SBP-9239633020-1010-E1

Rev. 1.0

W-Band Power Amplifier

Description:

Model SBP-9239633020-1010-E1 is a power amplifier with a typical small signal gain of 30 dB and a nominal output power of +20 dBm in the frequency range of 92 to 96 GHz. The DC power requirement for the amplifier is +8 V_{DC}/650 mA. The mechanical configuration offers an in line 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:

- High Gain
- High Output Power

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	92 GHz		96 GHz
Gain		30 dB	
P_{1dB}		+20 dBm	
P_{in}			-7 dBm
Input VSWR		3:1	
Output VSWR		3:1	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		650 mA	
Specification Temperature		+25˚C	
Case 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
Size	1.10” (W) X 1.50” (L) X 0.75” (H)
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Outline	BG-SW-2

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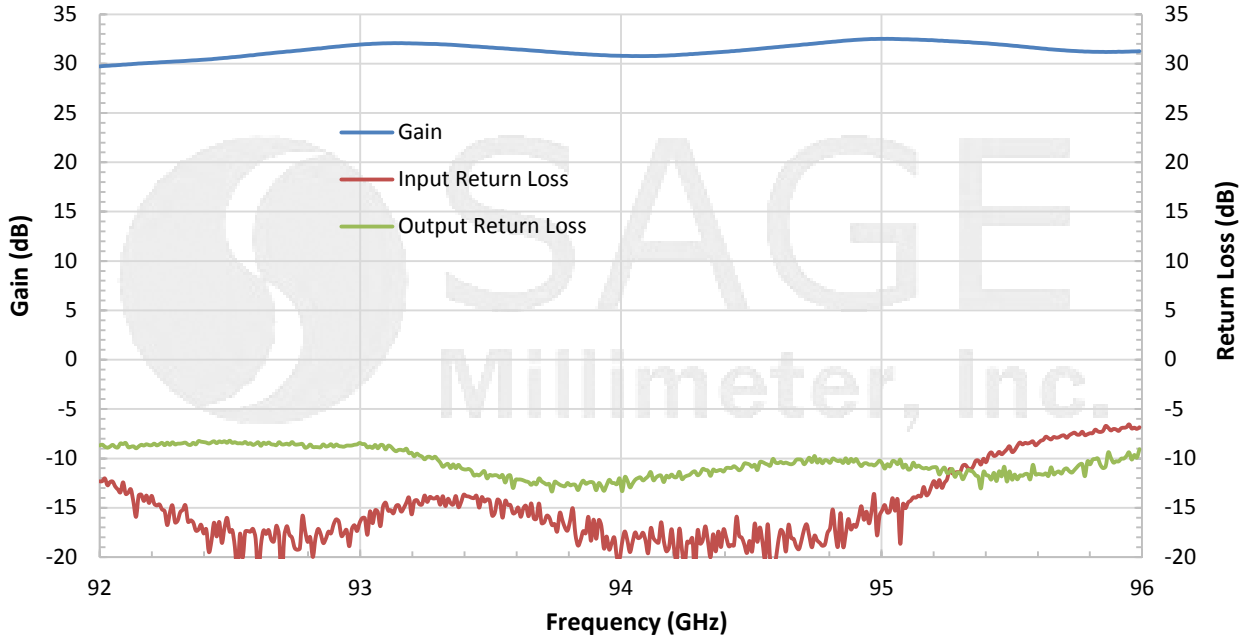
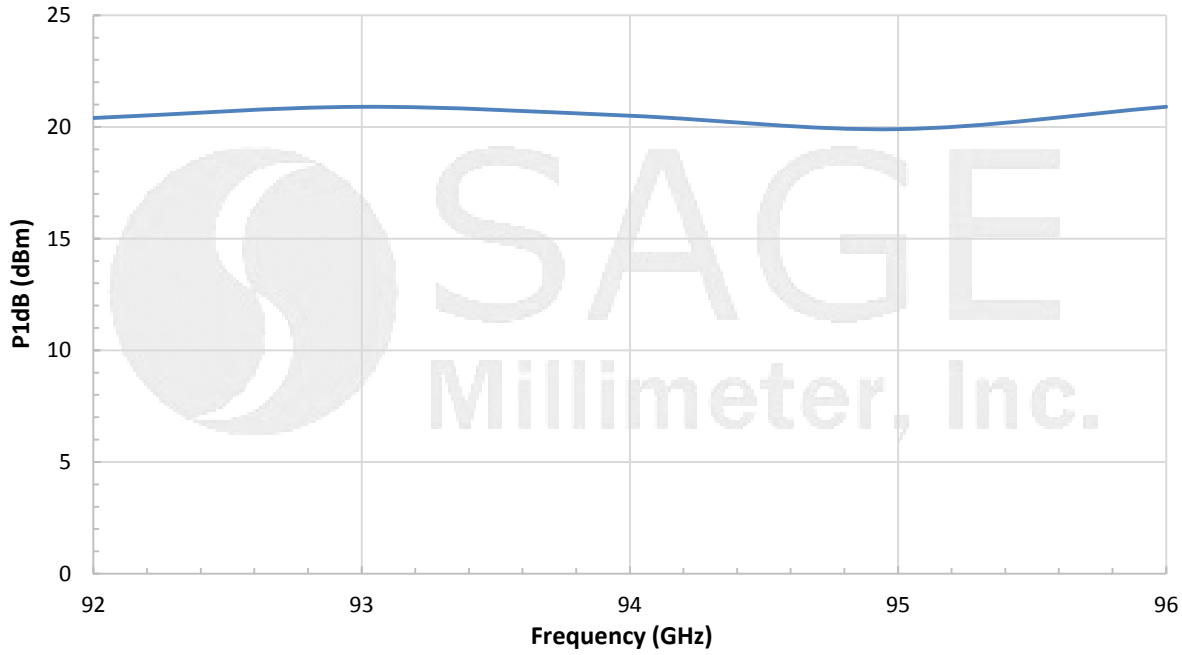
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/650 mA



Typical P_{1dB} vs. Frequency

Bias: +8 V_{DC}/650 mA



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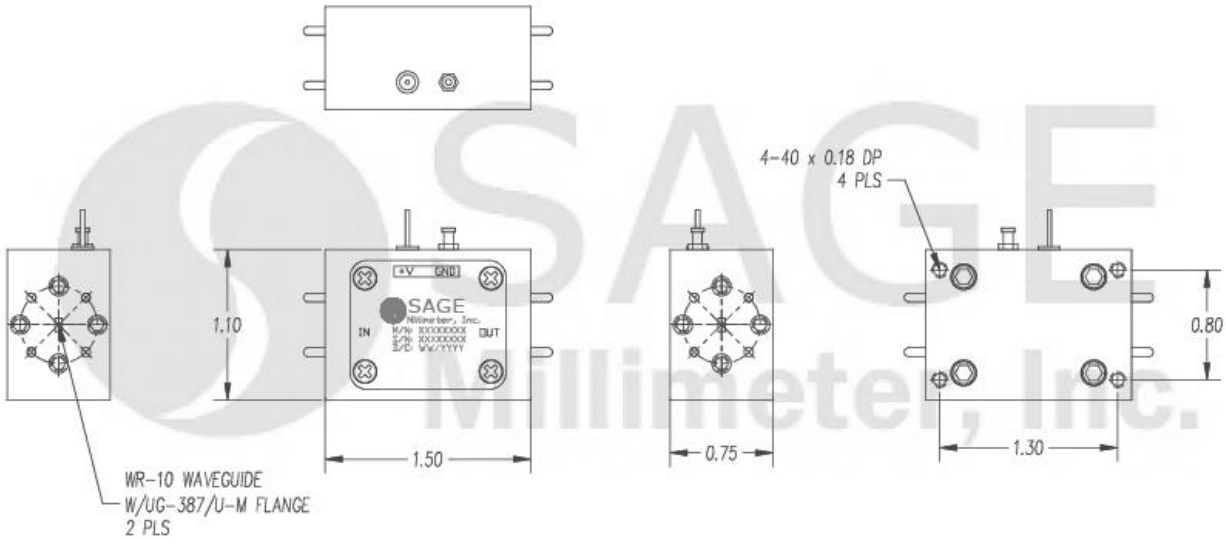
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



Note:

- All data are presented by using a limited 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 number.

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.

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