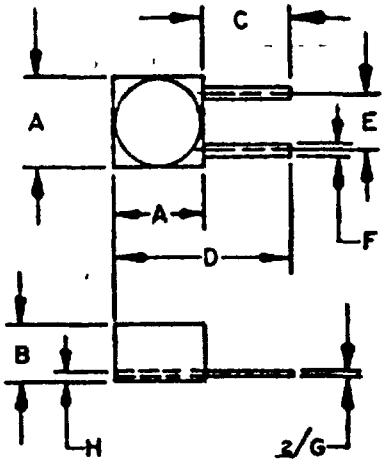
FED. SUP CLASS
5950

RATINGS	
Style	LT10K
Grade	1
Class	A
Operating temperature range	-55°C to +105°C
Ambient temperature	90°C max
Temperature rise	15°C max
Power dissipation	20.5mW max
Dielectric withstanding voltages:	
Sea level	140 V rms min
Reduced barometric pressure	50 V rms min
Terminal pull	227 grams min
Terminal bend	2 operations min
Terminal twist	Not applicable
Percent coupling	3% max
Altitude	70,000 feet
Weight	.03 gram max



Ltr	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.090 (2.29)	.110 (2.79)
B		.065(1.65)
C	.210(5.33)	
D	.350(8.89)REF	
E	.080 (2.03)	.110(2.79)
F	.010 (.25)	.014 (.36)
G	.002 (.05)	.003 (.08)
H	.005(.13)NOM	

(F) DENOTES CHANGES

ELECTRICAL CHARACTERISTICS (initial)

Dash No. 1/	Type designation	Nominal inductance	Test frequency (L & Q)	Q minimum	Self resonant frequency minimum	DC resistance at 25°C Maximum	Rated current maximum
		µH	MHz		MHz	Ohms	mA DC
-1	LT10K354	.015±30%	50	40	250	.065	492
-2	LT10K355	.022 "	50	40	250	.090	418
-3	LT10K356	.033 "	50	40	250	.115	370
-4	LT10K357	.047 "	50	40	250	.120	360
-5	LT10K358	.068 "	50	40	250	.150	324
-6	LT10K359	.100 "	50	40	250	.170	304
-7	LT10K360	.120±20%	25	35	250	.140	335
-8	LT10K361	.150 "	25	40	250	.160	313
-9	LT10K362	.180 "	25	40	250	.190	287
-10	LT10K363	.220 "	25	40	250	210	274
-11	LT10K364	.270 "	25	40	250	.240	256
-12	LT10K365	.330 "	25	40	250	.250	251
-13	LT10K366	.390 "	25	40	200	.280	237
-14	LT10K367	.470 "	25	40	175	.310	225
-15	LT10K368	.560 "	25	40	170	.450	185
-16	LT10K369	.680 "	25	40	165	.620	159
-17	LT10K370	.820 "	25	35	160	.650	155
-18	LT10K371	1.00 "	25	35	135	.730	145

APPROVED 15 AUG 1972 REVISED (F) 9 JUN 1976

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P A AF-11 Other Cust	International interest	TITLE COIL, RADIO FREQUENCY, ENCAPSULATED, FIXED, MICRO-MINIATURE, SHIELDED (IRON CORE), TYPES LT10K354 TO LT10K383, INCL.	MILITARY STANDARD MS 21367 (USAF)
Procurement Specification MIL-C-15305		SUPERSEDES:	PAGE 1 OF 5

FED. SUP CLASS 5950

ELECTRICAL CHARACTERISTICS (initial)

Dash No. 1/	Type designation	Nominal inductance	Test frequency (L & Q)	Q minimum	Self resonant frequency minimum	DC resistance at 25°C Maximum	Rated current maximum
		µH	MHz		MHz	Ohms	mA DC
-19	LT10K372	1.20±10%	7.9	35	120	1.00	125
-20	LT10K373	1.50 "	7.9	32	110	1.20	114
-21	LT10K374	1.80 "	7.9	32	95	1.50	102
-22	LT10K375	2.20 "	7.9	35	80	1.70	96
-23	LT10K376	2.70 "	7.9	35	70	2.00	89
-24	LT10K377	3.30 "	7.9	37	65	2.20	84
-25	LT10K378	3.90 "	7.9	37	60	2.80	75
-26	LT10K379	4.70 "	7.9	40	55	3.10	71
-27	LT10K380	5.60 "	7.9	40	50	3.30	69
-28	LT10K381	6.80 "	7.9	40	45	3.80	64
-29	LT10K382	8.20 "	7.9	40	43	5.00	56
-30	LT10K383	10.0 "	7.9	40	40	5.60	53

1/ The dash number added to the MS military-standard number constitutes the MS part number; for example, MS21367-1.
2/ The "G" dimension is not applicable within one-sixteenth of the body of the coil.

ELECTRICAL CHARACTERISTICS (final)
for .015µH thru 1.0µH

Inspection Group	Allowable percent variation from initial measurement		Allowable percent variation from specified minimum (initial)	
	Inductance	DCR	SRF	Q
Qualification				
Group II	±5	---	---	-10
Group III	±10	±(3%+.001 ohm)	-10	-15
Group IV	±5	±(2%+.001 ohm)	-10	-10
Quality conformance inspection				
Group C				
Subgroup I	±5	---	---	-10
Subgroup II	±5	±(2%+.001 ohm)	-10	-10
Subgroup III	±10	±(3%+.001 ohm)	-10	-15

REVISED (F) FOR CHANGES, SEE PAGE 1

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Procurement Specification MIL-C-15305		SUPERSEDES:	PAGE 2 OF 5

ELECTRICAL CHARACTERISTICS (final)
for 1.2μH thru 10μH

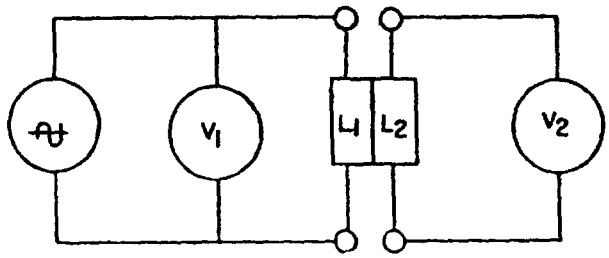
Inspection Group	Allowable percent variation from initial measurement		Allowable percent variation from specified minimum (initial)	
	Inductance	DCR	SRF	Q
Qualification				
Group II	±2	---	---	-10
Group III	±5	±(3%+.001 ohm)	-8	-10
Group IV	±2	±(2%+.001 ohm)	-10	-10
Quality conformance inspection				
Group C				
Subgroup I	±2	---	---	-10
Subgroup II	±2	±(2%+.001 ohm)	-10	-10
Subgroup III	±5	±(3%+.001 ohm)	-8	-10

NOTES:
1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Polarization during the moisture resistance test is not applicable.
4. Shock, specified pulse, method 213, test condition I, is applicable.
5. Coils are held rigidly by the body during vibration and mechanical shock testing.
6. The test fixture in the diagram below or its equivalent shall be used for electrical measurements. Inductance values are effective inductance as indicated on a HP260A or equal, Q meter, when tested in the test fixture. Inductance of 10 μH or less are corrected for residual meter and test fixture inductance which is typically .050 μH.
7. Core material is powdered iron. Lead material is beryllium copper with an electro-tin plating .0001 to .0002 inch thickness composed of 60% tin minimum and 40% lead maximum.
8. The maximum power is the wattage dissipated by the coil when rated DC current produces a 15°C temperature rise at 90°C ambient.
9. Barometric pressure test (test condition C) is applicable.
10. Resistance to soldering heat test, per MIL-STD-202, method 210, test condition A is applicable.
11. Referenced document shall be the issue in effect on the date of invitation for bid.
12. This standard takes precedence over the procurement specification referenced herein.

NOTES (Con't)

APPROVED REVISED (F) FOR CHANGES, SEE PAGE 1

13. The percent coupling between two radio frequency coils is to be determined by measuring the voltage induced in a coil when a voltage is applied to an adjacent coil. Percent coupling is not to be measured for parts with nominal inductances of less than 1.0 µH. The measurement is to be performed at 10 kHz for nominal inductance values from 1.0 µH through 100 µH and at 1 kHz for nominal inductance values greater than 100 µH. The measurement circuit is shown in the figure below.



Equipment for 1 kHz and 10 kHz consists of General Radio Audio Oscillator and Power Amplifier type 1308-A, or equivalent and Model 400 vacuum tube voltmeter, or equivalent.

The coils to be tested shall be taped or otherwise secured such that the bodies of the coils are kept parallel and in contact with each other to insure maximum coupling as shown in the figure below.

The voltage levels shall be as low as possible to permit reliable readings of V_2. The inductance shall be measured with .02 volt injection voltage on a Hewlett-Packard model 260A Q-meter or equivalent.

The percent coupling is to be calculated using the equation

$$\text{percent coupling} = \sqrt{\frac{L_1}{L_2}} \times \frac{V_2}{V_1} \times 100$$

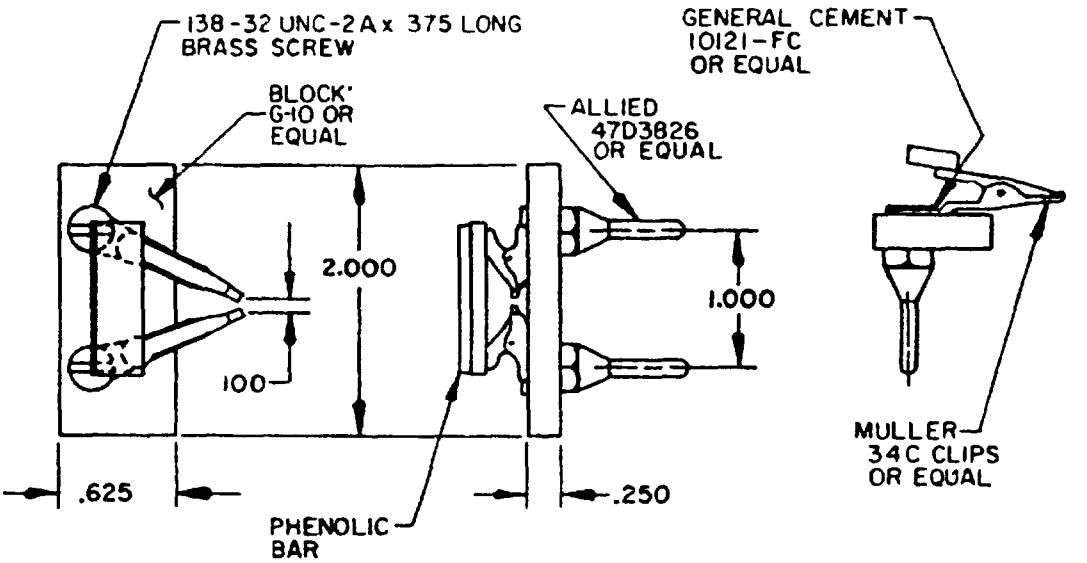
where: L_1 = effective inductance of primary coil (measured at standard Q-meter test frequency)
L_2 = effective inductance of secondary coil (measured at standard Q-meter test frequency)
V_1 = voltage measured across primary
V_2 = voltage measured across secondary

NOTES (Con't):

APPROVED REVISED (F) FOR CHANGES, SEE PAGE 1

14 For dielectric withstanding voltage, barometric pressure and insulation resistance units shall be placed on flat metal plate with leads insulated from surface. Measurement of dielectric withstanding voltage, barometric pressure and insulation resistance shall be between the leads of the coil connected together and the metal plate.

15. The marking shall be as specified in MIL-C-15305 except that the marking shall be on the unit package or container.



INCHES	MM
.100	2.54
.138	3.51
.250	6.35
.375	9.53
.625	15.88
1.000	25.40
2.000	50.80

APPROVED REVISED (F) FOR CHANGES, SEE PAGE 1

P A AF-11 Other Cust	International Interest	TITLE COIL, RADIO FREQUENCY, ENCAPSULATED, FIXED, MICRO-MINIATURE, SHIELDED (IRON CORE), TYPES LT10K354 TO LT10K383, INCL.	MILITARY STANDARD MS 21367 (USAF)
Procurement Specification MIL-C-15305		SUPERSEDES	PAGE 5 OF 5

DD FORM 1 SEP 83 672 (LIMITED COORDINATION)

5950-F176

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