



E-Band Power Amplifier, 71 to 78 GHz, 30 dB Gain, +25 dBm P_{1dB}

Description:

Model SBP-7137833028-1212-E1 is a power amplifier with a typical small signal gain of 30 dB, a nominal P_{1dB} of +25 dBm and a P_{sat} of +30 dBm across the frequency range of 71 to 78 GHz. The DC power requirement for the amplifier is +15 V_{DC}/620 mA. The mechanical configuration offers an in line structure with WR-12 waveguides and UG-387/U anti-cocking flanges. Other port configurations, such as with 1 mm connectors or a right angle structure with WR-12 waveguides, are also available under different model numbers.



Features:

- High Output Power
- Moderate Gain

Applications:

- Radar Systems
- 5G Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	71 GHz		78 GHz
Gain		30 dB	
P _{1dB}		+25 dBm	
P _{sat}		+30 dBm	
P _{in}			+5 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+13 V _{DC}	+15 V _{DC}	+18 V _{DC}
DC Supply Current		620 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
Output	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.10" (W) X 1.50" (L) X 0.75" (H)
Outline	BG-SE-2-A

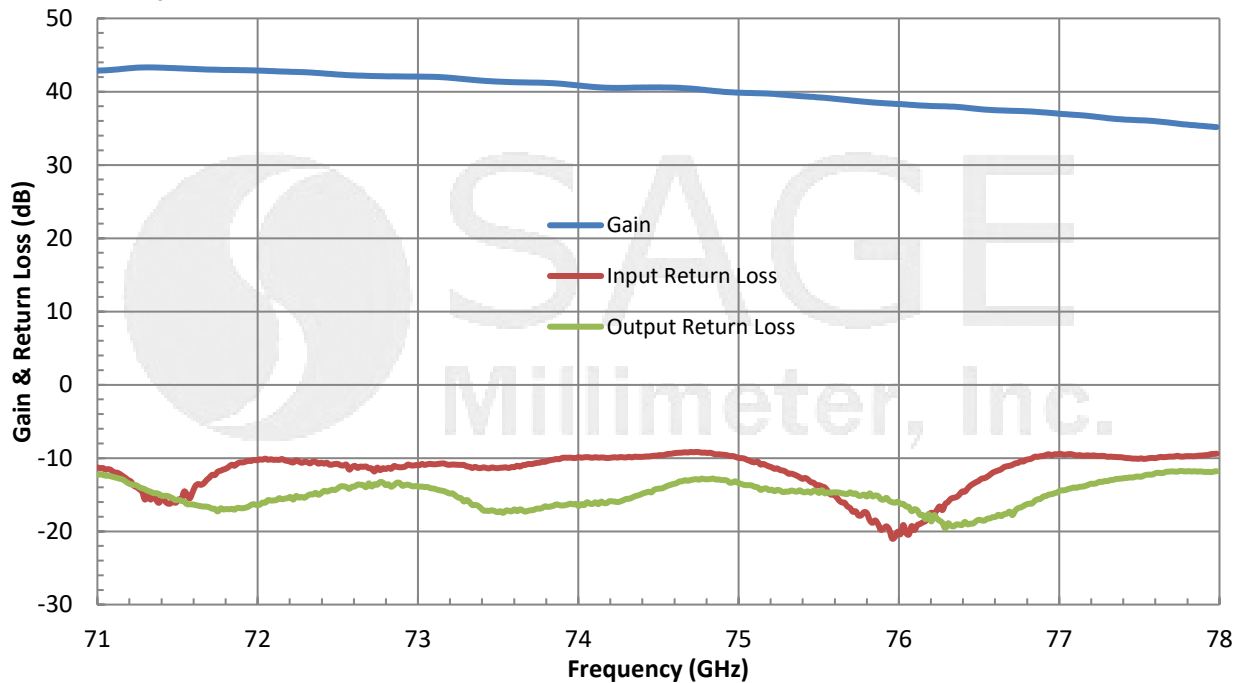




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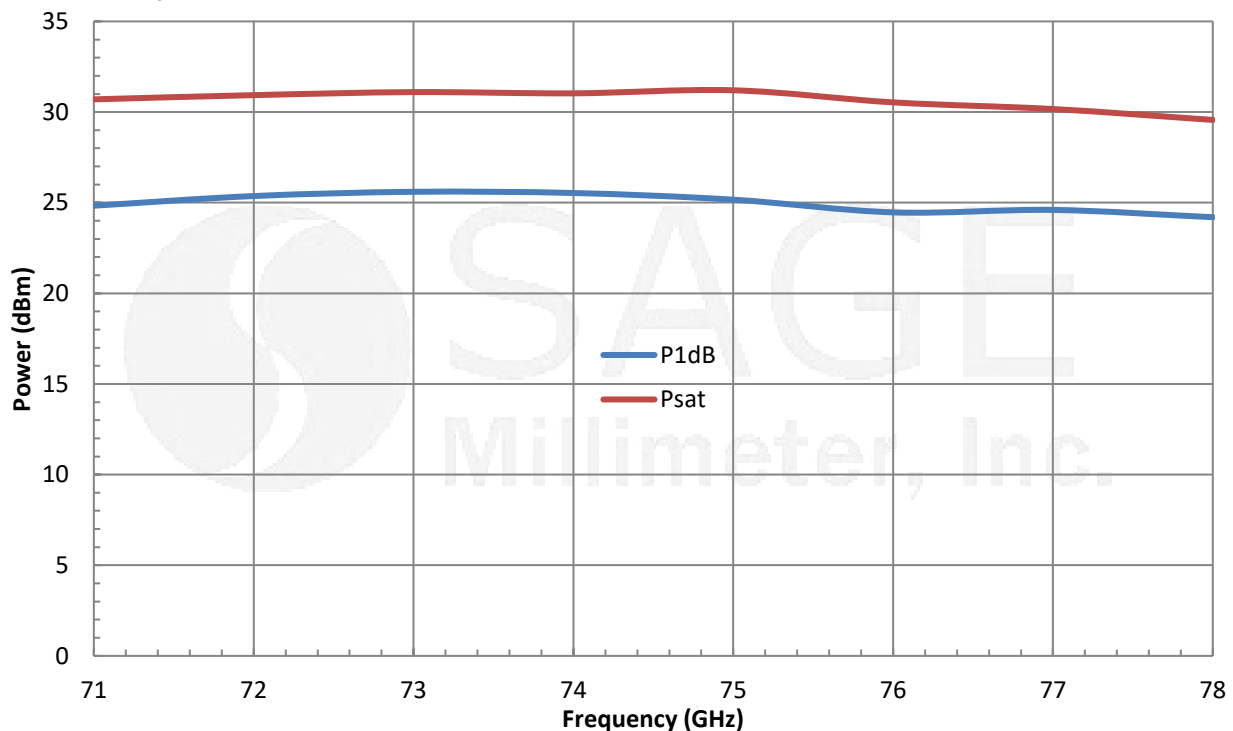
Typical Gain and Return Loss vs. Frequency

Bias: +15 V_{DC}/620 mA



Typical Output Power vs. Frequency

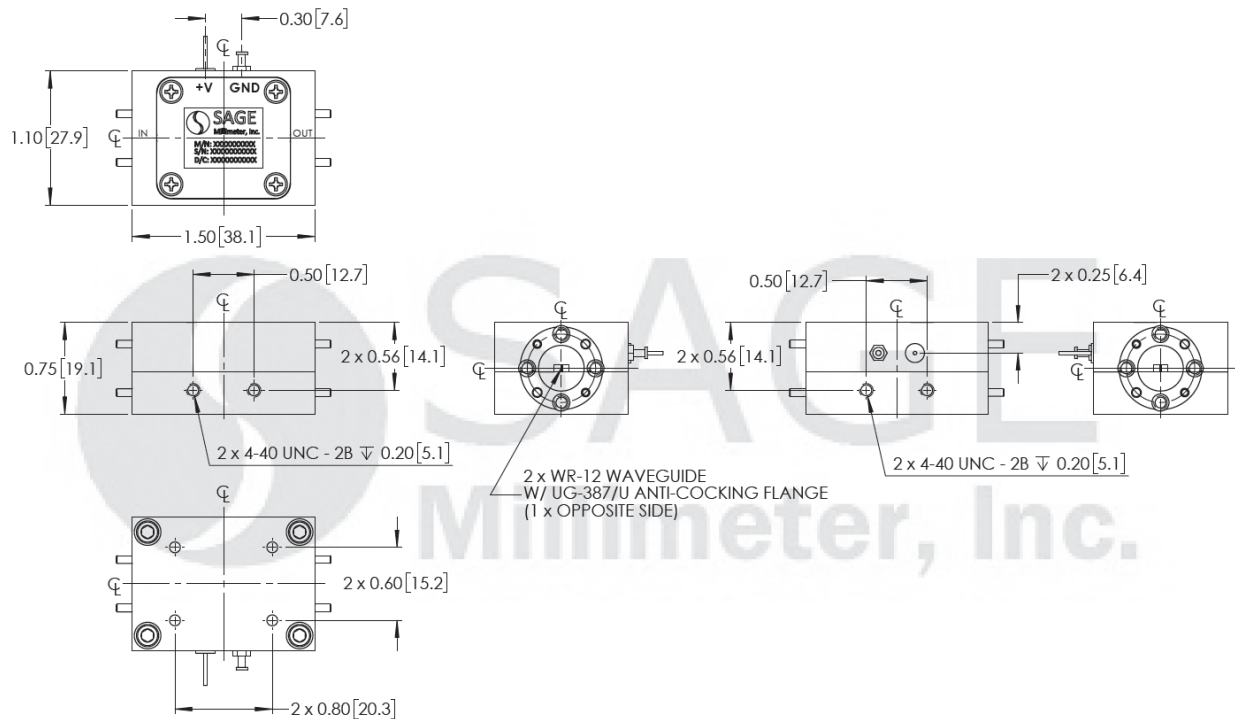
Bias: +15 V_{DC}/800 mA





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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.
- 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.

