SBP-2733133836-KFKF-C1-2

Rev 1.0

Ka-Band Power Amplifier, 27 to 31 GHz, 38 dB Gain, +36 dBm P_{1dB}

Description:

Model SBP-2733133836-KFKF-C1-2 is a power amplifier with a typical small signal gain of 38 dB and a nominal P_{1dB} of +36 dBm across the frequency range of 27 to 31 GHz. The DC power requirement for the amplifier is +8 V_{DC}/4.2 A quiescent and 7.0 A under RF drive. The RF connectors are female K connectors. Other port configurations, such as male K connectors and WR-28 waveguides are also available under different model numbers.

Features:

- High Gain
- High Output Power

Applications:

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

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	27 GHz		31 GHz
Gain		38 dB	
P_{1dB}		+36 dBm	
P_{sat}		+38 dBm	
P_{in}			+5 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Fan Voltage		+12 V_{DC}	
DC Supply Voltage		+8 V_{DC}	+8.5 V_{DC}
DC Supply Current (Quiescent)		4.2 A	
DC Supply Current (Under RF Drive)		7.0 A	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

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

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
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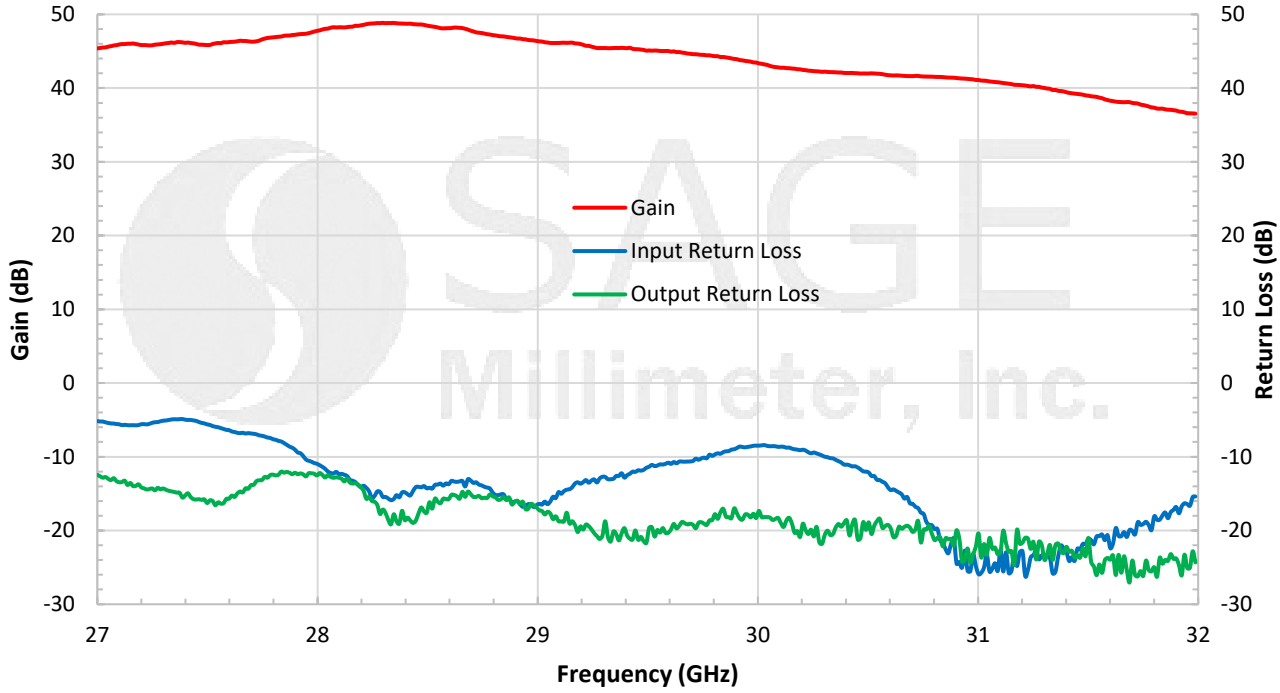
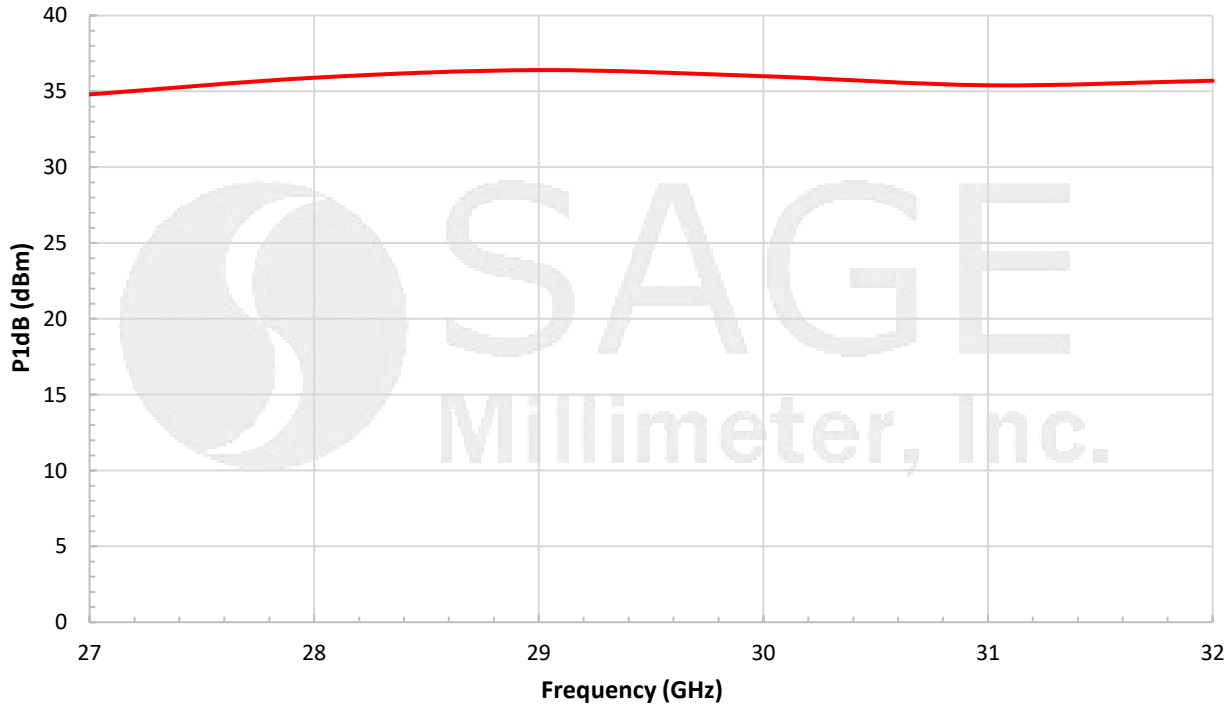
Typical Gain and Return Loss vs. Frequency

Vd: +8 V_{DC}; Id: 4.2 A



Typical P_{1dB} vs. Frequency

Vd: +8 V_{DC}; Id: 7 A



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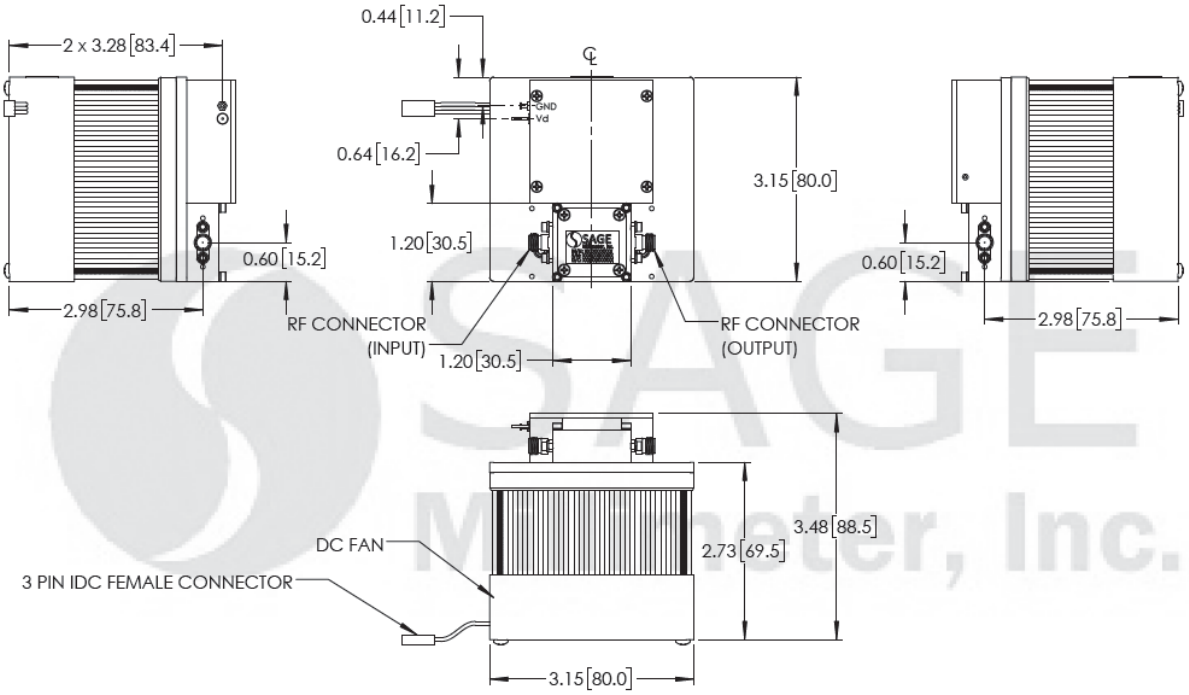
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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.
- 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.**