



## E-Band Direct Reading Attenuator, High Precision, 70 dB Attenuation

### Description:

**Model STA-60-12-D8** is an instrumentation grade, high precision and high attenuation range direct reading, rotary vane attenuator for use in millimeter wave test sets across the standard E-band frequency range of 60 to 90 GHz. The attenuator has a large scale calibrated dial which indicates the attenuation value directly. The attenuator is an ideal piece of equipment in waveguide systems where a broad direct reading of attenuation is required. The attenuator exhibits exceptional repeatability during frequent attenuation setting operations. The attenuator exhibits 1.0 dB typical insertion loss and up to maximum 70 dB attenuation. The accuracy of the attenuator is 0.1 dB or 1% of the reading up to 60 dB, and “for reference only” above 70 dB.



### Features:

- Full Waveguide Band Coverage
- Large Scaled Dial
- High Attenuation Accuracy
- Waveguide Moding Free

### Applications:

- Test Lab
- Bit Error Rate Testing
- Fade Margin
- Transceiver Diversity

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency Range	60 GHz		90 GHz
Insertion Loss		1.0 dB	1.3 dB
Attenuation Range	0 dB		60 dB
Attenuation Accuracy	0.1 dB or 1% of reading, whichever is larger, up to 60 dB		
Return Loss		23 dB	
Power Handling*		50 mW (CW)	100 mW (CW)
Specification Temperature		+25 °C	
Operating Temperature	+5 °C		+35 °C

\*Note: The maximum power handling is based on pulsed signal operation. Limit to 100 mW for CW operation.

### Mechanical Specifications:

Item	Specification
RF Ports	WR-12 Waveguide with UG-387/U Flange
Reading	Large Scale Dial
Scale Increments	0.01 dB (0 to 4 dB); 0.1 dB (4 to 30 dB); 0.2 dB (30 to 50 dB)
Flange Material	Brass
Finish	Gold Plated Waveguide Flange; Black Painted Body
Weight	26 Oz [737 grams]
Insertion Length	3.50" [89 mm]
Outline	TA-DE-F1

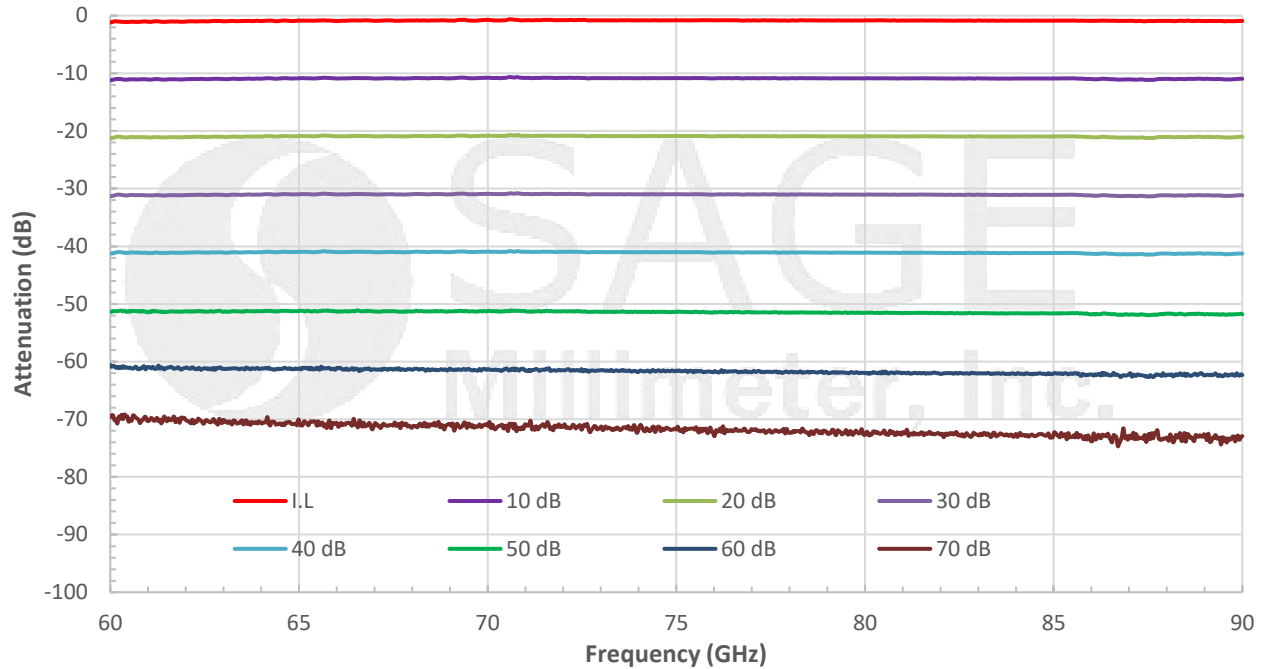


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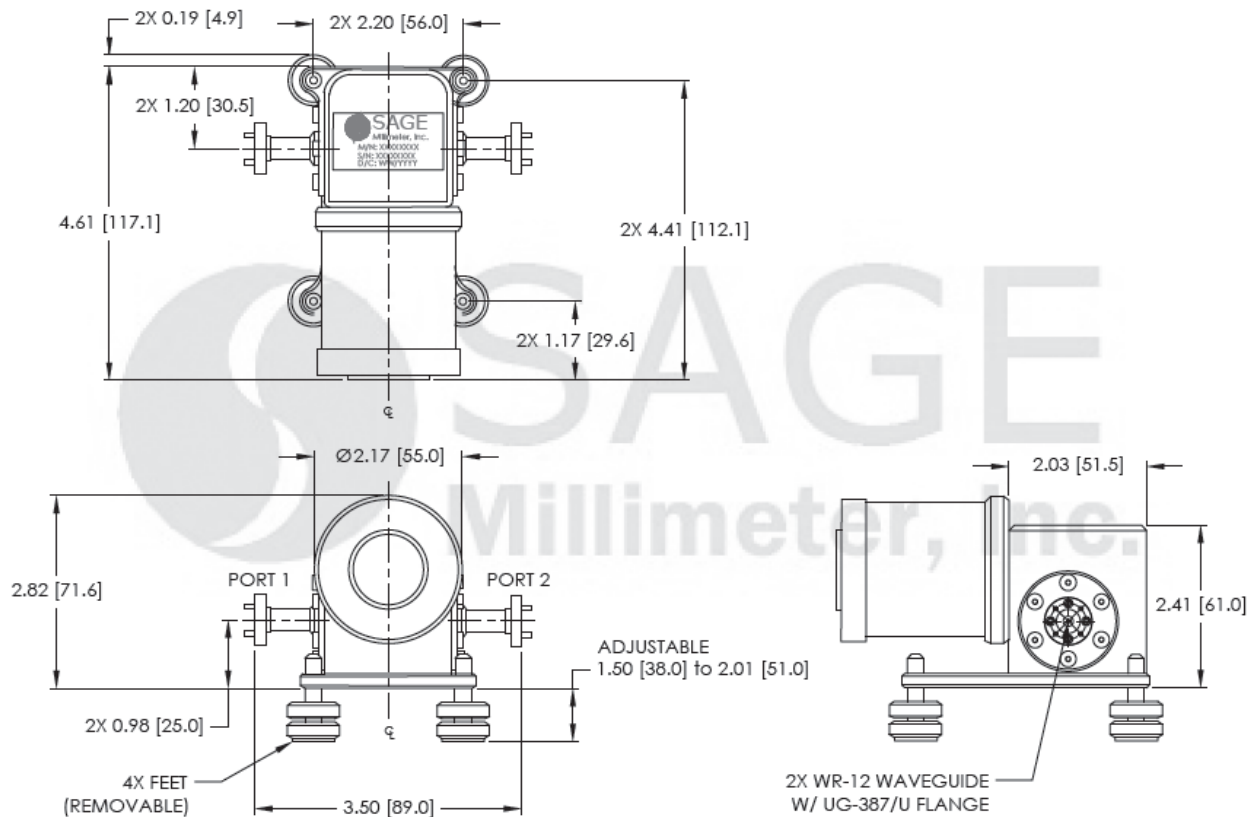


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Typical Attenuation vs. Frequency



**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])





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### Note:

- Calibration accuracy is 0.1 dB or 1% of the reading, whichever is greater, for attenuation ranges up to 60 dB and “for reference only” above 70 dB.
- The phase shift value does change while varying the attenuation.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model numbers.

### Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.

