# SBB-0524034318-KFKF-E8

Rev. 1.5

## 0.5 to 40 GHz Broadband Amplifier, 43 dB Gain, +18 dBm $P_{1dB}$, 6 dB NF

### Description:

**Model SBB-0524034318-KFKF-E8** is a broadband amplifier with a typical small signal gain of 43 dB, a nominal $P_{1dB}$ of +18 dBm, and a typical noise figure of 6.0 dB across the frequency range of 0.5 to 40 GHz. The DC power requirement for the amplifier is +12 $V_{DC}$/650 mA. The use of a heat sink is advised to assist in cooling the device. The RF connectors are female K connectors. Other port configurations, such as male K connectors for either input or output port, are also available under different model numbers.


### Features:

- Broadband Coverage
- Good Gain Flatness

### Applications:

- RF Microwave & VSAT
- Wireless Infrastructure
- Test Equipment

### Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---|---|---|---|
| Frequency | 0.5 GHz | | 40.0 GHz |
| Gain | | 43 dB | |
| Gain Flatness | | ±5.0 dB | |
| $P_{1dB}$ | | +18 dBm | |
| $P_{sat}$ | | +19 dBm | |
| Noise Figure | | 6.0 dB | |
| Input Max Power (No Damage) | | | -5 dBm |
| Input Return Loss | | 10 dB | |
| Output Return Loss | | 10 dB | |
| DC Voltage | +10 $V_{DC}$ | +12 $V_{DC}$ | +15 $V_{DC}$ |
| DC Supply Current | | 650 mA | 700 mA |
| Specification Temperature | | +25 ˚C | |
| Operating Temperature | 0 ˚C | | +50 ˚C |

### Mechanical Specifications:

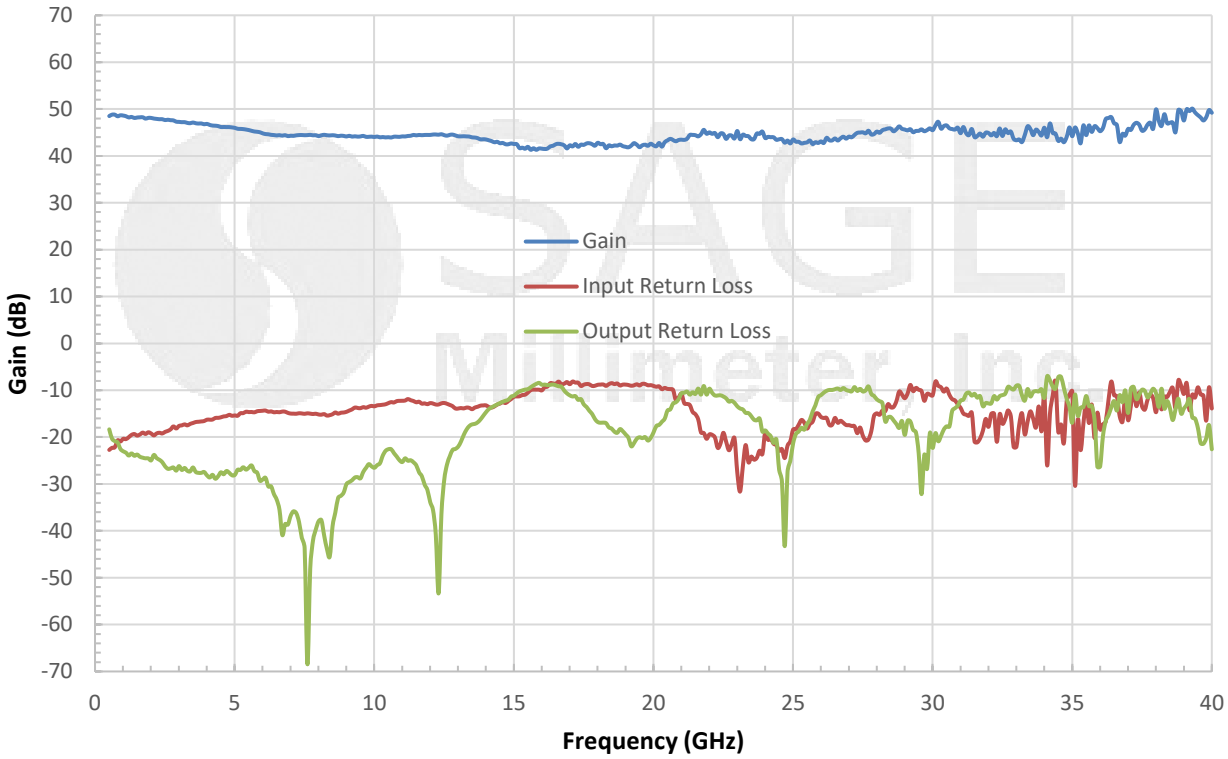
| Item | Specification |
|---|---|
| Input | K (F) |
| Output | K (F) |
| Bias | Solder Pin |
| Case Material | Aluminum |
| Finish | Gold Plated |
| Weight | 1.8 Oz |
| Size | 0.53” (W) x 1.26” (L) x 1.77” (H) |
| Outline | BB-DC-1 |

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

## 0.5 to 40 GHz Broadband Amplifier, 43 dB Gain, +18 dBm $P_{1dB}$, 6 dB NF

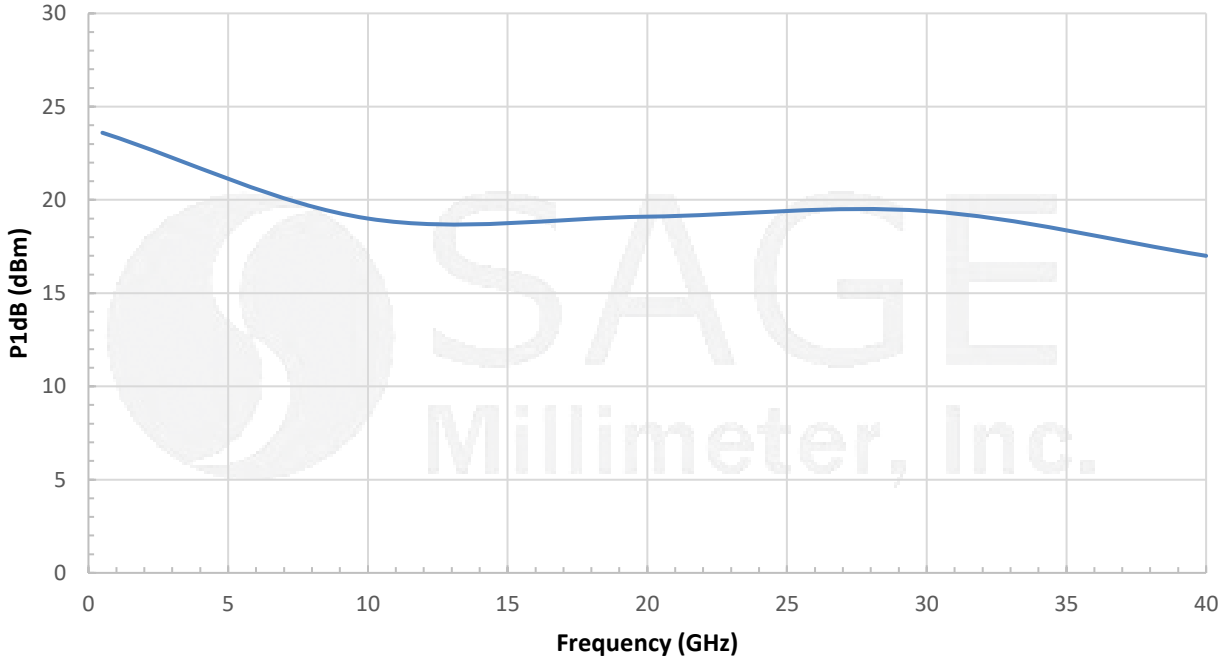
### Typical Gain and Return Loss vs. Frequency

Bias: +12 $V_{DC}$ / 455 mA




### Typical P1dB vs. Frequency

Bias: +12 $V_{DC}$ / 675 mA

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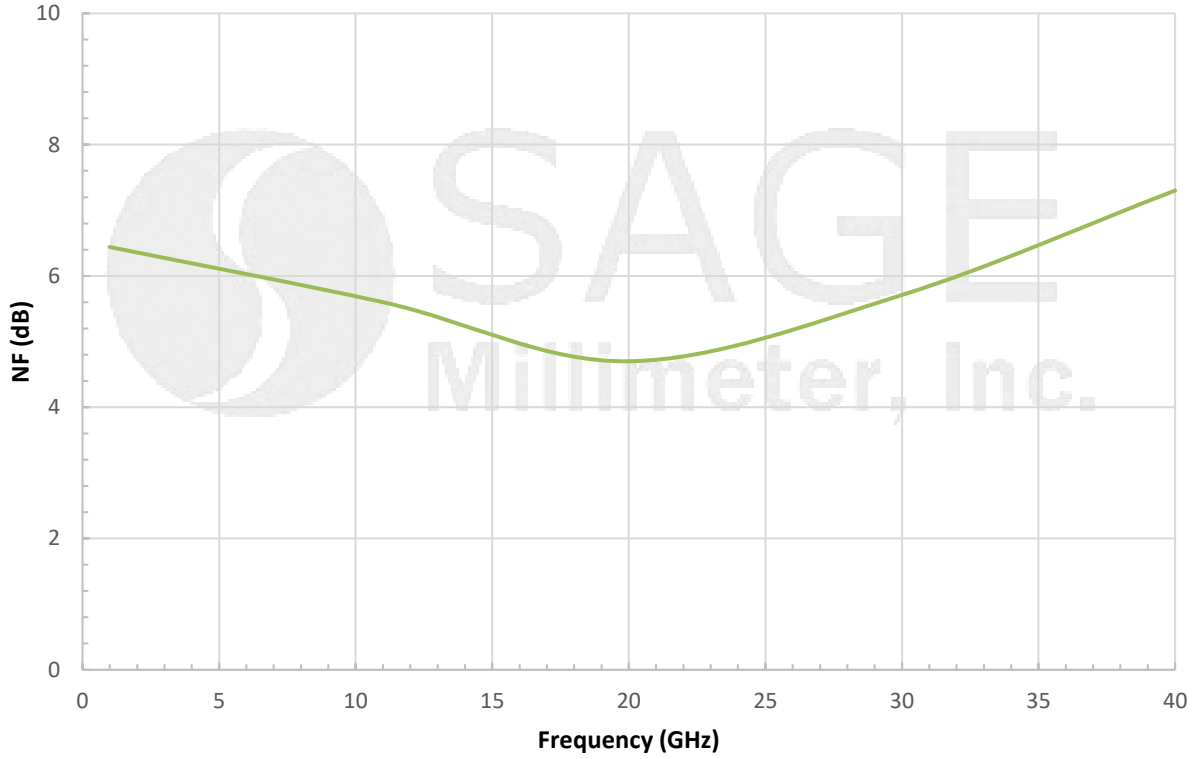
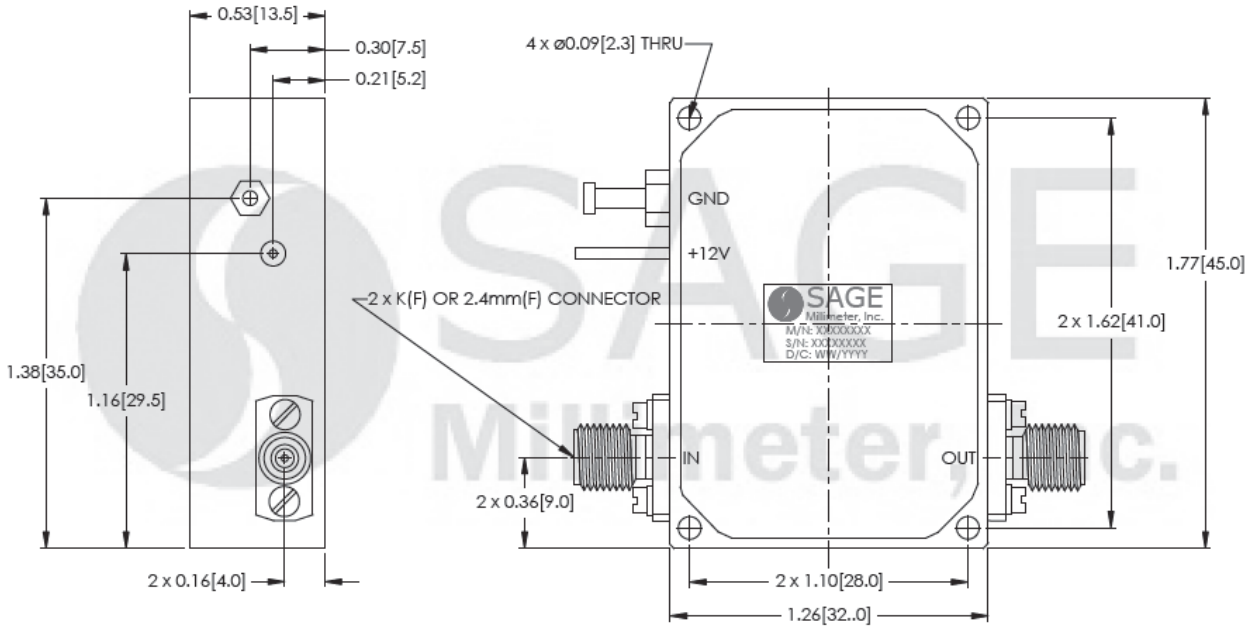
## 0.5 to 40 GHz Broadband Amplifier, 43 dB Gain, +18 dBm $P_{1dB}$, 6 dB NF

### Typical Noise Figure vs. Frequency

Bias: +12 $V_{DC}$ / 455 mA




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

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## 0.5 to 40 GHz Broadband Amplifier, 43 dB Gain, +18 dBm $P_{1dB,}$ 6 dB NF

**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 +65 ˚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.**