

INCH-POUND

MIL-PRF-55339/32A

17 September 2004

SUPERSEDING

MIL-PRF-55339/32

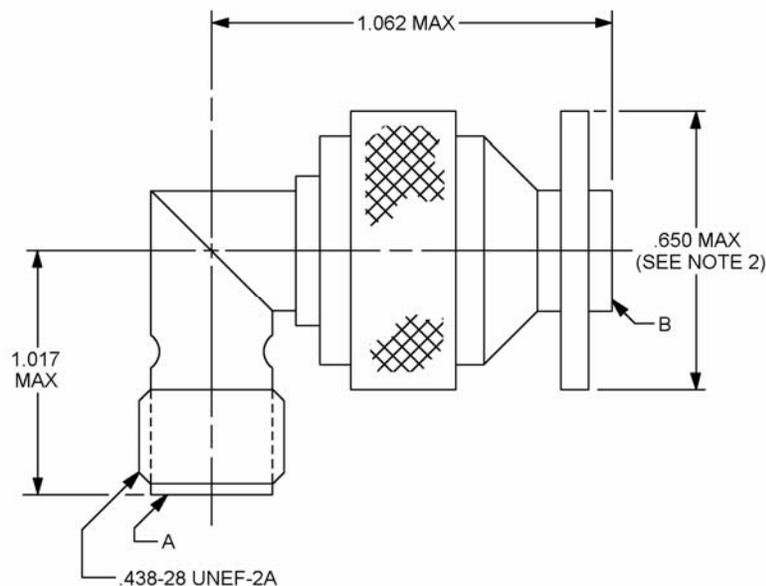
11 January 1977

PERFORMANCE SPECIFICATION SHEET

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, (WITHIN SERIES TNC) RIGHT ANGLE, MALE TO FEMALE

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 |
|--------|-------|
| .438 | 11.13 |
| .650 | 16.51 |
| 1.017 | 25.83 |
| 1.062 | 26.97 |

| Reference | Series | Contact |
|-----------|--------|---------|
| A | TNC | Socket |
| B | TNC | Pin |

NOTES:

1. Dimensions are in inches.
2. This dimension is the largest overall diameter of the connector.
3. Metric equivalents are given for general information only.
4. Shape of coupling nut is optional.
5. Interface shall be in accordance with MIL-STD-348, series TNC pin contact and series TNC socket 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 11 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), min.
Torque – 4 in. oz (0.028 Nm), min.

Force to engage and disengage: Longitudinal force - Not applicable.
Torque – 2-in. lb (0.22 Nm), max.

Mating characteristics:

Center contact (socket):

Oversize test pin dia: .057 in. (1.44 mm), min.
Insertion depth: .125 in. (3.17 mm), min.
Number of insertions: 1.

Max test pin (insertion force test):

Steel test pin diameter: .054 in. (3.17 mm), min.
Pin finish: 16 microinches (0.406 μ m).
Insertion force: 2 lb (8.90 N), max.
Number of insertions: 1.

Min test pin (withdrawal force):

Steel test pin dia: .052 in. (1.32 mm), max.
Pin finish: 16 microinches.
Withdrawal force: 2 oz (0.56 N), min.
Number of withdrawals: Not applicable.

Outer contact:

Min test ring ID - .319 in. (8.10 mm), max.
Pin finish – 16 microinches (0.406 μ m)
Insertion force – 5 lb (22.24 N), max.
Insertion depth - .093 in. (2.36 mm), min.
No. of insertions – Not applicable.

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

Test ring finish – Not applicable.
Insertion depth - .031 in. (0.79 mm), max.
Number of insertions – 1.

Permeability: <2.0.

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Seal:

Pressurized - Not applicable.
Weatherproof – Not applicable.

Insulation resistance: 5,000 megohms, min.

VSWR: 1.45 max at .5 to 11 GHz.

RF leakage (total): Not applicable.

RF insertion loss: $.144 \sqrt{F}$ (GHz) dB max, tested at 3 GHz.

Durability: 500 cycles 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 V rms, min (sea level).

Contact resistance (milliohms, max).

| <u>Contact</u> | <u>Initial</u> | <u>After</u> |
|----------------|----------------|--------------|
| Center | 2.5 | 3.0 |
| Outer | 0.5 | N/A |
| Outer (-70001) | 1.0 | N/A |

Vibration, high frequency: Interruptions, 1 μ 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): Test condition B.

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

Part or Identifying Number (PIN): M55339/32-00001.

PIN: M55339/32-70001. CAUTION: THIS PART HAS A NICKEL PLATED BODY AND IS NOT FOR USE IN APPLICATIONS WHERE PASSIVE INTERMODULATION GENERATION (PIM) MAY BE A CONCERN.

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

MIL-STD-348

CONCLUDING MATERIAL

Custodians:

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

Preparing activity
DLA - CC

(Project 5935-4657-025)

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>.