

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-55339/46A
 28 February 1979
 SUPERSEDING
 MIL-A-55339/46
 11 January 1977

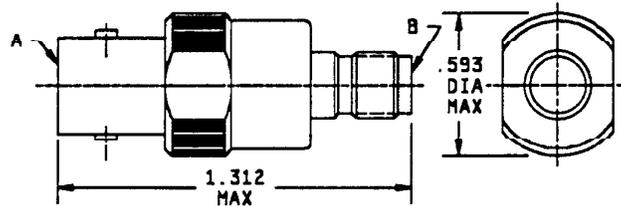
PERFORMANCE SPECIFICATION

(A)

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, IN-LINE,
 (BETWEEN SERIES SMA JACK 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	Socket	3

Inches	mm
.593	15.06
1.312	33.32

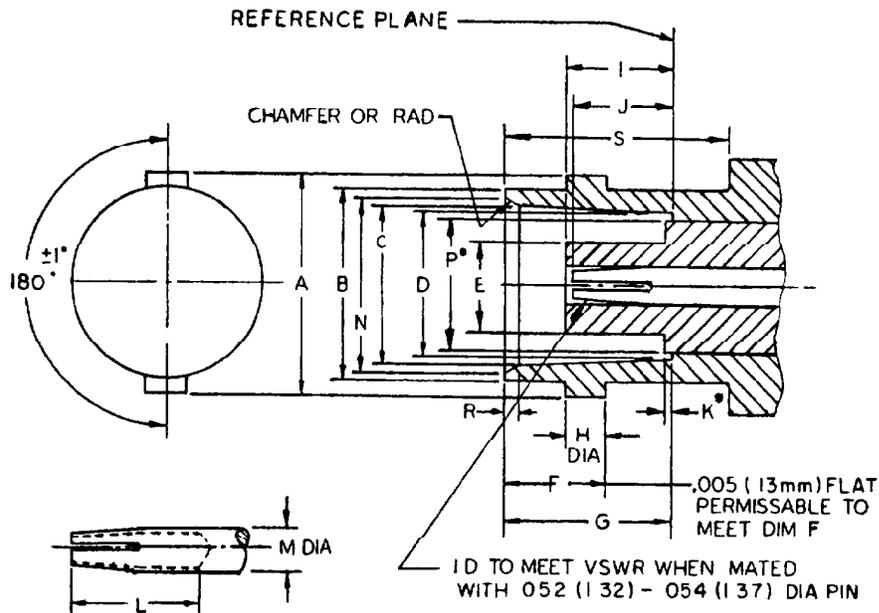
NOTES:

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.

(A)

FIGURE 1. General configuration.

(A) denotes change



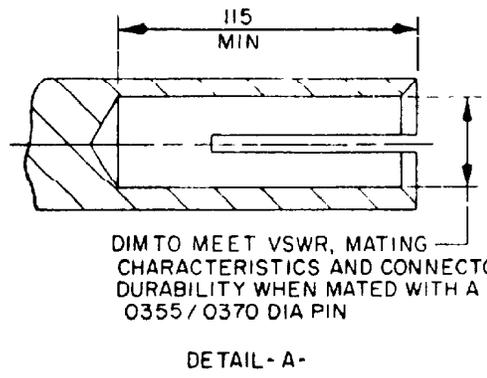
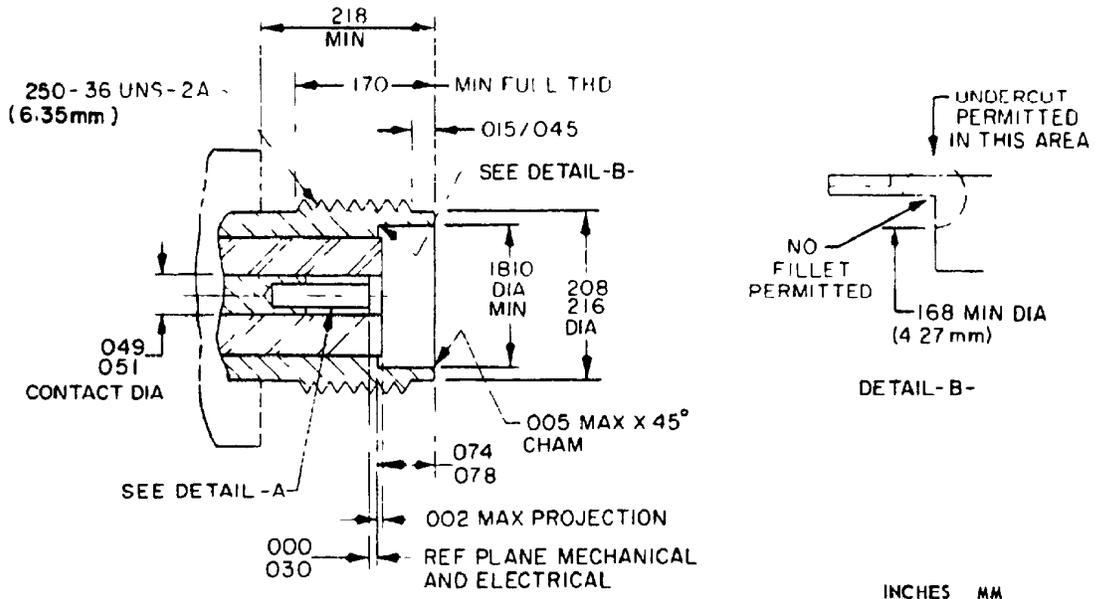
LTR	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.432 (10.97)	.436 (11.07)
B	.378 (9.60)	.382 (9.70)
C	.327 (8.31)	.333 (8.46)
D	.319 (8.10)	.321 (8.15)
E		.186 (4.72)
F	.204 (5.18)	.208 (5.28)
G	.327 (8.31)	.335 (8.51)
H	.075 (1.91)	.081 (2.06)
I	.188 (4.78)	.208 (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.



INCHES	MM
.002	.05
.003	.08
.005	.13
.015	.38
.030	.76
.0355	.90
.0370	.94
.045	1.14
.049	1.24
.051	1.30
.074	1.88
.078	1.98
.115	2.92
.170	4.32
.1810	4.60
.208	5.28
.216	5.49
.218	5.54

- NOTES:
1. Dimensions are in inches
 2. Slitting of inner contact optional.
 3. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.

FIGURE 3. Mating dimensions for SMA socket terminations.

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 - 6 lb, min
Torque - Not applicable

	<u>Series BNC</u>	<u>Series SMA</u>
Force to engage and disengage: Longitudinal force - lb, max.	3	Not applicable
Torque - in lb, max.	2 5	2

Mating characteristics:

	<u>Series BNC</u>	<u>Series SMA</u>
Center contact (socket):		
Oversize test pin dia (in min) -	.057	.0375 + 0001
Pin finish (microinches) -	16	16
Insertion depth (in. min) -	.125	030/ 045
No. of insertions -	1	3
Max test pin (insertion force test):		
Steel test pin dia (in. min) -	.054	0370 +.0001
Pin finish (microinches) -	16	16
Insertion force (lb. max) -	2	3
Insertion depth -	---	.050/.075
No. of insertions -	1	1
Min test pin (withdrawal force):		
Steel test pin dia (in. max) -	.052	.0355 - 0001
Pin finish (microinches) -	16	16
Withdrawal force (oz, min) -	2	1
Insertion depth -	---	.050/.075
No. of withdrawals -	1	3

Permeability: <2.0.

Seal:

 Pressurized - Not applicable.
 Weatherproof - Not applicable.

Insulation resistance: 5,000 megohms, min.

VSWR: 1.30 max at 5 to 4.0 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)

Contact	Initial	After
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

MARKING: As specified in MIL-A-55339

Ⓐ Part No M55339/46-30001
M55339/46-50001

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 - SH, OS
Air Force - 11, 99
DLA - ES

(Project 5935-3057-16)

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

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

OMB Approval
No 22 R255

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DOCUMENT IDENTIFIER AND TITLE

ML-A-55339/46A

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HQ, USA CORADCOM
ATTN DRDCO-CM-DM
Fort Monmouth, NJ 07703

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