SBP-6039032516-1F1F-S1

Rev 1.0

E-Band Power Amplifier, 60 to 90 GHz, 25 dB Gain, +16 dBm P_{1dB}

Description:

Model SBP-6039032516-1F1F-S1 is a power amplifier with a typical small signal gain of 25 dB and a nominal P_{1dB} of +16 dBm across the frequency range of 60 to 90 GHz. The saturated output power of the amplifier is +20 dBm. The DC power requirement for the amplifier is +8 V_{DC}/600 mA. The use of a heat sink is advised to assist in cooling the device. The RF connectors are female 1 mm connectors. Other port configurations are available under different model numbers.

Features:

- Full Waveguide Band Coverage
- Moderate Output Power

Applications:

- Automotive Radar
- Test Equipment
- Communication Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	60 GHz		90 GHz
Gain		25 dB	
P_{1dB}		+16 dBm	
P_{sat}		+20 dBm	
P_{in}			+10 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		600 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input Port	1 mm (F)
Output Port	1 mm (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.20” (W) X 1.20” (L) X 0.48” (H)
Outline	BG-SC-2

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

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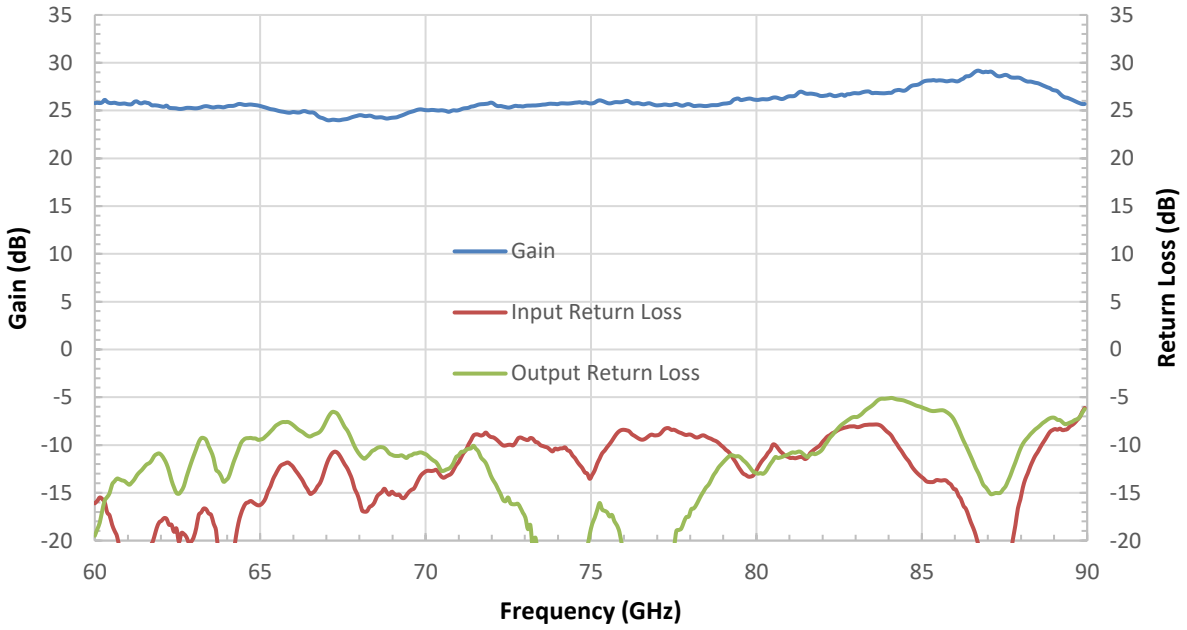
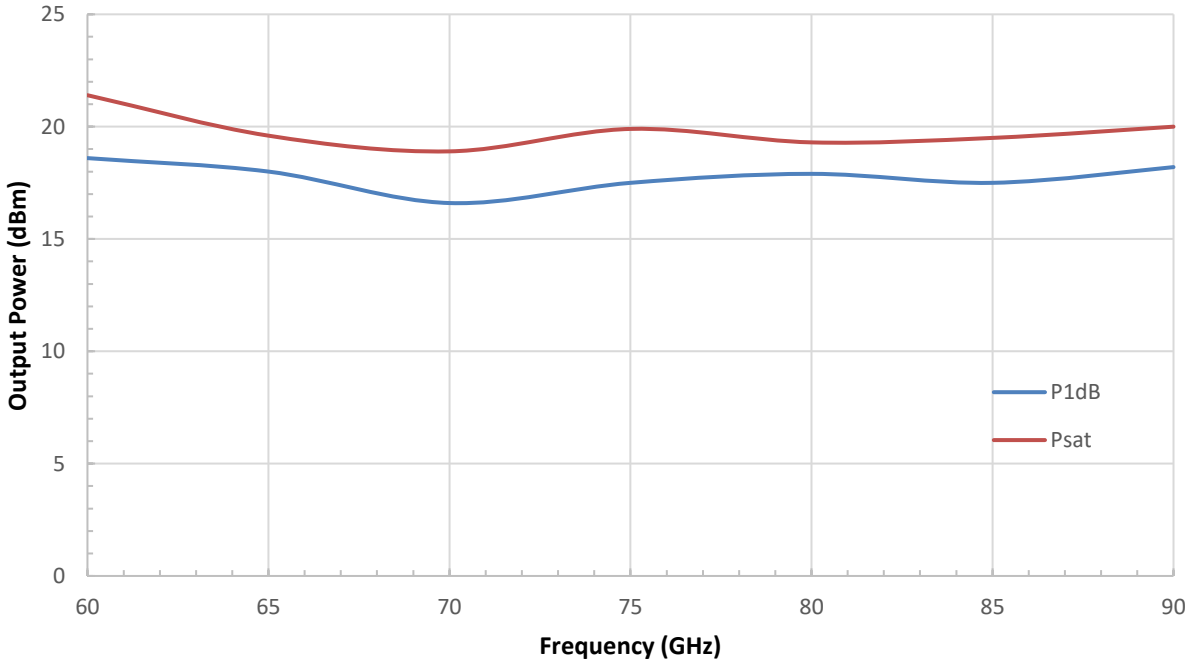
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/634 mA



Output Power vs. Frequency

RF Saturation: +8 V_{DC}/1,200 mA



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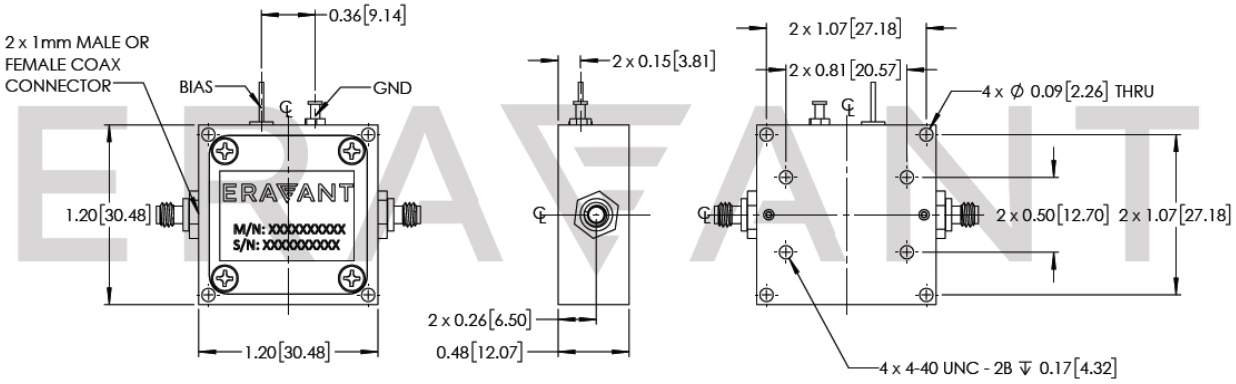
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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.
- Proper torque, 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-06004-S1, is highly recommended.**