



Broadband Power Amplifier, 26 to 46 GHz, 40 dB Gain, +23 dBm P_{1dB}

Description:

Model SBP-2634634023-2F2F-S1 is a broadband power amplifier with a typical small signal gain of 40 dB and a nominal P_{1dB} of +23 dBm across the frequency range of 26 to 46 GHz. The DC power requirement for the amplifier is +8 V_{DC}/1,100 mA. The RF connectors are female 2.4 mm connectors. Other port configurations, such as male 2.4 mm connectors for either the input or output port, are also available under different model numbers. The power amplifier requires a heatsink.



Features:

- Broadband Performance
- High Gain
- High Output Power
- Good Power and Gain Flatness

Applications:

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

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	26 GHz		46 GHz
Gain		40 dB	
P _{1dB}		+23 dBm	
P _{SAT}		+26 dBm	
P _{in}			+15 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+8 V _{DC}	+9 V _{DC}
DC Supply Current		1,100 mA	
Specification Temperature		+25 °C	
Case Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	2.4 mm (F)
Output Port	2.4 mm (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

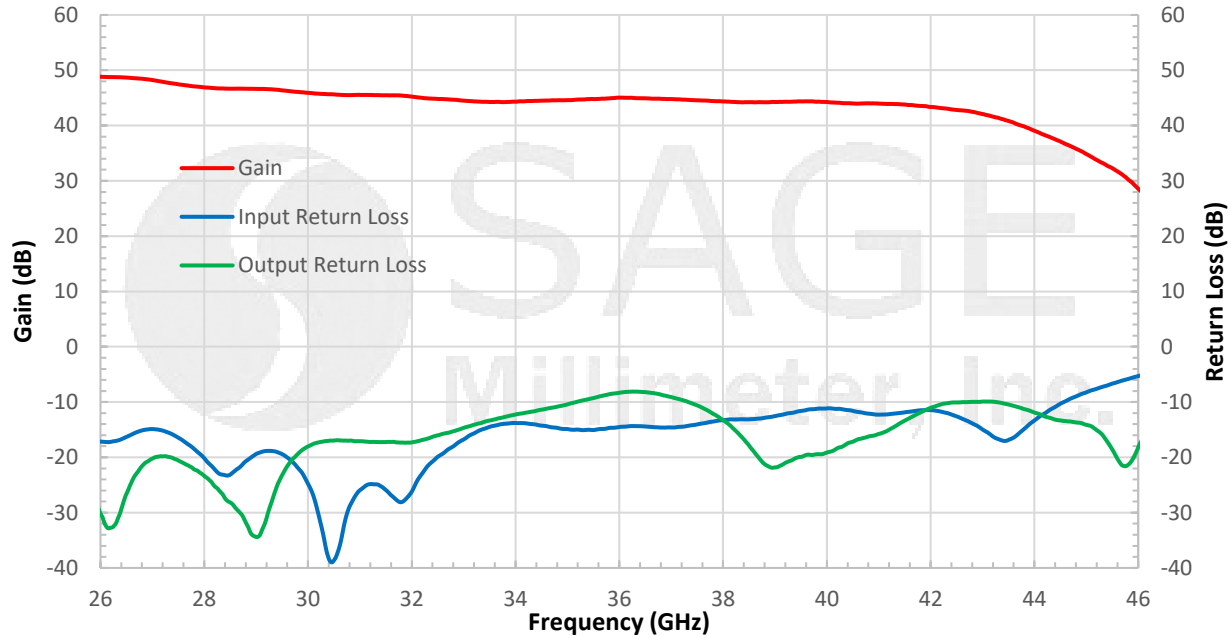




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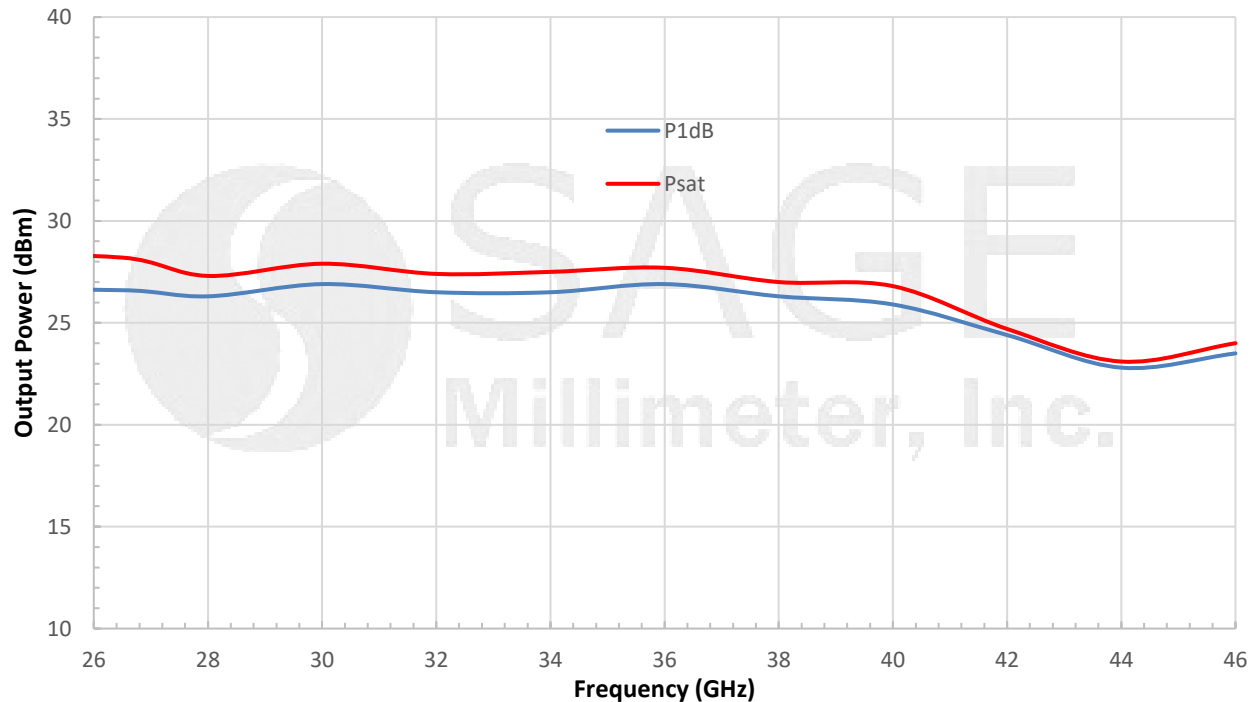
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/1.2 A



Typical Output P_{1dB} and Psat vs. Frequency

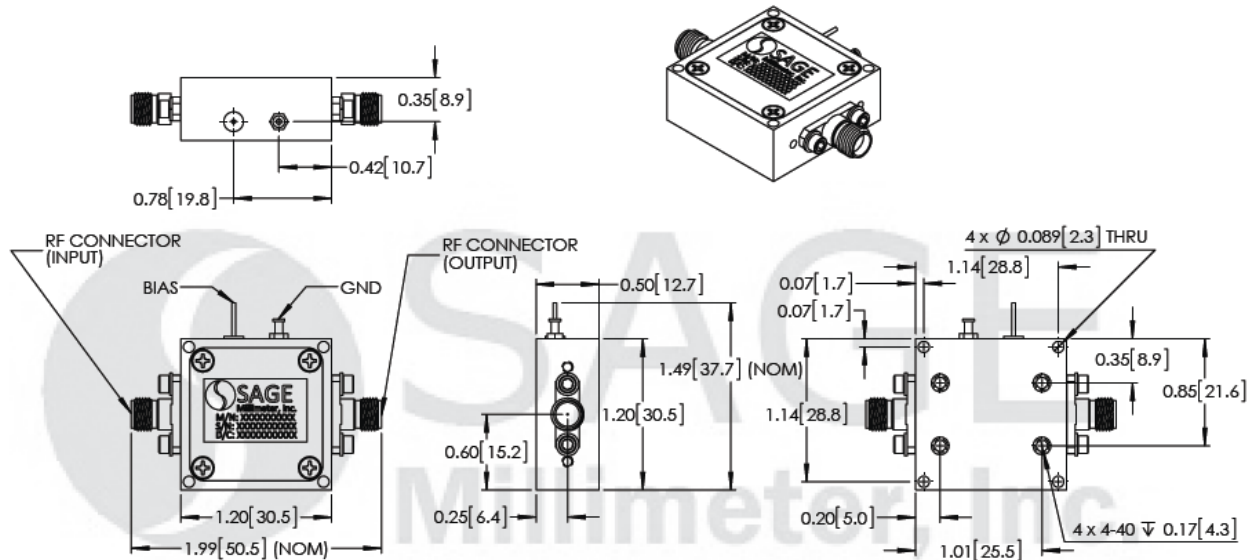
Bias: +8 V_{DC}/1,300 mA





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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.
- Exceeding the maximum bias voltage of **+9 V_{DC}** will cause amplifier overheating and result the instability.
- 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.**

