SBL-6039033055-1212-E1

Rev 1.0

E-Band Low Noise Amplifier, 30 dB Gain, 5.5 dB NF

Description:

Model SBL-6039033055-1212-E1 is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 5.5 dB across the frequency range of 60 to 90 GHz. The DC power requirement for the amplifier is +8 V_{DC}/190 mA. The mechanical configuration offers an in line structure with WR-12 waveguides and UG-387/U anti-cocking flanges. Other port configurations, such as with 1 mm connectors or a right angle structure with WR-12 waveguides, are also available under different model numbers.

Features:

- Full Waveguide Band Performance
- State-of-the-Art Noise Figure
- High Gain

Applications:

- Radar Systems
- Communication Systems
- Low Noise Receivers

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz		90 GHz
Gain		30 dB	
Noise Figure		5.5 dB	
P_{1dB}		+12 dBm	
P_{in}			+15 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		190 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) X 1.50” (L) X 0.75” (H)
Outline	BG-SE-2-A

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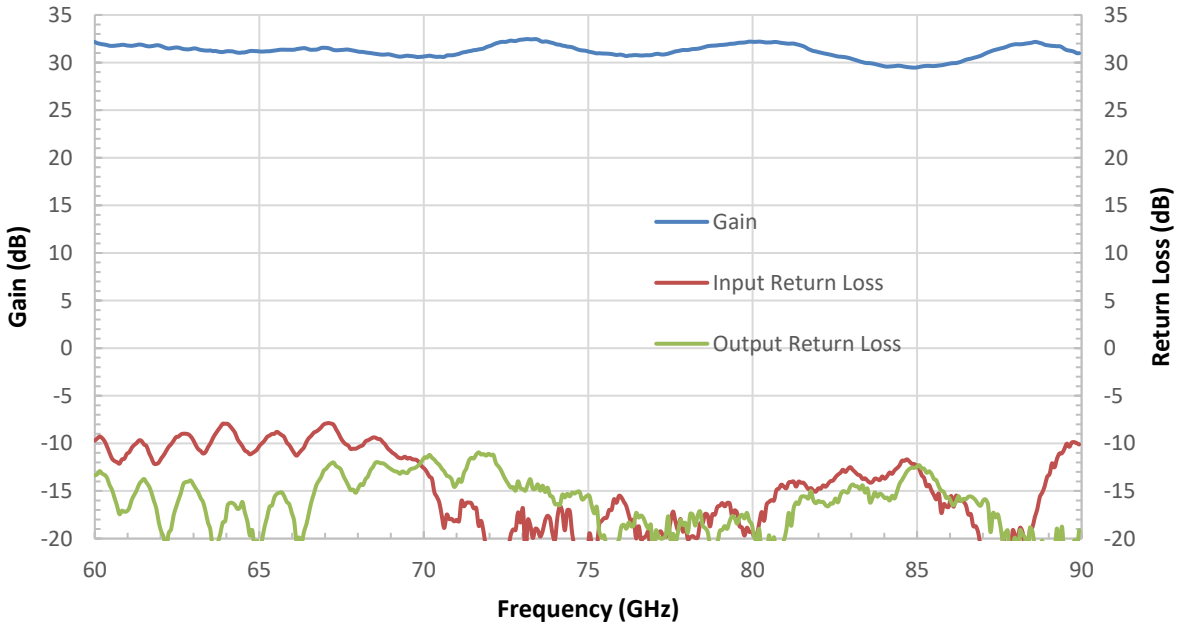
E-Band Low Noise Amplifier, 30 dB Gain, 5.5 dB NF

Gain and Return Loss vs. Frequency

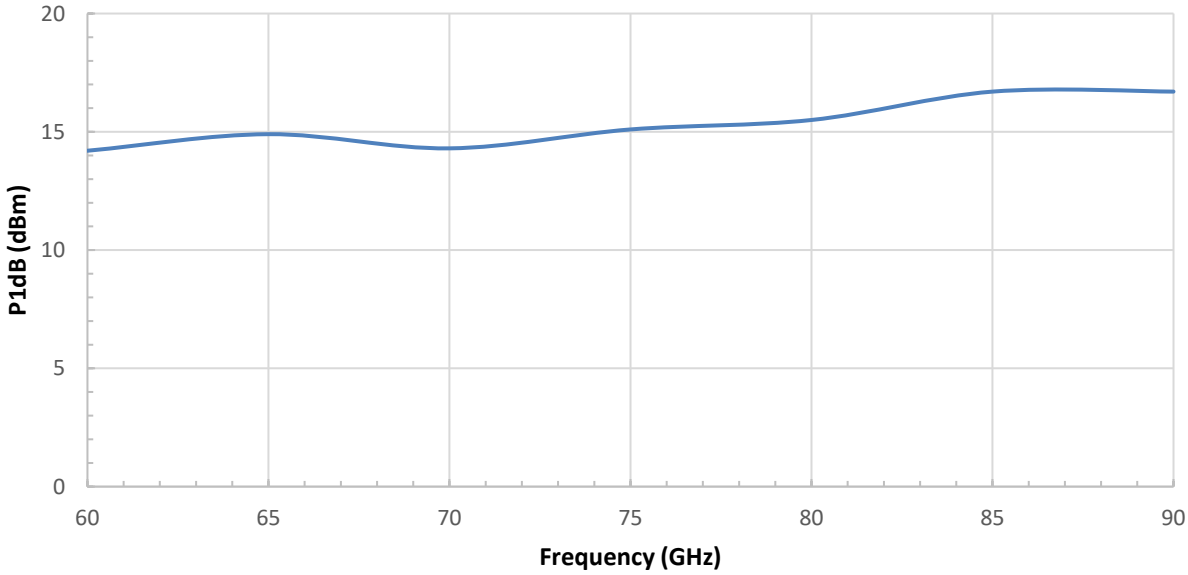
Bias: +8 V_{DC}/234 mA



P1dB vs. Frequency

Bias: +8 V_{DC}/234 mA

RFsat: +8 Vdc/ 300 mA



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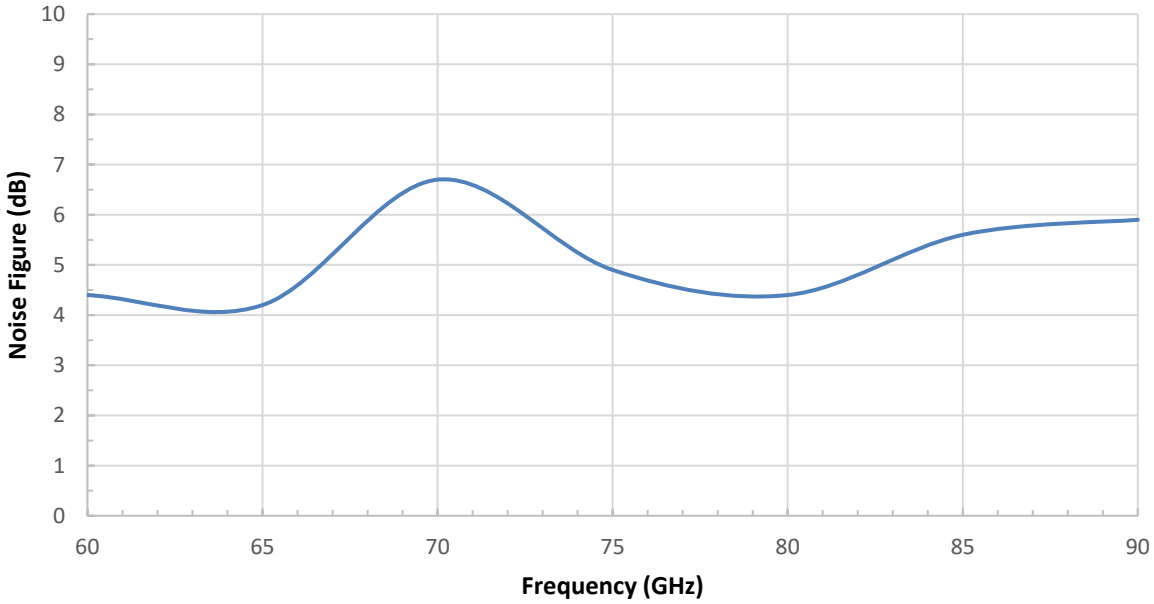
Noise Figure vs. Frequency

Bias: +8V_{DC}/ 234 mA



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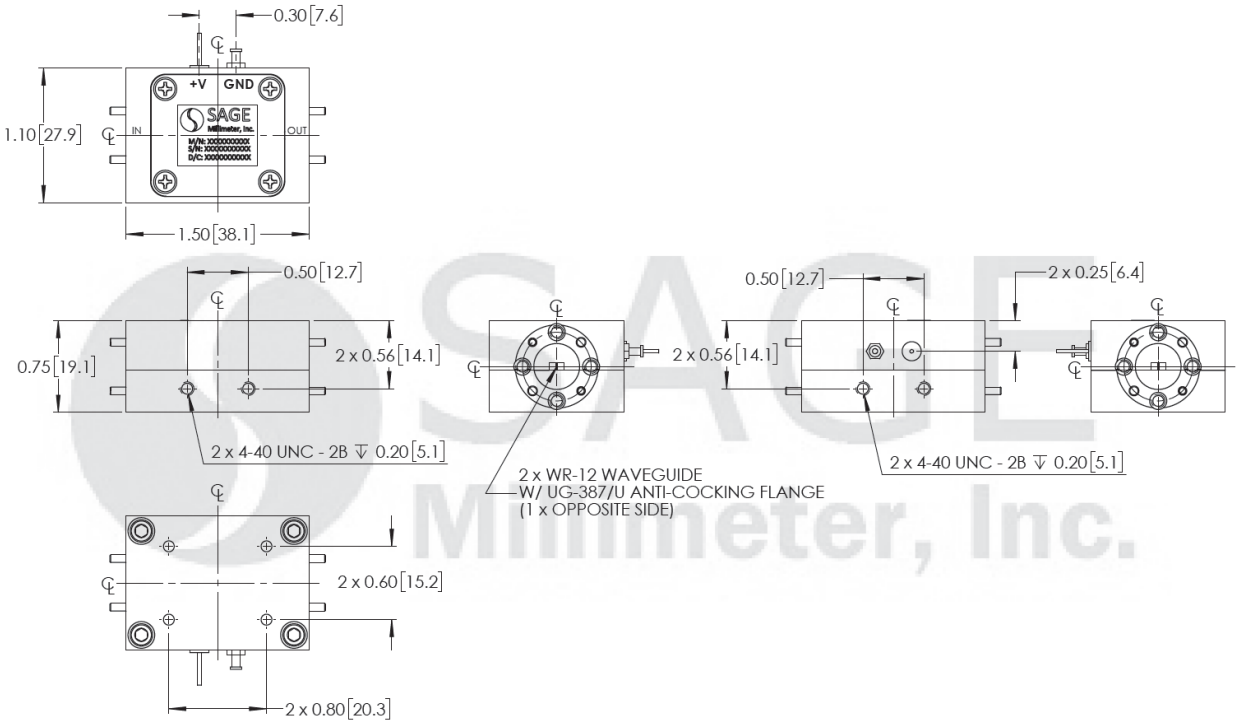
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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.
- 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.

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