



W-Band Bench Top Amplifier, 40 dB Gain, 5 dB NF

Description:

Model STB-7531144050-1010-L1 is a W Band bench top amplifier with a typical small signal gain of 40 dB, a nominal noise figure of 5 dB and P_{1dB} of +3 dBm across the frequency range of 75 to 110 GHz. The power supply required is a single phase AC voltage in the range of 100 to 240 V_{AC}, which can be supplied by a wall outlet. The LED light helps to indicate the working status of the amplifier. The input and output port configurations are both WR-10 waveguide with UG387/U-M flanges.



Features:

- Full Waveguide Band Coverage
- State-of-the-Art Noise Figure Performance
- Low Power Consumption

Applications:

- W-Band Imaging Systems
- Low Noise Amplification
- Gain Blocks

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz		110 GHz
Gain		40 dB	
Noise Figure		5 dB	
P_{1dB}		+3 dBm	
Damage P_{in}			-10 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
Power Supply (AC Adapter Provided)	100 V _{AC}		240 V _{AC}
Specification Temperature		+25 °C	
Case Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input	WR-10 Waveguide with UG-387/U-M Flange
Output	WR-10 Waveguide with UG-387/U-M Flange
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
DC Bias Switch	On-Off Rocker Switch with Indicator Light
Enclosure Material	Extruded Aluminum
Finish	Black Anodized
Weight	3 lbs
Size	5.51" (L) x 4.72" (W) x 2.81" (H)
Outline	TB-SW

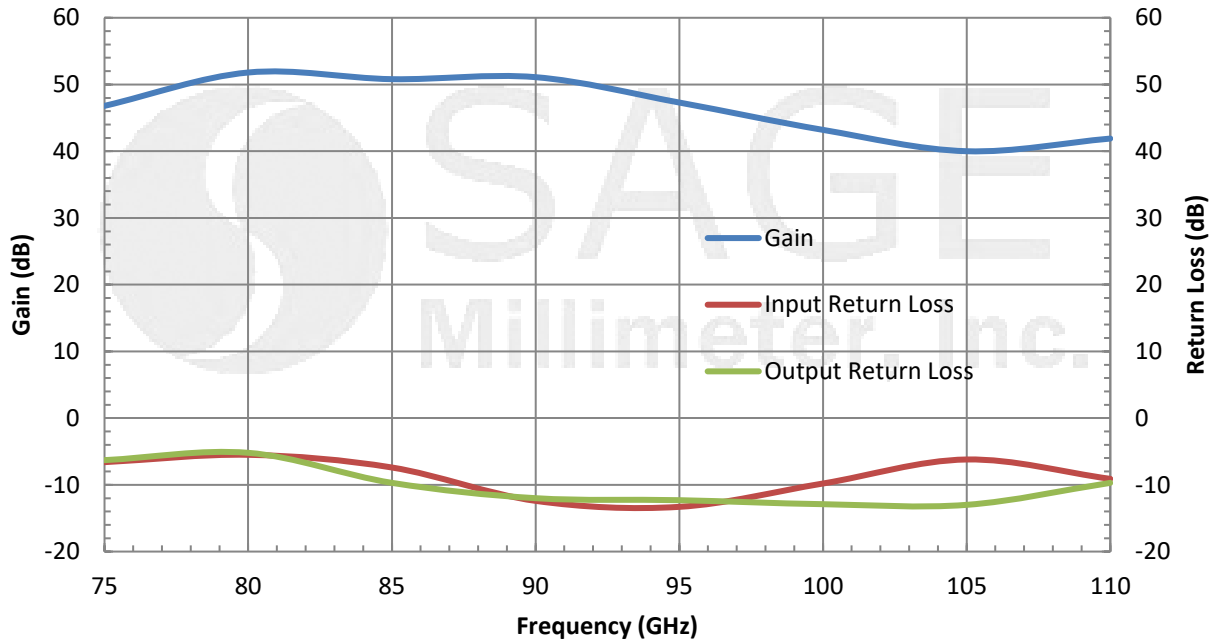




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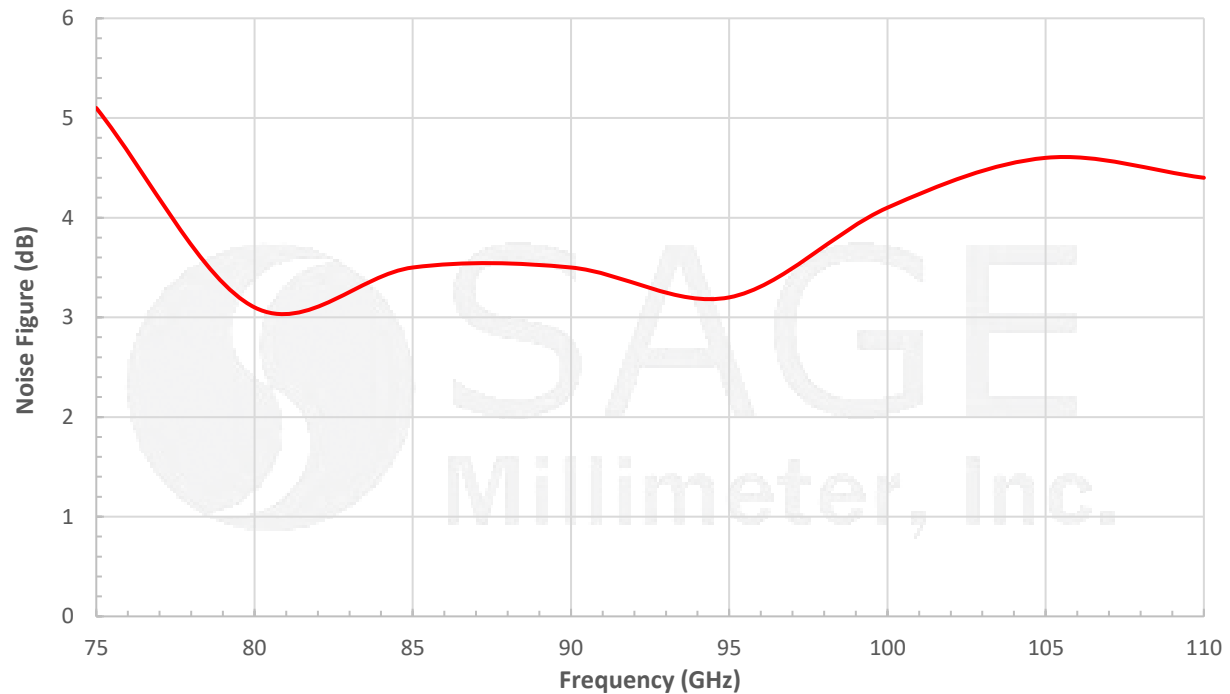
Typical Gain and Return Loss vs. Frequency

DC Bias: +8 V_{DC}/28 mA



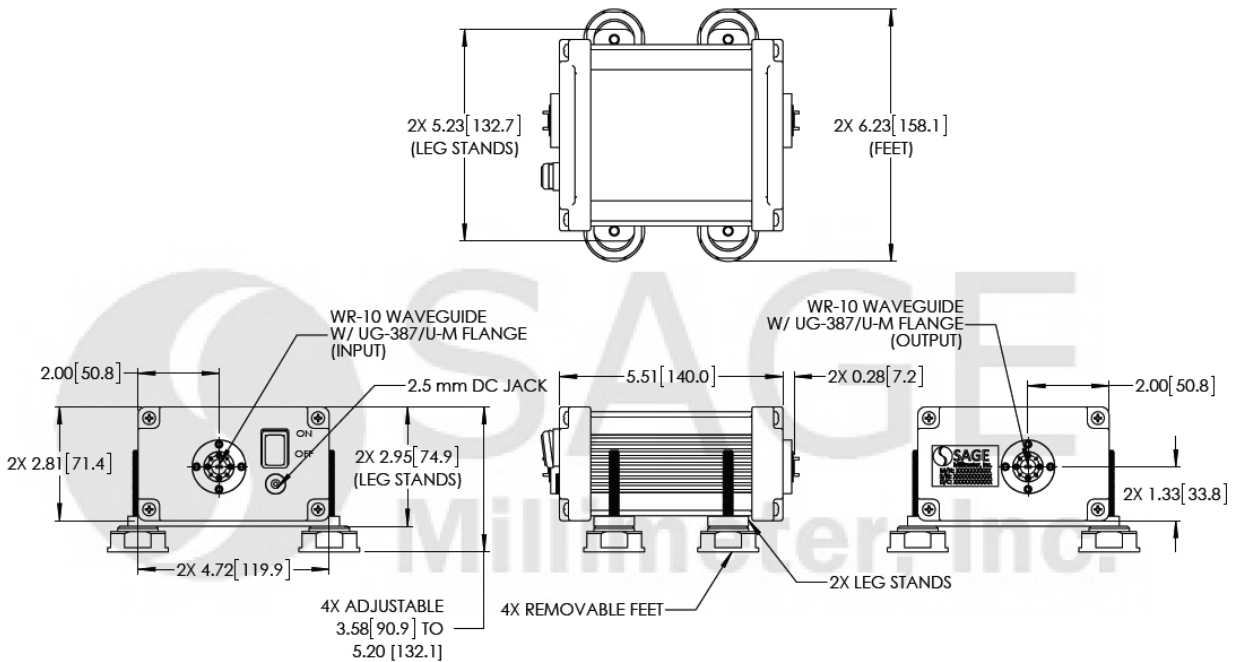
Typical Noise Figure vs. Frequency

Bias: +8V/58 mA



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



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25°C case temperature.
- Other mechanical configurations are available under different model numbers.
- SAGE Millimeter, Inc. 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.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- The case temperature of the device shall never exceed +50°C. Use proper heatsink or fan if necessary.

