SFA-363603418-19SF-S1

Rev. 1.1

U-Band, X4 Active Frequency Multiplier, 36 to 60 GHz, +18 dBm P_{out}

Description:

Model SFA-363603418-19SF-S1 is an active X4 frequency multiplier. The multiplier has an input frequency of 9 to 15 GHz with a minimum input power of 0 dBm and an output frequency of 36 to 60 GHz with a typical output power of +18 dBm. The multiplier also has a typical harmonic suppression of -15 dBc. The DC power requirement for the multiplier is +8 V_{DC}/800 mA. The input port configuration is a female SMA connector and the output is a WR-19 waveguide with a UG-383/U-M Anti-Cocking flange. Other port configurations are available under different model numbers.

Features:

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

Applications:

- 5G
- Frequency Extenders
- Source Module
- Communication Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	9 GHz		15 GHz
Input Power		0 dBm	+20 dBm
Output Frequency	36 GHz		60 GHz
Output Power		+18 dBm	
Harmonic Suppression		-15 dBc	
Spurious		-60 dBc	
Port Return Loss		15 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+9 V_{DC}
DC Supply Current		800 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input Port	SMA (F)
Output Port	WR-19 Waveguide with UG-383/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.20” (W) X 2.00” (L) X 0.50” (H)
Outline	FA-SU-1-A

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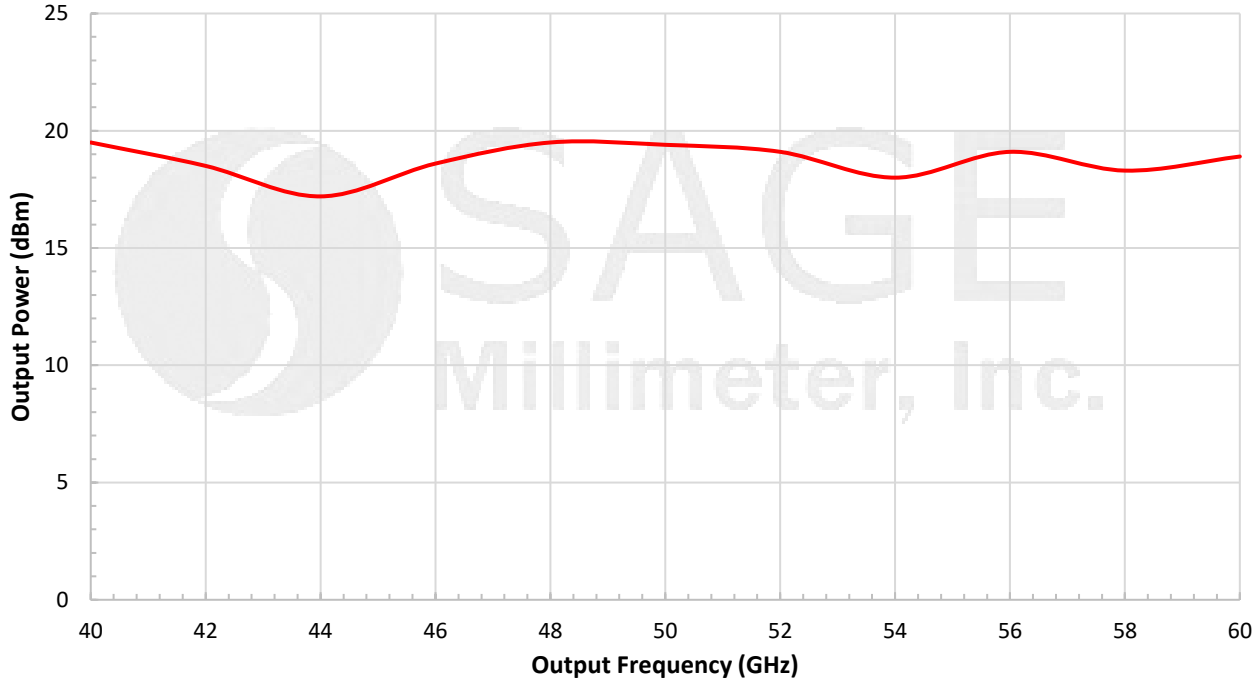
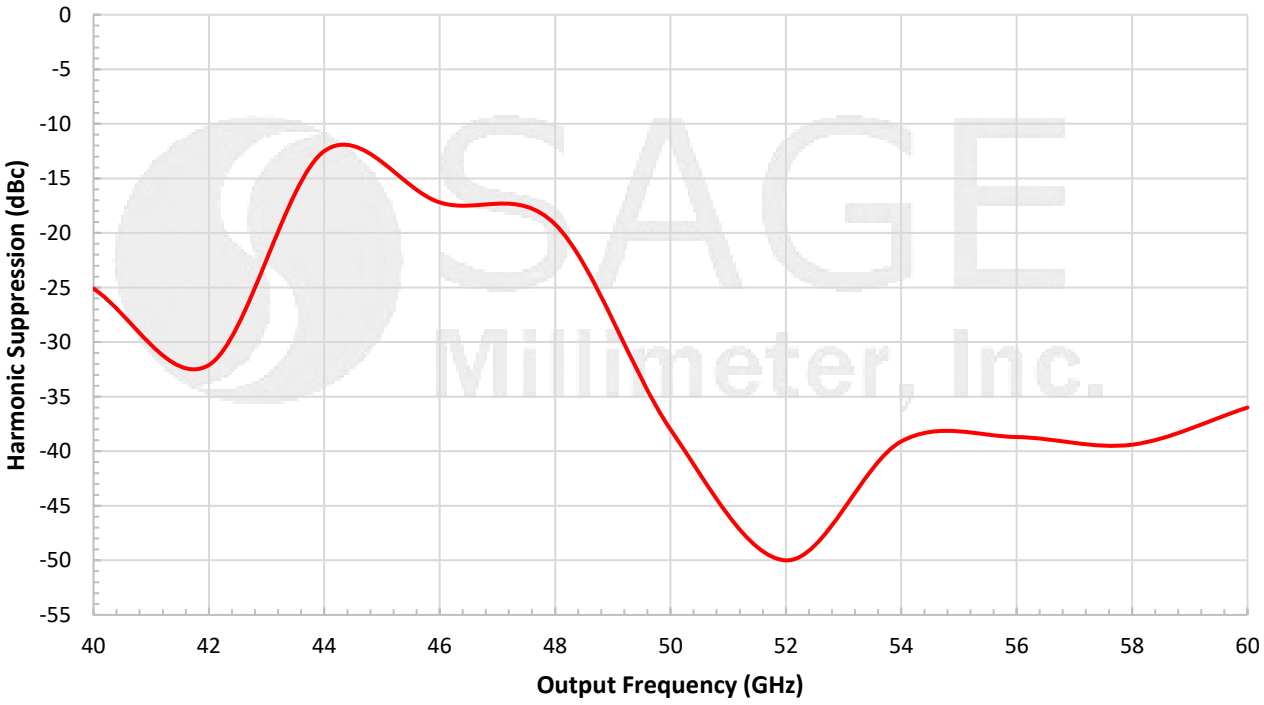
Typical Output Power vs. Output Frequency

Bias: +8 V_{DC}/800 mA; Input Power: 0 dBm



Typical Harmonic Suppression vs. Output Frequency

Bias: +8 V_{DC}/800 mA; nput Power: 0 dBm



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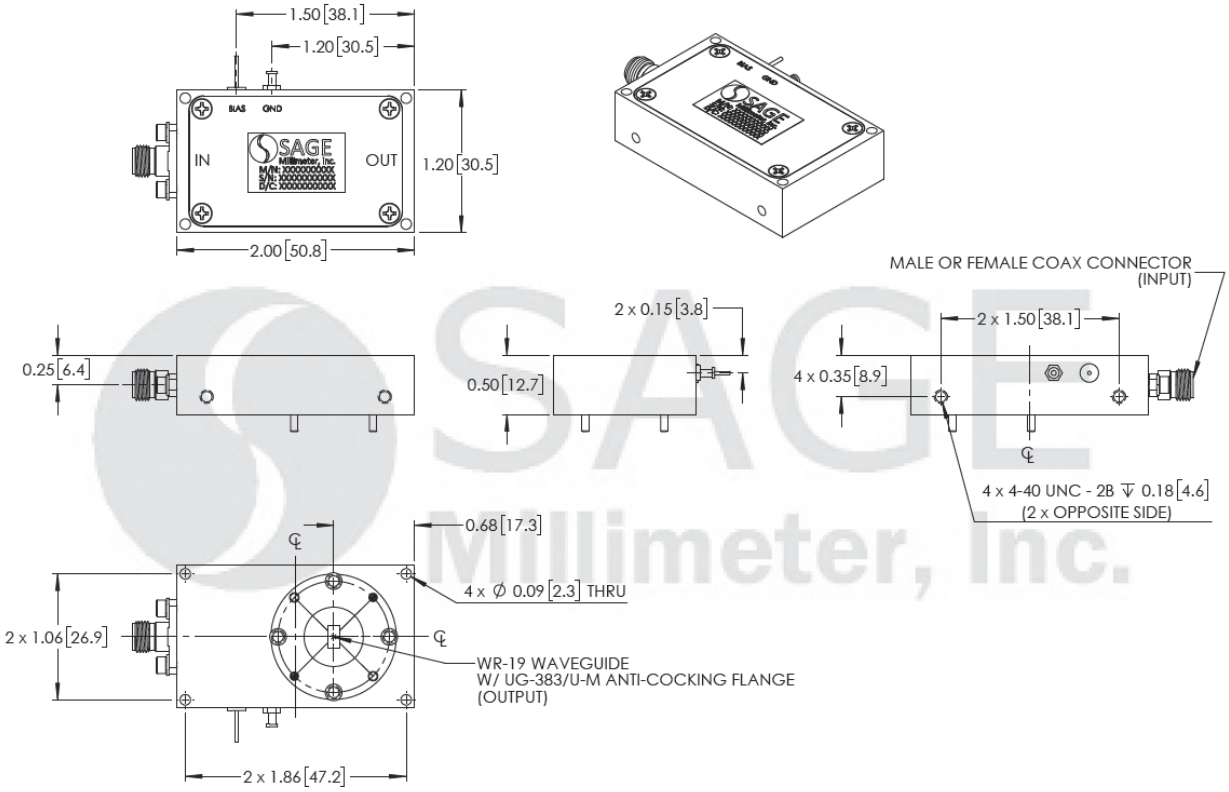
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- 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.**