



## D-Band Low Noise Amplifier, 110 to 170 GHz, 18 dB Gain, 6 dB NF

### Description:

**Model SBL-1141741860-0606-V1** is a D band low noise amplifier with a typical small signal gain of 18 dB and a nominal noise figure of 6.0 dB across the frequency range of 110 to 170 GHz. The DC power requirement for the amplifier is +3 V<sub>DC</sub>/60 mA. The input and output port configuration offers an inline structure with WR-06 waveguides and UG-387/U-M flanges. Other port configurations are available under different model numbers.



### Features:

- Full Waveguide Band Coverage
- State-of-the-Art Noise Figure
- Low Power Consumption

### Applications:

- D-Band Passive Imaging
- Communication Systems
- Radar Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		170 GHz
Gain		18 dB	
Noise Figure		6 dB	
P <sub>in</sub>			-25 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
DC Voltage		+3 V <sub>DC</sub>	+5 V <sub>DC</sub>
DC Supply Current		60 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

### Mechanical Specifications:

Item	Specification
Input	WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange
Output	WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Brass
Finish	Gold Plated
Weight	0.8 Oz
Size	1.34" (L) X 0.75" (W) X 0.75" (H)
Outline	BL-VD-1

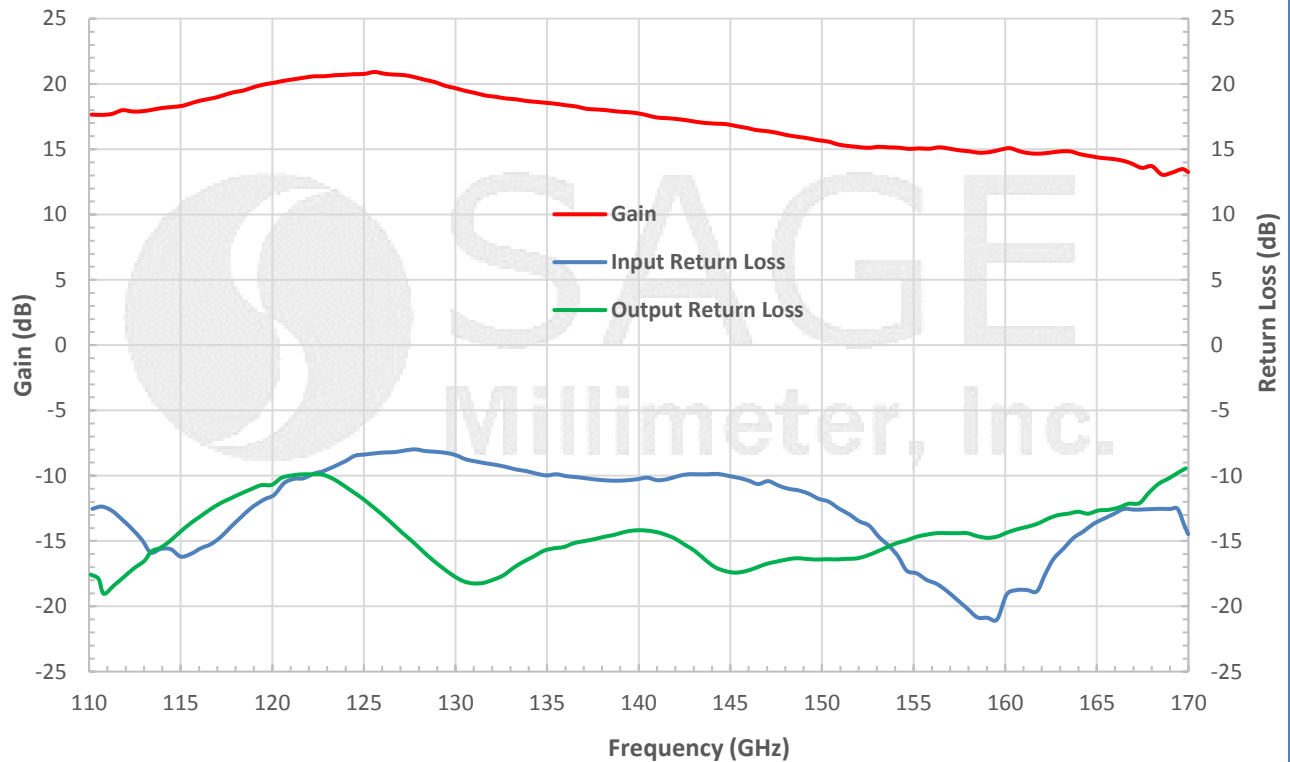




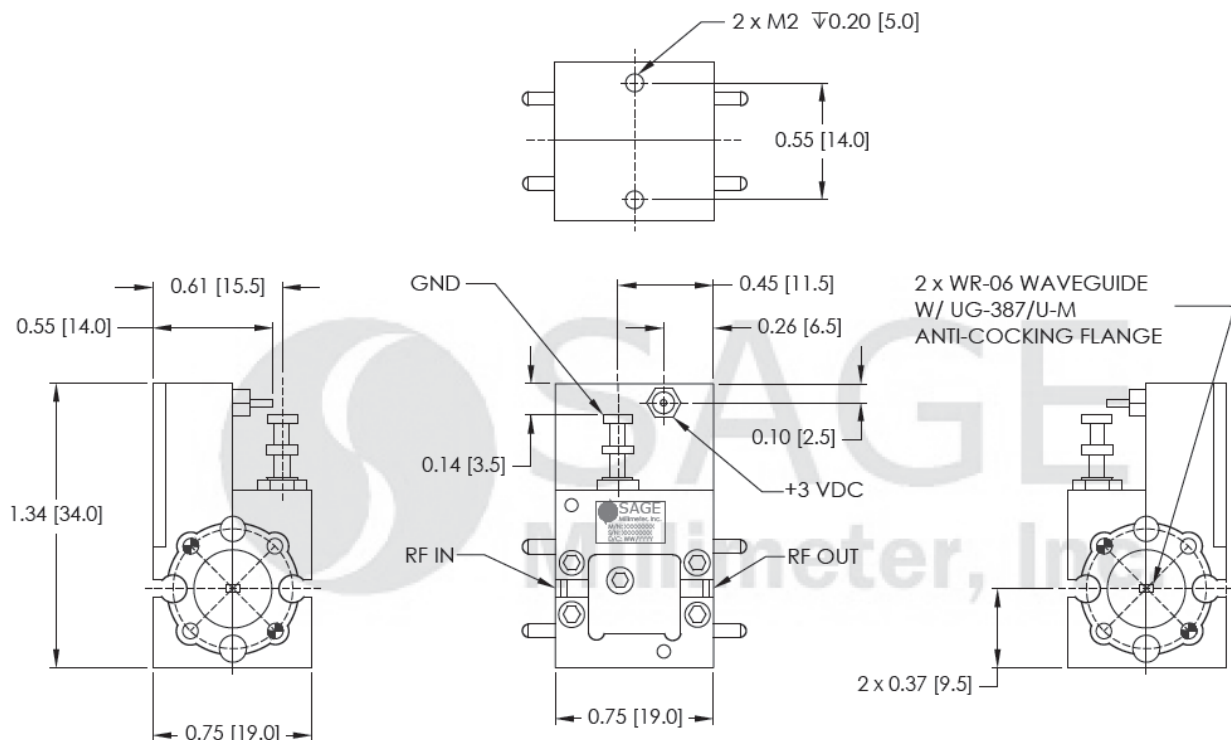
## D-Band Low Noise Amplifier, 110 to 170 GHz, 18 dB Gain, 6 dB NF

### Typical Performance vs. Frequency

Bias: +3V<sub>DC</sub>/60 mA



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



## D-Band Low Noise Amplifier, 110 to 170 GHz, 18 dB Gain, 6 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.

