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.

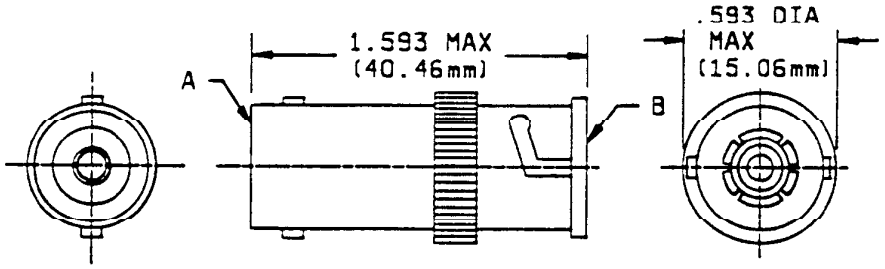
MIL-PRF-55339/23
6 May 1975
SUPERSEDING
MIL-A-27434/3
10 May 1960

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY,
(BETWEEN SERIES C TO SERIES BNC), 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.

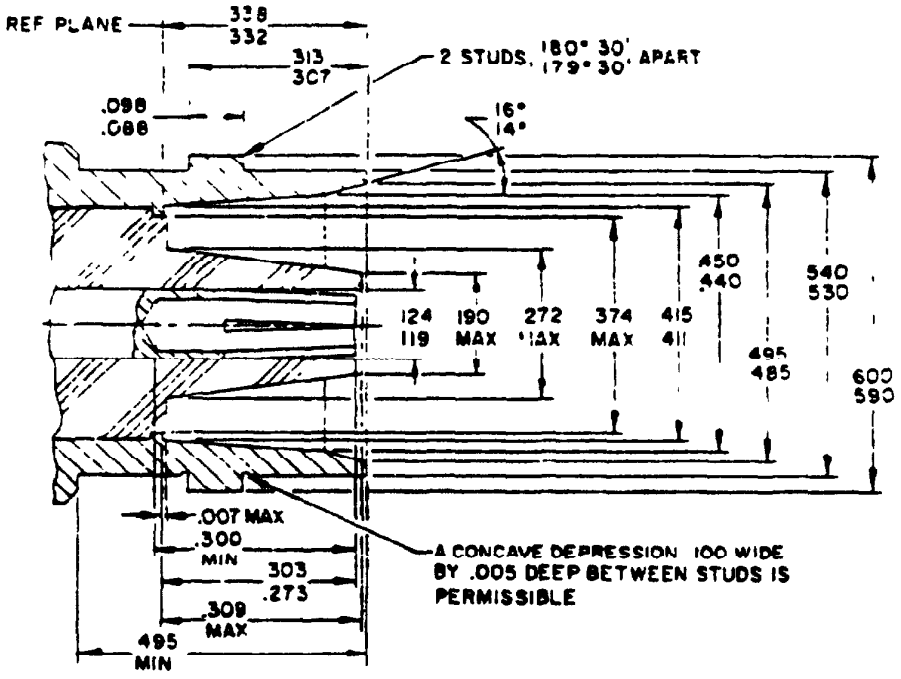


Reference	Series	Contact	Figure
A	C	Socket	2
B	BNC	Pin	3

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are in parentheses.
3. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
4. All undimensioned pictorial representations are for reference purposes only.

FIGURE 1. General configuration.

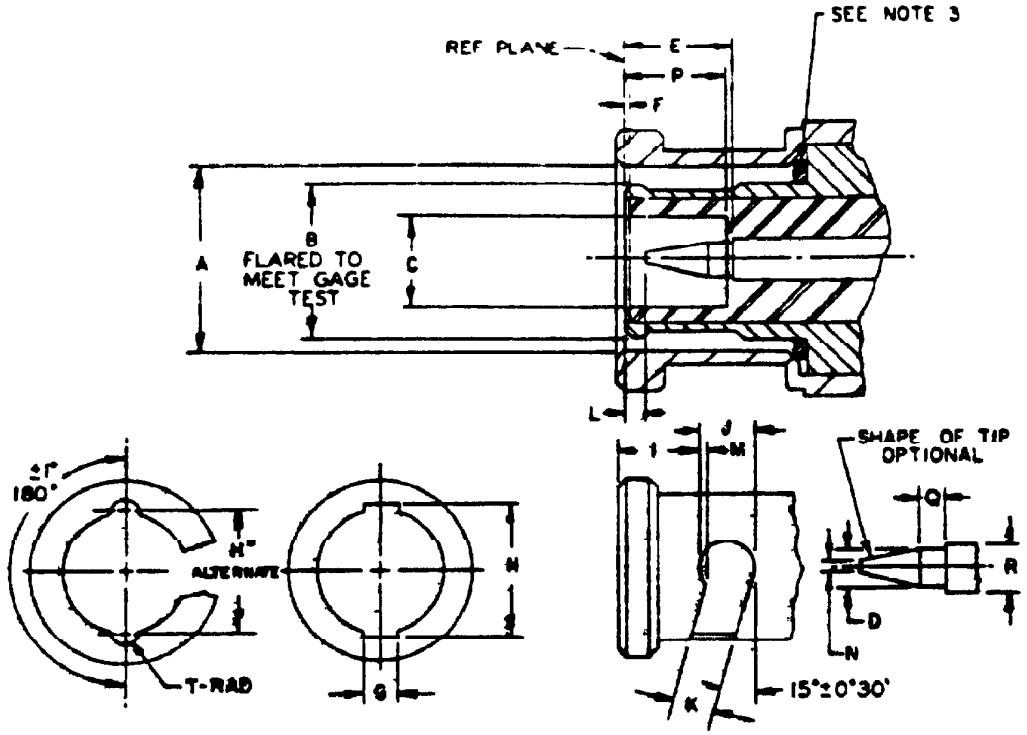
FSC 5935



INCHES	MM	INCHES	MM	INCHES	MM
.005	.13	.273	6.93	.411	10.44
.007	.18	.300	7.62	.415	10.54
.088	2.24	.303	7.70	.440	11.18
.098	2.49	.307	7.80	.450	11.43
.100	2.54	.309	7.85	.485	12.32
.119	3.02	.313	7.95	.495	12.57
.124	3.15	.332	8.43	.530	13 46
.190	4 83	.338	8.59	.540	13.72
.272	6.91	.374	9.50	.590	14.99
				.600	15.24

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. All undimensioned pictorial representations are for reference purposes only.

FIGURE 2. Mating dimensions for C socket contact terminations.



Ltr	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.385 (9.78)	.390 (9.91)
B	Gage test	
C	.180 (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

DESIGN AND CONSTRUCTION

eral 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 is not applicable).

Dimensions: See figures 1, 2, and 3.

Center contact retention:	Series C	Series BNC
Axial force (lb, min)	6	6
Torque (in. oz, min)	N/A	N/A

Force to engage and disengage:	Series C	Series BNC
Longitudinal force (lb, max)	4.5	3.0
Torque (in. lb, max)	4.0	2.5

Coupling proof torque: Not applicable.

Mating characteristics, series C:
- Center contact (socket):
  - Oversize test pin dia - .098 in., min.
    - Insertion depth - .125 in., min.
    - No. of insertions - 1.
  - Max test pin (insertion force test), series C:
    - Steel test pin dia - .092 in., min.
    - Pin finish - 16 microinches.
    - Insertion force - 2 lb, max.
    - No. of insertions - 1.
  - Min test pin (withdrawal force), series C:
    - Steel test pin dia - .090 in., max.
    - Pin finish - 16 microinches.
    - Withdrawal force - 2 oz, min.
    - No. of withdrawals - 1.
- Outer contact, series BNC:
  - Min test ring ID - .316 in., max.
    - Ring finish - 16 microinches.
    - Insertion force - 5 lb, max.
    - Insertion depth - .093 in., min.
    - No. of insertions - 1.
  - Max test ring ID - .324 in., min.
    - Test ring finish - 16 microinches.
    - Insertion depth - .031 in., max.
    - No. of insertions - 1.

Permeability: <2.0.

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

Insulation resistance: 5,000 megohms, min.

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

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

RF insertion loss .35 dB, max, 3 GHz
(.020 $\sqrt{F\ (GHz)}$ 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):

Contact	Initial	After
Center	.25	30
Outer	0.2	N/A

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

Shock: Test condition I.

Thermal shock: Test condition C

Moisture resistance: 2 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: Not applicable.

MARKING: As specified in MIL-A-55339.
Part No. M55339/23-00635.

TABLE I Cross reference of part numbers.

Part number	Superseded part number or type designation 1/
M55339/23-00635	MS35331 REB49237 UG-635/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 M55339/23-00635 shall be used in all cases for marking and identifying the adapter.

Custodians
Army - [illegible]
Navy - [illegible]
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 5935-1918-21)

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