

## WR-08 X2, Passive Frequency Multiplier, 85 to 130 GHz

**SFP-853134210-08VF-SB** is a WR-08 X2 passive multiplier that generates second order harmonics with good harmonic and fundamental suppression. This multiplier requires an input frequency range of 42.5 to 65 GHz at +19 dBm RF power to yield typical +7 dBm output power at 85 to 13 GHz. The multiplier is equipped with a 1.85 mm female coax connector as its input port and a WR-08 waveguide and UG-387/U-M flange as its output port.



## **Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Input Frequency	42.5 GHz		65 GHz
Output Frequency	85 GHz		130 GHz
Input Power		+19 dBm	+20 dBm
Damage Input Power			+22 dBm
Output Power		+7 dBm	
Conversion Efficiency		6%	
Harmonic Suppression		20 dB	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

# **Mechanical Specifications:**

Item	Specification
RF Input Port	1.85 mm (F)
RF Output Port	WR-08 Waveguide with UG-387/U-M Flange
Bias Port	SMA (F)
Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Size	0.75" (L) X 0.75" (W) X 0.75" (H)
Outline	FP-FC2-A

### **ECCN**

3A001.b.7

## **FEATURES**

- High Conversion Efficiency
- Compact Package

## **APPLICATIONS**

- THz
- Source Modules
- Frequency Extenders

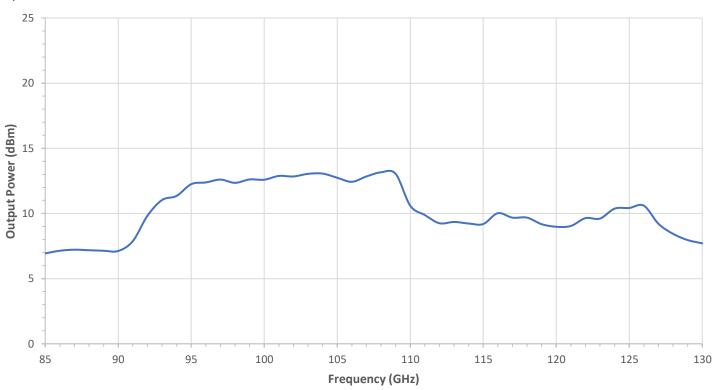
## **SUPPLEMENTAL DETAILS**



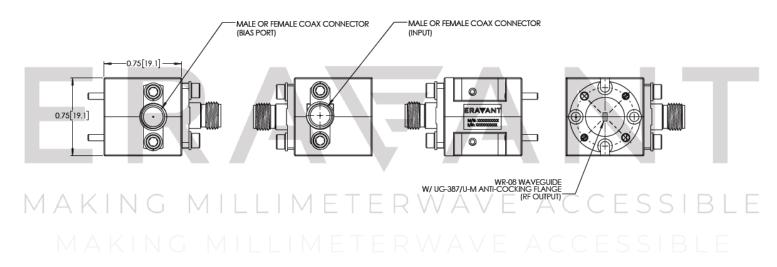
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## **Output Power vs. Frequency**

Input Power = +19 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 slightly.
- All testing was performed under +25 °C.
- Eravant reserves the right to change the information presented without notice.

#### **CAUTION:**

- Exceeding absolute maximum ratings shown will damage the device.
- The multiplier is a static sensitive device. Always follow ESD rules when working with the device.
- Eravant recommends the use of ESD wrist and ankle straps, grounded ESD dissipative surfaces, and air ionizers when handling the device.
- Any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- 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 <u>SCH-08008-S1</u> is highly recommended.

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