

**E-Band Low Noise Amplifier, 17 dB Gain, 5.5 dB NF**

**SBL-6039032055-1212-E1** is a low noise amplifier with a typical small signal gain of 17 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 VDC/80 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.

**Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz		90 GHz
Gain		17 dB	
Noise Figure		5.5 dB	
P <sub>1dB</sub>		+7 dBm	
P <sub>in</sub>			+15 dBm
Input Return Loss		8 dB	
Output Return Loss		8 dB	
DC Voltage	+6 V <sub>DC</sub>	+8 V <sub>DC</sub>	+15 V <sub>DC</sub>
DC Supply Current		80 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

**ECCN**

EAR99

**FEATURES**

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

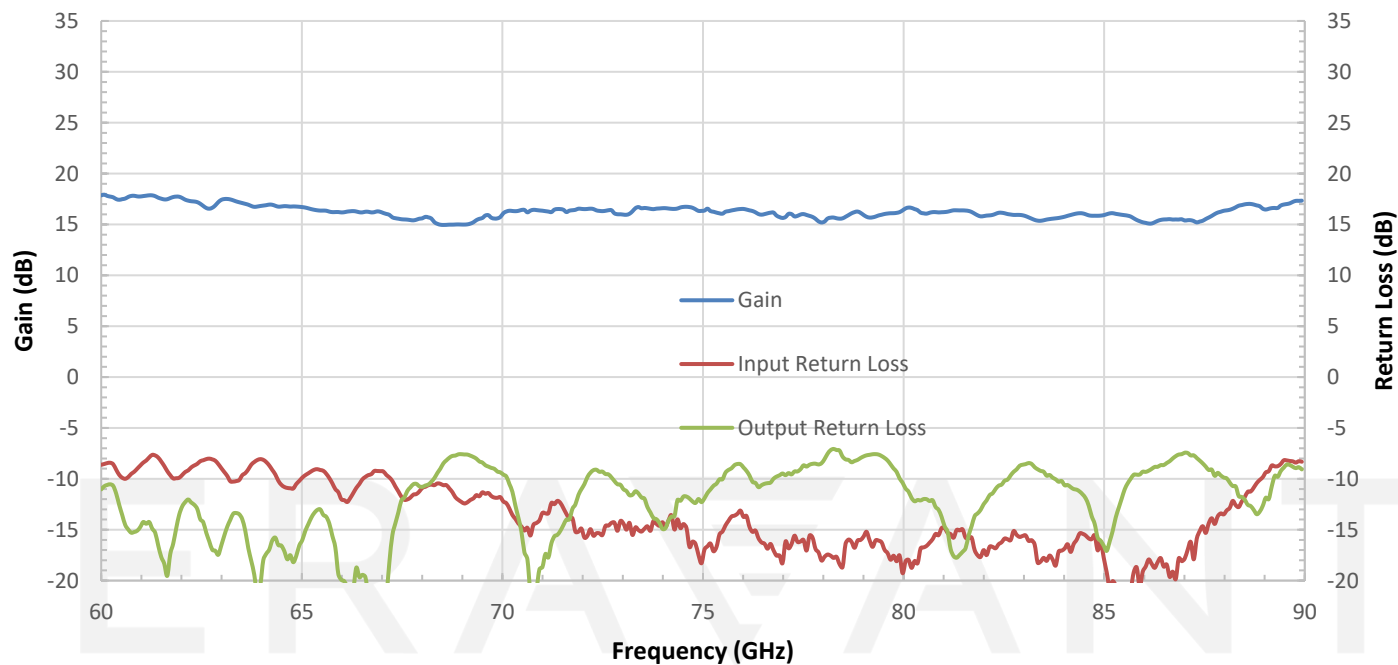
**APPLICATIONS**

- Radar Systems
- Communication Systems
- Low Noise Receivers

**SUPPLEMENTAL DETAILS**

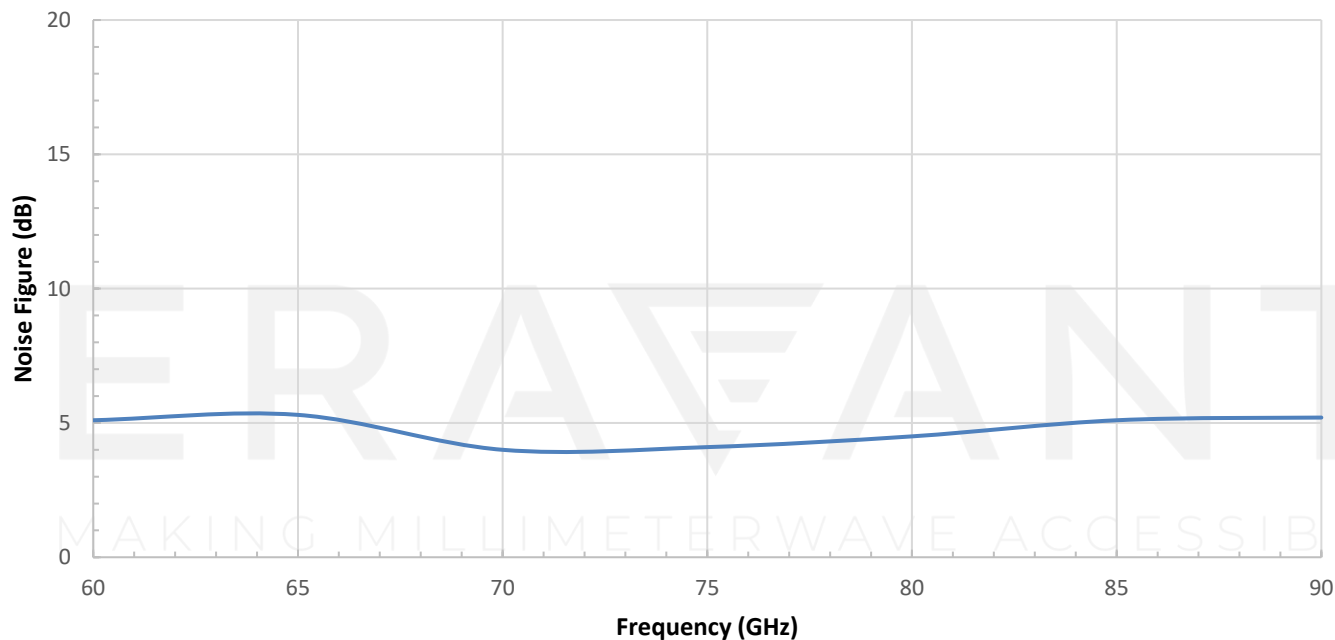
Gain and Return Loss vs. Frequency

Bias: +8 V<sub>DC</sub>/ 75 mA



Noise Figure vs. Frequency

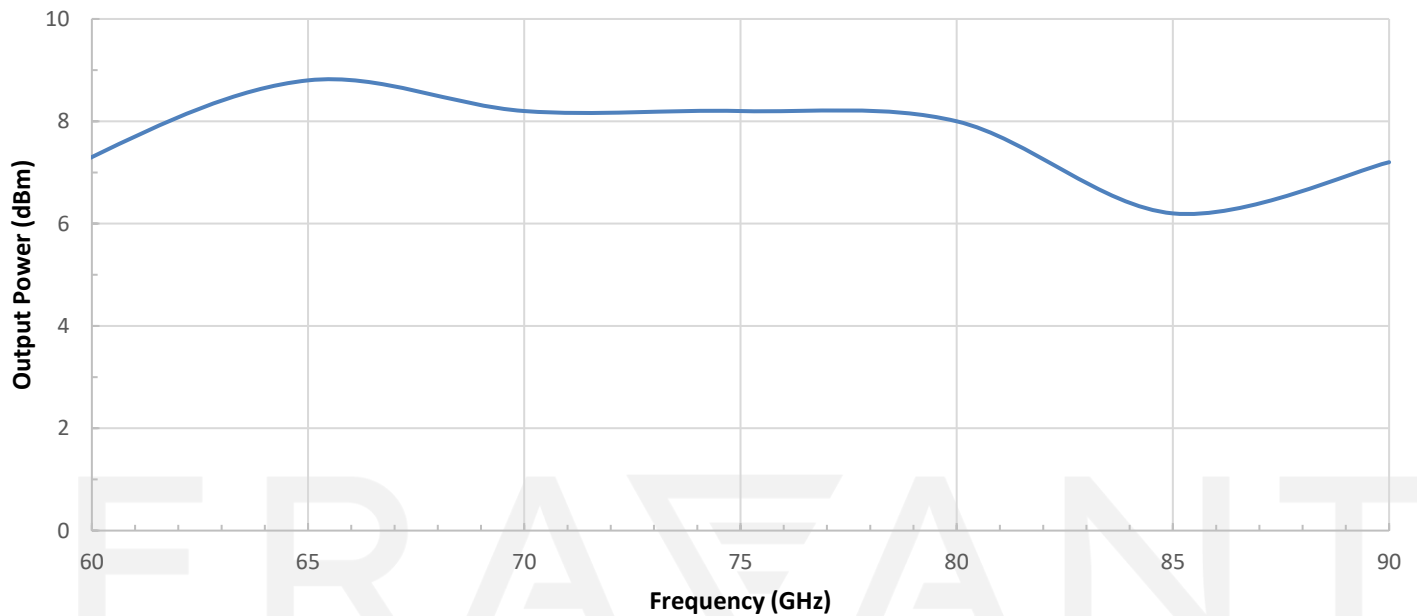
Bias: +8V<sub>DC</sub>/75 mA



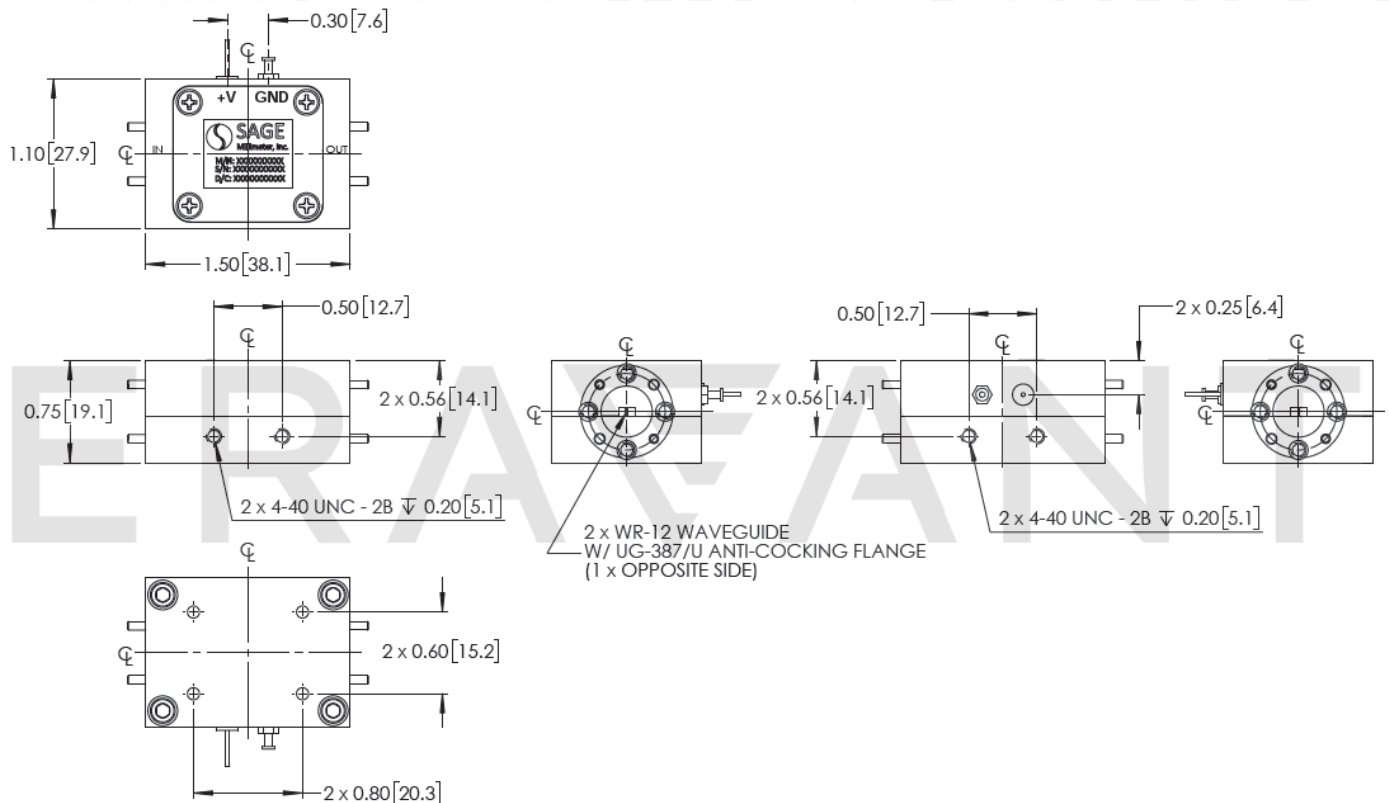
## SBL-6039032055-1212-E1

### Typical P1dB vs. Frequency

Bias: +8 V<sub>DC</sub>/75 mA



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



**NOTE:**

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room 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.
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.

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