

ILC-0402



Vishay Dale

Surface Mount, Multi Layer High Frequency Ceramic Inductor



FEATURES

- High reliability
- Surface mountable
- Reflow or wave solderable
- Tape and reel packaging per EIA specifications: 4000 pieces on 7" reel
- 100 % lead (Pb)-free and RoHS compliant



RoHS
COMPLIANT

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

MECHANICAL SPECIFICATIONS

Solderability: 90 % coverage after 5 second 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: 0.2 kg (0.44 lbs) for 30 s
Beam Strength: 0.2 kg (0.44 lbs)

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 full rated current

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | | | | | | |
|------------------------------------|-----------------|---------|----------|----------------------|-------------|---------|----------|--------------|-----------|--------|-------------------------|
| PART NUMBER | INDUCTANCE (nH) | TOL. | Q (MIN.) | TEST FREQUENCY (MHz) | Q (TYPICAL) | | | DCR MAX. (Ω) | SRF (MHz) | | MAX. RATED CURRENT (mA) |
| | | | | | 100 MHz | 500 MHz | 1000 MHz | | MIN. | TYP | |
| ILC0402ER1N0S | 1.0 | ±0.3 nH | 8 | 100 | 10 | 21 | 30 | 0.12 | 10 000 | 18 000 | 300 |
| ILC0402ER1N2S | 1.2 | ±0.3 nH | 8 | 100 | 10 | 23 | 31 | 0.12 | 10000 | 17 000 | 300 |
| ILC0402ER1N5S | 1.5 | ±0.3 nH | 8 | 100 | 10 | 25 | 35 | 0.13 | 6000 | 11 000 | 300 |
| ILC0402ER1N8S | 1.8 | ±0.3 nH | 8 | 100 | 10 | 25 | 35 | 0.14 | 6000 | 11 000 | 300 |
| ILC0402ER2N2S | 2.2 | ±0.3 nH | 8 | 100 | 10 | 23 | 32 | 0.16 | 6000 | 8700 | 300 |
| ILC0402ER2N7S | 2.7 | ±0.3 nH | 8 | 100 | 10 | 21 | 30 | 0.17 | 6000 | 7800 | 300 |
| ILC0402ER3N3S | 3.3 | ±0.3 nH | 8 | 100 | 10 | 22 | 31 | 0.19 | 6000 | 6400 | 300 |
| ILC0402ER3N9S | 3.9 | ±0.3 nH | 8 | 100 | 10 | 19 | 26 | 0.22 | 4000 | 5800 | 300 |
| ILC0402ER4N7S | 4.7 | ±0.3 nH | 8 | 100 | 10 | 19 | 26 | 0.24 | 4000 | 5100 | 300 |
| ILC0402ER5N6S | 5.6 | ±0.3 nH | 8 | 100 | 10 | 20 | 26 | 0.27 | 4000 | 4700 | 300 |
| ILC0402ER6N8J | 6.8 | ±5 % | 8 | 100 | 10 | 19 | 26 | 0.32 | 3900 | 4200 | 250 |
| ILC0402ER8N2J | 8.2 | ±5 % | 8 | 100 | 10 | 22 | 29 | 0.37 | 3600 | 3800 | 250 |
| ILC0402ER10NJ | 10 | ±5 % | 8 | 100 | 10 | 18 | 23 | 0.42 | 3200 | 3400 | 250 |
| ILC0402ER12NJ | 12 | ±5 % | 8 | 100 | 10 | 18 | 23 | 0.50 | 2700 | 2900 | 250 |
| ILC0402ER15NJ | 15 | ±5 % | 8 | 100 | 10 | 19 | 24 | 0.55 | 2300 | 2500 | 250 |
| ILC0402ER18NJ | 18 | ±5 % | 8 | 100 | 10 | 20 | 25 | 0.65 | 2100 | 2400 | 200 |
| ILC0402ER22NJ | 22 | ±5 % | 8 | 100 | 10 | 22 | 26 | 0.80 | 1900 | 2200 | 200 |
| ILC0402ER27NJ | 27 | ±5 % | 8 | 100 | 10 | 22 | 25 | 0.90 | 1600 | 2000 | 200 |
| ILC0402ER33NJ | 33 | ±5 % | 8 | 100 | 10 | 19 | 20 | 1.00 | 1300 | 1800 | 200 |
| ILC0402ER39NJ | 39 | ±5 % | 8 | 100 | 10 | 21 | 20 | 1.20 | 1200 | 1600 | 150 |
| ILC0402ER47NJ | 47 | ±5 % | 8 | 100 | 10 | 18 | 15 | 1.30 | 1000 | 1500 | 150 |
| ILC0402ER56NJ | 56 | ±5 % | 8 | 100 | 11 | 21 | 14 | 1.40 | 750 | 1200 | 150 |
| ILC0402ER68NJ | 68 | ±5 % | 8 | 100 | 11 | 18 | 12 | 1.40 | 750 | 1250 | 150 |
| ILC0402ER82NJ | 82 | ±5 % | 8 | 100 | 11 | 19 | 8 | 2.00 | 600 | 1100 | 100 |
| ILC0402ERR10J | 100 | ±5 % | 8 | 100 | 11 | 17 | 2 | 2.00 | 600 | 1000 | 100 |



| DESCRIPTION | | | | |
|--------------------|------------------------|-----------------------------|------------------|----------------------------------|
| ILC-0402 MODEL | 10 nH INDUCTANCE VALUE | ± 10 % INDUCTANCE TOLERANCE | ER PACKAGE CODE | e3 JEDEC LEAD (Pb)-FREE STANDARD |
| GLOBAL PART NUMBER | | | | |
| I | L | C | 0 4 0 2 | E R 1 0 N K |
| PRODUCT FAMILY | | | SIZE | PACKAGE CODE |
| | | | INDUCTANCE VALUE | TOL. |



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