

INCH POUND

MIL-DTL-3655/4C
w/AMENDMENT 1
20 April 2018
SUPERSEDING
MIL-C-3655/4C
18 March 2008

DETAIL SPECIFICATION SHEET

CONNECTOR, ADAPTER, ELECTRICAL, CLASS I
(COAXIAL, SERIES TWIN) TYPE UG-493A/U

**Inactive for new design
after 11 April 1980**

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

The requirements for acquiring the product described herein
shall consist of this specification sheet and MIL-DTL-3655.

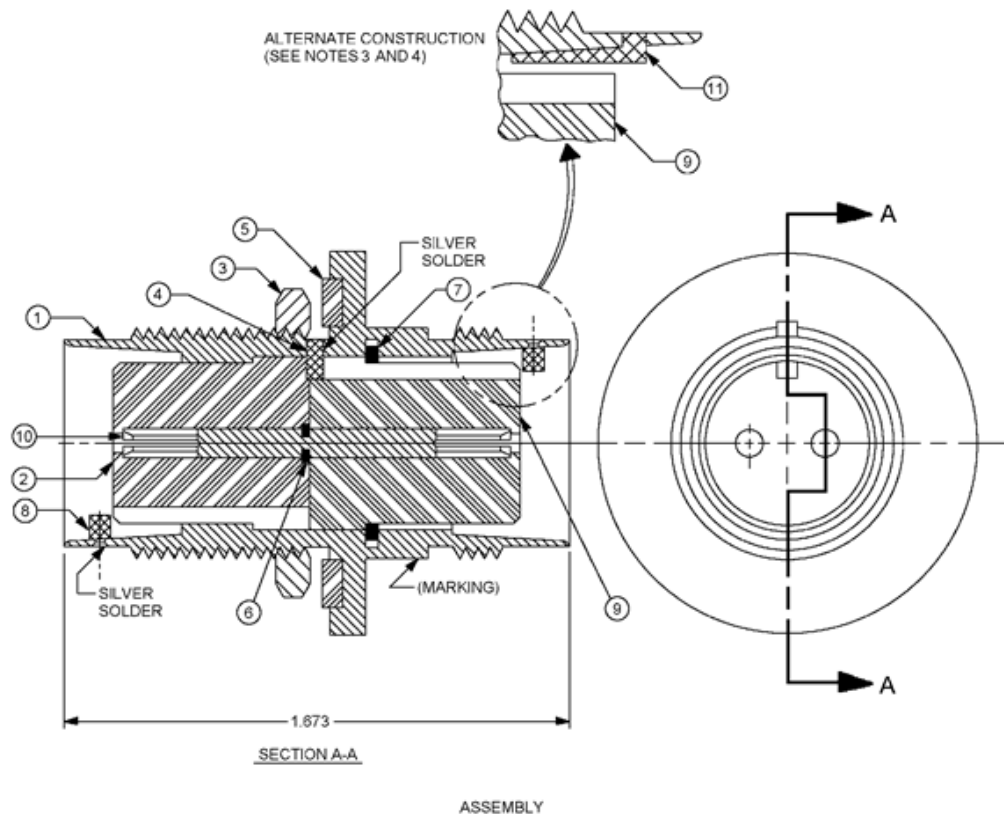


FIGURE 1. Type UG-493A/U, connector, electrical, adapter.

AMSC N/A

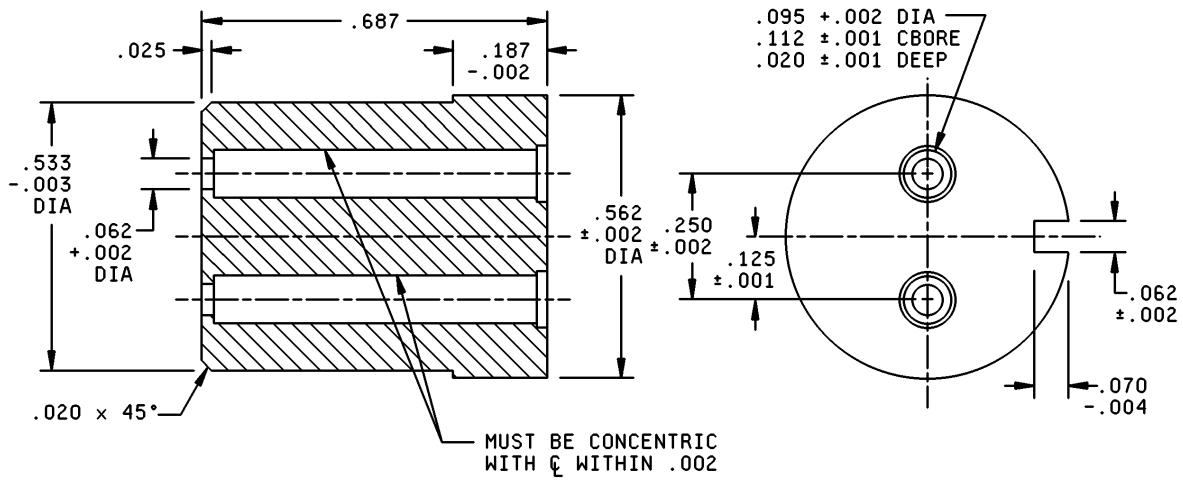
FSC 5935



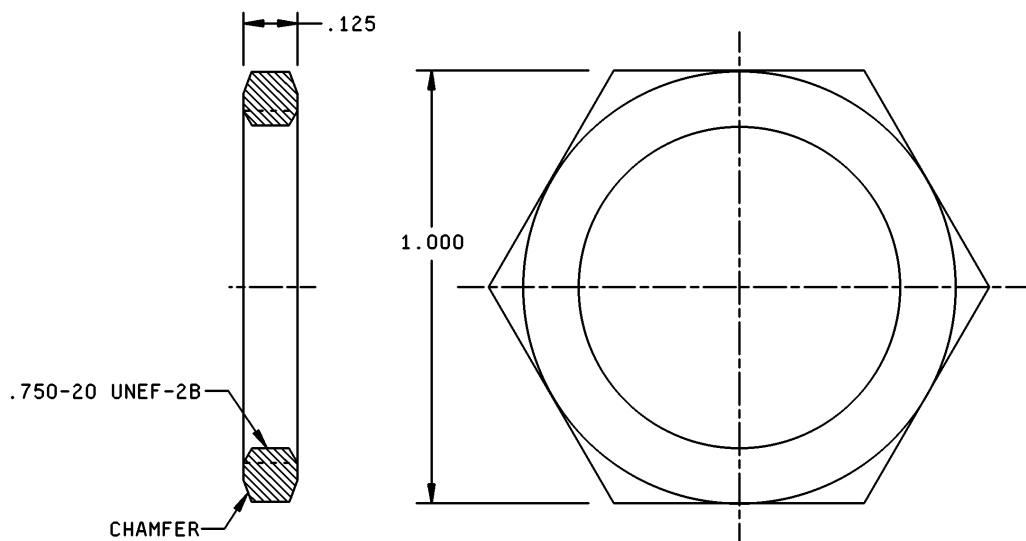


FIGURE 1. Type UG-493AU, connector, electrical, adapter – Continued.

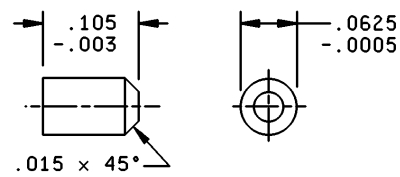
MIL-DTL-3655/4C
w/AMENDMENT 1



② INSULATOR



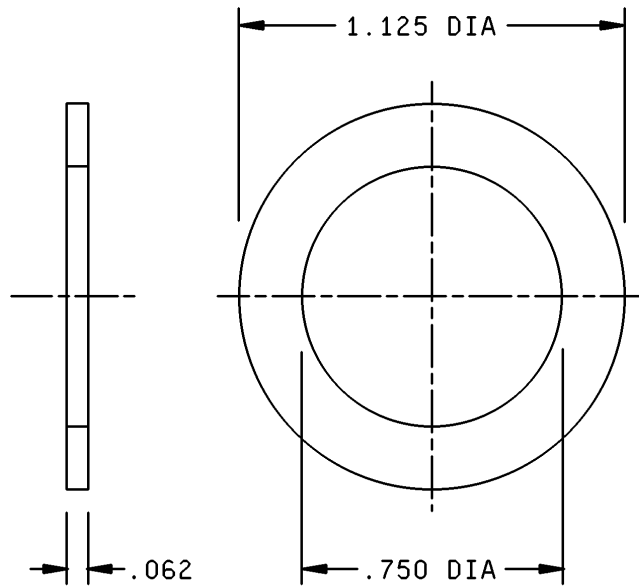
③ NUT



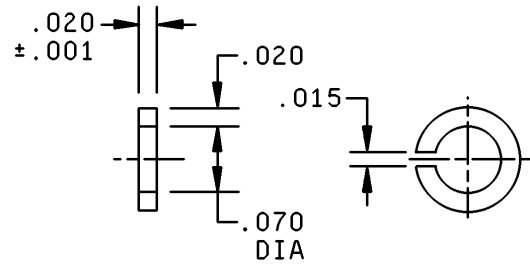
④ PIN

FIGURE 1. Type UG-493A/U, connector, electrical, adapter – Continued.

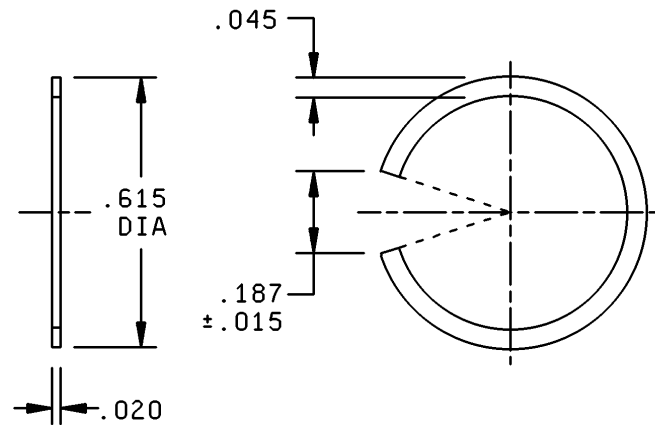
MIL-DTL-3655/4C
w/AMENDMENT 1



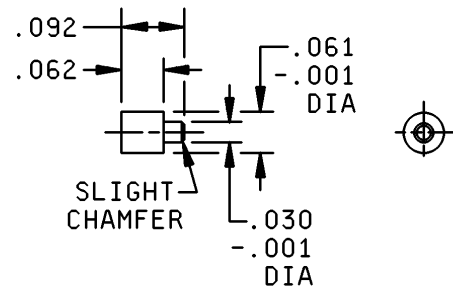
5 GASKET



6 RING



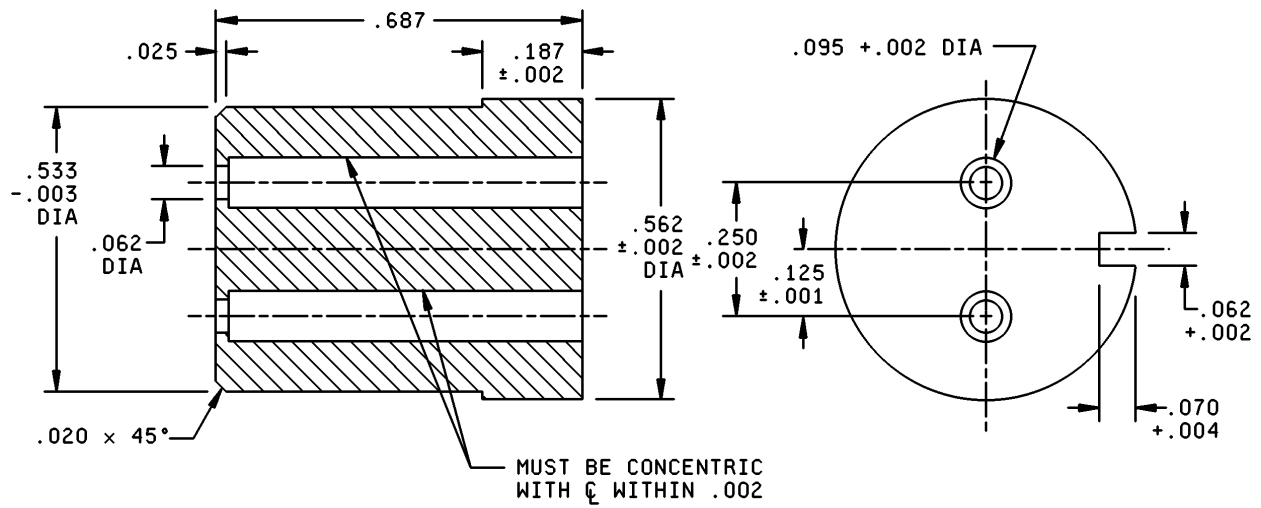
7 SPRING



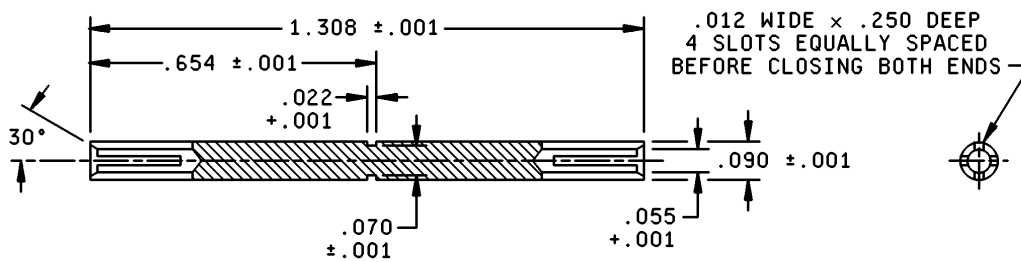
8 RING

FIGURE 1. Type UG-493A/U, connector, electrical, adapter – Continued.

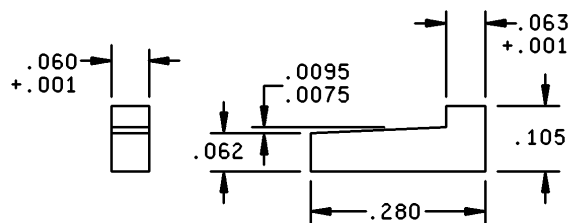
MIL-DTL-3655/4C
w/AMENDMENT 1



(9) INSULATOR



(10) CENTER CONTACT



(11) PIN

FIGURE 1. Type UG-493A/U, connector, electrical, adapter – Continued.

MIL-DTL-3655/4C
w/AMENDMENT 1

Item	Description	Material	Quantity
1	Body	Brass	1
2	Insulator	Plastic	1
3	Nut	Brass	1
4	Pin	Brass	1
5	Gasket	Silicon rubber	1
6	Ring	Phosphor bronze	2
7	Spring	Phosphor bronze	1
8	Pin	Beryllium copper	2
9	Insulator	Plastic	1
10	Center contact	Beryllium copper	2
11	Pin	Brass	1

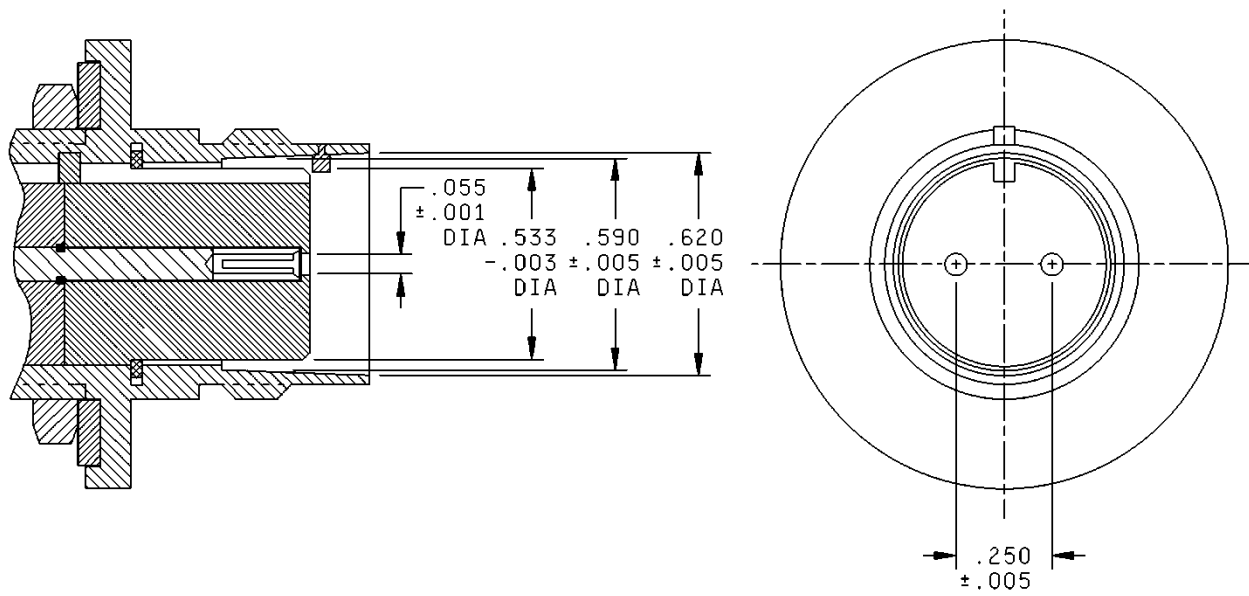
Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.0005	0.013	.030	0.76	.090	2.29	.388	9.86	.687	17.45
.001	0.03	.031	0.79	.092	2.34	.475	12.07	.750	19.05
.002	0.05	.032	0.81	.093	2.36	.533	13.54	.835	21.21
.003	0.08	.040	1.02	.095	2.41	.535	13.59	.881	22.38
.004	0.10	.045	1.14	.105	2.67	.562	14.27	1.000	25.40
.005	0.13	.055	1.40	.112	2.84	.565	14.35	1.125	28.58
.0075	0.190	.059	1.50	.125	3.18	.590	14.99	1.130	28.70
.0095	0.241	.060	1.52	.187	4.75	.615	15.62	1.250	31.75
.012	0.30	.061	1.55	.218	5.54	.620	15.75	1.308	33.22
.015	0.38	.062	1.57	.250	6.35	.648	16.46	1.673	42.49
.020	0.51	.0625	1.588	.280	7.11	.654	16.61		
.022	0.56	.063	1.60	.341	8.66	.671	17.04		
.025	0.64	.070	1.78	.375	9.53	.675	17.15		

NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only.
2. Unless otherwise specified, the tolerance is $\pm .005$ (0.13 mm).
3. Protruding length of item 8 shall be flush with outside surface of item 1.
4. Item 4 is not used with alternate construction.
5. Polarizing key position on one end must be located 180° from polarizing key on opposite end.
6. All undimensioned pictorial representations are for reference purposes only.

FIGURE 1. Type UG-493A/U, connector, electrical, adapter - Continued.

MIL-DTL-3655/4C
w/AMENDMENT 1



Inches	mm	Inches	mm
.001	0.03	.250	6.35
.003	0.08	.533	13.54
.005	0.13	.590	14.99
.055	1.40	.620	15.75

NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only.

FIGURE 2. Interface mating requirements.

MIL-DTL-3655/4C
w/AMENDMENT 1

ENGINEERING DATA

Nominal impedance: 95 ohms (balanced line not matched).

Frequency range: DC to 500 MHz, maximum.

Voltage rating: 500 V peak, maximum at sea level.

Mating connector: M3655/1-0421.

REQUIREMENTS:

Design and construction: See figures 1 and 2.

Center contact shall be plated in accordance with MIL-DTL-3655. All other metal parts shall be silver plated to a minimum thickness of .0002 inch in accordance with ASTM-B700.

Force to engage/disengage:

Torque: Not applicable.

Longitudinal force: Not applicable.

Coupling proof torque: Not applicable.

Mating characteristics (see figures 1 and 2 for dimensions):

Center contact:

Oversize test pin: .062 inch diameter, minimum (non-closed entry contact only).

Test pin finish: 16 microinches.

Insertion depth: .093 inch, minimum.

Number of insertions: One.

Insertion force test:

Steel test pin diameter: .062 inch, minimum.

Test pin finish: 16 microinches.

Insertion depth: .125 inch, minimum.

Insertion force: 2 pounds, maximum.

Withdrawal force test:

Steel test pin diameter: .052 inch, maximum.

Test pin finish: 16 microinches.

Insertion depth: .125 inch, minimum.

Withdrawal force: 2 ounces, minimum.

MIL-DTL-3655/4C
w/AMENDMENT 1

Permeability: Applicable.

Hermetic seal: Not applicable.

Leakage: Not applicable.

Insulation resistance: 5×10^9 ohms, minimum.

Contact insulator captivation: Not applicable.

Salt spray (corrosion): Applicable.

Connector durability: Applicable.

Contact resistance (milliohms, maximum):

	<u>Initial</u>	<u>After environment</u>
Inner conductor contacts:	2.67	3.50
Outer conductor contacts:	.34	Not applicable
Braid to body	.20	Not applicable

Dielectric withstanding voltage: 1,500 V rms, minimum, at sea level.

Vibration, high frequency: Applicable.

Shock (specified pulse): Not applicable.

Temperature cycling: Applicable.

Humidity: Applicable, but no measurement shall be made at high humidity. Insulation resistance shall be at least 2×10^8 ohms within 5 minutes after removal from the humidity chamber.

Cable retention force: Not applicable.

Coupling nut retention: Not applicable.

Part or Identifying Number (PIN): M3655/4-0493.

First article shall apply as follows: First article test inspection shall be performed in accordance with the requirements outlined in the latest revision of MIL-DTL-3655.

MIL-DTL-3655/4C
w/AMENDMENT 1

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. In addition to MIL-DTL-3655, this document references the following:

ASTM-B700

CONCLUDING MATERIAL

Custodians:

Army - CR

Navy - EC

Air Force – 85

DLA – CC

Preparing activity:

DLA - CC

(Project 5935-2018-054)

Review activities:

Army – AT, AV, MI

Navy – AS, MC, OS, SH

Air Force - 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.