

W-Band GaN Power Amplifier, 75 to 110 GHz, 23 dB Gain, +26 dBm P_{sat}

Description:

Model SBP-7531143026-1010-E1 is a W-Band GaN power amplifier with a typical small signal gain of 23 dB, a nominal P_{1dB} of +15 dBm, and a nominal P_{sat} of +26 dBm across the frequency range of 75 to 110 GHz. The DC power requirement for the amplifier is +16 V_{DC}/0.8 A. The mechanical configuration offers an inline structure with WR-10 waveguide with UG-387/U-M anti-cocking flange as input and output. Other port configurations are also available under different model numbers.



Features:

- High Output Power

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz		110 GHz
Small Signal Gain		23 dB	
Power Gain		16 dB	
P _{1dB}		+15 dBm	
P _{sat}		+26 dBm	
P _{in}			+22 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
DC Voltage		+16 V _{DC}	+18 V _{DC}
DC Supply Current		0.8 A	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

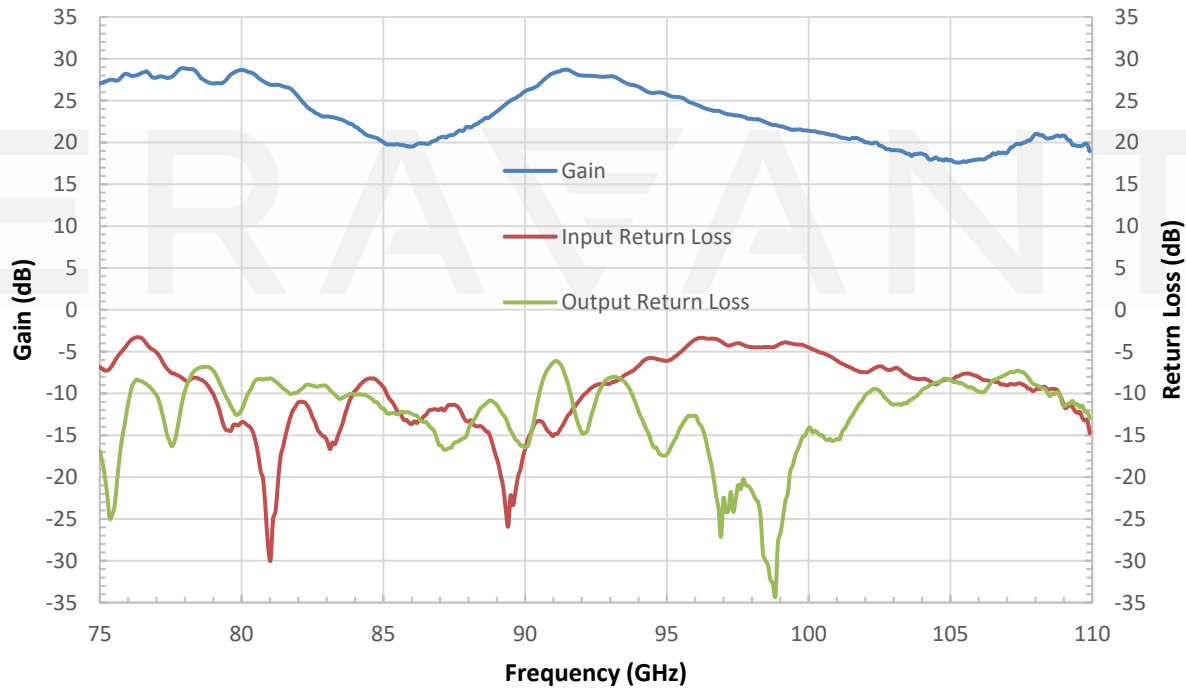
Item	Specification
Input	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Output	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Outline	BG-SW-2-A



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Typical Gain and Return Loss vs. Frequency

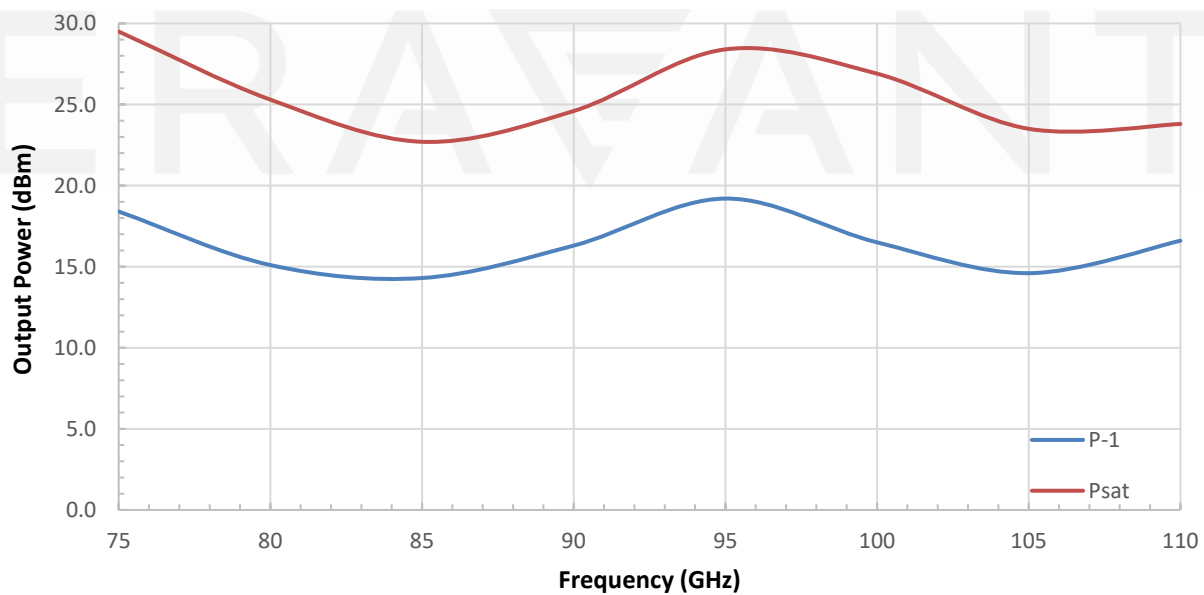
Bias: +16 V_{DC}/865 mA



Typical Output Power vs. Frequency

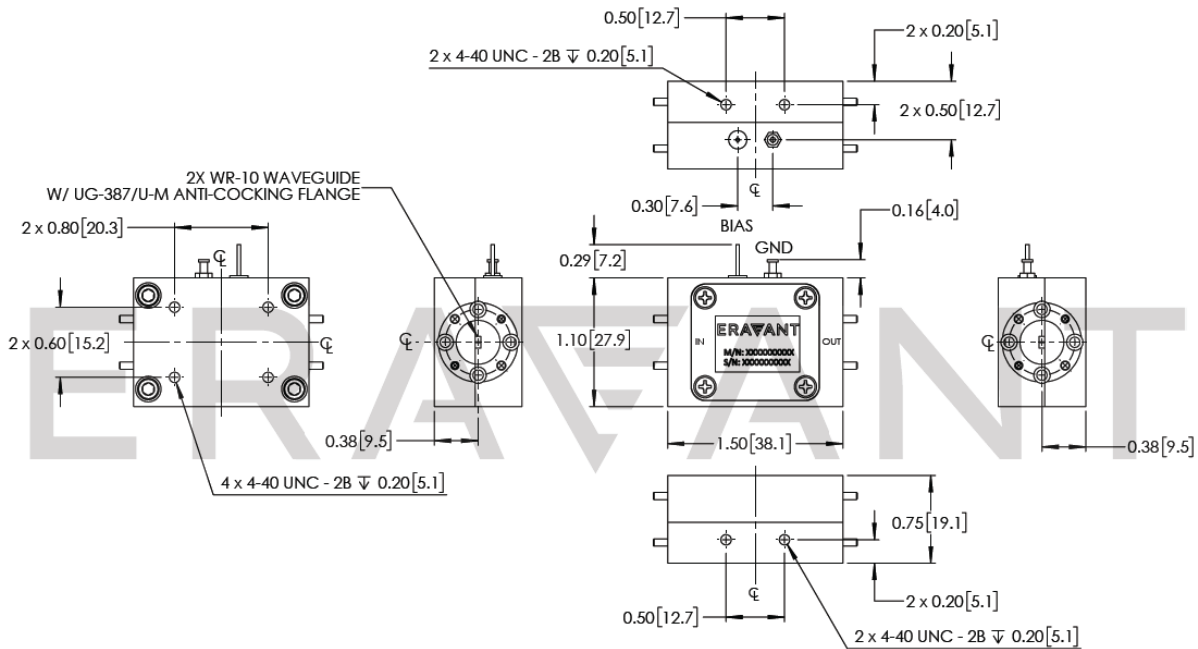
Bias: +16 V_{DC}/865 mA

RFsat: +16 V_{DC}/1,200 mA



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



Note:

- All test data is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant 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.
- Any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.

