

INCH-POUND

MS75087D
W/AMENDMENT 1
7 October 2022
SUPERSEDING
MS75087D
31 August 2007

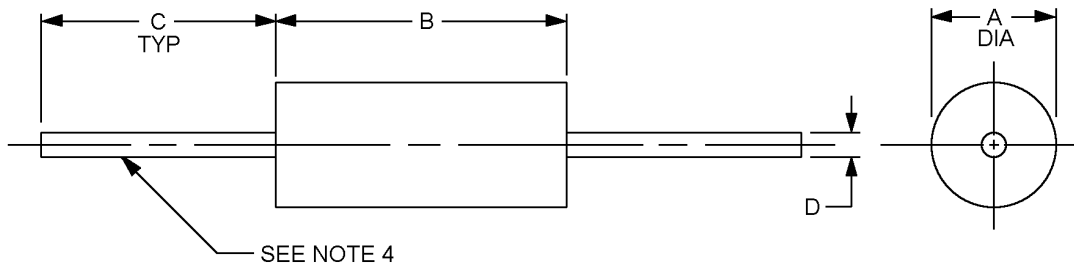
MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED, MICRO-MINIATURE,
MAGNETICALLY SHIELDED, (PHENOLIC CORE – IRON SLEEVE),
TYPES LT10K191 TO LT10K202, INCLUSIVE

Inactive for new design, after 4 September 1985.
For new design, use MIL-PRF-39010/1.

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	Minimum	Maximum
A	.152 (3.86)	.172 (4.37)
B	.390 (9.91)	.430 (10.92)
C	1.250 (31.75)	1.626 (41.30)
D	.023 (0.58)	.027 (0.69)

NOTES:

1. Dimensions are in inches with metric equivalents (mm) in parentheses.
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, number 22 AWG.

FIGURE 1. Dimensions and configuration.

MS75087D
W/AMENDMENT 1

REQUIREMENTS:

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

Weight: 0.03 ounce, maximum.

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

Ambient temperature: + 90°C maximum.

Temperature rise: 15°C.

Terminal pull: 5 pounds, minimum.

Altitude: 70,000 feet.

Shock, specified pulse: [MIL-STD-202-213](#), test condition I, is applicable.

Dielectric withstanding voltage:

At sea level: [MIL-STD-202-301](#), test voltage 1,000 V rms for a minimum of 60 seconds.

At reduced barometric pressure: [MIL-STD-202-105](#), test condition C, test voltage 200 V rms for a minimum of 60 seconds.

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.

Part or Identifying Number (PIN): MS75087 - (dash number from table I).

MS75087D
W/AMENDMENT 1

TABLE 1. Electrical characteristics (initial).

<u>1/</u> Dash Number MS75087	Type Designation	Inductance (μ H) $\pm 10\%$	Q Min.	Test Frequency (MHz)	SRF Minimum (MHz)	DC resistance (25°C) max (Ohms)	Rated DC current, (mA)
-1	LT10K191	.10	50	25	250	.025	1,790
-2	LT10K192	.12	51	25	250	.034	1,530
-3	LT10K193	.15	51	25	250	.037	1,470
-4	LT10K194	.18	50	25	250	.047	1,300
-5	LT10K195	.22	49	25	250	.067	1,100
-6	LT10K196	.27	47	25	250	.11	855
-7	LT10K197	.33	46	25	250	.13	780
-8	LT10K198	.39	44	25	250	.18	670
-9	LT10K199	.47	44	25	235	.25	565
-10	LT10K200	.56	43	25	210	.33	490
-11	LT10K201	.68	42	25	190	.45	420
-12	LT10K202	.82	40	25	180	.59	370

1/ The coils specified herein are substitutes for the inactivated coils on MS90537, providing the small decrease in physical dimensions are not a factor. The decrease in maximum operating temperature from 125°C to 105°C does not downgrade these coils but assures satisfactory operation at 105°C for a minimum of 2,000 hours of life, rather than a shorter period of operation at 125°C.

TABLE II. Electrical characteristics (final). 1/

Inspection group	Allowable variation from Initial measurement	Allowable variation from Initial measurement	Allowable percent from specified minimum value in electrical characteristics (initial) table	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	$\pm(3\% + .001 \text{ ohm})$	-8	-10
Group IV	± 5	$\pm(2\% + .001 \text{ ohm})$	-5	-10
Conformance inspection group C				
Subgroup I	± 5	---	---	-10
Subgroup II	± 5	$\pm(2\% + .001 \text{ ohm})$	-5	-10
Subgroup III	± 5	$\pm(3\% + .001 \text{ ohm})$	-8	-10

1/ Test fixture allowance of $+ .01 \mu\text{H}$ shall be added to all change in inductance limits $\pm(\_ \text{ percent } + .01 \mu\text{H})$.

MS75087D
W/AMENDMENT 1

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

Referenced documents. In addition to [MIL-PRF-15305](#), this document references the following:

MIL-STD-202-105 MIL-STD-202-213 MIL-STD-202-301

Custodians:

Army – CR
Navy - EC
Air Force - 85
DLA – CC

Preparing activity:

DLA – CC

Project 5950-2022-066

Review activities:

Army – AR, CR4, MI
Navy – AS, MC, OS, SH
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 <https://assist.dla.mil>.