



## V-Band Waveguide to 1.0 mm Connector Adapter, Right Angle, Thermal Vacuum Safe

### Description:

Models **SWC-151F-R1-V** and **SWC-151M-R1-V** are right angle (90°) V-Band waveguide to coax adapters that cover the frequency range of 50 to 75 GHz. The adapters are designed and manufactured for instrumentation grade quality and thermal vacuum compatibility, allowing for an efficient transition between the rectangular waveguide and 1.0 mm coax connector. The end launch (180°) versions are offered under model numbers **SWC-151F-E1-V** and **SWC-151M-E1-V**.



### Features:

- Thermal Vacuum Safe
- Full Waveguide Band Coverage
- Low Insertion Loss and VSWR
- Instrumentation Grade
- DC Open

### Applications:

- Thermal Vacuum Chamber
- Test Lab
- Instrumentations
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	50 GHz		75 GHz
Insertion Loss*		0.7 dB	1 dB
Return Loss	12 dB	15 dB	
Power Handling			10 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

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

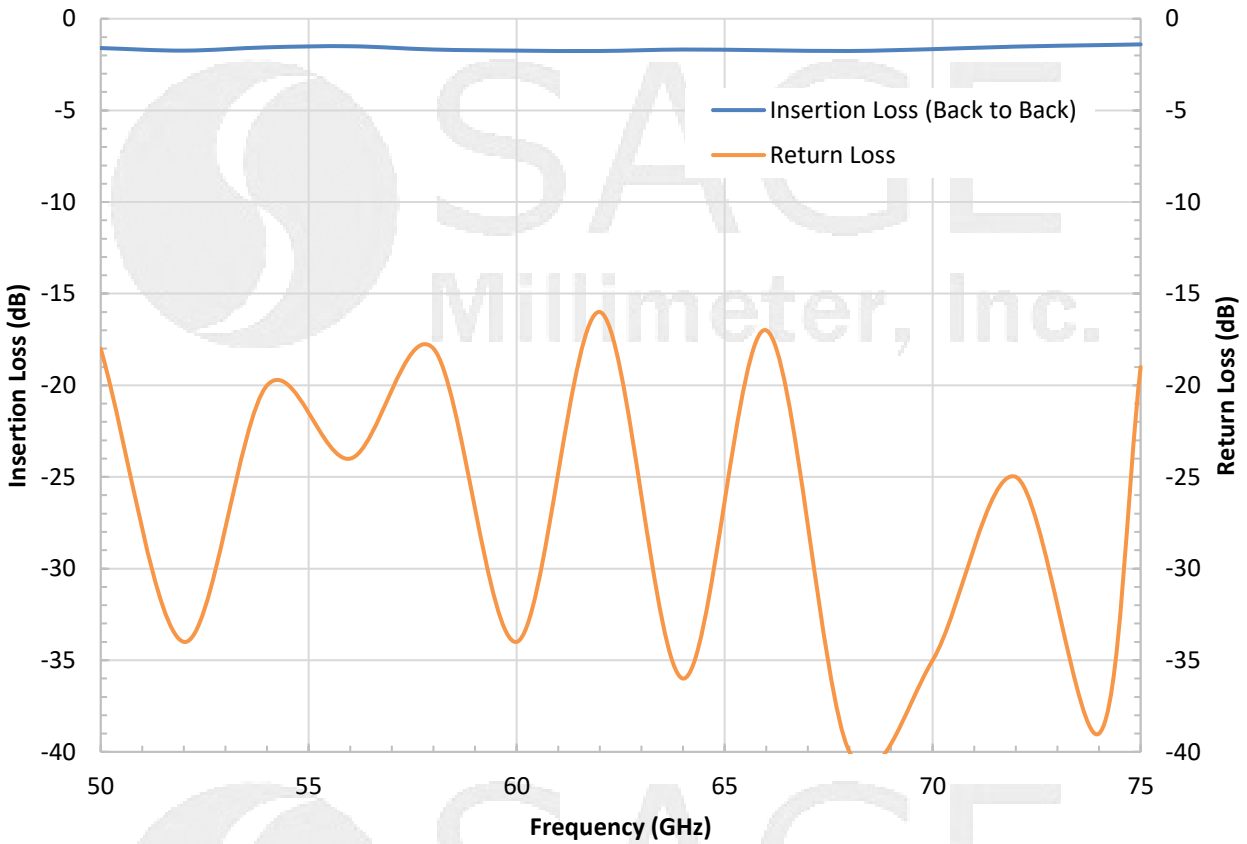
### Mechanical Specifications:

Item	Specification
Waveguide Port	WR-15 Waveguide with UG-385/U Flange
Coaxial Port	1.0 mm Female for Model Number: <b>SWC-151F-R1-V</b>
	1.0 mm Male for Model Number: <b>SWC-151M-R1-V</b>
Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Outline	WC-VR

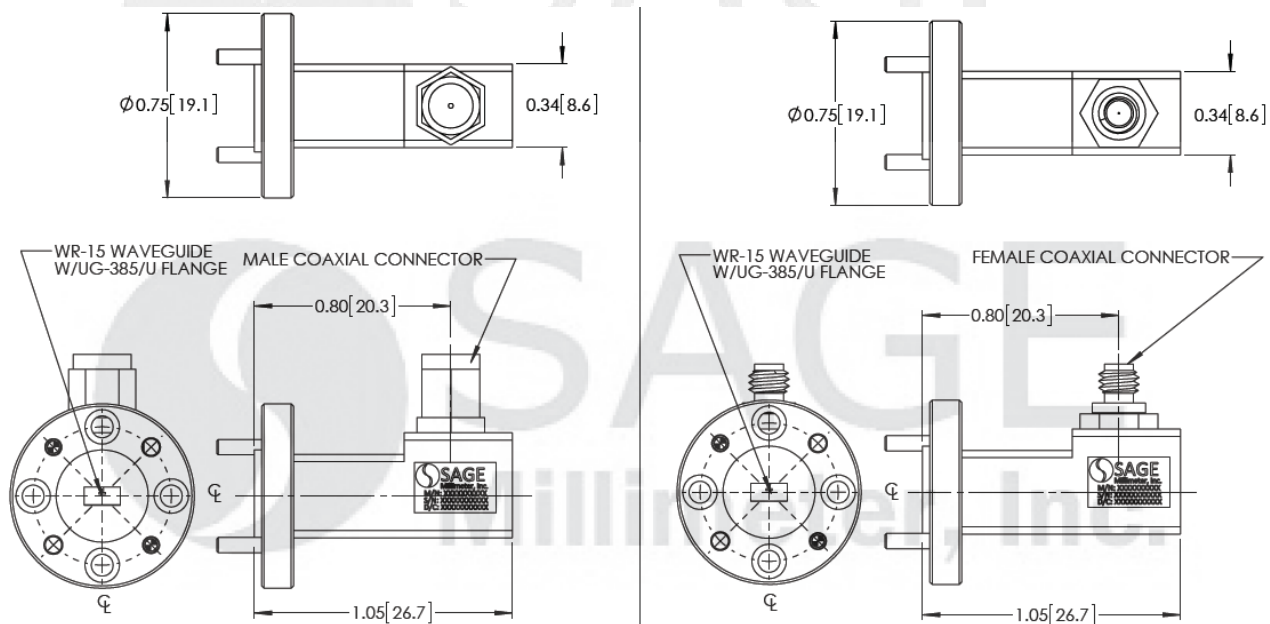


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### Typical Performance vs Frequency



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



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### 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.

### Caution:

- Any foreign objects in the waveguide will cause performance degradation and may damage the adapter.
- Proper torque,  $4.0 \pm 0.15$  inch-pounds ( $0.45 \pm 0.02$  Nm), should be used. **SAGE Millimeter torque wrench, model SCH-06004-S1, is highly recommended.**

