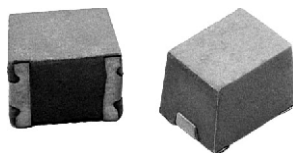


# Wirewound, Surface Mount, Molded, Shielded Inductors



## STANDARD ELECTRICAL SPECIFICATIONS

| IND.<br>( $\mu$ H) | TOL.       | TEST<br>FREQ.<br>(MHz) | Q MIN. | SRF<br>MIN.<br>(MHz) | DCR<br>MAX.<br>( $\Omega$ ) | RATED DC<br>CURRENT<br>(mA) <sup>(1)</sup> |
|--------------------|------------|------------------------|--------|----------------------|-----------------------------|--------------------------------------------|
| 0.10               | $\pm 20\%$ | 25.2                   | 30     | 460                  | 0.23                        | 552                                        |
| 0.12               | $\pm 20\%$ | 25.2                   | 30     | 400                  | 0.26                        | 519                                        |
| 0.15               | $\pm 20\%$ | 25.2                   | 30     | 390                  | 0.29                        | 491                                        |
| 0.18               | $\pm 20\%$ | 25.2                   | 30     | 350                  | 0.32                        | 468                                        |
| 0.22               | $\pm 20\%$ | 25.2                   | 30     | 310                  | 0.36                        | 441                                        |
| 0.33               | $\pm 20\%$ | 25.2                   | 30     | 280                  | 0.40                        | 418                                        |
| 0.39               | $\pm 20\%$ | 25.2                   | 30     | 240                  | 0.45                        | 394                                        |
| 0.47               | $\pm 20\%$ | 25.2                   | 30     | 215                  | 0.60                        | 342                                        |
| 0.56               | $\pm 20\%$ | 25.2                   | 30     | 205                  | 0.75                        | 306                                        |
| 0.68               | $\pm 20\%$ | 25.2                   | 30     | 195                  | 0.80                        | 296                                        |
| 0.82               | $\pm 20\%$ | 25.2                   | 30     | 165                  | 0.95                        | 271                                        |
| 0.8                | $\pm 20\%$ | 25.2                   | 30     | 155                  | 1.20                        | 242                                        |
| 1.0                | $\pm 10\%$ | 7.96                   | 30     | 140                  | 0.35                        | 447                                        |
| 1.2                | $\pm 10\%$ | 7.96                   | 30     | 120                  | 0.38                        | 429                                        |
| 1.5                | $\pm 10\%$ | 7.96                   | 30     | 100                  | 0.40                        | 418                                        |
| 1.8                | $\pm 10\%$ | 7.96                   | 30     | 90.0                 | 0.43                        | 403                                        |
| 2.2                | $\pm 10\%$ | 7.96                   | 30     | 80.0                 | 0.46                        | 390                                        |
| 2.7                | $\pm 10\%$ | 7.96                   | 30     | 67.0                 | 0.49                        | 378                                        |
| 3.3                | $\pm 10\%$ | 7.96                   | 30     | 61.0                 | 0.55                        | 357                                        |
| 3.9                | $\pm 10\%$ | 7.96                   | 30     | 56.0                 | 0.59                        | 344                                        |
| 4.7                | $\pm 10\%$ | 7.96                   | 30     | 50.0                 | 0.62                        | 336                                        |
| 5.6                | $\pm 10\%$ | 7.96                   | 30     | 40.0                 | 0.69                        | 333                                        |
| 6.8                | $\pm 10\%$ | 7.96                   | 30     | 32.0                 | 0.75                        | 306                                        |
| 8.2                | $\pm 10\%$ | 7.96                   | 30     | 30.0                 | 0.82                        | 292                                        |
| 10.0               | $\pm 10\%$ | 2.52                   | 50     | 25.0                 | 0.90                        | 279                                        |
| 12.0               | $\pm 10\%$ | 2.52                   | 50     | 22.0                 | 1.00                        | 265                                        |
| 15.0               | $\pm 10\%$ | 2.52                   | 50     | 18.0                 | 1.10                        | 252                                        |
| 18.0               | $\pm 10\%$ | 2.52                   | 50     | 15.0                 | 1.24                        | 238                                        |
| 22.0               | $\pm 10\%$ | 2.52                   | 50     | 14.0                 | 1.36                        | 227                                        |
| 27.0               | $\pm 10\%$ | 2.52                   | 50     | 13.0                 | 1.56                        | 212                                        |
| 33.0               | $\pm 10\%$ | 2.52                   | 50     | 12.0                 | 1.72                        | 202                                        |
| 39.0               | $\pm 10\%$ | 2.52                   | 50     | 11.0                 | 1.89                        | 192                                        |
| 47.0               | $\pm 10\%$ | 2.52                   | 50     | 9.0                  | 2.10                        | 183                                        |
| 56.0               | $\pm 10\%$ | 2.52                   | 50     | 8.0                  | 2.34                        | 173                                        |
| 68.0               | $\pm 10\%$ | 2.52                   | 50     | 7.6                  | 2.60                        | 164                                        |
| 82.0               | $\pm 10\%$ | 2.52                   | 50     | 7.2                  | 2.86                        | 156                                        |
| 100.0              | $\pm 10\%$ | 0.796                  | 40     | 7.0                  | 3.25                        | 147                                        |
| 120.0              | $\pm 10\%$ | 0.796                  | 40     | 6.0                  | 3.64                        | 139                                        |
| 150.0              | $\pm 10\%$ | 0.796                  | 40     | 5.0                  | 4.16                        | 130                                        |
| 180.0              | $\pm 10\%$ | 0.796                  | 40     | 4.5                  | 5.72                        | 111                                        |
| 220.0              | $\pm 10\%$ | 0.796                  | 40     | 4.2                  | 6.30                        | 105                                        |
| 270.0              | $\pm 10\%$ | 0.796                  | 40     | 4.0                  | 6.90                        | 101                                        |
| 330.0              | $\pm 10\%$ | 0.796                  | 40     | 3.7                  | 7.54                        | 96                                         |
| 390.0              | $\pm 10\%$ | 0.796                  | 40     | 3.5                  | 8.20                        | 92                                         |
| 470.0              | $\pm 10\%$ | 0.796                  | 40     | 3.3                  | 9.20                        | 87                                         |
| 560.0              | $\pm 10\%$ | 0.796                  | 30     | 2.8                  | 10.50                       | 82                                         |
| 680.0              | $\pm 10\%$ | 0.796                  | 40     | 2.6                  | 12.00                       | 76                                         |
| 820.0              | $\pm 10\%$ | 0.796                  | 30     | 2.2                  | 13.50                       | 72                                         |
| 1000.0             | $\pm 10\%$ | 0.252                  | 30     | 2.0                  | 16.00                       | 66                                         |

### 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
- Compatible with vapor phase and infrared reflow soldering
- Shielded construction minimizes coupling to other components
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



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

## ELECTRICAL SPECIFICATIONS

**Inductance Range:** 0.10  $\mu$ H to 1000  $\mu$ H

**Inductance Tolerance:**  $\pm 20\%$  for 0.10  $\mu$ H to 0.82  $\mu$ H  
 $\pm 10\%$  for 1.0  $\mu$ H to 1000  $\mu$ H standard  
 $\pm 10\%$ ,  $\pm 5\%$ ,  $\pm 3\%$  available

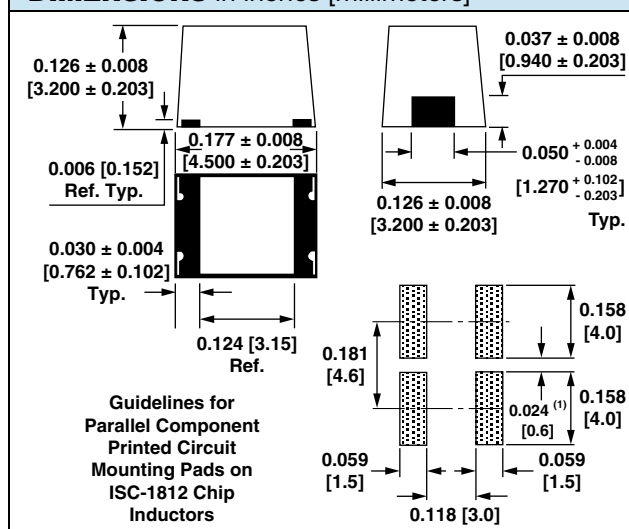
**Operating Temperature:** - 55 °C to + 125 °C

**Coilform Material:** Non-magnetic for 0.10  $\mu$ H to 0.82  $\mu$ H  
Powdered iron for 1.0  $\mu$ H to 22  $\mu$ H  
Ferrite for 27  $\mu$ H to 1000  $\mu$ H

## 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

## DIMENSIONS in inches [millimeters]



### Note

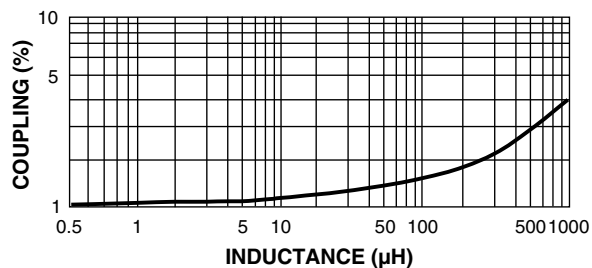
- <sup>(1)</sup> Recommended minimum spacing between components

## PART MARKING

- Vishay Dale
- Inductance value
- Date code



**COUPLING SPECIFICATIONS** (maximum)



**DESCRIPTION**

|          |                  |                      |              |                               |
|----------|------------------|----------------------|--------------|-------------------------------|
| ISC-1812 | 10 μH            | ± 10 %               | ER           | e3                            |
| MODEL    | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

**GLOBAL PART NUMBER**

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