# STA-60-08-D1

Rev. 1.0

## F-Band Direct Reading Attenuator

### Description:

**Model STA-60-08-D1** is a direct reading, rotary vane attenuator for use in millimeter wave systems across the standard F-band frequency range of 90 to 140 GHz. The attenuator has a large scale 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 1.2 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.



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### 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 | 90 GHz | | 140 GHz |
| Insertion Loss | | 1.2 dB | |
| Attenuation Range | 0 dB | | 60 dB |
| Attenuation Accuracy | 0.1 dB or 3% of reading, whichever is larger, up to 40 dB | | |
| VSWR | | | 1.25:1 |
| Power Handling* | | 50 mW | 100 mW |

*The maximum power handling is based on pulsed signal operation. Limit to 50 mW for CW operation.

### Mechanical Specifications:

| Item | Specification |
|---|---|
| RF Input | WR-08 Waveguide with UG-387/U-M Flange |
| RF Output | WR-08 Waveguide with UG-387/U-M 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)<br>0.02 dB (10 to 20 dB); 0.05 dB (20 to 30 dB); 1.0 dB (30 to 50 dB) |
| Insertion Length | 3.78" |
| Finish | Black Anodized |
| Weight | 2.2 lb |
| Outline | TA-DF |

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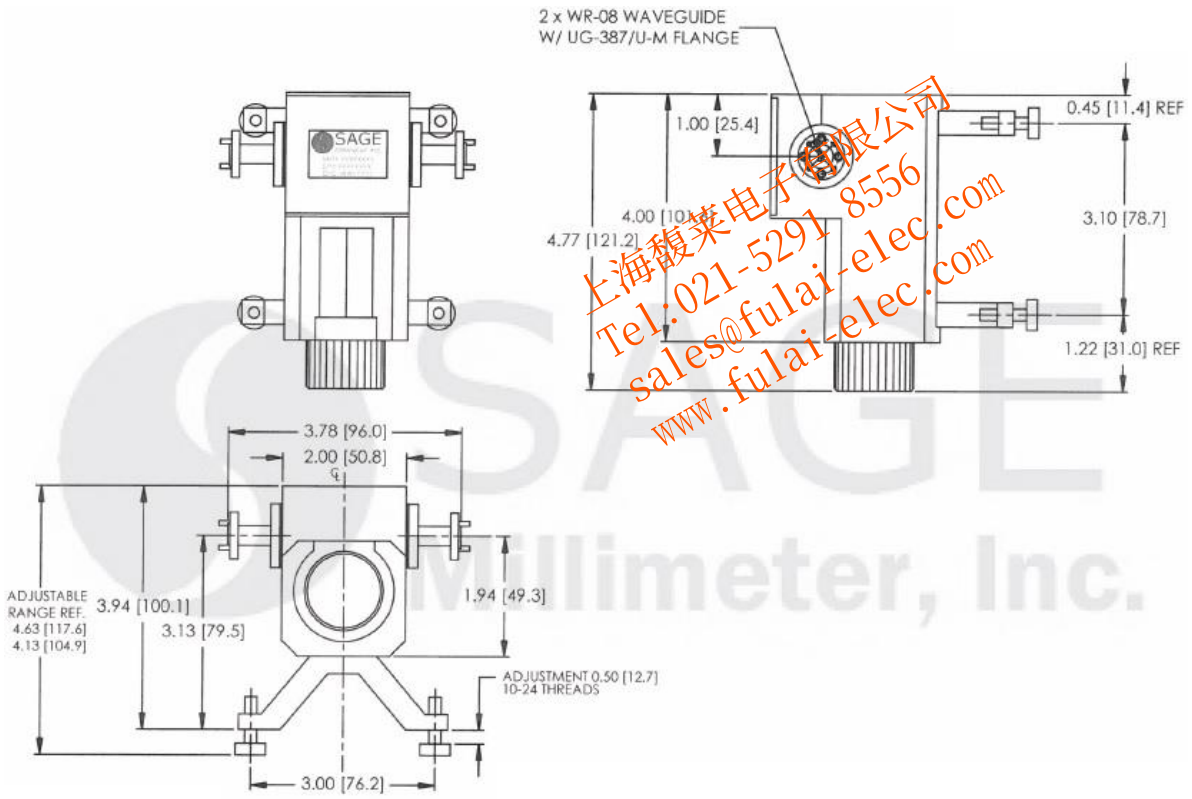
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**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches)




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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 ±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.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

**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.



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