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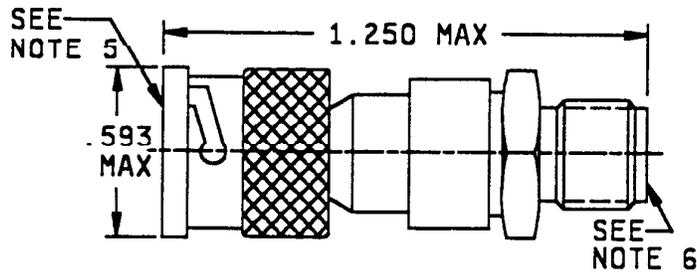
MIL-PRF-55339/44B
 13 July 1987
 SUPERSEDING
 MIL-A-55339/44A
 26 February 1979

PERFORMANCE SPECIFICATION

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

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

The complete requirements for acquiring the adapter described herein shall consist of this document and the latest issue of Specification MIL-PRF-55339.



Part number: M55339/44-30001 or

Part number: M55339/44-50001

Inches	mm
.593	15.06
1.250	31.75

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. Wrench flats to accommodate standard wrench opening in accordance with FED-STD-H28, appendix 10.
5. BNC pin contact interface, in accordance with MIL-STD-348.
6. SMA socket contact, in accordance with MIL-STD-348.

FIGURE 1. General configuration.

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REQUIREMENTS:

Design and construction:

General configuration: See figure 1.

Impedance: 50 ohms, nominal.

Working voltage:

Sea level: 335 V rms
70,000 feet: 85 V rms

Frequency range: 0 to 4 GHz.

Temperature range: -65° C to $+165^{\circ}$ C.

PERFORMANCE REQUIREMENTS (installation torque of 4 to 6 inch-pounds).

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

	<u>Series BNC</u>	<u>Series SMA</u>
Center contact retention:		
Axial force: (pounds, minimum):	6	6
Torque: (inch-ounces, minimum):	Not applicable	Not applicable
Force to engage and disengage:		
Longitudinal force (pounds, maximum):	<u>3</u>	<u>Not applicable</u>
Torque: (inch-pounds, maximum):	2.5	2

Mating characteristics:

Series BNC:

Cuter contact:

Minimum test pin inner diameter: .319 inch, maximum.

Pin finish: 16 microinches.

Insertion force: 5 pounds, maximum.

Insertion depth: .093 inch, minimum.

Number of insertions: 1.

Contacts with slotted members:

Shall contact a .324 minimum diameter ring within .031 of their tip ends.

Series SMA:

Center contact (socket):

Oversize test pin diameter: .0375 \pm .0001.

Insertion depth: .030/.045 inch, minimum

Number of insertions: 3.

Pin finish: 16 microinches.

Maximum Test pin (insertion force test):

Steel test pin diameter: .0370 \pm .0001.

Pin finish: 16 microinches.

Insertion force: 3 pounds, maximum.
 Number of insertions: 3.
 Minimum test pin (withdrawal force):
 Steel test pin diameter: .0355 \pm .0001.
 Pin finish: 16.
 Withdrawal force: 1 ounce, minimum.
 Number of withdrawals: 1.

Inspection conditions: For each test of threaded coupling connector where the test is performed on mated pairs, the pairs shall be torqued to 7 to 10 inch-pounds.

Permeability: <2.0.

Seal:

Pressurized: Not applicable.
 Weatherproof: Not applicable.

Insulation resistance: 5,000 megohms, minimum.

VSWR: 1.30:1 maximum at .5 to 4 GHz.

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

RF insertion loss: .2 dB, maximum, 3 GHz ($.115 \sqrt{F}$ (GHz) dB maximum 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, minimum (sea level).

Contact resistance (milliohms, maximum):

<u>Contract</u>	<u>Initial</u>	<u>After</u>
Center	4.1 $\frac{1}{2}$	6.0
Outer	2.2	Not applicable

Vibration, high frequency: Interruptions: 1 μ s, maximum. Test condition D.

Shock: Test condition I.

Thermal shock: Test condition C.

Moisture resistance: 200 megohms, minimum.

Corona level:

Voltage: 250 V, minimum.
 Altitude: 70,000 feet, minimum.

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RF high potential withstanding voltage:

RF voltage: 670 V rms, minimum.

Frequency: 5 MHz, minimum.

Salt spray (corrosion): Test condition B.

Coupling mechanism retention force: Series BNC Series SMA
100 pounds, minimum Not applicable

Group qualification: See table I.

TABLE I. Group qualifications.

Group	Submission and qualification of any of the following connectors	Qualifies the following connectors
I	M55339/44-30001 M55339/44-50001	M55339/44-30001 M55339/44-50001

Marking: As specified in MIL-A-55339.

Part number:

M55339/44-30001.

M55339/44-50001.

- 1/ Two center contacts must be mated to the center conductor under test, therefore doubling "center contact" resistance.

Custodians:

Army - CR

Navy - EC

Air Force - 85

Preparing activity:

Army - CR

Agent:

DLA - ES

Review activities:

Army - AR, MI

Navy - OS, SH

Air Force - 11, 99

DLA - ES

(Project 5935-3554-2)

User activities:

Army - AT

Navy - AS, MC, SH

Air Force - 19