

NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

MIL-PRF-55339/47A
 28 February 1979
 SUPERSEDING
 MIL-A-55339/47
 11 January 1977

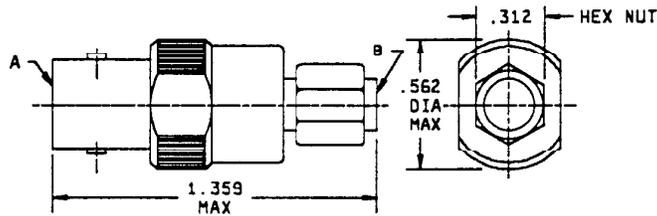
PERFORMANCE SPECIFICATION

(A)

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

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

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



Reference	Series	Contact	Figure
A	BNC	Socket	2
B	SMA	Pin	3

Inches	mm
.312	7.92
.562	14.27
1.359	34.52

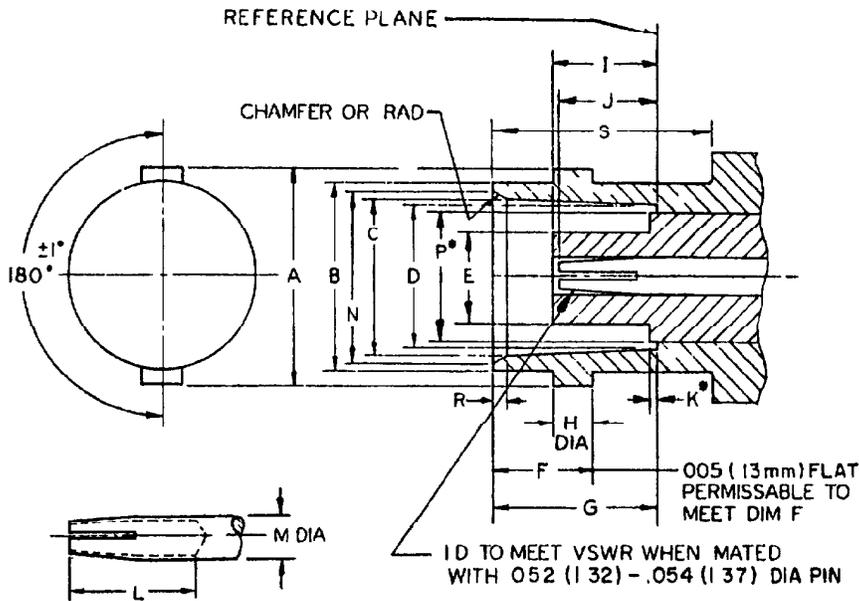
NOTES:

1. Dimensions are in inches
2. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.
3. All undimensioned pictorial representations are for reference purposes only.
4. Wrench flats are to accommodate standard wrench opening per H-28 App. 10.

FIGURE 1. General configuration.

(A)

denotes change



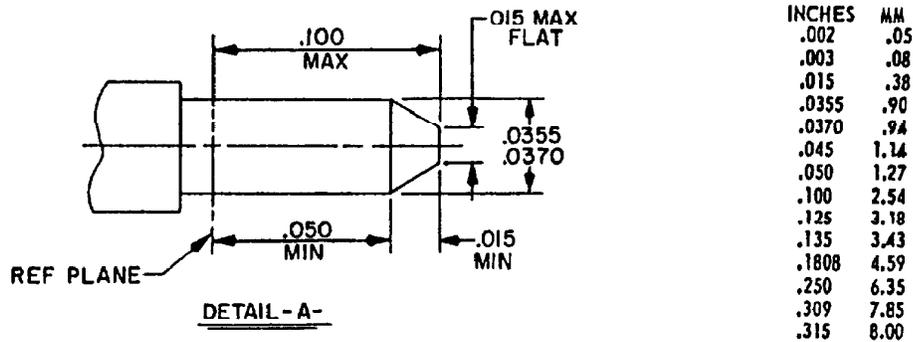
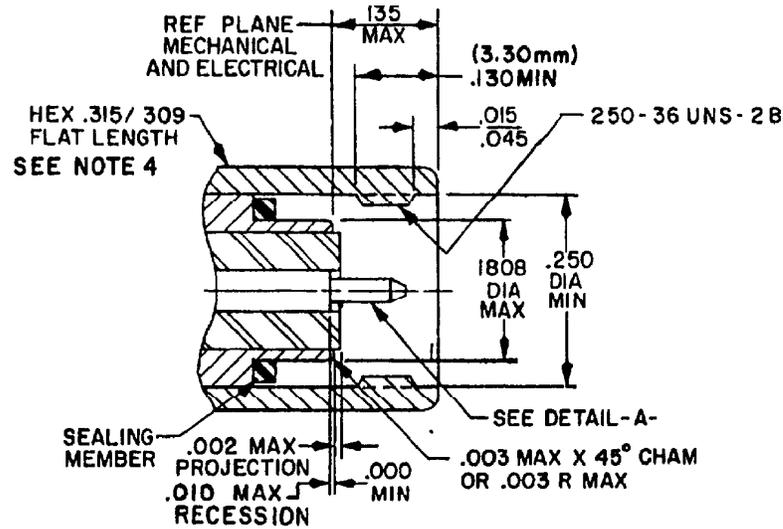
Ltr	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.432 (10.97)	.436 (11.07)
B	.378 (9.60)	.382 (9.70)
C	.327 (8.31)	.333 (8.46)
D	.319 (8.10)	.321 (8.15)
E		.186 (4.72)
F	.204 (5.18)	.208 (5.28)
G	.327 (8.31)	.335 (8.51)
H	.075 (1.91)	.081 (2.06)
I	.186 (4.72)	.208 (5.28)
J	.186 (4.72)	.206 (5.23)
K*		.006 (.15)
L	.195 (4.95)	
M	.081 (2.06)	.087 (2.21)
N	.346 (8.79)	.356 (9.04)
P*		.256 (6.50)
R	.015 (.38)	.030 (.76)
S	.414 (10.52)	

P dimension applies to that portion (if applicable) of dielectric which extends beyond reference plane by dimension K

NOTES:

1. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.
2. Concave depression .100 (2.54 mm) X .005 (.13 mm) deep between studs permissible.

FIGURE 2. Mating dimensions for BNC socket terminations.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.
3. Three holes .016 (.41 mm) minimum diameter, equally spaced, are required for safety wiring after mating. Location on coupling nut optional.
4. .150 minimum across narrowest part of flat.

(A)

FIGURE 2. Mating dimensions for BNC pin terminations.

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DESIGN AND CONSTRUCTION:

General configuration: See figure 1.

Impedance: 50 ohms, nom.

Working voltage: Sea level - 335 Vrms.
70,000 feet - 85 Vrms.

Frequency range: 0 to 4 GHz.

Temperature range: -65° to +165°C.

PERFORMANCE (installation torque 4 to 6 in. lbs).

Dimensions: See figures 1, 2, and 3.

Center contact retention:	Axial force - (lb, min) Torque - Not applicable	<u>Series SMA</u> 6	<u>Series BNC</u> 6
Force to engage and disengage:	Longitudinal force - Torque - (in. lb, max)	<u>Series SMA</u> Not applicable 2	<u>Series BNC</u> 3 2-1/2
Coupling proof torque:		<u>Series SMA</u> 15 in. lbs, min.	<u>Series BNC</u> Not applicable

Mating characteristics:

Series SMA - See figure 3
for dimensions

<u>Series BNC</u>	
Center contact (socket):	
Oversize test pin dia	.057 in. min.
Insertion depth	.125 in. min.
No. of insertions	1
Pin finish	16 microinches
Max test pin	
(insertion force test):	
Steel test pin dia	.054 in. min.
Pin finish	16 microinches
Insertion force	2 lbs, max.
No. of insertions	1
Min test pin (withdrawal force):	
Steel test pin dia	.052 max.
Pin finish	16 microinches
Withdrawal force	2 oz, min.
No. of withdrawals	1

Permeability: <2.0.

Seal:

Pressurized - Not applicable.
Weatherproof - Not applicable.

Insulation resistance: 5,000 megohms, min.

VSWR: 1.30 +0.025 GHz, 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 Vrms, min (sea level).

Contact resistance (milliohms, max):

<u>Contact</u>	<u>Initial</u>	<u>After</u>
Center	4.1 <u>1/</u>	6.0
Outer	2.2	Not applicable

Ⓐ Vibration, high frequency: Interruptions - 1 μ s, max. Test condition D.

Shock: Test condition I.

Thermal shock: 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 Vrms, min.
Frequency - 5 MHz, min.

Salt spray (corrosion): Test condition B.

Ⓐ Coupling mechanism retention force: 60 lb, min. series SMA, series BNC not applicable.

MARKING: As specified in MIL-A-55339.

Ⓐ Part No. M55339/47-30001 Adapter with safety wire hole, 30101 without safety wire hole.
M55339/47-50001 Adapter with safety wire hole, 50101 without safety wire hole.

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

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

Custodians:
Army - CR
Navy - EC
Air Force - 85

Preparing activity:
Army - CR

Agent:
DLA - ES

Review activities:
Army - AR, MI
Navy - SH, OS
Air Force - 11, 99
DLA - ES

(Project 5935-3057-17)

User activities:
Army - AT
Navy - AS, MC, SH
Air Force - 19

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

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