STE-KF412-S1

E-Band X4 Frequency Extender, +16 dBm Output Power

STE-KF412-S1 is a high ouput power E-Band X4 frequency extender that uses an input frequency range of 15 to 22.5 GHz at +5 dBm along with harmonic generation and filtering to produce a 60 to 90 GHz RF signal. The extender features an adjustable attenuator 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.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Output Frequency	60 GHz		90 GHz
Input Frequency	15 GHz		22.5 GHz
Output Power (No Attenuation)		+16 dBm	
Output Power Control Range		30 dB	
Input Power		+5 dBm	+20 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
Harmonic Suppression		30 dBc	
Spurious Suppression		60 dBc	
Power Supply @ +12VDC	100 V_{AC}		240 V_{AC}
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input Port	K (F)
Output Port	WR-12 Waveguide with UG-387/U-M Precision 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

ECCN

3A001.b.7

FEATURES

- Full Waveguide Band Operation
- Low Harmonic Emission

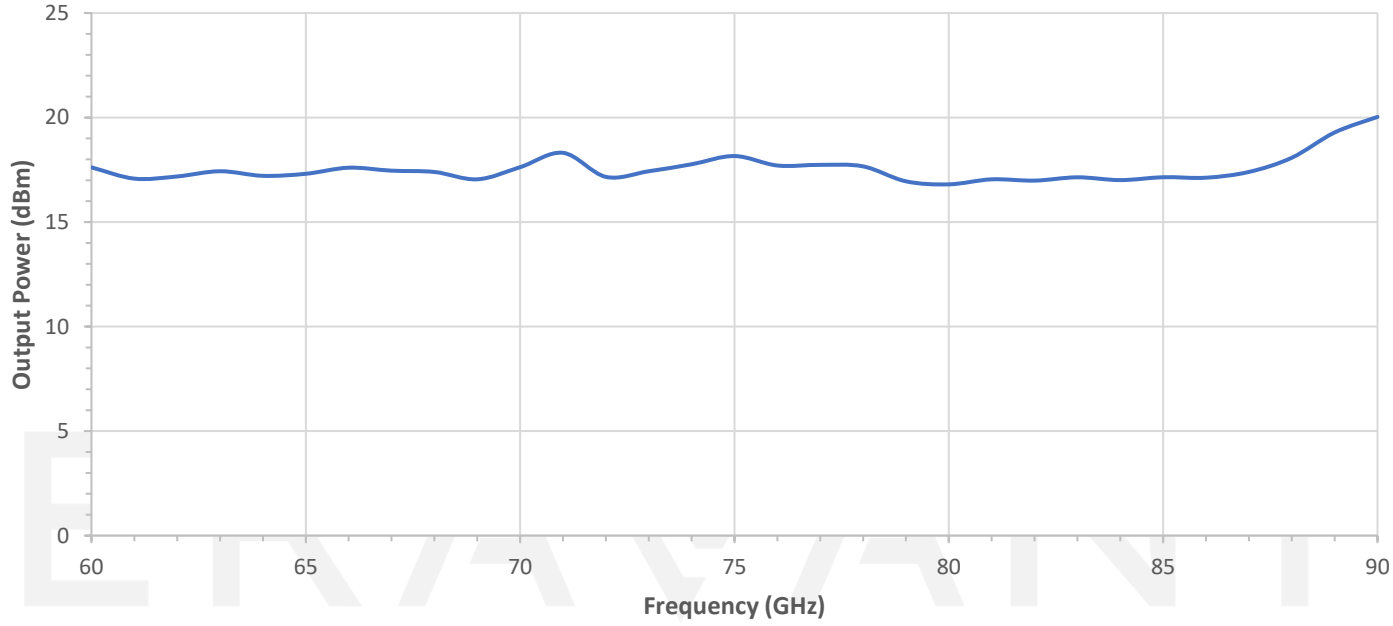
APPLICATIONS

- Test Lab
- Network Analyzer Systems
- Antenna Range

SUPPLEMENTAL DETAILS

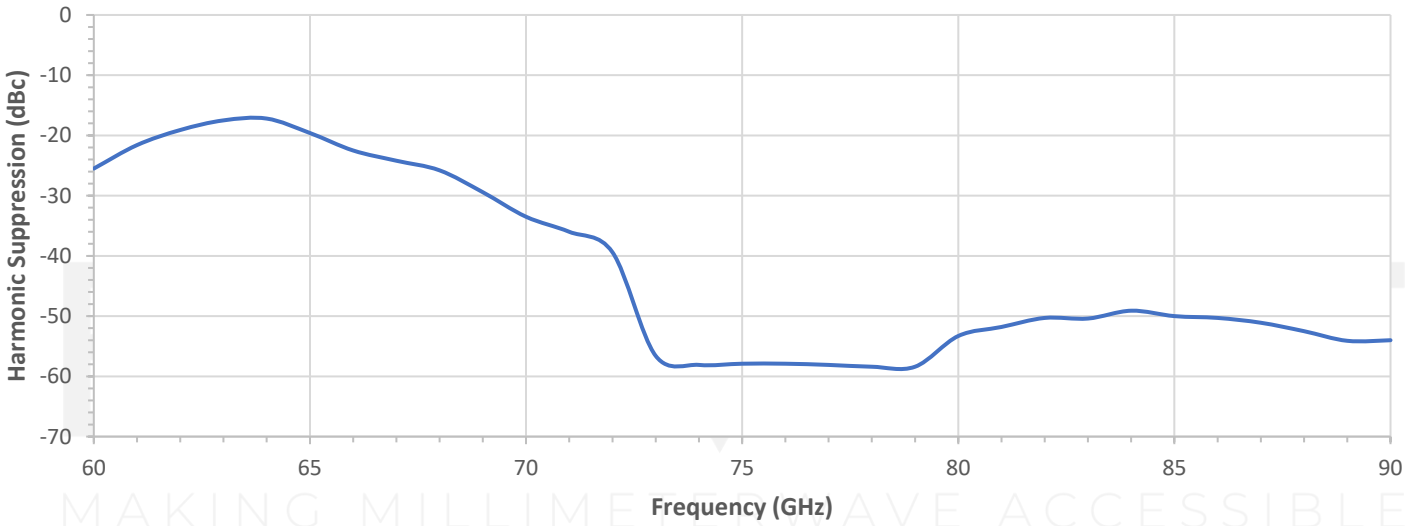
Output Power vs. Frequency

Bias: +8V_{DC}/780 mA; Input Power = +3 dBm
RF Sat: +8VDC/1200mA

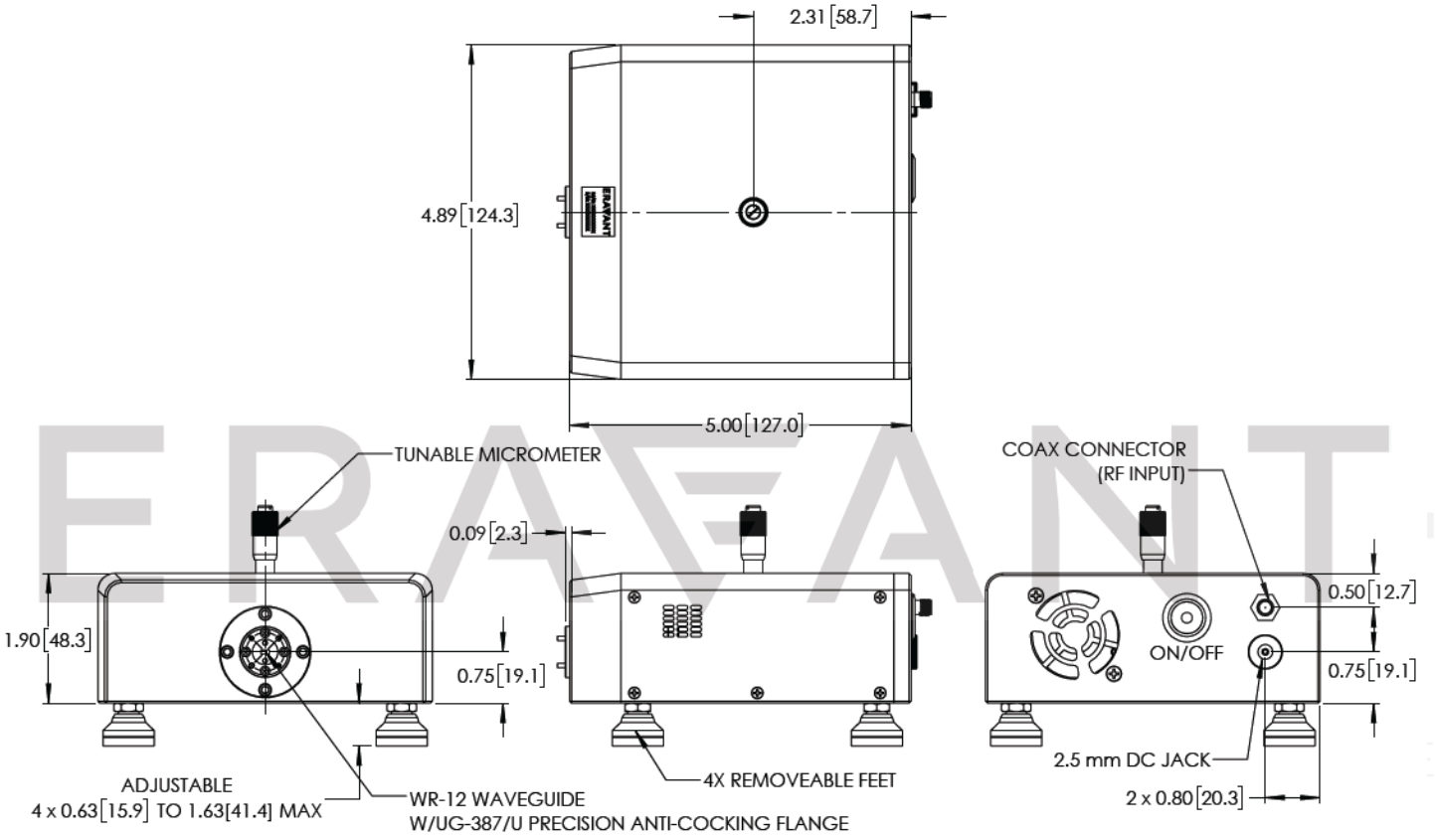


Harmonic Suppression vs. Frequency

Bias: +8V_{DC}/780 mA; Input Power = +3 dBm



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.

CAUTION:

- Exceeding absolute maximum ratings shown will damage the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 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.