



## Ka-Band X3, Passive Frequency Multiplier

### Description:

**Model SFP-283SF-U9** is a Ka-Band, X3 passive multiplier that utilizes GaAs Schottky, beam-lead diodes and a balanced circuit configuration to generate third order harmonics while suppressing unwanted harmonic products. This multiplier has an input frequency of 8.37 to 13.33 GHz at +20 dBm RF power to yield 26.5 to 40.0 GHz at +5 dBm power at the output. The multiplier is equipped with an SMA-female coaxial connector as its input port and a WR-28 waveguide as its output port. Other interface configurations are offered in different model numbers.



### Features:

- Minimal Conversion Loss
- No External Bias
- Compact Package

### Applications:

- Source Modules
- Communication Systems
- Radar Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	8.37 GHz		13.33 GHz
Output Frequency	26.5 GHz		40.0 GHz
Input Power		+20 dBm	+23 dBm
Output Power		+5 dBm	
Harmonic Suppression		20 dBc	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

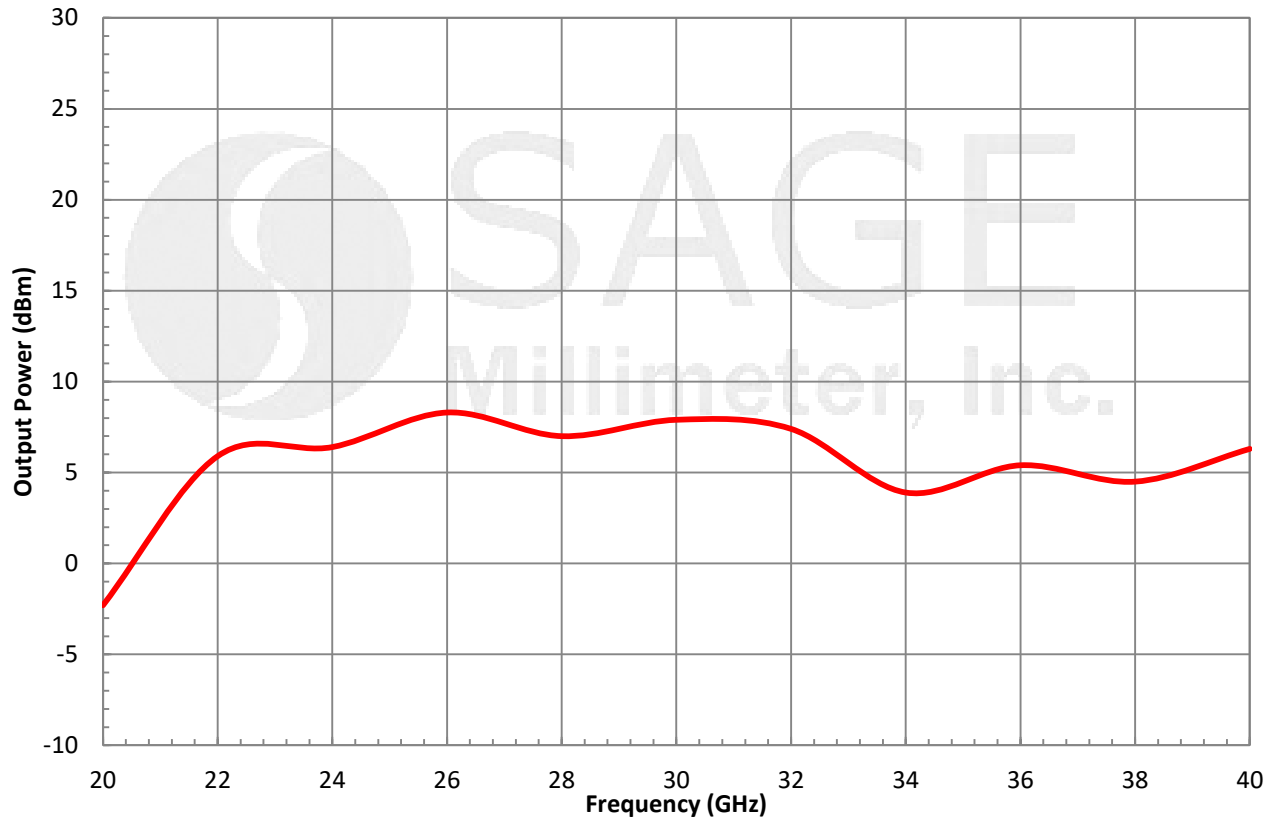
### Mechanical Specifications:

Item	Specification
Input Port	SMA(F)
LO Port	WR-28 Waveguide with UG-599/U Flange
Material	Aluminum
Weight	0.5 Oz
Outline	FP-AS3-P1

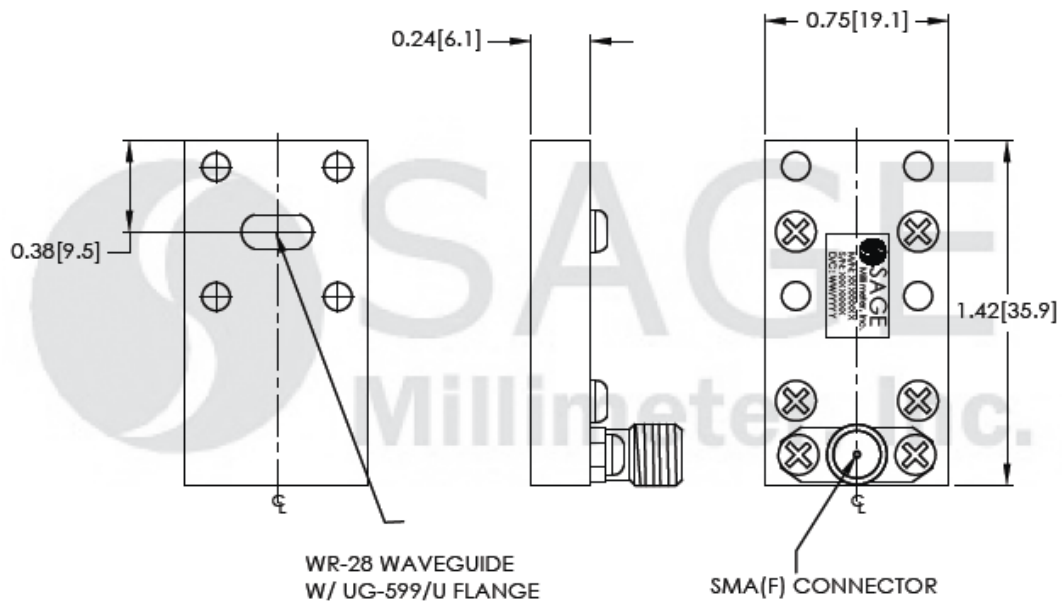
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### Typical Output Power vs. Output Frequency

Input Power: +18 dBm



**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.
- 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.

