



V-Band Power Amplifier, 50 to 75 GHz, 25 dB Gain, +12 dBm P_{1dB}

Description:

Model SBP-5037532512-1515-S1 is a V band power amplifier with a typical small signal gain of 25 dB and a nominal P_{1dB} of +12 dBm across the frequency range of 50 to 75 GHz. The DC power requirement for the amplifier is +8 V_{DC}/250 mA. The mechanical configuration offers a right angle structure with WR-15 waveguides and UG-385/U flange. Other port configurations, such as with 1 mm connectors or inline structure with WR-15 waveguides, are also available under different model numbers.



Features:

- Full Waveguide Band Coverage
- High Output Power
- High Gain

Applications:

- IEEE 802.11ab WiGig
- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	50 GHz		75 GHz
Gain		25 dB	
P _{1dB}		+12 dBm	
P _{sat}		+16 dBm	
P _{in}			+15 dBm
Noise Figure		8 dB	
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V _{DC}	+8 V _{DC}	+12 V _{DC}
DC Supply Current		250 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input Port	WR-15 Waveguide with UG-385/U Flange
Output Port	WR-15 Waveguide with UG-385/U Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.10" (W) X 1.70" (L) X 0.50" (H)
Outline	BG-SV-1

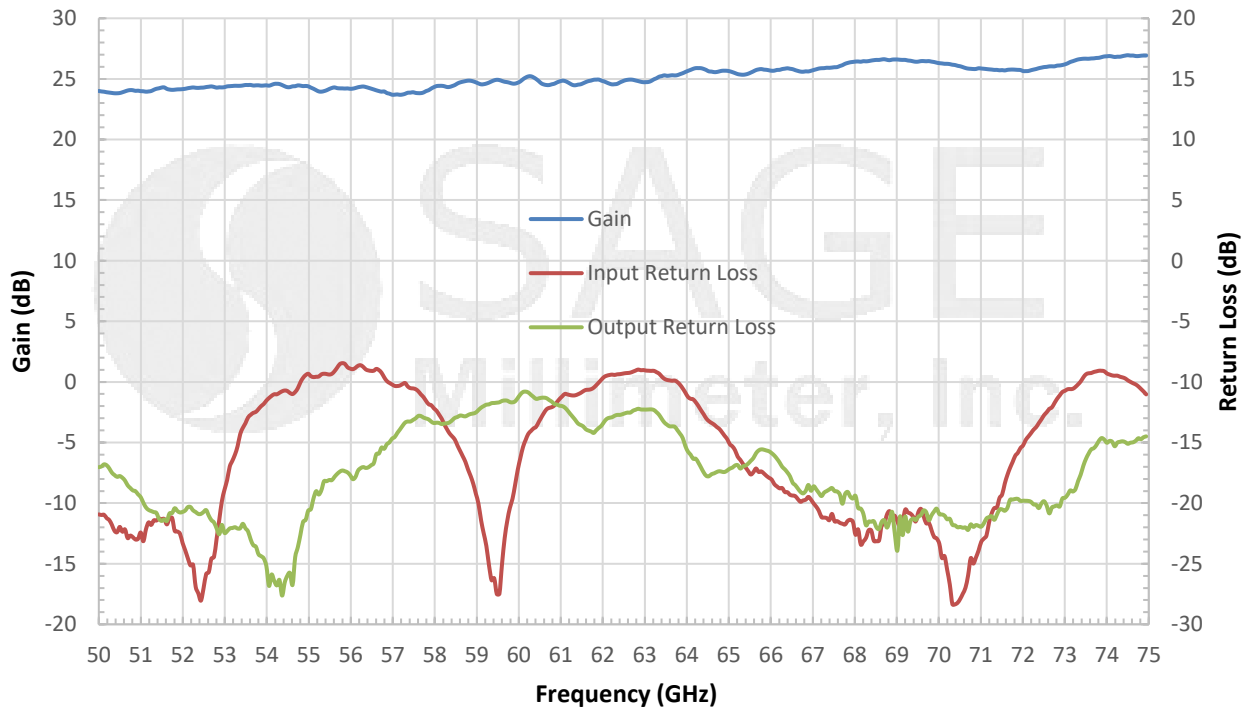




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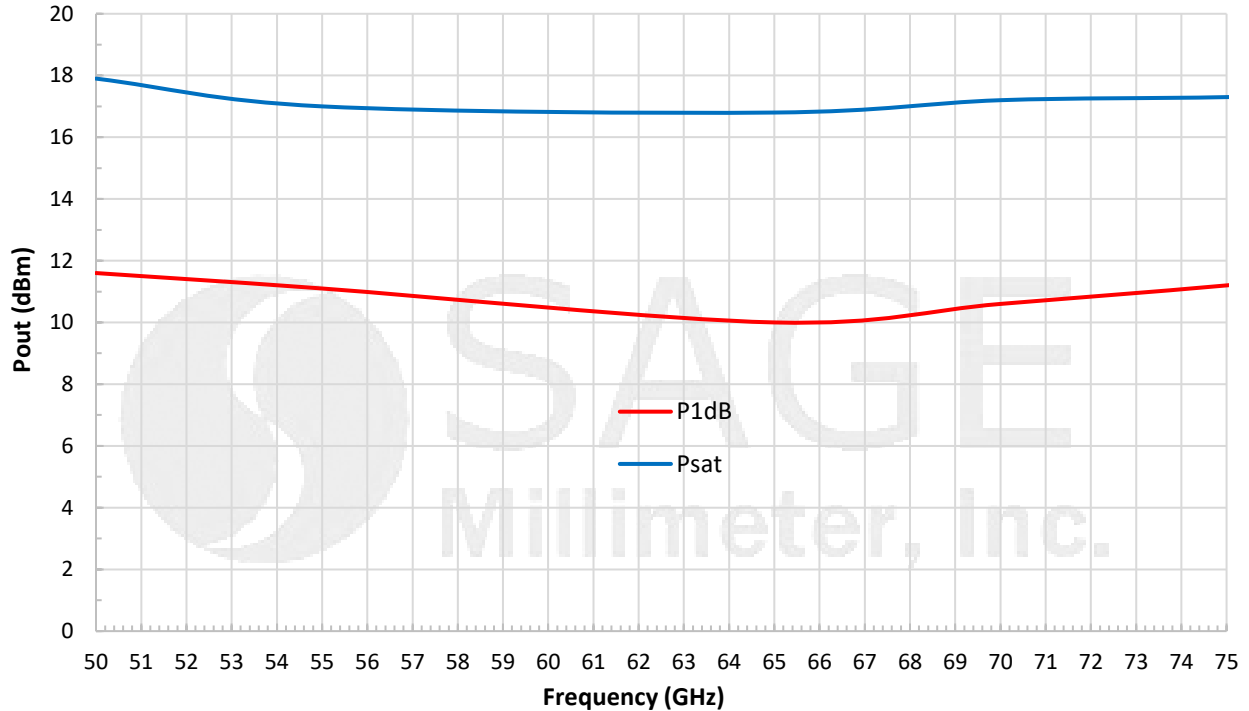
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/250 mA



Typical Output Power vs. Frequency

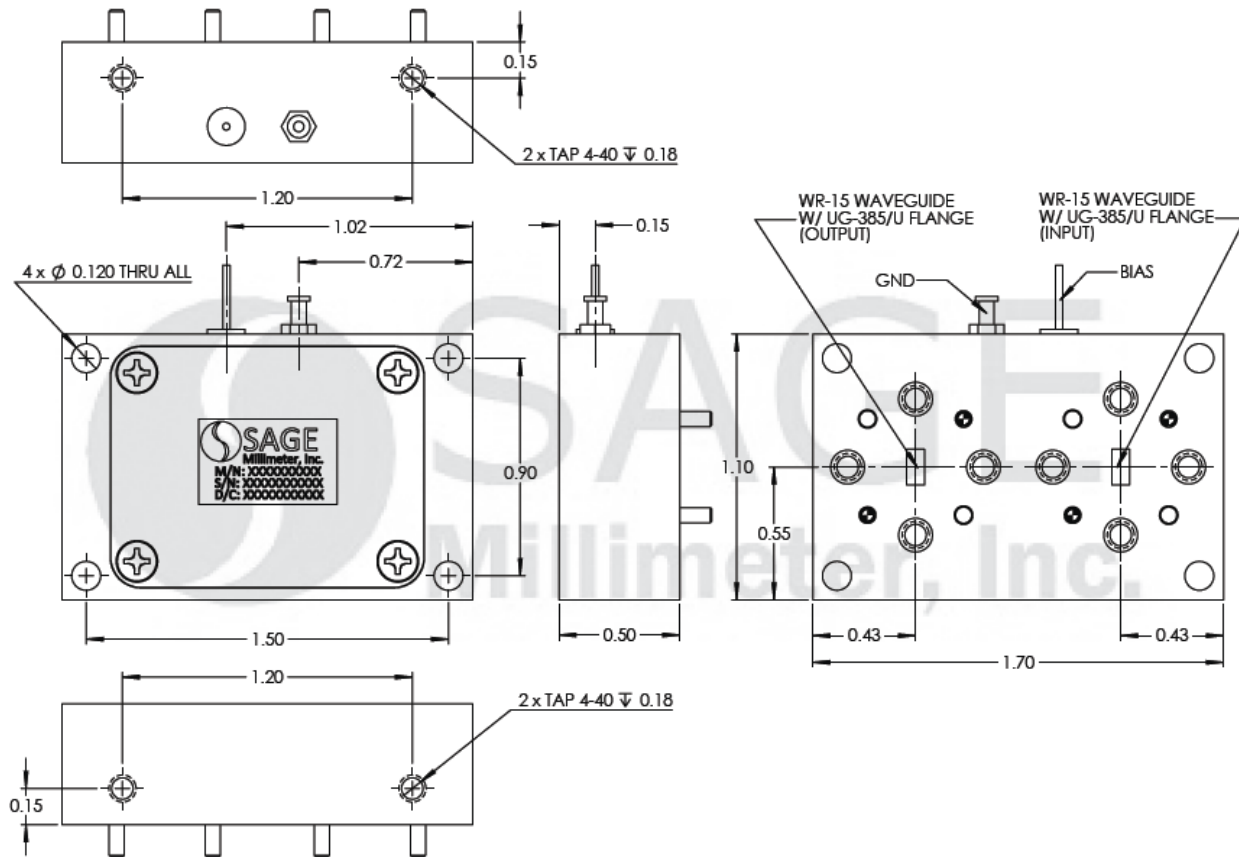
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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.

