SSR-4930533014-22-SE1

WR-22 Receiver, 47 to 52 GHz, 3 dB Noise Figure, 14 dB Gain

SSR-4930533014-22-SE1 is a WR-22 integrated receiver module for satellite internet applications such as Starlink. The receiver has a typical conversion gain of 14 dB with a typical Noise Figure of 3 dB in the frequency range of 47 to 52 GHz. The required LO power is 0 dBm between frequencies of 11.25 and 13 GHz. The RF receive port is WR-22 Uni-Guide™ Waveguide with UG-383/U 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	47 GHz		52 GHz
RF Input Power			+15 dBm
IF Output Frequency	DC		7 GHz
LO Frequency	11.25 GHz		13 GHz
LO Input Power		0 dBm	+10 dBm
Conversion Gain		14 dB	
Noise Figure		3 dB	
Input P_{1dB}		-25 dBm	
Bias Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
Bias Current		500 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
RF Ports	WR-22 Uni-Guide™ Waveguide with UG-383/U Anti-Cocking Flange
LO Port	SMA (F)
IF Port	SMA (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Outline	SR-SQ-A-2

ECCN

EAR99

FEATURES

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

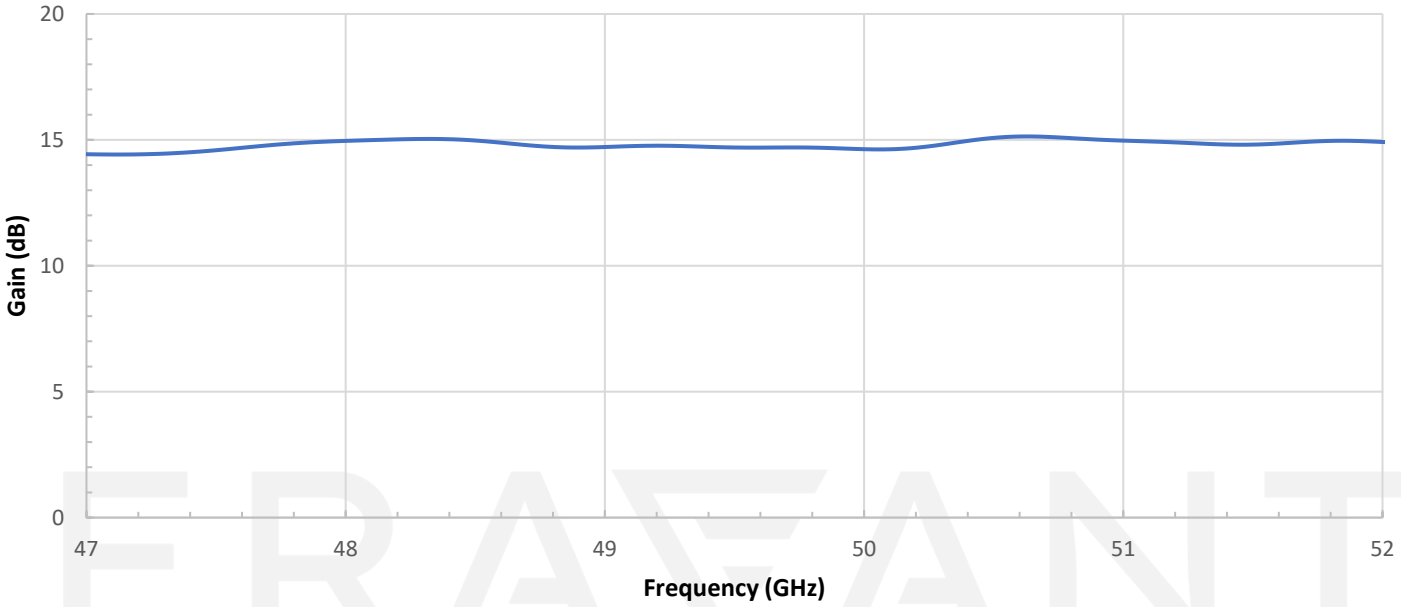
APPLICATIONS

- StarLink

SUPPLEMENTAL DETAILS

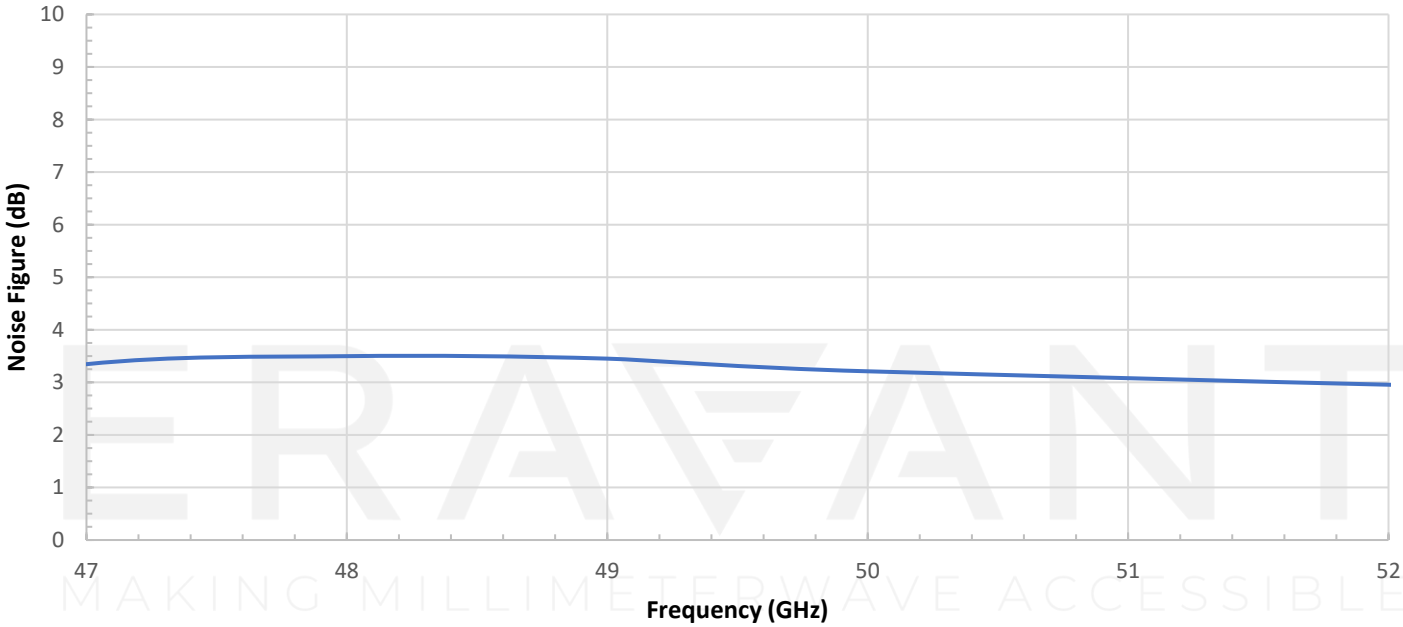
Gain vs. Frequency

Bias: +8 V_{DC}/489mA

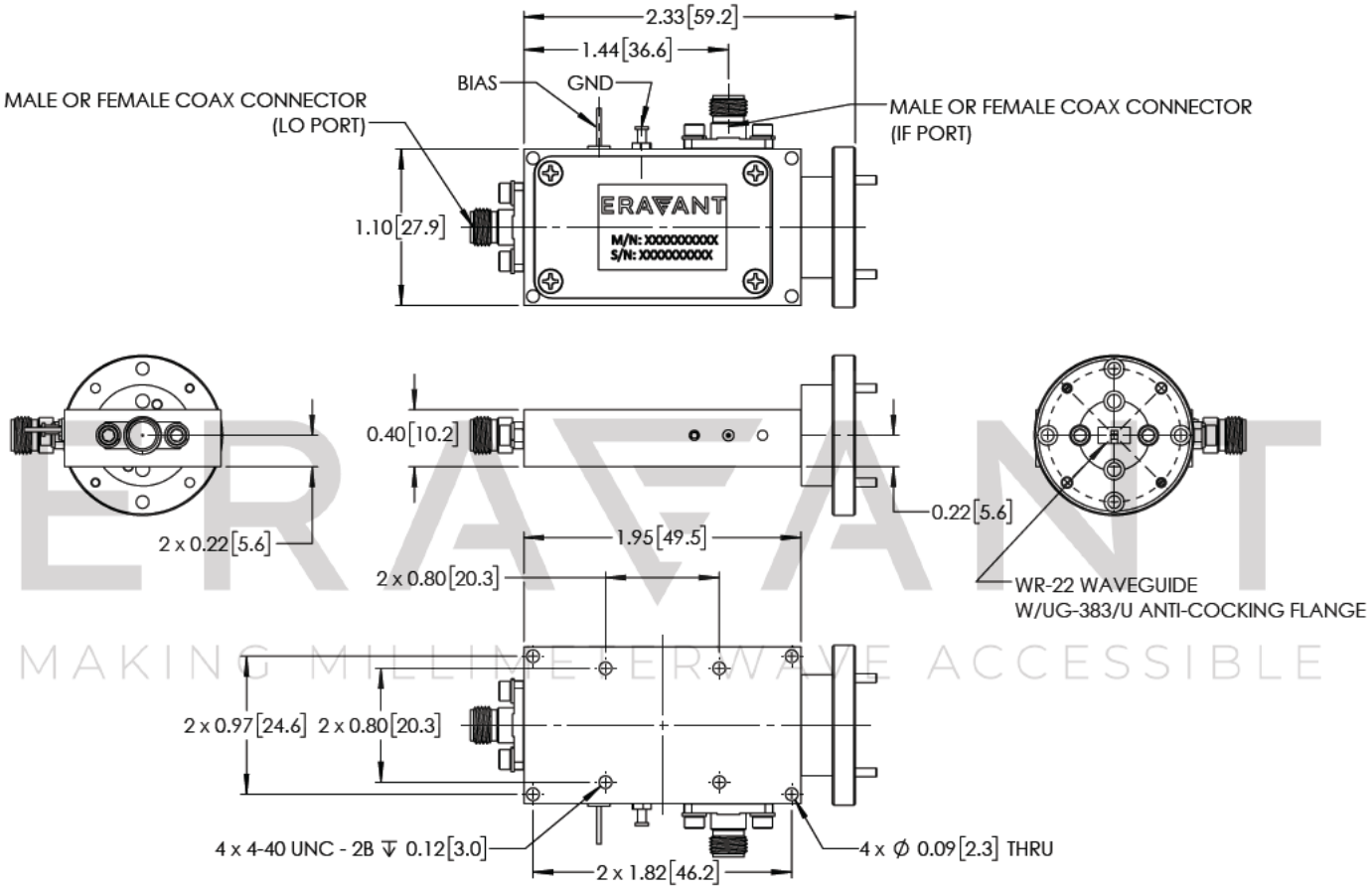


Noise Figure vs. Frequency

Bias: +8V_{DC}/489 mA



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



NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Other mechanical configurations are available under different model numbers.
- Eravant reserves the right to change the information presented without notice.

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.
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model SCH-06004-S1 is highly recommended.
- 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.