

Right Angle SMA Solution

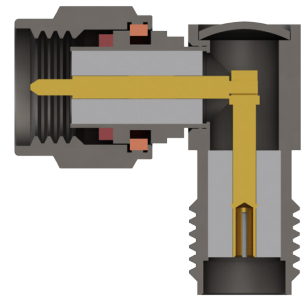
As a world leader in the RF/Microwave industry with over 50 years of proven performance, our designs and manufacturing capabilities of coaxial connectors, cable assemblies and passive components is unparalleled and ideal for military, satellite, aerospace, commercial and telecommunications applications.

Swept Body with Swept Contact versus Mitered Body with Swept Contact

Three major forms of right angle SMA connectors:

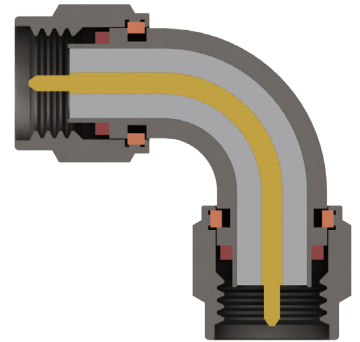
1. Solder Fork

- a. Typically uses a cap on the back for access to soldering the two center contacts or cable inner conductor
- b. Frequency range limited (DC to 12.4 GHz)
- c. Can look like the 18 GHz Mitered-Body/Swept-Contact design on drawings
- d. Body can be one or multiple piece parts



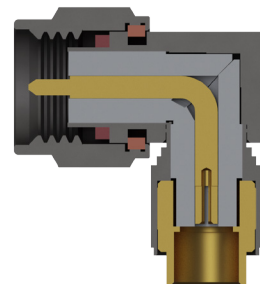
2. Swept Body and Contact

- a. Solid body construction, machined straight then bent 90°
- b. Frequency range DC to 18 GHz
- c. Found to be more inconsistent and lower performance than Mitered-Body/Swept-Contact



3. Mitered Body /Swept Contact

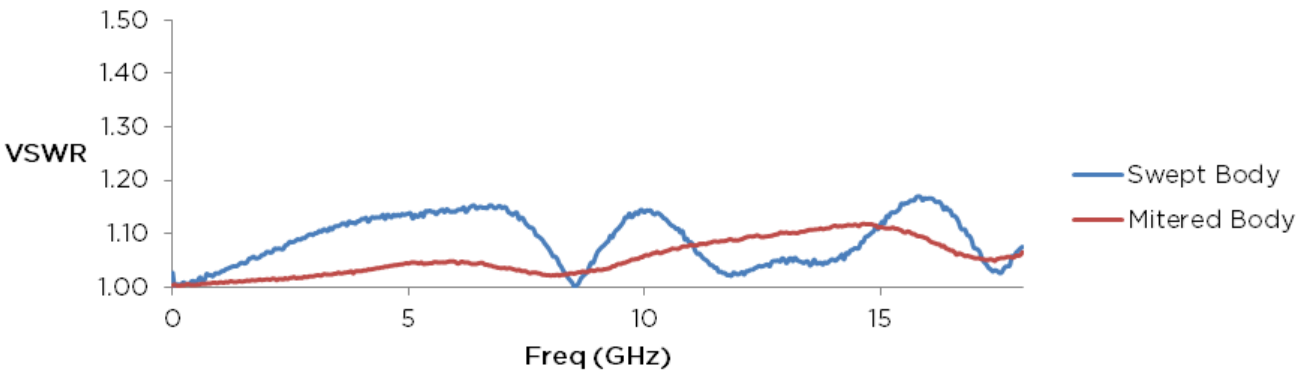
- a. Improved performance based on simulation enhancements
- b. Frequency range DC to 18 GHz



Test Results and Conclusion

Representative right angle (M - F) SMA adapters were tested over the full 18GHz frequency range on a vector network analyzer. Plots of VSWR and Insertion Loss (logarithmic trend line) performance shown below. In both cases, the mitered body SMA adapter design shows an improved and more consistent result.

VSWR
Mitered vs Swept Body



Insertion Loss
Mitered vs Swept Body

