



U-Band X3, Passive Frequency Multiplier, +20 dBm Input Power

Description:

Model SFP-193SF-S1 is a U-Band, X3 passive multiplier that utilizes GaAs Schottky, beam-lead diodes and a balanced circuit configuration to generate the third harmonic with good harmonic and fundamental frequency rejections. This multiplier requires an input frequency range of 13.333 to 20 GHz at +20 dBm RF power to yield 40 to 60 GHz at 0 dBm typically. The multiplier is equipped with a female SMA connector as its input port and a WR-19 waveguide with a UG-383/U-M anti-cocking 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	13.333 GHz		20 GHz
Output Frequency	40 GHz		60 GHz
Input Power		+20 dBm	
Damage Input Power			+22 dBm
Output Power		+0 dBm	
Harmonic Suppression		20 dBc	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	SMA (F)
Output Port	WR-19 Waveguide with UG-383/U-M Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Size	1.17" (L) X 1.13" (W) X 0.51" (H)
Outline	FP-U3-A

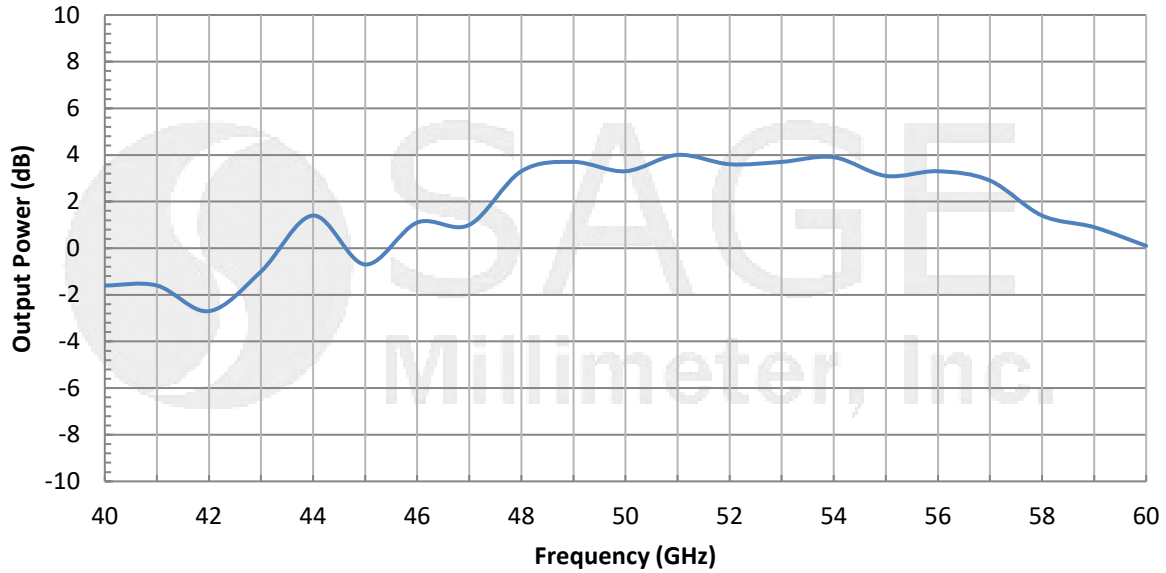




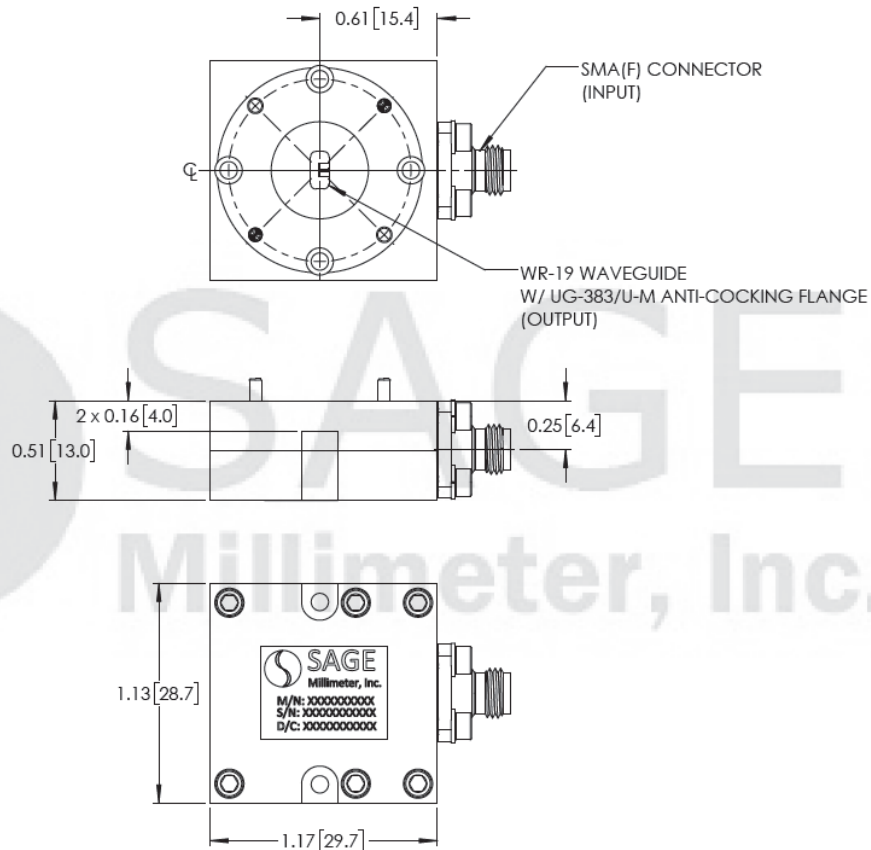
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Typical Output Power vs. Output Frequency

Input Power: +20 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, slightly.
- 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.

