



## K-Band Power Amplifier, 18 to 26.5 GHz, 30 dB Gain, +30 dBm P<sub>1dB</sub>

### Description:

**Model SBP-1832733030-KFKF-S1** is a power amplifier with a typical small signal gain of 30 dB and a nominal P<sub>1dB</sub> of +30 dBm across the frequency range of 18 to 26.5 GHz. The amplifier exhibits high output power and 10 dB typical input and output return loss. The DC power requirement for the amplifier is +8 V<sub>DC</sub>/1,500 mA. The RF connectors are female K connectors. Other port configurations, such as male K connectors and WR-42 waveguides for either the input or output port, are also available under different model numbers.



### Features:

- Full Waveguide Band Coverage
- High Output Power
- Extreme Gain Flatness

### Applications:

- Radar Systems
- Communication Systems
- Test Equipment

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18.0 GHz		26.5 GHz
Gain		30 dB	
P <sub>1dB</sub>		+30 dBm	
P <sub>sat</sub>		+32 dBm	
P <sub>in</sub>			+20 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+7.5 V <sub>DC</sub>	+8.0 V <sub>DC</sub>	+15.0 V <sub>DC</sub>
DC Supply Current		1,500 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



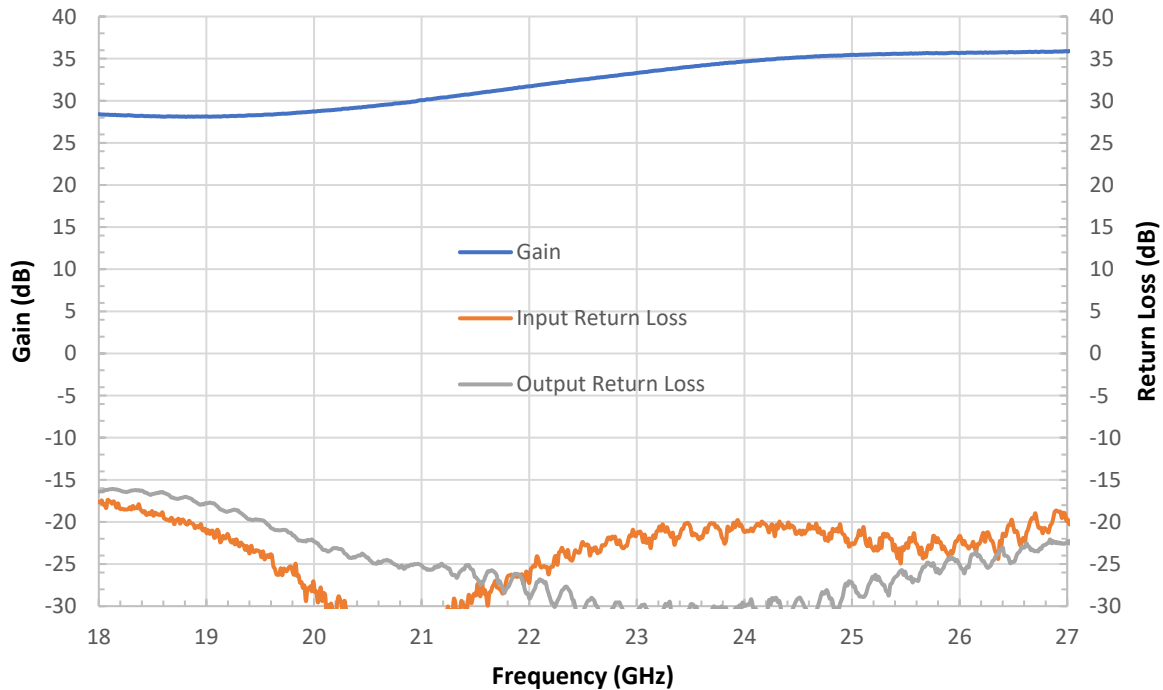


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### Test Data:

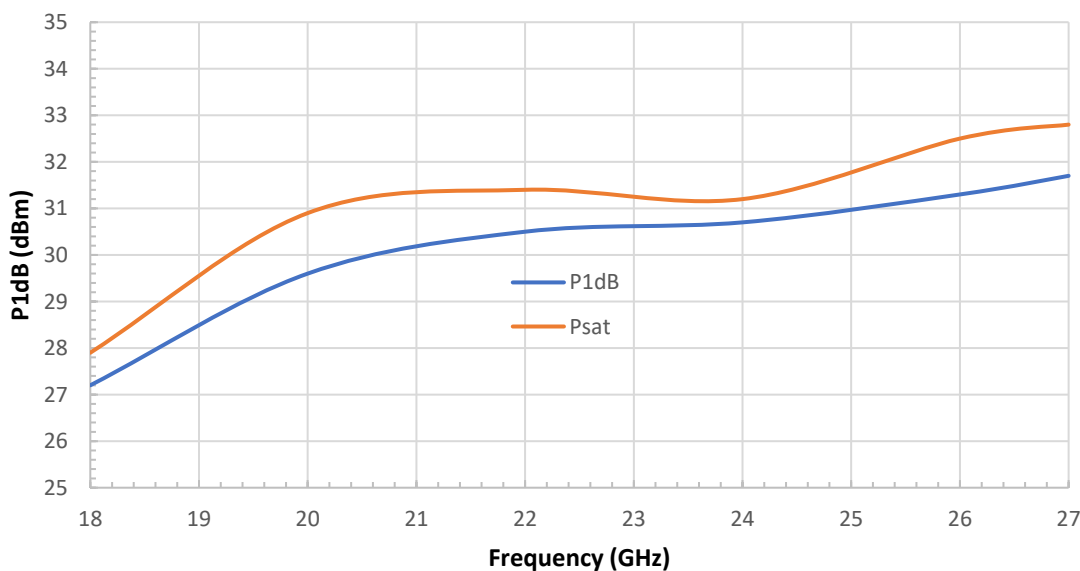
#### Gain and Return Loss vs. Frequency

Bias: +8 V<sub>DC</sub>/1.4 A



#### Output Power vs. Frequency

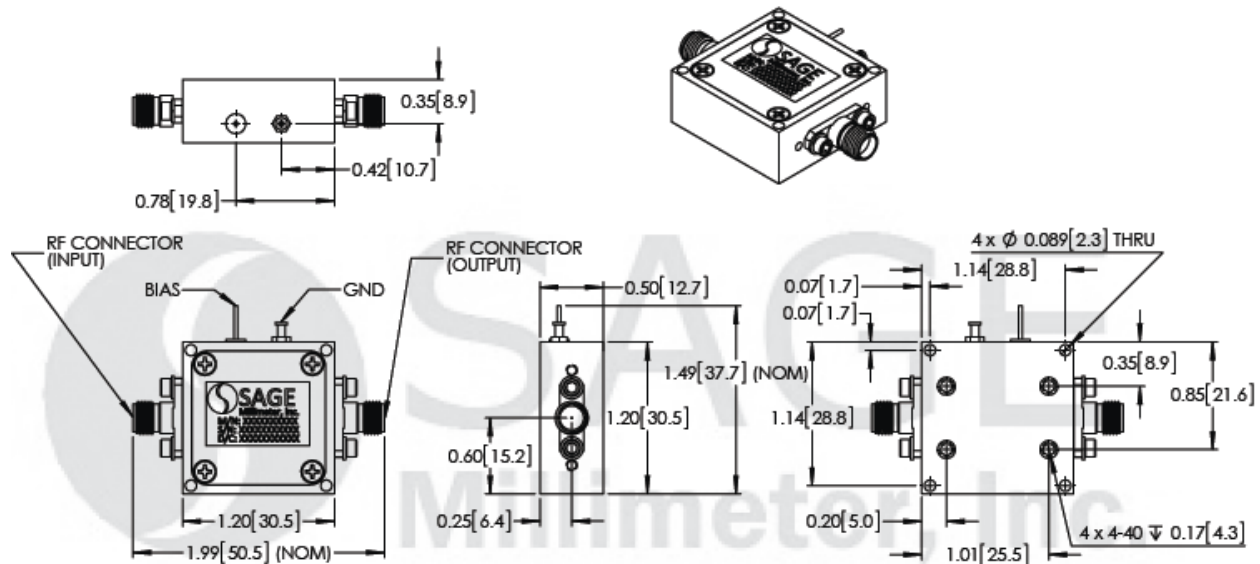
RF saturation: +8 Vdc/2.3 A





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**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.
- 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.**

