



Power Amplifier, 17 to 43 GHz, 35 dB Gain, +24 dBm P_{1dB}

Description:

Model SBP-1734333524-KFKF-E3 is a power amplifier with a typical small signal gain of 35 dB and a nominal P_{1dB} of +24 dBm across the frequency range of 17 to 43 GHz, respectively. The typical port return loss is 10 dB. The DC bias required for the amplifier is +12 V_{DC}/500 mA quiescent and 700 mA with RF signal. Both input and output ports are 2.92 mm female connectors. Other port configurations are also available under different model numbers.



Features:

- Broadband Performance
- High Gain
- High Output Power

Applications:

- 5G Systems
- Radar Systems
- Communication Systems
- Low Noise Receivers

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	17 GHz		43 GHz
Gain		35 dB	
P _{1dB}	+23 dBm	+24 dBm	
P _{SAT}		+26 dBm	
P _{in}			0 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+8 V _{DC}	+12 V _{DC}	+15 V _{DC}
DC Supply Current		500 mA	700 mA
Specification Temperature		+25 °C	
Case Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	2.92 mm (F)
Output Port	2.92 mm (F)
Bias Port	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	7.05 Oz
Size	1.58" (L) X 1.38" (W) X 0.47" (H)
Outline	BL-ZC-6

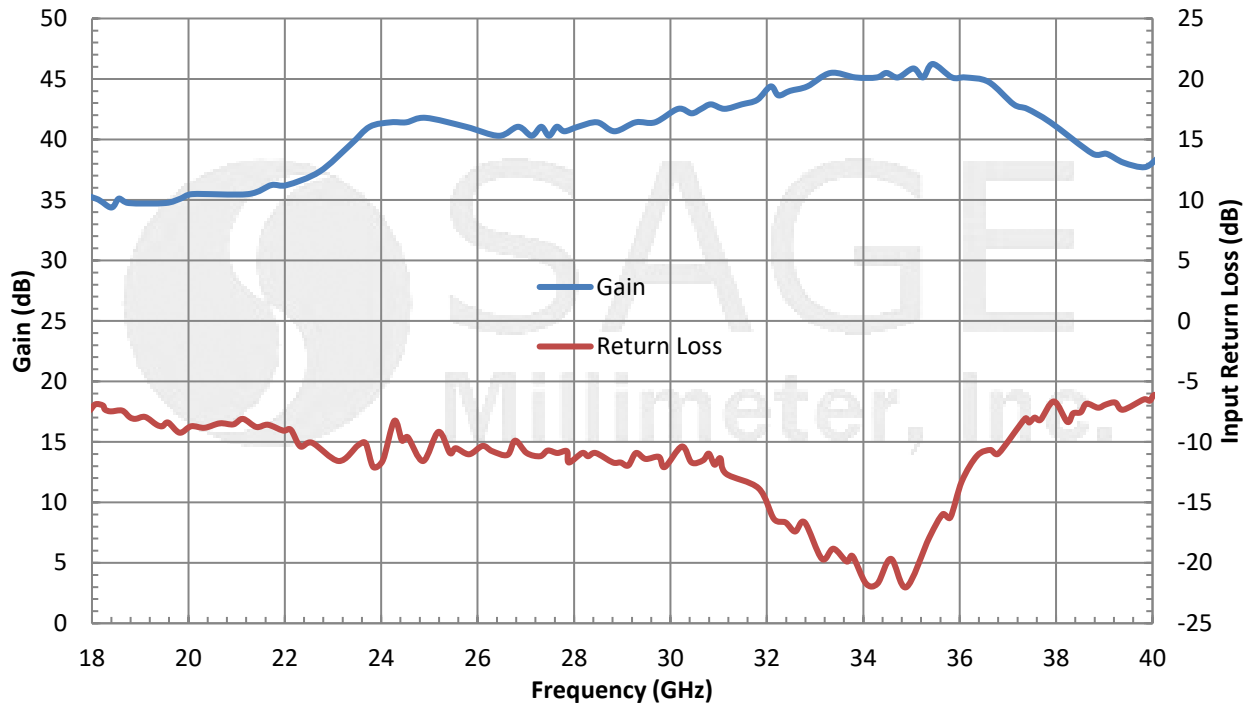




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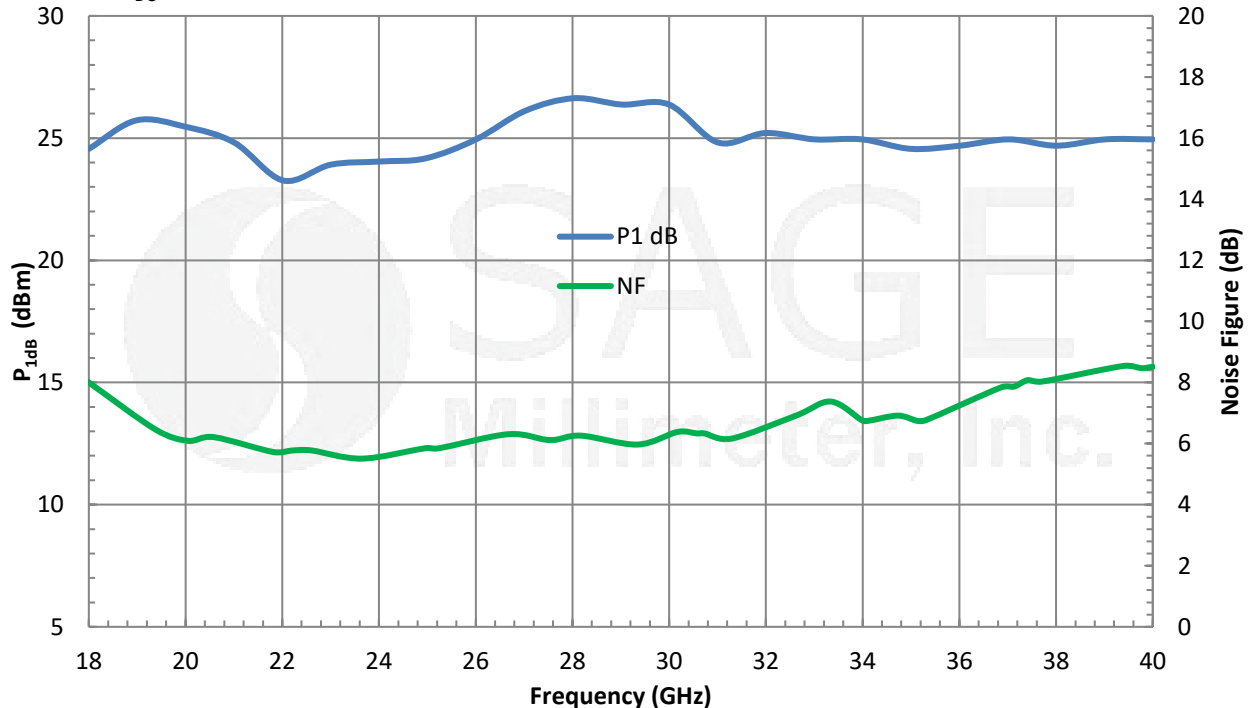
Typical Gain and Input Return Loss vs. Frequency

Bias: +12 V_{DC}/500 mA



Typical P_{1dB} and Noise Figure vs. Frequency

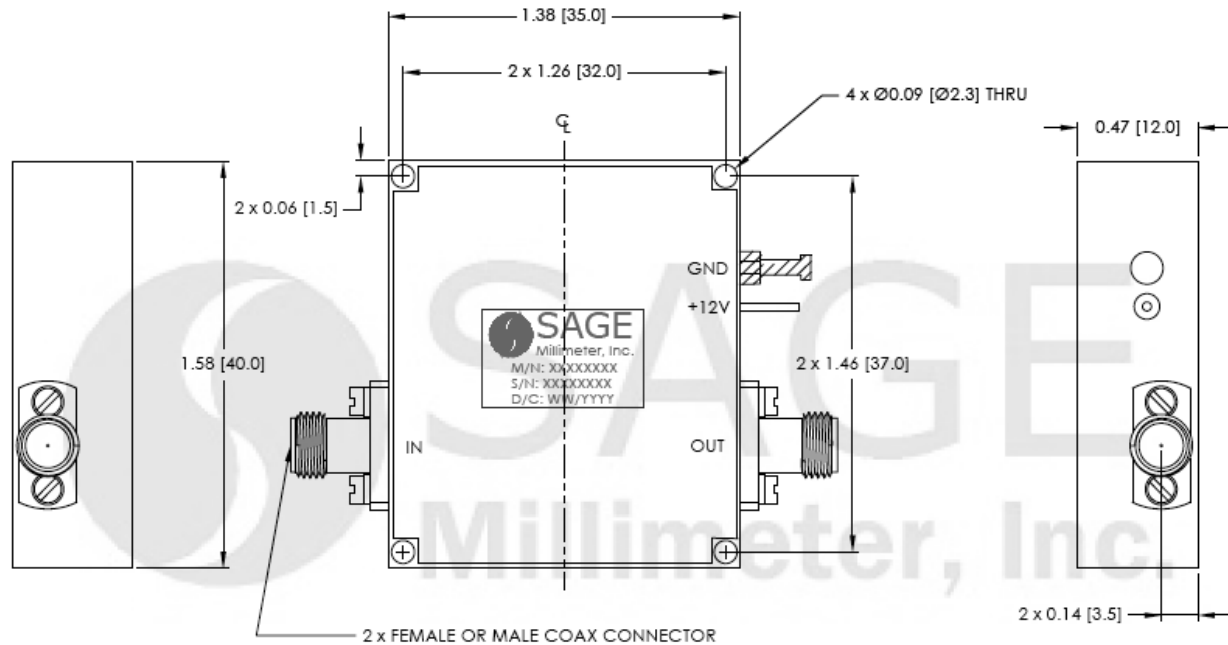
Bias: +12 V_{DC}/680 mA





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



Notes:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model numbers.

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. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

