

INCH-POUND

MS75101B  
16 February 1995

SUPERSEDING

MS75101A

4 September 1985

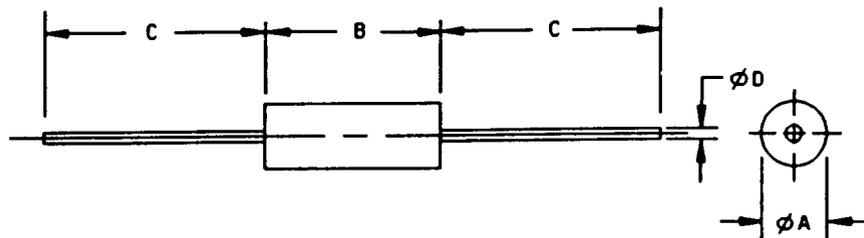
MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED, SUBMINIATURE (IRON CORE)  
TYPES LT10K169 TO LT10K180, INCLUSIVE

Inactive for new design after 4 September 1985.  
For new design, use MIL-C-39010/5.

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
$\phi A$	.156 (3.96)	.219 (5.56)
B	.406 (10.31)	.469 (11.91)
C	1.250 (31.75)	1.626 (41.30)
$\phi D$	.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: 0.03351 ounce maximum.

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

Ambient temperature: 90°C.

Temperature rise: 15°C.

Terminal pull: 5 pounds, is not applicable in group B inspection, table VI of MIL-C-39010/5.

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 1,000 V rms for a minimum of 60 seconds

Barometric pressure (reduced): MIL-STD-202, method 105, test condition C, test voltage of 200 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): MS75101-(dash number from table I).

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

Dash no. 1/	Type designation 2/	Superseded MS part no.	Inductance (μH)	Q (min)	Test frequency (MHz)	SRF min (MHz)	DC resistance (ohms)	Rated dc current (mA)
-1	LT10K169	75008-34	3.30 ±10%	30	7.9	70	0.140	990
-2	LT10K170	75008-35	3.90 ±10%	30	7.9	65	0.155	870
-3	LT10K171	75008-36	4.70 ±10%	30	7.9	60	0.210	745
-4	LT10K172	75008-37	5.60 ±10%	30	7.9	50	0.280	645
-5	LT10K173	75008-38	6.80 ±10%	30	7.9	50	0.375	560
-6	LT10K174	75008-39	8.20 ±10%	30	7.9	48	0.440	540
-7	LT10K175	75008-40	10.00 ±10%	30	7.9	42	0.605	440
-8	LT10K176	75008-41	12.00 ±10%	50	2.5	36	1.05	370
-9	LT10K177	75008-42	15.00 ±10%	55	2.5	30	1.20	310
-10	LT10K178	75008-43	18.00 ±10%	60	2.5	30	1.95	255
-11	LT10K179	75008-44	22.00 ±10%	60	2.5	24	2.20	240
-12	LT10K180	75008-45	27.00 ±10%	65	2.5	22	2.75	205

1/ The dash number added to MS military standard number constitutes the MS PIN; for example MS75101-1

2/ The coils are directly interchangeable with former PIN's (MS75008-34 thru -45). The decrease in maximum operating temperature from 125°C to 105°C does not downgrade these coils but assures satisfactory operation at 105°C for a minimum of 2,000 hours of life, rather than a shorter period of operation at 125°C.

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

- ⓑ 1/ Test fixture allowance of  $+0.01 \mu\text{H}$  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. Solderable/weldable lead wire, number 22 AWG.
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

## Preparing activity:

Army - ER

## Agent:

DLA - ES

## Review activities:

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

(Project 5950-0866)