

WR-22 Receiver, 37 to 44 GHz, 3.5 dB Noise Figure, 10 dB Gain

Description:

Model SSR-4130733510-22-SE1 is a WR-22 integrated receiver module for Starlink and Milstar 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 37 to 44 GHz. The required LO power is +0 dBm between frequencies of 9 and 11 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.



Features:

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

Applications:

- 5G Systems
- Starlink
- Milstar

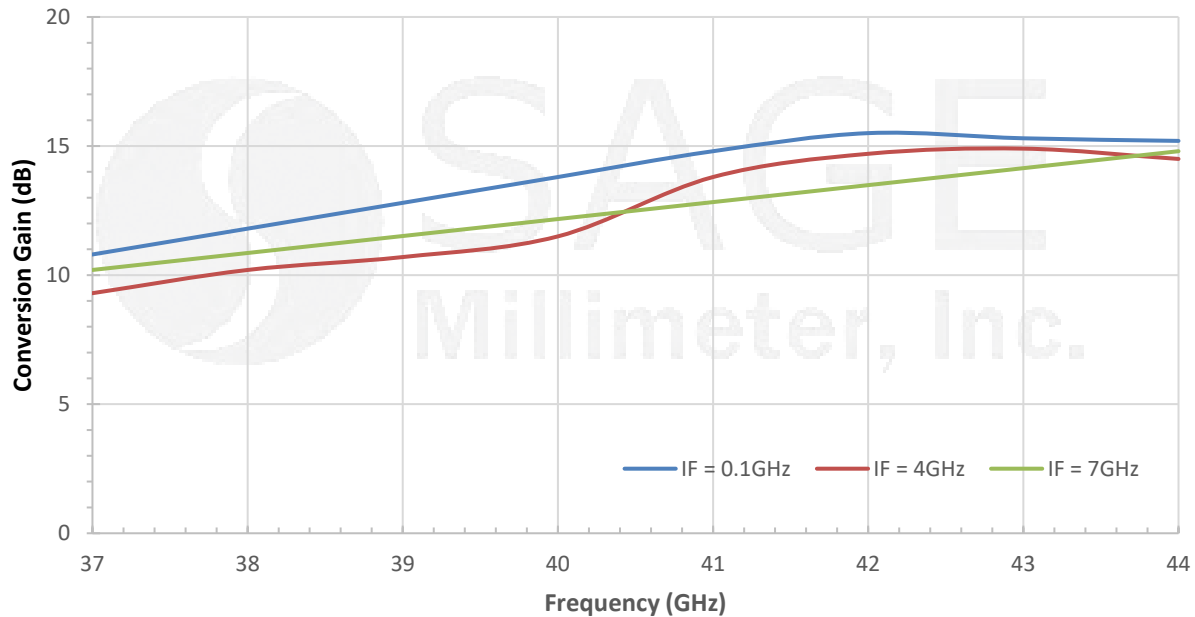
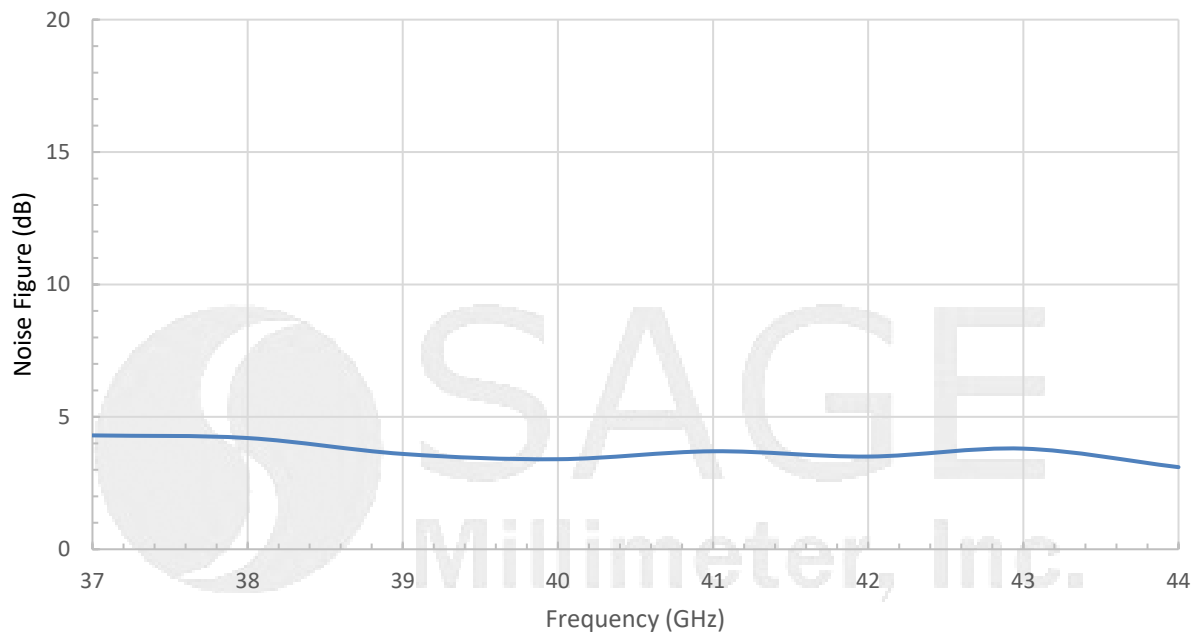
Electrical Specifications:

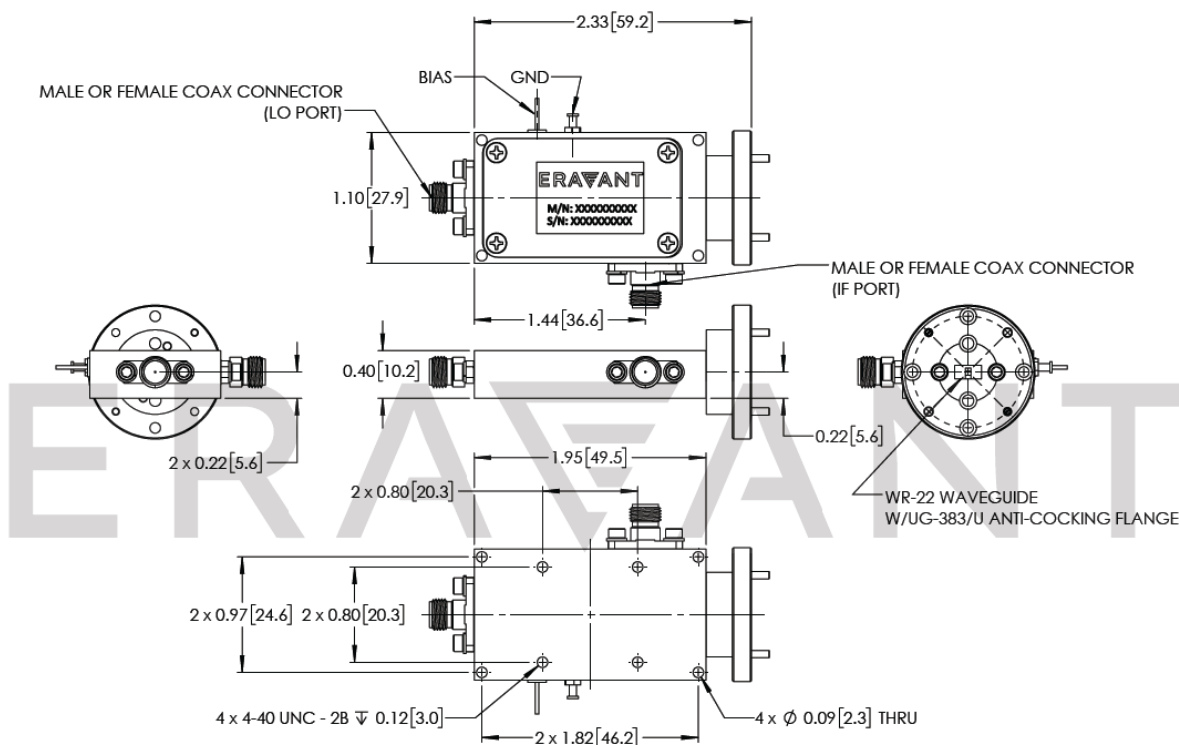
| Parameter | Minimum | Typical | Maximum |
|---------------------------|--------------------|--------------------|---------------------|
| RF Input Frequency | 37 GHz | | 44 GHz |
| RF Input Power | | | +5 dBm |
| IF Output Frequency | DC | | 7 GHz |
| LO Frequency | 9 GHz | | 11 GHz |
| LO Input Power | | +0 dBm | +5 dBm |
| Conversion Gain | | 10 dB | |
| Noise Figure | | 3.5 dB | |
| Input P _{1dB} | | -18 dBm | |
| Bias Voltage | +6 V _{DC} | +8 V _{DC} | +15 V _{DC} |
| Bias Current | | 200 mA | |
| Specification Temperature | | +25 °C | |
| Operating Temperature | 0 °C | | +50 °C |

Mechanical Specifications:

| Item | Specification |
|---------------|--|
| RF Port | 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 |
| Size | 1.10" (W) X 2.33" (L) X 0.40" (H) |
| Outline | SR-SQ-A-3 |

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WR-22 Receiver, 37 to 44 GHz, 3.5 dB Noise Figure, 10 dB Gain**Conversion Gain vs. Frequency**Bias: +8V_{DC} / 234mA; LO = 0dBm**Noise Figure vs. Frequency**Bias: +8V_{DC} / 234mA; LO = 0dBm; IF = 100 MHz

WR-22 Receiver, 37 to 44 GHz, 3.5 dB Noise Figure, 10 dB Gain**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])**Note:**

- The receiver 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-4130733510-22H-SE1** instead of the default **SSR-4130733510-22-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.
- 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.**