



Ka-Band Low Noise Amplifier, 33 to 37 GHz, 36 dB Gain, 4 dB NF

Description:

Model SBL-3333733640-2828-S1-K is a low noise amplifier with a typical small signal gain of 36 dB and a nominal noise figure of 4 dB across the frequency range of 33 to 37 GHz. The DC power requirement for the amplifier is +8 V_{DC}/150 mA. The input and output port configurations are both WR-28 waveguides. Other port configurations, such as K connectors or WR-28 waveguides for either the input or output port, are also available under different model numbers.



Features:

- State-of-the-Art Noise Figure
- Good Gain Flatness
- Choke and Grooved Flange

Applications:

- Communication Systems
- Radar Systems
- Low Noise Receivers

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	33 GHz		37 GHz
Gain		36 dB	
Noise Figure		4.0 dB	
P _{1dB}		+12 dBm	
P _{in}			+15 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+8 V _{DC}	+15 V _{DC}
DC Supply Current		150 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	WR-28 Waveguide with UG-600-A/U Choke and Grooved Flange
Output Port	WR-28 Waveguide with UG-600-A/U Choke and Grooved Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.9 Oz
Size	2.25" (L) X 1.20" (W) X 0.50" (H)
Outline	BG-SA-1-H-2

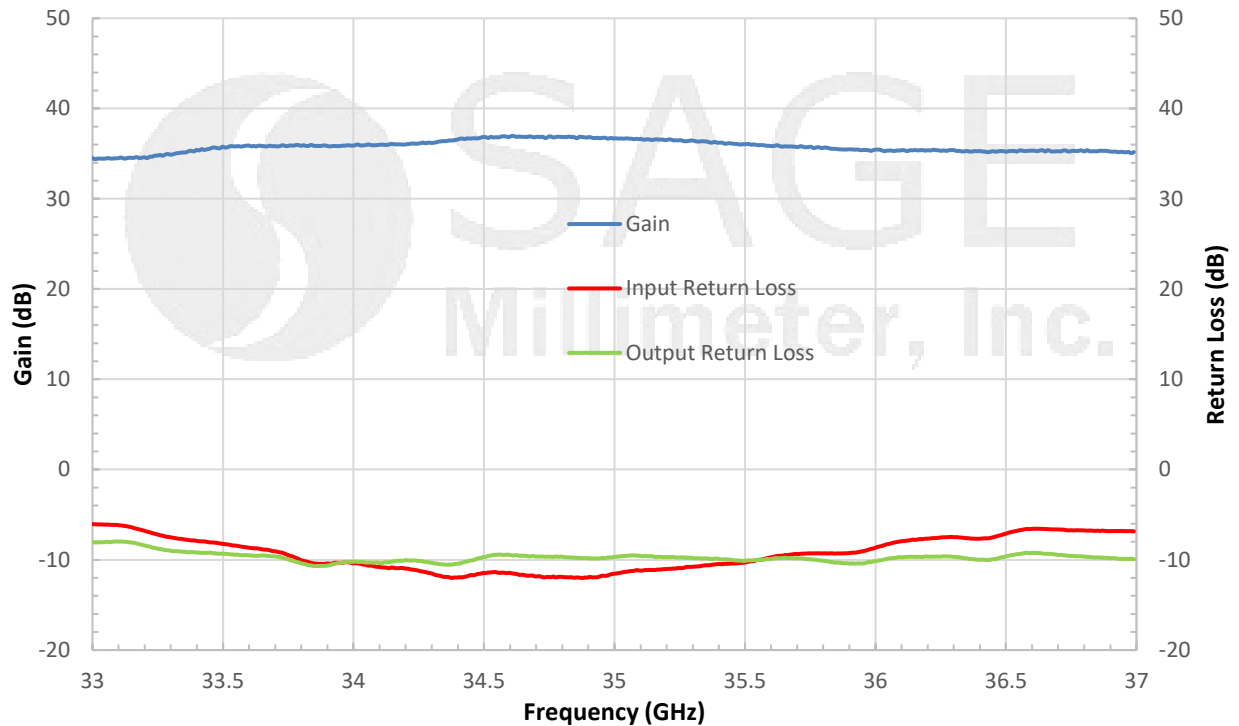




Ka-Band Low Noise Amplifier, 33 to 37 GHz, 36 dB Gain, 4 dB NF

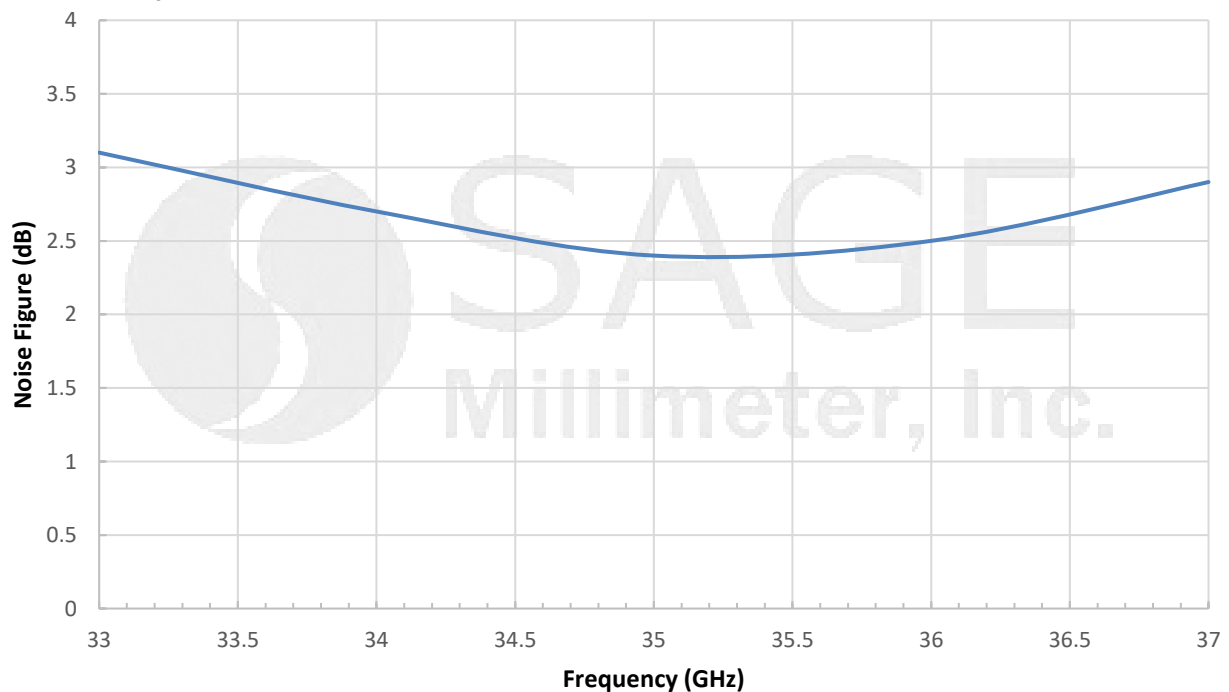
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/164 mA



Typical Noise Figure vs. Frequency

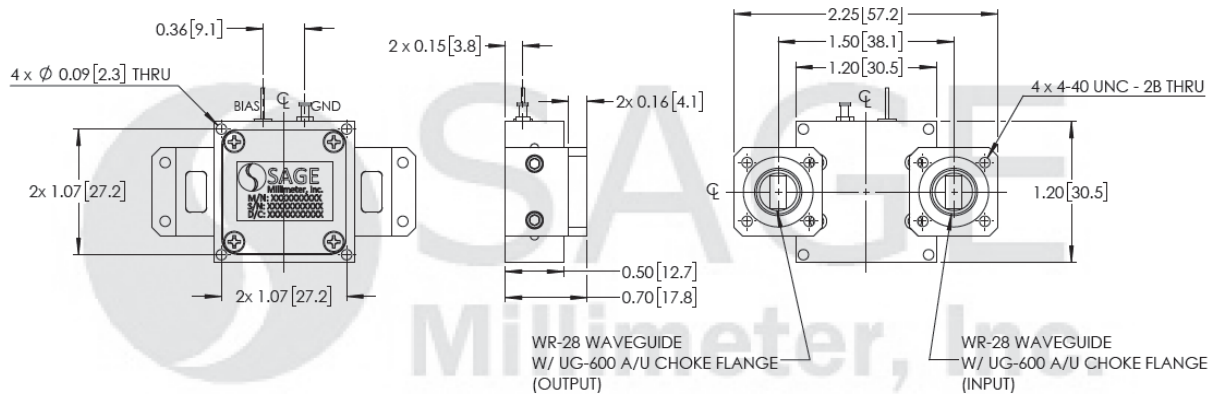
Bias: +8 V_{DC}/164 mA





Ka-Band Low Noise Amplifier, 33 to 37 GHz, 36 dB Gain, 4 dB NF

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.

