



V-Band Low Noise Amplifier, 50 to 75 GHz, 50 dB Gain, 5.5 dB NF

Description:

Model SBL-5037535055-1F15-E1-WC is a V band low noise amplifier with a typical small signal gain of 50 dB and a nominal noise figure of 5.5 dB across the frequency range of 50 to 75 GHz. The DC power requirement for the amplifier is +8 V_{DC}/300 mA. The input port configuration is a female 1 mm connector and the output is a WR-15 waveguide with a UG-385/U anti-cocking flange. Other port configurations are available under different model numbers.



Features:

- Full Waveguide Band Performance
- 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		50 dB	
Noise Figure		5.5 dB	
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		300 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	1 mm (F) Connector
Output Port	WR-15 Waveguide with UG-385/U Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.8 Oz
Size	1.96" (L) X 1.10" (W) X 0.75" (H)
Outline	BG-SV-2CW-A

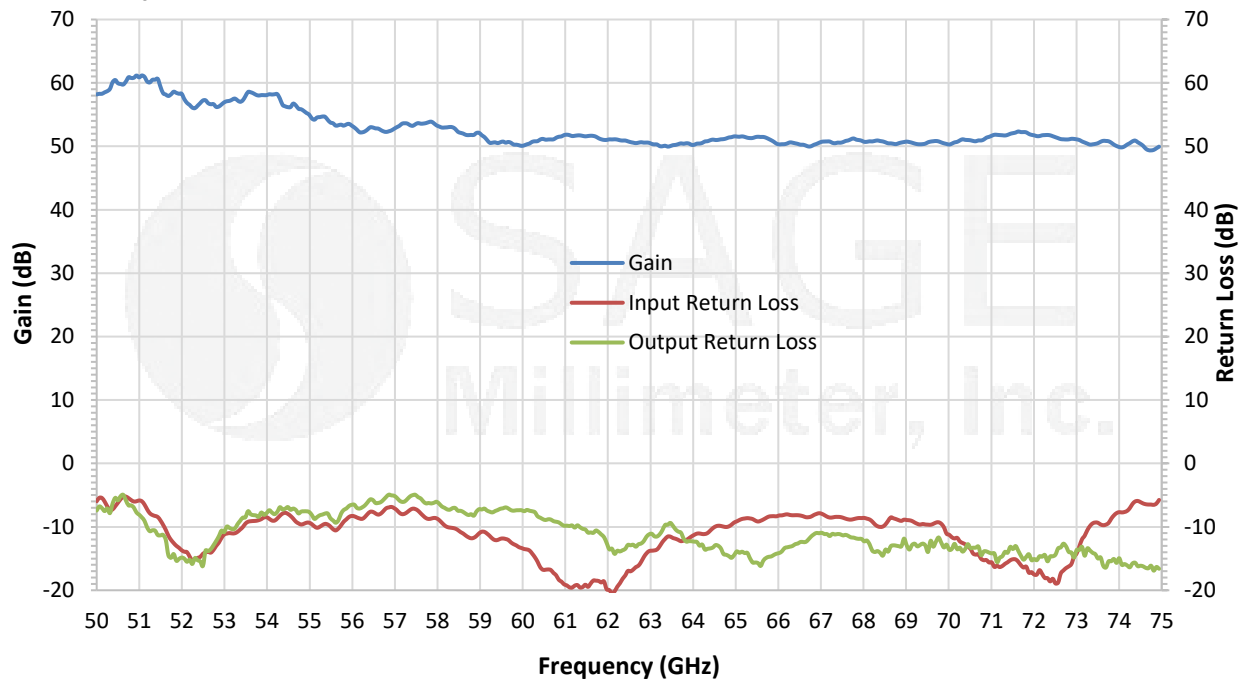




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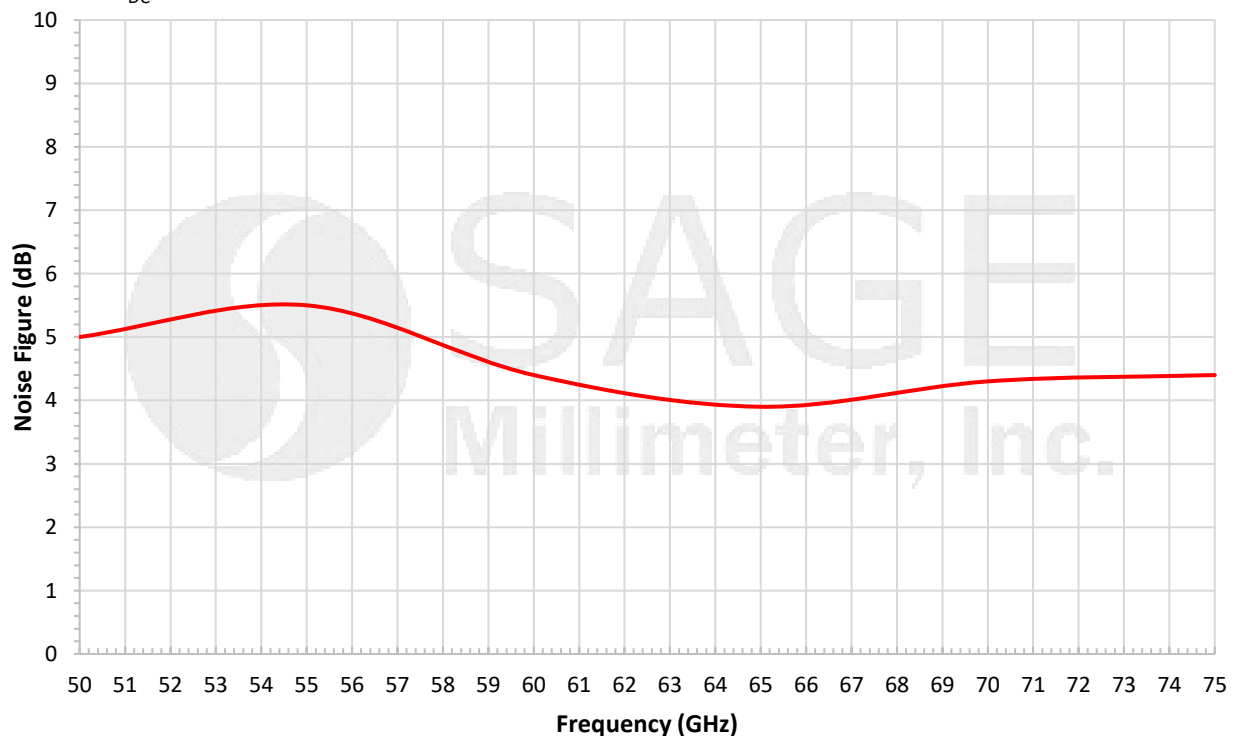
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/300 mA



Typical Noise Figure vs. Frequency

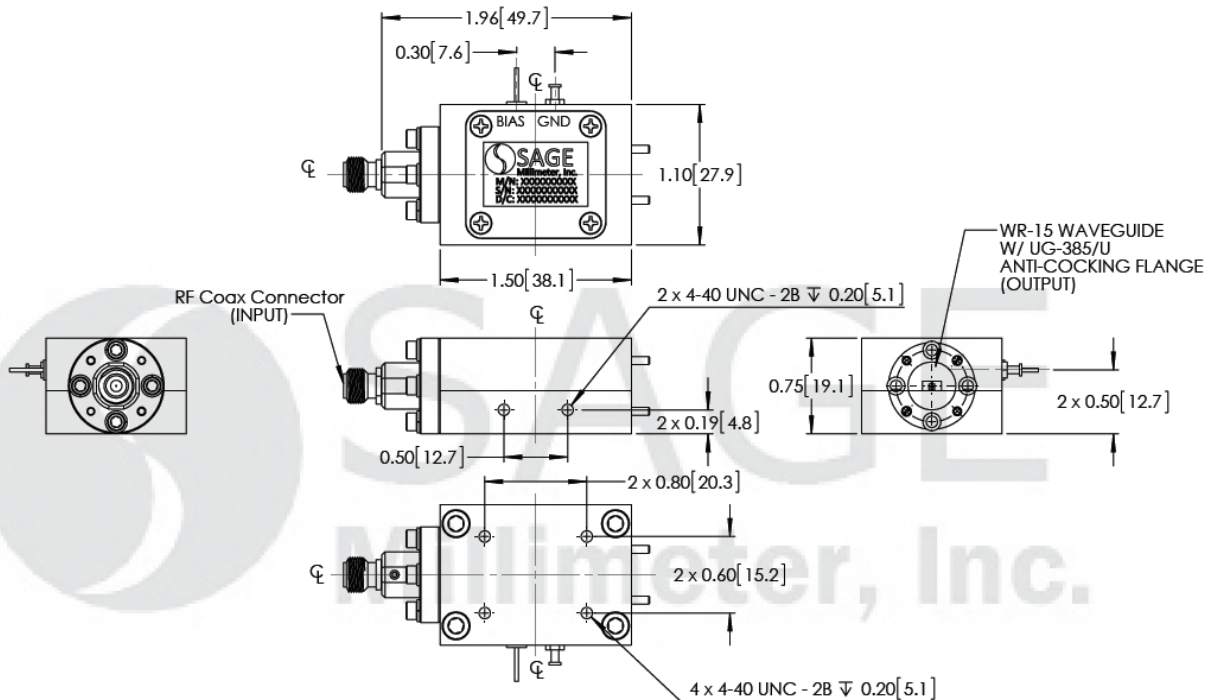
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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- 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.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.
- Proper torque, 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm), should be used. **SAGE Millimeter torque wrench, model SCH-06004-S1, is highly recommended.**

