

INCH-POUND

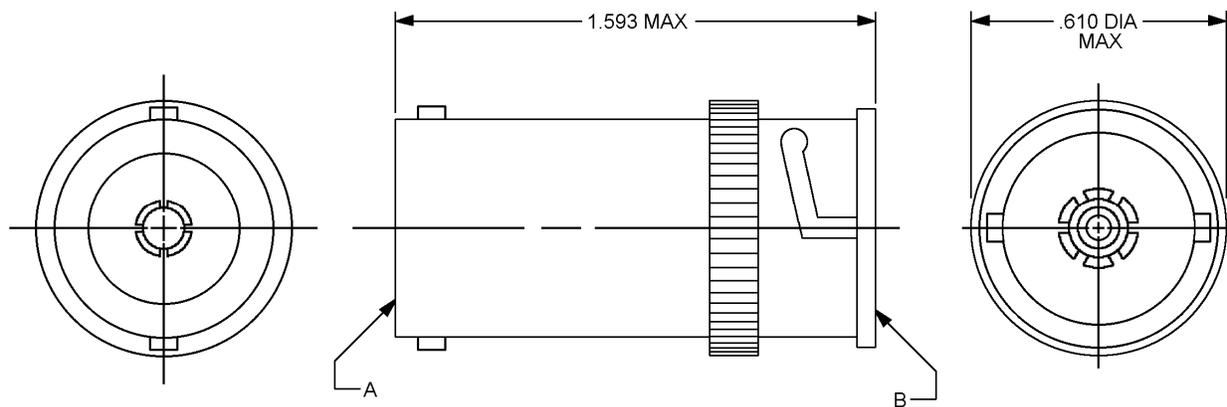
MIL-PRF-55339/23A  
w/AMENDMENT 1  
13 February 2007  
SUPERSEDING  
MIL-PRF-55339/23A  
17 September 2004

PERFORMANCE SPECIFICATION SHEET

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, IN-LINE,  
(BETWEEN SERIES C JACK TO SERIES BNC PLUG), CLASS 2

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

The requirements for acquiring the document described herein shall  
consist of this specification sheet and MIL-PRF-55339.



Inches	mm
.610	15.06
1.593	40.46

Reference	Series	Contact
A	C	Socket
B	BNC	Pin

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are in parentheses.
3. Metric equivalents are given for general information only.
4. All undimensioned pictorial representations are for reference purposes only.
5. Interface shall be in accordance with MIL-STD-348, series C socket contact and series BNC pin contact.

FIGURE 1. General configuration.

DESIGN AND CONSTRUCTION

General configuration: See figure 1.

Impedance: 50 ohms, nom.

Working voltage: Sea level – 500 V rms.  
70,000 feet (4.437 kPa) – 125 V rms.

Frequency range: 0 to 4 GHz.

Temperature range: -65° to +165°C.

PERFORMANCE (installation torque is not applicable)

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

Center contact retention:	<u>Series C</u>	<u>Series BNC</u>
Axial force (lb. min)	6 (26.7 N)	6 (26.7 N)
Torque (in. oz, min)	N/A	N/A
Force to engage and disengage	<u>Series C</u>	<u>Series BNC</u>
Longitudinal force (lb. max)	4.5 (20.02 N)	3.0 (13.3 N)
Torque (in. lb, max)	4.0 (0.45 Nm)	2.5 (0.34 Nm)

Coupling proof torque: Not applicable.

Mating characteristics, series C:

Center contact (socket):

Oversize test pin dia - .098 in. (2.49 mm), min.

Insertion depth - .125 in. (3.17 mm), min.

Number of insertions – 1.

Max test pin (insertion force test), series C:

Steel test pin dia - .092 in. (2.34 mm), min.

Pin finish – 16 microinches (0.407 μm).

Insertion force – 2 lb (8.89 N), max.

Number of insertions – 1.

Min test pin (withdrawal force), series C:

Steel test pin dia - .090 in. (2.29 mm), max.

Pin finish – 16 microinches (0.407 μm).

Withdrawal force – 2 oz, min (0.56 N).

Number of withdrawals – 1.

Outer contact, series BNC:

Min test ring ID - .319 in (8.10 mm), max.

Ring finish – 16 microinches (0.407 μm).

Insertion force – 5 lb (22.2 N), max.

Insertion depth - .093 in. (2.36 mm), min.

Number of insertions – 1.

Max test ring ID - .324 in. (8.23 mm), min.

Test ring finish – 16 microinches (0.407 μm).

Insertion depth - .031 in. (0.79 mm), max.

Number of insertions – 1.

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Permeability: <2.0.

Seal: Hermetic – Not applicable.  
Pressurized – Not applicable.  
Weatherproof – Not applicable.

Insulation resistance: 5,000 megohms, min.

VSWR: 1.35, max .5 to 4 GHz.

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

RF insertion loss: .35 dB, max, 3 GHz ( $.020 \sqrt{F}$  (GHz) dB max tested at 3 GHz).

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

Dielectric withstanding: Test voltage – 1,500 V rms, min (sea level).

Contact resistance (milliohms, max).

<u>Contact</u>	<u>Initial</u>	<u>After</u>
Center	.25	30
Outer	0.2	N/A
Outer (-70001)	0.4	N/A

Vibration, high frequency: Interruptions – 1  $\mu$ s, max.

Shock: Test condition I.

Thermal shock: Test condition C.

Moisture resistance: 2 megohms, min.

Corona level: Voltage – 375 V, min.  
Altitude - 70,000 feet (4.437 kPa), min.

RF high potential withstanding voltage: RF voltage – 1,000 V rms, min.  
Frequency – 5 MHz, min.

Salt spray (corrosion): Applicable.

Coupling mechanism retention force: Not applicable.

Part or Identifying Number (PIN): M55339/23-00635.

**PIN: M55339/23-70001. CAUTION: THIS PART HAS A NICKEL PLATED BODY AND IS NOT FOR USE IN APPLICATIONS WHERE PASSIVE INTERMODULATION GENERATION (PIM) MAY BE A CONCERN.**

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Cross reference: See table I.

TABLE I. Cross reference of PINs.

PIN	Superseded PIN or type designation <sup>1/</sup>
M55339/23-00635	MS35331 REB49237 UG-635/U

<sup>1/</sup> The superseded PIN or the type designation is for cross reference only. Where a superseded PIN or type designation is not given, none was assigned or will be assigned. The PIN M55339/23-00635 shall be used in all cases for marking and identifying the adapter.

Changes from the 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. In addition to MIL-PRF-55339, this document references to the following:

MIL-STD-348

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:  
DLA - CC

(Project 5935-2006-237)

Review activities:

Army – AR, 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 the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.