

# Wirewound, Surface-Mount, Molded Inductors



| STANDARD ELECTRICAL SPECIFICATIONS |        |                     |           |                      |                    |                                            |
|------------------------------------|--------|---------------------|-----------|----------------------|--------------------|--------------------------------------------|
| IND.<br>(μH)                       | TOL.   | TEST FREQ.<br>(MHz) | Q<br>MIN. | SRF<br>MIN.<br>(MHz) | DCR<br>MAX.<br>(Ω) | RATED DC<br>CURRENT<br>(mA) <sup>(1)</sup> |
|                                    |        | L & Q               |           |                      |                    |                                            |
| 0.010                              | ± 20 % | 50.0                | 50        | 1000                 | 0.20               | 450                                        |
| 0.012                              | ± 20 % | 50.0                | 50        | 1000                 | 0.20               | 450                                        |
| 0.018                              | ± 20 % | 50.0                | 50        | 1000                 | 0.20               | 450                                        |
| 0.022                              | ± 20 % | 50.0                | 50        | 1000                 | 0.20               | 450                                        |
| 0.027                              | ± 20 % | 50.0                | 50        | 1000                 | 0.20               | 450                                        |
| 0.033                              | ± 20 % | 50.0                | 50        | 1000                 | 0.30               | 450                                        |
| 0.039                              | ± 20 % | 50.0                | 50        | 1000                 | 0.30               | 450                                        |
| 0.047                              | ± 20 % | 50.0                | 50        | 1000                 | 0.30               | 450                                        |
| 0.056                              | ± 20 % | 50.0                | 40        | 900                  | 0.35               | 450                                        |
| 0.068                              | ± 20 % | 50.0                | 40        | 800                  | 0.35               | 450                                        |
| 0.082                              | ± 20 % | 50.0                | 40        | 700                  | 0.40               | 450                                        |
| 0.10                               | ± 20 % | 25.2                | 30        | 650                  | 0.32               | 450                                        |
| 0.12                               | ± 20 % | 25.2                | 30        | 600                  | 0.30               | 450                                        |
| 0.15                               | ± 20 % | 25.2                | 30        | 500                  | 0.30               | 450                                        |
| 0.18                               | ± 20 % | 25.2                | 30        | 400                  | 0.35               | 450                                        |
| 0.22                               | ± 20 % | 25.2                | 30        | 350                  | 0.40               | 450                                        |
| 0.27                               | ± 20 % | 25.2                | 30        | 300                  | 0.45               | 450                                        |
| 0.33                               | ± 20 % | 25.2                | 30        | 250                  | 0.55               | 430                                        |
| 0.39                               | ± 20 % | 25.2                | 30        | 220                  | 0.70               | 380                                        |
| 0.47                               | ± 10 % | 25.2                | 30        | 190                  | 0.80               | 355                                        |
| 0.56                               | ± 10 % | 25.2                | 30        | 170                  | 1.20               | 285                                        |
| 0.68                               | ± 10 % | 25.2                | 30        | 150                  | 1.40               | 270                                        |
| 0.82                               | ± 10 % | 25.2                | 30        | 140                  | 1.60               | 250                                        |
| 1.0                                | ± 10 % | 7.96                | 50        | 100                  | 0.50               | 450                                        |
| 1.2                                | ± 10 % | 7.96                | 50        | 80.0                 | 0.55               | 430                                        |
| 1.5                                | ± 10 % | 7.96                | 50        | 70.0                 | 0.60               | 410                                        |
| 1.8                                | ± 10 % | 7.96                | 50        | 60.0                 | 0.65               | 390                                        |
| 2.2                                | ± 10 % | 7.96                | 50        | 55.0                 | 0.70               | 380                                        |
| 2.7                                | ± 10 % | 7.96                | 50        | 50.0                 | 0.75               | 370                                        |
| 3.3                                | ± 10 % | 7.96                | 50        | 45.0                 | 0.80               | 355                                        |
| 3.9                                | ± 10 % | 7.96                | 50        | 40.0                 | 0.90               | 330                                        |
| 4.7                                | ± 10 % | 7.96                | 50        | 35.0                 | 1.00               | 315                                        |
| 5.6                                | ± 10 % | 7.96                | 50        | 33.0                 | 1.10               | 300                                        |
| 6.8                                | ± 10 % | 7.96                | 50        | 27.0                 | 1.20               | 285                                        |
| 8.2                                | ± 10 % | 7.96                | 50        | 25.0                 | 1.40               | 270                                        |
| 10.0                               | ± 10 % | 2.52                | 50        | 20.0                 | 1.60               | 250                                        |
| 12.0                               | ± 10 % | 2.52                | 50        | 18.0                 | 2.00               | 225                                        |
| 15.0                               | ± 10 % | 2.52                | 50        | 17.0                 | 2.50               | 200                                        |
| 18.0                               | ± 10 % | 2.52                | 50        | 15.0                 | 2.80               | 190                                        |
| 22.0                               | ± 10 % | 2.52                | 50        | 13.0                 | 3.20               | 180                                        |
| 27.0                               | ± 10 % | 2.52                | 50        | 12.0                 | 3.60               | 170                                        |
| 33.0                               | ± 10 % | 2.52                | 50        | 11.0                 | 4.00               | 160                                        |
| 39.0                               | ± 10 % | 2.52                | 50        | 11.0                 | 4.50               | 150                                        |
| 47.0                               | ± 10 % | 2.52                | 50        | 10.0                 | 5.00               | 140                                        |
| 56.0                               | ± 10 % | 2.52                | 50        | 9.0                  | 5.50               | 135                                        |
| 68.0                               | ± 10 % | 2.52                | 50        | 9.0                  | 6.00               | 130                                        |
| 82.0                               | ± 10 % | 2.52                | 50        | 8.0                  | 7.00               | 120                                        |
| 100.0                              | ± 10 % | 0.79                | 40        | 8.0                  | 8.00               | 110                                        |
| 120.0                              | ± 10 % | 0.79                | 40        | 6.0                  | 8.00               | 110                                        |
| 150.0                              | ± 10 % | 0.79                | 40        | 5.0                  | 9.00               | 105                                        |
| 180.0                              | ± 10 % | 0.79                | 40        | 5.0                  | 9.50               | 102                                        |
| 220.0                              | ± 10 % | 0.79                | 40        | 4.0                  | 10.0               | 100                                        |
| 270.0                              | ± 10 % | 0.79                | 40        | 4.0                  | 12.0               | 92                                         |
| 330.0                              | ± 10 % | 0.79                | 40        | 3.5                  | 14.0               | 85                                         |
| 390.0                              | ± 10 % | 0.79                | 40        | 3.0                  | 16.0               | 80                                         |
| 470.0                              | ± 10 % | 0.79                | 40        | 3.0                  | 26.0               | 62                                         |
| 560.0                              | ± 10 % | 0.79                | 30        | 3.0                  | 30.0               | 50                                         |
| 680.0                              | ± 10 % | 0.79                | 30        | 3.0                  | 30.0               | 50                                         |
| 820.0                              | ± 10 % | 0.79                | 30        | 2.5                  | 35.0               | 30                                         |
| 1000.0                             | ± 10 % | 0.25                | 30        | 2.5                  | 40.0               | 30                                         |

**Note**  
<sup>(1)</sup> Rated DC current based on the maximum temperature rise, not to exceed 40 °C at +85 °C ambient

## FEATURES

- Molded construction provides superior strength and moisture resistance
- Tape and reel packaging for automatic handling, 2000/reel, EIA-481
- Printed marking
- Compatible with vapor phase and infrared reflow soldering
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS  
COMPLIANT

## ELECTRICAL SPECIFICATIONS

Inductance range: 0.010 μH to 1000 μH

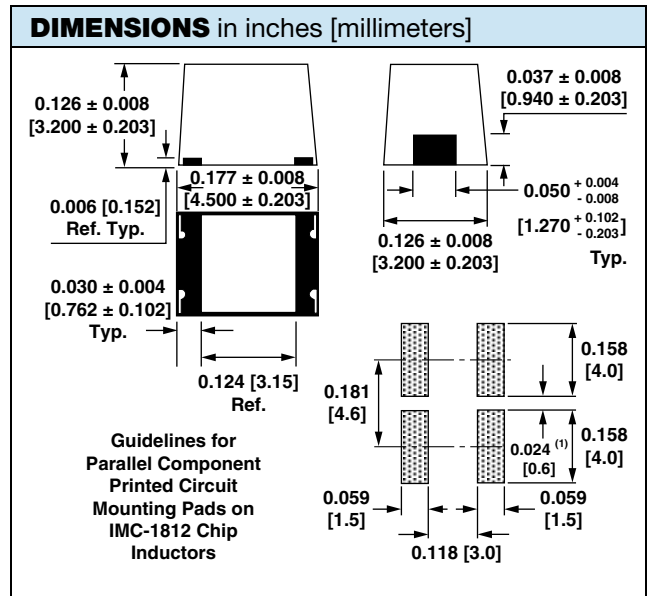
Special tolerances available upon request

Operating temperature: -55 °C to +125 °C

Coilform material: non-magnetic for 0.010 μH to 0.82 μH; powdered iron for 1.0 μH to 120 μH; ferrite for 150 μH to 1000 μH

## TEST EQUIPMENT

- H/P 4342A Q meter with Vishay Dale test fixture or equivalent
- H/P 4191A RF impedance analyzer (for SRF measurements)
- Wheatstone bridge



**Note**  
<sup>(1)</sup> Recommended minimum spacing between components

| PART MARKING      |
|-------------------|
| - Vishay Dale     |
| - Inductance code |
| - Date code       |



| DESCRIPTION |                  |                      |              |                                |
|-------------|------------------|----------------------|--------------|--------------------------------|
| IMC-1812    | 10 $\mu$ H       | $\pm 10 \%$          | ER           | e3                             |
| MODEL       | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

| GLOBAL PART NUMBER |   |   |      |   |   |   |              |   |                  |   |   |      |
|--------------------|---|---|------|---|---|---|--------------|---|------------------|---|---|------|
| I                  | M | C | 1    | 8 | 1 | 2 | E            | R | 1                | 0 | 0 | K    |
| PRODUCT FAMILY     |   |   | SIZE |   |   |   | PACKAGE CODE |   | INDUCTANCE VALUE |   |   | TOL. |



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