

# High Current, Surface Mount Inductors - Shielded



## FEATURES

- High energy storage
- Low resistance
- Magnetically shielded
- Tape and reel packaging for automatic handling
- Material categorization:  
For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

## ELECTRICAL SPECIFICATIONS

**Inductance Range:** 1.0  $\mu$ H to 10 000  $\mu$ H, tested at 1.0 V<sub>RMS</sub>  
**Inductance Tolerance:** 20 %, tighter tolerance available upon request

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

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

## MECHANICAL SPECIFICATIONS

**Core:** Ferrite

**Wire:** Enamelled copper wire

**Base:** Ceramic

**Terminals:** Gold over nickel

**Adhesive:** Epoxy resin

## STANDARD ELECTRICAL SPECIFICATIONS

| INDUCTANCE ( $\mu$ H) | TOLERANCE | TEST FREQUENCY L (kHz) | DCR MAX. ( $\Omega$ ) | RATED DC CURRENT (A) <sup>(1)</sup> |
|-----------------------|-----------|------------------------|-----------------------|-------------------------------------|
| 1.0                   | ± 20 %    | 100                    | 0.040                 | 3.0                                 |
| 1.5                   | ± 20 %    | 100                    | 0.045                 | 2.8                                 |
| 2.2                   | ± 20 %    | 100                    | 0.050                 | 1.8                                 |
| 3.3                   | ± 20 %    | 100                    | 0.055                 | 1.6                                 |
| 4.7                   | ± 20 %    | 100                    | 0.060                 | 1.4                                 |
| 6.8                   | ± 20 %    | 100                    | 0.065                 | 1.2                                 |
| 10                    | ± 20 %    | 100                    | 0.075                 | 1.0                                 |
| 15                    | ± 20 %    | 100                    | 0.090                 | 0.80                                |
| 22                    | ± 20 %    | 100                    | 0.11                  | 0.70                                |
| 33                    | ± 20 %    | 100                    | 0.19                  | 0.60                                |
| 47                    | ± 20 %    | 100                    | 0.23                  | 0.50                                |
| 68                    | ± 20 %    | 100                    | 0.29                  | 0.40                                |
| 100                   | ± 20 %    | 100                    | 0.48                  | 0.30                                |
| 150                   | ± 20 %    | 100                    | 0.59                  | 0.26                                |
| 220                   | ± 20 %    | 100                    | 0.77                  | 0.22                                |
| 330                   | ± 20 %    | 100                    | 1.4                   | 0.20                                |
| 470                   | ± 20 %    | 100                    | 1.8                   | 0.19                                |
| 680                   | ± 20 %    | 100                    | 2.2                   | 0.18                                |
| 1000                  | ± 20 %    | 100                    | 3.4                   | 0.15                                |
| 1500                  | ± 20 %    | 100                    | 4.2                   | 0.12                                |
| 2200                  | ± 20 %    | 100                    | 8.5                   | 0.10                                |
| 3300                  | ± 20 %    | 100                    | 11.0                  | 0.08                                |
| 4700                  | ± 20 %    | 100                    | 13.9                  | 0.06                                |
| 6800                  | ± 20 %    | 100                    | 25.0                  | 0.04                                |
| 10 000                | ± 20 %    | 100                    | 32.8                  | 0.02                                |

### Notes

<sup>(1)</sup> 30 °C temperature rise

## DIMENSIONS in inches [millimeters]

|  |              |              |              |              |              |              |              |              |
|--------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| A (Max.)                                                                             | B (Max.)     | D (Max.)     | E            | F            | G            | H            | I            | J            |
| 0.260 [6.60]                                                                         | 0.175 [4.45] | 0.115 [2.92] | 0.050 [1.27] | 0.040 [1.02] | 0.170 [4.32] | 0.055 [1.40] | 0.160 [4.06] | 0.140 [3.56] |

## DESCRIPTION

| IDCS-2512 | 10 $\mu$ H       | ± 20 %               | ER           | e4                            |
|-----------|------------------|----------------------|--------------|-------------------------------|
| MODEL     | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

## GLOBAL PART NUMBER

|                |          |          |          |          |          |          |          |              |          |                  |          |          |                      |
|----------------|----------|----------|----------|----------|----------|----------|----------|--------------|----------|------------------|----------|----------|----------------------|
| <b>I</b>       | <b>D</b> | <b>C</b> | <b>S</b> | <b>2</b> | <b>5</b> | <b>1</b> | <b>2</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 |          |          | INDUCTANCE TOLERANCE |



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