INCH-POUND

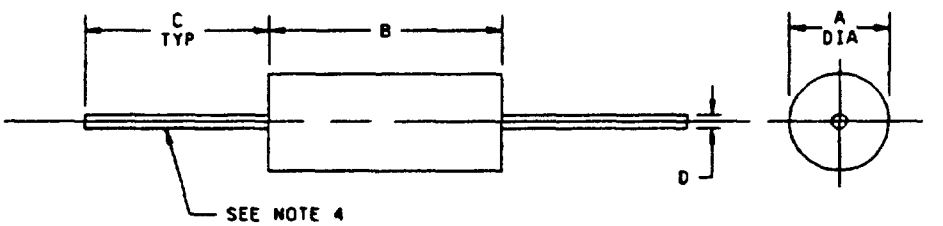
MS21390D(USAF)
14 September 1994
SUPERSEDING
MS21390C(85)
9 September 1988

MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED, SUBMINIATURE, IRON 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)	(D) .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 22.

FIGURE 1. Dimensions and configurations.

(D) denotes changes

REQUIREMENTS:

Design, construction and physical dimensions: See figure 1.

Style: LT4
Grade: 1
Class: B

(D) 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: .33 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.

(D) Part or Identifying Number (PIN): MS21390-(dash number from table I).

TABLE I. Electrical characteristics (initial).

Dash no.	Type designation	Inductance (µH)	Test frequency (MHz) Q	Test frequency (MHz) L	Q (min)	1/ SRF min (MHz)	Maximum DCR (ohms)	Rated DC current (mA)
01	LT4K	2.7 ±10%	10	7.9	55	110	.12	1600
02	LT4K	3.3 ±10%	10	7.9	55	100	.15	1400
03	LT4K	3.9 ±10%	10	7.9	60	95	.23	1200
04	LT4K	4.7 ±10%	7.9	7.9	70	90	.30	1000
05	LT4K	5.6 ±10%	7.9	7.9	65	80	.45	900
06	LT4K	6.8 ±10%	7.9	7.9	65	70	.55	800
07	LT4K	8.2 ±10%	7.9	7.9	60	65	.65	720
08	LT4K	10 ±10%	5	7.9	60	60	.73	650
09	LT4K	12 ±10%	5	2.5	65	53	1.1	590
10	LT4K	15 ±10%	2.5	2.5	80	47	1.4	500
11	LT4K	18 ±10%	2.5	2.5	75	43	1.6	460
12	LT4K	22 ±10%	2.5	2.5	75	40	1.8	430
13	LT4K	27 ±5%	2.5	2.5	75	36	2.7	360
14	LT4K	33 ±5%	2.5	2.5	85	32	3.5	300
15	LT4K	39 ±5%	2.5	2.5	80	26	3.8	290
16	LT4K	47 ±5%	2.5	2.5	80	22	4.0	275
17	LT4K	56 ±5%	2.5	2.5	75	19	4.4	265
18	LT4K	68 ±5%	2.5	2.5	75	16	4.7	250
19	LT4K	82 ±5%	2.5	2.5	75	13	5.3	235
20	LT4K	100 ±5%	1.5	2.5	75	10	6.0	220
21	LT4K	120 ±5%	.79	.79	65	7.2	5.0	170
22	LT4K	150 ±5%	.79	.79	65	6.7	5.8	164
23	LT4K	180 ±5%	.79	.79	65	6.3	6.6	158
24	LT4K	220 ±5%	.79	.79	65	5.9	7.4	155
25	LT4K	270 ±5%	.79	.79	65	5.6	8.0	150
26	LT4K	300 ±5%	.79	.79	65	5.3	8.6	145
27	LT4K	330 ±5%	.79	.79	65	5.0	8.9	142
28	LT4K	360 ±5%	.79	.79	65	4.7	9.6	137
29	LT4K	390 ±5%	.79	.79	65	4.5	9.9	135
30	LT4K	430 ±5%	.79	.79	65	4.3	10.4	131
31	LT4K	470 ±5%	.79	.79	65	4.0	10.9	128
32	LT4K	510 ±5%	.79	.79	65	3.8	11.6	124
33	LT4K	560 ±5%	.79	.79	60	3.6	11.8	123
34	LT4K	620 ±5%	.79	.79	60	3.5	12.5	120
35	LT4K	680 ±5%	.79	.79	60	3.4	13.5	115
36	LT4K	750 ±5%	.79	.79	60	3.3	14.0	113
37	LT4K	820 ±5%	.79	.79	60	3.1	15.0	110
38	LT4K	910 ±5%	.79	.79	60	3.0	15.5	107
39	LT4K	1000 ±5%	.79	.79	60	2.8	16.5	104

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

(D) 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
Quality 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).

CONCLUDING MATERIAL

Preparing activity:
Air force - 85

Agent
DLA - ES

(Project 5950-F246)