

INCH-POUND

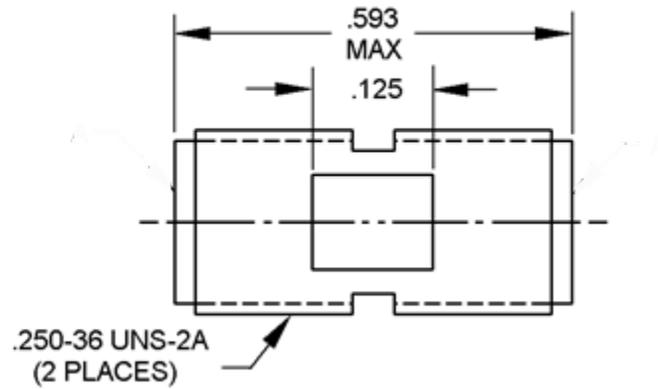
MIL-PRF-55339/31B
28 January 2015
SUPERSEDING
MIL-PRF-55339/31A
28 February 1979

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, IN-LINE,
(WITHIN SERIES SMA JACK TO SMA SERIES JACK), 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.



Inches	mm
.125	3.18
.250	6.35
.593	15.06

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, tolerances are $\pm .005$ (.13 mm) on three place decimals and $\pm .010$ (.25 mm) on two place decimals.
5. Interface shall be in accordance with MIL-STD-348.

FIGURE 1. General configuration jack-plug-jack.



DESIGN AND CONSTRUCTION:

General configuration: See figure 1.

Impedance: 50 ohms, nom.

Working voltage: Sea level – 335 Vrms.
70,000 feet – 85 Vrms.

Frequency range: 0.5 to 18 GHz.

Temperature range: -65° to +165°c.

PERFORMANCE

Dimensions: See figures 1 and 2.

Center contact retention: Axial force – 6 lb, min.
Torque – Not applicable.

Force to engagement and disengage: Longitudinal force – Not applicable.
Torque – 2 in. lb, max.

Coupling proof torque: Not applicable.

Mating characteristics:

Center contact (socket):

Oversize test pin dia - .0375 in., min.
Pin finish – 16 microinches.
Insertion depth - .030/.045 in., min.
No. of insertions – 3.

Max test pin (insertion force test):

Steel test pin dia - .0370 in., min.
Pin finish – 16 microinches.
Insertion depth .050/.075 in., min.
Insertion force – 3 lbs. max.
No. of insertions – 1.

Min test pin (withdrawal force):

Steel test pin dia - .0355 in., min.
Pin finish – 16 microinches.
Insertion depth .050/.075 in., min.
Withdrawal force – 1 oz, min.
No. of withdrawals – 1.

Permeability: <2.0.

Seal:

Pressurized – Not applicable.
Weatherproof – Not applicable.

Insulation resistance: 5,000 megohms, min.

VSWR: 1.10 + .008 F(GHz) at .5 to 18.0 GHz.

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

RF insertion loss. $(.06 \sqrt{F \text{ (GHz)}})$ dB max tested at 6 GHz).

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

Dielectric withstanding: Test voltage -1,500 Vrms, min (sea level).

Contact resistance (milliohms, max):

Contact	Initial	After
Center	4.0	6
Outer	2.0	Not applicable

Vibration, high frequency: Method 204, MIL-STD-202, test condition D, interruptions – 1 μ s, maximum.

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

Thermal shock: Method 107, MIL-STD-202, test condition C.

Moisture resistance: 200 megohms, min.

Corona level: Voltage – 250 V, min.
Altitude – 70,000 feet, min.

RF high potential withstanding voltage: RF voltage – 670 Vrms, min.
Frequency – 5 MHz, min.

Salt spray (corrosion): Test condition B.

Part or Identifying Number (PIN): As specified in MIL-PRF-55339.

Part No. M55339/31-30001
M55339/31-40001

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-DTL-55339, this document references the following:

MIL-STD-202
MIL-STD-348

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:
DLA - CC

Review activities:

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

(Project 5935-2015-019)

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>.