INCH-POUND

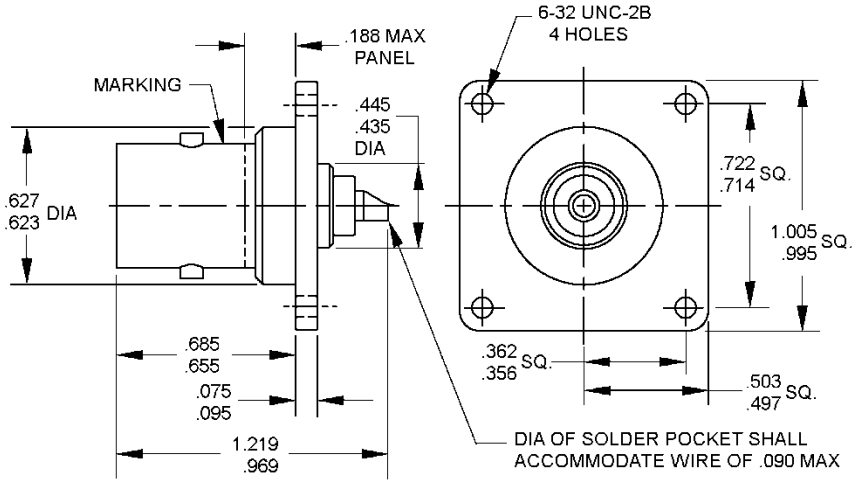
MIL-PRF-39012/12C
02 August 2016
SUPERSEDING
MIL-PRF-39012/12B
18 September 1977

PERFORMANCE SPECIFICATION SHEET

CONNECTORS, COAXIAL, RADIO FREQUENCY, SERIES C (UNCABLED-RECEPTACLE, FEMALE, FLANGE MOUNTED, REAR MOUNTED, CLASS 2)

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

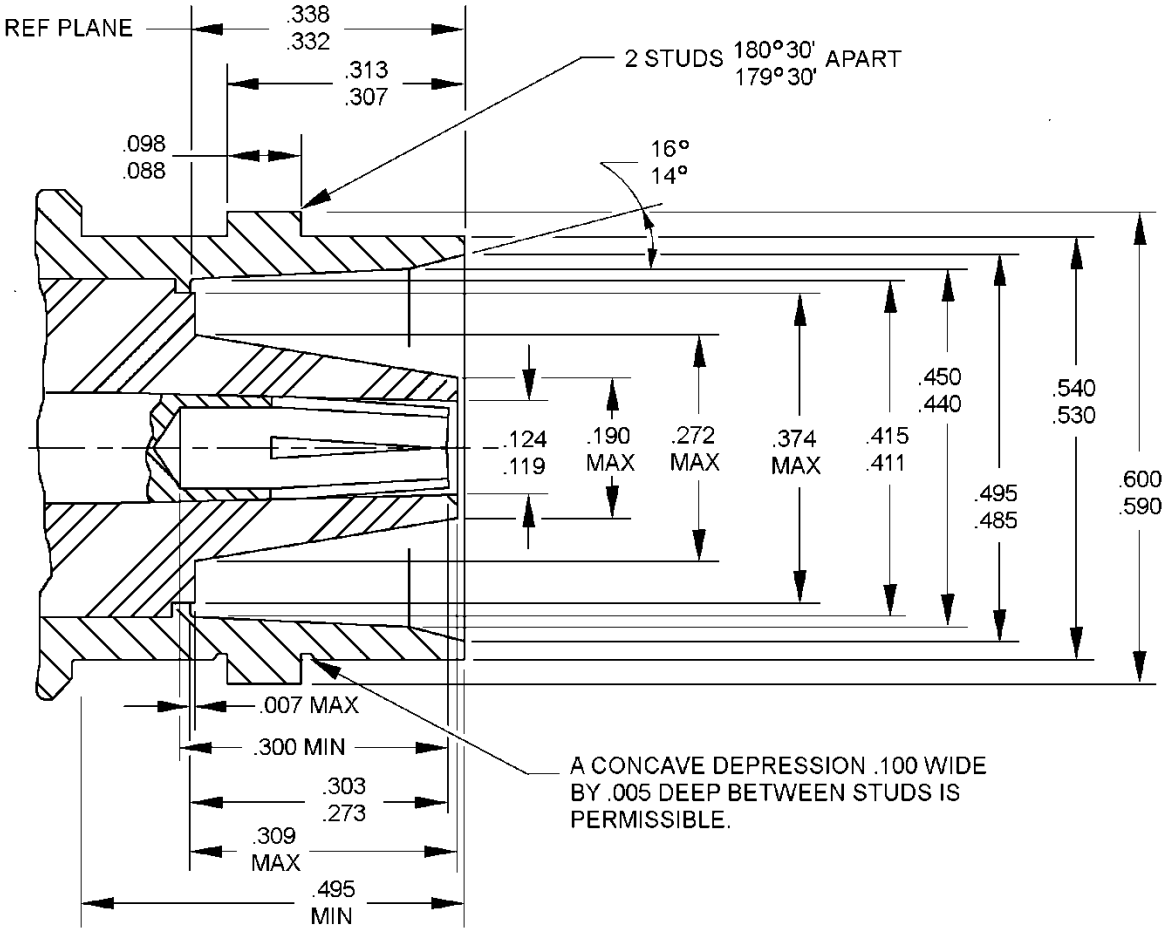
The requirements for acquiring the connectors described herein shall consist of this specification and the latest issue of MIL-PRF-39012.



INCHES	MM	INCHES	MM
.075	1.91	.623	15.82
.090	2.29	.627	15.93
.095	2.41	.655	16.64
.188	4.78	.685	17.40
.356	9.04	.714	18.14
.362	9.19	.722	18.34
.435	11.05	.969	24.61
.445	11.30	.995	25.27
.497	12.62	1.005	25.53
.503	12.78	1.219	30.96

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. Receptacle recommended for component part use and for use on panels with a .090 (2.29 mm) maximum thickness.
4. All undimensioned pictorial configurations are for reference purposes only.
5. Bayonet studs and edges of flange shall be within 3° of orientation shown.
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.



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.

TABLE I. Group qualification.

Group	Submission and qualification of the following connector	Qualifies the following connector
I	M39012/12-0001	M39012/12-0001

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: Not applicable.

Leakage (pressurized connectors): Not applicable.

Insulation resistance: MIL-STD-202-302, test condition B. 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
Center contact	1.0	1.5
Outer contact	.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: Not applicable.

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: M39012/12-0001.

TABLE II. Cross reference of part numbers.

Part number	Substitute for part number or type designation 1/
M39012/12-0001	UG-568/U

1/ The superseded part number or the type designation is for cross-reference only. The part number M39012/12-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 5935-2016-085)

Review activities:
Army – AM, AT, CR4, MI
Navy – AS, MC, OS
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.