



Secure-Locking Interconnects



Features & Benefits

- Quarter turn bayonet locking feature on standard SMP/ SMPM/SMPS interface
- Eliminates damage to PCB solder joints
- Low insertion/withdrawal force
- DC - 40GHz (SMP), 65GHz (SMPM/SMPS)

Applications

- Bench-top testing
- High vibration environments
- Applications with a high number of mating cycles
- Mil/Aero

Quick-Turn, Secure-Locking RF Connectors

Amphenol SV Microwave has developed a complete suite of spring-loaded RF interconnects featuring a bayonet-style coupling nut for quick, easy, and secure connections. This product line solves a problem typically associated with standard SMP, SMPM and SMPS RF interfaces-- namely, that the classic push-on design may come loose in high-vibration and shock environments common to military and space applications.

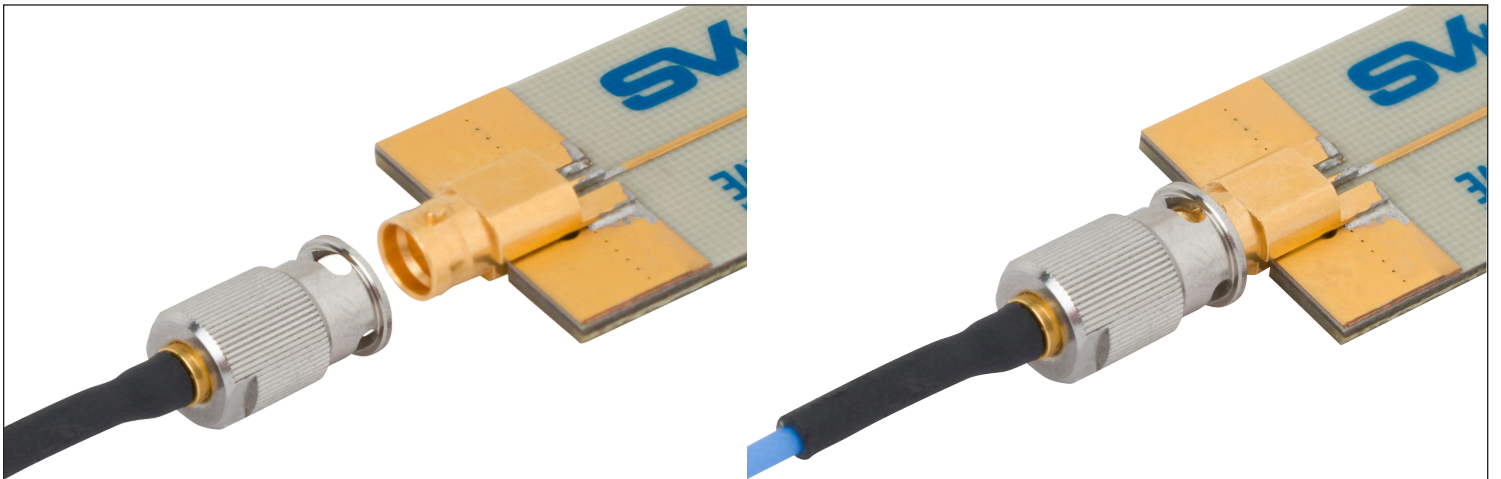
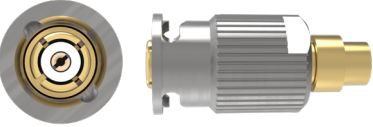
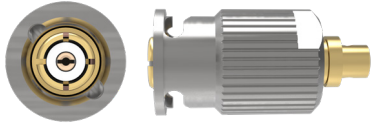
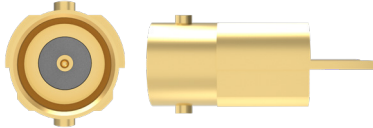
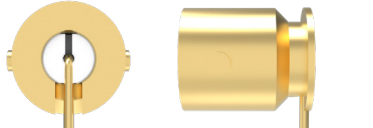
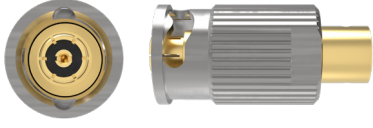


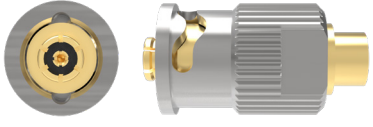
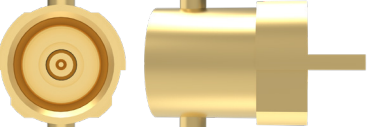
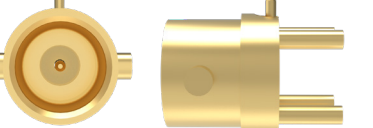
Figure 1: An SMP Female QB Cable Assembly (7012-1300) is shown with an SMP Male PCB QB Edge Launch Connector, SB (1211-66195) in both the unmated and mated positions.

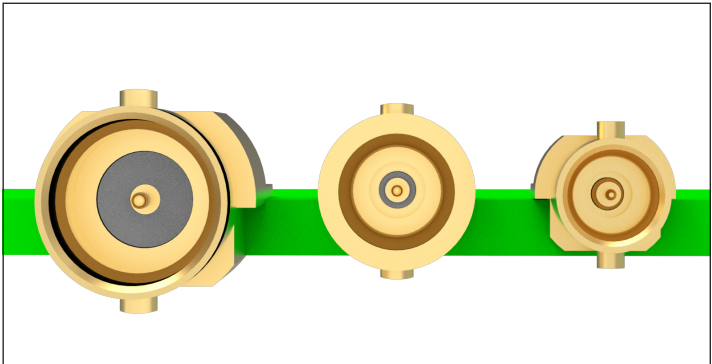
QuarterBack™ Product Line Characteristics

While the addition of the bayonet-style coupling nut detracts from the small form factor of the SMP, SMPM and SMPS interface, it still remains high-density. Below is a list of product specifications and sizes, useful when planning a system design, especially in tight packages.

SMP	
P/N: 1221-40049 SMP Female QB Cable Connector for .085 Cable	
P/N: 1221-40051 SMP Female QB Connector for .047 Cable	
P/N: 1211-66195 SMP Male QB Edge Launch Connector	
P/N: 1211-40032 SMP Male QB Surface Mount Connector	

SMPM	
P/N: 3221-60004 SMPM Female QB Connector for .085 Cable	
P/N: 3221-60003 SMPM Female QB Connector for .047 Cable	
P/N: 3211-60118 SMPM Male QB Edge Launch Connector, SB	
P/N: 3211-60112 SMPM Male QB Surface Mount Connector, R/A	

SMPS	
P/N: 3821-60008 SMPS Female QB Connector for .047 Cable	
P/N: 3811-40106 SMPS Male PCB QB Edge Launch Connector, SB	
P/N: 3811-40105 SMPS Male PCB QB Thru- Hole Connector, R/A	

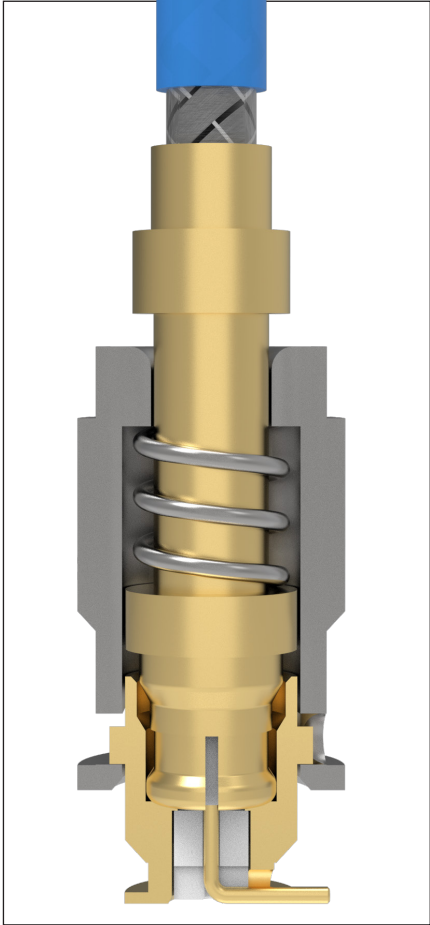


A side-by-side comparison of the SMP, SMPM, and SMPS connectors from our QuarterBack line that highlights the relative spacing between each interface on a PCB board.

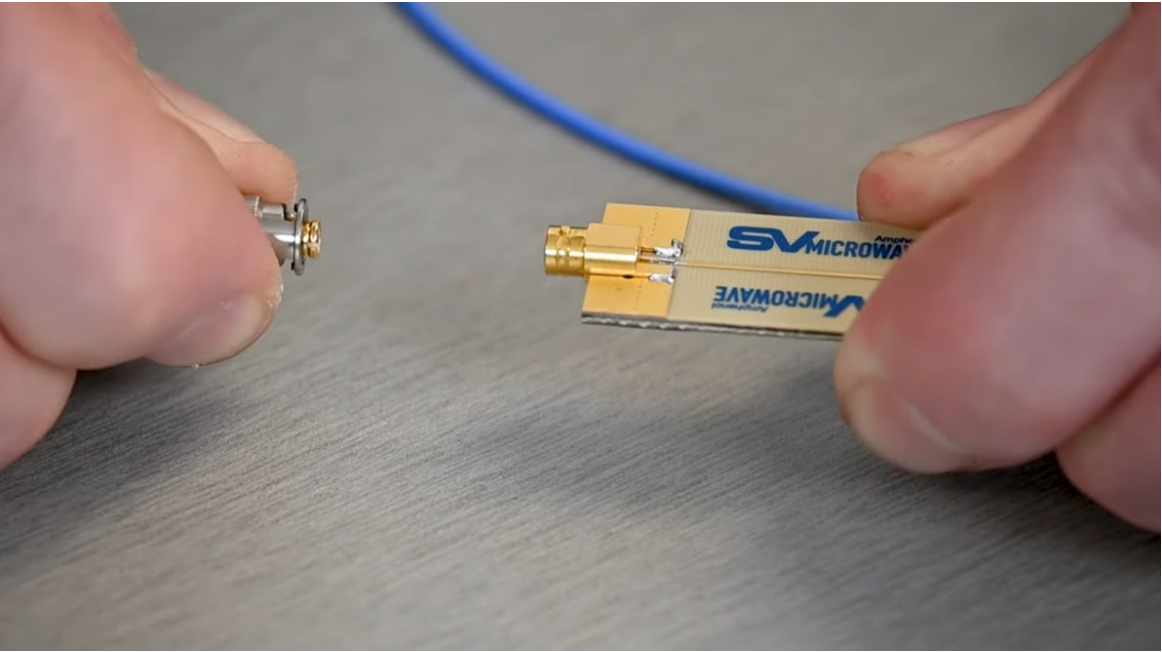
QuarterBack™ Product Line Characteristics Continued

Specifications		
Electrical	SMP	SMPM/SMPS
Impedance	50Ω	50Ω
Frequency Range	40 GHz	65 GHz
VSWR	1.15:1 to 26.5 GHz typ. 1.25:1 to 40 GHz typ.	1.10:1 to 26.5 GHz typ. 1.30:1 to 50 GHz typ.
Mechanical	SMP	SMPM/SMPS
Mating Cycles (min)	1000	500
Temperature Rating	-65 to +165°C	-65 to +165°C

Figure 2: A cross-section of a mated QB pair illustrates the spring-loaded mechanism that enables quick and reliable mating within this product line. The image shows a flexible .047” cable assembly terminated to an SMP QuarterBack. The cross-section highlights the locking lugs that allow for quick mating/de-mating and securely retains the cable assembly to the PCB connector, providing greater reliability and peace of mind in harsh or high-vibration environments.



Additional Resources



QuarterBack Bayonet Line

SV’s unique QuarterBack product line includes fixed-length RF cable assemblies and PCB connectors that utilize a quarter-turn bayonet coupling nut to quickly mate and demate. Scan the QR Code to watch now.