

High Current, Surface Mount Inductor



FEATURES

- High energy storage.
- Low resistance.
- Magnetically shielded.
- Tape and reel packaging for automatic handling.

ELECTRICAL SPECIFICATIONS

Inductance Range: 1.0 μ H to 47.0 μ H, tested at 1.0Vrms.

Inductance Tolerance: 20%, tighter tolerances available upon request.

Operating Temperature: - 40°C to + 125°C.

Resistance to Solder Heat: 260°C for 10 seconds.

MATERIALS

Core: Ferrite.

Wire: Enamelled copper wire.

Base: LCP.

Terminal: Nickel bronze.

Adhesive: Epoxy resin.

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | |
|------------------------------------|------------|------------------------|-----------------|-------------|-------------|
| IND. (μ H) | TOLERANCE | TEST FREQUENCY L (KHz) | DCR MAX. (Ohms) | Isat (Amps) | Irms (Amps) |
| 1.0 | $\pm 20\%$ | 100 | 0.021 | 5.6 | 5.0 |
| 1.5 | $\pm 20\%$ | 100 | 0.022 | 5.2 | 4.5 |
| 2.2 | $\pm 20\%$ | 100 | 0.032 | 5.0 | 3.8 |
| 3.3 | $\pm 20\%$ | 100 | 0.039 | 3.9 | 3.3 |
| 4.7 | $\pm 20\%$ | 100 | 0.054 | 3.2 | 2.7 |
| 6.8 | $\pm 20\%$ | 100 | 0.075 | 2.8 | 2.2 |
| 10 | $\pm 20\%$ | 100 | 0.101 | 2.4 | 2.0 |
| 15 | $\pm 20\%$ | 100 | 0.150 | 2.0 | 1.5 |
| 22 | $\pm 20\%$ | 100 | 0.207 | 1.6 | 1.3 |
| 33 | $\pm 20\%$ | 100 | 0.334 | 1.4 | 1.1 |
| 47 | $\pm 20\%$ | 100 | 0.472 | 1.0 | 0.8 |

Inductance drop = 10% typ. at Isat
 $\Delta T = 15^\circ\text{C}$ typ. at Iirms

| DIMENSIONS in inches [millimeters] | | | | | | | | |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | | | | | | | |
| A (Max.) | B (Max.) | D (Max.) | E | F | G | H | I | J |
| 0.510 [12.95] | 0.370 [9.40] | 0.200 [5.08] | 0.100 [2.54] | 0.100 [2.54] | 0.300 [7.62] | 0.115 [2.92] | 0.290 [7.37] | 0.110 [2.79] |

| DESCRIPTION | | |
|-------------|------------------|----------------------|
| IDCS-5020 | 10 μ H | $\pm 20\%$ |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE |

| SAP PART NUMBERING GUIDELINES (INTERNAL) | | | | |
|--|---|---|---|------|
| I | D | C | S | |
| PRODUCT FAMILY | | | | |
| 5 | 0 | 2 | 0 | |
| SIZE | | | | |
| N | B | | | |
| PACKAGE CODE | | | | |
| 1 | 0 | 0 | | |
| INDUCTANCE VALUE | | | | |
| | | | | M |
| | | | | TOL. |

See the end of this data book for conversion tables