

F-Band X8 Frequency Extender

Description:

Model STE-SF808-00-S1 is an F-Band X8 frequency extender that uses an input frequency range of 11.25 to 17.5 GHz at +5 dBm along with harmonic generation and filtering to produce a 90 to 140 GHz RF signal at -3 dBm. The extender is designed and manufactured as a bench top unit to extend the low frequency synthesizer or sweeper without losing all of the functionalities and features. The extender also features adjustable legs, which can also be removed, to allow for an easy test set up.



Features:

- Full Waveguide Band Operation
- X9 Frequency Extension
- Low Harmonic Emission

Applications:

- Test Lab
- Network Analyzer Systems
- Automatic Test Set
- Antenna Range

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|-----------|------------|----------|
| Output Frequency Range | 90 GHz | | 140 GHz |
| Input Frequency Range | 11.25 GHz | | 17.5 GHz |
| Output Power | | -3 dBm | |
| Input Power | +1 dBm | +5 dBm | +20 dBm |
| Input Return Loss | | 10 dB | |
| Output Return Loss | | 15 dB | |
| Harmonic Suppression | | 20 dBc | |
| Spurious Suppression | | 60 dBc | |
| Voltage Input | +8 V | +12V/450mA | +15 V |
| Specification Temperature | | +25 °C | |
| Operation Temperature | 0 °C | | +50 °C |

Mechanical Specifications:

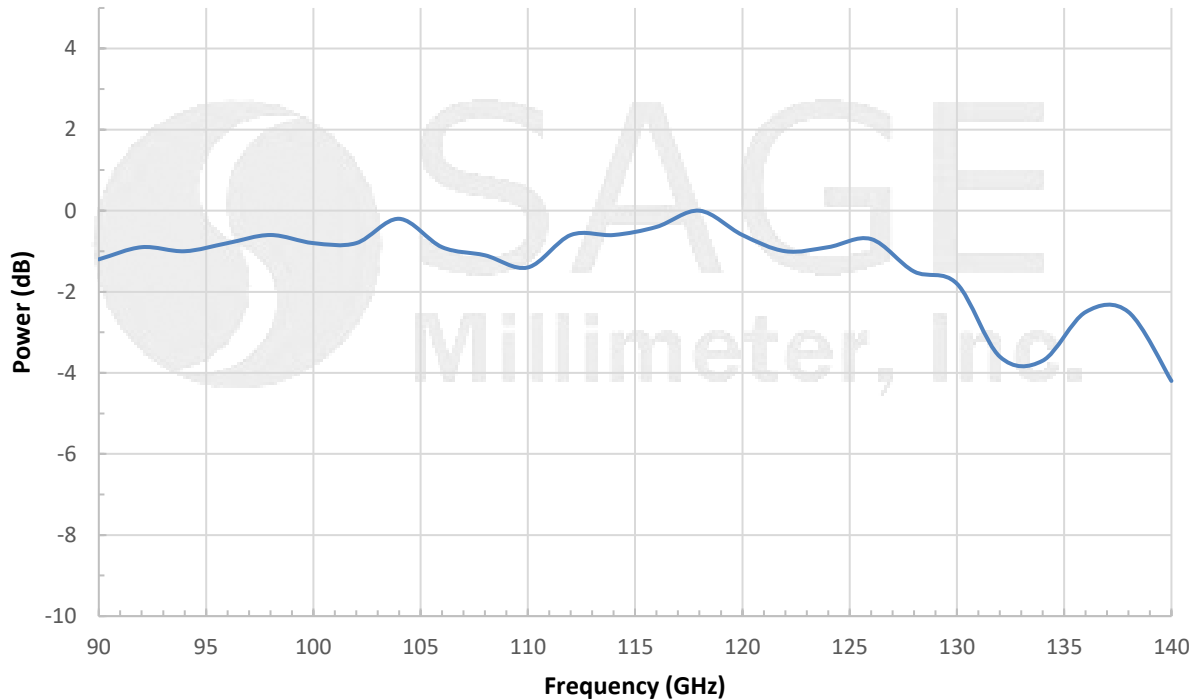
| Item | Specification |
|----------------|--|
| Input Port | SMA (F) |
| Output Port | WR-08 Waveguide with UG-387/U-M Flange |
| DC Bias | 2.5 mm DC Jack (AC-to-DC power converter included) |
| DC Bias Switch | On-Off Rocker Switch with Indicator Light |
| Size | 6.15" (W) x 6.89" (L) x 3.20" (H) |
| Finish | Black Anodized |
| Weight | 2 lb |
| Outline | TE-F1 |



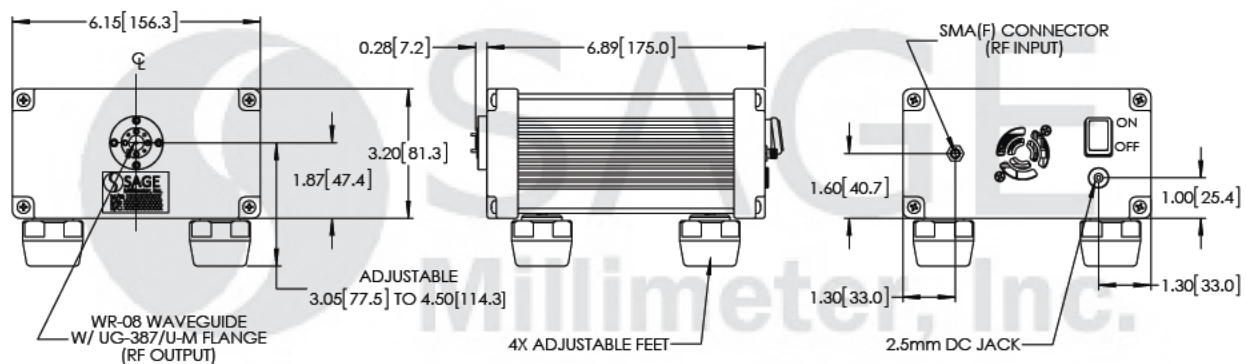
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Typical Performance vs. Frequency

RF Input Power: +0 dBm



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



Note:

- All data are presented using a limited 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.



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Caution:

- Exceeding absolute maximum ratings of the device will damage the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.

