



Low Noise Amplifier, 24.25 to 43.5 GHz, 40 dB Gain, 2.5 dB NF

Description:

Model SBL-2434434025-2F2F-E3 is a low noise amplifier with a typical small signal gain of 40 dB and a nominal noise figure of 2.5 dB across the frequency range of 28 to 43.5 GHz. The DC power requirement for the amplifier is +12 V_{DC}/300 mA. The input and output port configurations are both female 2.4 mm connectors. Other port configurations, such as male 2.4 mm connectors and WR-28 waveguides 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	24.25 GHz		43.5 GHz
Gain	38 dB		43 dB
Noise Figure @ 24.25 to 28.00 GHz			3.5 dB
Noise Figure @ 28.00 to 43.50 GHz			2.5 dB
P _{in}			5 dBm
P _{1dB}	21 dBm		
P _{sat}		22 dBm	
Output IP3	27 dBm	28 dBm	
Input Return Loss	10 dB		
Output Return Loss	10 dB		
DC Voltage		+12 V _{DC}	+16 V _{DC}
DC Supply Current		300 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Ports	2.4 mm (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.76 Oz
Size	1.58" (W) 1.38" (L) X 0.47" (H)
Outline	BG-ZC-3

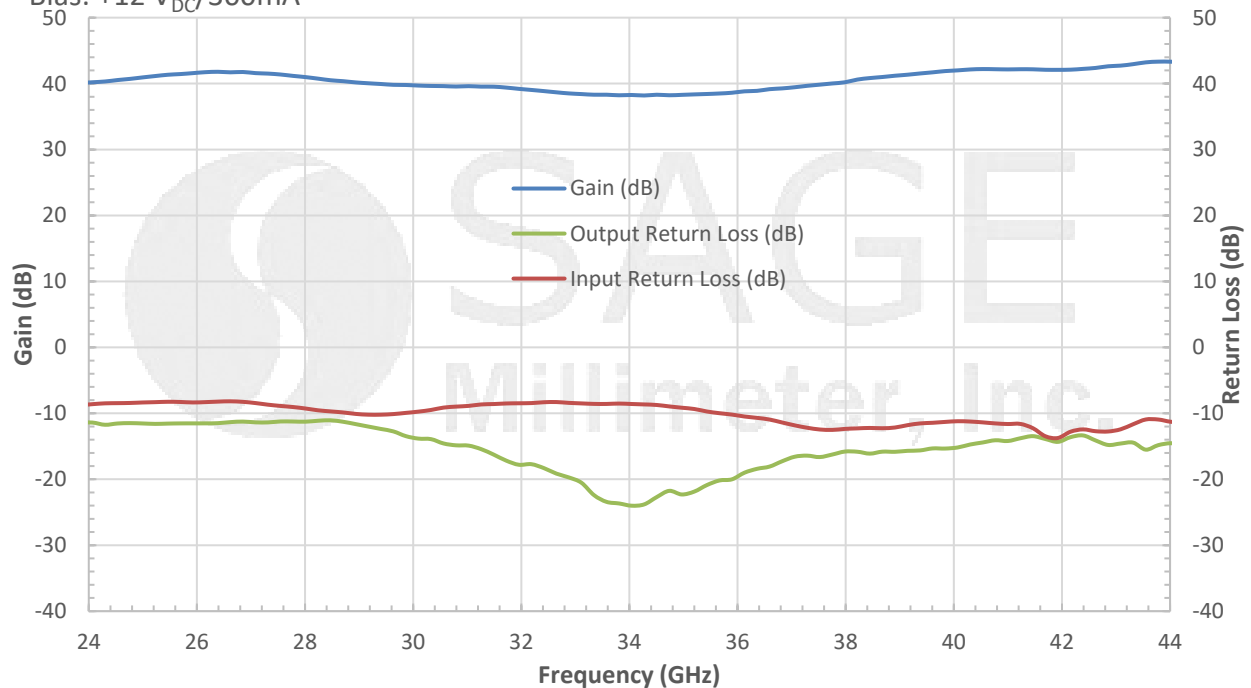




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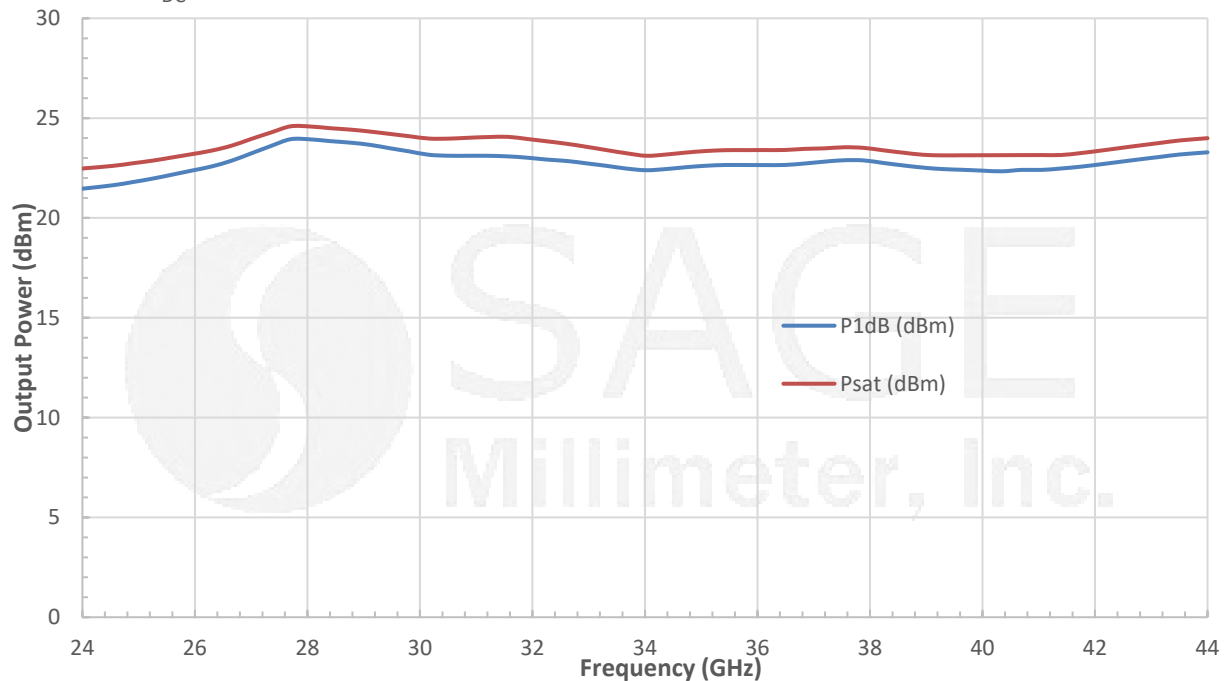
Typical Gain and Return Loss vs. Frequency

Bias: +12 V_{DC}/300mA



Typical Output Power vs. Frequency

Bias: +12 V_{DC}/300mA

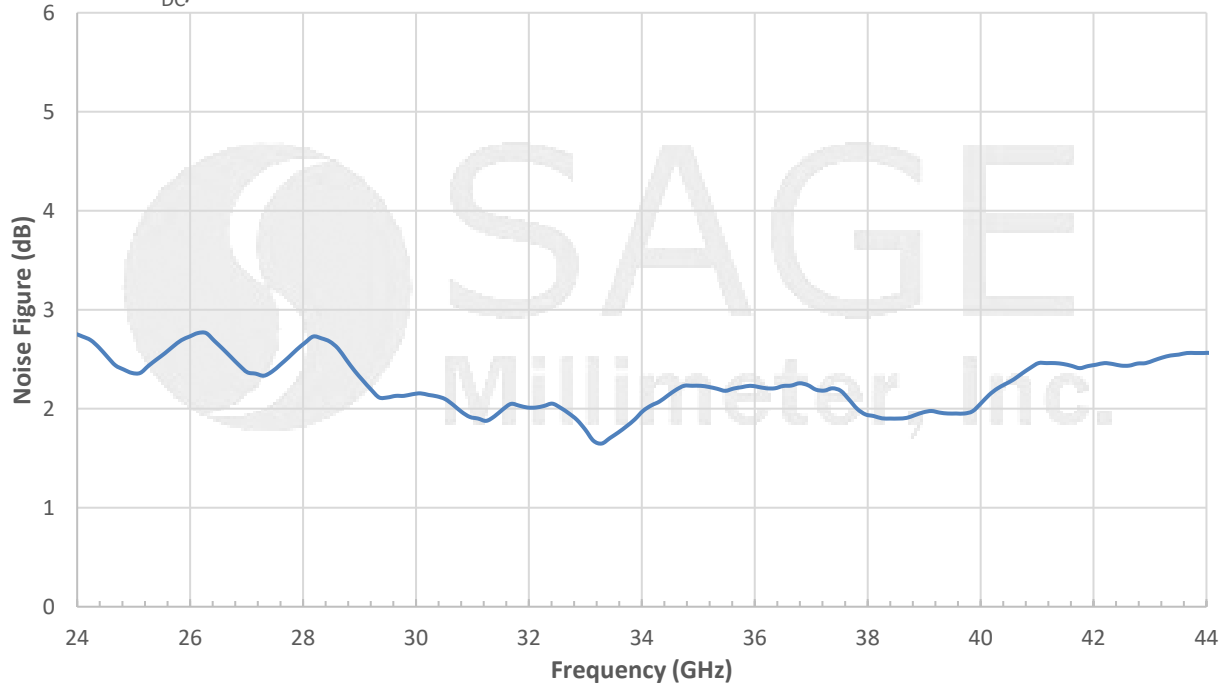




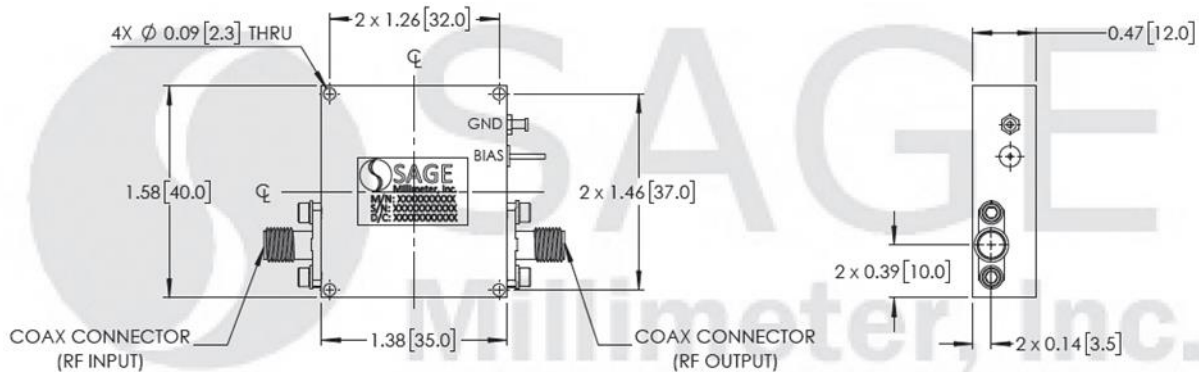
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Typical Noise Figure vs. Frequency

Bias: +12 V_{DC}/300mA



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



Note:

- 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.



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- 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.**

