

INCH-POUND

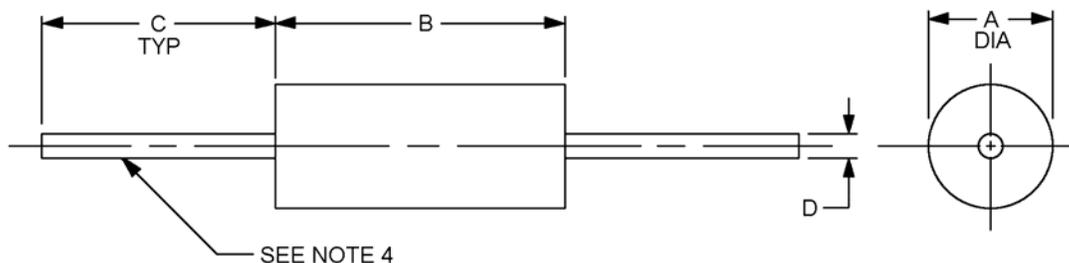
MS21363B  
 2 July 2007  
 SUPERSEDING  
 MS21363A(USAF)  
 2 July 1985

## MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED,  
 MICROMINIATURE, MAGNETICALLY SHIELDED,  
 (FERRITE CORE-FERRITE SLEEVE),  
 TYPES LT10K307 TO LT10K353 INCL.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the products described herein shall consist of this specification and MIL-PRF-15305.



Ltr	Dimensions in inches with metric Equivalents (mm) in parentheses	
	Minimum	Maximum
A	.152 (3.86)	.172 (4.37)
B	.390 (9.91)	.430 (10.92)
C	1.250 (31.75)	1.625 (41.28)
D	.023 (0.58)	.027 (0.69)

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. These coils are intended to be supported by their leads.
4. Solderable/weldable lead wire, AWG number 22.

FIGURE 1. Dimensions and configuration.

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REQUIREMENTS:

Design, construction, and physical dimensions: See figure 1.

Style: LT10.

Grade: 1.

Class: A.

Weight: 1 gram, maximum.

Operating temperature range: -55°C to +105°C.

Ambient temperature: 90°C maximum.

Temperature rise: 15°C maximum.

Terminal pull: 5 pounds minimum.

Altitude: 70,000 feet.

Shock, specified pulse: Method 213 of MIL-STD-202, test condition I, is applicable.

Dielectric withstanding voltage:

At sea level: Method 301 of MIL-STD-202, test voltage 1,000 V rms for a minimum of 60 seconds.

At reduced barometric pressure: Method 105 of MIL-STD-202, test condition C, test voltage 200 V rms for a minimum of 60 seconds.

Percent coupling: 3 percent maximum.

Electrical characteristics: See table I and table II.

Inductance: See table I.

Q values: See table I.

Self-resonant frequency (SRF): See table I.

DC resistance (DCR): See table I.

Part or Identifying Number (PIN): MS21363- (dash number from table I).

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TABLE I. Electrical characteristics (initial).

Dash number 1/	Type designation	Inductance ( $\mu$ H) $\pm 5\%$	Q (min)	Test frequency (MHz)	SRF min (MHz)	DC Resistance at 25°C max (ohms)	Rated dc current (mA)	Incremental Current (mA)
-1	LT10K307	15	45	2.5	49	.80	315	250
-2	LT10K308	18	45	2.5	45	.89	300	235
-3	LT10K309	22	45	2.5	41	.96	290	220
-4	LT10K310	27	45	2.5	38	1.19	260	200
-5	LT10K311	33	45	2.5	34	1.37	240	190
-6	LT10K312	39	50	2.5	29	1.93	205	180
-7	LT10K313	47	50	2.5	27	2.11	195	175
-8	LT10K314	56	50	2.5	25	2.23	190	160
-9	LT10K315	68	50	2.5	21	2.70	170	150
-10	LT10K316	82	50	2.5	10.5	2.44	180	140
-11	LT10K317	100	50	2.5	10.0	3.12	160	120
-12	LT10K318	120	55	.79	9.7	3.60	150	95
-13	LT10K319	150	55	.79	8.5	4.10	140	90
-14	LT10K320	180	55	.79	8.0	4.40	135	85
-15	LT10K321	220	55	.79	7.5	5.00	125	80
-16	LT10K322	270	55	.79	7.0	5.80	115	70
-17	LT10K323	330	55	.79	6.5	6.40	110	65
-18	LT10K324	390	60	.79	6.2	7.40	105	60
-19	LT10K325	470	60	.79	5.7	9.50	92	58
-20	LT10K326	560	60	.79	4.7	10.5	90	55
-21	LT10K327	680	60	.79	4.5	11.8	80	50
-22	LT10K328	820	60	.79	4.2	13.0	80	45
-23	LT10K329	1,000	60	.79	3.8	17.5	70	40
-24	LT10K330	1,200	45	.25	1.5	22.1	60	35
-25	LT10K331	1,500	45	.25	1.2	26.5	55	33
-26	LT10K332	1,800	45	.25	1.0	29.9	50	30
-27	LT10K333	2,200	45	.25	.97	33.8	50	27
-28	LT10K334	2,700	45	.25	.92	47.3	40	25
-29	LT10K335	3,300	45	.25	.84	53.0	40	22
-30	LT10K336	3,900	45	.25	.80	73.8	35	20
-31	LT10K337	4,700	45	.25	.74	81.6	31	19
-32	LT10K338	5,600	44	.25	.73	98.9	28	17
-33	LT10K339	6,800	40	.25	.66	111.0	27	16
-34	LT10K340	8,200	40	.25	.54	119.0	26	15
-35	LT10K341	10,000	40	.25	.47	137.0	24	14
-36	LT10K342	12,000	30	.079	.33	143.0	23	13
-37	LT10K343	15,000	30	.079	.29	157.0	22	12
-38	LT10K344	18,000	30	.079	.28	175.0	21	10
-39	LT10K345	22,000	27	.079	.25	274.0	17	9
-40	LT10K346	27,000	27	.079	.21	308.0	16	8
-41	LT10K347	33,000	27	.079	.19	343.0	15	7.5
-42	LT10K348	39,000	27	.079	.17	376.0	15	6.0
-43	LT10K349	47,000	23	.079	.16	473.0	13	5.5
-44	LT10K350	56,000	23	.079	.14	512.0	13	5.0
-45	LT10K351	68,000	23	.079	.13	580.0	12	4.0
-46	LT10K352	82,000	21	.079	.12	618.0	11	3.5
-47	LT10K353	100,000	18	.079	.11	678.0	11	3.0

1/ The dash number added to MS military standard number constitutes the MS PIN; for example MS21363-1.

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TABLE II. Electrical characteristics (final). 1/

Inspection group	Allowable variation from Initial measurement		Allowable percent from specified minimum value in electrical characteristics (initial) table	
	Inductance (percent)	DC resistance	Self-resonant frequency	Q
Qualification inspection				
Group II	±5	---	---	-10
Group III	±10	±(5% +.001 ohm)	-15	-20
Group IV	±5	±(2% +.001 ohm)	-5	-20
Conformance inspection group C				
Subgroup I	±5	---	---	-10
Subgroup II <u>2/</u>	±5	±(2% +.001 ohm)	-5	-20
Subgroup III	±10	±(5% +.001 ohm)	-15	-20

1/ Test fixture allowance of +.01  $\mu$ H shall be added to all change in inductance limits  $\pm$ ( \_ percent +.01  $\mu$ H).

## NOTES:

1. After the overload test is performed, a period of 24 hours shall elapse prior to taking electrical characteristics (final) measurements.
2. DC resistance shall be the last measurement taken in the electrical characteristics test sequence.

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Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Referenced documents. In addition to MIL-PRF-15305, this document references MIL-STD-202.

Custodians:

Army – CR  
Navy – EC  
Air Force – 11  
DLA - CC

Preparing activity:  
DLA – CC

(Project 5950-2007-012)

Review activities:

Air Force – 19

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.