SBP-3233734045-KF28-E1-R

32 to 37 GHz Power Amplifier, 40 dB Gain, +46 dBm P_{sat}

SBP-3233734045-KF28-E1-R is a power amplifier with a typical power gain of 40 dB and nominal Psat of +46 dBm across the frequency range of 32 to 37 GHz. The power supply for the amplifier is 110 V_{AC} to 220 V_{AC}. The RF input is a 2.92 mm female connector and the output is a WR-28 waveguide. Other port configurations, such as male 2.92 mm connectors for either the input or output port, are also available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	32 GHz		37 GHz
Power Gain	38 dB	40 dB	
Gain Flatness *(Over any 1 GHz Band)*		±2.5 dB	
P_{1dB}		+39 dBm	
P_{sat}	+45 dBm	+46 dBm	
P_{in}			+20 dBm
Input Return Loss		9 dB	
Output Return Loss		8 dB	
Spurious		-55 dBc	
Power Supply	110 V_{AC}		220 V_{AC}
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C
Storage Temperature	-55 °C		+125 °C

ECCN

3A001.b.4

FEATURES

- High Output Power
- Output Standing Wave Protection
- Overtemperature Protection
- Overdrive Protection
- Overload Protection

APPLICATIONS

- Radar Systems
- Communication Systems
- Test Equipment

SUPPLEMENTAL DETAILS

Mechanical Specifications:

Item	Specification
RF Input	2.92 mm (F)
RF Output	WR-28 Waveguide with UG-599/U Flange
Power Supply	MS27508E12B3P Connector
Control / Monitoring	Ethernet, RJFTVG Connector
Circuit Breaker	Siemens 5SL6116-7
Heat-sink	Forced Air Cooling
Ground Stud	¼-20 Brass Bolt Out Front at Bottom Center
Case Material	Aluminum
Surface Finish	Gold Alodine
Size	7.50” (W) x 9.87” (H) x 14.44” (D)
Weight	18.1 lbs
Outline	BP-LA-2WC-ATR-R1

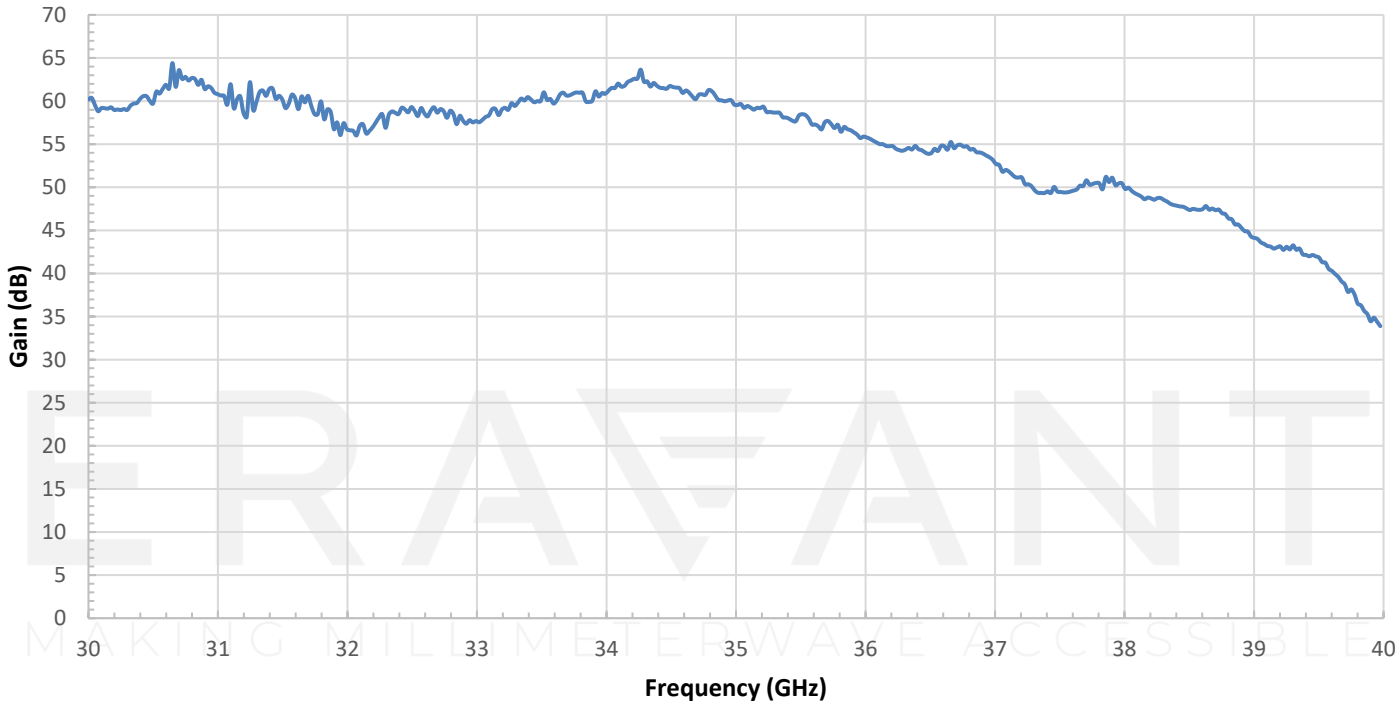
Front Panel Indictors:

Item	Specification
AC Power Indicator	‘On’ – Indicates amplifier is operating in stand-by mode ‘Off’ – Indicates amplifier is off
Functional Indicator	‘On’ after following verification checks: - Case temperature is less than upper limit - All fans are working ‘Flashing’ when internal check fails
RF Input Indicator	‘On’ when RF input is less than 15 dBm

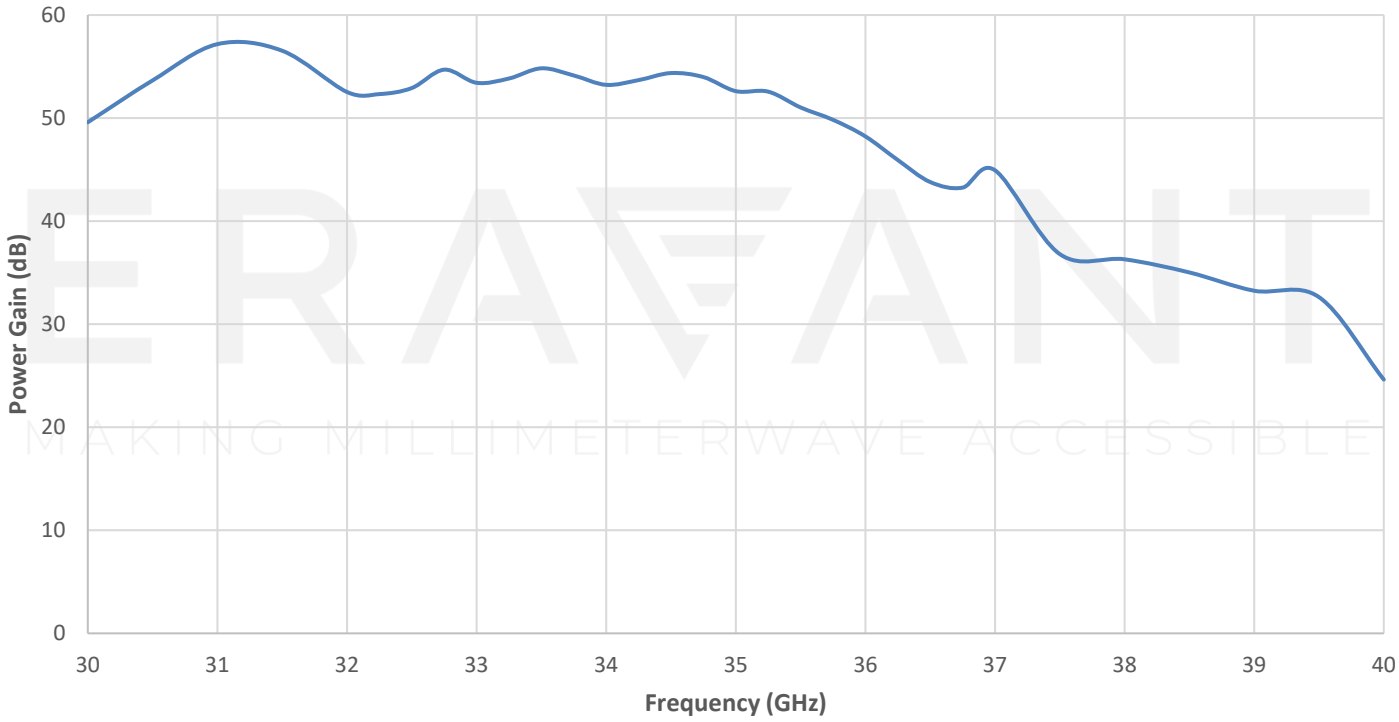
Control and Monitors:

Item	Specification
Remote On/Off	Enables/Disables DC power supply and RF input to the amplifier remotely
Overload Protection	Circuit Breaker (Siemens 5SL6116-7)
Overtemperature Protection	Amplifier will be switched back to stand-by mode if internal temperature exceeds maximum limit (Default maximum temperature: 80 °C)
Overdrive Protection	Amplifier will be switch back to stand-by mode if RF input power exceeds +15 dBm
Temperature Monitor	Provides internal temperature reading
Power Consumption	Provides Fan and Amplifier current readings at +24 V_{DC}

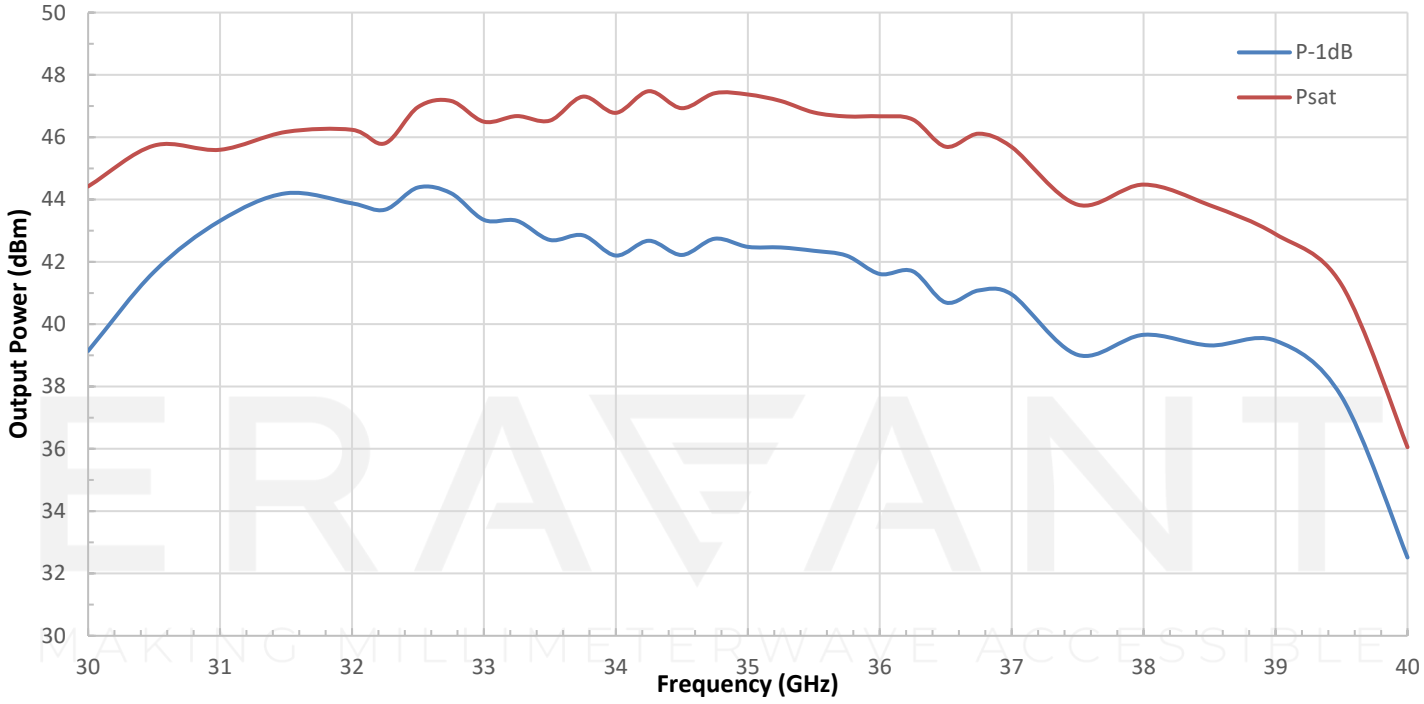
Small Signal Gain vs. Frequency



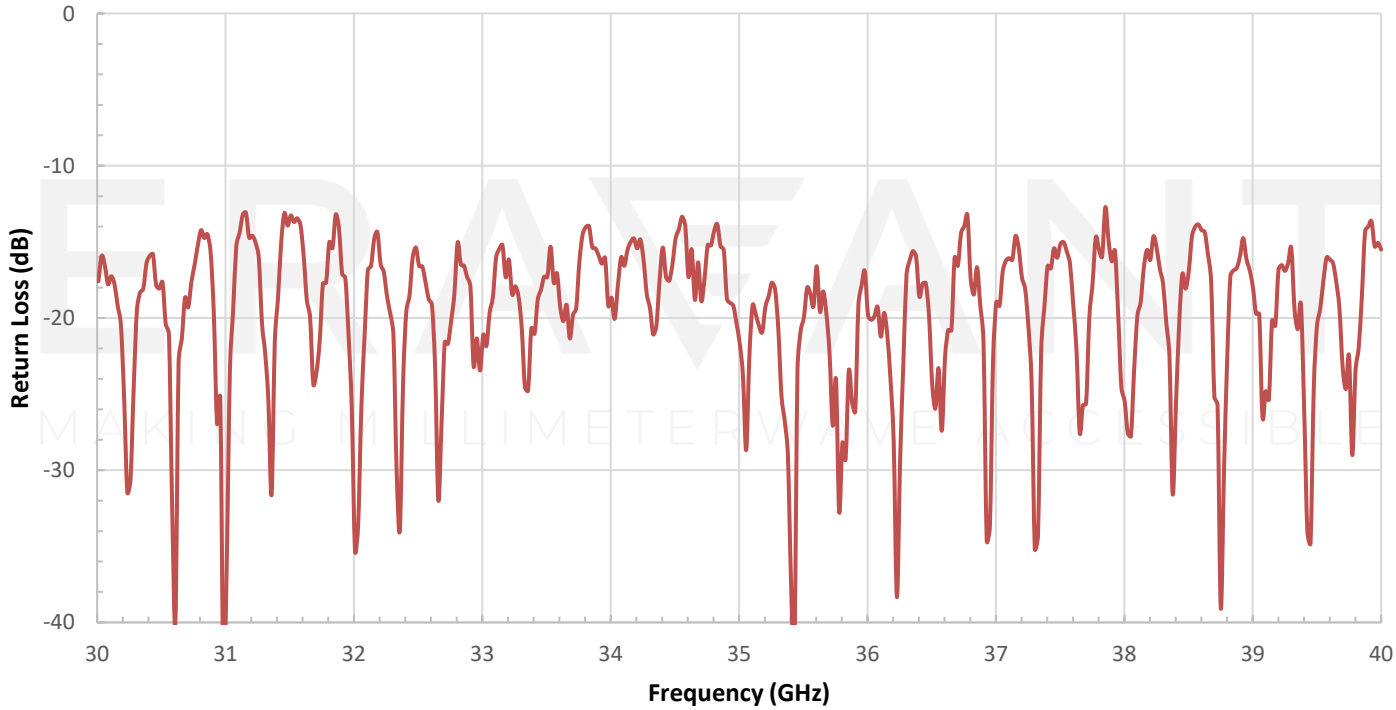
Power Gain vs Frequency



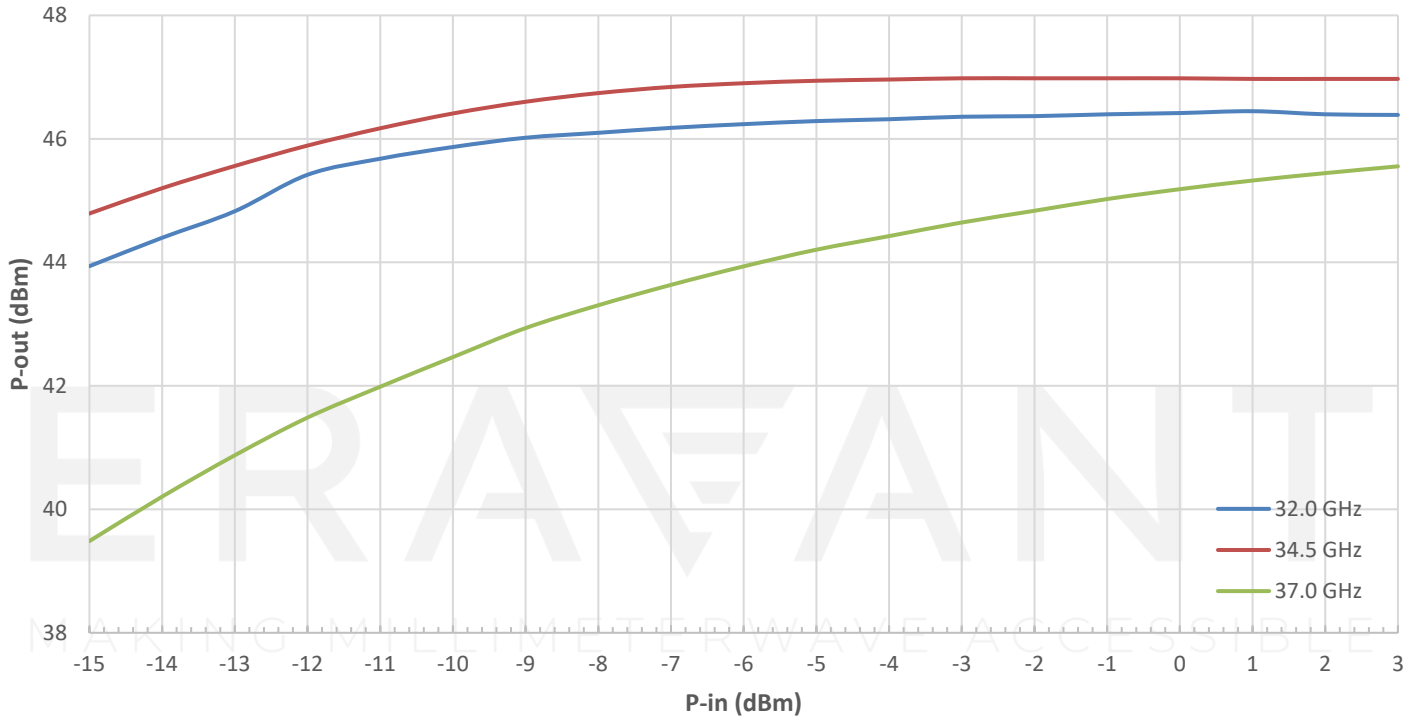
Output Power vs. Frequency



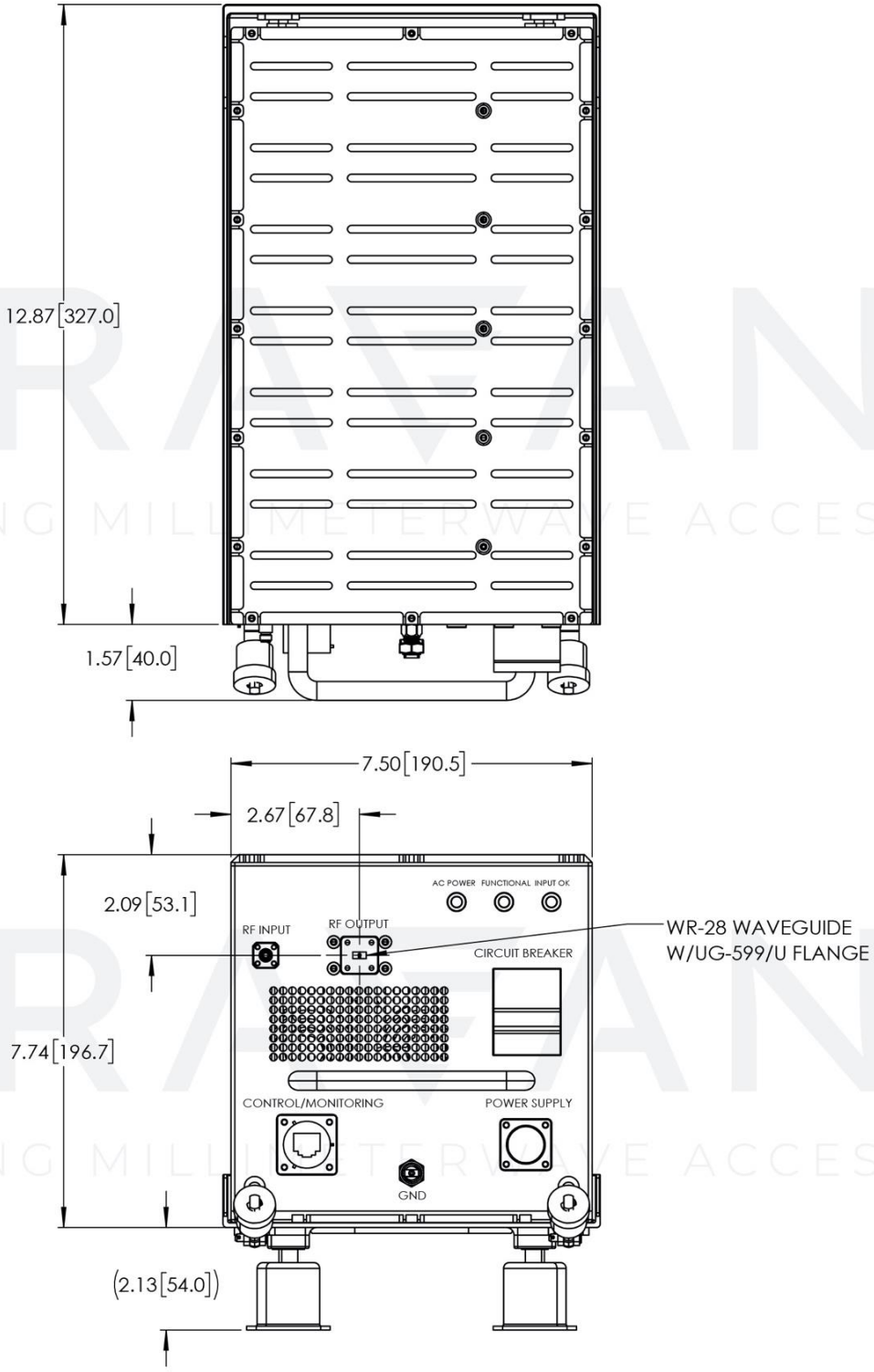
Input Return Loss vs. Frequency



P-in vs. P-out



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 from unit to unit.
- All testing was performed under +25 °C case temperature. Performance may vary with temperature.
- Other mechanical configurations are available under different model numbers.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum ratings will damage the device.
- Do not block the air inlets and outlets.
- Do not plug or unplug any connectors when amplifier is activated. All connectors must be connected/disconnected when amplifier is off.
- In case input power exceeds 15 dBm, Input ('RFin') indicator will start blinking and amplifier will get disabled.
- This 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 should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.