

INCH-POUND

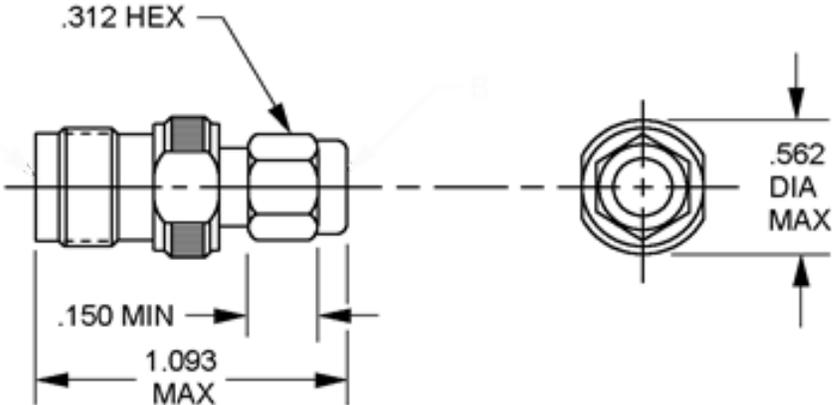
MIL-PRF-55339/40B  
28 January 2015  
SUPERSEDING  
MIL-PRF-55339/40A  
1 May 1978

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY,  
(BETWEEN SERIES SMA (MALE) TO SERIES TNC (FEMALE)), CLASS 2  
STRAIGHT PLUG

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-55339.



Inches	mm
.150	3.81
.312	7.92
.562	14.27
1.093	27.76

NOTES:

- 1. Dimensions are in inches.
- 2. Metric equivalents are given for general information only.
- 3. All undimensioned pictorial representations are for reference purposes only.
- 4. Interface shall be in accordance with MIL-STD-348.

FIGURE 1. General configuration jack-plug-jack.



ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 11 GHz.

Voltage rating: 335 volts rms maximum working voltage at sea level, 85 volts rms at 70,000 feet.

Temperature range: -65° to +165°C.

REQUIREMENTS:

Dimensions and configurations: See figure 1.

Center contact retention.

Axial force – 6 pounds minimum.

Force to engage and disengage.

Longitudinal force – Not applicable.

Torque – 2 inch-pounds maximum.

Coupling proof torque.

Series SMA – 15 inch-pounds, minimum.

Series TNC – Not applicable.

Inspection conditions.

Coupling torque – Series SMA – 7 to 10 inch-pounds.

Series TNC – 4 to 6 inch-pounds.

Mating characteristics.

Series SMA – Not applicable.

Series TNC

Center contact (socket):

Oversize test pin - .057 inch minimum.

Insertion depth - .125 inch minimum.

Number of insertions – 1.

Insertion force test. Steel test pin diameter - .054 inch minimum.

Test pin finish – 16 microinches.

Insertion force – 2 pounds maximum.

Withdrawal force. Steel test pin diameter - .052 inch maximum.

Withdrawal force – 2 ounces minimum.

Test pin finish – 16 microinches.

Permeability: Not to exceed 2.

Insulation resistance. 5,000 megohms minimum.

Voltage standing wave ratio (VSWR): 1.15 + .015 F (GHz) at .5 to 11 GHz.

RF leakage: -60 dB minimum tested at a frequency of 2 to 3 GHz.

RF insertion loss:  $.06 \sqrt{F \text{ (GHz)}}$  dB maximum at 6 GHz.

Durability: 500 cycles minimum at 12 cycles per minute maximum.

Dielectric withstanding voltage: 1,000 volts rms minimum at sea level.

Contact resistance (milliohms, max):

	Initial	After environment
Center contact	4.5 <sup>1/</sup>	6.0
Outer contact	2.2	--

<sup>1/</sup> Two center contacts must be mated to the center conductor under test therefore doubling center contact resistance.

Vibration, high frequency: Method 204, MIL-STD-202, test condition D, interruptions – 1 μs, maximum.

Shock (specified pulse): Method 213, MIL-STD-202, test condition I.

Thermal shock: Method 107, MIL-STD-202, test condition C.

Moisture resistance: 200 megohms, minimum.

Corona level:

Voltage – 375 volts minimum.

Altitude – 70,000 feet minimum.

RF high potential withstanding voltage:

RF voltage – 1,000 volts rms minimum.

Frequency – 5 to 7.5 MHz.

Salt spray (corrosion): Method 101, MIL-STD-202, test condition B.

Coupling mechanism retention force:

Series TNC – Not applicable.

Series SMA – 60 pounds minimum.

Part or Identifying Number (PIN):

- M55339/40-30001 (safety wire holes (SMA))
  - 30101 (without safety wire holes)
- M55339/40-50001 (safety wire holes (SMA))
  - 50101 (without safety wire holes)

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-55339, this document references the following:

- MIL-STD-202
- MIL-STD-348

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 5935-2015-020)

Review activities:

Army - AT, EA, MI  
Navy - AS, MC, OS, SH  
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 information above using the ASSIST Online database at <https://assist.dla.mil>.