



E-Band Low Noise Amplifier, 50 to 95 GHz, 22 dB Gain, 7 dB NF

Description:

Model SBL-5039532270-1F1F-S1 is a low amplifier with a typical small signal gain of 22 dB and a nominal noise figure of 7 dB in the frequency range of 50 to 95 GHz. The DC power requirement for the amplifier is +8 V_{DC}/300 mA. The mechanical configuration offers an inline structure with 1 mm (F) connectors. Other port configurations, such as with WR-12 waveguides in inline or right angle configurations, are also available under different model numbers.



Features:

- Ultra-Broadband Performance
- Moderate Noise Figure
- Moderate Output Power

Applications:

- 5G Systems
- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	50 GHz		95 GHz
Gain		22 dB	
Noise Figure		7 dB	
P _{1dB}		+11 dBm	
P _{sat}		+11 dBm	
P _{in}			+15 dBm
Input Return Loss		10 dB	
Output Return Loss		10 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	1.0 mm (F)
Output	1.0 mm (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.8 Oz
Size	1.10" (W) X 2.29" (L) X 0.75" (H)
Outline	BG-SE-2-WC

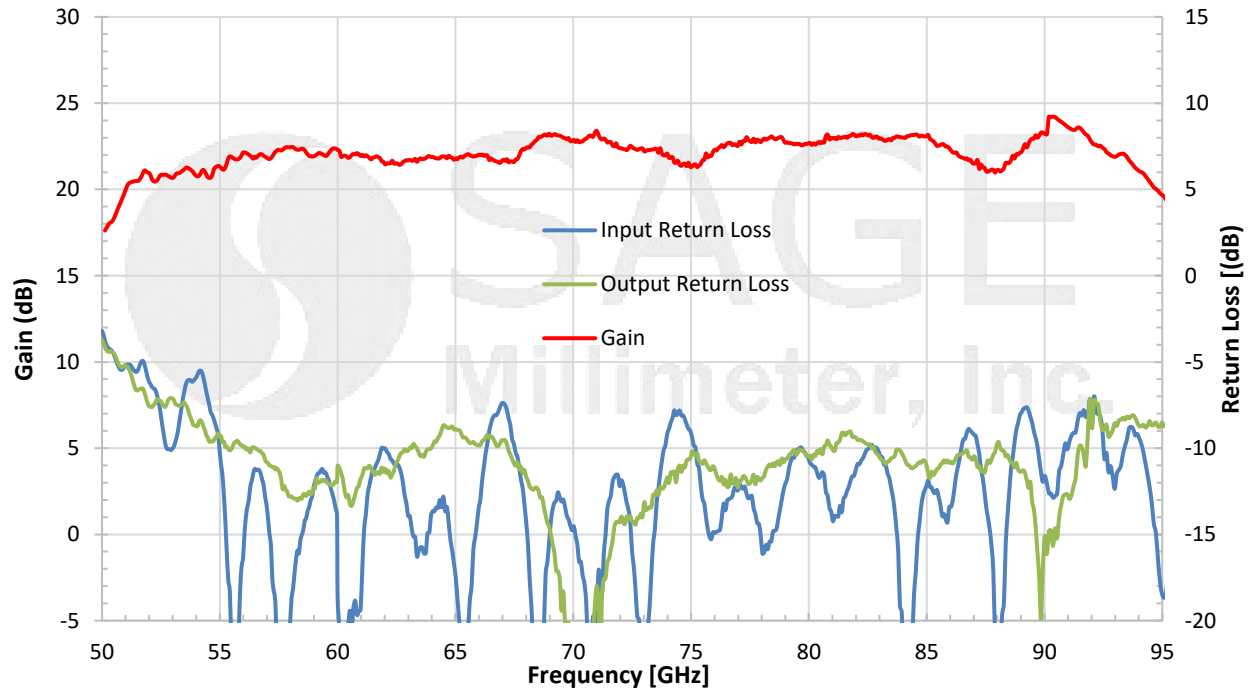




E-Band Low Noise Amplifier, 50 to 95 GHz, 22 dB Gain, 7 dB NF

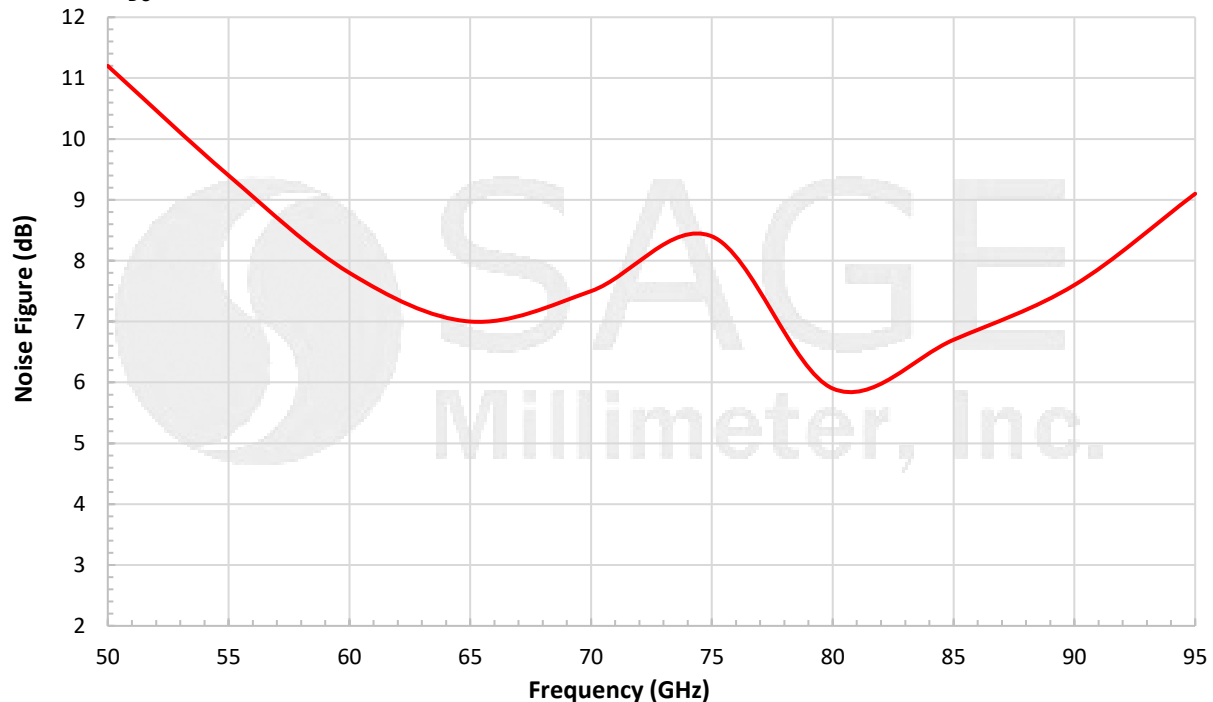
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/300 mA



Typical Noise Figure vs. Frequency

Bias: +8 V_{DC}/300 mA

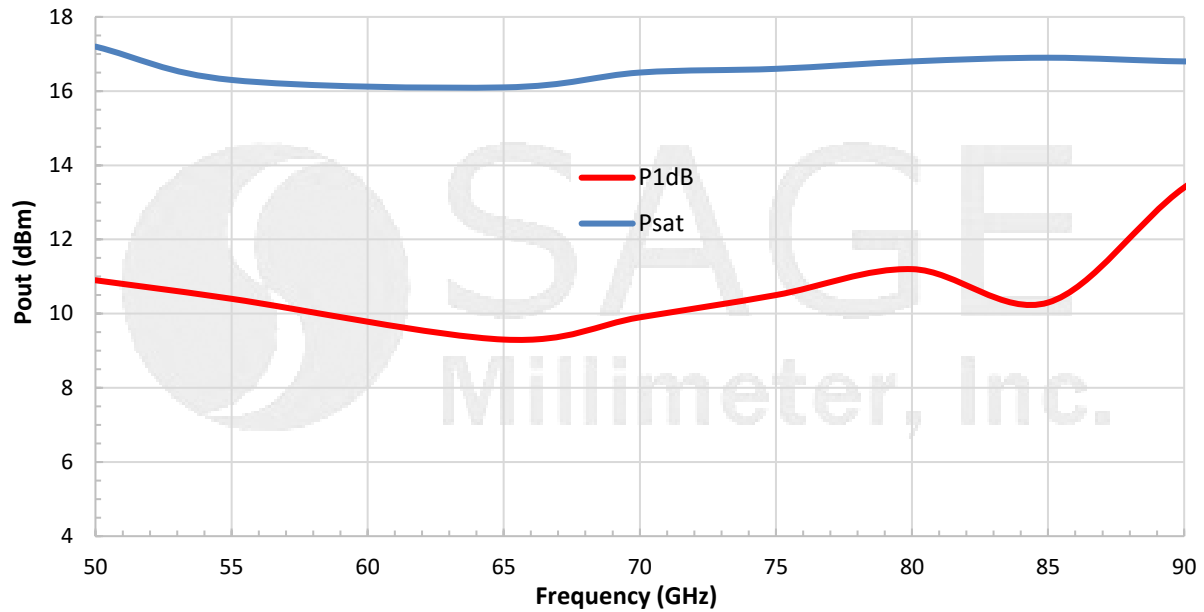




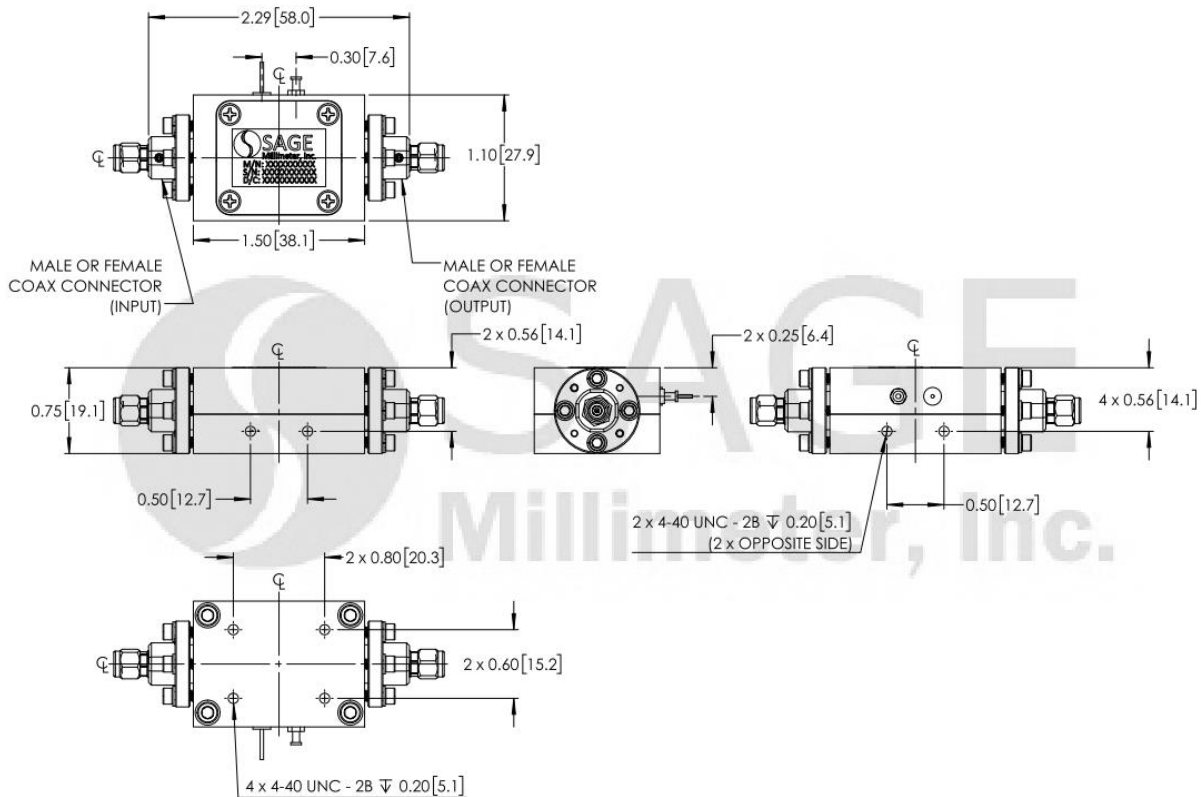
E-Band Low Noise Amplifier, 50 to 95 GHz, 22 dB Gain, 7 dB NF

Typical Output Power vs. Frequency

Bias: +8 V_{DC}/300 mA



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





E-Band Low Noise Amplifier, 50 to 95 GHz, 22 dB Gain, 7 dB NF

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, 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-06004-S1, is highly recommended.**

