



Bench Top Amplifier, 34.5 to 36.5 GHz, 55 dB Gain, +35 dBm P_{1dB}

Description:

Model STB-3533735536-KF28-S1 is a Ka Band bench top high power amplifier with a typical small signal gain of 55 dB and a nominal P_{1dB} of +35 dBm and P_{SAT} of +37 dBm in the frequency range of 34.5 to 36.5 GHz. 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. The LED light helps to indicate the working status of the amplifier. The input port and the output ports of the power amplifier are K(F) and WR-28 waveguide with UG599/U flange, respectively.



Features:

- Instrumentation Grade
- High Output Power
- Good Gain Flatness

Applications:

- Bench Top Power Amplification
- Device Fab Reliability Testing
- Power Boosting

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|------------------------------------|---------------------|---------|---------------------|
| Frequency Range | 34.5 GHz | | 36.5 GHz |
| Gain | 50 dB | 55 dB | |
| P _{1dB} | | +35 dBm | |
| P _{SAT} | | +37 dBm | |
| RF Input Damage Level | | | +5 dBm |
| Input Return Loss | | 10 dB | |
| Output Return Loss | | 10 dB | |
| Power Supply (AC Adapter Provided) | 100 V _{AC} | | 240 V _{AC} |
| Specification Temperature | | +25 °C | |
| Operation Temperature | 0 °C | | +50 °C |

Mechanical Specifications:

| Item | Specification |
|--------------------|--|
| Input | K(F) |
| Output | WR-28 Waveguide with UG599/U Flange |
| DC Bias | 2.5 mm DC Jack (AC-to-DC power converter included) |
| DC Bias Switch | On-Off Rocker Switch with Indicator Light |
| Enclosure Material | Extruded Aluminum |
| Finish | Black Anodized |
| Weight | 12.0 lbs |
| Size | 8.12" (W) x 12.09" (L) x 3.20" (H) |
| Outline | TB-SA-CW |

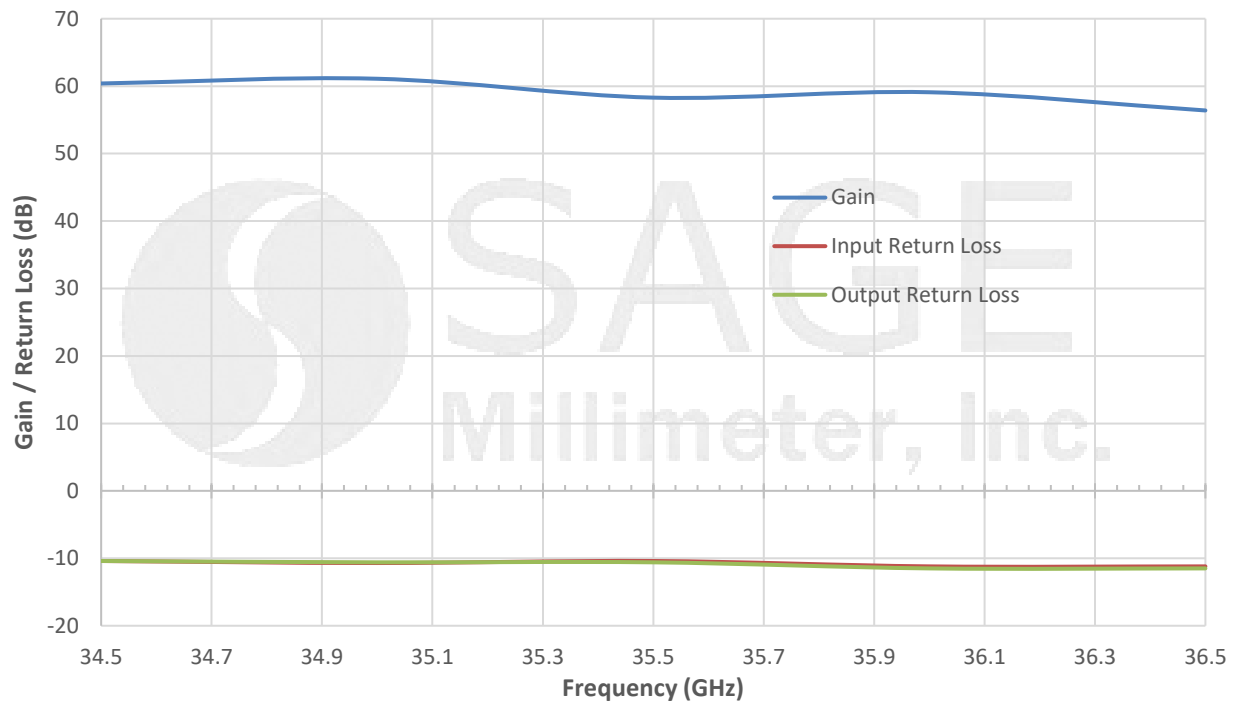




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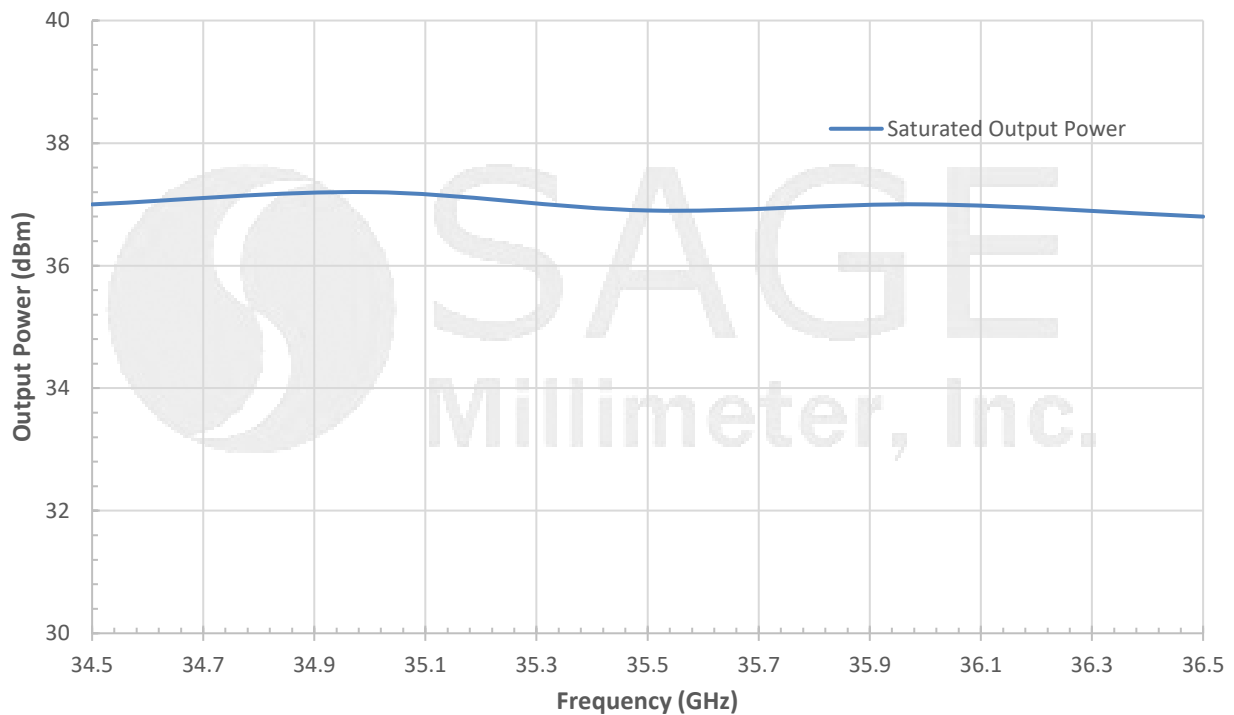
Typical Gain and Return Loss Vs Frequency

RF Input: -50 dBm



Typical Saturated Output Power vs. Frequency

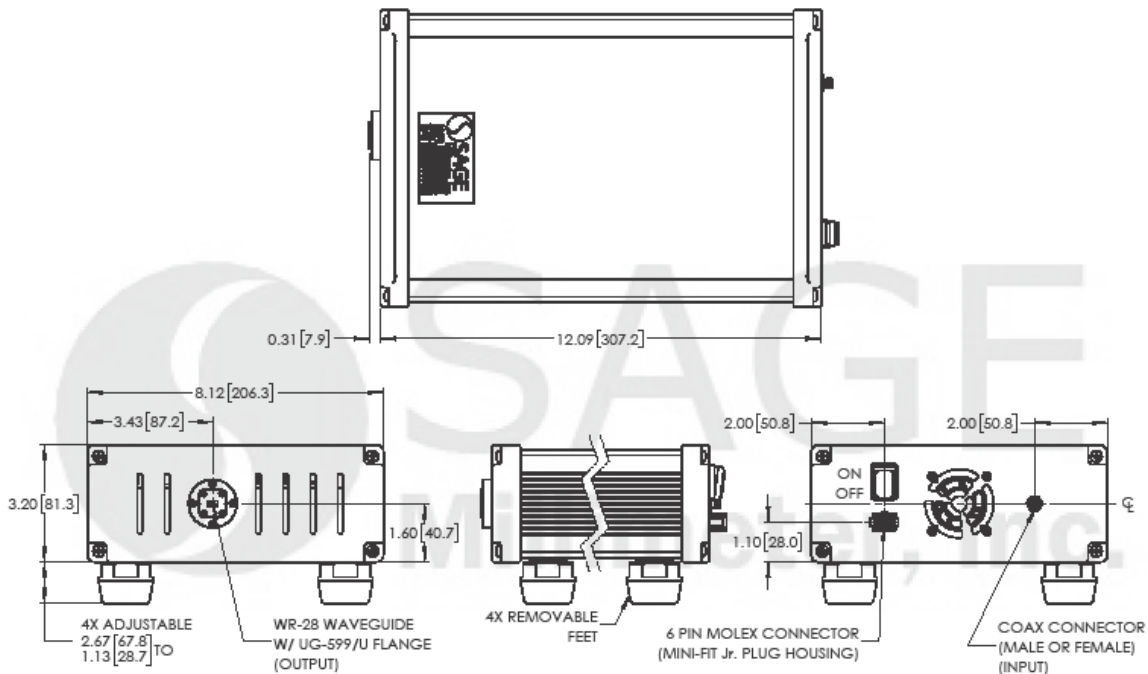
RF Input: -20 dBm





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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 slightly.
- All testing was performed under +35 °C case temperature.
- AC-to-DC power converter with cord is included.
- Other mechanical configurations are available under different model numbers.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

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

