SBP-2034433528-2F2F-S1

Final Rev 1.1

20 to 44 GHz Power Amplifier, 35 dB Gain, +28 dBm P_{1dB}

Description:

Model SBP-2034433528-2F2F-S1 is a power amplifier with a typical small signal gain of 35 dB and a nominal P_{1dB} of +28 dBm across the frequency range of 20 to 44 GHz. The DC power requirement for the amplifier is +8 V_{DC}/1500 mA. The RF connectors are female 2.4 mm connectors. Other port configurations, such as male 2.92 mm connectors for either the input or output port, are also available under different model numbers. The power amplifier requires a heatsink.

Features:

- High Gain
- High Output Power
- Good Power and Gain Flatness

Applications:

- 5G Systems
- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	20 GHz		44 GHz
Gain		35 dB	
P_{1dB}		+28 dBm	
P_{SAT}		+30 dBm	
Operational P_{in}			+18 dBm
Absolute (Damage) P_{in}			+20 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+8 V_{DC}	+12 V_{DC}
DC Supply Current		1500 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

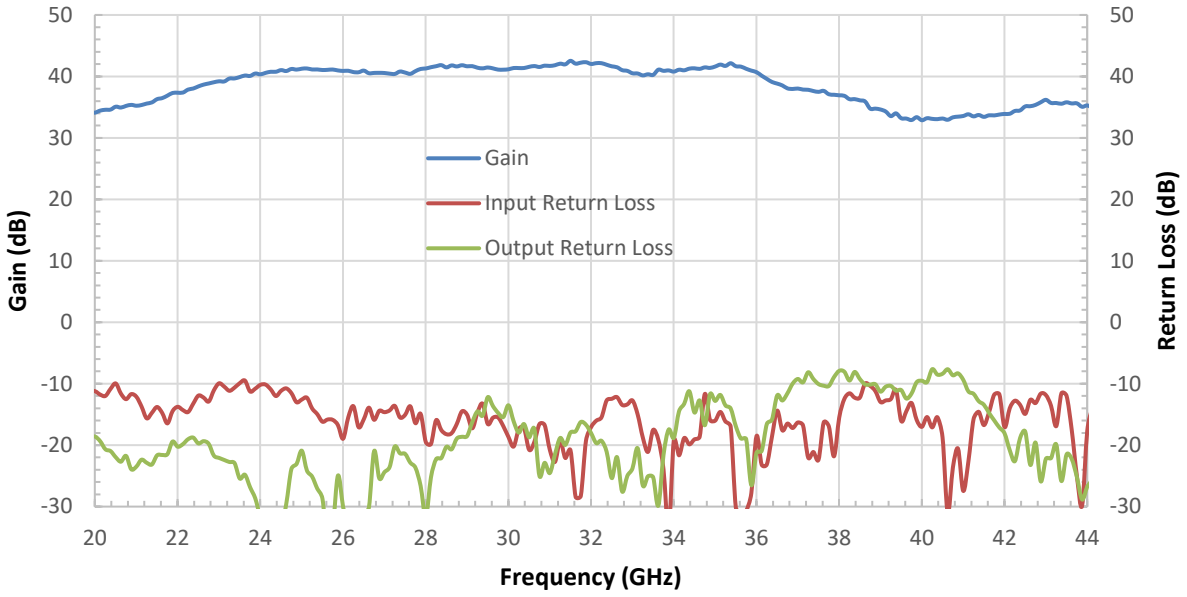
Item	Specification
Input Port	2.4 mm Female Connector
Output Port	2.4 mm Female Connector
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.20” (W) x 1.20” (L) x 0.50” (H)
Outline	BG-SC-1

www.sagemillimeter.com | 501 Amapola Ave, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

20 to 44 GHz Power Amplifier, 35 dB Gain, +28 dBm P_{1dB}

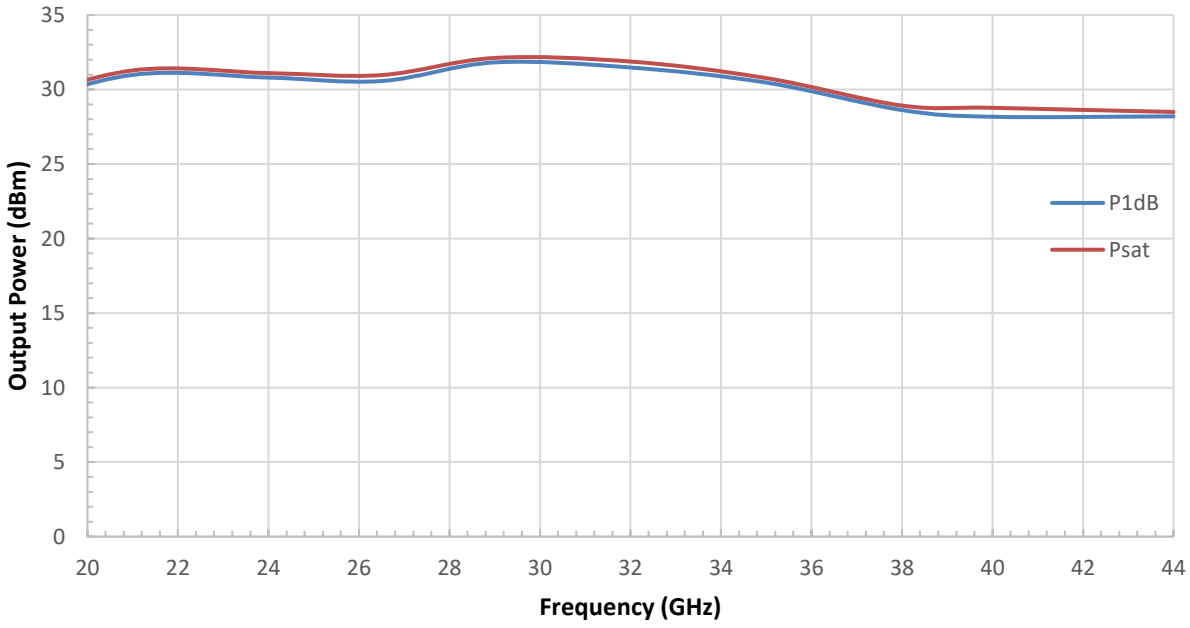
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/1.4 A



Output Power vs. Frequency

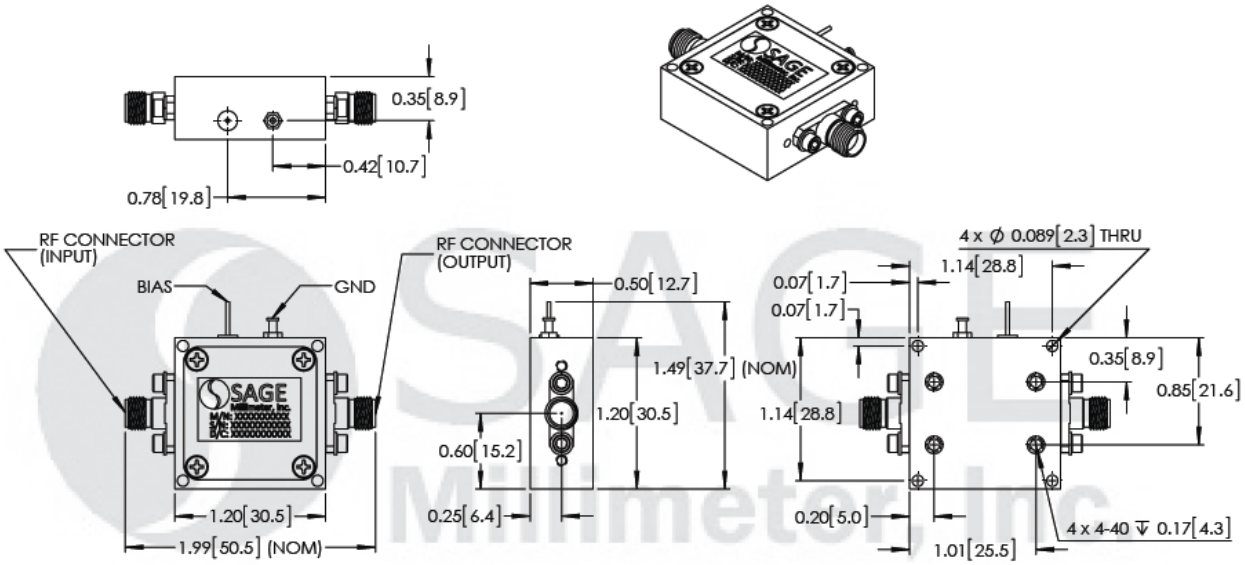
Bias: +8 V_{DC}/1.4 A



www.sagemillimeter.com | 501 Amapola Ave, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

20 to 44 GHz Power Amplifier, 35 dB Gain, +28 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.
- 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.
- Exceeding the maximum bias voltage of **+12 V_{DC}** will cause amplifier overheating and result the instability.
- 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, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

www.sagemillimeter.com | 501 Amapola Ave, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com