

INCH-POUND

MS90540C
19 March 2015
SUPERSEDING
MS90540B
7 September 2007

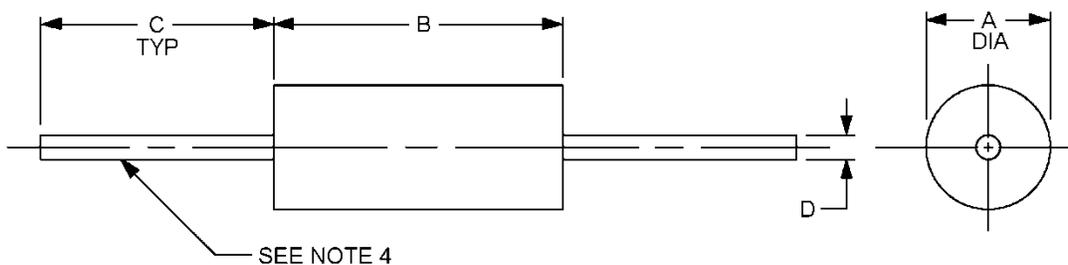
MILITARY SPECIFICATION SHEET

COIL, RADIO FREQUENCY, MOLDED, FIXED
SUBMINIATURE (IRON CORE),
TYPES LT10K037 TO LT10K049, INCLUSIVE

Inactive for new design.

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	.205 (5.21)	.225 (5.72)
B	.550 (13.97)	.570 (14.48)
C	1.250 (31.75)	1.625 (41.28)
D	.023 (0.58)	.030 (0.76)

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 bodies.
4. Solderable/weldable lead wire, number 21 or 22 AWG, tinned solid copper wire.

FIGURE 1. Dimensions and configuration.

REQUIREMENTS:

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

Style: LT10

Grade: 1

Class: A

Weight: 1.5 grams, maximum.

Operating temperature range: -55°C to $+105^{\circ}\text{C}$.

Ambient temperature: $+90^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

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

Barometric pressure (reduced): Method 105 of MIL-STD-202, 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 (SRF): See table I.

DC resistance (DCR): See table I.

Part or Identifying Number (PIN): MS90540 - (dash number from table I).

TABLE 1. Electrical characteristics (initial).

Dash Number MS90540 1/	Type Designation	Inductance (μ H) $\pm 5\%$	Q (min)	Test Frequency (MHz)	SRF Minimum (MHz)	DC resistance Max. (ohms)	Rated DC current (mA)	Lead Wire
-01	LT10K037	1100	60	.25	2.8	21.0	78	21 AWG
-02	LT10K038	1200	60	.25	2.7	22.0	76	21 AWG
-03	LT10K039	1300	60	.25	2.6	23.0	75	21 AWG
-04	LT10K040	1500	65	.25	2.4	25.0	72	21 AWG
-05	LT10K041	1600	65	.25	2.3	26.0	70	21 AWG
-06	LT10K042	1800	65	.25	2.2	28.0	68	21 AWG
-07	LT10K043	2000	65	.25	2.1	29.0	67	21 AWG
-08	LT10K044	2200	70	.25	2.0	30.0	66	21 AWG
-09	LT10K045	2400	70	.25	1.9	31.0	64	21 AWG
-10	LT10K046	2700	70	.25	1.8	33.0	62	21 AWG
-11	LT10K047	3000	70	.25	1.7	35.0	61	21 AWG
-12	LT10K048	3300	70	.25	1.6	38.0	58	21 AWG
-13	LT10K049	3600	70	.25	1.5	40.0	57	21 AWG
-14	LT10K037	1100	60	.25	2.8	21.0	78	22 AWG
-15	LT10K038	1200	60	.25	2.7	22.0	76	22 AWG
-16	LT10K039	1300	60	.25	2.6	23.0	75	22 AWG
-17	LT10K040	1500	65	.25	2.4	25.0	72	22 AWG
-18	LT10K041	1600	65	.25	2.3	26.0	70	22 AWG
-19	LT10K042	1800	65	.25	2.2	28.0	68	22 AWG
-20	LT10K043	2000	65	.25	2.1	29.0	67	22 AWG
-21	LT10K044	2200	70	.25	2.0	30.0	66	22 AWG
-22	LT10K045	2400	70	.25	1.9	31.0	64	22 AWG
-23	LT10K046	2700	70	.25	1.8	33.0	62	22 AWG
-24	LT10K047	3000	70	.25	1.7	35.0	61	22 AWG
-25	LT10K048	3300	70	.25	1.6	38.0	58	22 AWG
-26	LT10K049	3600	70	.25	1.5	40.0	57	22 AWG

1/ 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.

TABLE II. Electrical characteristics (final).

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

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.

MIL-PRF-15305
MIL-STD-202

Custodians:
Army – CR
Navy - EC
Air Force - 85
DLA – CC

Preparing activity:
DLA – CC

Project 5950-2015-002

Review activities:
Army – MI
Air Force – 99

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 <https://assist.dla.mil>.