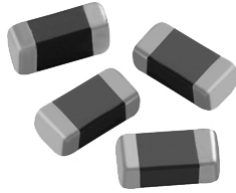


Monolithic Chip Inductors



FEATURES

- High reliability
- Surface mountable
- Magnetically self shielded
- Nickel barrier plating virtually eliminates silver migration
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

MECHANICAL SPECIFICATIONS

Solderability: 90 % coverage after 5 s dip in 235 °C solder following 60 s preheat at 120 °C to 150 °C and type R flux dip

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

Termination: 100 % Sn

Terminal Strength: 0.5 kg for 30 s

Beam Strength: 0.3 kg

ENVIRONMENTAL SPECIFICATIONS

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

Thermal Shock: -40 °C to +85 °C

Humidity: 90 % RH at 40 °C, 1000 h at full rated current

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

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | | |
|------------------------------------|------|------------------------------------|---------------------|-----------|-------------------|-----------------------------|-----------------------------|
| INDUCTANCE (μ H) | TOL. | THICKNESS "D" (INCHES [mm]) | TEST FREQ. (MHz) | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) |
| | | | L AND Q | | | | |
| 0.047 | 20 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 50 | 10 | 260 | 0.15 | 50 |
| 0.068 | 20 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 50 | 10 | 250 | 0.25 | 50 |
| 0.082 | 20 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 50 | 10 | 245 | 0.25 | 50 |
| 0.10 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 276 | 0.50 | 50 |
| 0.12 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 236 | 0.50 | 50 |
| 0.15 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 207 | 0.60 | 50 |
| 0.18 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 190 | 0.60 | 50 |
| 0.22 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 173 | 0.80 | 50 |
| 0.27 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 157 | 0.80 | 50 |
| 0.33 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 144 | 0.85 | 35 |
| 0.39 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 127 | 1.00 | 35 |
| 0.47 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 121 | 1.35 | 35 |
| 0.56 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 110 | 1.55 | 35 |
| 0.68 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 104 | 1.70 | 35 |
| 0.82 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 25 | 15 | 98 | 2.10 | 35 |
| 1.0 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 87 | 0.60 | 25 |
| 1.2 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 74 | 0.80 | 25 |
| 1.5 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 69 | 0.80 | 25 |
| 1.8 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 64 | 0.95 | 25 |
| 2.2 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 58 | 1.15 | 15 |
| 2.7 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 52 | 1.35 | 15 |
| 3.3 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 46 | 1.55 | 15 |
| 3.9 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 41 | 1.70 | 15 |
| 4.7 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 10 | 35 | 38 | 2.10 | 15 |
| 5.6 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 4 | 30 | 22 | 1.55 | 15 |
| 6.8 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 4 | 30 | 20 | 1.70 | 15 |
| 8.2 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 4 | 30 | 18 | 2.10 | 15 |
| 10 | 10 % | 0.031 \pm 0.008 [0.80 \pm 0.2] | 2 | 30 | 17 | 2.55 | 15 |

| DESCRIPTION | | | | |
|-------------|------------------|----------------------|--------------|--------------------------------|
| ILSB-0603 | 3.3 μ H | \pm 10 % | ER | e3 |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

| GLOBAL PART NUMBER | | | | |
|--------------------|---|---|---|------|
| I | L | S | B | |
| PRODUCT FAMILY | | | | |
| 0 | 6 | 0 | 3 | |
| SIZE | | | | |
| E | R | | | |
| PACKAGE CODE | | | | |
| 3 | R | 3 | | |
| INDUCTANCE VALUE | | | | |
| | | | K | |
| | | | | TOL. |

| DIMENSIONS in inches [millimeters] | | | | | | | |
|------------------------------------|-------------------------------|-------------------------------|------------------------------|----------------|----------------|-----------------|----------------|
| | | | | | | | |
| A | B | C | D | E | F | G | H |
| 0.063 ± 0.006 [1.6 ± 0.15] | 0.031 ± 0.006 [0.8 ± 0.15] | 0.012 ± 0.006 [0.3 ± 0.15] | 0.031 ± 0.008 [0.8 ± 0.2] | 0.105 [2.7] | 0.035 [0.9] | 0.025 [0.64] | 0.040 [1.0] |

| TAPE AND REEL SPECIFICATIONS 0603 SIZE PER EIA-481-1 in inches [millimeters] | | |
|--|------------------------------------|-------------------------------------|
| <p>4000 Piece/Reel</p> | A ₀ | 0.045 ± 0.004 [1.14 ± 0.1] |
| | B ₀ | 0.068 ± 0.004 [1.75 ± 0.1] |
| | D ₀ | 0.059 + 0.005/- 0.000 [1.5 + 0.127] |
| | D ₁ | 0.039 min. [1.0 min.] |
| | E ₁ | 0.069 ± 0.004 [1.75 ± 0.1] |
| | F | 0.138 ± 0.002 [3.50 ± 0.05] |
| | K ₀ | 0.045 ± 0.002 [1.15 ± 0.05] |
| | P ₀ | 0.157 ± 0.004 [4.00 ± 0.1] |
| | P ₁ | 0.157 ± 0.004 [4.00 ± 0.1] |
| | P ₂ | 0.079 ± 0.002 [2.00 ± 0.05] |
| | W | 0.327 max. [8.3 max.] |
| | T | 0.008 ± 0.002 [0.2 ± 0.05] |
| | A | 7.000 ± 0.079 [178 ± 2.0] |
| | N | 2.500 [63.5] |
| | C | 0.512 ± 0.020 [13.00 ± 0.50] |
| W ₁ | 0.315 + 0.059/- 0.000 [8.00 + 1.5] | |
| T ₁ | 0.079 ± 0.002 [2.00 ± 0.05] | |



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