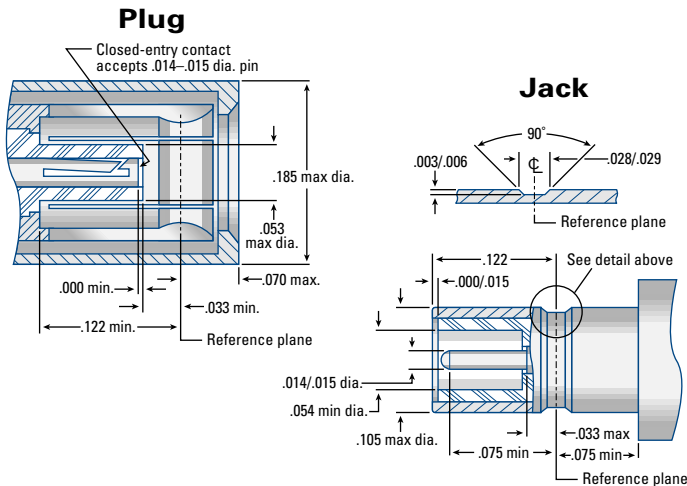
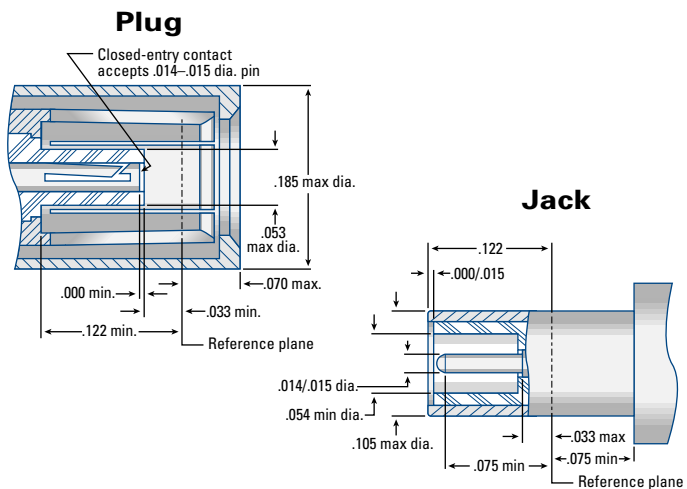


# SSMB/SSLB/SSMC Specifications

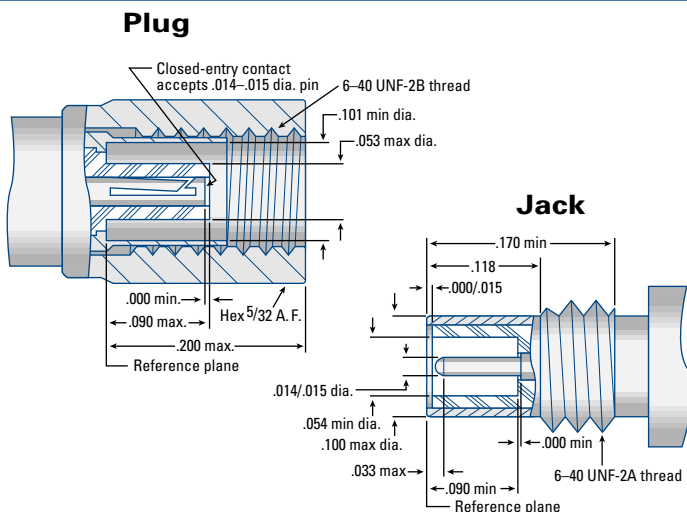
## SSMB Interface Dimensions



## SSLB Interface Dimensions



## SSMC Interface Dimensions



## Specifications

### SSMB and SSLB (MIL-PRF-39012 as applicable)

#### Materials:

**Plug spring fingers, center contacts:** Beryllium copper per ASTM-B-196, Condition HT.  
**Crimp sleeves:** Seamless copper tube per ASTM-B-75, type C12000, temper: light anneal 050.  
**Other metal parts:** Brass per ASTM-B-16, Alloy 360, 1/2 hard.  
**Insulators:** Teflon (TFE) per ASTM-D-1710.

#### Finish:

**Center contacts:** Gold plated per current revision of MIL-PRF-39012\*  
**Other metal parts:** Gold plated to meet current MIL-PRF-39012 corrosion requirements.\*

#### Electrical:

**Impedance:** 50Ω. **Frequency range:** DC-12.4 GHz.  
**Voltage Rating:** 250VRMS @ sea level; 60 VRMS @ 70,000 ft.  
**Insulation Resistance:** 1,000 megohms minimum.

#### Contact Resistance:

**Center contact:** Initial: 4.0 milliohms maximum;  
after environmental test conditions: 6.0 milliohms maximum.  
**Outer contact:** Initial: 1.0 milliohms maximum;  
after environmental test conditions: 1.5 milliohms maximum.

**Cable braid to body:** Initial: 1.0 milliohms maximum; after environmental test conditions: N/A.

**Corona level:** 125V @70,000 ft. **RF highpot:** 400 VRMS @ 5 MHz.

**RF leakage:** -70 dB min @ 2-3 GHz. **Insertion loss:** .30 dB max @ 1.5 GHz.

VSWR:	Cable	Straight connector	Right angle connector
RG-178	1.25 + (.020 x F[GHz])	1.25 + (.030 x F[GHz])	1.25 + (.030 x F[GHz])
RG-316	1.30 + (.020 x F[GHz])	1.30 + (.030 x F[GHz])	1.30 + (.030 x F[GHz])
.085" semi-rigid	1.25 + (.015 x F[GHz])	1.25 + (.025 x F[GHz])	1.25 + (.025 x F[GHz])

#### Mechanical:

**Force to engage:** *SSMB:* Initial, 6 pounds max engagement, 2 pounds min disengagement.  
After 500 matings, 6 pounds max engagement, 1 pound min disengagement.  
*SSLB:* Initial, 3 pounds max engagement, .5 pounds min disengagement.

**Contact retention:** 2 pounds min axial force.

**Durability:** 500 mating cycles.

#### Environmental (MIL-STD-202):

**Temperature range:** -65° C to +165° C. **Corrosion:** Method 101, condition B, 5% salt solution.

**Vibration (Method 204):** *SSMB:* Condition B (15G), *SSLB:* Condition A (10G).

**Mechanical shock (Method 213):** *SSMB:* Condition B, 75G @ 6 ms @ 1/2 sine, *SSLB:* N/A.

### SSMC (MIL-PRF-39012 as applicable)

#### Materials:

**Jack mating ends, center contacts:** Beryllium copper per ASTM-B-196, Condition HT.  
**Crimp sleeves:** Seamless copper tube per ASTM-B-75, type C12000, temper: light anneal 050.  
**Other metal parts:** Brass per ASTM-B-16, Alloy 360, 1/2 hard.  
**Insulators:** Teflon (TFE) per ASTM-D-1710.

#### Finish:

**Center contacts:** Gold plated per current revision of MIL-PRF-39012\*  
**Other metal parts:** Gold plated to meet current MIL-PRF-39012 corrosion requirements.\*

#### Electrical:

**Impedance:** 50Ω. **Frequency range:** DC-12.4 GHz.  
**Voltage Rating:** 250VRMS @ sea level; 60 VRMS @ 70,000 ft.  
**Insulation Resistance:** 1,000 megohms minimum.

#### Contact Resistance:

**Center contact:** Initial: 4.0 milliohms maximum;  
after environmental test conditions: 6.0 milliohms maximum.  
**Outer contact:** Initial: 1.0 milliohms maximum;  
after environmental test conditions: 1.5 milliohms maximum.

**Cable braid to body:** Initial: 1.0 milliohms maximum; after environmental test conditions: N/A.

**Corona level:** 125V @70,000 ft. **RF highpot:** 400 VRMS @ 5 MHz.

**RF leakage:** -50 dB min @ 2-3 GHz. **Insertion loss:** .30 dB max @ 1.5 GHz.

VSWR:	Cable	Straight connector	Right angle connector
RG-178	1.20 + (.020 x F[GHz])	1.20 + (.030 x F[GHz])	1.20 + (.030 x F[GHz])
RG-316	1.25 + (.020 x F[GHz])	1.25 + (.030 x F[GHz])	1.25 + (.030 x F[GHz])
.085" semi-rigid	1.20 + (.015 x F[GHz])	1.20 + (.025 x F[GHz])	1.20 + (.025 x F[GHz])

#### Mechanical:

**Force to engage:** 16 inch-ounces torque max.

**Mating torque:** 28-32 inch-ounces.

**Coupling nut pulloff resistance:** 25 pounds min.

**Contact retention:** 2 pounds min axial force.

**Durability:** 500 mating cycles.

#### Environmental (MIL-STD-202):

**Temperature range:** -65° C to +165° C. **Corrosion:** Method 101, condition B, 5% salt solution.

**Vibration (Method 204):** Condition D (20G).

**Mechanical shock (Method 213):** Condition B, 75G @ 6 ms @ 1/2 sine.

\*These specifications change periodically with updates to MIL-PRF-39012 requirements.  
Contact factory for latest specifications.

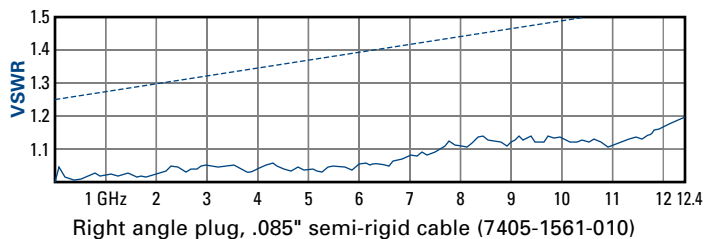
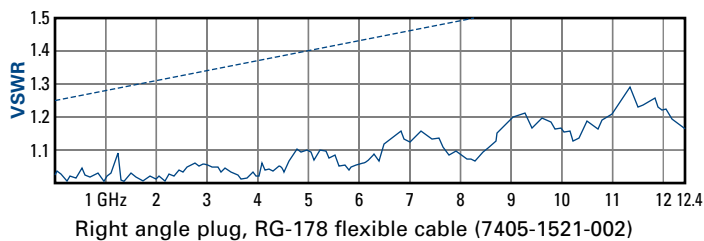
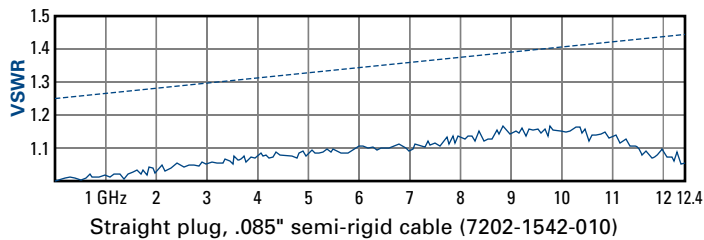
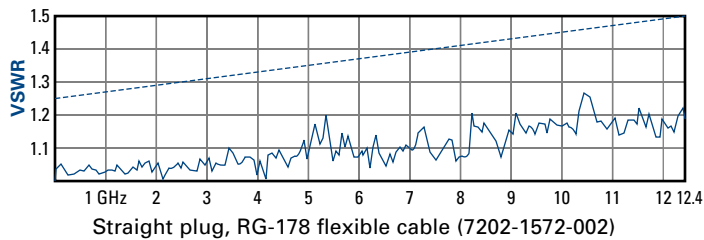
# SSMB/SSLB/SSMC Specifications

## VSWR Data

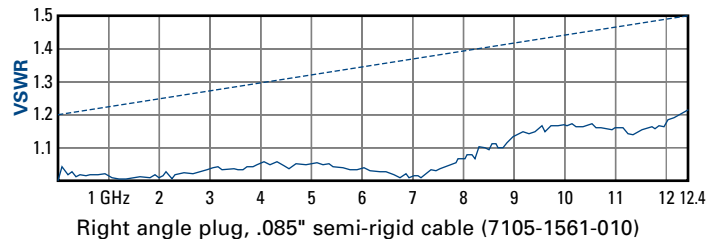
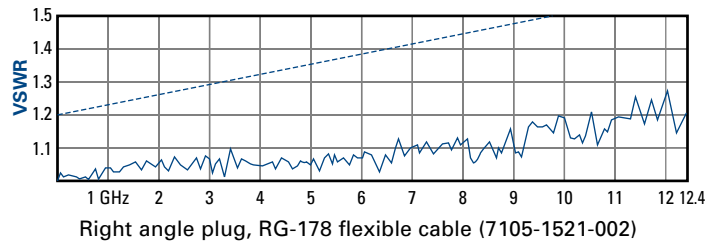
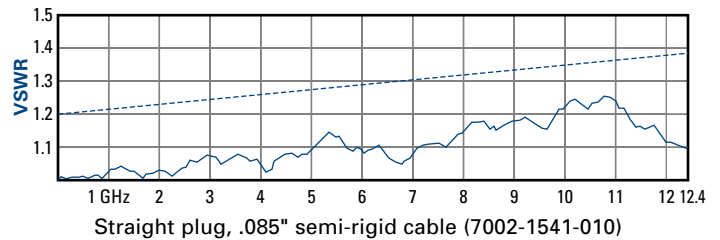
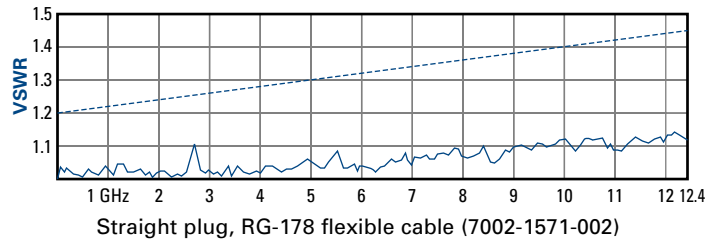
----- Specification requirement

— Actual (Connectors tested using 200' of cable as load.)

### SSMB



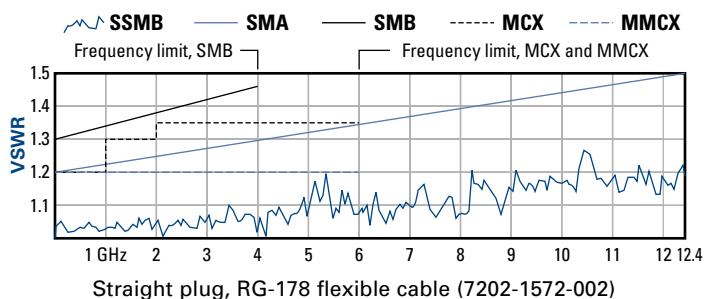
### SSMC



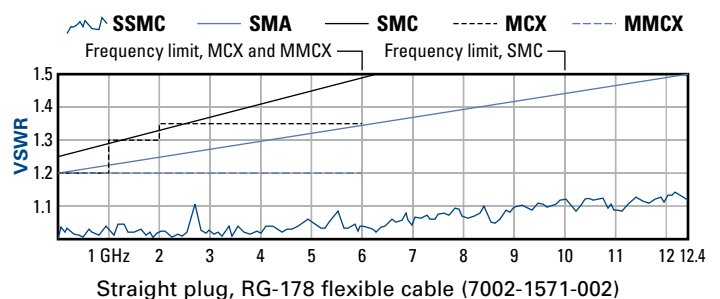
## Comparative VSWR

VSWR limits for SMA, SMB, SMC, MCX, and MMCX from MIL-PRF-39012 and/or manufacturer specifications

### SSMB



### SSMC



Note: VSWR of mated pairs in final installations is dependent on precise connector assembly to cable and/or other system components, and configuration of mating connectors.



APPLIED ENGINEERING PRODUCTS

(203) 776-2813 • FAX (203) 776-8294

www.aepconnectors.com • aepsales@aepconnectors.com