

INCH-POUND

MIL-PRF-55339/21A

17 September 2004

SUPERSEDING

MIL-PRF-55339/21

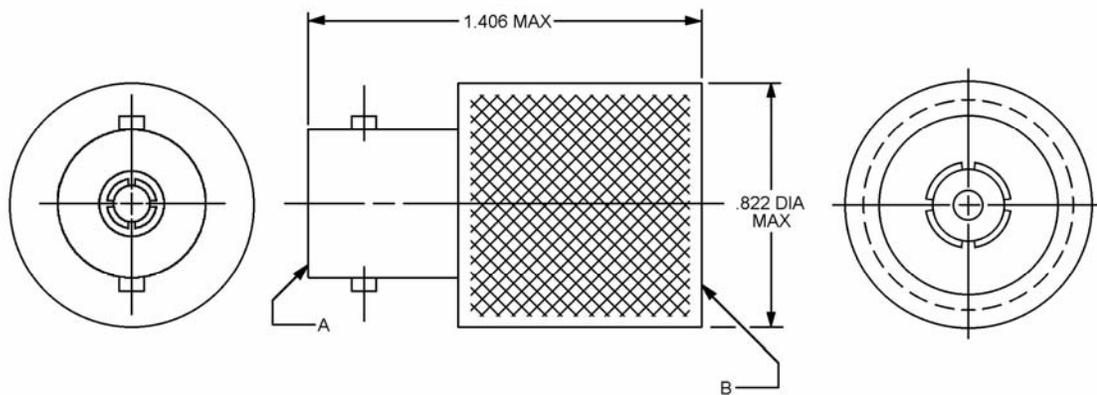
6 May 1975

PERFORMANCE SPECIFICATION SHEET

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, IN-LINE, (BETWEEN SERIES C JACK TO SERIES N 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 |
|--------|-------|
| .822 | 20.88 |
| 1.406 | 35.71 |

| Reference | Series | Contact |
|-----------|--------|---------|
| A | C | Socket |
| B | N | 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 N pin contact.

FIGURE 1. General configuration.

DESIGN AND CONSTRUCTION

General configuration: See figure 1.

Impedance: 50 ohms, nom.

Working voltage: Sea level – 1,000 V rms.
70,000 feet (4.437 kPa) – 250 V rms.

Frequency range: 0 to 11 GHz.

Temperature range: -65° to +165°C.

PERFORMANCE (installation torque of 6 to 10 lb. (0.68 to 1.13 Nm), series N)

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

| | | |
|--------------------------------|-----------------|-----------------|
| Center contact retention: | <u>Series C</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 C</u> | <u>Series N</u> |
| Longitudinal force (lb. max) | 4.5 (20.02 N) | 3.0 (13.34 N) |
| Torque (in. lb, max) | 4.0 (0.45 Nm) | 4.0 (0.45 Nm) |

Coupling proof torque: 15 in. lb (1.69 Nm), min, series N.

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 (0.56 N), min.

Number of withdrawals – 1.

Outer contact, series N:

Min test ring ID - .316 in. (8.03 mm), max.

Ring finish – 16 microinches (0.407 μm).

Insertion force – 25 lb (111.2 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 11 GHz.

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

RF insertion loss: .2 dB, max, 9 GHz (.05 \sqrt{F} (GHz) dB max tested at 3 to 6 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 – 2,500 V rms, min (sea level).

Contact resistance (milliohms, max).

| <u>Contact</u> | <u>Initial</u> | <u>After</u> |
|----------------|----------------|--------------|
| Center | 1.5 | 2.0 |
| Outer | 2.0 | N/A |
| Outer (-70001) | 4.0 | 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 – 500 V, min.
Altitude - 70,000 feet (4.437 kPa), min.

RF high potential withstanding voltage: RF voltage – 1,500 V rms, min.
Frequency – 5 MHz, min.

Salt spray (corrosion): Applicable.

Coupling mechanism retention force: 100 lb (444.8 N), min, series N.

Part or Identifying Number (PIN): M55339/21-00564.

PIN: M55339/21-70001. CAUTION: THIS PART HAS A NICKEL PLATED BODY AND IS NOT FOR USE IN APPLICATIONS WHERE PASSIVE INTERMODULATION GENERATION (PIM) MAY BE A CONCERN.

Cross reference: See table I.

TABLE I. Cross reference of PIN.

| PIN | Superseded PIN or type designation ^{1/} |
|-----------------|--|
| M55339/21-00564 | MS35321 REB49247 UG-564A/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. PIN M55339/21-00564 shall be used in all cases for marking and identifying the adapter.

Marginal notations are 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

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC
(Project 5935-4657-020)

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>.