SBP-7531141833-1010-C1-HR

75 to 110 GHz, Power Amplifier, 18 dB Gain, +33 dBm P_{sat}

SBP-7531141833-1010-C1-HR is a W-Band, GaN power amplifier with a typical small signal gain of 18 dB and a nominal P_{sat} of +33 dBm across the frequency range of 75 to 110 GHz. The DC power requirement for the amplifier is +18 V_{DC}/ 2.2 A. The mechanical configuration offers an in-line structure with WR-10 waveguides and UG-387/U-M anti-cocking flanges. A heat sink is included for cooling. Model SBP-7531143026-1010-E1 may be used as a driver power amplifier.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	75 GHz		110 GHz
Small Signal Gain		18 dB	
Power Gain		8 dB	
P_{1dB}		+25 dBm	
P_{Sat}		+33 dBm	
P_{in}		+26 dBm	+30 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+18 V_{DC}	+19 V_{DC}
DC Supply Current (Quiescent)		1.2 A	
DC Supply Current (Saturated)		2.2 A	
Fan DC Voltage		+12 V_{DC}	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input/Output Ports	WR-10 Rectangular Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Copper
Finish	Gold Plated, Black Anodize
Fan Connector	Molex 5051-03
Degree of Protection	IP40
Weight	25 oz
Size	3.15” (L) X 3.15” (W) X 3.73” (H)
Outline	BP-SW-2-H95-A

ECCN

3A001.b.4

FEATURES

- Forced Air Cooling
- In-line Port Configuration
- High Power Output

APPLICATIONS

- Communications Systems
- Test Equipment
- Radar Systems

SUPPLEMENTAL DETAILS

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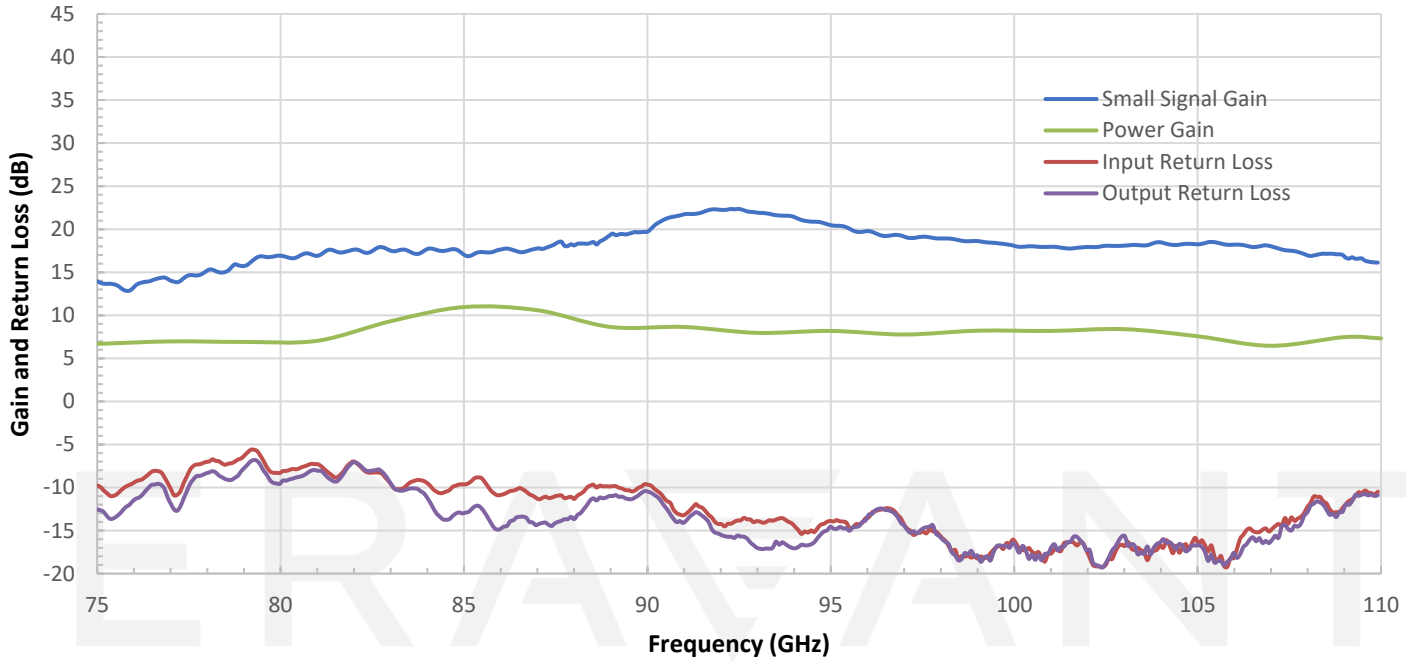
Typical Measured Gain and Return Loss vs. Frequency

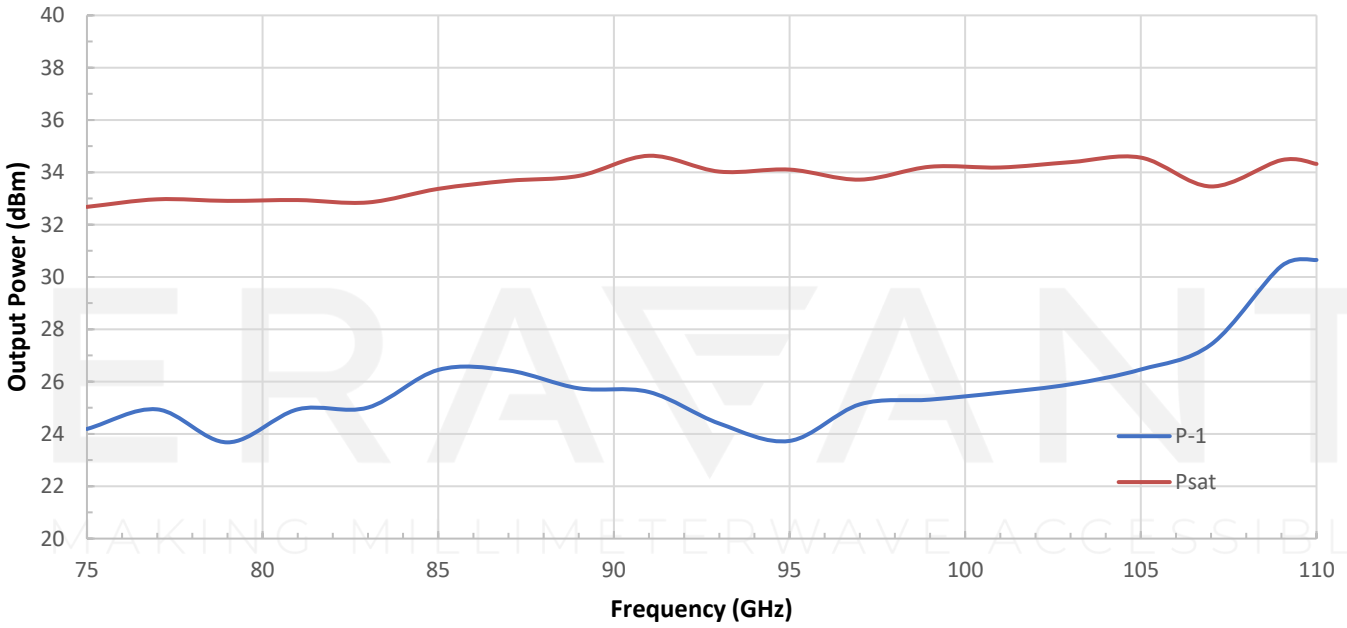
Bias: +18 V_{DC}/1200 mA



Typical Measured Output Power vs. Frequency

Bias: +18 V_{DC}/1200 mA

RFSat: 2200 mA



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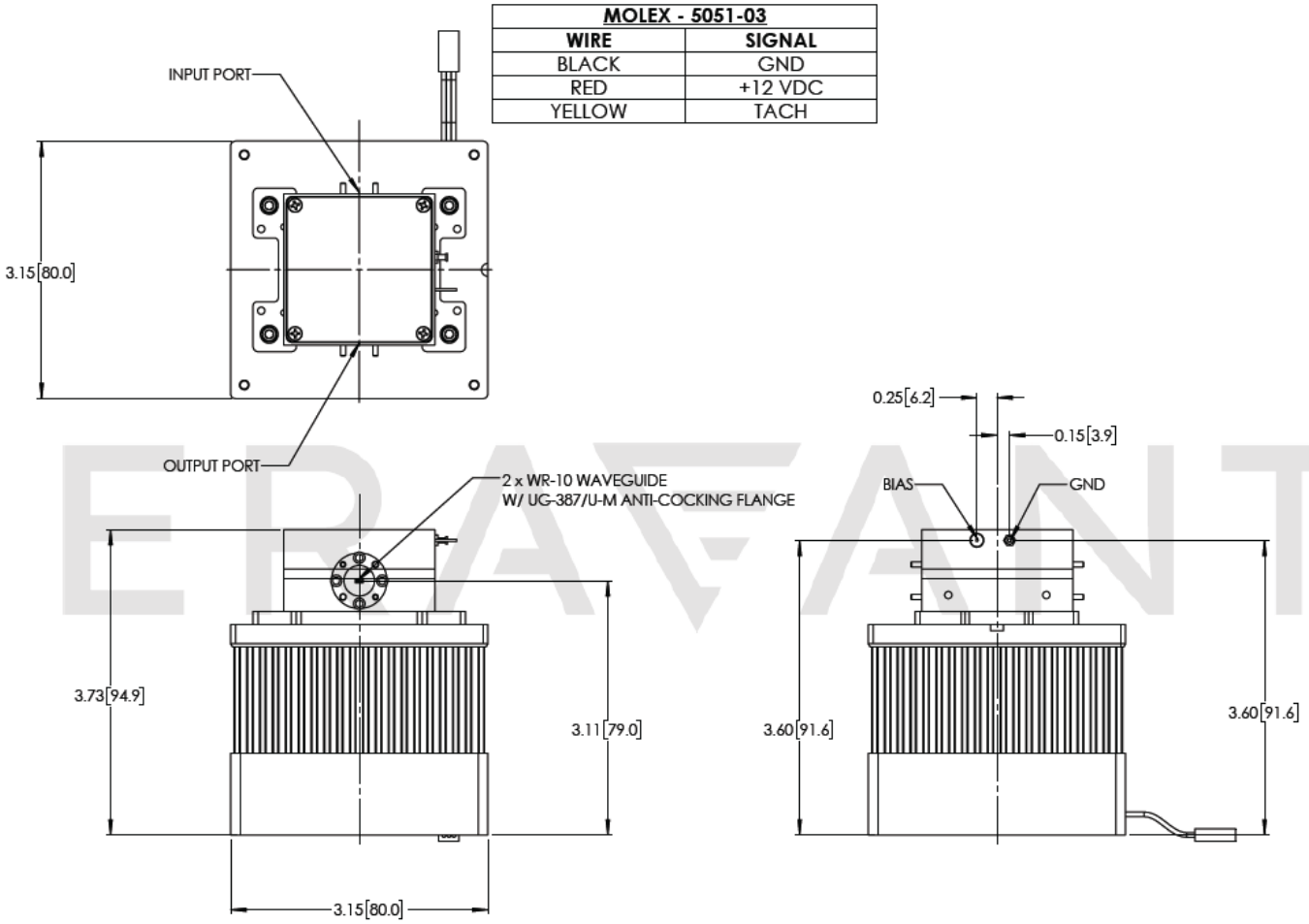
Mechanical Outline: Unless otherwise specified, all dimensions are in inches [millimeters])

MOLEX - 5051-03	
WIRE	**SIGNAL**
BLACK	GND
RED	+12 VDC
YELLOW	TACH



NOTE:

- The product presented in this datasheet is at a preliminary design stage. Final electrical and mechanical specifications may differ than what is presented.
- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- Other mechanical configurations with other frequency bands 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.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +70°C.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

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