

## SBP-3734333641-2F2F-EP

### Q-Band Power Amplifier, 37 to 43 GHz, 36 dB Gain, +41 dBm P<sub>sat</sub>

**SBP-3734333641-2F2F-EP** is a power amplifier with a typical small signal gain of 36 dB and a nominal P<sub>sat</sub> of +41 dBm across the frequency range of 37 to 43 GHz. The DC power requirement for the amplifier is +20 V<sub>DC</sub>/4.5 A. The mechanical configurations is an inline structure with 2.4 mm (F) connector as its input port and output port. Other port configurations, such as 2.4 mm (M) connectors and WR-22 waveguides for either the input or output port, are also available under different model numbers.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	37 GHz		43 GHz
Small Signal Gain		36 dB	
Power Gain		30 dB	
P <sub>sat</sub>		+41 dBm	
P <sub>in</sub>			+15 dBm
Input Return Loss		10 dB	
Output Return Loss		5 dB	
DC Supply Voltage (VDD)	+18 V <sub>DC</sub>	+20 V <sub>DC</sub>	+22 V <sub>DC</sub>
DC Supply Current		4.5 A	
Supply Voltage to Fan		+12 V <sub>DC</sub> /1.8 A	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

#### Mechanical Specifications:

Item	Specification
Input	2.4 mm Female
Output	2.4 mm Female
Power Supply	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Size	2.99" (L) X 3.15" (W) X 3.30" (H)
Outline	BP-HC-H3

#### ECCN

3A001.b.4

#### FEATURES

- Broadband Performance
- High Gain
- High Output Power

#### APPLICATIONS

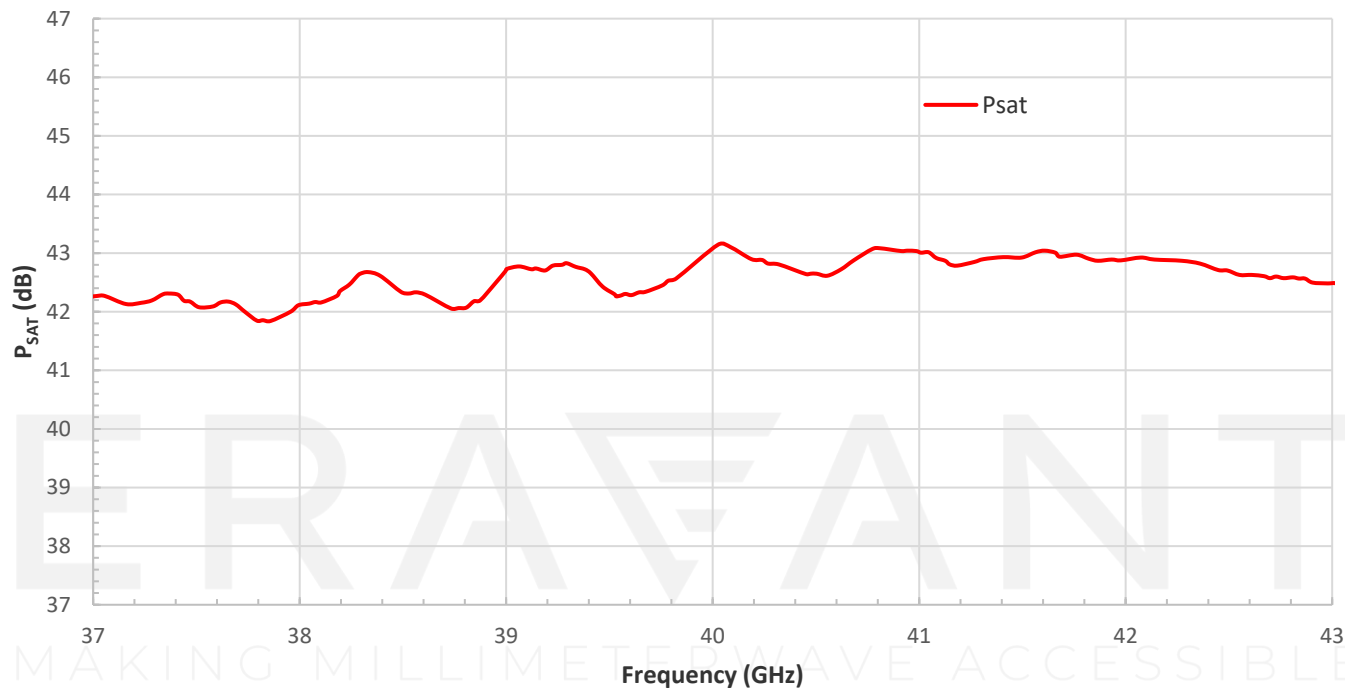
- 5G Systems
- Radar Systems
- Communication Systems
- Test Equipment

#### SUPPLEMENTAL DETAILS

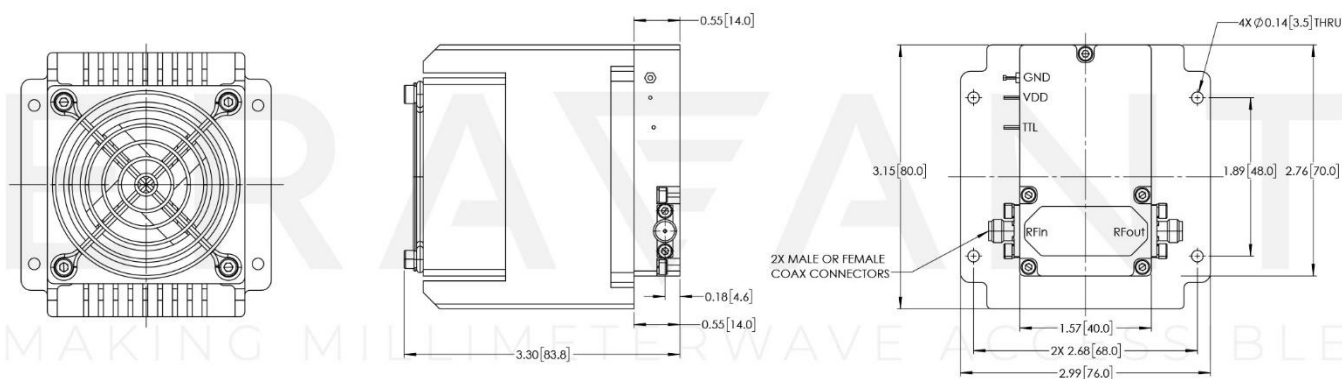


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Typical  $P_{SAT}$  vs. Frequency



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



WIRE COLOR	FUNCTIONS
RED	+12V
BLACK	GND
YELLOW	TACH SIGNAL (OPTIONAL)
BLUE	PWM (OPTIONAL)

**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:  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm). Torque wrench model SCH-08008-S1 is highly recommended.