



## V-Band Waveguide to 1.85mm Connector Adapter, End Launch

### Description:

Models **SWC-15VF-E1** and **SWC-15VM-E1** are end launch (180°) V-Band waveguide to coax adapters that cover the frequency range of 50 to 70 GHz. They are designed and manufactured for instrumentation grade quality but offered at a commercial grade price, allowing for an efficient transition between the rectangular waveguide and 1.85 mm (V) coax connector. The right angle (90°) versions are offered under model numbers SWC-15VF-R1 and SWC-15VM-R1.



### Features:

- Broad Band Coverage
- Lower Insertion Loss and VSWR
- Instrumentation Grade
- DC Short Circuit

### Applications:

- Test Lab
- Instrumentations
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	50 GHz		70 GHz*
Insertion Loss*		0.7 dB	1 dB
Return Loss	13 dB	16 dB	
Power Handling			40 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

\*The adapter can cover up to 75 GHz with slight performance degradation due to the frequency limitations of the 1.85 mm (V) coaxial connector.

\*Insertion Loss is tested back-to-back with a male and female adapter, the result is divided by 2.

### Mechanical Specifications:

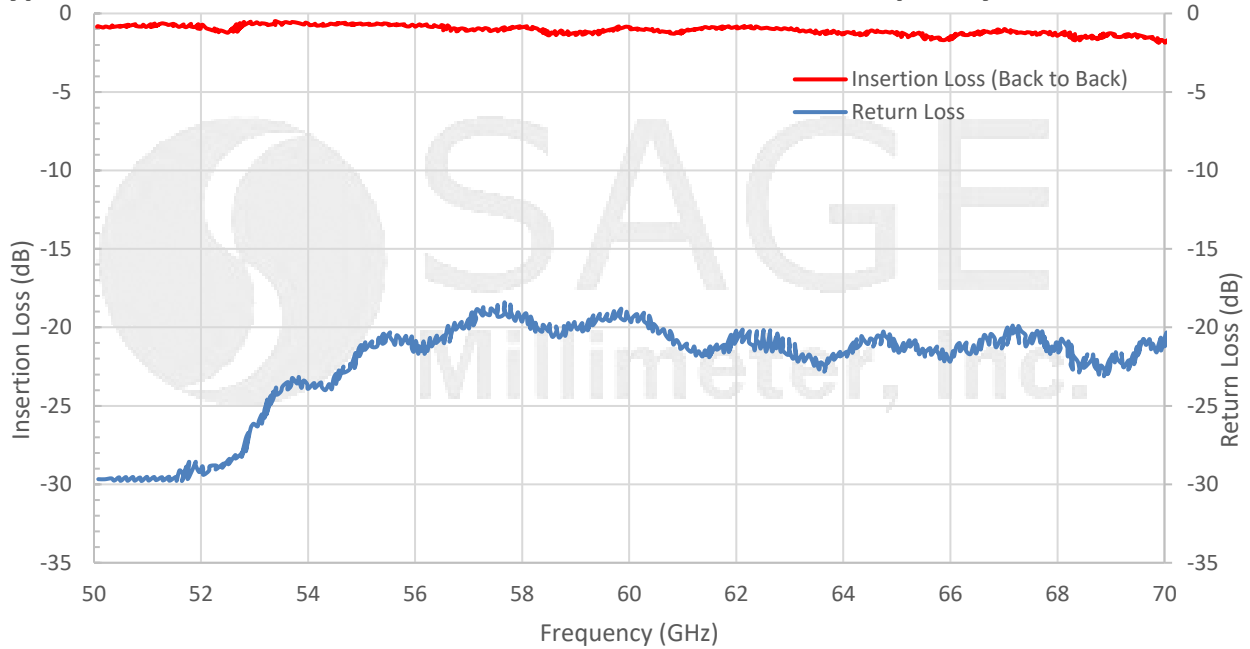
Item	Parameter
Waveguide	WR-15 with UG385/U Flange
Coaxial	1.85 mm (V) Female for Model Number: SWC-15VF-E1
Coaxial	1.85 mm (V) Male for Model Number: SWC-15VM-E1
Insertion Length	0.66" for SWC-15VF-E1
Insertion Length	0.81" for SWC-15VM-E1
Housing Material	Aluminum
Finish	Gold Plated
Weight	0.2 Oz
Outline	WC-VE



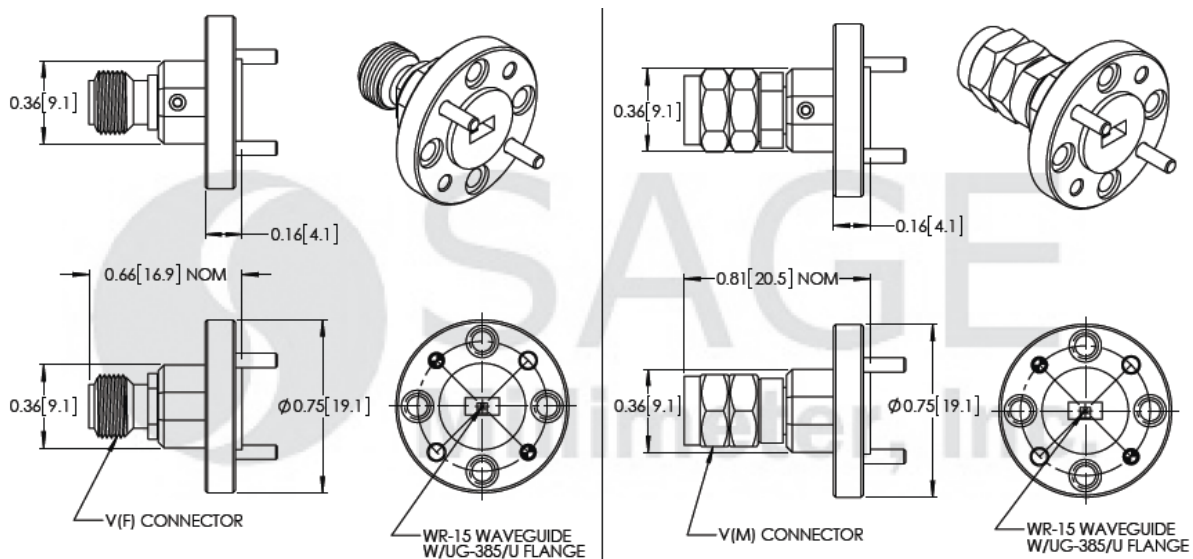


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Typical Return Loss and Back to Back Insertion Loss vs. Frequency



### Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



### Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.



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### Caution:

- Any foreign objects in the waveguide will cause performance degradation and may damage the adapter.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

