

SMPM-E Bullets

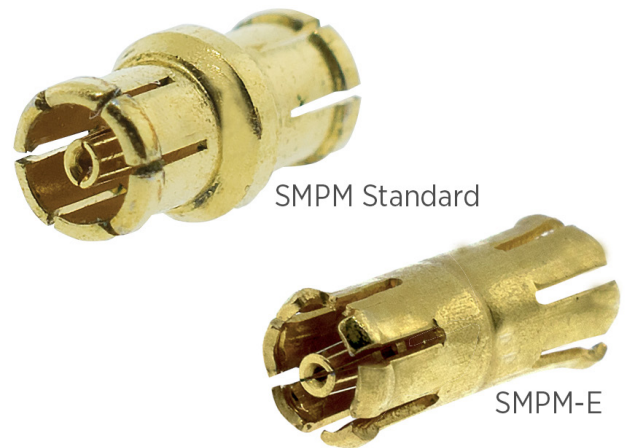
SMPM-E bullet series offer a lower cost alternative to the standard CNC machined SMPM bullet. Extensive testing has been performed to ensure that SMPM-E series meet the mechanical and electrical performance requirements of the DSCC (Defense Supply Center Columbus) that govern the standard SMPM series of connectors.

Features & Benefits

- Drop-in replacement for standard SMPM series bullets
- Economical alternative to traditional machined bodies
- Mechanical and Electrical Performance per DSCC 10019
- DC-40 GHz

Applications

- Test and Instrumentation
- Automated Test Equipment
- Phased Array Antenna Systems
- Embedded Systems Architecture
- 5G Telecommunications Antenna Systems
- Ground Based Vehicle Communications Systems
- Military and Aerospace Radar and Communications Systems



Specifications

Electrical	SMPM-E*	SMPM**
Impedance	50 ± 1Ω	50 ± 1Ω
Frequency Range	DC - 40 GHz	DC - 65 GHz
VSWR (Max Frequency)	1.15: 1 (DC - 18 GHz), 1.35:1 (18 - 40 GHz)	1.15: 1 (DC - 18 GHz), 1.35:1 (18 - 40 GHz)
Insertion Loss	0.07 * √f (GHz)	0.07 * √f (GHz)

Mechanical	SMPM-E*	SMPM**
Mating Cycles	Smooth Bore - 500, Full Detent - 100	Smooth Bore - 500, Full Detent - 100
Force to Engage / Disengage	2.5 lbs / 1.5 lbs	2.5 lbs / 1.5 lbs
Axial Misalignment	.010"	.010"
Radial Misalignment	±.010"	±.010"

*Results measured on .210" long SMPM-E bullet (P/N 1132-4089)

**Results measured on .210" long SMPM bullet (P/N 3290-4002)



The following plots compare the electrical performance of the SMPM-E bullet (P/N 1132-4089) versus a standard SV Microwave DSCC approved CNC machined SMPM bullet (P/N 3290-4002).

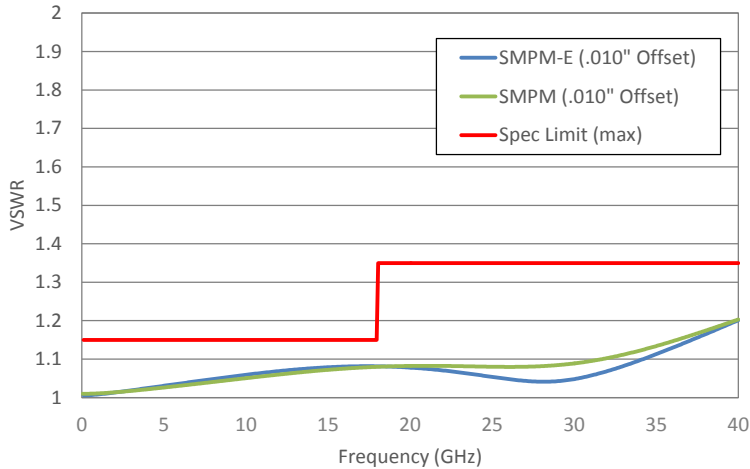


Figure 1 : VSWR Performance with Axial Offset

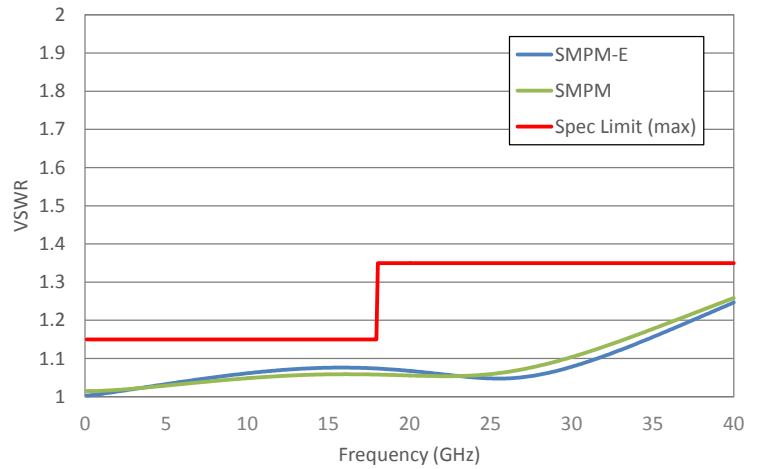


Figure 2 : VSWR Performance with Radial Offset

Mechanical durability testing on the SMPM-E bullet was also performed and measured within the specification limits of the SMPM series (Full Detent – 100 mating cycles, Smooth Bore – 500 mating cycles). Parts were mated to gages at max limits to simulate worst-case tolerance conditions.

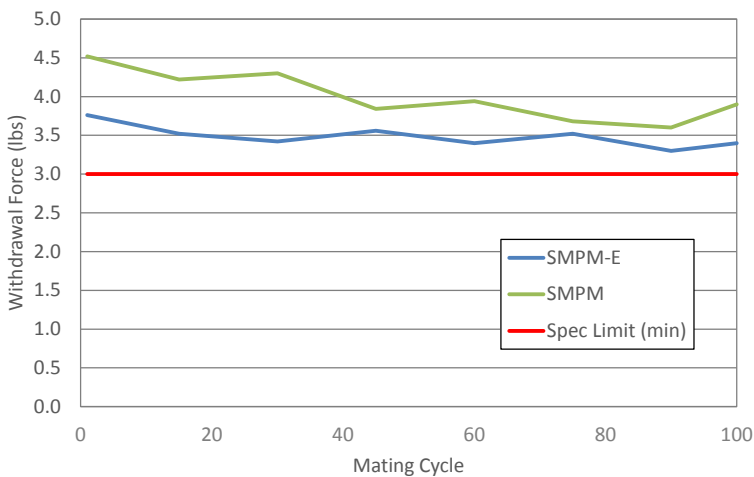


Figure 3: Full Detent Withdrawal Testing

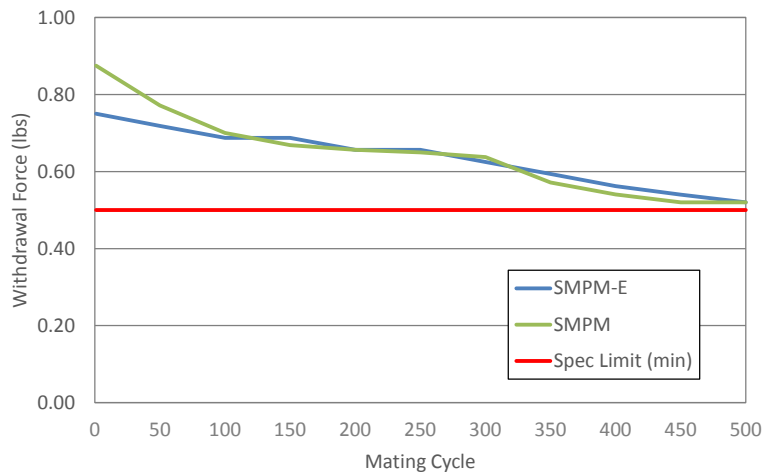


Figure 4: Smooth Bore Withdrawal Testing