



E-Band Low Noise Amplifier, 71 to 86 GHz, 35 dB Gain, 4 dB NF

Description:

Model SBL-7138633540-1212-E1 is a low noise amplifier with a typical small signal gain of 35 dB and a nominal noise figure of 4 dB across the frequency range of 71 to 86 GHz. The DC power requirement for the amplifier is +8 V_{DC}/150 mA. The mechanical configuration offers a in line structure with WR-12 waveguides and UG-387/U anti-cocking flanges. Other port configurations, such as right angle structure with WR-12 waveguides or 1 mm connectors, are also available under different model numbers.



Features:

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

Applications:

- Low Noise Receivers
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	71 GHz		86 GHz
Gain		35 dB	
Noise Figure		4 dB	
P _{1dB}		+5 dBm	
P _{in}			-24 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
DC Voltage	+5 V _{DC}	+8 V _{DC}	+12 V _{DC}
DC Supply Current		150 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
Output Port	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finishing	Gold Plated
Weight	1.6 Oz
Size	1.10" (W) 1.50" (L) X 0.75" (H)
Outline	BG-SE-2-A

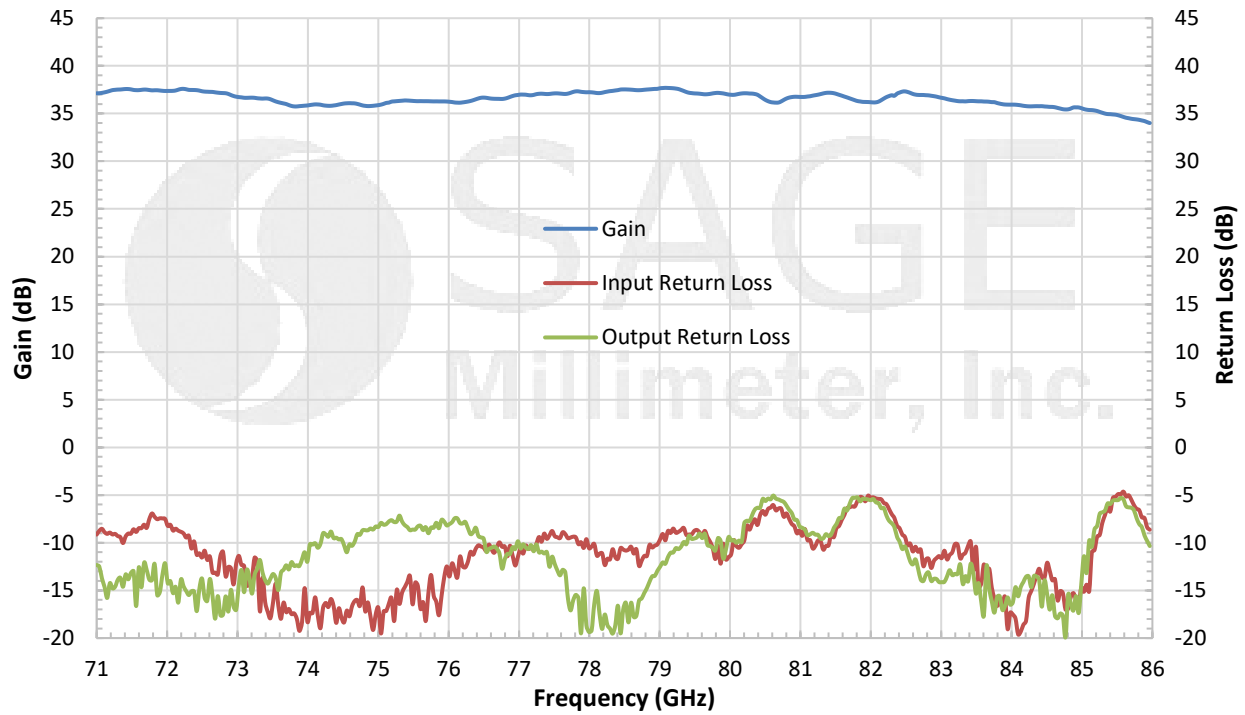




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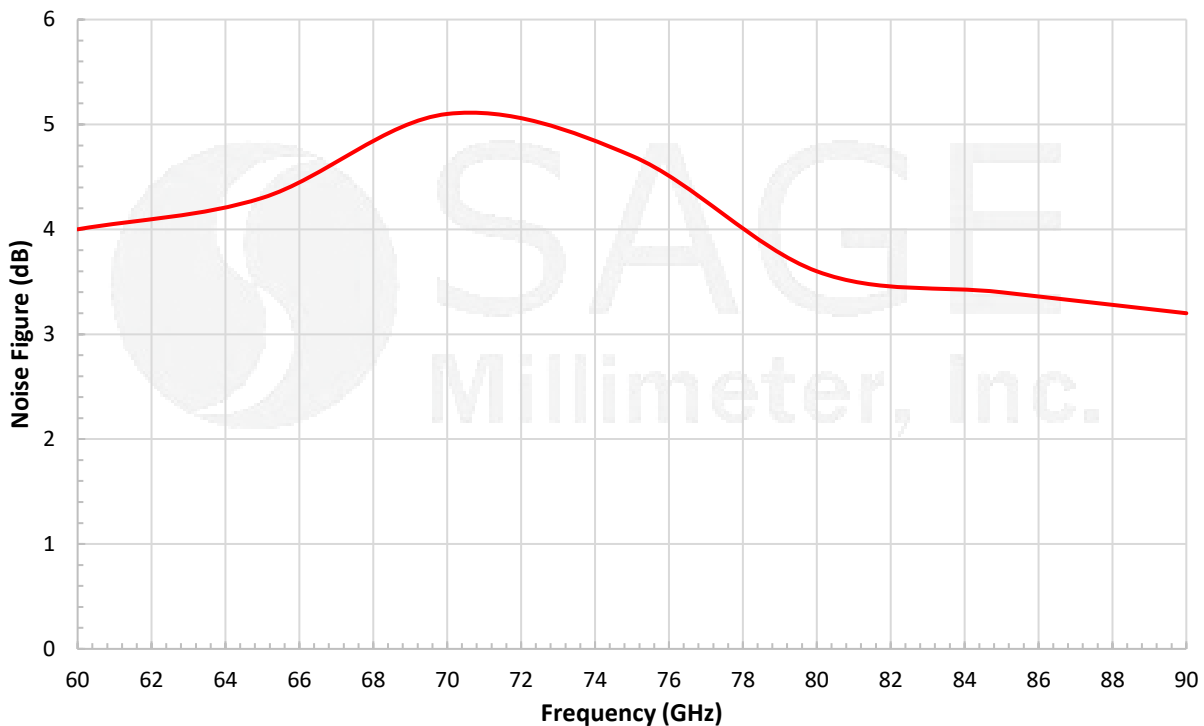
Typical Gain and Return Loss vs. Frequency

Bias = + 8 V_{DC}/150 mA



Typical Noise Figure vs. Frequency

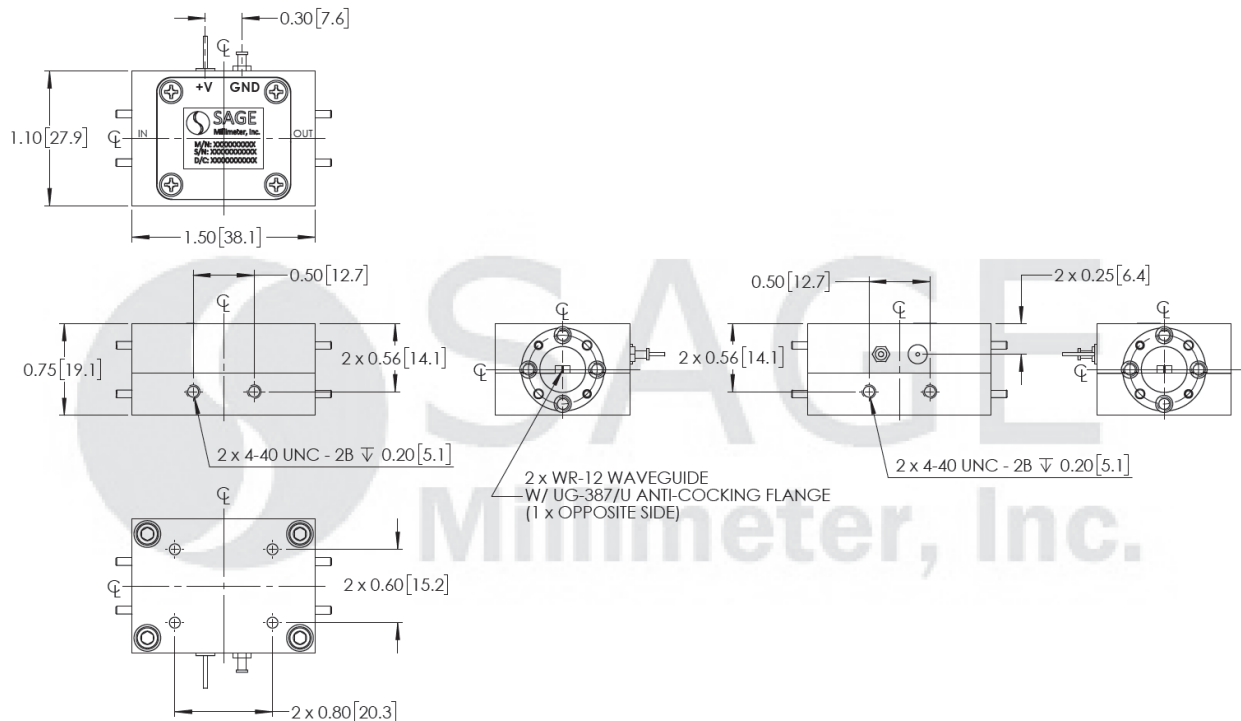
Bias: +8 V_{DC}/150 mA





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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.

