

## Bench Top Low Noise Amplifier, 50 to 75 GHz, 33 dB Gain, 5 dB NF

### Description:

**Model STB-5037533350-1515-L1** is a broadband benchtop low noise amplifier with a typical small signal gain of 33 dB and a nominal noise figure of 5 dB across the frequency range of 50 to 75 GHz. The power supply required is a single phase AC voltage in the range of 100 to 240 V<sub>AC</sub>, 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-15 waveguide with UG-385/U flanges.



### Features:

- Full Waveguide Band Coverage
- State-of-the-Art Noise Figure
- High Gain

### Applications:

- IEEE 802.11.ad WiGig
- Low Noise Receivers
- Communication Systems
- Test Equipment

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	50 GHz		75 GHz
Gain		33 dB	
Noise Figure		5 dB	
P <sub>1dB</sub> *		+8 dBm	
Maximum Input RF Power			-20 dBm
Input Return Loss		7 dB	
Output Return Loss		7 dB	
Power Supply (AC Adapter Provided)	100 V <sub>AC</sub>		240 V <sub>AC</sub>
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

\* See Notes

### Mechanical Specifications:

Item	Specification
Input	WR-15 Waveguide with UG-385/U Flange
Output	WR-15 Waveguide with UG-385/U 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	4.72" (W) x 5.51" (L) x 2.81" (H)
Outline	TB-SV



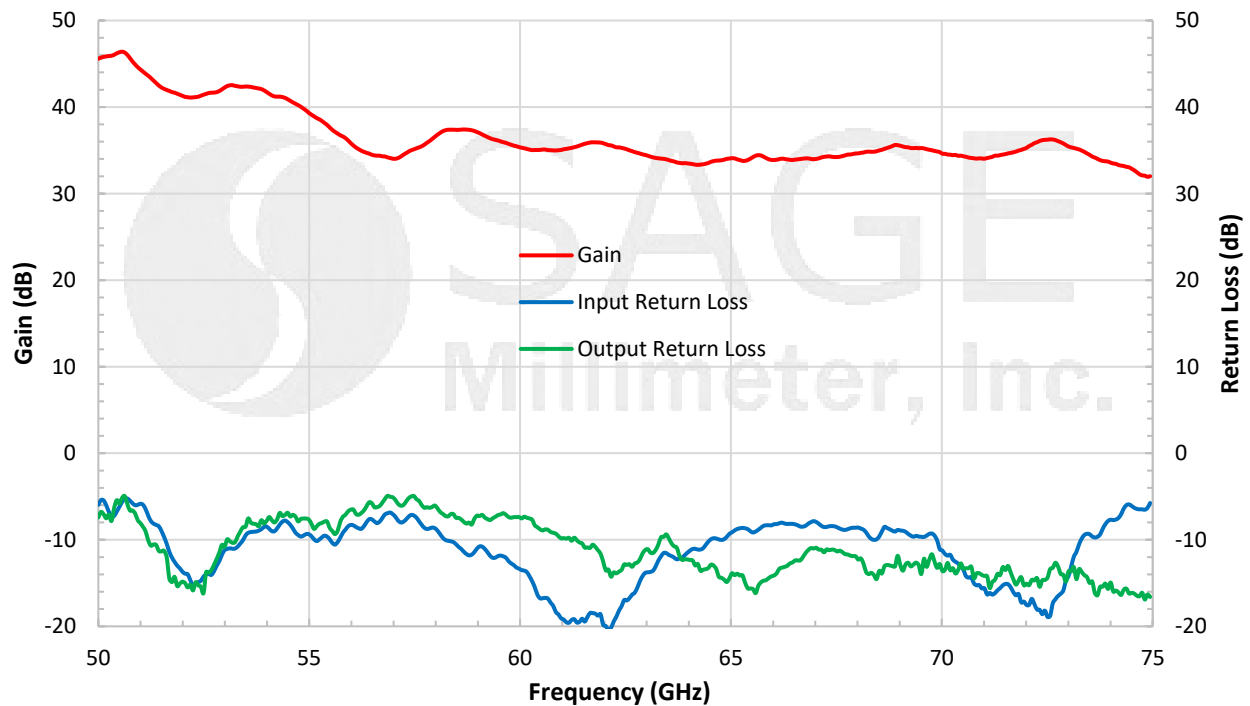
www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505  
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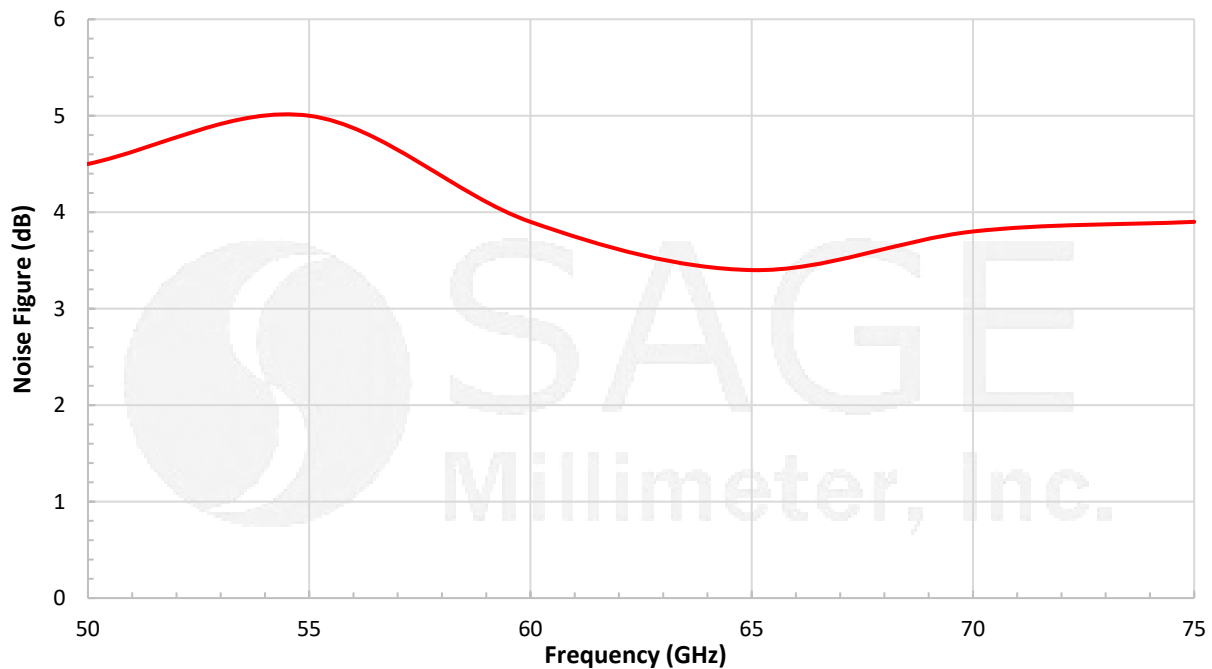


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### Typical Gain and Return Loss vs. Frequency

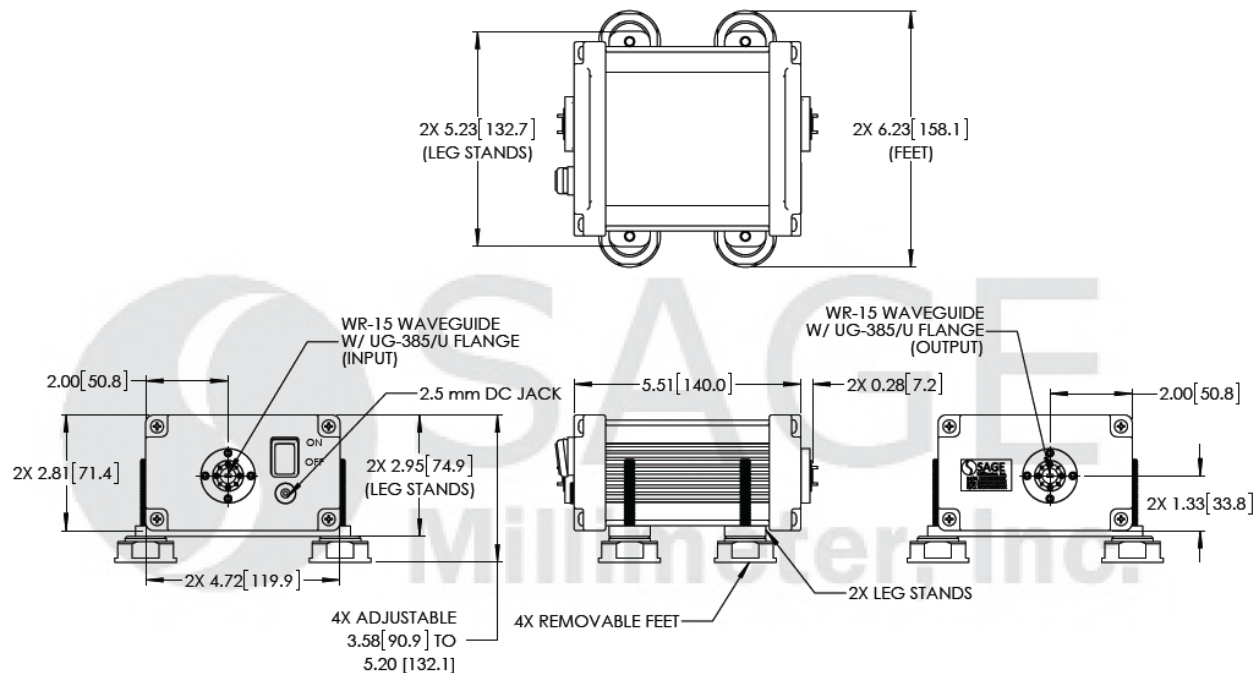


### Typical Noise Figure vs. Frequency



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



**Note:**

- P<sub>1dB</sub> specification met by design and not tested.
- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- 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.

