

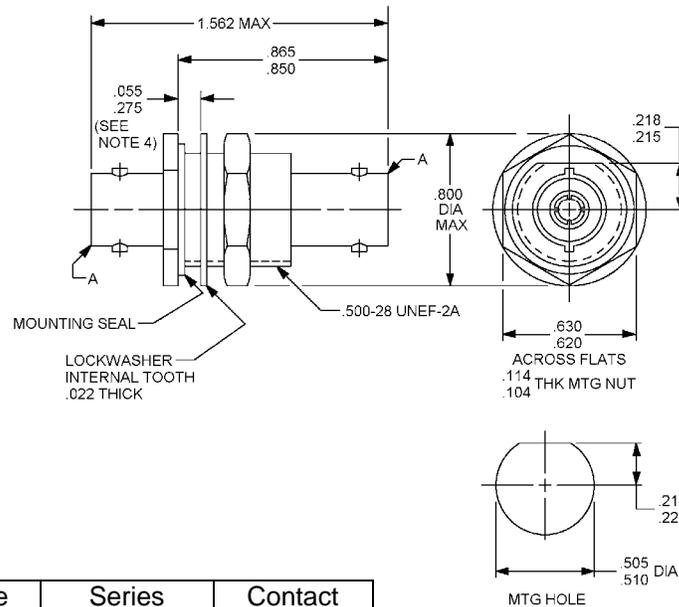
INCH-POUND  
 MIL-PRF-55339/13B  
 10 January 2005  
 SUPERSEDING  
 MIL-PRF-55339/13A  
 11 January 1977

PERFORMANCE SPECIFICATION SHEET

ADAPTERS, CONNECTOR, COAXIAL, RADIO FREQUENCY, IN-LINE, JAMNUT MOUNTED,  
 (WITHIN SERIES BNC JACK TO SERIES BNC JACK, (HERMETIC AND NON-HERMETIC)), CLASS 2

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    | Socket  |

|  | mm   | Inches | mm   | Inches | mm    | Inches | mm    |
|--|------|--------|------|--------|-------|--------|-------|
|  | 0.56 | .215   | 5.46 | .500   | 12.70 | .630   | 16.00 |
|  | 1.40 | .218   | 5.54 | .505   | 12.83 | .800   | 20.32 |
|  | 2.64 | .221   | 5.61 | .510   | 12.95 | .850   | 21.59 |
|  | 2.90 | .275   | 6.98 | .620   | 15.75 | .865   | 21.97 |
|  |      |        |      |        |       | 1.562  | 39.67 |

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. Panel thickness .055 minimum, .275 maximum.
5. Interface dimensions 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: 1,000 Vrms.

70,000 feet (4.437 kPa): 125 Vrms

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:

Axial force: 6 lb (26.69 N) minimum.

Torque: Not applicable.

Force to engage and disengage:

Longitudinal force: 3 lb (13.34 N), maximum.

Torque: 2.5 in. lb (0.28 Nm), maximum.

Coupling proof torque: Not applicable.

Mating characteristics:

Center contact (socket):

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

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

Number of insertions: 1.

Maximum test pin (insertion force test):

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

Pin finish: 16 microinches (0.406  $\mu$ m).

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

Number of insertions: 1.

MIL-PRF-55339/13B

Minimum test pin (withdrawal force):

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

Pin finish: 16 microinches (0.406 μm).

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

Number of withdrawals: 1.

Outer contact: Not applicable.

Permeability: <2.0

Seal:

|               |  |   |
|---------------|--|---|
|               | <u>- 00492 or -70001</u>   | <u>- 00001<sup>1/</sup> or -70002</u>       |
| Hermetic:     | 1 x 10 <sup>-7</sup> atm cm <sup>3</sup> /sec (center contact to body) | Not applicable                              |
| Pressurized:  | Not applicable   | 30 psi (206.8 kPa), maximum                 |
| Weatherproof: | 30 psi (206.8 kPa), maximum (mounting seal)                            | 30 psi (206.8 kPa), maximum (mounting seal) |

Insulation resistance: 5,000 megohms, minimum.

VSWR: 1.40:1, maximum for hermetic and 1 25:1 maximum for non-hermetic at .5 to 4 GHz.

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

RF insertion loss: 0.5 dB maximum for hermetic and 0.2 dB maximum for non-hermetic, 3 GHz (.144 √F (GHz) dB maximum tested at 3 GHz).

Durability 500 cycles minimum at 12 cycles/minimum 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).

Contact resistance (milliohms, maximum).

| <u>Contact</u> | <u>Hermetic (-00492, -70001)</u> |              | <u>Non-hermetic (-00001, -70002)</u> |              |
|----------------|----------------------------------|--------------|--------------------------------------|--------------|
|                | <u>Initial</u>                   | <u>After</u> | <u>Initial</u>                       | <u>After</u> |
| Center         | 4.4                              | 4.9          | 1.5                                  | 2.0          |
| Outer          | 0.2                              | N/A          | 0.2                                  | N/A          |
| Outer (-70001) | 0.4                              | N/A          | (-70002) 0.4                         | N/A          |

<sup>1/</sup> Internal parts shall be constructed of nonferro-magnetic material.

MIL-PRF-55339/13B

Vibration, high frequency:

Interruptions: 1  $\mu$ 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: Not applicable.

Part or Identifying Number (PIN):

M55339/13-00492 Hermetic and M55339/13 -00001 Non-hermetic or:

PIN: M55339/13-70001 Hermetic and M55339/13-70002 Non-hermetic. **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 PINs.

| PIN             | Superseded PIN or type designation <u>1/</u> |
|-----------------|--|
| M55339/13-00492 | MS35177<br>REB49098<br>UG-492D/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.

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.

MIL-PRF-55339/13B

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:  
DLA - CC

(Project 5935-4657-012)

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>.