



W-Band, X8 Active Frequency Multiplier, 90 to 98 GHz, +26 dBm P_{out}

Description:

Model SFA-903983826-10SF-E1 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 +26 dBm. The multiplier also has a typical harmonic suppression of -20 dBc. The DC power requirement for the multiplier is +15 V_{DC}/750 mA. The input port configuration is a female SMA connector and the output is a WR-10 waveguide with a UG-387/U-M 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		+26 dBm	
Harmonic Suppression		-20 dBc	
Spurious		-60 dBc	
Port Return Loss		10 dB	
DC Voltage	+13 V _{DC}	+15 V _{DC}	+16 V _{DC}
DC Supply Current		750 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-M Anti-Cocking Flange
Bias Port	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.10" (W) X 1.80" (L) X 0.75" (H)
Outline	FA-SW-2CW-A-1.8

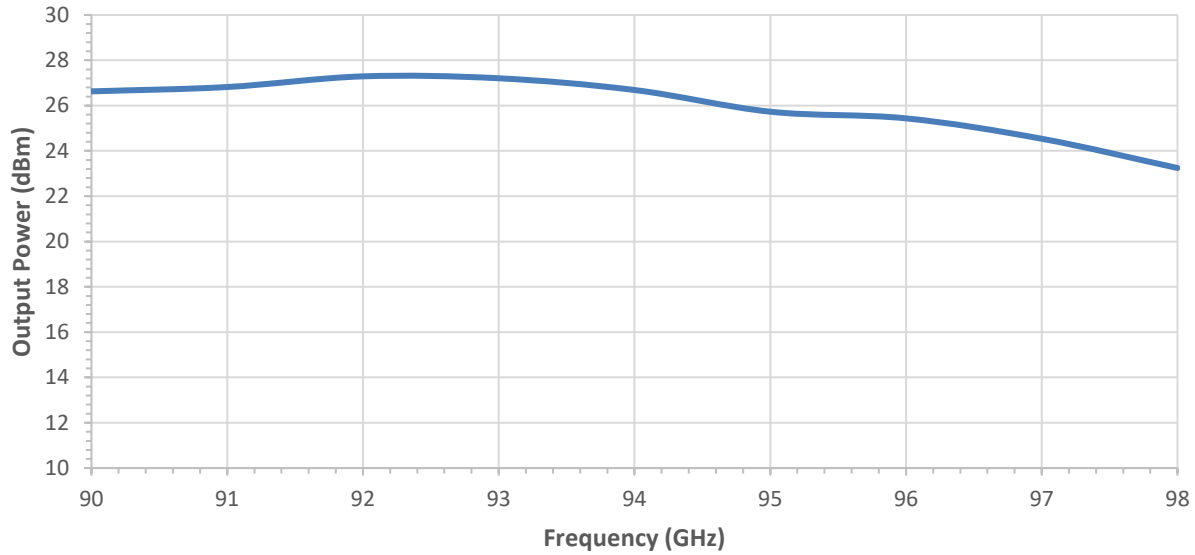




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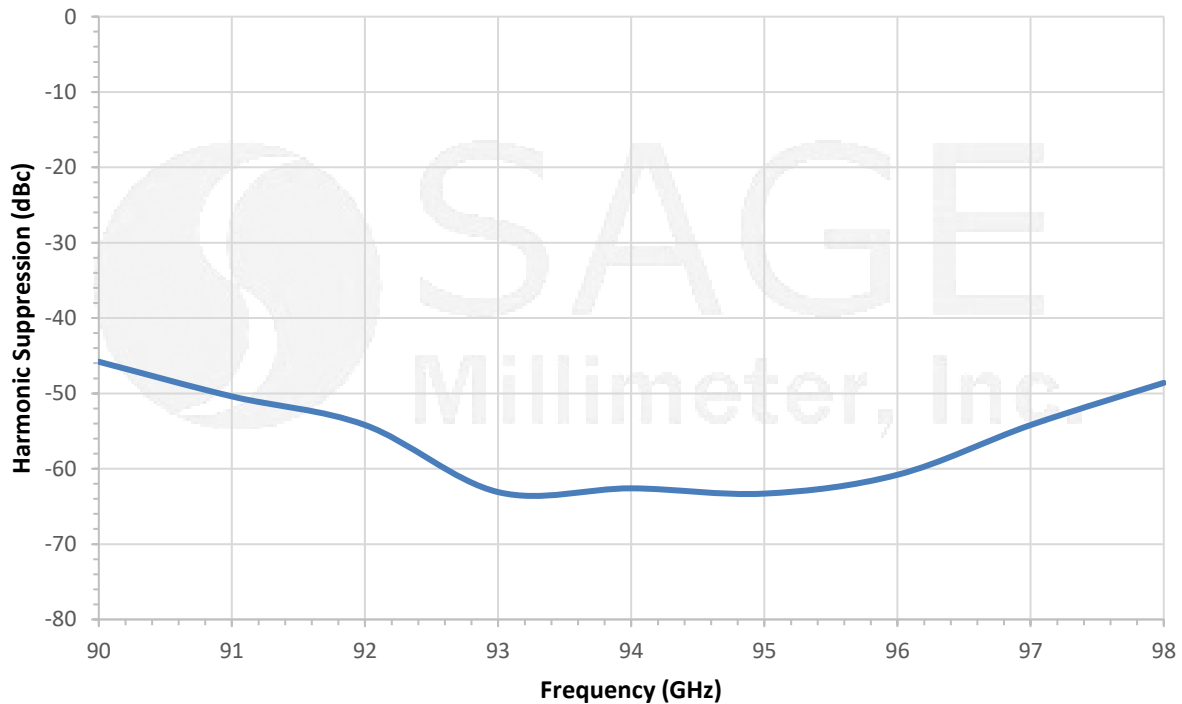
Output Power vs. Frequency

Bias: +15V_{DC}/787 mA; Input Power = + 4 dBm



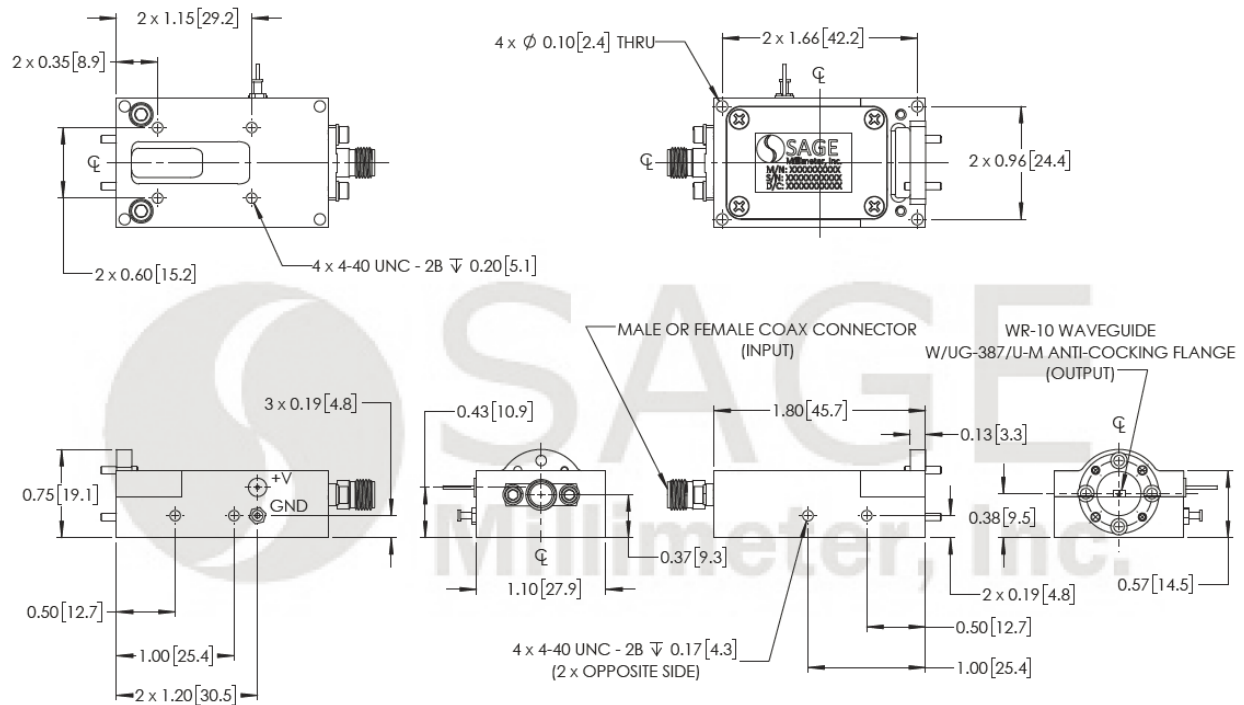
Typical Harmonic Suppression vs. Frequency

Bias: +15V_{DC}/ 750 mA; RF Input Power = +5 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, slightly.
- All testing was performed under +35 °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.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- The case temperature of the device shall never exceed +50 °C. Use proper Heatsink or fan if necessary.

