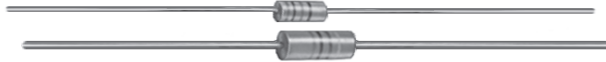


## Inductors

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:** ± 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	<b>0.10 μH</b>	<b>1 μH</b>	1	B
MS75084	<b>1.2 μH</b>	<b>27 μH</b>	1	A
MS75085	<b>33 μH</b>	<b>1000 μH</b>	1	A
MS18130	<b>0.15 μH</b>	<b>4.7 μH</b>	1	B
MS14046	<b>5.6 μH</b>	<b>33 μH</b>	1	A
MS90538	<b>36 μH</b>	<b>240 μH</b>	1	A
MS75101	<b>3.3 μH</b>	<b>27 μH</b>	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
<b>Barometric Pressure</b>	Test Condition C	MIL-STD-202, Method 105
<b>Thermal Shock</b>	Test Condition A-1	MIL-STD-202, Method 107
<b>Flammability</b>	-	MIL-STD-202, Method 111
<b>Overload</b>	-	MIL-PRF-15305
<b>Low Temperature Storage</b>	-	MIL-PRF-15305
<b>Resistance to Soldering Heat</b>	Test Condition A	MIL-STD-202, Method 210
<b>Resistance to Solvents</b>	-	MIL-STD-202, Method 215



# MS7508x, MS18130, MS14046, MS90538, MS75101

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

Vishay Dale

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



Vishay Dale

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

STANDARD ELECTRICAL SPECIFICATIONS										
MODEL	IND (μH)	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	± 10 %	-1	LT10K 128	45	7.9	60.0	0.32	495	IRON CORE
	6.8	± 10 %	-2	129	50	7.9	55.0	0.50	395	
	8.2	± 10 %	-3	130	50	7.9	50.0	0.60	360	
	10.0	± 10 %	-4	131	55	7.9	45.0	0.90	290	
	12.0	± 10 %	-5	132	65	2.5	42.0	1.10	265	
	15.0	± 10 %	-6	133	65	2.5	40.0	1.40	240	
	18.0	± 10 %	-7	134	75	2.5	34.0	2.25	185	
	22.0	± 10 %	-8	135	75	2.5	30.0	2.50	175	
	27.0	± 10 %	-9	136	60	2.5	25.0	2.60	170	
	33.0	± 10 %	-10	137	65	2.5	19.0	3.00	165	
MS90538	36.0	± 5 %	-1	LT10K 001	60	2.5	15.5	2.50	180	IRON CORE
	39.0	± 5 %	-2	002	60	2.5	14.5	2.60	176	
	43.0	± 5 %	-3	003	60	2.5	13.7	2.70	172	
	47.0	± 5 %	-4	004	55	2.5	13.0	2.75	170	
	51.0	± 5 %	-5	005	55	2.5	12.7	2.85	167	
	56.0	± 5 %	-6	006	55	2.5	12.0	3.00	164	
	62.0	± 5 %	-7	007	55	2.5	11.5	3.15	160	
	68.0	± 5 %	-8	008	55	2.5	11.0	3.30	156	
	75.0	± 5 %	-9	009	55	2.5	10.5	3.70	147	
	82.0	± 5 %	-10	010	50	2.5	10.3	3.90	143	
	91.0	± 5 %	-11	011	50	2.5	10.0	4.30	136	
	100.0	± 5 %	-12	012	50	2.5	9.5	4.50	133	
	110.0	± 5 %	-13	013	60	0.79	8.9	4.90	128	
	120.0	± 5 %	-14	014	65	0.79	8.7	5.20	124	
	130.0	± 5 %	-15	015	65	0.79	8.5	5.45	121	
	150.0	± 5 %	-16	016	65	0.79	8.0	6.05	114	
	160.0	± 5 %	-17	017	65	0.79	7.5	6.40	111	
	180.0	± 5 %	-18	018	65	0.79	7.0	6.75	108	
	200.0	± 5 %	-19	019	65	0.79	6.5	7.10	106	
	220.0	± 5 %	-20	020	65	0.79	6.2	7.45	103	
	240.0	± 5 %	-21	021	65	0.79	5.9	7.80	101	
MS75101	3.3	± 10 %	-01	LT10K 169	30	LT10K 7.9	70.0	0.140	990	IRON CORE
	3.9	± 10 %	-02	170	30	7.9	65.0	0.155	870	
	4.7	± 10 %	-03	171	30	7.9	60.0	0.210	745	
	5.6	± 10 %	-04	172	30	7.9	50.0	0.280	645	
	6.8	± 10 %	-05	173	30	7.9	50.0	0.375	560	
	8.2	± 10 %	-06	174	30	7.9	48.0	0.440	540	
	10.0	± 10 %	-07	175	30	7.9	42.0	0.605	440	
	12.0	± 10 %	-08	176	50	2.5	36.0	1.05	370	
	15.0	± 10 %	-09	177	55	2.5	30.0	1.20	310	
	18.0	± 10 %	-10	178	60	2.5	30.0	1.95	255	
	22.0	± 10 %	-11	179	60	2.5	24.0	2.20	240	
	27.0	± 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 μH to 1.0 μH = 35 °C at + 90 °C ambient	- 55 °C to + 125 °C
MS75084	1.2 μH to 27 μH = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C
MS75085	33 μH to 1000 μH = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C
MS18130	0.15 μH to 4.7 μH = 35 °C at + 90 °C ambient	- 55 °C to + 125 °C
MS14046	5.6 μH to 33 μH = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C
MS90538	36 μH to 240 μH = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C
MS75101	3.3 μH to 27 μH = 15 °C at + 90 °C ambient	- 55 °C to + 105 °C



# MS7508x, MS18130, MS14046, MS90538, MS75101

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

Vishay Dale

## DESCRIPTION - MILITARY PART NUMBER

<b>MS75084</b>	<b>- 12</b>		<b>LT</b>	<b>10</b>	<b>K</b>	<b>072</b>
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



## 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.