SBP-8531043824-1010-E1

Final Rev 1.0

W-Band Power Amplifier, 85 to 100 GHz, 38 dB Gain, 24 dBm P_{1dB}

Description:

Model SBP-8531043824-1010-E1 is a GaAs based high power amplifier with a typical small signal gain of 38 dB and a nominal P_{1dB} of +24 dBm across the frequency range of 85 to 100 GHz. The DC power requirement for the amplifier is +8 V_{DC}/2 A. The mechanical configuration offers an in line structure with WR-10 waveguides and UG-387/U-M anti-cocking 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 Output Power
- High Power Added Efficiency (PAE)

Applications:

- Test Instrumentation
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	85 GHz		100 GHz
Gain		38 dB	
P_{1dB}		+24 dBm	
P_{sat}		+26 dBm	
P_{in}			+0 dBm
Input Return Loss		6 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+12 V_{DC}
DC Supply Current		2 A	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Output Port	WR-10 Waveguide with UG-387/U-M 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-SW-2-A

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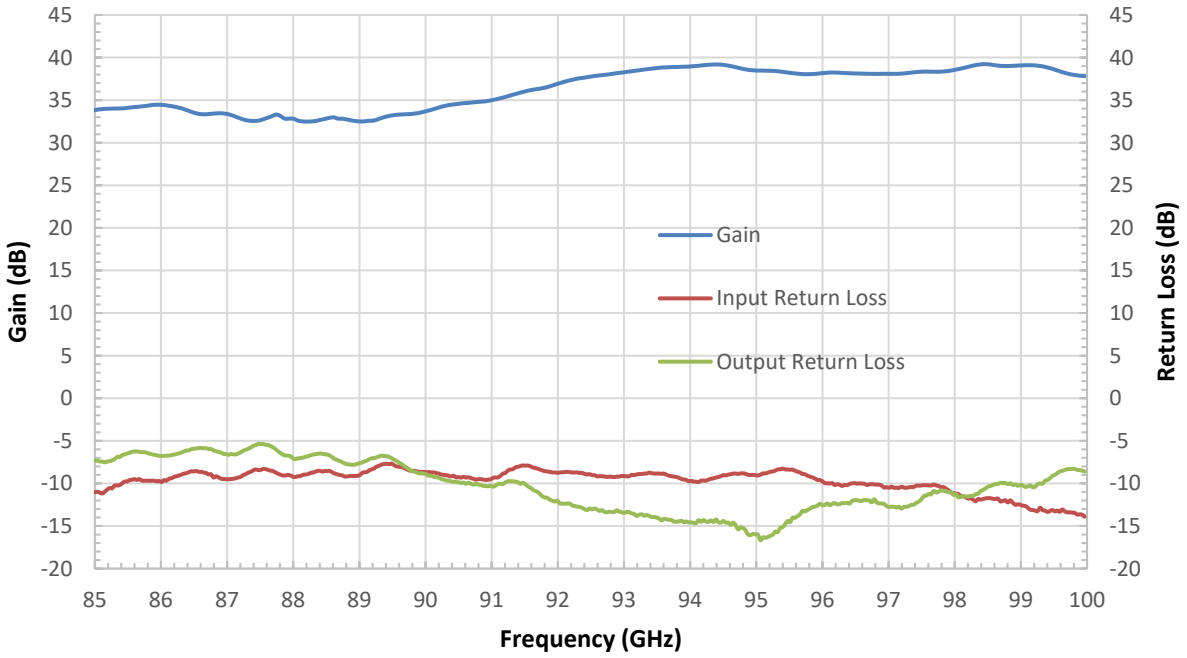
W-Band Power Amplifier, 85 to 100 GHz, 38 dB Gain, 24 dBm P_{1dB}

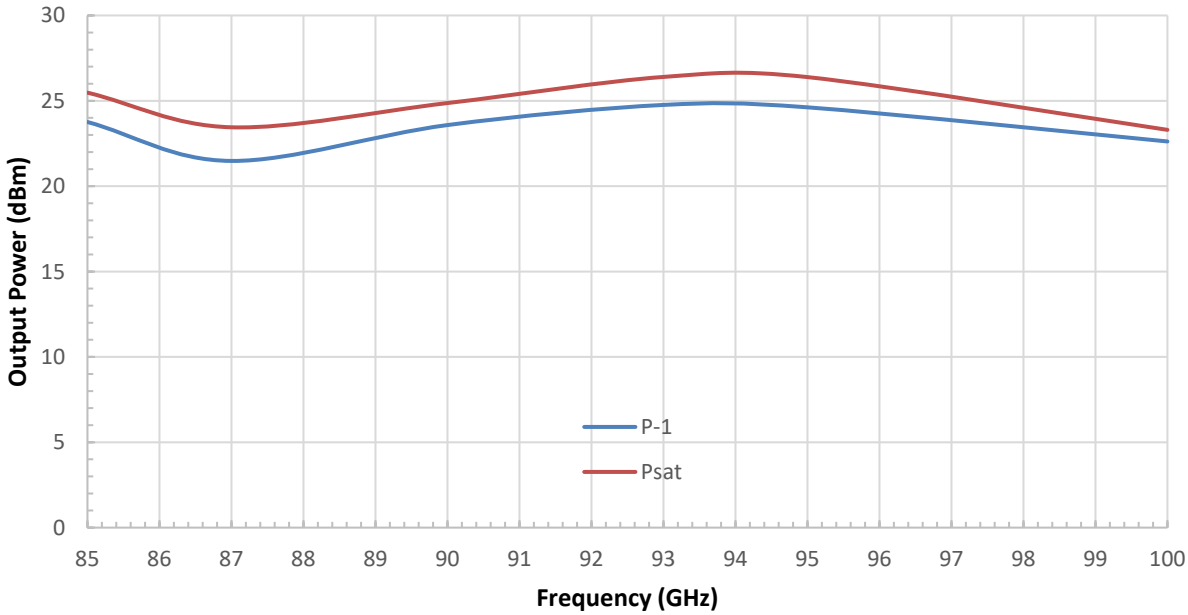
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/1.974 A



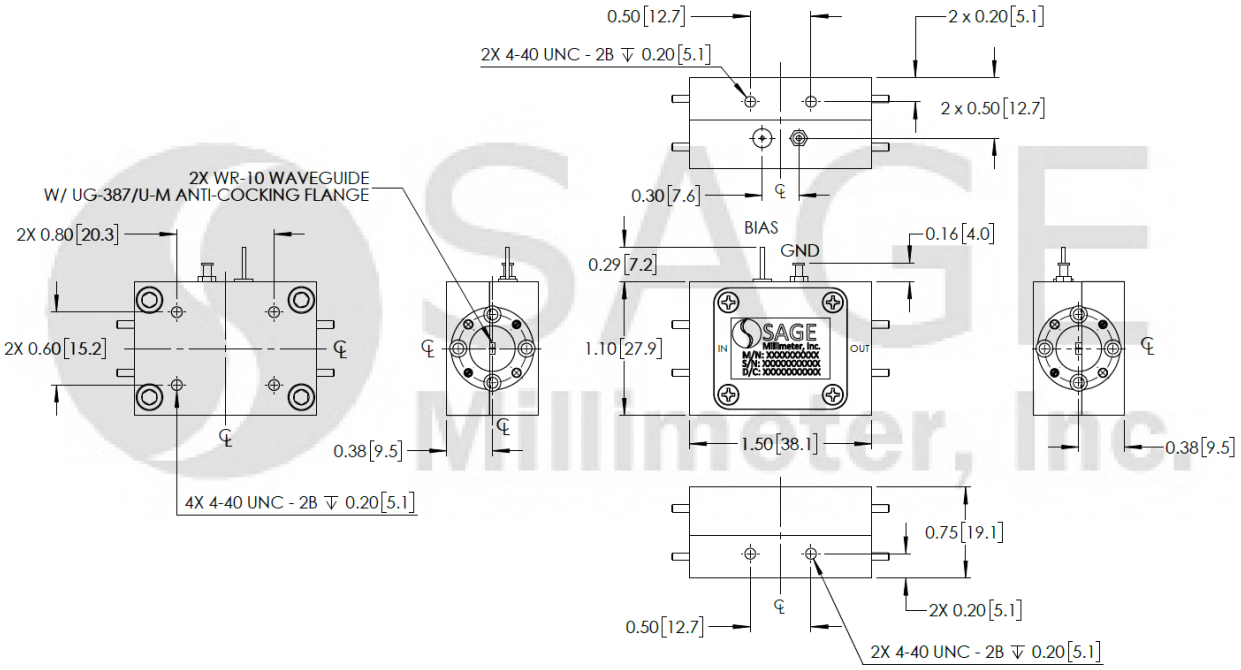
Output Power vs. Frequency

Bias: +8 V_{DC}/2.847 A



W-Band Power Amplifier, 85 to 100 GHz, 38 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.