

INCH-POUND

MIL-PRF-39012/128C

16 November 2011

SUPERSEDING

MIL-PRF-39012/128B

19 September 1989

PERFORMANCE SPECIFICATION SHEET

CONNECTORS, RECEPTACLE, ELECTRICAL, COAXIAL, RADIO FREQUENCY,  
(SERIES BNC, SOLDER POCKET, SOCKET CONTACT  
JAM NUT MOUNTED, ISOLATED, CLASS 2)

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-PRF-39012.

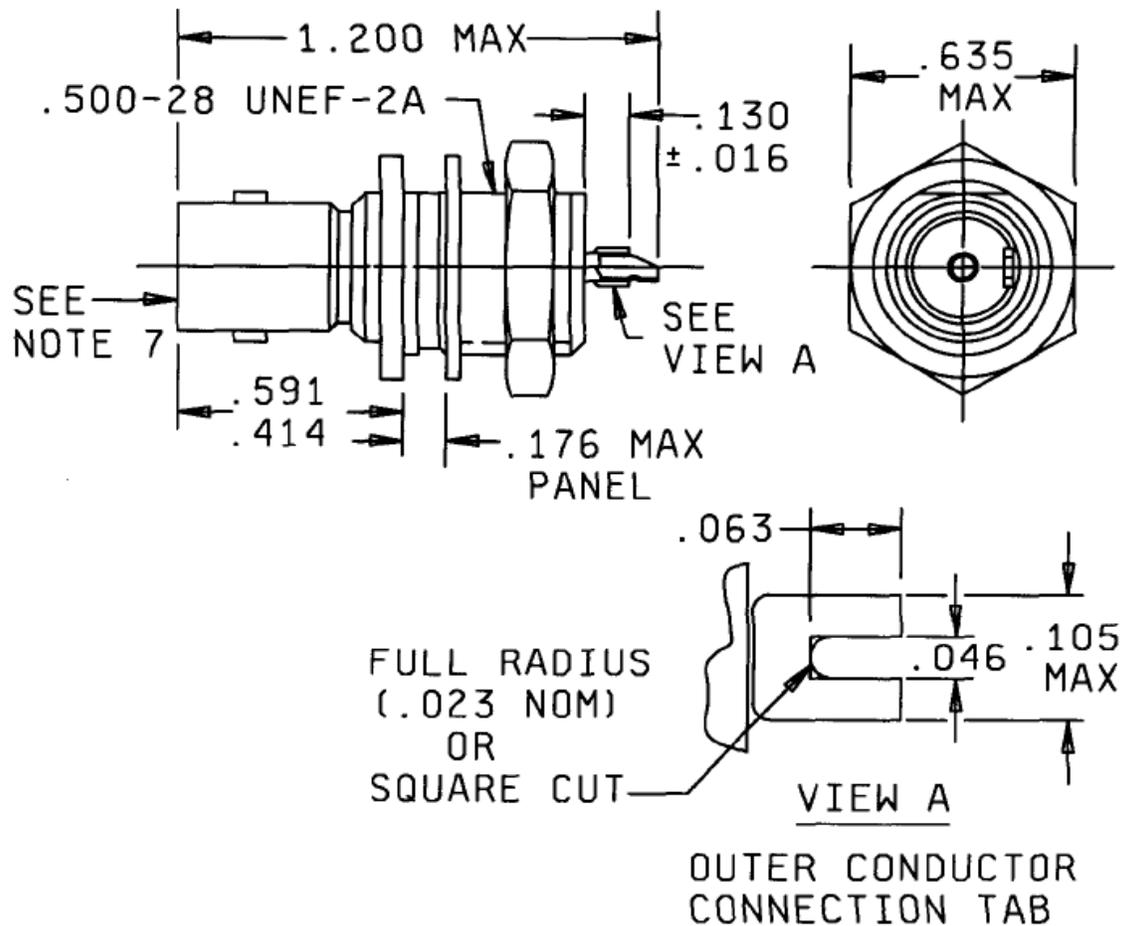
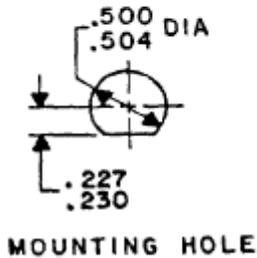
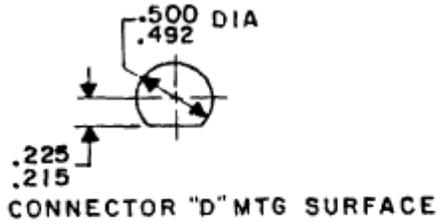


FIGURE 1. General configuration.



Inches	mm	Inches	mm	Inches	mm
.016	0.41	.215	5.46	.504	12.80
.023	0.58	.225	5.72	.591	15.01
.046	1.17	.227	5.77	.635	16.13
.063	1.60	.230	5.84	1.20	30.48
.105	2.67	.414	10.52		
.130	3.30	.492	12.45		
.176	4.47	.500	12.70		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified all tolerances are .005(0.13mm) inches
4. Wrench flats are to accommodate standard wrench opening in accordance with FED-STD-H28, appendix 10.
4. All undimensioned pictorial configurations are for reference purposes only.
5. Solder pocket shall accommodate a wire of .059 (1.50 mm) diameter maximum.
6. Series BNC, socket contact interface in accordance with MIL-STD-348.

FIGURE 1. General configuration - Continued.

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ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 4 GHz.

Voltage rating: 500 V rms maximum working voltage at sea level; 125 V rms maximum at 70,000 feet.

Temperature rating: -65°C to +165°C.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Center contacts;

Axial force: 4lbs, minimum

Radial torque: 4 inch-ounces, minimum

Isolating insulator captivation: Forces shall be applied between the mounting bushing and connector body for a period of 10 seconds, minimum.

Torque: 15 inch-pounds

Axial force: 30 pounds.

Force to engage and disengage:

Longitudinal force: 3 pound maximum.

Torque: 2 ½ inch-pounds maximum.

Coupling proof torque: Not applicable.

Inspection conditions(coupling torque): Not applicable.

Mating characteristics: See MIL-STD-348.

Center contact (socket):

Oversized test pin: .057 diameter, minimum (non-closed entry contacts only).

Insertion depth: .125, minimum.

Number of insertions: one.

Insertion force test: Steel test pin diameter .054, minimum.

Test pin finish: 16 micro inches

Insertions force: 2 pounds, maximum

Withdrawal force test: Steel test pin diameter .052, minimum.

Withdrawal force: 2 ounces minimum.

Test pin finish: 16 micro inches

Hermetic seal: Not applicable.

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Leakage (pressurized connectors): Not applicable.

Insulation resistance: In accordance with MIL-STD-202, method 302, test condition B, 5,000 megohms minimum.

Contact resistance: In milliohms, maximum.

	<u>Initial</u>	<u>After environment</u>
Center contact:	1.5	2.0
Outer contact:	2.0	Not applicable

Resistance to test prod damage: Not applicable.

Corrosion (Salt spray): In accordance with MIL-STD-202 method 101, test condition B.

Voltage standing wave ratio (VSWR): Not applicable.

Dielectric withstanding voltage at sea level: In accordance with MIL-STD-202, method 301. 1,500 V rms, minimum at sea level.

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

Vibration, high frequency: In accordance with MIL-STD-202, method 204, test condition D.

Shock: In accordance with MIL-STD-202, method 213, test condition C.

Thermal shock: In accordance with MIL-STD-202, method 107, test condition B, except high temperature shall be +85°C. High temperature shall be +200°C for connectors using +200°C cables.

Moisture resistance: In accordance with MIL-STD-202, method 106 (no measurements at high humidity). Insulation resistance shall be at least 200 Megaohms within 5 minutes after removal from humidity. Dielectric withstanding voltage shall be met. Voltages shall be applied at points suitable for testing each individual insulator.

Corona level:

Voltage: 375 Volts, minimum.

Altitude: 70,000 feet

RF high potential withstanding voltage:

Voltage and frequency: 1000 V rms, tested at a frequency from 5 to 7.5 MHz.

Leakage current: Not applicable.

Cable retention force: Not applicable.

RF leakage: Not applicable.

RF insertion loss: Not applicable.

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Isolation: The following test shall be accomplished after the shock test to verify isolation. Voltages shall be applied at two points suitable for testing only the insulator providing the isolation.

Insulation resistance: in accordance with MIL-STD-202, method 302, test condition B. 5000 Megaohms, minimum.

Dielectric withstanding voltage: in accordance with MIL-STD-202, method 301. 1500 Vrms, minimum.

Part or Identifying Number (PIN): M39012/128-0001

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. 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 and relationship to the last previous issue.

Referenced documents. In addition to MIL-PRF-39012, this document references the following:

MIL-STD-348  
MIL-STD-202  
FED-STD-H28

## CONCLUDING MATERIAL

### Custodians:

Army - CR  
Navy - EC  
Air Force - 85  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5935-2009-112)

### Review activities:

Army - AT, AV, EA, MI  
Navy - AS, MC, OS, SA, 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.daps.dla.mil>.