

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: 0.1 kg for 30 s

Beam Strength: 2.5 kg

FEATURES

- 3.2 mm x 1.6 mm x 0.5 mm size
- 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

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

| PART NUMBER | INDUCTANCE (μH) | TOL. (%) | TEST FREQ. (MHz) | Q MIN. | SRF MIN. (MHz) | DCR MAX. (Ω) | RATED DC CURRENT (mA) |
|----------------|--------------------|-------------|---------------------|-----------|----------------------|--------------------|-----------------------------|
| | | | L AND Q | | | | |
| ILSB1206ER47NM | 0.047 | 20 | 50 | 20 | 368 | 0.15 | 300 |
| ILSB1206ER68NM | 0.068 | 20 | 50 | 20 | 322 | 0.25 | 300 |
| ILSB1206ERR10K | 0.10 | 10 | 25 | 20 | 271 | 0.25 | 250 |
| ILSB1206ERR12K | 0.12 | 10 | 25 | 20 | 253 | 0.30 | 250 |
| ILSB1206ERR15K | 0.15 | 10 | 25 | 20 | 230 | 0.30 | 250 |
| ILSB1206ERR18K | 0.18 | 10 | 25 | 20 | 213 | 0.40 | 250 |
| ILSB1206ERR22K | 0.22 | 10 | 25 | 20 | 196 | 0.40 | 250 |
| ILSB1206ERR27K | 0.27 | 10 | 25 | 20 | 173 | 0.50 | 250 |
| ILSB1206ERR33K | 0.33 | 10 | 25 | 20 | 167 | 0.60 | 250 |
| ILSB1206ERR39K | 0.39 | 10 | 25 | 25 | 156 | 0.50 | 200 |
| ILSB1206ERR47K | 0.47 | 10 | 25 | 25 | 144 | 0.60 | 200 |
| ILSB1206ERR68K | 0.68 | 10 | 25 | 25 | 121 | 0.80 | 150 |
| ILSB1206ER1R0K | 1.0 | 10 | 10 | 45 | 87 | 0.40 | 100 |
| ILSB1206ER1R2K | 1.2 | 10 | 10 | 45 | 75 | 0.50 | 100 |
| ILSB1206ER1R5K | 1.5 | 10 | 10 | 45 | 69 | 0.50 | 50 |
| ILSB1206ER1R8K | 1.8 | 10 | 10 | 45 | 64 | 0.50 | 50 |
| ILSB1206ER2R2K | 2.2 | 10 | 10 | 45 | 58 | 0.50 | 50 |
| ILSB1206ER3R3K | 3.3 | 10 | 10 | 45 | 48 | 0.70 | 50 |
| ILSB1206ER3R9K | 3.9 | 10 | 10 | 45 | 44 | 0.80 | 50 |
| ILSB1206ER4R7K | 4.7 | 10 | 10 | 45 | 41 | 0.90 | 50 |
| ILSB1206ER5R6K | 5.6 | 10 | 4 | 45 | 37 | 0.70 | 25 |
| ILSB1206ER6R8K | 6.8 | 10 | 4 | 45 | 34 | 0.80 | 25 |
| ILSB1206ER8R2K | 8.2 | 10 | 4 | 45 | 30 | 0.90 | 25 |
| ILSB1206ER100K | 10 | 10 | 2 | 45 | 28 | 1.00 | 25 |
| ILSB1206ER120K | 12 | 10 | 2 | 45 | 26 | 1.05 | 15 |
| ILSB1206ER150K | 15 | 10 | 1 | 45 | 22 | 0.70 | 5 |
| ILSB1206ER180K | 18 | 10 | 1 | 45 | 21 | 0.70 | 5 |
| ILSB1206ER220K | 22 | 10 | 1 | 35 | 19 | 0.90 | 5 |
| ILSB1206ER270K | 27 | 10 | 1 | 35 | 17 | 0.90 | 5 |
| ILSB1206ER330K | 33 | 10 | 1 | 35 | 15 | 1.05 | 5 |



DESCRIPTION

| | | | | |
|-----------|------------------|----------------------|--------------|--------------------------------|
| ILSB-1206 | 3.3 μ H | $\pm 10 \%$ | ER | e3 |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

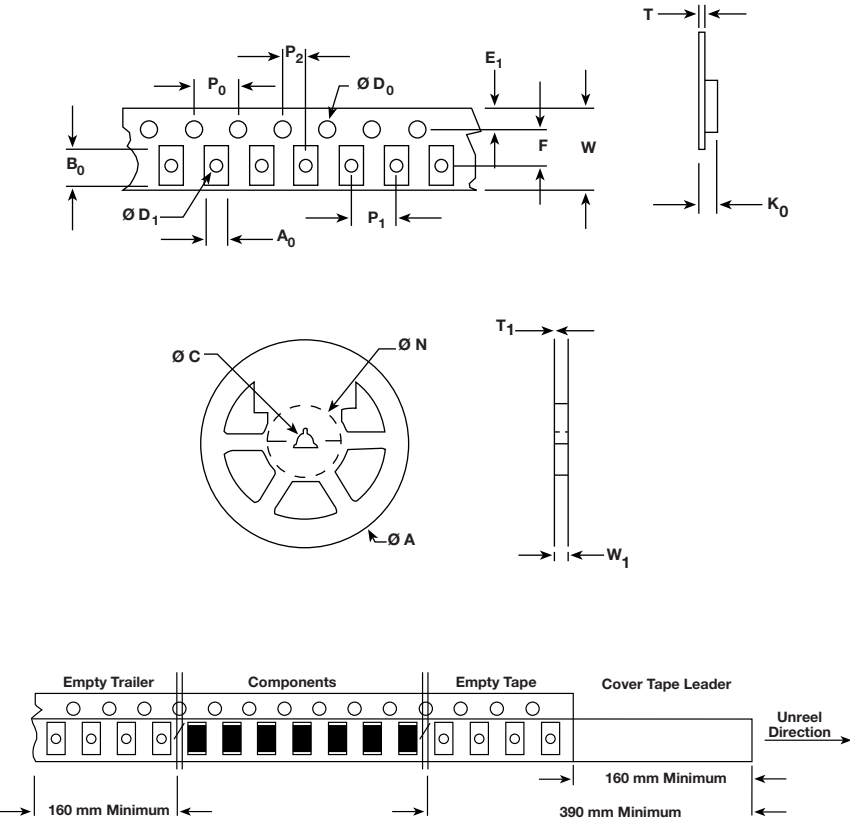
GLOBAL PART NUMBER

| | | | | |
|----------------|---------|--------------------|--------------------|-----------|
| I L S B | 1 2 0 6 | E R | 3 R 3 | K |
| PRODUCT FAMILY | SIZE | PACKAGE CODE | INDUCTANCE VALUE | TOLERANCE |
| | | ER = tape and reel | 3R3 = 3.3 Ω | K = 10 % |

DIMENSIONS in inches [millimeters]

| <div><div><p>100 % Sn Termination</p><p>Ferrite Body</p></div><div><p>Dimensional Outline</p></div></div> <div><div><p>Suggested Pad Layout</p></div></div> | | | | | | | |
|---|--------------------------------------|--------------------------------------|---------------------------------------|----------------|----------------|----------------|----------------|
| A | B | C | D | E | F | G | H |
| 0.126 \pm 0.008 [3.2 \pm 0.2] | 0.063 \pm 0.008 [1.6 \pm 0.2] | 0.020 \pm 0.012 [0.5 \pm 0.3] | 0.043 \pm 0.012 [1.10 \pm 0.3] | 0.185 [4.7] | 0.070 [1.8] | 0.087 [2.2] | 0.047 [1.2] |

TAPE AND REEL SPECIFICATIONS 1206 SIE PER EIA-481-1 in inches [millimeters]

| | | |
|---|----------------|-------------------------------------|
|  | A ₀ | 0.073 ± 0.004 [1.85 ± 0.1] |
| | B ₀ | 0.135 ± 0.004 [3.43 ± 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 | 0.048 ± 0.002 [1.22 ± 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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