PERFORMANCE SPECIFICATION SHEET

CONNECTORS, COAXIAL, RADIO FREQUENCY
(SERIES TNC (UNCABLED) – RECEPTACLE, SOCKET,
HERMETIC SEALED, JAM NUT MOUNTED, CLASS 2)

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

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-39012.

FIGURE 1. General configuration.
Inches | mm  | Inches | mm  | Inches | mm
---|---|---|---|---|---
.022 | .56 | .159 | 4.04 | .4375 | 11.11
.062 | 1.57 | .215 | 5.46 | .495 | 12.57
.087 | 2.21 | .218 | 5.54 | .500 | 12.70
.099 | 2.51 | .221 | 5.61 | .505 | 12.83
.104 | 2.64 | .368 | 9.35 | .508 | 12.90
.114 | 2.90 | .375 | 9.53 | .510 | 12.95
.153 | 3.89 | .380 | 9.65 | .620 | 15.75
.156 | 3.96 | .384 | 9.75 | .630 | 16.00

NOTES:
1. Dimensions are in inches.
2. For dimensions A, B, and C see table I.
3. Dimension B is the largest overall diameter of the connector. Hex nut dimension not included in the overall diameter of the connector.
4. Metric equivalents (to the nearest .01 mm) are given for general information only.
5. All undimensioned pictorial configurations are for reference purposes only.
6. Full threads to within .063 (1.60 mm) of shoulder; 1 ½ max uneven threads to shoulder.

FIGURE 1. General configuration – Continued.
TABLE I.  Dash number and overall dimensions.

<table>
<thead>
<tr>
<th>Dash No.</th>
<th>Dim</th>
<th>Inches-millimeters 1/</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Minimum panel thickness</th>
<th>Maximum panel thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>A</td>
<td>.684 (17.37)</td>
<td>.690 (17.53)</td>
<td>1.343 (34.11)</td>
<td>.045 (1.14)</td>
<td>.125 (3.18)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>.769 (19.53)</td>
<td></td>
<td>.893 (22.68)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0002</td>
<td>A</td>
<td>.626 (15.90)</td>
<td>.650 (16.51)</td>
<td>1.328 (33.73)</td>
<td>.045 (1.14)</td>
<td>.250 (6.35)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
<td></td>
<td>.750 (19.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1/  Millimeters are in parentheses.

TABLE II.  Group qualification.

<table>
<thead>
<tr>
<th>Group</th>
<th>Submission and qualification of any of the following connectors</th>
<th>Qualifies the following connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0001</td>
<td>0001</td>
</tr>
<tr>
<td></td>
<td>0002</td>
<td>0002</td>
</tr>
</tbody>
</table>

ENGINEERING DATA

Nominal impedance:  50 ohms.

Frequency range:  0 to 11,000 MHz.

Voltage rating:  500 volts rms maximum working voltage at sea level, 125 volts rms maximum at 70,000 feet.

Temperature rating:  -65°C to +165°C.

REQUIREMENTS

Dimensions and configuration:  See figure 1.

Force to engage and disengage:
   Longitudinal force – Not applicable.
   Torque – 2 inch-pounds maximum.

Coupling proof torque:  Not applicable.

Inspection conditions:
   Coupling torque – 4 to 6 inch-pounds.

Mating characteristics:  See MIL-STD-348, Figure 313-2.
   Center contact (female)
   Oversize test pin - .057 diameter minimum (non-closed entry contacts only).
   Insertion depth - .125 minimum.
   Number of insertions – 1.

Insertion force test – Steel test pin dia .054 minimum.
   Test pin finish – 16 microinches.
   Insertion force – 2 lbs maximum.
Withdrawal force test: Steel test pin dia .052 maximum.
Withdrawal force – 2 oz minimum.
Test pin finish – 16 microinches.

Hermetic seal: Leakage shall not exceed $1 \times 10^{-5}$ cc/sec of tracer gas at atmospheric pressure.

Leakage (pressurized connectors): Connector mounted in mounting hole specified on figure 1 with mating end capped. Test applicable to mounting seal only. Air pressure – 30 psi. Duration: 30 seconds minimum.


Center contact retention:
- 6 lbs minimum axial force.
- 4 inch-ounces radial torque minimum.


Voltage standing wave ratio (VSWR): Not applicable.

Connector durability: 500 cycles at 12 cycles/minute maximum. The connector shall meet the mating characteristics and force to engage and disengage requirements.

Contact resistance: In milliohms maximum.

<table>
<thead>
<tr>
<th>Contact</th>
<th>Initial</th>
<th>After environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center contact</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Outer contact</td>
<td>.2</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Dielectric withstanding voltage: Method 301 of MIL-STD-202. 1,500 volts rms minimum at sea level.


Temperature cycling: Method 102, test condition C, MIL-STD-202, except test high temperature shall be +200°C.

Thermal shock: Not applicable.


Corona level:
- Voltage – 375 volts, minimum.
- Altitude – 70,000 feet.

RF high potential withstanding voltage:
- Voltage and frequency: 1,000 volts rms at 5 MHz.
- Leakage current: Not applicable.

Cable retention force: Not applicable.

Coupling mechanism retention force: Not applicable.

RF leakage: Not applicable.
Insertion loss: Not applicable.

Part or Identifying Number (PIN): M39012/34 – (dash number from table I)

Group qualification: See table II.

Changes from previous issues. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. In addition to MIL-PRF-39012, this document references the following:

MIL-STD-202
MIL-STD-348

CONCLUDING MATERIAL

Custodians: Preparing activity:
Army – CR DLA-CC
Navy – EC
Air Force – 85
DLA - CC

Review activities:
Army – AT, AV, EA, MI
Navy – AS, MC, OS, SH
Air Force – 19, 99 (Project 5935-2014-102)
NASA - NA

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.