



W-Band X3 Frequency Extender

Description:

Model STE-KF310-15-S1 is a W-Band X3 frequency extender that uses an input frequency range of 25 to 36.67 GHz at +5 dBm along with harmonic generation and filtering to produce a 75 to 110 GHz RF signal at +15 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
- X3 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	75 GHz		110 GHz
Input Frequency Range	25.00 GHz		36.67 GHz
Output Power		+15 dBm	
Input Power	+1 dBm	+5 dBm	+20 dBm
Input Damage Level			+20 dBm
Harmonic Suppression		20 dBc	
Spurious Suppression		60 dBc	
Voltage Input		+15 V _{dc}	
Bias Current		300 mA	
Specification Temperature		+25 °C	
Operation Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Parameter
Input Port	K (F)
Output Port	WR-10 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
Finish	Black Anodized
Weight	2 lb
Size	6.15" (W) x 6.89" (L) x 4.38" (H)
Outline	TE-W



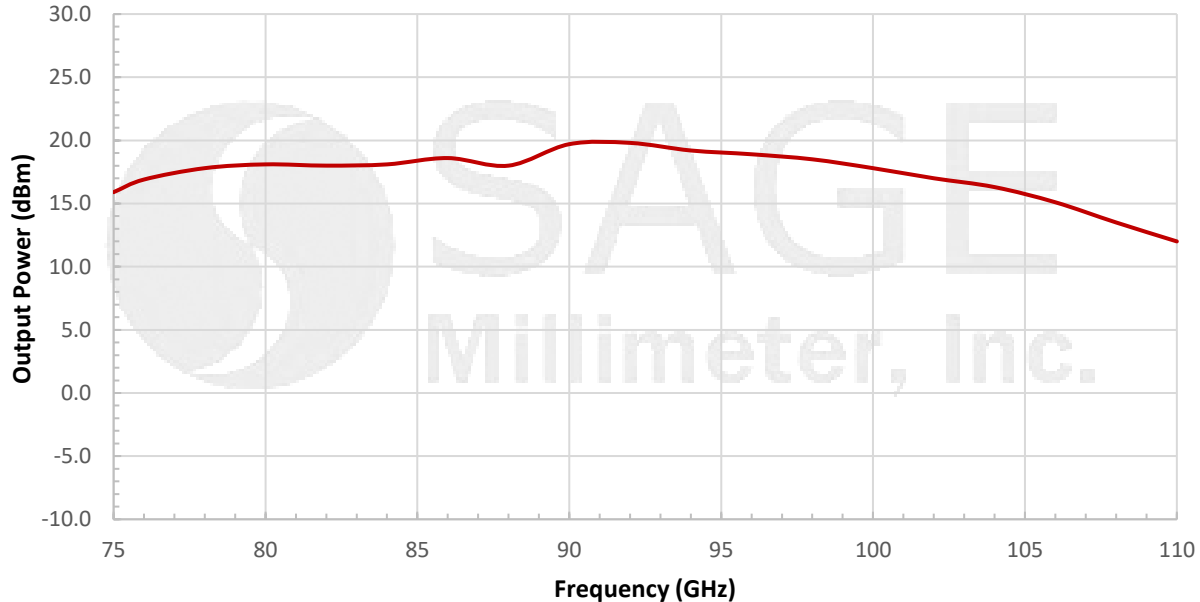
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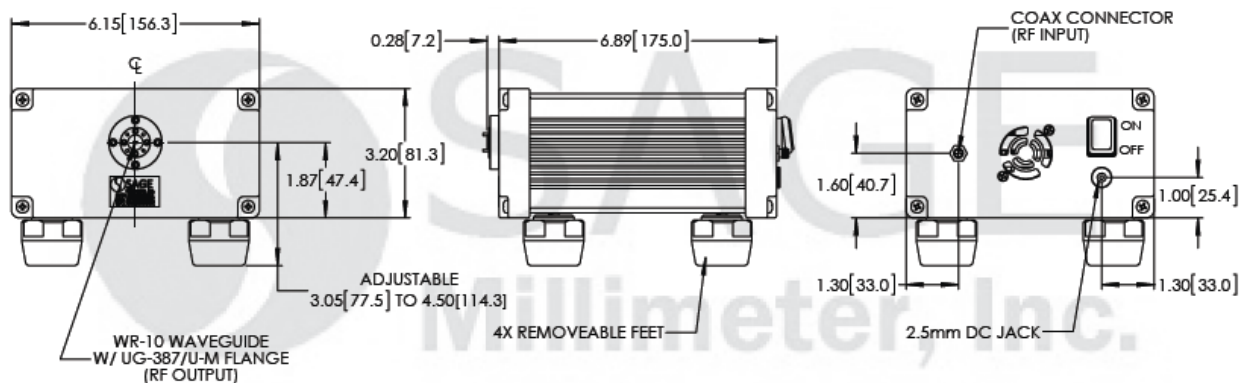
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Typical Performance vs. Frequency

Input Power: + 5 dBm, V/I: +15 V_{DC}/300 mA



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.
- Other frequency multiplication factors available under different model numbers.

Caution:

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



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