

SMPM-E Bullets

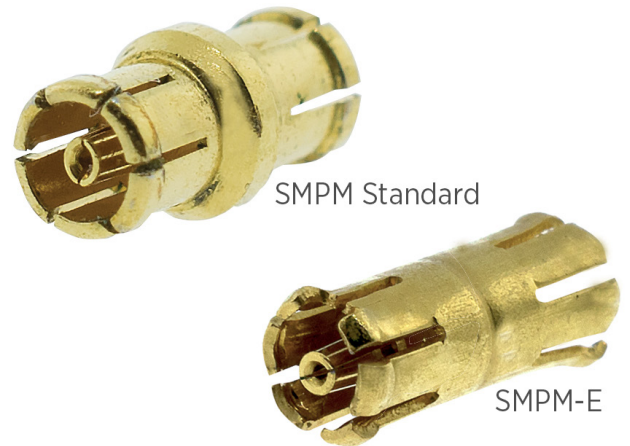
SMPM-E bullet series offer a lower cost alternative to the standard CNC machined SMPM bullet. Extensive testing has been performed to ensure that SMPM-E series meet the mechanical and electrical performance requirements of the DSCC (Defense Supply Center Columbus) that govern the standard SMPM series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

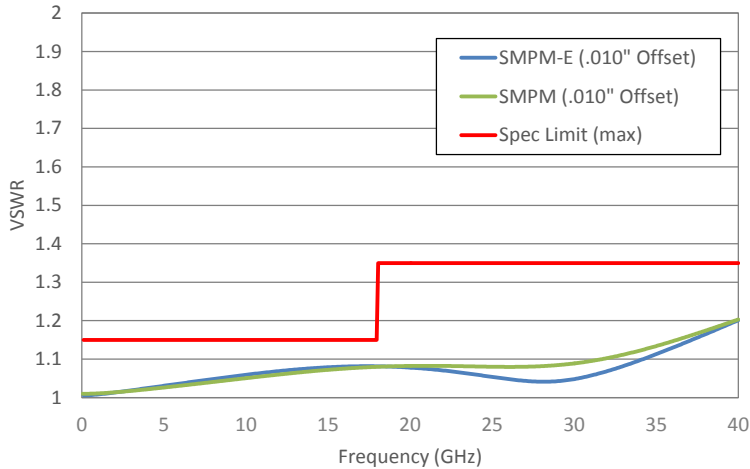


Figure 1 : VSWR Performance with Axial Offset

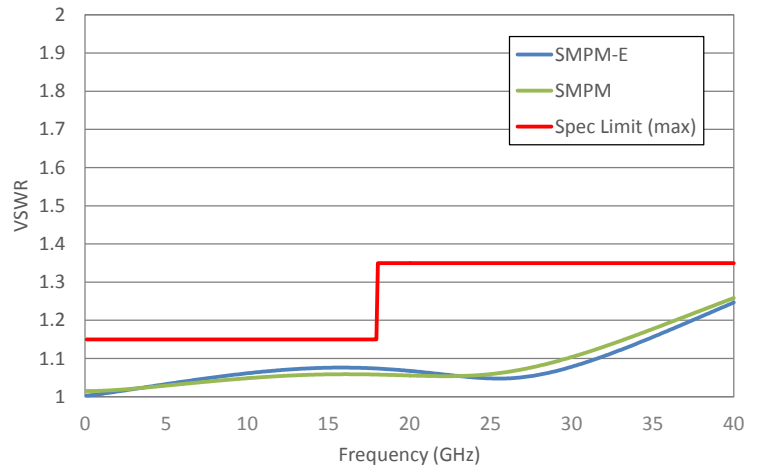


Figure 2 : VSWR Performance with Radial Offset

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.

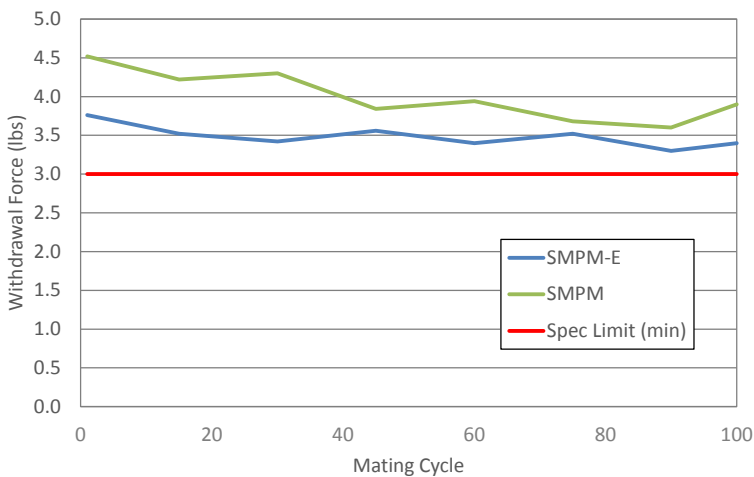


Figure 3: Full Detent Withdrawal Testing

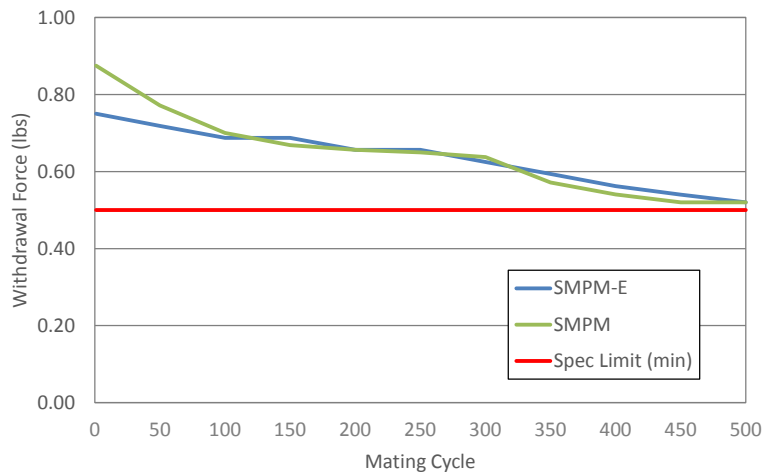


Figure 4: Smooth Bore Withdrawal Testing