



V-Band Power Amplifier, 35 to 75 GHz, 35 dB Gain, +20 dBm P_{1dB}

Description:

Model SBP-3537533520-VFVF-S1 is a power amplifier with a typical small signal gain of 35 dB and a nominal P_{1dB} of +20 dBm across the frequency range of 35 to 75 GHz. The DC power requirement for the amplifier is +8 V_{DC}/900 mA. The input and output ports are both female V connectors. Other port configurations, such as inline and right-angle waveguides, are also available under different model numbers.



Features:

- Broadband Performance
- High Output Power
- High Gain

Applications:

- IEEE 802.11.ad WiGig
- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|--------------------|--------------------|---------------------|
| Frequency | 35 GHz | | 75 GHz |
| Gain | | 35 dB | |
| P _{1dB} | | +20 dBm | |
| P _{sat} | | +22 dBm | |
| P _{in} | | | -3 dBm |
| Input Return Loss | | 10 dB | |
| Output Return Loss | | 10 dB | |
| DC Voltage | +6 V _{DC} | +8 V _{DC} | +15 V _{DC} |
| DC Supply Current | | 900 mA | |
| Specification Temperature | | +25 °C | |
| Operating Temperature | 0 °C | | +50 °C |

Mechanical Specifications:

| Item | Specification |
|---------------|---------------------------------|
| Input Port | V(F) |
| Output Port | V(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 |

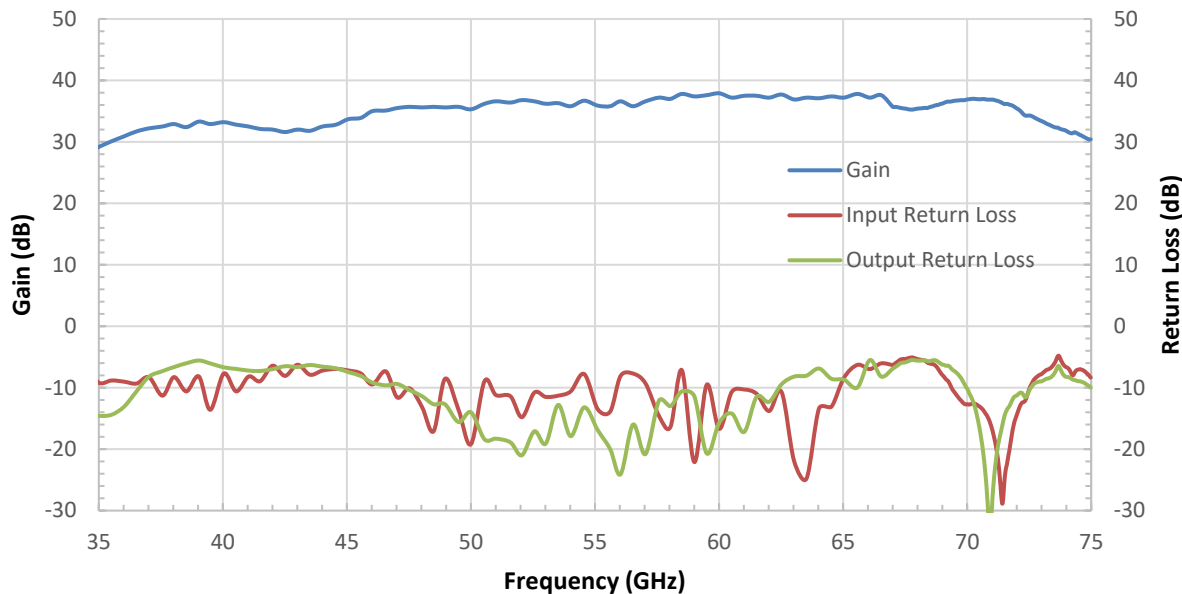




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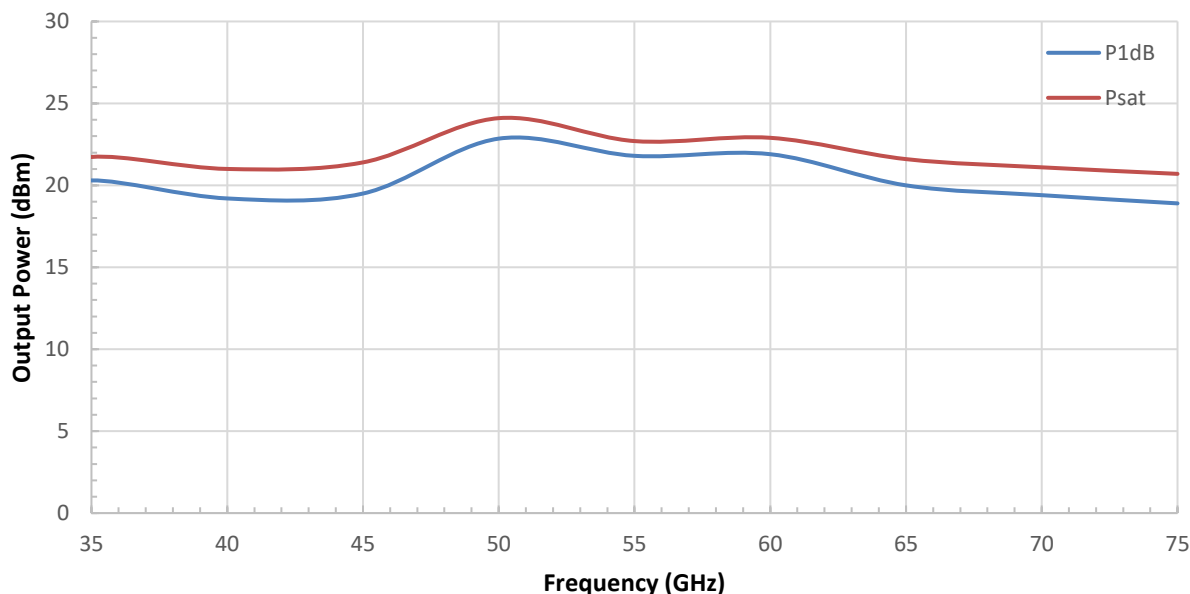
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/943mA



Output Power vs. Frequency

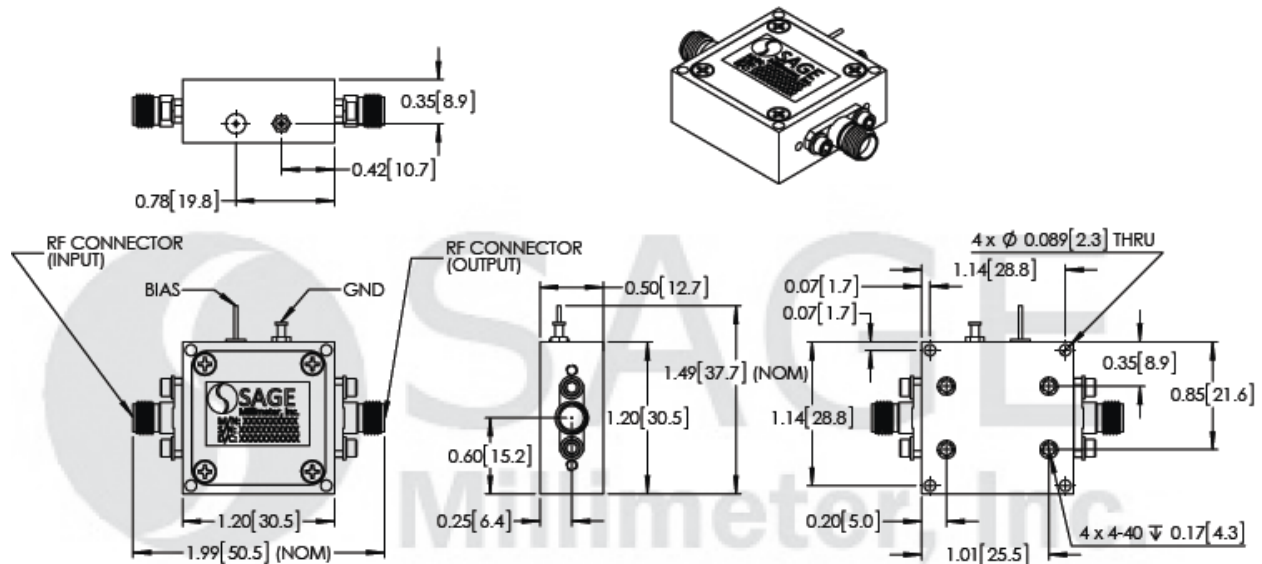
Bias: +8 V_{DC}/1.3A





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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.
- 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 ± 0.4 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

