SBP-3735233436-1919-H1-HR

37 to 52 GHz, Power Amplifier, 34 dB Gain, +36 dBm P_{sat}

SBP-3735233436-1919-H1-HR is a U-Band, GaN power amplifier with a typical small signal gain of 34 dB and a nominal P_{sat} of +36 dBm across the frequency range of 37 to 52 GHz. The DC power requirement for the amplifier is +20 V_{DC}/ 4.0 A. The mechanical configuration offers an in-line structure with WR-19 waveguides and UG-383/U-M anti-cocking flanges. A heat sink is included for cooling.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	37 GHz		52 GHz
Small Signal Gain		34 dB	
P_{1dB}		+25 dBm	
P_{Sat}		+36 dBm	
P_{In} (Damage)			+16 dBm
Input Return Loss		9 dB	
Output Return Loss		9 dB	
DC Voltage	+19 V_{DC}	+20 V_{DC}	+26 V_{DC}
DC Supply Current (Quiescent)		2.6 A	
DC Supply Current (Saturated)		4.0 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-19 Rectangular Waveguide with UG-383/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Copper / Aluminum
Finish	Gold Plated, Black Anodize
Fan Connector	Molex 5051-03
Degree of Protection	IP40
Outline	BP-SU-2-SR-H95

ECCN

3A001.b.4

FEATURES

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

APPLICATIONS

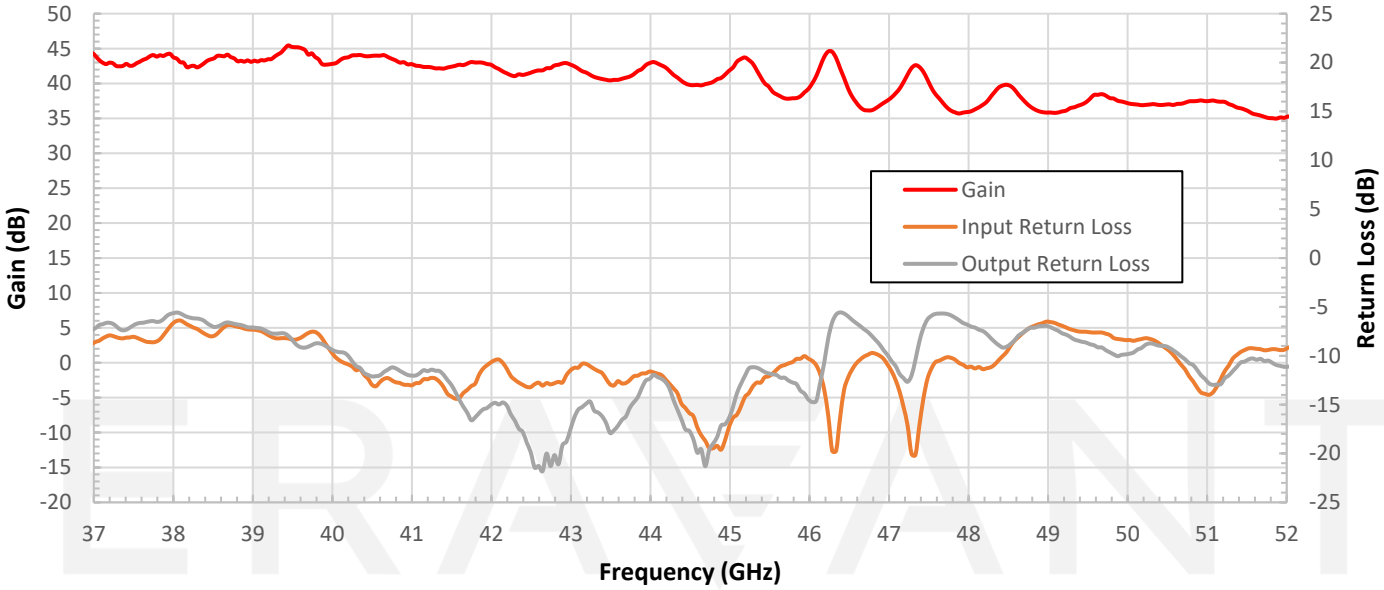
- Communications Systems
- Test Equipment
- Radar Systems
- SATCOM

SUPPLEMENTAL DETAILS

Typical Measured Data:

Gain and Return Loss vs. Frequency

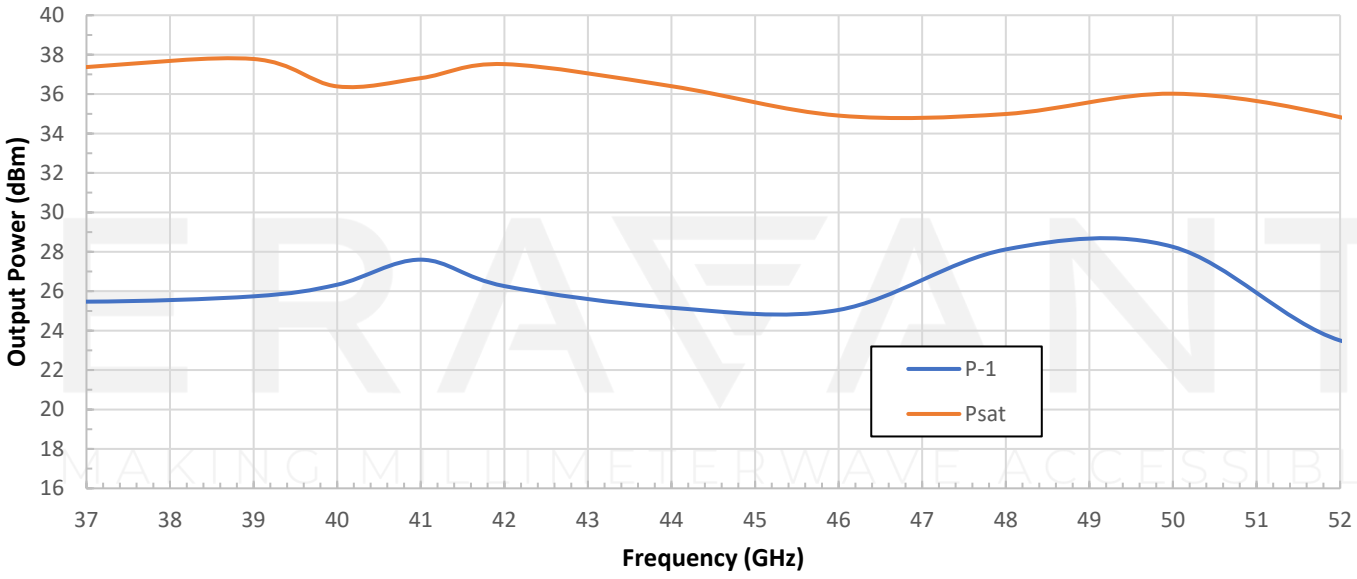
Bias: +20 V_{DC}/2221 mA



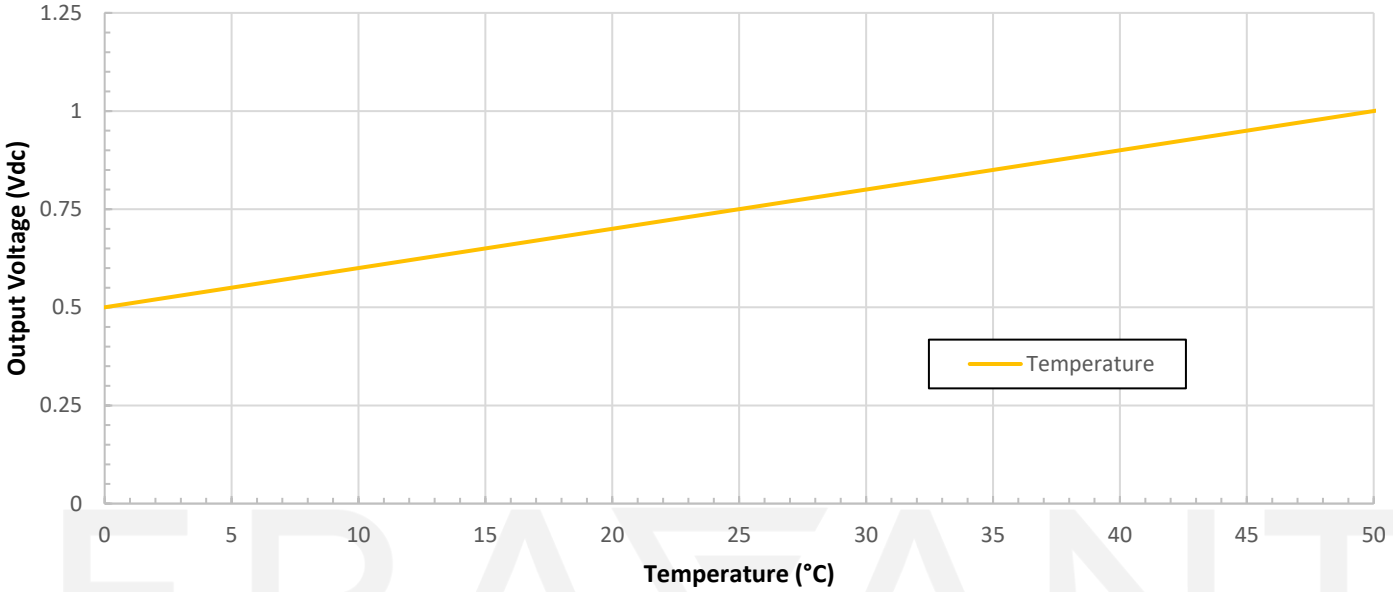
Output Power vs. Frequency

Bias: +20 V_{DC}/2221 mA

RF Sat: +20 V_{DC}/3818 mA

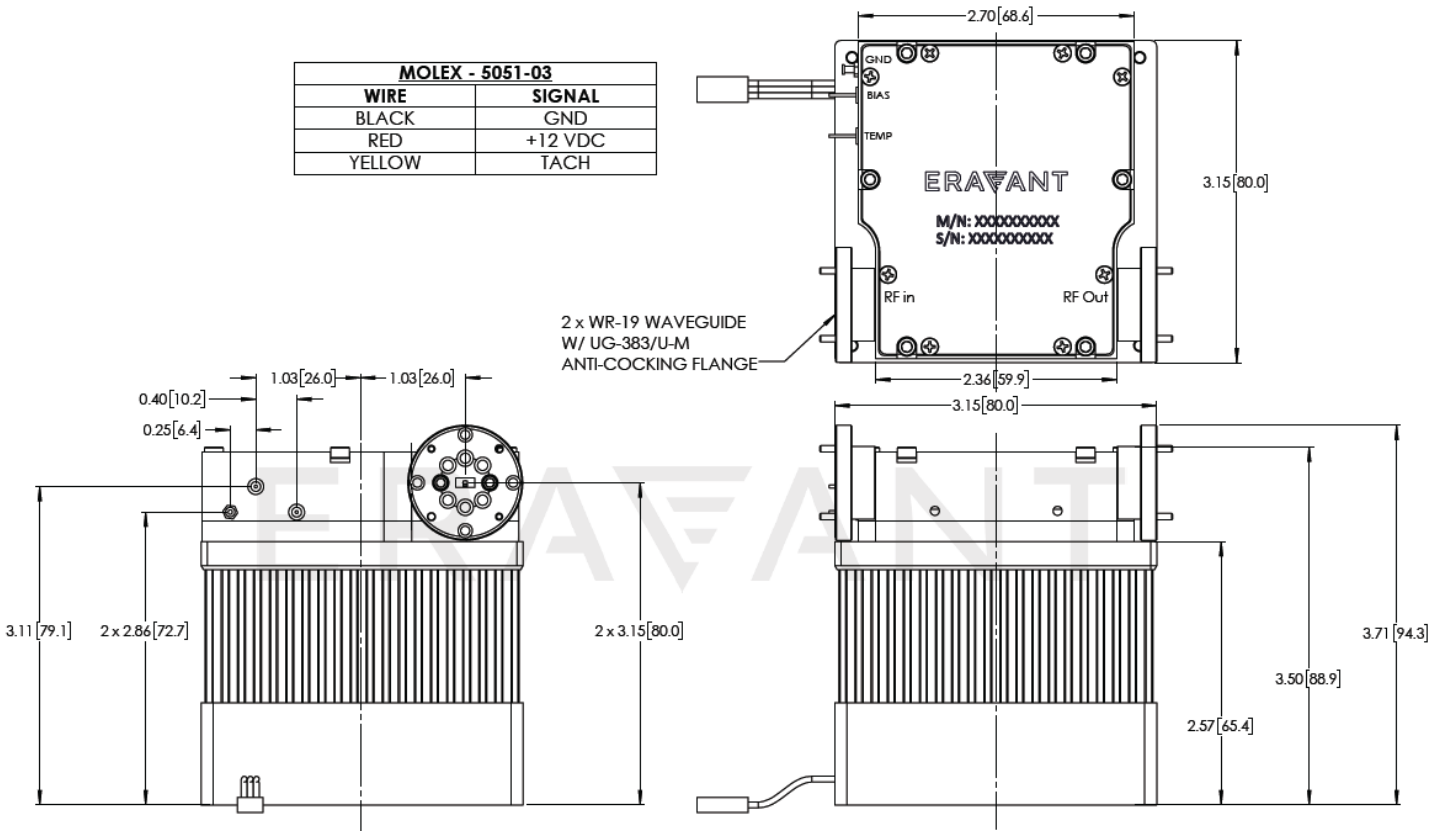


Temperature vs Temp Sensor Output Voltage



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

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



NOTE:

- 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 +50°C.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

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