

INCH-POUND

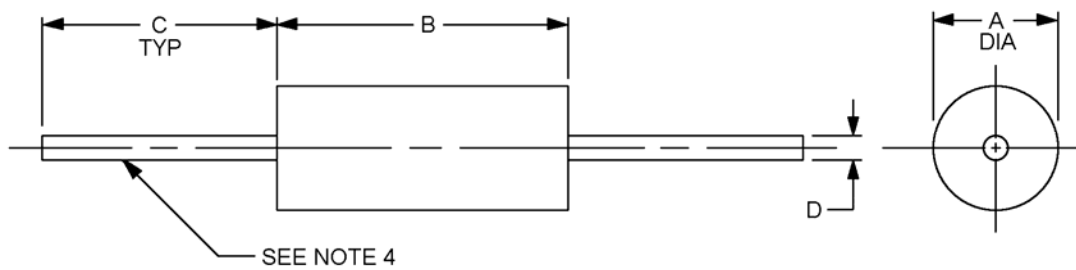
MS21426C
 24 August 2007
 SUPERSEDING
 MS21426B
 3 August 1979

MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED,
 MICRO-MINIATURE, MAGNETICALLY SHIELDED,
 (IRON CORE-IRON SLEEVE), TYPES LT10K518 TO LT10K554

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the products described herein shall consist of this specification and MIL-PRF-15305.



| Ltr | 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 general 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 configuration.

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REQUIREMENTS:

Design, construction, and physical dimensions: See figure 1.

Style: LT10K

Grade: 1

Class: A

Weight: .01 ounce, maximum.

Operating temperature range: -55° to +105°C.

Ambient temperature: + 90°C maximum.

Temperature rise: +15°C.

Terminal pull: 3 pounds minimum.

Altitude: 70,000 feet.

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

Dielectric withstanding voltage:

At sea level: Method 301 of MIL-STD-202, test voltage 200 V rms.

At reduced barometric pressure: Method 105 of MIL-STD-202, test condition C, test voltage 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. DC resistance shall be the last measurement taken in the electrical characteristics test sequence.

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

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TABLE 1. Electrical characteristics (initial).

| <u>1/</u> Dash number MS21426 | Type designa- tion | Inductance (μ H) $\pm 10\%$ | Q (min) | Test frequency (MHz) | SRF min (MHz) | DC resistance at 25°C max (ohms) | Rated DC current (mA) |
|--|--------------------------|--|------------|----------------------------|---------------------|---|--------------------------------|
| -1 | LT10K518 | .10 | 54 | 25 | 490 | .10 | 670 |
| -2 | LT10K519 | .12 | 52 | 25 | 430 | .11 | 635 |
| -3 | LT10K520 | .15 | 50 | 25 | 415 | .12 | 610 |
| -4 | LT10K521 | .18 | 49 | 25 | 375 | .13 | 585 |
| -5 | LT10K522 | .22 | 47 | 25 | 330 | .15 | 545 |
| -6 | LT10K523 | .27 | 46 | 25 | 300 | .16 | 530 |
| -7 | LT10K524 | .33 | 44 | 25 | 260 | .18 | 495 |
| -8 | LT10K525 | .39 | 42 | 25 | 230 | .19 | 485 |
| -9 | LT10K526 | .47 | 41 | 25 | 220 | .21 | 460 |
| -10 | LT10K527 | .56 | 41 | 25 | 210 | .23 | 440 |
| -11 | LT10K528 | .68 | 39 | 25 | 180 | .24 | 430 |
| -12 | LT10K529 | .82 | 38 | 25 | 165 | .27 | 405 |
| -13 | LT10K530 | 1.00 | 37 | 25 | 150 | .30 | 385 |
| -14 | LT10K531 | 1.20 | 40 | 7.9 | 130 | .73 | 247 |
| -15 | LT10K532 | 1.50 | 41 | 7.9 | 115 | .86 | 228 |
| -16 | LT10K533 | 1.80 | 43 | 7.9 | 105 | .95 | 217 |
| -17 | LT10K534 | 2.20 | 45 | 7.9 | 95 | 1.10 | 202 |
| -18 | LT10K535 | 2.70 | 48 | 7.9 | 90 | 1.20 | 193 |
| -19 | LT10K536 | 3.30 | 49 | 7.9 | 80 | 1.30 | 185 |
| -20 | LT10K537 | 3.90 | 50 | 7.9 | 75 | 1.50 | 173 |
| -21 | LT10K538 | 4.70 | 53 | 7.9 | 70 | 2.4 | 136 |
| -22 | LT10K539 | 5.60 | 54 | 7.9 | 60 | 2.9 | 124 |
| -23 | LT10K540 | 6.80 | 55 | 7.9 | 55 | 3.2 | 118 |
| -24 | LT10K541 | 8.20 | 55 | 7.9 | 53 | 3.6 | 111 |
| -25 | LT10K542 | 10.0 | 57 | 7.9 | 50 | 4.0 | 106 |
| -26 | LT10K543 | 12.0 | 36 | 2.5 | 35 | 3.0 | 122 |
| -27 | LT10K544 | 15.0 | 38 | 2.5 | 30 | 3.4 | 115 |
| -28 | LT10K545 | 18.0 | 40 | 2.5 | 26 | 3.8 | 108 |
| -29 | LT10K546 | 22.0 | 40 | 2.5 | 24 | 4.9 | 96 |
| -30 | LT10K547 | 27.0 | 40 | 2.5 | 21 | 5.8 | 88 |
| -31 | LT10K548 | 33.0 | 41 | 2.5 | 20 | 6.5 | 83 |
| -32 | LT10K549 | 39.0 | 42 | 2.5 | 19 | 7.9 | 75 |
| -33 | LT10K550 | 47.0 | 44 | 2.5 | 16 | 9.3 | 69 |
| -34 | LT10K551 | 56.0 | 44 | 2.5 | 15 | 11.0 | 64 |
| -35 | LT10K552 | 68.0 | 45 | 2.5 | 13 | 12.0 | 61 |
| -36 | LT10K553 | 82.0 | 45 | 2.5 | 11 | 13.0 | 59 |
| -37 | LT10K554 | 100.0 | 40 | 2.5 | 10.5 | 16.8 | 51 |

1/ The dash number added to the MS military standard number constitutes the MS part number, 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 |
| Conformance inspection group C | | | | |
| Subgroup I | ±5 | --- | --- | -10 |
| Subgroup II | ±10 | ±(3% +.001 ohm) | -15 | -20 |
| Subgroup III | ±5 | ±(3% +.001 ohm) | -8 | -10 |

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

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°.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Referenced documents.

MIL-PRF-15305
MIL-STD-202

Custodians:
Navy – EC
Air Force - 11
DLA - CC

Preparing activity:
DLA – CC

(Project 5950-2007-026)

Review activities:
Air Force – 19

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.