

## SSC-9239236035-SFSF-C1

## 90 to 94 GHz Transceiver Subassembly, +35 dBm Output Power

**SSC-9239236035-SFSF-C1** is a W-Band transceiver module operating from 90 to 94 GHz. The transceiver is constructed with a three sectoral antennas providing 360° coverage connected to a integrated receiver and transmitter. The transmitter has a typical output power of +35 dBm and the receiver has a typical conversion gain of 12 dB. The module also includes an oscillator to provide LO input and the design has integrated heatsinks and a fan for cooling. 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		46 dB	
TX Output P <sub>1dB</sub>		+30 dBm	
TX Output P <sub>sat</sub>		+35 dBm	
RX Conversion Gain		12 dB	
RX Noise Figure		6 dB	
RX RF Input Power			+10 dBm
RX RF Input P <sub>1dB</sub>		-22 dBm	
RF IF Output P <sub>1dB</sub>		-10 dBm	
DC Voltage		+8V / +15VDC	
DC Current (Quiescent):		3.3 A / 9 A	
DC Current (Saturated):		5 A / 16 A	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+75°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	10.37" (L) X 10.17" (W) X 17.24" (H)
Outline	SC-SC-2

## ECCN

3A001.b12

## FEATURES

- 90 to 94 GHz Operation
- High Gain

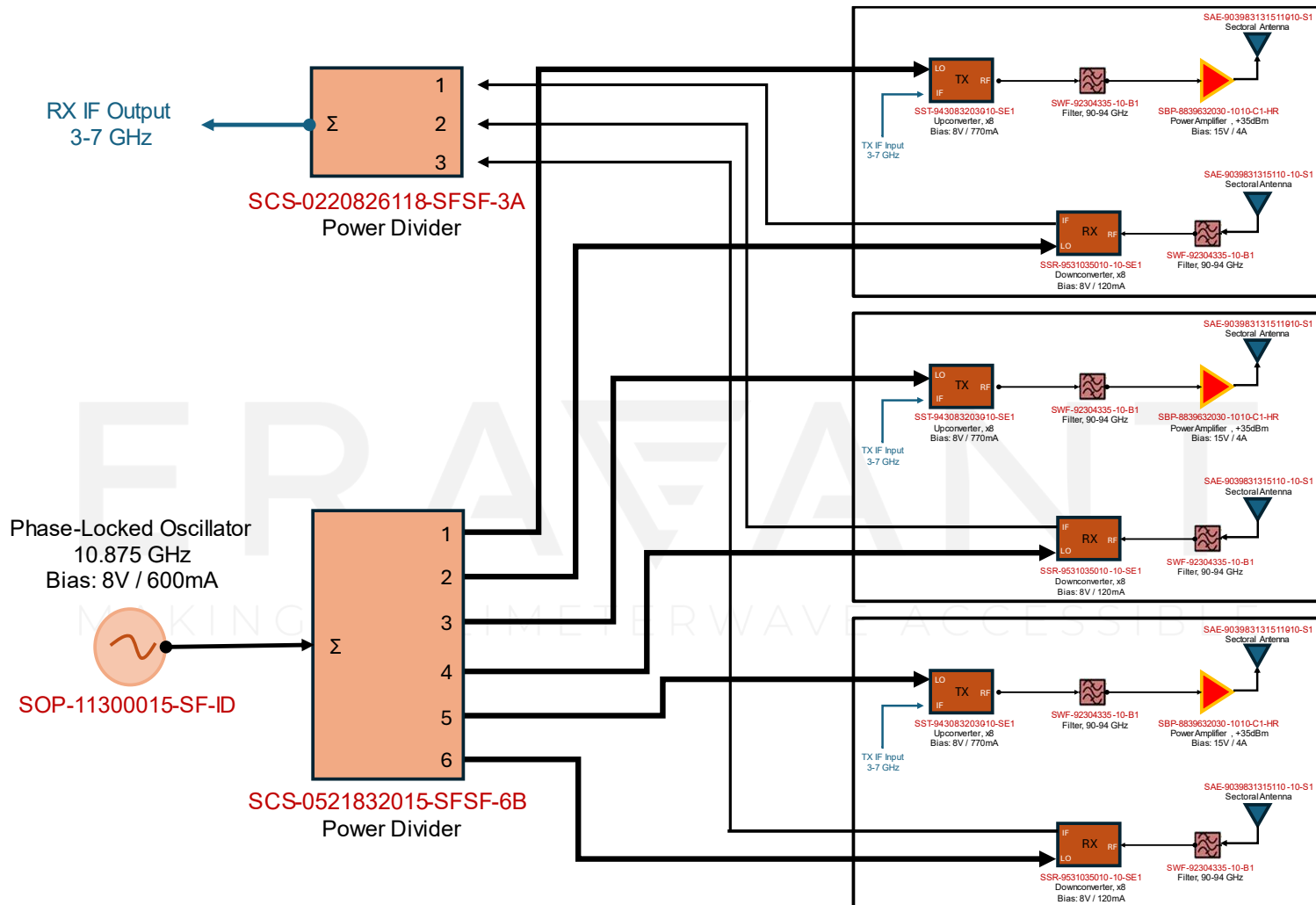
## APPLICATIONS

- Radar Systems
- Communication Systems

## SUPPLEMENTAL DETAILS

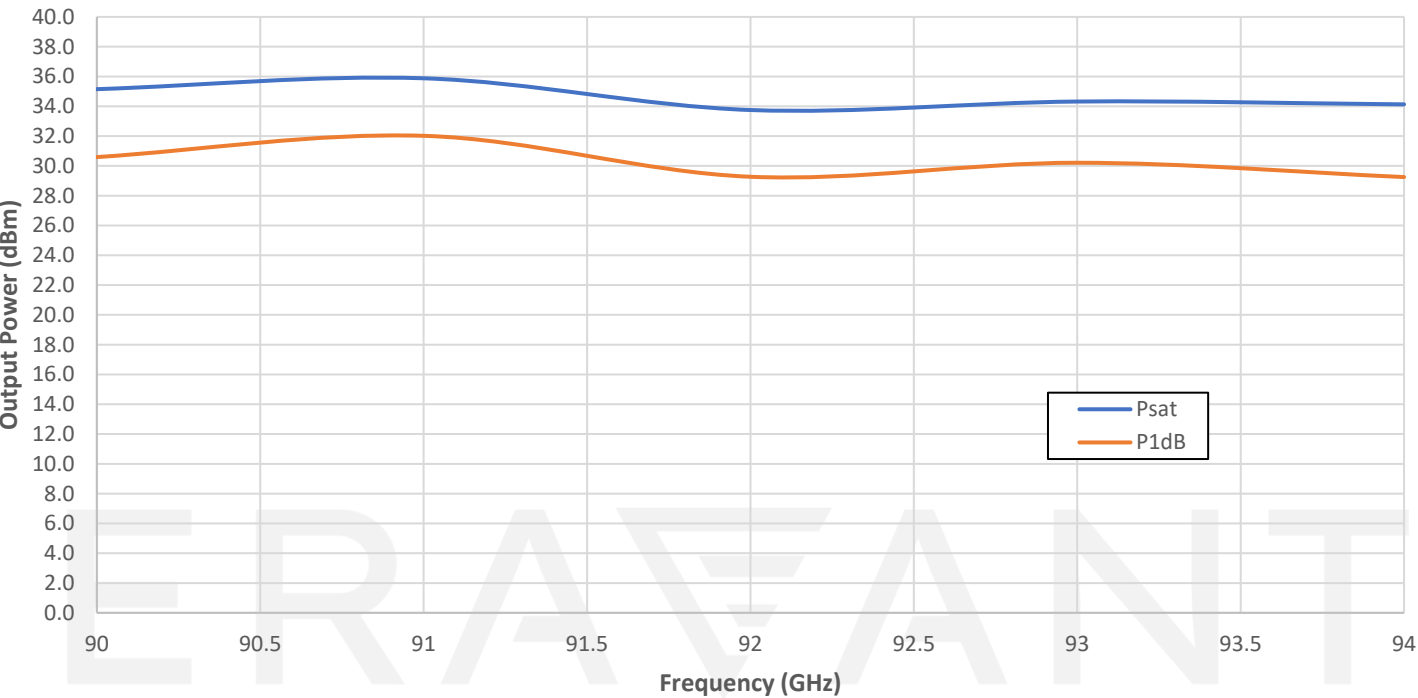
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### Block Diagram:



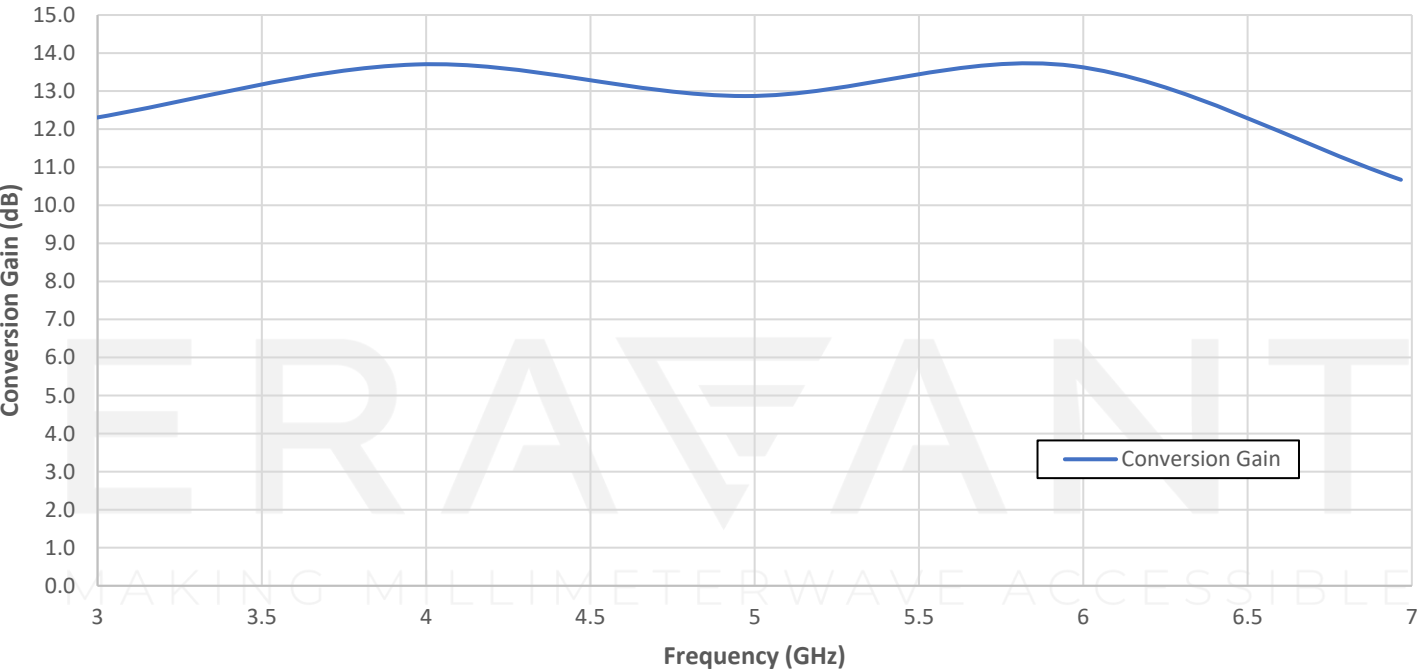
Typical TX Output Power vs. Frequency

LO: 87 GHz, 5 dBm , IF: 3 to 7 GHz, -10 dBm



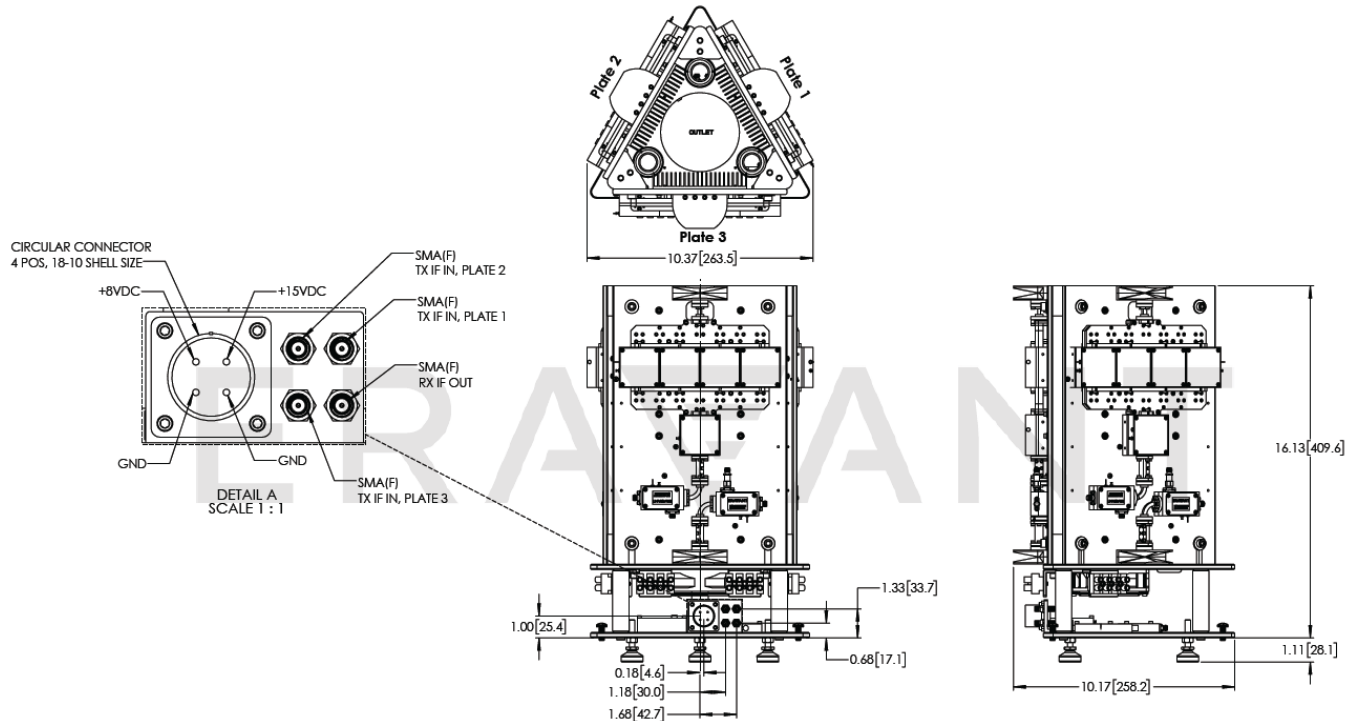
Typical RX Conversion Gain vs. Frequency

LO: 87 GHz, 5 dBm , IF: 3 to 7 GHz, -22 dBm



## SSC-9239236035-SFSF-C1

**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 sensitive. Always follow ESD rules when working with the device.
- The case temperature of the subassembly shall never exceed +75°C.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied:  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm). Torque wrench model SCH-08008-S1 is highly recommended.