

## V-Band Low Noise Amplifier, 50 to 68 GHz, 35 dB Gain, 4.5 dB NF

### Description:

**Model SBL-5036833545-1515-S1-WP** is a low noise amplifier with a typical small signal gain of 40 dB and a nominal noise figure of 4.5 dB across the frequency range of 50 to 68 GHz. The DC power requirement for the amplifier is +8 V<sub>DC</sub>/200 mA. The mechanical configuration offers a right angle structure with WR-15 waveguides and UG-385/U flanges. Other port configurations, such as an in line structure with WR-15 waveguides or 1 mm connectors, are also available under different model numbers.



### Features:

- State-of-the-Art Noise Figure
- High Gain

### Applications:

- IEEE 802.11ab WiGig
- Low Noise Receivers
- Communication Systems
- Test Equipment

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	50 GHz		68 GHz
Gain		40 dB	
Noise Figure (50 GHz-55 GHz)		6 dB	
Noise Figure (55 GHz-68 GHz)		4.5 dB	
P <sub>1dB</sub>		+12 dBm	
P <sub>in</sub>			-5 dBm
Input Return Loss		8 dB	
Output Return Loss		8 dB	
DC Voltage	+6 V <sub>DC</sub>	+8 V <sub>DC</sub>	+15 V <sub>DC</sub>
DC Supply Current		200 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

### Mechanical Specifications:

Item	Specification
Input Port	WR-15 Waveguide with UG-385/U Flange
Output Port	WR-15 Waveguide with UG-385/U Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.10" (W) 1.70" (L) X 0.50" (H)
Outline	BG-SV-1

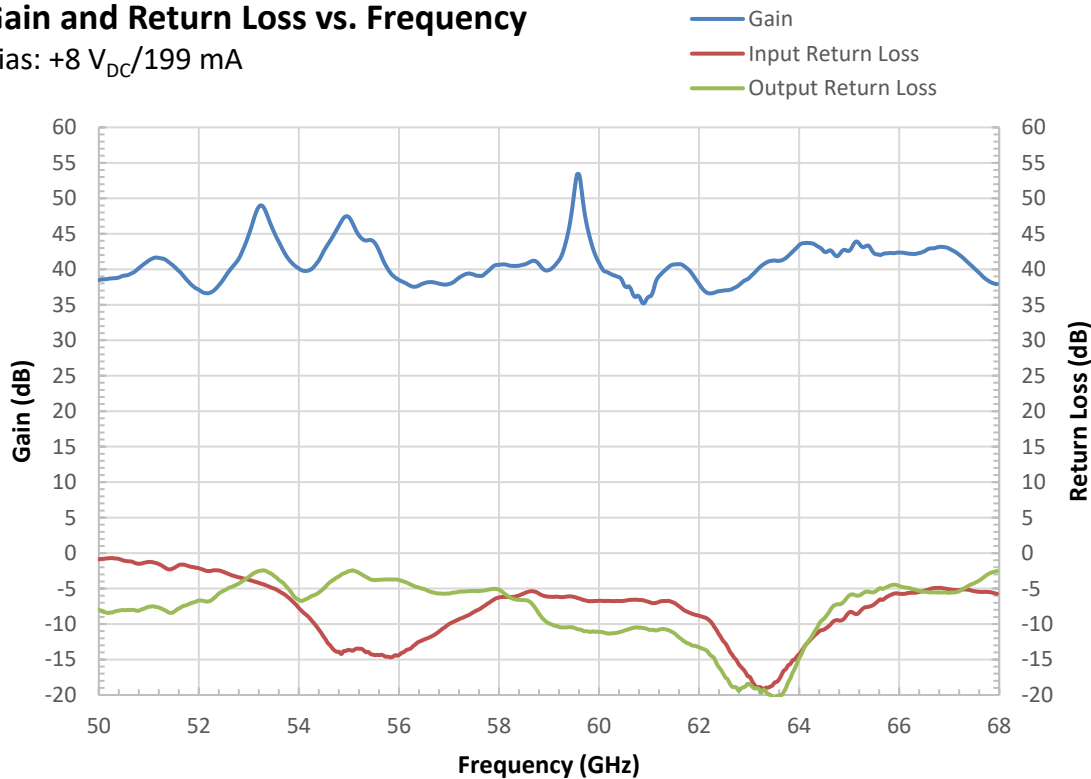




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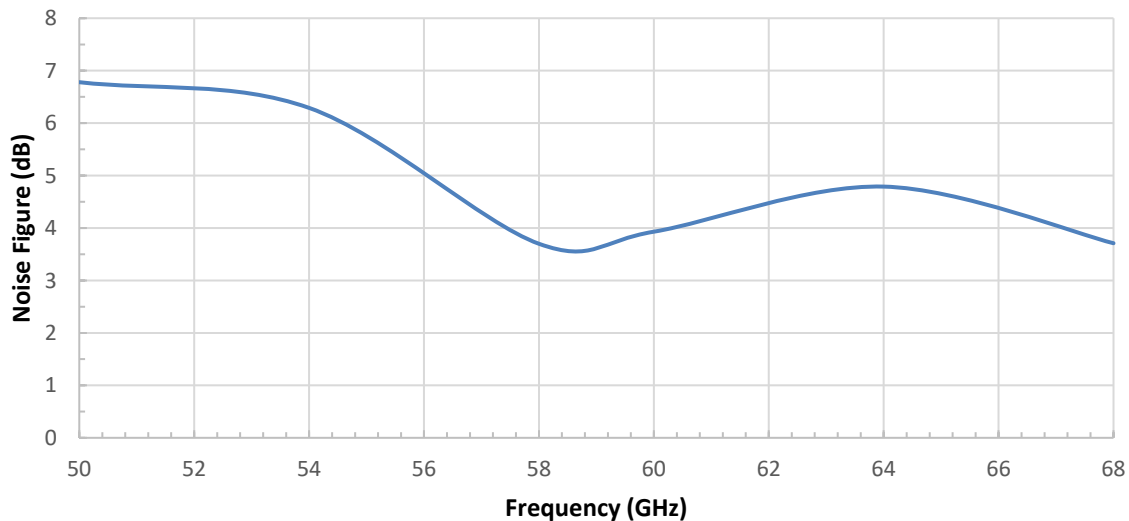
### Gain and Return Loss vs. Frequency

Bias: +8 V<sub>DC</sub>/199 mA



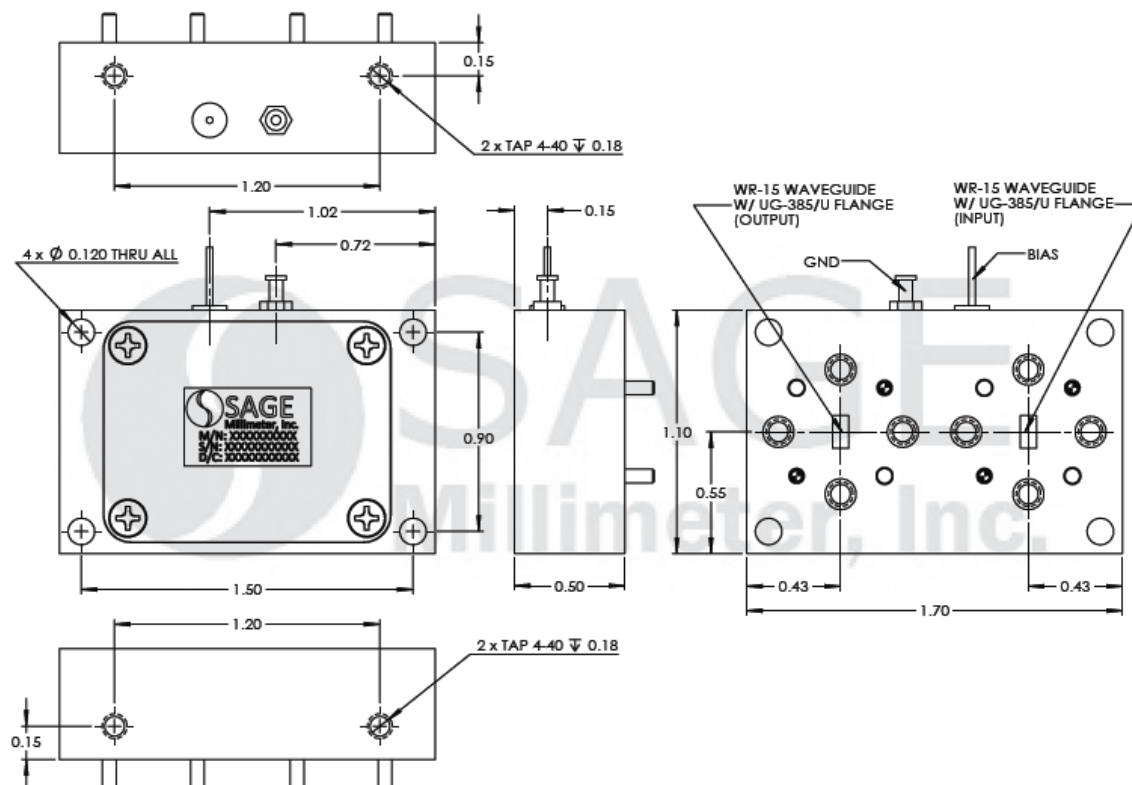
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**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches)



### Note:

- 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.
- 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.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.