



## K-Band Waveguide to K Connector Adapter, End Launch, Thermal Vacuum Safe

### Description:

Models **SWC-42KF-E1-V** and **SWC-42KM-E1-V** 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 and thermal vacuum compatibility, allowing for an efficient transition between the rectangular waveguide and 2.92 mm (K) coax connector.



### Features:

- Thermal Vacuum Safe
- Broad Band Coverage
- Lower Insertion Loss
- Instrumentation Grade
- DC Short Circuit

### Applications:

- Thermal Vacuum Chamber
- Test Lab
- Instrumentation
- 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	17 dB	20 dB	
Power Handling			50 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, and the result is divided by 2

### Mechanical Specifications:

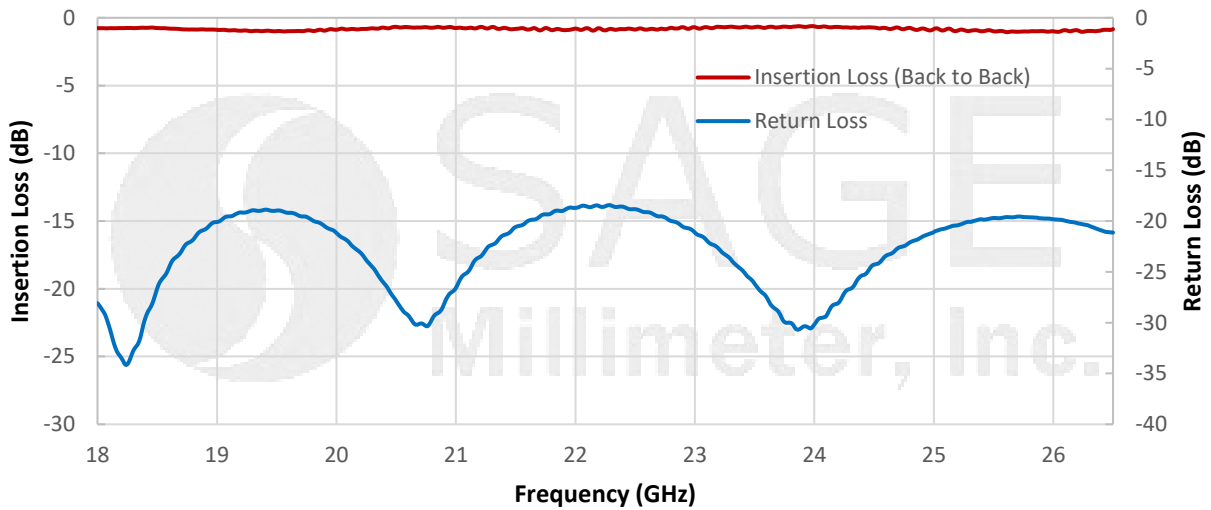
Item	Parameter
Waveguide	WR-42 with UG-595/U Flange
Coaxial	2.92 mm (K) Female for Model Number: SWC-42KF-E1-V
Coaxial	2.92 mm (K) Male for Model Number: SWC-42KM-E1-V
Size	0.97" (L) x 0.88" (S) for Model Number: SWC-42KF-E1-V
Size	1.10" (L) x 0.88" (S) for Model Number: SWC-42KM-E1-V
Housing Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Outline	WC-KE



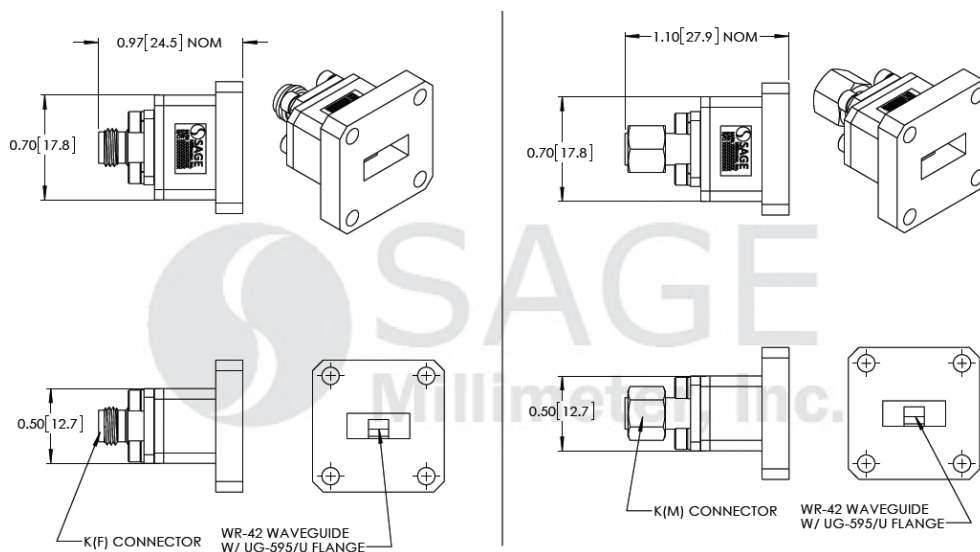


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### Typical Insertion Loss & Return Loss vs. Frequency (Back to Back)



### 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-S1, is highly recommended.**

