

SMP UHV miniature coaxial feedthrough

SMP feedthroughs are a great choice for high-frequency applications, especially if you are constrained by space. The feedthrough is 50 Ohm, and it is suitable for applications up to 14 GHz. Due to its small footprint multiple feedthroughs can be mounted even on the smallest of flanges, for example 4 SMP on a DN16CF (1.33"). SMP feedthroughs are available from Allectra with "limited detent" (LD) and "smooth detent" SMP feedthroughs welded into standard CF, KF and ISO, but can also supply complete assemblies on custom flanges. To complete the range, standard and custom length in-vacuum cables are available.

	Specifications	
Type	SMP male, double sided	
Impedance	50 Ohm	
Frequency range	0 – 14 GHz	
Voltage rating	335 V rms / 500 V DC	
Max current	1 A DC	
Standing Wave Ratio (VSWR)	<1.1 (10GHz) / <1.3 (12GHz) / <1.5 (14GHz)	
Vacuum	UHV, all metal seal	
Temperature	-55 ... 165 °C with connector / 4k... 400°C	
Vacuum leak rate	< 5x 10 ⁻¹⁰ mbar l / s (He)	
Materials	Stainless Steel, Glass, Kovar	
Vacuum	UHV, leak rate < 2x 10 ⁻¹⁰ mbar l / s He	
Insertion type	Limited Detent (LD) Marked on air side	Smooth Bore / Detent (SD) No mark
Insertion force	45 N max.	9 N max.
Disengagement force	9 N min.	2 N min.



4 SMP on a DN16CF flange,
↑ from air side, and
↓ from vacuum side



Limited Detent feedthrough
with mark on air side



SMP connector with 3 GHz
cable type 301-KAP50S