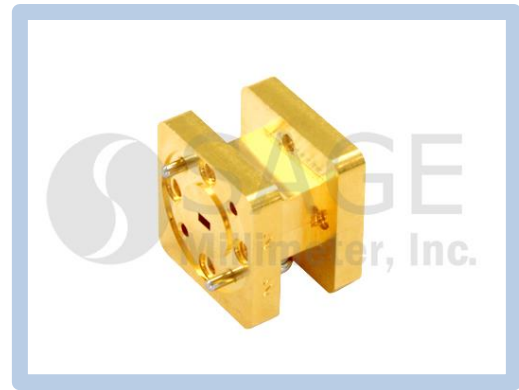




## G-Band X2, Passive Frequency Multiplier, 140 to 220 GHz

### Description:

**Model SFP-05210-U5** is a G-Band, X2 passive multiplier that utilizes GaAs Schottky, beam-lead diodes and a balanced circuit configuration to generate the second harmonic with good harmonic and fundamental frequency rejections. This multiplier requires an input frequency range of 70 to 110 GHz at +17 dBm RF power to yield typical 140 to 220 GHz at -3 dBm output power. The multiplier is equipped with a WR-10 waveguide and UG-387/U-M flange as its input port and a WR-05 waveguide and UG-387/U-M flange as its output port.



### Features:

- Low Conversion Loss
- No External Bias
- Compact Package

### Applications:

- Source Modules
- Frequency Extenders
- Radar and Communication Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	70 GHz		110 GHz
Output Frequency	140 GHz		220 GHz
Input Power	+ 10 dBm	+17 dBm	+20 dBm
Output Power		-3 dBm	
Harmonic Suppression		20 dB	
Specification Temperature		+25 °C	
Operating Temperature	-20 °C		+70 °C

### Mechanical Specifications:

Item	Specification
RF Input Port	WR-10 Waveguide with UG-387/U-M Flange
RF Output Port	WR-05 Waveguide with UG-387/U-M Flange
Material	Brass
Finish	Gold Plated
Weight	0.4 Oz
Size	0.79" (L) X 0.79" (W) X 0.63" (H)
Outline	FP-GW2-CE1

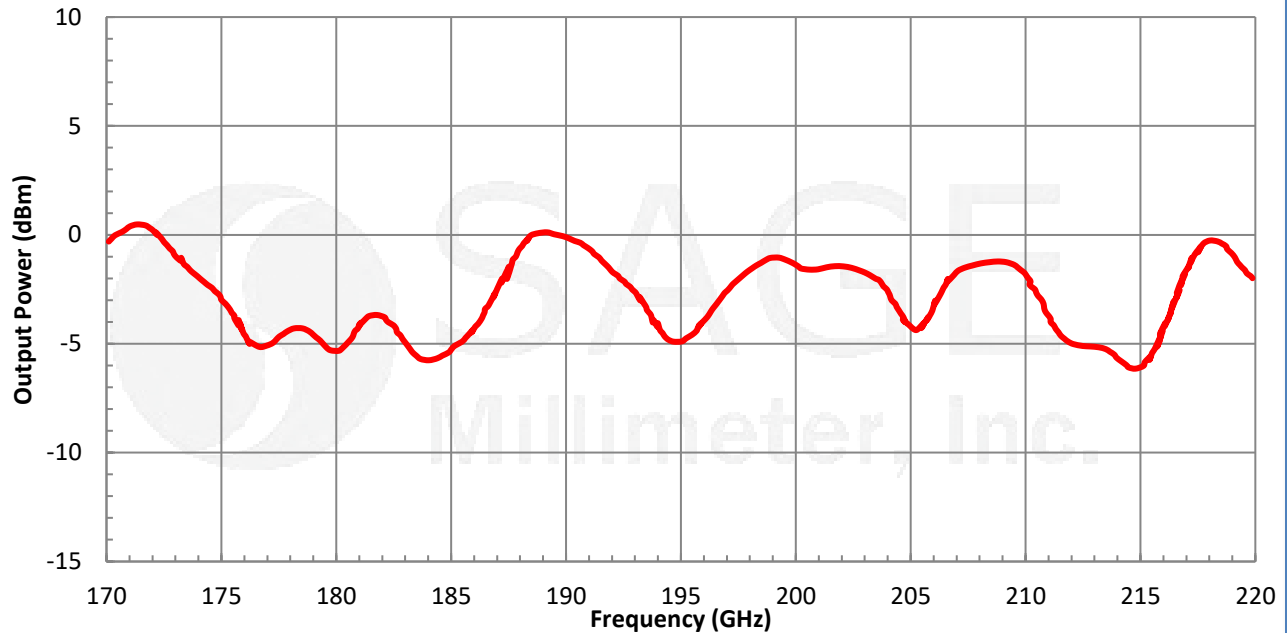




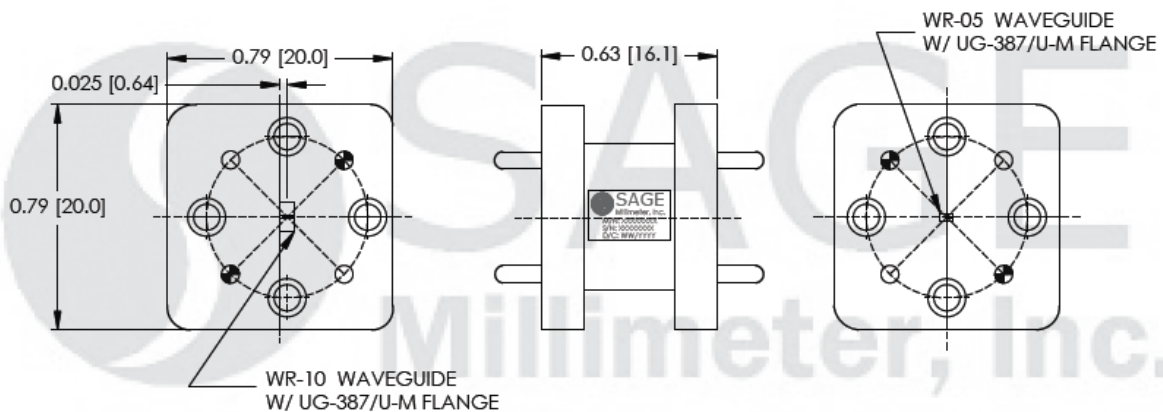
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### Typical Output Power vs. Frequency

Pin: +17 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.
- All testing was performed under +25°C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

**Caution:**

- Exceeding absolute maximum ratings of the multiplier will damage the device.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- The multiplier is a static sensitive device. Always follow ESD rules when working with the multiplier.

