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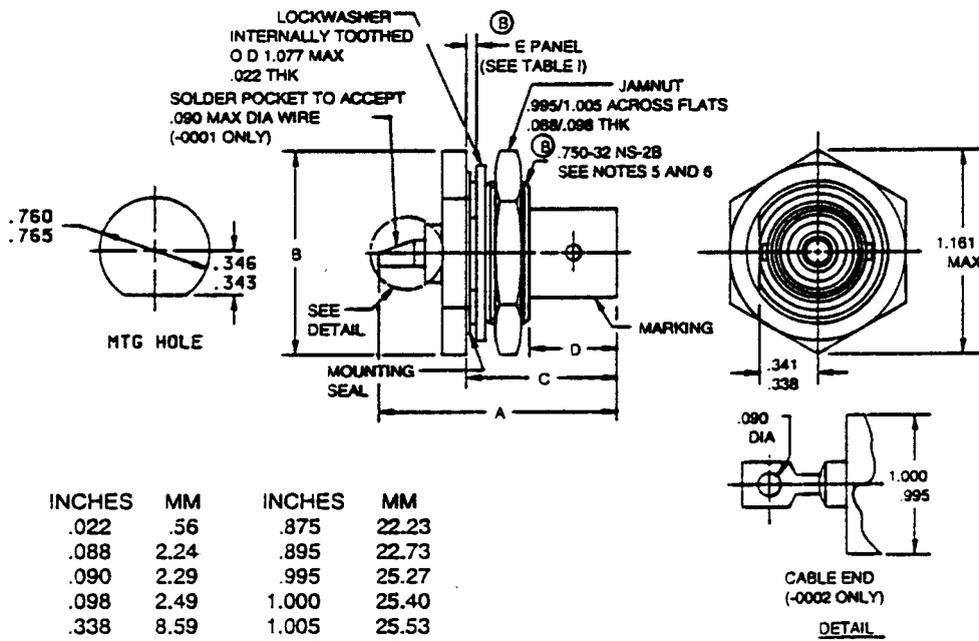
MIL-PRF-39012/14B
 18 September 1977
 SUPERSEDING
 MIL-C-39012/14A
 26 March 1971

PERFORMANCE SPECIFICATION SHEET

CONNECTORS, COAXIAL, RADIO FREQUENCY
 SERIES C (UNCABLED-RECEPTACLE, FEMALE, JAM NUT MOUNTED,
 HERMETIC SEAL, CLASS 2)

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

The complete requirements for procuring the connectors described herein shall consist of this document and the latest issue of Specification MIL-PRF-39012.



| INCHES | MM | INCHES | MM |
|--------|-------|--------|-------|
| .022 | .56 | .875 | 22.23 |
| .088 | 2.24 | .895 | 22.73 |
| .090 | 2.29 | .995 | 25.27 |
| .098 | 2.49 | 1.000 | 25.40 |
| .338 | 8.59 | 1.005 | 25.53 |
| .341 | 8.66 | 1.077 | 27.36 |
| .343 | 8.71 | 1.088 | 27.64 |
| .346 | 8.79 | 1.161 | 29.49 |
| .760 | 19.30 | 1.320 | 33.53 |
| .765 | 19.43 | | |

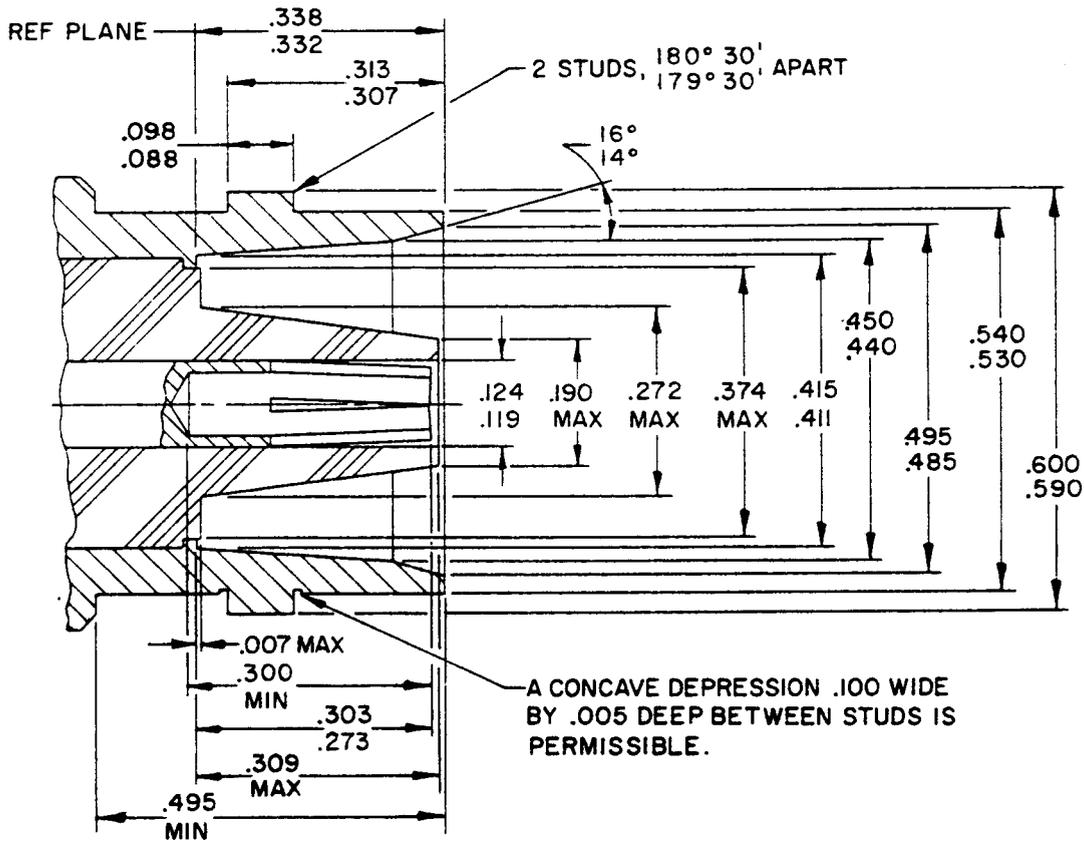
NOTES:

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. For dimensions 'A', 'C', 'D' and 'E' see table I.
4. All undimensioned pictorial configurations are for reference purposes only.
5. Orientation of body hex flats, mounting flat and bayonet studs shall be within 3° of that shown.
6. Full threads to within .063 (1.60 mm) of shoulder; 1 ½ maximum uneven threads to shoulder.

(B)
 (B)
 (B)

FIGURE 1. General configuration.

(B) denotes changes



| INCHES | MM | INCHES | MM |
|--------|------|--------|-------|
| .005 | .13 | .313 | 7.95 |
| .007 | .18 | .332 | 8.43 |
| .088 | 2.24 | .338 | 8.59 |
| .098 | 2.49 | .374 | 9.50 |
| .100 | 2.54 | .411 | 10.44 |
| .119 | 3.02 | .415 | 10.54 |
| .124 | 3.15 | .440 | 11.18 |
| .190 | 4.83 | .450 | 11.43 |
| .272 | 6.91 | .485 | 12.32 |
| .273 | 6.93 | .495 | 12.57 |
| .300 | 7.62 | .530 | 13.46 |
| .303 | 7.70 | .540 | 13.72 |
| .307 | 7.80 | .590 | 14.99 |
| .309 | 7.85 | .600 | 15.24 |

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. All undimensioned pictorial configurations are for reference purposes only.

FIGURE 2. Mating dimensions for female terminations.

(B) TABLE I. Part number and basic overall dimensions.

| Part no. | Dim | Inches - Millimeters ^{1/} | | Type of seal |
|----------------|-----------------|------------------------------------|--------------|--------------|
| | | Minimum | Maximum | |
| M39012/14-0001 | A | --- | 1.219(30.96) | Pressurized |
| | B ^{2/} | .995(25.27) | 1.005(25.53) | |
| | C | .738(18.75) | .762(19.35) | |
| | D | .495(12.57) | .505(12.83) | |
| | E | .045 (1.14) | .113(2.87) | |
| M39012/14-0002 | A | --- | 1.531(38.89) | Hermetic |
| | B ^{2/} | .995(25.27) | 1.005(25.53) | |
| | C | .799(20.29) | .809(20.55) | |
| | D | .484(12.29) | .497(12.62) | |
| | E | .045 (1.14) | .182(4.62) | |

^{1/} Millimeters are in parentheses.

^{2/} -0001 HEX dimension of flange; -0002 diameter of flange.

TABLE II. Group qualification.

| Group | Submission and qualification of any of the following connectors | Qualifies the following connectors |
|-------|---|------------------------------------|
| I | M39012/14-0001 M39012/14-0002 | M39012/14-0001 M39012/14-0002 |

ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 11,000 MHz.

Voltage rating: 1,000 volts rms maximum working voltage at sea level. 250 volts rms maximum at 70,000 feet.

Temperature rating: -65°C to +165°C.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Force to engage and disengage:
Longitudinal force - 4-1/2 lbs maximum.
Torque - 4 inch pounds maximum.

Coupling proof torque: Not applicable.

Inspection conditions: Coupling torque not applicable.

Mating characteristics:

See figure 2 for dimensions.

Center contact (female):

Oversize test pin - .098 diameter minimum (non-closed entry contacts only).

Insertion depth - .125 minimum.

Number of insertions - 1.

Insertion force test - Steel test pin dia .092 minimum.
Test pin finish - 16 microinches.
Insertion force - 2 lbs maximum.

Withdrawal force test: Steel test pin dia .090 maximum.
(B) Withdrawal force - 2 ounces minimum.
Test pin finish - 16 microinches.

Hermetic seal: Leakage shall not exceed 1×10^{-5} cc/sec of tracer gas at atmospheric pressure when mounted in mounting hole specified on figure 1. Applicable to -0002 only.

Leakage (pressurized connectors):
Connectors shall be mounted in mounting hole shown on figure 1 with mating end capped. Test applicable to mounting seal only. Air pressure - 30 psi. Duration - 30 seconds minimum, 2 minutes maximum.

Insulation resistance: Method 302, test condition B, MIL-STD-202. 5,000 megohms minimum.

Center contact retention: 6 lbs minimum axial force.

Corrosion (salt spray): Method 101, test condition B, MIL-STD-202.

Voltage standing wave ratio (VSWR):
Not applicable.

Swept frequency VSWR test setup:
Not applicable.

Connector durability:
500 cycles at 12 cycles/minute maximum.
The connector shall meet mating characteristics and force to engage and disengage requirements.

Contact resistance: In milliohms maximum.

| | After | | | |
|----------------|---------|------|----------------|------|
| | Initial | | environment | |
| | 0001 | 0002 | 0001 | 0002 |
| Center contact | 1.0 | 2.5 | 1.5 | 3.0 |
| Outer contact | .15 | .15 | Not applicable | |

Dielectric withstanding voltage: Method 301 of MIL-STD-202. 3,000 volts rms at sea level.

Vibration, high frequency: Method 204, test condition B, MIL-STD-202.

Shock: Method 213 of MIL-STD-202, test condition I.

Temperature cycling: Method 102, test condition C, MIL-STD-202, except test high temperature shall be 200°C.

Thermal shock: Applicable to -0002 only.

Moisture resistance: Method 106 of MIL-STD-202. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes after removal from humidity.

Corona level:
Altitude - 70,000 feet.
Voltage - 750 volts rms minimum.

RF high potential withstanding voltage:
Voltage and frequency - 2,500 volts rms at 5 to 7.5 MHz.
Leakage current - Not applicable.

Cable retention force: Not applicable.

Coupling mechanism retention force:
Not applicable.

RF leakage: Not applicable.

Insertion loss: Not applicable.

Part number: M39012/14 (and dash number from table I).

TABLE III. Cross reference of part numbers.

| Part number | Substitute for part number or type designation ^{1/} |
|----------------|--|
| M39012/14-0001 | UG-569/U |
| M39012/14-0002 | UG-705/U |

^{1/} The superseded part number or the type designation is for cross reference only. The part number M39012/14-XXXX shall be used in all cases for marking and identifying the connector.

Custodians:
Army - EL
Navy - EC
Air Force - 85

Review activities:
Army - MI, AR, EL
Navy - OS
Air Force - 11, 17, 99
DLA - ES

User activities:
Army - AT, AV, ME
Navy - AS, MC, SH
Air Force - 19

Preparing activity:
Army - EL

Agent:
DLA - ES

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