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.

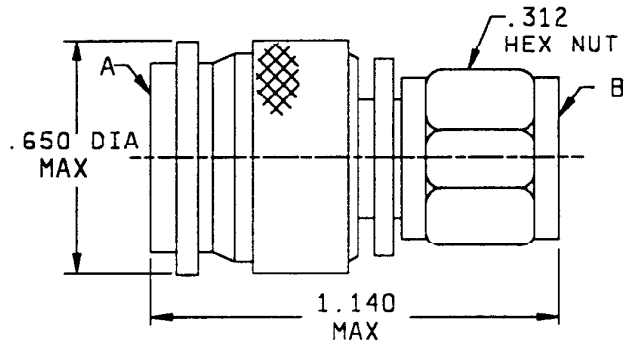
MIL-PRF-55339/43A
1 May 1978
SUPERSEDING
MIL-A-55339/43
11 January 1977

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY,
(BETWEEN SERIES SMA (MALE) TO SERIES TNC (MALE)),
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.



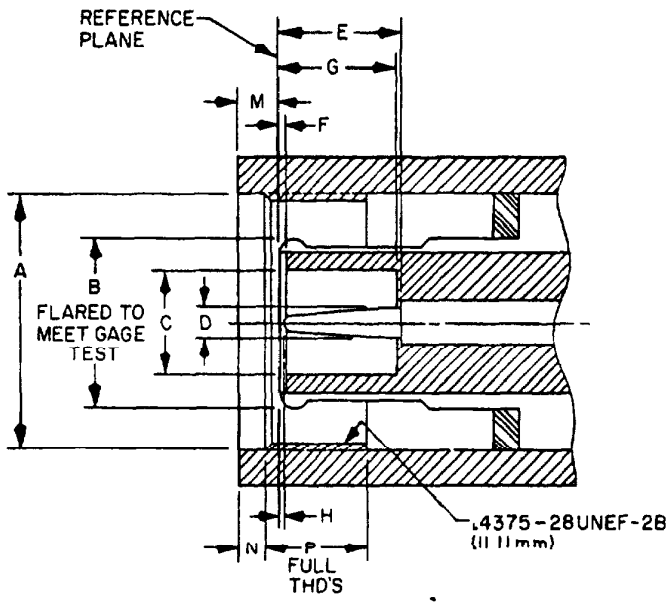
Reference	Series	Contact	Figure
A	TNC	Pin	2
B	SMA	Pin	3

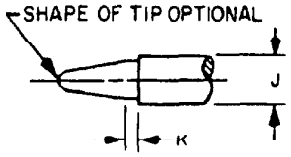
Inches	mm
.312	7.92
.650	16.51
1.140	28.96

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.

FSC 5935

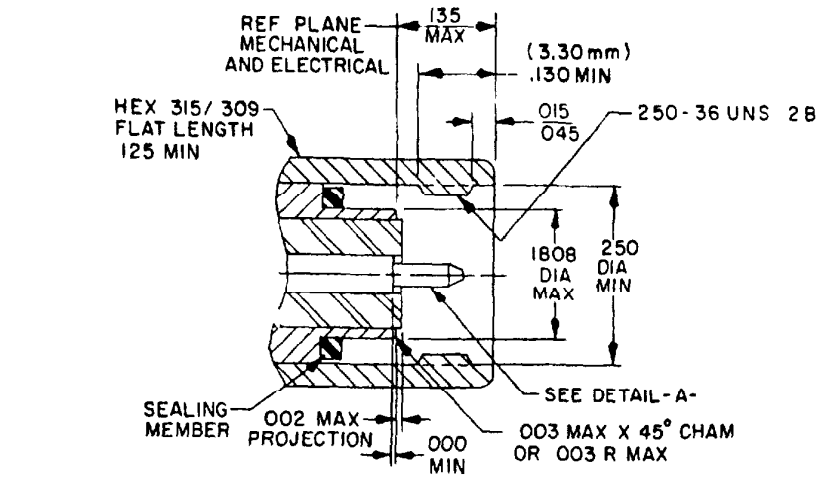


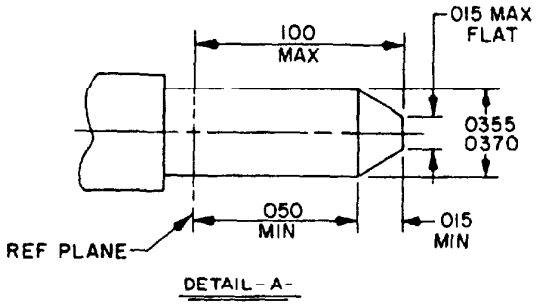


Ltr	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.440 (11.18)	
B	Gage test	
C	.190 (4.83)	
D	.052 (1.32)	.054 (1.37)
E	.210 (5.33)	230 (5 84)
F	.006 (.15)	
G	.208 (5.28)	228 (5 79)
H	.003 (.08)	040 (1 02)
J	.081 (2.06)	.087 (2.21)
K	.078 (1.98)	
M		.078 (1.98)
N	.063 (1.60)	
P	.156 (3.96)	

NOTES:
1. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm
2. Three holes .027 (69 mm) minimum diameter equally spaced for safety wiring Location on coupling nut optional.
3. All undimensioned pictorial configurations are for reference purposes only

FIGURE 2 Mating dimensions for male terminations.





INCHES	MM
.002	05
003	08
015	38
0355	902
0370	940
045	1.14
050	1 27
100	2 54
125	3 18
.135	3 43
150	3 81
1808	4 592
250	6 35
309	7 85
315	8 00

NOTES
1. Dimensions are in inches
2. Metric equivalents are given for general information only and are based upon 1 00 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

FIGURE 3. Mating dimensions for male terminations

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 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.

Coupling proof torque
Series SMA - 15 inch-pounds.
Series TNC - 15 inch-pounds.

Inspection conditions
Coupling torque - Series SMA 7 to 10 inch-pounds, Series TNC 4 to 6 inch-pounds.

Mating characteristics
Series SMA - See figure 3.
Series TNC
See figure 2 for dimensions.
Outer contact
Test ring ID .319 maximum, 16 microinch finish.
Insertion force 5 pounds maximum when inserted a minimum of .093.
Contacts with slotted members Shall contact a .324 minimum diameter ring within .031 of their tip ends.

Permeability Not to exceed 2.

Insulation resistance 5,000 megohms minimum.

Voltage standing wave ratio (VSWR) 1.15 F(GHz) at .5 to 11 GHz.

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

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

Durability 500 cycles minimum at 12 cycles per minute maximum.

Dielectric withstanding voltage 1,000 volts rms, minimum.

Contact resistance In milliohms maximum.

	Initial	After environment
Center contact	4.5 1/	6.0
Outer contact	2.2	---

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

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

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.

Coupling mechanism retention force
  Series SMA - 60 pounds minimum.
  Series TNC - 100 pounds minimum.

Part No M55339/43-50001 (safety wire holes (SMA and TNC)).
-50101 2/ (without safety wire holes)

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 - SH
  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 5935-3029-4)

2/ For logistic purposes adapters with only the safety wire holes through the coupling nuts shall be stocked.

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

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DOCUMENT IDENTIFIER AND TITLE MIL-A-55339/43A ADAPTERS,CONNECTOR,COAXIAL,RADIO FREQUENCY,(BETWEEN SERIES SMA (MALE) TO SERIES TNC (MALE)),CLASS 2, STRAIGHT PLUG

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CONTRACT NUMBER

MATERIAL PROCURED UNDER A

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