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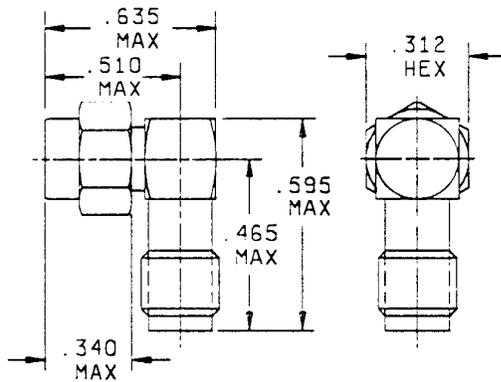
MIL-PRF-55339/2A(USAF)  
4 August 1975  
SUPERSEDING  
MIL-A-55339/2  
1 August 1972

PERFORMANCE SPECIFICATION

ADAPTERS, CONNECTOR, COAXIAL, RADIO FREQUENCY, (SERIES SMA),  
CLASS 2, RIGHT ANGLE, MALE TO FEMALE

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

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



NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Wrench flats to accommodate standard wrench per H-28 appendix 10.

DESIGN AND CONSTRUCTION:

General configuration _____	See figure 1.
Center contact spring member _____	Copper beryllium.
Impedance _____	50 ohms, nom.
Working voltage:	
Sea level _____	335 Vrms.
70,000 feet _____	85 Vrms.
Frequency range _____	0 to 12.4 GHz.
Temperature range _____	-65° to +165° C.

PERFORMANCE (installation torque of 7 to 10 in. lb).

Dimensions - See figures 1 and 2.

Coupling proof torque: 15 in. lb, max.

Center contact retention:

Axial force - 6 lb, min.  
Torque - 4 in. oz, min.

Mating characteristics:

Center contact - See table I.  
Outer contact - Not applicable.

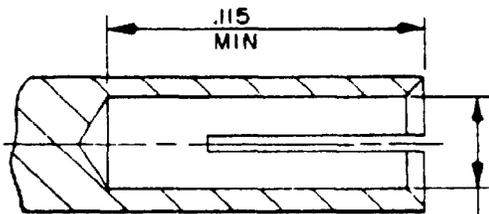
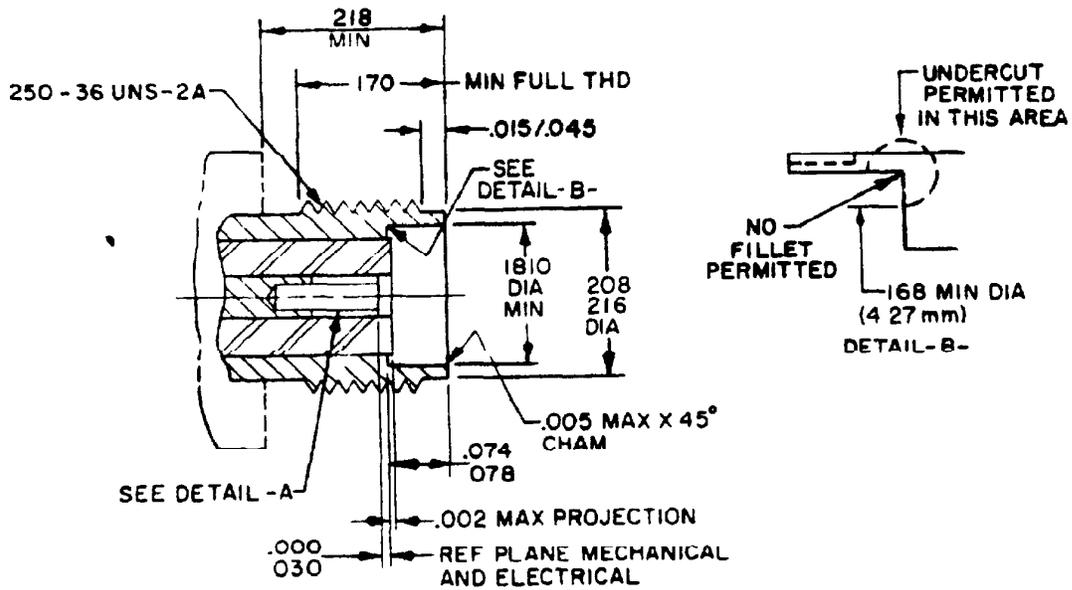
Force to engage and disengage:

\*See table I.

Permeability: Less than 2.0.

(A) denotes changes

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DIM TO MEET VSWR, MATING CHARACTERISTICS AND CONNECTOR DURABILITY WHEN MATED WITH A .0355 / .0370 DIA PIN

DETAIL - A -

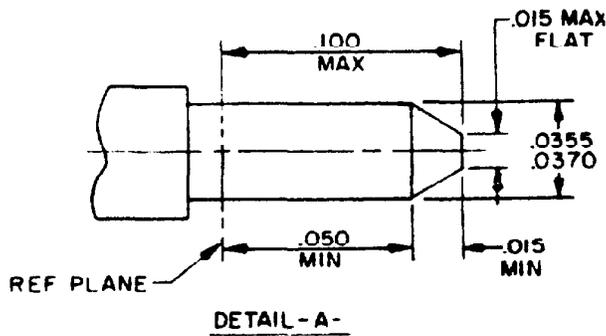
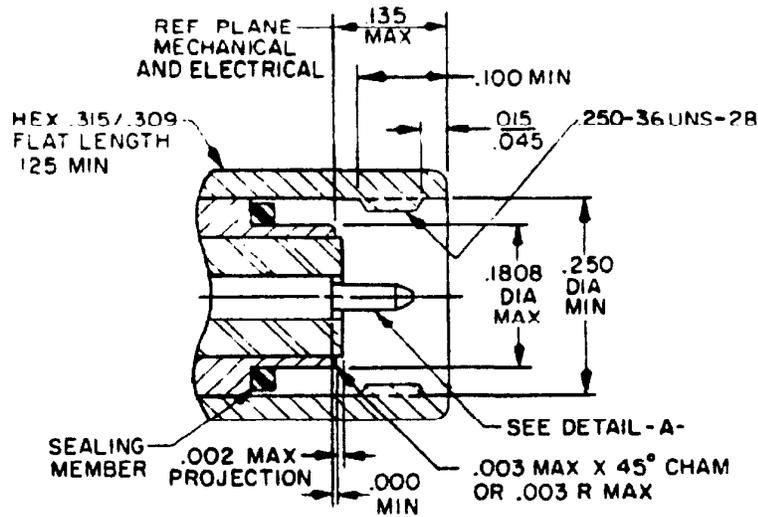
INCHES	MM
.002	.05
.003	.08
.005	.13
.015	.38
.030	.76
.0355	.90
.0370	.94
.045	1.14
.074	1.88
.078	1.98
.115	2.92
.170	4.32
.1810	4.60
.208	5.28
.216	5.49
.218	5.54
.250	6.35

Series SMA female.

NOTES

1. Dimensions are in inches.
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FIGURE 2 Mating dimensions.



INCHES	MM
.002	.05
.003	.08
.015	.38
.0355	.90
.0370	.94
.045	1.14
.050	1.27
.100	2.54
.125	3.18
.135	3.43
.1808	4.59
.250	6.35
.309	7.85
.315	8.00

Series SMA male.

NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.

FIGURE 2. Mating dimensions - Continued.

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Seal (hermetic pressurized, and weatherproof) Not applicable

Insulation resistance Method 302 of MIL-STD-202, test condition B  
5,000 megohms, min

VSWR 1.05 + .010 F, max, at 5 to 12.4 GHz

RF leakage (total) -60 dB, min, at 2 to 3 GHz.

RF insertion loss  
(.05  $\sqrt{F(\text{GHz})}$ ) dB max tested at 6 GHz)

Durability 500 cycles, min, at 12 c/in.

Dielectric withstanding voltage Method 301 of MIL-STD-202  
Test voltage - 1,000 Vrms, max, at sea level

Contact resistance (in milliohms, max)

	<u>Initial</u>	<u>After environment</u>
Center contact	4.0	6.0
Outer contact	2.0	N/A

Vibration, high frequency Method 204 of MIL-STD-202, test condition D

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

(A) Thermal shock: Method 107 of MIL-STD-202, test condition B.

Moisture resistance Method 106 of MIL-STD-202.  
Insulation resistance - 200 megohms, min.

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

RF high potential withstanding voltage  
RF voltage - 670 Vrms.  
Frequency - 5 MHz.

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

Coupling mechanism retention force  
60 lbs, min.

(A) MARKING As specified in MIL-A-55339 Part No. M55339/02-30001-40001.

TABLE I. Performance characteristics

Characteristic	Test value	
	MALE	FEMALE
Force to engage and disengage		
Longitudinal force - - - - -	N/A	N/A
Torque - - - - -	2 in. lb, max	2 in. lb, max
Mating characteristics (center contact)		
Oversize test pin	} See figure for dim	.0375 + .0001 in. dia
(inserted .030/.045 in deep) - - - - -		
Max test pin (insertion force 3 lb, max)		.0370 in. dia
(insertion depth .050/.075) - - - - -		
Min test pin (withdrawal force 1 oz, min)		.0355 - .0001 in. dia
(insertion depth .050/.075) - - - - -		

Preparing activity  
Air Force - 11

Agent:  
DSA - ES

(Project 5835-FR95)

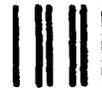
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