANCE TO VALUE | L. SERIES | | |
| • • | vishay.com/patents ct is protected by one | e or more United States | and international pat | ents. | | | |

Revision: 20-Nov-2018

Document Number: 34190

For technical questions, contact: <u>magnetics@vishay.com</u> THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT <u>www.vishay.com/doc?91000</u>

Pb-free



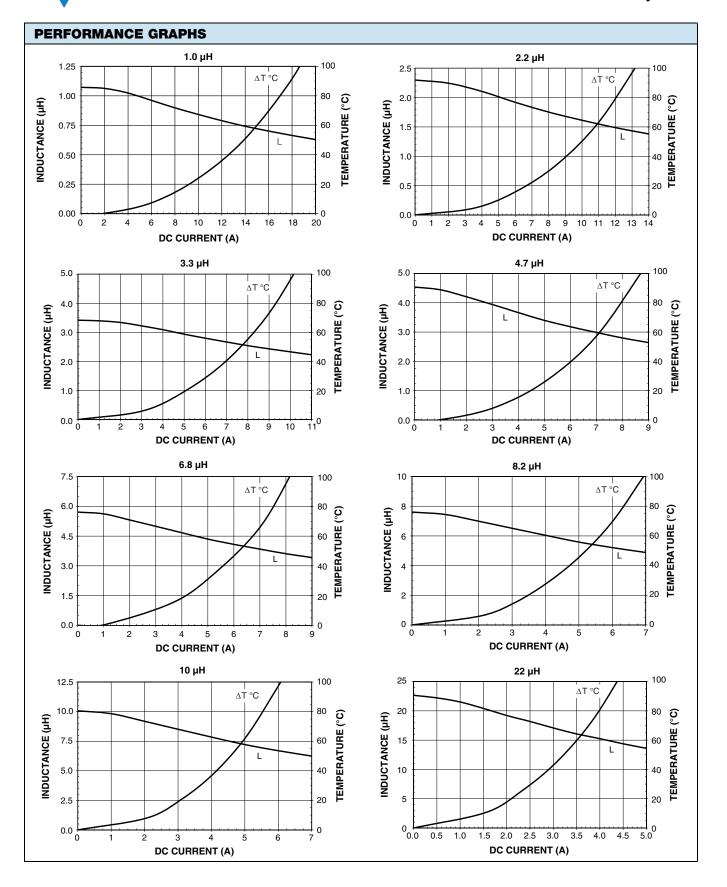
FREE

¹





Vishay Dale



Revision: 20-Nov-2018

2 For technical questions, contact: <u>magnetics@vishay.com</u> Document Number: 34190

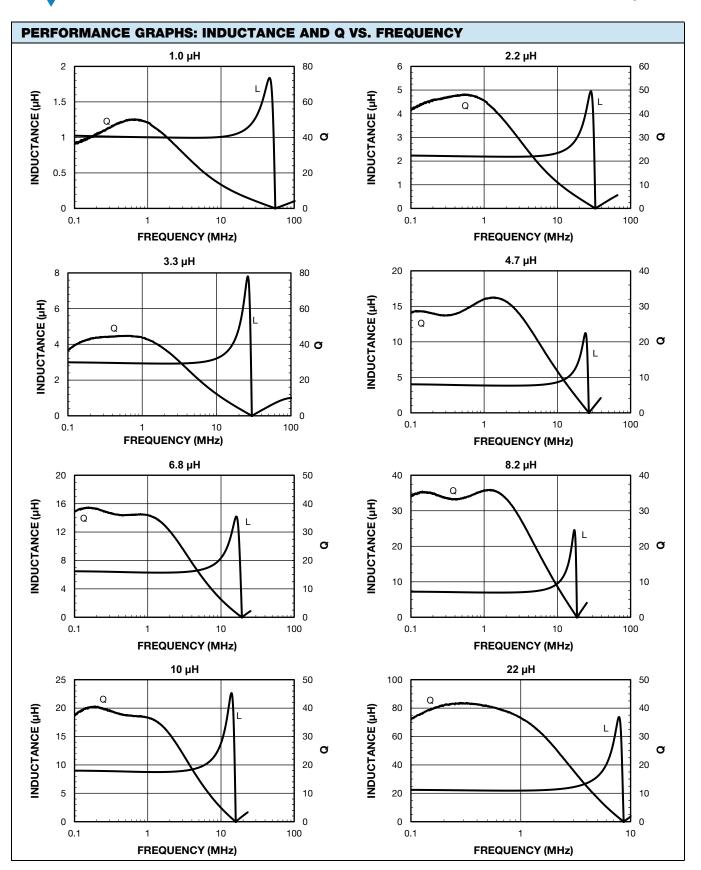
THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000



IHLP-2525CZ-11

www.vishay.com

Vishay Dale



Revision: 20-Nov-2018

3 For technical questions, contact: magnetics@vishay.com Document Number: 34190

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000



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.