



W-Band Power Amplifier, 90 to 98 GHz, 20 dB Gain, 13 dBm P_{1dB}

Description:

Model SBP-9039832013-1010-E1 is a GaAs based high power amplifier with a typical small signal gain of 20 dB and a nominal P_{1dB} of +13 dBm across the frequency range of 90 to 98 GHz. The DC power requirement for the amplifier is +8 V_{DC}/225 mA. 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	90 GHz		98 GHz
Gain		20 dB	
P _{1dB}		+13 dBm	
P _{sat}		+14 dBm	
P _{in}			+0 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
DC Voltage		+8 V _{DC}	
DC Supply Current		225 mA	
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

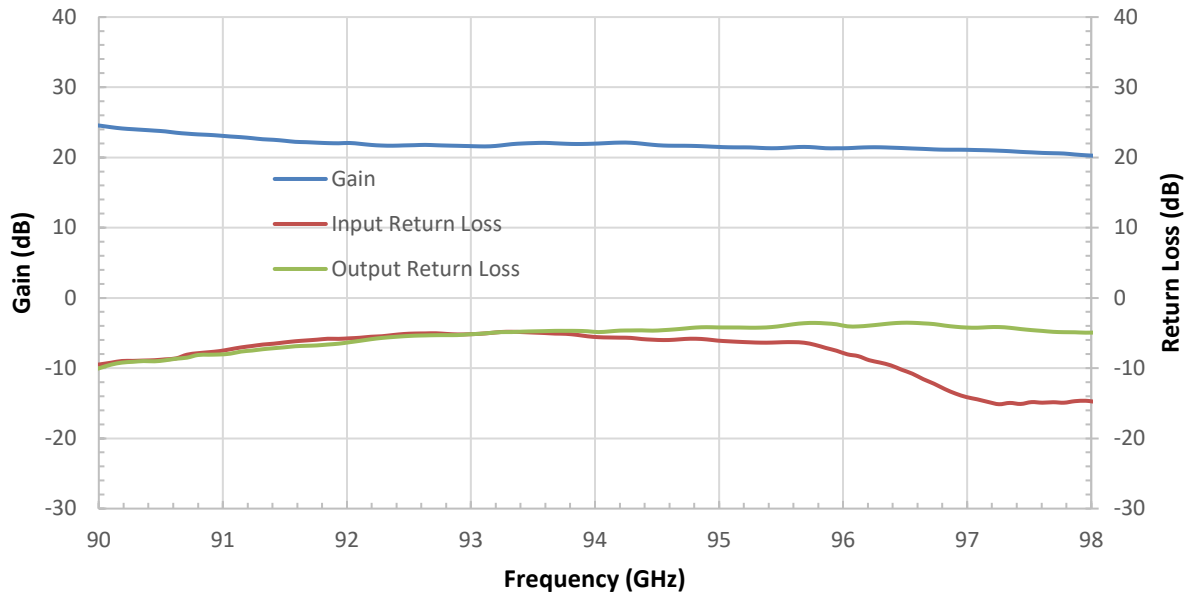




W-Band Power Amplifier, 85 to 100 GHz, 23 dB Gain, 24 dBm P_{1dB}

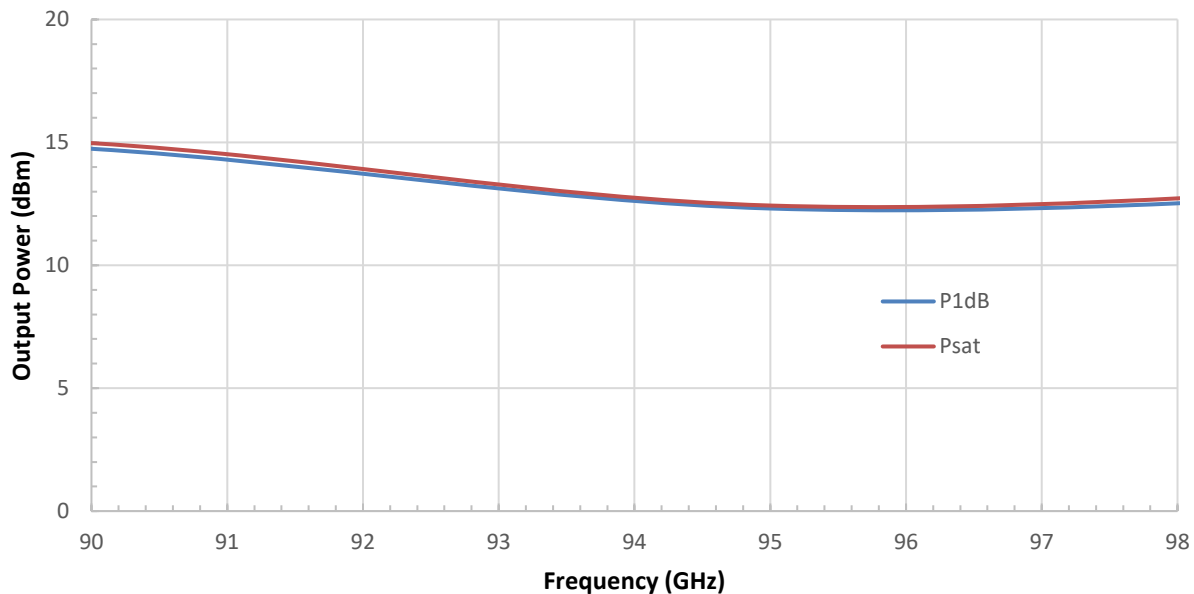
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/256 mA



Output Power vs. Frequency

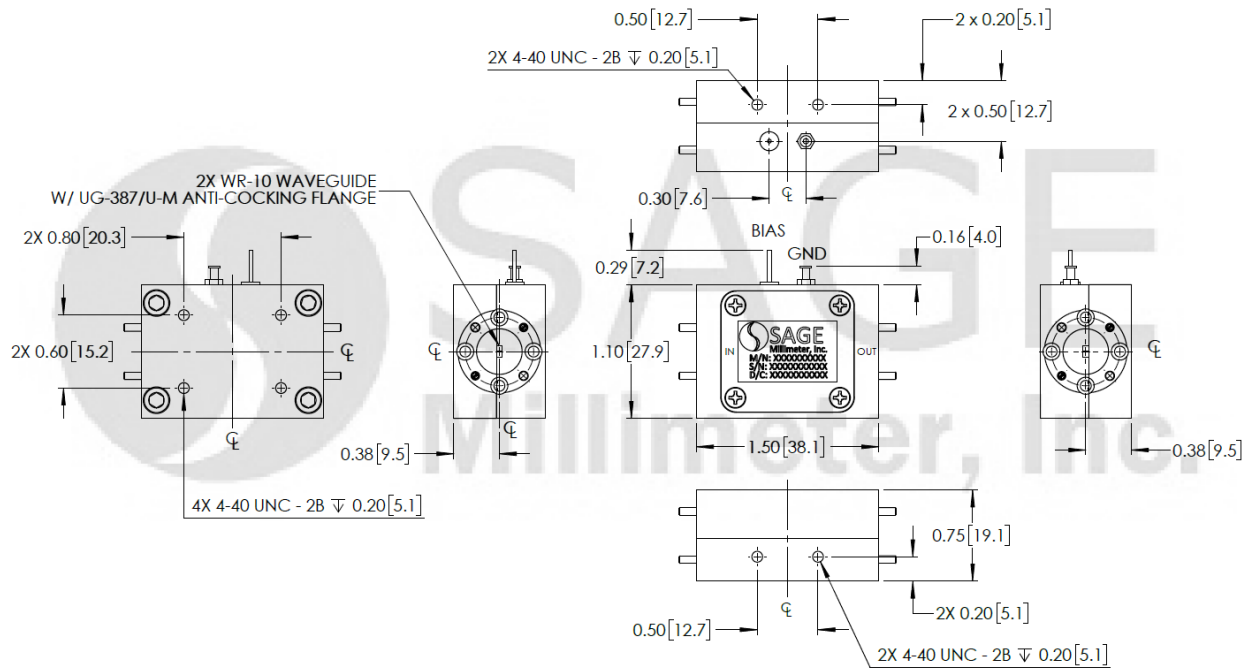
Bias: +8 V_{DC}/256 mA





W-Band Power Amplifier, 85 to 100 GHz, 23 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.
- 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.

