

## 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.<br>AT ± 10 %<br>(µH) | TOL. | THICKNESS "D"<br>(INCHES [mm]) | TEST FREQ.<br>(MHz) | Q<br>MIN. | SRF MIN.<br>(MHz) | DCR<br>MAX.<br>(Ω) | RATED<br>DC CURRENT<br>(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. |





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