SBL-1834232840-KFKF-E3

Rev 1.3

Low Noise Amplifier, 18 to 42 GHz, 28 dB Gain, 4 dB NF

Description:

Model SBL-1834232840-KFKF-E3 is a low noise amplifier with a typical small signal gain of 28 dB and a nominal noise figure of 4 dB across the frequency range of 18 to 42 GHz. The DC power requirement for the amplifier is +5 V_{DC}/210 mA. Due to the small package, the amplifier does not have a built-in regulator. The input and output port configurations are both female K connectors. Other port configurations are available under different model numbers.

Features:

- Ultra-Wideband Operation
- State-of-the-Art Noise Figure
- Compact Package

Applications:

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

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18 GHz		42 GHz
Gain		28 dB	
Noise Figure		4 dB	
P_{1dB}		+14 dBm	
RF Input Power			-5 dBm
Damage RF Input Power			0 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+5 V_{DC}	+5.5 V_{DC}
DC Supply Current		210 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

Mechanical Specifications:

Item	Specification
Input Port	K(F)
Output Port	K(F)
Bias	Solder Pin
Case Material	Copper
Finish	Gold Plated
Weight	1.8 Oz
Size	0.43” (L) X 0.74” (W) X 0.35” (H)
Outline	BL-ZC-3

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

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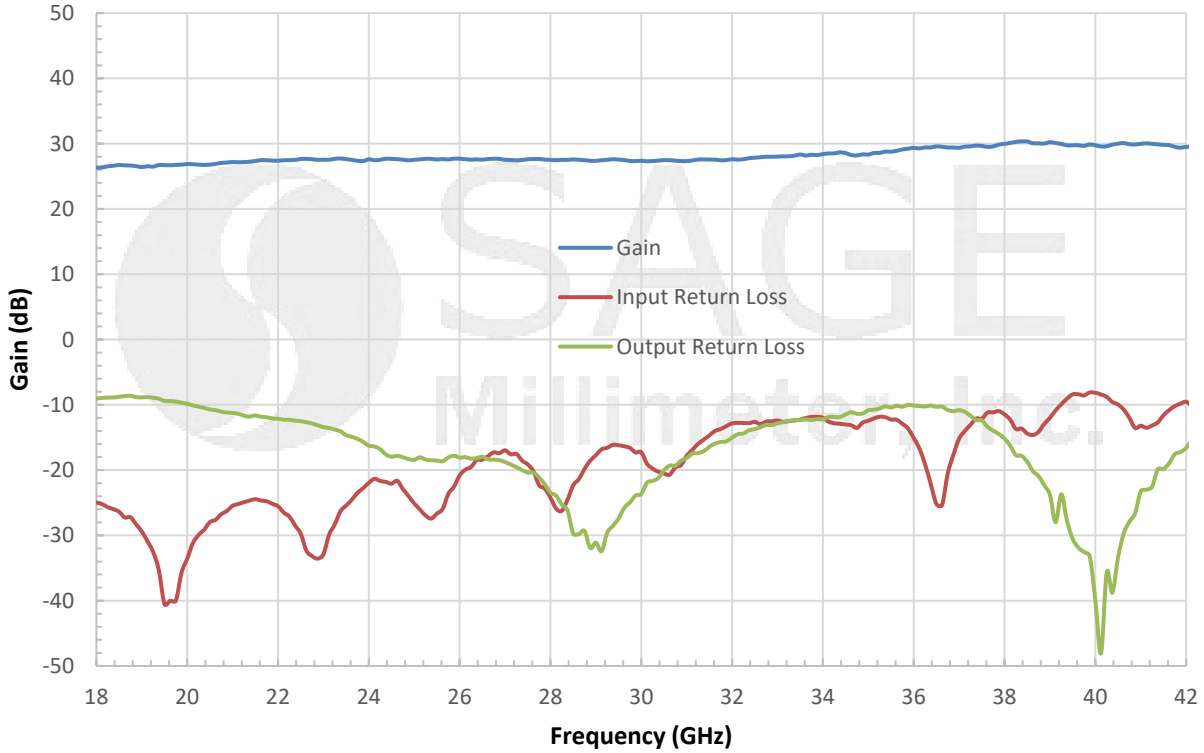
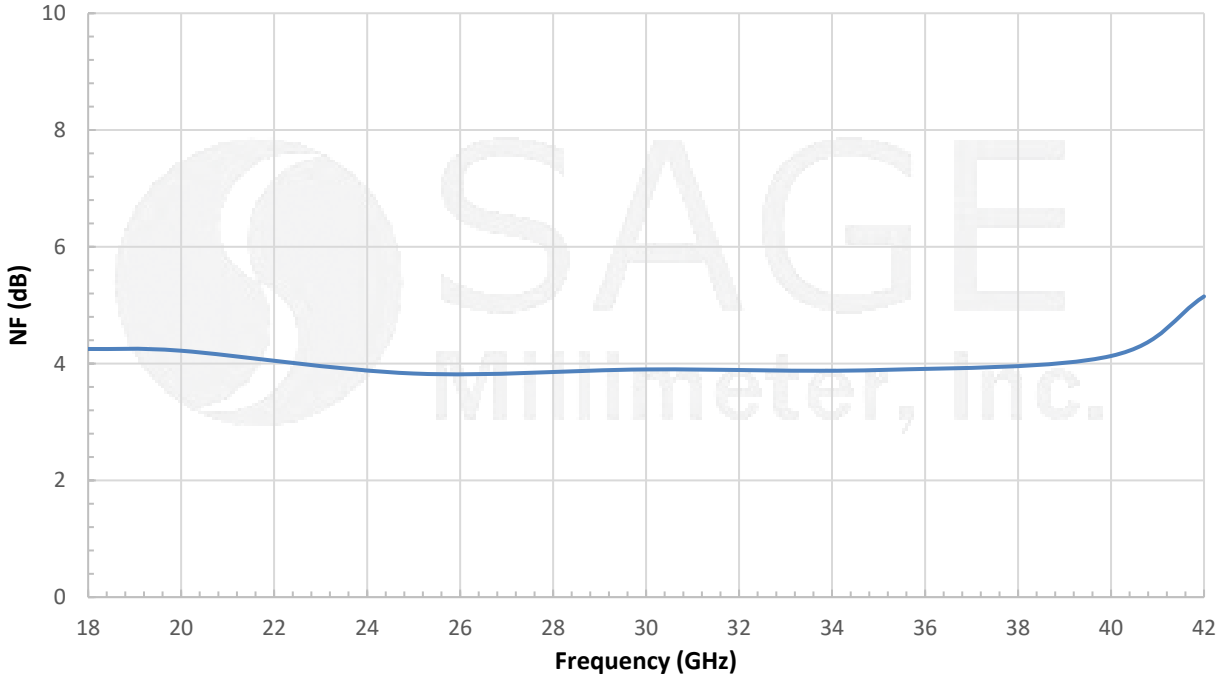
Typical Gain and Return Loss vs. Frequency

Bias: +5 Vdc/210 mA



Typical Noise Figure vs. Frequency

Bias: +5 Vdc/210 mA



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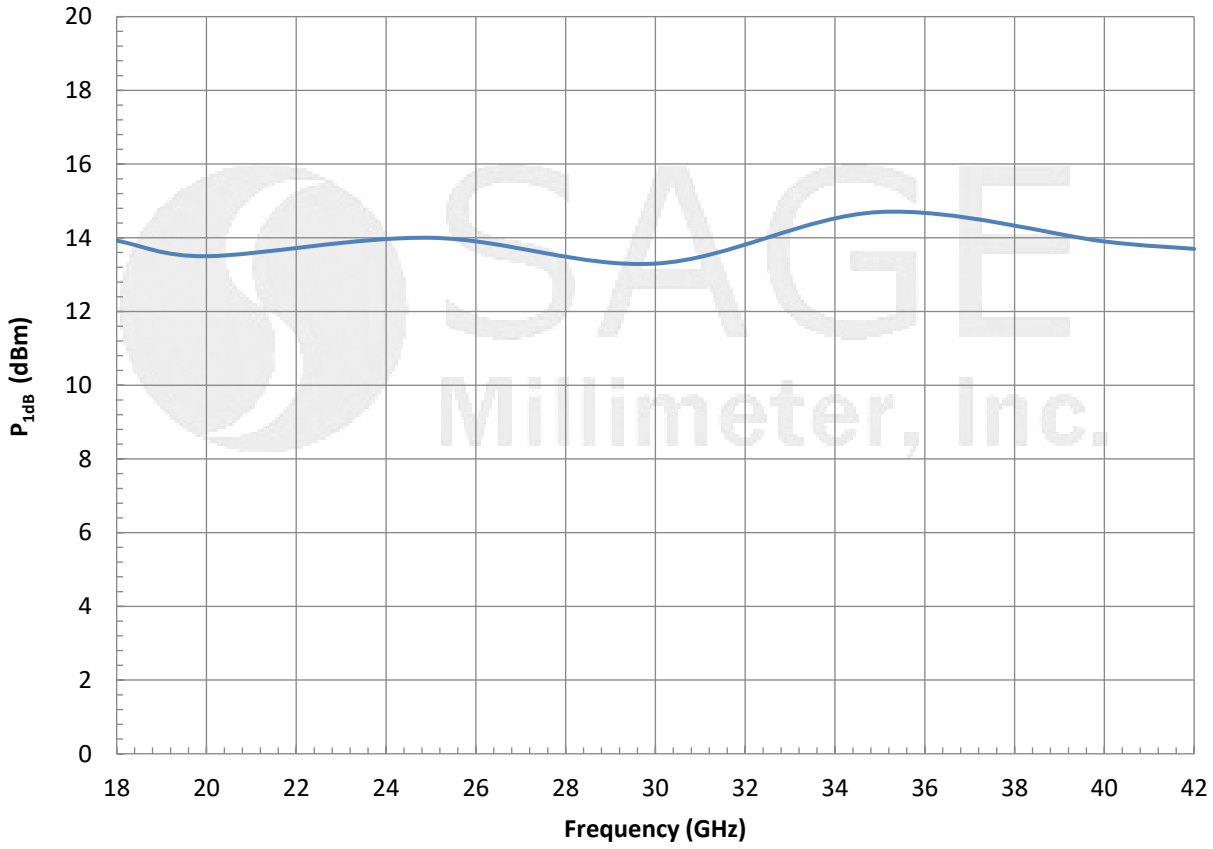
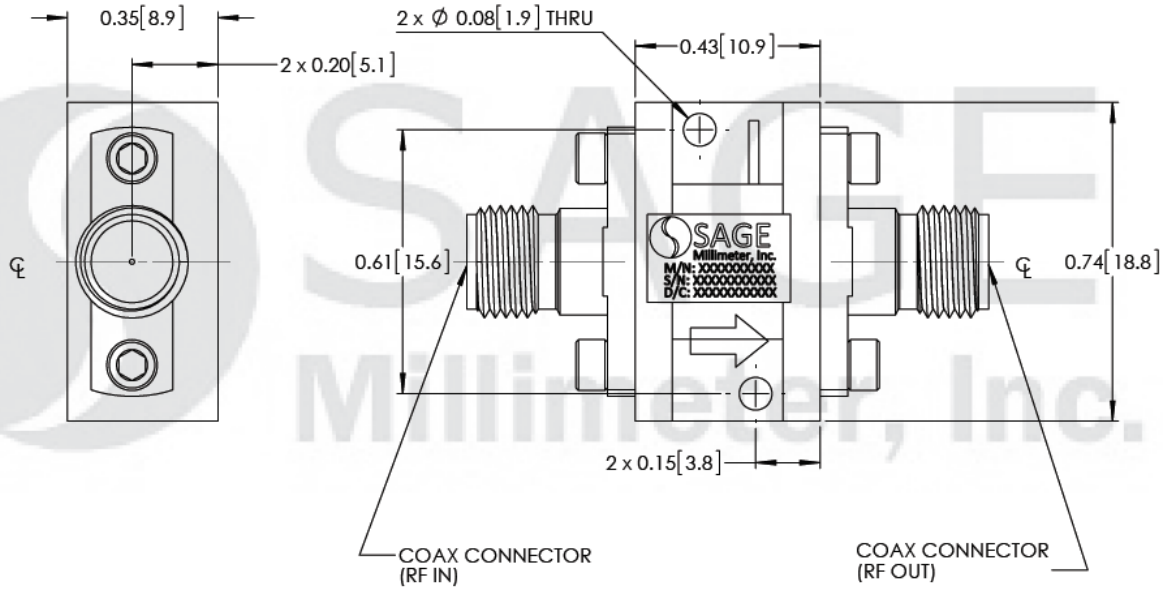
Typical P_{1dB} vs. Frequency

Bias: +5 Vdc/250 mA



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.
- 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.
- **Due to compact package size, the amplifier does not have an internal voltage regulator. Therefore, any reverse or over bias will damage the amplifier. Never allow the bias voltage exceeds +5.5 V_{DC} because the amplifier will be damaged.**
- 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.**