

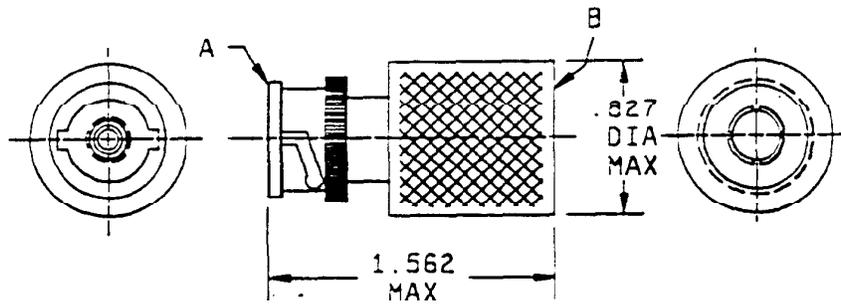
NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

MIL-PRF-55339/18
 6 May 1975
 SUPERSEDING
 MIL-A-21434/27
 28 September 1960

PERFORMANCE SPECIFICATION
 ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY,
 (BETWEEN SERIES BNC TO SERIES N), 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 adapters described herein shall consist of this specification and the latest issue of Specification MIL-PRF-55339.



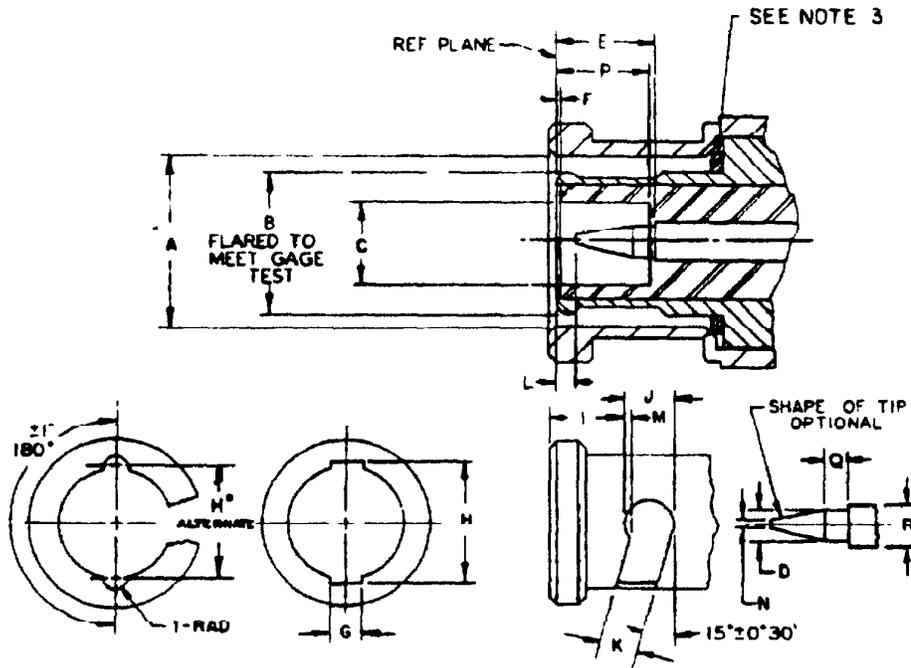
Reference	Series	Contact	Figure
A	BNC	Pin	2
B	N	Pin	3

Inches	mm
.827	21.01
1.562	39.67

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. All undimensioned pictorial representations are for reference purposes only.

FIGURE 1. General configuration.

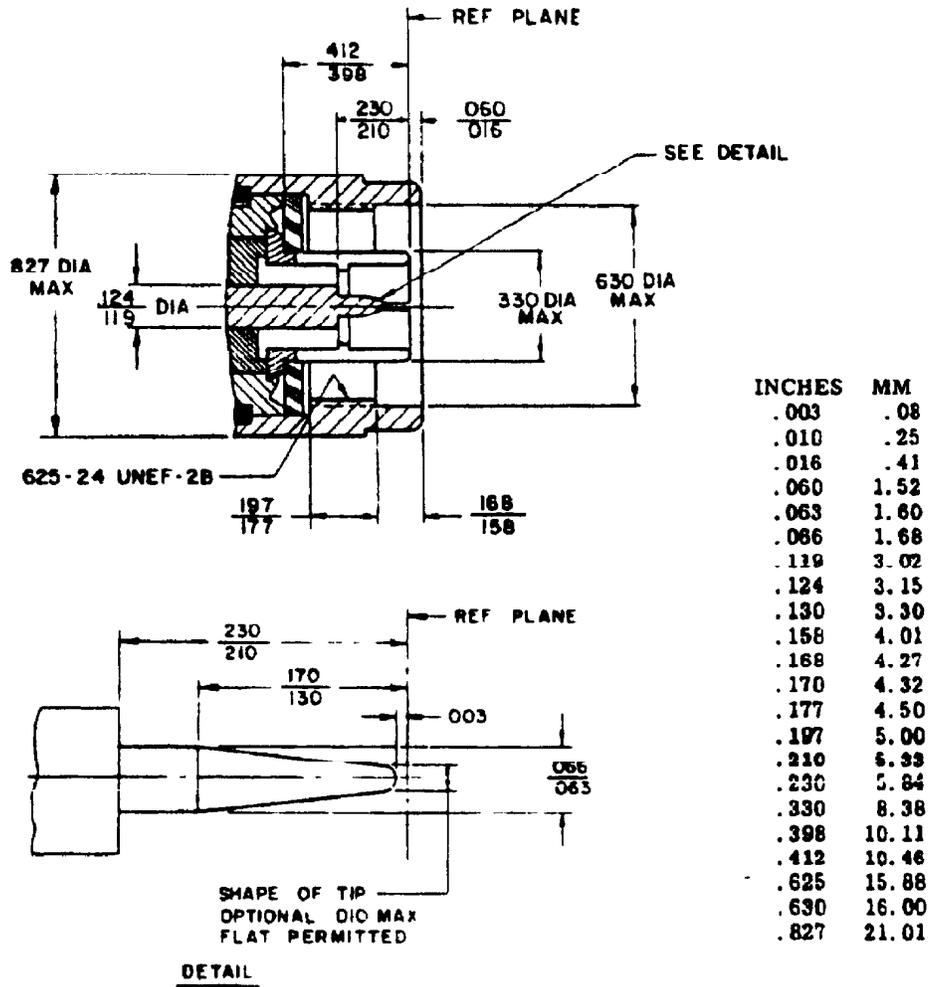


Ltr	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.385 (9.78)	.390 (9.91)
B	Gage Test	
C	.190 (4.83)	
D	.052 (1.32)	.054 (1.37)
E	.210 (5.33)	
F	.006 (.15)	
G	.091 (2.31)	.097 (2.46)
H	.463 (11.76)	.473 (12.01)
H*	.394 (10.01)	.400 (10.16)
I	.180 (4.57)	.184 (4.67)
J	.124 (3.15)	
K	.091 (2.31)	.097 (2.46)
L	.003 (.08)	
M	.018 (.46)	.022 (.56)
N		.025 (.64)
P	.208 (5.28)	
Q	.078 (1.98)	
R	.081 (2.06)	.087 (2.21)
T	.045 (1.14)	.049 (1.24)

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. In the mated condition the longitudinal force of the spring of the coupling mechanism shall exceed the pressure exerted by the sealing gasket by an amount necessary to insure butting of the outer contacts at the reference plane
4. All undimensioned pictorial representations are for reference purposes only.
5. Outer contact shall have a minimum of four slots

FIGURE 2. Mating dimensions for BNC pin contact terminations.



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. Three holes .027 (.69 mm) minimum diameter, equally spaced, are required for safety wiring after mating. Location on coupling nut optional.
4. All undimensioned pictorial representations are for reference purposes only.
5. Outer contact shall have a minimum of four slots.

FIGURE 3. Mating dimensions for N pin contact terminations.

DESIGN AND CONSTRUCTION.

General configuration: See figure 1
 Impedance: 50 ohms, nom.
 Working voltage. Sea level - 500 Vrms.
 70,000 feet - 125 Vrms
 Frequency range: 0 to 4 GHz.
 Temperature range: -65° to +165°C.

PERFORMANCE (installation torque of 6 to 10 in lb, series N).

Dimensions. See figures 1, 2, and 3.

Center contact retention	<u>Series BNC</u>	<u>Series N</u>
Axial force (lb, min) - - - - -	6	6
Torque (in. oz, min) - - - - -	N/A	N/A
Force to engage and disengage	<u>Series BNC</u>	<u>Series N</u>
Longitudinal force (lb, max) - - - -	3.0	0
Torque (in. lb, max) - - - - -	2.5	6.0

Coupling proof torque: 15 in. lb, min, series N.

Mating characteristics

Center contact (socket): Not applicable.

Outer contact.	<u>Series BNC</u>	<u>Series N</u>
Min test ring ID (in, max) - - - - -	.319	.316
Ring finish (microinches) - - - - -	16	16
Insertion force (lb, max) - - - - -	5	25
Insertion depth (in, min) - - - - -	.093	.093
No. of insertions - - - - -	1	1
Max test ring ID (in., min) - - - - -	.324	.324
Test ring finish (microinches) - - -	16	16
Insertion depth (in, max) - - - - -	.031	.031
No. of insertions - - - - -	1	1

Permeability: <2.0

Seal. Hermetic - Not applicable.
 Pressurized - Not applicable.
 Weatherproof - Not applicable.

Insulation resistance: 5,000 megohms, min

VSWR: 1.35:1, max at .5 to 4 GHz.

RF leakage (total) -55 dB, min, 2 to 3 GHz.

RF insertion loss: .1 dB, max, 3 GHz
 (.006 \sqrt{F} (GHz) dB max tested at 3 GHz).

Durability. 500, min.
 Rate 12 c/m, min.

Dielectric withstanding: Test voltage - 1,500 Vrms, min (sea level)

Contact resistance (milliohms, max)

<u>Contact</u>	<u>Initial</u>	<u>After</u>
Center	2.0	2.5
Outer	0.5	N/A

Vibration, high frequency: Interruptions - 1 us, max.

Shock. Test condition I.

Thermal shock: Test condition C.

Moisture resistance: 200 megohms, min.

Corona level Voltage - 375 V, min
Altitude - 70,000 feet, min.

RF high potential withstanding voltage. RF voltage - 1,000 Vrms, min.
Frequency - 5 MHz, min.

Salt spray (corrosion): Applicable

Coupling mechanism retention force: 100 lb, min.

MARKING: As specified in MIL-A-55339.
Part No. M55339/18-01034.

TABLE I Cross reference of part numbers

Part number	Superseded part number or type designation <u>1/</u>
M55339/18-01034	UG-1034/U

1/ The superseded part number or the type designation is for cross reference only. Where a superseded part number or type designation is not given, none was assigned or will be assigned. The part number M55339/18-01034 shall be used in all cases for marking and identifying the adapter.

Custodians:

Army - EL
Navy - EC
Air Force - 85

Review activities:

Army - MU, MI, EL
Navy - SH
Air Force - 11, 80
DSA - ES

User activities:

Army - AT
Navy - AS, MC
Air Force - 19

Preparing activity.

Army - EL

Agent

DSA - ES

(Project 5935-1918-16)

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SPECIFICATION ANALYSIS SHEET

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INSTRUCTIONS This sheet is to be filled out by personnel either Government or contractor involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.

SPECIFICATION MIL-A-55339/18 ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY,
(BETWEEN SERIES BNC TO SERIES N), CLASS 2, STRAIGHT PLUG

ORGANIZATION

CITY AND STATE

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

DIRECT GOVERNMENT CONTRACT SUBCONTRACT

1 HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A GIVE PARAGRAPH NUMBER AND WORDING

B RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2 COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3 IS THE SPECIFICATION RESTRICTIVE?

YES NO (If "yes", in what way?)

4 REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers attach to form and place both in an envelope addressed to preparing activity.)

SUBMITTED BY (Printed or typed name and activity - Optional)

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REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED

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