

W-Band Transmitter, 90 to 96 GHz, 20 dB Gain, +20 dBm P_{1dB}

Description:

Model SST-9330632030-10-M1-I is a W-Band single channel transmitter. The transmitter has a typical conversion gain of 20 dB with a typical IF input power of -20 dBm in the frequency range of 3 to 9 GHz and a RF output frequency range of 90 to 96 GHz. The required LO power and frequency range are 5 dBm and 10.875 GHz, respectively. The LO and IF port are equipped with female SMA connectors and the RF port is a WR-10 waveguide with a UG-387/U-M anti-cocking flange.



Features:

- Compact Size
- High Transmitting Power
- Fully Integrated Module

Applications:

- Radar Systems
- Communication Systems
- Passive Camera Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Output Frequency	90 GHz		96 GHz
IF Input Frequency	3 GHz		9 GHz
IF Input Power		-20 dBm	+10 dBm
IF to RF Conversion Gain		20 dB	
RF Output P _{1dB} /Psat		+20/+24 dBm	
Image Rejection*		20 dBc	
LO Frequency		10.875 GHz	
LO Input Power	0 dBm	+5 dBm	+10 dBm
DC Voltage Supply	+6 V _{DC}	+8 V _{DC}	+16 V _{DC}
Current Supply		750 mA	
Specification Temperature		+ 25 °C	
Operating Temperature	0 °C		+ 50 °C

*Configured to reject lower sideband

Mechanical Specifications:

Item	Specification
RF Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
IF Port	SMA (F)
LO Port	SMA (F)
Bias Port	SMA (F)
Case Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Size	1.10" (W) X 1.80" (L) X 0.50" (H)
Outline	SR-SW-A-3

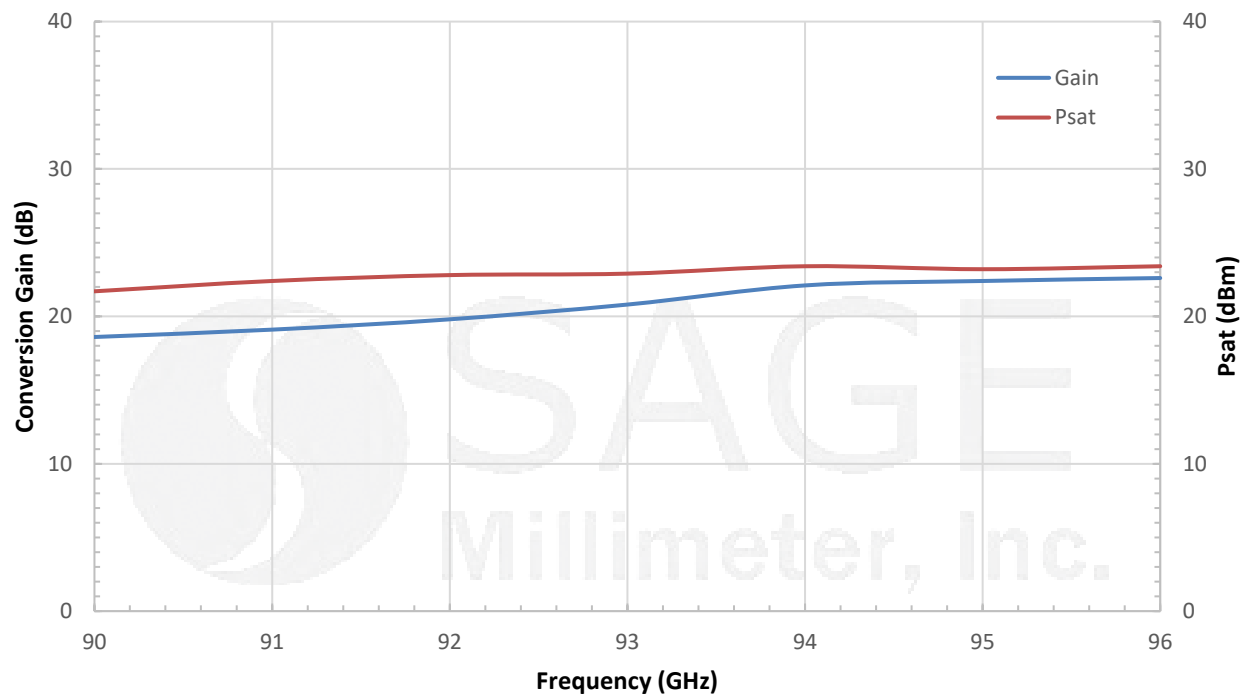
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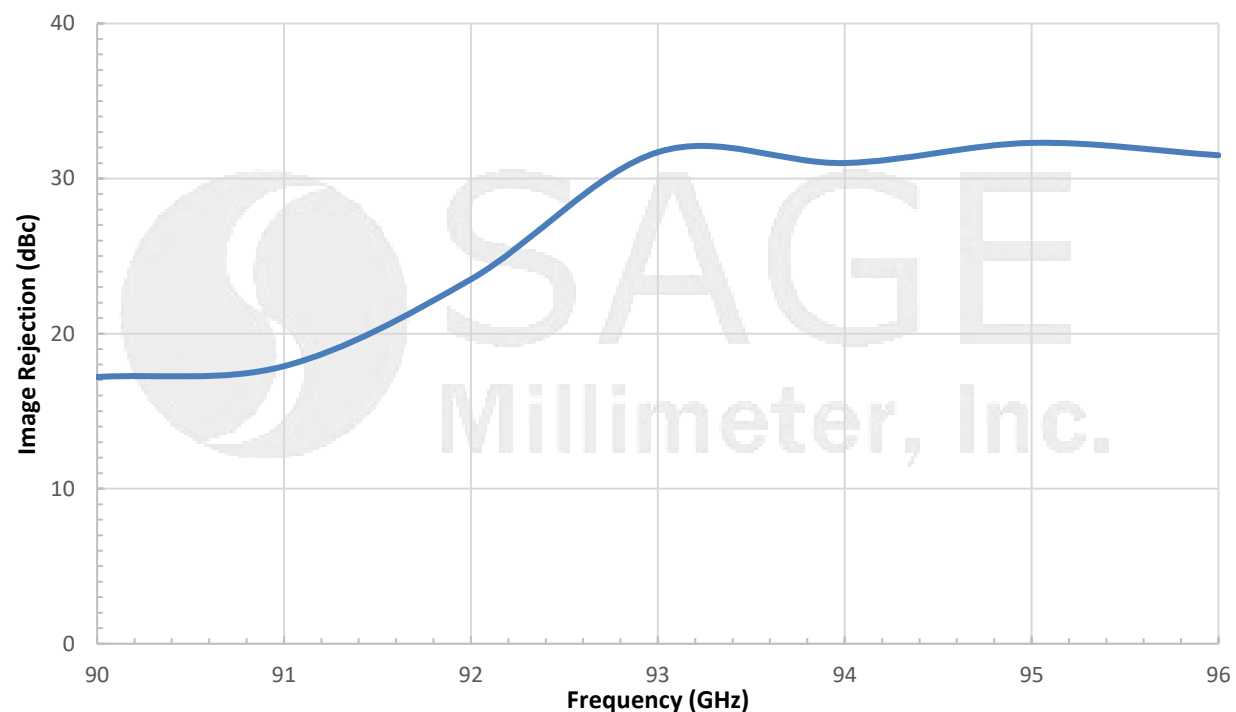
Typical Conversion Gain and Psat vs. Frequency

Bias: +8 V_{DC}/710 mA, IF Input: -20 dBm



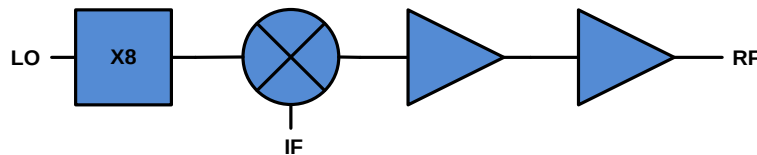
Typical Image Rejection vs. Frequency

Bias: +8 V_{DC}/710 mA, RF Input: -20 dBm

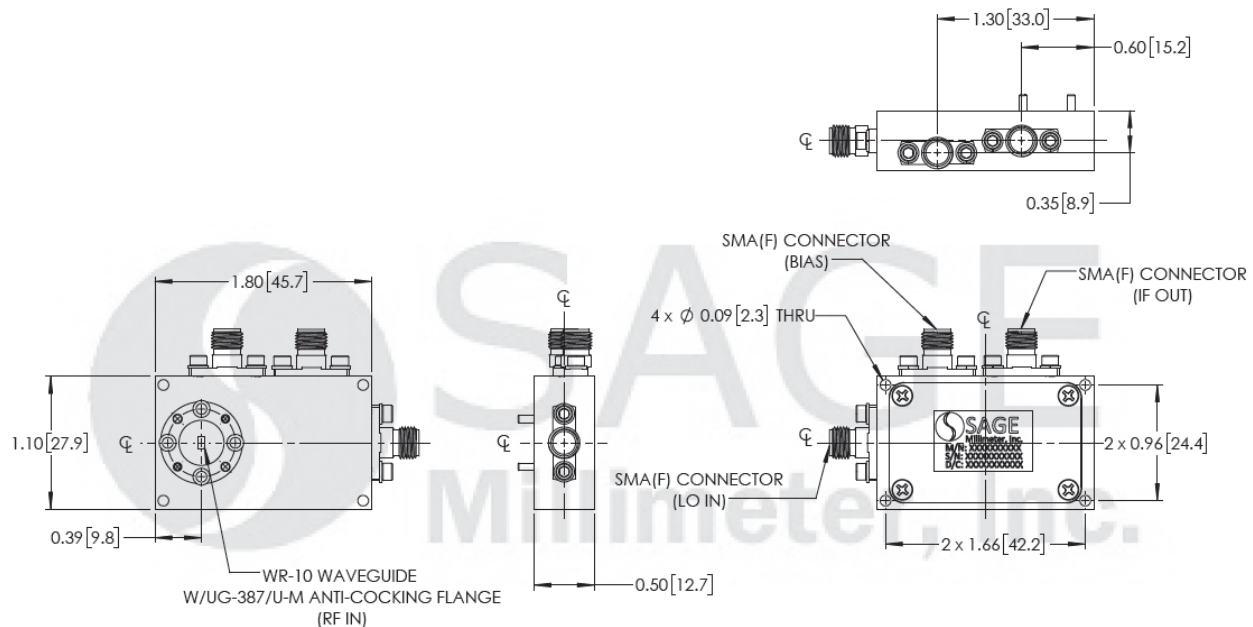


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Block Diagram:



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.
- 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.