SFA-903983810-10SF-S1

Rev. 1.0

X8 Active Frequency Multiplier, 90 to 98 GHz, +10 dBm

Description:

Model SFA-903983810-10SF-S1 is an active X8 frequency multiplier. The multiplier has an input frequency of 11.25 to 12.25 GHz with a typical input power of +5 dBm and an output frequency of 90 to 98 GHz with a typical output power of +10 dBm. The multiplier also has a typical harmonic suppression of -20 dBc. The DC power requirement for the multiplier is +8 V_{DC}/450 mA. The input port configuration is a female K connector and the output is a WR-10 waveguide with a UG-387/U 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	11.25 GHz		12.25 GHz
Input Power		+5 dBm	+15 dBm
Output Frequency	90.00 GHz		98.00 GHz
Output Power		+10 dBm	
Harmonic Suppression		20 dBc	
Spurious		60 dBc	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		450 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 Anti-Cocking Flange
Bias	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

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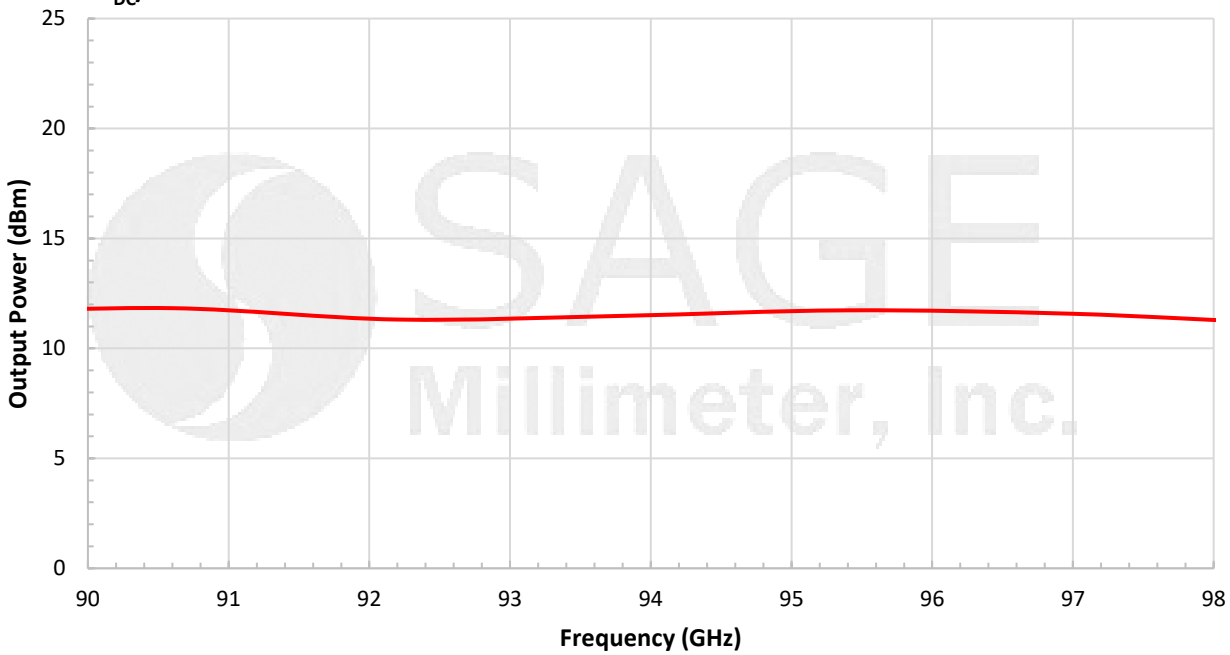
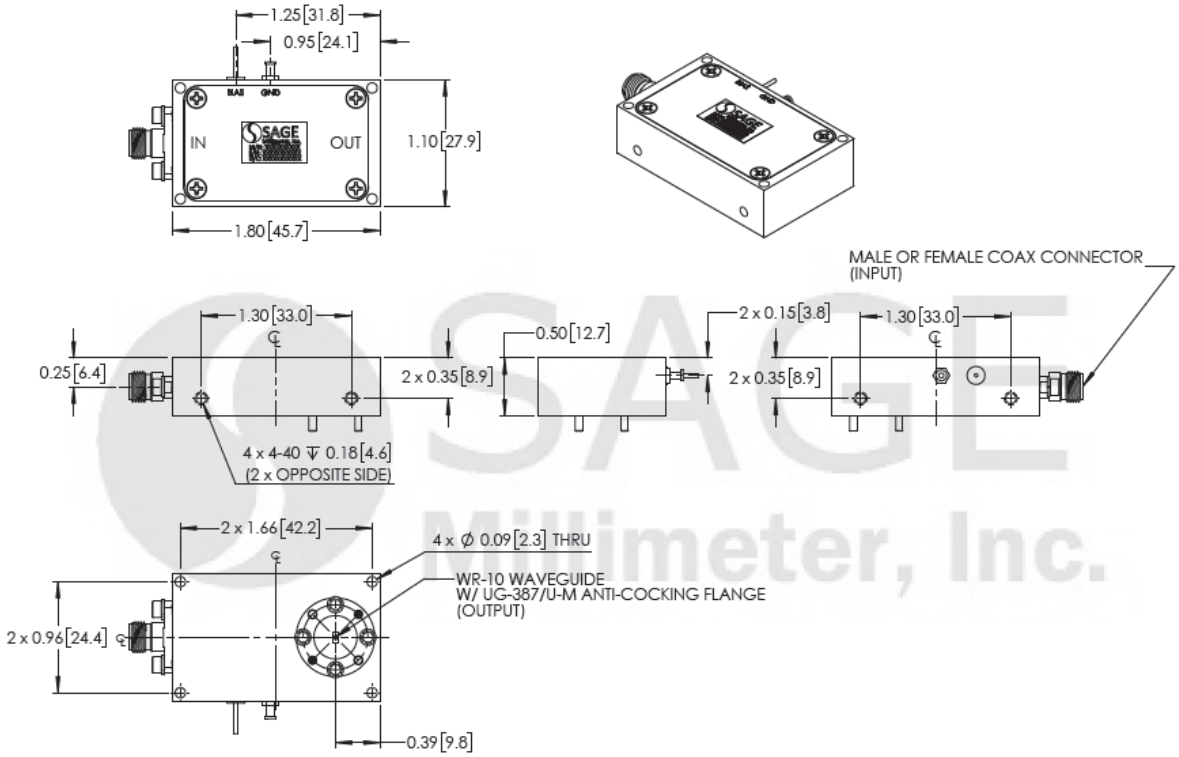
Typical Output Power vs. Frequency

Bias = + 8 V_{DC}/450 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 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 (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**