SBP-1832736850-KF42-EP

18 to 26.5 GHz Power Amplifier, 68 dB Gain, +50 dBm P_{sat}

SBP-1832736850-KF42-EP is a power amplifier with a typical small gain of 68 dB and a nominal P_{sat} of +50 dBm across the frequency range of 18 to 27 GHz. The DC power requirement for the amplifier is +24 V_{DC}/23 A. The mechanical configurations is an inline structure with 2.92 mm (F) connector as its input port and WR-42 waveguide with UG-595/U Flange as output port. Other port configurations, such as 2.92 mm (M) connectors and WR-42 waveguides for either the input or output port, are also available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18 GHz		26.5 GHz
Small Signal Gain		68 dB	
Power Gain		50 dB	
Gain Flatness		±2 dB	
P_{sat}	+49 dBm	+50 dBm	
P_{in}			+12 dBm
Input Return Loss		12 dB	
Output Return Loss		5 dB	
DC Supply Voltage (VDD)	+23 V_{DC}	+24 V_{DC}	+25 V_{DC}
DC Supply Current		23 A	
Specification Temperature		+25 ˚C	
Operating Temperature	0˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Package	Hermetically Sealed
RF Input	2.92 mm (K) Female
RF Output	WR-42 Waveguide with UG-595/U Flange
Power Supply & Control	D-SUB13W3
Case Material	Aluminum
Finish	Chem Film, Clear
Weight	4.7 lbs (2.1 kg)
Size	9.45” (L) X 6.50” (W) X 1.18” (H)
Outline	BP-HK-CW1

ECCN

3A001.b.4

FEATURES

- Class AB GaN Technique
- Broadband Performance
- High Gain
- High Output Power
- Hermetically Sealed
- Input/Output Power Detector
- High VSWR Protection
- Overtemperature Protection

APPLICATIONS

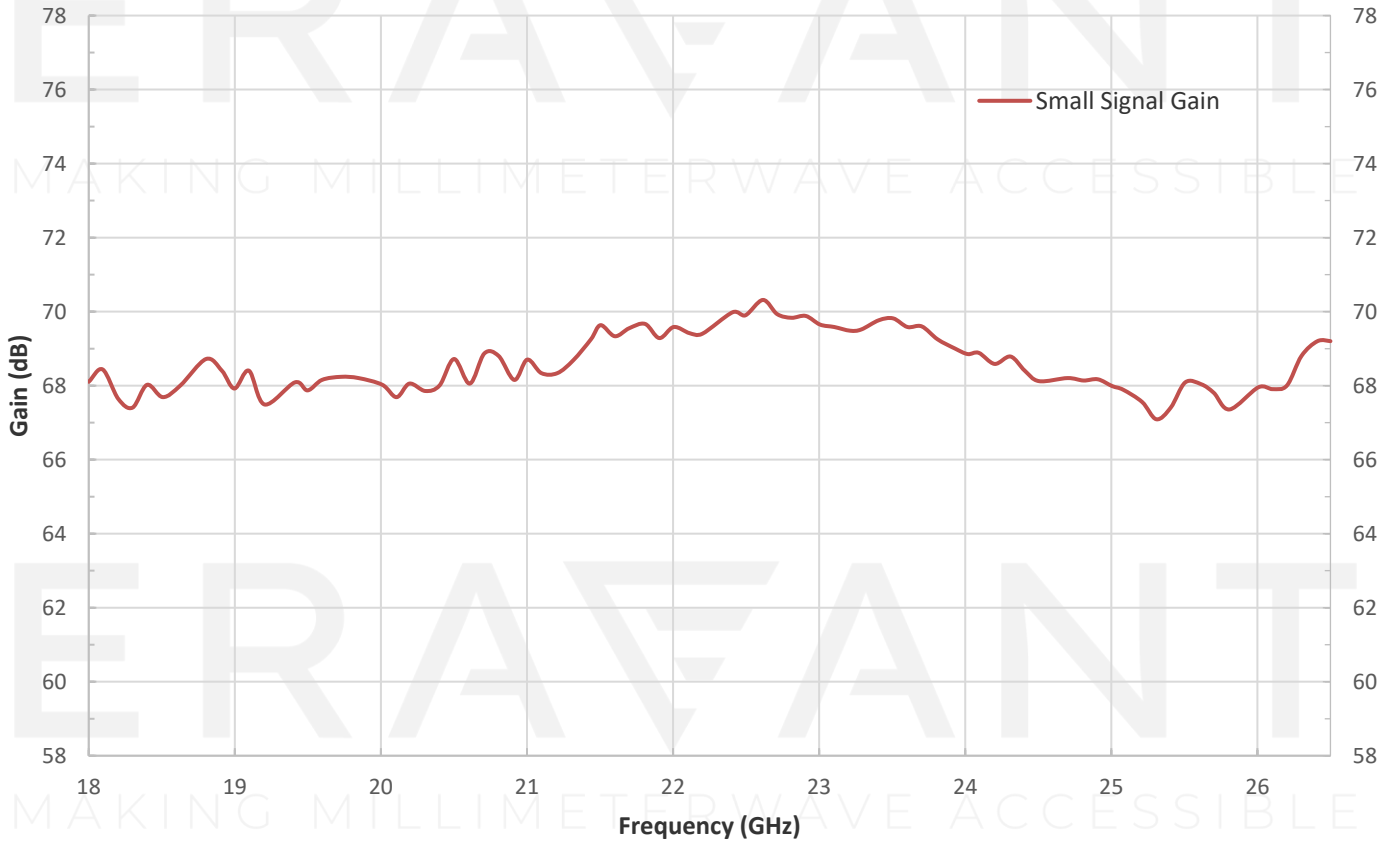
- Radar Systems
- Communication Systems
- Test Equipment

SUPPLEMENTAL DETAILS

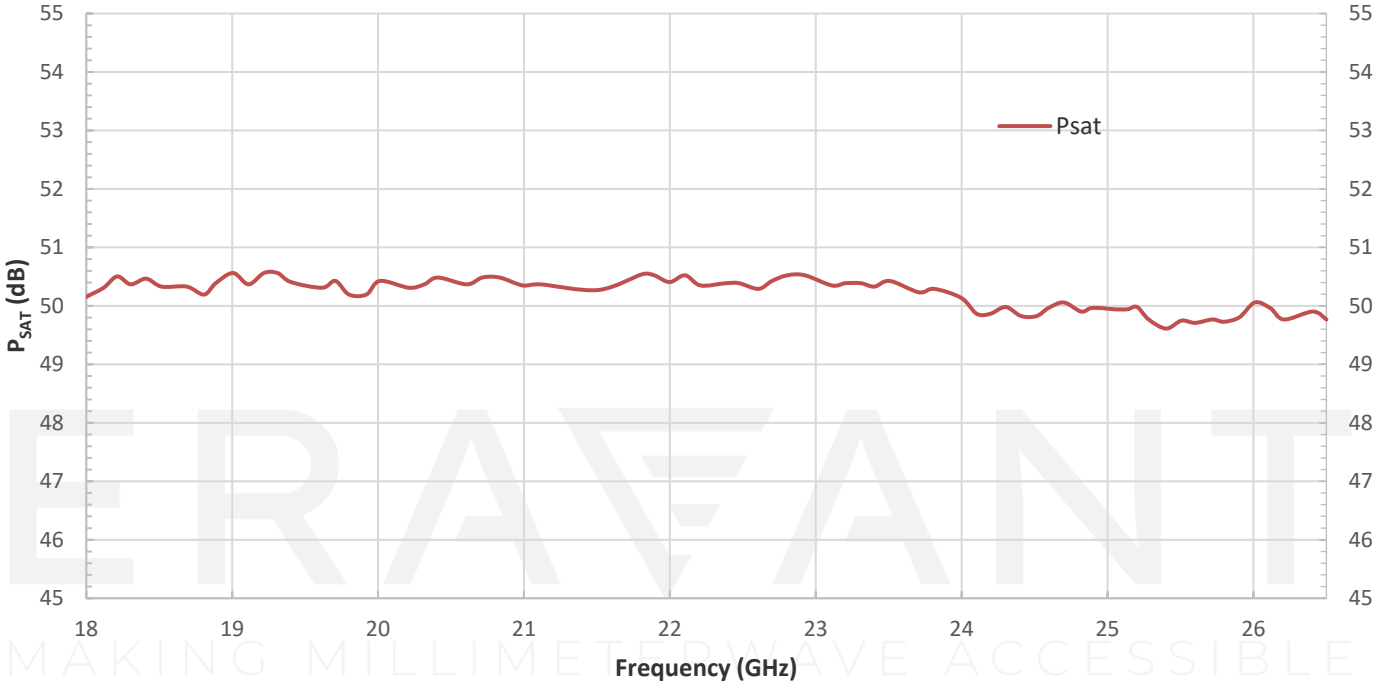
Control and Monitors:

Item	Specification
Power Enable	Turns on/off power supply to the amplifier
Input/Output Power Detector	Provides input/output power reading
High VSWR Protection	Auto shutdown if output 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 (+25 V)

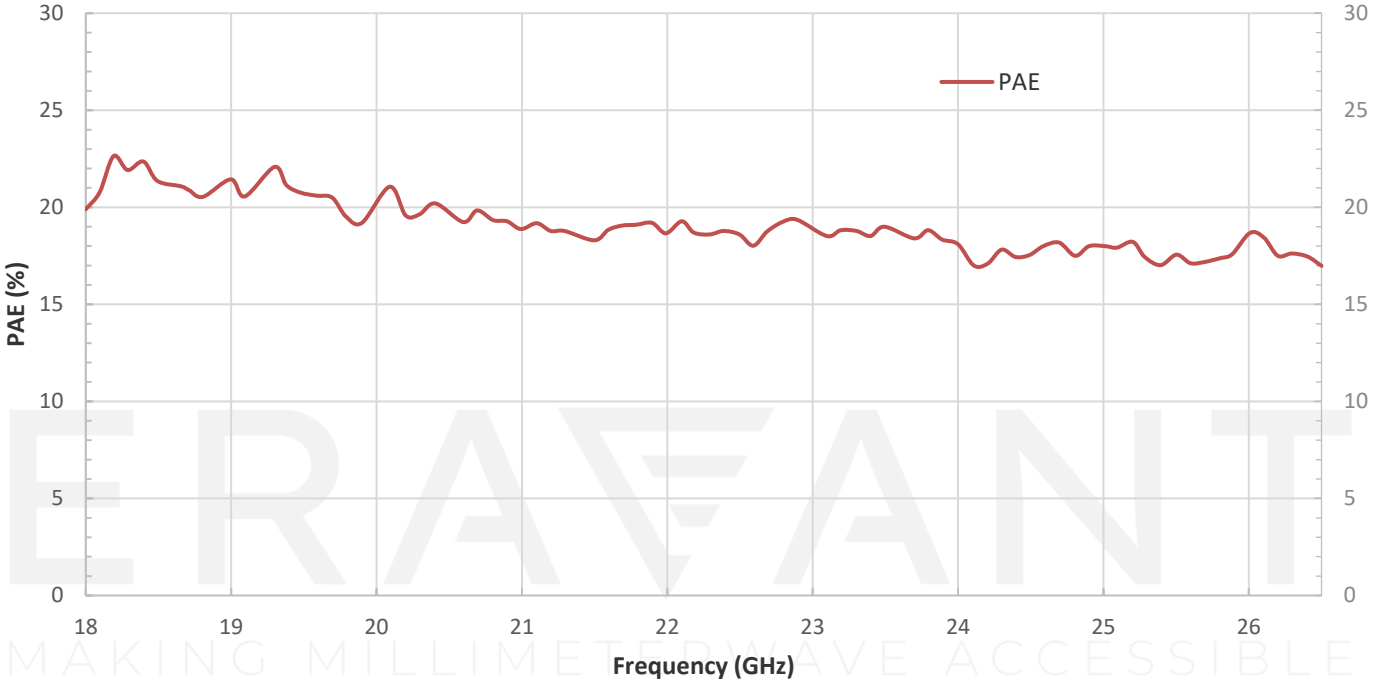
Typical Gain vs. Frequency



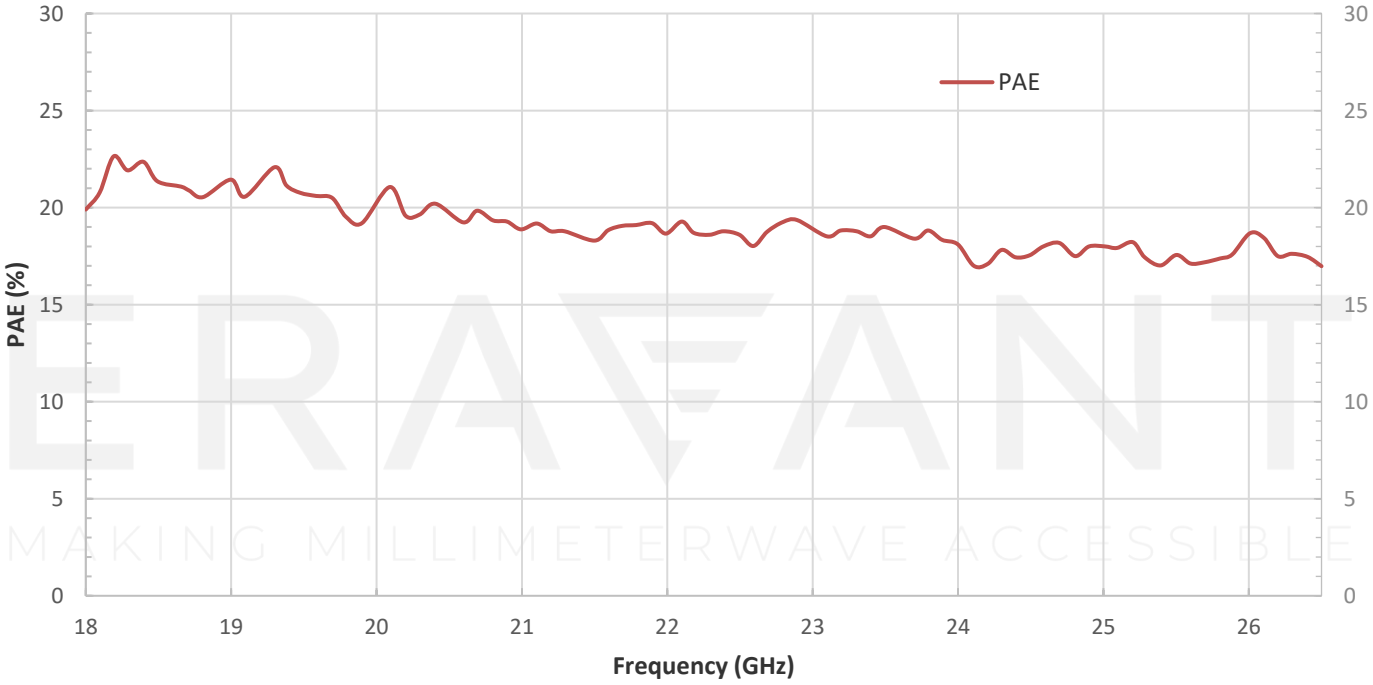
Typical P_{SAT} vs. Frequency



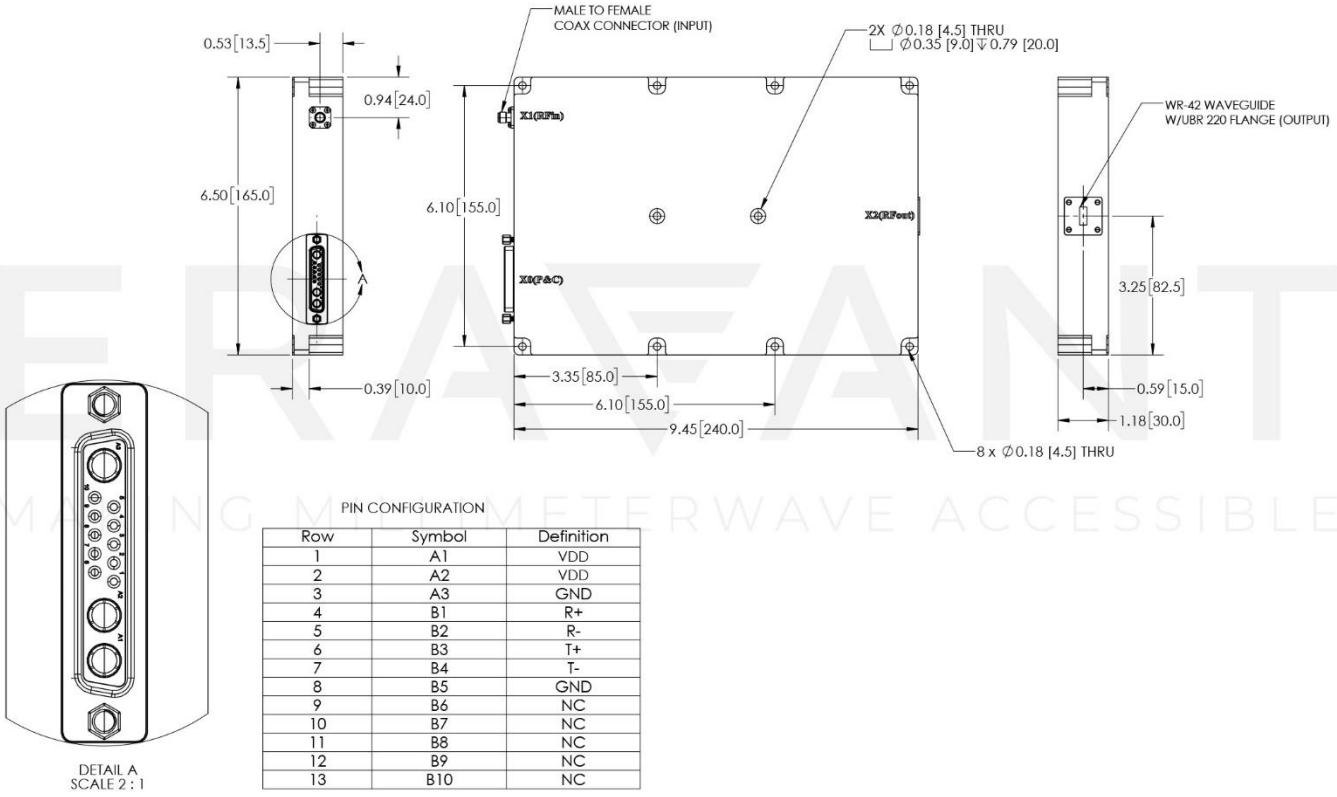
Typical PAE vs. Frequency



Typical PAE vs. Frequency



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



PIN CONFIGURATION

Row	Symbol	Definition
1	A1	VDD
2	A2	VDD
3	A3	GND
4	B1	R+
5	B2	R-
6	B3	T+
7	B4	T-
8	B5	GND
9	B6	NC
10	B7	NC
11	B8	NC
12	B9	NC
13	B10	NC

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.
- 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.