STB-5037533350-1515-L1-C

Advanced

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

Description:

Model STB-5037533350-1515-L1-C is a compat 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 $V_{AC,}$ which can be supplied by a wall outlet. The unit is light weight, compact and designed for the purpose of easy biasing and reconfiguration for applications requiring waveguide interface. 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
- Lab Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	50 GHz		75 GHz
Gain		33 dB	
Noise Figure		5 dB	
P_{1dB}*		+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_{AC}		240 V_{AC}
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

*** See Notes**

Mechanical Specifications:

Item	Specification
Input	WR-15 Waveguide with UG-385/U Anti-Cocking Flange
Output	WR-15 Waveguide with UG-385/U Anti-Cocking 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	1.5 lbs
Size	2.36” (W) x 2.36” (L) x 4.10” (H)
Outline	TB-SV-A-C

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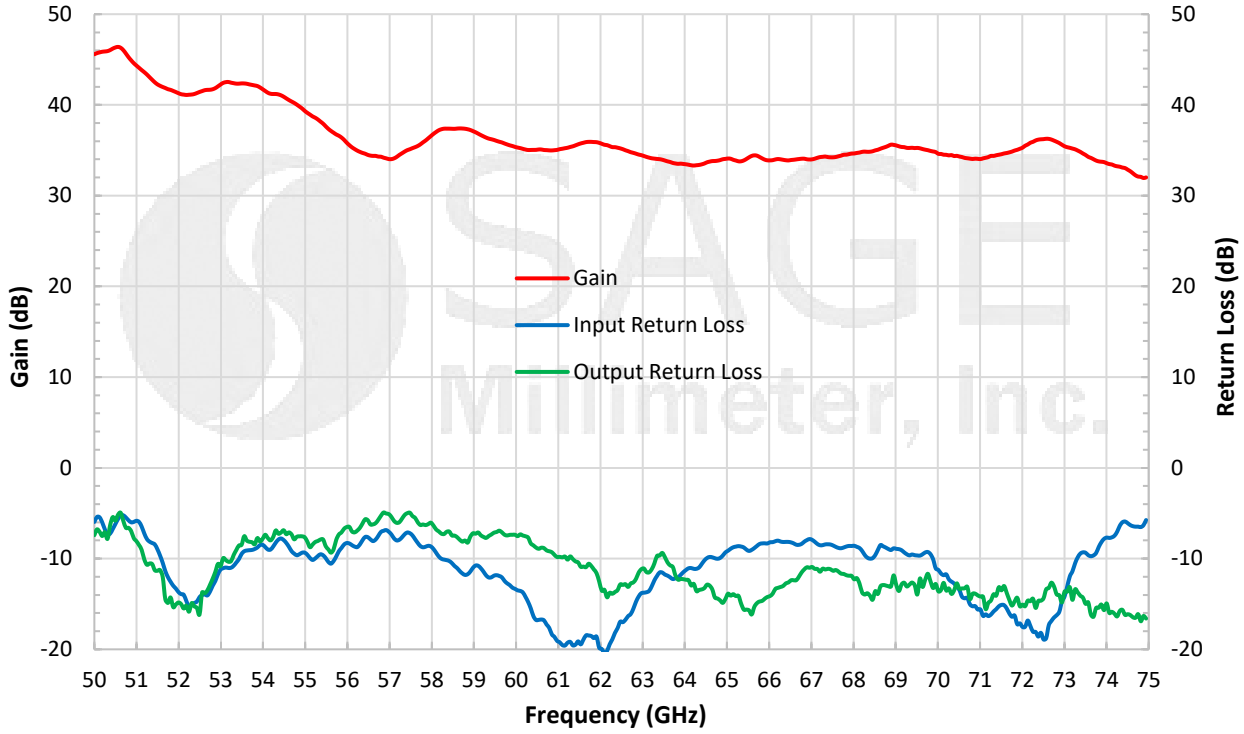
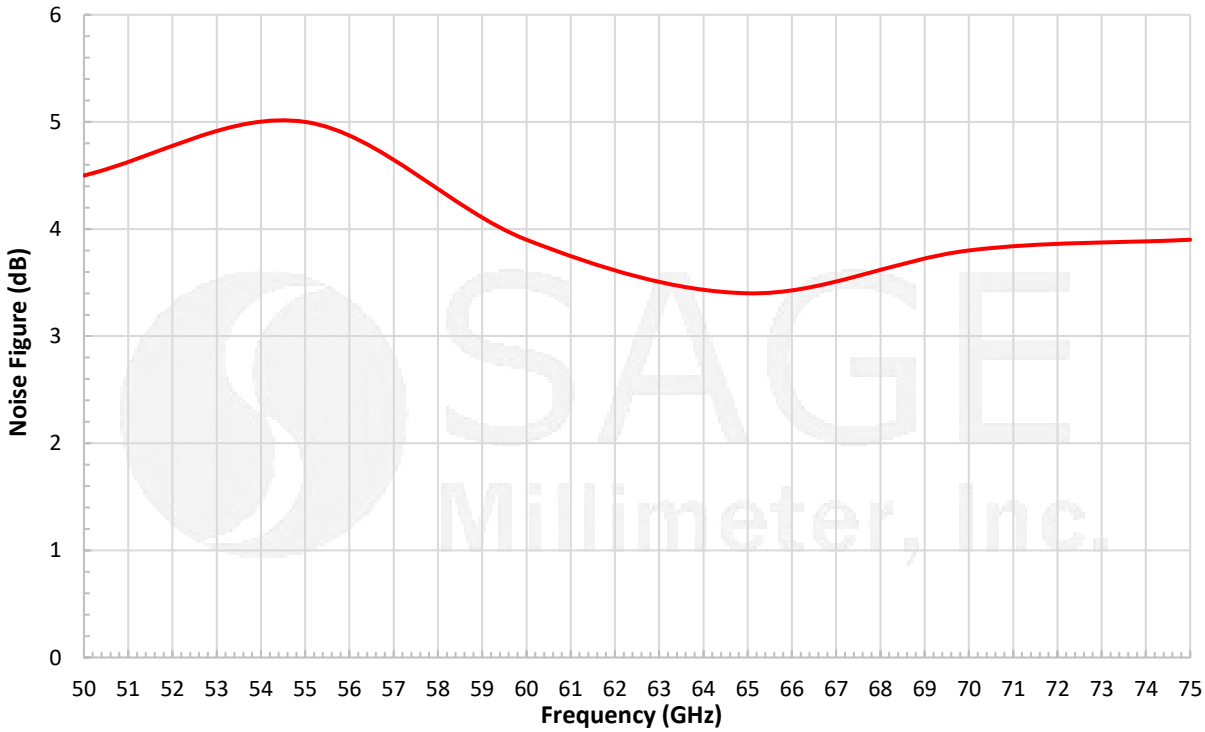
Typical Gain and Return Loss vs. Frequency



Typical Noise Figure vs. Frequency



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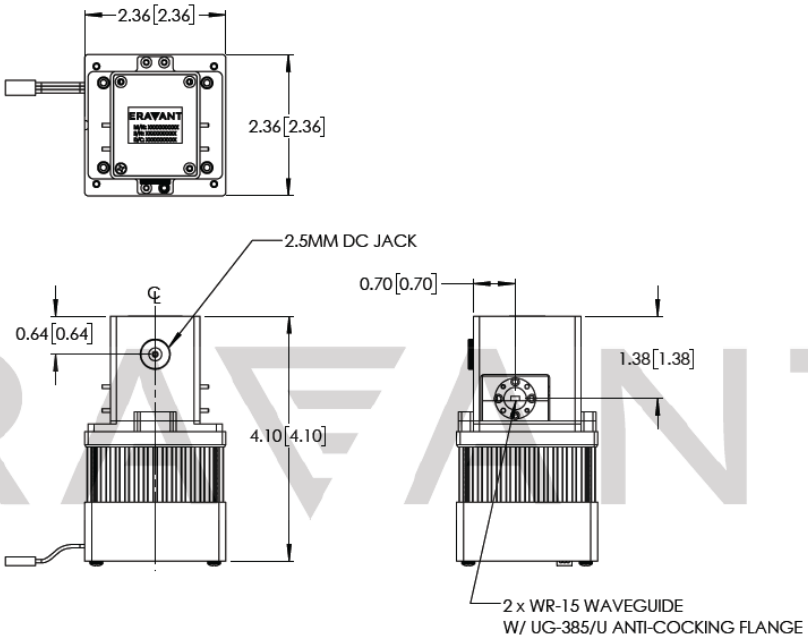
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- P_{1dB} 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.

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