

WR-10 Receiver, 75 to 110 GHz, 10 dB Conversion Loss

SSR-1010N10-SE1 is a full WR-10 integrated receiver module. The receiver has a typical conversion loss of 10 dB with a typical Noise Figure of 14 dB in the frequency range of 75 to 110 GHz. The required LO power is +3 dBm between frequencies of 12.5 and 18.33 GHz. The RF receive port is WR-10 Waveguide with UG-387/U-M Anti-Cocking 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
Frequency Range	75 GHz		110 GHz
RF Input Power			+10 dBm
IF Output Frequency	DC	1 GHz	12 GHz
LO Frequency	12.5 GHz		18.33 GHz
LO Input Power		+3 dBm	+20 dBm
Conversion Loss		10 dB	
Noise Figure		14 dB	
Input P _{1dB}		0 dBm	
Bias Voltage	+6 V _{DC}	+8 V _{DC}	+15 V _{DC}
Bias Current		330 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 Anti-Cocking Flange
LO Port	SMA (F)
IF Port	SMA (F)
Bias	Solder Pin
Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Size	1.10" (W) X 1.95" (L) X 0.75" (H)
Outline	SR-SW-A-5

ECCN

3A001.b.7

FEATURES

- Built in x6 LO Multiplier
- Fully Integrated Module

APPLICATIONS

- Communication Systems

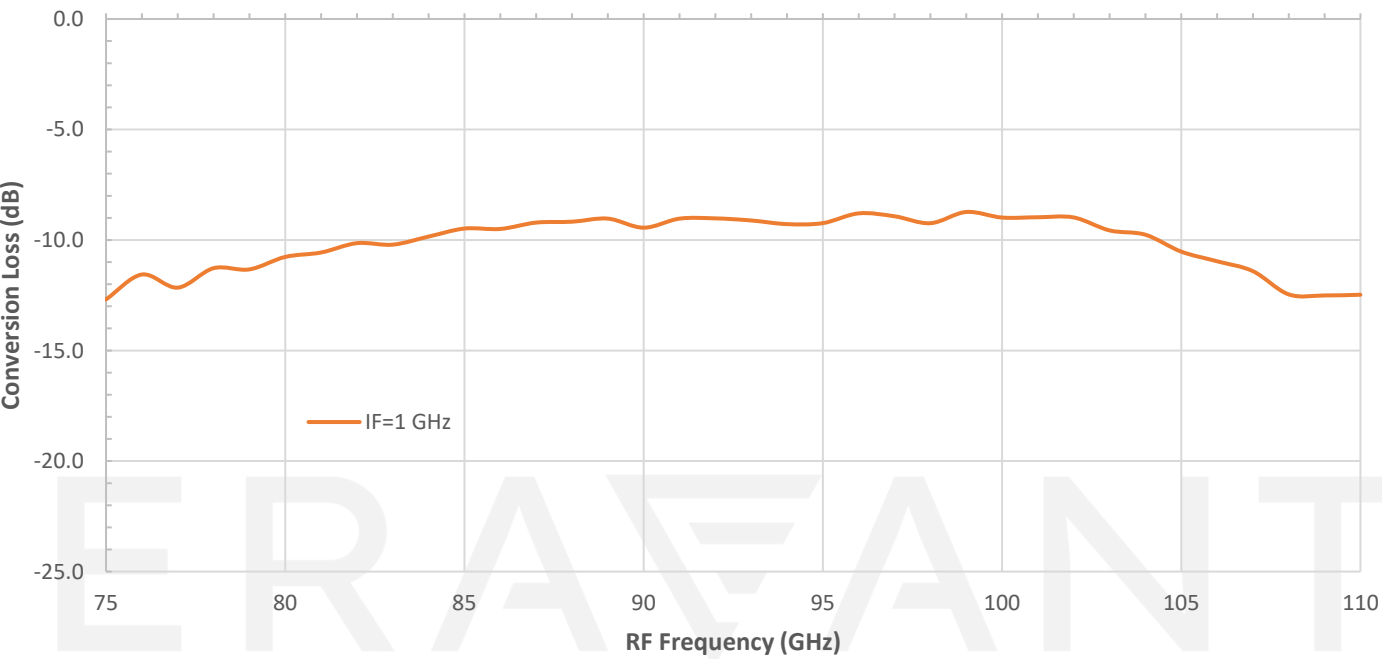
SUPPLEMENTAL DETAILS



SSR-1010N10-SE1

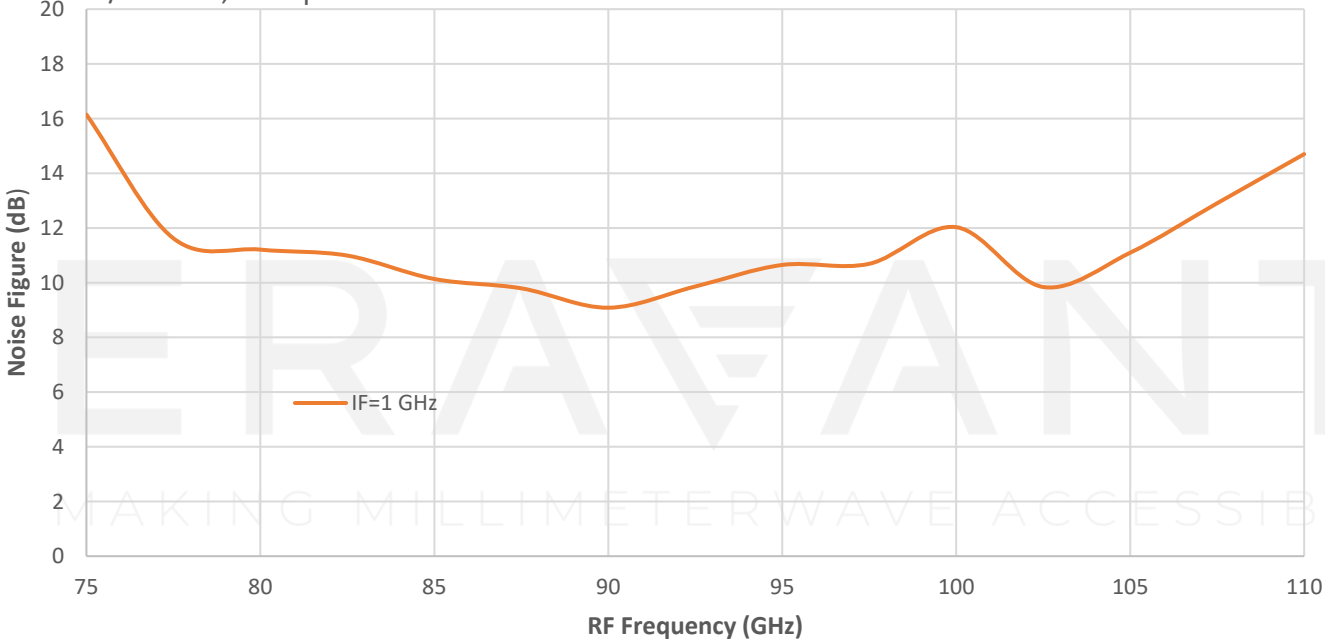
Conversion Loss vs. Frequency

Bias: +8V/330mA ; LO Input Power: +3dBm; RF: -20 dBm



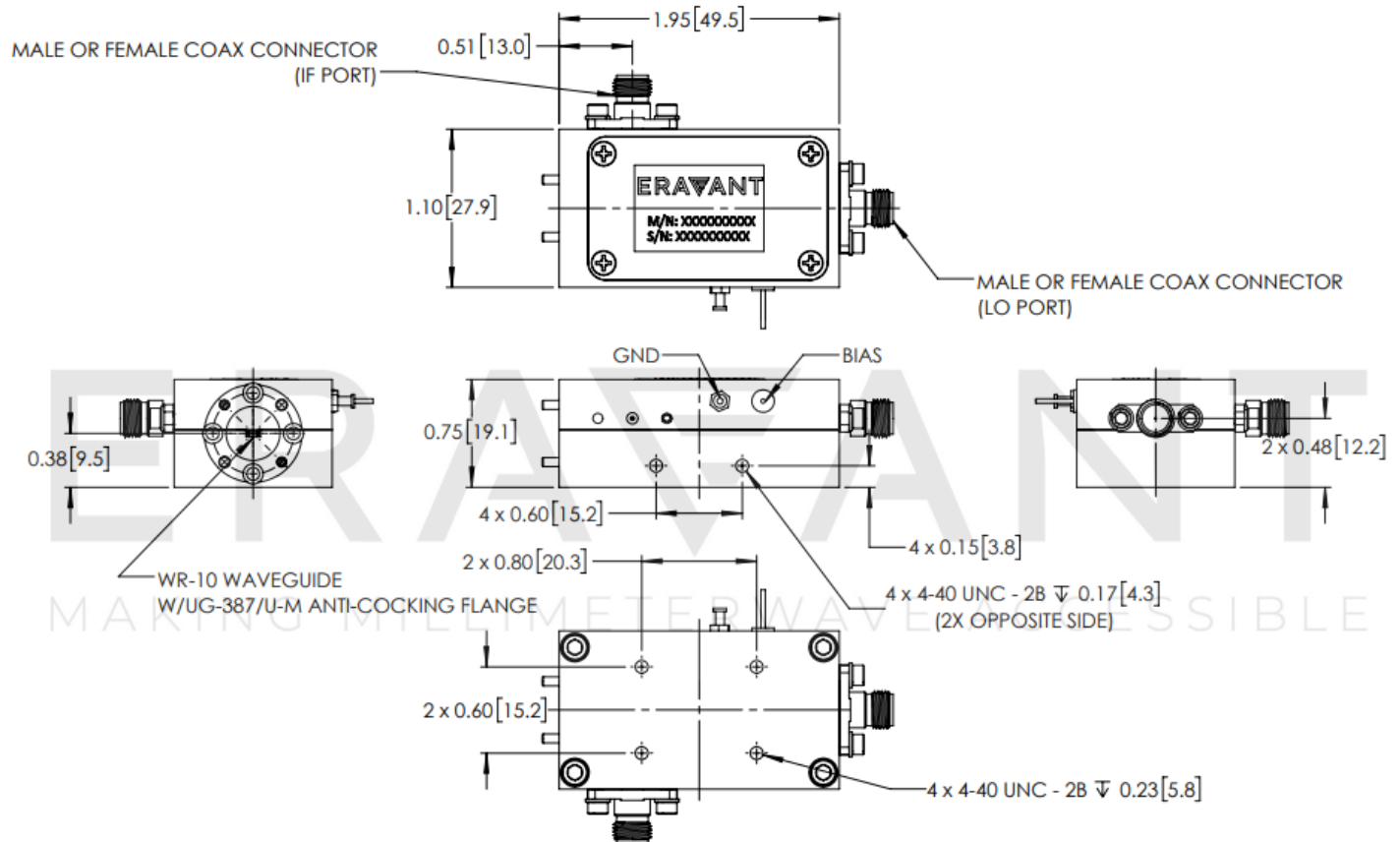
Typical Noise Figure vs. Frequency

Bias: +8V/330mA ; LO Input Power: +3dBm



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



Note:

- 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.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**