



## K Band Low Noise Amplifier, 18 to 26.5 GHz, 50 dB Gain, 2.5 dB NF

### Description:

**Model STB-1832735025-KF2F-L1** is a broadband benchtop low noise amplifier with a typical small signal gain of 50 dB and a nominal noise figure of 2.5 dB across the frequency range of 18 to 26.5 GHz. The power supply required is a single phase AC voltage in the range of 100 to 240 V<sub>AC</sub>, which can be supplied by wall outlet. The LED light helps to indicate the working status of the amplifier. The input connector is 2.92 mm (F) connector and the output is a 2.4mm (F) connector.



### Features:

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

### Applications:

- Low Noise Receivers
- Radar Systems
- Communication Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18.0 GHz		26.5 GHz
Gain		50 dB	
Noise Figure		2.5 dB	4.0 dB
*P <sub>1dB</sub>	+10 dBm	+15 dBm	
P <sub>in</sub>			+20 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
Power Supply (AC Adapter Provided)	100 V <sub>AC</sub>		240 V <sub>AC</sub>
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

\*The P1dB figure provided is for reference only and will not be tested or guaranteed.

### Mechanical Specifications:

Item	Specification
Input Port	2.92 mm (K) Female
Output Port	2.4 mm Female
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
DC Bias Switch	On-Off Rocker Switch with Indicator Light
Enclosure Material	Extruded Aluminum
Finish	Black Anodized
Weight	1.5 lbs
Size	6.23" (W) x 5.51" (L) x 3.58" (H)
Outline	TB-SC

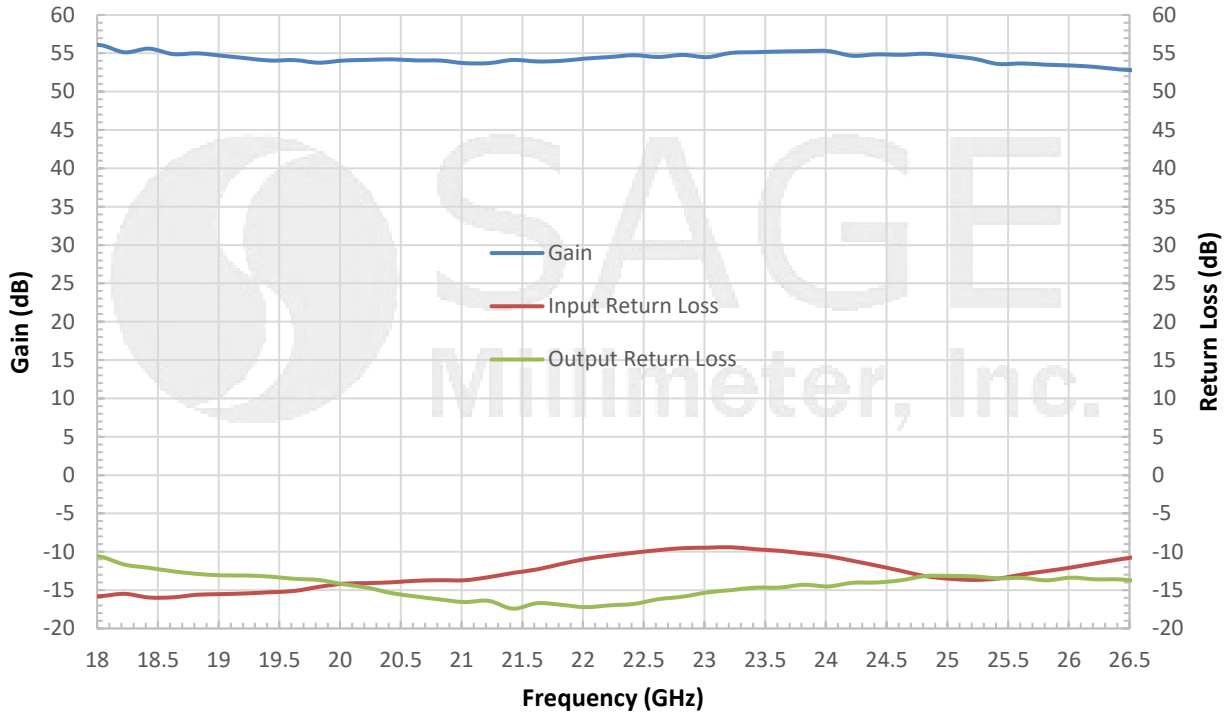




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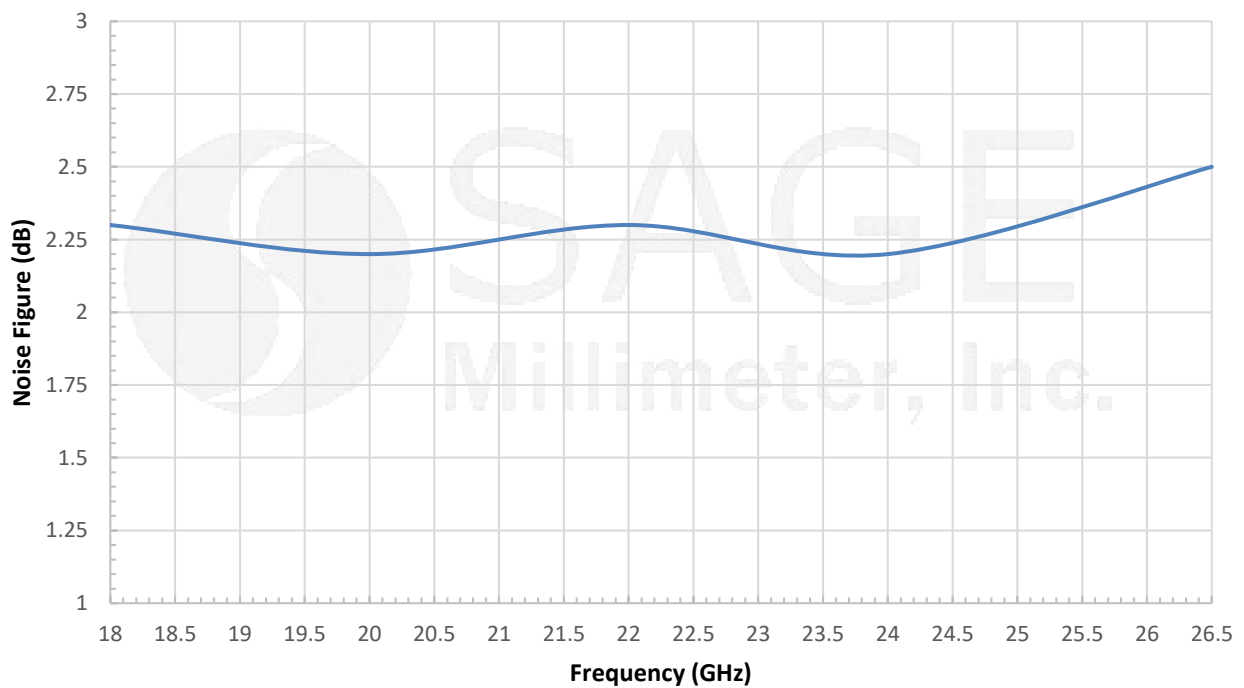
### Typical Gain and Return Loss vs. Frequency

Bias: +8 V<sub>DC</sub>/230 mA



### Typical Noise Figure vs. Frequency

Bias: +8 V<sub>DC</sub>/230 mA

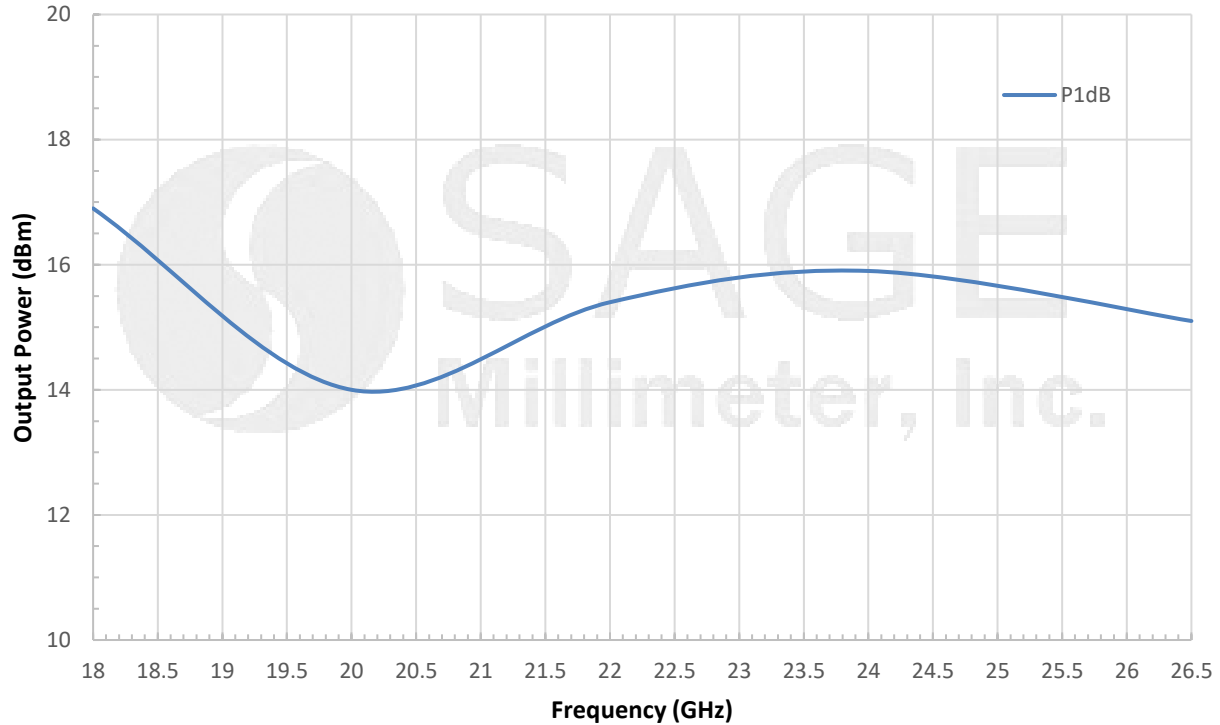




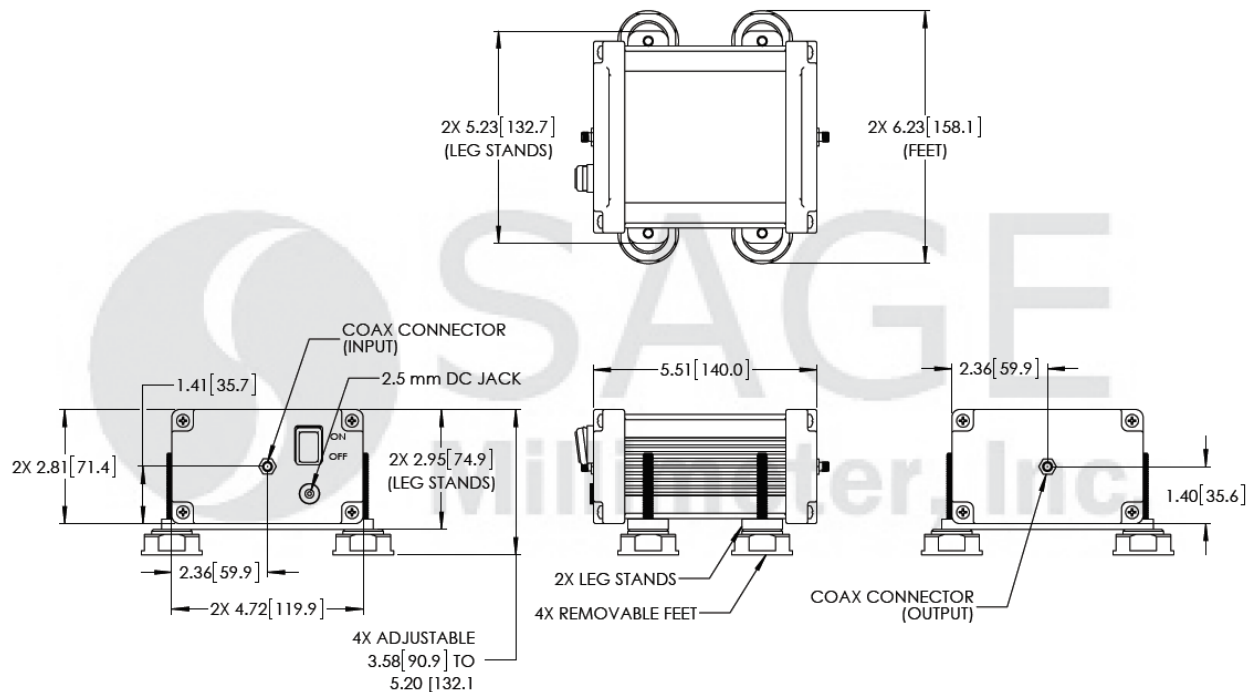
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### Typical P1dB vs. Frequency

Bias: +8 V<sub>DC</sub>/230 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.**

