SBP-4035533023-1919-E1

Advanced

U-Band Power Amplifier, 40 to 55 GHz, 30 dB Gain, +23 dBm P_{1dB}

Description:

Model SBP-4035533023-1919-E1 is an U-band power amplifier with a typical small signal gain of 30 dB and a nominal P_{1dB} of +23 dBm in the frequency range of 40 to 55 GHz. The DC power requirement for the amplifier is +8 V_{DC}/1100 mA. The mechanical configuration offers an in line structure with WR-19 Uni-Guide™ waveguides. Other port configurations, such as a right angle structure with WR-19 waveguides or 1.85 mm connectors, are also available under different model numbers.

Features:

- Full Band Performance
- High Output Power
- High Gain

Applications:

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

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	40 GHz		55 GHz
Gain		30 dB	
P_{1dB}		+23 dBm	
P_{sat}		+24 dBm	
P_{in}			-6 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+8 V_{DC}	+12 V_{DC}
DC Supply Current		1100 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
RF Ports	WR-19 Uni-Guide™ Waveguide with a UG-383/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Size	1.98” (L) 1.20” (W) X 1.13” (H)
Outline	BG-SU-2-A

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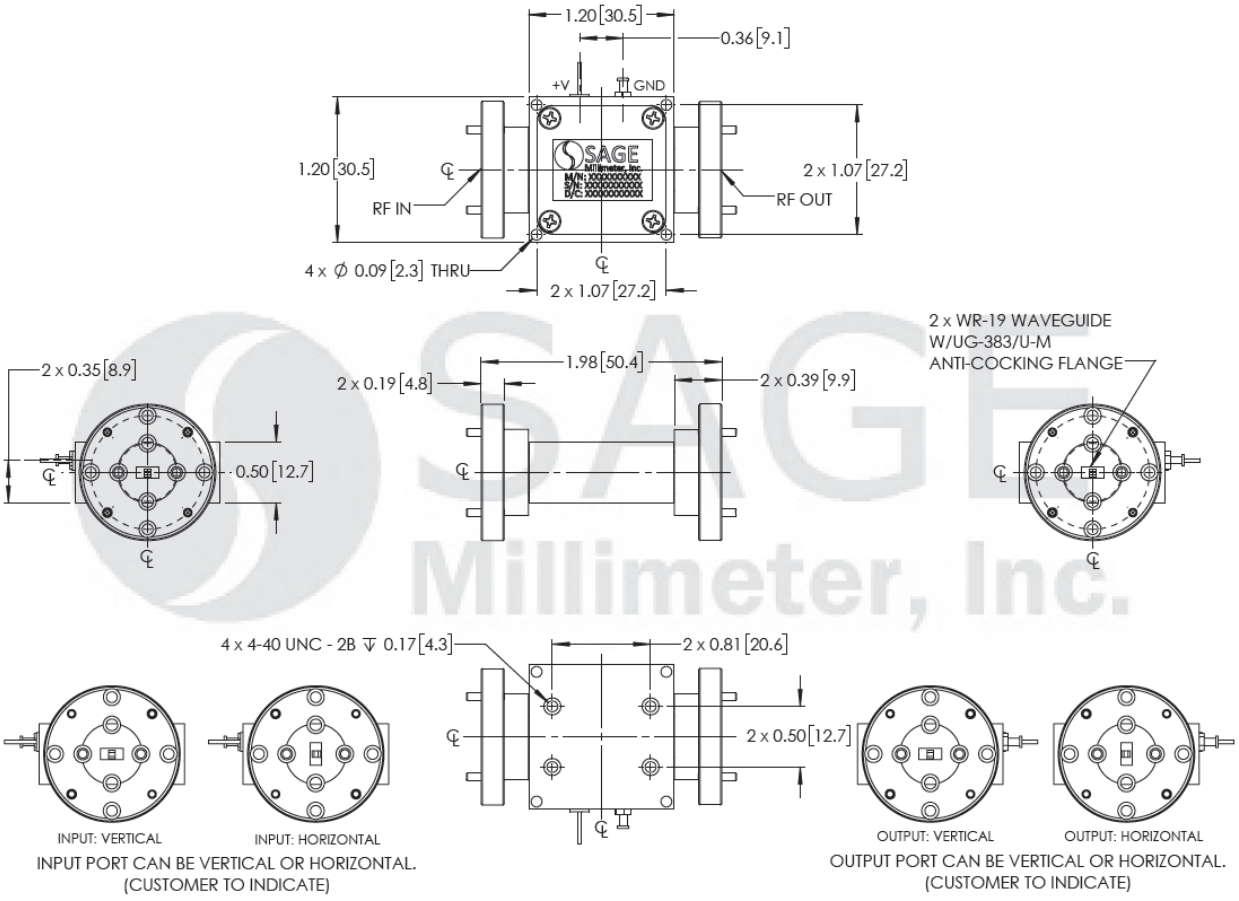
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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Note:

- The amplifier employs SAGE Millimeter's trademarked and patent pending technology, the **Uni-Guide™**, as its waveguide interfaces. The orientation of the input and the output waveguides can be specified through corresponding model numbers. For example, the model number for a vertical input waveguide and horizontal output waveguide configuration would be **SBP-4035533522-1919H-E1** instead of the default **SBP-4035533023-1919-E1** which indicates vertical orientation for both input and output.
- Other mechanical configurations are available under different model numbers.
- SAGE Millimeter, Inc. 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.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.