



## Low Noise Amplifier, 18 to 40 GHz, 40 dB Gain, 3 dB NF

### Description:

**Model SBL-1834034030-KFKF-S1** is a low noise amplifier with a typical small signal gain of 40 dB and a nominal noise figure of 3 dB across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +8 V<sub>DC</sub>/200 mA. The input and output port configurations are both female K connectors. Other port configurations are available under different model numbers.



### Features:

- Broadband Operation
- State-of-the-Art Noise Figure
- High Gain and Good Gain Flatness

### Applications:

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

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18 GHz		40.0 GHz
Gain		40 dB	
Noise Figure		3 dB	
P <sub>in</sub>			-20 dBm
Output P <sub>1dB</sub>		+10 dBm	
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+5.5 V <sub>DC</sub>	+8 V <sub>DC</sub>	+15 V <sub>DC</sub>
DC Supply Current		200 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

### Mechanical Specifications:

Item	Specification
Input Port	K(F)
Output Port	K(F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.20" (W) X 1.20" (L) X 0.50" (H)
Outline	BG-SC-1

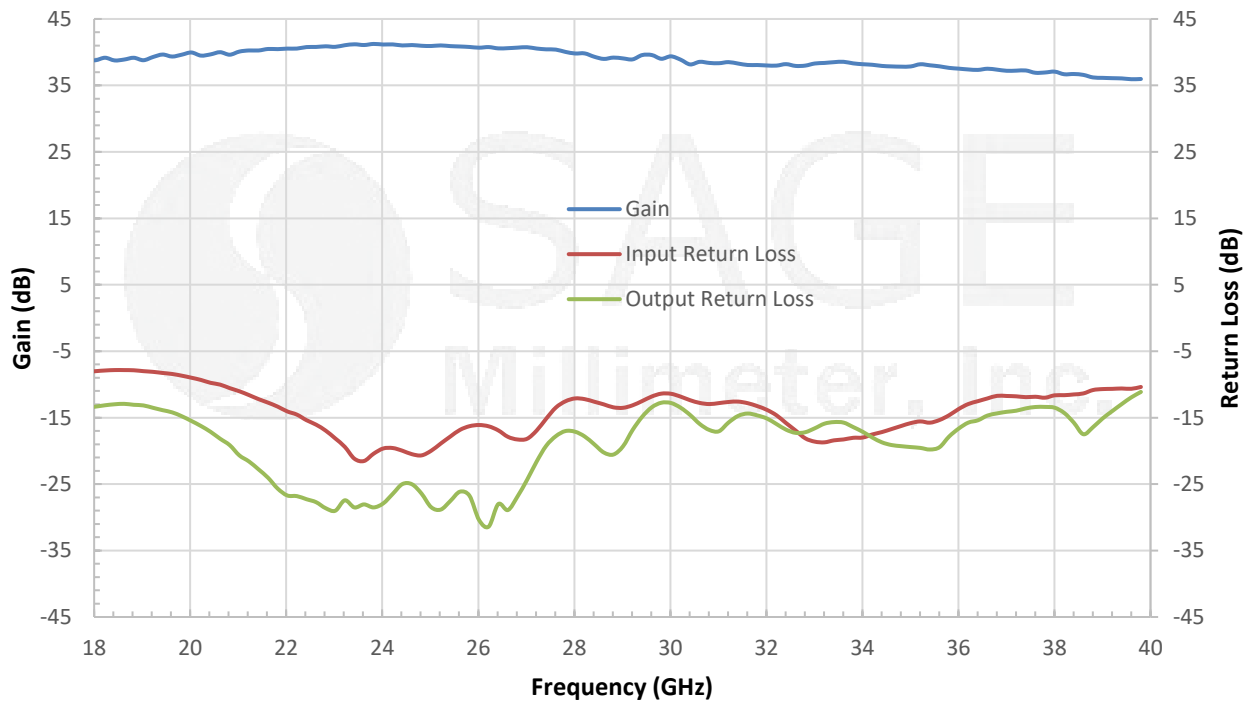




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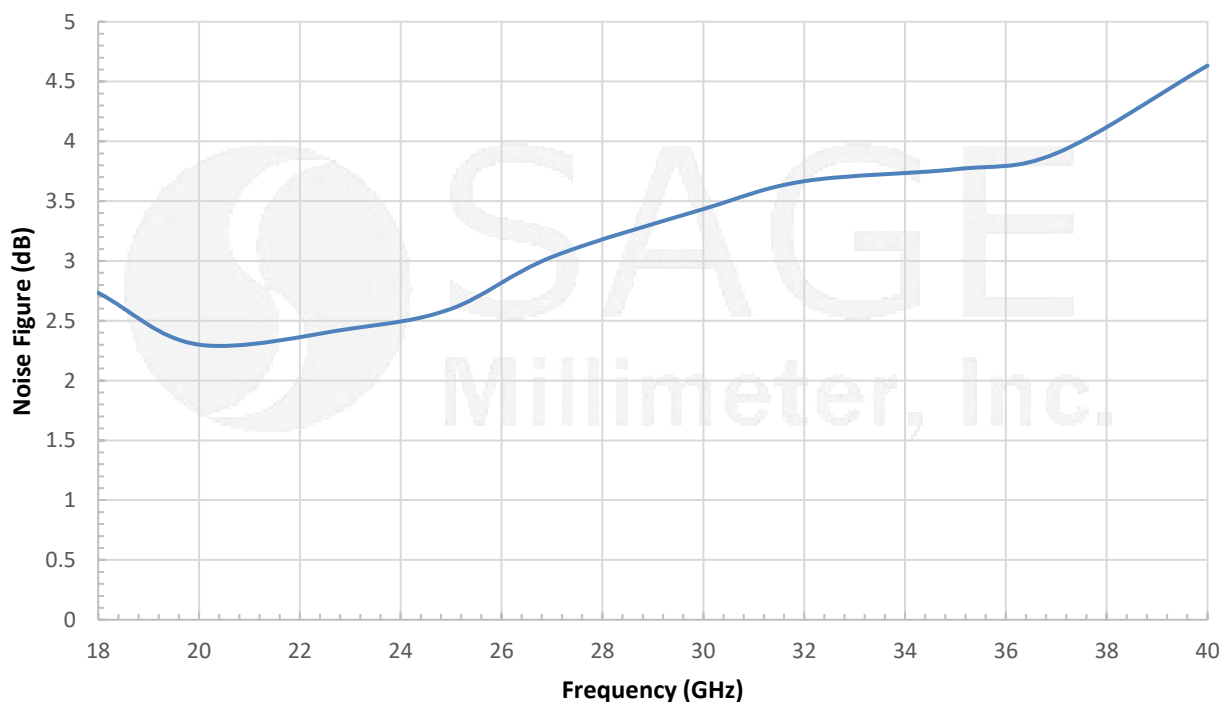
### Typical Gain and Return Loss vs. Frequency

Bias: +8 V<sub>DC</sub>/198 mA



### Typical Noise Figure vs. Frequency

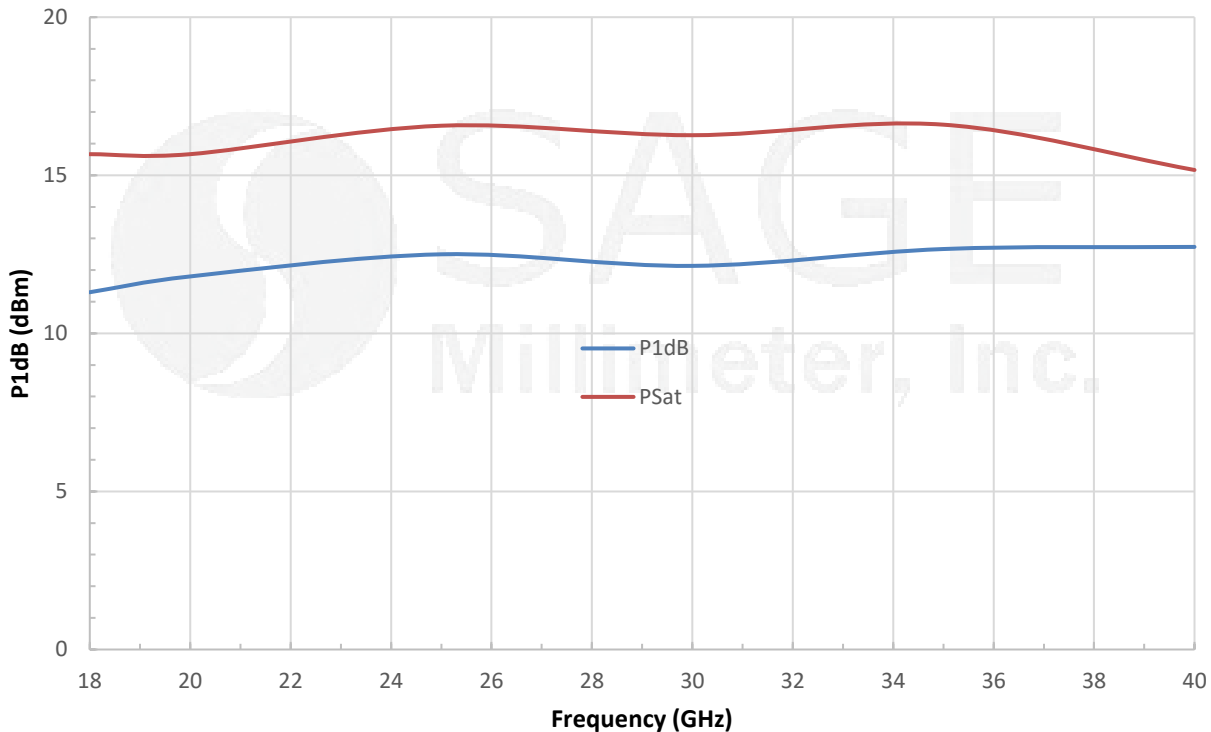
Bias: +8V<sub>DC</sub>/198 mA



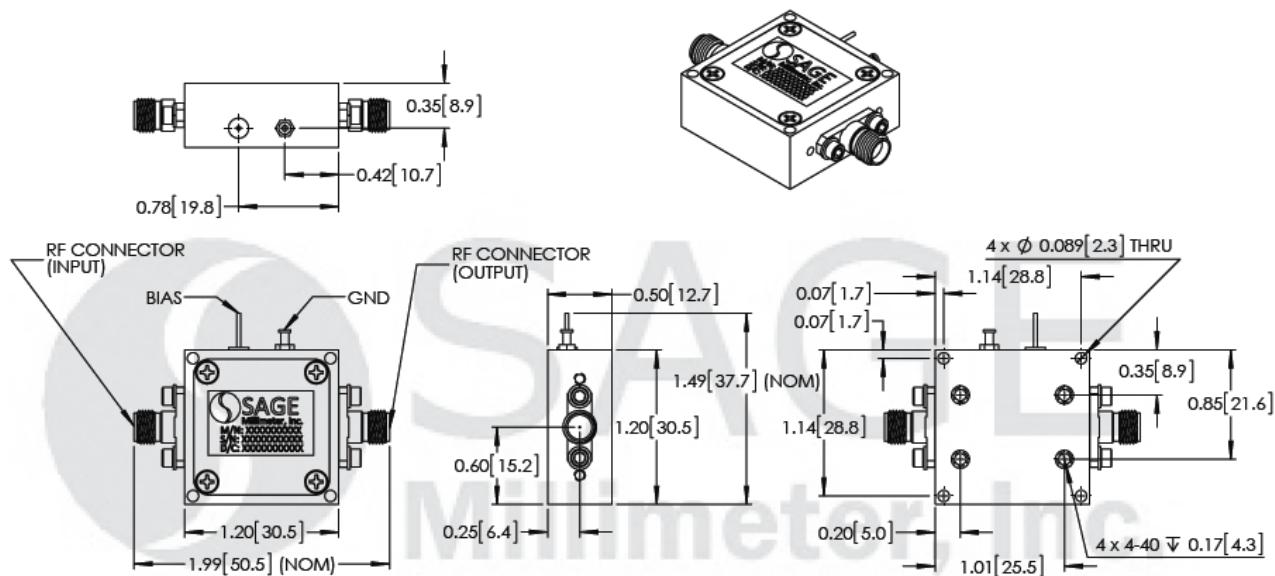
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### Typical Output Power vs. Frequency

Bias: +8V<sub>DC</sub>/198 mA



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





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

