SSR-9430434030-10-M1-D

Advanced

W-Band Receiver, 92 to 96 GHz, x8 LO, 4 dB NF, 30 dB Gain, I/Q

Description:

Model SSR-9430434030-10-M1-D is a W-Band dual channel (I/Q) receiver. The receiver has a typical conversion gain of 30 dB with a typical RF input power of -60 dBm in the frequency range of 92 to 96 GHz and a IF output frequency range of 4 to 8 GHz. The receiver has a build in x8 multiplier, which requires the typical input LO power and frequency of +5 dBm and 11 GHz, respectively. The LO and IF port are both equipped with female SMA connectors and the RF port is a WR-10 waveguide with a UG-387/U-M flange.

Features:

- Compact Size
- Low Noise Figure
- Fully Integrated Module

Applications:

- Radar Systems
- Communication Systems
- Passive Camera Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Input Frequency	92 GHz		96 GHz
RF Input Power		-60 dBm	-24 dBm
Noise Figure		4 dB	
IF Output Frequency	4 GHz		8 GHz
I/Q Phase Unbalance		±15°	
I/Q Amplitude Unbalance		±1.0 dB	
RF to IF Conversion Gain		30 dB	
LO Frequency		11 GHz	
LO Input Power	0 dBm	+5 dBm	+10 dBm
DC Voltage Supply	+6 V_{DC}	+8 V_{DC}	+12 V_{DC}
Current Supply		400 mA	
Specification Temperature		+ 25 °C	
Operating Temperature	0 °C		+ 50 °C

Mechanical Specifications:

Item	Specification
RF Port	WR-10 Waveguide with UG-387/U-M Flange
RX IF Ports and LO Port	SMA (F)/SMA (F) and SMA (F)
Bias	Solder Pin
Housing/Finishing	Aluminum/Gold Plated
Weight	2 Oz
Size	1.1” (W) X 1.8” (L) X 0.5” (H)
Outline	ST-SW-D

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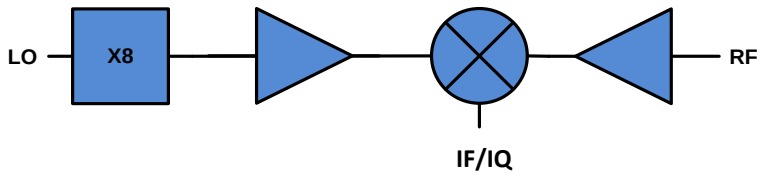
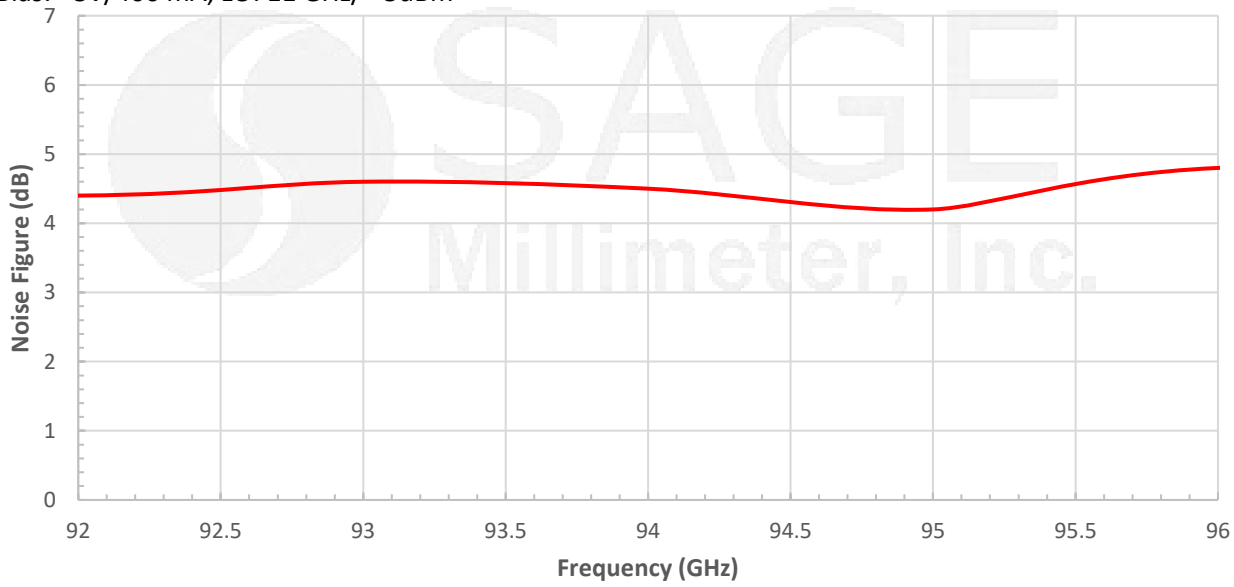
Block Diagram:



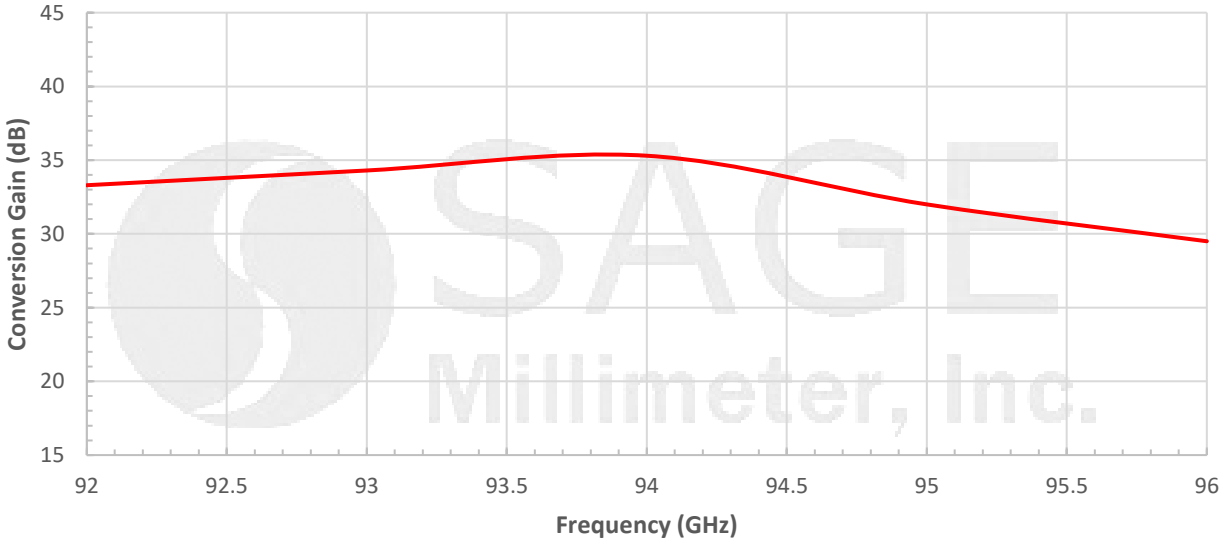
Typical Noise Figure vs. Frequency

Bias: +8V/400 mA, LO: 11 GHz/+ 5dBm



Typical Conversion Gain vs. Frequency

Bias: +8V/400 mA, LO: 11 GHz/+ 5dBm



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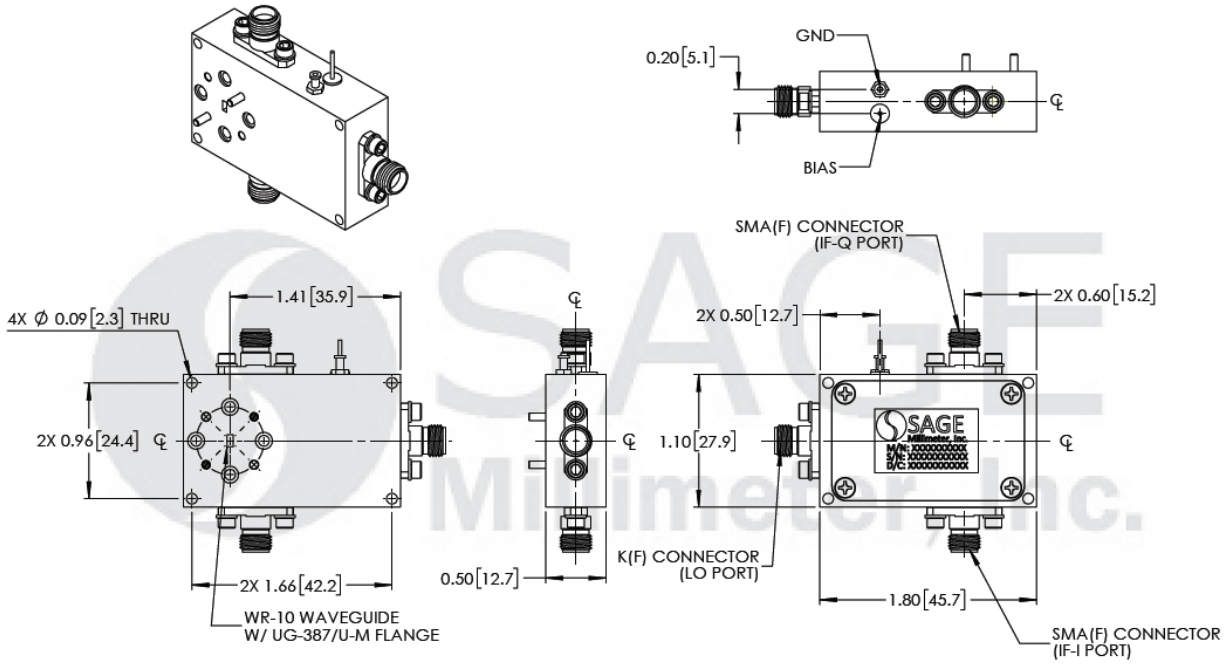
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- 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.

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