

INCH-POUND

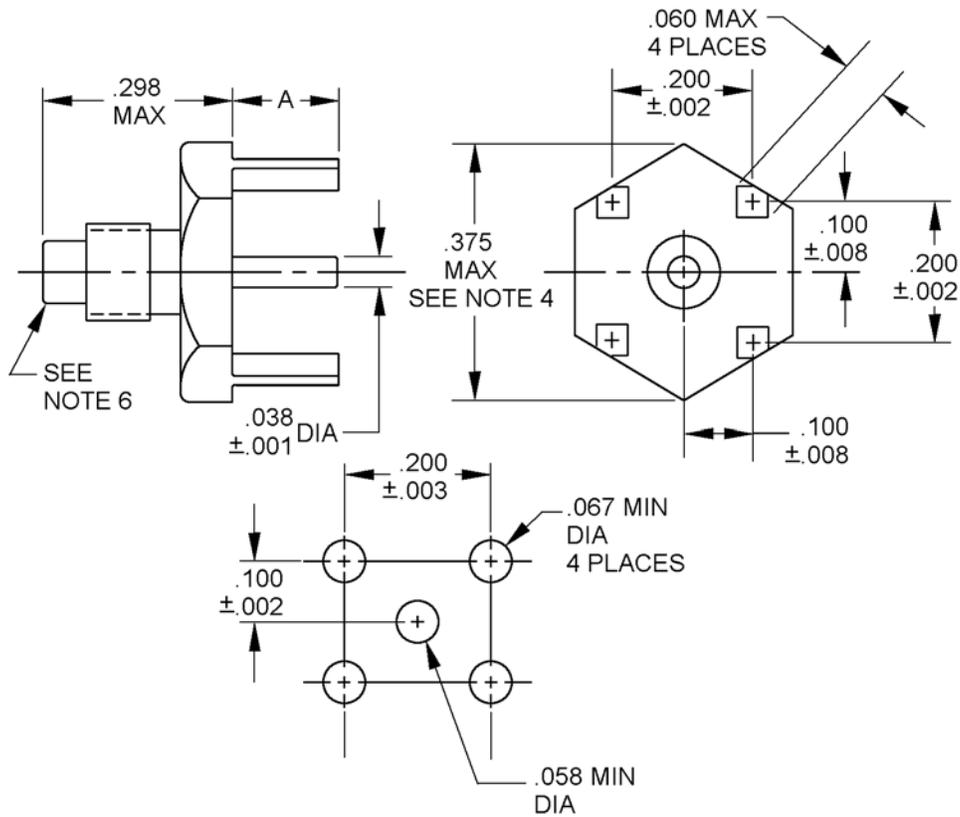
MIL-PRF-39012/133A  
w/AMENDMENT 2  
15 July 2016  
SUPERSEDING  
MIL-PRF-39012/133A AMD 1  
5 April 2002  
MIL-PRF-39012/133A  
15 November 1993

PERFORMANCE SPECIFICATION SHEET

CONNECTORS, RECEPTACLE, ELECTRICAL, COAXIAL, RADIO FREQUENCY,  
SERIES SMC, PRINTED CIRCUIT BOARD MOUNT

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.



Recommended mounting hole configuration

FIGURE 1. General configuration.



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Dash number	Dimension A
0001 <u>5/</u>	.155 (3.94) ± .010 (0.25)
0002 <u>5/</u>	.125 (3.18) ± .010 (0.25)
0003 <u>5/</u>	.093 (2.36) ± .010 (0.25)
0004 <u>7/</u>	.155 (3.94) ± .010 (0.25)
0005 <u>7/</u>	.125 (3.18) ± .010 (0.25)
0006 <u>7/</u>	.093 (2.36) ± .010 (0.25)

Inches	mm	Inches	mm
.001	0.02	.060	1.52
.002	0.05	.067	1.70
.003	0.08	.100	2.54
.008	0.20	.200	5.08
.038	0.97	.298	7.57
.058	1.47	.375	9.52

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All undimensioned pictorial configurations are for reference purposes only.
4. Configuration of base optional. Dimension .375 (9.52 mm) is the maximum envelope diameter.
5. Connector bodies shall be gold plated in accordance with ASTM B488, type II, code C, class 1.27.
6. Series SMC interface shall be in accordance with MIL-STD-348.
7. Connector bodies shall be silver plated in accordance with MIL-PRF-39012.

FIGURE 1. General configuration – Continued.

ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 4 GHz.

Voltage rating: 335 volts rms maximum at sea level; 85 volts rms maximum at 70,000 feet.

Temperature rating: -65°C to +165°C.

REQUIREMENTS:

Dimensions and configuration: See figure 1 and MIL-STD-348.

Force to engage and disengage:

Longitudinal force: Not applicable.

Torque: 16 inch-ounces maximum.

Coupling proof torque: Not applicable.

Inspection conditions: Torque to 35 to 50 inch-ounces.

Mating characteristics: See MIL-STD-348 for dimensions.

Hermetic seal: Not applicable.

Leakage (pressurized connectors): Not applicable.

Insulation resistance: In accordance with MIL-STD-202-302, test condition B; 1,000 megohms minimum.

Center contact retention:

Minimum axial force: 6.0 pounds from mating end; 4.0 pounds from opposite end.

Torque: 3 inch-ounces.

Solderability: In accordance with MIL-STD-202-208. For quality conformance inspection, the test shall be performed in group B following VSWR; test 5 samples with no failures permitted.

Salt atmosphere (corrosion): In accordance with MIL-STD-202-101, test condition B.

Voltage standing wave ratio (VSWR): Not applicable.

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Connector durability:

Insertion and withdrawal force: 500 cycles minimum at 12 cycles per 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	6.0	8.0
Outer contact	1.0	1.5
Braid to body	Not applicable	Not applicable

Dielectric withstanding voltage at sea level: In accordance with MIL-STD-202-301, 1,000 volts rms.

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

Shock (specified pulse): In accordance with MIL-STD-202-213, test condition I.

Thermal shock: In accordance with MIL-STD-202-107, test condition B.

Moisture resistance: Not applicable.

Corona level: Not applicable.

RF high potential withstanding voltage:

Voltage and frequency: 600 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.

Part or Identifying Number (PIN): M39012/133- (dash number from figure 1).

Group qualification: See table I.

NOTE: This specification sheet supersedes DESC drawing 85139 when a QPL source is obtained.

TABLE I. Group qualification and retention testing.

Group	Submission and qualification of any of the following connectors <sup>1/</sup>	Qualifies the following connectors
I	M39012/133-0001	M39012/133-0001
	M39012/133-0002	M39012/133-0002
	M39012/133-0003	M39012/133-0003
	M39012/134-0001	M39012/134-0001
	M39012/134-0002	M39012/134-0002
	M39012/134-0003	M39012/134-0003
II	M39012/133-0004	M39012/133-0004
	M39012/133-0005	M39012/133-0005
	M39012/133-0006	M39012/133-0006
	M39012/134-0004	M39012/134-0004
	M39012/134-0005	M39012/134-0005
	M39012/134-0006	M39012/134-0006

<sup>1/</sup> For qualification retention, where more than one part is listed in a group in this column, data may be supplied on any of these parts in order to retain qualification for those parts in the corresponding right hand column. The part used for qualification retention does not have to be the part initially qualified.

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Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

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

MIL-STD-202-101	MIL-STD-202-213	MIL-STD-348
MIL-STD-202-107	MIL-STD-202-301	ASTM B488
MIL-STD-202-204	MIL-STD-202-302	
MIL-STD-202-208		

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:  
DLA - CC

(Project 5935-2016-106)

Review activities:

Army - AM, AT, CR4, MI, AR  
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>.