

# High Current, Surface Mount Inductor



## STANDARD ELECTRICAL SPECIFICATIONS

| IND.<br>@ 1kHz<br>( $\mu$ H) | DCR<br>MAX.<br>(Ohms) | RATED<br>CURRENT<br>(Max. Amps) | INCREMENTAL<br>CURRENT<br>(Amps Approx.) |
|------------------------------|-----------------------|---------------------------------|--|
| 1.0                          | 0.011                 | 9.0                             | 5.3                                      |
| 1.2                          | 0.012                 | 8.8                             | 4.8                                      |
| 1.5                          | 0.012                 | 8.6                             | 4.4                                      |
| 1.8                          | 0.013                 | 8.5                             | 4.0                                      |
| 2.2                          | 0.014                 | 8.4                             | 3.6                                      |
| 2.7                          | 0.016                 | 8.2                             | 3.2                                      |
| 3.3                          | 0.017                 | 8.1                             | 2.8                                      |
| 3.9                          | 0.02                  | 7.3                             | 2.6                                      |
| 4.7                          | 0.023                 | 6.7                             | 2.4                                      |
| 5.6                          | 0.025                 | 6.0                             | 2.3                                      |
| 6.8                          | 0.028                 | 5.6                             | 2.1                                      |
| 8.2                          | 0.032                 | 5.3                             | 1.9                                      |
| 10.0                         | 0.036                 | 5.0                             | 1.7                                      |
| 12.0                         | 0.04                  | 4.8                             | 1.5                                      |
| 15.0                         | 0.043                 | 4.5                             | 1.4                                      |
| 18.0                         | 0.047                 | 4.2                             | 1.3                                      |
| 22.0                         | 0.054                 | 3.8                             | 1.2                                      |
| 27.0                         | 0.074                 | 3.4                             | 1.1                                      |
| 33.0                         | 0.084                 | 3.0                             | 0.99                                     |
| 39.0                         | 0.095                 | 2.8                             | 0.93                                     |
| 47.0                         | 0.12                  | 2.6                             | 0.87                                     |
| 56.0                         | 0.14                  | 2.4                             | 0.82                                     |
| 68.0                         | 0.16                  | 2.1                             | 0.76                                     |
| 82.0                         | 0.184                 | 1.9                             | 0.72                                     |
| 100.0                        | 0.226                 | 1.7                             | 0.68                                     |
| 120.0                        | 0.305                 | 1.5                             | 0.61                                     |
| 150.0                        | 0.362                 | 1.4                             | 0.54                                     |
| 180.0                        | 0.399                 | 1.3                             | 0.48                                     |
| 220.0                        | 0.536                 | 1.1                             | 0.44                                     |
| 270.0                        | 0.599                 | 0.95                            | 0.4                                      |
| 330.0                        | 0.714                 | 0.86                            | 0.36                                     |
| 390.0                        | 0.819                 | 0.8                             | 0.33                                     |
| 470.0                        | 1.1                   | 0.74                            | 0.31                                     |
| 560.0                        | 1.2                   | 0.68                            | 0.29                                     |
| 680.0                        | 1.58                  | 0.63                            | 0.26                                     |
| 820.0                        | 2.08                  | 0.573                           | 0.23                                     |
| 1000.0                       | 2.42                  | 0.51                            | 0.21                                     |
| 1200.0                       | 2.68                  | 0.46                            | 0.19                                     |
| 1500.0                       | 3.15                  | 0.4                             | 0.17                                     |
| 1800.0                       | 4.2                   | 0.34                            | 0.15                                     |
| 2200.0                       | 4.62                  | 0.31                            | 0.135                                    |
| 2700.0                       | 6.3                   | 0.29                            | 0.12                                     |
| 3300.0                       | 7.09                  | 0.27                            | 0.11                                     |
| 3900.0                       | 9.14                  | 0.25                            | 0.1                                      |
| 4700.0                       | 10.6                  | 0.23                            | 0.09                                     |
| 5600.0                       | 11.8                  | 0.21                            | 0.08                                     |
| 6800.0                       | 15.8                  | 0.19                            | 0.0775                                   |
| 8200.0                       | 21.8                  | 0.17                            | 0.0725                                   |
| 10000.0                      | 24.6                  | 0.16                            | 0.07                                     |
| 12000.0                      | 28.4                  | 0.14                            | 0.0625                                   |
| 15000.0                      | 37.8                  | 0.12                            | 0.055                                    |
| 18000.0                      | 44.1                  | 0.11                            | 0.05                                     |

## FEATURES

- Flame retardant encapsulant (UL 94V-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.
- Tape and reel packaging for automatic handling.

## 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 volt 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).

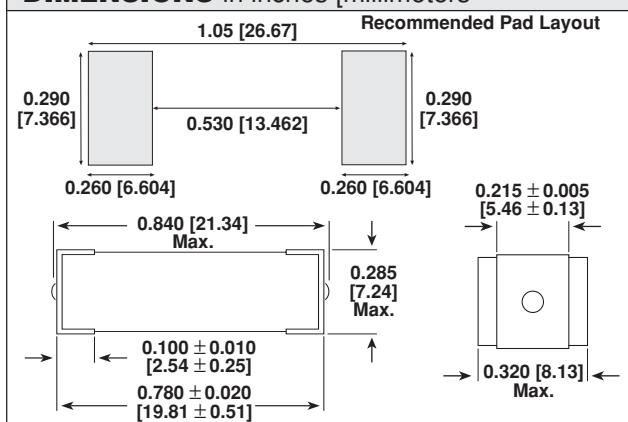
## MATERIAL SPECIFICATIONS

**Core:** High resistivity ferrite core.

**Encapsulant:** Epoxy.

**Terminals:** 60/40 solder coated copper.

## DIMENSIONS in inches [millimeters]



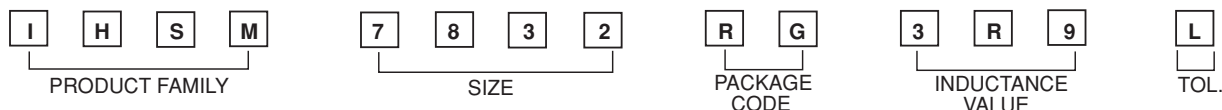
## PART MARKING

- Model
- Inductance value
- Date code

## DESCRIPTION

|           |                     |                         |
|-----------|---------------------|-------------------------|
| IHSM-7832 | 3.9 $\mu$ H         | $\pm 15\%$              |
| MODEL     | INDUCTANCE<br>VALUE | INDUCTANCE<br>TOLERANCE |

## SAP PART NUMBERING GUIDELINES (INTERNAL)



See the end of this data book for conversion tables



### Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.