



V-Band Waveguide to 1.85mm Connector Adapter, End Launch, Non-Standard Return Loss

Description:

Models SWC-15VF-E1-RL20 is an end launch (180°) V-Band waveguide to coax adapter that covers the frequency range of 50 to 70 GHz. The adapter is 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 adapter offers 20 dB minimum non-standard return loss. The right angle (90°) versions are offered under model numbers SWC-15VF-R1-RL20.



Features:

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

Applications:

- Test Lab
- Instrumentation
- Sub-assemblies

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|---------|---------|-----------|
| Frequency Range | 50 GHz | | 70 GHz* |
| Insertion Loss | | 0.4 dB | |
| Return Loss | 20 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:

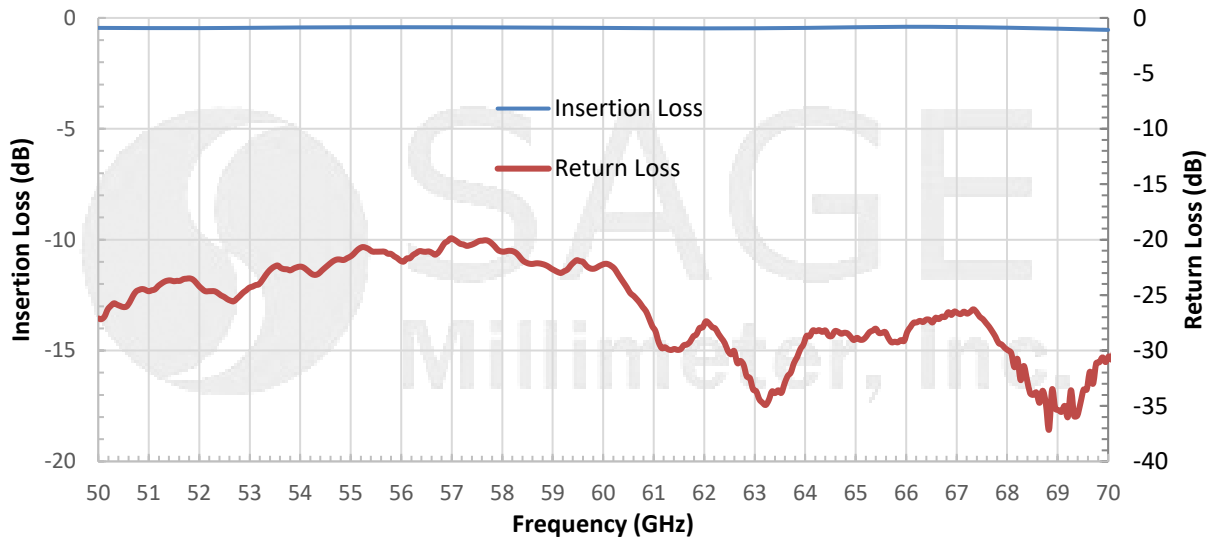
| Item | Parameter |
|------------------|----------------------------------------------------------|
| Waveguide | WR-15 with UG-385/U Flange |
| Coaxial | 1.85 mm (V) Female |
| Housing Material | Aluminum |
| Finish | Gold Plated |
| Weight | 0.2 Oz |
| Size | 0.66" (L) x 0.75" (Ø) for Model Number: SWC-15VF-E1-RL20 |
| Outline | WC-VE |



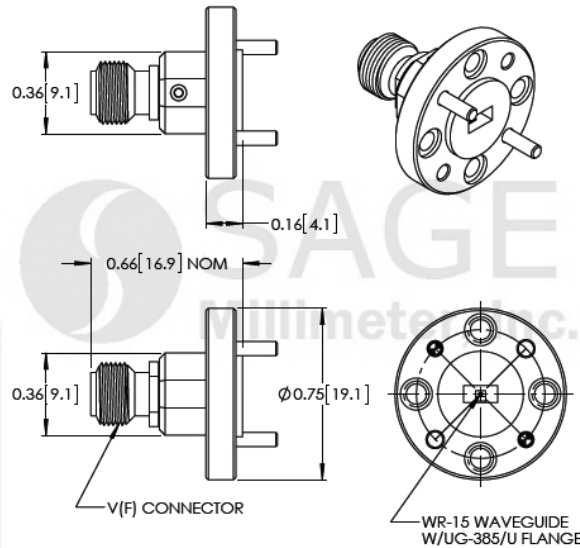


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Typical Insertion Loss and Return Loss vs. Frequency



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.
- Other mechanical configurations are available under different model numbers.

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.**



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