

INCH-POUND

MS75052E  
19 March 2015  
SUPERSEDING  
MS75052D  
31 August 2007

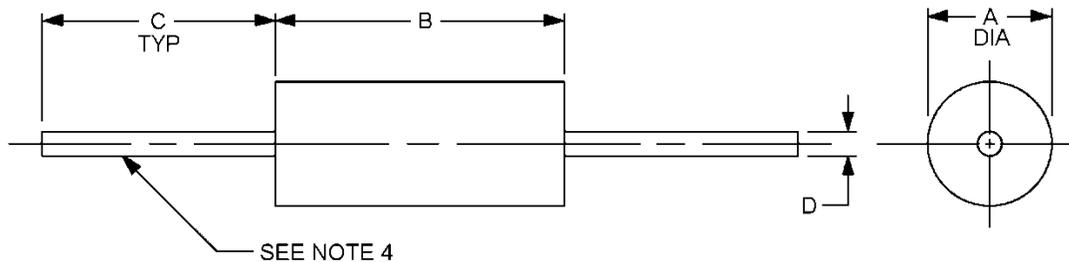
MILITARY SPECIFICATION SHEET

COILS, RADIO FREQUENCY, MOLDED, FIXED,  
SUBMINIATURE (PHENOLIC CORE),  
LT4K052 TO LT4K053

Inactive for new design,

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	.210 (5.33)	.260 (6.60)
B	.550 (13.97)	.570 (14.48)
C	1.250 (31.75)	1.625 (41.28)
D	.023 (0.58)	.027 (0.69)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. These coils are intended to be mounted by their body.
4. Solderable/weldable lead wire, number 22 AWG.

FIGURE 1. Dimensions and configuration.

REQUIREMENTS:

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

Weight: 2.0 grams, maximum.

Operating temperature range: -55° to +125°C.

Ambient temperature: + 90°C maximum.

Temperature rise: 35°C.

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 1,000 V rms for a minimum of 60 seconds.

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

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.

Marking: Marking shall be as specified in MIL-PRF-15305.

Part or Identifying Number (PIN): MS75052 - (dash number from table I).

TABLE 1. Electrical characteristics (initial). 1/

Dash Number	Type designation	Inductance ( $\mu$ H) $\pm 10\%$	Q Min.	Test Frequency (MHz)	SRF Minimum (MHz)	DC resistance max (Ohms)	Rated DC current, (mA)
MS75052							
-1	LT4K052	47	18	2.5	13.5	5.9	195
-2	LT4K053	56	18	2.5	13.0	6.4	185

1/ Former MS part numbers MS75052-3 through MS75052-7 have been superseded by MS14047-1 through MS14047-5, respectively.

TABLE II. Electrical characteristics (final).

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	$\pm 2$	---	---	-10
Group III	$\pm 5$	$\pm(3\% +.001 \text{ ohm})$	-8	-10
Group IV	$\pm 5$	$\pm(2\% +.001 \text{ ohm})$	-10	-15
Conformance inspection group C				
Subgroup I	$\pm 2$	---	---	-10
Subgroup II	$\pm 5$	$\pm(2\% +.001 \text{ ohm})$	-10	-15
Subgroup III	$\pm 5$	$\pm(3\% +.001 \text{ ohm})$	-8	-10

## Application notes:

1. The polarization voltage during moisture the moisture resistance tests is applied with the positive lead Connected to the coil terminals tied together, and the negative lead connected to the metal strap.

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 - 85  
DLA – CC

Preparing activity:  
DLA – CC

Project 5950-2015-003

Review activities:  
Army – AR, MI  
Navy – AS, MC, OS,  
Air Force – 19, 99

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>.