

Inductors

Commercial, Molded, Shielded



FEATURES

- Wide inductance range in small package
- Flame retardant coating
- Electromagnetic shield-finest shield available
- Epoxy molded construction provides superior moisture protection
- Precision performance, excellent reliability, sturdy construction



RoHS
COMPLIANT

INDUCTANCE RANGE AND MILITARY STANDARD			
INDUCTANCE RANGE		MATERIAL	
FROM	TO	CORE	SHIELD
0.10 μ H	0.82 μ H	Phenolic	Powd. Iron
1.0 μ H	12.0 μ H	Powd. Iron	Powd. Iron
15.0 μ H	100000 μ H	Ferrite	Ferrite

ELECTRICAL SPECIFICATIONS

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

Insulation Resistance: 1000 Megohm minimum per MIL-STD-202, Method 302, Test Condition B

Dielectric Withstanding Voltage: 1000 VAC per MIL-STD-202, Method 301 (sea level)

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

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

MECHANICAL SPECIFICATIONS

Terminals: 5 pounds pull per MIL-STD-202, Method 211, Test Condition A

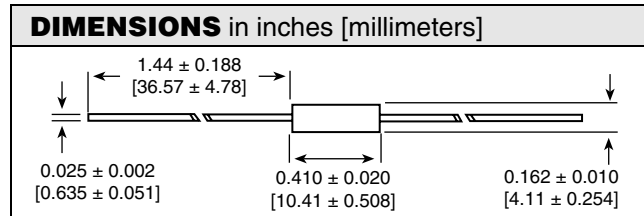
Weight: IMS-5 = 0.85 grams maximum

MATERIAL SPECIFICATIONS

Encapsulant: Epoxy

Standard Terminals: #22 AWG tinned copper

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



STANDARD ELECTRICAL SPECIFICATIONS							
IND. (μ H)	TOL.	Q MIN.	TEST FREQ. L & Q (MHz)	SELF-RESONANT* FREQ MIN. (MHz)	DCR AT 25 °C MAX. (Ohms)	RATED DC** CURRENT (mA)	INCREMENTAL** CURRENT (mA)
0.10	$\pm 10\%$	50	25.0	250.0	0.025	1790	-
0.12	$\pm 10\%$	51	25.0	250.0	0.034	1530	-
0.15	$\pm 10\%$	51	25.0	250.0	0.037	1470	-
0.18	$\pm 10\%$	50	25.0	250.0	0.047	1300	-
0.22	$\pm 10\%$	49	25.0	250.0	0.067	1100	-
0.27	$\pm 10\%$	47	25.0	250.0	0.11	855	-
0.33	$\pm 10\%$	46	25.0	250.0	0.13	780	-
0.39	$\pm 10\%$	44	25.0	250.0	0.18	670	-
0.47	$\pm 10\%$	44	25.0	235.0	0.25	565	-
0.56	$\pm 10\%$	43	25.0	210.0	0.33	490	-
0.68	$\pm 10\%$	42	25.0	190.0	0.45	420	-
0.82	$\pm 10\%$	40	25.0	180.0	0.59	370	-
1.0	$\pm 10\%$	44	25.0	140.0	0.07	1070	-
1.2	$\pm 10\%$	44	7.9	130.0	0.10	895	-
1.5	$\pm 10\%$	44	7.9	115.0	0.12	815	-
1.8	$\pm 10\%$	44	7.9	105.0	0.14	775	-
2.2	$\pm 10\%$	44	7.9	100.0	0.19	650	-
2.7	$\pm 10\%$	44	7.9	92.0	0.28	535	-
3.3	$\pm 10\%$	44	7.9	85.0	0.35	480	-

* Measured with full length lead.

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

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



STANDARD ELECTRICAL SPECIFICATIONS							
IND. (µH)	TOL.	Q MIN.	TEST FREQ. L & Q (MHz)	SELF-RESONANT* FREQ MIN. (MHz)	DCR AT 25 °C MAX. (Ohms)	RATED DC** CURRENT (mA)	INCREMENTAL** CURRENT (mA)
3.9	± 10 %	44	7.9	75.0	0.40	450	-
4.7	± 10 %	44	7.9	70.0	0.55	380	-
5.6	± 10 %	44	7.9	65.0	0.72	335	-
6.8	± 10 %	50	7.9	55.0	1.02	280	-
8.2	± 10 %	50	7.9	50.0	1.32	250	-
10.0	± 10 %	50	7.9	46.0	1.62	220	-
12.0	± 10 %	55	2.5	44.0	2.00	200	-
15.0	± 10 %	45	2.5	49.0	0.80	315	250.0
18.0	± 10 %	45	2.5	45.0	0.89	300	235.0
22.0	± 10 %	45	2.5	41.0	0.96	290	220.0
27.0	± 10 %	45	2.5	38.0	1.19	260	200.0
33.0	± 10 %	45	2.5	34.0	1.37	240	190.0
39.0	± 10 %	50	2.5	29.0	1.93	205	180.0
47.0	± 10 %	50	2.5	27.0	2.11	195	175.0
56.0	± 10 %	50	2.5	25.0	2.23	190	160.0
68.0	± 10 %	50	2.5	21.0	2.70	170	150.0
82.0	± 10 %	50	2.5	10.5	2.44	180	140.0
100.0	± 10 %	50	2.5	10.0	3.12	160	120.0
120.0	± 10 %	55	0.79	9.7	3.6	150	95.0
150.0	± 10 %	55	0.79	8.5	4.1	140	90.0
180.0	± 10 %	55	0.79	8.0	4.4	135	85.0
220.0	± 10 %	55	0.79	7.5	5.0	125	80.0
270.0	± 10 %	55	0.79	7.0	5.8	115	70.0
330.0	± 10 %	55	0.79	6.5	6.4	110	65.0
390.0	± 10 %	60	0.79	6.2	7.4	105	60.0
470.0	± 10 %	60	0.79	5.7	9.5	92	58.0
560.0	± 10 %	60	0.79	4.7	10.5	90	55.0
680.0	± 10 %	60	0.79	4.5	11.8	80	50.0
820.0	± 10 %	60	0.79	4.2	13.0	80	45.0
1000.0	± 10 %	60	0.79	3.8	17.5	70	40.0
1200.0	± 10 %	45	0.25	1.5	22.1	60	35.0
1500.0	± 10 %	45	0.25	1.2	26.5	55	33.0
1800.0	± 10 %	45	0.25	1.0	29.9	50	30.0
2200.0	± 10 %	45	0.25	0.97	33.8	50	27.0
2700.0	± 10 %	45	0.25	0.92	47.3	40	25.0
3300.0	± 10 %	45	0.25	0.84	53.0	40	22.0
3900.0	± 10 %	45	0.25	0.80	73.8	35	20.0
4700.0	± 10 %	45	0.25	0.74	81.6	31	19.0
5600.0	± 10 %	44	0.25	0.73	98.9	28	17.0
6800.0	± 10 %	40	0.25	0.66	111.0	27	16.0
8200.0	± 10 %	40	0.25	0.54	119.0	26	15.0
10000.0	± 10 %	40	0.25	0.47	137.0	24	14.0
12000.0	± 10 %	30	0.079	0.33	143.0	23	13.0
15000.0	± 10 %	30	0.079	0.29	157.0	22	12.0
18000.0	± 10 %	30	0.079	0.28	175.0	21	10.0
22000.0	± 10 %	27	0.079	0.25	274.0	17	9.0
27000.0	± 10 %	27	0.079	0.21	308.0	16	8.0
33000.0	± 10 %	27	0.079	0.19	343.0	15	7.5
39000.0	± 10 %	27	0.079	0.17	376.0	15	6.0
47000.0	± 10 %	23	0.079	0.16	473.0	13	5.5
56000.0	± 10 %	23	0.079	0.14	512.0	13	5.0
68000.0	± 10 %	23	0.079	0.13	580.0	12	4.0
82000.0	± 10 %	21	0.079	0.12	618.0	11	3.5
100000.0	± 10 %	18	0.079	0.11	678.0	11	3.0

* Measured with full length lead.

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

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

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

GLOBAL PART NUMBER INFORMATION			
I	M	S	0 5
MODEL			
E	R	1 0 0	K
PACKING CODE		INDUCTANCE VALUE	TOL.



Disclaimer

All product specifications and data are subject to change without notice.

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 herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

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.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.