

INCH-POUND

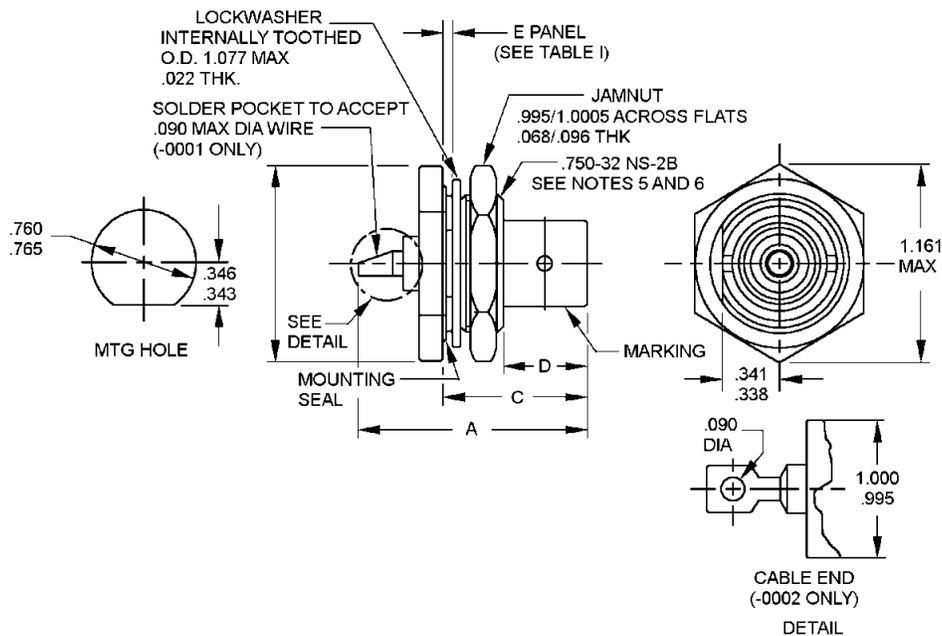
MIL-PRF-39012/14C
 10 August 2016
 SUPERSEDING
 MIL-PRF-39012/14B
 18 September 1977

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		

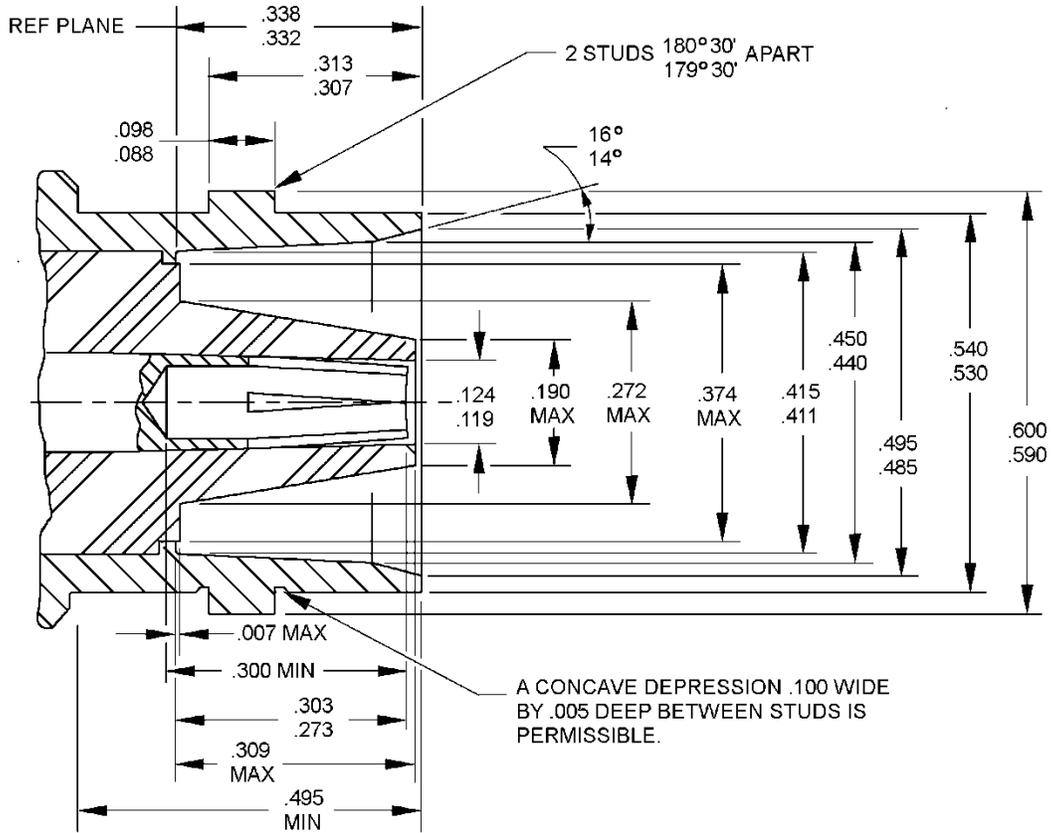
NOTES:

1. Dimensions are in inches. Metric equivalents are given for general information only.
2. For dimensions "A", "C", "D" and "E" see table I.
3. All undimensioned pictorial configurations are for reference purposes only.
4. Orientation of body hex flats, mounting flat and bayonet studs shall be within 3° of that shown.
5. Full threads to within .063 (1.60 mm) of shoulder; 1 ½ maximum uneven threads to shoulder.
6. There shall be a solid barrier in the socket between the pin entry and the solder pocket to prevent solder wicking.

FIGURE 1. General configuration.



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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. Metric equivalents are given for general information only.
2. All undimensioned pictorial configurations are for reference purposes only.

FIGURE 2. Mating dimensions for female terminations.

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 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 ½ 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.
 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: MIL-STD-202-302, test condition. 5,000 megohms minimum.

Center contact retention: 6 lbs minimum axial force.

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

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.

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

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

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

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

Temperature cycling: MIL-STD-202-107, test condition B except test high temperature shall be +200°C.

Thermal shock: Applicable to -0002 only.

Moisture resistance: MIL-STD-202-106. 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 <u>1/</u>
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.

Changes from previous issues. 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-PRF-39012, this document references the following:

- MIL-STD-202-101
- MIL-STD-202-106
- MIL-STD-202-107
- MIL-STD-202-204
- MIL-STD-202-213
- MIL-STD-202-301
- MIL-STD-202-302

CONCLUDING MATERIAL

Custodians:
 Army – CR
 Navy – EC
 Air Force – 85
 DLA – CC

Preparing activity:
 DLA – CC

 (Project 5935-2016-087)

Review activities:
 Army – AM, AT, CR4, 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>.