



## Power Amplifier, 23 to 35 GHz, 40 dB Gain, +28 dBm P<sub>1dB</sub>

### Description:

**Model SBP-2333534028-KFKF-E3** is a power amplifier with a typical small signal gain of 40 dB and a nominal P<sub>1dB</sub> of +28 dBm across the frequency range of 23 to 35 GHz. The DC power requirement for the amplifier is typically +12 V<sub>DC</sub>/2100 mA. Both input and output ports are 2.92 mm K female connectors. Other port configurations are also available under different model numbers.



### Features:

- Broadband Performance
- High Gain
- High Output Power

### Applications:

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

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	23 GHz		35 GHz
Gain		40 dB	
Noise Figure		7 dB	
P <sub>1dB</sub>		+28 dBm	
P <sub>sat</sub>		+30 dBm	
P <sub>in</sub>			+10 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V <sub>DC</sub>	+12 V <sub>DC</sub>	
DC Supply Current		2100 mA	
Specification Temperature		+25 °C	
Case Temperature	0 °C		+50 °C

### Mechanical Specifications:

Item	Specification
Input Port	2.92 mm K(F)
Output Port	2.92 mm K(F)
Bias Port	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	7.05 Oz
Size	1.97" (L) X 1.77" (W) X 0.47" (H)
Outline	BB-ZC-1

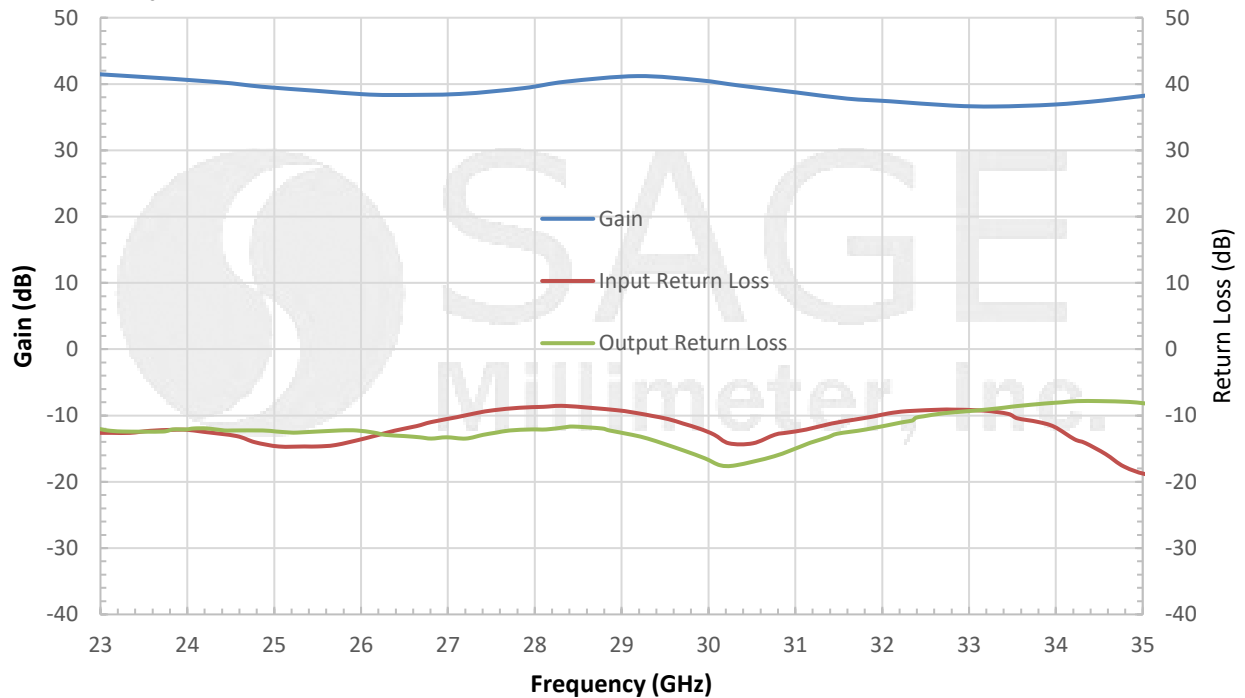




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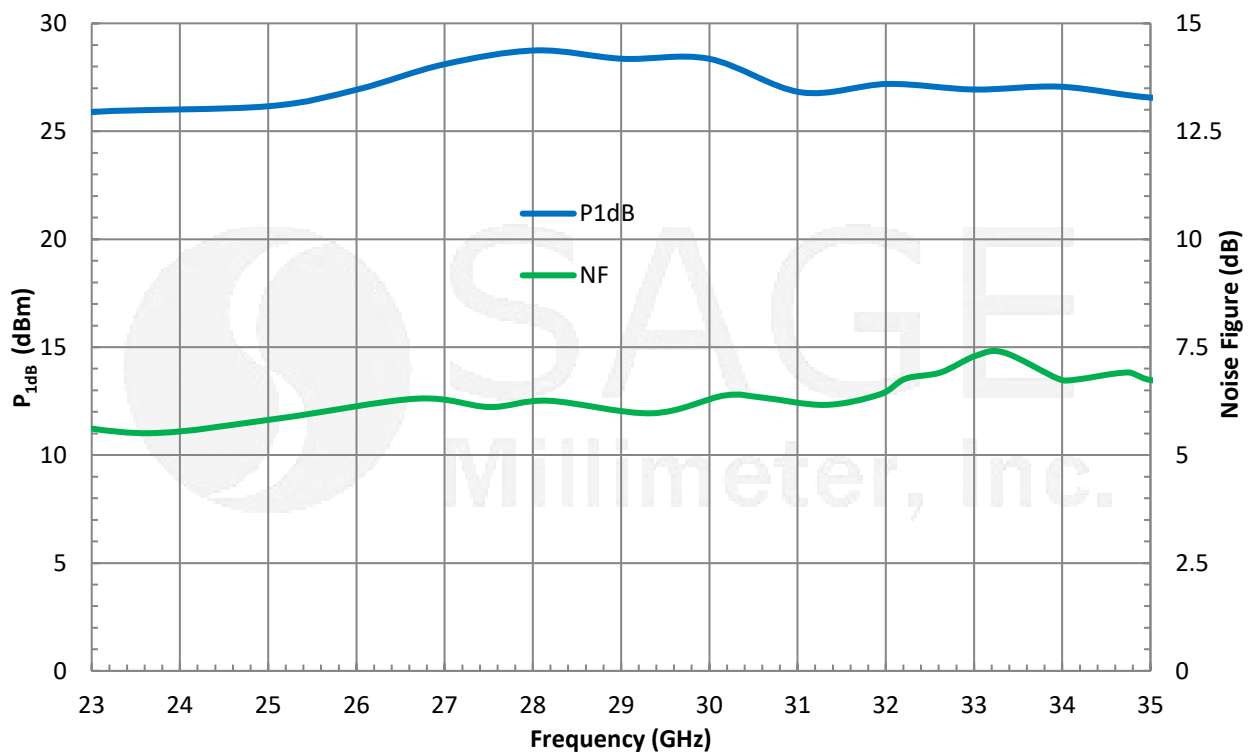
### Typical Gain and Return Loss vs. Frequency

Bias: +12 V<sub>DC</sub> / 2,100 mA



### Typical P<sub>1dB</sub> and Noise Figure vs. Frequency

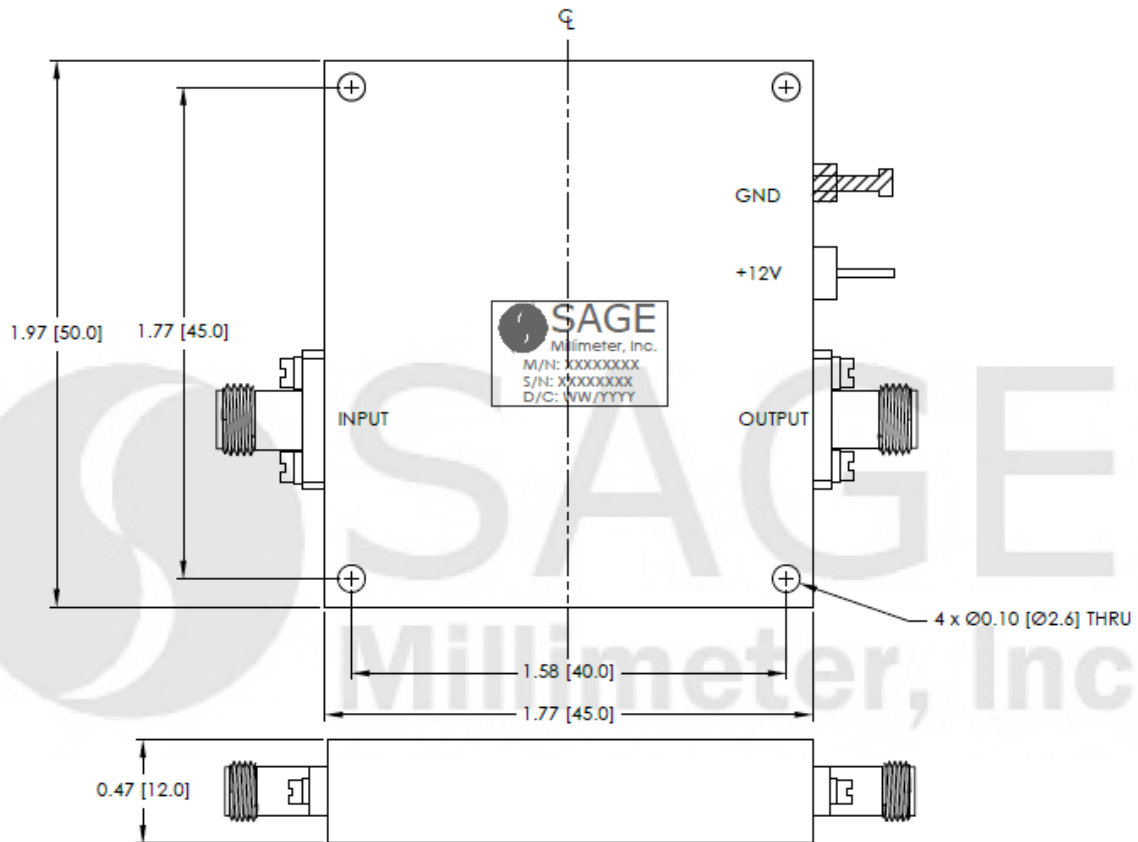
Bias: +12 V<sub>DC</sub>/2,300 mA





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



### Notes:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- 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.**

