SFP-1222F-S1

Rev. 1.0

E-Band X2, Passive Frequency Multiplier

Description:

Model SFP-1222F-S1 is an E-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 30 to 45 GHz at +17 dBm RF power to yield 60 to 90 GHz at +6 dBm. The multiplier is equipped with a female 2.4 mm connector as its input port and a WR-12 waveguide with a UG-387/U flange as its output port. Other interface configurations are offered under different model numbers.

Features:

- Low Conversion Loss
- No External Bias
- Compact Package

Applications:

- Source Modules
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	30 GHz		45 GHz
Output Frequency	60 GHz		90 GHz
Input Power		+17 dBm	
Damage Input Power			+19 dBm
Output Power		+6 dBm	
Fundamental Rejection		40 dB	
Harmonic Suppression		20 dB	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Input	2.4 mm (F)
X2 Output	WR-12 Waveguide with UG-387/U Flange
Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Size	1.18” (L) x 0.75” (Ø)
Outline	FP-E22

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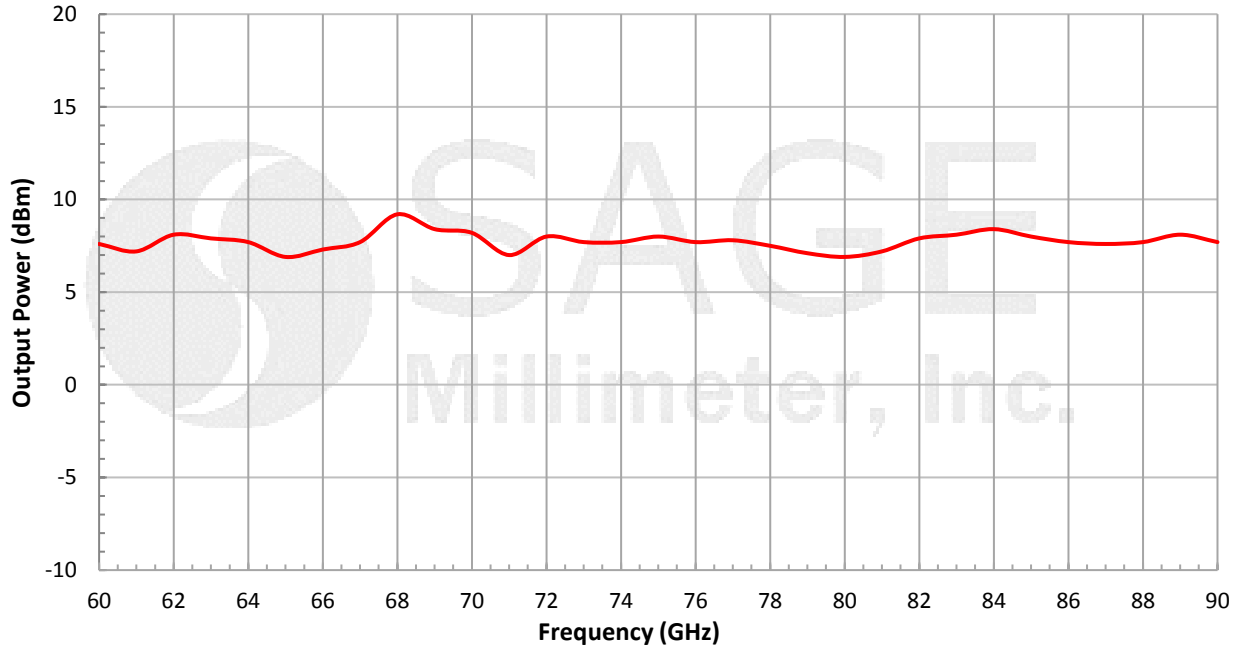
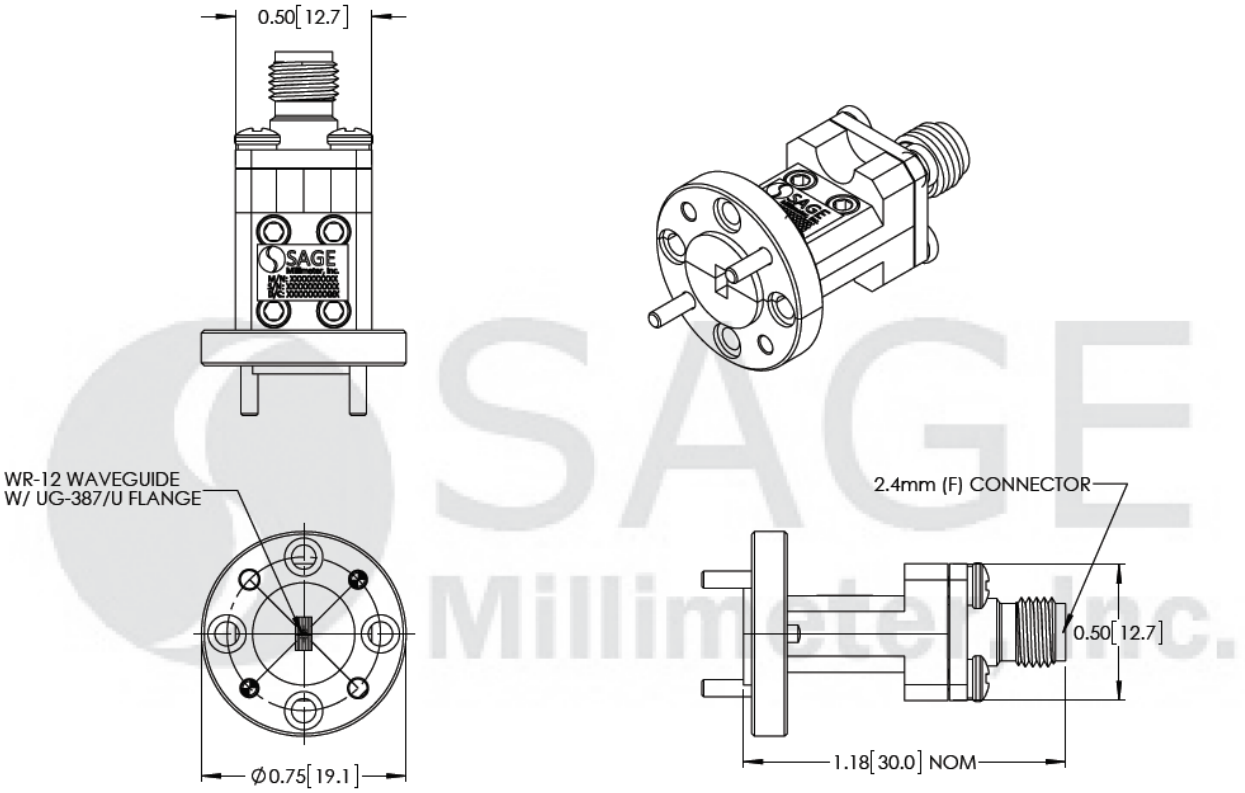
Typical Output Power vs. Output Frequency

Input Power: +17 dBm Typical



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 degrade performance and/or damage the device.
- The multiplier is a static sensitive device. Always follow ESD rules when working with the multiplier.

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