

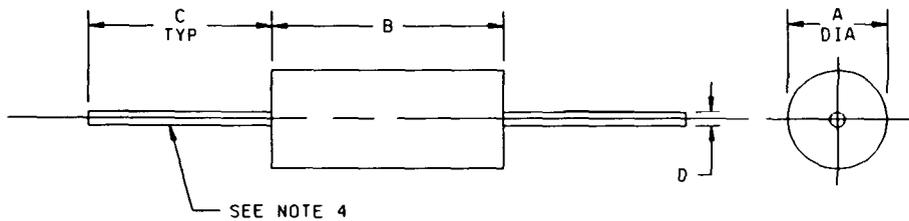
INCH-POUND

MS21389D(USAF)
14 September 1994
SUPERSEDING
MS21389C(85)
28 July 1986

MILITARY SPECIFICATION SHEET
COILS, RADIO FREQUENCY, MOLDED, FIXED,
SUBMINIATURE, PHENOLIC CORE
TYPES LT4K

This specification is approved for use by the Electronic Support Flight Division, Department of the Air Force, and is available 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 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 (0.58)	.027 (0.69)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. These coils are intended to be supported by their leads.
4. Tinned copper lead wire, AWG 21.

FIGURE 1. Dimensions and configurations.

ⓓ denotes changes

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REQUIREMENTS:

Design, construction and physical dimensions: see figure 1.

Style: LT4
Grade: 1
Class: 8

Ⓓ Weight: 0.03 ounce maximum.

Operating temperature range: -55°C 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: MIL-STD-202, method 213, test condition I, is applicable.

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

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

Barometric pressure (reduced): MIL-STD-202, method 105, 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).

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TABLE I. Electrical characteristics (initial).

Dash no.	Type designation	Inductance (μ H)	Test frequency (MHz)		Q (min)	1/ SRF min (MHz)	Maximum DCR (ohms)	Rated DC current (mA)
			Q	L				
01	LT4K	.10 \pm 20%	50	25	75	500	.02	4000
02	LT4K	.12 \pm 20%	50	25	75	500	.025	3500
03	LT4K	.15 \pm 20%	50	25	75	500	.03	3000
04	LT4K	.18 \pm 20%	50	25	65	500	.03	3000
05	LT4K	.22 \pm 20%	50	25	65	500	.03	3000
06	LT4K	.27 \pm 20%	45	25	65	470	.04	2700
07	LT4K	.33 \pm 20%	40	25	65	440	.05	2500
08	LT4K	.39 \pm 20%	40	25	60	400	.08	2000
09	LT4K	.47 \pm 20%	25	25	55	360	.08	2000
10	LT4K	.56 \pm 20%	25	25	50	330	.10	1700
11	LT4K	.68 \pm 20%	25	25	50	300	.12	1500
12	LT4K	.82 \pm 20%	25	25	45	275	.18	1300
13	LT4K	1.0 \pm 20%	20	25	45	250	.24	1100
14	LT4K	1.2 \pm 20%	20	7.9	45	220	.35	1000
15	LT4K	1.5 \pm 10%	15	7.9	45	200	.43	850
16	LT4K	1.8 \pm 10%	15	7.9	45	180	.65	720
17	LT4K	2.2 \pm 10%	15	7.9	45	165	.80	610

1/ Minimum self resonant frequency to be not less than 80 percent 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	\pm 2	---	---	-10
Group III	\pm 5	\pm (3% +.001 ohm)	-8	-10
Group IV	\pm 5	\pm (2% +.001 ohm)	-10	-10
Quality conformance inspection group C				
Subgroup I	\pm 2	---	---	-10
Subgroup II	\pm 5	\pm (2% +.001 ohm)	-10	-10
Subgroup III	\pm 5	\pm (3% +.001 ohm)	-8	-10

1/ Test fixture allowance of +.01 μ H shall be added to all change in inductance limits \pm (_ percent +.01 μ H).

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CONCLUDING MATERIAL

Preparing activity:
Air force - 85

Agent:
DLA - ES

(Project 5950-F247)