SBP-3734333538-2F2F-E1-HR

Rev 1.2

37 to 43 GHz GaN Power Amplifier, 35 dB Gain, +38 dBm P_{sat}

Description:

Model SBP-3734333538-2F2F-E1-HR is a GaN power amplifier with a typical small signal gain of 35 dB and a nominal P_{sat} of +38 dBm across the frequency range of 37 to 43 GHz. The DC power requirement for the amplifier is +15V_{DC}/3.7 A. The RF connectors are female 2.4 mm connectors. Other port configurations, such as V connectors and WR-22 waveguides for either the input or output port, are also available under different model numbers.

Features:

- High Output Power
- Good Power and Gain Flatness

Applications:

- 5G System
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	37 GHz		43 GHz
Gain		35 dB	
P_{1dB}		+34 dBm	
P_{sat}		+38 dBm	
P_{in}			+10 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+14 V_{DC}	+15 V_{DC}	+17 V_{DC}
DC Supply Current (Under RF Drive)		3.7 A	
Supply Voltage to Fan		+12 V_{DC}	
Specification Temperature		+25˚C	
Operating Temperature	0˚C		+50˚C

Mechanical Specifications:

Item	Specification
Input	2.4 mm (F)
Output	2.4 mm (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	17 Oz
Size	3.15” (L) X 3.15” (W) X 3.48” (H)
Outline	BK-SC-C1-H

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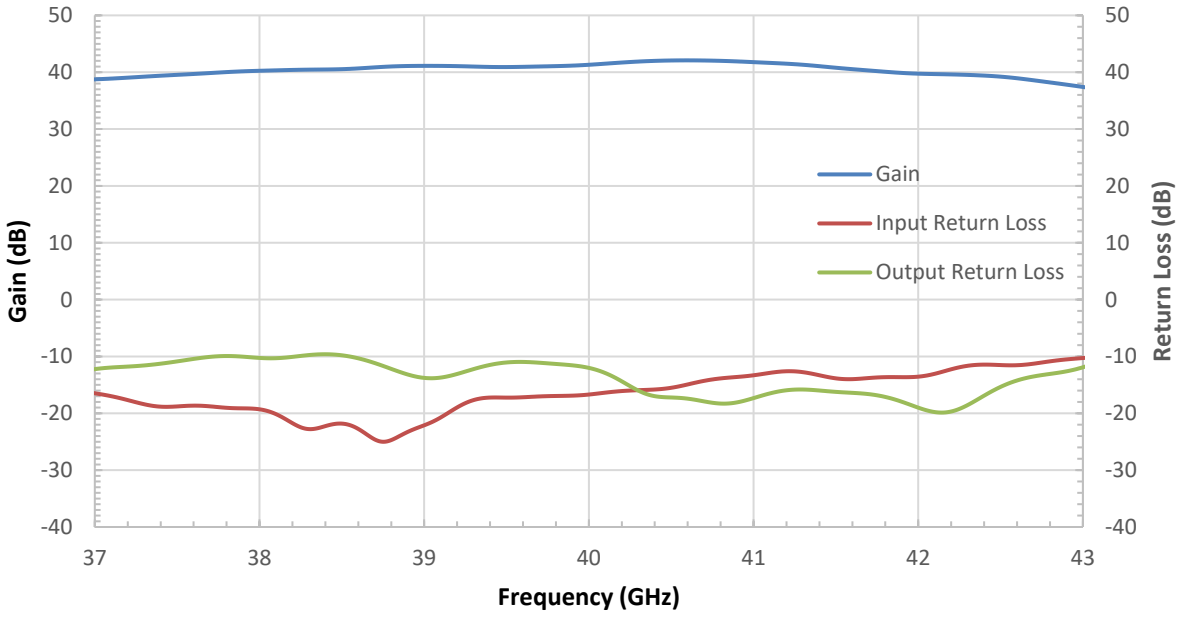
Test Data:

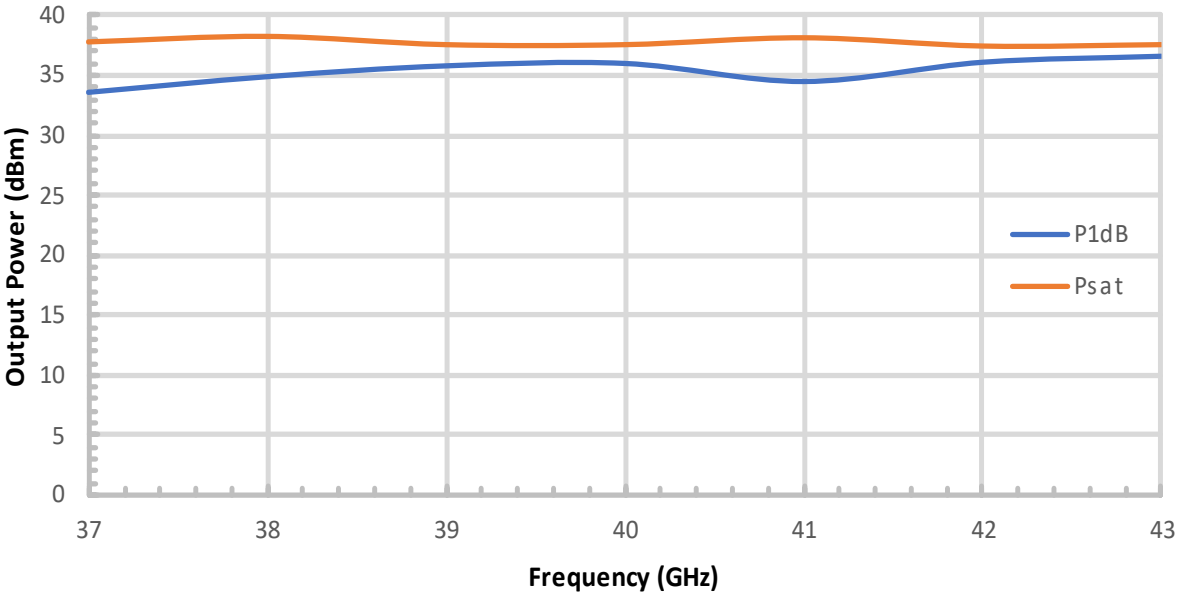
Gain and Return Loss vs. Frequency

Bias: +15 V_{DC}/ 1.7 A



Output Power vs. Frequency

Bias: +15V_{DC}/3.7A



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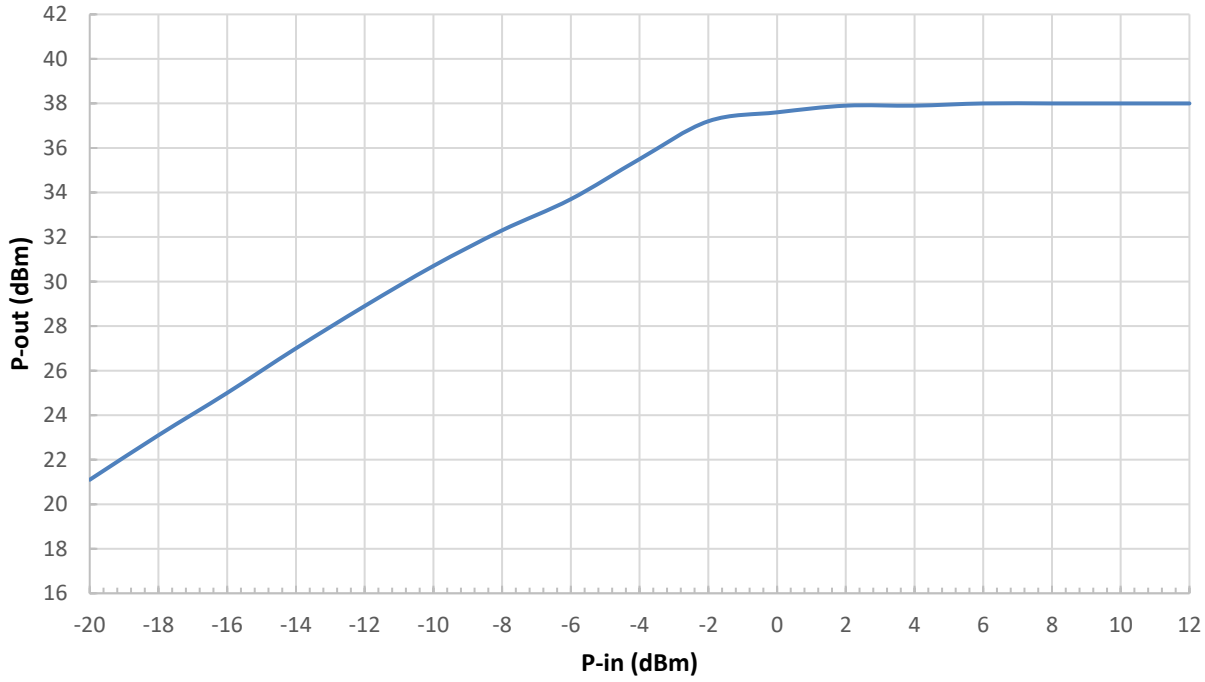
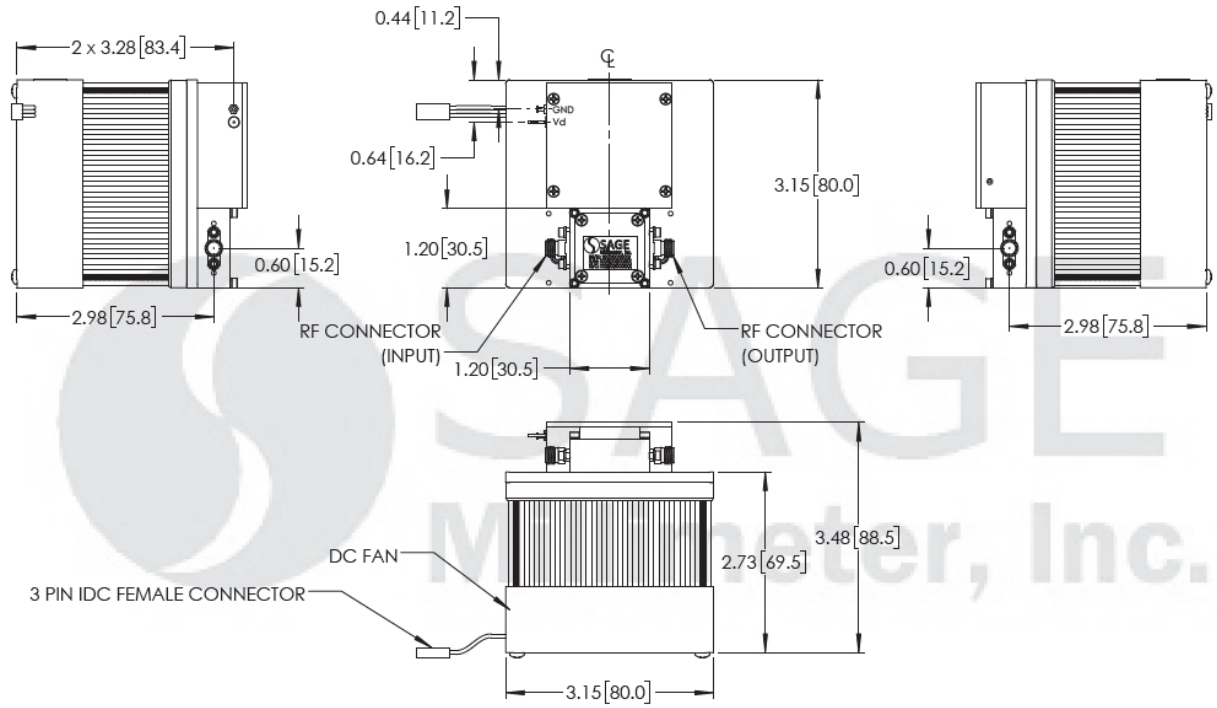
P-in vs. P-out

RF Input: 40 GHz



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



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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.
- 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. Use proper heatsink or fan if necessary.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**