

# Inductors, Commercial, Molded Shielded, Axial Leaded



INDUCTANCE RANGE AND MILITARY STANDARD			
INDUCTANCE RANGE		MATERIAL	
FROM	TO	CORE	SHIELD
0.10 $\mu$ H	0.82 $\mu$ H	Phenolic	Powd. Iron
1.0 $\mu$ H	12.0 $\mu$ H	Powd. Iron	Powd. Iron
15.0 $\mu$ H	100 000 $\mu$ H	Ferrite	Ferrite

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. ( $\mu$ H)	TOL.	Q MIN.	TEST FREQ. L AND Q (MHz)	SELF-RESONANT FREQ MIN. (MHz) <sup>(1)</sup>	DCR AT 25 °C MAX. ( $\Omega$ )	RATED DC CURRENT (mA) <sup>(2)</sup>	INCREMENTAL CURRENT (mA) <sup>(3)</sup>
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	-

**Notes**

<sup>(1)</sup> Measured with full length lead

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

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

**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
- Compliant to RoHS directive 2002/95/EC



**RoHS COMPLIANT**

**ELECTRICAL SPECIFICATIONS**

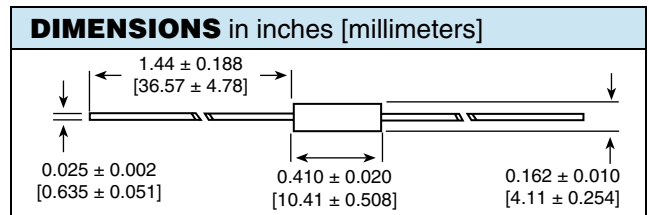
**Inductance Tolerance:**  $\pm 10\%$  standard,  $\pm 5\%$  available  
**Insulation Resistance:** 1000 M $\Omega$  minimum per MIL-STD-202, method 302, test condition B  
**Dielectric Withstanding Voltage:** 1000 V<sub>AC</sub> per MIL-STD-202, method 301 (sea level)  
**Percent Coupling:** 3 % maximum 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 g maximum

**MATERIAL SPECIFICATIONS**

**Encapsulant:** Epoxy  
**Standard Terminals:** #22 AWG tinned copper





STANDARD ELECTRICAL SPECIFICATIONS							
IND. (μH)	TOL.	Q MIN.	TEST FREQ. L AND Q (MHz)	SELF-RESONANT FREQ MIN. (MHz) <sup>(1)</sup>	DCR AT 25 °C MAX. (Ω)	RATED DC CURRENT (mA) <sup>(2)</sup>	INCREMENTAL CURRENT (mA) <sup>(3)</sup>
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
10 000.0	± 10 %	40	0.25	0.47	137.0	24	14.0
12 000.0	± 10 %	30	0.079	0.33	143.0	23	13.0
15 000.0	± 10 %	30	0.079	0.29	157.0	22	12.0
18 000.0	± 10 %	30	0.079	0.28	175.0	21	10.0
22 000.0	± 10 %	27	0.079	0.25	274.0	17	9.0
27 000.0	± 10 %	27	0.079	0.21	308.0	16	8.0
33 000.0	± 10 %	27	0.079	0.19	343.0	15	7.5
39 000.0	± 10 %	27	0.079	0.17	376.0	15	6.0
47 000.0	± 10 %	23	0.079	0.16	473.0	13	5.5
56 000.0	± 10 %	23	0.079	0.14	512.0	13	5.0
68 000.0	± 10 %	23	0.079	0.13	580.0	12	4.0
82 000.0	± 10 %	21	0.079	0.12	618.0	11	3.5
100 000.0	± 10 %	18	0.079	0.11	678.0	11	3.0

**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

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	E R	1 0 0	K
MODEL	PACKING CODE	INDUCTANCE VALUE	TOL.



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