INCH-POUND

MS21389E
24 August 2007
SUPERSEDING
MS21389D
14 September 1994

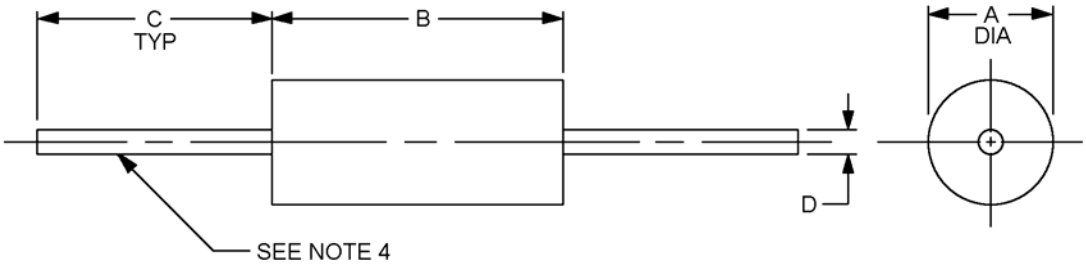
MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED, SUBMINIATURE, PHENOLIC CORE, TYPES LT4K

Inactive for new design
after 21 February 2003

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	.168 (4.27)	.193 (4.90)
B	.420 (10.67)	.440 (11.18)
C	1.300 (33.02)	
D	.023 (0.67)	.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. Tinned copper lead wire, AWG number 21.

FIGURE 1. Dimensions and configuration.

REQUIREMENTS:

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

Weight: 0.03 ounce, maximum.

Operating temperature range: -55° to +125°C.

Ambient temperature: + 90°C maximum.

Temperature rise: 35°C maximum.

Power dissipation: .500 watt maximum.

Terminal pull: 5 pounds minimum.

Altitude: 60,000 feet.

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

Vibration (high frequency): Method 204 of MIL-STD-202, test condition G.

Dielectric withstanding voltage (sea level): Method 301 of MIL-STD-202, test voltage 700 V rms minimum.

Barometric pressure (reduced): Method 105 of MIL-STD-202, test condition C, test voltage 100 V rms minimum.

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): MS21389 - (dash number from table I).

TABLE 1. Electrical characteristics (initial).

Dash number 1/	Inductance (μH)	Test frequency (MHz)		Q (min)	SRF min (MHz) 1/	Maximum DCR (ohms)	Rated dc current (mA)
		Q	L				
-01	.10 ±20%	50	25	75	500	.02	4000
-02	.12 ±20%	50	25	75	500	.025	3500
-03	.15 ±20%	50	25	75	500	.03	3000
-04	.18 ±20%	50	25	65	500	.03	3000
-05	.22 ±20%	50	25	65	500	.03	3000
-06	.27 ±20%	45	25	65	470	.04	2700
-07	.33 ±20%	40	25	65	440	.05	2500
-08	.39 ±20%	40	25	60	400	.08	2000
-09	.47 ±20%	25	25	55	360	.08	2000
-10	.56 ±20%	25	25	50	330	.10	1700
-11	.68 ±20%	25	25	50	300	.12	1500
-12	.82 ±20%	25	25	45	275	.18	1300
-13	1.0 ±20%	20	25	45	250	.24	1100
-14	1.2 ±20%	20	7.9	45	220	.35	1000
-15	1.5 ±10%	15	7.9	45	200	.43	850
-16	1.8 ±10%	15	7.9	45	180	.65	720
-17	2.2 ±10%	15	7.9	45	165	.80	610

1/ Minimum self resonant frequency to be not less than 80% of the specified value.

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

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:
Air Force - 11
DLA - CC

Preparing activity:
DLA – CC

(Project 5950-2007-017)

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.