

## W-Band X2, Passive Frequency Multiplier

### Description:

**Model SFP-1022F-S1** is a W-Band, X2 passive multiplier that utilizes GaAs Schottky, beam-lead diodes and a balanced circuit configuration to generate second order harmonics with good harmonic and fundamental suppression. This multiplier requires an input frequency range of 37.5 to 55 GHz at +16 dBm RF power to yield 75 to 110 GHz at +3 dBm. The multiplier is equipped with a 2.4 mm female coaxial connector as its input port and a WR-10 waveguide with UG-387/U-M flange as its output port.



### Features:

- Minimal Conversion Loss
- No External Bias
- Compact Package

### Applications:

- Source Modules
- Communication Systems
- Radar Systems

### Electrical Specifications:

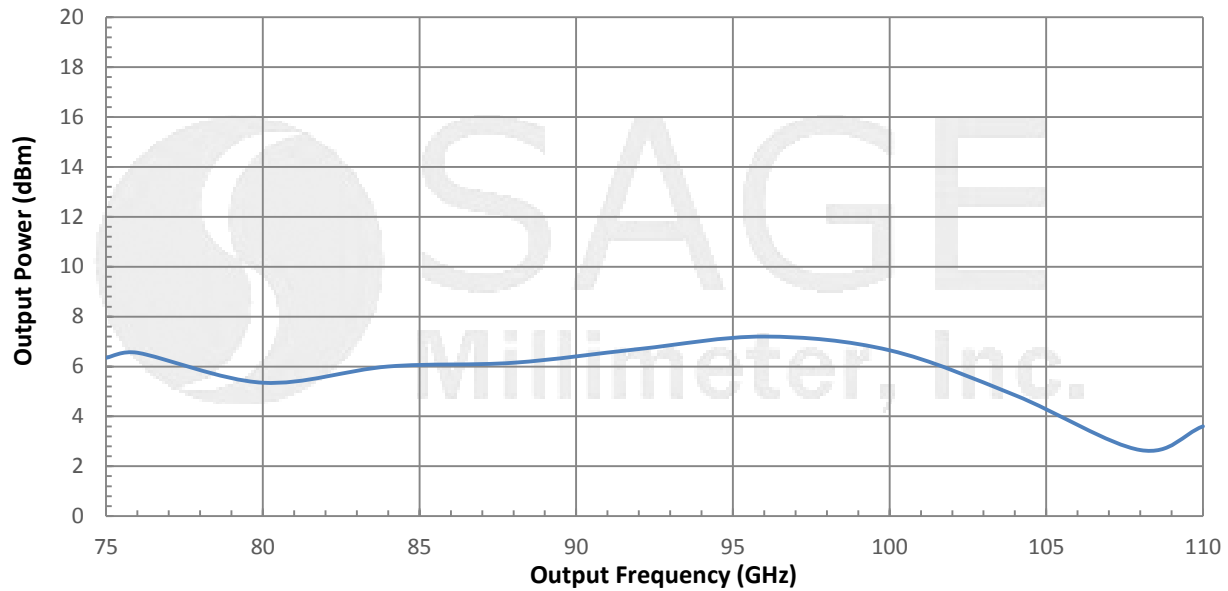
Parameter	Minimum	Typical	Maximum
Input Frequency	37.5 GHz		55.0 GHz
Output Frequency	75.0 GHz		110.0 GHz
Input Power		+16 dBm	+18 dBm
Output Power		+3 dBm	
Harmonic Suppression		20 dB	

### Mechanical Specifications:

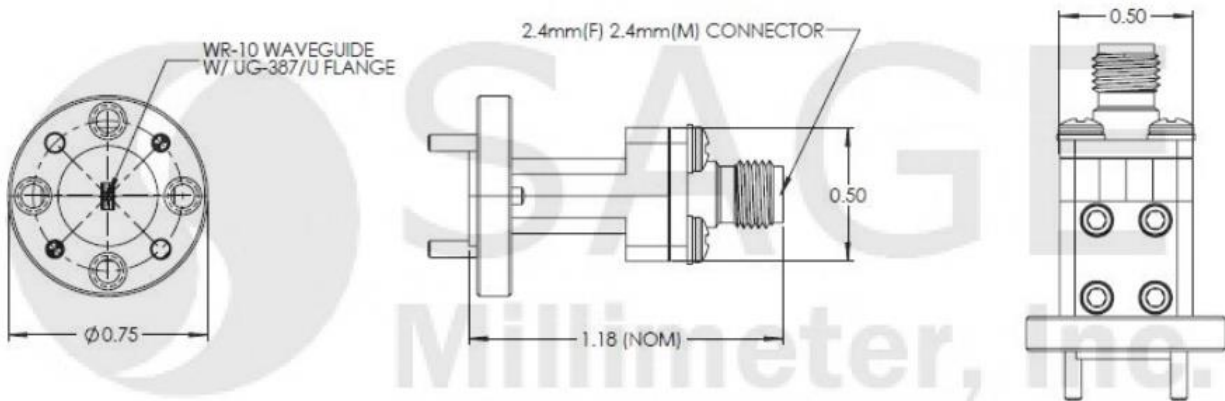
Item	Specification
RF Input	2.4 mm (F)
RF Output	WR-10 Waveguide with UG-387/U-M Flange
Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Outline	FP-W22

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### Typical Output Power vs. Output Frequency



### Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



#### Note:

- All data are presented using a limited 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 into 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.

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