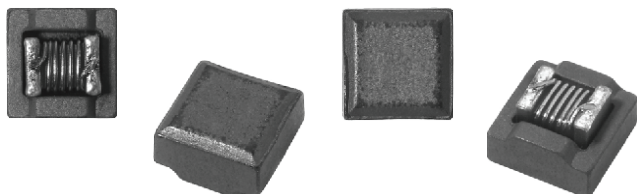


# Wirewound, Surface-Mount, Shielded Inductor


RoHS  
COMPLIANT

## FEATURES

- Excellent solderability and resistance to soldering heat
- Suitable for reflow soldering
- High reliability and easy surface mount assembly
- Wide range of inductance values available
- Tape and reel packaging for automatic handling, 750/reel, EIA-481
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

## ELECTRICAL SPECIFICATIONS

Inductance Range: 1  $\mu$ H to 1000  $\mu$ H

Operating Temperature: -40 °C to +85 °C

Storage Temperature: -40 °C to +125 °C

Material: ferrite with magnetic shield

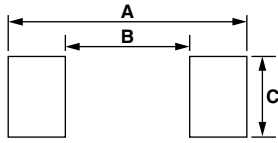
## TEST EQUIPMENT

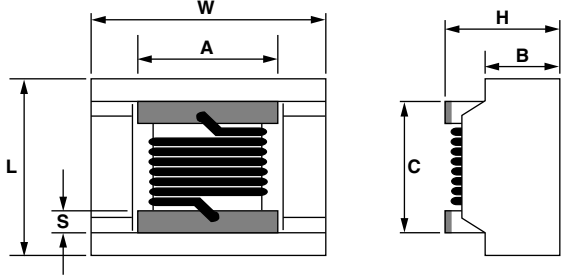
- Inductance and Q is measured in HP-4286A RF LCR meter with HP-16193 fixture
- SRF is measured in HP-8753E RF network analyzer
- DCR is measured in HP-4338B milliohmmeter

| STANDARD ELECTRICAL SPECIFICATIONS |            |                 |                |                       |                                      |
|------------------------------------|------------|-----------------|----------------|-----------------------|--------------------------------------|
| IND. AT 100 kHz ( $\mu$ H)         | TOL.       | Q MIN. AT 1 MHz | SRF MIN. (MHz) | DCR MAX. ( $\Omega$ ) | RATED DC CURRENT (mA) <sup>(1)</sup> |
| 1.0                                | $\pm 20\%$ | 35              | 344            | 0.05                  | 1000                                 |
| 1.5                                | $\pm 20\%$ | 35              | 260            | 0.06                  | 800                                  |
| 1.8                                | $\pm 20\%$ | 35              | 225            | 0.09                  | 680                                  |
| 2.7                                | $\pm 20\%$ | 38              | 185            | 0.14                  | 650                                  |
| 3.9                                | $\pm 20\%$ | 38              | 175            | 0.26                  | 650                                  |
| 4.7                                | $\pm 20\%$ | 38              | 160            | 0.35                  | 500                                  |
| 5.6                                | $\pm 20\%$ | 38              | 150            | 0.40                  | 450                                  |
| 6.8                                | $\pm 20\%$ | 38              | 120            | 0.60                  | 400                                  |
| 10                                 | $\pm 20\%$ | 38              | 100            | 0.95                  | 250                                  |
| 15                                 | $\pm 20\%$ | 38              | 35             | 1.15                  | 220                                  |
| 22                                 | $\pm 20\%$ | 40              | 26             | 1.40                  | 180                                  |
| 33                                 | $\pm 20\%$ | 45              | 20             | 1.60                  | 150                                  |
| 39                                 | $\pm 20\%$ | 45              | 14             | 1.85                  | 130                                  |
| 47                                 | $\pm 20\%$ | 45              | 14             | 2.50                  | 110                                  |
| 68                                 | $\pm 20\%$ | 45              | 12             | 3.80                  | 100                                  |
| 82                                 | $\pm 20\%$ | 45              | 9.0            | 4.20                  | 100                                  |
| 100                                | $\pm 20\%$ | 45              | 7.0            | 5.80                  | 80                                   |
| 120                                | $\pm 20\%$ | 45              | 6.0            | 6.20                  | 60                                   |
| 150                                | $\pm 20\%$ | 40              | 5.6            | 7.50                  | 50                                   |
| 220                                | $\pm 20\%$ | 40              | 4.0            | 10.0                  | 50                                   |
| 330                                | $\pm 20\%$ | 40              | 3.8            | 11.5                  | 50                                   |
| 470                                | $\pm 20\%$ | 35              | 2.0            | 16.5                  | 50                                   |
| 560                                | $\pm 20\%$ | 35              | 2.0            | 18.0                  | 30                                   |
| 680                                | $\pm 20\%$ | 30              | 1.8            | 24.0                  | 30                                   |
| 820                                | $\pm 20\%$ | 30              | 1.5            | 26.0                  | 30                                   |
| 1000                               | $\pm 20\%$ | 30              | 1.3            | 30.0                  | 30                                   |

Note

<sup>(1)</sup> For 15 °C rise

| RECOMMENDED PATTERN                                                                 |                                       |                                       |                                       |
|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|  |                                       |                                       |                                       |
| LENGTH (L)                                                                          | WIDTH (W)                             | HEIGHT (H)                            | TERMINAL (S)                          |
| 0.142 $\pm$ 0.008<br>[3.60 $\pm$ 0.2]                                               | 0.142 $\pm$ 0.008<br>[3.60 $\pm$ 0.2] | 0.098 $\pm$ 0.008<br>[2.50 $\pm$ 0.2] | 0.020 $\pm$ 0.004<br>[0.50 $\pm$ 0.1] |

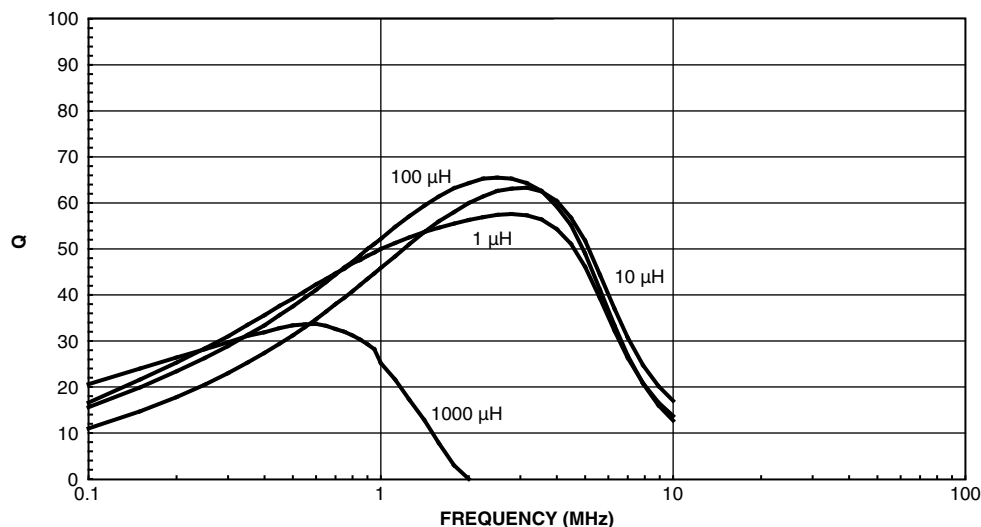
| DIMENSIONS in inches [millimeters]                                                   |                                       |                                       |                                       |
|--------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|  |                                       |                                       |                                       |
| LENGTH (L)                                                                           | WIDTH (W)                             | HEIGHT (H)                            | TERMINAL (S)                          |
| 0.142 $\pm$ 0.008<br>[3.60 $\pm$ 0.2]                                                | 0.142 $\pm$ 0.008<br>[3.60 $\pm$ 0.2] | 0.098 $\pm$ 0.008<br>[2.50 $\pm$ 0.2] | 0.020 $\pm$ 0.004<br>[0.50 $\pm$ 0.1] |
| A                                                                                    |                                       | B                                     | C                                     |
| 0.080 $\pm$ 0.004<br>[2.00 $\pm$ 0.1]                                                |                                       | 0.063 $\pm$ 0.008<br>[1.60 $\pm$ 0.2] | 0.098 $\pm$ 0.004<br>[2.50 $\pm$ 0.1] |

| DESCRIPTION |                  |                      |              |                               |
|-------------|------------------|----------------------|--------------|-------------------------------|
| ISC-1008    | 10 $\mu$ H       | $\pm 20\%$           | ER           | e3                            |
| MODEL       | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

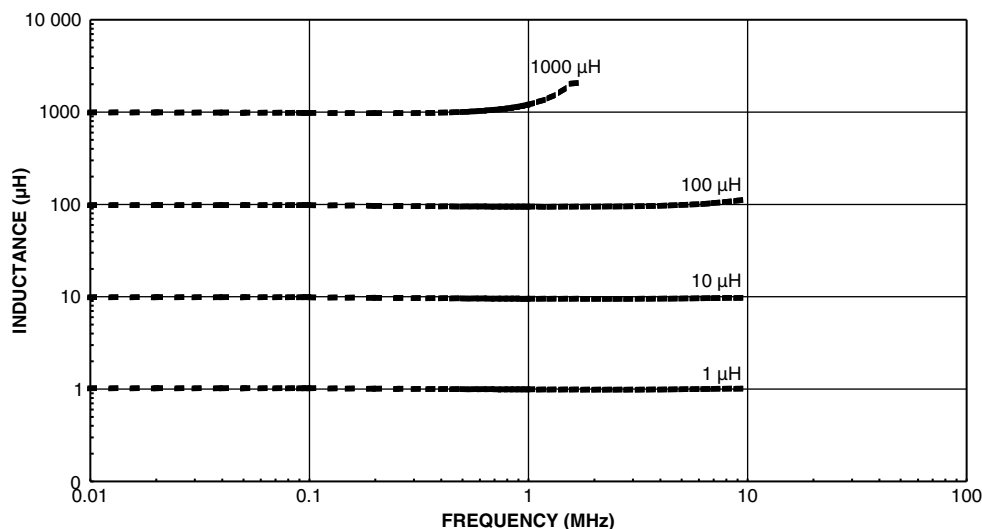
| GLOBAL PART NUMBER |   |   |      |   |   |   |              |   |                  |   |   |      |
|--------------------|---|---|------|---|---|---|--------------|---|------------------|---|---|------|
| I                  | S | C | 1    | 0 | 0 | 8 | E            | R | 1                | 0 | 0 |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

# PERFORMANCE GRAPHS ISC-1008

## Q vs. FREQUENCY

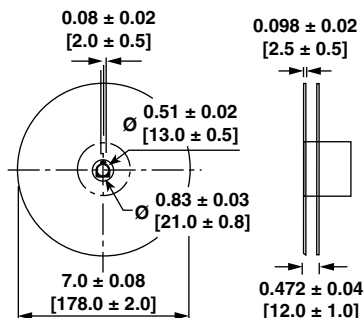


## INDUCTANCE vs. FREQUENCY

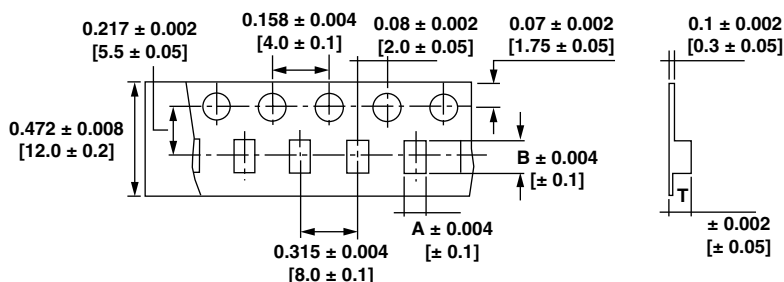


# TAPE AND REEL SPECIFICATIONS in inches [millimeters]

## REEL DIMENSIONS



## TAPE DIMENSIONS



| MODEL    | UNITS PER REEL | MODEL    | A           | B           | T           |
|----------|----------------|----------|-------------|-------------|-------------|
| ISC-1008 | 750            | ISC-1008 | 0.150 [3.8] | 0.157 [4.0] | 0.098 [2.5] |



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