SSC-9239236027-SFSF-C1

90 to 94 GHz Transceiver Subassembly, +27 dBm Output Power

SSC-9239236027-SFSF-C1 is a W-Band transceiver module operating from 90 to 94 GHz. The transceiver is constructed with a two omni-directional antennas with a typical gain of 2 dBi connected to a integrated receiver and transmitter. The transmitter has a typical output power of +27 dBm and the receiver has a typical conversion gain of 10 dB. The module also includes an oscillator to provide LO input. The IF input and output ports are both equipped with female SMA connectors and a circular connector is used for the bias connections.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency Range	90 GHz		94 GHz
IF Frequency Range	3 GHz		7 GHz
IF Input Power		-10 dBm	+5 dBm
TX Conversion Gain		37 dB	
TX Output P_{1dB}		+24 dBm	
TX Output P_{sat}		+27 dBm	
RX Conversion Gain		10 dB	
RX Noise Figure		6 dB	
RX RF Input Power			+10 dBm
RX RF Input P_{1dB}		-22 dBm	
RF IF Output P_{1dB}		-10 dBm	
DC Voltage		+8V / +15VDC	
DC Current (Quiescent):		870mA / 850mA	
DC Current (Saturated):		1.2 A / 1.1 A	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
IF Input/ Output Connector	SMA (F)
+8V/ +15V Bias Connector	Circular Connector, Male, 4 Pos, 18-10 Shell Size
Finish	Gold Plated (Components) Chem Film (Base Plate)
Size	12.50” (L) X 5.00” (W) X 5.01” (H)
Outline	SC-SC

ECCN

3A001.b12

FEATURES

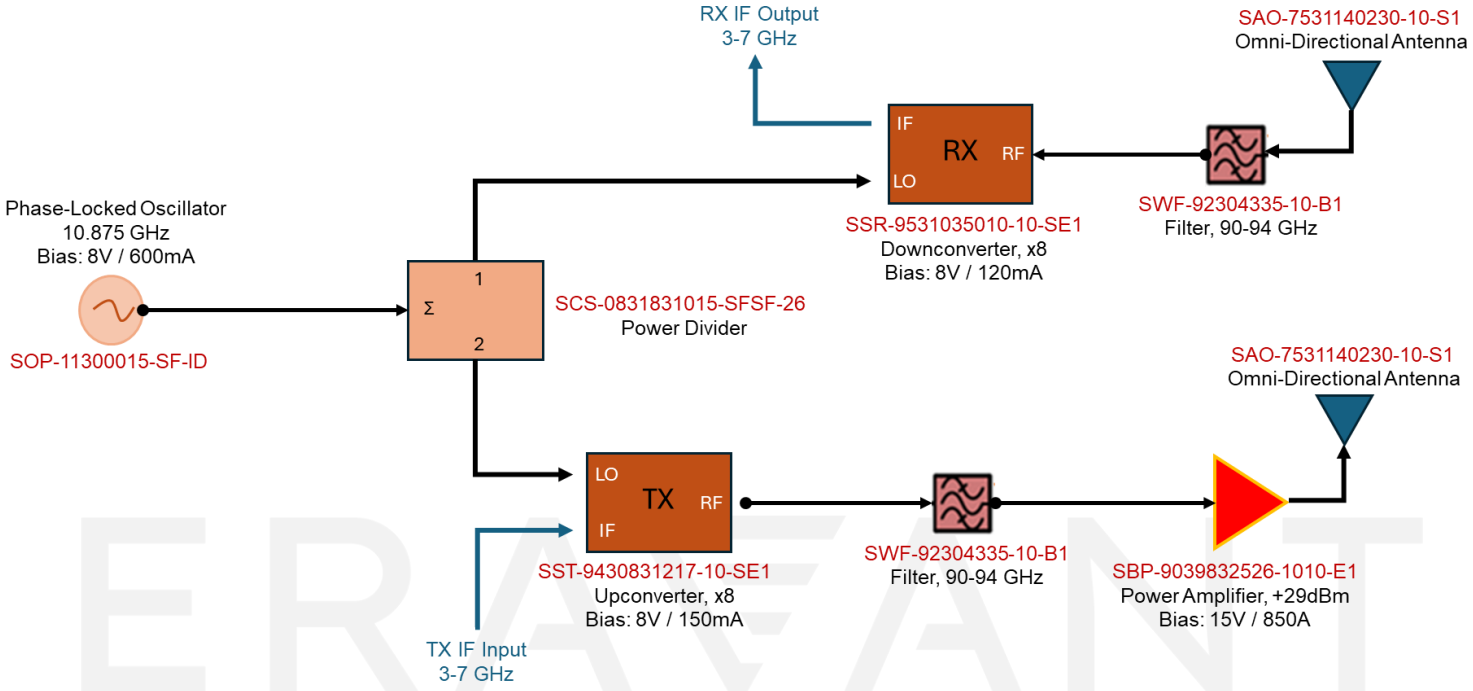
- 90 to 94 GHz Operation
- High Gain

APPLICATIONS

- Radar Systems
- Communication Systems

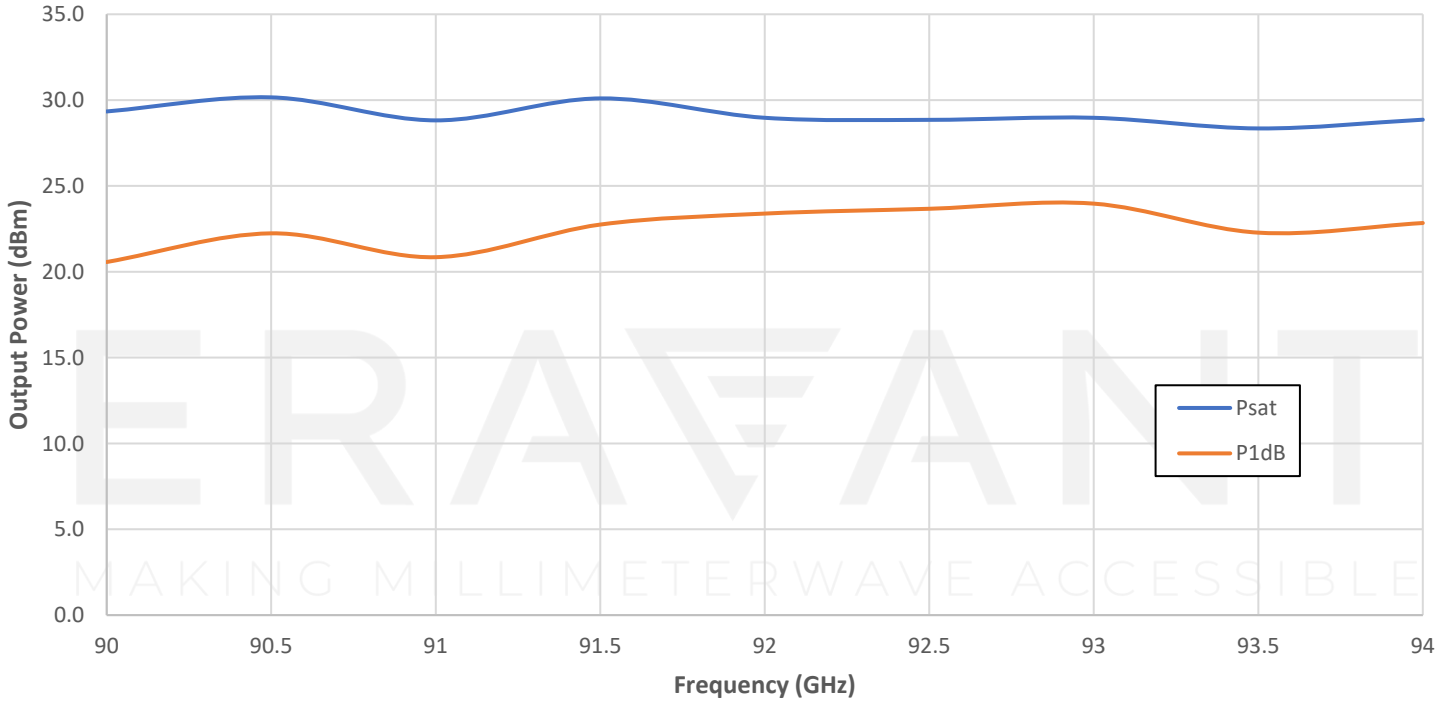
SUPPLEMENTAL DETAILS

Block Diagram:



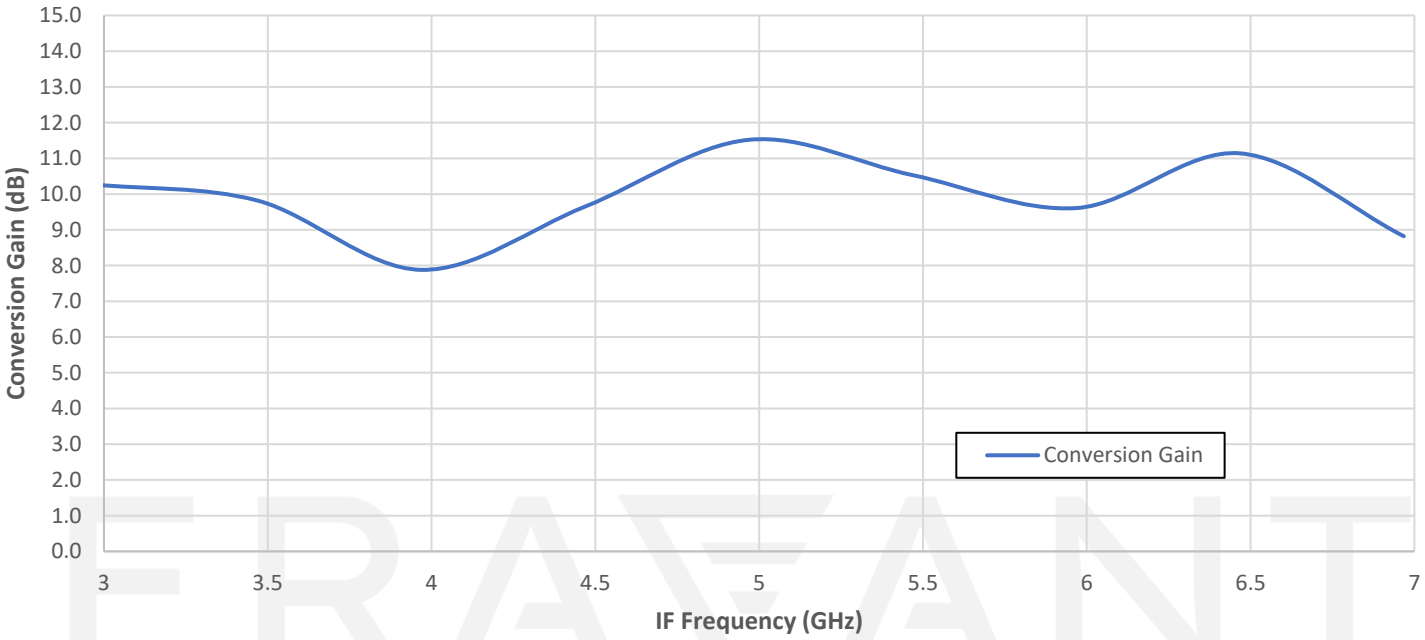
Typical TX Output Power vs. Frequency

LO: 87 GHz, 7 dBm , IF: 3 to 7 GHz, -10 dBm

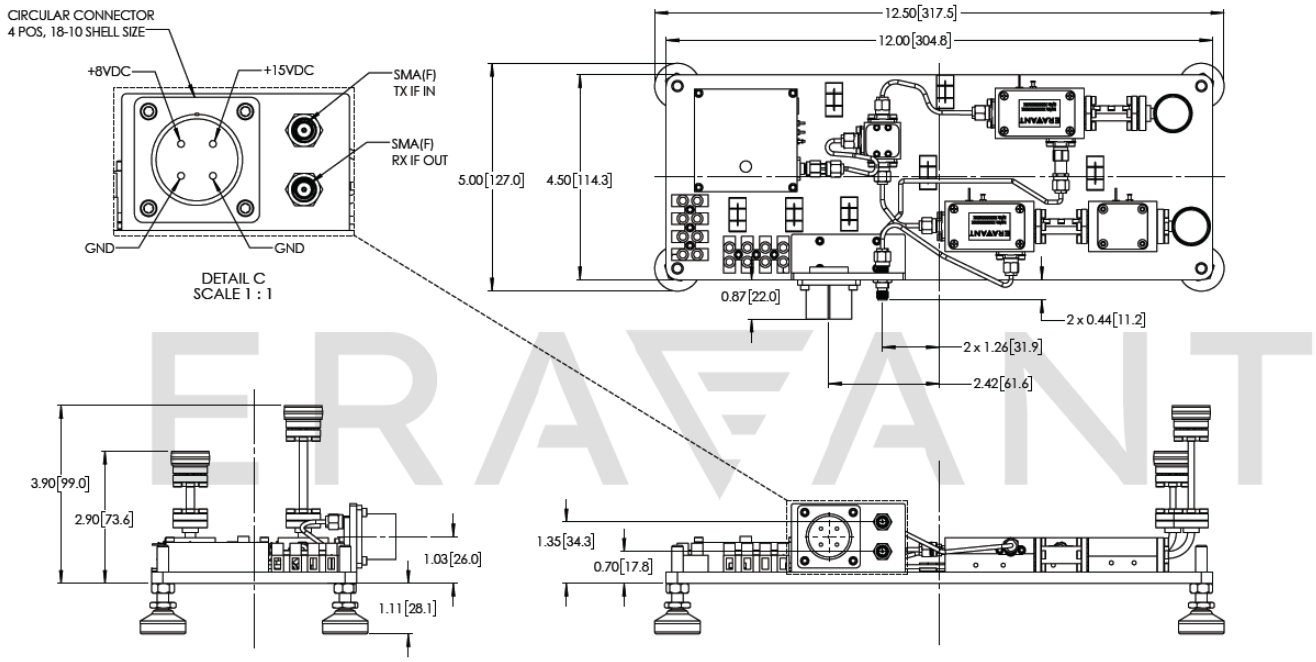


Typical RX Coversion Gain Vs. Frequency

LO: 87 GHz, 7 dBm , RF: 90-94 GHz, -22 dBm



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



NOTE:

- Eravant reserves the right to change the information presented without notice.
- Mating connector with wires for bias port is included

CAUTION:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensititve. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +85°C. Use additional heatsink or fan if necessary.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.

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