

INCH-POUND

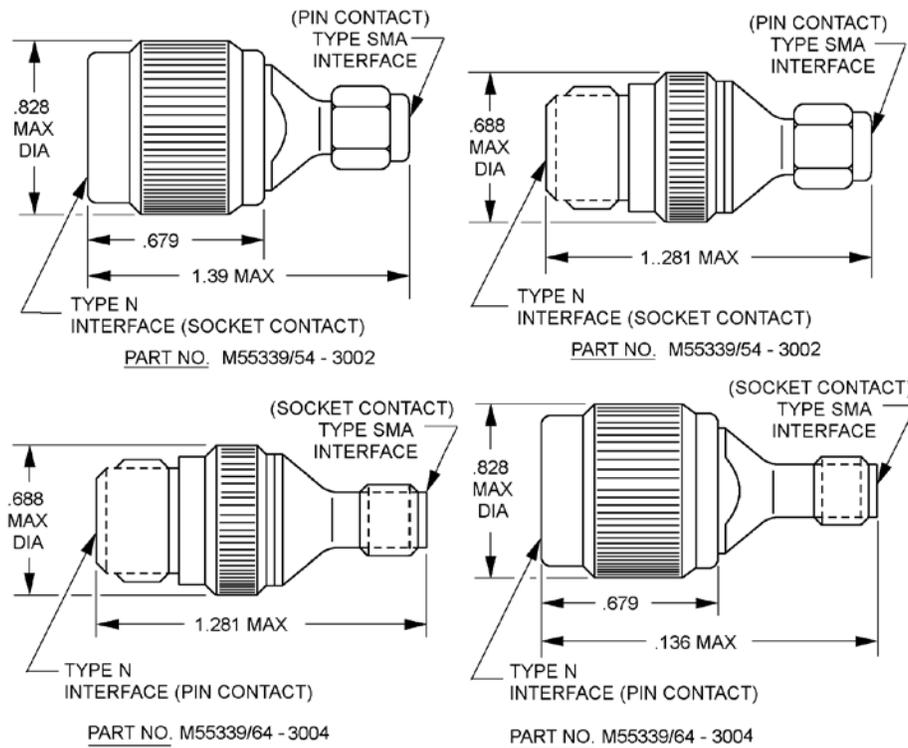
MIL-PRF-55339/54A
30 April 2015
SUPERSEDING
MIL-PRF-55339/54
8 February 1989

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, ELECTRICAL, COAXIAL, RADIO FREQUENCY, (BETWEEN SERIES SMA TO N)

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.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .015$ (0.38 mm).
4. All undimensioned pictorial configurations are for reference purposes only.
5. Interfaces shall be in accordance with MIL-STD-348.

Inches	mm
.679	17.25
.688	17.48
.828	21.03
1.36	34.5
1.38	35.1

FIGURE 1. General configuration.



ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 18 GHz.

Voltage range: 355 V rms at sea level, 85 V rms at 70,000 feet.

Operating temperature range: -65°C to +165°C.

REQUIREMENTS:

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

Inspection conditions: For each test of threaded coupling connectors where the test is performed on mated pairs, the pairs shall be torqued to 7 to 10 inch-pounds.

Permeability: Less than 2.0, air = 1.0.

Seal:

Pressurized: Not applicable.

Weatherproof: Not applicable.

Insulation resistance: 5,000 megohms, minimum.

VSWR:

1.06 + .005 F (GHz); dc to 12.4 GHz.

.83 + .023 F (GHz); 12.4 to 18 GHz.

RF leakage: -65 dB, minimum, 2 to 3 GHz.

RF insertion loss: .18 dB, maximum, at 9 GHz.

Dielectric withstanding voltage: 1,000 V rms at sea level, minimum.

Contact resistance (milliohms, maximum):

Contact	Initial	After environmental
Center	4.1 ^{1/}	6.0
Outer	2.2	Not applicable

^{1/} Two center contacts must be mated to the center conductor under test, therefore doubling "center contact" resistance.

Vibration, high frequency: Interruptions, 1 μs maximum. Method 204 of MIL-STD-202, test condition D.

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

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

Moisture resistance: 200 megohms, minimum, method 106 of MIL-STD-202 within 5 minutes after removal from humidity.

Corona level:

Voltage: 375 V, minimum, at 70,000 feet minimum.

RF high potential withstanding voltage:

RF voltage: 1,000 V rms, minimum at 5 MHz minimum.

Salt spray: Method 101 of MIL-STD-202, test condition B.

Center contact retention:

Axial force: 6 pounds, minimum.

Torque: Not applicable.

Force to engage and disengage:

	<u>Series N</u>	<u>Series SMA</u>
Longitudinal force:	Not applicable	Not applicable
Torque: (inch-pounds, maximum)	6.0	2.0

Coupling proof torque: 15 inch-pounds, minimum.

Durability: 500 cycles, minimum at 12 cycles per minute, maximum.

Coupling mechanism retention force: 60 pounds, minimum.

Group qualification: See table I.

MARKING: As specified in MIL-PRF-55339.

Part or Identifying Number (PIN). M55339/53-30001
M55339/53-40001

TABLE I. Group qualification.

Group	Submission and qualification of any of the following connectors	Qualifies the following connectors
1	M55339/54-30001 M55339/54-30002 M55339/54-30004	M55339/54-30001 M55339/54-30002 M55339/54-30003 M55339/54-30004

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-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

(Project 5935-2015-030)

Review activities:

Army - AR, AT, EA, MI
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 information above using the ASSIST Online database at <https://assist.dla.mil>.