# SBB-0115034019-2F2F-E3

## Broadband Amplifier, 0.01 to 50 GHz, 40 dB Gain, 18 dBm P1dB, 6 dB NF

**SBB-0115034019-2F2F-E3** is a broadband amplifier with a minimum small signal gain of 40 dB, a nominal P1dB 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 VDC/400 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.


## Electrical Specifications:

| Parameter | | Minimum | Typical | Maximum |
|---|---|---|---|---|
| Frequency | | 0.01 GHz | | 50.00 GHz |
| Gain | 0.01-45 GHz | 40 dB | | 50 dB |
| | 45-50 GHz | 35 dB | | 50 dB |
| $P_{1dB}$ | 0.01-40 GHz | | +18 dBm | |
| | 40-50 GHz | | +12 dBm | |
| $P_{sat}$ | 0.01-40 GHz | | +20 dBm | |
| | 40-50 GHz | | +15 dBm | |
| Noise Figure | | | 6.0 dB | 8.0 dB |
| $P_{in}$ | | | | -20 dBm |
| Input Return Loss | | | 8 dB | |
| Output Return Loss | | | 8 dB | |
| DC Voltage | | | +12 $V_{DC}$ | |
| DC Supply Current | | | 400 mA | |
| Specification Temperature | | | +25°C | |
| Operating Temperature | | 0°C | | +50°C |

### FEATURES

- Broadband Operation
- Low Noise and High Power

### APPLICATIONS

- RF Microwave & VSAT
- Wireless Infrastructure
- Test Equipment

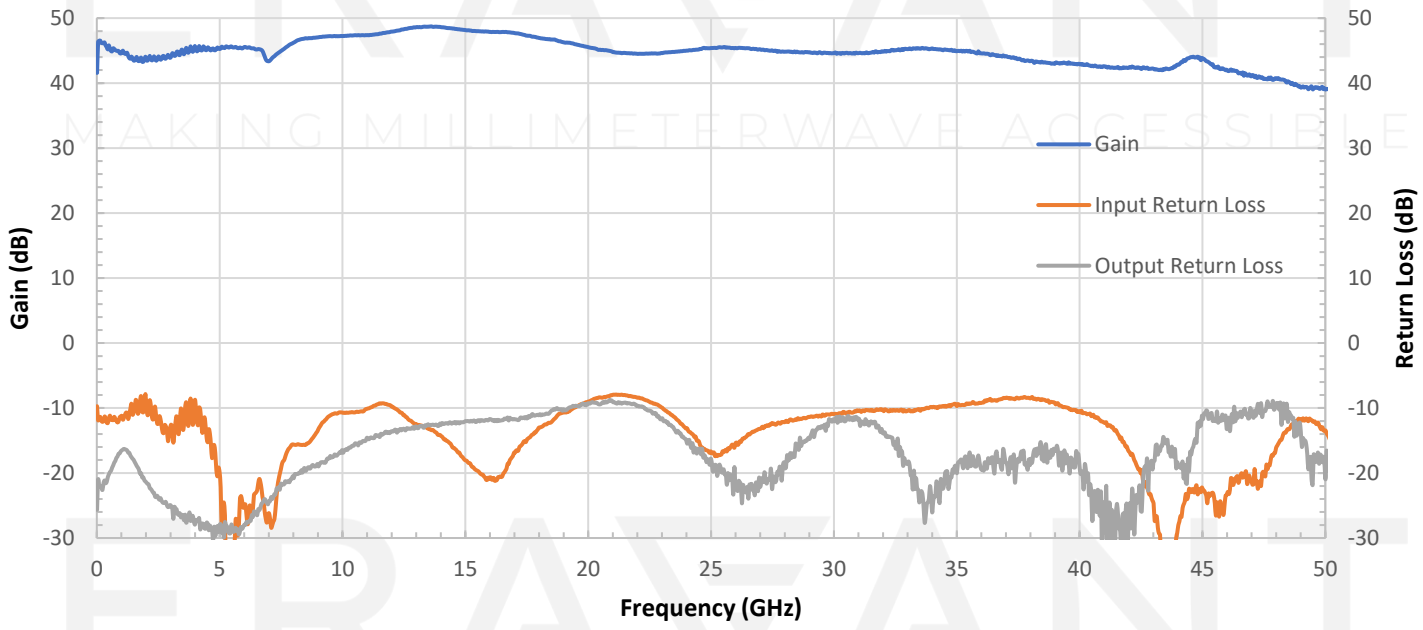
### SUPPLEMENTAL DETAILS

## Mechanical Specifications:

| Item | Specification |
|---|---|
| Input Port | 2.4 mm (F) |
| Output Port | 2.4 mm (F) |
| Bias | Solder Pin |
| Material | Brass |
| Finish | Gold Plated |
| Weight | 3.2 Oz |
| Size | 1.58” (L) x 1.38” (W) x 0.47” (H) |
| Outline | BG-ZC-9 |

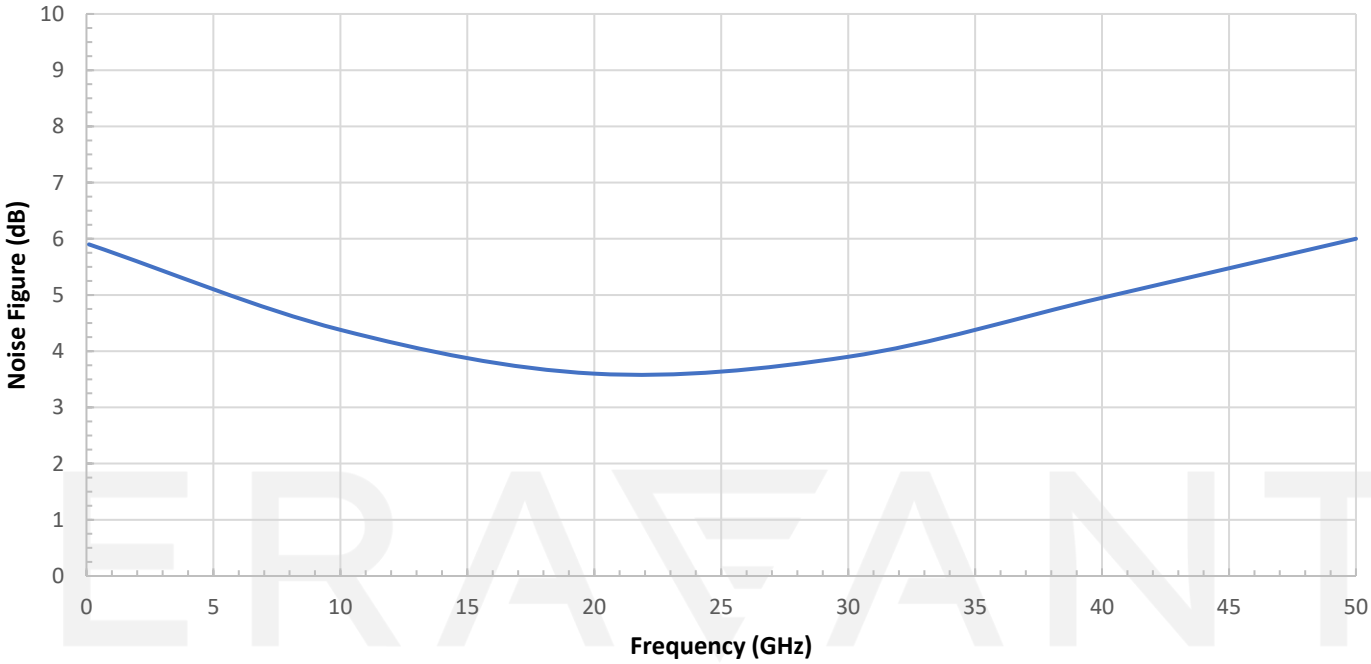
### Typical Gain and Return Loss vs. Frequency

Bias: +12 $V_{DC}$/400 mA



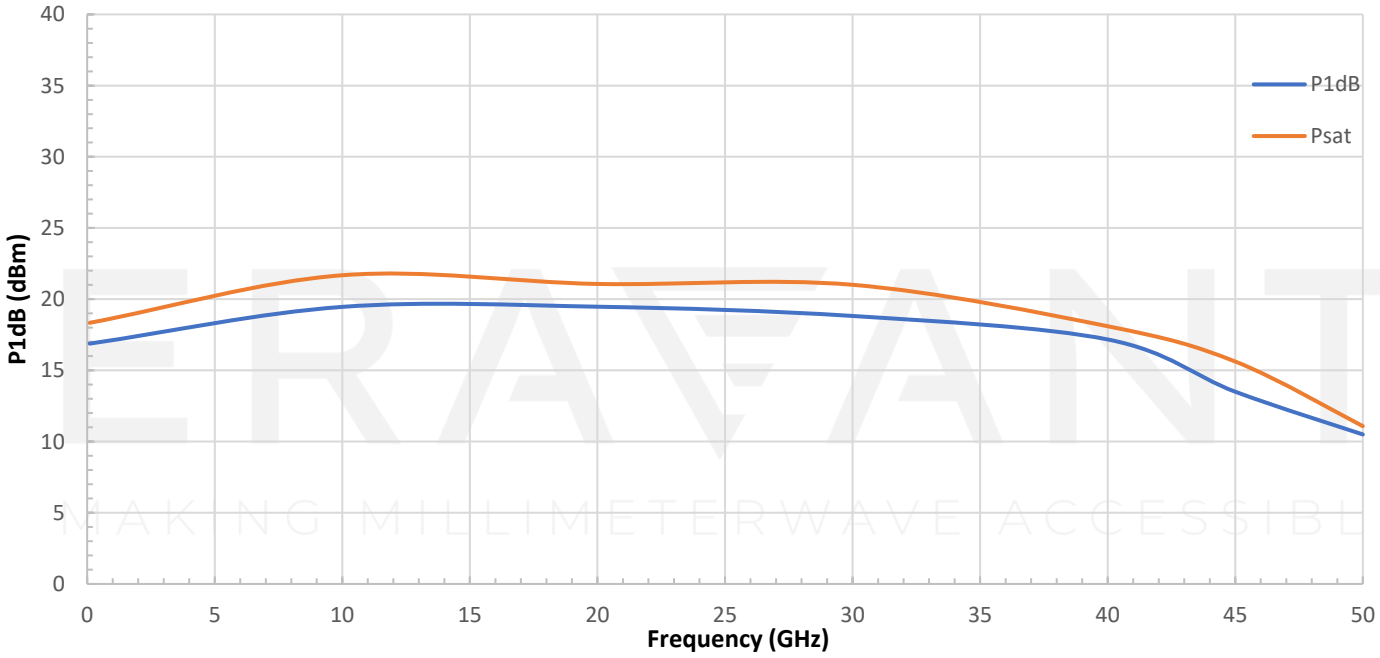
## Typical Noise Figure vs. Frequency

Bias: +12$V_{DC}$/400 mA



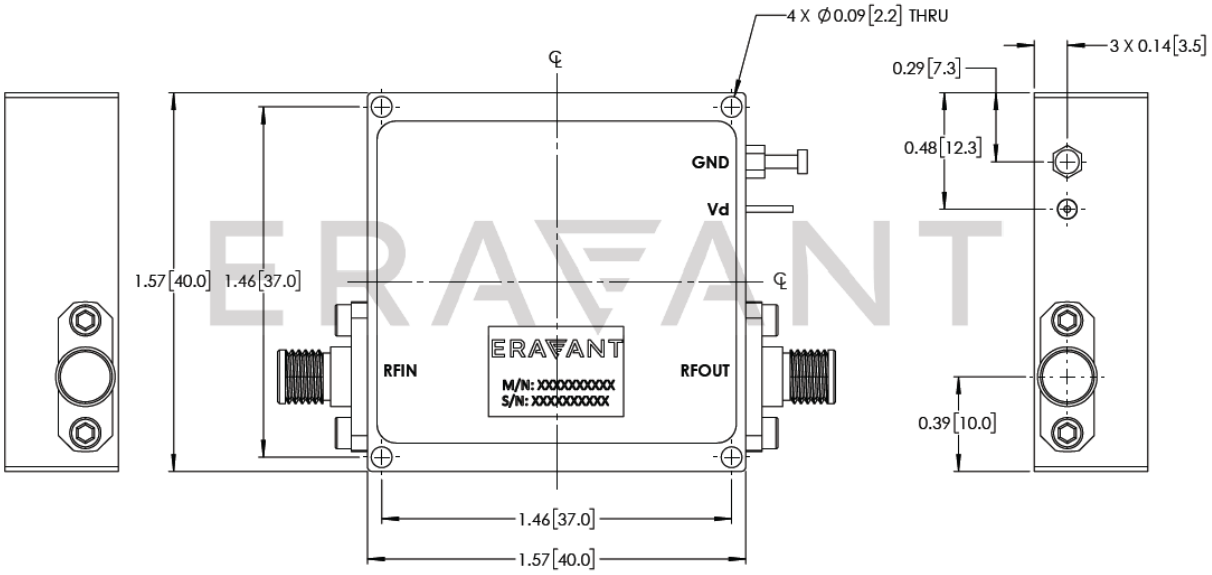

## Typical Output Power vs. Frequency

Bias: +12$V_{DC}$/400A



**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.
- 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.**