

## SFP-1141543N03-0622-S1-M

### D-Band X3, Passive Frequency Multiplier, 110 to 145 GHz

**SFP-1141543N03-0622-S1-M** is a D-Band, X3 passive multiplier that utilizes GaAs pHEMT-based MMIC chip with a balanced circuit configuration to generate third order harmonics with good harmonic and fundamental suppression. This multiplier requires an input frequency range of 36.7 to 48.3 GHz at +17 dBm RF power to yield 110 to 145 GHz at a nominal -3 dBm. The multiplier is equipped with a WR-22 waveguide with a UG-383/U anti-cocking flange as its input port and a WR-06 waveguide with a UG-387/U-M anti-cocking flange as its output port. Other interface configurations are offered under different model numbers.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency	36.7 GHz		48.3 GHz
Output Frequency	110 GHz		145 GHz
Input Power		+17 dBm	+20 dBm
Output Power		-3 dBm	
Harmonic Suppression		-20 dBc	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

#### Mechanical Specifications:

Item	Specification
Input Ports	WR-22 Waveguide with UG-383/U Anti-Cocking Flange
Output Port	WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.2 Oz
Size	1.00" (L) x 1.13" (W) x 1.13" (H)
Outline	FP-DQ3-A

#### ECCN

3A001.b.7

#### FEATURES

- No External Bias
- Compact Design

#### APPLICATIONS

- Source Modules
- THz Systems

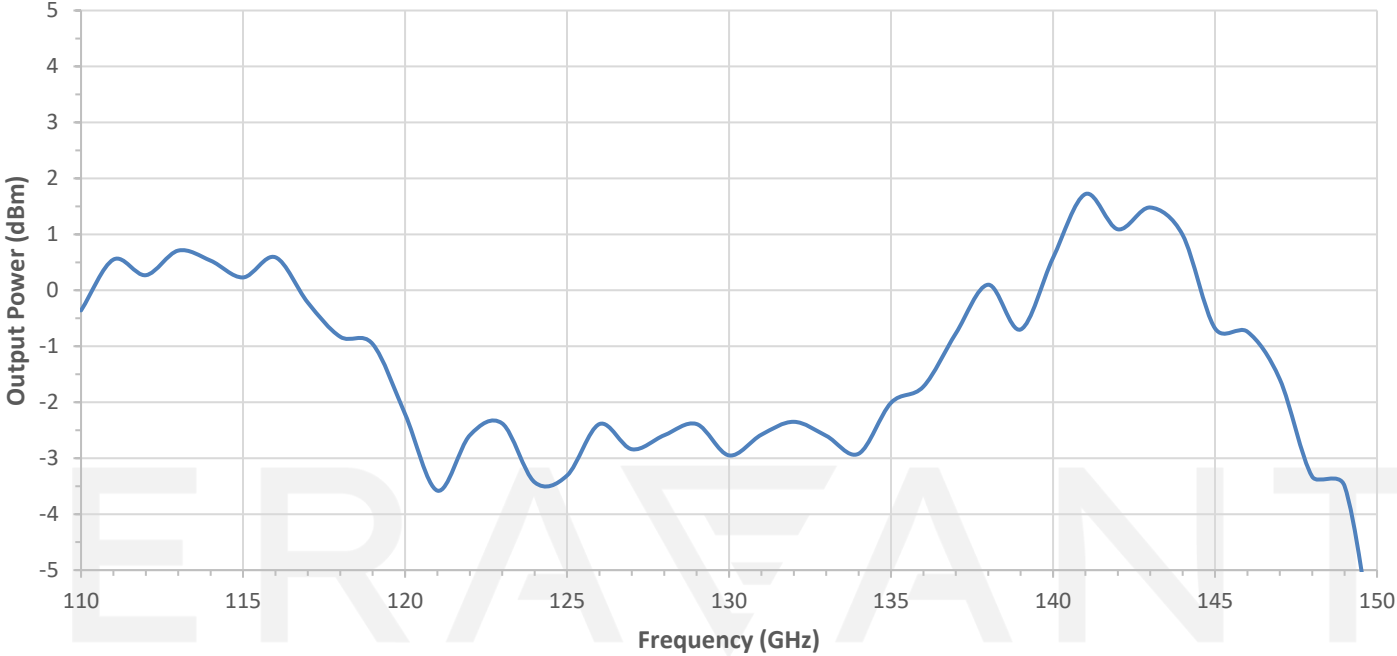
#### SUPPLEMENTAL DETAILS



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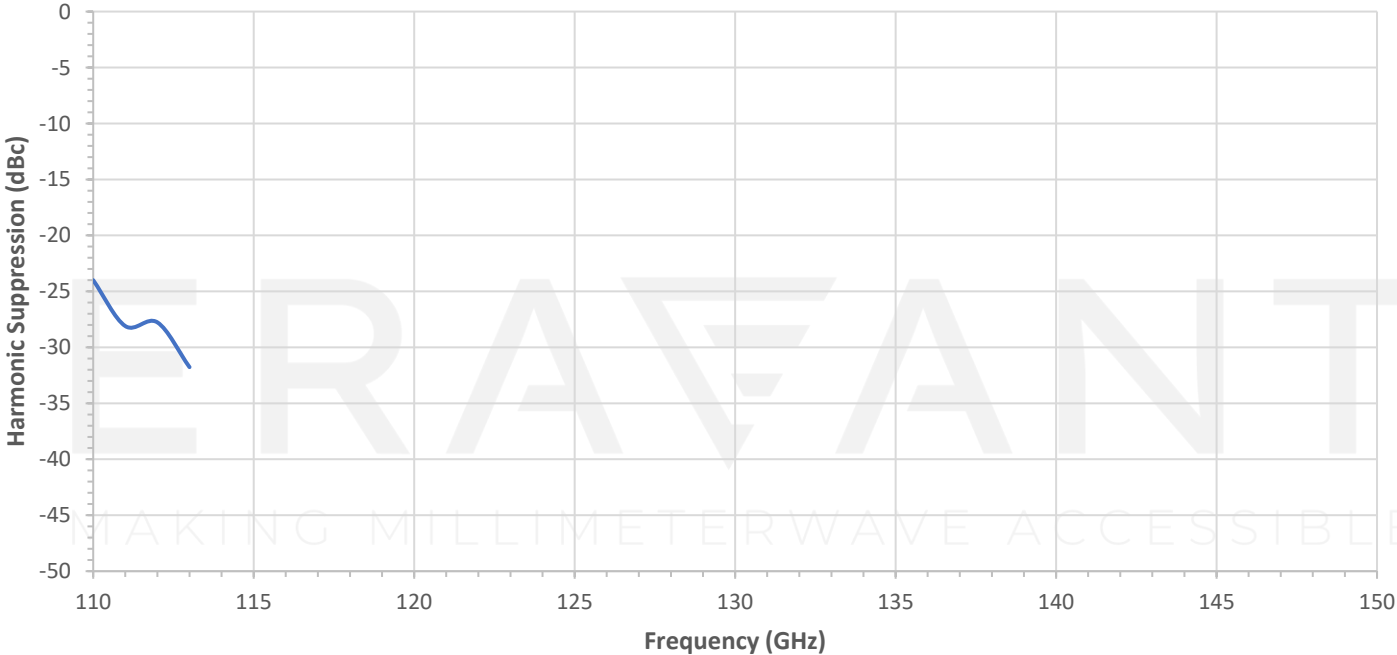
Output Power vs. Frequency

Input Power = +17 dBm



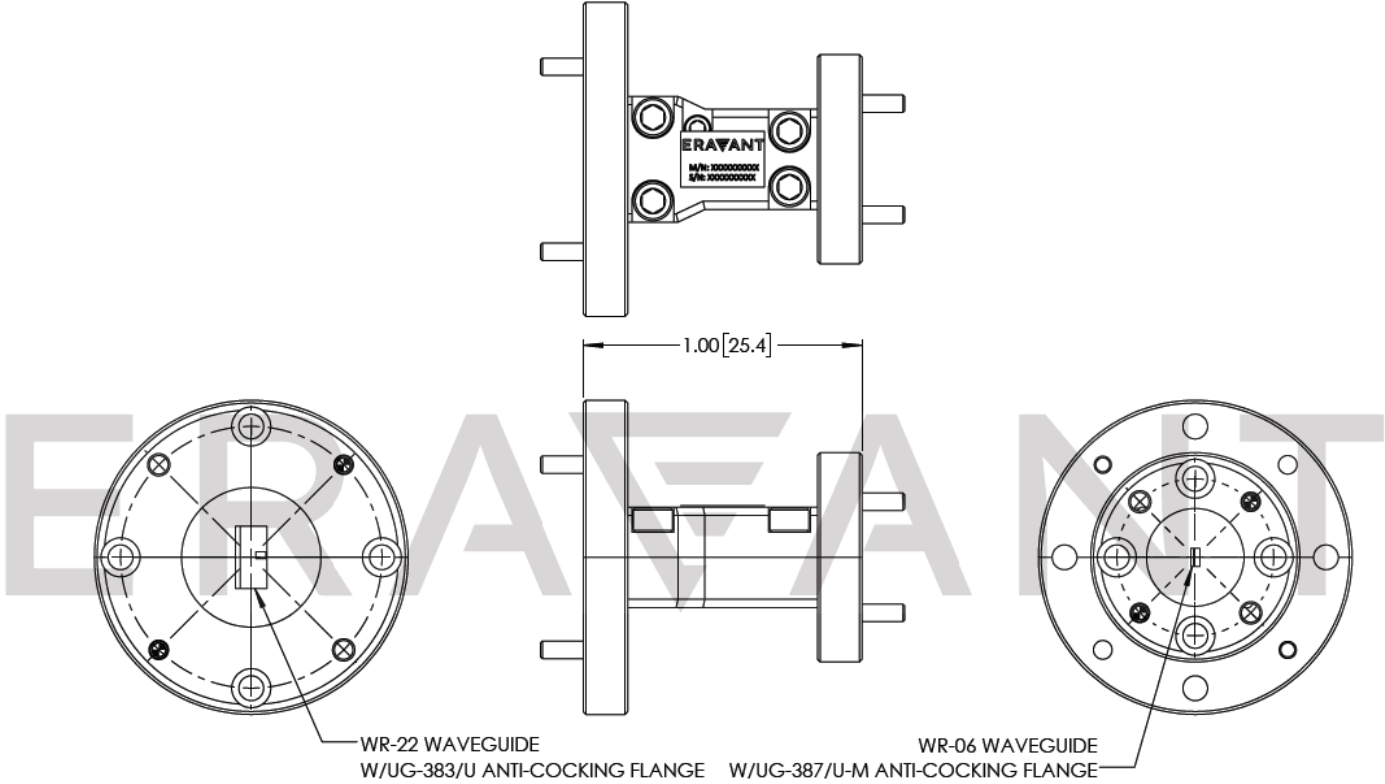
Harmonic Suppression vs. Frequency

Input Power = +17 dBm



## SFP-1141543N03-0622-S1-M

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



**NOTE:**

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

**CAUTION:**

- Exceeding absolute maximum ratings of the multiplier will damage the device.
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- The multiplier is a static sensitive device. Always follow ESD rules when working with the multiplier.

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