



V-Band Waveguide to 1.85mm Connector Adapter, Right Angle, Thermal Vacuum Safe

Description:

Models **SWC-15VF-R1-V** and **SWC-15VM-R1-V** are right angle (90°) 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 and thermal vacuum compatibility, allowing for an efficient transition between the rectangular waveguide and 1.85 mm (V) coax connector.



Features:

- Thermal Vacuum Safe
- Broad Band Coverage
- Lower Insertion Loss
- Instrumentation Grade
- DC Short Circuit

Applications:

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

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|---------|---------|-----------|
| Frequency Range | 50 GHz | | 70 GHz* |
| Insertion Loss | | 0.5 dB | |
| Return Loss | | 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.

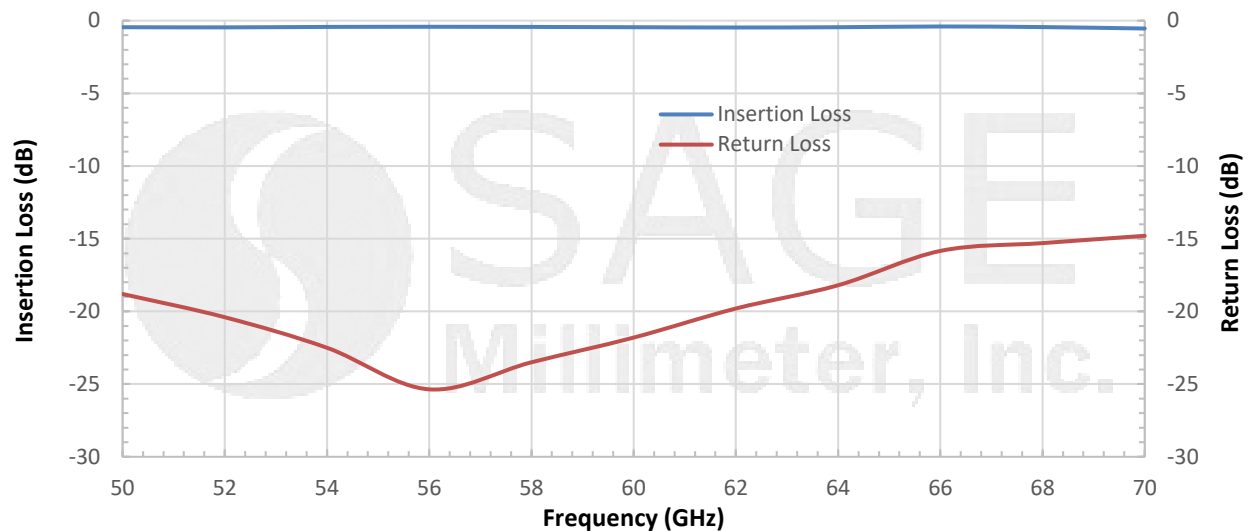
Mechanical Specifications:

| Item | Parameter |
|------------------|--|
| Waveguide | WR-15 Waveguide with UG-385/U Flange |
| Coaxial | 1.85 mm (V) Female for Model Number: SWC-15VF-R1-V |
| Coaxial | 1.85 mm (V) Male for Model Number: SWC-15VM-R1-V |
| Insertion Length | 0.66" for SWC-15VF-R1-V |
| Insertion Length | 0.81" for SWC-15VM-R1-V |
| Housing Material | Aluminum |
| Finish | Gold Plated |
| Weight | 0.2 Oz |
| Outline | WC-VR |

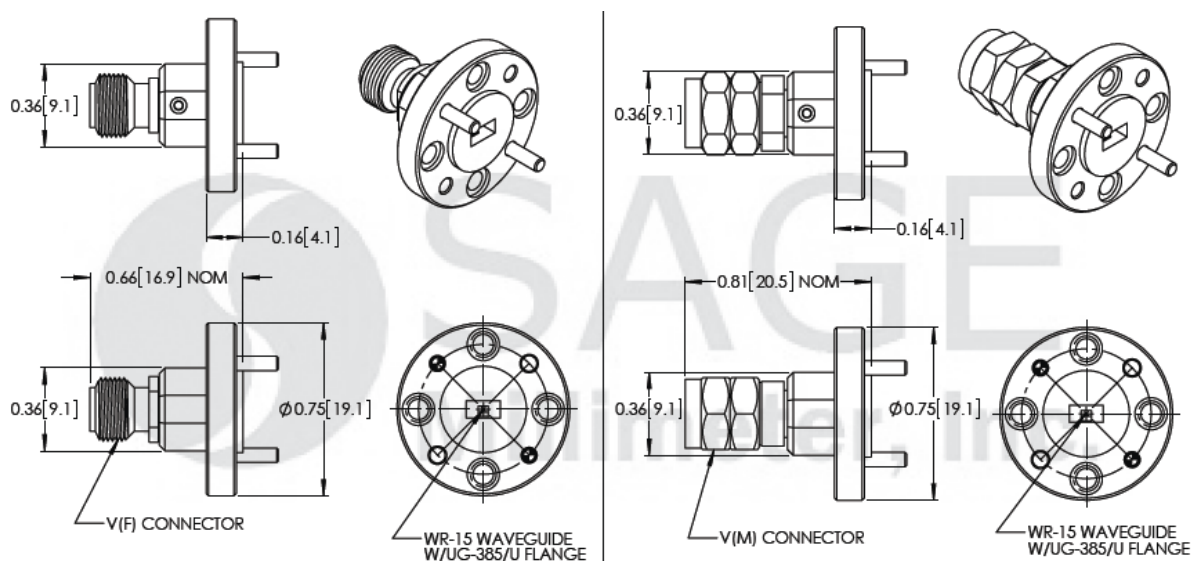


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Typical Insertion Loss and Return Loss vs. Frequency (Back to Back)



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 slightly.
- 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, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-U3, is highly recommended.**

