SBP-9039835039-1010-EP

W-Band Power Amplifier, 90 to 98 GHz, 50 dB Gain, +39 dBm P_{sat}

SBP-9039835039-1010-EP is a W-band GaN power amplifier with a typical small signal gain of 50 dB and a nominal P_{sat} of +39 dBm across the frequency range of 90 to 98 GHz. The DC power requirement for the amplifier is +18 V_{DC}/4.5 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 asssembled with the unit.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	90 GHz		98 GHz
Small Signal Gain		50 dB	
Power Gain		39 dB	
P_{sat}		+39 dBm	
P_{in}			+10 dBm
Input Return Loss		10 dB	
Output Return Loss without Damage		5 dB	
DC Supply Voltage (VDD)	+16 V_{DC}	+18 V_{DC}	+20 V_{DC}
DC Supply Current		4.5 A	
Supply Voltage to Fan		+12 V_{DC}/2.4 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	6.16” (L) X 3.15” (W) X 3.73” (H)
Outline	BP-HW-H2

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

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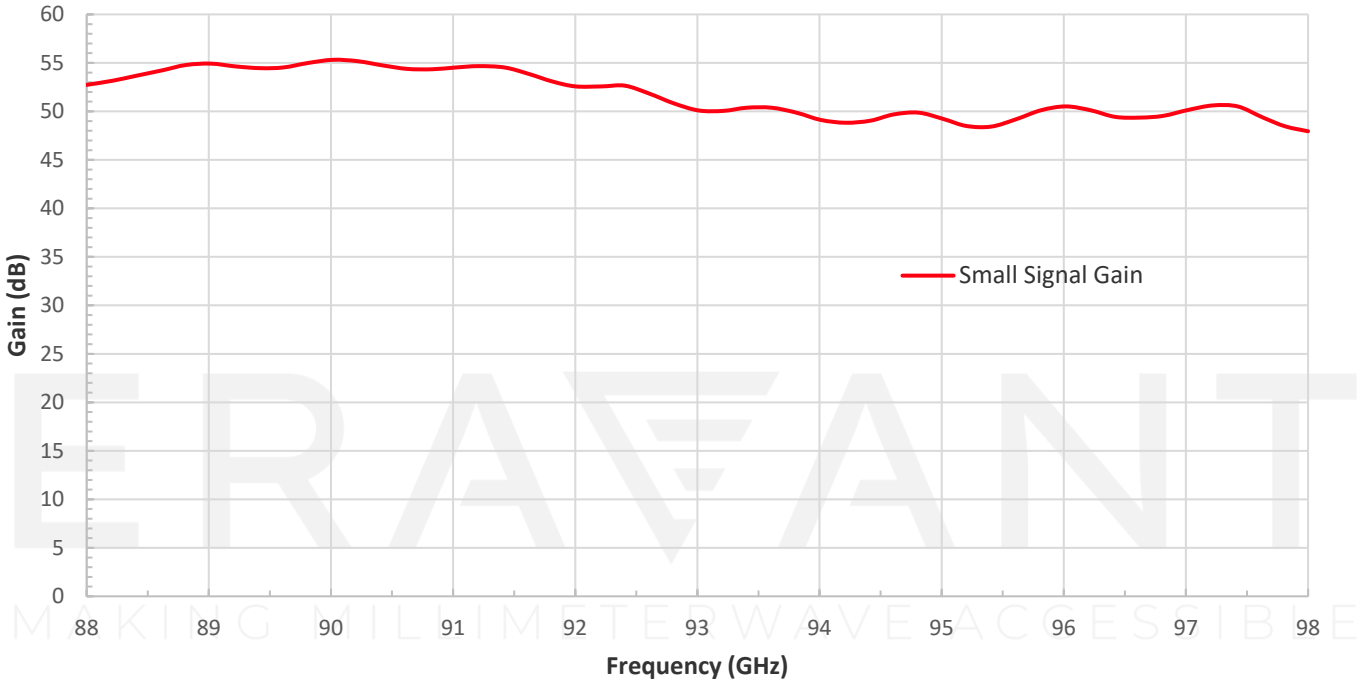
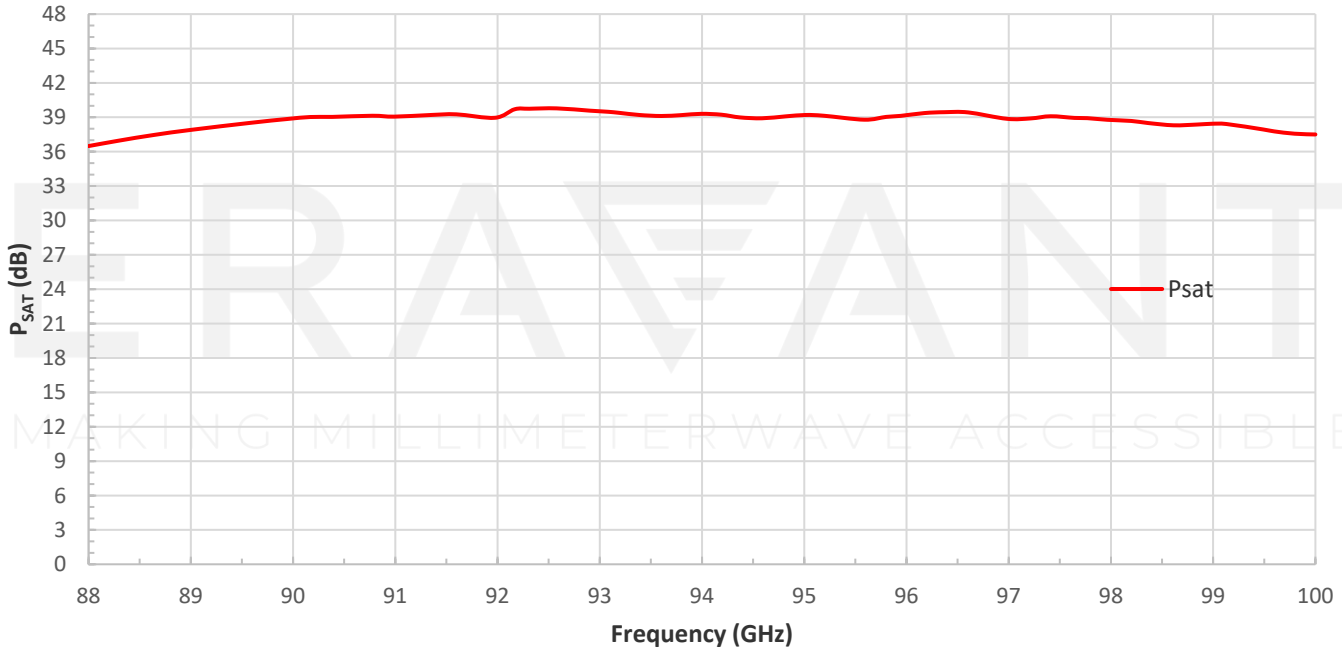
Typical Gain vs. Frequency



Typical P_{SAT} vs. Frequency

Bias: +18 V_{DC}/ 4150 mA



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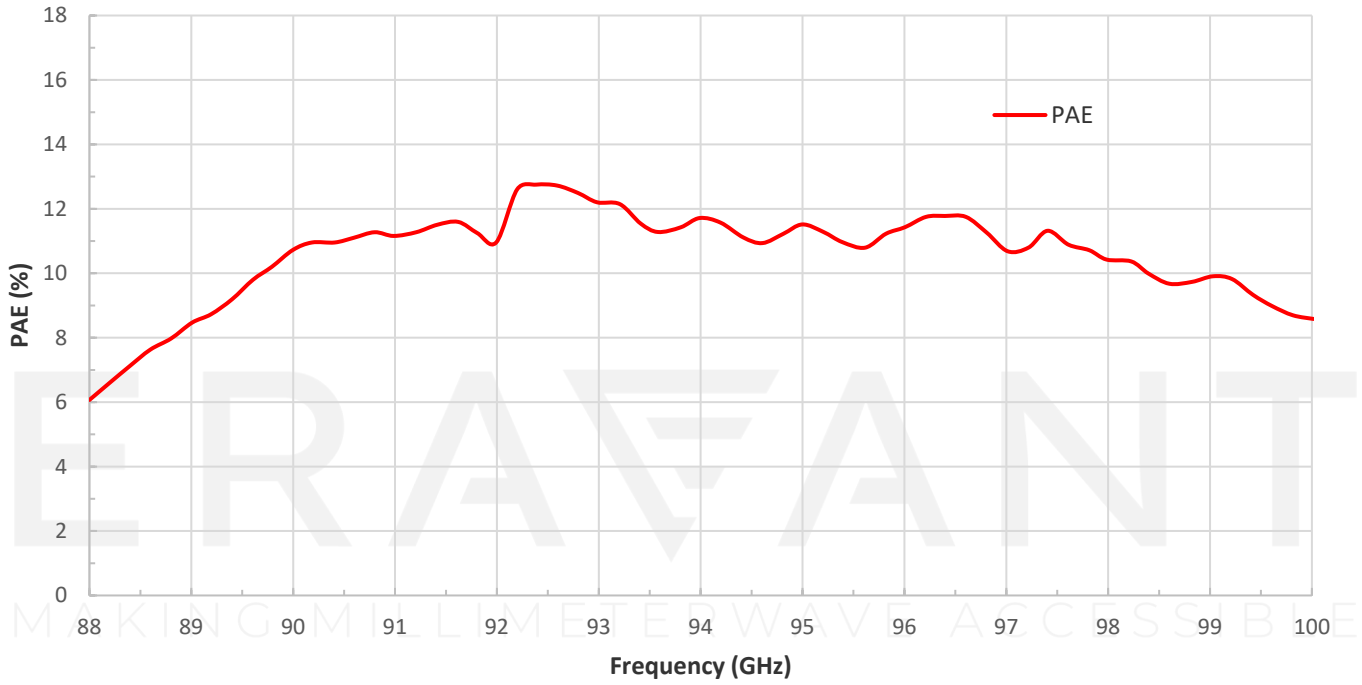
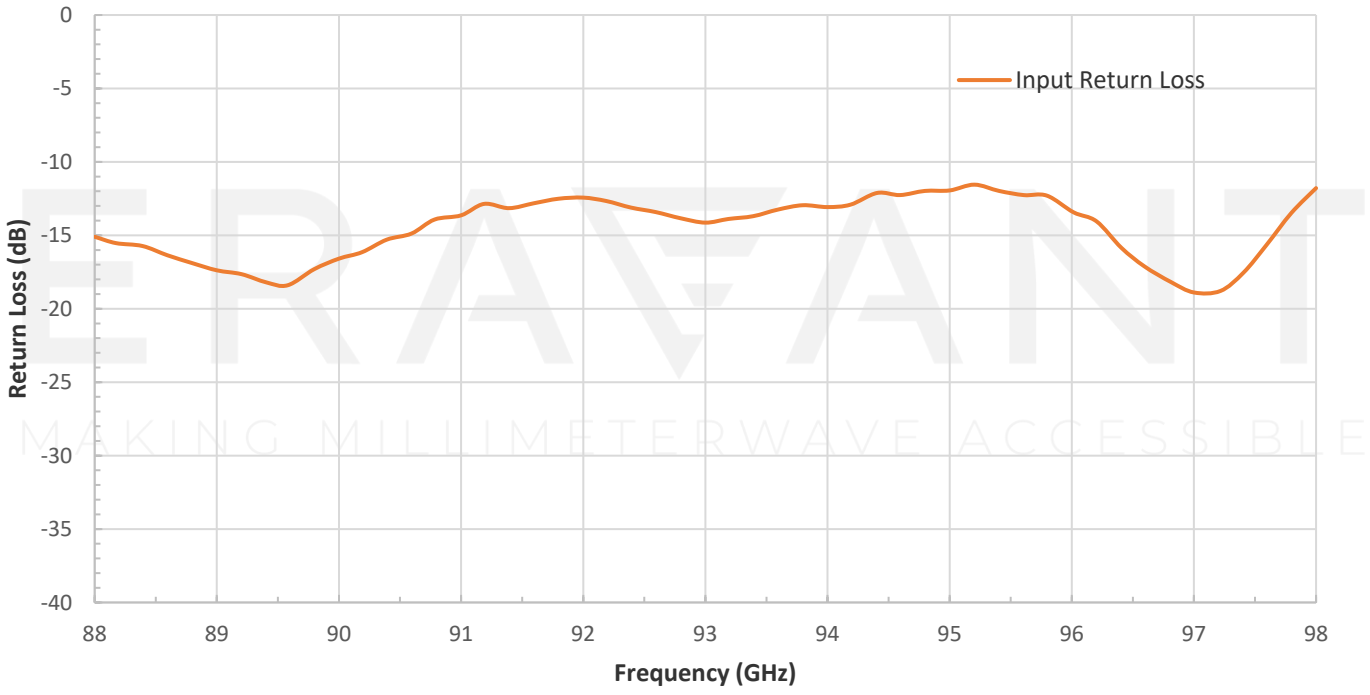
Typical PAE vs. Frequency

Bias: +18 V_{DC}/ 4150 mA



Typical Return Loss vs. Frequency



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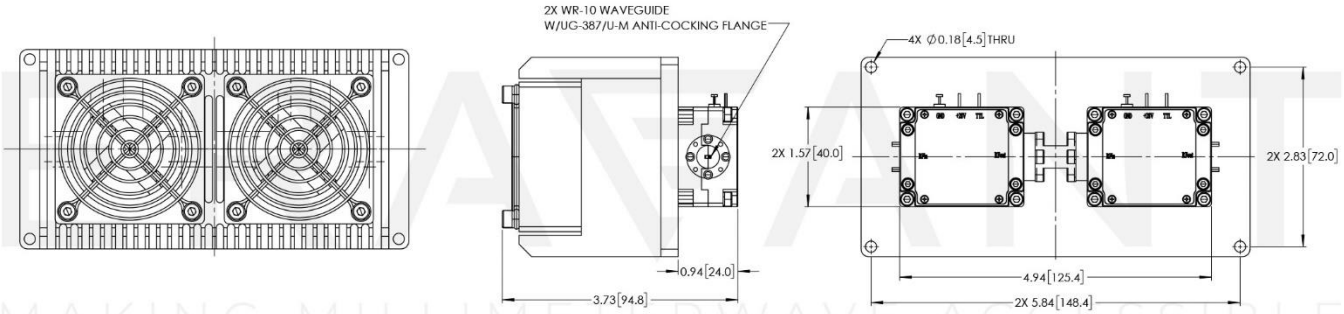
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



WIRE COLOR	FUNCTIONS
RED	+12V
BLACK	GND
YELLOW	TACH SIGNAL (OPTIONAL)
BLUE	PWM (OPTIONAL)

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.

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