

## SBP-8839833230-1010-EP

### W-Band Power Amplifier, 88 to 98 GHz, 32 dB Gain, +30 dBm P<sub>sat</sub>

**SBP-8839833230-1010-EP** is a W-band GaN power amplifier with a typical small signal gain of 32 dB and a nominal P<sub>sat</sub> of +30 dBm across the frequency range of 88 to 98 GHz. The DC power requirement for the amplifier is +15 V<sub>DC</sub>/0.8 A. The mechanical configurations is an inline structure with WR-10 waveguides and UG-387/U-M anti-cocking flanges. Power amplifier module comes with heatsink and fan assembled with the unit.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	88 GHz		98 GHz
Small Signal Gain		32 dB	
Power Gain		25 dB	
P <sub>sat</sub>		+30 dBm	
P <sub>in</sub>			+10 dBm
Input Return Loss		10 dB	
Output Return Loss without Damage		5 dB	
DC Supply Voltage (VDD)	+14 V <sub>DC</sub>	+15 V <sub>DC</sub>	+20 V <sub>DC</sub>
DC Supply Current		0.8 A	
Supply Voltage to Fan		+12 V <sub>DC</sub> /0.2 A	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

#### Mechanical Specifications:

Item	Specification
Input	WR-10 Waveguide with UG-387/U-M Anti-Coking Flange
Output	WR-10 Waveguide with UG-387/U-M Anti-Coking Flange
Power Supply	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Size	3.15" (L) X 2.99" (W) X 3.69" (H)
Outline	BP-HW-H1

#### ECCN

3A001.b.4

#### FEATURES

- Class AB GaN Technique
- Broadband Performance
- High Gain
- High Output Power
- Forced Air Cooling
- In-line Port Configuration

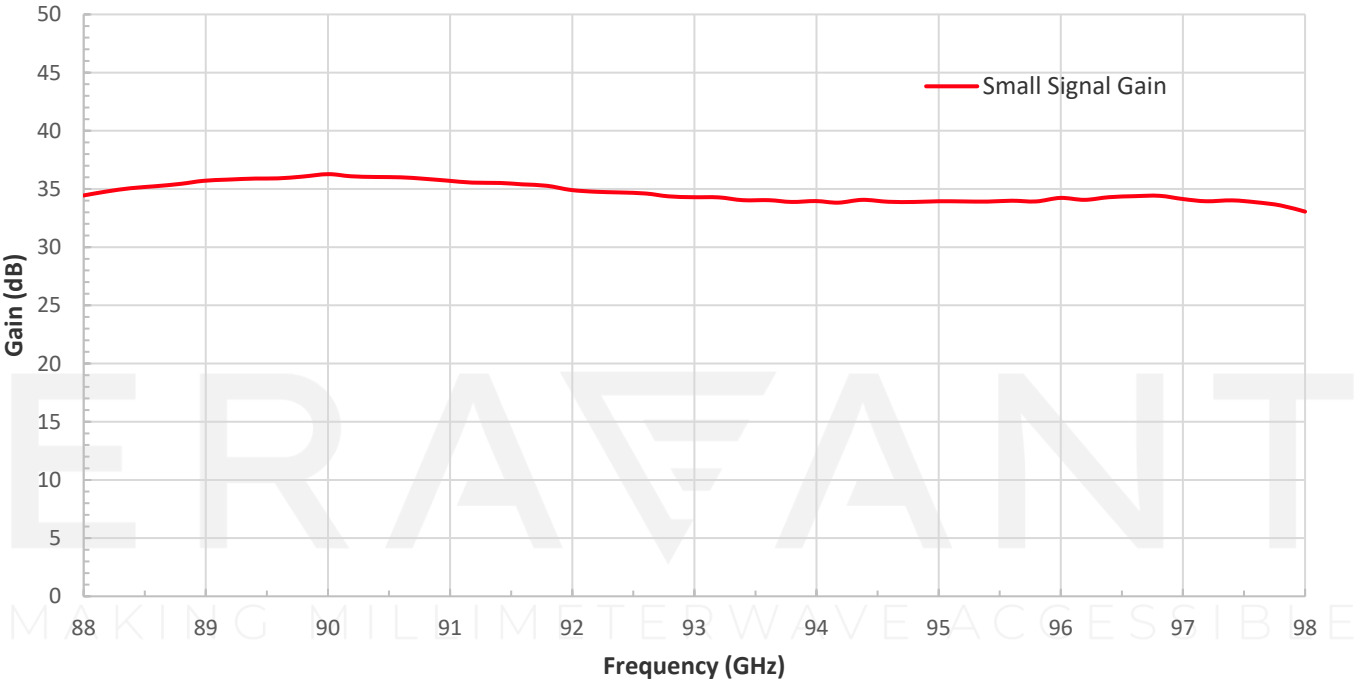
#### APPLICATIONS

- Radar Systems
- Communication Systems
- Test Equipment

#### SUPPLEMENTAL DETAILS

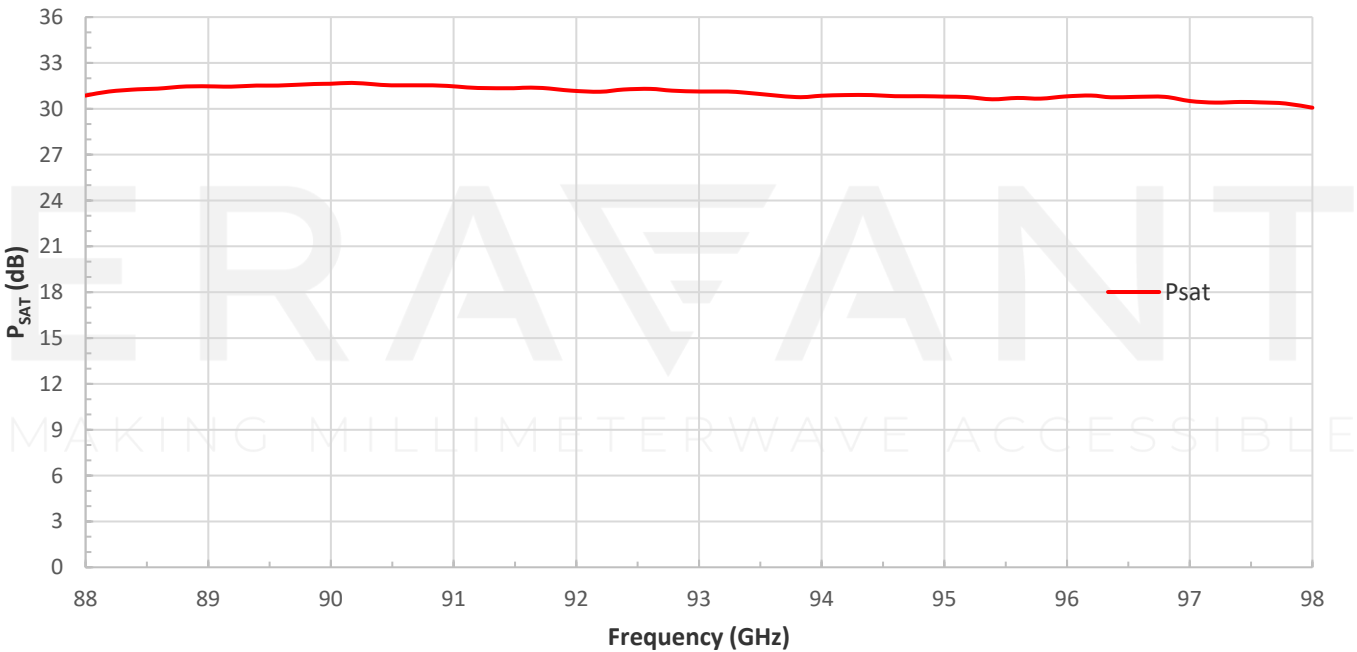


Typical Gain vs. Frequency



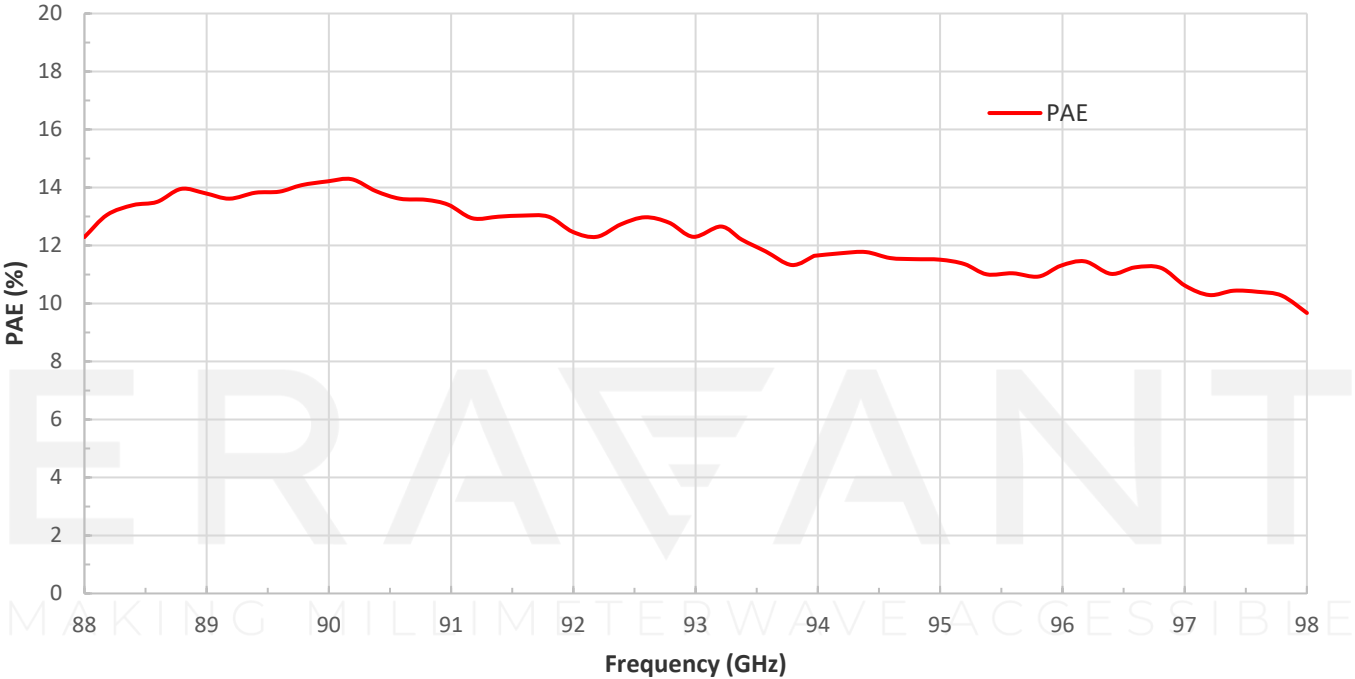
Typical  $P_{SAT}$  vs. Frequency

Bias: +15 V<sub>DC</sub>/ 700 mA

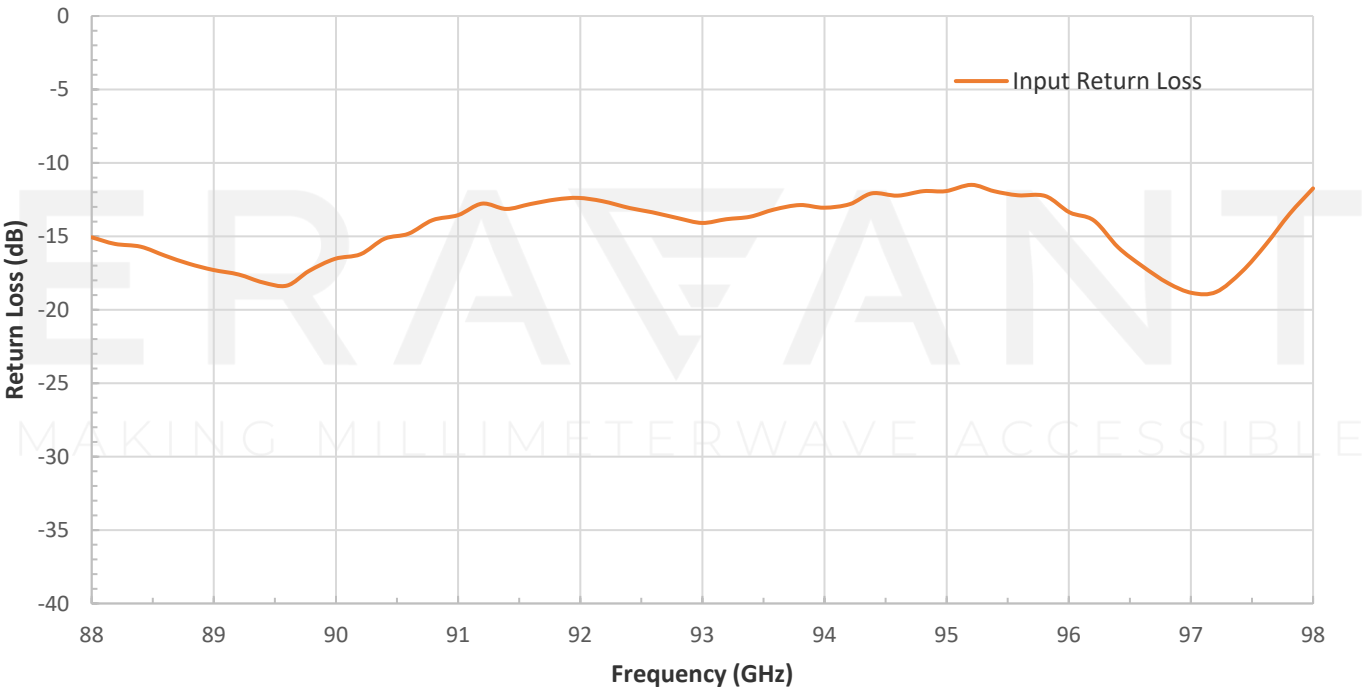


Typical PAE vs. Frequency

Bias: +15 V<sub>DC</sub>/ 700 mA

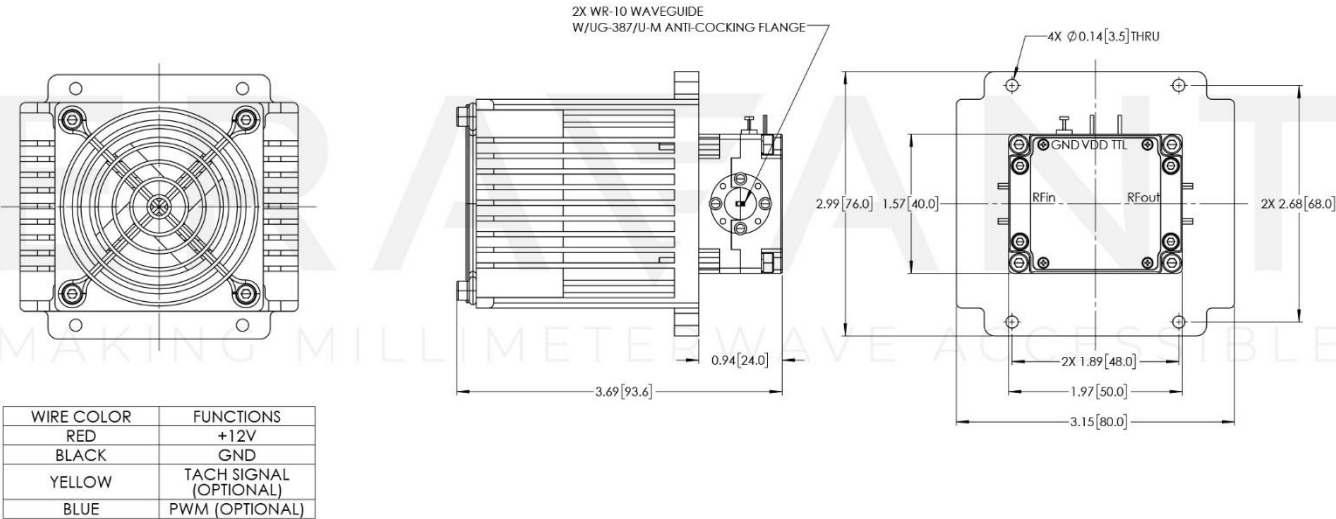


Typical Return Loss vs. Frequency



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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.
- 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 shown will damage the device.
- Do not block the air inlets and outlets.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Do not plug or unplug any connectors when amplifier is activated. All connectors must be connected/disconnected when amplifier is off.
- 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 degrade performance and/or damage the device.