



## E-Band Transmitter, 76 to 81 GHz, +15 dBm P<sub>1dB</sub>, 18 dB Gain

### Description:

**Model SST-7930531815-12-D2** is an E-Band integrated transmitter module. The transmitter has a typical conversion gain of 18 dB with a typical P-1 of +15 dBm in the frequency range of 76 to 81 GHz and an IF frequency range of 1 to 6 GHz. The LO includes a X12 multiplier chain and requires +13 dBm at the frequency of 6.25 GHz. The LO and IF ports are both equipped with female SMA connectors and the RF port is a WR-12 waveguide with a UG-387/U flange.



### Features:

- High Output Power
- High Gain
- Good Gain Flatness

### Applications:

- E Band Communication Systems
- Radar Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Output Frequency	76 GHz		81 GHz
Damaged IF Power			+7 dBm
Output P <sub>1dB</sub>		+15 dBm	
Output Psat		+17 dBm	
IF Input Frequency	1 GHz		6 GHz
IF to RF Conversion Gain		18 dB	
LO to RF Isolation		20 dB	
LO Frequency		6.25 GHz	
LO Input Power		+5 dBm	+10 dBm
LO DC Voltage Supply	+6 V <sub>DC</sub>	+8 V <sub>DC</sub>	+15 V <sub>DC</sub>
LO Current Supply		500 mA	
Output Return Loss		10 dB	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

### Mechanical Specifications:

Item	Specification
RF Port	WR-12 Waveguide with UG-387/U Flange
IF/LO Ports	SMA (F)/SMA (F)
Bias	Solder Pin
Housing Material	Aluminum
Weight	1.8 Oz
Finish	Gold Plated
Size	1.2" (W) x 1.8" (L) x 0.5" (H)
Outline	SR-SE



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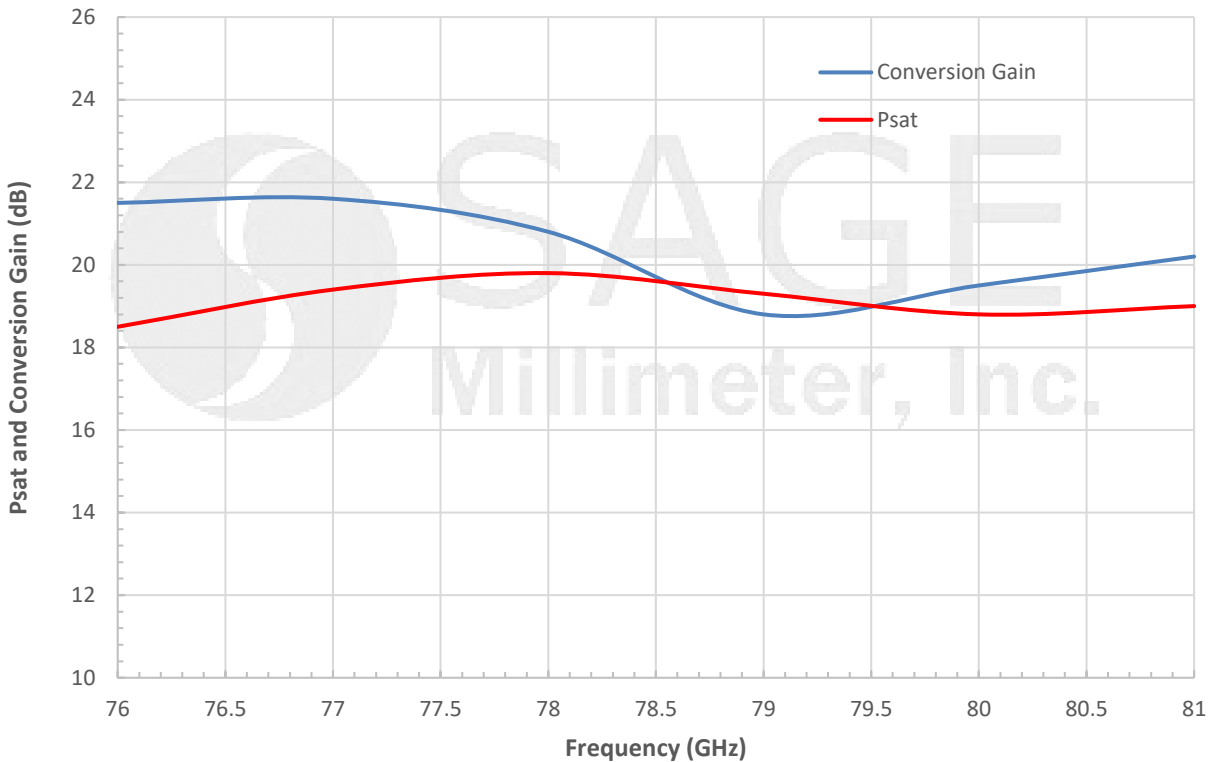




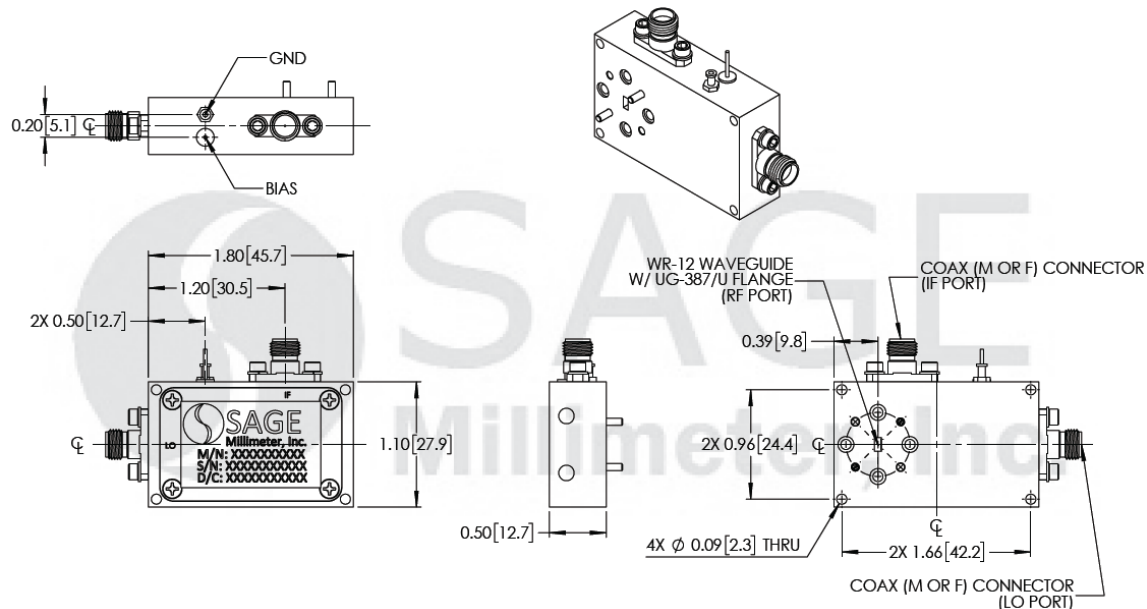
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### Typical Conversion Gain and Psat vs. Frequency

+8 Vdc/850 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.
- 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.
- 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.



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