INCH-POUND

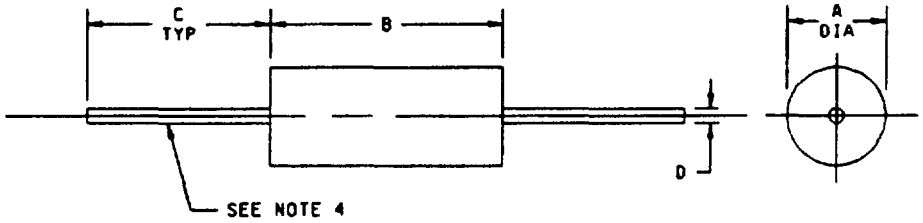
MS21380C(USAF)
14 September 1994
SUPERSEDING
MS21380B(85)
28 July 1986

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	(C).280 (7.11)	.310 (7.87)
B	.880 (22.35)	(C).910 (23.11)
C	1.300 (33.02)	
D	.0265 (0.67)	.0305 (0.77)

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

FIGURE 1. Dimensions and configurations.

(C) denotes changes

REQUIREMENTS:

Design, construction and physical dimensions: See figure 1.

Style: LT4
Grade: 1
Class: B

(C) Weight: 0.14 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): 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.

(C) Part or Identifying Number (PIN): MS21380-(dash number from table I).

TABLE I. Electrical characteristics (initial).

Dash no.	Type designation	Inductance (µH)	Test frequency (MHz)		Q (min)	1/ SRF min (MHz)	Maximum DCR (ohms)	Rated dc current (mA)
			Q	L				
01	LT4K	1.0 ±10%	15	2.5	130	170	.03	4000
02	LT4K	1.2 ±10%	15	7.9	130	155	.03	4000
03	LT4K	1.5 ±10%	10	7.9	130	140	.03	4000
04	LT4K	1.8 ±10%	10	7.9	130	125	.03	4000
05	LT4K	2.2 ±10%	10	7.9	130	115	.04	3500
06	LT4K	2.7 ±10%	10	7.9	100	102	.04	3500
07	LT4K	3.3 ±10%	7.9	7.9	100	90	.04	3500
08	LT4K	3.9 ±10%	7.9	7.9	80	85	.05	3100
09	LT4K	4.7 ±10%	7.9	7.9	75	80	.05	3100
10	LT4K	5.6 ±10%	7.9	7.9	65	72	.06	3000
11	LT4K	6.8 ±10%	7.9	7.9	65	65	.06	3000
12	LT4K	8.2 ±10%	7.9	7.9	65	57	.11	2400
13	LT4K	10 ±10%	5.0	7.9	75	50	.15	1800
14	LT4K	12 ±10%	5.0	2.5	75	45	.23	1600
15	LT4K	15 ±5%	5.0	2.5	75	40	.30	1300
16	LT4K	18 ±5%	5.0	2.5	75	36	.40	1150
17	LT4K	22 ±5%	2.5	2.5	75	32	.50	1000
18	LT4K	27 ±5%	2.5	2.5	70	30	.60	900
19	LT4K	33 ±5%	2.5	2.5	70	28	.70	850
20	LT4K	39 ±5%	2.5	2.5	70	26	1.1	720
21	LT4K	47 ±5%	2.5	2.5	75	25	1.3	620
22	LT4K	56 ±5%	2.5	2.5	80	22	1.8	540
23	LT4K	68 ±5%	2.5	2.5	100	20	2.4	450
24	LT4K	82 ±5%	2.5	2.5	100	18	2.8	425
25	LT4K	100 ±5%	1.5	2.5	100	17	3.2	400
26	LT4K	120 ±5%	1.5	.79	100	15	4.8	360
27	LT4K	150 ±5%	1.0	.79	100	14	6.4	280
28	LT4K	180 ±5%	1.0	.79	95	12	9.5	240
29	LT4K	220 ±5%	1.0	.79	95	11	12	200
30	LT4K	270 ±5%	1.0	.79	70	9	13	195
31	LT4K	330 ±5%	.79	.79	65	7.5	14	190
32	LT4K	390 ±5%	.79	.79	65	6.5	15.5	180
33	LT4K	470 ±5%	.79	.79	60	5.5	17	170
34	LT4K	560 ±5%	.50	.79	75	4.0	18.5	165
35	LT4K	680 ±5%	.50	.79	75	3.2	20	155
36	LT4K	820 ±5%	.50	.79	75	2.8	22	150
37	LT4K	1,000 ±5%	.50	.79	75	2.4	24	145
38	LT4K	1,200 ±5%	.50	.79	75	2.1	27	137
39	LT4K	1,500 ±5%	.40	.79	75	1.9	29	130
40	LT4K	1,800 ±5%	.40	.79	65	1.7	32	125
41	LT4K	2,200 ±5%	.25	.25	65	1.5	35	120
42	LT4K	2,700 ±5%	.25	.25	65	1.3	40	112
43	LT4K	3,300 ±5%	.25	.25	65	1.2	45	105
44	LT4K	3,900 ±5%	.25	.25	65	1	49	100
45	LT4K	4,700 ±5%	.25	.25	65	0.95	53	95
46	LT4K	5,600 ±5%	.25	.25	65	0.85	60	90
47	LT4K	6,800 ±5%	.25	.25	65	0.75	67	85
48	LT4K	8,200 ±5%	.25	.25	65	0.65	75	82
49	LT4k	10,000 ±5%	.15	.25	65	0.58	80	80

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	±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-F245)