



## Q-Band Waveguide to 2.4 mm Connector Adapter, End Launch

### Description:

Models **SWC-222F-E1** and **SWC-222M-E1** are end launch (180°) Q-Band waveguide to coax adapters that cover the frequency range of 33 to 50 GHz. The adapters 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 2.4 mm coax connector. The right angle (90°) versions are offered under model numbers SWC-222F-R1 and SWC-222M-R1. Other coaxial connector types are also offered under various model numbers.



### 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	33 GHz		50 GHz
Insertion Loss*		0.4 dB	0.7 dB
Return Loss	16 dB	18 dB	
Power Handling			40 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:

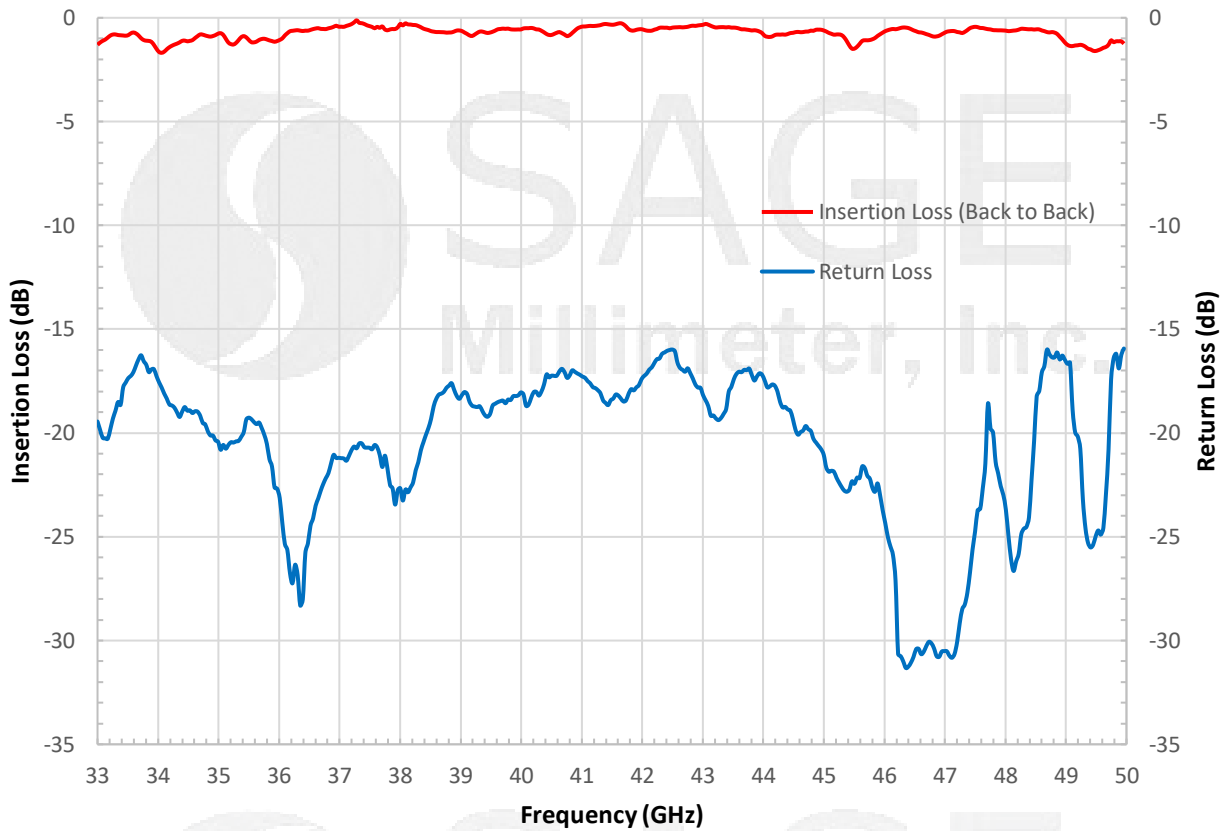
Item	Parameter
Waveguide	WR-22 with UG383/U Flange
Coaxial	2.4 mm Female for Model Number: SWC-222F-E1
Coaxial	2.4 mm Male for Model Number: SWC-222M-E1
Size	0.64" (L) x 1.13" (Ø)
Housing Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Outline	WC-QE



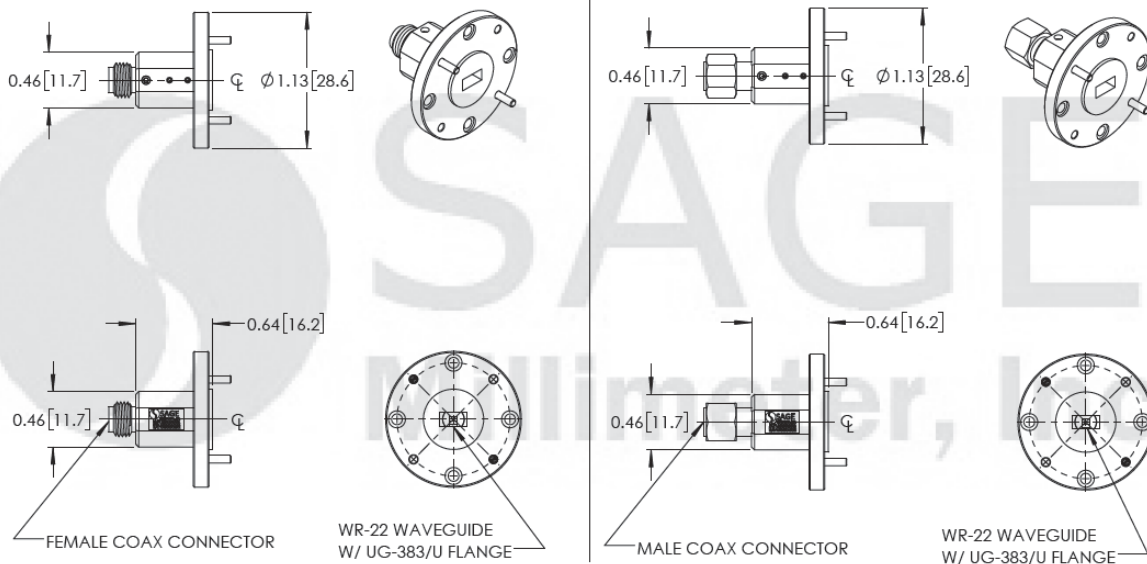


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### Typical Return Loss & Back to Back Insertion Loss vs. Frequency



### 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,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

