SFP-103KF-S1-M

Rev. 1.0

W-Band X3, Passive Frequency Multiplier

Description:

Model SFP-103KF-S1-M is a W-Band, X3 passive multiplier that utilizes GaAs pHEMT-based MMIC chip with 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 36.6 GHz at +16 dBm RF power to yield 75 to 110 GHz at -5 dBm. The multiplier is equipped with a female 2.92 mm connector as its input port and a WR-10 waveguide with a UG-387/U-M anti-cocking flange as its output port. Other interface configurations are offered under different model numbers.

Features:

- Minimal Conversion Loss
- No External Bias
- Compact Design

Applications:

- Source Modules
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	25.0 GHz		36.6 GHz
Output Frequency	75 GHz		110 GHz
Input Power		+16 dBm	+21 dBm
Output Power		-5 dBm	
Harmonic Suppression		20 dB	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input Port	2.92 mm (F)
Output Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Case Material	Aluminum
Finish	Gold Plated
Weight	0.8 Oz
Size	0.75” (L) X 0.97” (W) X 0.64” (H)
Outline	FP-WC32M-A

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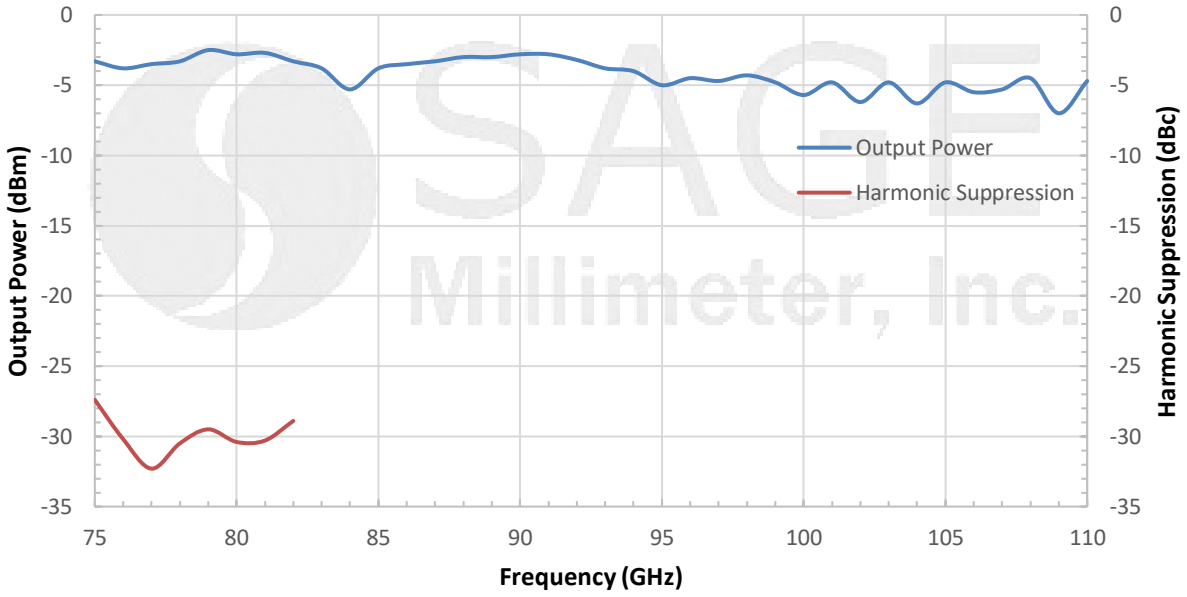
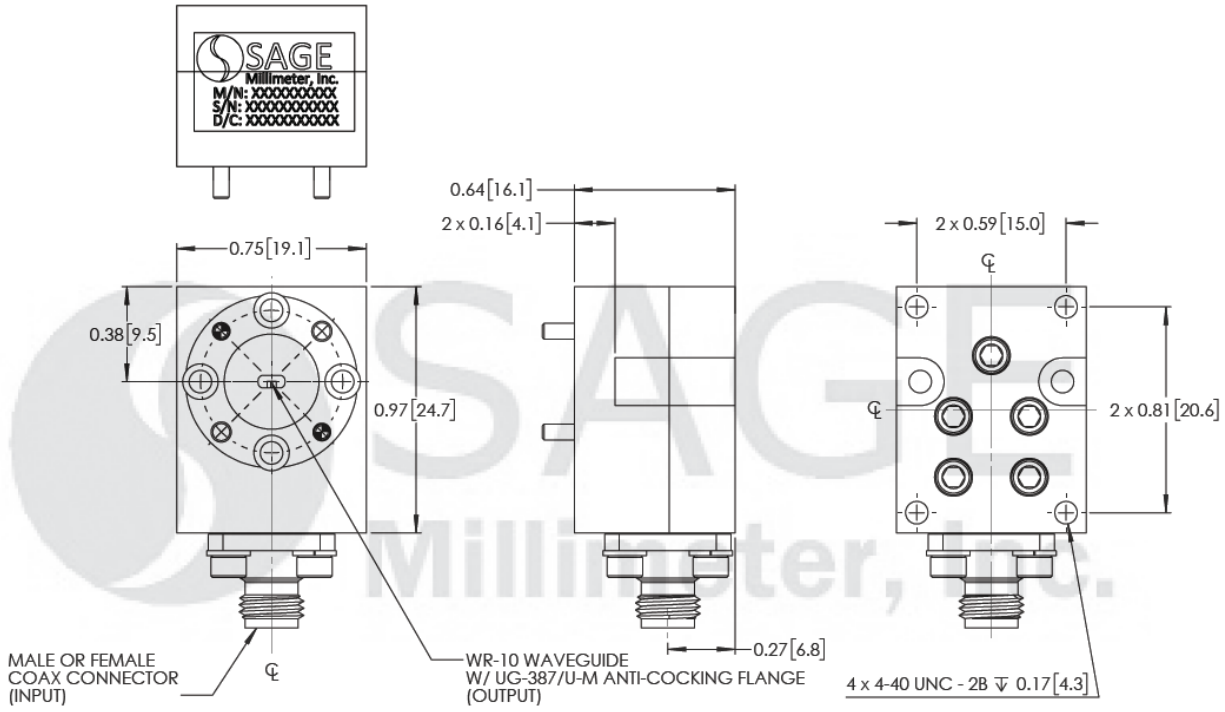
Output Power vs. Frequency

Input Power: +16 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 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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