SBP-9039531124-1010-S1

Rev. 1.3

W-Band Power Amplifier, 90 to 95 GHz, 11 dB Gain, +24 dBm P_{1dB}

Description:

Model SBP-9039531124-1010-S1 is a power amplifier with a typical small signal gain of 11 dB and a nominal P_{1dB} of +24 dBm across the frequency range of 90 to 95 GHz. The DC power requirement for the amplifier is +15 V_{DC}/260 mA. The mechanical configuration offers a right angle structure with WR-10 waveguides and UG-387/U-M flanges. Other port configurations, such as an inline structure with WR-10 waveguides or 1 mm connectors, are also available under different model numbers.

Features:

- High Output Power
- High Power Added Efficiency (PAE)

Applications:

- Test Instrumentation
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	90 GHz		95 GHz
Gain		11 dB	
P_{1dB}		+24 dBm	
P_{Sat}		+26 dBm	
P_{in}			+20 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
DC Voltage	+13 V_{DC}	+15 V_{DC}	+18 V_{DC}
DC Supply Current		260 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input Port	WR-10 Waveguide with UG-387/U-M Flange
Output Port	WR-10 Waveguide with UG-387/U-M 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-SW-1

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Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

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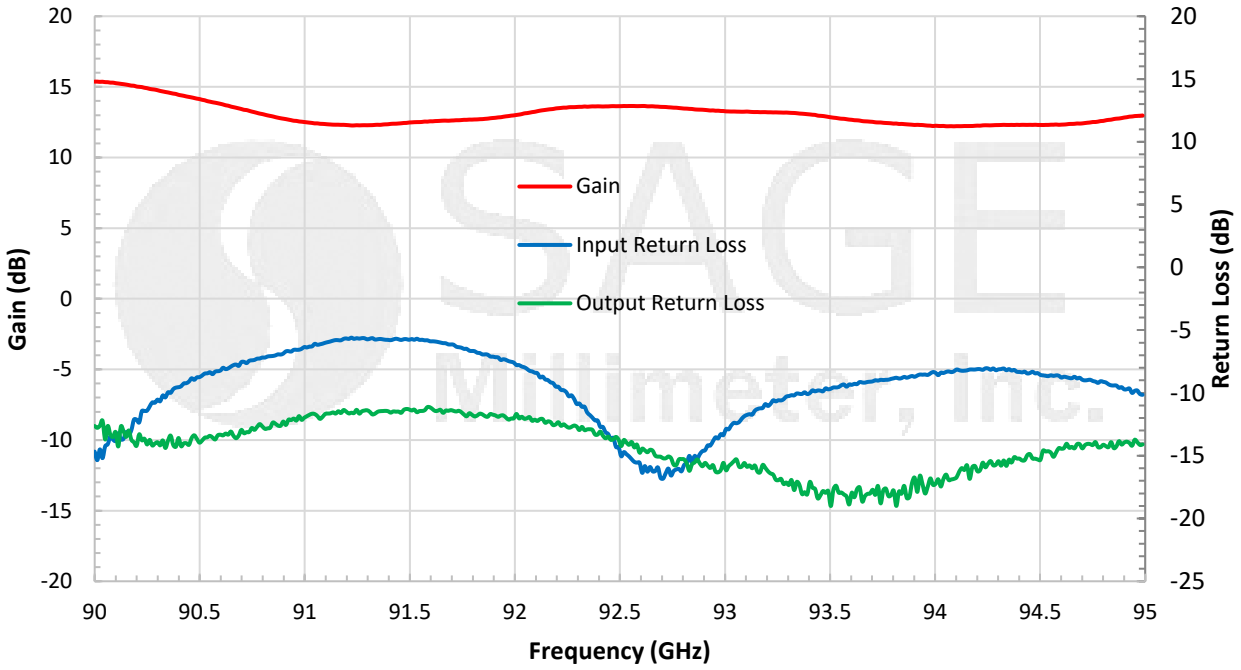
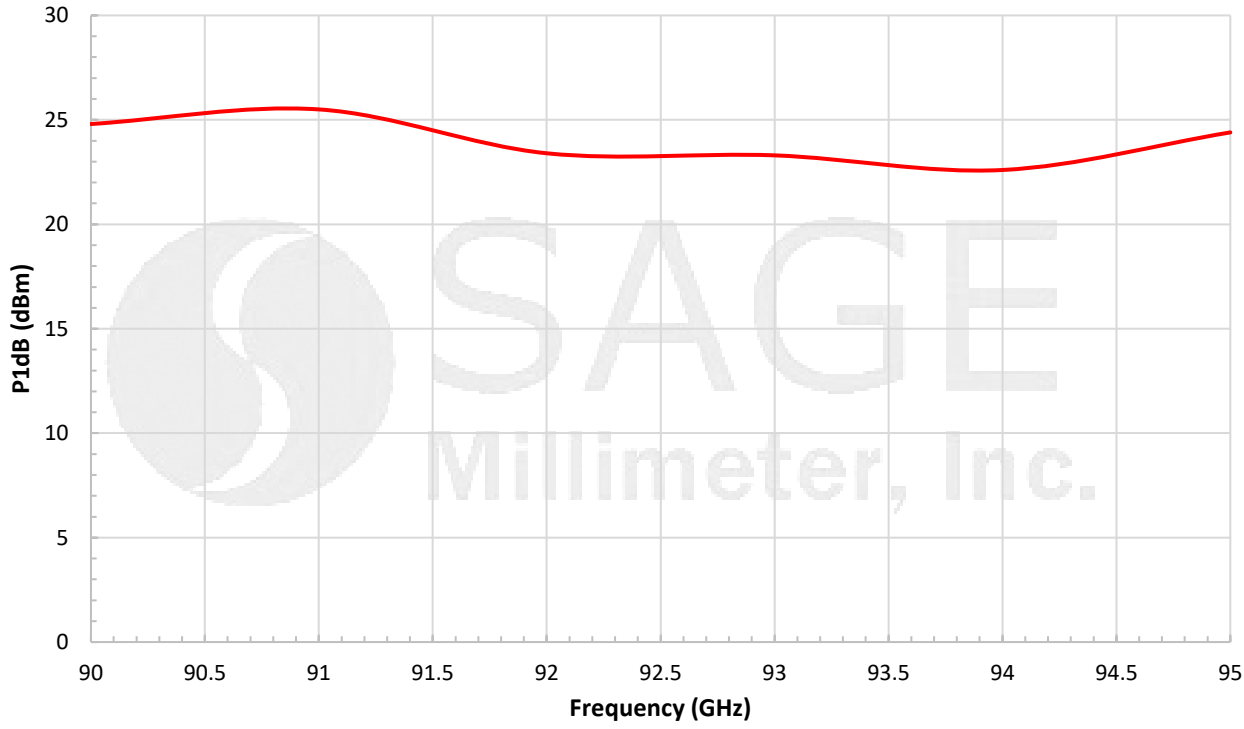
Gain and Return Loss vs. Frequency

Bias: +15 V_{DC}/260 mA



Typical P_{1dB} vs. Frequency

Bias: +15 V_{DC}/360 mA



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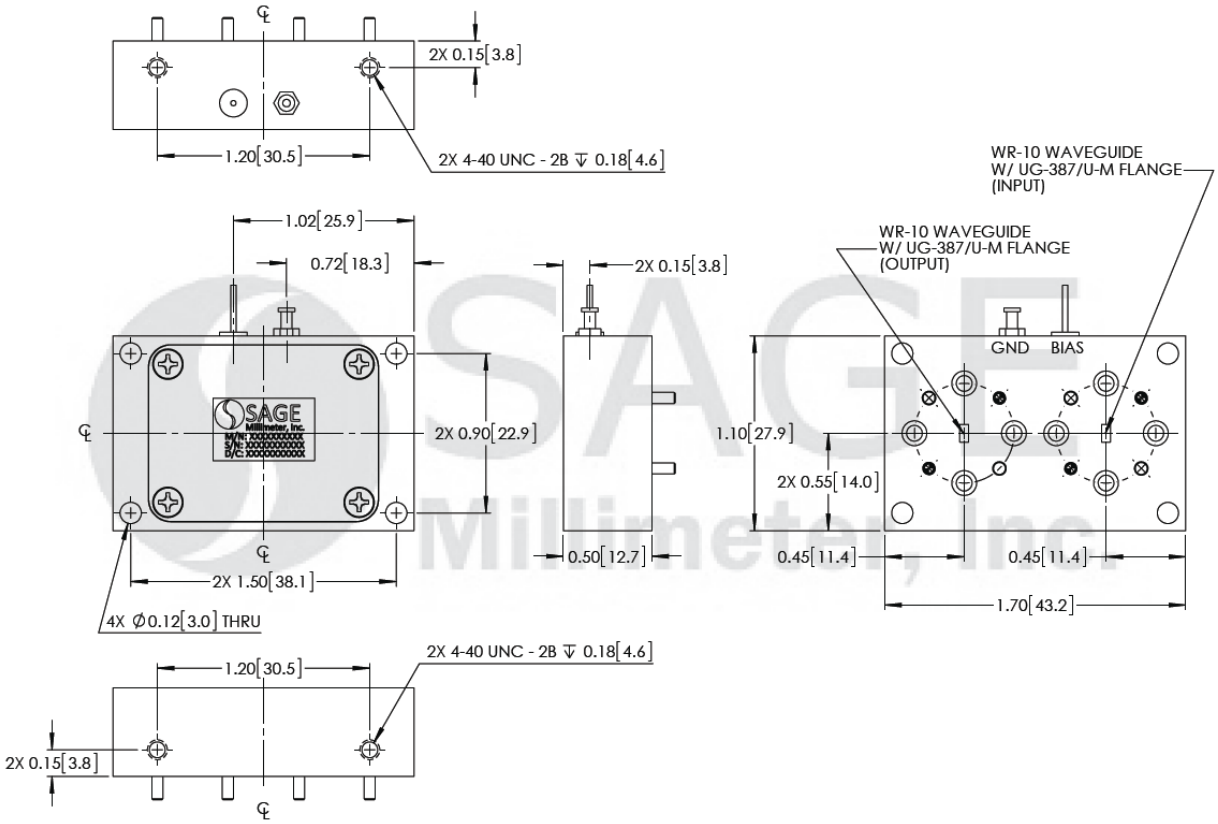
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



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.

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