

INCH-POUND

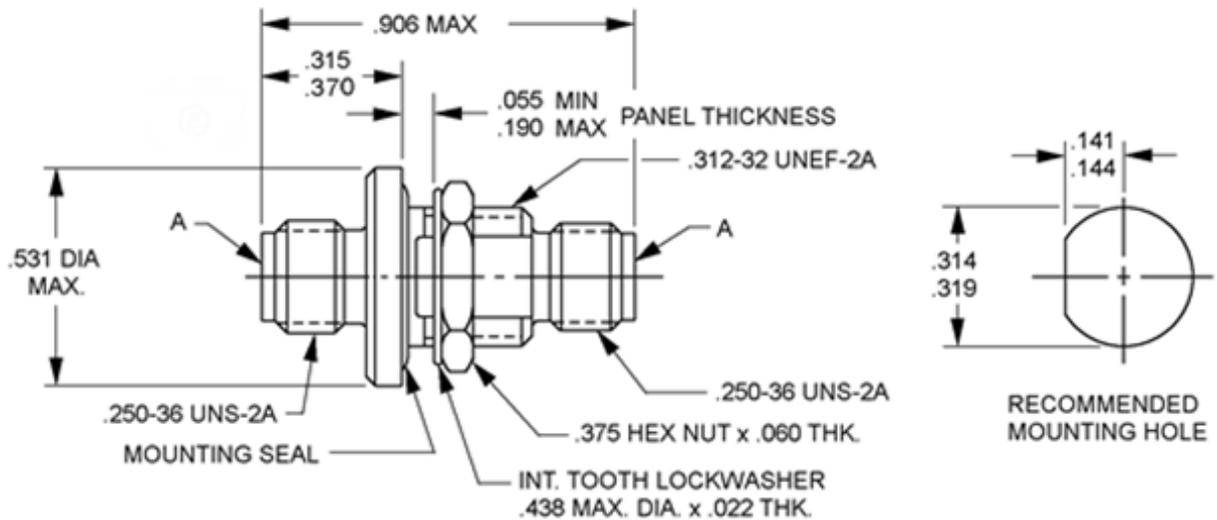
MIL-PRF-55339/28C
w/AMENDMENT 1
20 April 2016
SUPERSEDING
MIL-A-55339/28C
17 January 2015

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, IN-LINE, JAMNUT AND
FLANGE MOUNTED, (WITHIN SERIES SMA PLUG TO SERIES SMA PLUG
HERMETIC AND NON-HERMETIC), 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-55339.



Reference	Series	Contact
A	SMA	Socket

INCHES	MM	INCHES	MM
.015	.38	.314	7.98
.022	.56	.315	8.00
.055	1.40	.319	8.10
.060	1.52	.370	9.40
.141	3.58	.375	9.52
.144	3.68	.438	11.13
.190	4.83	.531	13.49
.250	6.35	.906	23.01
.312	7.92		

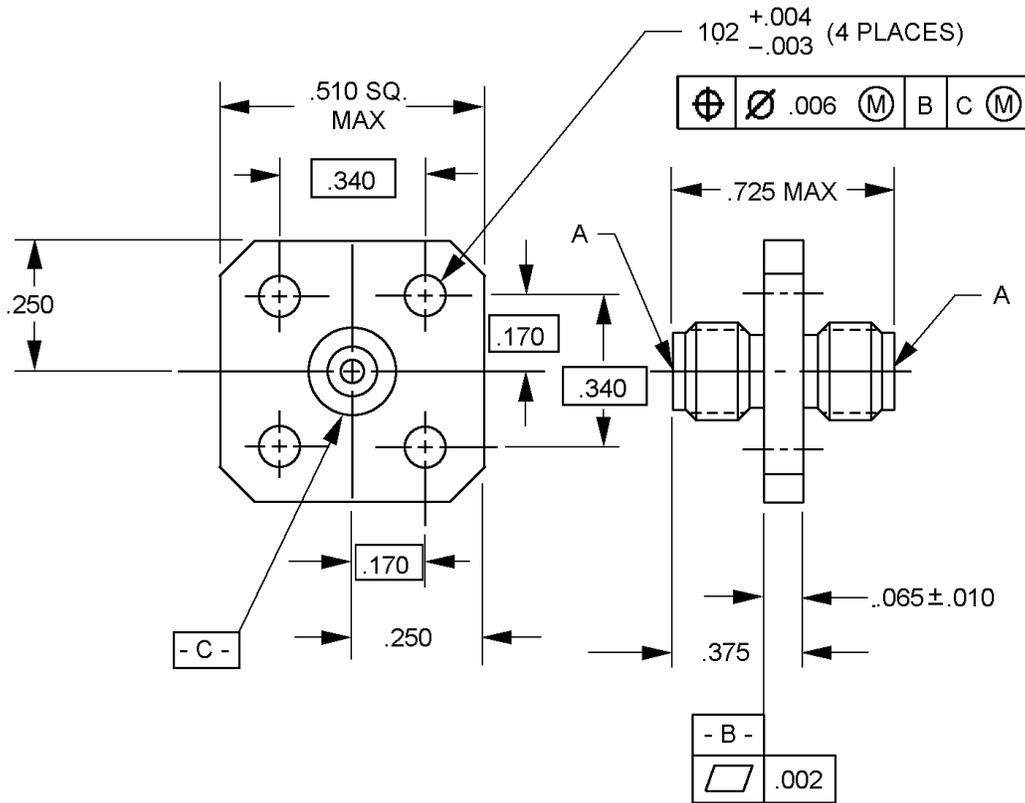
(Jam nut mount, Hermetic)

FIGURE 1. General configuration.

AMSC N/A

FSC 5935





| (Flange mount, Non-Hermetic)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All undimensioned pictorial representations are for reference purposes only.
4. Unless otherwise specified, tolerance are \pm .005 (0.13 mm) on three place decimals and \pm .010 (0.25 mm) on two place decimals.
5. Interfaces shall be per MIL-STD-348.

FIGURE 1. General configuration – Continued.

DESIGN AND CONSTRUCTION:

General configuration: See figure 1.

Impedance: 50 ohms, nominal.

Working voltage:

Sea level: 335 V rms.
70,000 feet: 85 V rms.

Frequency range: 0.5 to 12.4 gigahertz (GHz).

Temperature range: -65°C to +165°C.

PERFORMANCE:

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

Center contact retention:

Axial force: 6 pounds, minimum.
Torque: Not applicable.

Force to engage and disengage:

Longitudinal force: Not applicable.
Torque: 2 inch-pounds maximum.

Mating characteristics:

Center contact (socket):

Oversize test pin diameter: .0375 + .0001 inch minimum.
Pin finish: 16 microinches.
Insertion depth: .030/.045 inch minimum.
Number of insertions: 3.

Maximum test pin (insertion force test):
Steel test pin diameter: .0370 + .0001 inch minimum.
Pin finish: 16 microinches.
Insertion force: 3 pounds, maximum.
Insertion depth: .050/.075 inch minimum.
Number of insertions: 1.

Minimum test pin (withdrawal force):
Steel test pin diameter: .0355 - .0001 inch minimum.
Pin finish: 16 microinches.
Withdrawal force: 1 ounce, minimum.
Insertion depth: .050/.075 inch minimum.
Number of withdrawals: 1.

Permeability: Applicable to non-hermetic adapters.

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Seal: Applicable to hermetic adapters only:

Hermetic: Leakage through the connector shall not exceed 1×10^{-7} cc/s of tracer gas at atmospheric pressure.

Pressurized: Not applicable.

Weatherproof: 30 psi maximum mounting seal.

Insulation resistance: 5,000 megohms, minimum.

VSWR: $1.10 + .015 F(\text{GHz})$ at 0.5 to 12.4 GHz.

RF leakage (total): -60 dB, minimum, 2 to 3 GHz.

RF insertion loss: $.15 \sqrt{F}$ (GHz) dB maximum, tested at 6 GHz.

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

Dielectric withstanding test voltage: 1,000 V rms, minimum (sea level).

Contact resistance (milliohms, maximum):

Non-hermetic			Hermetic		
Contact	Initial	After	Contact	Initial	After
Center	8.0	10.0	Center	12.0 Hermetic	12.0
Outer	4.0 Non-hermetic	Not applicable	Outer	4.0	Not applicable

Vibration, high frequency: Interruptions, 1 microsecond (μs), maximum. Test condition D.

Shock: Test condition I.

Thermal Shock: Test condition C.

Moisture resistance: 200 megohms, minimum.

Corona level:

Voltage: 250 V, minimum.

Altitude: 70,000 feet, minimum.

RF high potential withstanding voltage:

RF voltage: 670 V rms, minimum.

Frequency: 5 megahertz (MHz), minimum.

Salt spray (corrosion): Test condition B.

Marking: As specified in MIL-PRF-55339.

Part or Identifying Number (PIN): M55339/28-30001 (Hermetic) (Jam nut mount),
M55339/28-40001 (Hermetic) (Jam nut mount).
M55339/28-30002 (Non-Hermetic) (Flange mount),
M55339/28-40002 (Non-Hermetic) (Flange mount).

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Group qualification: See table I.

TABLE I. Group qualification.

Group	Submission and qualification of any of the following connectors <u>1/</u>	Qualifies the following connectors
1	M55339/28-X0001 <u>2/</u>	M55339/28-X0001 <u>2/</u> M55339/28-X0002

1/ Qualification of connectors qualifies connectors of the same body material and finish only.

2/ X denotes material.

Cross reference: See table II.

TABLE II. Supersession and cross reference.

Military part number	Superseded part number	
	CAGE 60617	CAGE 95077
M55339/28-30001	2084-8001-90 2084-8001-92	SF2991-6020

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-DTL-55339, this document references the following:

MIL-STD-348

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

Review activities:

Army – AR, AT, MI
Navy – AS, MC, OS
Air Force – 19, 99

(Project 5935-2016-055)

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 information above using the ASSIST Online database at <https://assist.dla.mil>.