STE-SF908-00-S1

Rev. 1.2

F-Band X9 Frequency Extender

Description:



Model STE-SF908-00-S1 is an F-Band X9 frequency extender that uses an input frequency range of 10 to 15.56 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	10.00 GHz		15.56 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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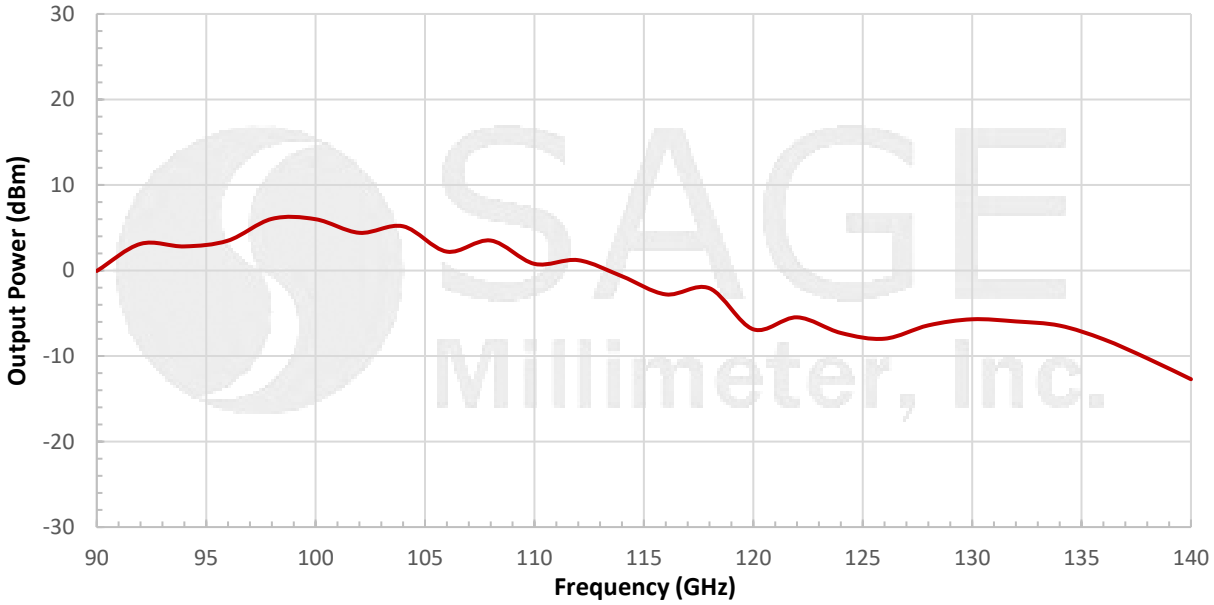
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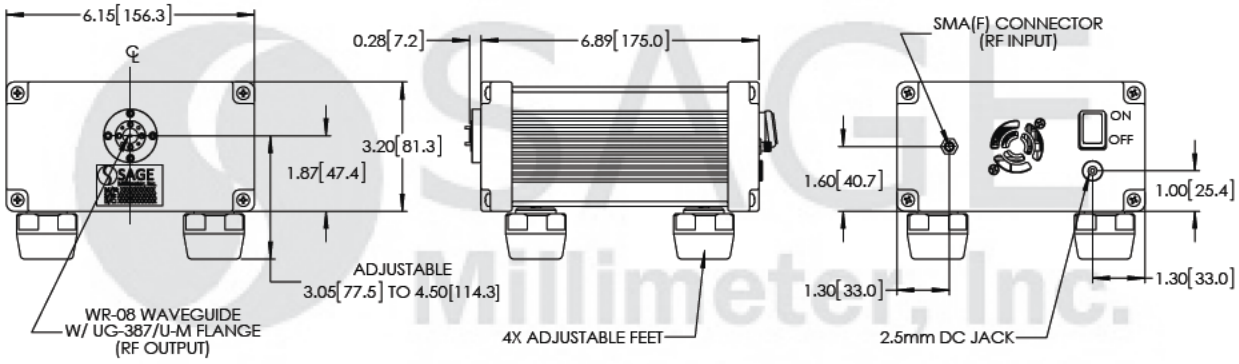
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Typical Performance vs. Frequency

P_{in} : +5 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.

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.

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