

## Wirewound, Surface Mount Inductors



| STANDARD ELECTRICAL SPECIFICATIONS |                |                  |      |        |                |              |                       |
|------------------------------------|----------------|------------------|------|--------|----------------|--------------|-----------------------|
| IND. (nH)                          | TOL.           | TEST FREQ. (MHz) |      | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) |
|                                    |                | L                | Q    |        |                |              |                       |
| 2.2                                | 0.3 nH, 0.2 nH | 250              | 1000 | 50     | 6000           | 0.06         | 800                   |
| 2.7                                | 0.3 nH, 0.2 nH | 250              | 1000 | 35     | 6000           | 0.08         | 800                   |
| 3.3                                | 0.3 nH, 0.2 nH | 250              | 1000 | 60     | 6000           | 0.08         | 800                   |
| 3.9                                | 0.3 nH, 0.2 nH | 250              | 1000 | 60     | 6000           | 0.06         | 600                   |
| 4.7                                | 0.3 nH, 0.2 nH | 250              | 1000 | 60     | 5800           | 0.06         | 600                   |
| 5.6                                | 5 %, 2 %       | 250              | 1000 | 60     | 5800           | 0.08         | 600                   |
| 6.8                                | 5 %, 2 %       | 250              | 1000 | 60     | 5500           | 0.06         | 600                   |
| 8.2                                | 5 %, 2 %       | 250              | 1000 | 60     | 5500           | 0.06         | 600                   |
| 10                                 | 5 %, 2 %       | 250              | 500  | 60     | 4800           | 0.08         | 600                   |
| 12                                 | 5 %, 2 %       | 250              | 500  | 60     | 4100           | 0.08         | 600                   |
| 15                                 | 5 %, 2 %       | 250              | 500  | 60     | 3600           | 0.08         | 600                   |
| 18                                 | 5 %, 2 %       | 250              | 500  | 60     | 3400           | 0.08         | 600                   |
| 22                                 | 5 %, 2 %       | 250              | 500  | 60     | 3300           | 0.10         | 600                   |
| 27                                 | 5 %, 2 %       | 250              | 500  | 60     | 2600           | 0.12         | 600                   |
| 33                                 | 5 %, 2 %       | 250              | 500  | 60     | 2400           | 0.15         | 500                   |
| 39                                 | 5 %, 2 %       | 250              | 500  | 60     | 2100           | 0.18         | 500                   |
| 47                                 | 5 %, 2 %       | 200              | 500  | 60     | 1700           | 0.15         | 500                   |
| 56                                 | 5 %, 2 %       | 200              | 500  | 60     | 1600           | 0.25         | 500                   |
| 68                                 | 5 %, 2 %       | 200              | 500  | 60     | 1450           | 0.27         | 500                   |
| 82                                 | 5 %, 2 %       | 150              | 500  | 60     | 1350           | 0.32         | 500                   |
| 100                                | 5 %, 2 %       | 150              | 500  | 60     | 1200           | 0.43         | 500                   |
| 120                                | 5 %, 2 %       | 150              | 250  | 50     | 1100           | 0.48         | 500                   |
| 150                                | 5 %, 2 %       | 100              | 250  | 50     | 950            | 0.56         | 400                   |
| 180                                | 5 %, 2 %       | 100              | 250  | 50     | 900            | 0.78         | 400                   |
| 220                                | 5 %, 2 %       | 100              | 250  | 50     | 860            | 1.00         | 400                   |
| 270                                | 5 %, 2 %       | 100              | 250  | 45     | 850            | 1.46         | 350                   |
| 330                                | 5 %, 2 %       | 100              | 250  | 45     | 800            | 1.65         | 300                   |
| 390                                | 5 %, 2 %       | 100              | 250  | 45     | 780            | 2.20         | 210                   |
| 470                                | 5 %            | 25.2             | 100  | 45     | 375            | 0.95         | 500                   |
| 560                                | 5 %            | 25.2             | 100  | 45     | 340            | 1.10         | 450                   |
| 680                                | 5 %            | 25.2             | 100  | 35     | 188            | 1.20         | 400                   |
| 820                                | 5 %            | 25.2             | 100  | 35     | 215            | 1.50         | 300                   |
| 1000                               | 5 %            | 25.2             | 50   | 35     | 200            | 2.13         | 180                   |
| 1200                               | 5 %            | 7.96             | 7.96 | 15     | 200            | 2.60         | 150                   |
| 1500                               | 5 %            | 7.96             | 7.96 | 15     | 200            | 2.90         | 130                   |
| 1800                               | 5 %            | 7.96             | 7.96 | 15     | 120            | 3.00         | 120                   |
| 2200                               | 5 %            | 7.96             | 7.96 | 15     | 110            | 3.10         | 110                   |
| 2700                               | 5 %            | 7.96             | 7.96 | 15     | 100            | 3.50         | 100                   |
| 3300                               | 5 %            | 7.96             | 7.96 | 15     | 70             | 2.30         | 210                   |
| 3900                               | 5 %            | 7.96             | 7.96 | 15     | 60             | 2.50         | 200                   |
| 4700                               | 5 %            | 7.96             | 7.96 | 15     | 50             | 2.80         | 180                   |
| 5600                               | 5 %            | 7.96             | 7.96 | 15     | 45             | 3.00         | 160                   |
| 6800                               | 5 %            | 7.96             | 7.96 | 15     | 45             | 3.20         | 130                   |
| 8200                               | 5 %            | 7.96             | 7.96 | 15     | 40             | 3.50         | 120                   |
| 10 000                             | 5 %            | 2.52             | 2.52 | 10     | 40             | 5.00         | 80                    |

### FEATURES

- High self-resonant frequency values
- High Q values at higher frequencies
- Wirewound construction
- Compatible with vapor phase and infrared reflow soldering
- Tape and reel packaging for automatic handling, 2000/reel
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 2.2 nH to 10 000 nH

**Inductance and Tolerance:** 0.3 nH for 2.2 nH to 4.7 nH, ± 5 % for 5.6 nH to 10 000 nH

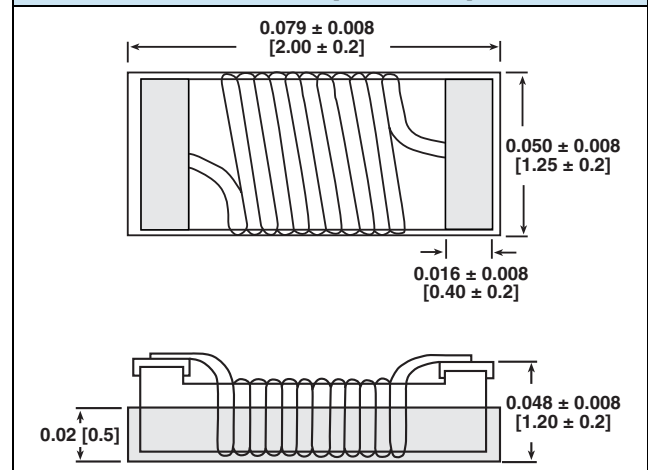
**Operating Temperature:** - 40 °C to + 125 °C

**Core Material:** Ceramic from 2.2 nH to 390 nH; Ferrite from 470 nH to 10 000 nH

### TEST EQUIPMENT

- Inductance and Q measured on HP4286A (2.2 nH to 390 nH) and HP4285A (470 nH to 10 000 nH)
- SRF is measured on HP8753E
- DCR is measured on HP4338B

### DIMENSIONS in inches [millimeters]



### DESCRIPTION

|                    |                  |                      |              |                               |
|--------------------|------------------|----------------------|--------------|-------------------------------|
| <b>IMC-0805-01</b> | <b>10 nH</b>     | <b>± 5 %</b>         | <b>ER</b>    | <b>e4<sup>(1)</sup></b>       |
| MODEL              | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

#### Note

<sup>(1)</sup> For parts within 2.2 nH to 390 nH please use e4 for JEDEC lead (Pb)-free standard. For parts within 470 nH to 10 000 nH please use e3 for JEDEC lead (Pb)-free standard.

### GLOBAL PART NUMBER

|                |          |          |          |          |          |              |          |                  |          |          |          |          |          |          |
|----------------|----------|----------|----------|----------|----------|--------------|----------|------------------|----------|----------|----------|----------|----------|----------|
| <b>I</b>       | <b>M</b> | <b>C</b> | <b>0</b> | <b>8</b> | <b>0</b> | <b>5</b>     | <b>E</b> | <b>R</b>         | <b>1</b> | <b>0</b> | <b>N</b> | <b>J</b> | <b>0</b> | <b>1</b> |
| PRODUCT FAMILY |          |          | SIZE     |          |          | PACKAGE CODE |          | INDUCTANCE VALUE |          |          | TOL.     | SERIES   |          |          |

**PERFORMANCE GRAPHS (IMC-0805-01)**

**Q VS. FREQUENCY**

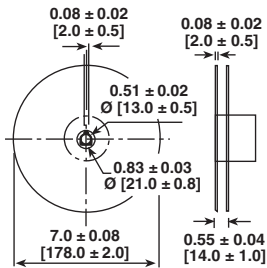


**INDUCTANCE VS. FREQUENCY**

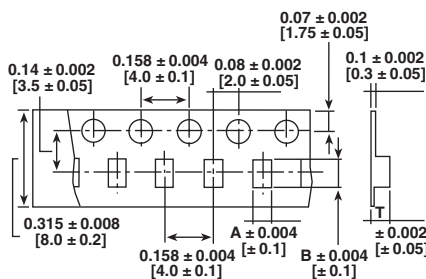


**TAPE AND REEL SPECIFICATIONS in inches [millimeters]**

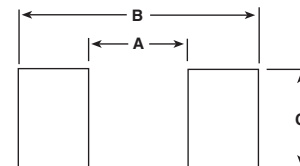
**REEL DIMENSIONS**



**TAPE DIMENSIONS**



**RECOMMENDED PATTERN**



| MODEL       | UNITS PER REEL | MODEL       | A              | B              | T              | MODEL       | A               | B              | C               |
|-------------|----------------|-------------|----------------|----------------|----------------|-------------|-----------------|----------------|-----------------|
| IMC-0805-01 | 2000           | IMC-0805-01 | 0.055<br>[1.4] | 0.091<br>[2.3] | 0.055<br>[1.4] | IMC-0805-01 | 0.047<br>[1.20] | 0.102<br>[2.6] | 0.047<br>[1.20] |



## **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.