

INCH-POUND

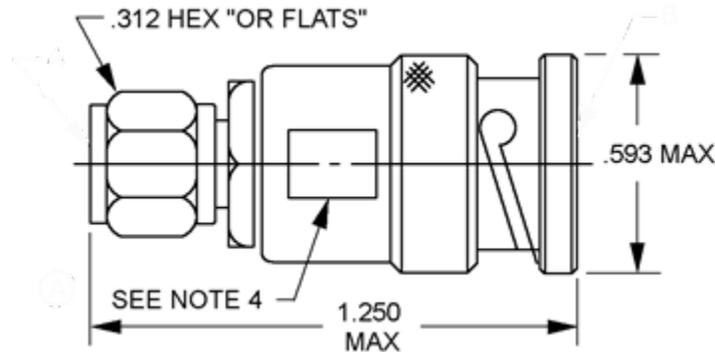
MIL-PRF-55339/45B
28 January 2015
SUPERSEDING
MIL-PRF-55339/45A
28 February 1979

PERFORMANCE SPECIFICATION

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



Inches	mm
.312	7.92
.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. Unless otherwise specified, tolerances are $\pm .005$ (.13 mm) on three place decimals and $\pm .010$ (.25 mm) on two place decimals.
5. Interface shall be in accordance with MIL-STD-348.

FIGURE 1. General configuration.



ENGINEERING DATA:

General configuration: See figure 1.

Impedance: 50 ohms, nom.

Working voltage: Sea level – 335 V rms. 70,000 feet – 85 V rms.

Frequency range: 0 to 4 GHz.

Temperature range: -65° to +165°C.

REQUIREMENTS (installation torque 7 to 10 in. lbs).

Series BNC coupling nut shall be nickel plated in accordance with SAE-AMS-QQ-N-290, 200-300 microinches, thickness.

Dimensions: See figure 1.

Center contact retention	Series SMA	Series BNC
Axial force – (lb, min)	6	6
Torque	Not applicable	Not applicable

Force to engage and disengage	Series SMA	Series BNC
Longitudinal force –	Not applicable	3
Torque – (in. lb, max)	2	2.5

Coupling proof torque	Series SMA	Series BNC
	15 in. lbs, min.	Not applicable

Mating characteristics:

Series SMA - Not applicable	Series BNC
	Outer contact Min test ID - .319 in., max. Pin finish – 16 microinches. Insertion force – 5 lb. max. Insertion depth - .093 in., min No. of insertions – 1 Contacts with slotted members: Shall contact a .324 minimum diameter ring within .031 of their tip ends.

Permeability: <2.0.

Seal:

Pressurized – Not applicable.

Weatherproof – Not applicable.

Insulation resistance: 5,000 megohms, min.

VSWR: 1.30 max at .5 to 4 GHz.

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

RF insertion loss: (.2 dB, max, 3 GHz). (.115 \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).

Contact resistance (milliohms, max):

Contact	Initial	After
Center	4.1 ^{1/}	6.0
Outer	2.2	Not applicable

^{1/} Two center contacts must be mated to the center conductor under test, therefore doubling “center contact” resistance.

Vibration, high frequency: Method 204, MIL-STD-202, test condition D, interruptions – 1 μs, maximum.

Shock (specified pulse): Method 213, MIL-STD-202, test condition I.

Thermal shock: Method 107, MIL-STD-202, test condition C.

Moisture resistance: 200 megohms, min.

Corona level: Voltage – 250 V, min. Altitude – 70,000 feet, min.

RF high potential withstanding voltage: RF voltage – 670 V rms, min. Frequency – 5 MHz, min.

Salt spray (corrosion): Test condition B.

Coupling mechanism retention force	Series BNC	Series SMA
	100 lb, min.	60 lbs, min.

Marking: As specified in MIL-PRF-55339.

Part or Identifying Number (PIN):

M55339/45-30001 with safety wire holes, 30101 without safety wire holes.
 M55339/45-50001 with safety wire holes, 50101 without safety wire holes.

NOTE: For logistics purposes, only adapters with safety wire hole will be stocked.

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-202
- MIL-STD-348
- SAE-AMS-QQ-N-290

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 85
DLA – CC

Preparing activity:

DLA - CC

(Project 5935-2015-024)

Review activities:

Army - AR, AT, MI
Navy - AS, MC, 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 information above using the ASSIST Online database at <https://assist.dla.mil>.