

SBP-0231836350-SFNF-EP

2 to 18 GHz Power Amplifier, 63 dB Gain, +50 dBm P_{sat}

SBP-0231836350-SFNF-EP is a power amplifier with a typical small gain of 63 dB and a nominal P_{sat} of +50 dBm across the frequency range of 2 to 18 GHz. The power supply for the amplifier is +28 V_{DC}. The RF input is a SMA female connector and the output is a N female connector. Other port configurations, such as SMA male connectors and N male for either the input or output port, are also available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	2 GHz		18 GHz
Small Signal Gain		63 dB	
Power Gain @ P _{sat}		52.5 dB	
P _{sat} , CW		+50 dBm	
P _{in}			+10 dBm
Input Return Loss		12 dB	
Output Return Loss		5 dB	
Harmonics Suppression @ P _{sat}	16 dBc	20 dBc	
Spurious @ P _{sat}		60 dBc	
DC Supply Voltage (VDD)	+26 V _{DC}	+28 V _{DC}	+30 V _{DC}
DC Supply Current		29 A	
Supply Voltage to Heatsink		+12 V _{DC} /9 A	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

ECCN

3A001.b.4

FEATURES

- Class AB GaN Technique
- High Gain
- 100 W Output Power
- Input/Output Power Reading
- CW & Pulse Compatible
- Output VSWR Protection
- Over Temperature Protection
- Over Voltage Protection
- Over Drive Protection

APPLICATIONS

- Radar Systems
- Communication Systems
- Test Equipment

SUPPLEMENTAL DETAILS



Mechanical Specifications:

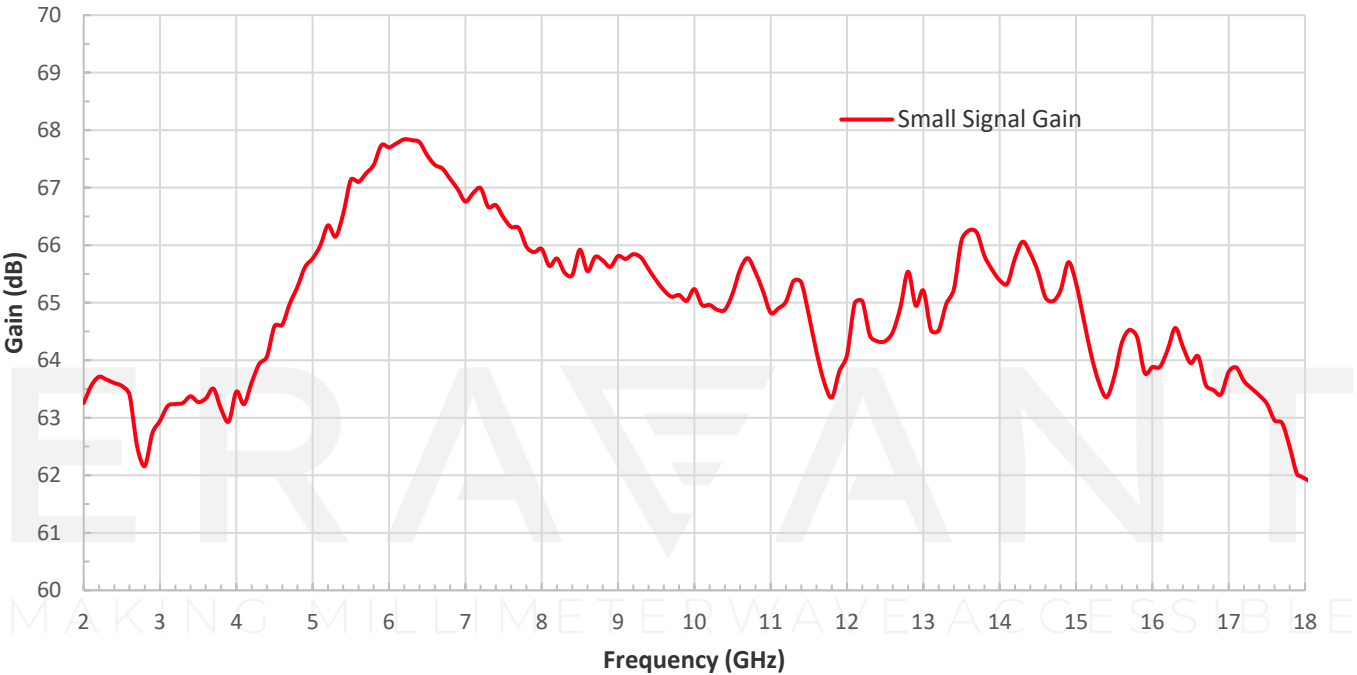
Item	Specification
Input Port	SMA Female
Output Port	N Female
Power Supply & Control	D-SUB13W3
Fan Connector	DC-099 Socket 12V@9A 5.5×2.1/2.5mm
Case Material	Copper, Nickel Plated
Heatsink	Aluminum, Black Anodized
Weight	16.3 lbs. (7.4 kg)
Size	11.81" (L) x 8.66" (W) x 3.90" (H)
Outline	BP-HC-H8

Control and Monitors:

Item	Specification
Power Enable	Turns on/off power supply to the amplifier; TTL High" enables the amplifier, and "TTL Low" disables
Input/Output Power Detector	Provides input/output power reading
High VSWR Protection	Auto shutdown if Load VSWR exceeds maximum limit (3.5:1)
Overtemperature Protection	Auto shutdown if internal temperature exceeds maximum limit (85 °C)
Input Overdrive	Auto shutdown if Input power exceeds maximum limit (+10 dBm)
Over-Voltage	Auto shutdown if DC Supply Voltage exceeds maximum limit (+32 V)

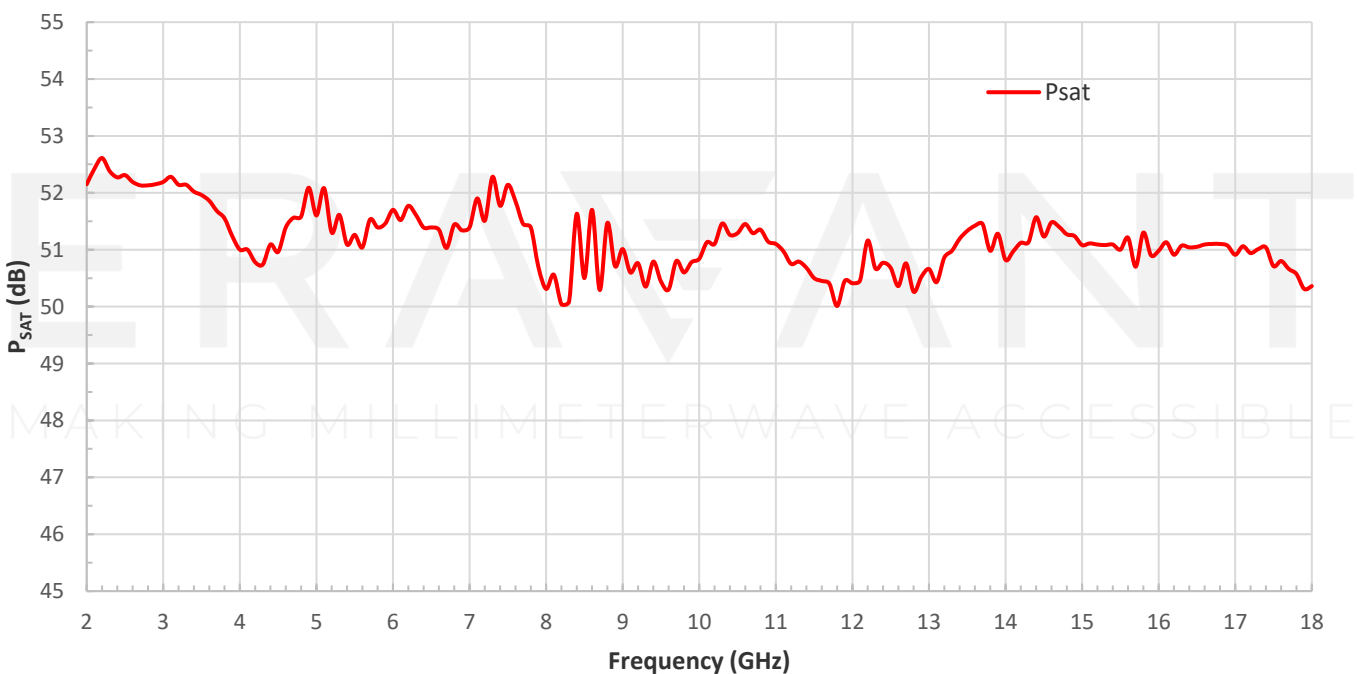
Typical Gain vs. Frequency

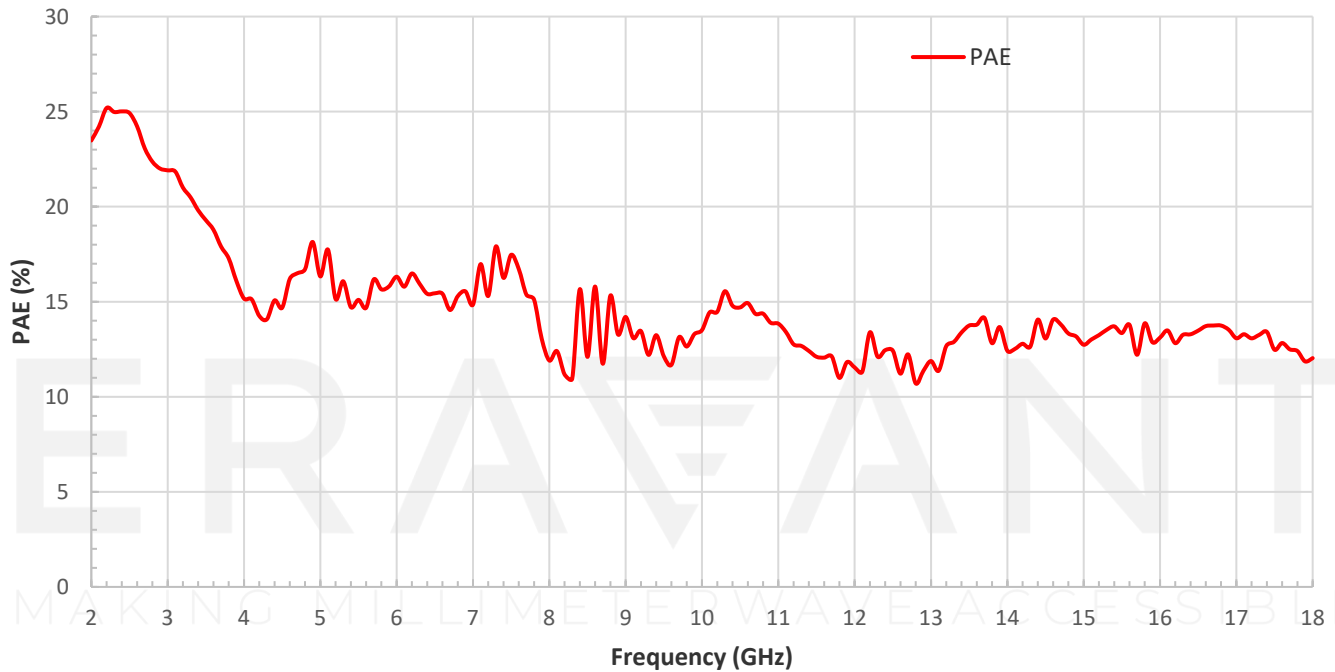
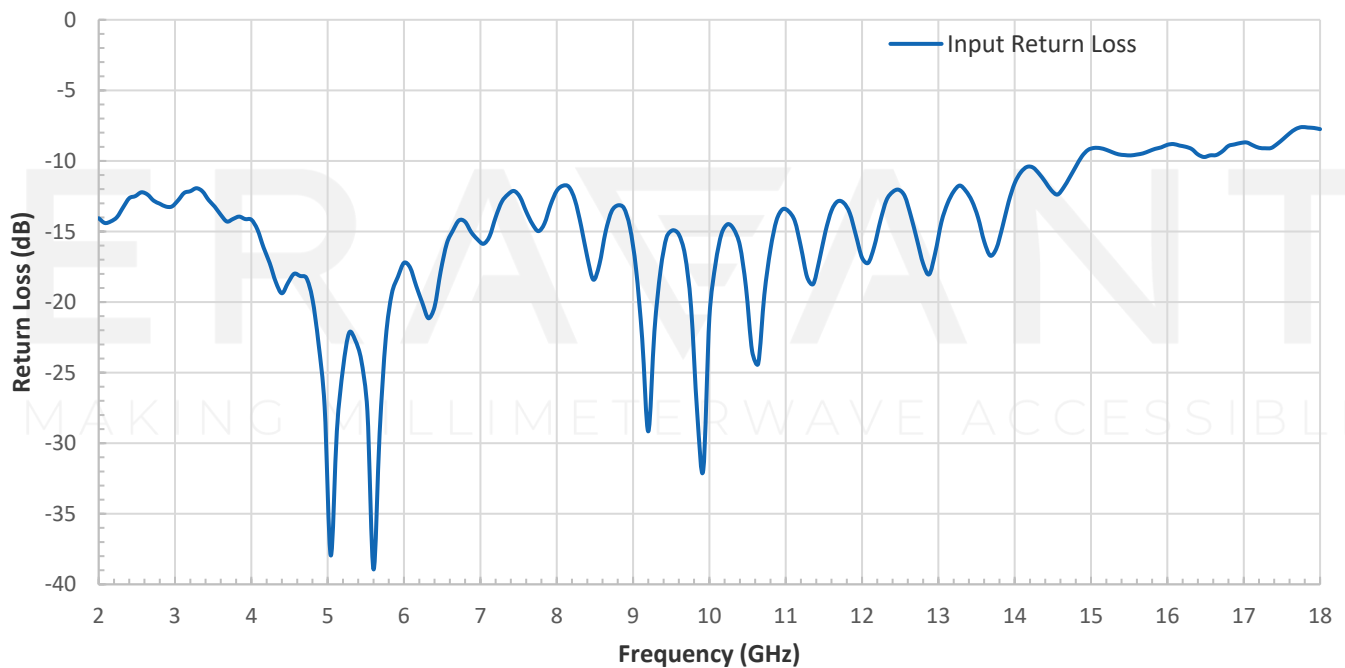
Bias: +28 V_{DC}/15 A



Typical P_{SAT} vs. Frequency

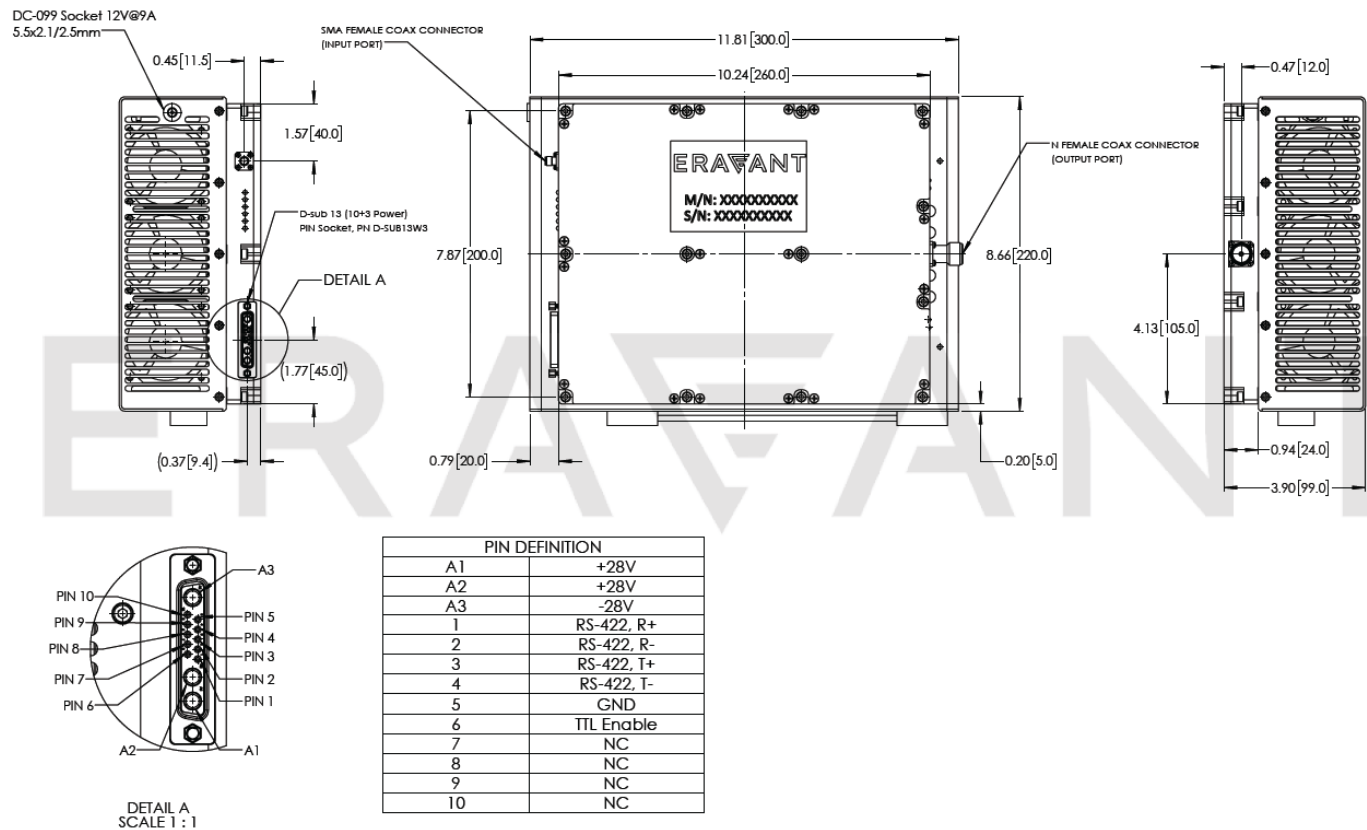
Bias +28 V_{DC}/39 A



Typical PAE vs. FrequencyBias +28 V_{DC}/39 A**Typical Return Loss vs. Frequency**Bias: +28 V_{DC}/15 A

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



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
- Proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.