SSR-7930530018-12-S1

Rev. 1.0

E-Band Receiver, 76 to 81 GHz, X6 LO, DC to 6 GHz IF

Description:

Model SSR-7930530018-12-S1 is an E-Band integrated receiver module. The receiver module has a typical conversion gain of 18 dB in the frequency range of 76 to 81 GHz and an IF output frequency range of DC to 6 GHz. The receiver has a build in X6 multiplier, which requires the input LO power and frequency of +13 dBm and 12.5 GHz, respectively. The LO and IF port are both equipped with female SMA connectors and the RF port is with a WR-12 waveguide with UG-387/U flange.

Features:

- Compact Size
- High Conversion Gain
- Fully Integrated Module

Applications:

- Radar Systems
- Communication Systems
- Passive Camera Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Input Frequency	76 GHz		81 GHz
RF Input Power		-30 dBm	
Damage RF Power		-20 dBm	
IF Output Frequency	DC		6 GHz
RF to IF Conversion Gain		18 dB	
LO Input Frequency		12.5 GHz	
LO Input Power		+7 dBm	+15 dBm
LO DC Bias Voltage		+8 V_{DC}	+15 V_{DC}
LO DC Bias Current		300 mA	
Input Return Loss		6 dB	
Specification Temperature		+ 25 °C	
Operating Temperature	0 °C		+ 50 °C

Mechanical Specifications:

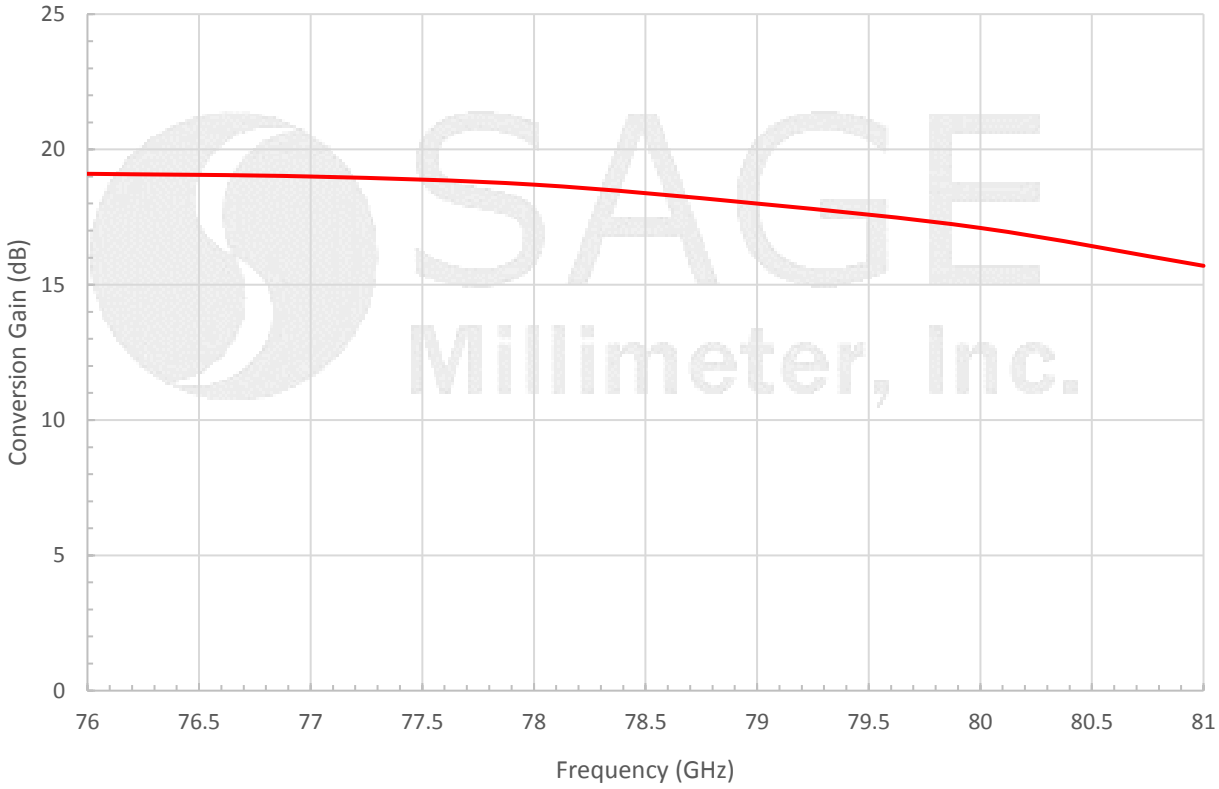
Item	Specification
RF Port	WR-12 Waveguide with UG387/U Flange
IF Port	SMA (F)
LO Port	SMA (F)
Housing	Aluminum
Bias	Solder Pin
Weight	2.0 Oz
Finishing	Gold Plated
Size	1.10” (W) X 2.50” (L) X 0.50” (H)
Outline	SR-SE

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

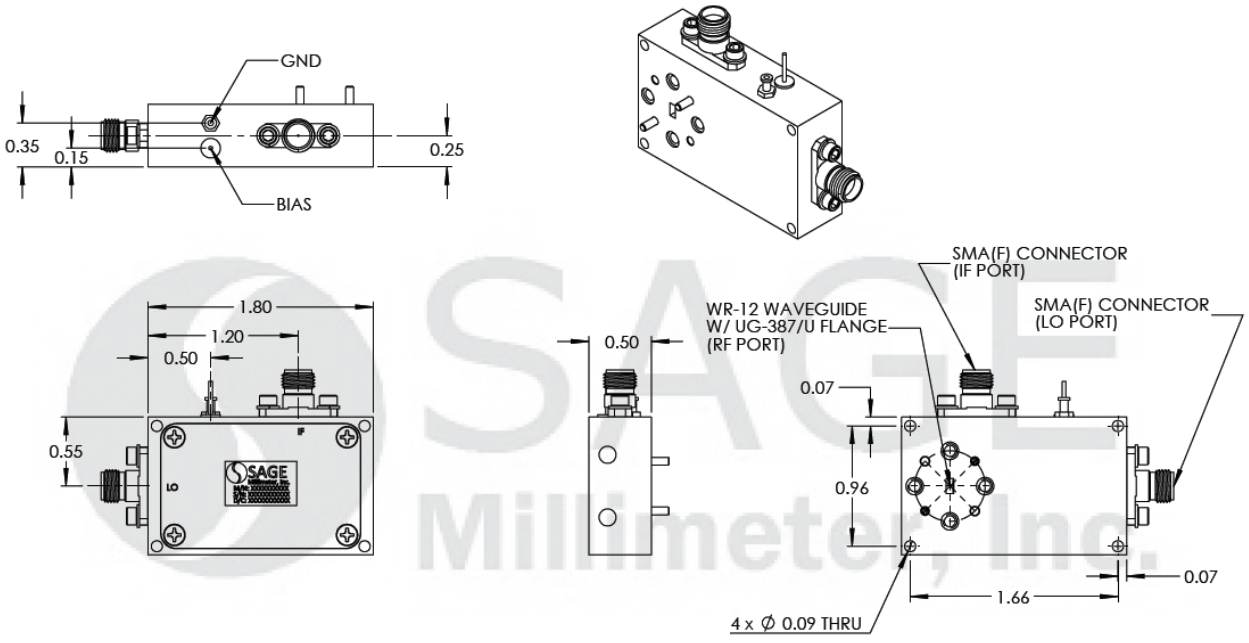
E-Band Receiver, 76 to 81 GHz, X6 LO, DC to 6 GHz IF

Typical Conversion Gain vs. Frequency

+8 V_{DC}/300 mA



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



www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

E-Band Receiver, 76 to 81 GHz, X6 LO, DC to 6 GHz IF

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.

Caution:

- Exceeding absolute maximum ratings of the device will damage the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com