



## V-Band, X4 Active Frequency Multiplier, 50 to 66 GHz, +16 dBm P<sub>out</sub>

### Description:

**Model SFA-503663416-15KF-S1** is an active X4 frequency multiplier. The multiplier has an input frequency of 12.5 to 16.5 GHz with a typical input power of +0 dBm and an output frequency of 50 to 66 GHz with a minimum output power of +16 dBm. The multiplier also has a typical harmonic suppression of -20 dBc. The DC power requirement for the multiplier is +8 V<sub>DC</sub>/380 mA. The input port configuration is a female K 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	12.5 GHz		16.5 GHz
Input Power		+0 dBm	+1 dBm
Output Frequency	50.0 GHz		66.0 GHz
Output Power	+16 dBm		
Harmonic Suppression		-20 dBc	
Spurious		-60 dBc	
DC Voltage	+6 V <sub>DC</sub>	+8 V <sub>DC</sub>	+15 V <sub>DC</sub>
DC Supply Current		380 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

### Mechanical Specifications:

Item	Specification
Input Port	K(F)
Output Port	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

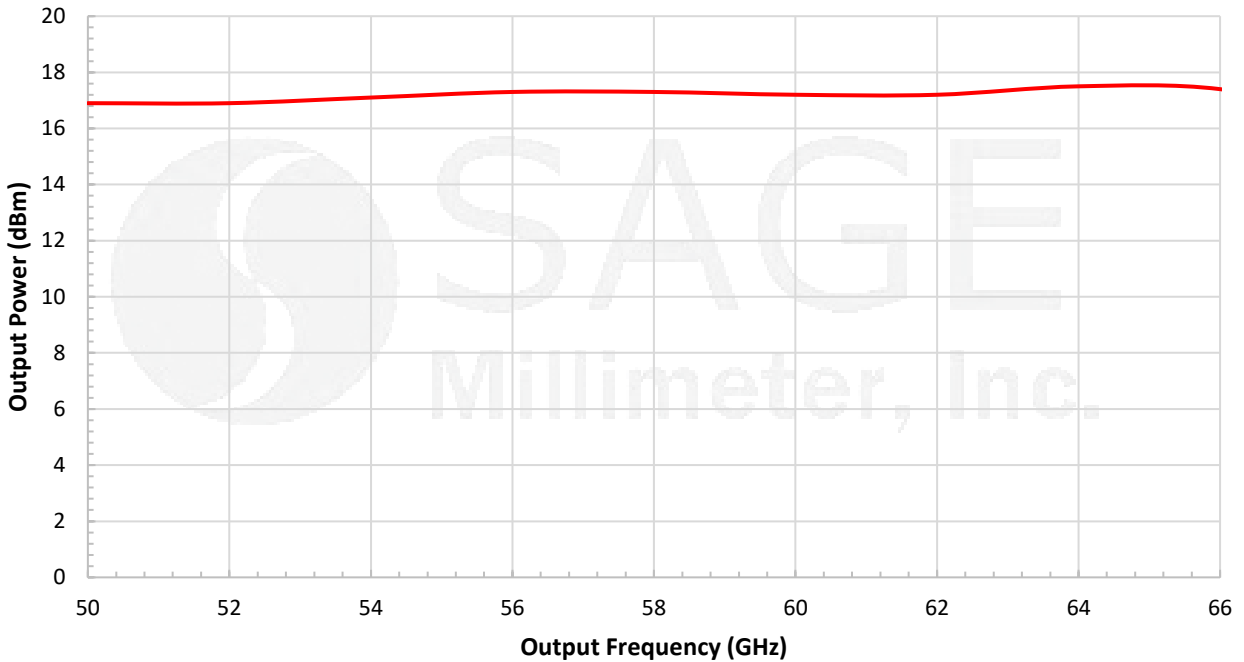




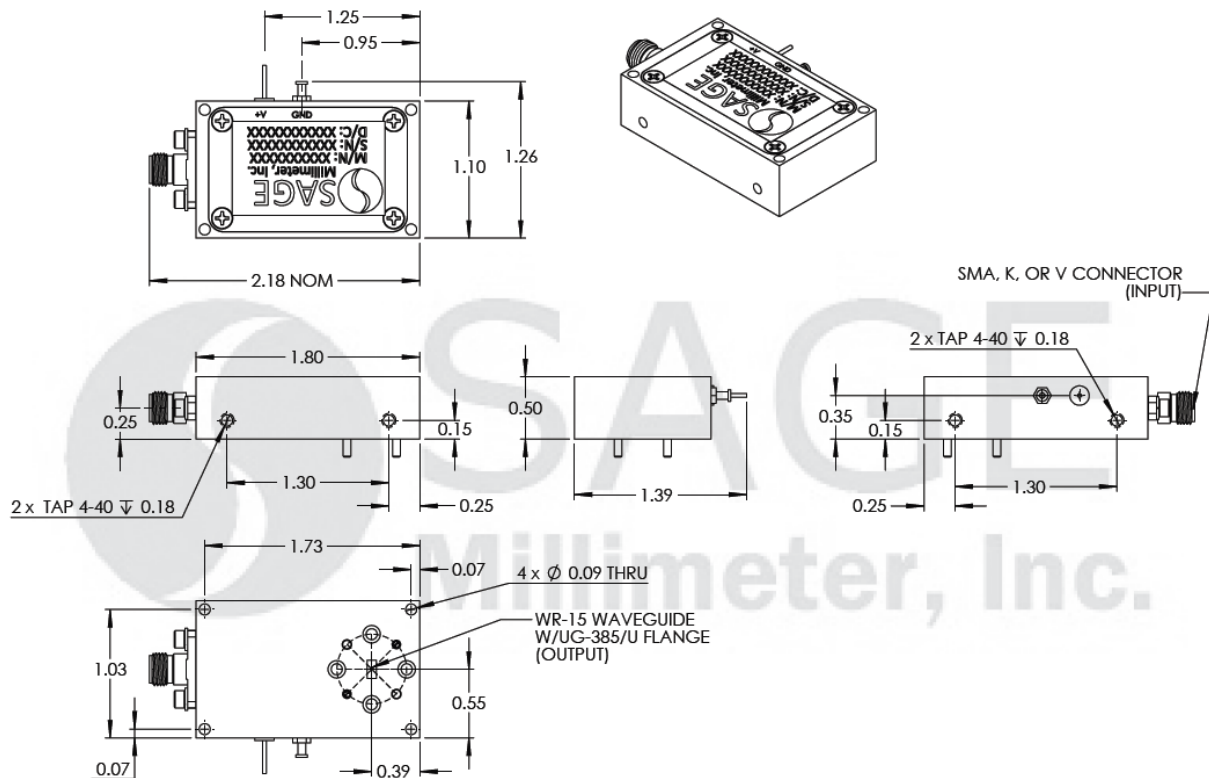
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### Typical Output Power vs. Output Frequency

Bias: +8 V<sub>DC</sub>/380 mA



### Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)





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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.
- 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,  $8.0 \pm 0.15$  inch-pounds ( $0.92 \pm 0.05$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

