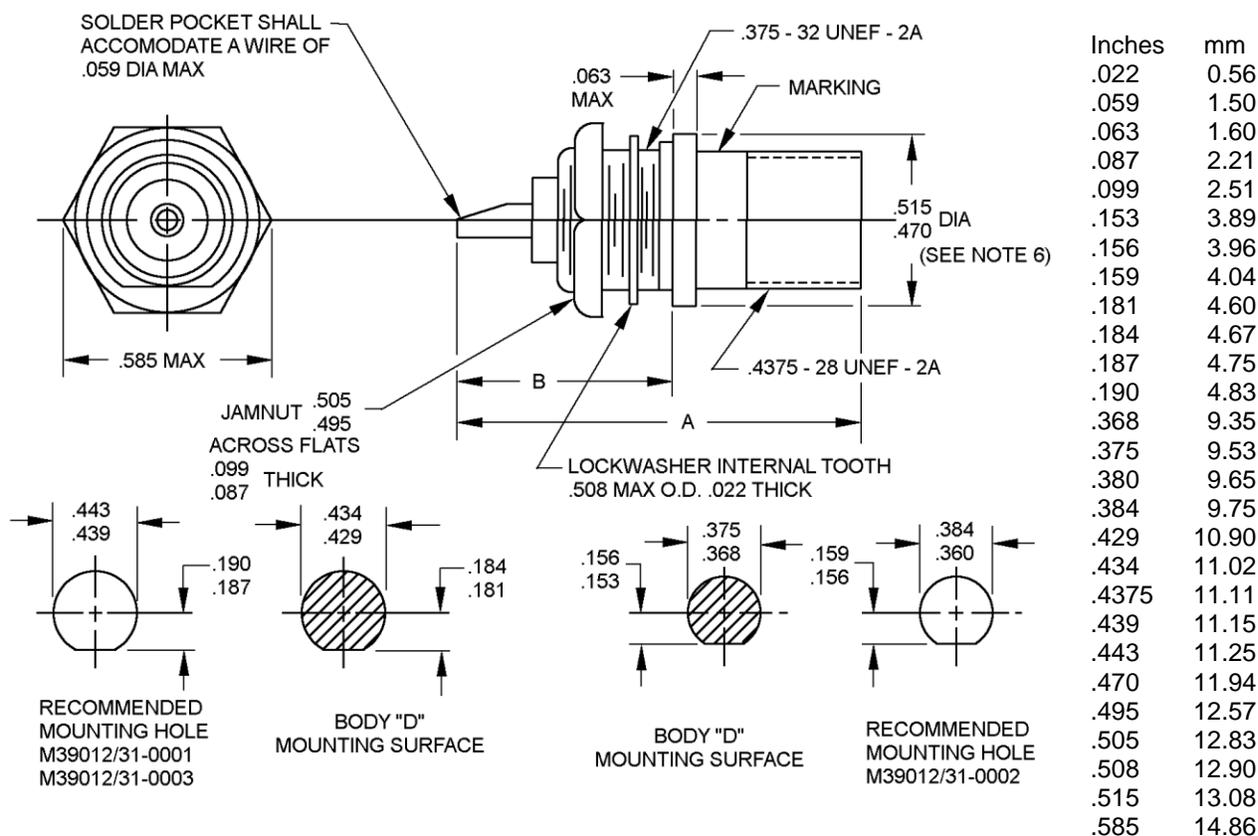


PERFORMANCE SPECIFICATION SHEET  
 CONNECTORS, COAXIAL, RADIO FREQUENCY  
 (SERIES TNC (UNCABLED – RECEPTACLES, SOCKET, JAM NUT MOUNTED, CLASS 2))

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

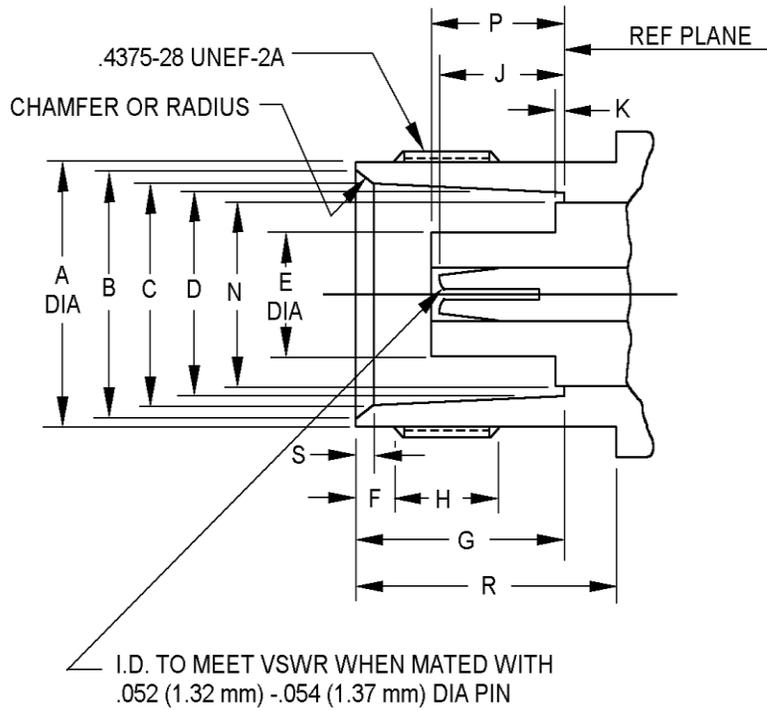
The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-39012.



NOTES:

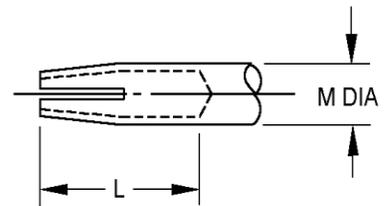
1. Dimensions are in inches.
2. For dimension A and B, see table I.
3. Metric equivalents are given for information only.
4. All undimensioned pictorial configurations are for reference purposes only.
5. Wrench flats to accommodate standard wrench opening per ASME B107.100.
6. Full threads to within .063 (1.60 mm) of shoulder; 1 1/2 maximum uneven threads to shoulder.
7. 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.



Dimensions in inches with metric equivalents (mm) in parentheses

Ltr	Minimum	Maximum
A	.378 (9.60)	.381 (9.68)
B	.345 (8.76)	.356 (9.04)
C	.327 (8.31)	.333 (8.46)
D	.319 (8.10)	.321 (8.15)
E		.186 (4.72)
F	.068 (1.73)	.088 (2.24)
G	.329 (8.36)	.333 (8.46)
H	.187 (4.75)	
J	.186 (4.72)	.206 (5.23)
K		.006 (.15)
L	.195 (4.95)	
M	.081 (2.06)	.087 (2.21)
N		.256 (6.50)
P	.188 (4.78)	.208 (5.28)
R	.415 (10.56)	
S	.015 (.38)	.030 (.76)



NOTES:

1. Metric equivalents are given for general information only.
2. All undimensioned pictorial configurations are for reference purposes only.
3. N dimension applies to that portion (if applicable) of the dielectric which protrudes beyond the metal shoulder (or reference plane) by dimension K.

FIGURE 2. Mating dimensions for socket terminations.

TABLE I. Dash number and overall dimensions.

Dash no.	Dim	Inches-millimeters <sup>1/</sup>		Maximum panel thickness	Minimum panel thickness
		Minimum	Maximum		
0001	A		1.187 (30.15)	.125 (3.18)	.045 (1.14)
	B	.529 (13.44)	.653 (16.59)		
0002 <sup>2/</sup>	A		1.312 (33.32)	.250 (6.35)	.045 (1.14)
	B	.654 (16.61)	.778 (19.76)		
0003	A		1.312 (33.32)	.260 (6.60)	.045 (1.14)
	B	.654 (16.61)	.778 (19.76)		

<sup>1/</sup> Millimeters are in parentheses.

<sup>2/</sup> Not for use in air force equipment.

TABLE II. Group qualification.

Group	Submission and qualification of any of the following connectors	Qualifies the following Connectors
I	/31-0001 /31-0002 /32-0001	/31-0001 /31-0002 /32-0001

ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 11,000 MHz.

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

Temperature rating: -65° to +165 C.

REQUIREMENTS:

Design and configuration: See figure 1.

Force to engage and disengage:

Longitudinal force: Not applicable.

Torque: 2 inch-pounds maximum.

Coupling proof torque: Not applicable.

Inspection conditions:

Coupling torque: 4 to 6 inch-pounds.

Mating characteristics: See figure 2 for dimensions.

Center contact (female):

Oversize test pin - .057 inch diameter minimum (nonclosed entry contacts only).

Insertion depth - .125 inch minimum.

Number of insertions - 1.

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

Test pin finish: 16 microinches.

Insertion force: 2 lbs maximum.

Withdrawal force test: Steel test pin diameter .052 inch maximum.  
Withdrawal force: 2 oz. minimum.  
Test pin finish: 16 microinches.

Hermetic seal: Not applicable.

Leakage: Not applicable.

Insulation resistance: Method 301 of MIL-STD-202, test condition B. 5,000 megohms minimum.

Center contact retention:  
6 lbs minimum axial force.  
4 inch-ounces radial torque minimum.

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

Voltage standing wave ratio (VSWR): Not applicable.

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

Contact resistance: In milliohms maximum.

Contact	Initial	After environment
Center contact	1.5	2.0
Outer contact	.2	Not applicable

Dielectric withstanding voltage: Method 302 of MIL-STD-202. 1,500 volts rms minimum at sea level.

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

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

Thermal shock: Method 107 of MIL-STD-202, test condition B, except high temperature shall be +200°C.

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:  
Voltage: 375 volts, minimum.  
Altitude: 70,000 feet.

RF high potential withstanding voltage:  
Voltage and frequency: 1,000 volts rms at 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.

Group Qualification: See table II.

Part or Identifying Number (PIN): M39012/31- (dash number from table I).

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  
ASME B107.100

#### CONCLUDING MATERIAL

Custodians:

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

Preparing activity:  
DLA-CC

Review activities:

Army – AM, AT, CR4, MI  
Navy – AS, MC, OS, SH  
Air Force – 19, 99

(Project 5935-2014-003)

Civilian Agencies:

NASA - NA

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>.