

## Wirewound, Surface Mount Inductors



### STANDARD ELECTRICAL SPECIFICATIONS

| IND.<br>(nH) | TOL.           | TEST<br>FREQ.<br>(MHz) |      | Q<br>MIN. | SRF<br>MIN.<br>(MHz) | DCR<br>MAX.<br>(Ω) | RATED DC<br>CURRENT<br>(mA) |
|--------------|----------------|------------------------|------|-----------|----------------------|--------------------|-----------------------------|
|              |                | L                      | Q    |           |                      |                    |                             |
| 2.2          | 0.3 nH, 0.2 nH | 250                    | 1000 | 50        | 6000                 | 0.06               | 800                         |
| 2.7          | 0.3 nH, 0.2 nH | 250                    | 1000 | 35        | 6000                 | 0.08               | 800                         |
| 3.3          | 0.3 nH, 0.2 nH | 250                    | 1000 | 60        | 6000                 | 0.08               | 800                         |
| 3.9          | 0.3 nH, 0.2 nH | 250                    | 1000 | 60        | 6000                 | 0.06               | 600                         |
| 4.7          | 0.3 nH, 0.2 nH | 250                    | 1000 | 60        | 5800                 | 0.06               | 600                         |
| 5.6          | 5 %, 2 %       | 250                    | 1000 | 60        | 5800                 | 0.08               | 600                         |
| 6.8          | 5 %, 2 %       | 250                    | 1000 | 60        | 5500                 | 0.06               | 600                         |
| 8.2          | 5 %, 2 %       | 250                    | 1000 | 60        | 5500                 | 0.06               | 600                         |
| 10           | 5 %, 2 %       | 250                    | 500  | 60        | 4800                 | 0.08               | 600                         |
| 12           | 5 %, 2 %       | 250                    | 500  | 60        | 4100                 | 0.08               | 600                         |
| 15           | 5 %, 2 %       | 250                    | 500  | 60        | 3600                 | 0.08               | 600                         |
| 18           | 5 %, 2 %       | 250                    | 500  | 60        | 3400                 | 0.08               | 600                         |
| 22           | 5 %, 2 %       | 250                    | 500  | 60        | 3300                 | 0.10               | 600                         |
| 27           | 5 %, 2 %       | 250                    | 500  | 60        | 2600                 | 0.12               | 600                         |
| 33           | 5 %, 2 %       | 250                    | 500  | 60        | 2400                 | 0.15               | 500                         |
| 39           | 5 %, 2 %       | 250                    | 500  | 60        | 2100                 | 0.18               | 500                         |
| 47           | 5 %, 2 %       | 200                    | 500  | 60        | 1700                 | 0.15               | 500                         |
| 56           | 5 %, 2 %       | 200                    | 500  | 60        | 1600                 | 0.25               | 500                         |
| 68           | 5 %, 2 %       | 200                    | 500  | 60        | 1450                 | 0.27               | 500                         |
| 82           | 5 %, 2 %       | 150                    | 500  | 60        | 1350                 | 0.32               | 500                         |
| 100          | 5 %, 2 %       | 150                    | 500  | 60        | 1200                 | 0.43               | 500                         |
| 120          | 5 %, 2 %       | 150                    | 250  | 50        | 1100                 | 0.48               | 500                         |
| 150          | 5 %, 2 %       | 100                    | 250  | 50        | 950                  | 0.56               | 400                         |
| 180          | 5 %, 2 %       | 100                    | 250  | 50        | 900                  | 0.78               | 400                         |
| 220          | 5 %, 2 %       | 100                    | 250  | 50        | 860                  | 1.00               | 400                         |
| 270          | 5 %, 2 %       | 100                    | 250  | 45        | 850                  | 1.46               | 350                         |
| 330          | 5 %, 2 %       | 100                    | 250  | 45        | 800                  | 1.65               | 300                         |
| 390          | 5 %, 2 %       | 100                    | 250  | 45        | 780                  | 2.20               | 210                         |
| 470          | 5 %            | 25.2                   | 100  | 45        | 375                  | 0.95               | 500                         |
| 560          | 5 %            | 25.2                   | 100  | 45        | 340                  | 1.10               | 450                         |
| 680          | 5 %            | 25.2                   | 100  | 35        | 188                  | 1.20               | 400                         |
| 820          | 5 %            | 25.2                   | 100  | 35        | 215                  | 1.50               | 300                         |
| 1000         | 5 %            | 25.2                   | 50   | 35        | 200                  | 2.13               | 180                         |
| 1200         | 5 %            | 7.96                   | 7.96 | 15        | 200                  | 2.60               | 150                         |
| 1500         | 5 %            | 7.96                   | 7.96 | 15        | 200                  | 2.90               | 130                         |
| 1800         | 5 %            | 7.96                   | 7.96 | 15        | 120                  | 3.00               | 120                         |
| 2200         | 5 %            | 7.96                   | 7.96 | 15        | 110                  | 3.10               | 110                         |
| 2700         | 5 %            | 7.96                   | 7.96 | 15        | 100                  | 3.50               | 100                         |
| 3300         | 5 %            | 7.96                   | 7.96 | 15        | 70                   | 2.30               | 210                         |
| 3900         | 5 %            | 7.96                   | 7.96 | 15        | 60                   | 2.50               | 200                         |
| 4700         | 5 %            | 7.96                   | 7.96 | 15        | 50                   | 2.80               | 180                         |
| 5600         | 5 %            | 7.96                   | 7.96 | 15        | 45                   | 3.00               | 160                         |
| 6800         | 5 %            | 7.96                   | 7.96 | 15        | 45                   | 3.20               | 130                         |
| 8200         | 5 %            | 7.96                   | 7.96 | 15        | 40                   | 3.50               | 120                         |
| 10 000       | 5 %            | 2.52                   | 2.52 | 10        | 40                   | 5.00               | 80                          |

### 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
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 2.2 nH to 10 000 nH

**Inductance and Tolerance:** 0.3 nH for 2.2 nH to 4.7 nH, ± 5 % for 5.6 nH to 10 000 nH

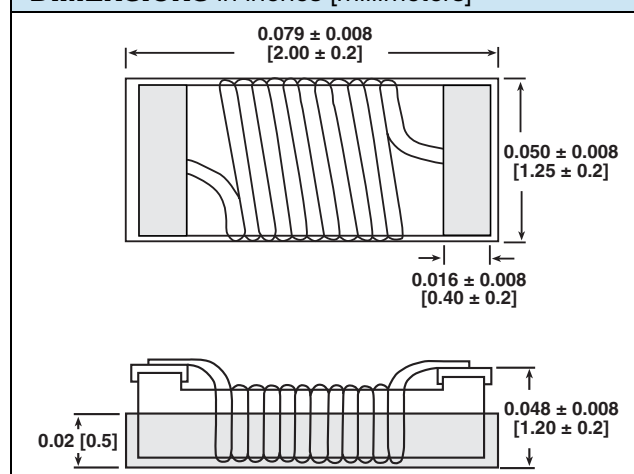
**Operating Temperature:** - 40 °C to + 125 °C

**Core Material:** Ceramic from 2.2 nH to 390 nH; Ferrite from 470 nH to 10 000 nH

### TEST EQUIPMENT

- Inductance and Q measured on HP4286A (2.2 nH to 390 nH) and HP4285A (470 nH to 10 000 nH)
- SRF is measured on HP8753E
- DCR is measured on HP4338B

### DIMENSIONS in inches [millimeters]



### DESCRIPTION

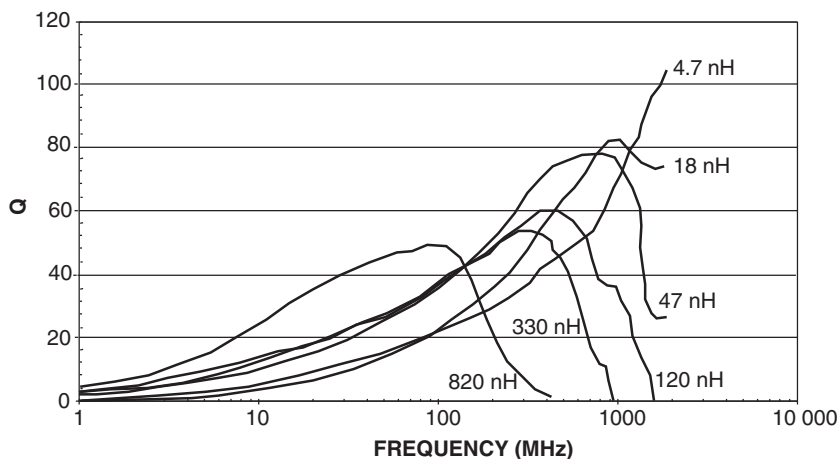
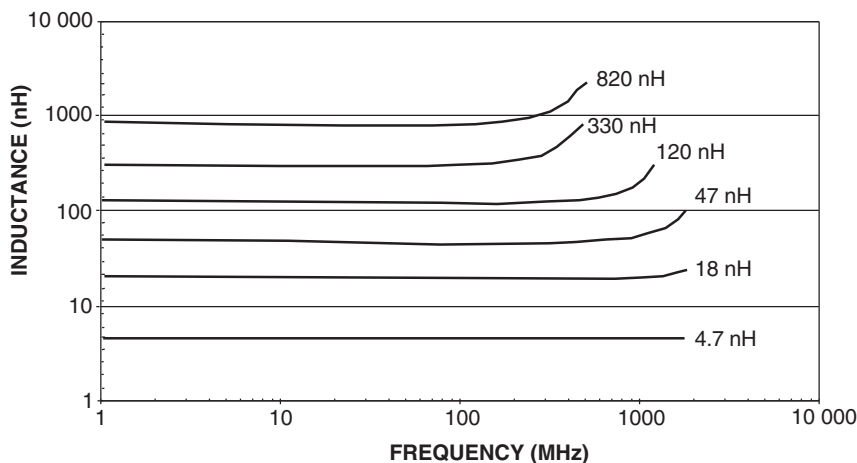
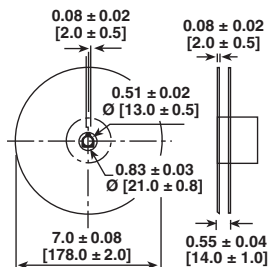
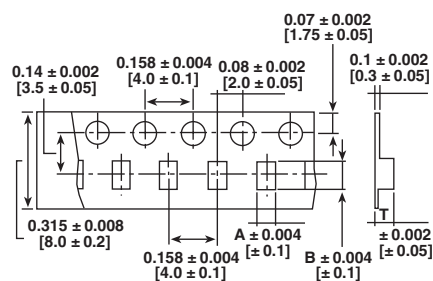
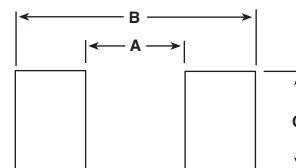
| IMC-0805-01 | 10 nH            | ± 5 %                | ER           | e4 <sup>(1)</sup>             |
|-------------|------------------|----------------------|--------------|-------------------------------|
| MODEL       | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

#### Note

<sup>(1)</sup> For parts within 2.2 nH to 390 nH please use e4 for JEDEC lead (Pb)-free standard. For parts within 470 nH to 10 000 nH please use e3 for JEDEC lead (Pb)-free standard.

### GLOBAL PART NUMBER

|                |   |   |      |   |   |              |   |                  |   |   |      |   |        |   |
|----------------|---|---|------|---|---|--------------|---|------------------|---|---|------|---|--------|---|
| I              | M | C | 0    | 8 | 0 | 5            | E | R                | 1 | 0 | N    | J | 0      | 1 |
| PRODUCT FAMILY |   |   | SIZE |   |   | PACKAGE CODE |   | INDUCTANCE VALUE |   |   | TOL. |   | SERIES |   |

**PERFORMANCE GRAPHS (IMC-0805-01)****Q VS. FREQUENCY****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-0805-01 | 2000           | IMC-0805-01 | 0.055<br>[1.4] | 0.091<br>[2.3] | 0.055<br>[1.4] | IMC-0805-01 | 0.047<br>[1.20] | 0.102<br>[2.6] | 0.047<br>[1.20] |



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