

## Wirewound, Surface Mount Inductors



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### FEATURES

- Excellent solderability and resistance to soldering heat
- Suitable for reflow soldering
- High reliability and easy surface mount assembly
- Wide range of inductance values available
- Tape and reel packaging for automatic handling, 3000/reel EIA 481
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

### STANDARD ELECTRICAL SPECIFICATIONS

| IND. (nH) | TOL.           | TEST FREQ. (MHz) | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) <sup>(1)</sup> |
|-----------|----------------|------------------|--------|----------------|--------------|--------------------------------------|
|           |                | L & Q            |        |                |              |                                      |
| 2.0       | 0.3 nH, 0.2 nH | 250              | 16     | 6900           | 0.08         | 700                                  |
| 3.9       | 0.3 nH, 0.2 nH | 250              | 20     | 6900           | 0.08         | 700                                  |
| 4.7       | 0.3 nH, 0.2 nH | 250              | 20     | 5800           | 0.11         | 700                                  |
| 6.8       | 10 %, 5 %      | 250              | 30     | 5800           | 0.11         | 700                                  |
| 8.2       | 10 %, 5 %      | 250              | 30     | 4600           | 0.10         | 700                                  |
| 10        | 5 %, 2 %       | 250              | 30     | 4800           | 0.13         | 700                                  |
| 12        | 5 %, 2 %       | 250              | 35     | 4000           | 0.13         | 700                                  |
| 15        | 5 %, 2 %       | 250              | 35     | 4000           | 0.17         | 700                                  |
| 18        | 5 %, 2 %       | 250              | 38     | 3100           | 0.17         | 700                                  |
| 22        | 5 %, 2 %       | 250              | 38     | 3000           | 0.22         | 700                                  |
| 27        | 5 %, 2 %       | 250              | 40     | 2800           | 0.22         | 600                                  |
| 33        | 5 %, 2 %       | 250              | 43     | 2300           | 0.22         | 600                                  |
| 39        | 5 %, 2 %       | 250              | 43     | 2200           | 0.25         | 600                                  |
| 47        | 5 %, 2 %       | 200              | 40     | 2000           | 0.28         | 600                                  |
| 56        | 5 %, 2 %       | 200              | 40     | 1900           | 0.31         | 600                                  |
| 68        | 5 %, 2 %       | 200              | 40     | 1700           | 0.34         | 600                                  |
| 72        | 5 %, 2 %       | 150              | 35     | 1700           | 0.49         | 400                                  |
| 82        | 5 %, 2 %       | 150              | 35     | 1700           | 0.54         | 400                                  |
| 100       | 5 %, 2 %       | 150              | 35     | 1400           | 0.63         | 400                                  |
| 120       | 5 %, 2 %       | 150              | 35     | 1300           | 0.65         | 300                                  |
| 150       | 5 %, 2 %       | 150              | 35     | 1000           | 0.92         | 280                                  |
| 180       | 5 %, 2 %       | 100              | 30     | 1000           | 1.25         | 240                                  |
| 220       | 5 %, 2 %       | 100              | 30     | 1000           | 1.70         | 200                                  |
| 270       | 5 %, 2 %       | 100              | 30     | 1000           | 1.80         | 170                                  |
| 330       | 5 %            | 100              | 25     | 450            | 2.00         | 150                                  |
| 390       | 5 %            | 100              | 20     | 350            | 2.00         | 170                                  |

**Note**

(1) Value obtained when current flows and temperature has risen 15 °C

### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 2 nH to 270 nH

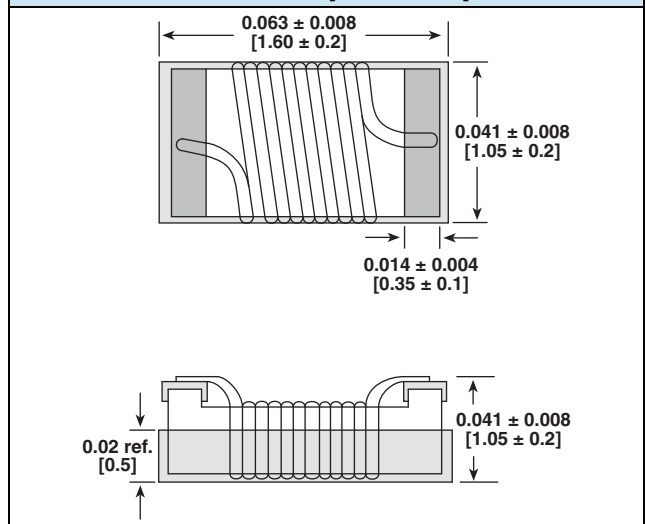
**Operating Temperature:** -40 °C to +125 °C

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

### TEST EQUIPMENT

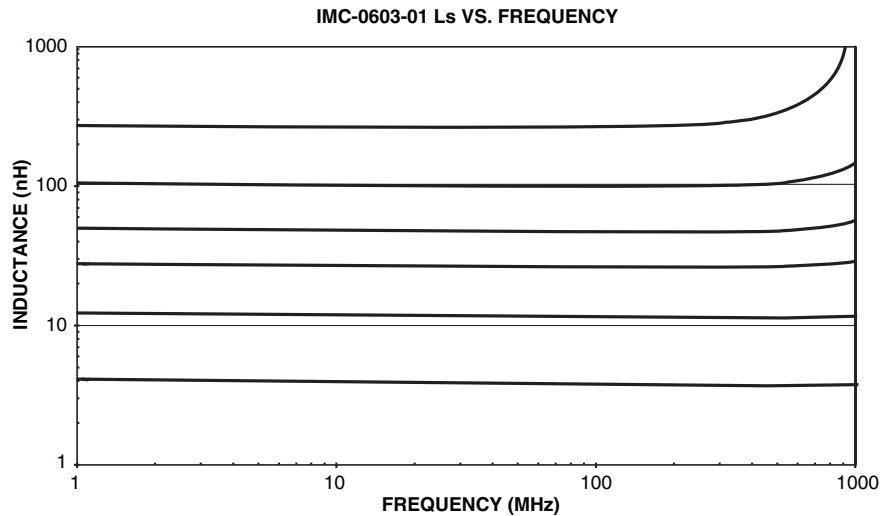
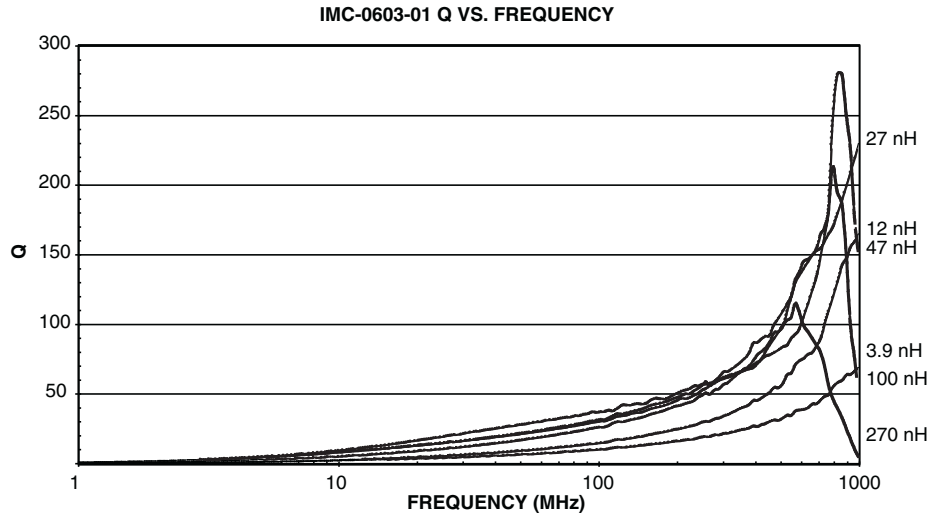
- Inductance is measured in HP4287A RF LCR meter with HP16193 fixture
- Q is measured in HP4287A RF LCR meter with HP16193 fixture
- SRF is measured in HP8753E RF network analyzer
- DCR is measured in HP4338B milliohmeter

### DIMENSIONS in inches [millimeters]



| DESCRIPTION |                  |                      |              |                               |
|-------------|------------------|----------------------|--------------|-------------------------------|
| IMC-0603-01 | 10 nH            | ± 5 %                | ER           | e4                            |
| MODEL       | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

| GLOBAL PART NUMBER |   |   |      |   |   |              |   |                  |   |   |      |        |   |   |
|--------------------|---|---|------|---|---|--------------|---|------------------|---|---|------|--------|---|---|
| I                  | M | C | 0    | 6 | 0 | 3            | E | R                | 1 | 0 | N    | J      | 0 | 1 |
| PRODUCT FAMILY     |   |   | SIZE |   |   | PACKAGE CODE |   | INDUCTANCE VALUE |   |   | TOL. | SERIES |   |   |

**PERFORMANCE GRAPHS (IMC-0603-01)**

**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-0603-01     | 3000           | IMC-0603-01     | 0.039<br>[1.0] | 0.070<br>[1.8] | 0.039<br>[1.0] | IMC-0603-01         | 0.025<br>[0.64] | 0.075<br>[1.92] | 0.040<br>[1.02] |



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