



W-Band Power Amplifier, 70 to 95 GHz, 20 dB Gain, +12 dBm P_{1dB}

Description:

Model SBP-7039532012-1010-S1 is a power amplifier with a typical small signal gain of 20 dB and a nominal output P_{1dB} of +12 dBm and a P_{SAT} of +16 dBm in the frequency range of 70 to 95 GHz. The DC power requirement for the amplifier is +8 V_{DC}/250 mA. The mechanical configuration offers an inline structure with WR-10 waveguides and UG-387/U-M flanges. Other port configurations, such as with 1 mm connectors or a right angle structure with WR-10 waveguides, are also available under different model numbers.



Features:

- Moderate Gain
- Moderate Output Power

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	70 GHz		95 GHz
Gain		20 dB	
P _{1dB}		+12 dBm	
P _{sat}		+16 dBm	
P _{in}			+3 dBm
Input Return Loss		15 dB	
Output Return Loss		15 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
Input	WR-10 Waveguide with UG-387/U-M Flange
Output	WR-10 Waveguide with UG-387/U-M Flange
Bias	Solder Pin
Case Material	Aluminum
Weight	1.3 Oz
Size	1.10" (W) X 1.70" (L) X 0.50" (H)
Outline	BG-SW-1

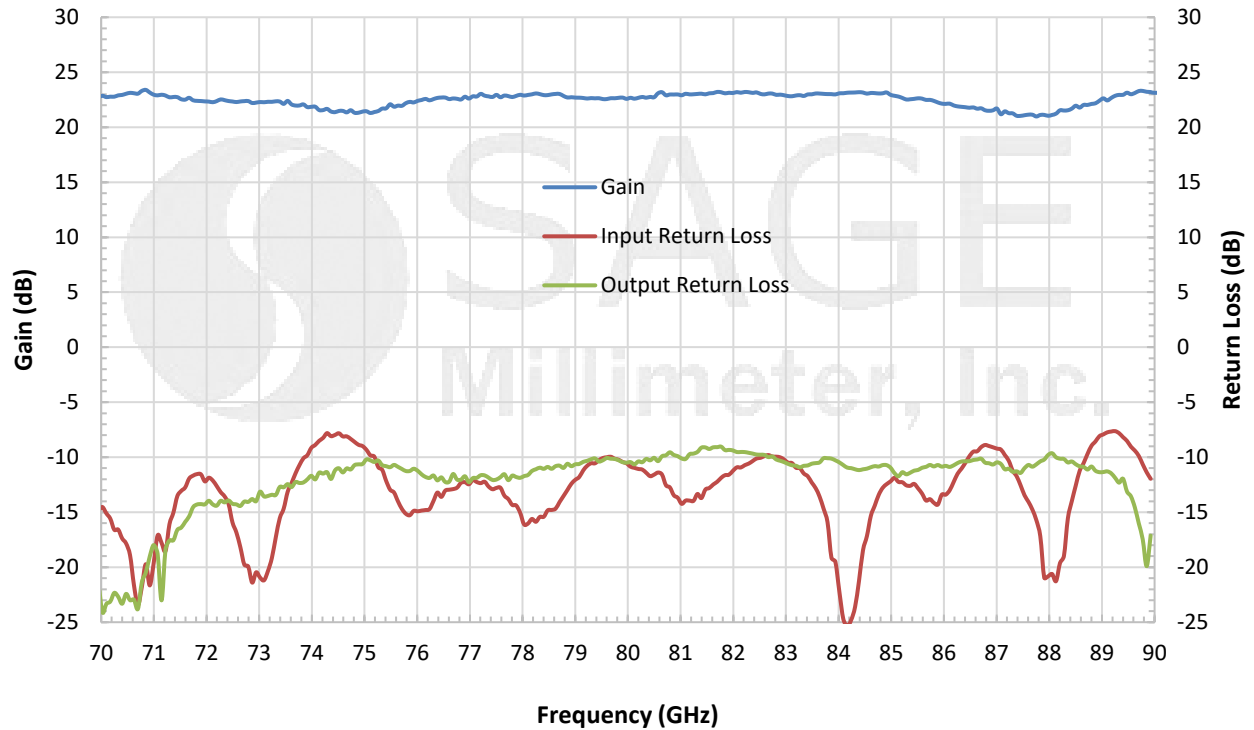




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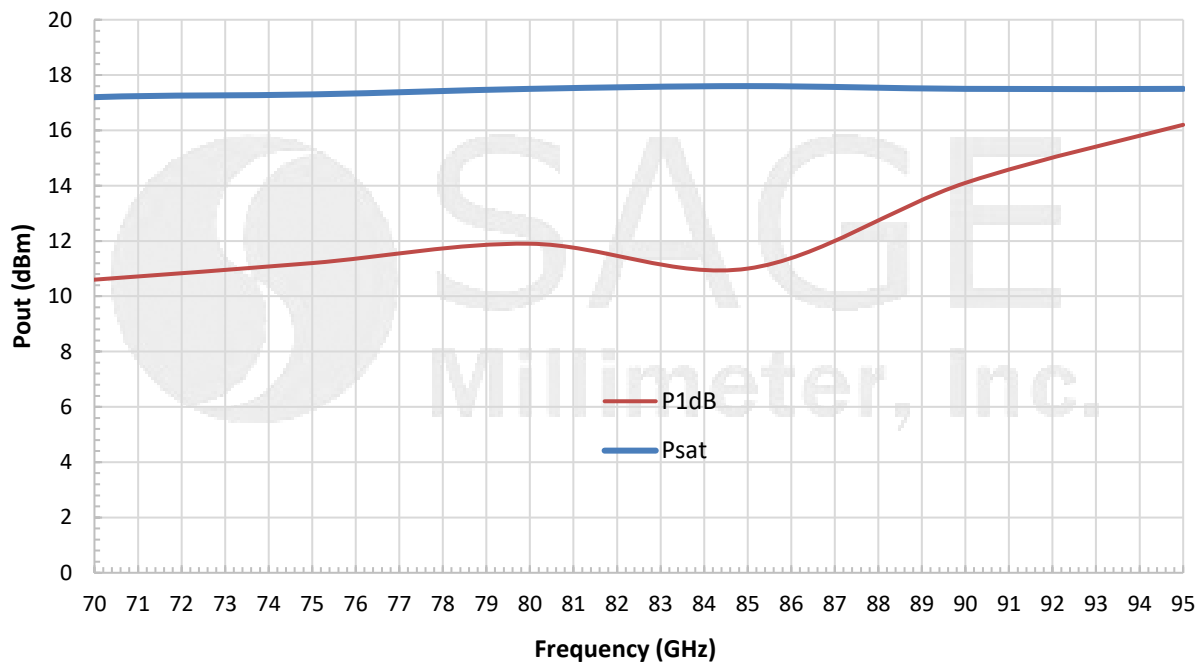
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/250 mA



Typical Output Power vs. Frequency

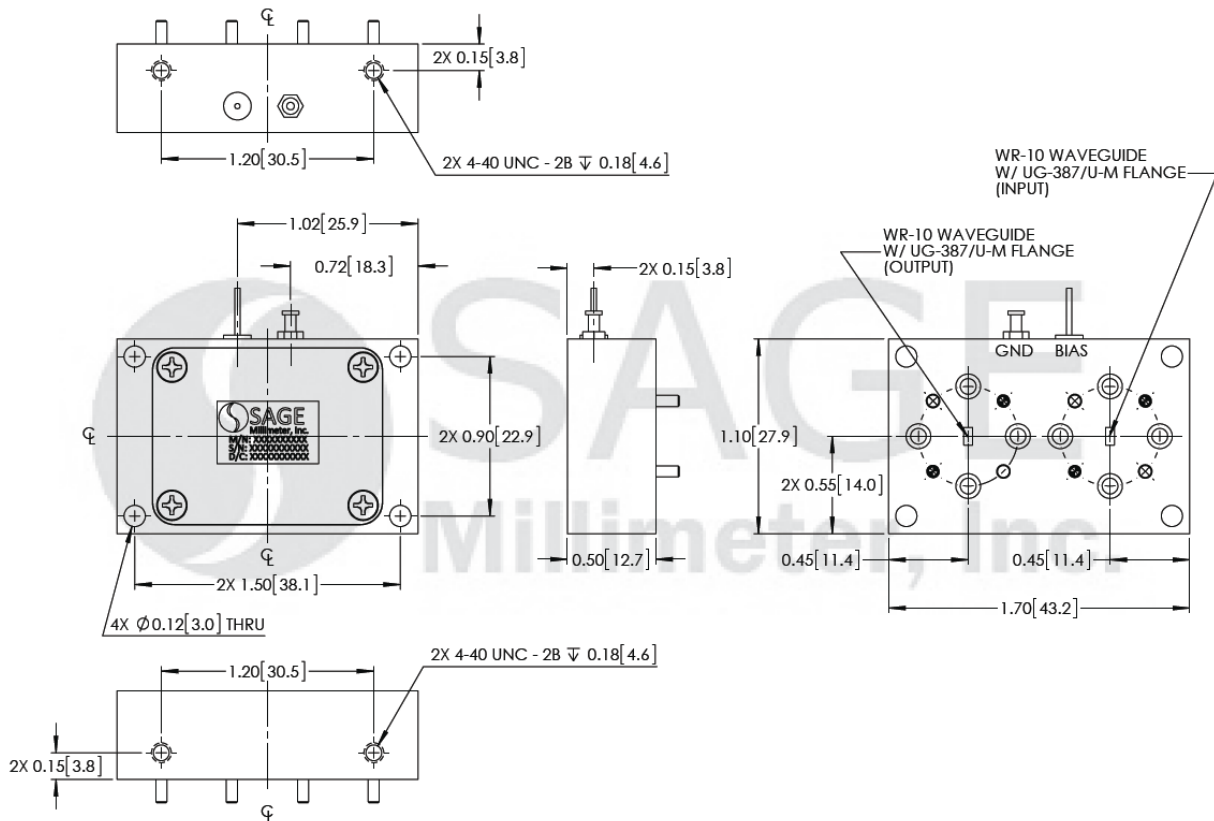
Bias: +8 V_{DC}/300 mA





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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, slightly.
- 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.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- The case temperature of the device shall never exceed +50 °C. Use proper heatsink or fan if necessary.

