SBP-7531142515-1010-E1-WPC

Rev 1.0

W-Band Power Amplifier, 75 to 110 GHz, 25 dB Gain, +15 dBm P_{1dB}

Description:

Model SBP-7531142515-1010-E1-WPC is a power amplifier with a typical small signal gain of 25 dB and a nominal output power of +15 dBm across the frequency range of 75 to 110 GHz. The DC power requirement for the amplifier is +15 V_{DC}/350 mA. The mechanical configuration offers an in line structure with WR-10 waveguides and UG-387/U-M anti-cocking flanges. Other port configurations, such as with 1 mm connectors or a right angle structure with WR-10 waveguides, are also available under different model numbers.

Features:

- Full Waveguide Band Coverage
- High Gain
- High Output Power

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz		110 GHz
Gain		25 dB	
P_{1dB}		+15 dBm	
P_{sat}		+20 dBm	
P_{in}			+15 dBm
Input Return Loss		10 dB	
Output Return Loss		8 dB	
DC Voltage	+13 V_{DC}	+15 V_{DC}	+16 V_{DC}
DC Supply Current		350 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Output Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.10” (W) X 1.50” (L) X 0.75” (H)
Outline	BG-SW-2-A

www.eravant.com | 501 Amapola Avenue, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com

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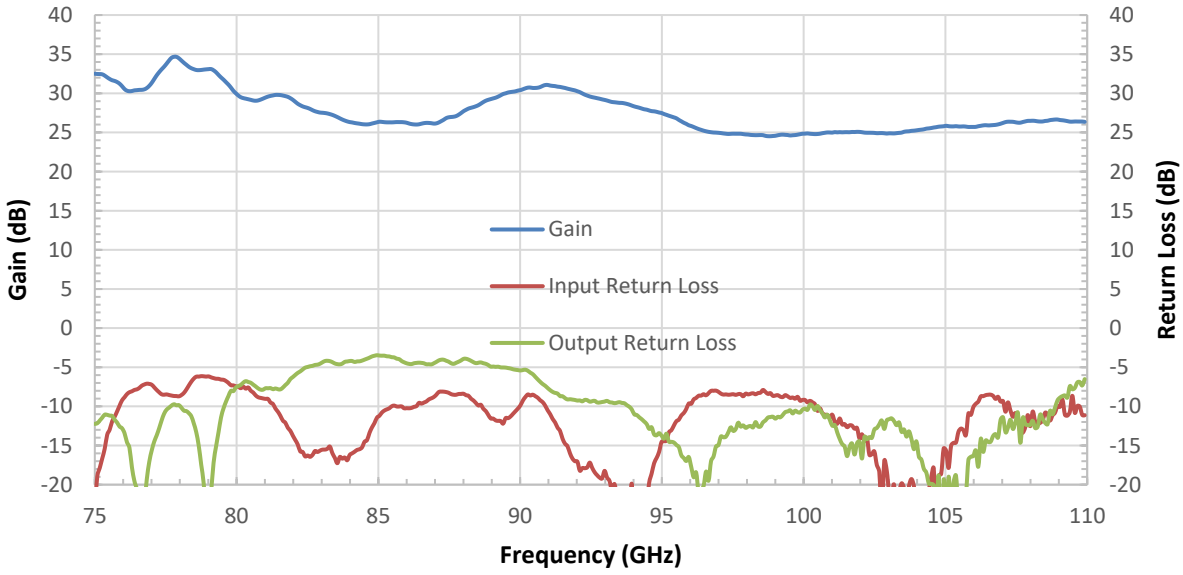
Test Data:

Gain and Return Loss vs. Frequency

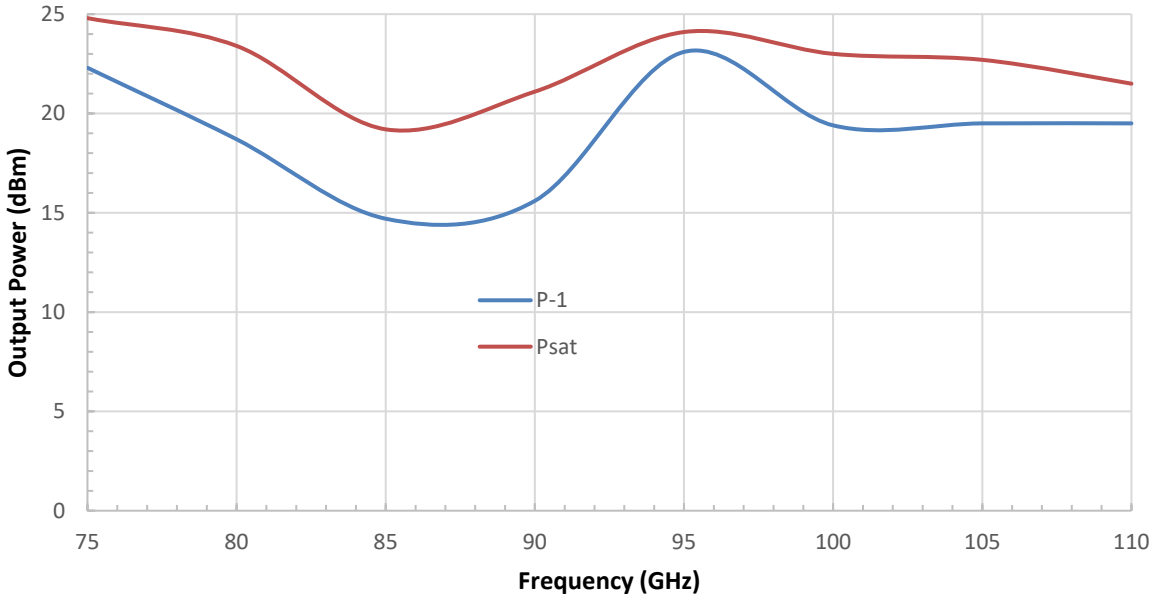
Bias: +15 V_{DC}/348 mA



Output Power vs. Frequency

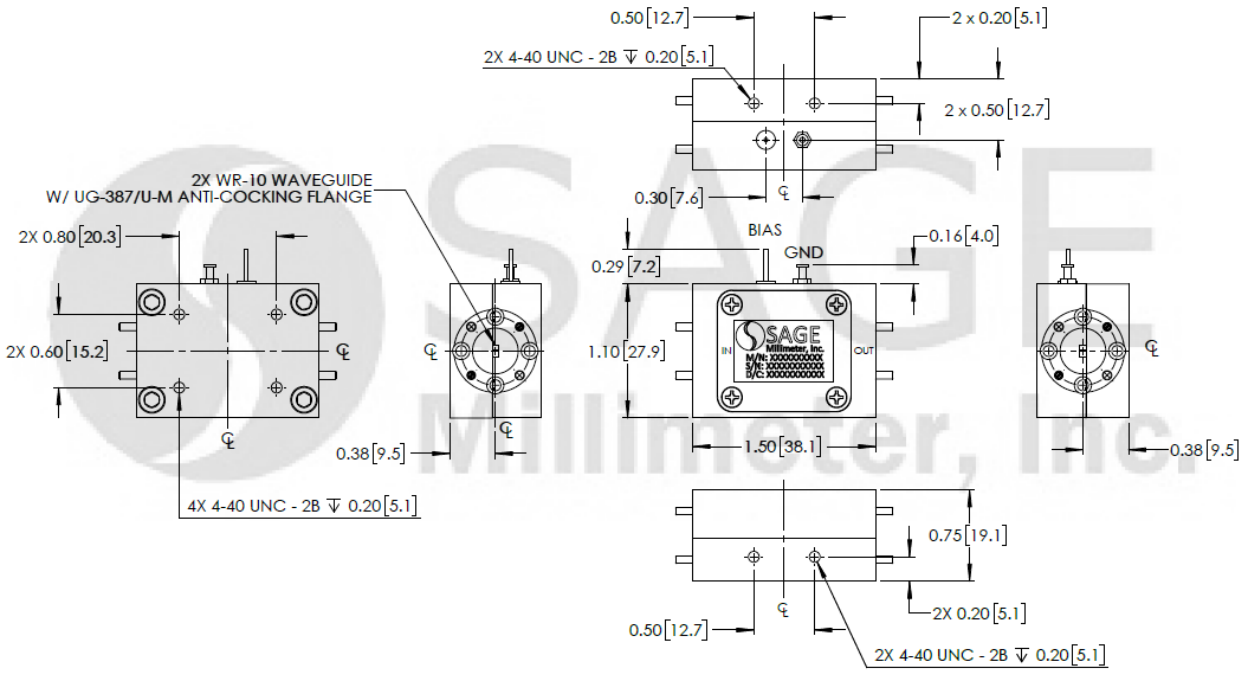
Bias: +15 V_{DC}/348 mA

RFsat: +15 Vdc/ 480 mA



W-Band Power Amplifier, 75 to 110 GHz, 25 dB Gain, +15 dBm P_{1dB}

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.
- Eravant 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.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.