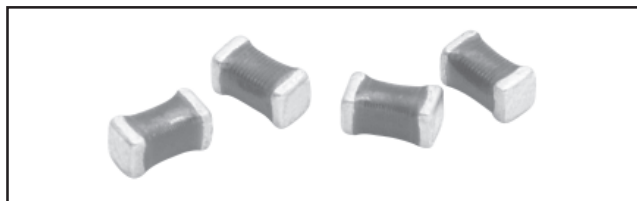


## Inductors

*High Frequency, Surface Mount, Laser Spiral, Coated*



### FEATURES

- Very small in size.
- High self-resonant frequency values.
- High Q values relative to size at higher frequencies.
- Coated coil provides protection and moisture resistance.
- Compatible with vapor phase and infrared reflow soldering.
- Tape and reel packaging for automatic handling, 3000/reel, EIA-481.
- L & Q value not effected by mounting orientation.

**Core Material:** Non-Magnetic.

### TEST EQUIPMENT

- Inductance and Q measured on HP4191A.
- SRF measured on HP8753B.

### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 1.5nH to 100nH.

**Inductance Tolerance:**  $\pm 0.3\text{nH}$ , 1.5nH to 3.3nH.  
 $\pm 5\%$ , 3.9nH to 100nH.

**Temperature Rating:** - 40°C to + 105°C (no load)  
- 40°C to + 85°C (at full rated current).

### STANDARD ELECTRICAL SPECIFICATIONS

| IND.<br>(nH) | TOLERANCE                             | TEST<br>FREQ.<br>L & Q<br>(MHz) | Q<br>MINIMUM | Q TYPICAL    |              |              | SELF-<br>RESONANT<br>FREQ. MIN.<br>(MHz) | DCR<br>MAXIMUM<br>(Ohms) | RATED<br>DC<br>CURRENT<br>(mA) |
|--------------|---------------------------------------|---------------------------------|--------------|--------------|--------------|--------------|------------------------------------------|--------------------------|--------------------------------|
|              |                                       |                                 |              | 100<br>(MHz) | 800<br>(MHz) | 1.8<br>(GHz) |                                          |                          |                                |
| 1.5          | $\pm 0.3\text{nH}$ (or $\pm 20\%$ )   | 100                             | 8            | 18           | 50           | 75           | 6000                                     | 0.07                     | 500                            |
| 1.8          | $\pm 0.3\text{nH}$ (or $\pm 16.7\%$ ) | 100                             | 8            | 18           | 48           | 72           | 6000                                     | 0.08                     | 500                            |
| 2.2          | $\pm 0.3\text{nH}$ (or $\pm 13.6\%$ ) | 100                             | 8            | 15           | 38           | 55           | 6000                                     | 0.09                     | 500                            |
| 2.7          | $\pm 0.3\text{nH}$ (or $\pm 11.1\%$ ) | 100                             | 8            | 16           | 40           | 60           | 6000                                     | 0.1                      | 500                            |
| 3.3          | $\pm 0.3\text{nH}$ (or $\pm 9.1\%$ )  | 100                             | 9            | 15           | 42           | 60           | 5500                                     | 0.12                     | 500                            |
| 3.9          | $\pm 5\%$                             | 100                             | 9            | 12           | 42           | 62           | 5500                                     | 0.15                     | 450                            |
| 4.7          | $\pm 5\%$                             | 100                             | 9            | 16           | 45           | 65           | 4800                                     | 0.17                     | 450                            |
| 5.6          | $\pm 5\%$                             | 100                             | 9            | 15           | 38           | 52           | 4600                                     | 0.18                     | 430                            |
| 6.8          | $\pm 5\%$                             | 100                             | 9            | 19           | 50           | 70           | 3550                                     | 0.2                      | 430                            |
| 8.2          | $\pm 5\%$                             | 100                             | 9            | 15           | 38           | 48           | 3500                                     | 0.28                     | 400                            |
| 10           | $\pm 5\%$                             | 100                             | 10           | 18           | 45           | 58           | 2800                                     | 0.32                     | 400                            |
| 12           | $\pm 5\%$                             | 100                             | 10           | 17           | 42           | 58           | 2800                                     | 0.35                     | 400                            |
| 15           | $\pm 5\%$                             | 100                             | 10           | 17           | 40           | 50           | 2500                                     | 0.41                     | 350                            |
| 18           | $\pm 5\%$                             | 100                             | 10           | 15           | 38           | 40           | 2300                                     | 0.45                     | 350                            |
| 22           | $\pm 5\%$                             | 100                             | 10           | 16           | 45           | —            | 2000                                     | 0.5                      | 300                            |
| 27           | $\pm 5\%$                             | 100                             | 10           | 18           | 45           | —            | 2000                                     | 0.55                     | 300                            |
| 33           | $\pm 5\%$                             | 100                             | 10           | 16           | 40           | —            | 1800                                     | 0.6                      | 300                            |
| 39           | $\pm 5\%$                             | 100                             | 11           | 17           | 40           | —            | 1800                                     | 0.8                      | 300                            |
| 47           | $\pm 5\%$                             | 100                             | 11           | 17           | 45           | —            | 1800                                     | 0.95                     | 250                            |
| 56           | $\pm 5\%$                             | 100                             | 12           | 17           | 38           | —            | 1800                                     | 1.2                      | 250                            |
| 68           | $\pm 5\%$                             | 100                             | 12           | 18           | 35           | —            | 1500                                     | 1.3                      | 250                            |
| 82           | $\pm 5\%$                             | 100                             | 12           | 18           | 35           | —            | 1500                                     | 1.5                      | 250                            |
| 100          | $\pm 5\%$                             | 100                             | 12           | 17           | 30           | —            | 1300                                     | 1.8                      | 200                            |

### HOW TO ORDER

IMC-0603      10nH       $\pm 5\%*$   
MODEL      INDUCTANCE      INDUCTANCE  
                    VALUE      TOLERANCE

\*Use tolerance % shown in electrical specifications in lieu of  $\pm 0.3\text{nH}$  on 1.5 - 3.3nH.

### DIMENSIONAL CONFIGURATIONS

[Numbers in brackets indicate millimeters]

