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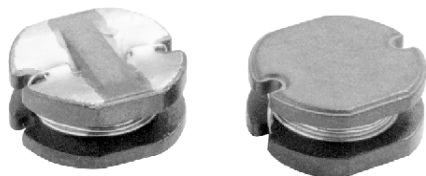


www.vishay.com

**IDCP-1813**

Vishay Dale

## High Current, Surface Mount Inductors - Non-Shielded



### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 1.0  $\mu$ H to 68  $\mu$ 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

| STANDARD ELECTRICAL SPECIFICATIONS |                        |                          |                                           |
|------------------------------------|------------------------|--------------------------|-------------------------------------------|
| INDUCTANCE<br>( $\mu$ H)           | TEST<br>FREQUENCY<br>L | DCR MAX.<br>( $\Omega$ ) | RATED DC<br>CURRENT<br>(A) <sup>(1)</sup> |
| 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

<sup>(1)</sup> 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.

### FEATURES

- High energy storage
- Low resistance
- 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

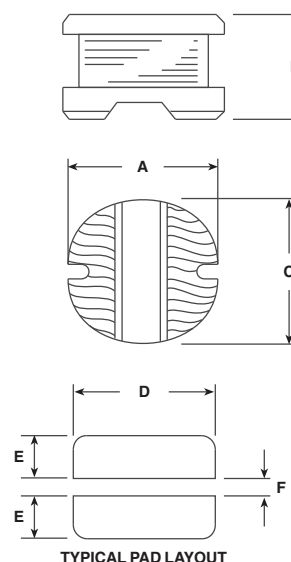
### MATERIALS

**Core:** Ferrite

**Wire:** Enamelled copper wire

**Terminals:** Ag and Sn/Ag/Cu

### DIMENSIONS in inches [millimeters]



| A                                   | B                                   | C                                   |
|-------------------------------------|-------------------------------------|-------------------------------------|
| 0.178 $\pm$ 0.01<br>[4.5 $\pm$ 0.3] | 0.126 $\pm$ 0.01<br>[3.2 $\pm$ 0.3] | 0.158 $\pm$ 0.01<br>[4.0 $\pm$ 0.3] |
| D                                   | E                                   | F                                   |
| 0.178 [4.5]                         | 0.069 [1.75]                        | 0.059 [1.5]                         |

### DESCRIPTION

| IDCP-1813 | 10 $\mu$ H       | $\pm$ 20 %           | ER           | e1                            |
|-----------|------------------|----------------------|--------------|-------------------------------|
| MODEL     | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

### GLOBAL PART NUMBER

|                |   |   |   |      |   |   |   |              |   |                  |   |   |                      |
|----------------|---|---|---|------|---|---|---|--------------|---|------------------|---|---|----------------------|
| I              | D | C | P | 1    | 8 | 1 | 3 | E            | R | 1                | 0 | 0 | M                    |
| PRODUCT FAMILY |   |   |   | SIZE |   |   |   | PACKAGE CODE |   | INDUCTANCE VALUE |   |   | INDUCTANCE TOLERANCE |



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