



## K-Band Waveguide to SMA Connector Adapter, End Launch

### Description:

**Models SWC-42SF-E1 and SWC-42SM-E1** are end launch (180°) K-Band waveguide to coax adapters that cover the frequency range of 18 to 26.5 GHz. They 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 SMA coax connector. The right angle (90°) versions are offered under model numbers SWC-42SF-R1 and SWC-42SM-R1.



### Features:

- Broad Band Coverage
- Lower Insertion Loss
- Higher Return Loss
- Instrumentation Grade
- DC Short Circuit

### Applications:

- Test Lab
- Instrumentations
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	18 GHz		26.5 GHz
Insertion Loss*		0.3 dB	0.4 dB
Return Loss	15 dB	17 dB	
Power Handling			50 Watts
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

\*Insertion loss is tested back-to-back with a male and female adapter, and the result is divided by 2.

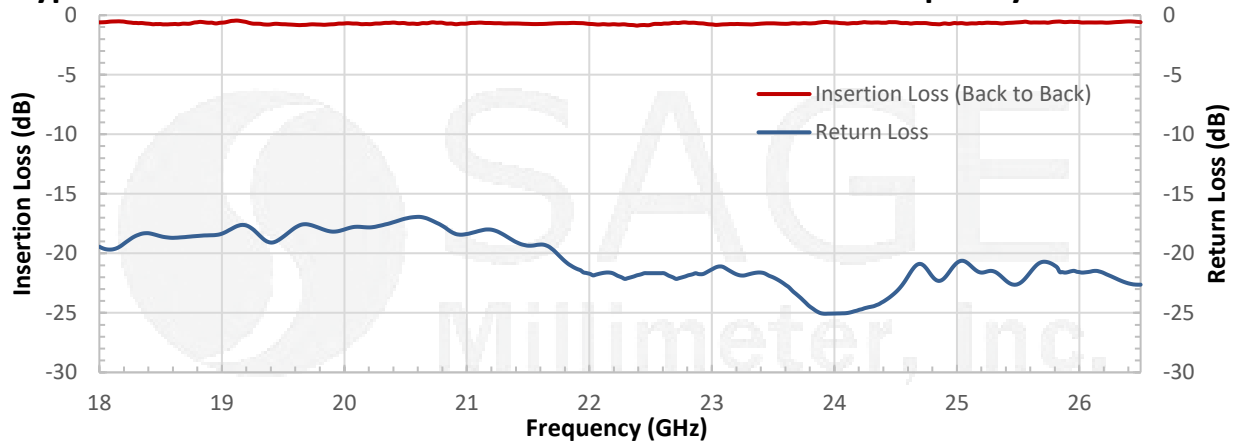
### Mechanical Specifications:

Item	Specification
Waveguide Port	WR-42 Waveguide with UG-595/U Flange
Coaxial Port	SMA Female for Model Number: SWC-42SF-E1
Coaxial Port	SMA Male for Model Number: SWC-42SM-E1
Housing Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Size	0.59" (L) x 0.88" (S)
Outline	WC-KE

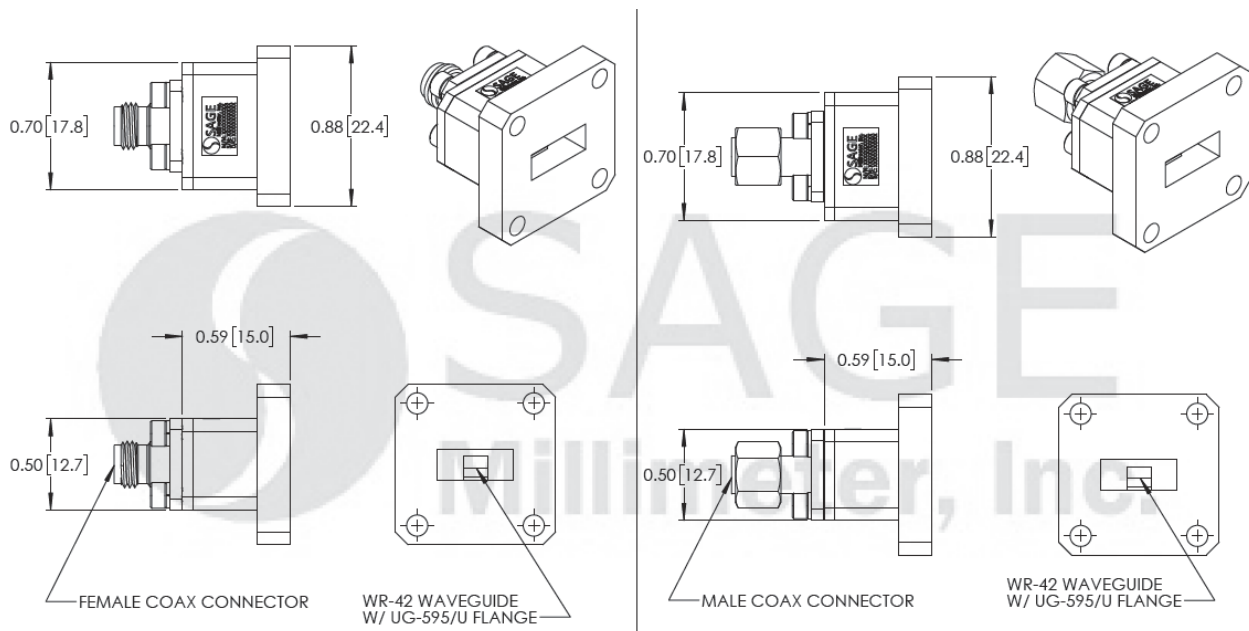


## K-Band Waveguide to SMA Connector Adapter, End Launch

Typical Return Loss and Back to Back Insertion 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, 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-S1, is highly recommended.**

