INCH-POUND

MS14041B
29 June 2007
SUPERSEDING
MS14041A
25 July 1983

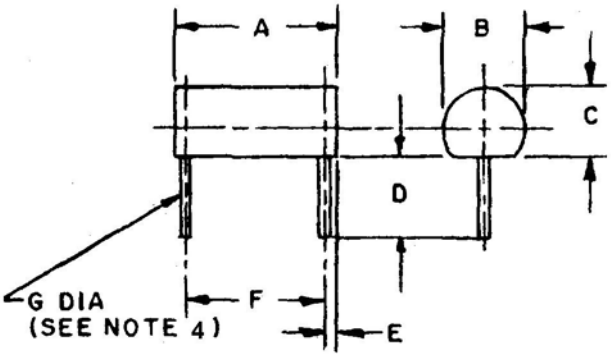
MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED, SUBMINIATURE, (IRON CORE), TYPES LT10K108 TO LT10K112 INCL.

Inactive for new design after 25 July 1983.

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	.594 (15.09)	.656 (16.66)
B	.251 (6.38)	.313 (7.95)
C	.234 (5.94)	.296 (7.52)
D	.250 (6.35)	.374 (9.50)
E	.051 (1.30)	.071 (1.80)
F	.490 (12.45)	.510 (12.95)
G	.023 (0.58)	.027 (0.69)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents, in parentheses, are given for general information only.
3. These coils are intended to be mounted by the body.
4. Solderable/weldable lead wire, AWG number 22.

FIGURE 1. Dimensions and configuration.

REQUIREMENTS:

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

Style: LT10.

Grade: 1.
Class: A.

Weight: 1.8 grams, 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.

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): MS14041- (dash number from table I).

VERIFICATION:

Quality assurance provisions:

Qualification Inspection: Not applicable for this standard.

Conformance Inspection: Group A and group B tests of MIL-PRF-15305 shall be applicable.

TABLE I. Electrical characteristics (initial).

Dash number 1/	Type designation 2/	Superseded MS PIN	Inductance (μH) ±10%	Q (min)	Test frequency (MHz)	SRF min (MHz)	DC resistance (ohms)	Rated dc current (mA)
-1	LT10K108	MS18100-23	68	45	2.5	6.8	3.3	165
-2	LT10K109	MS18100-24	82	40	2.5	6.3	3.5	157
-3	LT10K110	MS18100-25	100	35	2.5	5.8	3.8	152
-4	LT10K111	MS18100-26	120	60	.79	5.0	4.7	138
-5	LT10K112	MS18100-27	150	60	.79	4.4	5.3	132

1/ The dash number added to MS military standard number constitutes the MS PIN; for example MS14041-1.

2/ 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 2/	±5	±(2% +.001 ohm)	-10	-15
Conformance inspection group C				
Subgroup I	±2	---	---	-10
Subgroup II 2/	±5	±(2% +.001 ohm)	-10	-15
Subgroup III	±5	±(3% +.001 ohm)	-8	-10

1/ Test fixture allowance of +.01 μH shall be added to all change in inductance limits ±(_ percent +.01 μH).

2/ 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.

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

Review activities:
Army – AR, CR4, MI
Navy – AS, MC, OS, SH
Air Force – 19

Preparing activity:
DLA – CC

(Project 5950-2007-002)

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.