

High Frequency, Surface Mount Inductors


RoHS
COMPLIANT

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

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

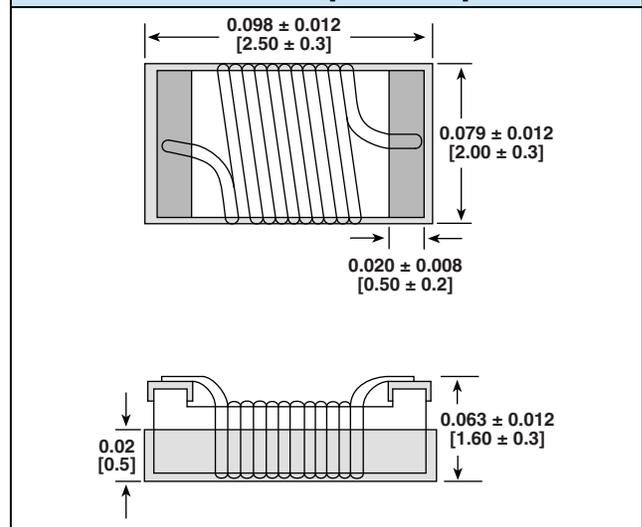
Core Material: Ceramic from 3.3 nH to 1000 nH
Ferrite from 1200 nH to 47 000 nH

TEST EQUIPMENT

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

STANDARD ELECTRICAL SPECIFICATIONS

| IND. (nH) | TOL. | TEST FREQ. (MHz) | | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (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 |

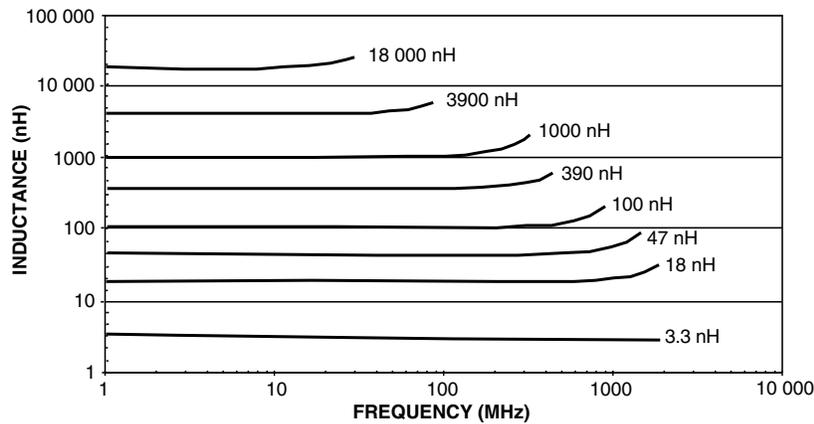
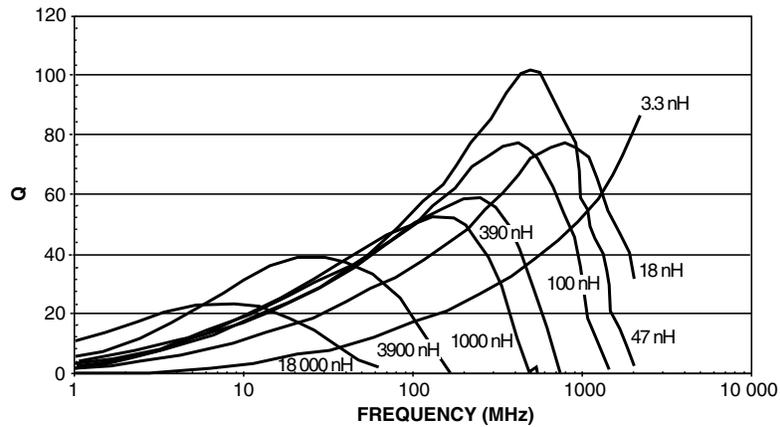
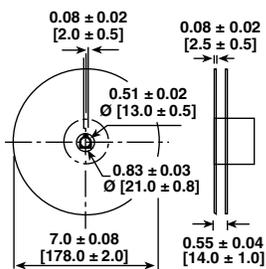
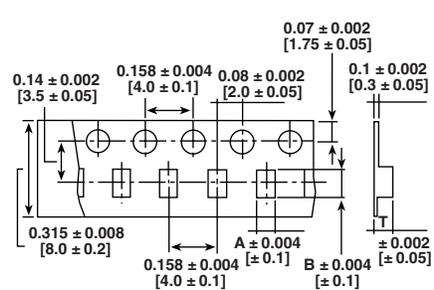
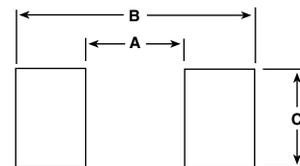
DIMENSIONS in inches [millimeters]


| DESCRIPTION | | | | |
|-------------|------------------|----------------------|--------------|--------------------------------|
| IMC-1008 | 10 nH | ± 5 % | ER | e4 ⁽¹⁾ |
| 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 | | | | |
|--------------------|---|---|------------------|--------------|
| I | M | C | 1 | 0 |
| PRODUCT FAMILY | | | SIZE | PACKAGE CODE |
| | | | 1 | 0 |
| | | | INDUCTANCE VALUE | TOL. |
| | | | | J |

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 [2.20] | 0.110 [2.80] | 0.071 [1.80] | IMC-1008 | 0.047 [1.20] | 0.150 [3.80] | 0.100 [2.54] |



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