

**WR-03 X2, Passive Frequency Multiplier, 220 to 330 GHz**

**SFP-03206-SB** is a WR-03 X2 passive multiplier that utilizes GaAs Schottky diodes to generate second order harmonics with good harmonic and fundamental suppression. This multiplier requires an input frequency range of 110 to 165 GHz at +13 dBm RF power to yield typical -1 dBm output power at 220 to 330 GHz. The multiplier is equipped with a WR-06 waveguide and UG-387/U-M flange as its input port and a WR-03 waveguide and UG-387/U-M flange as its output port.

**Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Input Frequency	110 GHz		165 GHz
Output Frequency	220 GHz		330 GHz
Input Power		+13 dBm	
Damage Input Power			+16 dBm
Output Power		-1 dBm	
Conversion Efficiency		4%	
Harmonic Suppression		20 dB	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

**Mechanical Specifications:**

Item	Specification
RF Input Port	WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange
RF Output Port	WR-03 Waveguide with UG-387/U-M Anti-Cocking 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-03D2-A

**ECCN**

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**FEATURES**

- Low Conversion Loss
- Optional External Bias
- Compact Package

**APPLICATIONS**

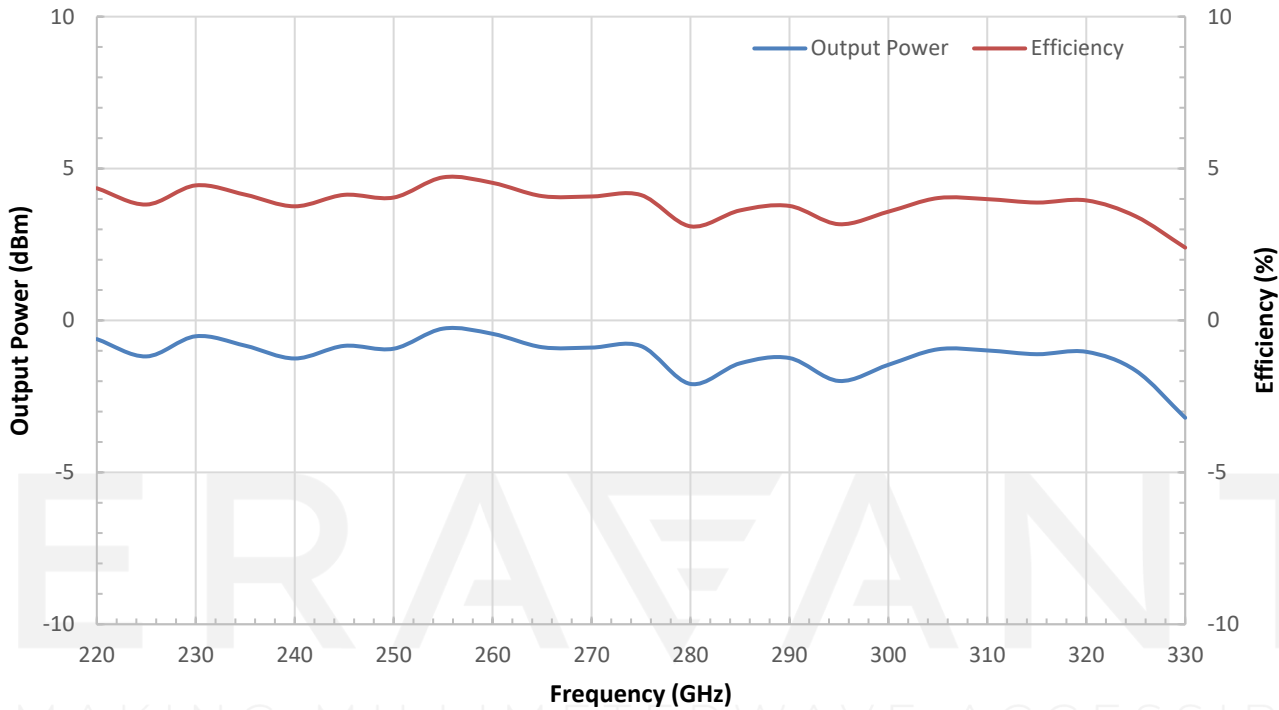
- THz
- Source Modules
- Frequency Extenders

**SUPPLEMENTAL DETAILS**

SFP-03206-SB

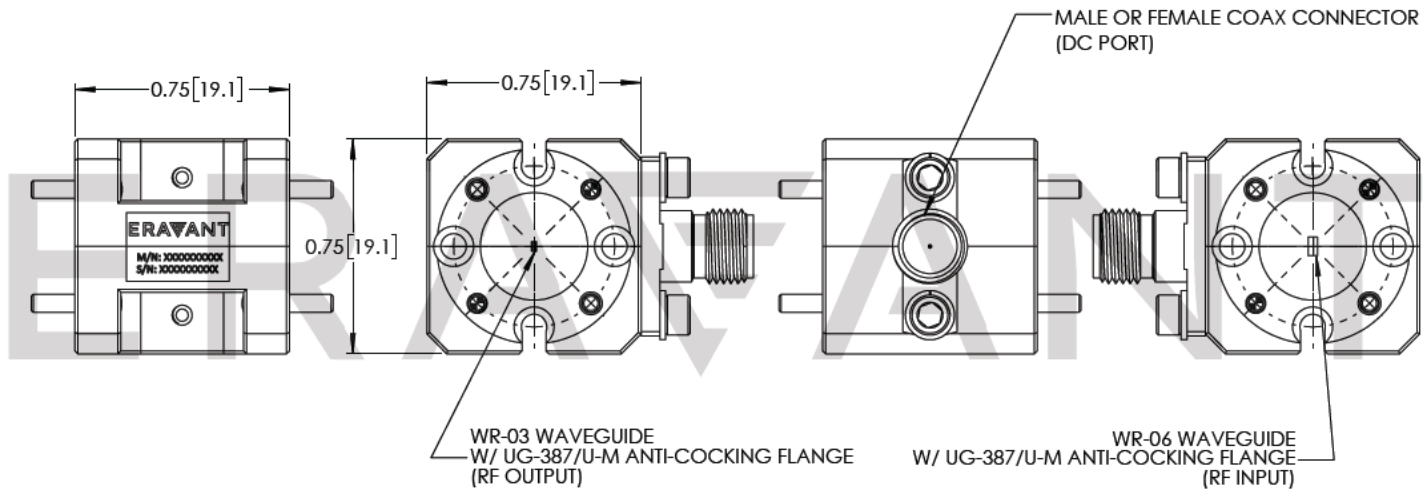
Output Power and Efficiency vs. Frequency

Input Power: +13 dBm; Bias: 0V



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.
- Eravant reserves the right to change the information presented without notice.

**CAUTION:**

- Exceeding absolute maximum ratings of the multiplier 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.
- The multiplier is a static sensitive device. Always follow ESD rules when working with the multiplier.
- For 1 mm connectors proper torque should be applied:  $4.0 \pm 0.15$  inch-pounds ( $0.45 \pm 0.02$  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:  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm). Torque wrench model SCH-08008-S1 is highly recommended

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