SFP-10328-S1

Rev. 1.0

W-Band X3, Passive Frequency Multiplier

Description:

Model SFP-10328-S1 is a W-Band, X3 passive multiplier that utilizes GaAs Schottky, beam-lead diodes and a balanced circuit configuration to generate third order harmonics with good harmonic and fundamental suppression. This multiplier requires an input frequency range of 25 to 36.67 GHz at +20 dBm RF power to yield 75 to 110 GHz with +3 dBm. The multiplier is equipped with a WR-28 waveguide with a UG-599/U flange as its input port and a WR-10 waveguide with a UG-387/U-M flange as its output port. Other interface configurations are offered under different model numbers.

Features:

- Full Waveguide Operation
- No External Bias Required
- Balanced Configuration for Low Harmonic Emissions

Applications:

- Source Modules
- Frequency Extenders
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	25.00 GHz		36.67 GHz
Output Frequency	75 GHz		110 GHz
Input Power		+20 dBm	+22 dBm
Output Power		+0 dBm	
Harmonic Suppression		20 dB	
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

Mechanical Specifications:

Item	Specification
Input Port	WR-28 Waveguide with UG-599/U Flange
Output Port	WR-10 Waveguide with UG-387/U-M Flange
Case Material	Aluminum
Finish	Gold Plated
Weight	0.9 Oz
Size	0.50” (L) X 0.75” (W) X 1.60” (H)
Outline	FP-WA3

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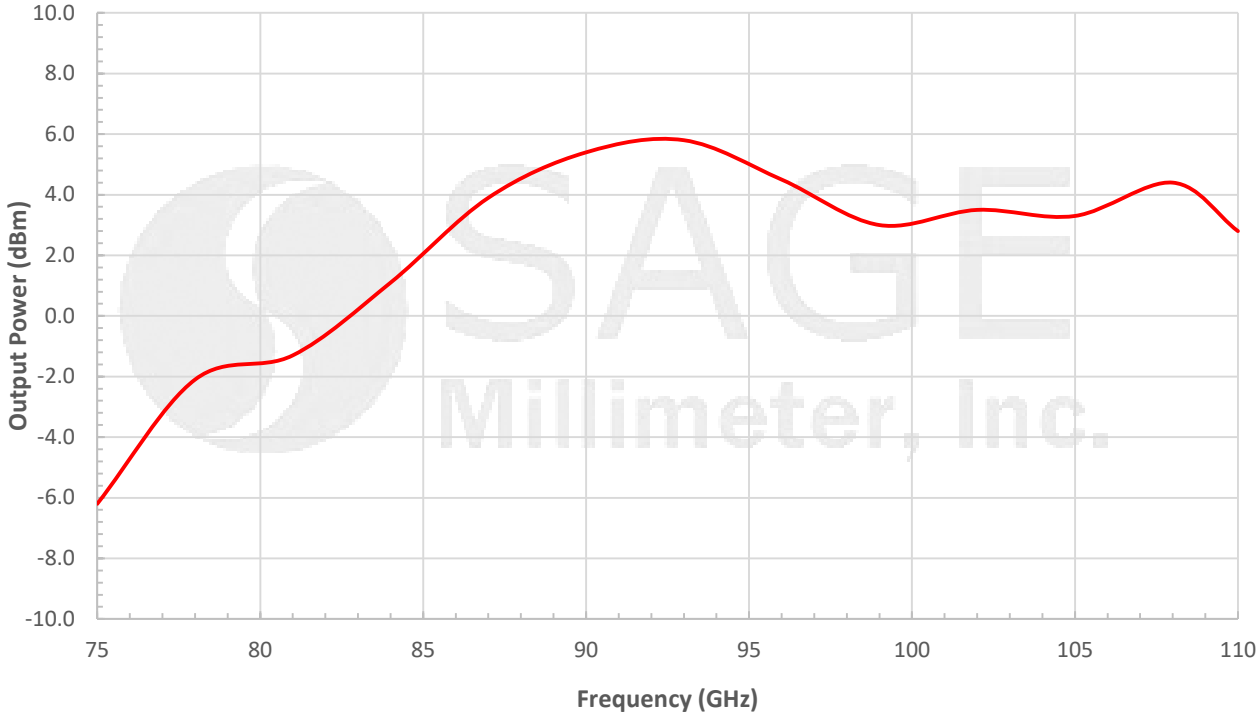
W-Band X3, Passive Frequency Multiplier

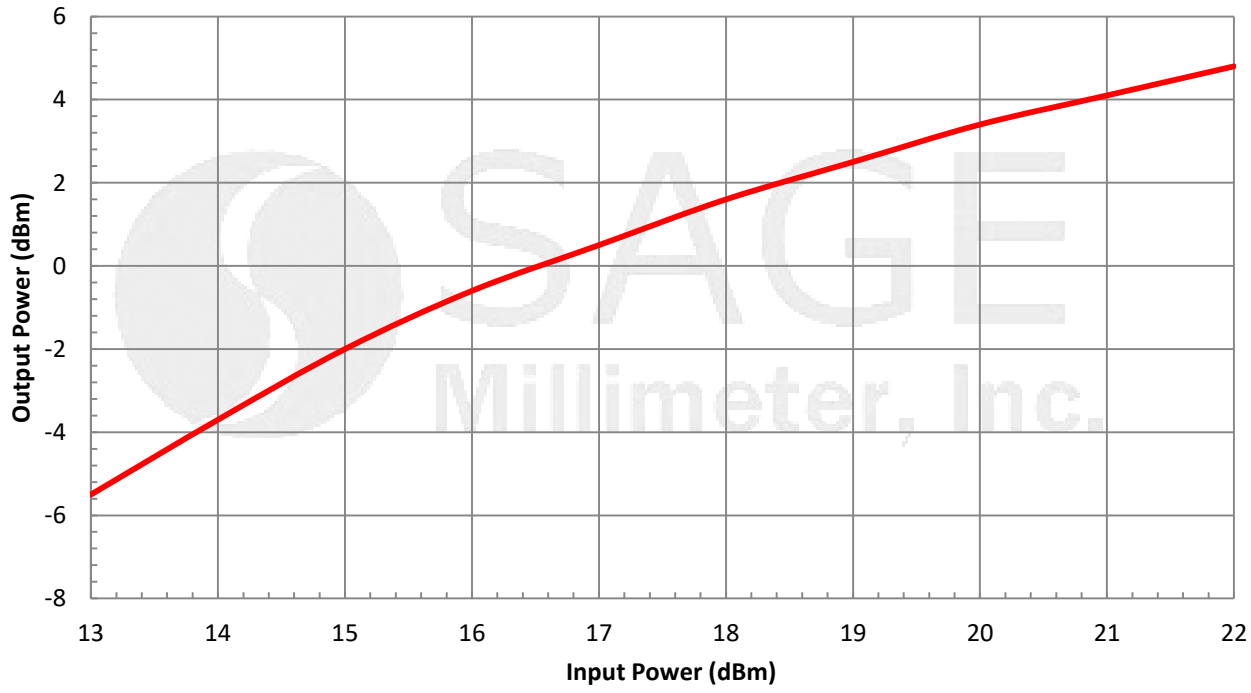
Typical Output Power vs. Frequency

Input Power: + 20 dBm



Typical Input Power vs. Output Power

Output Freq: 94 GHz



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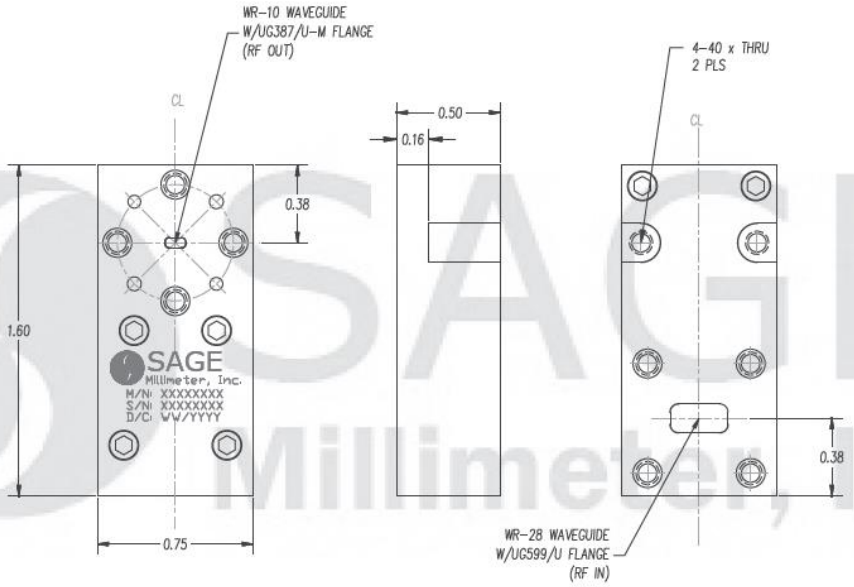
W-Band X3, Passive Frequency Multiplier

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



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- The data given above was tested under case temperature **+25°C**.
- 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.

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