

## SBL-3735231530-1919-E1

### U-Band Low Noise Amplifier, 37 to 52 GHz, 15 dB Gain, 4 dB NF

**SBL-3735231530-1919-E1** is a low noise amplifier with a typical small signal gain of 15 dB across the frequency range of 37 to 52 GHz and a nominal noise figure of 4 dB. The DC power requirement for the amplifier is +6 V<sub>DC</sub>/60 mA. The mechanical configuration offers an in-line structure WR-19 Uni-Guide™ waveguides. Other port configurations, such as a right angle structure with WR-19 waveguides or 1.85 mm connectors, are also available under different model numbers.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	37 GHz		52 GHz
Gain		15 dB	
Noise Figure		4 dB	
P <sub>1dB</sub>		+6 dBm	
P <sub>in</sub>			+0 dBm
Input Return Loss		8 dB	
Output Return Loss		8 dB	
DC Voltage		+6 V <sub>DC</sub>	+12 V <sub>DC</sub>
DC Supply Current		60 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

#### Mechanical Specifications:

Item	Specification
RF Ports	WR-19 Uni-Guide™ Waveguide with UG-383/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Size	1.20" (W) x 1.98" (L) x 1.13" (H)
Outline	BG-SU-2-A

#### ECCN

EAR99

#### FEATURES

- Full Waveguide Band Coverage
- State-of-the-Art Noise Figure
- Good Gain Flatness

#### APPLICATIONS

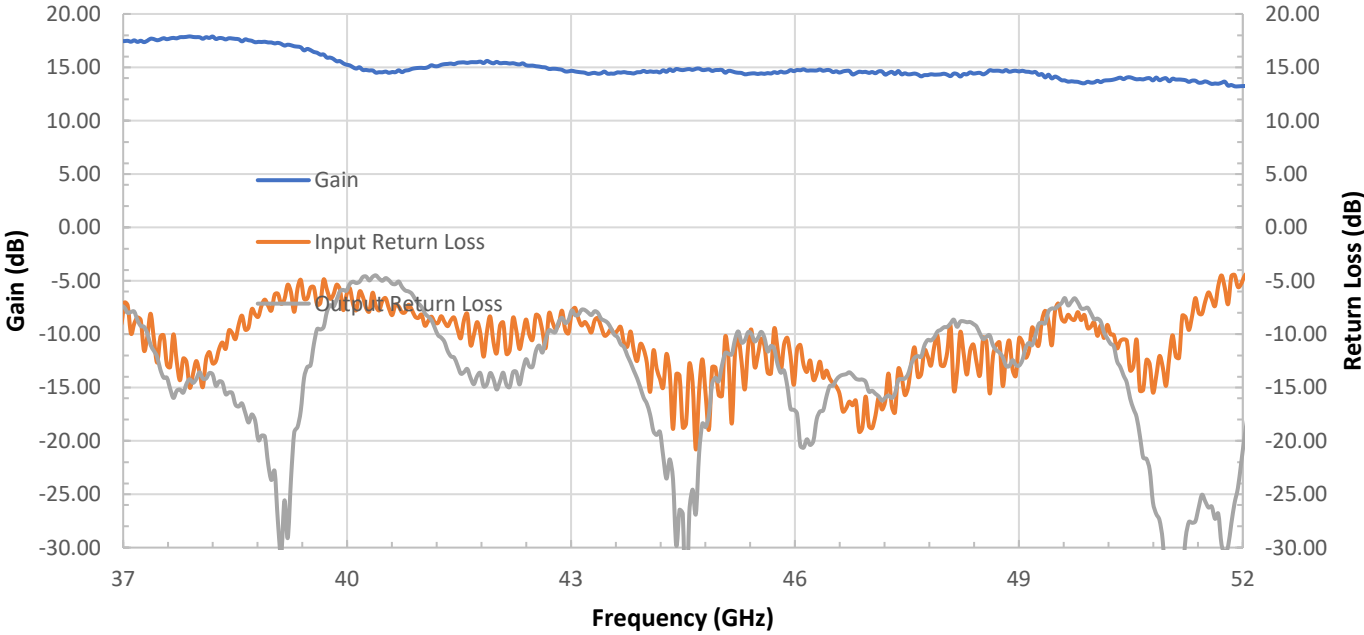
- New 5G Bands
- Radar Systems
- Communication Systems
- Low Noise Receivers

#### SUPPLEMENTAL DETAILS



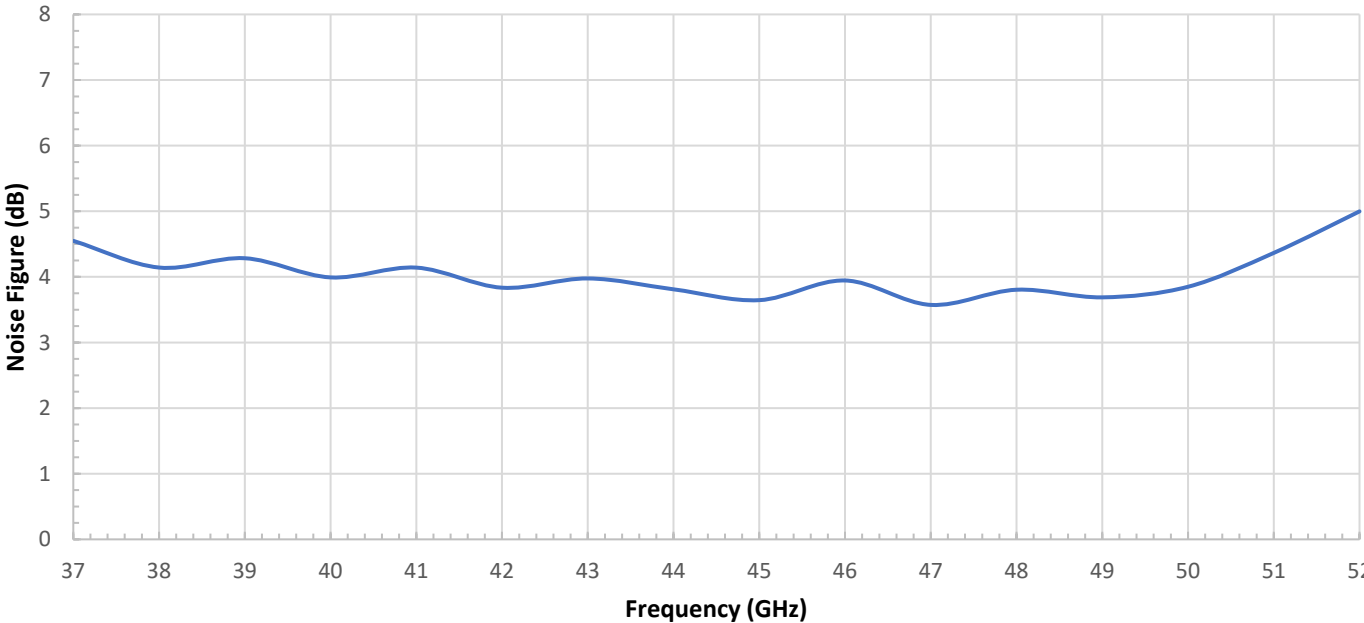
### Typical Gain and Return Loss vs. Frequency

Bias: +6 V<sub>DC</sub>/47mA



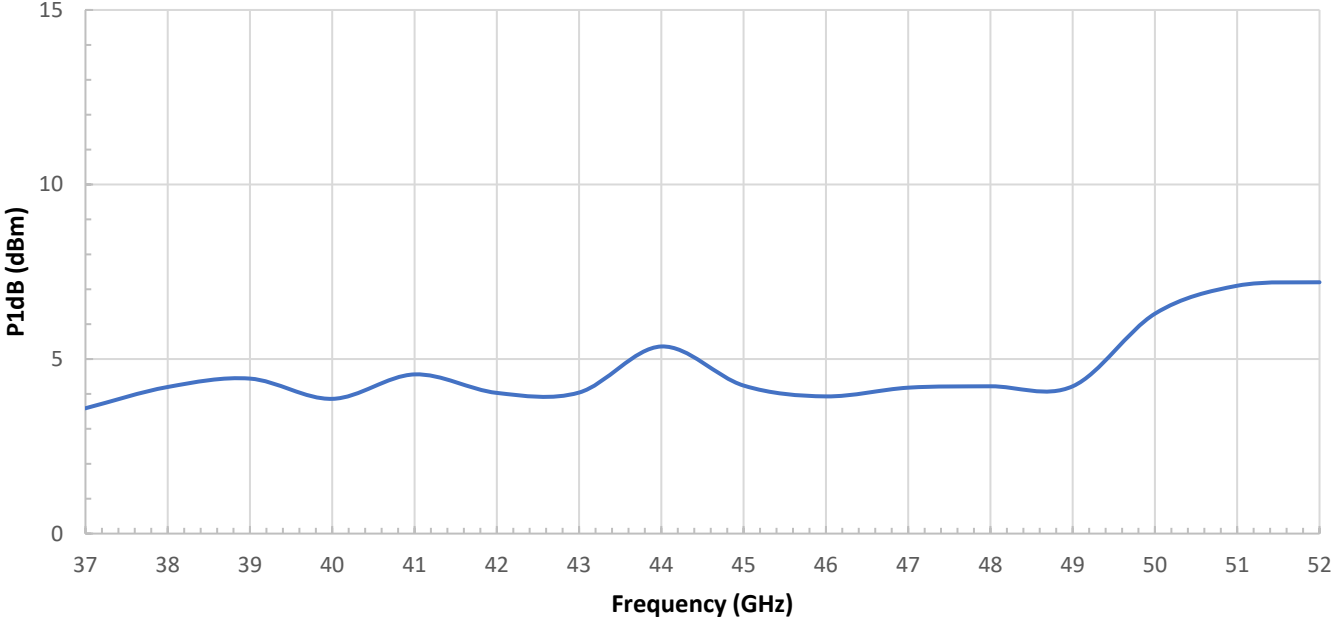
### Typical Noise Figure vs. Frequency

Bias: +6 V<sub>DC</sub>/47 mA



Typical P1dB vs. Frequency

Bias: +6 V<sub>DC</sub>/47mA



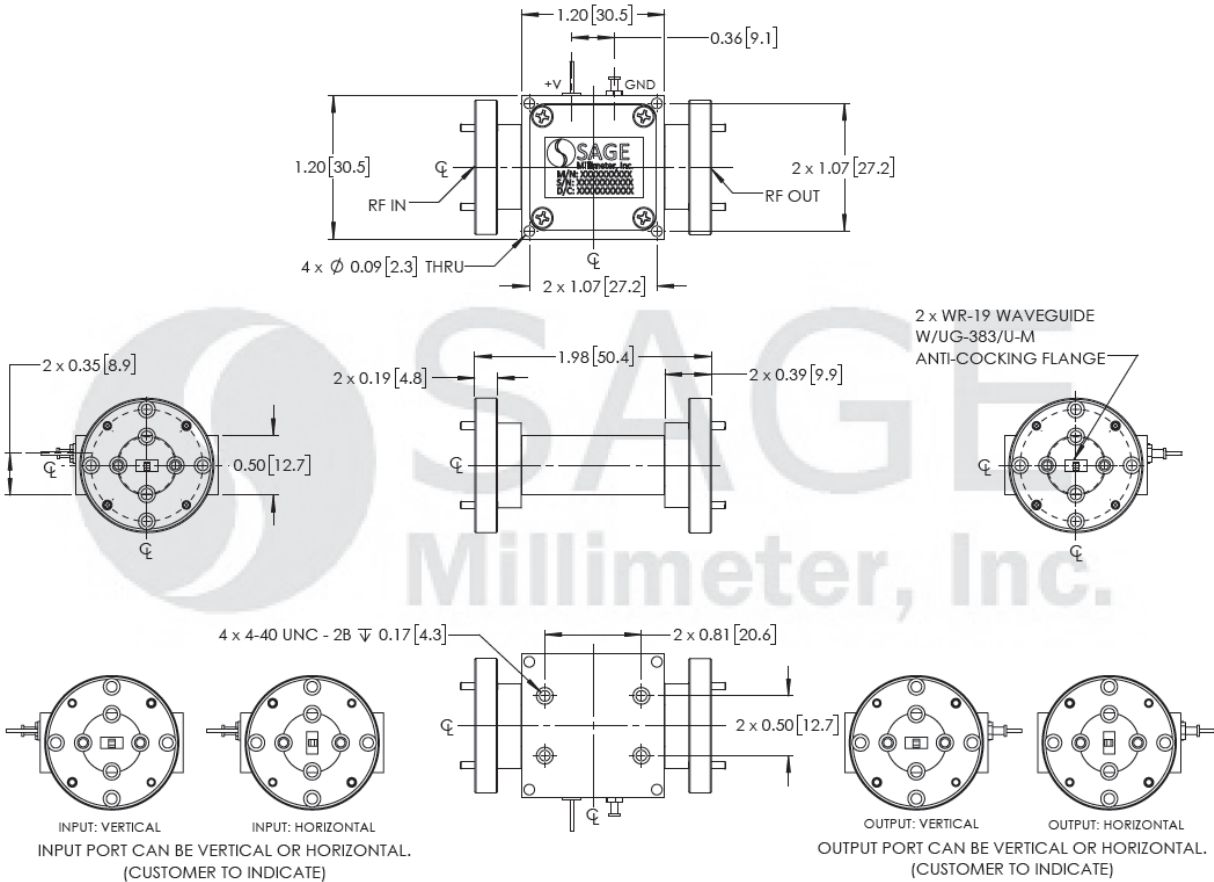
MAKING MILLIMETERWAVE ACCESSIBLE



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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 slightly from unit to unit.
- All testing is performed under +25 °C room temperature.
- The amplifier employs Eravant's trademarked and patent pending technology, the **Uni-Guide™**, as its waveguide interfaces. The orientation of the input and the output waveguides can be specified through corresponding model numbers. For example, the model number for a vertical input waveguide and horizontal output waveguide configuration would be **SBP-3735231530-1919H-E1** instead of the default **SBL-3735231530-1919-E1** which indicates vertical orientation for both input and output.
- 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.