

D-Band, X4 Active Multiplier, +2 dBm P_{out}

Description:

Model SFA-114174402-06VF-E1 is an active X4 frequency multiplier. The multiplier has an input frequency of 27.5 to 42.5 GHz with a typical input power of +3 dBm and an output frequency of 110 to 170 GHz with a typical output power of +2 dBm. The DC power requirement for the multiplier is +8 V_{DC}/380 mA. The input port configuration is a female 1.85 mm connector and the output is a WR-06 waveguide with a UG-387/U-M anti-cocking flange. Other port configurations are available under different model numbers.



Features:

- Full Band Coverage
- X4 Multiplication

Applications:

- Frequency Extenders
- THz Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	27.5 GHz		42.5 GHz
Input Power		+3 dBm	20 dBm
Output Frequency	110 GHz		170 GHz
Output Power		+2 dBm	
Harmonic Suppression		-15 dBc	
Spurious		-60 dBc	
Port Return Loss		8 dB	
DC Voltage	+6 V _{DC}	+8 V _{DC}	+15 V _{DC}
DC Supply Current		380 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

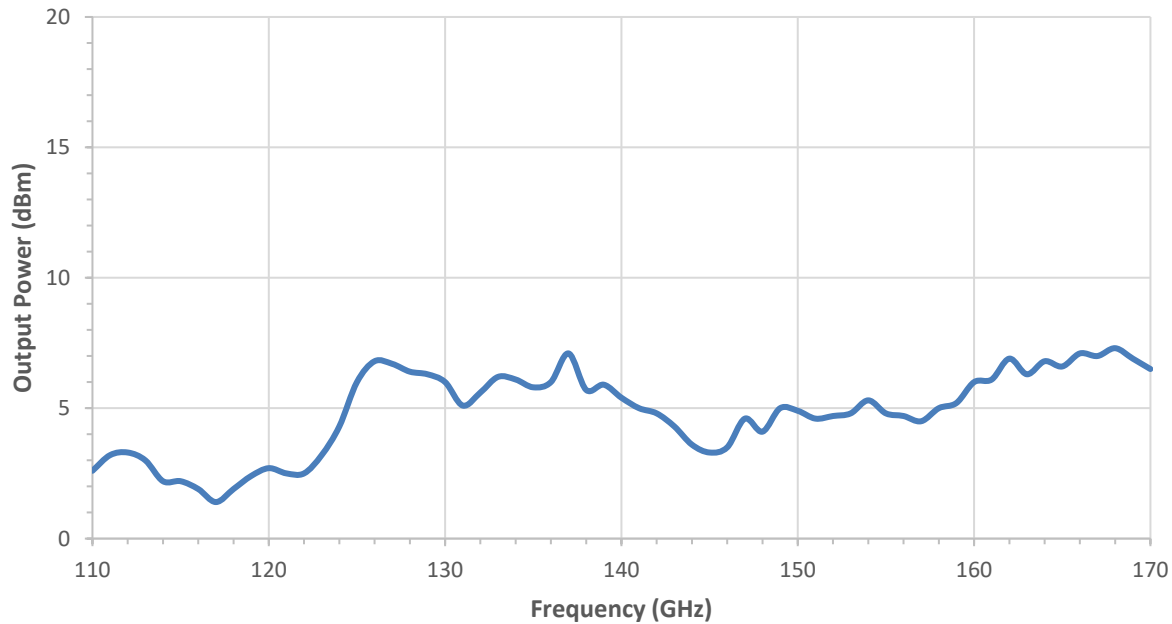
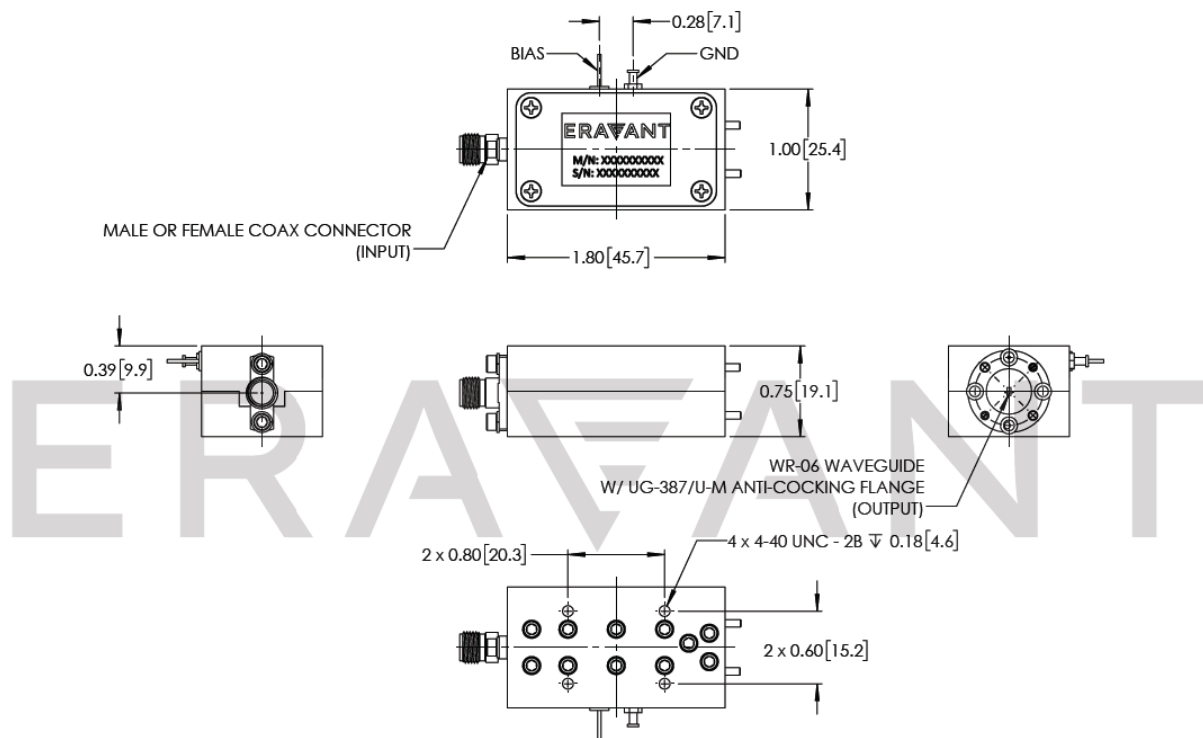
Mechanical Specifications:

Item	Specification
Input Port	1.85 mm (F)
Output Port	WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.2 Oz
Size	1.80" (L) X 1.00" (W) X 0.75" (H)
Outline	FA-SD-2CW-A-1.8



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Typical Output Power vs. Frequency

Bias: +8V_{DC}/360 mA**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])

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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 mechanical configurations are available under different model numbers.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +50 °C. Use proper heatsink or fan if necessary.
- Any foreign objects in the waveguide will cause performance degradation and may 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.**

