

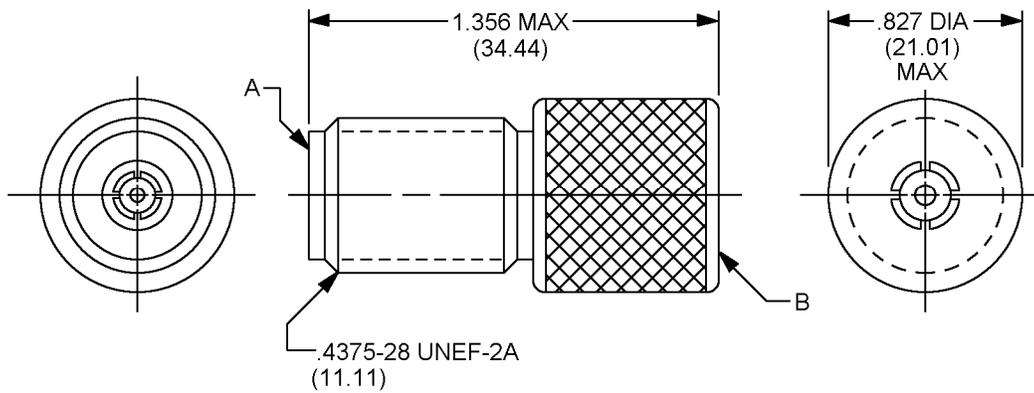
INCH-POUND
MIL-PRF-55339/51A
10 January 2005
SUPERSEDING
MIL-PRF-55339/51 (USAF)
28 April 1978

PERFORMANCE SPECIFICATION SHEET

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY.
(BETWEEN SERIES TNC TO SERIES N), 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.



Reference	Series	Contact
A	TNC	Socket
B	N	Pin

NOTES:

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

FIGURE 1. General configuration.

DESIGN AND CONSTRUCTION:

General configuration: See figure 1.

Impedance: 50 ohms, nominal.

Working voltage:

Sea level: 500 Vrms.

70,000 feet (4.437 kPa): 125 Vrms

Frequency range: 5 to 11 GHz.

Temperature range: -65° to +165°C.

PERFORMANCE (installation torque of 6 to 10 in. lb (0.68 Nm to 1.13 Nm), series N).

Dimensions: See figure 1 and MIL-STD-348.

Center contact retention:	<u>Series TNC</u>	<u>Series N</u>
Axial force (lb, minimum)	6 (26.69 N)	6 (26.69 N)
Torque (in. oz, minimum)	N/A	N/A

Force to engage and disengage:	<u>Series TNC</u>	<u>Series N</u>
Longitudinal force (lb, maximum)	3.2 (14.23 N)	N/A
Torque (in, lb, maximum)	2 (0.22 Nm)	6.0 (0.68 Nm)

Coupling proof torque: 15 in. lb (1.69 Nm), minimum, series N.

Mating characteristics:

Center contact (socket) series TNC:

Oversize test pin diameter: .057 inch (1.45 mm), minimum.

Insertion depth: .125 inch (3.17 mm), minimum.

Number of insertions: 1.

Maximum test pin (insertion force test) series TNC:

Steel test pin diameter: .054 inch (1.37 mm), minimum.

Pin finish: 16 microinches (.406 μm).

Insertion force: 2 lb (8.90 N), maximum.

Number of insertions: 1.

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Minimum test pin (withdrawal force) series TNC:

Steel test pin diameter: .052 inch (1.32 mm), maximum.

Pin finish: 16 microinches (.406 μm).

Withdrawal force: 2 oz (0.56 N), minimum.

Number of withdrawals: 1.

Outer contact, series N:

Minimum test ring ID: .316 inch (8.03 mm), maximum.

PIN finish: 16 microinches (.406 μm).

Insertion force: 25 lb (111.20 N), maximum.

Insertion depth: .093 inch (2.36 mm), minimum.

Number of insertions: 1.

Slotted member contacts only, series N.

Maximum test ring ID: .324 inch (8.23 mm), minimum.

Test ring finish: 16 microinches (.406 μm).

Insertion depth: .031 inch (0.79 mm), maximum.

Number of insertions: 1.

Permeability: <2.0

Seal:

Hermetic: Not applicable.

Pressurized: Not applicable.

Weatherproof: Not applicable.

Insulation resistance: 5,000 megohms, minimum.

VSWR: 1.35:1, maximum at .5 to 9 GHz. 1.5 maximum at 9 to 11 GHz.

RF leakage (total): -60dB, minimum, 2 to 3 GHz.

RF insertion loss: .060 \sqrt{F} (GHz) dB maximum, tested at 6 GHz.

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

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Dielectric withstanding:

Test voltage: 1,500 Vrms, minimum (sea level).

Contact resistance (milliohms, maximum).

<u>Contact</u>	<u>Initial</u>	<u>After</u>
Center	2.0	2.5
Outer	.25	N/A
Outer (-70001)	.5	N/A

Vibration, high frequency:

Interruptions: 1 μ s, maximum.

Shock: Test condition I.

Thermal shock: Test condition C.

Moisture resistance: 200 megohms, minimum.

Corona level:

Voltage: 375 V, minimum.

Altitude: 70,000 feet (4.437 kPa), minimum.

RF high potential withstanding voltage:

RF voltage: 1,000 Vrms, minimum.

Frequency: 5 MHz, minimum.

Salt spray (corrosion): Applicable.

Coupling mechanism retention force: 100 lb (444.82 N), minimum.

Part Identifying Numberr (PIN): M55339/51-00001 or

PIN: M55339/51-70001 CAUTION: THIS PART HAS A NICKEL PLATED BODY AND IS NOT FOR USE IN APPLICATIONS WHERE PASSIVE INTERMODULATION GENERATION (PIM) MAY BE A CONCERN.

Reference documents. In addition to MIL-PRF-55339, this document references the following:

MIL-STD-348

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

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CONCLUDING MATERIAL

Custodians:
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

Review activities:
Air Force - 19, 99

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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 <http://assist.daps.dla.mil>.