



Ka-Band Power Amplifier, 20 to 44 GHz, 35 dB Gain, +26 dBm P_{1dB}

Description:

Model **SBP-2034433526-2F2F-S1** is a Ka band power amplifier with a typical small signal gain of 35 dB and a nominal P_{1dB} of +26 dBm across the frequency range of 20 to 44 GHz. The DC power requirement for the amplifier is +8 V_{DC}/800 mA. The RF connectors are female 2.4 mm connectors. Other port configurations, such as male K connectors for either the input or output port, are also available under different model numbers. The power amplifier requires a heatsink.



Features:

- 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	20 GHz		44 GHz
Gain		35 dB	
P _{1dB}	+24 dBm	+26 dBm	
P _{SAT}		+27 dBm	
P _{in}			+20 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+8 V _{DC}	+12 V _{DC}
DC Supply Current		800 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	2.4 mm Female Connector
Output Port	2.4 mm Female Connector
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

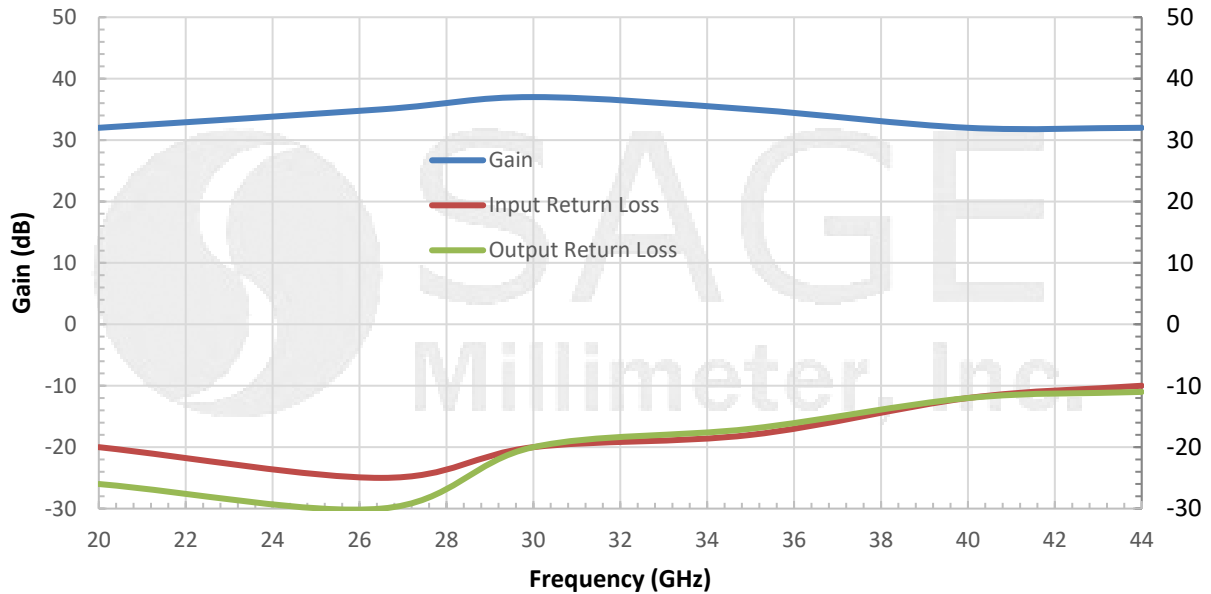




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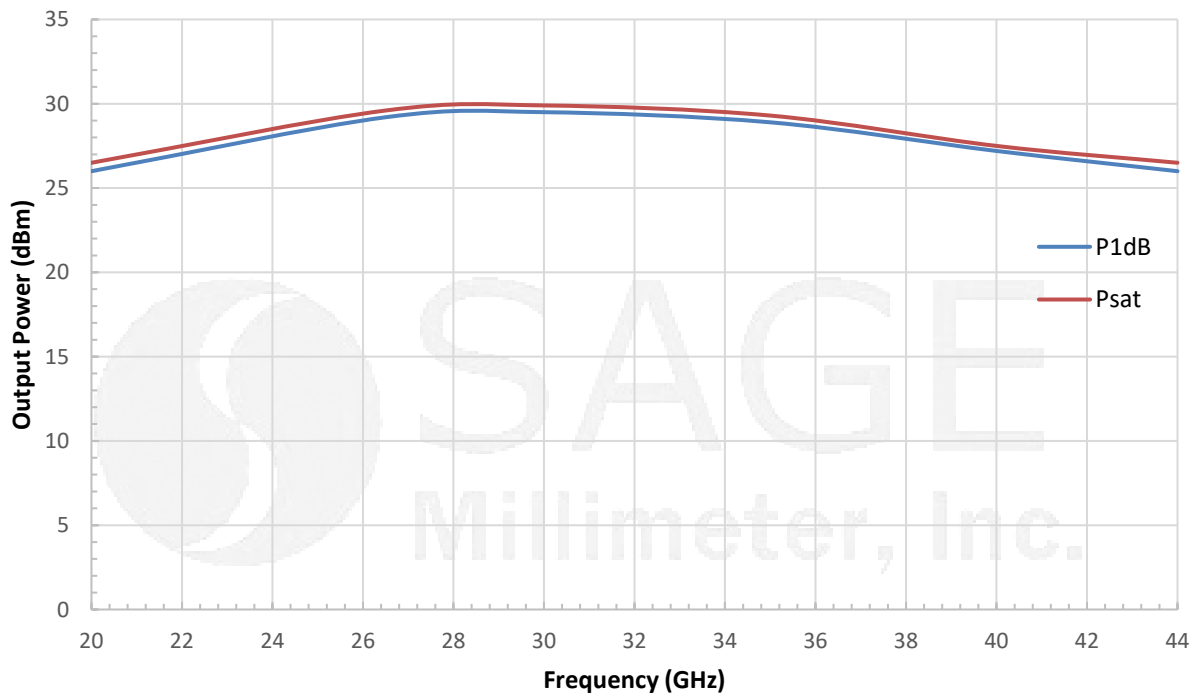
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/875 mA



Output Power vs. Frequency

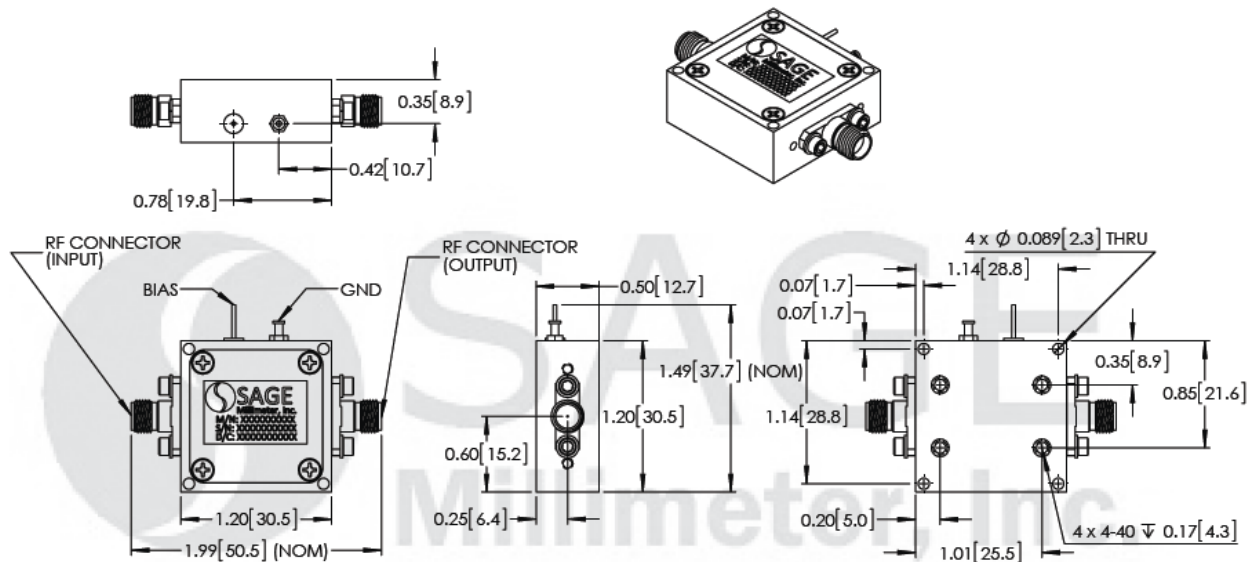
Bias: +8 V_{DC}/1.3 A





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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.
- Eravant 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 **+12 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. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

