

High Current, Surface Mount Inductors



FEATURES

- High energy storage
- Low resistance
- Tape and reel packaging for automatic handling
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE

ELECTRICAL SPECIFICATIONS

Inductance Range: 1.0 μ H to 68 μ H

Inductance Tolerance: 20 %

Operating Temperature: - 25 °C to + 105 °C

Storage Temperature: - 40 °C to + 125 °C

Resistance to Solder Heat: 260 °C for 10 s

MATERIALS

Core: Ferrite

Wire: Enamelled copper wire

Terminals: Ag and Sn/Ag/Cu

| STANDARD ELECTRICAL SPECIFICATIONS | | | |
|------------------------------------|------------------|-----------------------|-------------------------------------|
| INDUCTANCE (μ H) | TEST FREQUENCY L | DCR MAX. (Ω) | RATED DC CURRENT (A) ⁽¹⁾ |
| 1.0 | 7.96 MHz | 0.033 | 3.80 |
| 1.4 | 7.96 MHz | 0.038 | 3.30 |
| 1.8 | 7.96 MHz | 0.042 | 2.91 |
| 2.2 | 7.96 MHz | 0.047 | 2.60 |
| 2.7 | 7.96 MHz | 0.052 | 2.43 |
| 3.3 | 7.96 MHz | 0.058 | 2.15 |
| 3.9 | 7.96 MHz | 0.076 | 1.98 |
| 4.7 | 7.96 MHz | 0.094 | 1.70 |
| 5.6 | 7.96 MHz | 0.101 | 1.60 |
| 6.8 | 7.96 MHz | 0.117 | 1.41 |
| 8.2 | 7.96 MHz | 0.132 | 1.26 |
| 10.0 | 2.52 MHz | 0.182 | 1.15 |
| 12.0 | 2.52 MHz | 0.210 | 1.05 |
| 15.0 | 2.52 MHz | 0.235 | 0.92 |
| 18.0 | 2.52 MHz | 0.338 | 0.84 |
| 22.0 | 2.52 MHz | 0.378 | 0.76 |
| 27.0 | 2.52 MHz | 0.522 | 0.71 |
| 33.0 | 2.52 MHz | 0.540 | 0.64 |
| 39.0 | 2.52 MHz | 0.587 | 0.59 |
| 47.0 | 2.52 MHz | 0.844 | 0.54 |
| 56.0 | 2.52 MHz | 0.937 | 0.50 |
| 68.0 | 2.52 MHz | 1.117 | 0.46 |

Note

⁽¹⁾ Rated Current: Value obtained when current flows and the temperature has risen 40 °C or when DC current flows and the initial value of inductance has fallen by 10 %, whichever is smaller.

| DIMENSIONS in inches [millimeters] | | |
|------------------------------------|-----------------------------|-----------------------------|
| <p>TYPICAL PAD LAYOUT</p> | | |
| A | B | C |
| 0.178 ± 0.01 [4.5 ± 0.3] | 0.126 ± 0.01 [3.2 ± 0.3] | 0.158 ± 0.01 [4.0 ± 0.3] |
| D | E | F |
| 0.178 [4.5] | 0.069 [1.75] | 0.059 [1.5] |

| DESCRIPTION | | | | |
|------------------|-----------------------------|----------------------|--------------|-------------------------------|
| IDCP-1813 | 10 μH | ± 20 % | ER | e1 |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

| GLOBAL PART NUMBER | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px 5px;">I</td><td style="padding: 2px 5px;">D</td><td style="padding: 2px 5px;">C</td><td style="padding: 2px 5px;">P</td></tr> </table> <p>PRODUCT FAMILY</p> | I | D | C | P | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px 5px;">1</td><td style="padding: 2px 5px;">8</td><td style="padding: 2px 5px;">1</td><td style="padding: 2px 5px;">3</td></tr> </table> <p>SIZE</p> | 1 | 8 | 1 | 3 | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px 5px;">E</td><td style="padding: 2px 5px;">R</td></tr> </table> <p>PACKAGE CODE</p> | E | R | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px 5px;">1</td><td style="padding: 2px 5px;">0</td><td style="padding: 2px 5px;">0</td></tr> </table> <p>INDUCTANCE VALUE</p> | 1 | 0 | 0 | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td style="padding: 2px 5px;">M</td></tr> </table> <p>INDUCTANCE TOLERANCE</p> | M |
| I | D | C | P | | | | | | | | | | | | | | | |
| 1 | 8 | 1 | 3 | | | | | | | | | | | | | | | |
| E | R | | | | | | | | | | | | | | | | | |
| 1 | 0 | 0 | | | | | | | | | | | | | | | | |
| M | | | | | | | | | | | | | | | | | | |



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