

Inductors, Commercial, Molded, Shielded, Axial Leaded



ELECTRICAL SPECIFICATIONS

Inductance Tolerance: $\pm 10\%$ standard, $\pm 5\%$ available

Insulation Resistance: 1000 M Ω minimum per MIL-STD-202, method 302, test condition B

Dielectric Withstanding Voltage: 1000 V_{AC} per MIL-STD-202, method 301 (at sea level)

Percent Coupling: 3 % maximum per MIL-PRF-15305

Operating Temperature: - 55 °C to + 105 °C

ENVIRONMENTAL PERFORMANCE		
TEST	CONDITIONS	SPECIFICATIONS
Barometric Pressure	C	MIL-STD-202, meth. 105
Thermal Shock	A-1	MIL-STD-202, meth. 107
Flammability	-	MIL-STD-202, meth. 111
Overload	-	MIL-PRF-15305
Low Temperature Storage	-	MIL-PRF-15305
Resistance to Soldering Heat	A	MIL-STD-202, meth. 210
Resistance to Solvents	-	MIL-STD-202, meth. 215

FEATURES

- Wide inductance range in small package
- Flame retardant coating
- Electromagnetic shield-finest shield available
- Precision performance, excellent reliability, sturdy construction
- Epoxy molded construction provides superior moisture protection
- Compliant to RoHS directive 2002/95/EC



RoHS
COMPLIANT

MECHANICAL SPECIFICATIONS

Terminals: 5 lb pull per MIL-STD-202, method 211, test condition A

Weight: IMS-5 = 0.85 g maximum

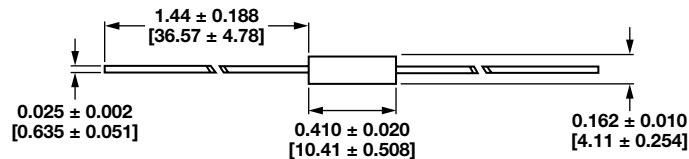
MATERIAL SPECIFICATIONS

Encapsulant: Epoxy

Standard Terminals: #22 AWG, tinned copper

INDUCTANCE RANGE AND MILITARY STANDARD			
INDUCTANCE RANGE (μ H)		MATERIAL	
MIN.	MAX.	CORE	SHIELD
0.10	0.82	Phenolic	Powdered iron
1.0	12	Powdered iron	Powdered iron
15	8200	Ferrite	Ferrite

DIMENSIONS in inches [millimeters]



STANDARD ELECTRICAL SPECIFICATIONS

MODEL	IND. (μ H)	TOL. (%)	Q MIN.	TEST FREQUENCY L AND Q (MHz)	SRF MIN. (MHz) ⁽¹⁾	DCR MAX. (Ω)	RATED DC CURRENT (mA) ⁽²⁾	INCREMENTAL CURRENT (mA) ⁽³⁾
IMS-5	0.10	± 10	50	25.0	250.0	0.025	1790	-
IMS-5	0.12	± 10	51	25.0	250.0	0.034	1530	-
IMS-5	0.15	± 10	51	25.0	250.0	0.037	1470	-
IMS-5	0.18	± 10	50	25.0	250.0	0.047	1300	-
IMS-5	0.22	± 10	49	25.0	250.0	0.067	1100	-
IMS-5	0.27	± 10	47	25.0	250.0	0.11	855	-
IMS-5	0.33	± 10	46	25.0	250.0	0.13	780	-
IMS-5	0.39	± 10	44	25.0	250.0	0.18	670	-
IMS-5	0.47	± 10	44	25.0	235.0	0.25	565	-
IMS-5	0.56	± 10	43	25.0	210.0	0.33	490	-
IMS-5	0.68	± 10	42	25.0	190.0	0.45	420	-
IMS-5	0.82	± 10	40	25.0	180.0	0.59	370	-

Notes

⁽¹⁾ Measured with full length lead

⁽²⁾ **Rated DC Current:** Based on maximum temperature rise not to exceed 15 °C at + 90 °C ambient

⁽³⁾ **Incremental Current:** The minimum typical current at which the inductance will be decreased by 5 % from its initial zero DC value

STANDARD ELECTRICAL SPECIFICATIONS								
MODEL	IND. (μH)	TOL. (%)	Q MIN.	TEST FREQUENCY L AND Q (MHz)	SRF MIN. (MHz) ⁽¹⁾	DCR MAX. (Ω)	RATED DC CURRENT (mA) ⁽²⁾	INCREMENTAL CURRENT (mA) ⁽³⁾
IMS-5	1.0	± 10	44	25.0	140.0	0.07	1070	-
IMS-5	1.2	± 10	44	7.9	130.0	0.10	895	-
IMS-5	1.5	± 10	44	7.9	115.0	0.12	815	-
IMS-5	1.8	± 10	44	7.9	105.0	0.14	775	-
IMS-5	2.2	± 10	44	7.9	100.0	0.19	650	-
IMS-5	2.7	± 10	44	7.9	92.0	0.28	535	-
IMS-5	3.3	± 10	44	7.9	85.0	0.35	480	-
IMS-5	3.9	± 10	44	7.9	75.0	0.40	450	-
IMS-5	4.7	± 10	44	7.9	70.0	0.55	380	-
IMS-5	5.6	± 10	44	7.9	65.0	0.72	335	-
IMS-5	6.8	± 10	50	7.9	55.0	1.02	280	-
IMS-5	8.2	± 10	50	7.9	50.0	1.32	250	-
IMS-5	10	± 10	50	7.9	46.0	1.62	220	-
IMS-5	12	± 10	55	2.5	44.0	2.00	200	-
IMS-5	15	± 10	45	2.5	49.0	0.80	315	250.0
IMS-5	18	± 10	45	2.5	45.0	0.89	300	235.0
IMS-5	22	± 10	45	2.5	41.0	0.96	290	220.0
IMS-5	27	± 10	45	2.5	38.0	1.19	260	200.0
IMS-5	33	± 10	45	2.5	34.0	1.37	240	190.0
IMS-5	39	± 10	50	2.5	29.0	1.93	205	180.0
IMS-5	47	± 10	50	2.5	27.0	2.11	195	175.0
IMS-5	56	± 10	50	2.5	25.0	2.23	190	160.0
IMS-5	68	± 10	50	2.5	21.0	2.70	170	150.0
IMS-5	82	± 10	50	2.5	10.5	2.44	180	140.0
IMS-5	100	± 10	50	2.5	10.0	3.12	160	120.0
IMS-5	120	± 10	55	0.79	9.7	3.6	150	95.0
IMS-5	150	± 10	55	0.79	8.5	4.1	140	90.0
IMS-5	180	± 10	55	0.79	8.0	4.4	135	85.0
IMS-5	220	± 10	55	0.79	7.5	5.0	125	80.0
IMS-5	270	± 10	55	0.79	7.0	5.8	115	70.0
IMS-5	330	± 10	55	0.79	6.5	6.4	110	65.0
IMS-5	390	± 10	60	0.79	6.2	7.4	105	60.0
IMS-5	470	± 10	60	0.79	5.7	9.5	92	58.0
IMS-5	560	± 10	60	0.79	4.7	10.5	90	55.0
IMS-5	680	± 10	60	0.79	4.5	11.8	80	50.0
IMS-5	820	± 10	60	0.79	4.2	13.0	80	45.0
IMS-5	1000	± 10	60	0.79	3.8	17.5	70	40.0
IMS-5	1200	± 10	45	0.25	1.5	22.1	60	35.0
IMS-5	1500	± 10	45	0.25	1.2	26.5	55	33.0
IMS-5	1800	± 10	45	0.25	1.0	29.9	50	30.0
IMS-5	2200	± 10	45	0.25	0.97	33.8	50	27.0
IMS-5	2700	± 10	45	0.25	0.92	47.3	40	25.0
IMS-5	3300	± 10	45	0.25	0.84	53.0	40	22.0
IMS-5	3900	± 10	45	0.25	0.80	73.8	35	20.0
IMS-5	4700	± 10	45	0.25	0.74	81.6	31	19.0
IMS-5	5600	± 10	44	0.25	0.73	98.9	28	17.0
IMS-5	6800	± 10	40	0.25	0.66	111.0	27	16.0
IMS-5	8200	± 10	40	0.25	0.54	119.0	26	15.0

Notes

- (1) Measured with full length lead
- (2) **Rated DC Current:** Based on maximum temperature rise not to exceed 15 °C at + 90 °C ambient
- (3) **Incremental Current:** The minimum typical current at which the inductance will be decreased by 5 % from its initial zero DC value

ORDERING INFORMATION				
IMS-5	10 μH	± 10 %	ER	e2
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER			
I	M	S	0 5
MODEL			
E	R	1	0 0
PACKAGE CODE		INDUCTANCE VALUE	
			K
			INDUCTANCE TOLERANCE



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.