



E-Band Power Amplifier, 78 to 87 GHz, 30 dB Gain, +25 dBm P_{1dB}

Description:

Model SBP-7838733025-1212-E1 is a power amplifier with a typical small signal gain of 30 dB and a typical P_{1dB} and P_{sat} of +25 and +27 dBm across the frequency range of 78 to 87 GHz, respectively. The DC power requirement for the amplifier is +8 V_{DC}/1,200 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 right angle structure with WR-12 waveguides, are also available under different model numbers.



Features:

- High Output Power
- High Gain
- Good Gain Flatness

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	78 GHz		87 GHz
Gain		30 dB	
P _{1dB}		+25 dBm	
P _{sat}		+27 dBm	
P _{in}			+16 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V _{DC}	+8 V _{DC}	+15 V _{DC}
DC Supply Current		1,200 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
Output Port	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

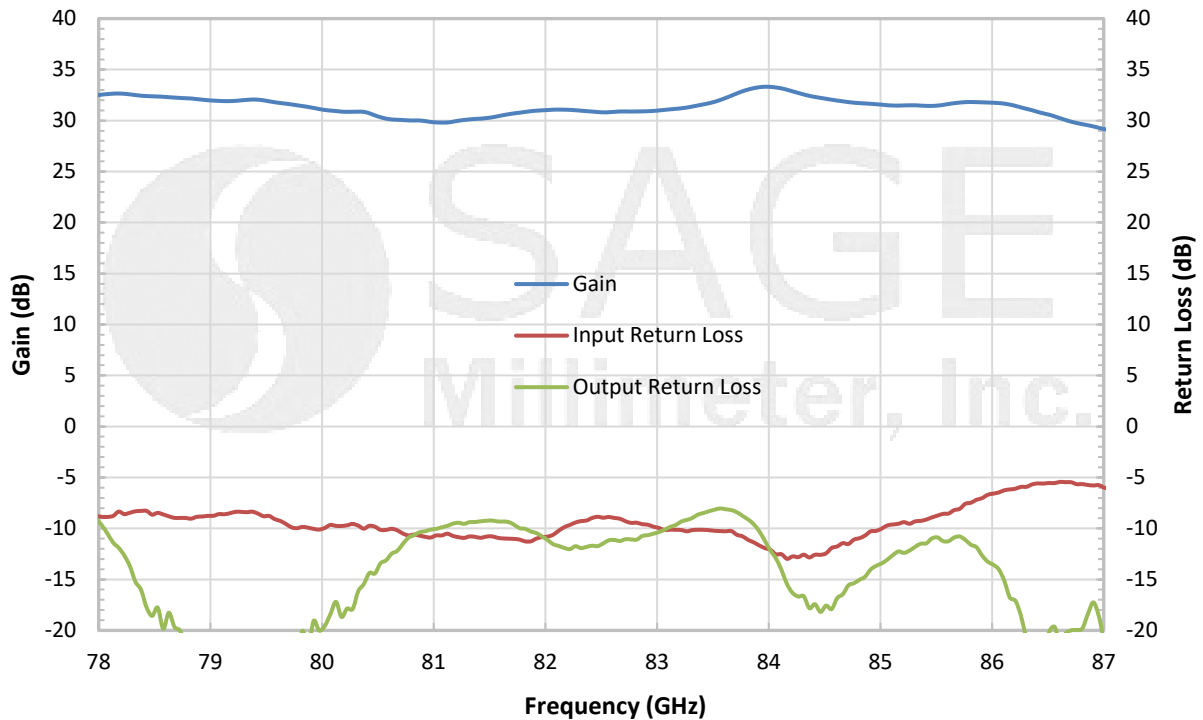




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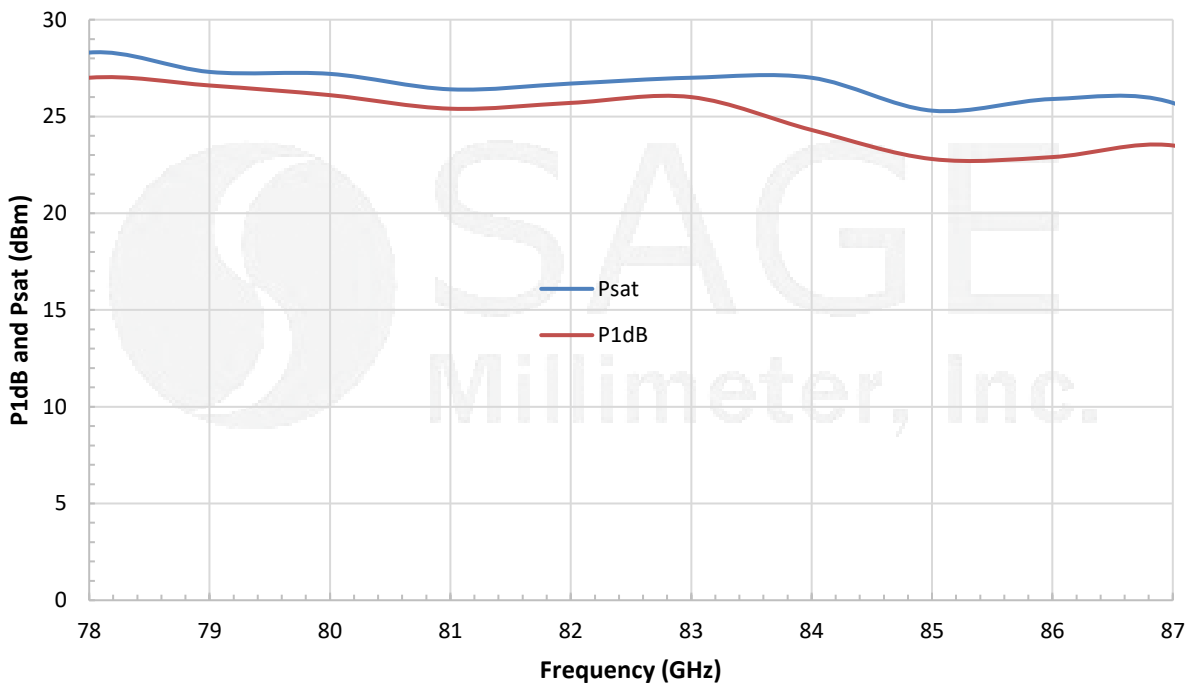
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/1,210 mA



Typical P_{1dB} and P_{sat} vs. Frequency

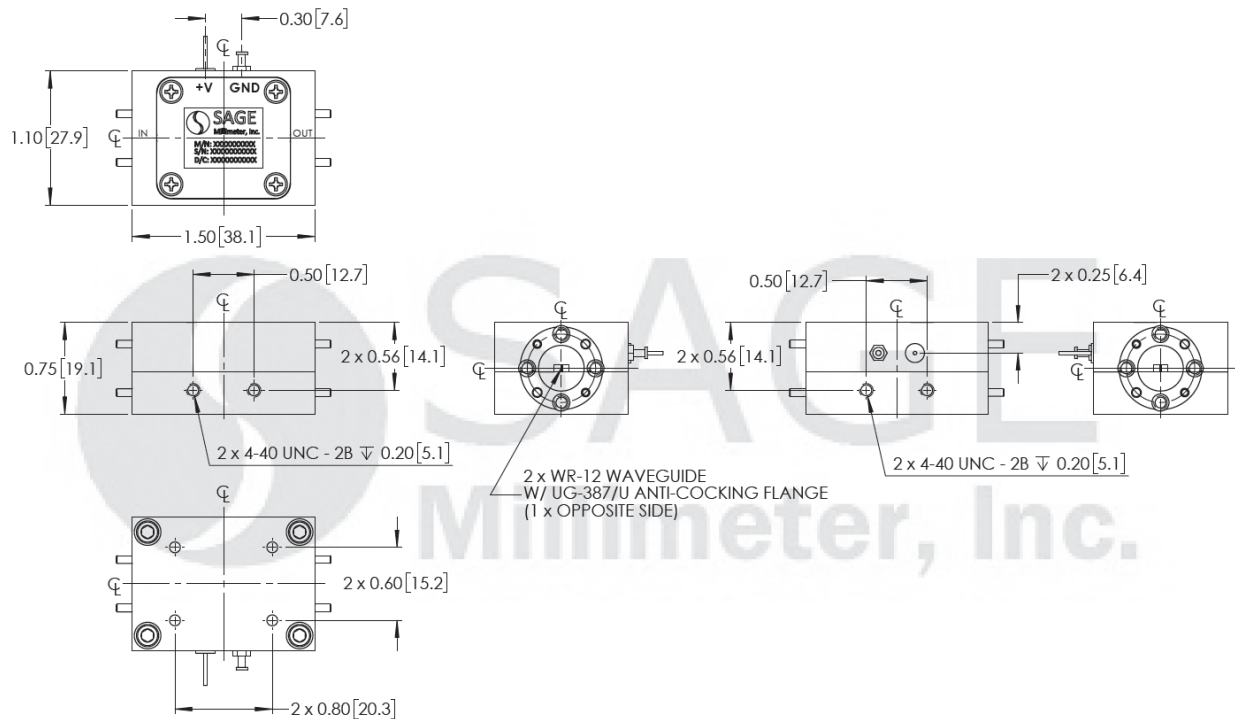
Bias: +8 V_{DC}/1,500 mA





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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.
- 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.

