

High Frequency, Surface Mount Inductor



FEATURES

- High self-resonant frequency values
- High Q values at higher frequencies
- Wirewound construction
- Tape and reel packaging for automatic handling, 2000/ reel
- Compatible with vapor phase and infrared reflow soldering



RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

| IND. (nH) | TOL. | TEST FREQ. L (MHz) | Q MIN. | TEST FREQ. Q (MHz) | SELF-RESONANT FREQ. MIN. (MHz) | DCR MAX. (Ohms) | RATED DC CURRENT (mA) |
|-----------|--------|--------------------|--------|--------------------|--------------------------------|-----------------|-----------------------|
| 3.3 | 0.3 nH | 100 | 50 | 1000 | 6000 | 0.06 | 1000 |
| 6.8 | ± 5% | 100 | 50 | 1000 | 5500 | 0.06 | 1000 |
| 8.2 | ± 5% | 100 | 50 | 1000 | 5500 | 0.06 | 1000 |
| 10 | ± 5% | 100 | 50 | 1000 | 4300 | 0.08 | 1000 |
| 12 | ± 5% | 100 | 60 | 500 | 3600 | 0.08 | 1000 |
| 15 | ± 5% | 100 | 60 | 500 | 2700 | 0.08 | 1000 |
| 18 | ± 5% | 100 | 60 | 350 | 2700 | 0.10 | 1000 |
| 22 | ± 5% | 100 | 60 | 350 | 2500 | 0.10 | 1000 |
| 27 | ± 5% | 100 | 60 | 350 | 1800 | 0.10 | 1000 |
| 33 | ± 5% | 100 | 60 | 350 | 1700 | 0.10 | 1000 |
| 39 | ± 5% | 100 | 60 | 350 | 1500 | 0.10 | 1000 |
| 47 | ± 5% | 100 | 60 | 350 | 1500 | 0.10 | 1000 |
| 56 | ± 5% | 100 | 60 | 350 | 1350 | 0.12 | 1000 |
| 68 | ± 5% | 100 | 60 | 350 | 1300 | 0.15 | 1000 |
| 82 | ± 5% | 100 | 60 | 350 | 1100 | 0.18 | 1000 |
| 100 | ± 5% | 100 | 60 | 350 | 1100 | 0.18 | 1000 |
| 120 | ± 5% | 25 | 45 | 100 | 950 | 0.20 | 800 |
| 150 | ± 5% | 25 | 45 | 100 | 880 | 0.22 | 800 |
| 180 | ± 5% | 25 | 45 | 100 | 800 | 0.33 | 800 |
| 220 | ± 5% | 25 | 45 | 100 | 730 | 0.45 | 800 |
| 270 | ± 5% | 25 | 45 | 100 | 650 | 0.75 | 600 |
| 330 | ± 5% | 25 | 45 | 100 | 570 | 0.90 | 500 |
| 390 | ± 5% | 25 | 45 | 100 | 530 | 1.06 | 470 |
| 470 | ± 5% | 25 | 45 | 100 | 480 | 1.17 | 420 |
| 560 | ± 5% | 25 | 45 | 100 | 430 | 1.50 | 310 |
| 680 | ± 5% | 25 | 45 | 100 | 380 | 2.06 | 230 |
| 750 | ± 5% | 25 | 45 | 100 | 360 | 2.20 | 200 |
| 820 | ± 5% | 25 | 45 | 100 | 350 | 2.30 | 180 |
| 910 | ± 5% | 25 | 45 | 100 | 330 | 3.18 | 150 |
| 1000 | ± 5% | 25 | 35 | 50 | 310 | 3.30 | 120 |
| 1200 | ± 5% | 7.96 | 20 | 7.96 | 280 | 1.30 | 230 |
| 1500 | ± 5% | 7.96 | 20 | 7.96 | 250 | 1.65 | 220 |
| 1800 | ± 5% | 7.96 | 20 | 7.96 | 200 | 2.20 | 210 |
| 2200 | ± 5% | 7.96 | 20 | 7.96 | 160 | 2.35 | 200 |
| 2700 | ± 5% | 7.96 | 20 | 7.96 | 130 | 2.60 | 195 |
| 3300 | ± 5% | 7.96 | 20 | 7.96 | 80 | 2.85 | 185 |
| 3900 | ± 5% | 7.96 | 20 | 7.96 | 50 | 4.00 | 180 |
| 4700 | ± 5% | 7.96 | 20 | 7.96 | 45 | 4.30 | 175 |
| 5600 | ± 5% | 7.96 | 20 | 7.96 | 42 | 2.60 | 170 |
| 6800 | ± 5% | 7.96 | 20 | 7.96 | 39 | 2.80 | 165 |
| 8200 | ± 5% | 7.96 | 20 | 7.96 | 36 | 3.05 | 160 |
| 10000 | ± 5% | 2.52 | 15 | 2.52 | 33 | 3.50 | 150 |
| 12000 | ± 5% | 2.52 | 15 | 2.52 | 30 | 3.60 | 140 |
| 15000 | ± 5% | 2.52 | 15 | 2.52 | 26 | 4.00 | 130 |
| 18000 | ± 5% | 2.52 | 15 | 2.52 | 24 | 4.50 | 120 |
| 22000 | ± 5% | 2.52 | 15 | 2.52 | 22 | 4.80 | 110 |
| 27000 | ± 5% | 2.52 | 15 | 2.52 | 21 | 5.30 | 95 |
| 33000 | ± 5% | 2.52 | 15 | 2.52 | 20 | 6.10 | 85 |
| 39000 | ± 5% | 2.52 | 15 | 2.52 | 18 | 8.30 | 60 |
| 47000 | ± 5% | 2.52 | 15 | 2.52 | 17 | 12.00 | 45 |

ELECTRICAL SPECIFICATIONS

Inductance Range: 3.3 nH to 47000 nH

Inductance Tolerance: 0.3 nH for 3.3 nH
± 5 % for 6.8 nH to 47000 nH

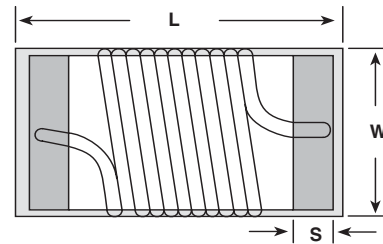
Operating Temperature: - 40 °C to 125 °C

Core Material: Ceramic from 3.3 nH to 1000 nH
Ferrite from 1200 nH to 47000 nH

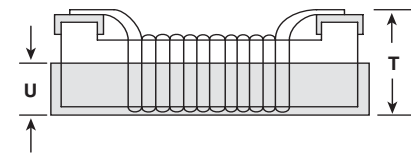
TEST EQUIPMENT

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

DIMENSIONS in inches [millimeters]



| L | W | S |
|-------------------------------|-------------------------------|-------------------------------|
| 0.098 ± 0.008 [2.50 ± 0.2] | 0.079 ± 0.008 [2.00 ± 0.2] | 0.020 ± 0.008 [0.50 ± 0.2] |



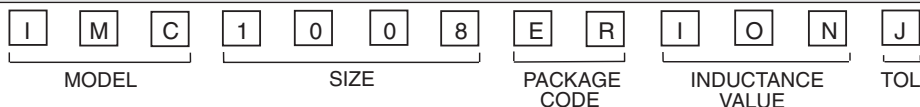
| U | T |
|---------------|-------------------------------|
| 0.02 [0.5] | 0.063 ± 0.008 [1.60 ± 0.2] |

DESCRIPTION

| | | | | |
|----------|------------------|----------------------|--------------|-------------------------|
| IMC-1008 | 10 nH | ± 5 % | ER | e4* |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JDEC LEAD FREE STANDARD |

*NOTE: For parts within 3.3 nH to 910 nH please use e4 for JDEC lead free standard. For parts within 1 µH to 47 µH please use e3 for JDEC lead free standard.

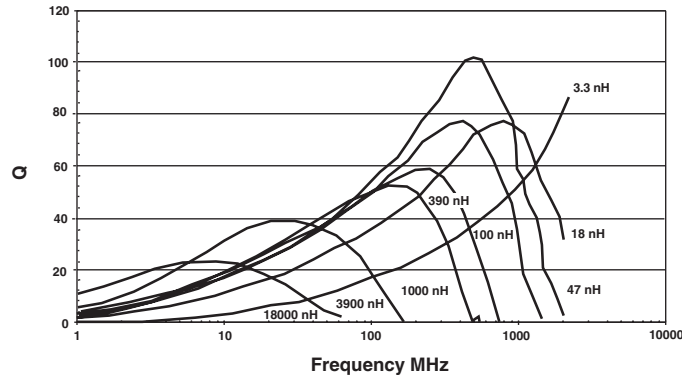
GLOBAL PART NUMBER



PERFORMANCE GRAPHS

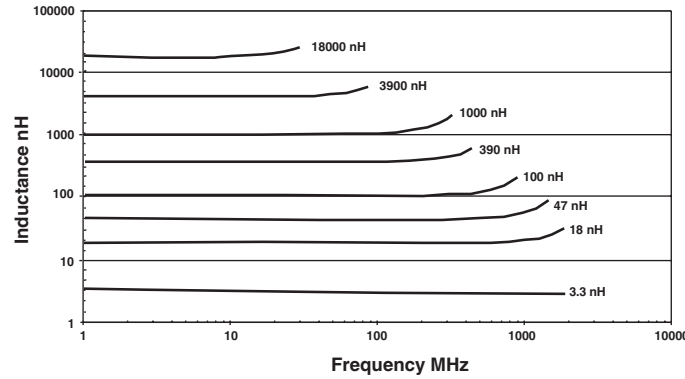
IMC-1008

Q vs Frequency



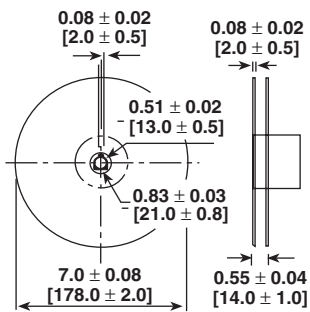
IMC-1008

Inductance vs Frequency

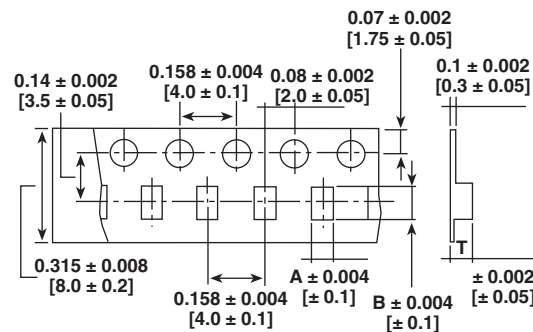


TAPE AND REEL SPECIFICATIONS in inches [millimeters]

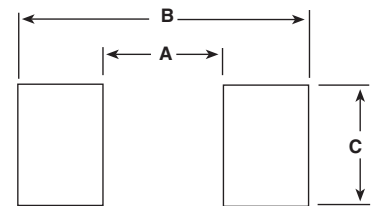
REEL DIMENSIONS



TAPE DIMENSIONS



RECOMMENDED PATTERN



| MODEL | UNITS PER REEL | MODEL | A | B | T | MODEL | A | B | C |
|----------|----------------|----------|----------------|-----------------|----------------|----------|-----------------|----------------|-----------------|
| IMC-1008 | 2000 | IMC-1008 | 0.087 [2.2] | 0.110 [2.80] | 0.071 [1.8] | IMC-1008 | 0.047 [1.20] | 0.150 [3.8] | 0.100 [2.54] |



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