

U-Band Low Noise Amplifier, 40 to 60 GHz, 45 dB Gain, 4.0 dB NF

Description:

Model SBL-4036034540-VFVF-S1 is a low noise amplifier with a typical small signal gain of 45 dB across the frequency range of 40 to 60 GHz and a nominal noise figure of 4.0 dB. The DC power requirement for the amplifier is +8 V_{DC}/250 mA. The input and output port configurations are both female 1.85 mm (V) connectors. Other port configurations, such as inline and right-angle waveguides, are also available under different model numbers.



Features:

- Full Waveguide Band Operations
- State-of-the-Art Noise Figure

Applications:

- New 5G Bands
- Low Noise Receivers
- Communication Systems
- Radar Systems

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|--------------------|--------------------|---------------------|
| Frequency | 40 GHz | | 60 GHz |
| Gain | | 45 dB | |
| Noise Figure | | 4.0 dB | |
| P _{1dB} | | +16 dBm | |
| P _{in} | | | +5 dBm |
| Input Return Loss | | 8 dB | |
| Output Return Loss | | 10 dB | |
| DC Voltage | +6 V _{DC} | +8 V _{DC} | +15 V _{DC} |
| DC Supply Current | | 250 mA | |
| Specification Temperature | | +25 °C | |
| Operating Temperature | 0 °C | | +50 °C |

Mechanical Specifications:

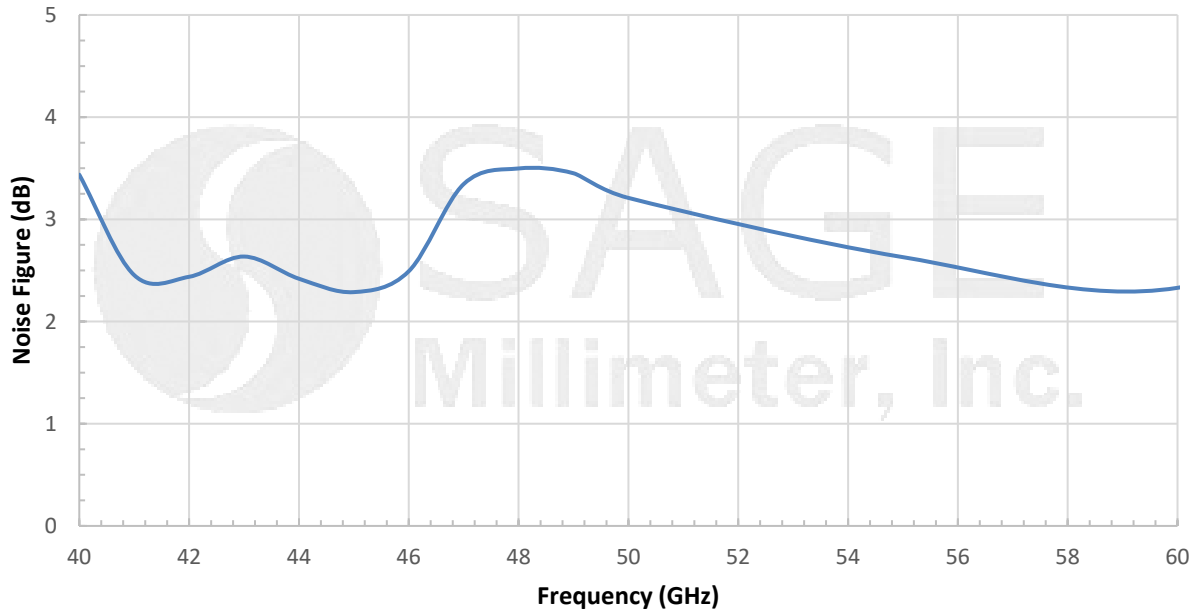
| Item | Specification |
|---------------|---------------------------------|
| RF Ports | 1.85 mm (F) |
| Bias | Solder Pin |
| Case Material | Aluminum |
| Finish | Gold Plated |
| Weight | 1.3 Oz |
| Size | 1.20" (W) 1.20" (L) X 0.50" (H) |
| Outline | BG-SC-1 |



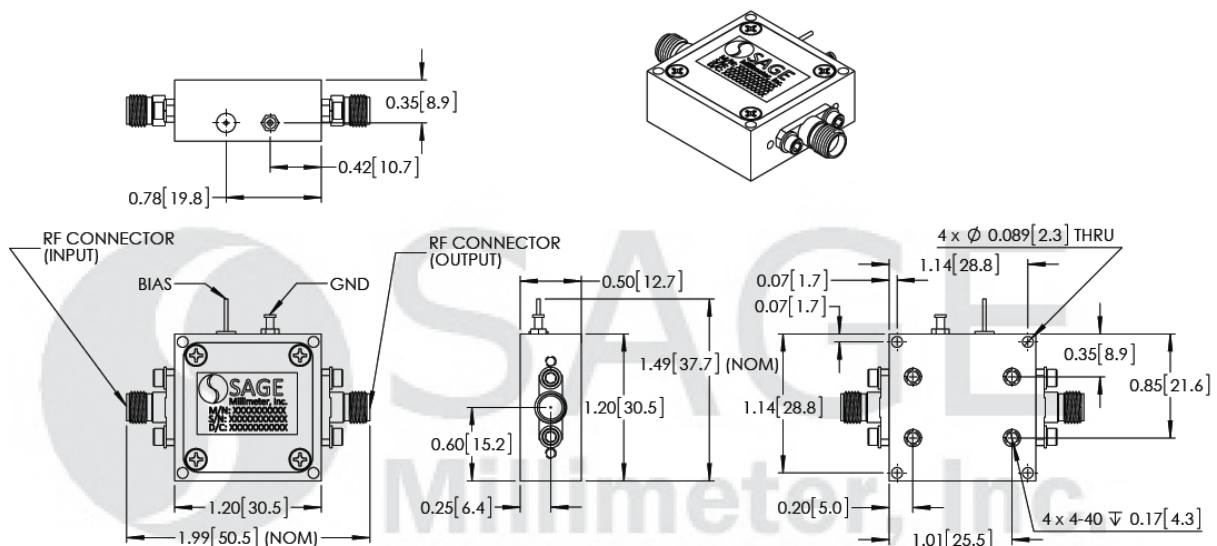
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Noise Figure vs. Frequency

Bias: +8 V_{DC}/265mA



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.**

