

## High Current, Surface Mount Inductor



### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 1.0 H to 1000  $\mu$ H, tested at 1.0 Vrms

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

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

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

### FEATURES

- High energy storage
- Low resistance
- Tape and reel packaging for automatic handling
- 100 % lead (Pb)-free and RoHS compliant



**RoHS**  
COMPLIANT

### MATERIALS

**Core:** Ferrite

**Wire:** Enamelled copper wire Base: LCP

**Terminal:** Nickel bronze

**Adhesive:** Epoxy resin

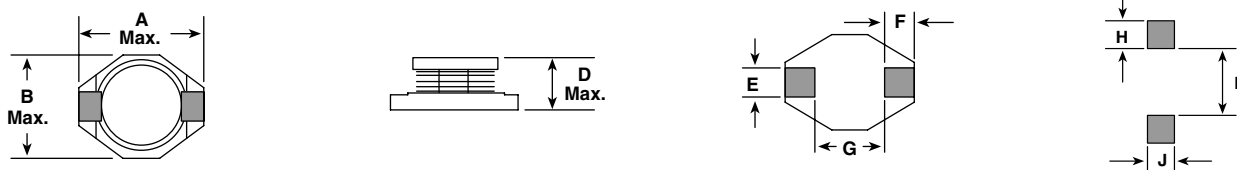
### STANDARD ELECTRICAL SPECIFICATIONS

| INDUCTANCE<br>( $\mu$ H) | TOLERANCE | TEST FREQUENCY L<br>(kHz) | DCR MAXIMUM<br>(Ohms) | Isat<br>(Amps) | Irms<br>(Amps) |
|--------------------------|-----------|---------------------------|-----------------------|----------------|----------------|
| 1.0                      | ± 20 %    | 100                       | 0.009                 | 9.0            | 6.8            |
| 1.5                      | ± 20 %    | 100                       | 0.010                 | 8.0            | 6.4            |
| 2.2                      | ± 20 %    | 100                       | 0.012                 | 7.0            | 6.1            |
| 3.3                      | ± 20 %    | 100                       | 0.015                 | 6.4            | 5.4            |
| 4.7                      | ± 20 %    | 100                       | 0.018                 | 5.4            | 4.8            |
| 6.8                      | ± 20 %    | 100                       | 0.027                 | 4.6            | 4.4            |
| 10                       | ± 20 %    | 100                       | 0.038                 | 3.8            | 3.9            |
| 15                       | ± 20 %    | 100                       | 0.046                 | 3.0            | 3.1            |
| 22                       | ± 20 %    | 100                       | 0.085                 | 2.6            | 2.7            |
| 33                       | ± 20 %    | 100                       | 0.10                  | 2.0            | 2.1            |
| 47                       | ± 20 %    | 100                       | 0.14                  | 1.6            | 1.8            |
| 68                       | ± 20 %    | 100                       | 0.20                  | 1.4            | 1.5            |
| 100                      | ± 20 %    | 100                       | 0.28                  | 1.2            | 1.3            |
| 150                      | ± 20 %    | 100                       | 0.40                  | 1.0            | 1.0            |
| 220                      | ± 20 %    | 100                       | 0.61                  | 0.8            | 0.8            |
| 330                      | ± 20 %    | 100                       | 1.02                  | 0.6            | 0.6            |
| 470                      | ± 20 %    | 100                       | 1.27                  | 0.5            | 0.5            |
| 680                      | ± 20 %    | 100                       | 2.02                  | 0.4            | 0.4            |
| 1000                     | ± 20 %    | 100                       | 3.00                  | 0.3            | 0.3            |

Inductance drop = 10 % typ. at Isat

$\Delta$ GT = 15°C typ. at Irms

### DIMENSIONS in inches [millimeters]

|  |                 |                 |                 |                 |                 |                 |                 |                 |
|--------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| A (Max.)                                                                             | B (Max.)        | D (Max.)        | E               | F               | G               | H               | I               | J               |
| 0.510<br>[12.95]                                                                     | 0.370<br>[9.40] | 0.205<br>[5.21] | 0.100<br>[2.54] | 0.100<br>[2.54] | 0.300<br>[7.62] | 0.115<br>[2.92] | 0.290<br>[7.37] | 0.110<br>[2.79] |

### DESCRIPTION

|                          |                                                    |                                          |                              |                                               |
|--------------------------|----------------------------------------------------|------------------------------------------|------------------------------|-----------------------------------------------|
| <b>IDC-5020</b><br>MODEL | <b>10 <math>\mu</math>H</b><br>INDUCTANCE<br>VALUE | <b>± 20 %</b><br>INDUCTANCE<br>TOLERANCE | <b>ER</b><br>PACKAGE<br>CODE | <b>e3</b><br>JEDEC LEAD (Pb)-FREE<br>STANDARD |
|--------------------------|----------------------------------------------------|------------------------------------------|------------------------------|-----------------------------------------------|

### GLOBAL PART NUMBER

|                            |                                     |                   |                            |          |
|----------------------------|-------------------------------------|-------------------|----------------------------|----------|
| <b>I</b> <b>D</b> <b>C</b> | <b>5</b> <b>0</b> <b>2</b> <b>0</b> | <b>E</b> <b>R</b> | <b>1</b> <b>0</b> <b>0</b> | <b>M</b> |
| PRODUCT FAMILY             | SIZE                                | PACKAGE CODE      | INDUCTANCE VALUE           | TOL.     |



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