

INCH-POUND

MIL-PRF-55339/24B

17 September 2004

SUPERSEDING

MIL-PRF-55339/24A

28 February 1979

### PERFORMANCE SPECIFICATION SHEET

#### ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, FLANGE MOUNTED, (WITHIN SERIES BNC PLUG TO SERIES N JACK), 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.

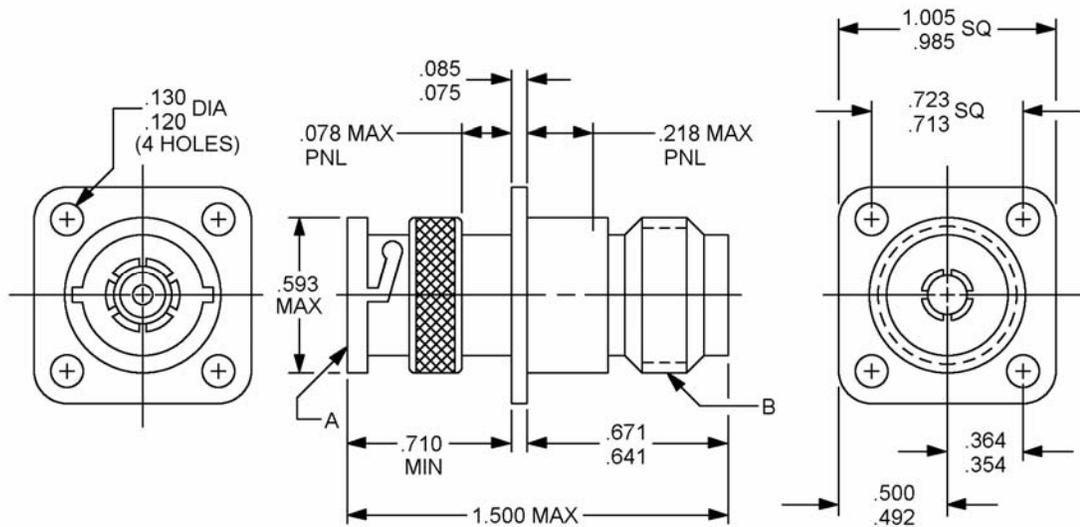


FIGURE 1. General configuration.

Inches	mm	Inches	mm
.075	1.91	.630	16.00
.085	2.16	.641	16.28
.120	3.05	.671	17.04
.130	3.30	.710	18.03
.218	5.54	.713	18.11
.354	8.99	.723	18.36
.364	9.25	.985	25.02
.492	12.50	1.005	25.53
.500	12.70	1.500	38.10

Reference	Series	Contact
A	BNC	Pin
B	N	Socket

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 dimensions shall be in accordance with MIL-STD-348, series BNC pin contact and series N socket contact.

FIGURE 1. General configuration - Continued.

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

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

Center contact retention:	<u>Series BNC</u>	<u>Series N</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 BNC</u>	<u>Series N</u>
Longitudinal force (lb. max)	3.0 (13.3 N)	N/A
Torque (in. lb, max)	2.5 (0.34 Nm)	6.0 (0.68 Nm)

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Coupling proof torque: Not applicable.

Mating characteristics, series N:

Center contact (socket):

Oversize test pin dia - .074 in. (1.88 mm), min.

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

No. of insertions - 1.

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

Steel test pin dia - .066 in. (1.68 mm), min.

Pin finish - 16 microinches (0.407  $\mu\text{m}$ ).

Insertion force - 2 lb (8.89 N), max.

No. of insertions - 1.

Min test pin (withdrawal force), series N:

Steel test pin dia - .063 in. (1.60 mm), max.

Pin finish - 16 microinches (0.407  $\mu\text{m}$ ).

Withdrawal force - 2 oz (0.56 N).

No. of withdrawals - 1.

Outer contact, series BNC:

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

Ring finish - 16 microinches (0.407  $\mu\text{m}$ ).

Insertion force - 5 lb (22.24 N), max.

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

No. of insertions - 1.

Max test ring ID - .324 in. (8.32 mm), min.

Test ring finish - 16 microinches (0.407  $\mu\text{m}$ ).

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

No. of insertions - 1.

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: .1 dB, max, 3 GHz ( $.06 \sqrt{F}$  (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).

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Contact resistance (milliohms, max):

<u>Contact</u>	<u>Initial</u>	<u>After</u>
Center	1.0	1.5
Outer	1.5	N/A
Outer (-7001)	3.0	N/A

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

Shock: Test condition I.

Thermal shock: Test condition C.

Moisture resistance: 200 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): M55339/24-00335.

PIN: M55339/24-70001. **CAUTION: THIS PART HAS A NICKEL PLATED BODY AND IS NOT FOR USE IN APPLICATIONS WHERE PASSIVE INTERMODULATION GENERATION (PIM) MAY BE A CONCERN.**

TABLE I. Cross reference of PIN's.

PIN	Superseded PIN or type designation <u>1/</u>
M55339/24-00335	REB49103 UG-335A/U

1/ 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 M55339/24-00335 shall be used in all cases for marking and identifying the adapter.

Marginal notations is 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-348

MIL-PRF-55339/24B

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 5935-4657-023)

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>.