

INCH POUND

MIL-DTL-3655/5C
18 March 2008
SUPERSEDING
MIL-C-3655/5B
11 April 1980

DETAIL SPECIFICATION SHEET

CONNECTOR, ADAPTER, ELECTRICAL, CLASS I
(COAXIAL, SERIES TWIN) TYPE UG-981/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.

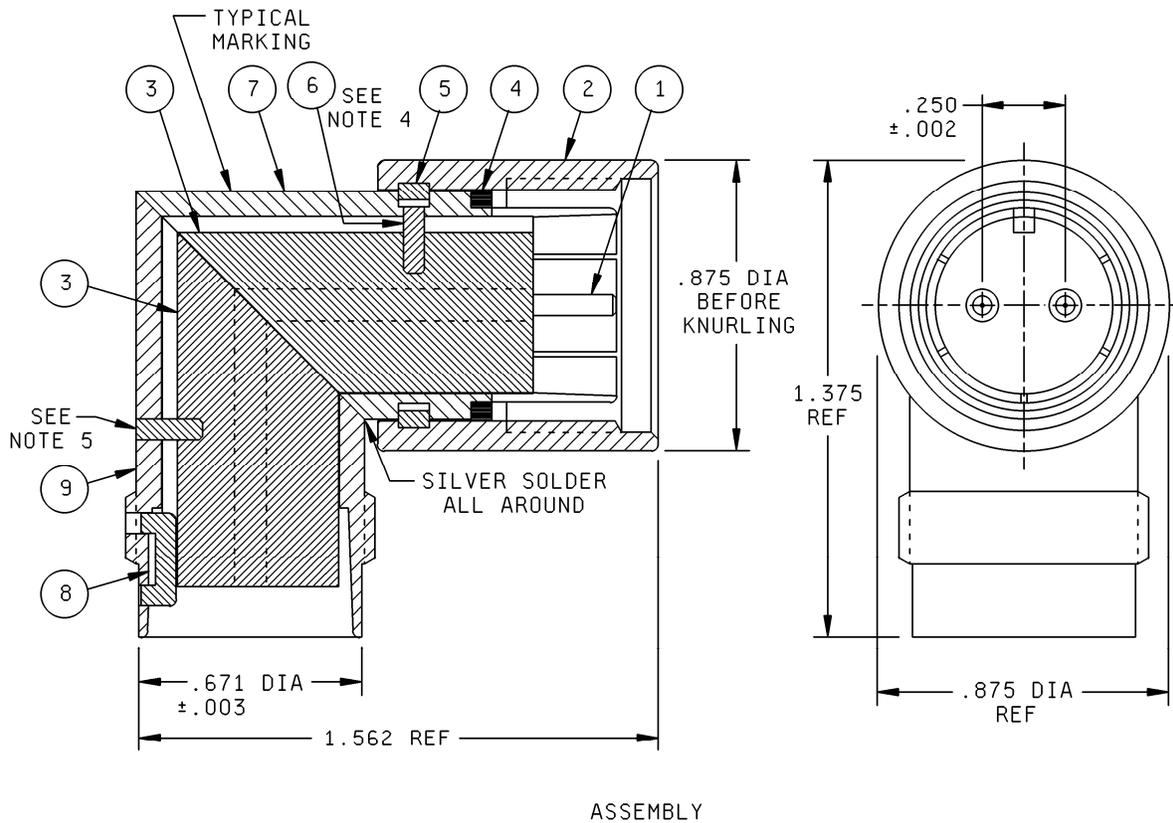


FIGURE 1. Type UG-981/U, connector, electrical, adapter.

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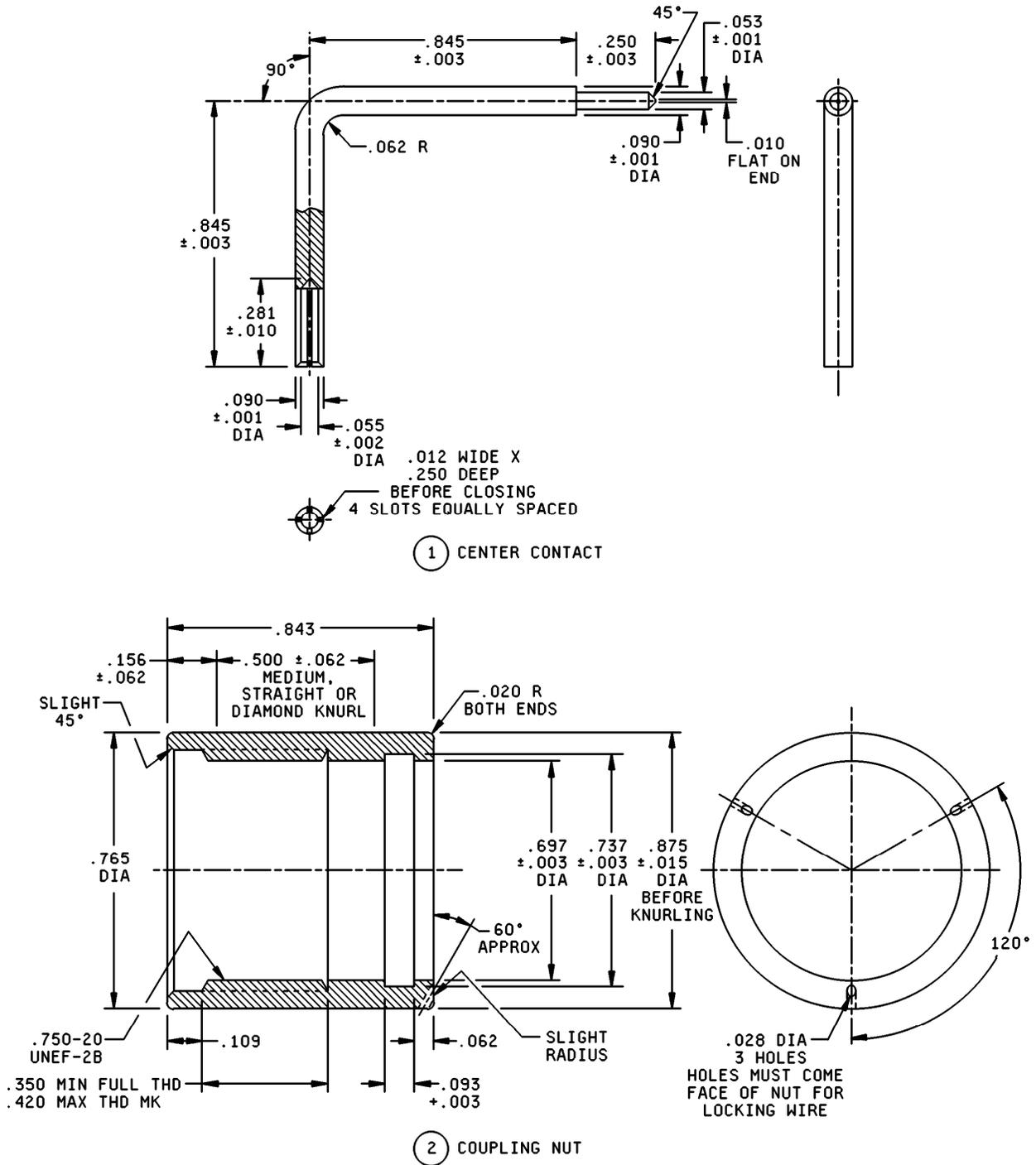


FIGURE 1. Type UG-981/U, connector, electrical, adapter – Continued.

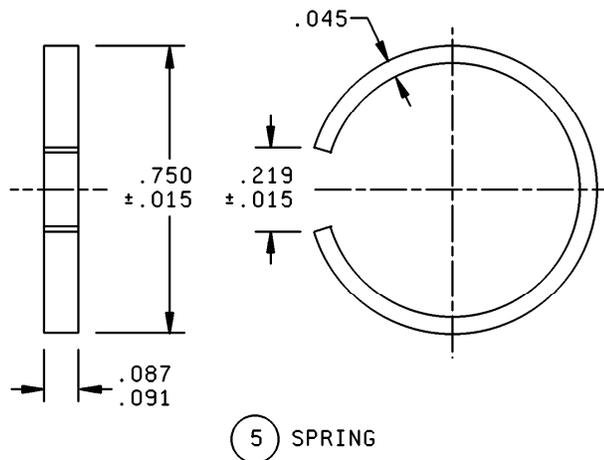
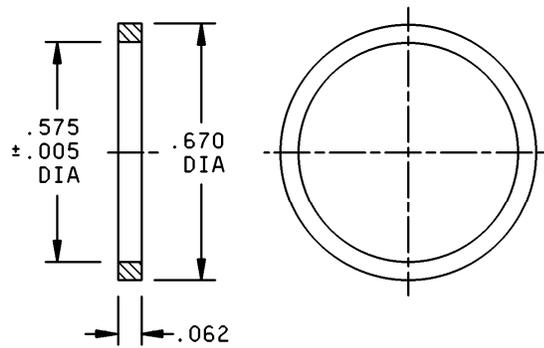
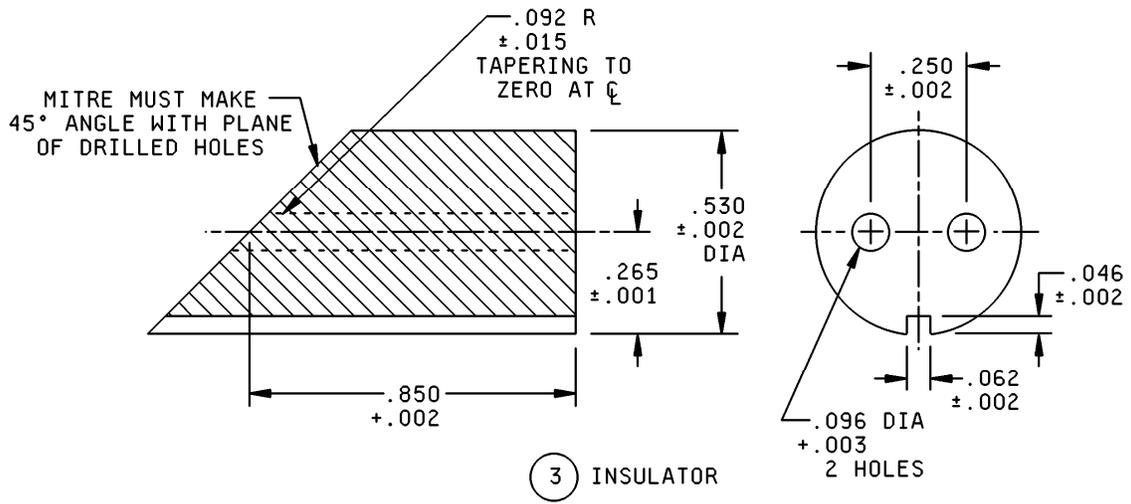


FIGURE 1. Type UG-981/U, connector, electrical, adapter – Continued.

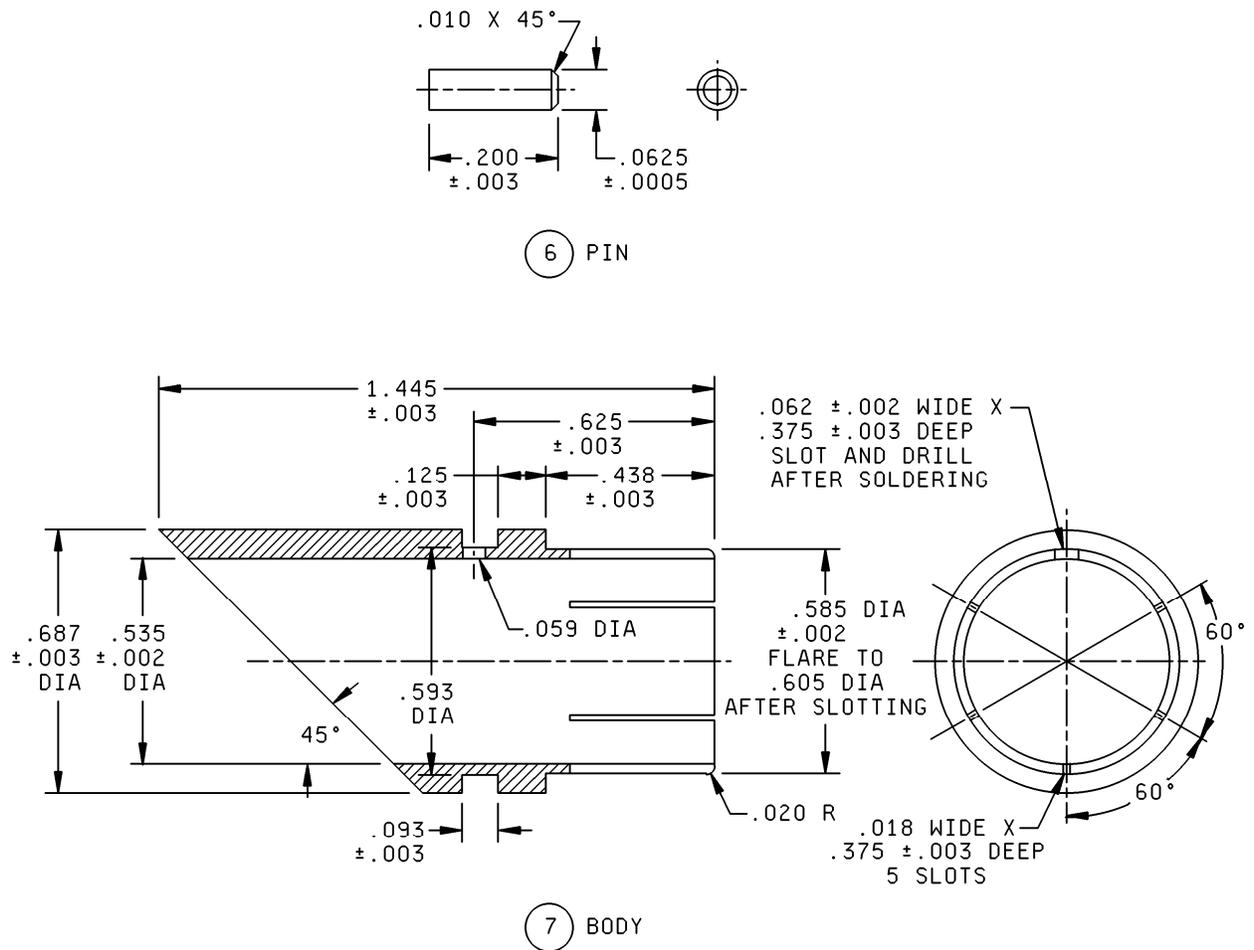


FIGURE 1. Type UG-981/U, connector, electrical, adapter – Continued.

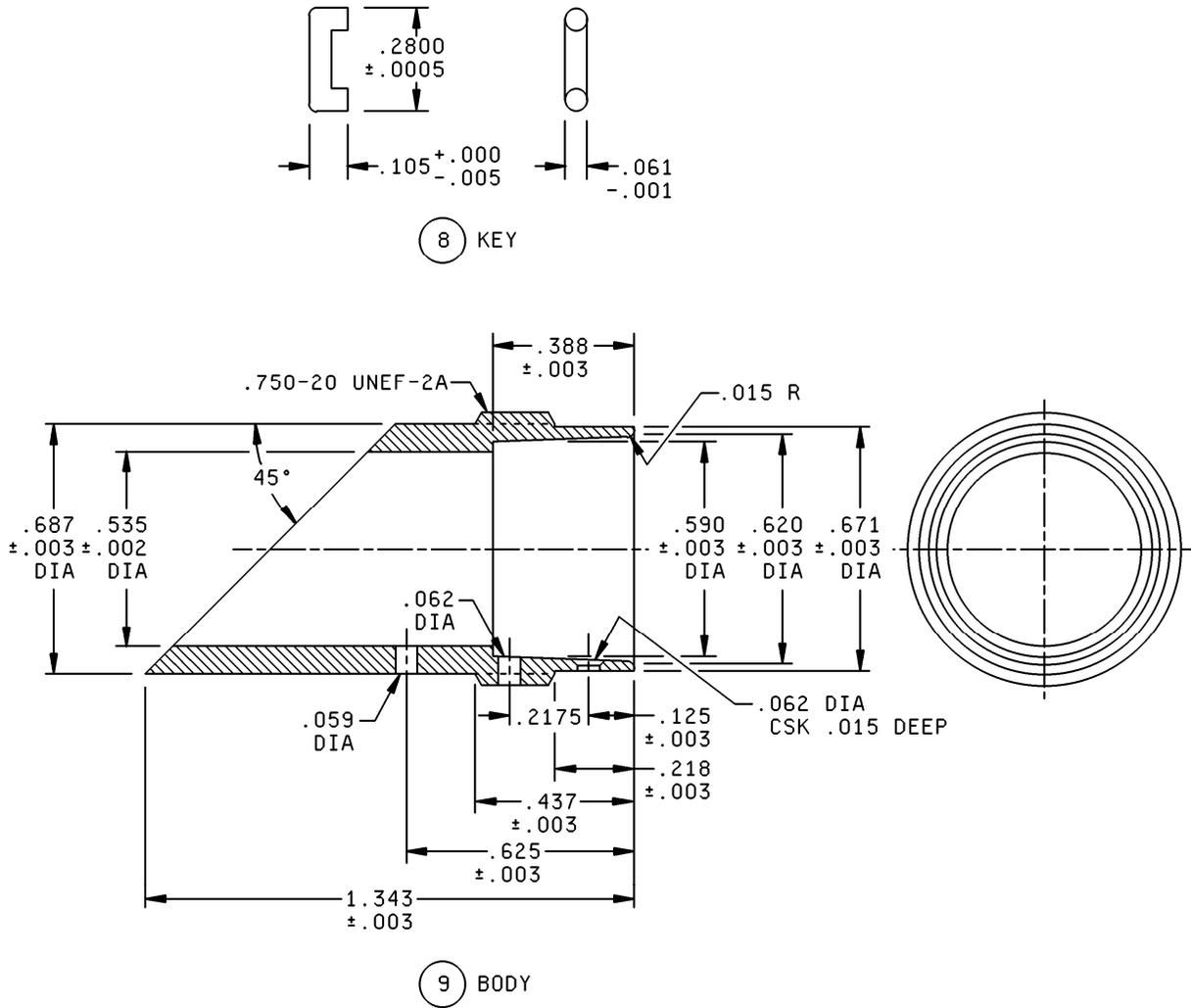


FIGURE 1. Type UG-981/U, connector, electrical, adapter – Continued.

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Item	Description	Material	Quantity
1	Center contact	Beryllium copper <u>1/</u>	2
2	Coupling nut	Brass	1
3	Insulator	Plastic	2
4	Gasket	Silicon rubber	1
5	Spring	Phosphor bronze	1
6	Pin	Brass	2
7	Body	Brass	1
8	Key	Brass	1
9	Body	Brass	1

1/ For alternate two piece construction, male portion shall be of brass, and female portion shall be of beryllium copper.

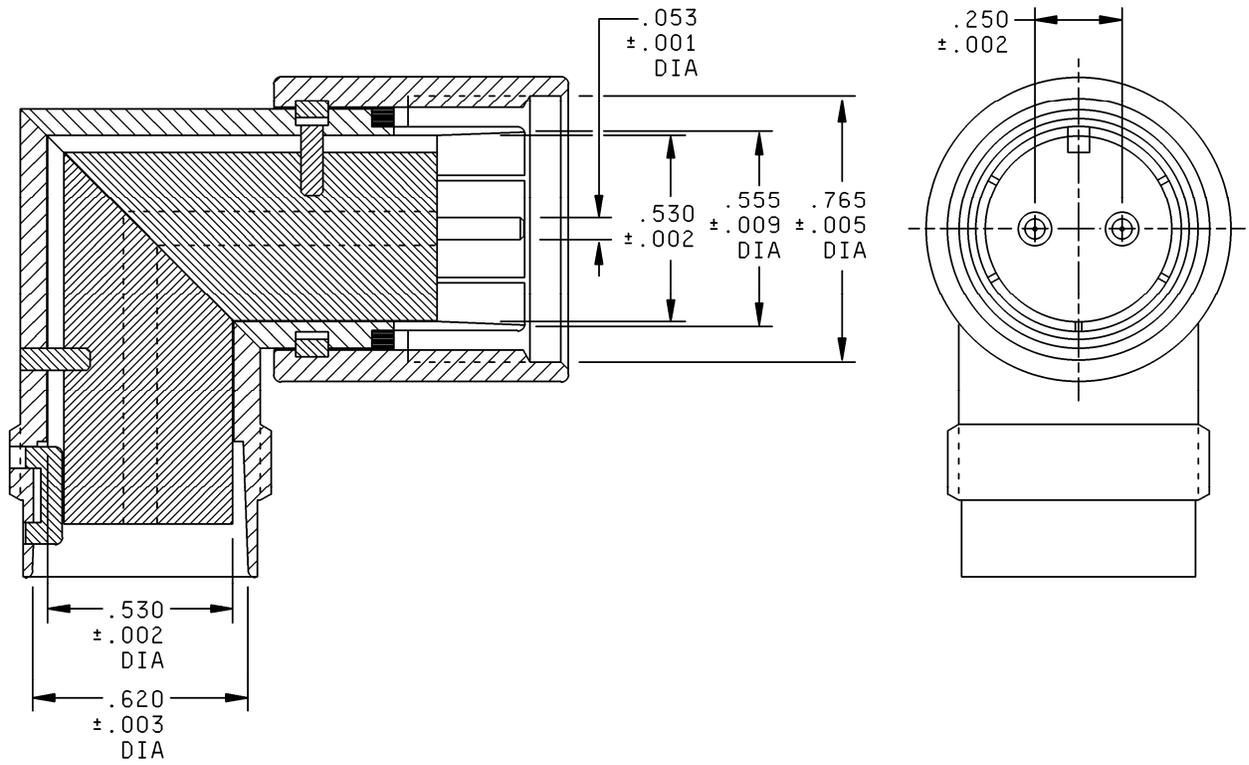
Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.0005	0.013	.055	1.40	.125	3.18	.437	11.10	.687	17.45
.001	0.03	.059	1.50	.156	3.96	.4375	11.112	.697	17.70
.002	0.05	.061	1.55	.200	5.08	.438	11.13	.737	18.72
.003	0.08	.062	1.57	.2175	5.524	.500	12.70	.750	19.05
.005	0.13	.0625	1.588	.218	5.54	.530	13.46	.765	19.43
.010	0.25	.063	1.60	.219	5.56	.531	13.49	.843	21.41
.012	0.30	.087	2.21	.250	6.35	.535	13.59	.845	21.46
.015	0.38	.090	2.29	.265	6.73	.585	14.86	.850	21.59
.018	0.46	.091	2.31	.2800	7.112	.590	14.99	.875	22.23
.020	0.51	.092	2.34	.281	7.14	.593	15.06	1.343	34.11
.028	0.71	.093	2.36	.350	8.89	.605	15.37	1.375	34.93
.045	1.14	.096	2.44	.375	9.53	.620	15.75	1.445	36.70
.046	1.17	.105	2.67	.388	9.86	.625	15.88	1.562	39.67
.053	1.35	.109	2.77	.420	10.67	.671	17.04		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, the tolerance is ± 005 (0.13 mm).
4. Press pin into hole flush with diameter of groove.
5. Press pin into hole flush with outside diameter.

FIGURE 1. Type UG-981/U, connector, electrical, adapter – Continued.

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Inches	mm	Inches	mm
.001	0.03	.250	6.35
.002	0.05	.530	13.46
.003	0.08	.555	14.10
.005	0.13	.620	15.75
.053	1.35	.765	19.43

NOTES:

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

FIGURE 2. Interface mating requirements.

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ENGINEERING DATA

Nominal impedance: 95 ohms.

Frequency range: DC to 500 MHz, maximum.

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

Mating connector: M3655/1-0421 and M3655/2-0422

Intended use: Type M3655/5-0981 electrical connector is designed for use with receptacle shield M3655/11-0106.

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: 15 inch-pounds, minimum.

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.

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Outer contacts:

Test ring, inner diameter : .583 inch,minimum.

Test ring finish: 16 microinches.

Insertion force: 15 pounds maximum when inserted a minimum of .125 inch.

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:	2.84	3.80
Outer conductor contacts:	.38	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: Applicable.

Coupling nut retention: Applicable.

Part or Identifying Number (PIN): M3655/5-0981.

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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.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

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

ASTM-B700

CONCLUDING MATERIAL

Custodians:

Army - CR

Navy - EC

Air Force – 11

DLA – CC

Preparing activity:

DLA - CC

(Project 5935-2007-018)

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 <http://assist.daps.dla.mil>.