

INCH POUND

MS21426B(USAF)

20 March 1995

SUPERSEDING

MS21426A(USAF)

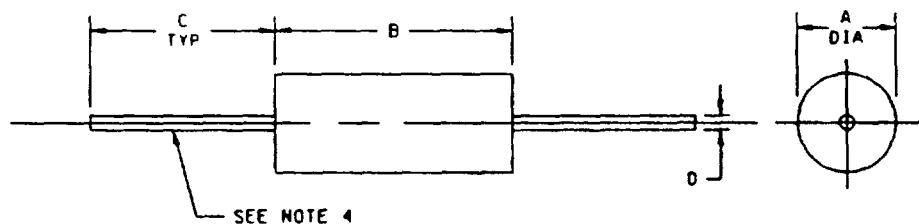
26 April 1984

MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED,
MICRO-MINIATURE, MAGNETICALLY SHIELDED,
(IRON CORE-IRON SLEEVE) TYPE LT10K

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.



| Letter | Dimensions in inches with metric equivalents (mm) in parentheses | |
|--------|--|---------------|
| | Minimum | Maximum |
| A | .085 (2.16) | .105 (2.67) |
| B | .240 (6.10) | .260 (6.60) |
| C | 1.380 (35.05) | 1.620 (41.15) |
| D | .015 (0.38) | .0215 (0.55) |

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. Solderable/weldable lead wire, AWG number 26.

FIGURE 1 Dimensions and configurations.

(B) denotes changes

AMSC N/A

1 of 4

SC 5960

DISTRIBUTION STATEMENT A Approved for public release; distribution is unlimited

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REQUIREMENTS.

Design, construction, and physical dimensions. See figure 1

Style. LT10

Grade. 1

Class. A

(B) Weight: 0.01 ounce maximum

Operating temperature range: -55°C to $+105^{\circ}\text{C}$.

Ambient temperature: $+90^{\circ}\text{C}$ maximum.

Temperature rise: $+15^{\circ}\text{C}$ maximum.

Terminal pull: 3 pounds minimum.

Altitude: 70,000 feet.

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

Dielectric withstanding voltage (sea level): MIL-STD-202, method 301, test voltage of 200 V rms

Barometric pressure (reduced): MIL-STD-202, method 105, test condition C, test voltage of 80 V rms

Percent coupling: 3 percent maximum

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.

(B) Part or Identifying Number (PIN) MS21426-(dash number from table I)

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TABLE 1. Electrical characteristics (initial).

| Dash number 1/ | Type designation | Inductance $\pm 10\%$ (μH) | Test frequency (MHz) | Q minimum | SRF minimum (MHz) | DC resistance maximum at +25°C (ohms) | Rated DC current (mA) |
|-------------------|------------------|---|-------------------------|--------------|-------------------------|--|-----------------------------|
| -1 | LT10K | .10 | 25 | 54 | 490 | .10 | 670 |
| -2 | LT10K | .12 | 25 | 52 | 430 | .11 | 635 |
| -3 | LT10K | .15 | 25 | 50 | 415 | .12 | 610 |
| -4 | LT10K | .18 | 25 | 49 | 375 | .13 | 585 |
| -5 | LT10K | .22 | 25 | 47 | 330 | .15 | 545 |
| -6 | LT10K | .27 | 25 | 46 | 300 | .16 | 530 |
| -7 | LT10K | .33 | 25 | 44 | 260 | .18 | 495 |
| -8 | LT10K | .39 | 25 | 42 | 230 | .19 | 485 |
| -9 | LT10K | .47 | 25 | 41 | 220 | .21 | 460 |
| -10 | LT10K | .56 | 25 | 41 | 210 | .23 | 440 |
| -11 | LT10K | .68 | 25 | 39 | 180 | .24 | 430 |
| -12 | LT10K | .82 | 25 | 38 | 165 | .27 | 405 |
| -13 | LT10K | 1.00 | 25 | 37 | 150 | .30 | 385 |
| -14 | LT10K | 1.20 | 7.9 | 40 | 130 | .73 | 247 |
| -15 | LT10K | 1.50 | 7.9 | 41 | 115 | .86 | 228 |
| -16 | LT10K | 1.80 | 7.9 | 43 | 105 | .95 | 217 |
| -17 | LT10K | 2.20 | 7.9 | 45 | 95 | 1.10 | 202 |
| -18 | LT10K | 2.70 | 7.9 | 48 | 90 | 1.20 | 193 |
| -19 | LT10K | 3.30 | 7.9 | 49 | 80 | 1.30 | 185 |
| -20 | LT10K | 3.90 | 7.9 | 50 | 75 | 1.50 | 173 |
| -21 | LT10K | 4.70 | 7.9 | 53 | 70 | 2.4 | 136 |
| -22 | LT10K | 5.60 | 7.9 | 54 | 60 | 2.9 | 124 |
| -23 | LT10K | 6.80 | 7.9 | 55 | 55 | 3.2 | 118 |
| -24 | LT10K | 8.20 | 7.9 | 55 | 53 | 3.6 | 111 |
| -25 | LT10K | 10.0 | 7.9 | 57 | 50 | 4.0 | 106 |
| -26 | LT10K | 12.0 | 2.5 | 36 | 35 | 3.0 | 122 |
| -27 | LT10K | 15.0 | 2.5 | 38 | 30 | 3.4 | 115 |
| -28 | LT10K | 18.0 | 2.5 | 40 | 26 | 3.8 | 108 |
| -29 | LT10K | 22.0 | 2.5 | 40 | 24 | 4.9 | 96 |
| -30 | LT10K | 27.0 | 2.5 | 40 | 21 | 5.8 | 88 |
| -31 | LT10K | 33.0 | 2.5 | 41 | 20 | 6.5 | 83 |
| -32 | LT10K | 39.0 | 2.5 | 42 | 19 | 7.9 | 75 |
| -33 | LT10K | 47.0 | 2.5 | 44 | 16 | 9.3 | 69 |
| -34 | LT10K | 56.0 | 2.5 | 44 | 15 | 11.0 | 64 |
| -35 | LT10K | 68.0 | 2.5 | 45 | 13 | 12.0 | 61 |
| -36 | LT10K | 82.0 | 2.5 | 45 | 11 | 13.0 | 59 |
| -37 | LT10K | 100.0 | 2.5 | 40 | 10.5 | 16.8 | 51 |

1/ The dash number added to MS military-standard number constitutes the MS PIN; for example MS21426-1.

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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 | ±5 | --- | --- | -10 |
| Group III | ±5 | ±(3% + .001 ohm) | -8 | -10 |
| Group IV | ±10 | ±(3% + .001 ohm) | -15 | -20 |
| Quality conformance inspection group C | | | | |
| Subgroup I | ±5 | --- | --- | -10 |
| Subgroup II | ±10 | ±(3% + .001 ohm) | -15 | -20 |
| Subgroup III | ±5 | ±(3% + .001 ohm) | -8 | -10 |

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

Application notes:

1. The SRF minimum values tabulated exceeding 250 MHz are estimates and to be used for reference only.
2. Polarization during moisture resistance test is not applicable.
3. Terminal strength twist test, in accordance with MIL-STD-202, method 211, test condition D, except 180° rotation for a total of 540°.

CONCLUDING MATERIAL

Custodians:

Navy - EC
Air Force - 85

Review activities:

Air Force - 17, 19
DLA - ES

Preparing activity:
Air Force - 85

Agent:
DLA - ES

(Project 5950-0868)