

Monolithic Chip Inductors



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: 0.6 kg for 30 s

Beam Strength: 1.0 kg

FEATURES

- High reliability
- Surface mountable
- Magnetically self shielded
- Nickel barrier plating virtually eliminates silver migration
- 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: - 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

| IND. AT ± 10 % (µH) | TOL. | THICKNESS "D" (INCHES [mm]) | TEST FREQ. (MHz) | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) |
|---------------------------|------|--------------------------------|---------------------|-----------|-------------------|--------------------|-----------------------------|
| | | | L & Q | | | | |
| 0.047 | 20 % | 0.035 ± 0.008 [0.90 ± 0.2] | 50 | 15 | 320 | 0.20 | 300 |
| 0.056 | 20 % | 0.035 ± 0.008 [0.90 ± 0.2] | 50 | 15 | 300 | 0.20 | 300 |
| 0.068 | 20 % | 0.035 ± 0.008 [0.90 ± 0.2] | 50 | 15 | 280 | 0.20 | 300 |
| 0.082 | 20 % | 0.035 ± 0.008 [0.90 ± 0.2] | 50 | 15 | 255 | 0.20 | 300 |
| 0.10 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 20 | 279 | 0.30 | 250 |
| 0.12 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 20 | 253 | 0.30 | 250 |
| 0.15 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 20 | 230 | 0.40 | 250 |
| 0.18 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 20 | 213 | 0.40 | 250 |
| 0.22 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 20 | 196 | 0.50 | 250 |
| 0.27 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 20 | 173 | 0.50 | 250 |
| 0.33 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 20 | 167 | 0.55 | 250 |
| 0.39 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 25 | 156 | 0.65 | 200 |
| 0.47 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 25 | 144 | 0.65 | 200 |
| 0.56 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 25 | 133 | 0.75 | 150 |
| 0.68 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 25 | 121 | 0.80 | 150 |
| 0.82 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 25 | 25 | 115 | 1.00 | 150 |
| 1.0 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 10 | 45 | 87 | 0.40 | 50 |
| 1.2 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 10 | 45 | 75 | 0.50 | 50 |
| 1.5 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 10 | 45 | 69 | 0.50 | 50 |
| 1.8 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 10 | 45 | 64 | 0.60 | 50 |
| 2.2 | 10 % | 0.035 ± 0.008 [0.90 ± 0.2] | 10 | 45 | 58 | 0.65 | 30 |
| 2.7 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 10 | 45 | 52 | 0.75 | 30 |
| 3.3 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 10 | 45 | 48 | 0.80 | 30 |
| 3.9 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 10 | 45 | 44 | 0.90 | 30 |
| 4.7 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 10 | 45 | 41 | 1.00 | 30 |
| 5.6 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 4 | 45 | 37 | 0.90 | 15 |
| 6.8 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 4 | 45 | 34 | 1.00 | 15 |
| 8.2 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 4 | 45 | 30 | 1.10 | 15 |
| 10 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 2 | 50 | 28 | 1.15 | 15 |
| 12 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 2 | 50 | 26 | 1.25 | 15 |
| 15 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 1 | 30 | 22 | 0.80 | 5 |
| 18 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 1 | 30 | 21 | 0.90 | 5 |
| 22 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 1 | 30 | 19 | 1.10 | 5 |
| 27 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 1 | 30 | 17 | 1.15 | 5 |
| 33 | 10 % | 0.049 ± 0.008 [1.25 ± 0.2] | 0.4 | 30 | 13 | 1.25 | 5 |

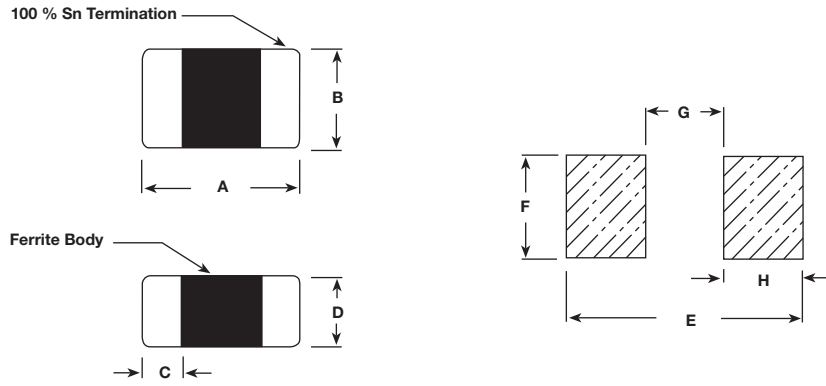
DESCRIPTION

| | | | | |
|-----------|------------------|----------------------|--------------|-------------------------------|
| ILSB-0805 | 3.3 µH | ± 10 % | ER | e3 |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

GLOBAL PART NUMBER

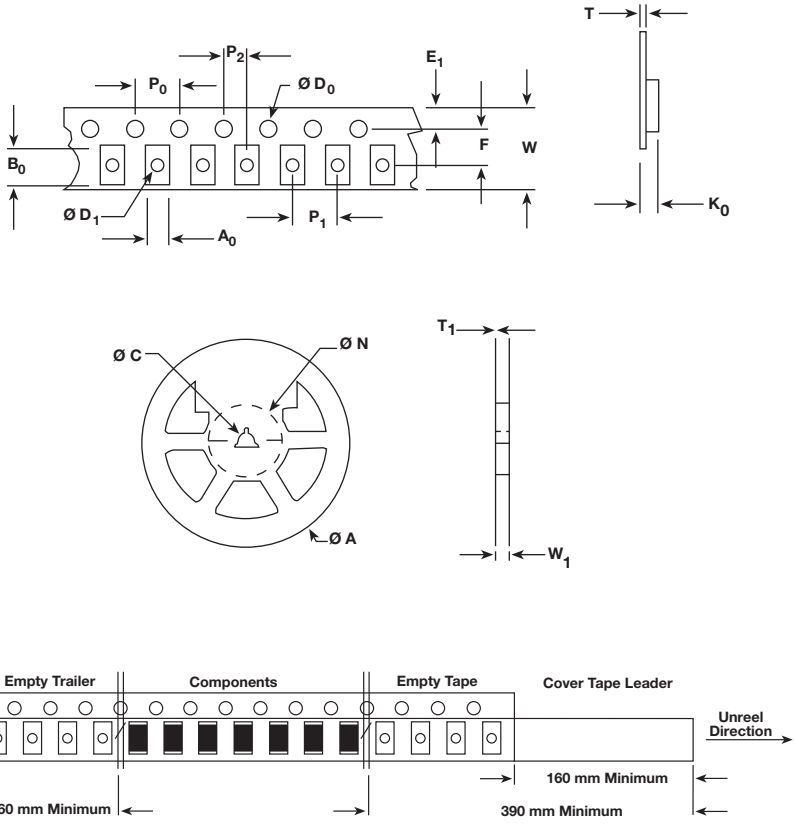
| | | | | | | | | | | | | | |
|----------------|---|---|---|------|---|---|---|--------------|---|------------------|---|---|------|
| I | L | S | B | 0 | 8 | 0 | 5 | E | R | 3 | R | 3 | K |
| PRODUCT FAMILY | | | | SIZE | | | | PACKAGE CODE | | INDUCTANCE VALUE | | | TOL. |

DIMENSIONS in inches [millimeters]



| A | B | C | D | E | F | G | H |
|------------------------------|-------------------------------|------------------------------|----------------------|----------------|----------------|----------------|----------------|
| 0.079 ± 0.008 [2.0 ± 0.2] | 0.049 ± 0.008 [1.25 ± 0.2] | 0.020 ± 0.012 [0.5 ± 0.3] | see electrical specs | 0.120 [3.0] | 0.051 [1.3] | 0.040 [1.0] | 0.040 [1.0] |

TAPE AND REEL SPECIFICATIONS 0805 SIZE PER EIA-481-1 in inches [millimeters]



| | |
|----------------|-------------------------------------|
| A ₀ | 0.059 ± 0.004 [1.50 ± 0.1] |
| B ₀ | 0.092 ± 0.004 [2.34 ± 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 | 0.049 ± 0.002 [1.24 ± 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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