



E-Band Direct Reading Attenuator, General Purpose, 60 dB

Description:

Model STA-60-12-D1 is a general purpose direct reading, rotary vane attenuator for use in millimeter wave systems 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 0.7 dB typical insertion loss and up to maximum 60 dB attenuation. The accuracy of the attenuator is 0.1 dB or 3% of the reading, whichever is larger, up to 40 dB, 5% up to 50 dB, and “for reference only” above 50 dB.



Features:

- Full Band Coverage
- High Attenuation Accuracy
- Large Scaled Dial

Applications:

- Test Lab
- Instrumentations
- Manual Test Set

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency Range	60 GHz		90 GHz
Insertion Loss		0.7 dB	
Return Loss		20 dB	
Attenuation Range	0 dB		60 dB
Attenuation Accuracy	0.1 dB or 3% of reading, whichever is larger, up to 40 dB		
Power Handling*		50 mW	100 mW
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

*Note: The maximum power handling is based on pulsed signal operation. Limit to 50 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 0.1 dB); 0.05 dB (0.1 to 1.0 dB); 0.1 dB (1.0 to 10 dB) 0.02 dB (10 to 20 dB); 0.05 dB (20 to 30 dB); 1.0 dB (30 to 50 dB)
Flange Material	Brass
Finish	Gold Plated Waveguide Flange; Black Anodized Body
Weight	2.2 lb
Insertion Length	3.86"
Outline	TA-DE

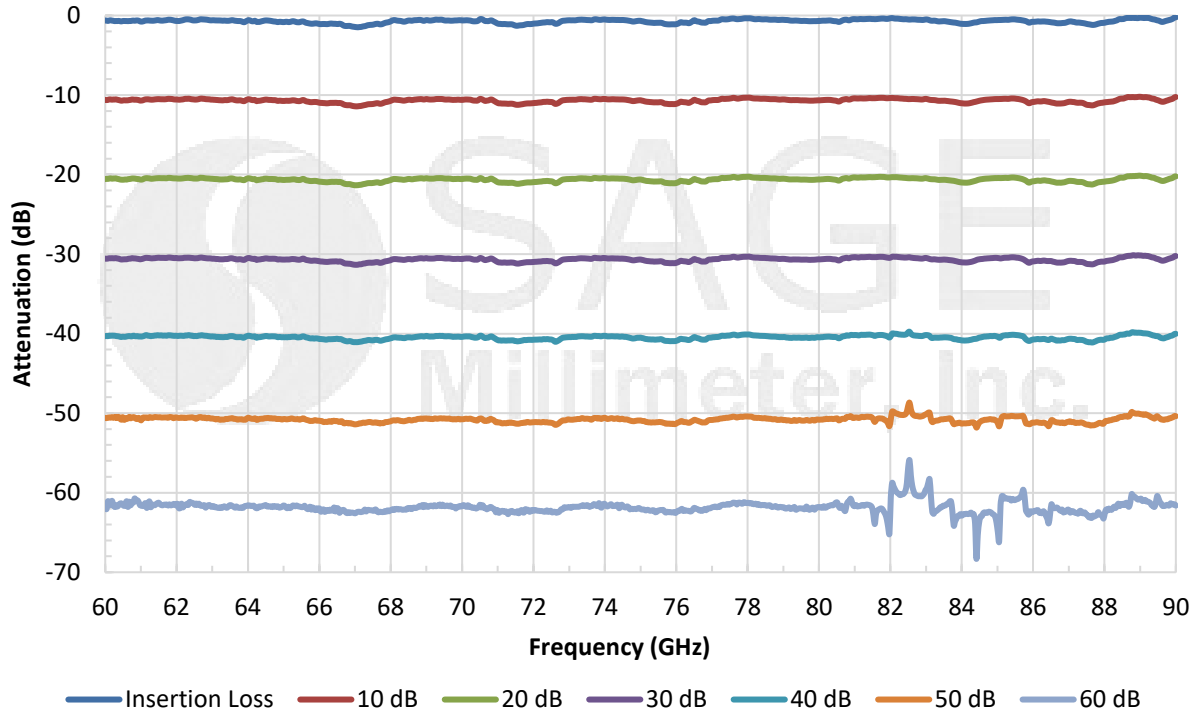


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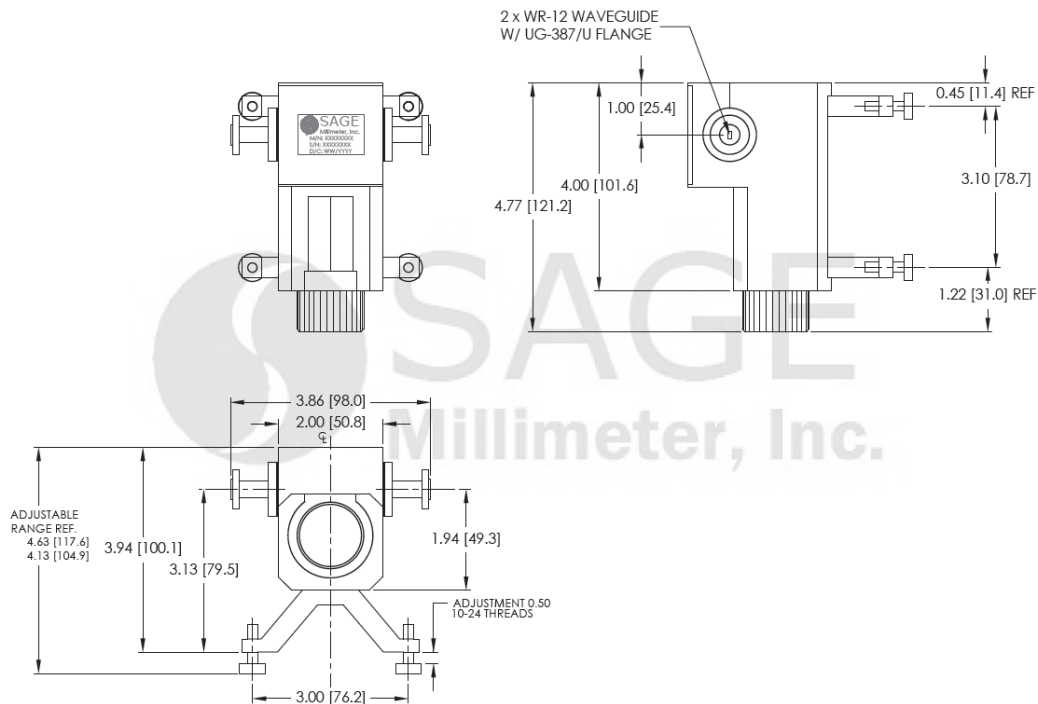


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Typical Attenuation vs. Frequency



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



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Note:

- Calibration accuracy is 0.1 dB or 3% of the reading, whichever is greater, for attenuation ranges up to 40 dB, 5% up to 50 dB, and “for reference only” above 50 dB.
- The attenuation flatness is $\pm 2\%$ or ± 0.5 dB of the indicated value, whichever is greater, for the frequency band.
- The phase shift value does change while varying the attenuation.
- 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.
- 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.

