



## Q-Band Waveguide to 2.4 mm Connector Adapter, End Launch, RL=22 dB

### Description:

**Models SWC-222F-E1-RL22 and SWC-222M-E1-RL22** 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. These adapters offer superior return loss at 22 dB typical. The right angle (90°) versions are offered under model numbers SWC-222F-R1-RL22 and SWC-222M-R1-RL22. 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	20 dB	22 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:

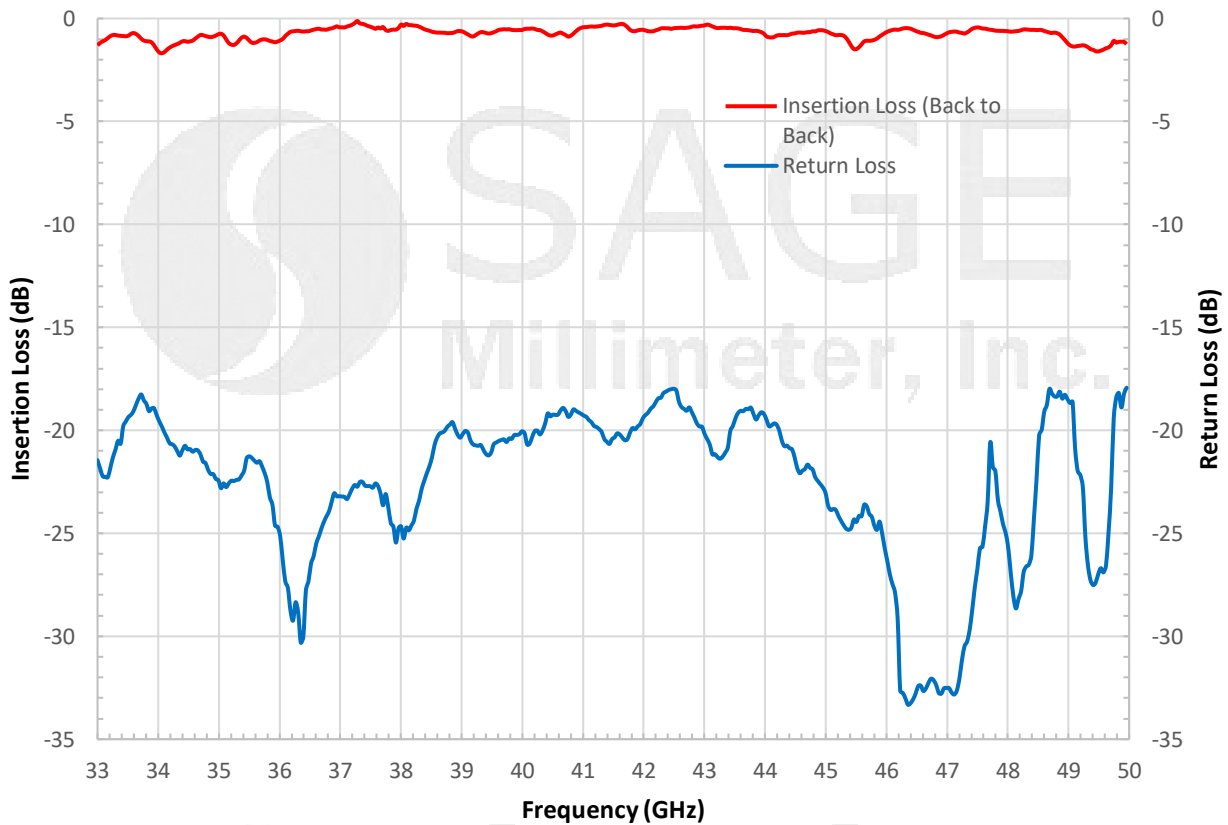
Item	Parameter
Waveguide	WR-22 with UG383/U Flange
Coaxial	2.4 mm Female for Model Number: SWC-222F-E1-RL22
Coaxial	2.4 mm Male for Model Number: SWC-222M-E1-RL22
Size	0.64" (L) x 1.13" (Ø)
Housing Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Outline	WC-QE



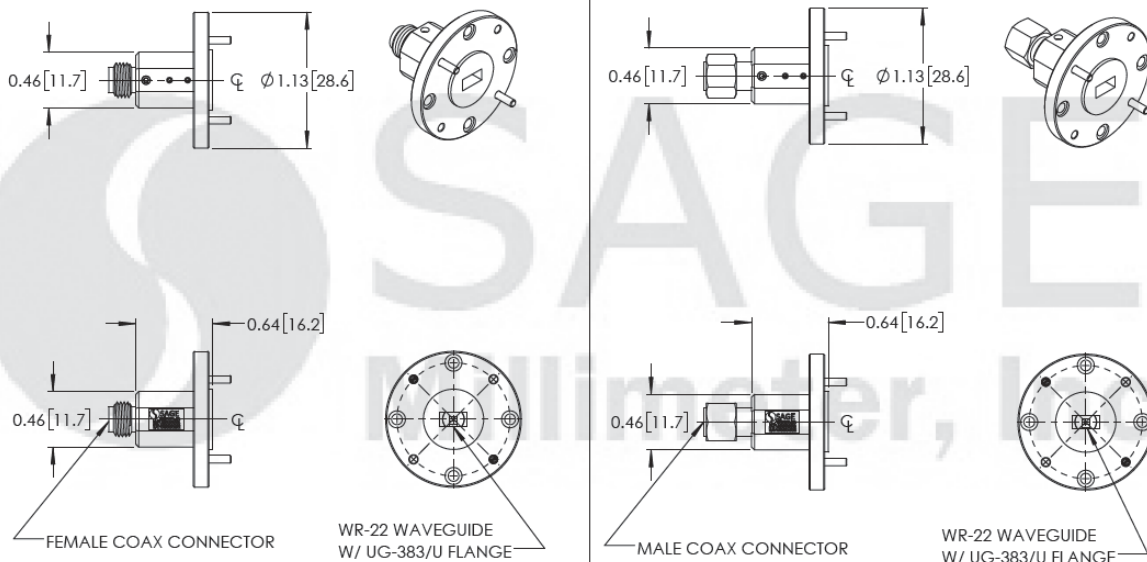


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### Typical Return Loss & Back to Back Insertion Loss vs. Frequency



### 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.**

