Spring Bullets

Features & Benefits

- Available in SMP, SMPM & SMPS
- Mitigates performance degradation from gaps due to tolerance stack up
- Wide range of available sizes
- Performance guaranteed under all states of compression

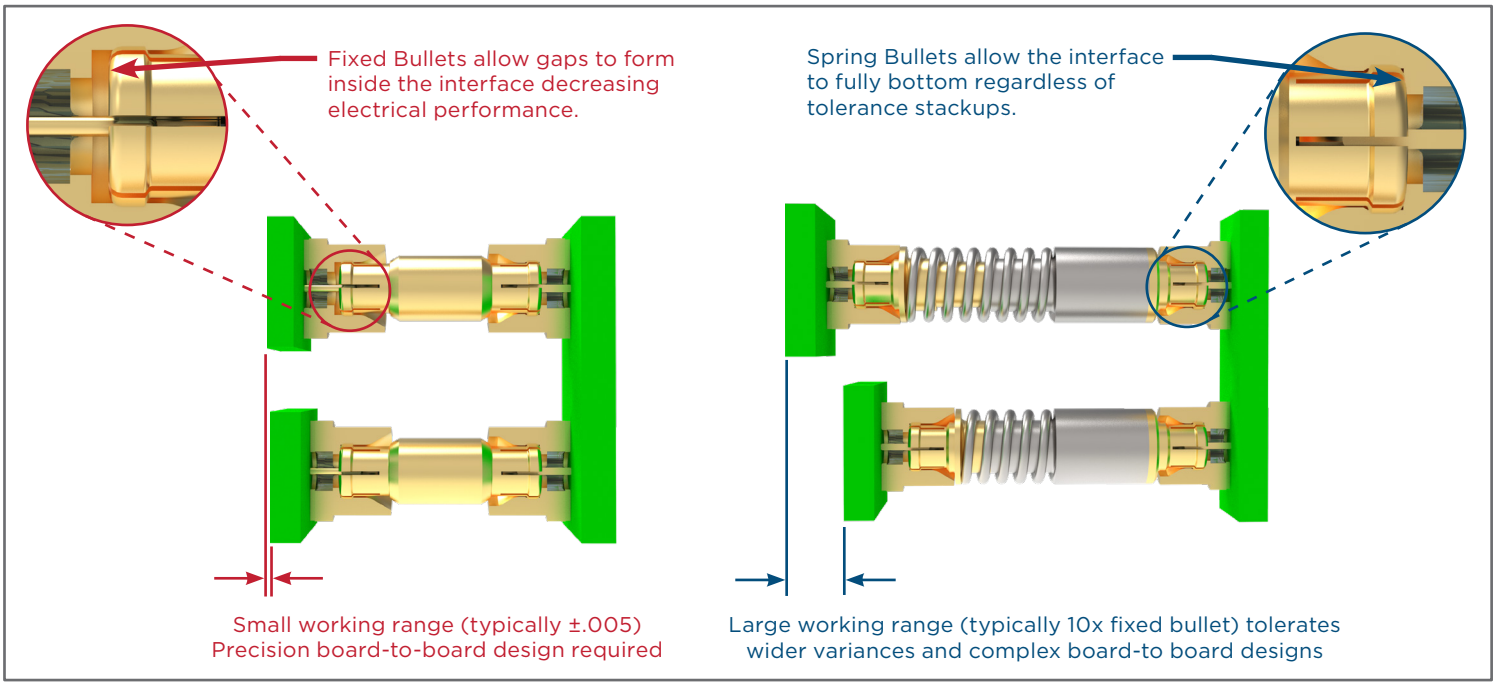
Applications

- High density, small form factor
- Complex board to board with multiple simultaneous mates
- Large-scale blind-mate arrays

Spring Bullet Performance Under Compression

SV Microwave's Spring Bullets are engineered to ensure exceptional RF performance across high-frequency and demanding applications. Their spring-loaded, compressible design eliminates gaps during gang mating. This maintains consistent electrical performance throughout the entire range of compression. These bullets are ideal for aerospace, military, instrumentation, and satellite communications applications. Several different standard lengths are available in distribution with customized lengths available upon request. These bullets provide unparallelled signal performance while maintaining a simplified and user-friendly design.

Figure 1: Fixed vs Spring Bullets



An undesirable gap at the connector reference plane can result when system tolerances exceed the capabilities of fixed bullets (left), this is resolved by the use of spring bullets (right).

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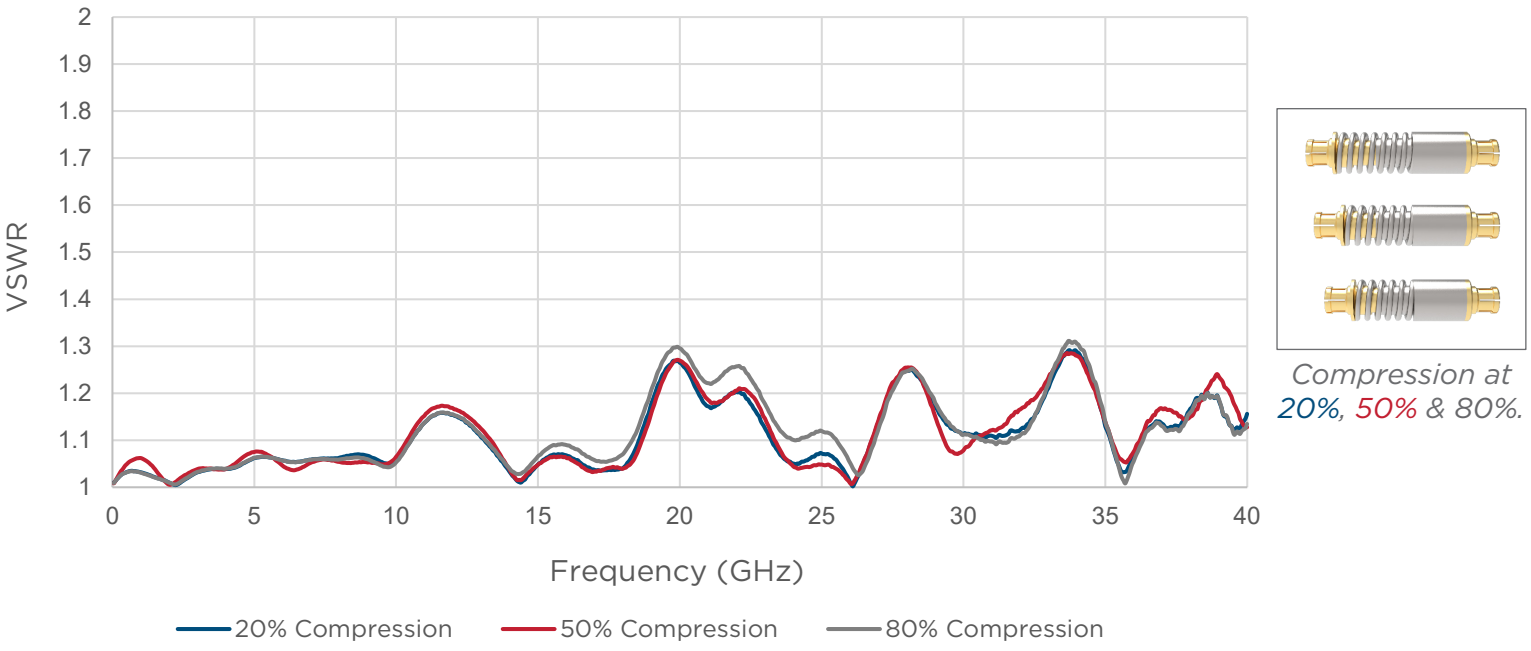
Bullet Lengths/Frequency Ranges

We offer a range of spring and fixed bullets in distribution for common sizes. The table below shows the mid-compression shortest and longest lengths of catalog bullets for each series. Custom lengths are available upon request. Contact **applications@svmicro.com** for more information.

Series	Type	Freq. (GHz)	Shortest	Longest	Working Tolerance Range
SMP	Fixed	40	.255”	.396”	± .005”
	Spring	40	.650”	.950”	± .050”
SMPM	Fixed	65	.166”	.327”	± .005”
	Spring	40	.412”	.960”	± .050”
SMPS	Fixed	65	.098”	.188”	± .005”
	Spring	32	.490”	.550”	± .030”

VSWR Consistency

The plot below shows that electrical performance is consistent over the entire range of compression.



Plot 1: *VSWR for a spring bullet under different compression states.*

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