

INCH-POUND

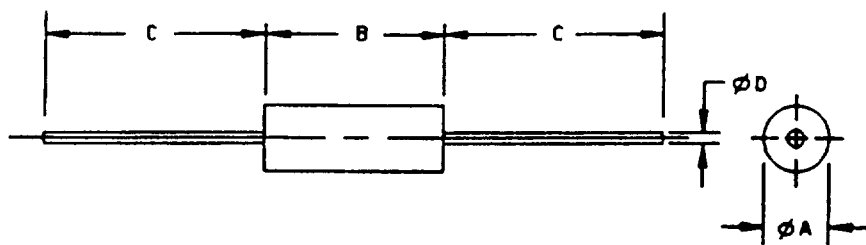
MS90538B
 16 February 1995
 SUPERSEDING
 MS90538A
 1 June 1973

MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED, SUBMINIATURE (IRON CORE)
 TYPES LT10K001 TO LT10K021, INCLUSIVE

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

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-C-15305.



Ltr	Dimensions are in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
ϕA	.145 (3.68)	.165 (4.19)
B	.365 (9.27)	.385 (9.78)
C	1.250 (31.75)	1.626 (41.30)
ϕD	.023 (0.58)	.027 (0.69)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.

FIGURE 1. Dimensions and configuration.

(B) denotes changes

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REQUIREMENTS:

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

Style: LT10.
 Grade: 1
 Class: A.

ⓑ Weight: 0.031747 ounce maximum

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

Ambient temperature: 90°C

Temperature rise: 15°C.

Terminal pull: 5 pounds.

Altitude: 70,000 feet.

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

Dielectric withstanding voltage (sea level): MIL-STD-202, method 301, test voltage of 700 V rms for a minimum of 60 seconds.

Barometric pressure (reduced): MIL-STD-202, method 105, test condition C, test voltage of 180 V rms for a minimum of 60 seconds

Electrical characteristics See tables I and II.

Inductance: See table I.

Q values See table I

Self-resonant frequency. See table I.

DC resistance: See table I.

ⓑ Part or Identifying Number (PIN). MS90538-(dash number from table I).

TABLE I. Electrical characteristics (initial) and dash numbers.

Dash no. 1/	Type designation	Inductance (μH)	Q (min)	Test frequency (MHz)	SRF min (MHz)	DC resistance (ohms)	Rated dc current (mA)
-01	LT10K001	36 ±5%	60	2.50	15.5	2.50	180
-02	LT10K002	39 ±5%	60	2.50	14.5	2.60	176
-03	LT10K003	43 ±5%	60	2.50	13.7	2.70	172
-04	LT10K004	47 ±5%	55	2.50	13.0	2.75	170
-05	LT10K005	51 ±5%	55	2.50	12.7	2.85	167
-06	LT10K006	56 ±5%	55	2.50	12.0	3.00	164
-07	LT10K007	62 ±5%	55	2.50	11.5	3.15	160
-08	LT10K008	68 ±5%	55	2.50	11.0	3.30	156
-09	LT10K009	75 ±5%	55	2.50	10.5	3.70	147
-10	LT10K010	82 ±5%	50	2.50	10.3	3.90	143
-11	LT10K011	91 ±5%	50	2.50	10.0	4.30	136
-12	LT10K012	100 ±5%	50	2.50	9.5	4.50	133
-13	LT10K013	110 ±5%	60	.79	8.9	4.90	128
-14	LT10K014	120 ±5%	65	.79	8.7	5.20	124
-15	LT10K015	130 ±5%	65	.79	8.5	5.45	121
-16	LT10K016	150 ±5%	65	.79	8.0	6.05	114
-17	LT10K017	160 ±5%	65	.79	7.5	6.40	111
-18	LT10K018	180 ±5%	65	.79	7.0	6.75	108
-19	LT10K019	200 ±5%	65	.79	6.5	7.10	106
-20	LT10K020	220 ±5%	65	.79	6.2	7.45	103
-21	LT10K021	240 ±5%	65	.79	5.9	7.80	101

1/ The dash number added to MS military standard number constitutes the MS PIN, for example MS90538-01.

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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	± 2	---	---	-10
Group III	± 5	$\pm(3\% + .001 \text{ ohm})$	-8	-10
Group IV	± 5	$\pm(2\% + .001 \text{ ohm})$	-10	-15
Quality conformance inspection group C				
Subgroup I	± 2	---	---	-10
Subgroup II	± 5	$\pm(2\% + .001 \text{ ohm})$	-10	-15
Subgroup III	± 5	$\pm(3\% + .001 \text{ ohm})$	-8	-10

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

Application notes:

1. These coils are intended to be mounted by their leads.
2. Tinned, solid copper wire, AWG #22.
3. The polarizing voltage during the moisture resistance tests is applied with the positive lead connected to the coil terminals tied together, and the negative lead connected to the metal strap.

CONCLUDING MATERIAL

Custodians

Army - ER
Navy - EC
Air Force - 85

Review activities:

Army - AR, MI
Navy - AS, MC, OS, SH
Air Force - 17, 19
DLA - ES

Preparing activity.
Army - ER

Agent:
DLA - ES

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