



# Inductors

Military, MIL-PRF-15305 Qualified, Type LT  
and Commercial, Molded, Shielded, Miniature



### FEATURES

- Flame retardant coating.
- Electromagnetic shield.
- Small package for a shielded inductor.
- Epoxy molded construction provides superior moisture protection.
- Precision performance, excellent reliability, sturdy construction.

STANDARD ELECTRICAL SPECIFICATIONS										
IND. ( $\mu$ H)	TOL.	MILITARY STANDARD	MILITARY TYPE	Q MIN.	TEST FREQ. L & Q (MHz)	SELF- RESONANT FREQ. MIN. (MHz)	DCR MAX. (Ohms)	RATED** DC CURRENT (mA)	INCREMENTAL*** CURRENT	
0.10	$\pm 10\%$	MS21426	LT10K	(Not QPL'd)	25.0	490.0	0.10	670	—	Iron Core
0.12	$\pm 10\%$	-1	518	54	25.0	430.0	0.11	635	—	
0.15	$\pm 10\%$	-2	519	52	25.0	415.0	0.12	610	—	
0.18	$\pm 10\%$	-3	520	50	25.0	375.0	0.13	585	—	
0.22	$\pm 10\%$	-4	521	49	25.0	330.0	0.15	545	—	
0.27	$\pm 10\%$	-5	522	47	25.0	300.0	0.16	530	—	
0.33	$\pm 10\%$	-6	523	46	25.0	260.0	0.18	495	—	
0.39	$\pm 10\%$	-7	524	44	25.0	230.0	0.19	485	—	
0.47	$\pm 10\%$	-8	525	42	25.0	220.0	0.21	460	—	
0.56	$\pm 10\%$	-9	526	41	25.0	210.0	0.23	440	—	
0.68	$\pm 10\%$	-10	527	41	25.0	180.0	0.24	430	—	
0.82	$\pm 10\%$	-11	528	39	25.0	165.0	0.27	405	—	
1.0	$\pm 10\%$	-12	529	38	25.0	150.0	0.30	385	—	
1.0	$\pm 10\%$	-13	530	37	25.0				—	
1.2	$\pm 10\%$	MS21426	LT10K		7.9	130.0	0.73	247	—	Iron Core
1.5	$\pm 10\%$	-14	531	40	7.9	115.0	0.86	228	—	
1.8	$\pm 10\%$	-15	532	41	7.9	105.0	0.95	217	—	
2.2	$\pm 10\%$	-16	533	43	7.9	95.0	1.1	202	—	
2.7	$\pm 10\%$	-17	534	45	7.9	90.0	1.2	193	—	
3.3	$\pm 10\%$	-18	535	48	7.9	80.0	1.3	185	—	
3.9	$\pm 10\%$	-19	536	49	7.9	75.0	1.5	173	—	
4.7	$\pm 10\%$	-20	537	50	7.9	70.0	2.4	136	—	
5.6	$\pm 10\%$	-21	538	53	7.9	60.0	2.9	124	—	
6.8	$\pm 10\%$	-22	539	54	7.9	55.0	3.2	118	—	
8.2	$\pm 10\%$	-23	540	55	7.9	53.0	3.6	111	—	
10.0	$\pm 10\%$	-24	541	55	7.9	50.0	4.0	106	—	
12.0	$\pm 10\%$	-25	542	57	7.9	35.0	3.0	122	—	
15.0	$\pm 10\%$	-26	543	36	2.5	30.0	3.4	115	—	
18.0	$\pm 10\%$	-27	544	38	2.5	26.0	3.8	108	—	
22.0	$\pm 10\%$	-28	545	40	2.5	24.0	4.9	96	—	
27.0	$\pm 10\%$	-29	546	40	2.5	21.0	5.8	88	—	
33.0	$\pm 10\%$	-30	547	40	2.5	20.0	6.5	83	—	
39.0	$\pm 10\%$	-31	548	41	2.5	19.0	7.9	75	—	
47.0	$\pm 10\%$	-32	549	42	2.5	16.0	9.3	69	—	
56.0	$\pm 10\%$	-33	550	44	2.5	15.0	11.0	64	—	
68.0	$\pm 10\%$	-34	551	44	2.5	13.0	12.0	61	—	
82.0	$\pm 10\%$	-35	552	45	2.5	11.0	13.0	59	—	
100.0	$\pm 10\%$	-36	553	45	2.5	10.5	16.8	51	—	
100.0	$\pm 10\%$	-37	554	40	2.5				—	
120.0	$\pm 10\%$	MS21427	LT10K	(Not QPL'd)	0.79	13.0	5.8	88	27	Ferrite Core
150.0	$\pm 10\%$	-1	555	31	0.79	12.0	7.9	75	24	
180.0	$\pm 10\%$	-2	556	33	0.79	11.0	9.4	69	22	
220.0	$\pm 10\%$	-3	557	33	0.79	10.0	11.0	64	20	
270.0	$\pm 10\%$	-4	558	35	0.79	9.0	12.0	61	18	
330.0	$\pm 10\%$	-5	559	37	0.79	8.0	16.0	53	16	
390.0	$\pm 10\%$	-6	560	40	0.79	7.8	21.0	46	14	
470.0	$\pm 10\%$	-7	561	38	0.79	7.5	24.0	43	13	
560.0	$\pm 10\%$	-8	562	36	0.79	7.0	28.0	40	12	
560.0	$\pm 10\%$	-9	563	36	0.79					

\*Measured with full length lead. \*\*Rated DC Current: Based on the 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.

### 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:** 200 VAC per MIL-STD-202, Method 301 (sea level).

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

**Operating Temperature Range:** - 55°C to + 105°C.



**MECHANICAL SPECIFICATIONS**

**Terminal Strength:** 3 pounds pull per MIL-STD-202, Method 211, Test Condition A except 180° rotation for a total of 540°C.

**Weight:** IMS-2 = 0.30 grams maximum.

**MATERIAL SPECIFICATIONS**

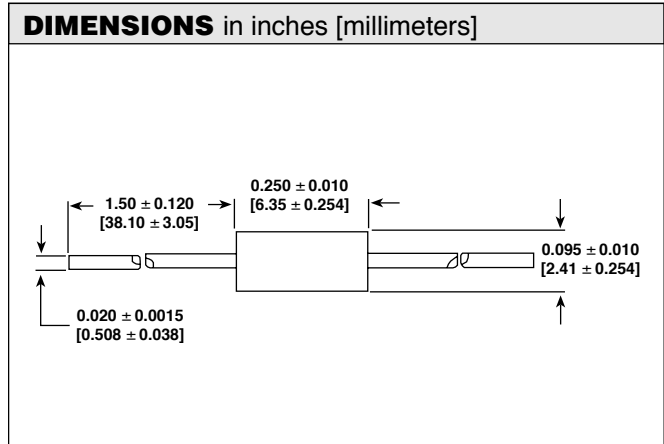
**Encapsulant:** Epoxy.

**Standard Terminal:** #24 AWG tinned copper.

**TEST EQUIPMENT\***

- H/P 4342A Q-Meter.
- Measurements Corporation Megacycle Meter, Model 59.
- Wheatstone Bridge.

\*Test procedures per MIL-PRF-15305.



INDUCTANCE RANGE AND MILITARY STANDARD						
INDUCTANCE RANGE		CLASSIFICATION		MATERIAL		MILITARY STANDARD
FROM	TO	GRADE	CLASS	CORE	SHIELD	
0.10µH	100µH	1	A	Powdered Iron	Powdered Iron	MS21426
120µH	560µH	1	A	Ferrite	Ferrite	MS21427

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

ORDERING INFORMATION		
IMS-2 MODEL	10µH INDUCTANCE VALUE	± 10% INDUCTANCE TOLERANCE

ORDERING INFORMATION - MILITARY PART NUMBER						
MS21426 MILITARY STANDARD	- 14 INDUCTANCE VALUE	OR	LT TYPE	10 GRADE AND CLASS	K FAMILY	531 ID NUMBER

**NOTE:** Listing of military standard does not imply qualification. Contact factory for latest government QPL information.



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