

Inductors

Military, MIL-PRF-15305 Qualified, Type LT, Molded



FEATURES

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

ELECTRICAL SPECIFICATIONS

Inductance Tolerance: $\pm 10\%$, Standard

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

Dielectric Strength: Per MIL-STD-202, Method 301: 1000 VAC

MECHANICAL SPECIFICATIONS

Terminal Strength: Per MIL-STD-202, Method 211, Test Condition A: 5 pounds pull and twist

Weight: MS75083 = 0.30 gram maximum
 MS75084 = 0.30 gram maximum
 MS75085 = 0.30 gram maximum
 MS18130 = 0.65 gram maximum
 MS14046 = 0.65 gram maximum
 MS90538 = 0.65 gram maximum
 MS75101 = 0.95 gram maximum

MATERIAL SPECIFICATIONS

Encapsulant: Epoxy

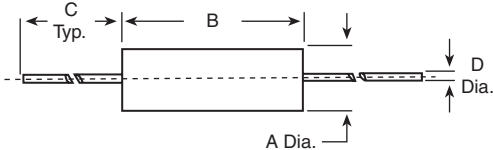
Standard Terminal: MS75083, MS75084, MS75085, 24 AWG; MS18130, MS14046, MS90538, MS75101, 22 AWG; tinned copper

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				
MILITARY STANDARD	INDUCTANCE RANGE Mil. Range in bold face		CLASSIFICATION	
	FROM	TO	GRADE	CLASS
MS75083	0.10 μH	1 μH	1	B
MS75084	1.2 μH	27 μH	1	A
MS75085	33 μH	1000 μH	1	A
MS18130	0.15 μH	4.7 μH	1	B
MS14046	5.6 μH	33 μH	1	A
MS90538	36 μH	240 μH	1	A
MS75101	3.3 μH	27 μH	1	A

DIMENSIONS in inches [millimeters]					
					
MODEL		A (Dia.)	B	C (Typ.)	D (Dia.)
MS75083	Max.	0.105 [2.67]	0.260 [6.60]	1.63 [41.40]	0.0215 [0.546]
	Min.	0.085 [2.16]	0.240 [6.10]	1.25 [31.75]	0.0185 [0.470]
MS75084	Max.	0.105 [2.67]	0.260 [6.60]	1.63 [41.40]	0.0215 [0.546]
	Min.	0.085 [2.16]	0.240 [6.10]	1.25 [31.75]	0.0185 [0.470]
MS75085	Max.	0.105 [2.67]	0.260 [6.60]	1.63 [41.40]	0.0215 [0.546]
	Min.	0.085 [2.16]	0.240 [6.10]	1.25 [31.75]	0.0185 [0.470]
MS83130	Max.	0.165 [4.19]	0.385 [9.78]	1.63 [41.40]	0.027 [0.686]
	Min.	0.145 [3.68]	0.365 [9.27]	1.25 [31.75]	0.023 [0.584]
MS14046	Max.	0.165 [4.19]	0.385 [9.78]	1.63 [41.40]	0.027 [0.686]
	Min.	0.145 [3.68]	0.365 [9.27]	1.25 [31.75]	0.023 [0.584]
MS90538	Max.	0.165 [4.19]	0.385 [9.78]	1.63 [41.40]	0.027 [0.686]
	Min.	0.145 [3.68]	0.365 [9.27]	1.25 [31.75]	0.023 [0.584]
MS75101	Max.	0.200 [5.08]	0.450 [11.43]	1.63 [41.40]	0.027 [0.686]
	Min.	0.180 [4.57]	0.430 [10.92]	1.25 [31.75]	0.023 [0.584]

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



MS7508x, MS18130, MS14046, MS90538, MS75101

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STANDARD ELECTRICAL SPECIFICATIONS

MODEL	IND (μ 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)	
MS75083	0.10	$\pm 10\%$	- 1	LT4K 339	40	25.0	680.0	0.08	1350	PHENOLIC CORE
	0.12	$\pm 10\%$	- 2	340	40	25.0	640.0	0.09	1270	
	0.15	$\pm 10\%$	- 3	341	38	25.0	600.0	0.10	1200	
	0.18	$\pm 10\%$	- 4	342	35	25.0	550.0	0.12	1105	
	0.22	$\pm 10\%$	- 5	343	33	25.0	510.0	0.14	1025	
	0.27	$\pm 10\%$	- 6	344	33	25.0	430.0	0.16	960	
	0.33	$\pm 10\%$	- 7	345	30	25.0	410.0	0.22	815	
	0.39	$\pm 10\%$	- 8	346	30	25.0	365.0	0.30	700	
	0.47	$\pm 10\%$	- 9	347	30	25.0	330.0	0.35	650	
	0.56	$\pm 10\%$	- 10	348	30	25.0	300.0	0.50	545	
	0.68	$\pm 10\%$	- 11	349	28	25.0	275.0	0.60	495	
	0.82	$\pm 10\%$	- 12	350	28	25.0	250.0	0.85	415	
	1.0	$\pm 10\%$	- 13	351	25	25.0	230.0	1.0	385	
MS75084	1.2	$\pm 10\%$	- 1	LT10K 061	25	7.9	150.0	0.18	590	IRON CORE
	1.5	$\pm 10\%$	- 2	062	28	7.9	140.0	0.22	535	
	1.8	$\pm 10\%$	- 3	063	30	7.9	125.0	0.30	455	
	2.2	$\pm 10\%$	- 4	064	30	7.9	115.0	0.40	395	
	2.7	$\pm 10\%$	- 5	065	37	7.9	100.0	0.55	355	
	3.3	$\pm 10\%$	- 6	066	45	7.9	90.0	0.85	270	
	3.9	$\pm 10\%$	- 7	067	45	7.9	80.0	1.0	250	
	4.7	$\pm 10\%$	- 8	068	45	7.9	75.0	1.2	230	
	5.6	$\pm 10\%$	- 9	069	50	7.9	65.0	1.8	185	
	6.8	$\pm 10\%$	- 10	070	50	7.9	60.0	2.0	175	
	8.2	$\pm 10\%$	- 11	071	55	7.9	55.0	2.7	155	
	10.0	$\pm 10\%$	- 12	072	55	7.9	50.0	3.7	130	
	12.0	$\pm 10\%$	- 13	073	45	2.5	40.0	2.7	155	
	15.0	$\pm 10\%$	- 14	074	40	2.5	35.0	2.8	150	
	18.0	$\pm 10\%$	- 15	075	50	2.5	30.0	3.1	145	
	22.0	$\pm 10\%$	- 16	076	50	2.5	25.0	3.3	140	
	27.0	$\pm 10\%$	- 17	077	50	2.5	20.0	3.5	135	
MS75085	33.0	$\pm 10\%$	- 1	LT10K 078	45	2.5	24.0	3.4	130	FERRITE CORE
	39.0	$\pm 10\%$	- 2	079	45	2.5	22.0	3.6	125	
	47.0	$\pm 10\%$	- 3	080	45	2.5	20.0	4.5	110	
	56.0	$\pm 10\%$	- 4	081	45	2.5	18.0	5.7	100	
	68.0	$\pm 10\%$	- 5	082	50	2.5	15.0	6.7	92	
	82.0	$\pm 10\%$	- 6	083	50	2.5	14.0	7.3	88	
	100.0	$\pm 10\%$	- 7	084	50	2.5	13.0	8.0	84	
	120.0	$\pm 10\%$	- 8	085	30	0.79	12.0	13.0	66	
	150.0	$\pm 10\%$	- 9	086	30	0.79	11.0	15.0	61	
	180.0	$\pm 10\%$	- 10	087	30	0.79	10.0	17.0	57	
	220.0	$\pm 10\%$	- 11	088	30	0.79	9.0	21.0	52	
	270.0	$\pm 10\%$	- 12	089	30	0.79	8.0	25.0	47	
	330.0	$\pm 10\%$	- 13	090	30	0.79	7.0	28.0	45	
	390.0	$\pm 10\%$	- 14	091	30	0.79	6.5	35.0	40	
	470.0	$\pm 10\%$	- 15	092	30	0.79	6.0	42.0	36	
	560.0	$\pm 10\%$	- 16	093	30	0.79	5.0	46.0	35	
	680.0	$\pm 10\%$	- 17	094	30	0.79	4.0	60.0	30	
	820.0	$\pm 10\%$	- 18	095	30	0.79	3.8	65.0	29	
	1000.0	$\pm 10\%$	- 19	096	30	0.79	3.4	72.0	28	
MS18130	0.15	$\pm 20\%$	- 1	LT4K 074	50	25.0	525.0	0.03	2450	PHENOLIC CORE
	0.22	$\pm 20\%$	- 2	075	50	25.0	450.0	0.055	1810	
	0.33	$\pm 20\%$	- 3	076	45	25.0	360.0	0.09	1400	
	0.47	$\pm 20\%$	- 4	077	45	25.0	310.0	0.12	1225	
	0.56	$\pm 10\%$	- 5	078	50	25.0	280.0	0.135	1150	
	0.68	$\pm 10\%$	- 6	079	50	25.0	250.0	0.15	1100	
	0.82	$\pm 10\%$	- 7	080	50	25.0	220.0	0.22	900	
	1.0	$\pm 10\%$	- 8	081	50	25.0	200.0	0.29	785	
	1.2	$\pm 10\%$	- 9	082	33	7.9	180.0	0.42	650	
	1.5	$\pm 10\%$	- 10	083	33	7.9	160.0	0.50	600	
	1.8	$\pm 10\%$	- 11	084	33	7.9	150.0	0.65	525	
	2.2	$\pm 10\%$	- 12	085	33	7.9	135.0	0.95	435	
	2.7	$\pm 10\%$	- 13	086	33	7.9	120.0	1.20	385	
	3.3	$\pm 10\%$	- 14	087	33	7.9	110.0	2.0	300	
	3.9	$\pm 10\%$	- 15	088	33	7.9	100.0	2.30	280	
	4.7	$\pm 10\%$	- 16	089	33	7.9	90.0	2.60	260	

* Measured with full length lead. ** Rated DC Current based on the maximum temperature rise as shown in table.

MS7508x, MS18130, MS14046, MS90538, MS75101



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STANDARD ELECTRICAL SPECIFICATIONS									
MODEL	IND (μ 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)
MS14046	5.6	$\pm 10\%$	-1	LT10K 128	45	7.9	60.0	0.32	495
	6.8	$\pm 10\%$	-2	129	50	7.9	55.0	0.50	395
	8.2	$\pm 10\%$	-3	130	50	7.9	50.0	0.60	360
	10.0	$\pm 10\%$	-4	131	55	7.9	45.0	0.90	290
	12.0	$\pm 10\%$	-5	132	65	2.5	42.0	1.10	265
	15.0	$\pm 10\%$	-6	133	65	2.5	40.0	1.40	240
	18.0	$\pm 10\%$	-7	134	75	2.5	34.0	2.25	185
	22.0	$\pm 10\%$	-8	135	75	2.5	30.0	2.50	175
	27.0	$\pm 10\%$	-9	136	60	2.5	25.0	2.60	170
	33.0	$\pm 10\%$	-10	137	65	2.5	19.0	3.00	165
MS90538	36.0	$\pm 5\%$	-1	LT10K 001	60	2.5	15.5	2.50	180
	39.0	$\pm 5\%$	-2	002	60	2.5	14.5	2.60	176
	43.0	$\pm 5\%$	-3	003	60	2.5	13.7	2.70	172
	47.0	$\pm 5\%$	-4	004	55	2.5	13.0	2.75	170
	51.0	$\pm 5\%$	-5	005	55	2.5	12.7	2.85	167
	56.0	$\pm 5\%$	-6	006	55	2.5	12.0	3.00	164
	62.0	$\pm 5\%$	-7	007	55	2.5	11.5	3.15	160
	68.0	$\pm 5\%$	-8	008	55	2.5	11.0	3.30	156
	75.0	$\pm 5\%$	-9	009	55	2.5	10.5	3.70	147
	82.0	$\pm 5\%$	-10	010	50	2.5	10.3	3.90	143
	91.0	$\pm 5\%$	-11	011	50	2.5	10.0	4.30	136
	100.0	$\pm 5\%$	-12	012	50	2.5	9.5	4.50	133
	110.0	$\pm 5\%$	-13	013	60	0.79	8.9	4.90	128
	120.0	$\pm 5\%$	-14	014	65	0.79	8.7	5.20	124
	130.0	$\pm 5\%$	-15	015	65	0.79	8.5	5.45	121
	150.0	$\pm 5\%$	-16	016	65	0.79	8.0	6.05	114
	160.0	$\pm 5\%$	-17	017	65	0.79	7.5	6.40	111
	180.0	$\pm 5\%$	-18	018	65	0.79	7.0	6.75	108
	200.0	$\pm 5\%$	-19	019	65	0.79	6.5	7.10	106
	220.0	$\pm 5\%$	-20	020	65	0.79	6.2	7.45	103
	240.0	$\pm 5\%$	-21	021	65	0.79	5.9	7.80	101
MS75101	3.3	$\pm 10\%$	-01	LT10K 169	30	7.9	70.0	0.140	990
	3.9	$\pm 10\%$	-02	170	30	7.9	65.0	0.155	870
	4.7	$\pm 10\%$	-03	171	30	7.9	60.0	0.210	745
	5.6	$\pm 10\%$	-04	172	30	7.9	50.0	0.280	645
	6.8	$\pm 10\%$	-05	173	30	7.9	50.0	0.375	560
	8.2	$\pm 10\%$	-06	174	30	7.9	48.0	0.440	540
	10.0	$\pm 10\%$	-07	175	30	7.9	42.0	0.605	440
	12.0	$\pm 10\%$	-08	176	50	2.5	36.0	1.05	370
	15.0	$\pm 10\%$	-09	177	55	2.5	30.0	1.20	310
	18.0	$\pm 10\%$	-10	178	60	2.5	30.0	1.95	255
	22.0	$\pm 10\%$	-11	179	60	2.5	24.0	2.20	240
	27.0	$\pm 10\%$	-12	180	65	2.5	22.0	2.75	205

* Measured with full length lead. ** Rated DC Current based on the maximum temperature rise as shown in table

MAXIMUM TEMPERATURE RISE		
		OPERATING TEMPERATURE RANGE
MS75083	0.10 μ H to 1.0 μ H = 35 °C at + 90 °C ambient	- 55 °C to + 125 °C
MS75084	1.2 μ H to 27 μ H = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C
MS75085	33 μ H to 1000 μ H = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C
MS18130	0.15 μ H to 4.7 μ H = 35 °C at + 90 °C ambient	- 55 °C to + 125 °C
MS14046	5.6 μ H to 33 μ H = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C
MS90538	36 μ H to 240 μ H = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C
MS75101	3.3 μ H to 27 μ H = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C



MS7508x, MS18130, MS14046, MS90538, MS75101

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DESCRIPTION - MILITARY PART NUMBER

MS75084	- 12		LT	10	K	072
MILITARY STANDARD	INDUCTANCE VALUE	OR	TYPE	GRADE AND CLASS	FAMILY	ID NUMBER

GLOBAL PART NUMBER INFORMATION

M	S	7	5	0	4	8
MODEL						

-	1	2
INDUCTANCE VALUE		

R	U
PACKAGE CODE	



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