

WR-10 Receiver, 90 to 100 GHz, 5 dB Noise Figure, 10 dB Gain

SSR-9531035010-10-SR1 is a WR-10 integrated receiver module for radar systems. The receiver has a typical conversion gain of 10 dB with a typical Noise Figure of 5 dB in the frequency range of 90 to 100 GHz. The required LO power is +5 dBm between frequencies of 11 and 12.5 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
RF Input Frequency	90 GHz		100 GHz
RF Input Power			+5 dBm
IF Output Frequency	DC		12 GHz
LO Frequency	11 GHz		12.5 GHz
LO Input Power		+5 dBm	+15 dBm
Conversion Gain		10 dB	
Noise Figure		5 dB	
Input P _{1dB}		-22 dBm	
Bias Voltage	+6 V _{DC}	+8 V _{DC}	+15 V _{DC}
Bias Current		120 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
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-4

ECCN

3A001.b.7

FEATURES

- Good Gain Flatness and Noise Figure
- Built in x8 LO Multiplier
- Fully Integrated Module

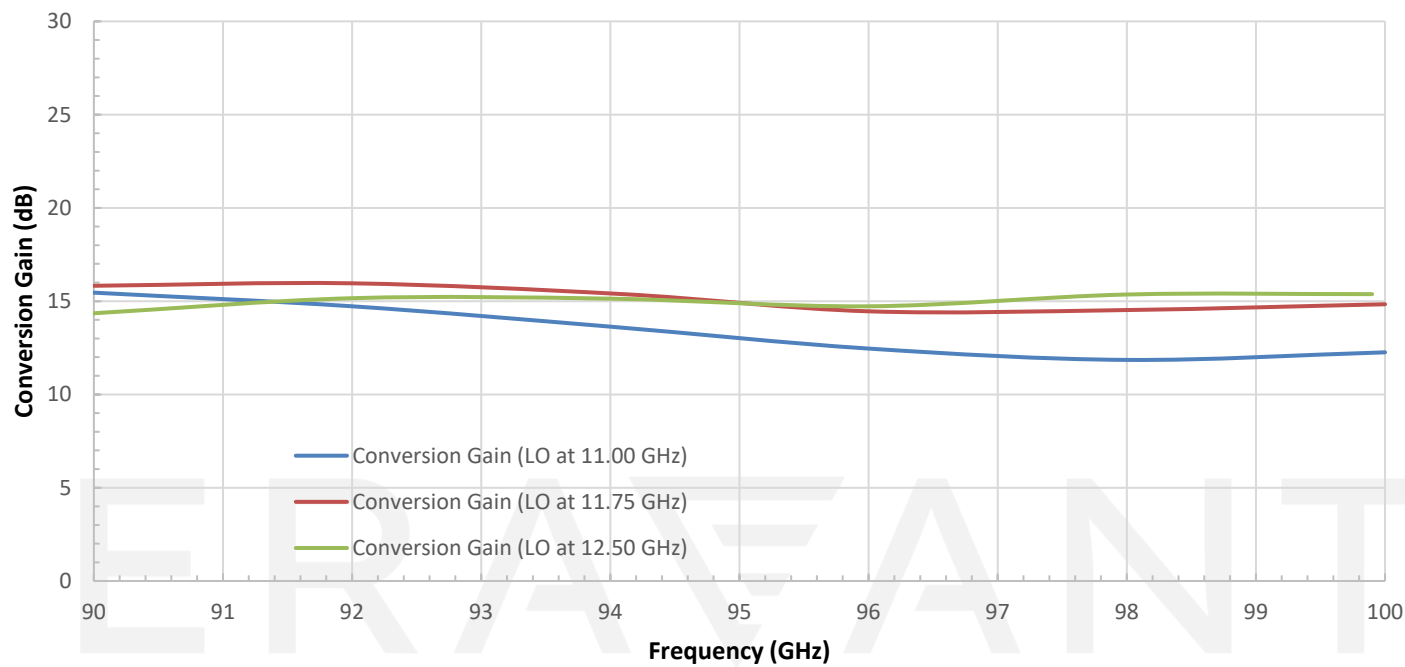
APPLICATIONS

- Radar Systems
- Earth Observation and Research

SUPPLEMENTAL DETAILS

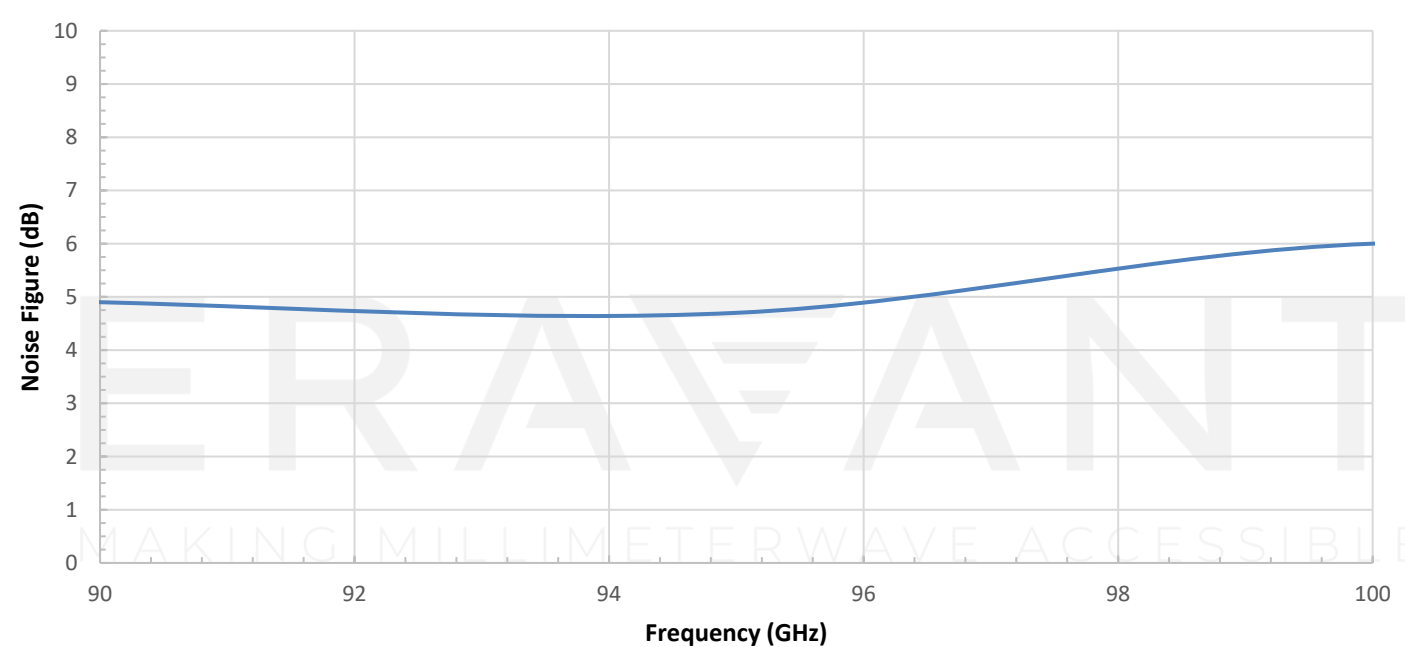
Conversion Gain vs. Frequency

RF: -40 dBm; LO: +5 dBm; 8VDC/122mA



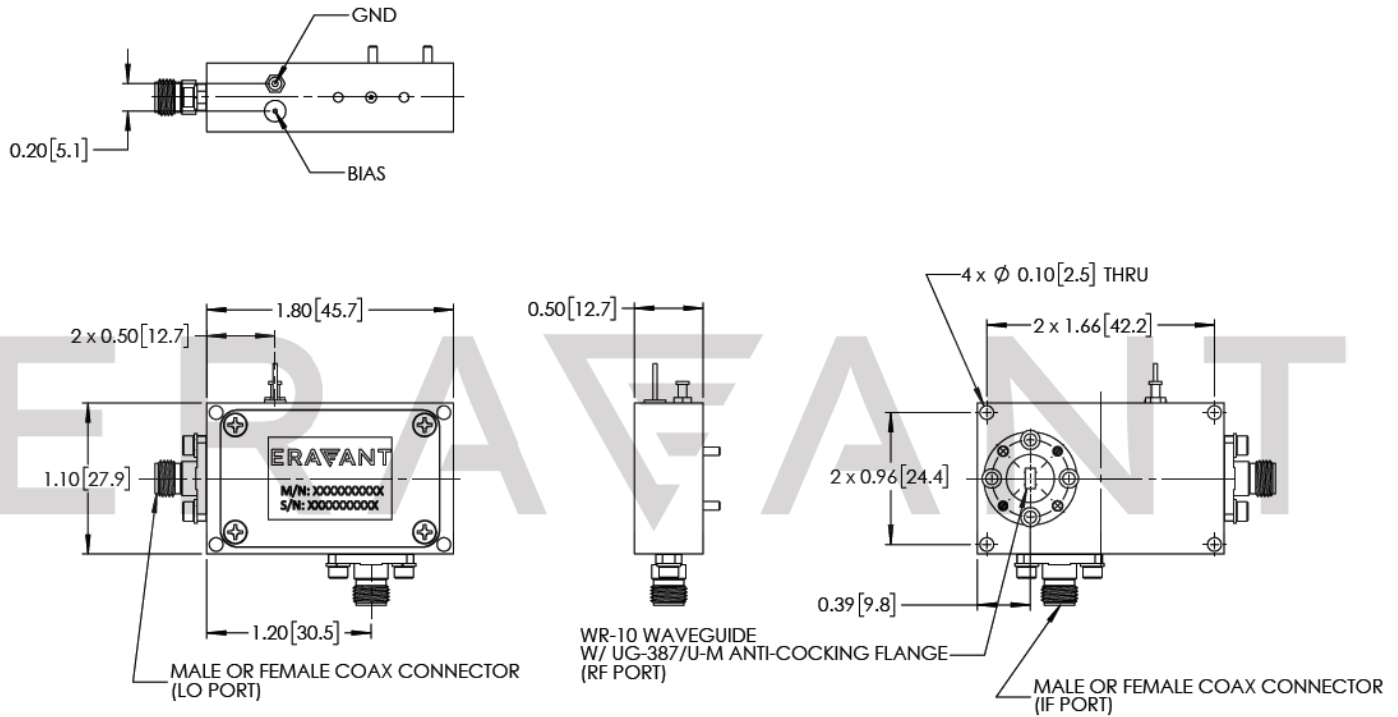
Noise Figure vs. Frequency

Bias: +8V_{DC}/122 mA



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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.
- 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). Torque wrench model SCH-08008-S1 is highly recommended