SFA-783983616-10SF-E1-ET

W-Band, X6 Active Frequency Multiplier, 78 to 98 GHz, 16 dBm P_{out}, Extended Temperature

SFA-783983616-10SF-E1-ET is an active X6 frequency multiplier. The multiplier has an input frequency of 13 to 16.33 GHz with a typical input power of +3 dBm and an output frequency of 78 to 98 GHz with a typical output power of +16 dBm. The multiplier also has a typical harmonic suppression of -20 dBc. The DC power requirement for them multipler is +8 V_{DC}/650 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.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	13 GHz		16.33 GHz
Input Power		+3 dBm	+20 dBm
Output Frequency	78 GHz		98 GHz
Output Power		+16 dBm	
Harmonic Suppression		-20 dBc	
Spurious		-60 dBc	
Port Return Loss		10 dB	
DC Voltage		+8 V_{DC}	+12 V_{DC}
DC Supply Current		650 mA	
Specification Temperature		+25° C	
Operating Temperature	-40 °C		+85° C

Mechanical Specifications:

Item	Specification
Input Port	SMA (F)
Output Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
DC Bias Port	Solder Pin
Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.10” (W) X 1.80” (L) X 0.75” (H)
Outline	FA-SC-2CW-A-1.8

ECCN

3A001.b.4

FEATURES

- Low Harmonic Components
- Moderate Output Power

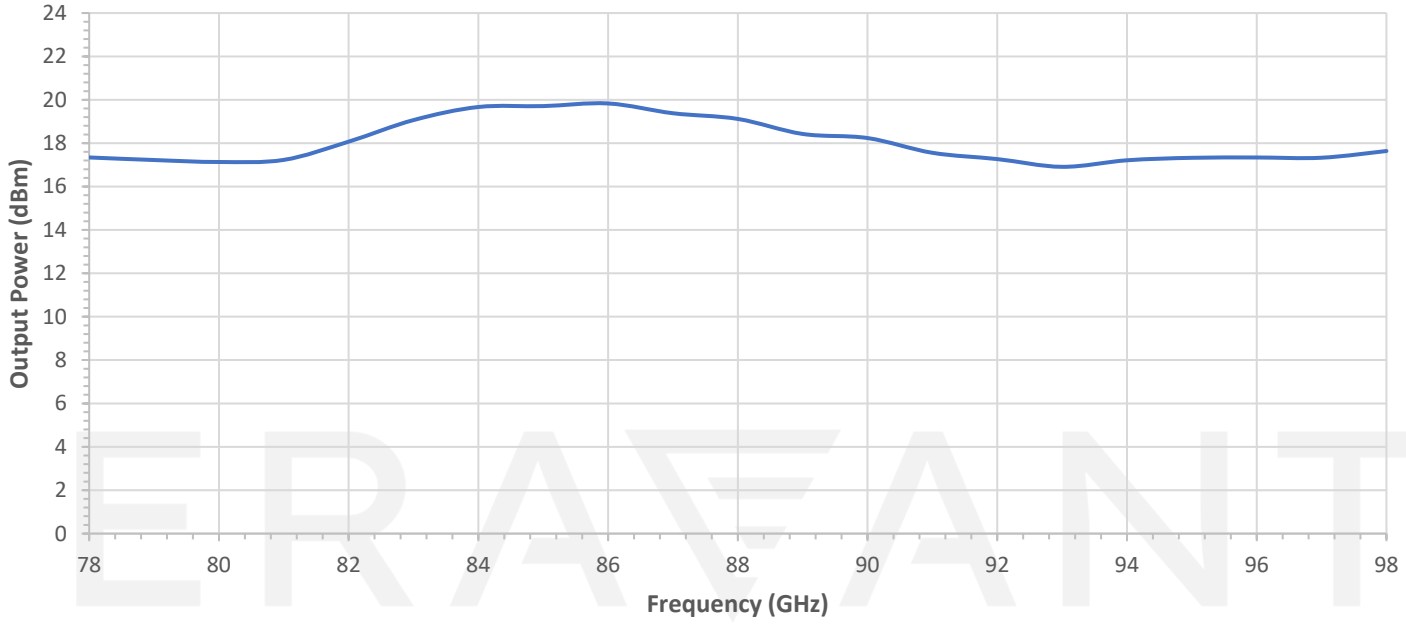
APPLICATIONS

- Frequency Extenders
- Communication Systems
- Radar Systems

SUPPLEMENTAL DETAILS

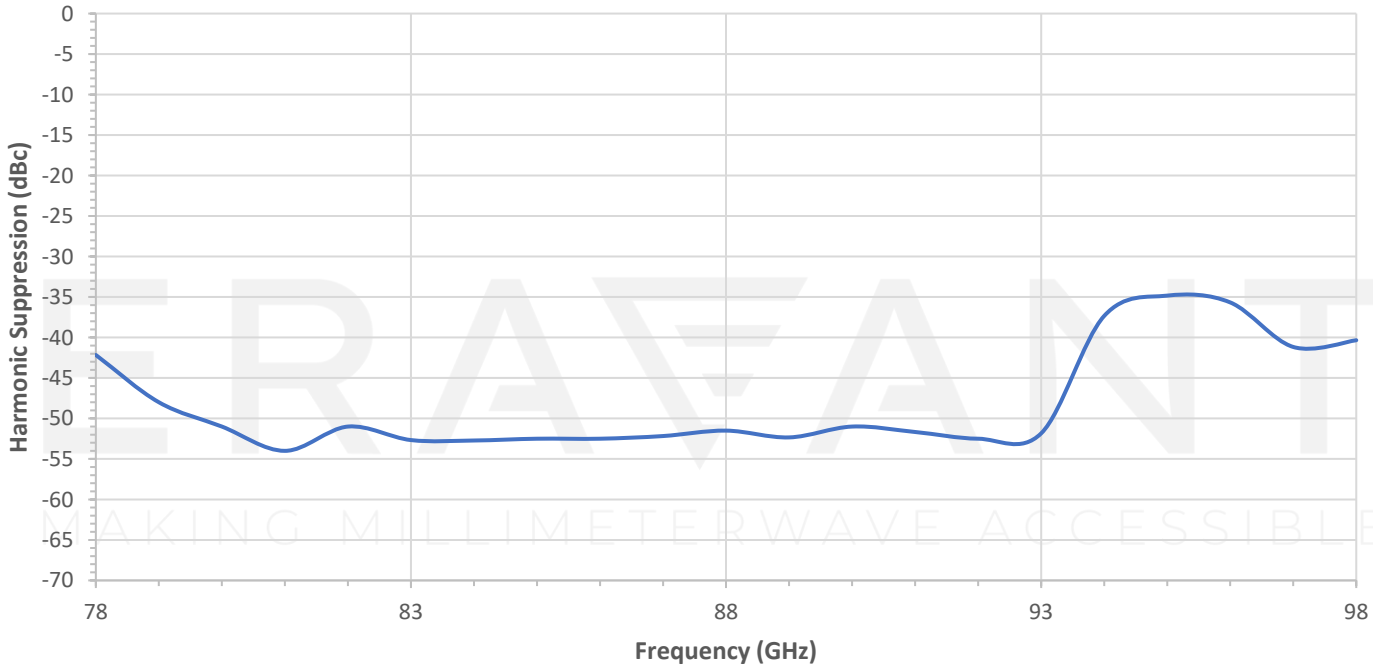
Output Power vs. Frequency

Bias: +8V_{DC}/591 mA; Input Power = +3 dBm
RF saturation: +8Vdc/673 mA

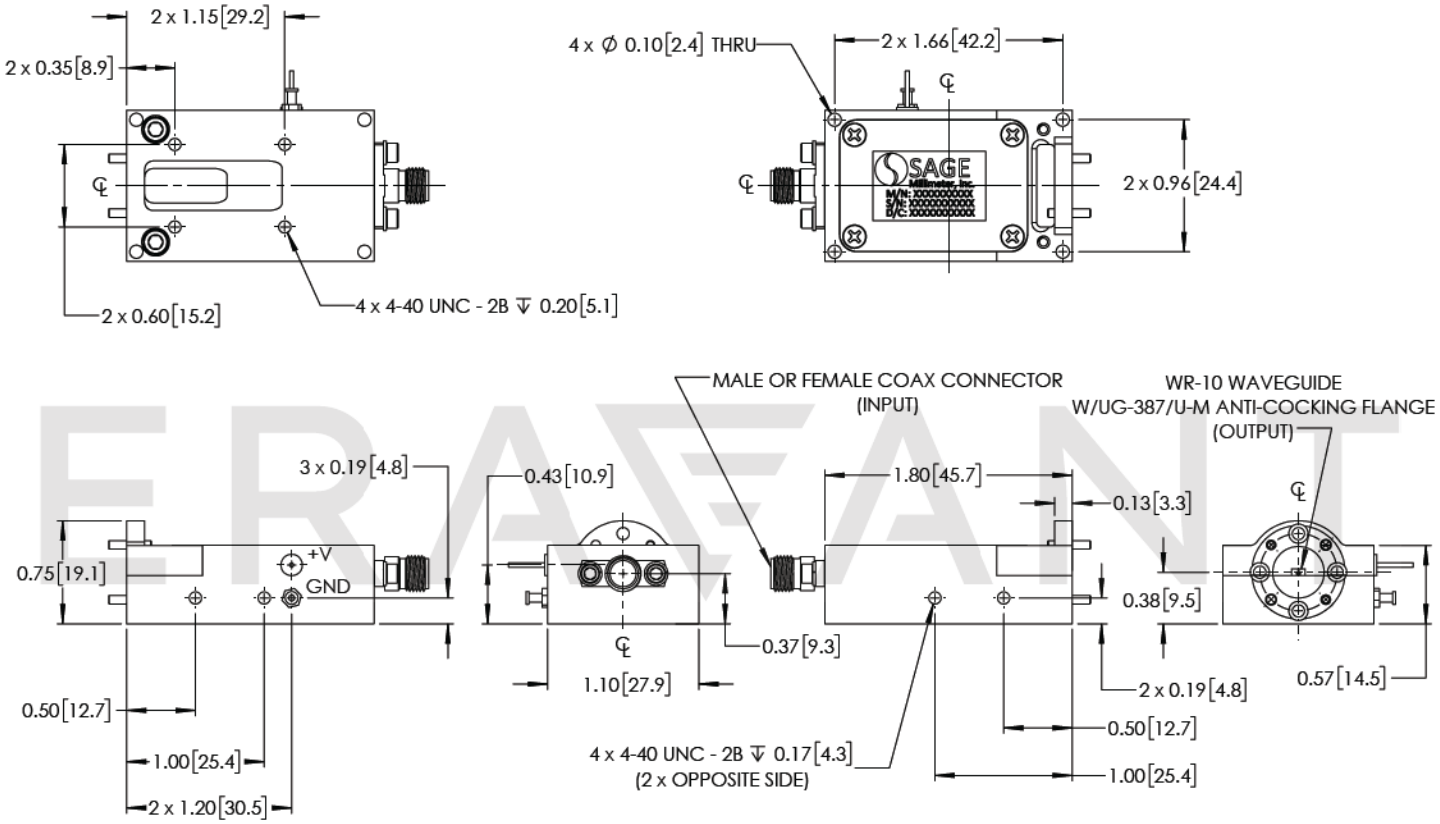


Harmonic Suppression vs. Frequency

Bias: +8V_{DC}/591 mA; Input Power = +3 dBm



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 +25 ˚C case temperature.
- Eravant reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model numbers.
- Extended temperature testing is performed under -40 ˚C and +85 ˚C.

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 +85 ˚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. **Torque wrench, model SCH-08008-S1, is highly recommended.**