High Current, Surface Mount Inductors

STANDARD ELECTRICAL SPECIFICATIONS

IND. AT 1 kHz (µH)	DCR MAX. (Ω)	RATED CURRENT MAX. (A)	INCREMENTAL CURRENT APPROX. (A)
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
10 000.0	24.6	0.16	0.07
12 000.0	28.4	0.14	0.0625
15 000.0	37.8	0.12	0.055
18 000.0	44.1	0.11	0.05

FEATURES

- Flame retardant encapsulant (UL 94 V-0)
- Completely encapsulated winding provides superior environmental protection and mooisture 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
- Compliant to RoHS directive 2002/95/EC

Pb-free

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: ± 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)

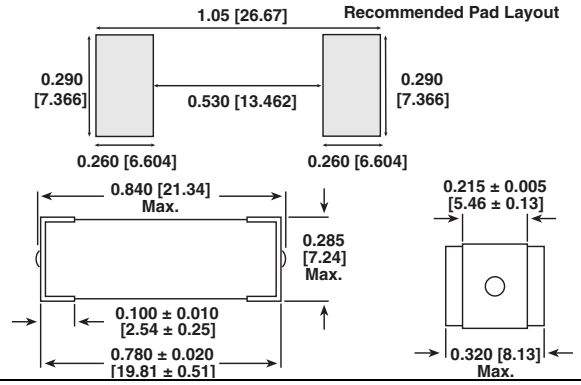
MECHANICAL SPECIFICATIONS

Core: High resistivity ferrite core

Encapsulant: Epoxy

Terminals: 100 % Sn over Ni

DIMENSIONS in inches [millimeters]



PART MARKING

- Model
- Inductance value
- Date code

DESCRIPTION

IHSM-7832	3.9 µH	± 15 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

I	H	S	M	7	8	3	2	E	R	3	R	9	L
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.