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[IMC1008ER100J](#)

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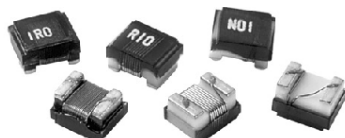


www.vishay.com

**IMC-1008**

Vishay Dale

## High Frequency, Surface Mount Inductors



**RoHS**  
COMPLIANT

### STANDARD ELECTRICAL SPECIFICATIONS

| IND.<br>(nH) | TOL.   | TEST FREQ.<br>(MHz) |      | Q MIN. | SRF<br>MIN.<br>(MHz) | DCR<br>MAX.<br>(Ω) | RATED DC<br>CURRENT<br>(mA) |
|--------------|--------|---------------------|------|--------|----------------------|--------------------|-----------------------------|
|              |        | L                   | Q    |        |                      |                    |                             |
| 3.3          | 0.3 nH | 100                 | 1000 | 50     | 6000                 | 0.06               | 1000                        |
| 6.8          | 5 %    | 100                 | 1000 | 50     | 5500                 | 0.06               | 1000                        |
| 8.2          | 5 %    | 100                 | 1000 | 50     | 5500                 | 0.06               | 1000                        |
| 10           | 5 %    | 100                 | 1000 | 50     | 4300                 | 0.08               | 1000                        |
| 12           | 5 %    | 100                 | 500  | 60     | 3600                 | 0.08               | 1000                        |
| 15           | 5 %    | 100                 | 500  | 60     | 2700                 | 0.08               | 1000                        |
| 18           | 5 %    | 100                 | 350  | 60     | 2700                 | 0.10               | 1000                        |
| 22           | 5 %    | 100                 | 350  | 60     | 2500                 | 0.10               | 1000                        |
| 27           | 5 %    | 100                 | 350  | 60     | 1800                 | 0.10               | 1000                        |
| 33           | 5 %    | 100                 | 350  | 60     | 1700                 | 0.10               | 1000                        |
| 39           | 5 %    | 100                 | 350  | 60     | 1500                 | 0.10               | 1000                        |
| 47           | 5 %    | 100                 | 350  | 60     | 1500                 | 0.10               | 1000                        |
| 56           | 5 %    | 100                 | 350  | 60     | 1350                 | 0.12               | 1000                        |
| 68           | 5 %    | 100                 | 350  | 60     | 1300                 | 0.15               | 1000                        |
| 82           | 5 %    | 100                 | 350  | 60     | 1100                 | 0.18               | 1000                        |
| 100          | 5 %    | 100                 | 350  | 60     | 1100                 | 0.18               | 1000                        |
| 120          | 5 %    | 25                  | 100  | 45     | 950                  | 0.20               | 800                         |
| 150          | 5 %    | 25                  | 100  | 45     | 880                  | 0.22               | 800                         |
| 180          | 5 %    | 25                  | 100  | 45     | 800                  | 0.33               | 800                         |
| 220          | 5 %    | 25                  | 100  | 45     | 730                  | 0.45               | 800                         |
| 270          | 5 %    | 25                  | 100  | 45     | 650                  | 0.75               | 600                         |
| 330          | 5 %    | 25                  | 100  | 45     | 570                  | 0.90               | 500                         |
| 390          | 5 %    | 25                  | 100  | 45     | 530                  | 1.06               | 470                         |
| 470          | 5 %    | 25                  | 100  | 45     | 480                  | 1.17               | 420                         |
| 560          | 5 %    | 25                  | 100  | 45     | 430                  | 1.50               | 310                         |
| 680          | 5 %    | 25                  | 100  | 45     | 380                  | 2.06               | 230                         |
| 750          | 5 %    | 25                  | 100  | 45     | 360                  | 2.20               | 200                         |
| 820          | 5 %    | 25                  | 100  | 45     | 350                  | 2.30               | 180                         |
| 910          | 5 %    | 25                  | 100  | 45     | 330                  | 3.18               | 150                         |
| 1000         | 5 %    | 25                  | 50   | 35     | 310                  | 3.30               | 120                         |
| 1200         | 5 %    | 7.96                | 7.96 | 20     | 280                  | 1.30               | 230                         |
| 1500         | 5 %    | 7.96                | 7.96 | 20     | 250                  | 1.65               | 220                         |
| 1800         | 5 %    | 7.96                | 7.96 | 20     | 200                  | 2.20               | 210                         |
| 2200         | 5 %    | 7.96                | 7.96 | 20     | 160                  | 2.35               | 200                         |
| 2700         | 5 %    | 7.96                | 7.96 | 20     | 130                  | 2.60               | 195                         |
| 3300         | 5 %    | 7.96                | 7.96 | 20     | 80                   | 2.85               | 185                         |
| 3900         | 5 %    | 7.96                | 7.96 | 20     | 50                   | 4.00               | 180                         |
| 4700         | 5 %    | 7.96                | 7.96 | 20     | 45                   | 4.30               | 175                         |
| 5600         | 5 %    | 7.96                | 7.96 | 20     | 42                   | 2.60               | 170                         |
| 6800         | 5 %    | 7.96                | 7.96 | 20     | 39                   | 2.80               | 165                         |
| 8200         | 5 %    | 7.96                | 7.96 | 20     | 36                   | 3.05               | 160                         |
| 10 000       | 5 %    | 2.52                | 2.52 | 15     | 33                   | 3.50               | 150                         |
| 12 000       | 5 %    | 2.52                | 2.52 | 15     | 30                   | 3.60               | 140                         |
| 15 000       | 5 %    | 2.52                | 2.52 | 15     | 26                   | 4.00               | 130                         |
| 18 000       | 5 %    | 2.52                | 2.52 | 15     | 24                   | 4.50               | 120                         |
| 22 000       | 5 %    | 2.52                | 2.52 | 15     | 22                   | 5.00               | 110                         |
| 27 000       | 5 %    | 2.52                | 2.52 | 15     | 21                   | 6.00               | 95                          |
| 33 000       | 5 %    | 2.52                | 2.52 | 15     | 20                   | 6.50               | 85                          |
| 39 000       | 5 %    | 2.52                | 2.52 | 15     | 18                   | 8.50               | 60                          |
| 47 000       | 5 %    | 2.52                | 2.52 | 15     | 17                   | 14.00              | 45                          |

### FEATURES

- High self-resonant frequency values
- High Q values at higher frequencies
- Wirewound construction
- Compatible with vapor phase and infrared reflow soldering
- Tape and reel packaging for automatic handling, 2000/reel
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 3.3 nH to 47 000 nH

**Inductance and Tolerance:** 0.3 nH for 3.3 nH  
± 5 % for 6.8 nH to 47 000 nH

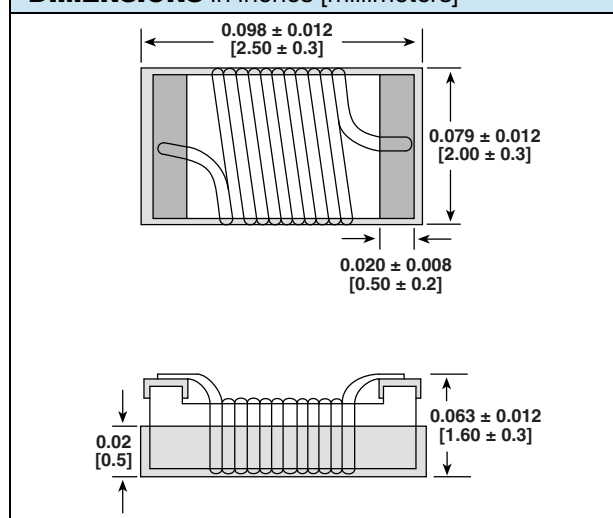
**Operating Temperature:** -40 °C to +125 °C

**Core Material:** Ceramic from 3.3 nH to 1000 nH  
Ferrite from 1200 nH to 47 000 nH

### TEST EQUIPMENT

- Inductance and Q measured on HP4286A
- SRF measured on HP8753D

### DIMENSIONS in inches [millimeters]



### DESCRIPTION

|                 |                  |                      |              |                                |
|-----------------|------------------|----------------------|--------------|--------------------------------|
| <b>IMC-1008</b> | <b>10 nH</b>     | <b>± 5 %</b>         | <b>ER</b>    | <b>e4 (1)</b>                  |
| MODEL           | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

#### Note

(1) For parts within 3.3 nH to 910 nH please use e4 for JEDEC lead (Pb)-free standard. For parts within 1000 nH to 47 000 nH please use e3 for JEDEC lead (Pb)-free standard.

### GLOBAL PART NUMBER

|                |          |          |          |          |          |          |              |          |                  |          |          |          |
|----------------|----------|----------|----------|----------|----------|----------|--------------|----------|------------------|----------|----------|----------|
| <b>I</b>       | <b>M</b> | <b>C</b> | <b>1</b> | <b>0</b> | <b>0</b> | <b>8</b> | <b>E</b>     | <b>R</b> | <b>1</b>         | <b>0</b> | <b>N</b> | <b>J</b> |
| PRODUCT FAMILY |          |          | SIZE     |          |          |          | PACKAGE CODE |          | INDUCTANCE VALUE |          |          | TOL.     |

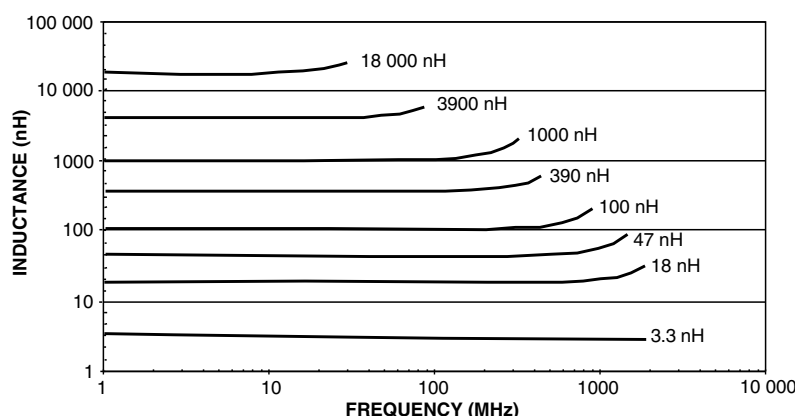
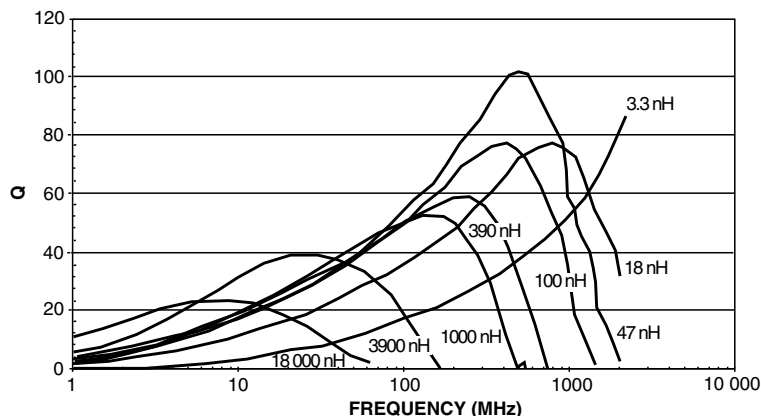


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**IMC-1008**

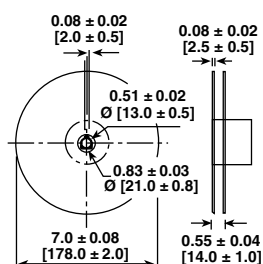
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# **PERFORMANCE GRAPHS IMC-1008**

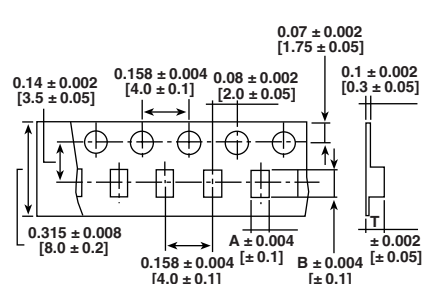


# **TAPE AND REEL SPECIFICATIONS in inches [millimeters]**

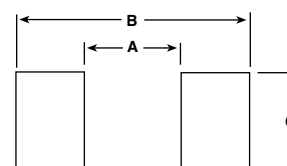
## **REEL DIMENSIONS**



## **TAPE DIMENSIONS**



## **RECOMMENDED PATTERN**



| MODEL    | UNITS PER REEL | MODEL    | A               | B               | T               | MODEL    | A               | B               | C               |
|----------|----------------|----------|-----------------|-----------------|-----------------|----------|-----------------|-----------------|-----------------|
| IMC-1008 | 2000           | IMC-1008 | 0.087<br>[2.20] | 0.110<br>[2.80] | 0.071<br>[1.80] | IMC-1008 | 0.047<br>[1.20] | 0.150<br>[3.80] | 0.100<br>[2.54] |



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