

INCH-POUND

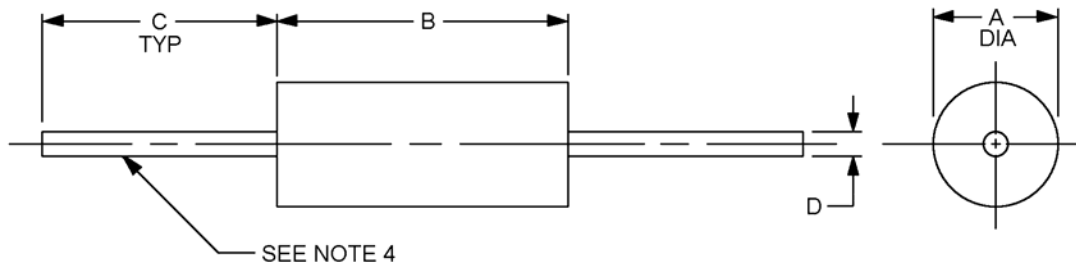
MS21427C  
 24 August 2007  
 SUPERSEDING  
 MS21427B  
 31 October 1984

## MILITARY SPECIFICATION SHEET

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

This specification is approved for use by all Depart-  
 ments 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: .250 grams, 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): MS21427 - (dash number from table I).

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TABLE 1. Electrical characteristics (initial).

Dash Number	Type designation	Inductance ( $\mu$ H) $\pm 10\%$	Q (min)	Test frequency (MHz)	SRF min (MHz)	DC resistance at 25°C max (ohms)	Rated DC current (mA)	Incremental current (mA)
MS21427								
-1	LT10K555	120	31	.79	13	5.8	88	27
-2	LT10K556	150	33	.79	12	7.9	75	24
-3	LT10K557	180	33	.79	11	9.4	69	22
-4	LT10K558	220	35	.79	10	11.0	64	20
-5	LT10K559	270	37	.79	9	12.0	61	18
-6	LT10K560	330	40	.79	8	16.0	53	16
-7	LT10K561	390	38	.79	7.8	21.0	46	14
-8	LT10K562	470	36	.79	7.5	24.0	43	13
-9	LT10K563	560	36	.79	7.0	28.0	40	12

1/ The dash number added to the MS military standard number constitutes the MS part number, for example MS21427-1

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	$\pm 5$	---	---	-15
Group III	$\pm 10$	$\pm(3\% + .001 \text{ ohm})$	-15	-20
Group IV	$\pm 10$	$\pm(3\% + .001 \text{ ohm})$	-15	-20
Conformance inspection group C				
Subgroup I	$\pm 5$	---	---	-15
Subgroup II	$\pm 10$	$\pm(3\% + .001 \text{ ohm})$	-15	-20
Subgroup III	$\pm 10$	$\pm(3\% + .001 \text{ ohm})$	-15	-20

## 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°.

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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:  
Army – CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA – CC

(Project 5950-2007-027)

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>.