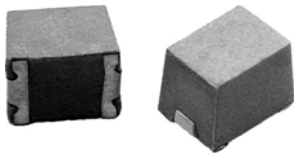
# Wirewound, Surface Mount, Molded, Shielded Inductors



## 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

Pb-free

RoHS COMPLIANT

HALOGEN FREE

## STANDARD ELECTRICAL SPECIFICATIONS

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

**Note**

(1) Rated DC current based on the maximum temperature rise, not to exceed 40 °C at +85 °C ambient

## ELECTRICAL SPECIFICATIONS

**Inductance range:** 0.10 µH to 1000 µH

**Special tolerances available upon request**

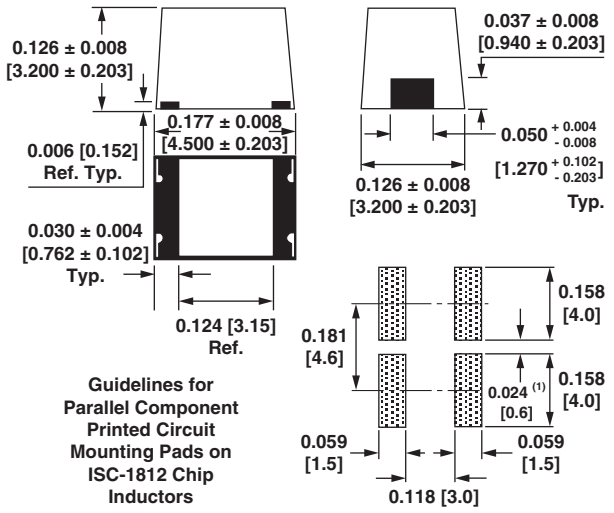
**Operating temperature:** -55 °C to +125 °C

**Coilform material:** Non-magnetic for 0.10 µH to 0.82 µH
Powdered iron for 1.0 µH to 22 µH
Ferrite for 27 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

## DIMENSIONS in inches [millimeters]



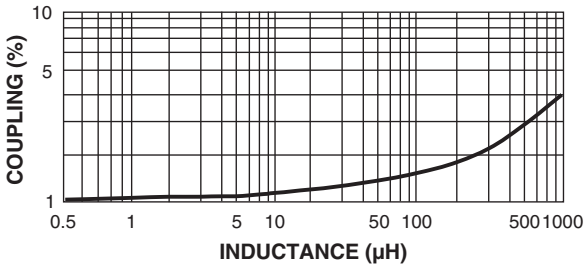

**Note**

(1) 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. |

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ISC1812ES681K ISC1812ES1R8K ISC1812ES471K ISC1812ET680K ISC1812RV1R0K ISC1812ES4R7K
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