



## Q-Band Fixed Attenuator, High Precision, 20 dB

### Description:

**Model STA-20-22-F1** is a 20 dB fixed attenuator that is used in millimeterwave systems and operates from 33 to 50 GHz. The attenuator has a fixed attenuation value of 20 dB at center frequency, 41.5 GHz. The attenuator's waveguides are manufactured with precision wire EDM to ensure high accuracy and a quality internal surface finish. The design features anti-cocking flanges to reduce misalignment errors and a sandblasted surface treatment to provide a durable finish. While the attenuator is designed for full waveguide band applications, the attenuation value does show a minor slope within the band due to its distinct mechanical configuration. Other attenuation values are available under different model numbers as **STA-XX-22-F1**, where **XX** is the desired attenuation value.



### Features:

- Full Band Coverage
- Low Cost
- Accurate Attenuation Value at Center Frequency

### Applications:

- Test Lab
- Instrumentations
- System Integration

### Electrical Specifications:

| Parameter                 | Minimum | Typical | Maximum |
|---------------------------|---------|---------|---------|
| Frequency Range           | 33 GHz  |         | 50 GHz  |
| Attenuation @ 41.5 GHz    |         | 20 dB   |         |
| Return Loss               |         | 20 dB   |         |
| Power Handling            |         | 500 mW  | 750 mW  |
| Specification Temperature |         | +25 °C  |         |
| Operating Temperature     | -40 °C  |         | +85 °C  |

### Mechanical Specifications:

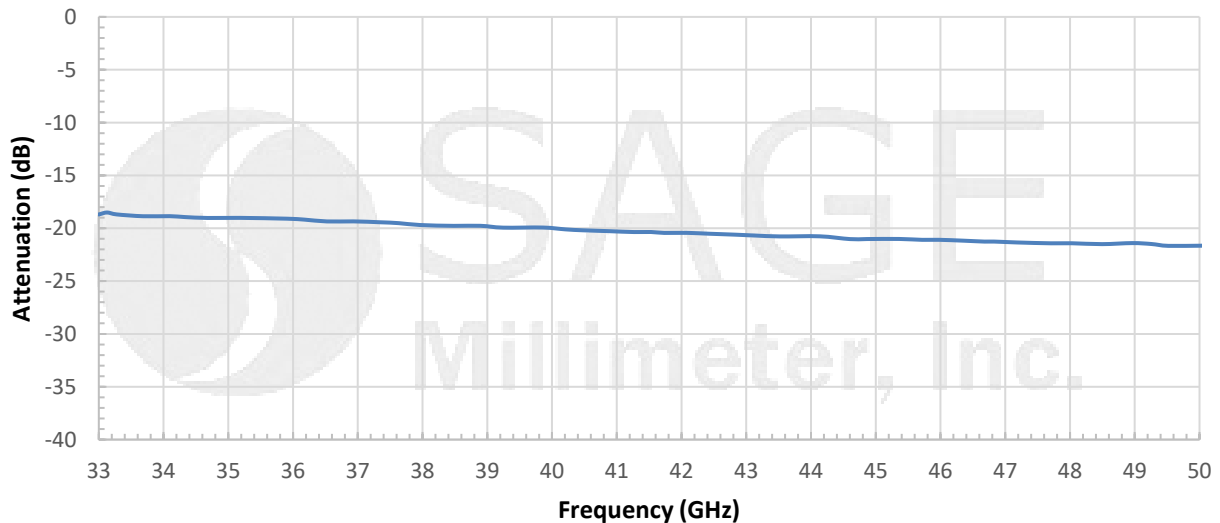
| Item                | Specification                                     |
|---------------------|---|
| Waveguide Ports     | WR-22 Waveguide with UG-383/U Anti-Cocking Flange |
| Attenuation Setting | Fixed   |
| Insertion Length    | 3.00"   |
| Material            | Brass   |
| Finish              | Gold Plated                                       |
| Weight              | 4.5 Oz  |
| Outline             | TA-FQ-A   |



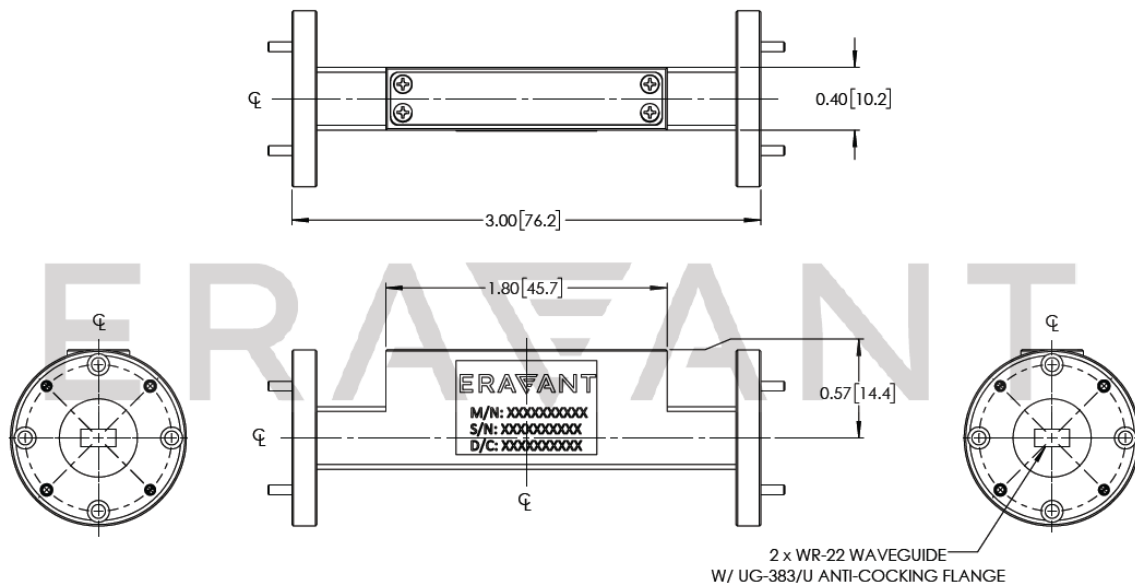


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### Typical Measured Attenuation vs Frequency



### 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:

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



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