

## Q-Band Waveguide to 2.92 mm Connector Adapter, End Launch, Thermal Vacuum Safe

### Description:

Models SWC-22KF-E1-V and SWC-22KM-E1-V are end launch (180°) Q-Band waveguide to coax adapters that cover the frequency range of 33 to 43 GHz. The adapters are designed and manufactured for instrumentation grade quality and thermal vacuum compatibility (out-gassing free), allowing for an efficient transition between the rectangular waveguide and 2.92 mm (K) coax connector. The right angle (90°) versions are offered under model numbers SWC-22KF-R1-V and SWC-22KM-R1-V.



### Features:

- 33 to 43 GHz Coverage
- Lower Insertion Loss and VSWR
- Instrumentation Grade
- DC Short Circuit
- Thermal Vacuum Safe

### Applications:

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

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	33 GHz		43 GHz*
Insertion Loss		0.3 dB	
Return Loss		18 dB	
Power Handling			50 W (CW)
Pressure	10 <sup>-5</sup> hPa		
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Note: The operating Frequency is limited by the 2.92 mm connector.

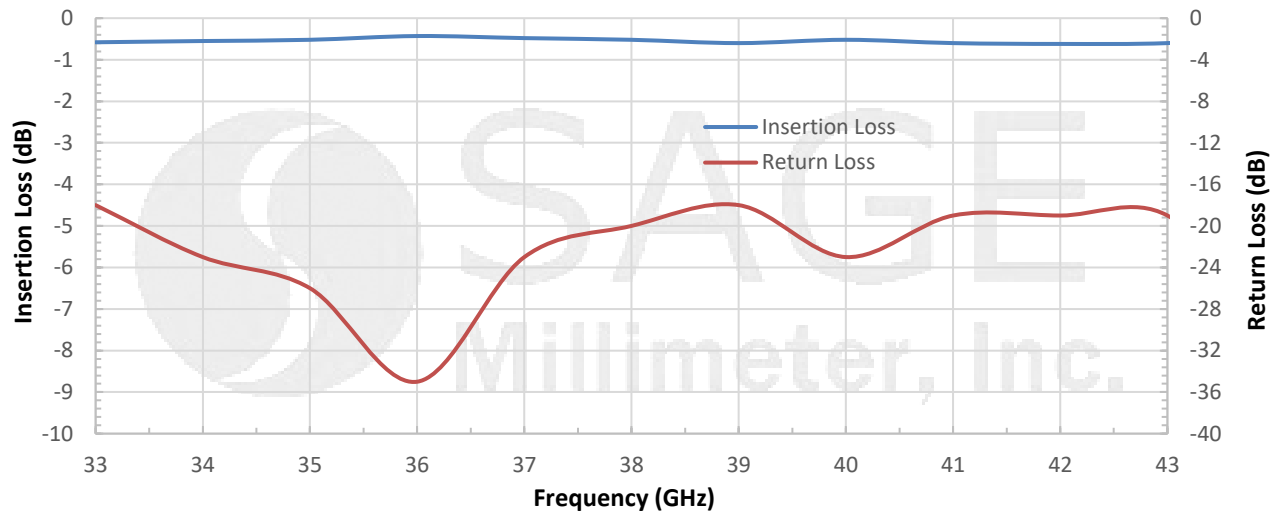
### Mechanical Specifications:

Item	Parameter
Waveguide	WR-22 with UG-383/U Flange
Coaxial	2.92 mm (K) Female for Model Number: SWC-22KF-E1-V
Coaxial	2.92 mm (K) Male for Model Number: SWC-22KM-E1-V
Size	0.87" (L) x 1.13" (Ø) for Model Number: SWC-22KF-E1-V
Size	1.04" (L) x 1.13" (Ø) for Model Number: SWC-22KM-E1-V
Housing Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Outline	WC-QE

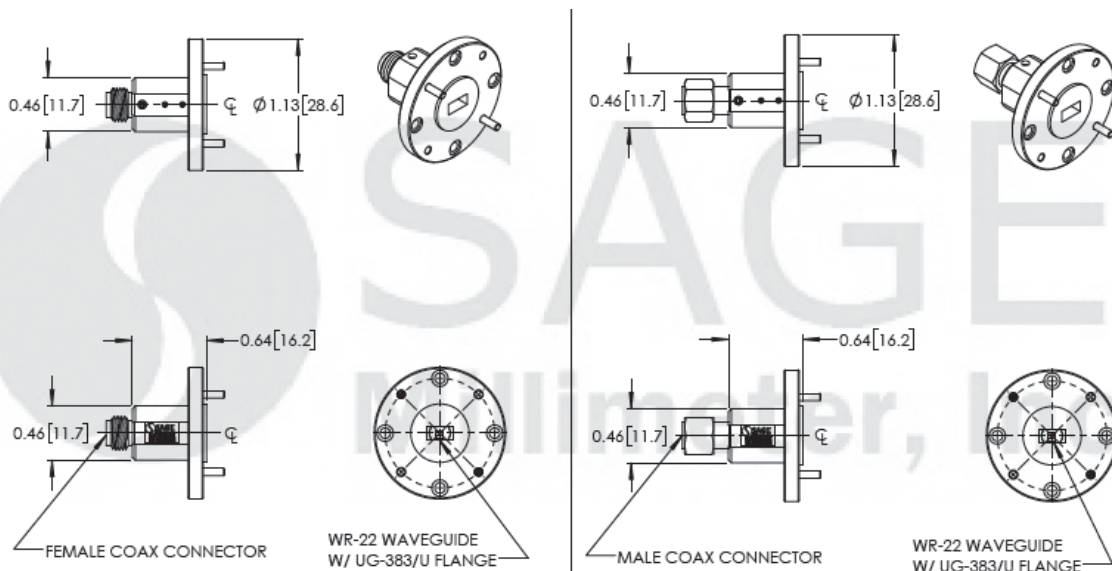


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### Typical Insertion Loss and Return Loss vs. Frequency (Back to Back)



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



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