

V-Band, X6 Active Frequency Multiplier, 50 to 75 GHz, +13 dBm P_{out}**Description:**

Model SFA-503753613-15SF-S1 is a V-Band active X6 frequency multiplier. The multiplier has an input frequency of 8.33 to 12.5 GHz with a typical input power of +3 dBm and an output frequency of 50 to 75 GHz with a typical output power of +13 dBm. The multiplier also has a typical harmonic suppression of -15 dBc. The DC power requirement for the multiplier is +8 V_{DC}/550 mA. The input port configuration is an SMA(F) connector and the output is a WR-15 waveguide with a UG-385/U flange. Other port configurations are available under different models.

**Features:**

- Full Band Coverage
- High Output Power
- Low Harmonic Emission

Applications:

- IEEE 802.11ab WiGig
- Frequency Extenders
- Source Modules
- Communication Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	8.33 GHz		12.5 GHz
Input Power		+3 dBm	+20 dBm
Output Frequency	50.0 GHz		75.0 GHz
Output Power		+13 dBm	
Harmonic Suppression		-15 dBc	
Spurious		-60 dBc	
Port Return Loss		10 dB	
DC Voltage	+6 V _{DC}	+8 V _{DC}	+15 V _{DC}
DC Supply Current		550 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

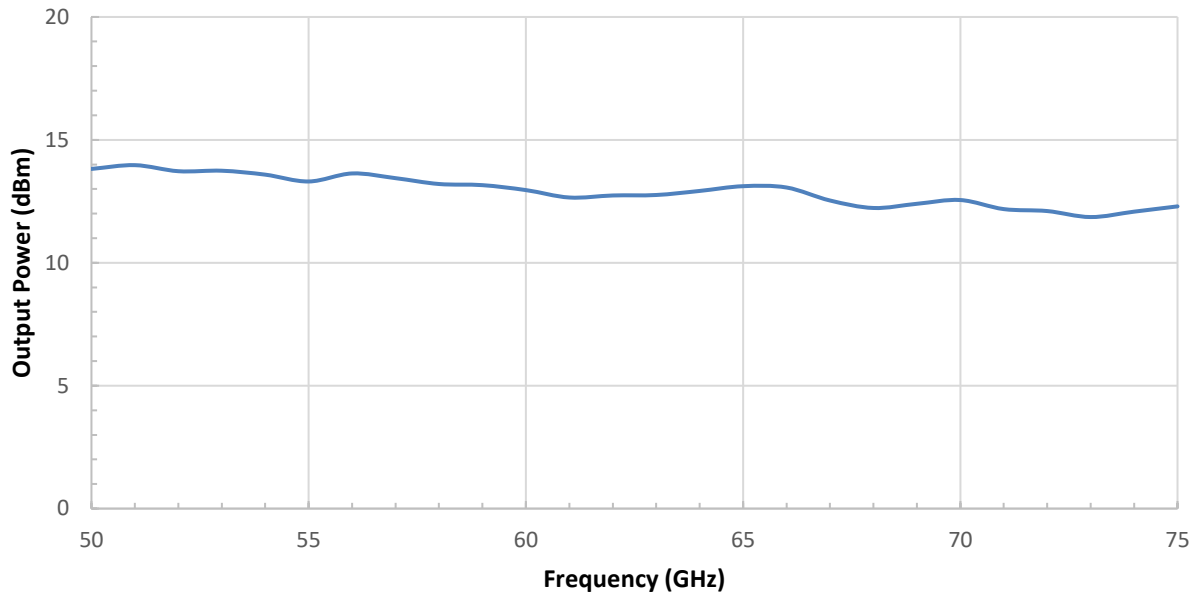
Item	Specification
Input	SMA(F)
Output	WR-15 Waveguide with UG-385/U Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.10" (W) X 1.80" (L) X 0.50" (H)
Outline	FA-SV-1-1.8



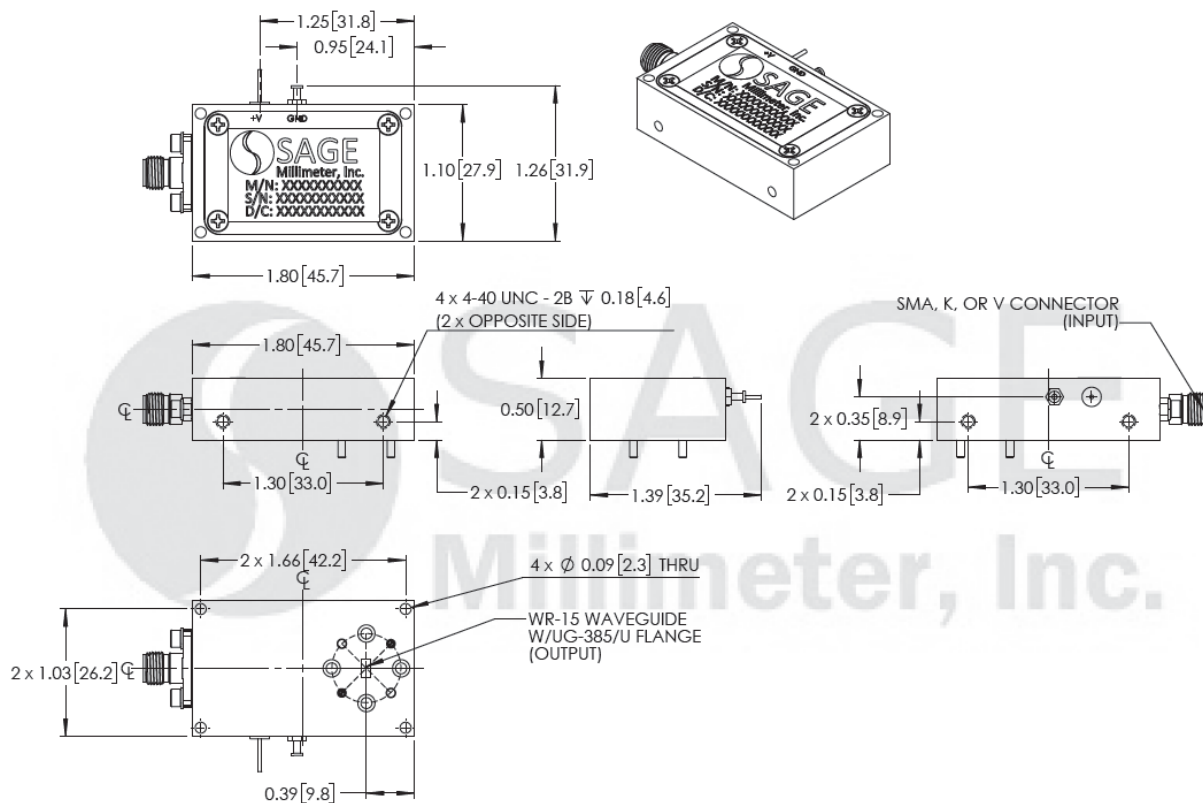
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Output Power vs. Frequency

Bias: +8 V_{DC}/430 mA



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 number.

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 (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

