



Compact Benchtop Amplifier, 40 to 48 GHz, 35 dB Gain, +29 dBm P_{1dB}

Description:

Model STB-4034833529-2F2F-S1-C is a compact benchtop amplifier with a typical small signal gain of 35 dB and a nominal P_{1dB} of +29 dBm and +31 dBm P_{SAT} across the frequency range of 40 to 48 GHz, respectively. The input required to saturate the amplifier is +5 dBm typically. An AC to DC power adapter is provided so that the power supply required is a single phase AC voltage in the range of 100 to 240 V_{AC}, which can be supplied by a wall outlet or lab benches. The fan helps to keep the amplifier working around room temperature. The input and output ports are female 2.4 mm connectors. Other port configurations are available under different model numbers.



Features:

- High Output Power
- High Gain

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	40 GHz		48 GHz
Gain		35 dB	
P _{1dB}		+29 dBm	
P _{SAT}		+31 dBm	
P _{in}			+5 dBm
Port Return Loss		8 dB	
Power Supply (AC Adapter Provided)	100 V _{AC}		240 V _{AC}
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Ports	2.4 mm (F)
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
Enclosure Material	Extruded Aluminum
Finish	Various
Weight	1.5 lbs
Size	2.36" (W) x 2.36" (L) x 4.10" (H)
Outline	TB-ZC-C

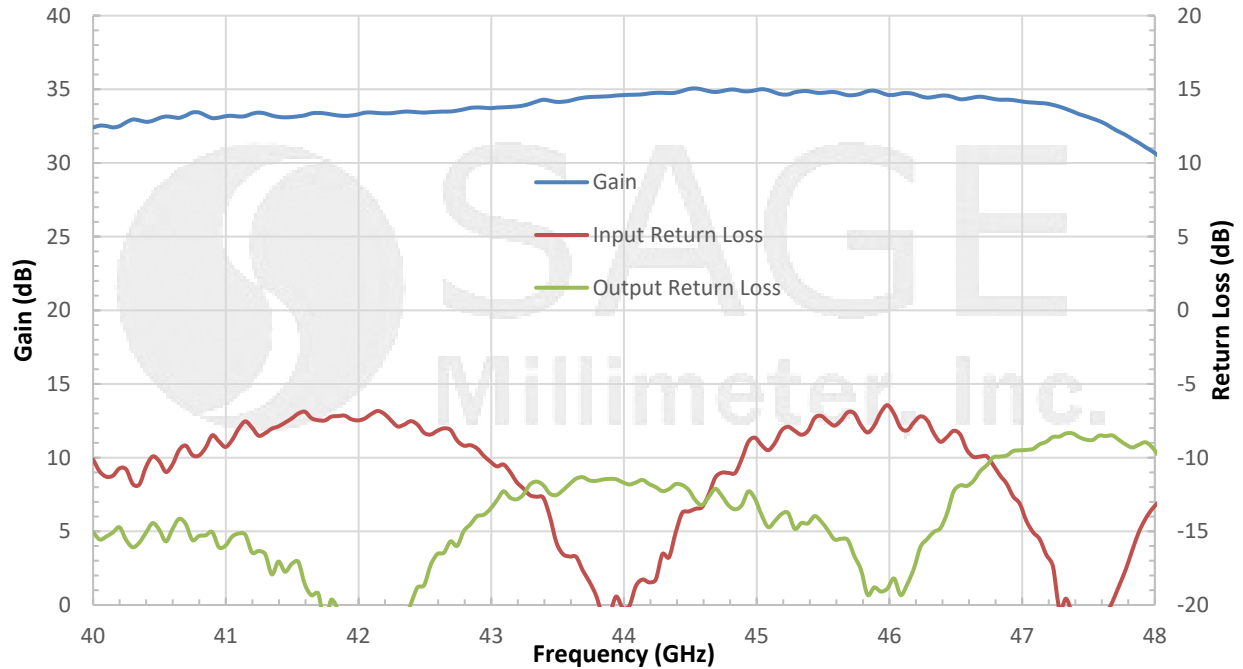




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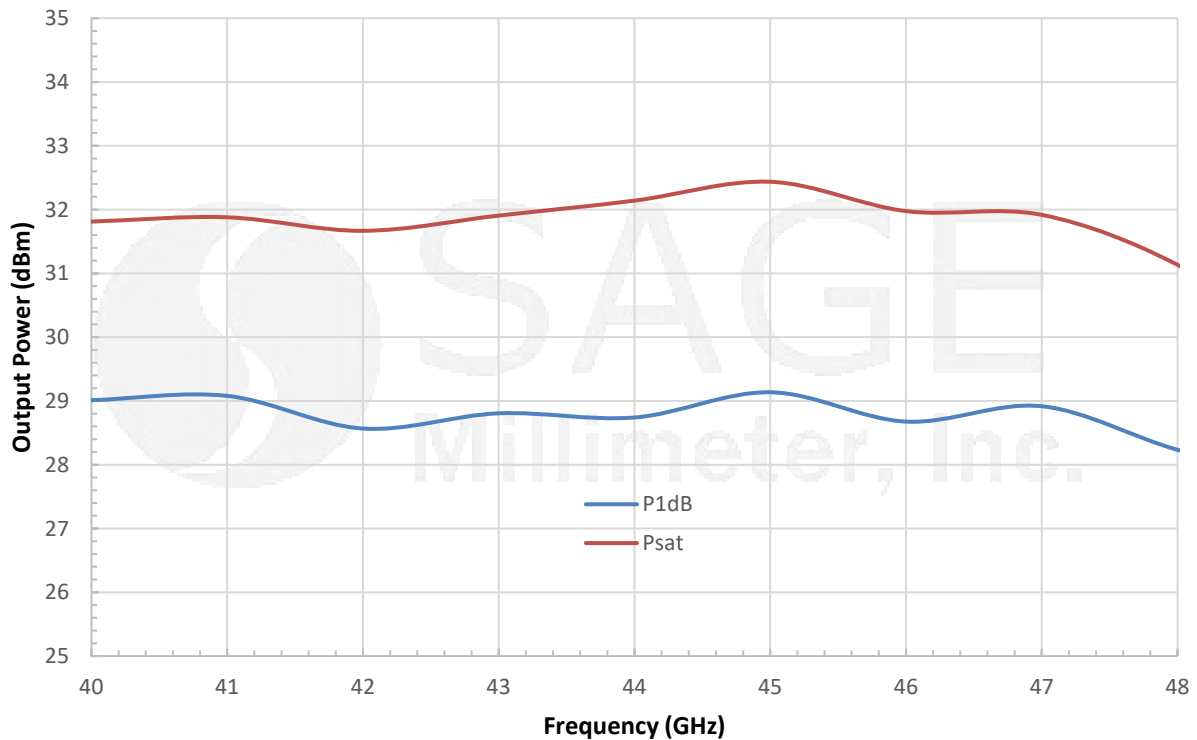
Gain and Return Loss vs. Frequency

Bias: +7 V_{DC}/2,200 mA



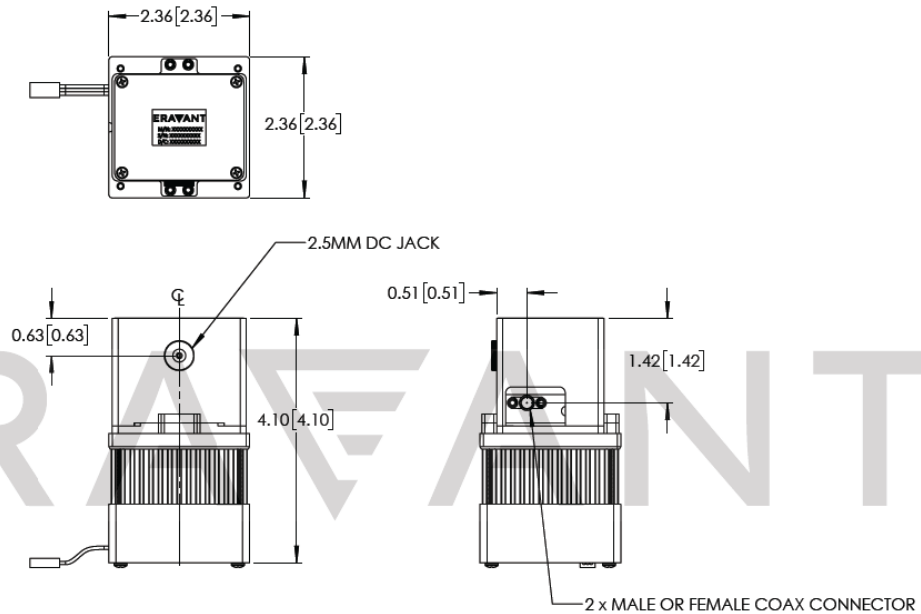
Output Power vs. Frequency

Bias: +7 V_{DC}/ 3,000 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 +35 °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, 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.**

