

SSR-2930433510-28-SE1

WR-28 Receiver, 27 to 31 GHz, 3.5 dB Noise Figure, 10dB Gain

SSR-2930433510-28-SE1 is a WR-28 integrated receiver module for radar and communication applications. The receiver has a typical conversion gain of 10 dB with a typical Noise Figure of 3.5 dB in the frequency range of 27 to 31 GHz. The required LO power is +5 dBm between frequencies of 6.5 and 8.25 GHz. The RF receive port is WR-28 Uni-Guide™ Waveguide with UG-599/U Flange while the LO and IF port is female SMA connectors. Other port configurations, are also available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Input Frequency	27 GHz		31 GHz
RF Input Power			+7 dBm
IF Output Frequency	DC		6 GHz
LO Frequency	6.5 GHz		8.25 GHz
LO Input Power		+5 dBm	+10 dBm
Conversion Gain		10 dB	
Noise Figure		3.5 dB	
Input P1dB		-20 dBm	
Bias Voltage	+6 V _{DC}	+8 V _{DC}	+15 V _{DC}
Bias Current		300 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
RF Ports	WR-28 Uni-Guide™ Waveguide with UG-599/U Flange
LO Port	SMA (F)
IF Port	SMA (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Size	1.10" (W) X 2.38" (L) X 0.40" (H)
Outline	SR-SA-3

ECCN

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FEATURES

- Good Gain Flatness and Noise Figure
- Built in x4 LO Multiplier
- Fully Integrated Module

APPLICATIONS

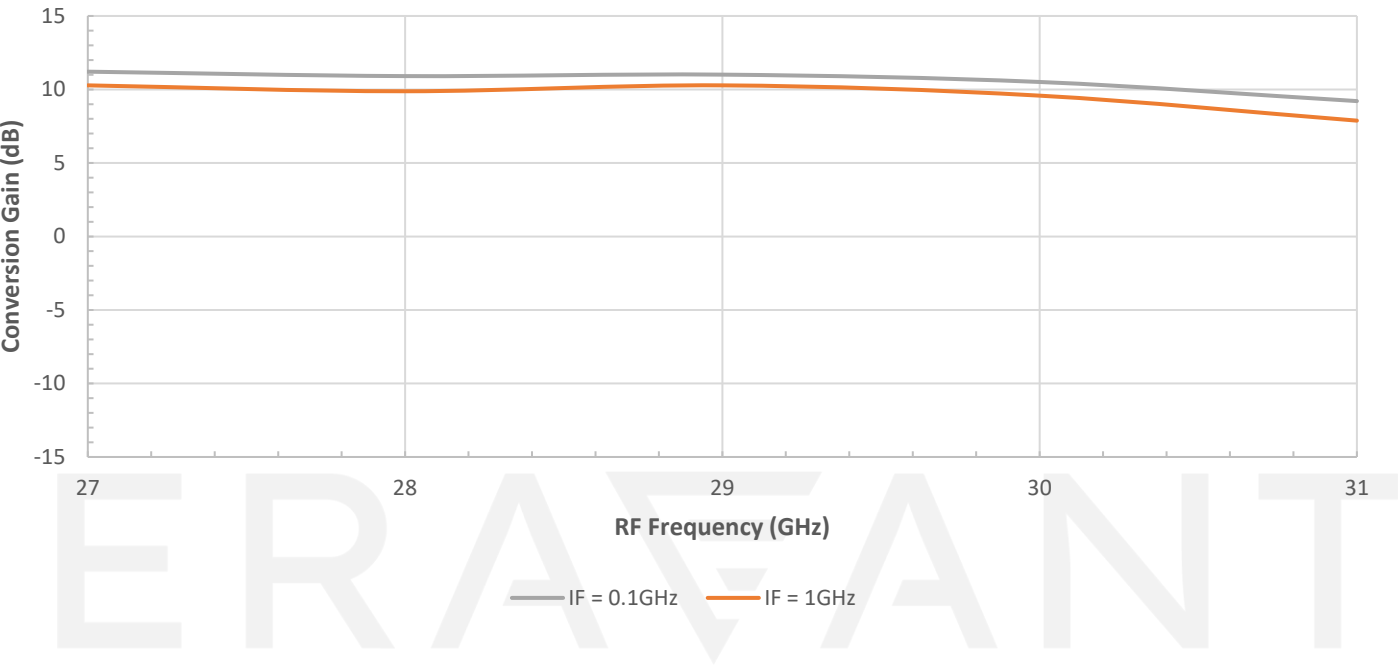
- 5G Systems
- Radar Systems
- Communication Systems

SUPPLEMENTAL DETAILS

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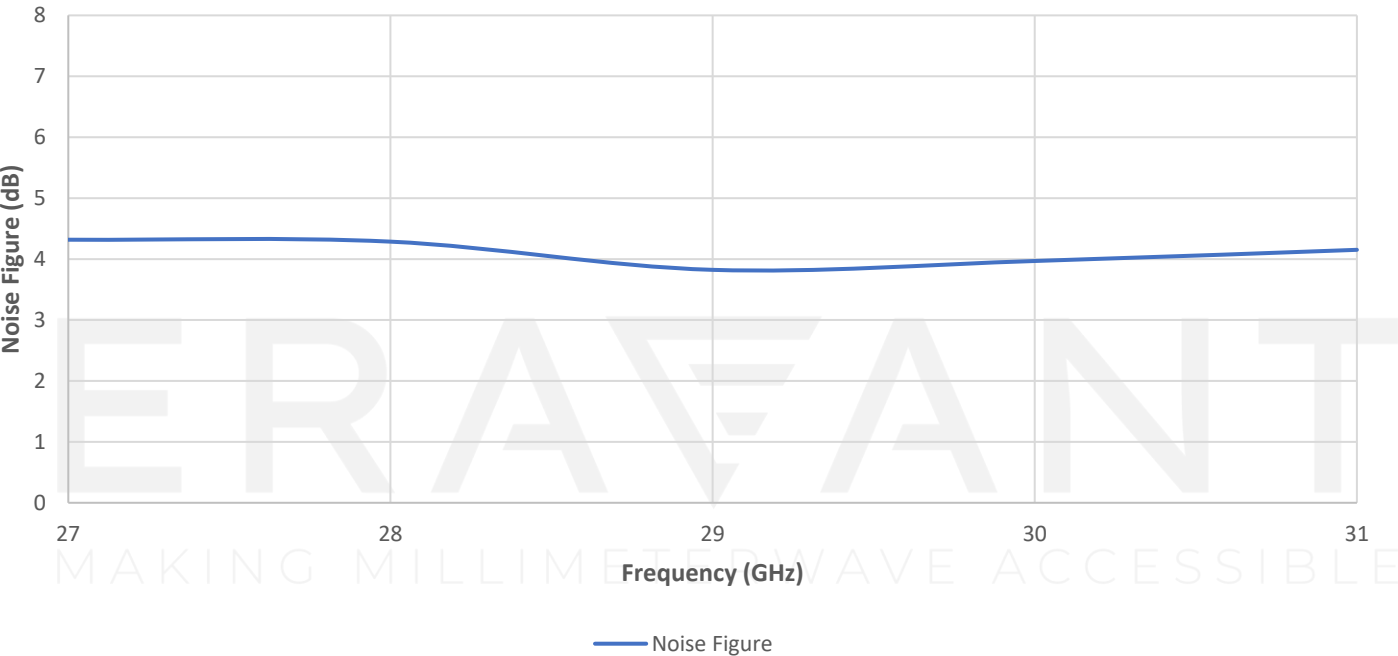
Typical Conversion Gain vs. Frequency

Bias: +8V/525 mA ; LO Input Power: +5dBm; RF Input Power: -20dBm



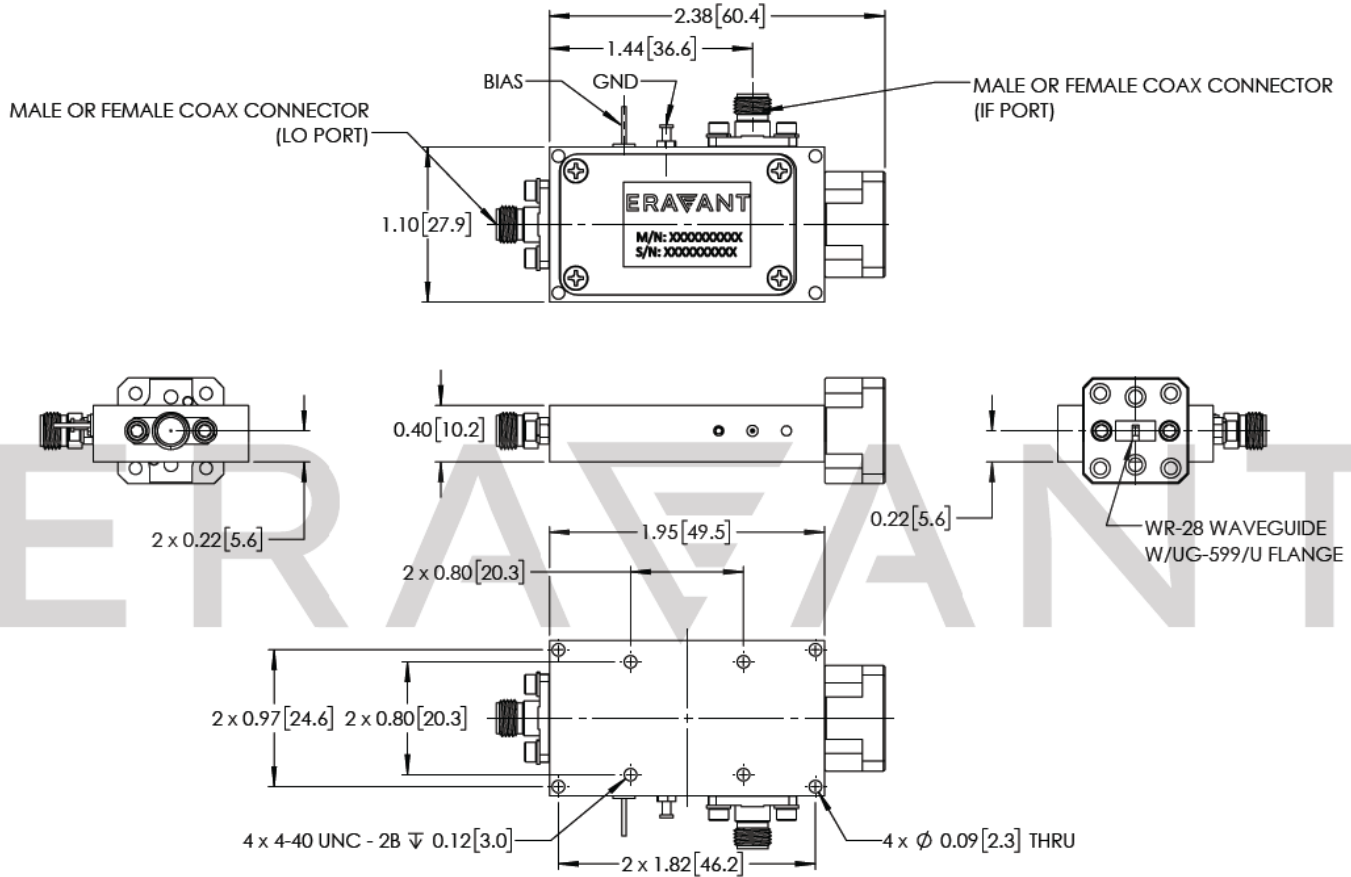
Typical Noise Figure vs. Frequency; IF=0.1GHz

Bias: +8V/525mA ; LO Power: +5dBm



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



NOTE:

- The transmitter employs Eravant's trademarked and patent pending technology, **Uni-Guide™**, as its waveguide interfaces. The orientation of the input and the output waveguides can be specified through corresponding model numbers. For example, the model number for a horizontal output waveguide configuration would be **SSR-2930432825-28H-SE1** instead of the default **SST-2930432825-28-SE1** which indicates vertical orientation output.
- Eravant 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.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**