

# High Current, Surface Mount Inductors - Wirewound Molded



## STANDARD ELECTRICAL SPECIFICATIONS

| IND.<br>AT 1 kHz<br>( $\mu$ H) | DCR<br>MAX.<br>( $\Omega$ ) | RATED<br>CURRENT MAX.<br>(A) | INCREMENTAL<br>CURRENT APPROX.<br>(A) |
|--------------------------------|-----------------------------|------------------------------|---------------------------------------|
| 1.0                            | 0.015                       | 5.11                         | 4.41                                  |
| 1.2                            | 0.016                       | 4.93                         | 4.11                                  |
| 1.5                            | 0.017                       | 4.63                         | 3.66                                  |
| 1.8                            | 0.022                       | 4.27                         | 3.22                                  |
| 2.2                            | 0.031                       | 3.61                         | 2.62                                  |
| 2.7                            | 0.038                       | 3.18                         | 2.40                                  |
| 3.3                            | 0.045                       | 2.94                         | 2.13                                  |
| 3.9                            | 0.062                       | 2.57                         | 2.05                                  |
| 4.7                            | 0.083                       | 2.17                         | 1.93                                  |
| 5.6                            | 0.091                       | 2.08                         | 1.79                                  |
| 6.8                            | 0.101                       | 1.94                         | 1.62                                  |
| 8.2                            | 0.118                       | 1.83                         | 1.50                                  |
| 10.0                           | 0.126                       | 1.74                         | 1.36                                  |
| 12.0                           | 0.170                       | 1.50                         | 1.26                                  |
| 15.0                           | 0.228                       | 1.29                         | 1.11                                  |
| 18.0                           | 0.306                       | 1.13                         | 1.05                                  |
| 22.0                           | 0.336                       | 1.05                         | 0.96                                  |
| 27.0                           | 0.389                       | 0.98                         | 0.86                                  |
| 33.0                           | 0.440                       | 0.92                         | 0.75                                  |
| 39.0                           | 0.490                       | 0.86                         | 0.72                                  |
| 47.0                           | 0.646                       | 0.74                         | 0.68                                  |
| 56.0                           | 0.845                       | 0.65                         | 0.64                                  |
| 68.0                           | 1.040                       | 0.61                         | 0.58                                  |
| 82.0                           | 1.240                       | 0.56                         | 0.51                                  |
| 100.0                          | 1.440                       | 0.48                         | 0.42                                  |
| 120.0                          | 2.180                       | 0.45                         | 0.40                                  |
| 150.0                          | 2.900                       | 0.38                         | 0.37                                  |
| 180.0                          | 3.280                       | 0.36                         | 0.33                                  |
| 220.0                          | 3.650                       | 0.34                         | 0.28                                  |
| 270.0                          | 4.400                       | 0.29                         | 0.26                                  |
| 330.0                          | 5.070                       | 0.27                         | 0.23                                  |
| 390.0                          | 5.900                       | 0.23                         | 0.20                                  |
| 470.0                          | 7.670                       | 0.22                         | 0.19                                  |
| 560.0                          | 8.850                       | 0.21                         | 0.17                                  |
| 680.0                          | 10.20                       | 0.18                         | 0.15                                  |
| 820.0                          | 11.58                       | 0.17                         | 0.14                                  |
| 1000.0                         | 12.97                       | 0.16                         | 0.13                                  |

## FEATURES

- Flame retardant encapsulant (UL 94 V-0)
- Completely encapsulated winding provides superior environmental protection and moisture resistance
- High current unit in surface mount package printed with model, inductance value and date code
- Compatible with infrared or conventional reflow soldering methods
- Pick and place compatible
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

## APPLICATIONS

Excellent power line noise filters, filters for switching regulated power supplies, DC/DC converters, SCR and triac controls and RFI suppression.

## ELECTRICAL SPECIFICATIONS

**Inductance:** Measured at 1 V with no DC current

**Inductance Tolerance:**  $\pm 15\%$

**Incremental Current:** The typical current at which the inductance will be decreased by 5 % from its initial zero DC value

**Operating Temperature:** -55 °C to +125 °C (no load); -55 °C to +85 °C (at full rated current)

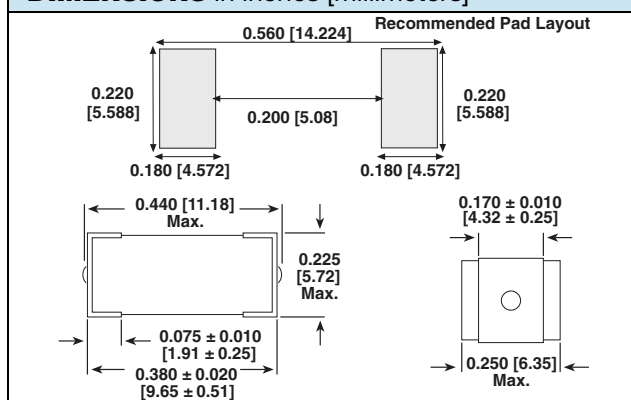
## MECHANICAL SPECIFICATIONS

**Core:** High resistivity ferrite core

**Encapsulant:** Epoxy

**Terminals:** 100 % Sn over Ni

## DIMENSIONS in inches [millimeters]



## PART MARKING

- Model
- Inductance value
- Date code

## DESCRIPTION

|                  |                              |                              |              |                               |
|------------------|------------------------------|------------------------------|--------------|-------------------------------|
| <b>IHSM-3825</b> | <b>3.9 <math>\mu</math>H</b> | <b><math>\pm 15\%</math></b> | <b>ER</b>    | <b>e3</b>                     |
| MODEL            | INDUCTANCE VALUE             | INDUCTANCE TOLERANCE         | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

## GLOBAL PART NUMBER

|                |          |          |          |          |          |          |          |              |          |                  |          |          |          |
|----------------|----------|----------|----------|----------|----------|----------|----------|--------------|----------|------------------|----------|----------|----------|
| <b>I</b>       | <b>H</b> | <b>S</b> | <b>M</b> | <b>3</b> | <b>8</b> | <b>2</b> | <b>5</b> | <b>E</b>     | <b>R</b> | <b>3</b>         | <b>R</b> | <b>9</b> | <b>L</b> |
| PRODUCT FAMILY |          |          |          | SIZE     |          |          |          | PACKAGE CODE |          | INDUCTANCE VALUE |          |          | TOL.     |



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