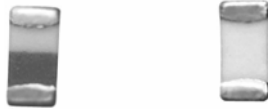


Surface Mount, Multi Layer High Frequency Ceramic Inductors



MECHANICAL SPECIFICATIONS

Solderability: 90 % coverage after 5 s dip in 235 °C solder following 60 s preheat at 120 °C and type R flux dip

Resistance to Solder Heat: 10 s in 260 °C solder, after preheat and flux above

Terminal Strength: 0.3 kg (0.66 lbs) for 30 s

Beam Strength: 0.3 kg (0.66 lbs)

Flex: 0.0788" [2.0 mm] min. mounted on 0.063" [1.6 mm] thick PC board

FEATURES

- High reliability
- Surface mountable
- Reflow or wave solderable
- Tape and reel packaging per EIA specifications: 4000 pieces on 7" reel
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: - 55 °C to + 125 °C

Thermal Shock: 100 cycles, - 40 °C to + 85 °C

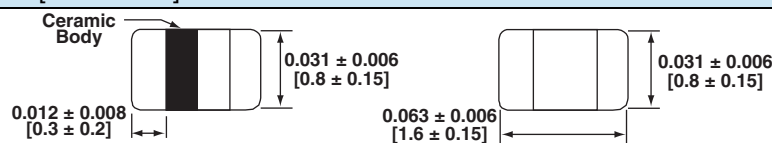
Humidity: + 40 °C, 85 % RH, 1000 h at full rated current

Load Life: 85 °C for 1000 h at full rated current

STANDARD ELECTRICAL SPECIFICATIONS

| PART NUMBER | IND. (nH) | TOL. | TEST FREQUENCY (MHz) | Q MIN. | Q TYPICAL | | | SRF (MHz) | | DCR MAX. (Ω) | RATED DC CURRENT MAX. (mA) |
|---------------|-----------|--------|----------------------|--------|-----------|---------|----------|-----------|--------|--------------|----------------------------|
| | | | | | 100 MHz | 500 MHz | 1000 MHz | MIN. | TYP. | | |
| ILC0603ER1N0S | 1.0 | 0.3 nH | 100 | 8 | 15 | 43 | 63 | 10 000 | 15 000 | 0.05 | 300 |
| ILC0603ER1N2S | 1.2 | 0.3 nH | 100 | 8 | 14 | 38 | 55 | 10 000 | 14 000 | 0.05 | 300 |
| ILC0603ER1N5S | 1.5 | 0.3 nH | 100 | 8 | 11 | 28 | 40 | 6000 | 13 000 | 0.10 | 300 |
| ILC0603ER1N8S | 1.8 | 0.3 nH | 100 | 8 | 10 | 24 | 35 | 6000 | 11 000 | 0.10 | 300 |
| ILC0603ER2N2S | 2.2 | 0.3 nH | 100 | 8 | 14 | 35 | 40 | 6000 | 10 000 | 0.10 | 300 |
| ILC0603ER2N7S | 2.7 | 0.3 nH | 100 | 10 | 12 | 29 | 45 | 6000 | 7000 | 0.10 | 300 |
| ILC0603ER3N3S | 3.3 | 0.3 nH | 100 | 10 | 16 | 40 | 47 | 4000 | 5900 | 0.12 | 300 |
| ILC0603ER3N9S | 3.9 | 0.3 nH | 100 | 10 | 11 | 25 | 35 | 3500 | 4500 | 0.14 | 300 |
| ILC0603ER4N7S | 4.7 | 0.3 nH | 100 | 10 | 11 | 26 | 35 | 3500 | 4500 | 0.16 | 300 |
| ILC0603ER5N6S | 5.6 | 0.3 nH | 100 | 10 | 15 | 36 | 46 | 3500 | 4000 | 0.18 | 300 |
| ILC0603ER6N8J | 6.8 | 5 % | 100 | 10 | 15 | 38 | 47 | 3000 | 3600 | 0.22 | 300 |
| ILC0603ER8N2J | 8.2 | 5 % | 100 | 10 | 13 | 31 | 41 | 3000 | 3500 | 0.24 | 300 |
| ILC0603ER10NJ | 10 | 5 % | 100 | 12 | 15 | 34 | 47 | 2800 | 3000 | 0.26 | 300 |
| ILC0603ER12NJ | 12 | 5 % | 100 | 12 | 12 | 27 | 49 | 2000 | 2500 | 0.28 | 300 |
| ILC0603ER15NJ | 15 | 5 % | 100 | 12 | 15 | 30 | 36 | 2000 | 2200 | 0.32 | 300 |
| ILC0603ER18NJ | 18 | 5 % | 100 | 12 | 15 | 28 | 31 | 1800 | 2000 | 0.35 | 300 |
| ILC0603ER22NJ | 22 | 5 % | 100 | 12 | 17 | 34 | 36 | 1800 | 1900 | 0.40 | 300 |
| ILC0603ER27NJ | 27 | 5 % | 100 | 12 | 15 | 31 | 30 | 1500 | 1700 | 0.45 | 300 |
| ILC0603ER33NJ | 33 | 5 % | 100 | 12 | 15 | 28 | 24 | 1200 | 1500 | 0.55 | 300 |
| ILC0603ER39NJ | 39 | 5 % | 100 | 12 | 14 | 31 | 28 | 1100 | 1300 | 0.60 | 300 |
| ILC0603ER47NJ | 47 | 5 % | 100 | 12 | 17 | 31 | 28 | 900 | 1300 | 0.70 | 300 |
| ILC0603ER56NJ | 56 | 5 % | 100 | 12 | 19 | 34 | 26 | 900 | 1200 | 0.75 | 300 |
| ILC0603ER68NJ | 68 | 5 % | 100 | 12 | 17 | 30 | 20 | 700 | 1000 | 0.85 | 300 |
| ILC0603ER82NJ | 82 | 5 % | 100 | 12 | 16 | 29 | 18 | 600 | 1000 | 0.95 | 300 |
| ILC0603ERR10J | 100 | 5 % | 100 | 12 | 16 | 24 | 3 | 600 | 800 | 1.00 | 300 |
| ILC0603ERR12J | 120 | 5 % | 50 | 8 | 17 | 21 | - | 500 | 800 | 1.20 | 300 |
| ILC0603ERR15J | 150 | 5 % | 50 | 8 | 19 | 20 | - | 500 | 700 | 1.20 | 300 |
| ILC0603ERR18J | 180 | 5 % | 50 | 8 | 18 | 13 | - | 400 | 600 | 1.30 | 300 |
| ILC0603ERR22J | 220 | 5 % | 50 | 8 | 18 | - | - | 400 | 500 | 1.50 | 300 |
| ILC0603ERR27J | 270 | 5 % | 50 | 8 | 19 | - | - | 350 | 490 | 1.60 | 300 |

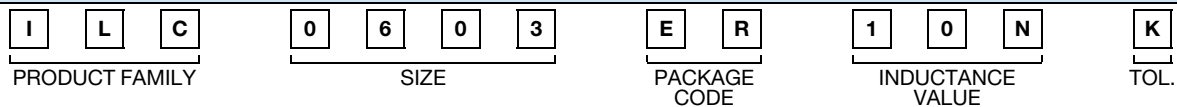
DIMENSIONS in inches [millimeters]



DESCRIPTION

| | | | | |
|----------|------------------|----------------------|--------------|-------------------------------|
| ILC-0603 | 10 nH | ± 10 % | ER | e3 |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

GLOBAL PART NUMBER





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