



V-Band Low Noise Amplifier, 50 to 70 GHz, 35 dB Gain, 5 dB NF

Description:

Model **SBL-5037033550-VFVF-S1** is a low noise amplifier with a typical small signal gain of 35 dB and a nominal noise figure of 5 dB across the frequency range of 50 to 70 GHz. The DC power requirement for the amplifier is +8 V_{DC}/150 mA. The RF connectors are female V connectors. Other port configurations, such as male V connectors and WR-15 waveguides for either the input or output port, are also available under different model numbers.



Features:

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

Applications:

- IEEE 802.11ab WiGig
- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	50 GHz		70 GHz
Gain		35 dB	
Noise Figure		5 dB	
Output P _{1dB}		+11 dBm	
P _{in}			-20 dBm
Input Return Loss		8 dB	
Output Return Loss		8 dB	
DC Voltage	+6 V _{DC}	+8 V _{DC}	+15 V _{DC}
DC Supply Current		150 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	V(F)
Output Port	V(F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.20" (W) 1.20" (L) X 0.50" (H)
Outline	BG-SC-1

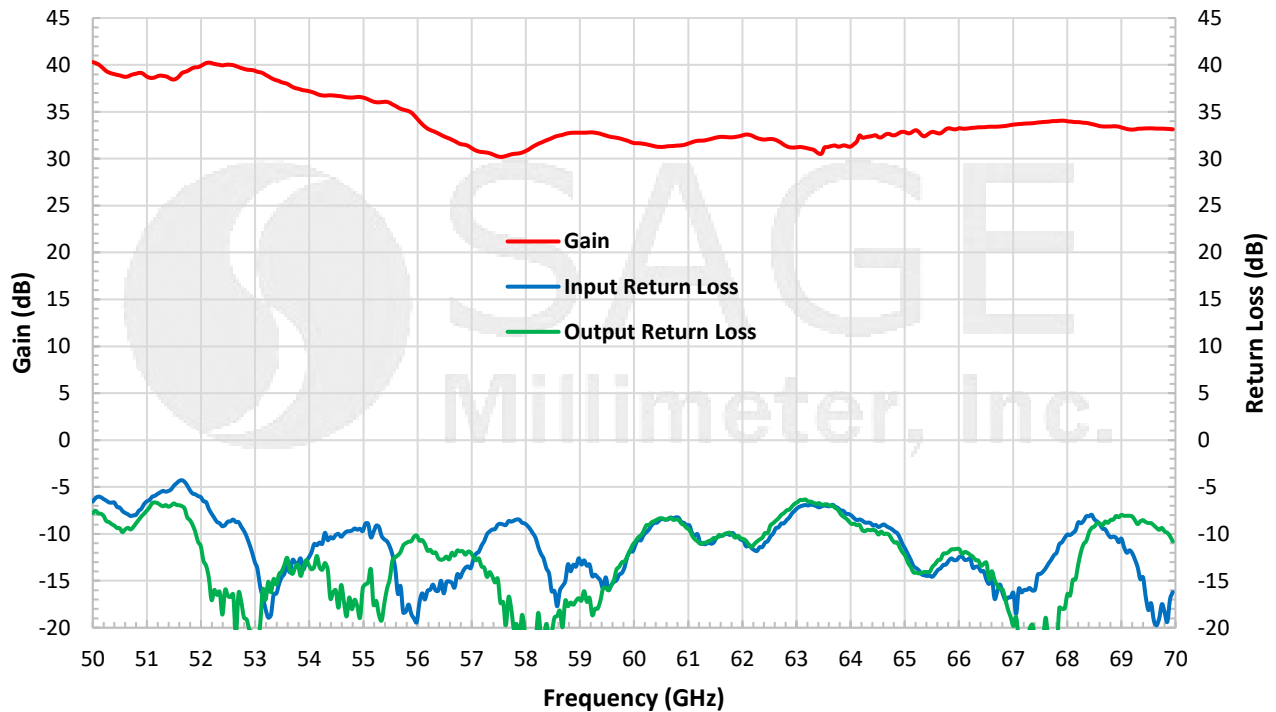




V-Band Low Noise Amplifier, 50 to 70 GHz, 35 dB Gain, 5 dB NF

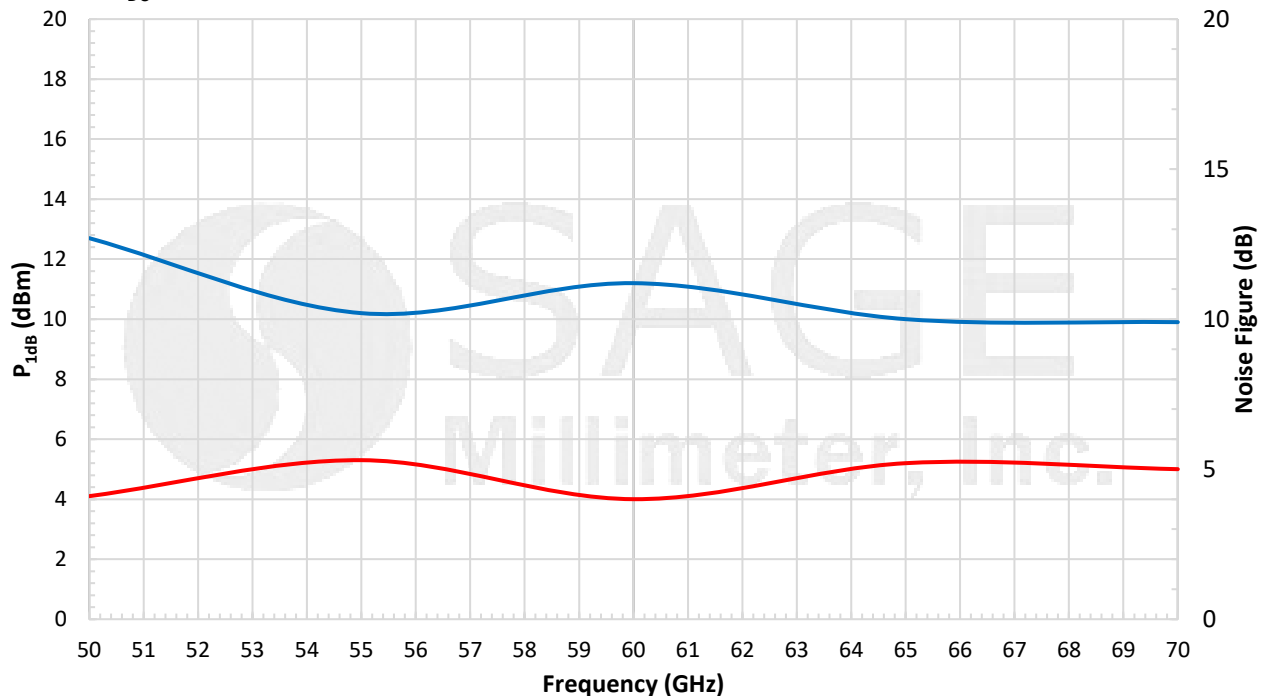
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/150 mA



Typical P_{1dB} and Noise Figure vs. Frequency

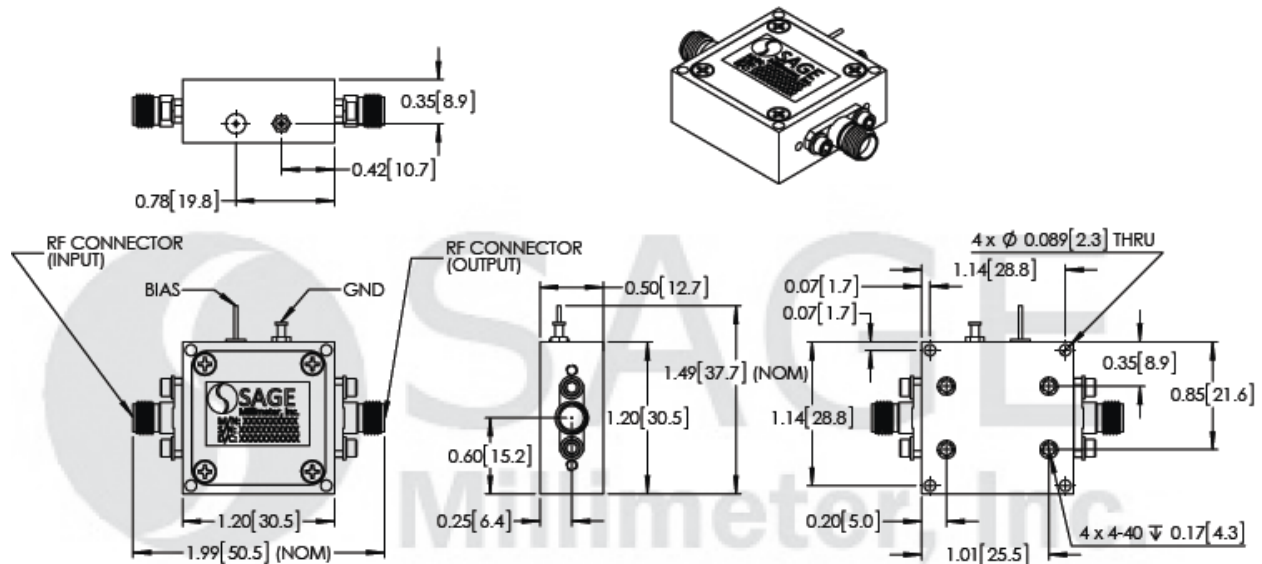
Bias: +8 V_{DC}/150 mA





V-Band Low Noise Amplifier, 50 to 70 GHz, 35 dB Gain, 5 dB NF

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.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. 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 (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

