

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.

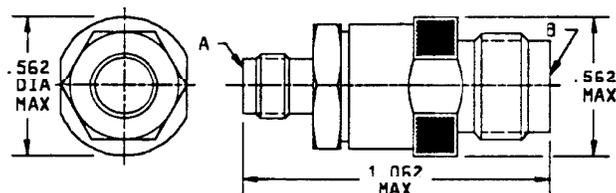
MIL-PRF-55339/41A,
 1 May 1978
 SUPERSEDING
 MIL-A-55339/41
 11 January 1977

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY,
 (BETWEEN SERIES SMA (FEMALE) TO SERIES TNC (FEMALE)), CLASS 2,
 STRAIGHT PLUG

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.



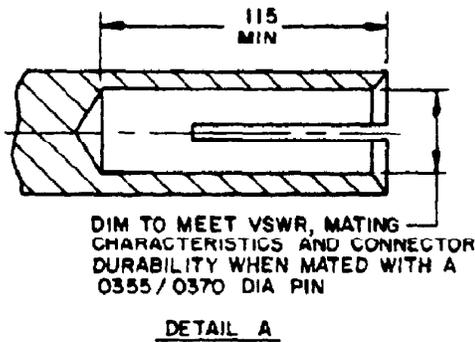
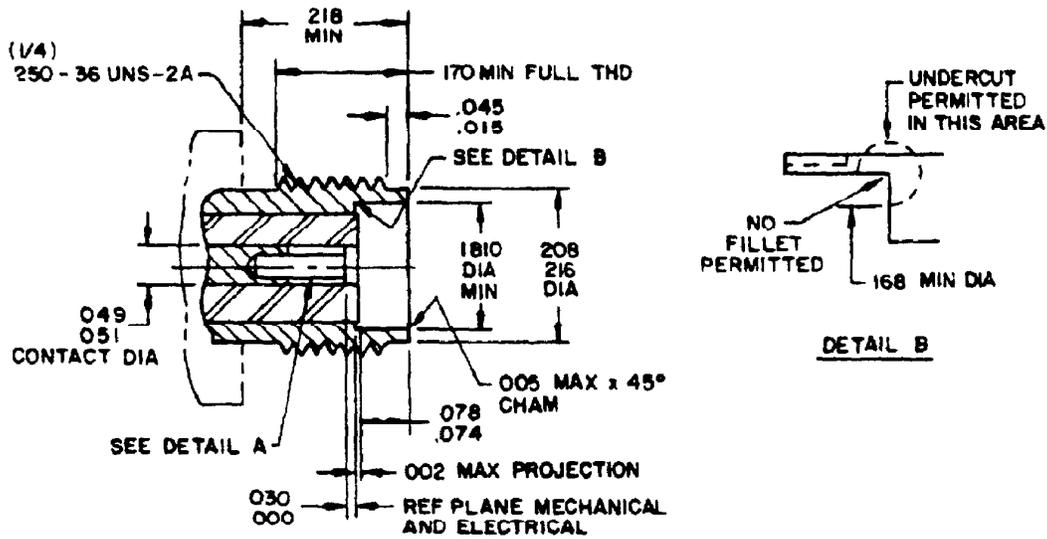
Reference	Series	Contact	Figure
A	SMA	Socket	2
B	TNC	Socket	3

Inches	mm
.562	14.27
1.062	26.97

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 to accommodate standard wrench per H-28, appendix 10.

FIGURE 1. General configuration.

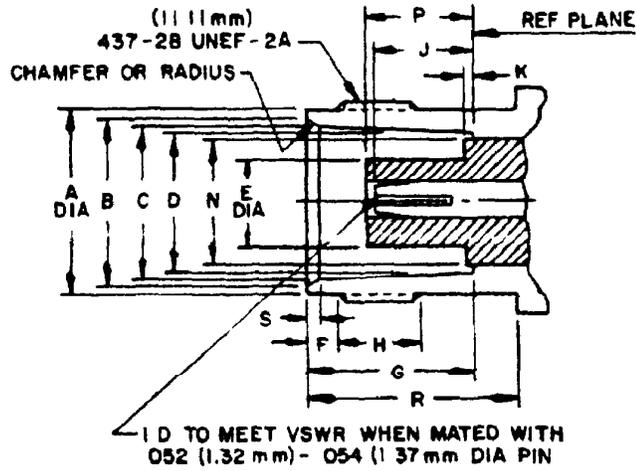


INCHES	MM
.002	.05
.003	.08
.005	.13
.015	.38
.030	.76
.0355	.902
.0370	.940
.045	1.14
.049	1.24
.051	1.30
.074	1.88
.078	1.98
.115	2.92
.170	4.32
.1810	45.97
.208	5.28
.216	5.49
.218	5.54
.250	6.35

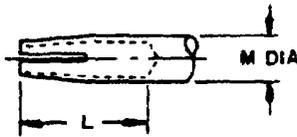
NOTES

- 1 Dimensions are in inches
- 2 Slitting of inner contact optional
- 3 Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm

FIGURE 2 Mating dimensions for socket termination



Ltr	Dimensions in inches with metric equivalents (mm) in parentheses (see note)	
	Minimum	Maximum
A	.378 (9.60)	.381 (9.68)
B	.345 (8.76)	.356 (9.04)
C	.327 (8.31)	.333 (8.46)
D	.319 (8.10)	.321 (8.15)
E		.186 (4.72)
F	.068 (1.73)	.088 (2.24)
G	.329 (8.36)	.333 (8.46)
H	.187 (4.75)	
J	.188 (4.72)	.206 (5.23)
K		.006 (.15)
L	.195 (4.95)	
M	.081 (2.06)	.087 (2.21)
N		.256 (6.50)
P	.188 (4.78)	.208 (5.28)
R	.415 (10.54)	
S	.015 (.38)	.030 (.76)



*N dimension applies to that portion (if applicable) of the dielectric which protrudes beyond the metal shoulder (or reference plane) by dimension K

NOTES

- 1 Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
- 2 All undimensioned pictorial configurations are for reference purposes only

FIGURE 3 Mating dimensions for socket terminations.

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ENGINEERING DATA

Nominal impedance 50 ohms.
Frequency range 0 to 11 GHz.
Voltage rating 335 volts rms maximum working voltage at sea level, 85 volts rms at 70,000 feet.
Temperature range -65° to +165°C.

REQUIREMENTS

Dimensions and configurations See figures 1, 2, and 3.

Center contact retention
Axial force - 6 pounds minimum.

Force to engage and disengage
Longitudinal force - Not applicable.
Torque - 2 inch-pounds maximum.

Mating characteristics
See figure 2 for SMA dimensions and figure 3 for TNC dimensions.
Center contact (socket)
Oversize test pin Series SMA - .0375+.0001, Series TNC .057 diameter minimum (nonenclosed entry contacts only).
Insertion depth - Series SMA .030/.045, Series TNC .125 minimum.
Number of insertions - Series SMA 3, Series TNC 1.

Insertion force test Steel test pin diameter - Series SMA .0370+.0001, Series TNC - .054 minimum.
Test pin finish - 16 microinches.
Insertion force - Series SMA 3 pounds maximum. Series TNC 2 pounds maximum.

Withdrawal force Steel test pin diameter - Series SMA .0355 -.0001, Series TNC .052 maximum.
Withdrawal force Series SMA 1 ounce minimum, Series TNC 2 ounces minimum.
Test pin finish 16 microinches.

Permeability Not to exceed 2

Insulation resistance 5,000 megohms minimum.

Voltage standing wave ratio (VSWR) $1.15 \pm .015 \sqrt{F(\text{GHz})}$ at .5 to 11 GHz.

RF leakage -60 dB minimum tested at a frequency of 2 to 3 GHz.

RF insertion loss $.06 \sqrt{F(\text{GHz})}$ dB maximum at 6 GHz.

Durability 500 cycles minimum at 12 cycles per minute maximum.

Dielectric withstanding voltage 1,000 volts rms minimum at sea level

Contact resistance In milliohms maximum.

	<u>Initial</u>	<u>After environment</u>
Center contact	4.5 ^{1/}	6.0
Outer contact	2.2	---

^{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 μ s 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 minimum

Corona level

Voltage - 375 volts minimum

Altitude - 70,000 feet minimum

RF high potential withstanding voltage

RF voltage - 1,000 volts rms minimum.

Frequency - 5 to 7.5 MHz.

Salt spray (corrosion). Method 101, MIL-STD-202, test condition B.

Part number M55339/41-50001

Revision letters are not used to denote changes due to the extensiveness of the changes.

Custodians

Army - EL

Navy - EC

Air Force - 85

Review activities

Army - MI, EL, AT

Navy - CW

Air Force - 11, 99

DLA - ES

User activities

Army - AT, AR

Navy - AS, MC

Air Force - 19

Preparing activity

Army - EL

Agent

DLA - ES

(Project 5935-3029-2)

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OMB Approval
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