

## E-Band X6 Frequency Extender, +16 dBm Output Power

### Description:

**Model STE-KF612-S1** is a high output power E-Band X6 frequency extender that uses an input frequency range of 10 to 15 GHz at +3 dBm along with harmonic generation and filtering to produce a 60 to 90 GHz RF signal. The extender features an adjustable attenuator to for output power control. 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
- Low Harmonic Emission
- 30 dB Dynamic Range

### Applications:

- Test Lab
- Network Analyzer Systems
- Antenna Range

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Output Frequency	60 GHz		90 GHz
Input Frequency	10 GHz		15 GHz
Output Power (No Attenuation)		+16 dBm	
Dynamic Range		30 dB	
Input Power		+3 dBm	+20 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
Harmonic Suppression		-20 dBc	
Spurious Suppression		-60 dBc	
Power Supply	100 V <sub>AC</sub>		240 V <sub>AC</sub>
Specification Temperature		+25 °C	
Operation Temperature	0 °C		+50 °C

### Mechanical Specifications:

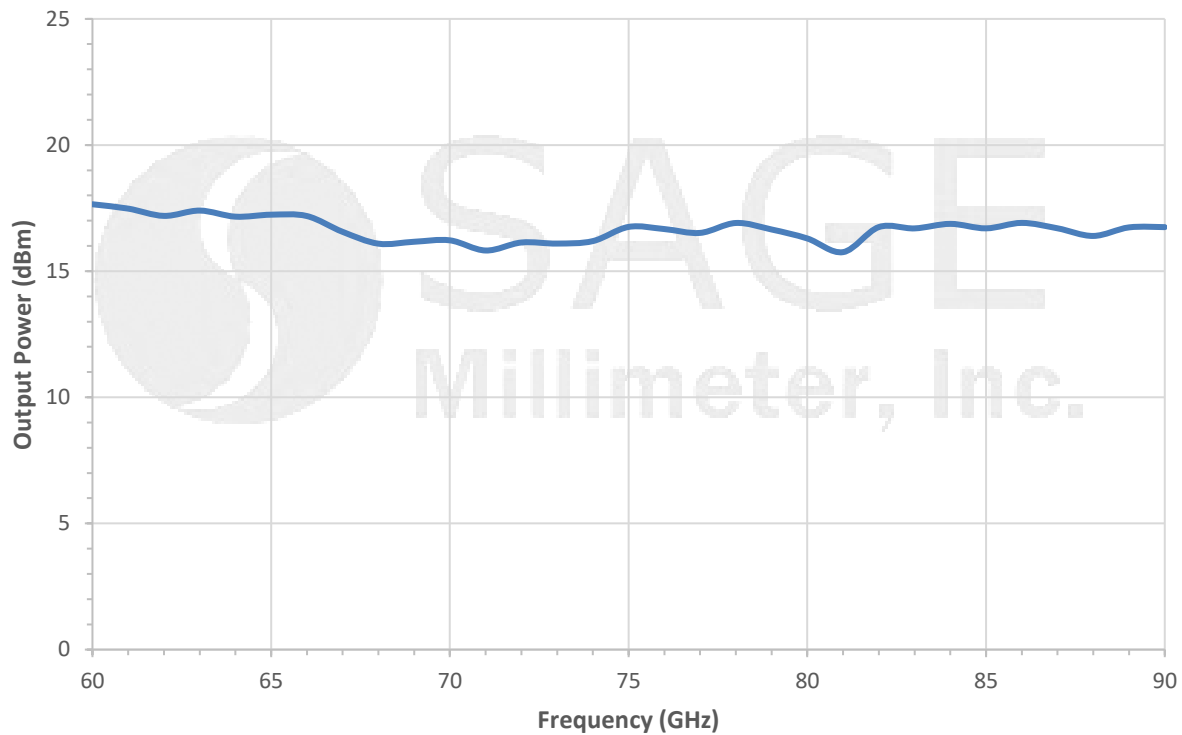
Item	Parameter
Input Port	K (F)
Output Port	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
DC Bias Switch	Off-On Latching Switch with Indicator Light
Finish	Black Anodized
Weight	2.3 lbs
Size	4.89" (W) x 5.00" (L) x 1.90" (H)
Outline	TE-E-A-2



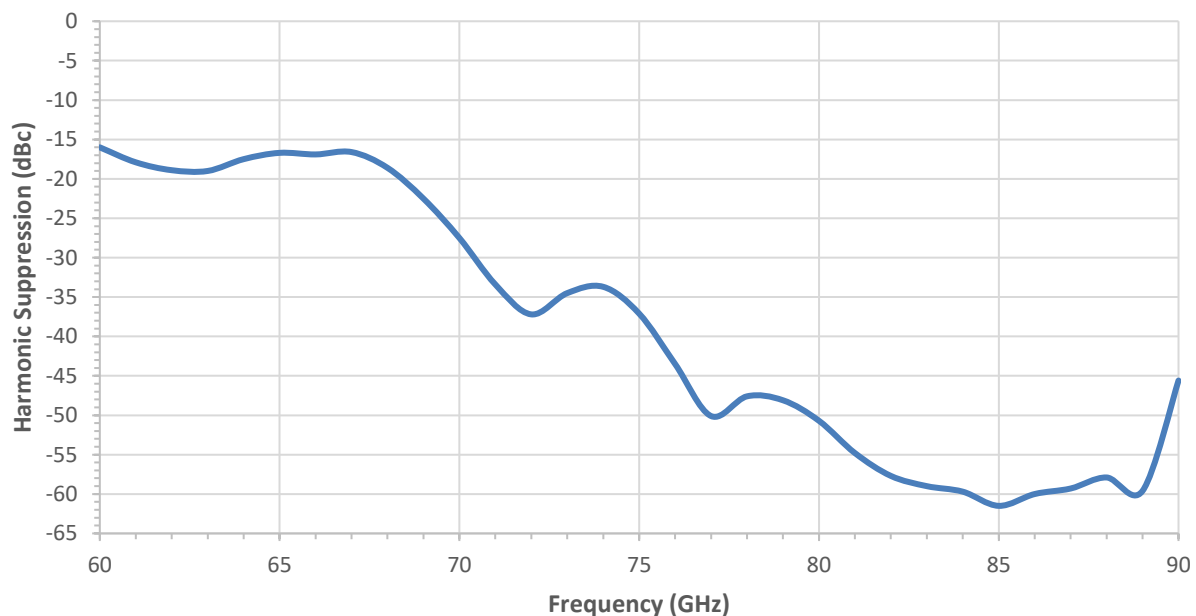
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### Typical Output Power vs. Frequency

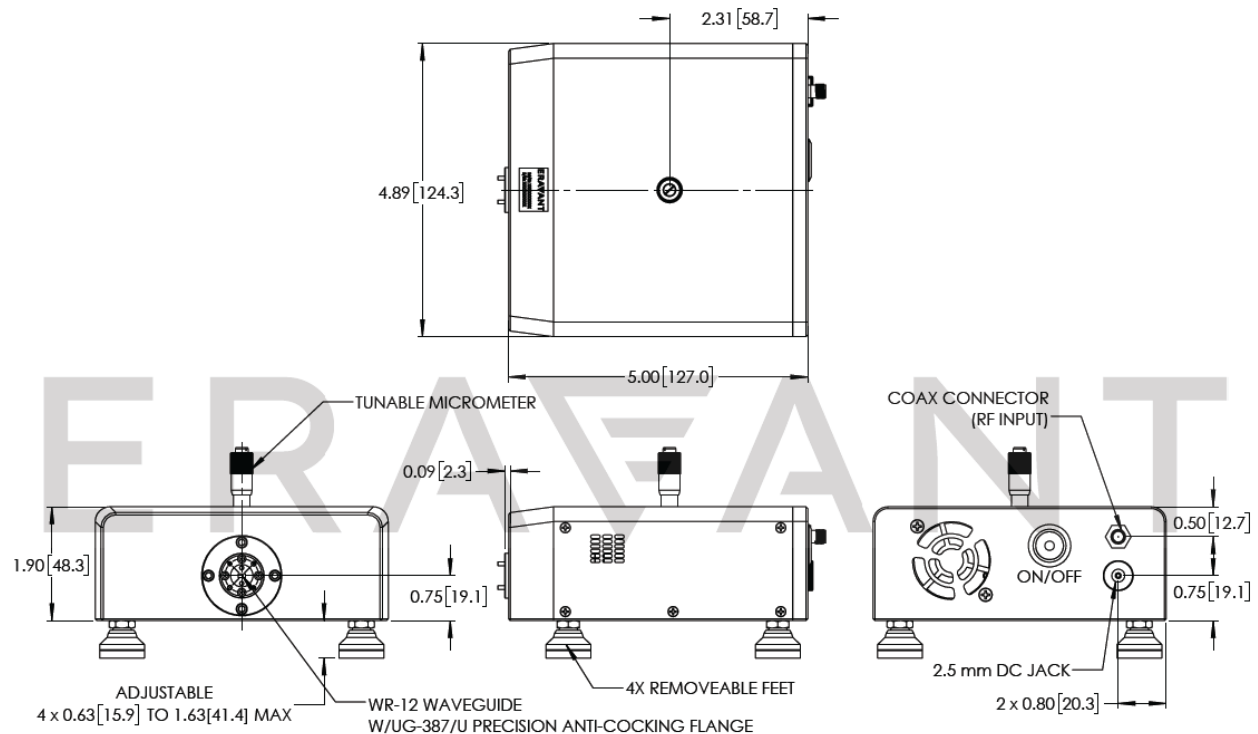


### Harmonic Suppression vs. Frequency



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**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.
- All testing was performed under +25 °C case temperature.
- Eravant reserves the right to change the information presented without notice.
- Power Supply adapter is included with the frequency extender.
- Other frequency multiplication factors available under different model numbers.

### Caution:

- Exceeding absolute maximum ratings of the device will damage the device.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.

