SBP-7531142030-1010-EP

W-Band Power Amplifier, 75 to 110 GHz, 20 dB Gain, +30 dBm P_{sat}

SBP-7531142030-1010-EP is a W-band GaN power amplifier with a typical small signal gain of 20 dB and a typical P_{sat} of +30 dBm across the frequency range of 75 to 110 GHz. The DC power requirement for the amplifier is +15 V_{DC}/1.6 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	75 GHz		110 GHz
Small Signal Gain		20 dB	
Power Gain		10 dB	
P_{sat}		+30 dBm	
P_{in}			+30 dBm
Input Return Loss		7 dB	
Output Return Loss without Damage		5 dB	
DC Supply Voltage (VDD)	+14 V_{DC}	+15 V_{DC}	+20 V_{DC}
DC Supply Current		1.6 A	
Supply Voltage to Fan		+12 V_{DC}/0.6 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

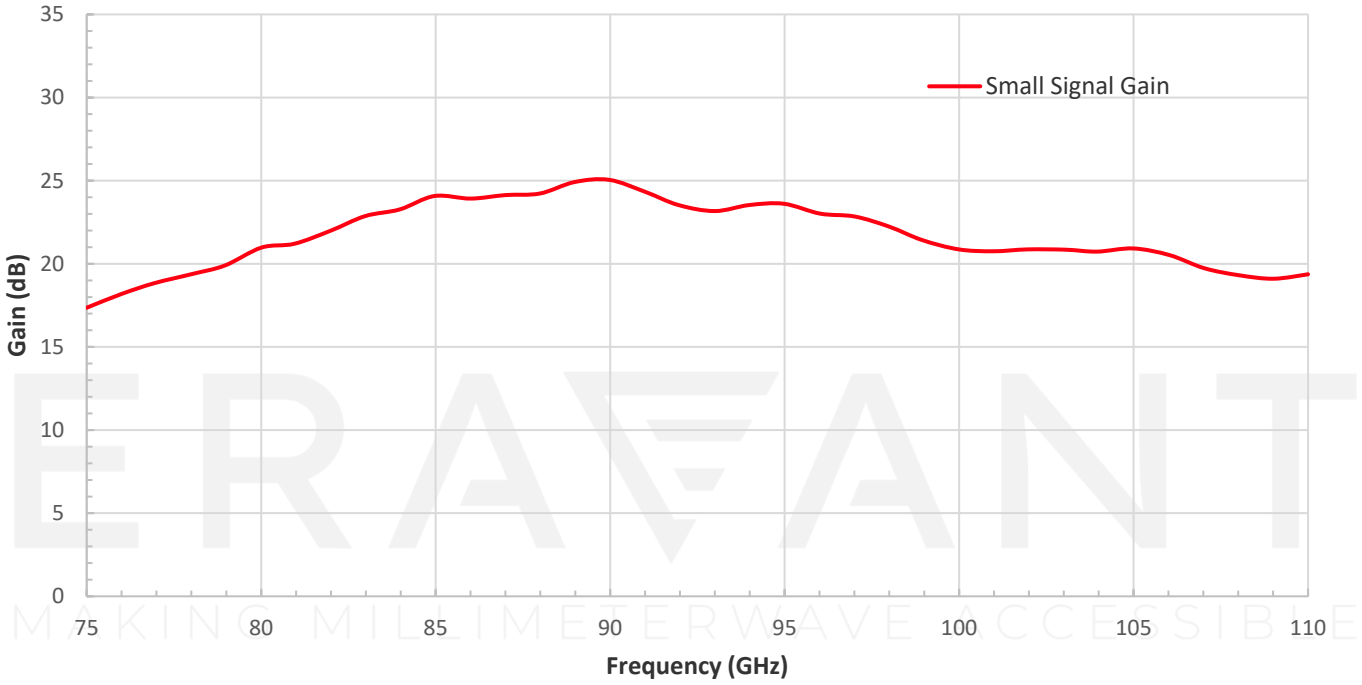
- Class AB GaN Technique
- Broadband Performance
- High Gain
- High Output Power
- Forced Air Cooling
- In-line Port Configuration

APPLICATIONS

- Radar Systems
- Communication Systems
- Test Equipment

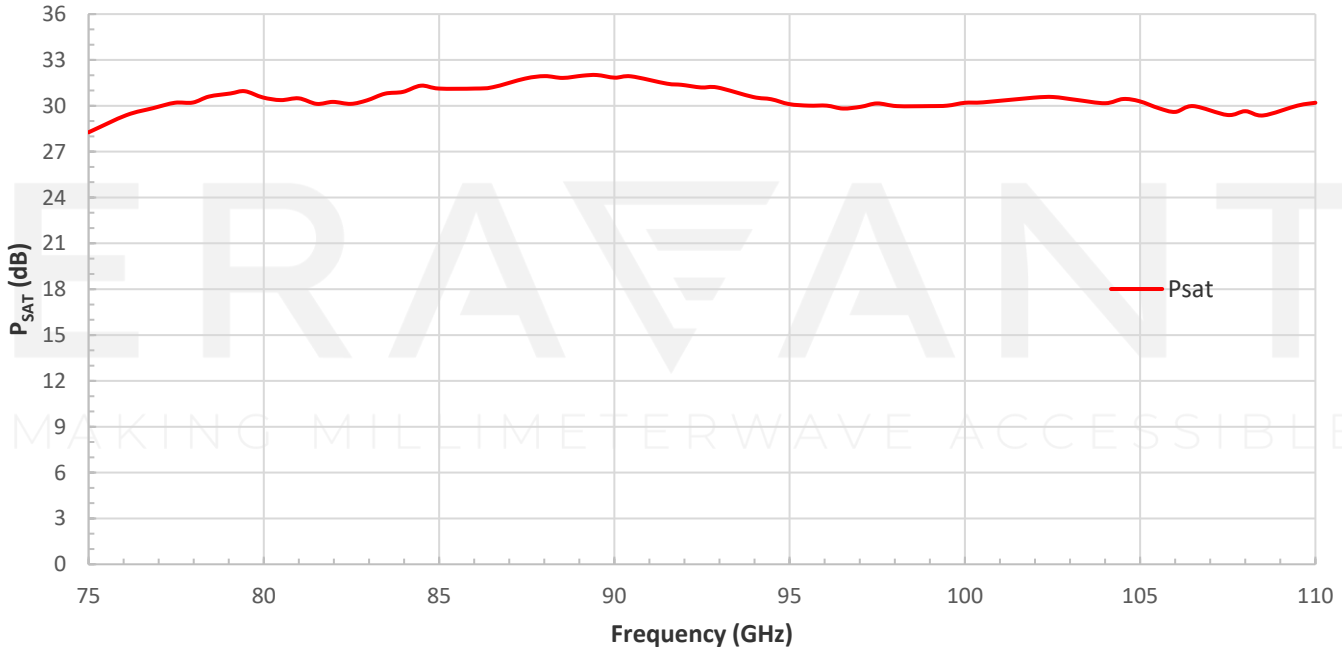
SUPPLEMENTAL DETAILS

Typical Gain vs. Frequency



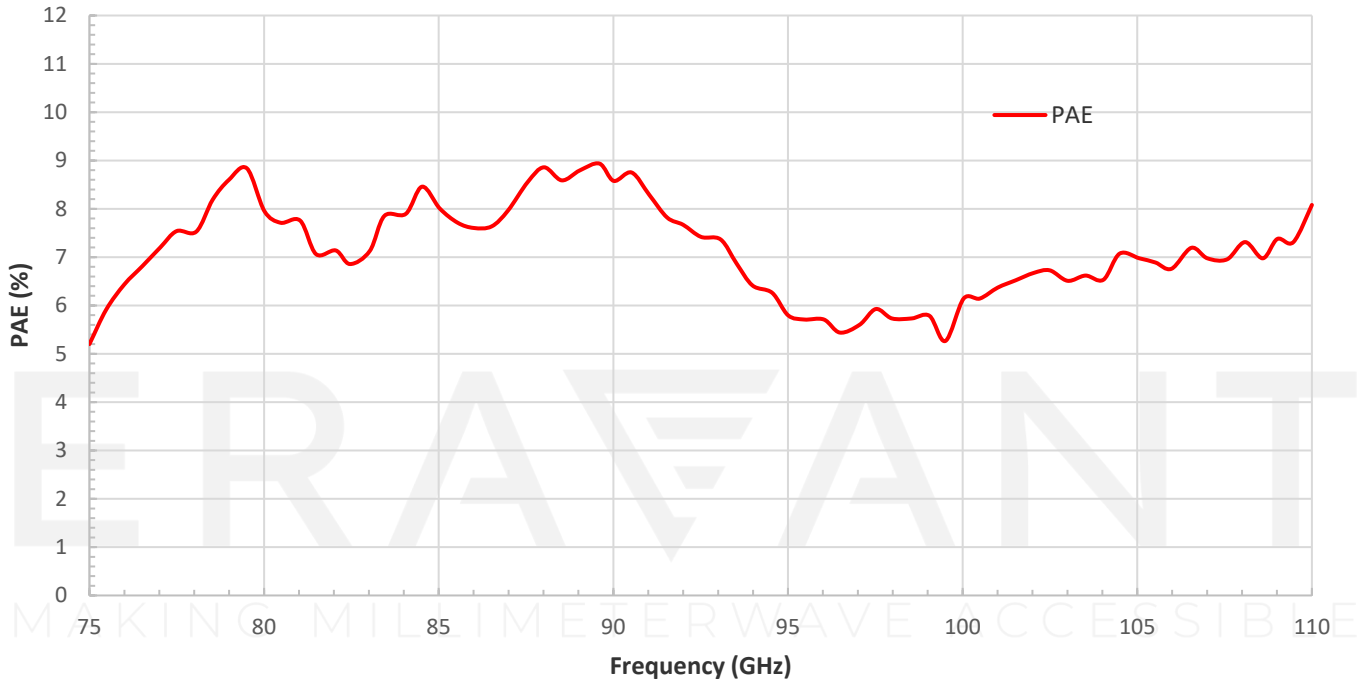
Typical P_{SAT} vs. Frequency

Bias: +15 V_{DC}/ 1200 mA

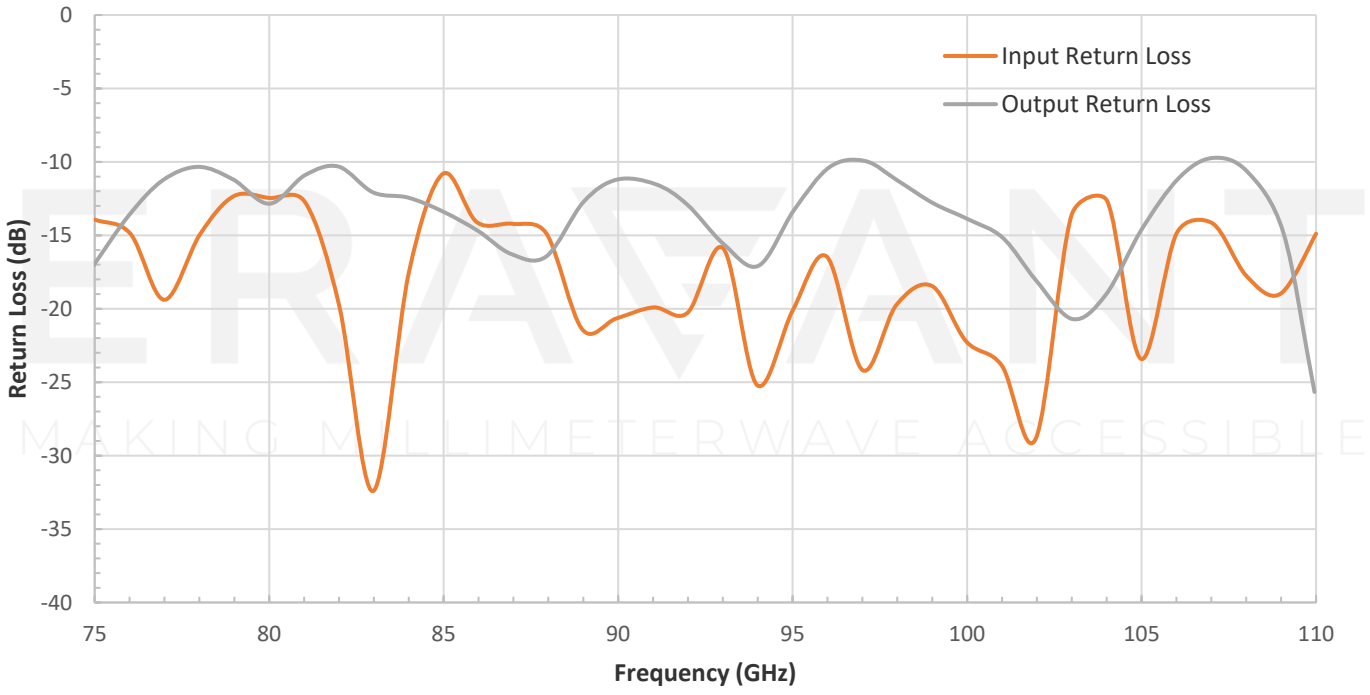


Typical PAE vs. Frequency

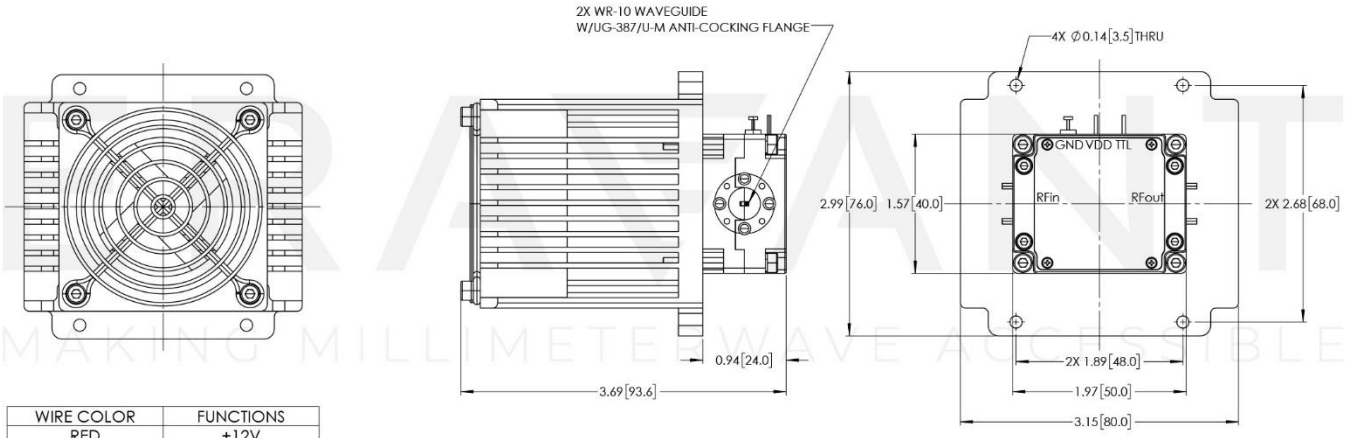
Bias: +15 V_{DC}/ 1200 mA



Typical Return Loss vs. Frequency



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.