

E-Band Power Amplifier, 66 to 78 GHz, 20 dB Gain, +19 dBm P_{1dB}**Description:**

Model SBP-6637832019-1212-EC is a power amplifier with a minimum small signal gain of 20 dB and a nominal P_{1dB} of +19 dBm across the frequency range of 66 to 78 GHz. The amplifier has a minimum P_{sat} of +19 dBm, which can be attenuated up to 10 dB using a control voltage of 0 to +5 V_{DC}. The DC power requirement for the amplifier is +8 V_{DC}/550 mA. The mechanical configuration offers an in line structure with WR-12 waveguides and UG-387/U anti-cocking flanges. Other port configurations are also available under different model numbers.

**Features:**

- High Output Power
- Output Power Control

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

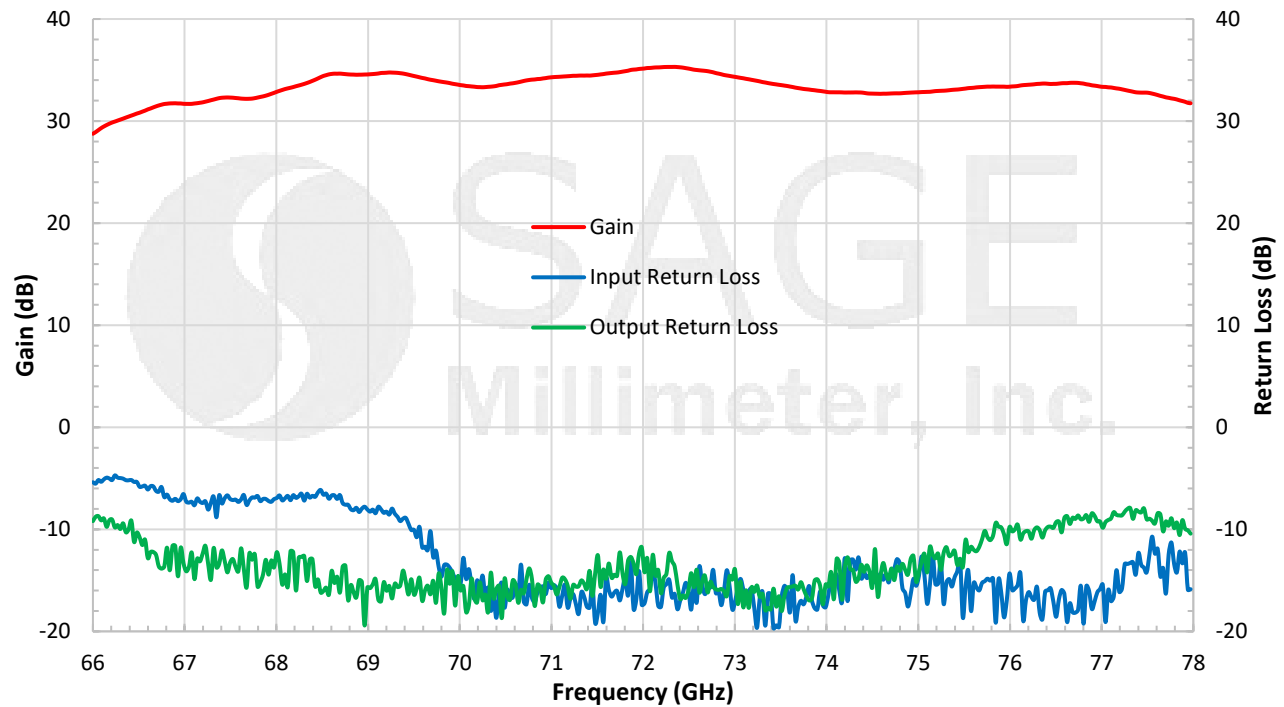
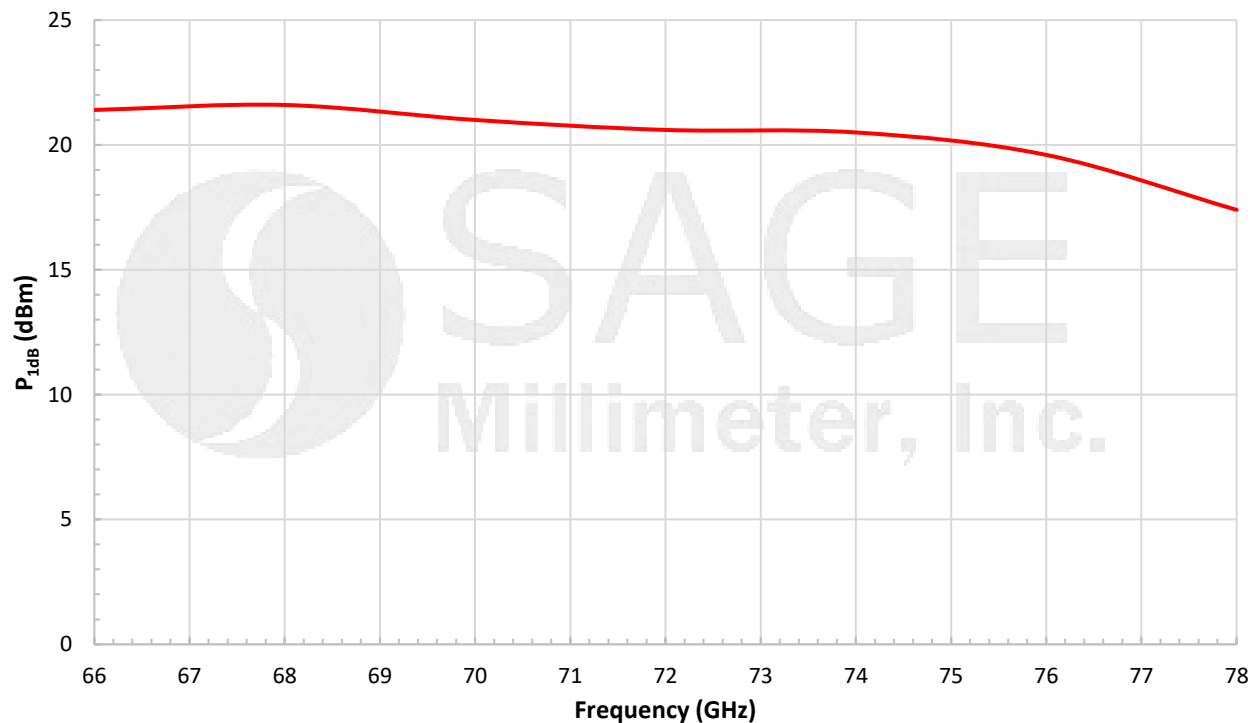
Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	66 GHz		78 GHz
Gain		20 dB	
P _{1dB}		+19 dBm	
P _{sat}		+24 dBm	
P _{sat} Control	0 dB		10 dB
P _{in}			+0 dBm
Input/ Output Return Loss		6 dB	
DC Supply Voltage	+6 V _{DC}	+8 V _{DC}	+12 V _{DC}
DC P _{sat} Control Voltage	0 V _{DC}		+5 V _{DC}
DC Supply Current		550 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Ports	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
Bias	Solder Pin
Psat Control	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-2C-A

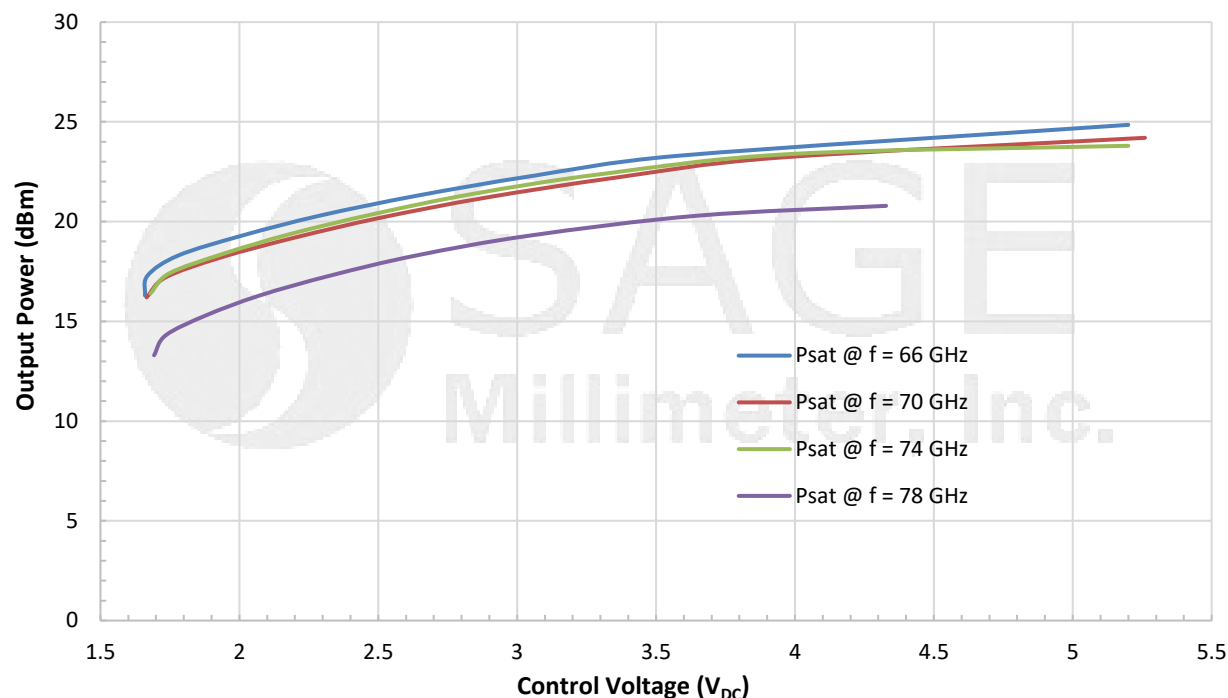


**E-Band Power Amplifier, 66 to 78 GHz, 20 dB Gain, +19 dBm P_{1dB}** **Typical Gain and Return Loss vs. Frequency**Bias: +12 V_{DC}/550 mA, V_{CTRL}: +5 V_{DC}**Typical P_{1dB} vs. Frequency**Bias: +12 V_{DC}/700 mA, V_{CTRL}: +5 V_{DC}

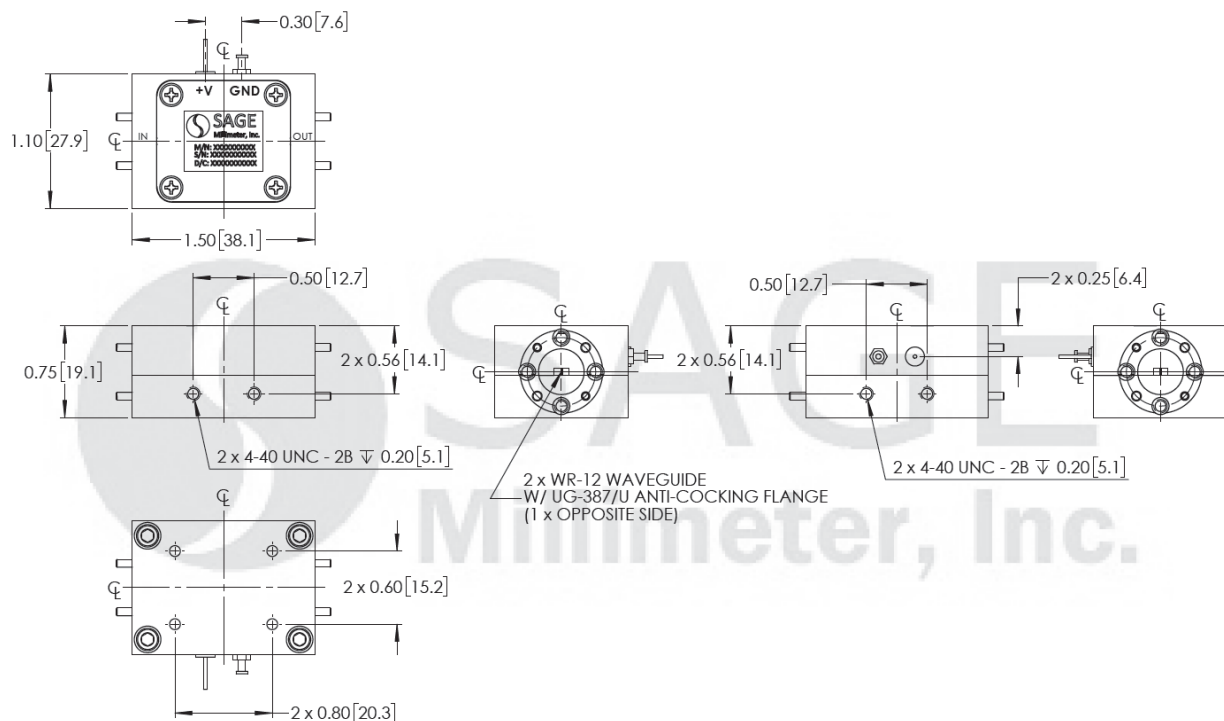
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Typical Saturated Output Power vs. Control Voltage

Bias: +12 V_{DC}/550 mA, V_{CTRL}: 0 to +5 V_{DC}



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





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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.

