

Q-Band X4 Frequency Extender, +18 dBm Output Power

Description:

Model STE-SF422-S1 is a Q-Band X4 frequency extender that uses an input frequency range of 8.25 to 12.5 GHz at +5 dBm along with harmonic generation and filtering to produce a 33 to 50 GHz RF signal. 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

Applications:

- Test Lab
- Network Analyzer Systems
- Antenna Range

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Output Frequency	33 GHz		50 GHz
Input Frequency	8.25 GHz		12.5 GHz
Output Power (No Attenuation)		+18 dBm	
Dynamic Range		30 dB	
Input Power		+5 dBm	+10 dBm
Port Return Loss		10 dB	
Harmonic Suppression		-15 dBc	
Spurious Suppression		-60 dBc	
Power Supply	100 V _{AC}		240 V _{AC}
Specification Temperature		+25 °C	
Operation Temperature	0 °C		+50 °C

Mechanical Specifications:

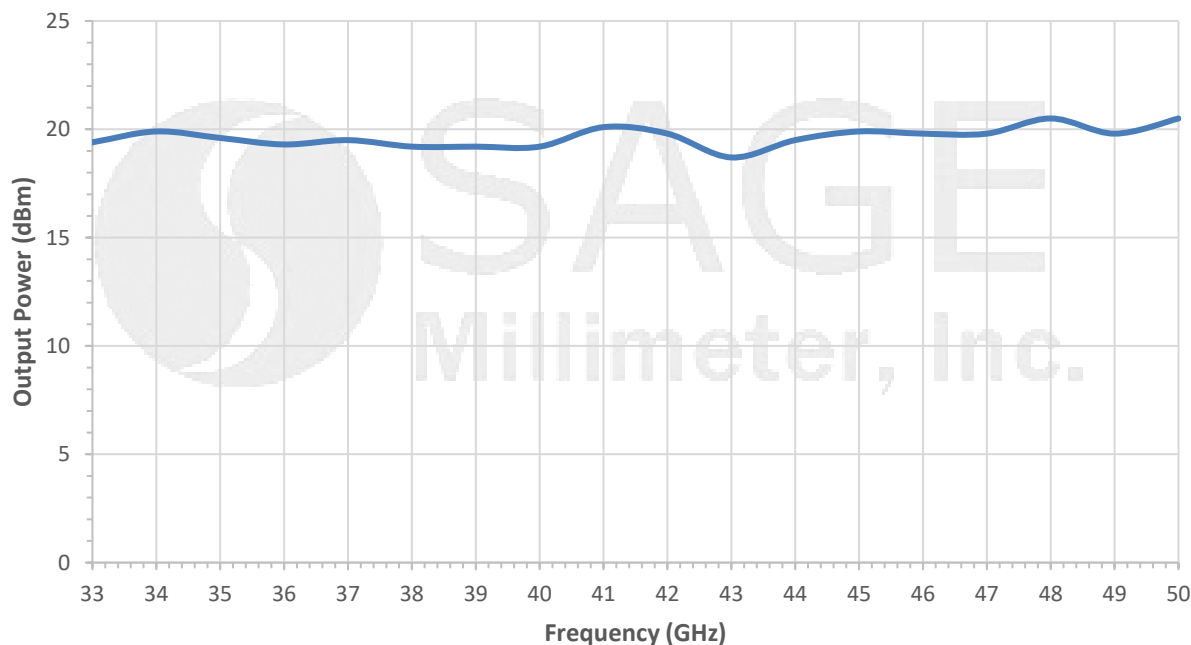
Item	Parameter
Input Port	SMA (F)
Output Port	WR-22 Waveguide with UG-383/U Anti-Cocking Flange
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
DC Bias Switch	Off-On Latching Switch with Indicator Light
Finish	Black Anodized
Weight	2.3 lbs
Size	4.89" (W) x 6.00" (L) x 2.00" (H)
Outline	TE-Q-A



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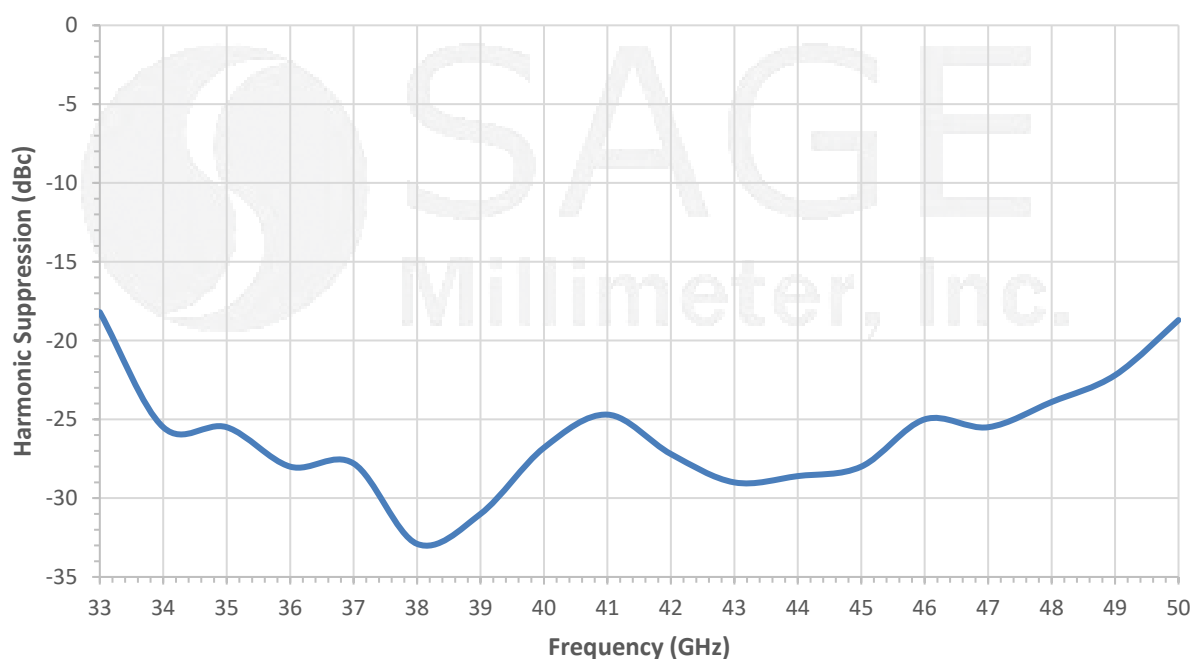
Output Power vs. Frequency

Input Power = +5 dBm



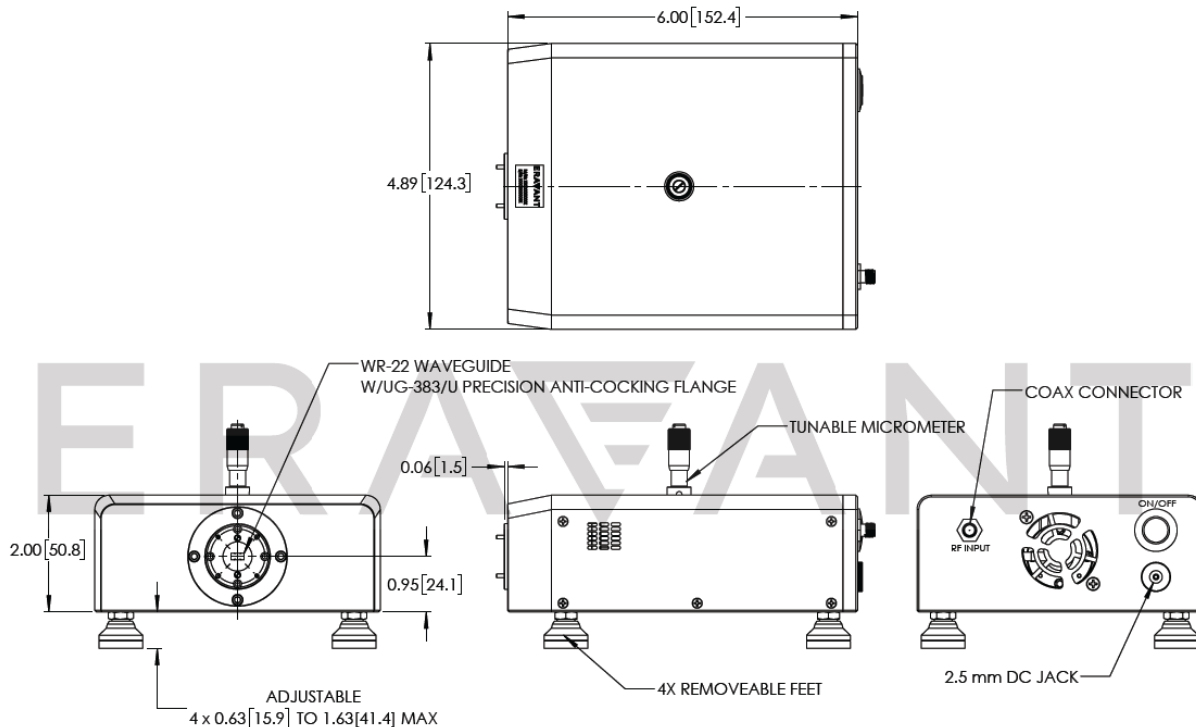
Harmonic Suppression vs. Frequency

Input Power = +5 dBm



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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 ± 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.

