SBP-7138633024-1212-E1

Rev 1.0

E-Band Power Amplifier, 71 to 86 GHz, 30 dB Gain, +24 dBm P_{1dB}

Description:

Model SBP-7138633024-1212-E1 is a GaAs based power amplifier with a typical small signal gain of 30 dB and a nominal P_{1dB} of +24 dBm across the frequency range of 71 to 86 GHz. The DC power requirement for the amplifier is +8 V_{DC}/2.3 A. The mechanical configuration offers an inline structure with WR-12 waveguides and UG-387/U anti-cocking flanges. Other port configurations, such as a right angle structure with WR-12 waveguides or 1 mm connectors, are also available under different model numbers.

Features:

- Full Waveguide Band Coverage
- High Output Power
- Good Gain Flatness

Applications:

- Test Instrumentation
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	71 GHz		86 GHz
Gain		30 dB	
P_{1dB}		+24 dBm	
P_{Sat}		+26 dBm	
P_{in}			+15 dBm
Input Return Loss		8 dB	
Output Return Loss		6 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		2.3 A	
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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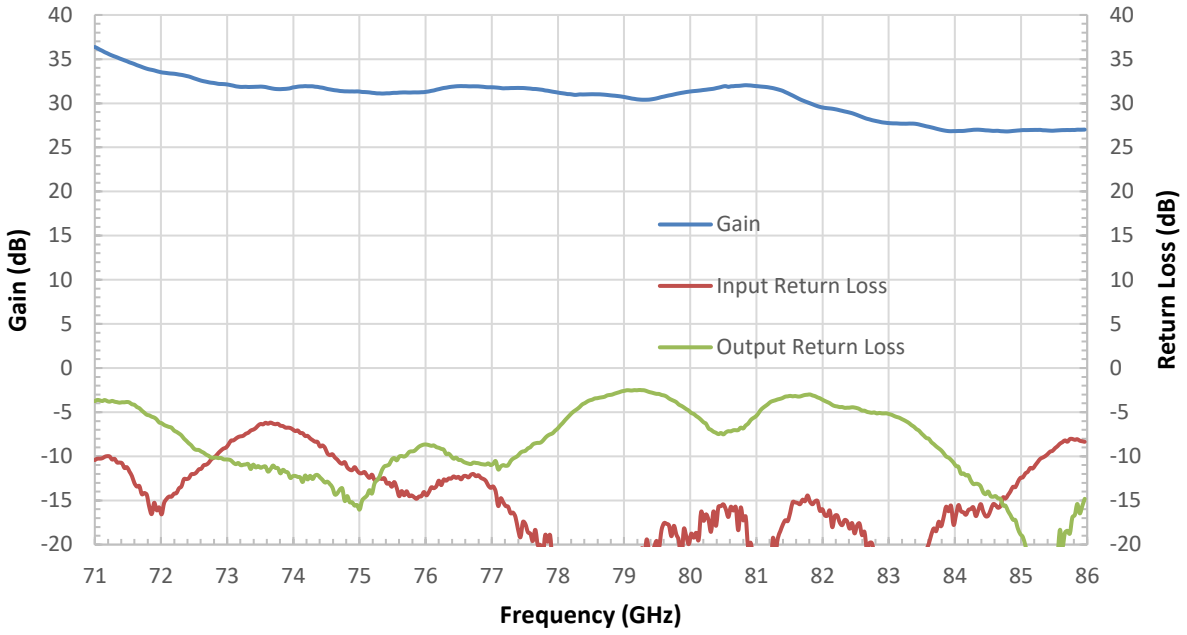
E-Band Power Amplifier, 71 to 86 GHz, 30 dB Gain, +24 dBm P_{1dB}

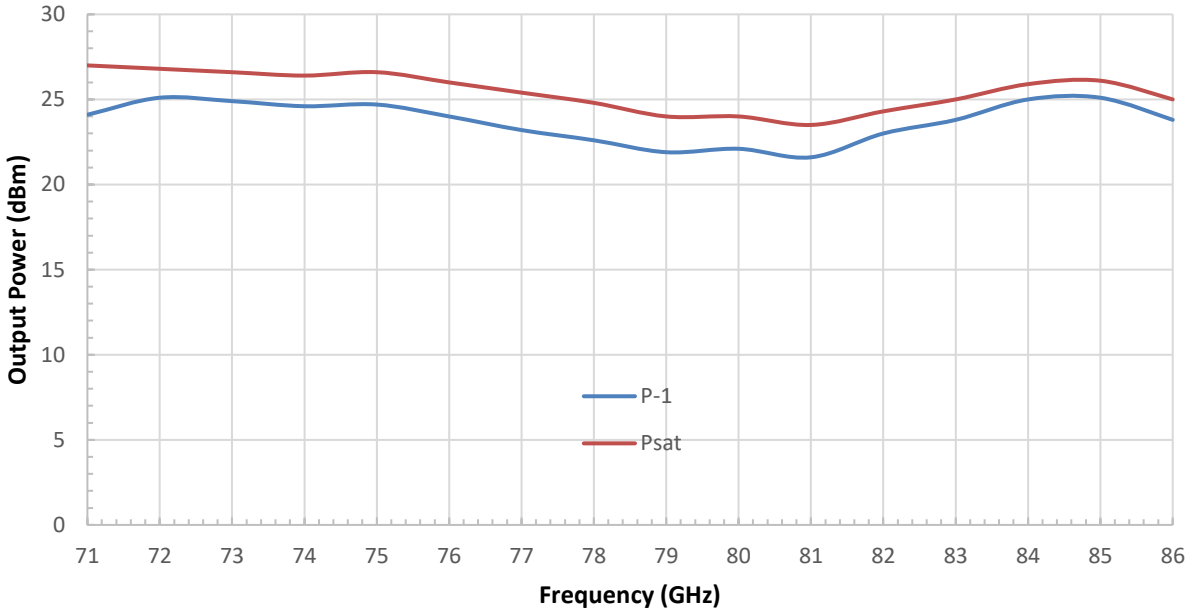
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/ 2,360 mA



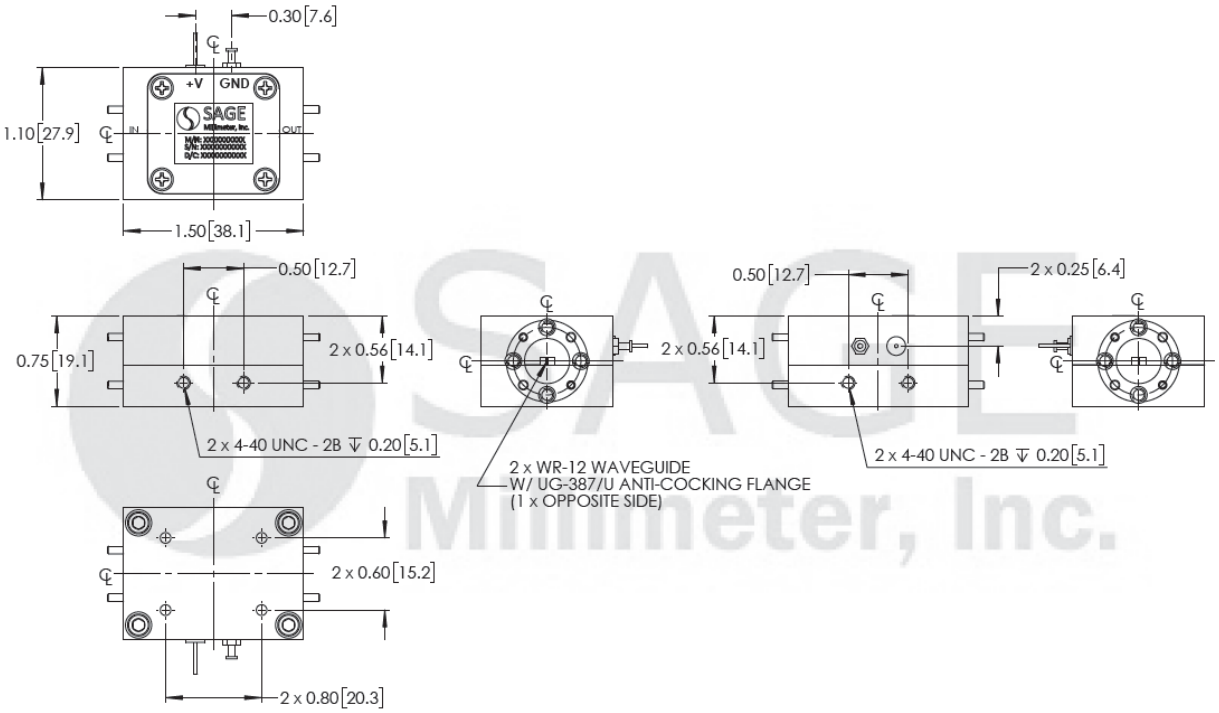
Output Power vs. Frequency

Bias: +8 V_{DC}/ 2,360 mA
RFsat: +8 Vdc/ 3,600 mA



E-Band Power Amplifier, 71 to 86 GHz, 30 dB Gain, +24 dBm P_{1dB}

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, slightly.
- All testing was performed under +25 ˚C case temperature.
- Eravant 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.