

Broadband Amplifier, 0.01 to 50 GHz, 27 dB Gain, +18 dBm P_{1dB}, 6.0 dB NF**Description:**

Model SBB-0115032718-2F2F-E3 is a broadband amplifier with a typical small signal gain of 27 dB, a nominal P_{1dB} of +18 dBm, and a typical noise figure of 6.0 dB across the frequency range of 0.01 to 50 GHz. The DC power requirement for the amplifier is +12 V_{DC} at 450 mA. The use of a heat sink is advised to assist in cooling the device. The RF connectors are female 2.4 mm connectors. Other port configurations are available under different model numbers.

**Features:**

- Broadband Coverage
- Good Gain Flatness

Applications:

- RF Microwave & VSAT
- Wireless Infrastructure
- Test Equipment

Electrical Specifications:

Parameter	Condition	Minimum	Typical	Maximum
Frequency		0.01 GHz		50 GHz
Gain			27 dB	
P _{1dB}	0.01-30 GHz		+18 dBm	
P _{sat}	0.01-45 GHz		+19 dBm	
Noise Figure			6.0 dB	
Input Max Power (No Damage)				0 dBm
Input Return Loss			10 dB	
Output Return Loss			10 dB	
DC Voltage			+12 V _{DC}	
DC Supply Current			450 mA	500 mA
Specification Temperature			+25 °C	
Operating Temperature		0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input	2.4 mm (F)
Output	2.4 mm (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.06 Oz
Size	1.38" (L) x 1.58" (W) x 0.47" (H)
Outline	BG-ZC-1

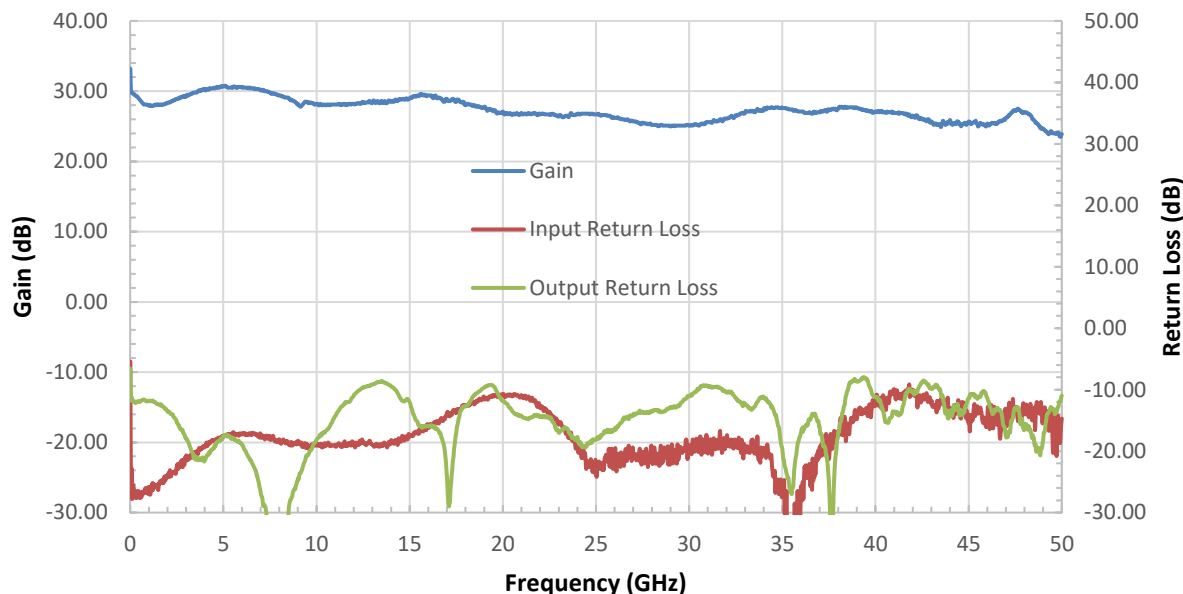




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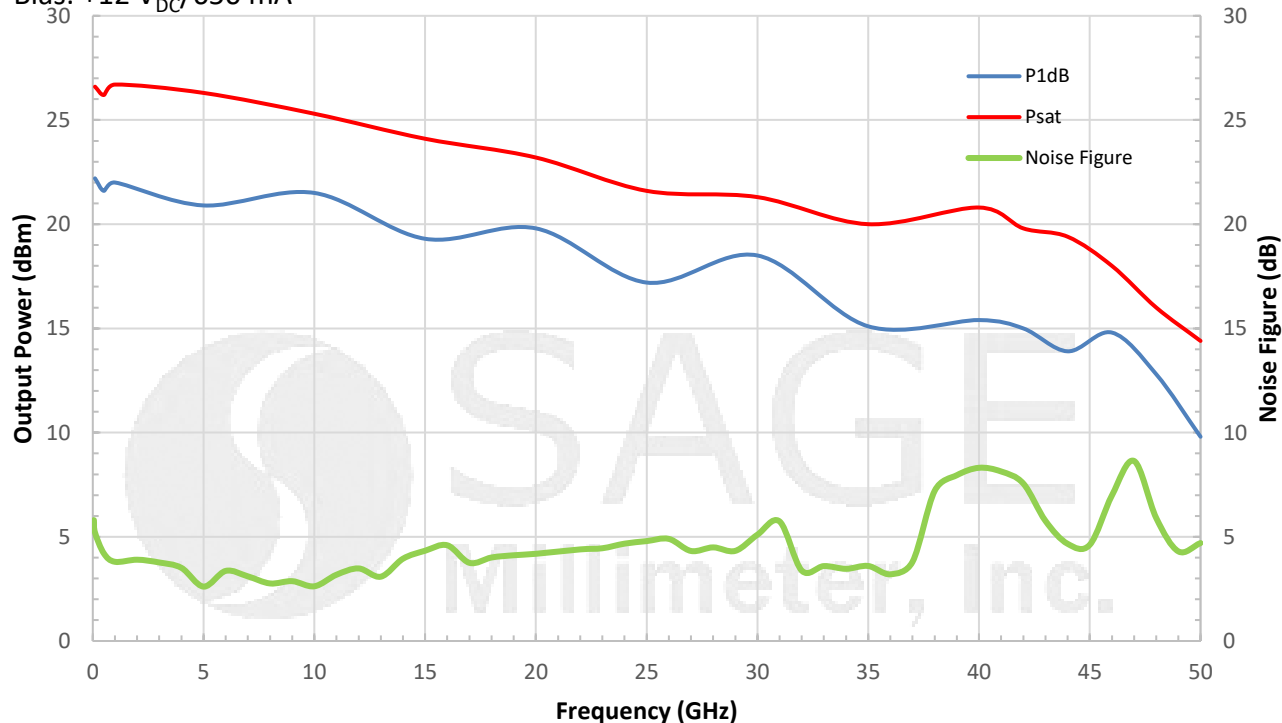
Gain and Return Loss vs. Frequency

Bias: +12 V_{DC}/450mA



Typical P_{1dB} & P_{sat} and Noise Figure vs Frequency

Bias: +12 V_{DC}/650 mA



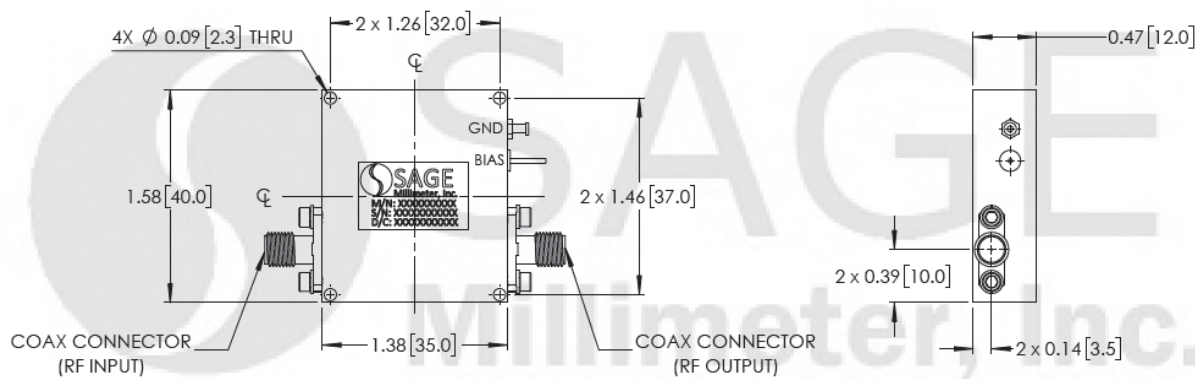
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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Note:

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

