



E-Band Power Amplifier, 60 to 90 GHz, 20 dB Gain, 12 dBm P₁ dB

Description:

Model SBP-6039032012-1F12-E1-WC is an E band power amplifier with a typical small signal gain of 20 dB and a nominal P_{-1 dB} of +12 dBm across the frequency range of 60 to 90 GHz. The DC power requirement for the amplifier is +8 V_{DC}/250 mA. The input port configuration is a female 1 mm connector and the output is a WR-12 waveguide with a UG-387/U flange. Other port configurations are available under different model numbers.



Features:

- Full Waveguide Band Performance
- Moderate Output Power

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz		90 GHz
Gain		20 dB	
P _{1dB}		+12 dBm	
P _{sat}		+16 dBm	
P _{in}			+15 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		250 mA	
Specification Temperature		+25 °C	
Case Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	1 mm (F) Connector
Output Port	WR-12 Waveguide with UG-387/U Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.9 Oz
Size	1.89" (L) X 1.10" (W) X 0.75" (H)
Outline	BG-SE-2CW

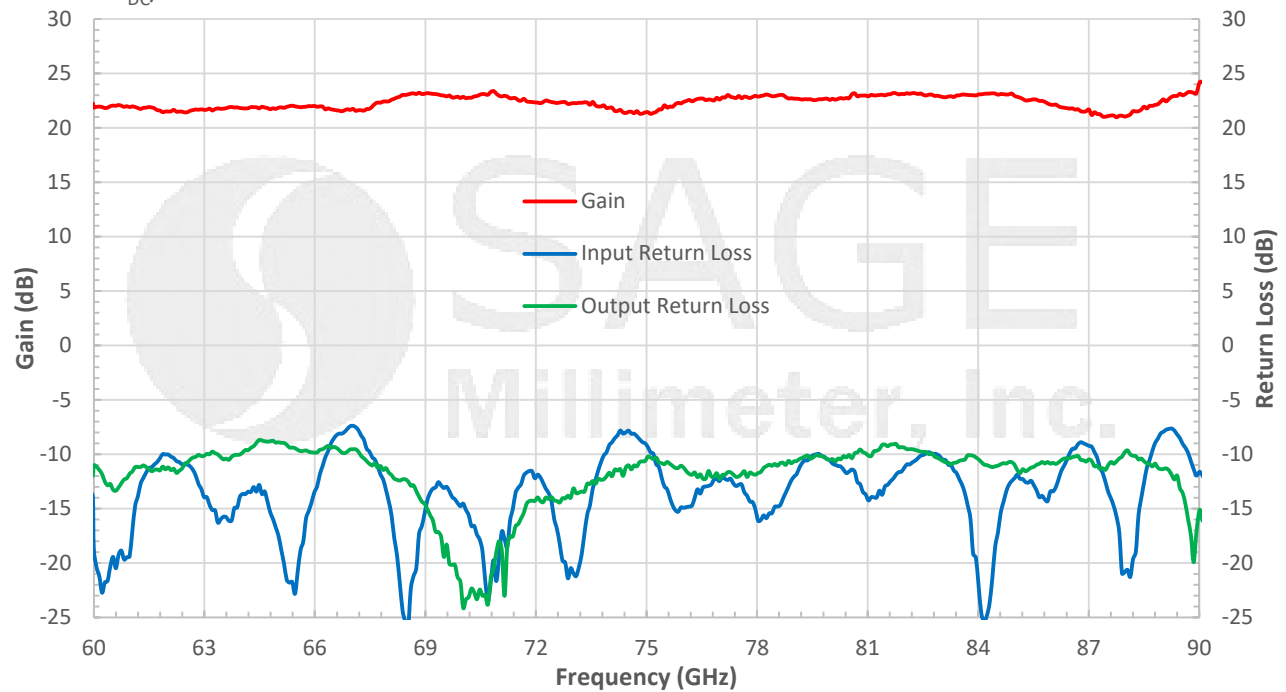




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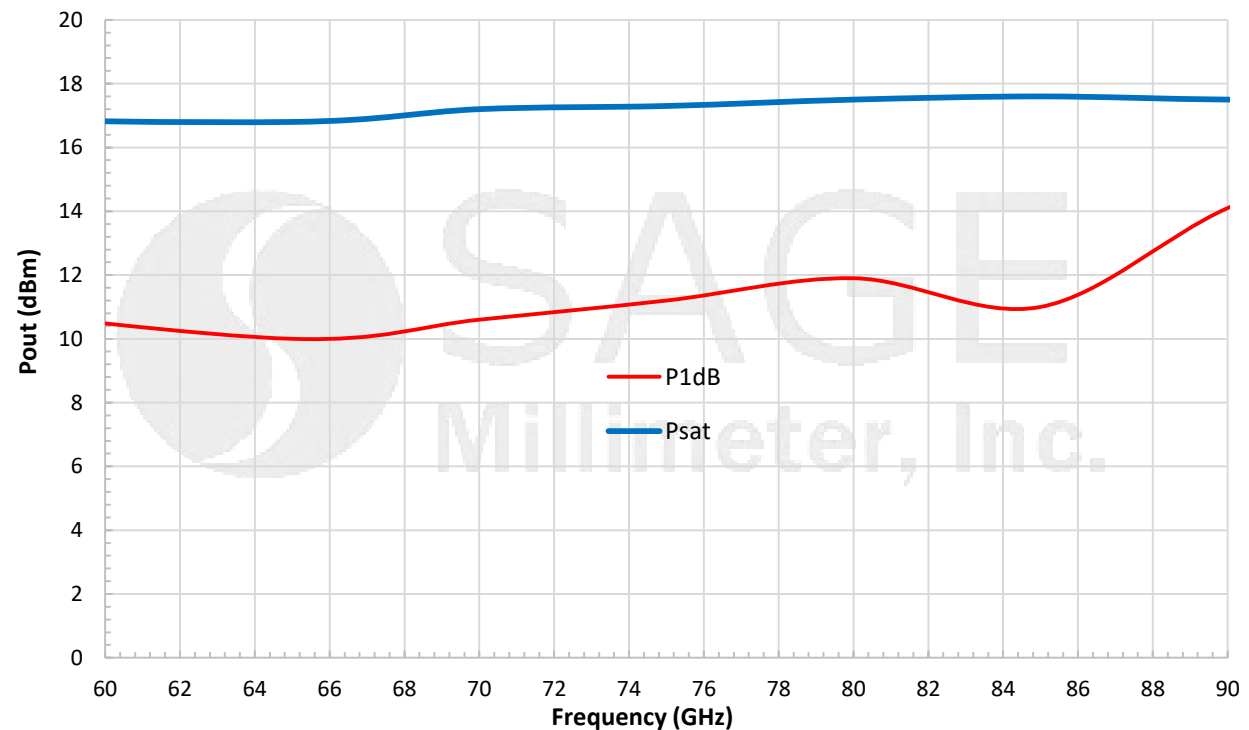
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/250 mA



Typical Output Power vs. Frequency

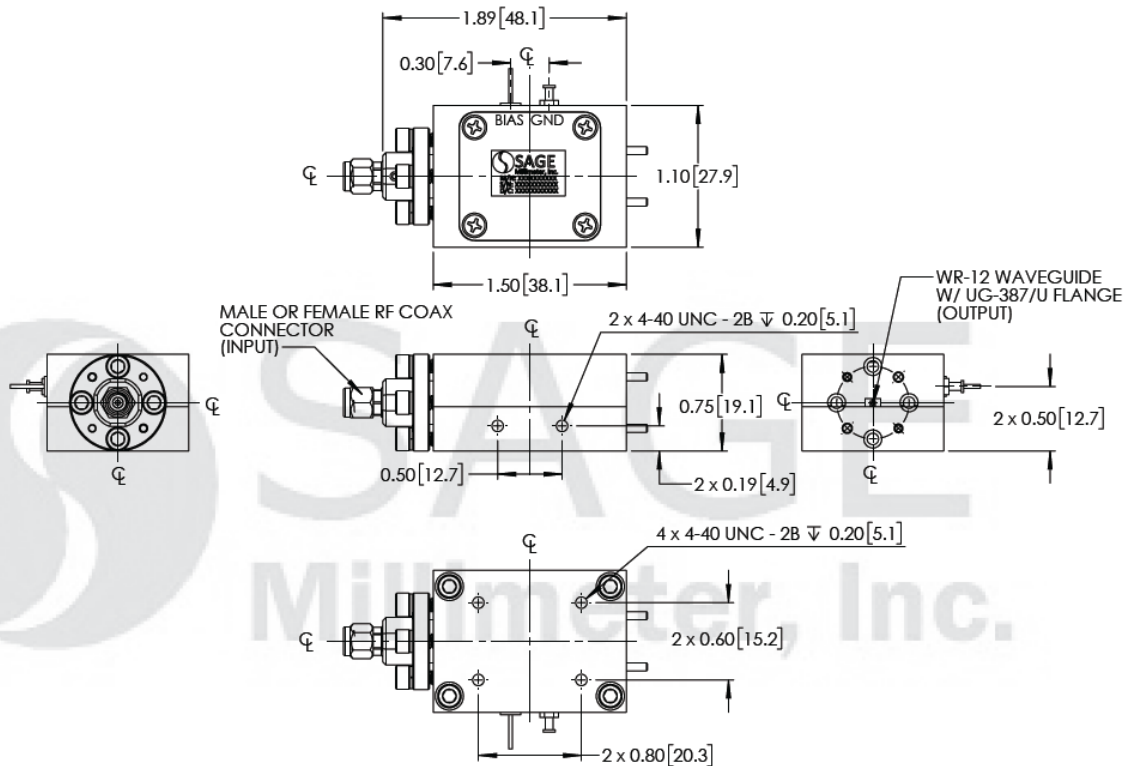
Bias: +8 V_{DC}/150 mA





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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.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

