

## D-band X8 Frequency Extender, +16 dBm Output Power

### Description:

**Model STE-144164KF806-16-S1** is a WR-06 x8 frequency extender that uses an input signal from 16.87 to 20 GHz at +5 dBm to produce a 135 to 160 GHz RF signal at +16 dBm. The frequency extender features an internal level set attenuator that provides 25 dB output power dynamic range. The extender is designed and manufactured as a bench top unit to extend the low frequency synthesizer or sweeper without losing functionalities and features. The extender also features adjustable legs, which can be removed, to allow for an easy test set up. This product combines Eravant's HPA technology and ACST GmbH's high power multiplier technology to provide state-of-the-art performance at MM/SubMM-Waves.



### Features:

- X8 Frequency Extension
- Low Harmonic Emission
- 25 dB Output Dynamic Range

### Applications:

- Test Lab
- Network Analyzer Systems
- Automatic Test Set
- 6G Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Output Frequency	135 GHz		160 GHz
Input Frequency	16.87 GHz		20 GHz
Output Power (No Attenuation)		+16 dBm	
Output Power Dynamic Range		25 dB	
Input Power		+5 dBm	+20 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
Harmonic Suppression		-15 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:

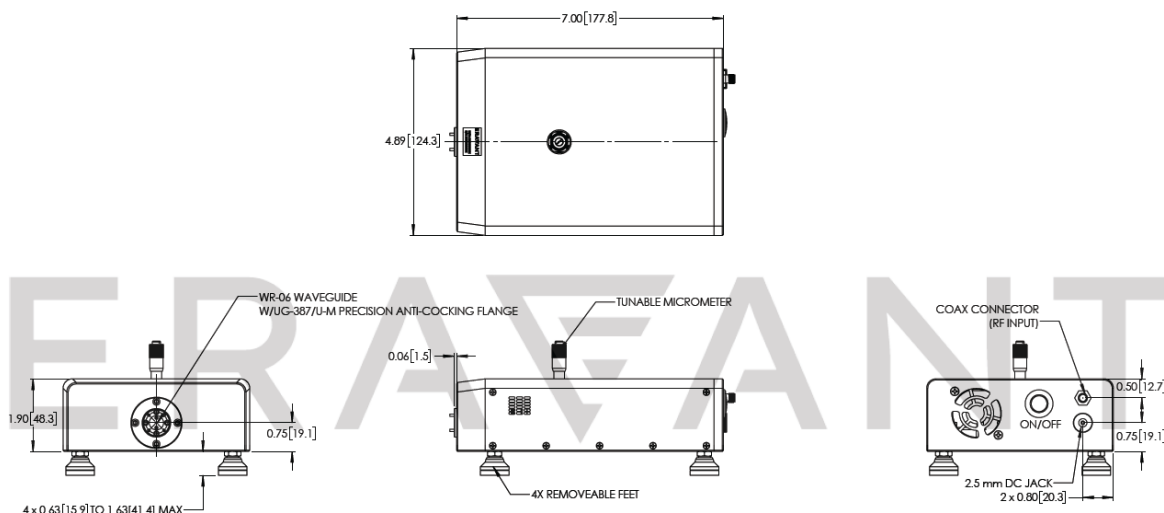
Item	Specification
Input Port	2.92 mm (F)
Output Port	WR-06 Waveguide with UG-387/U-M Precision Anti-Cocking Flange
DC Bias Port	2.5 mm DC Jack (AC-to-DC power converter included)
Power Switch	Off-On Latching Switch with Indicator Light
Finish	Black Anodized
Weight	2.3 lbs
Size	4.89" (W) x 7.00" (L) x 1.90" (H)
Outline	TE-D-A



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

### 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,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

