



Ka-Band Low Noise Amplifier, 26.5 to 40.0 GHz, 30 dB Gain, 3.0 NF

Description:

Model SBL-2634033030-KF28-S1 is Ka band low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 3.0 dB across the frequency range of 26.5 to 40 GHz. The DC power requirement for the amplifier is +8 V_{DC}/150 mA. The input port configuration is female K connector and the output port is a WR-28 waveguide with UG-599/U flange. Other port configurations are available under different model numbers.



Features:

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

Applications:

- 5G Systems Application
- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	26.5 GHz		40.0 GHz
Gain		30 dB	
Noise Figure		3.0 dB	
P _{1dB}		+10 dBm	
P _{in}			-15 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V _{DC}	+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	K (F) Connector
Output Port	WR-28 Waveguide with UG-599/U Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.5 Oz
Size	1.70" (L) X 1.20" (W) X 0.50" (H)
Outline	BG-SA-1CW



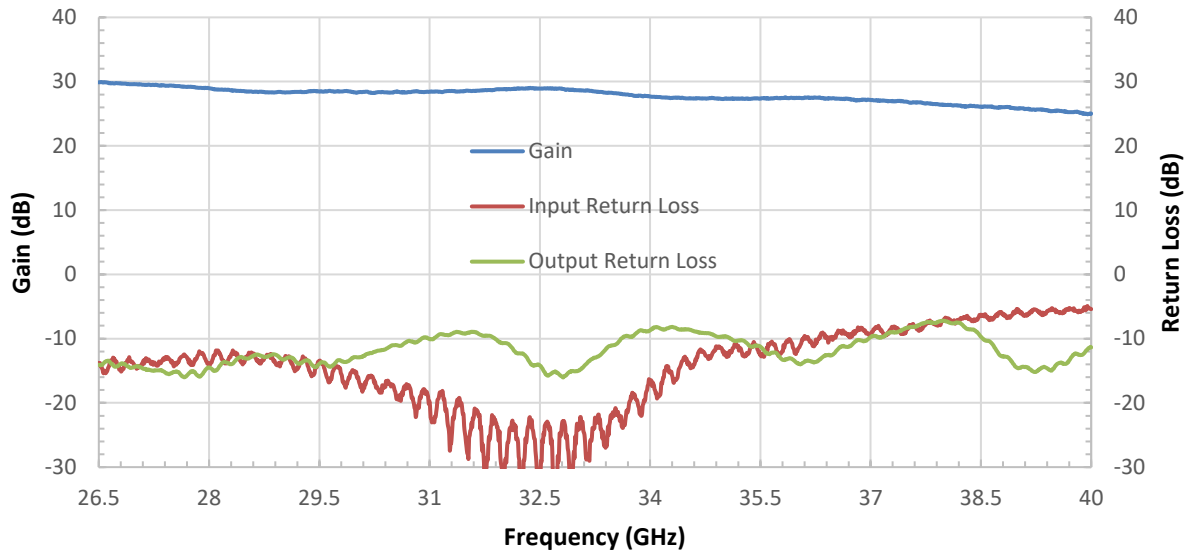


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Test Data:

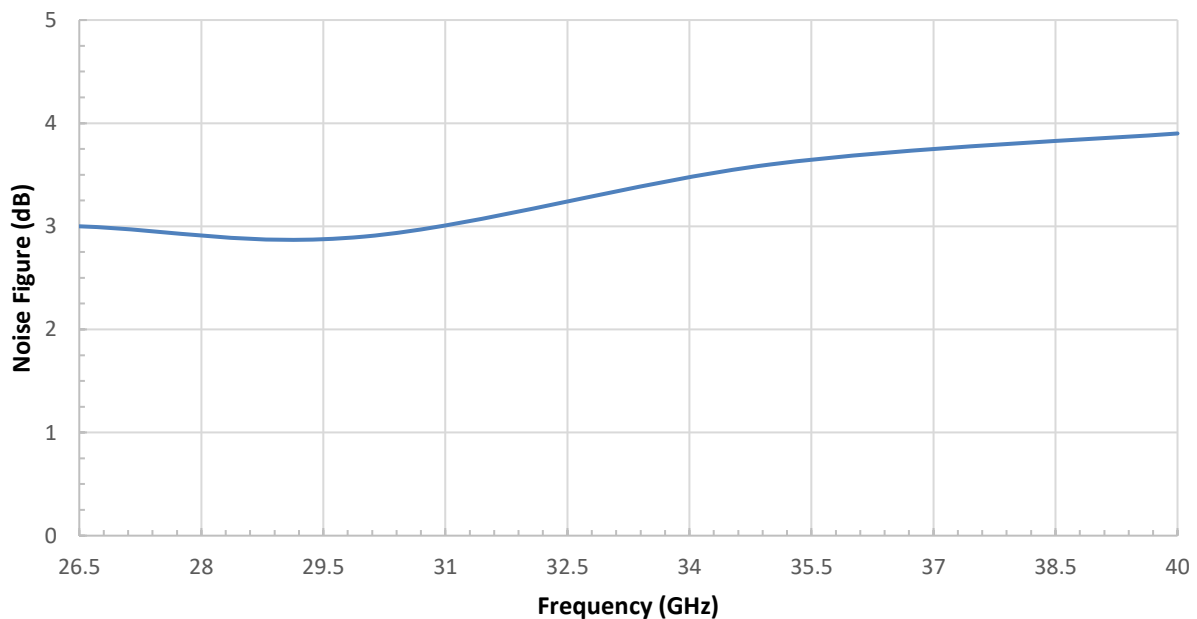
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/150 mA



Noise Figure vs. Frequency

Bias: +8V_{DC}/150 mA

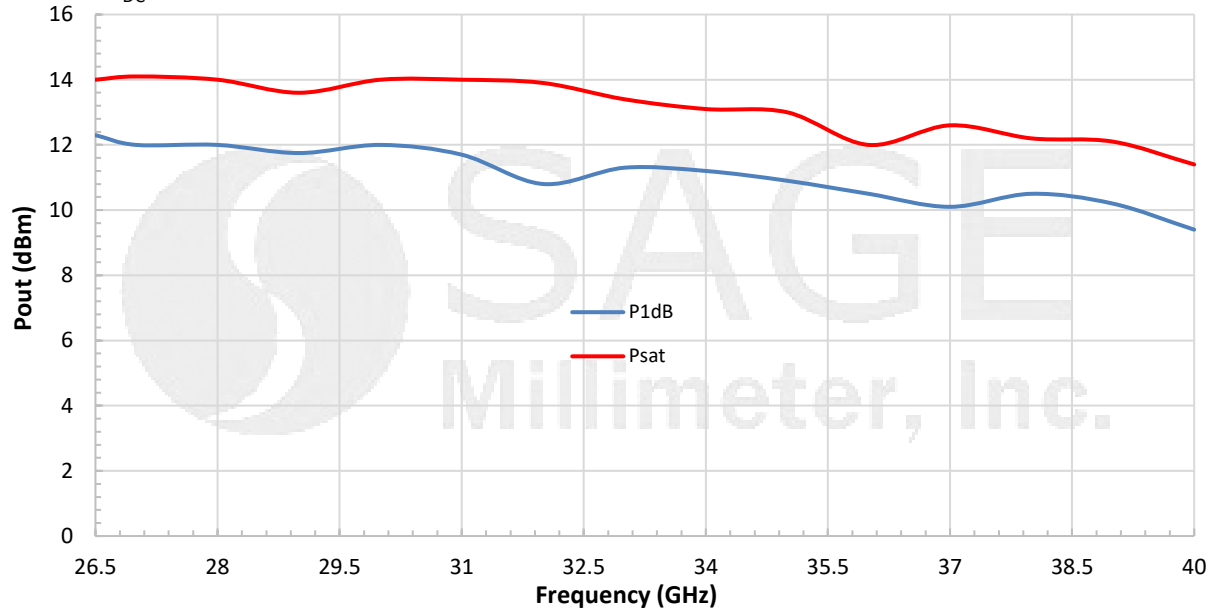




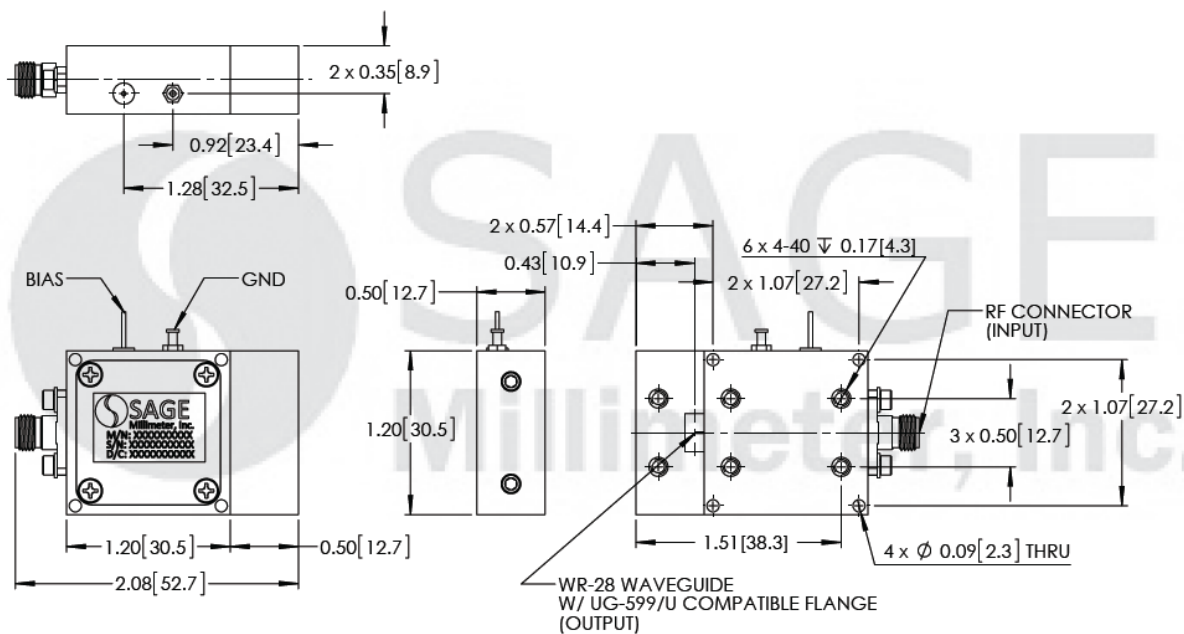
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Output Power vs. Frequency

Bias: +8 V_{DC}/150 mA



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



Note:



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- 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.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

