

INCH-POUND

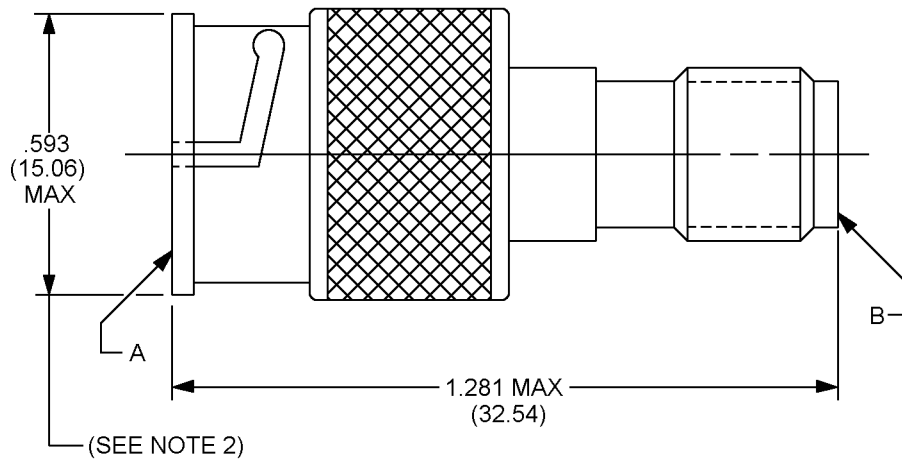
MIL-PRF-55339/38A
w/ AMENDMENT 1
28 February 2023
SUPERSEDING
MIL-PRF-55339/38A
10 January 2005

PERFORMANCE SPECIFICATION SHEET

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, (BETWEEN SERIES BNC TO SERIES TNC), 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	BNC	Pin
B	TNC	Socket

NOTES:

1. Dimensions are in inches.
2. This dimension is the largest overall diameter of the connector.
3. Interface 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: 0 to 4GHz.

Temperature range: -65° to +165°C.

PERFORMANCE (installation torque is not applicable).

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

Center contact retention:

Axial force: 6 lb (26.69 N) minimum.

Torque: Not applicable.

Force to engage and disengage:

	<u>Series BNC</u>	<u>Series TNC</u>
Longitudinal force:	3 lb maximum (13.34 N)	Not applicable

Torque:	2.5 in. lb, (0.28 Nm)
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Mating characteristics:

Center contact (socket) series TNC:

Oversize test pin diameter: .057 inch, minimum.

Insertion depth: .125, minimum.

Number of insertions: 1.

Maximum test pin (insertion force test):

Steel test pin diameter: .054 inch, minimum.

Pin finish: 16 microinches.

Insertion force: 2 lb, maximum.

Number of insertions: 1.

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Minimum test pin (withdrawal force):

Steel test pin diameter: .052 inch, maximum.

Pin finish: 16 microinches.

Withdrawal force: 2 oz, minimum.

Number of withdrawals: 1.

Outer contact, series BNC:

Minimum test ring ID: .319 inch, maximum.

PIN finish: 16 microinches.

Insertion force: 5 lb, maximum.

Insertion depth: .093 inch, minimum.

Number of insertions: 1.

Maximum test ring ID: .324 inch, minimum.

Test ring finish: 16 microinches.

Insertion depth: .031 inch, maximum.

Number of insertions: 1.

Permeability: <2.0

Seal:

Pressurized: Not applicable.

Weatherproof: Not applicable.

Insulation resistance: 5,000 megohms, minimum.

VSWR: 1.25:1, maximum.5 to 4 GHz.

RF leakage (total): -55 dB, min, 2 to 3 GHz.

RF insertion loss: .2 dB, max, 3 GHz ($.115 \sqrt{F}$ (GHz) dB max tested at 3 GHz)

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

Dielectric withstanding:

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

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Contact resistance (milliohms, maximum).

<u>Contact</u>	<u>Initial</u>	<u>After</u>
Center	2.0	2.5
Outer	0.2	N/A
Outer (-70001)	0.4	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): Test condition B.

	<u>Series BNC</u>	<u>Series TNC</u>
Coupling mechanism retention force	100 lb, minimum	Not applicable

Part or Identifying Number (PIN):. M55339/38-00001 or:

PIN: M55339/38-70001 **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

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

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CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:

DLA - CC

(Project 5935-2023-023)

Review activities:

Army - AR, AT, EA
Navy - AS, MC, OS
Air Force - 19

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>.