SSC-6535736024-1515-SR1

Advanced Rev 1.1

V-Band Transceiver, RX 64 to 66 GHz, and TX 56 to 58 GHz

Description:

Model SSC-6535736024-1515-SR1 is a V Band transceiver. The transceiver has a typical transmit output power of +24 dBm in the frequency range of 56 to 58 GHz with an IF input power of 0 dBm and frequency range of DC to 5 GHz. The receiver has a typical receiving linear conversion gain of 20 dB and noise figure of 5.0 dB in the frequency range of 64 to 66 GHz with a IF output frequency range of DC to 5 GHz. The receiver signal linear range is from -100 to -20 dBm. The required typical LO power and frequency range are +5 dBm, 10.83 GHz for the transmitter and 9.5 GHz for receiver channels respectively. The LO and IF ports are equipped with a female SMA connectors and the RF port is a WR-15 waveguide with a UG-385/U flange. Although the module is offered in a monostatic version via a frequency diplexer, bi-static version is available per request.

Features:

- Compact Size
- High Performance
- Low Cost
- Fully Integrated Module

Applications:

- V Band Communication Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
TX RF Output Frequency	56 GHz		58 GHz
TX RF Output Power, P-1 dB		+24 dBm	
TX IF Input Frequency	DC		5 GHz
TX IF Input Power			0 dBm
TX LO Input Frequency	9.33 GHz		9.67 GHz
TX LO Input Power		+5 dBm	
RX RF Input Frequency	64 GHz		66 GHz
RX Noise Figure		5 dB	
RX RF Input Power		-20 dBm	+3 dBm
RX IF Output Frequency	DC		5 GHz
RX Conversion Gain		20 dB	
RX LO Frequency	10.66 GHz		11.16 GHz
RX LO Input Power		+5 dBm	
TX and RX Isolation		55 dB	
DC Voltage Supply	+6 V_{DC}	+8V_{DC}	+12 V_{DC}
DC Current Supply		2,500 mA	
Specification Temperature		+25 °C	
Operation Temperature	0 °C		+50 °C
Storage Temperature	-40 °C		+85 °C

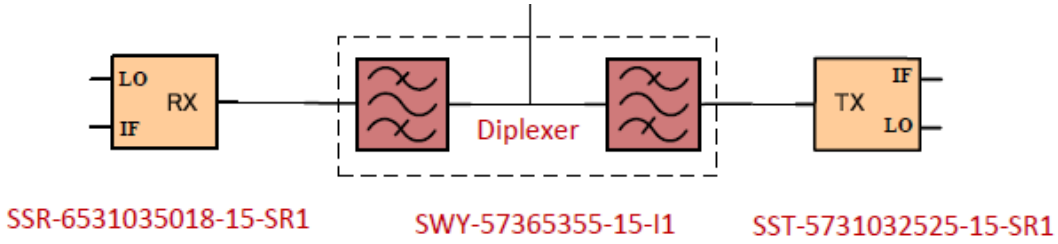
www.eravant.com | 501 Amapola Avenue, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com

V-Band Transceiver, RX 64 to 66 GHz, and TX 56 to 58 GHz

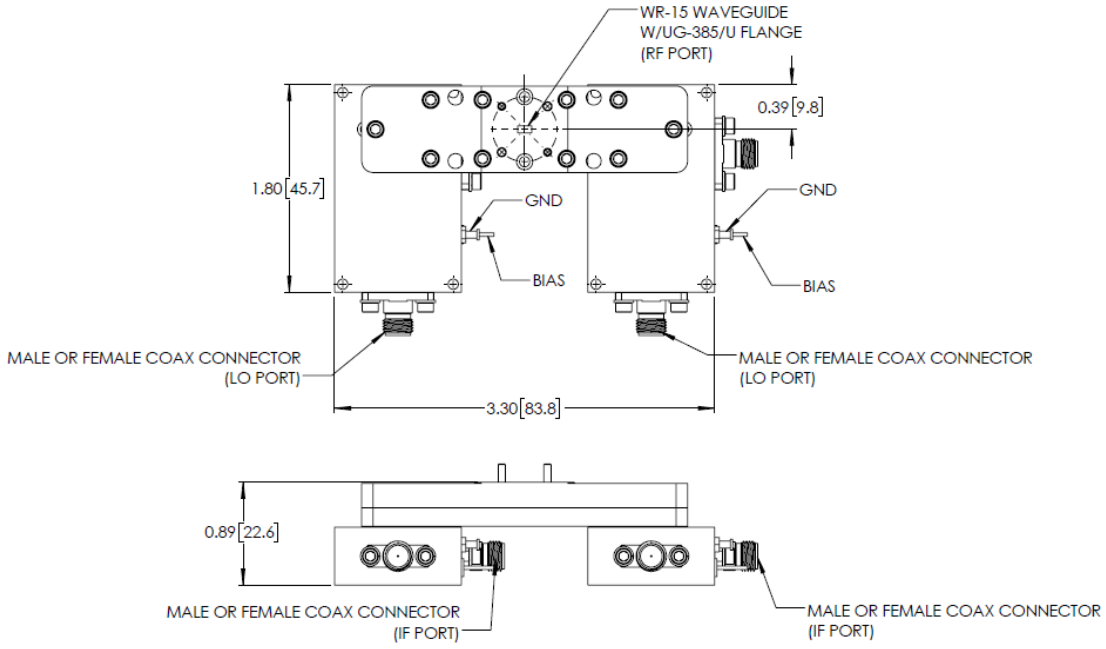
Mechanical Specifications:

Item	Specification
TX/RX Port	WR-15 Waveguide with UG-385/U Flange
TX IF Port	SMA(F)
RX IF Port	SMA(F)
TX LO Port	SMA(F)
RX LO Port	SMA(F)
Bias	Solder Pin
Size	3.30” (W) X 1.80” (L) X 0.89” (H)
Weight	8 Oz
Finishing	Gold Plated
Outline	SC-VC

Block Diagram:



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

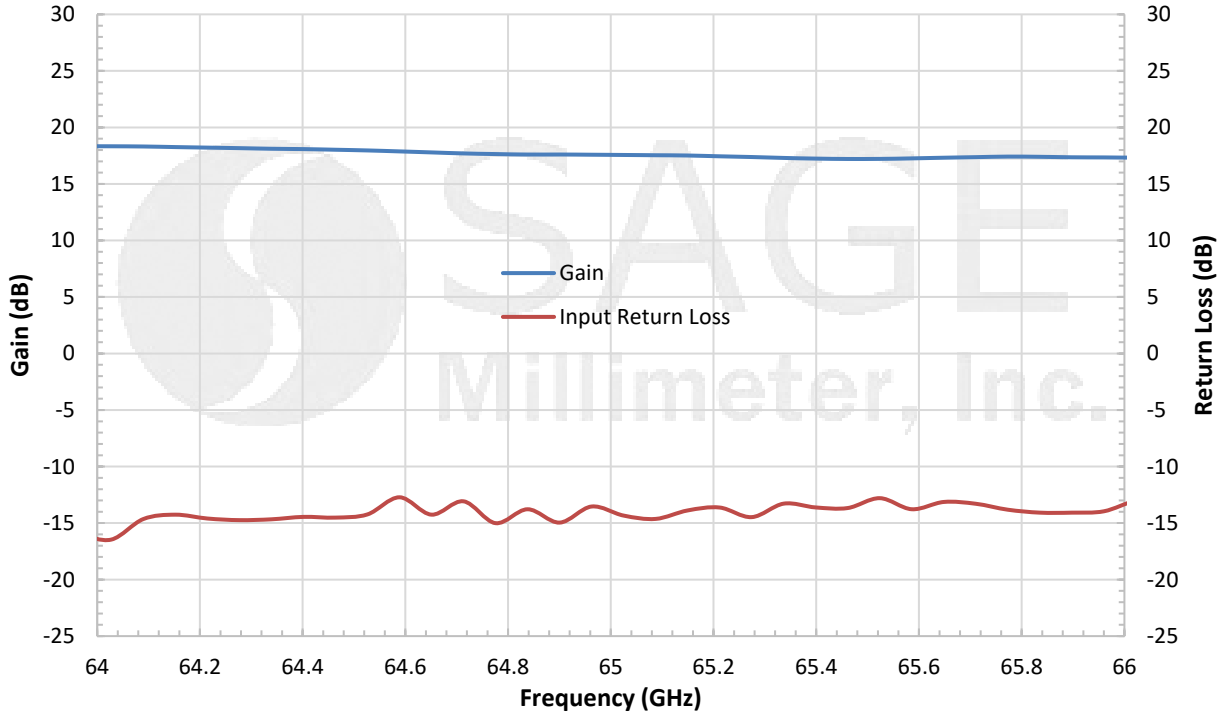


www.eravant.com | 501 Amapola Avenue, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com

V-Band Transceiver, RX 64 to 66 GHz, and TX 56 to 58 GHz

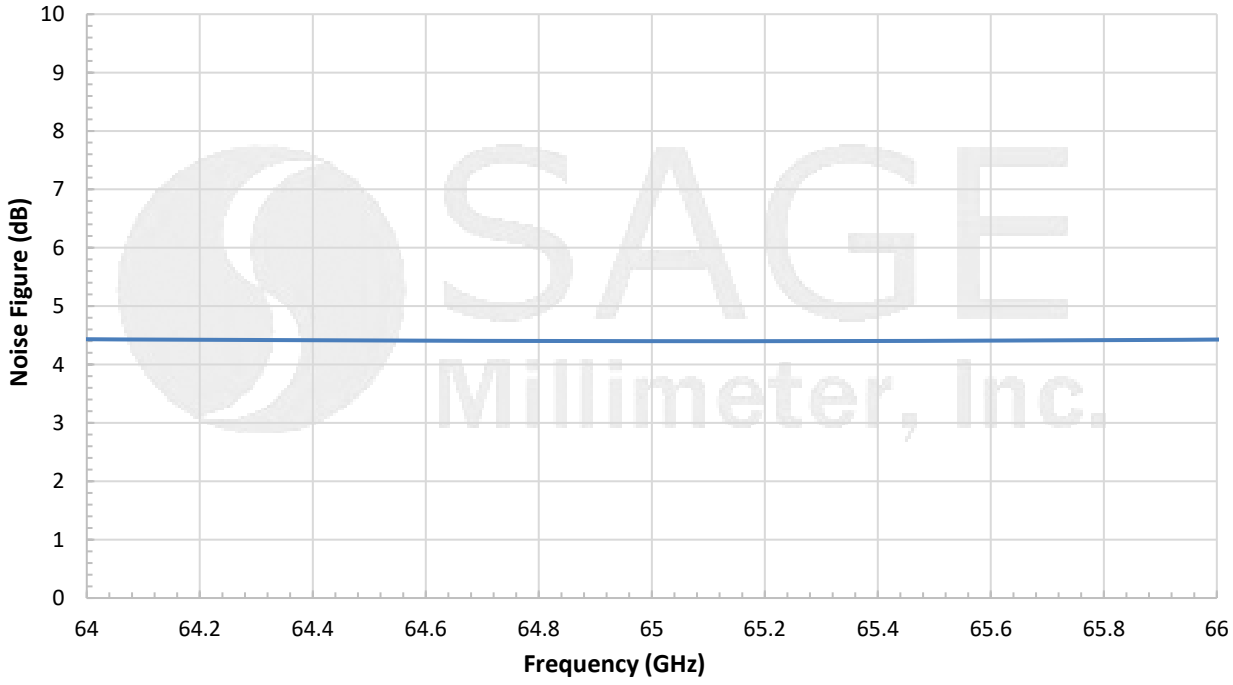
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/2,500 mA



Typical RX Noise Figure vs. Frequency

Bias: +8 V_{DC}/2,500 mA

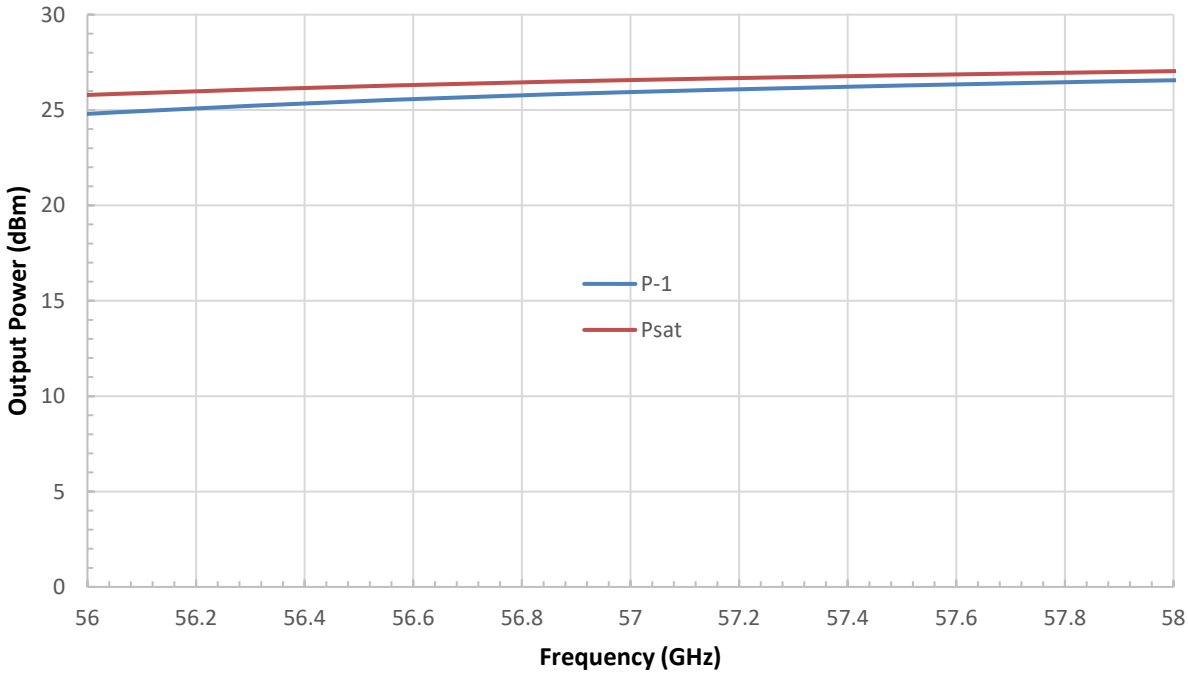


www.eravant.com | 501 Amapola Avenue, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com

V-Band Transceiver, RX 64 to 66 GHz, and TX 56 to 58 GHz

Typical Output Power vs. Frequency

Bias: +8 V_{DC}/ 2,500mA



Note:

- All data are presented using a limited 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 number.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Any foreign objects into the waveguide will cause performance degradation and possible device damage.
- The case temperature of the device shall never exceed +50 ˚C. Use proper Heatsink or fan if necessary.

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