



Coaxial Low Noise Amplifier, 20 to 44 GHz, 30 dB Gain, 4 dB NF

Description:

Model SBL-2034433040-2F2F-S1 is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 4.0 dB across the frequency range of 20 to 44 GHz. The DC power requirement for the amplifier is +8 V_{DC}/160 mA. The mechanical configuration offers an inline structure with 2.4 mm female connectors. Other port configurations, such as male 1.85 mm connectors for either the input or output port, are also available under different model numbers.



Features:

- 5G Band Coverage
- State-of-the-Art Noise Figure
- Good Gain Flatness

Applications:

- Radar Systems
- Communication Systems
- Low Noise Receivers

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	20 GHz		44 GHz
Gain		30 dB	
Noise Figure		4.0 dB	
P _{in}			+15 dBm
P _{1dB}		12 dBm	
Input Return Loss		10 dB	
Output Return Loss		7 dB	
DC Voltage	+6 V _{DC}	+8 V _{DC}	+15 V _{DC}
DC Supply Current		160 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input	2.4 mm Female
Output	2.4 mm Female
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.20" (W) 1.20" (L) X 0.50" (H)
Outline	BG-SC-1

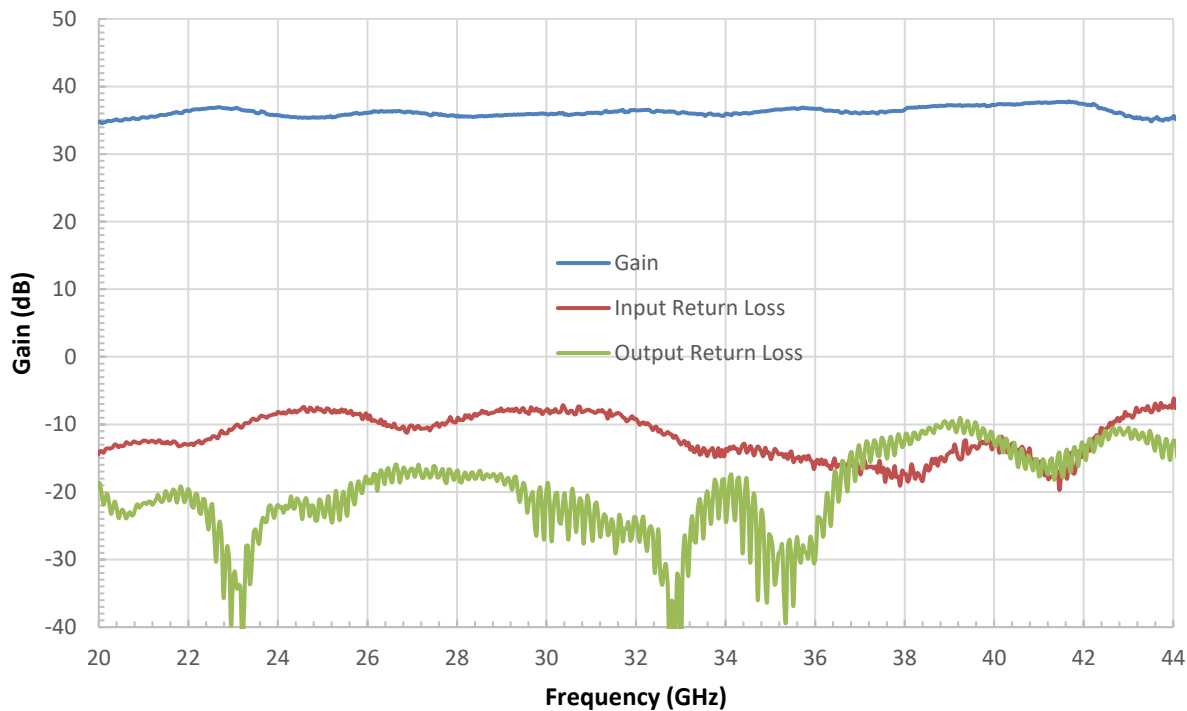




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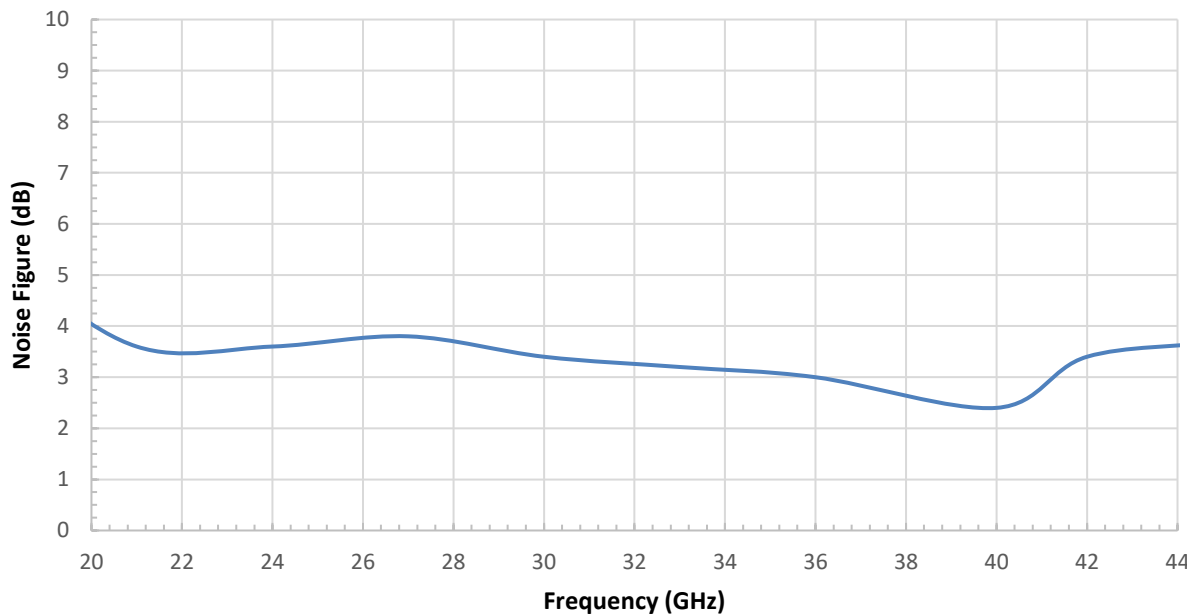
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/160 mA



Noise Figure vs. Frequency

Bias: +8V_{DC}/160 mA

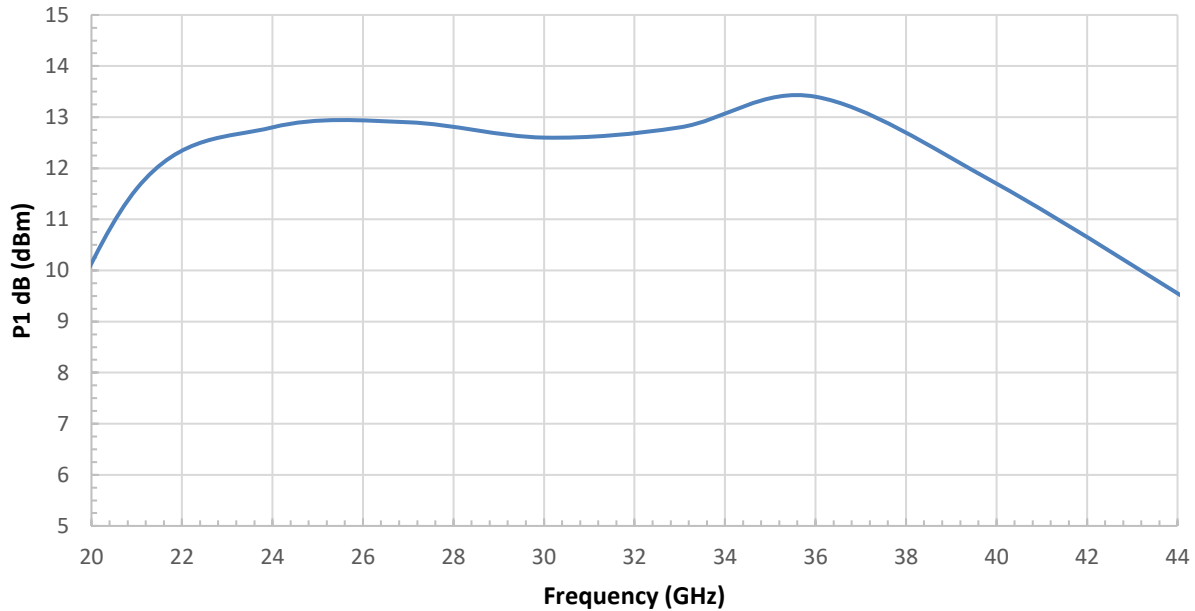




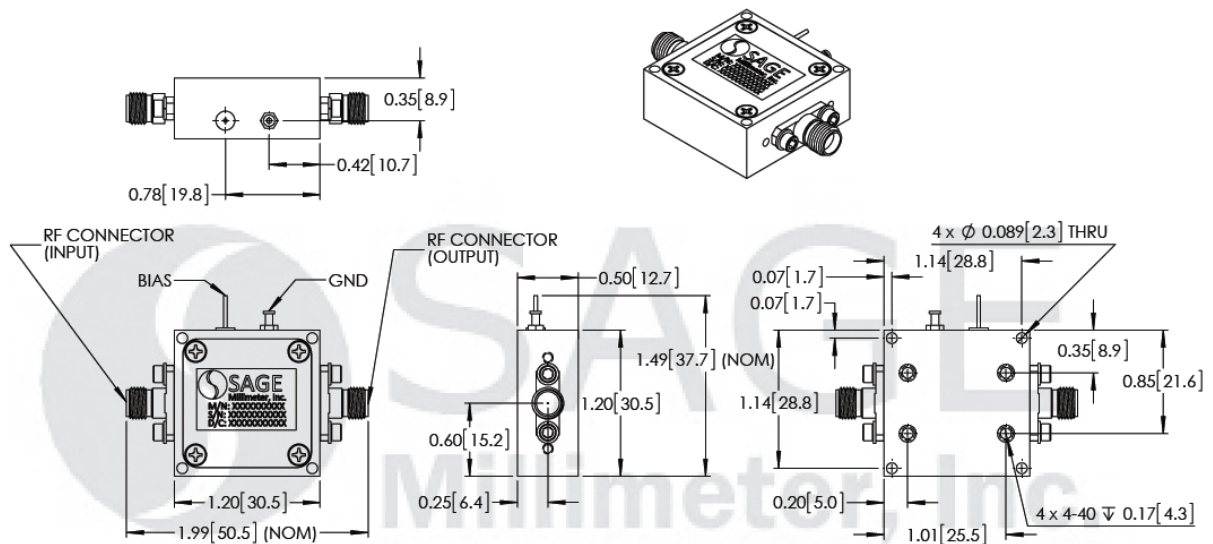
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P1 dB vs. Frequency

Bias: +8V_{DC}/160 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 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

