

U-Band X4 Frequency Extender, 20 dBm Output Power

STE-SF419-S1 is a U-Band X4 frequency extender that uses an input frequency range of 10 to 15 GHz at +0 dBm along with harmonic generation and filtering to produce a 40 to 60 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.



Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|-------------------------------|---------------------|---------|---------------------|
| Output Frequency | 40 GHz | | 60 GHz |
| Input Frequency | 10 GHz | | 15 GHz |
| Output Power (No Attenuation) | | +20 dBm | |
| Dynamic Range | | 30 dB | |
| Input Power | | 0 dBm | +20 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 | |
| Operating Temperature | 0°C | | +50°C |

Mechanical Specifications:

| Item | Specification |
|----------------|---|
| Input Port | SMA (F) |
| Output Port | WR-19 Waveguide with UG-383/U-M 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-U-A |

ECCN

3A001.b.7

FEATURES

- Full Waveguide Band Operation
- Low Harmonic Emission

APPLICATIONS

- Test Lab
- Network Analyzer Systems
- Antenna Range

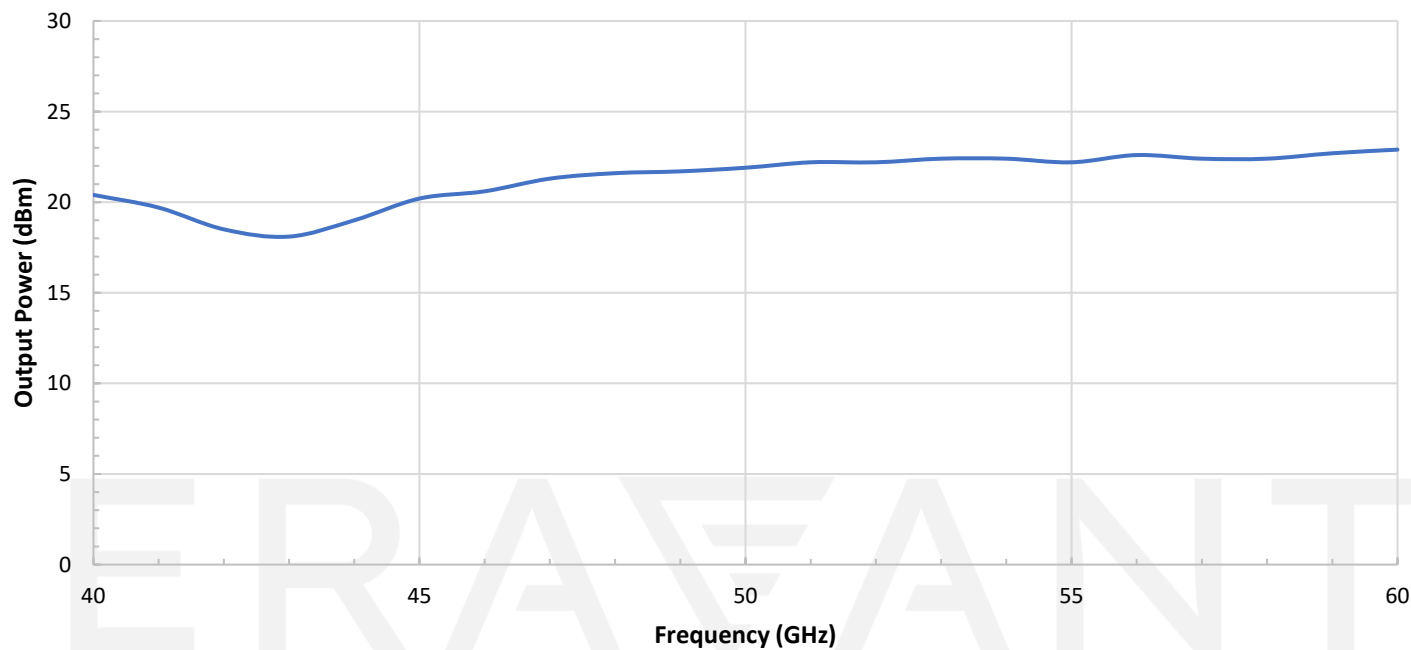
SUPPLEMENTAL DETAILS



STE-SF419-S1

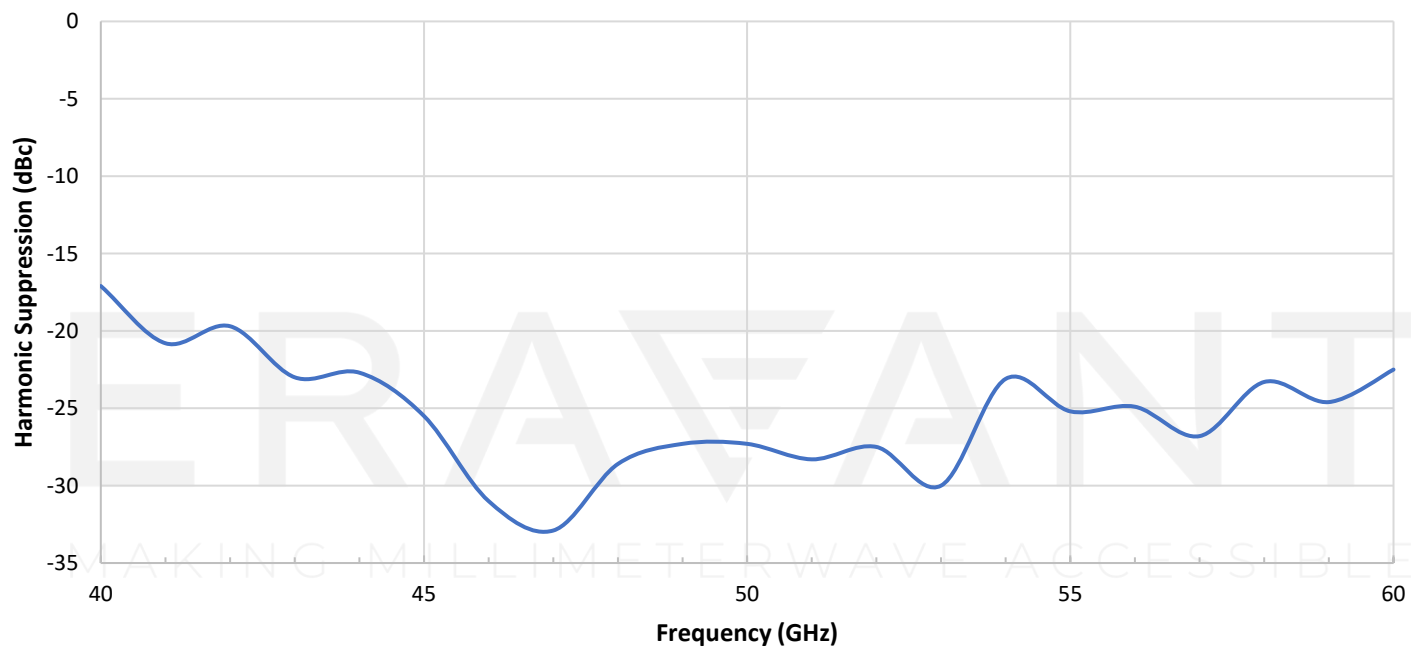
Output Power vs. Frequency

Input Power = +0 dBm



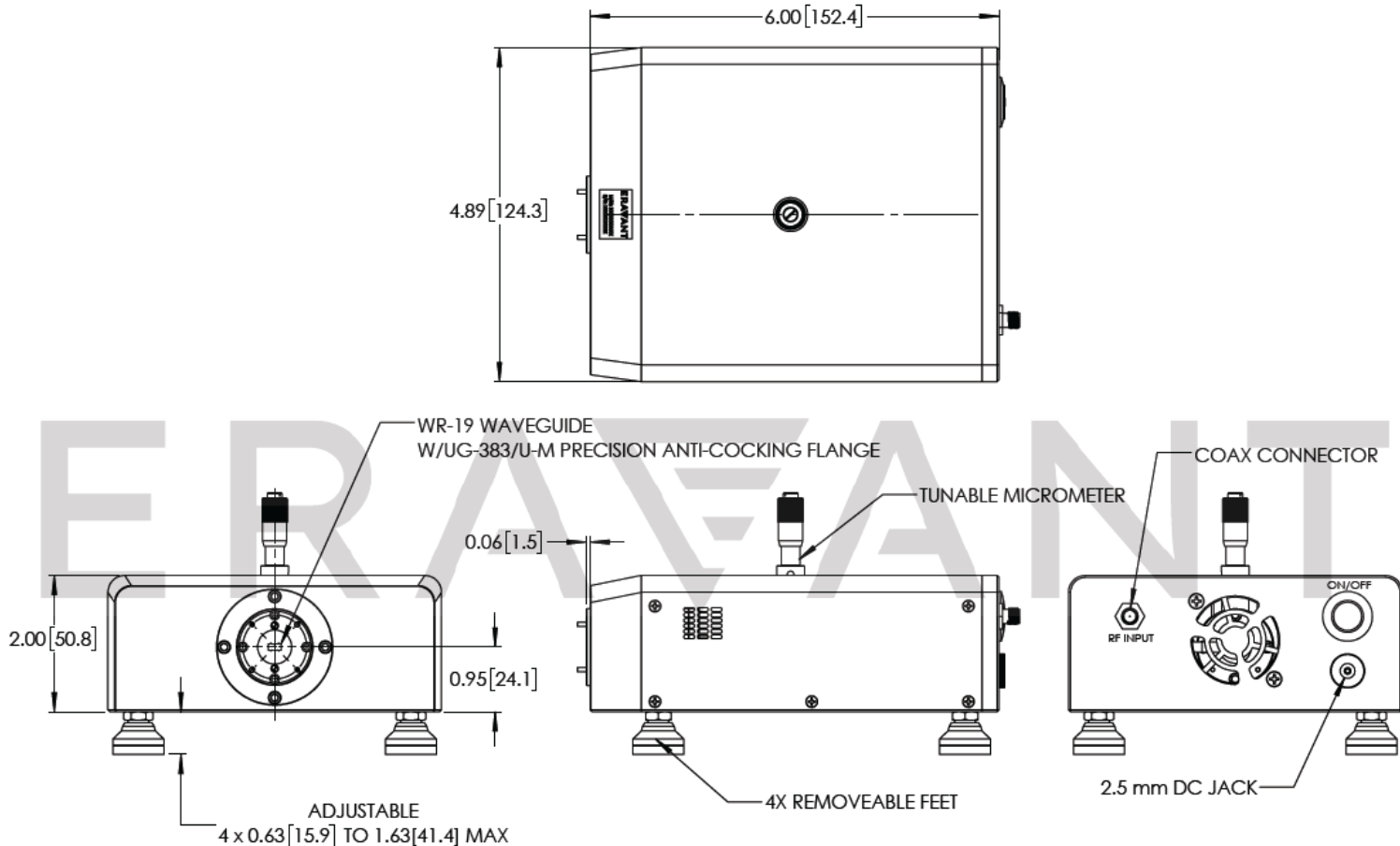
Harmonic Suppression vs. Frequency

Input Power = +0 dBm



STE-SF419-S1

Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Power Supply adapter is included with the frequency extender.
- Other frequency multiplication factors are available under different model numbers.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum ratings shown will damage the device.
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model [SCH-06004-S1](#) is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model [SCH-08008-S1](#) is highly recommended.