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.

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.

<table>
<thead>
<tr>
<th>LTR</th>
<th>Dimensions in inches with metric equivalents (mm) in parentheses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
</tr>
<tr>
<td>A</td>
<td>.210 (5.33)</td>
</tr>
<tr>
<td>B</td>
<td>.550 (13.97)</td>
</tr>
<tr>
<td>C</td>
<td>1.250 (31.75)</td>
</tr>
<tr>
<td>D</td>
<td>.023 (0.58)</td>
</tr>
</tbody>
</table>
REQUIREMENTS:

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

Weight: 2.0 grams, maximum.

Operating temperature range: -55°C 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 I. Electrical characteristics (initial) 1/

<table>
<thead>
<tr>
<th>Dash Number</th>
<th>Type designation</th>
<th>Inductance (μH) ±10%</th>
<th>Q Min.</th>
<th>Test Frequency (MHz)</th>
<th>SRF Minimum (MHz)</th>
<th>DC resistance max (Ohms)</th>
<th>Rated DC current, (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS75052-1</td>
<td>LT4K052</td>
<td>47</td>
<td>18</td>
<td>2.5</td>
<td>13.5</td>
<td>5.9</td>
<td>195</td>
</tr>
<tr>
<td>MS75052-2</td>
<td>LT4K053</td>
<td>56</td>
<td>18</td>
<td>2.5</td>
<td>13.0</td>
<td>6.4</td>
<td>185</td>
</tr>
</tbody>
</table>

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).

<table>
<thead>
<tr>
<th>Inspection group</th>
<th>Allowable variation from Initial measurement</th>
<th>Allowable percent from specified minimum value in electrical characteristics (initial) table</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inductance (percent)</td>
<td>DC resistance</td>
</tr>
<tr>
<td>Qualification inspection Group II</td>
<td>±2</td>
<td>---</td>
</tr>
<tr>
<td>Group III</td>
<td>±5</td>
<td>±(3% + .001 ohm)</td>
</tr>
<tr>
<td>Group IV</td>
<td>±5</td>
<td>±(2% + .001 ohm)</td>
</tr>
<tr>
<td>Conformance inspection group C Subgroup I</td>
<td>±2</td>
<td>---</td>
</tr>
<tr>
<td>Subgroup II</td>
<td>±5</td>
<td>±(2% + .001 ohm)</td>
</tr>
<tr>
<td>Subgroup III</td>
<td>±5</td>
<td>±(3% + .001 ohm)</td>
</tr>
</tbody>
</table>

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.