SFA-453703413-15SF-S1

Rev 1.0

V Band, X4 Active Frequency Multiplier, 45 to 70 GHz, +13 dBm

Description:

Model SFA-453703413-15SF-S1 is an active X4 frequency multiplier. The multiplier has an input frequency of 11.25 to 17.50 GHz with a typical input power of +5 dBm and an output frequency of 45 to 70 GHz. The typical output power is +13 dBm. The multiplier also has a typical harmonic suppression of -20 dBc. The DC power requirement for the multiplier is +8 V_{DC}/600 mA. The input port configuration is a female SMA connector and the output is a WR-15 waveguide with a UG-385/U flange. Other port configurations are available under different model numbers.

Features:

- Broadband Coverage
- High Output Power
- Low Harmonic Emission

Applications:

- Frequency Extenders
- Source Modules
- Communication Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	11.25 GHz		17.50 GHz
Input Power		+5 dBm	+20 dBm
Output Frequency	45.0 GHz		70.0 GHz
Output Power		+13 dBm	
Harmonic Suppression		-20 dBc	
Spurious		-60 dB	
Port Return Loss		10 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		600 mA	
Specification Temperature		+25˚C	
Operating Temperature	0˚C		+50˚C

Mechanical Specifications:

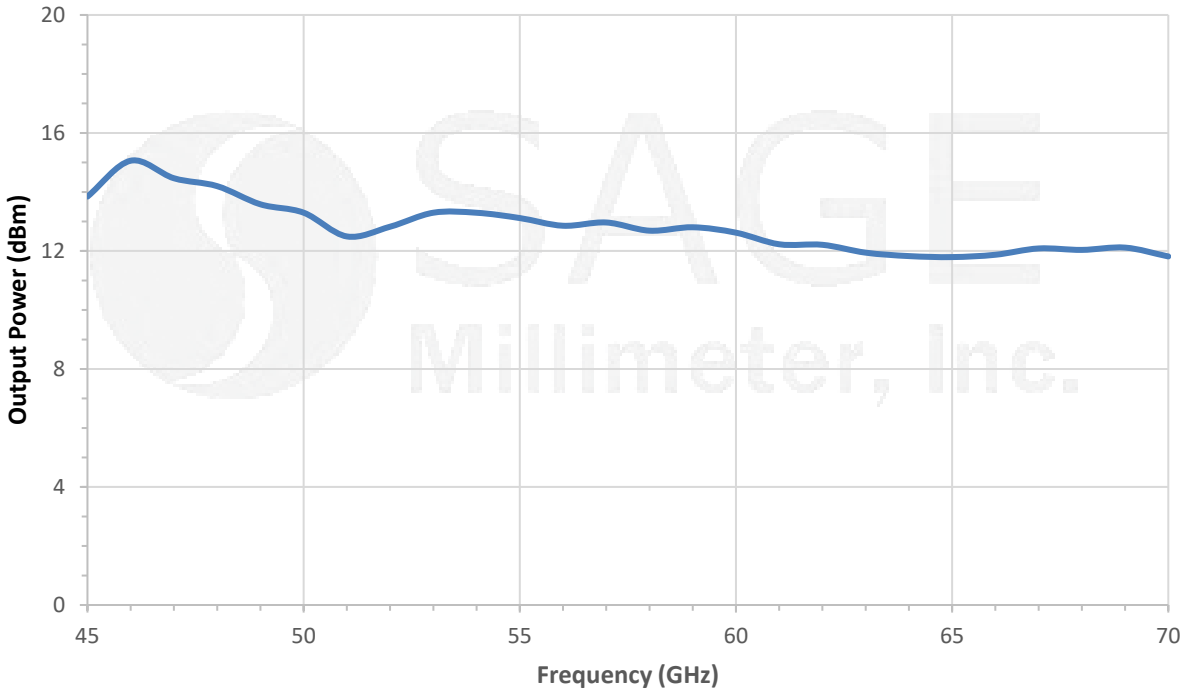
Item	Specification
Input	SMA (F)
Output	WR-15 Waveguide with UG-385/U Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.4 Oz
Size	1.10” (W) X 1.80” (L) X 0.50” (H)
Outline	FA-SV-1-1.8

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

V Band, X4 Active Frequency Multiplier, 45 to 70 GHz, +13 dBm

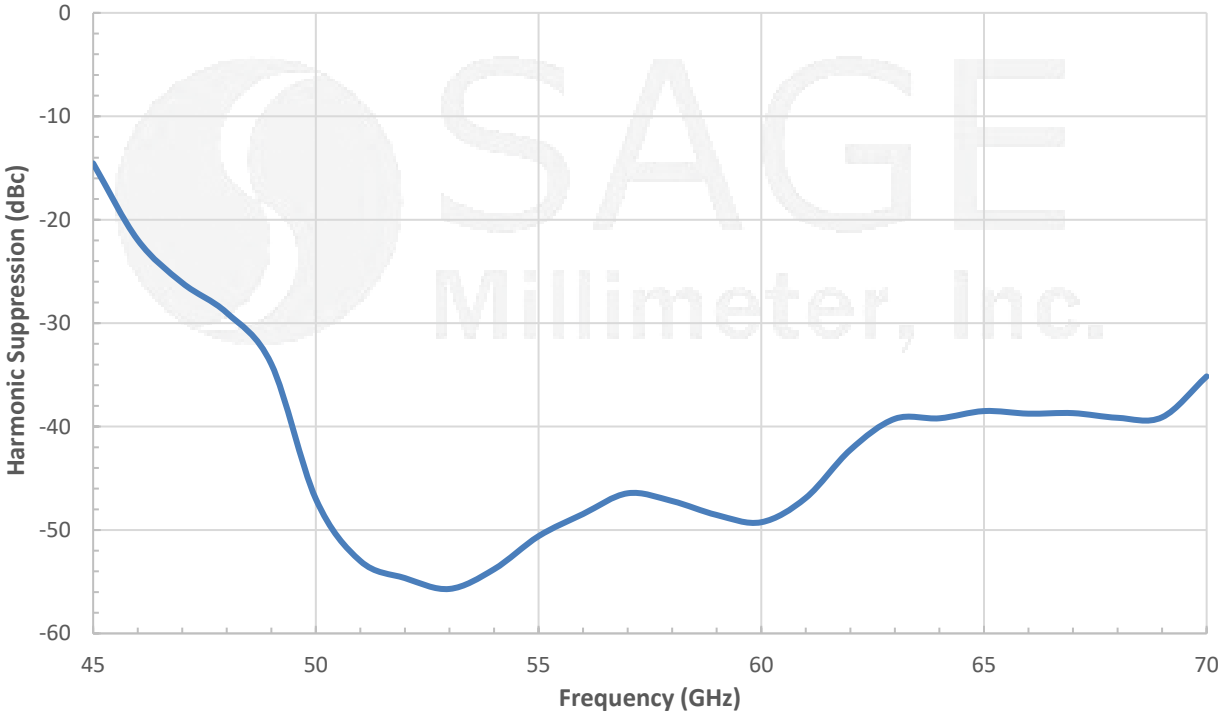
Typical Output Power vs. Frequency

Bias: +8V_{DC}/700 mA; Input Power = +2 dBm



Typical Harmonic Suppression vs. Frequency

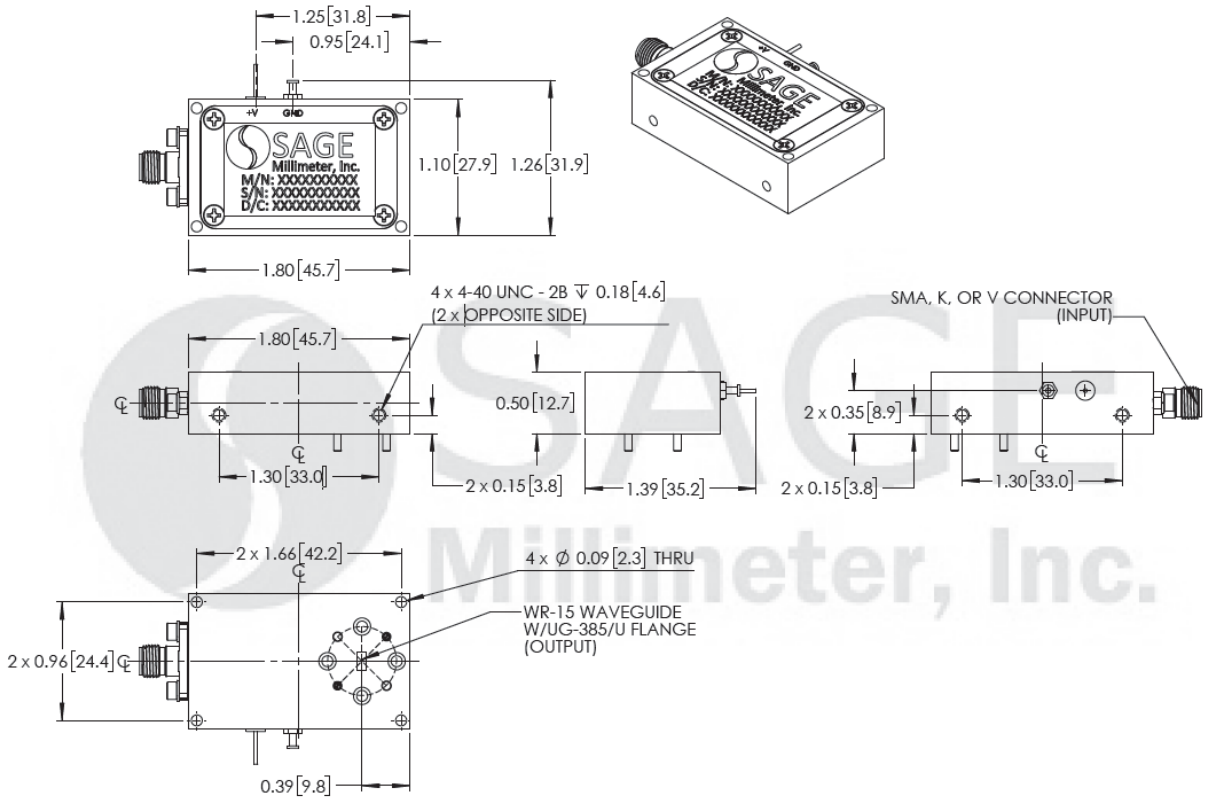
Bias: +8V_{DC}/700 mA; Input Power = +5 dBm



www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

V Band, X4 Active Frequency Multiplier, 45 to 70 GHz, +13 dBm

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



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.**