SFA-8431041213-10SF-S1

Rev. 1.0

W-Band, X12 Active Frequency Multiplier, 84 to 100 GHz, +13 dBm

Description:

Model SFA-8431041213-10SF-S1 is an active X12 frequency multiplier. The multiplier has an input frequency of 7.0 to 8.333 GHz with a typical input power of +5 dBm and an output frequency of 84 to 100 GHz with a typical output power of +13 dBm. The multiplier also has an exceptional harmonic suppression, up to -20 dBc. The DC power requirement for the multiplier is +8 V_{DC}/400 mA. The input port configuration is a female K connector and the output is a WR-10 waveguide with a UG-387/U-M anti-cocking flange. Other port configurations are available under different model numbers.

Features:

- Low Harmonic Components
- High Output Power

Applications:

- Frequency Extenders
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	7.0 GHz		8.333 GHz
Input Power		+5 dBm	+10 dBm
Output Frequency	84 GHz		100 GHz
Output Power		+13 dBm	
Harmonic Suppression		-20 dBc	
Spurious		-60 dBc	
Port Return Loss		10 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		400 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input Port	SMA (F)
Output Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias Port	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.10” (W) X 1.80” (L) X 0.50” (H)
Outline	FA-SW-1-A-1.8

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
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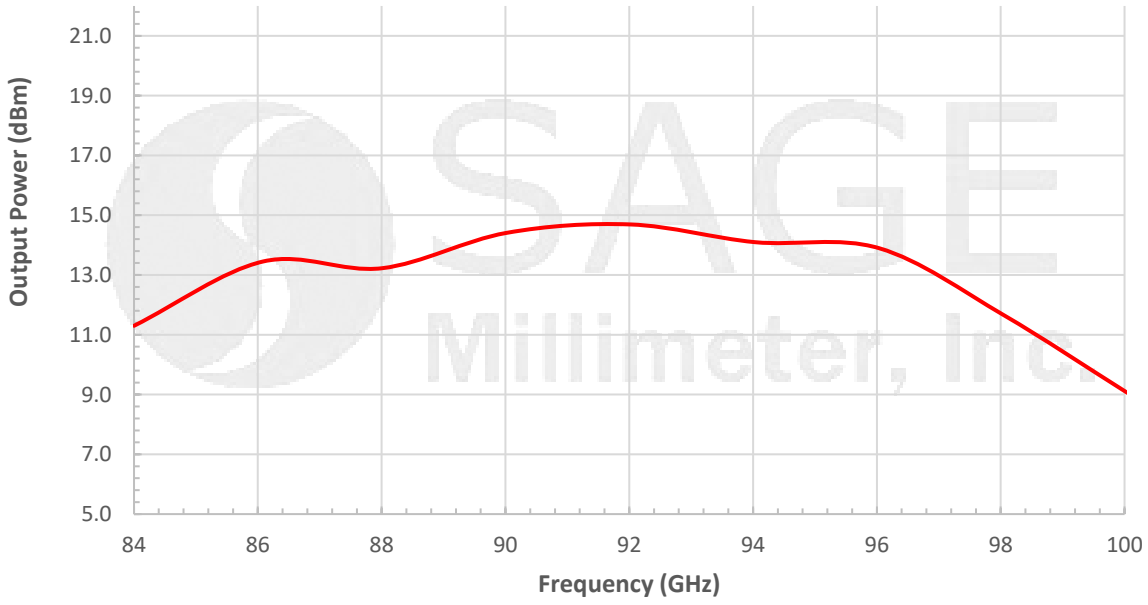
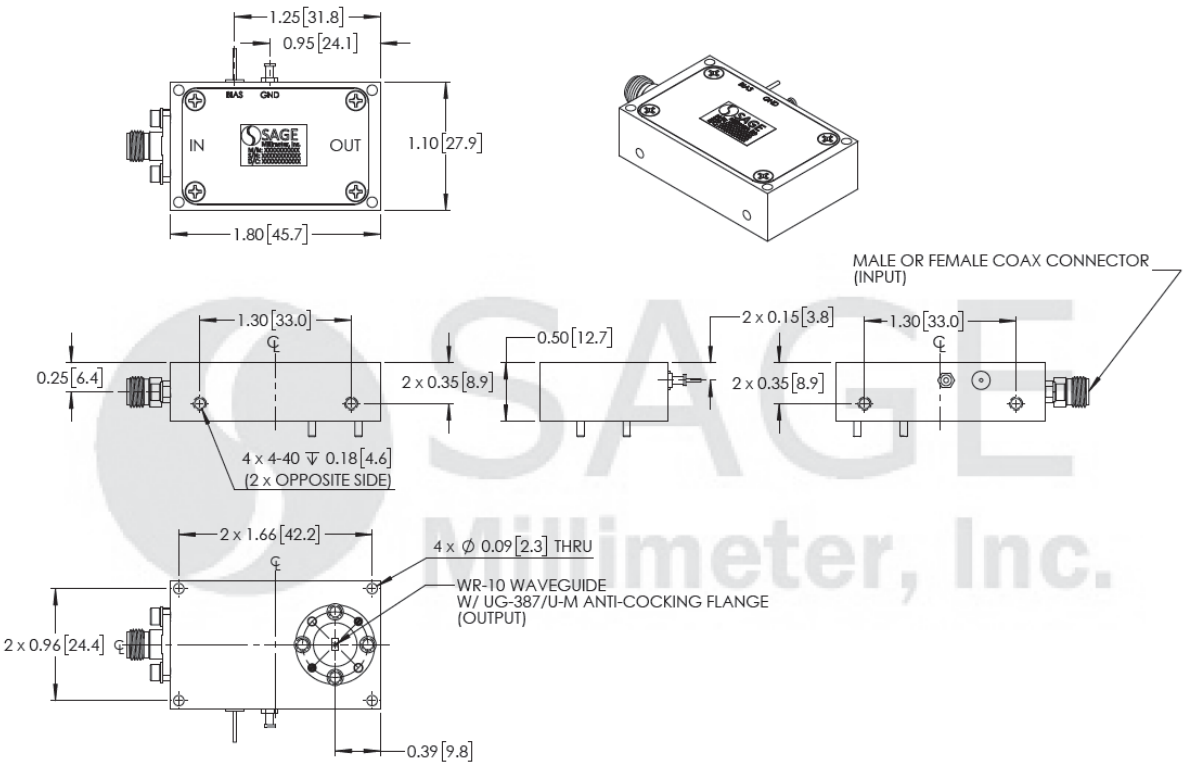
Typical Output Power vs. Frequency

Bias: +8 Vdc/450 mA, RF Input Power: +5 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.
- Other mechanical configurations are available under different model numbers.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +50 ˚C. Use proper heatsink or fan if necessary.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**