# SBB-0117031815-VFVF-E3-WP

Rev 1.0

## Broadband Amplifier, 0.01 to 70 GHz, 18 dB Gain, +14 dBm $P_{1dB}$, 6 dB NF

### Description:

**Model SBB-0117031815-VFVF-E3-WP** is a broadband amplifier with a typical small signal gain of 18 dB, a nominal $P_{1dB}$ of +14 dBm, and a typical noise figure of 6.0 dB across the frequency range of 0.01 to 40 GHz and 10 dB for 40 to 70 GHz. The DC power requirement for the amplifier is +12 $V_{DC}$/250 mA. Connectors are female 1.85 mm connectors for both input and output.


### Features:

- Broadband Operation
- Low Noise and High Power

### Applications:

- 5G Systems
- Wireless Infrastructure
- Test Equipment

### Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---|---|---|---|
| Frequency Range | 0.01 GHz | | 70 GHz |
| Gain (< 65 GHz) | | 18 dB | |
| $P_{1dB}$ | | +14 dBm | |
| $P_{sat}$ | | +16 dBm | |
| Noise Figure (0.01 to 40 GHz) | | 6.0 dB | |
| Noise Figure (40 to 70 GHz) | | 10 dB | |
| $P_{in}$ | | | +5 dBm |
| Input Return Loss | | 10 dB | |
| Output Return Loss | | 10 dB | |
| DC Voltage | | +12 $V_{DC}$ | |
| DC Supply Current | | 250 mA | |
| Specification Temperature | | +25 ˚C | |
| Operating Temperature | 0 ˚C | | +50 ˚C |

### Mechanical Specifications:

| Item | Specification |
|---|---|
| Input Port | 1.85 mm (F) |
| Output Port | 1.85 mm (F) |
| Bias | Solder Pin |
| Case Material | Aluminum |
| Finish | Gold Plated |
| Weight | 1.3 Oz |
| Size | 1.18” (W) X 1.18” (L) X 0.31” (H) |
| Outline | BG-ZC-5 |


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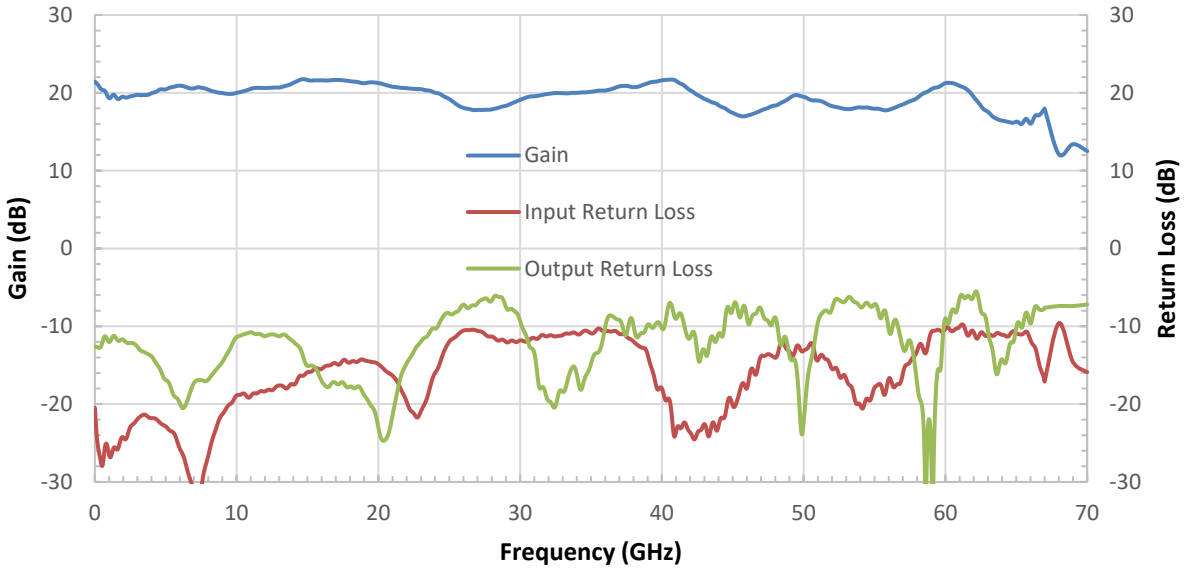
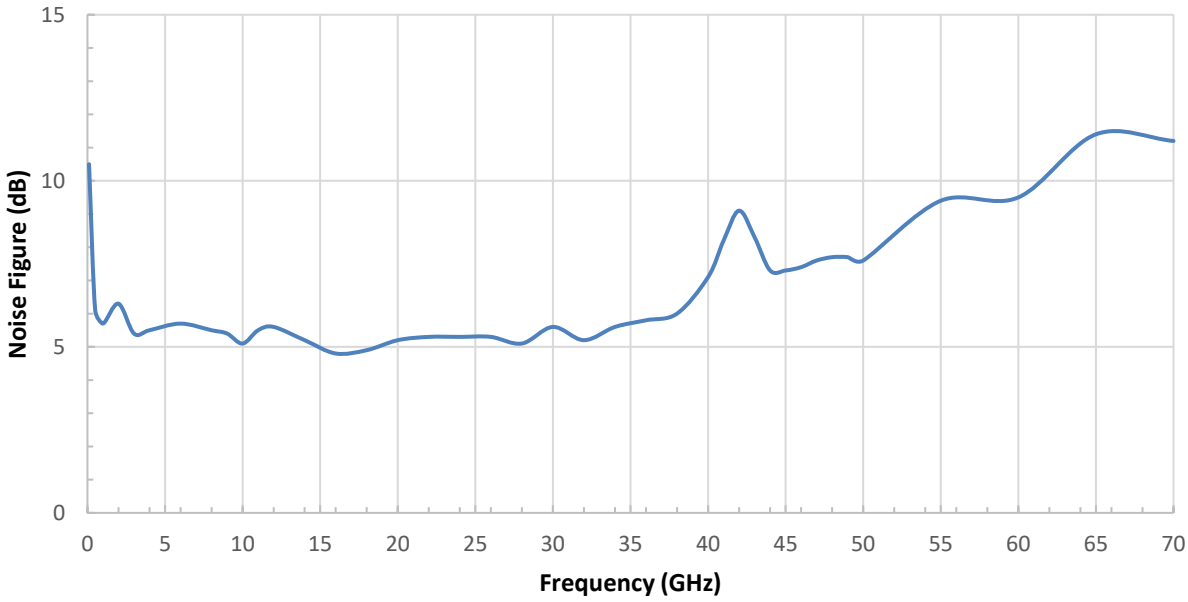
## Gain and Return Loss vs. Frequency

Bias: +12$V_{DC}$/237 mA




## Noise Figure vs. Frequency

Bias: +12$V_{DC}$/237 mA



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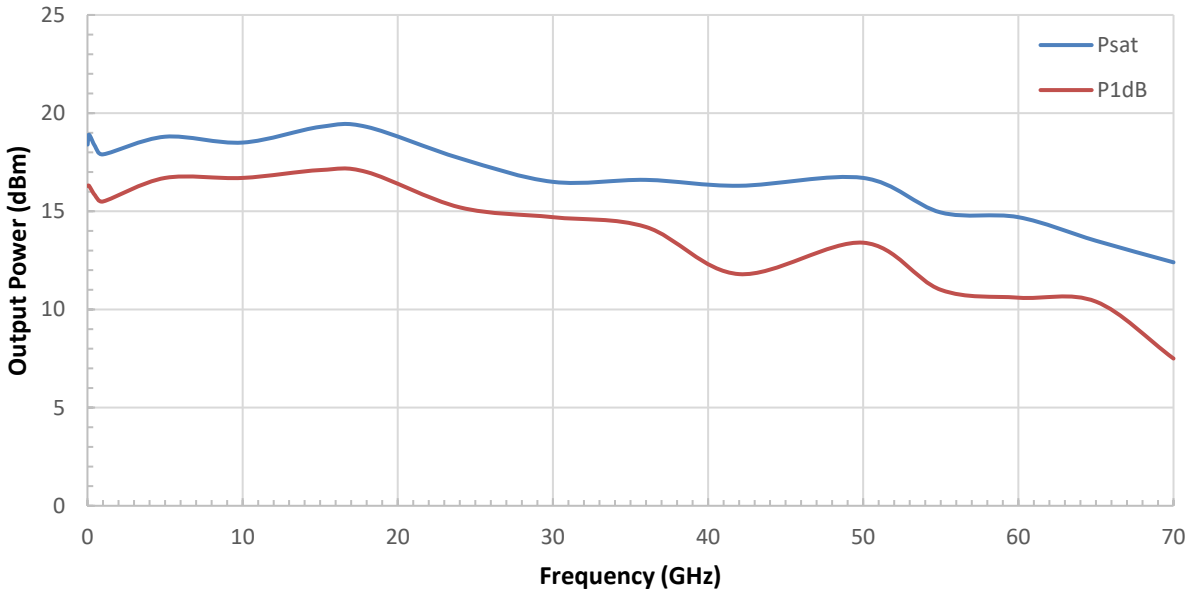
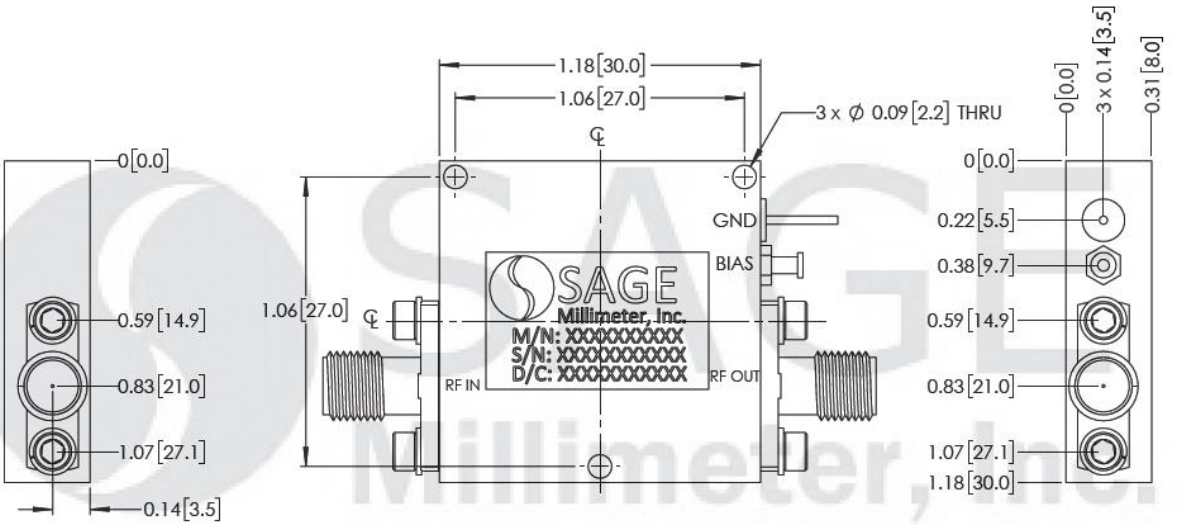
### Output Power vs. Frequency

Bias: +12VDC/237 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.
- 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.
- 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.**