

INCH-POUND

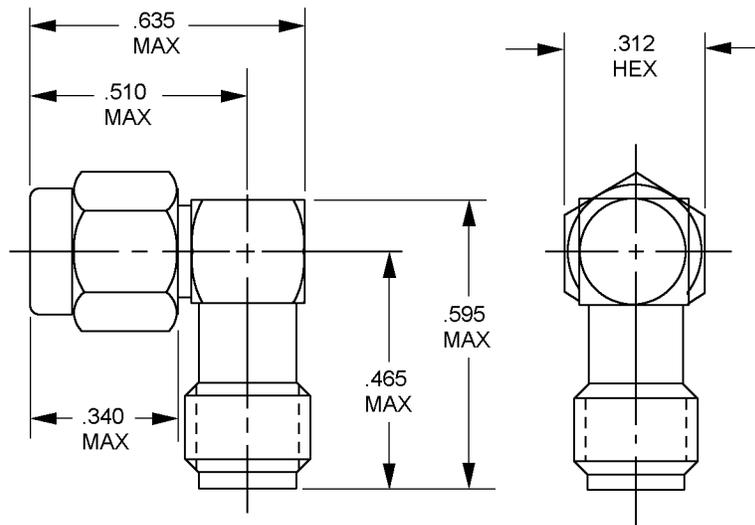
MIL-PRF-55339/2B
17 January 2015
SUPERSEDING
MIL-A-55339/2A(USAF)
4 August 1975

PERFORMANCE SPECIFICATION

ADAPTERS, CONNECTOR, COAXIAL, RADIO FREQUENCY, (SERIES SMA), CLASS 2, RIGHT ANGLE, MALE TO FEMALE

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 |
|--------|-------|
| .312 | 7.92 |
| .340 | 8.64 |
| .465 | 11.81 |
| .510 | 12.95 |
| .595 | 15.11 |
| .635 | 16.13 |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only. Interface dimensions shall be in accordance with MIL-STD-348.

FIGURE 1. Dimensions and configurations.



DESIGN AND CONSTRUCTION:

| | |
|---------------------------------------|-------------------|
| General configuration - - - - - | See figure 1. |
| Center contact spring member- - - - - | Copper beryllium. |
| Impedance - - - - - | 50 ohms, nom. |
| Working voltage: | |
| Sea level - - - - - | 335 Vrms. |
| 70,000 feet- - - - - | 85 Vrms. |
| Frequency range- - - - - | 0 to 12.4 GHz. |
| Temperature range - - - - - | -65° to +165°C. |

PERFORMANCE (for each test of a threaded coupling connector where the test is performed on mated pairs, the pairs shall be torqued 7 to 10 inch pounds [.791 to 1.13 Nm]).

Dimensions – See figure 1.

Center contact retention:

- Axial force – 6 lb, min.
- Torque – 4 in. oz, min.

Force to engage and disengage:

See table I.

Coupling proof torque: 15 in. lb, min.

Mating characteristics:

Center contact – See table I.

Outer contact – Not applicable.

Permeability: Less than 2.0

Seal (hermetic pressurized, and weatherproof). Not applicable.

Insulation resistance: Method 302 of MIL-STD-202, test condition B. 5,000 megohms, min.

VSWR: $1.05 + .010 F$, (F in GHz) max, at .5 to 12.4 GHz.

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

RF insertion loss: $(.05 \sqrt{F(\text{GHz})})$ dB max 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 voltage: Method 301 of MIL-STD-202. Test voltage – 1,000 Vrms, max, at sea level.

Contact resistance (in milliohms, max).

| | Initial | After environment |
|----------------|---------|-------------------|
| Center contact | 4.0 | 6.0 |
| Outer contact | 2.0 | N/A |

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

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

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

Moisture resistance: Method 106 of MIL-STD-202. Insulation resistance – 200 megohms, min.

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

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

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

Coupling mechanism retention force: 60 lbs, min.

Marking: As specified in MIL-DTL-55339.

TABLE I. Performance characteristics.

| Characteristic | Test value | |
|---|---------------|-----------------------|
| | MALE | FEMALE |
| Force to engage and disengage | | |
| Longitudinal force ----- | N/A | N/A |
| Torque ----- | 2 in. lb, max | 2 in. lb, max |
| Mating characteristics (center contact) | | |
| Oversize test pin | | |
| (inserted .030/.045 in. deep) ----- | | .0375 + .0001 in. dia |
| Max. test pin (insertion force 3 lb, max) | | |
| (insertion depth .050/.075) ----- | | .0370 in. dia |
| Min test pin (withdrawal force 1 oz, min) | | |
| (insertion depth .050/.075) ----- | | .0355 - .0001 in. dia |

Part or Identifying Number (PIN): M55339/02-30001, -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

(Project 5935-2015-015)

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>.