

# Wirewound, Surface-Mount, Molded, Shielded Inductors



| STANDARD ELECTRICAL SPECIFICATIONS |        |                  |        |                |              |                                      |
|------------------------------------|--------|------------------|--------|----------------|--------------|--------------------------------------|
| IND. (μH)                          | TOL.   | TEST FREQ. (MHz) | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) <sup>(1)</sup> |
|                                    |        | L & Q            |        |                |              |                                      |
| 0.010                              | ± 20 % | 50               | 50     | 1000           | 0.10         | 810                                  |
| 0.012                              | ± 20 % | 50               | 50     | 1000           | 0.11         | 750                                  |
| 0.015                              | ± 20 % | 50               | 50     | 1000           | 0.12         | 720                                  |
| 0.018                              | ± 20 % | 50               | 50     | 1000           | 0.13         | 690                                  |
| 0.022                              | ± 20 % | 50               | 45     | 1000           | 0.15         | 640                                  |
| 0.027                              | ± 20 % | 50               | 45     | 1000           | 0.17         | 610                                  |
| 0.033                              | ± 20 % | 50               | 45     | 1000           | 0.18         | 585                                  |
| 0.039                              | ± 20 % | 50               | 40     | 1000           | 0.24         | 530                                  |
| 0.047                              | ± 20 % | 50               | 40     | 1000           | 0.26         | 495                                  |
| 0.056                              | ± 20 % | 50               | 40     | 1000           | 0.28         | 485                                  |
| 0.068                              | ± 20 % | 50               | 40     | 1000           | 0.35         | 475                                  |
| 0.082                              | ± 20 % | 50               | 38     | 900            | 0.45         | 460                                  |
| 0.10                               | ± 20 % | 50               | 36     | 700            | 0.50         | 450                                  |
| 0.12                               | ± 20 % | 25.2             | 40     | 500            | 0.20         | 630                                  |
| 0.15                               | ± 20 % | 25.2             | 40     | 470            | 0.20         | 600                                  |
| 0.18                               | ± 20 % | 25.2             | 40     | 400            | 0.24         | 580                                  |
| 0.22                               | ± 20 % | 25.2             | 40     | 330            | 0.30         | 565                                  |
| 0.27                               | ± 20 % | 25.2             | 40     | 310            | 0.33         | 500                                  |
| 0.33                               | ± 20 % | 25.2             | 40     | 280            | 0.36         | 475                                  |
| 0.39                               | ± 20 % | 25.2             | 40     | 230            | 0.40         | 465                                  |
| 0.47                               | ± 20 % | 25.2             | 40     | 220            | 0.44         | 460                                  |
| 0.56                               | ± 20 % | 25.2             | 40     | 200            | 0.46         | 455                                  |
| 0.68                               | ± 20 % | 25.2             | 40     | 180            | 0.48         | 450                                  |
| 0.82                               | ± 20 % | 25.2             | 40     | 160            | 0.50         | 450                                  |
| 1.0                                | ± 10 % | 7.96             | 30     | 120            | 0.60         | 400                                  |
| 1.2                                | ± 10 % | 7.96             | 30     | 110            | 0.65         | 390                                  |
| 1.5                                | ± 10 % | 7.96             | 30     | 90.0           | 0.75         | 370                                  |
| 1.8                                | ± 10 % | 7.96             | 30     | 85.0           | 0.85         | 350                                  |
| 2.2                                | ± 10 % | 7.96             | 30     | 65.0           | 0.90         | 320                                  |
| 2.7                                | ± 10 % | 7.96             | 30     | 60.0           | 1.00         | 290                                  |
| 3.3                                | ± 10 % | 7.96             | 30     | 60.0           | 1.10         | 270                                  |
| 3.9                                | ± 10 % | 7.96             | 30     | 58.0           | 1.20         | 250                                  |
| 4.7                                | ± 10 % | 7.96             | 30     | 52.0           | 1.25         | 220                                  |
| 5.6                                | ± 10 % | 7.96             | 30     | 50.0           | 1.40         | 210                                  |
| 6.8                                | ± 10 % | 7.96             | 30     | 40.0           | 1.60         | 205                                  |
| 8.2                                | ± 10 % | 7.96             | 30     | 35.0           | 1.65         | 195                                  |
| 10.0                               | ± 10 % | 2.52             | 30     | 30.0           | 2.00         | 185                                  |
| 12.0                               | ± 10 % | 2.52             | 30     | 24.0           | 2.30         | 175                                  |
| 15.0                               | ± 10 % | 2.52             | 30     | 20.0           | 2.50         | 165                                  |
| 18.0                               | ± 10 % | 2.52             | 30     | 17.0           | 2.70         | 155                                  |
| 22.0                               | ± 10 % | 2.52             | 30     | 16.0           | 3.10         | 150                                  |
| 27.0                               | ± 10 % | 2.52             | 30     | 14.5           | 3.30         | 125                                  |
| 33.0                               | ± 10 % | 2.52             | 30     | 14.5           | 5.10         | 115                                  |
| 39.0                               | ± 10 % | 2.52             | 30     | 14.0           | 5.90         | 105                                  |
| 47.0                               | ± 10 % | 2.52             | 30     | 13.0           | 8.00         | 100                                  |
| 56.0                               | ± 10 % | 2.52             | 30     | 11.5           | 10.0         | 95                                   |
| 68.0                               | ± 10 % | 2.52             | 30     | 11.0           | 10.0         | 90                                   |
| 82.0                               | ± 10 % | 2.52             | 30     | 11.0           | 11.0         | 85                                   |
| 100.0                              | ± 10 % | 0.796            | 30     | 6.0            | 12.0         | 80                                   |

**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, infrared, and wave soldering methods
- 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:** 0.01 μH to 100 μH  
**Special tolerances available upon request**  
**Operating temperature:** -55 °C to +125 °C  
**Coilform material:** non-magnetic for 0.01 μH to 0.10 μH;; powdered iron for 0.12 μH to 100 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

## DIMENSIONS in inches [millimeters]



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

## PART MARKING

- Vishay Dale
- Inductance code
- Date code

| DESCRIPTION        |                  |                      |                  |                                |
|--------------------|------------------|----------------------|------------------|--------------------------------|
| ISC-1210           | 10 μH            | ± 10 %               | ER               | e3                             |
| MODEL              | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE     | JEDEC® LEAD (Pb)-FREE STANDARD |
| GLOBAL PART NUMBER |                  |                      |                  |                                |
| I                  | S                | C                    | 1                | 2                              |
| PRODUCT FAMILY     |                  |                      | SIZE             |                                |
|                    |                  |                      | E                | R                              |
|                    |                  |                      | PACKAGE CODE     |                                |
|                    |                  |                      | 1                | 0                              |
|                    |                  |                      | INDUCTANCE VALUE |                                |
|                    |                  |                      |                  | K                              |
|                    |                  |                      |                  | TOL.                           |



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