



35.00 GHz Doppler Sensor Head, Dual Channel, Long Range, + 15 dBm

Description:

Model SSS-35315-22L-D1 is Ka Band, lens antenna-based Doppler sensor head that is designed and manufactured for **long range** measurements of a moving target's speed and direction. The sensor head has a center frequency of 35 GHz and takes a nominal bias of +5.5 VDC/350 mA. The sensor heads are configured with a lens corrected antenna, T/R diplexer, a dual channel (I/Q) receiver and a transmitter/receiver oscillator in an integrated package. Sensor heads with a single receiver are offered under model number **SSS-35315-22L-S1** and can only detect the speed of a moving target.



Features:

- 35.00 GHz Operation
- Low Flicker Noise and High Sensitivity
- Low Harmonic Emission
- No IF Integrated Amplifiers

Applications:

- Traffic Management Systems
- Microwave Fence
- Industry Automation
- Military Surveillance Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Antenna 3 dB Beamwidth		12°	
Antenna Side Lobes		-20 dB	
Antenna Gain		22 dBi	
Antenna Polarization	Right-Handed Circular		
RF Frequency Range	34.9 GHz	35.0 GHz	35.1 GHz
Transmitting Power		+15 dBm	
ERP (Effective Radiated Power)		+37 dBm	
Receiver I/Q Phase Δ	80°		100°
Receiver I/Q Amplitude Δ	0 dB		2 dB
IF Frequency Range	DC		100 MHz
IF Offset Voltage		$\pm 0.1 V_{DC}$	
Frequency Stability		-0.3 MHz/°C	
Power Stability		-0.03 dB/°C	
DC Supply Voltage		+5.5 V _{DC} /350 mA	
Specification Temperature		+25 °C	
Case Temperature	-40 °C		+85 °C



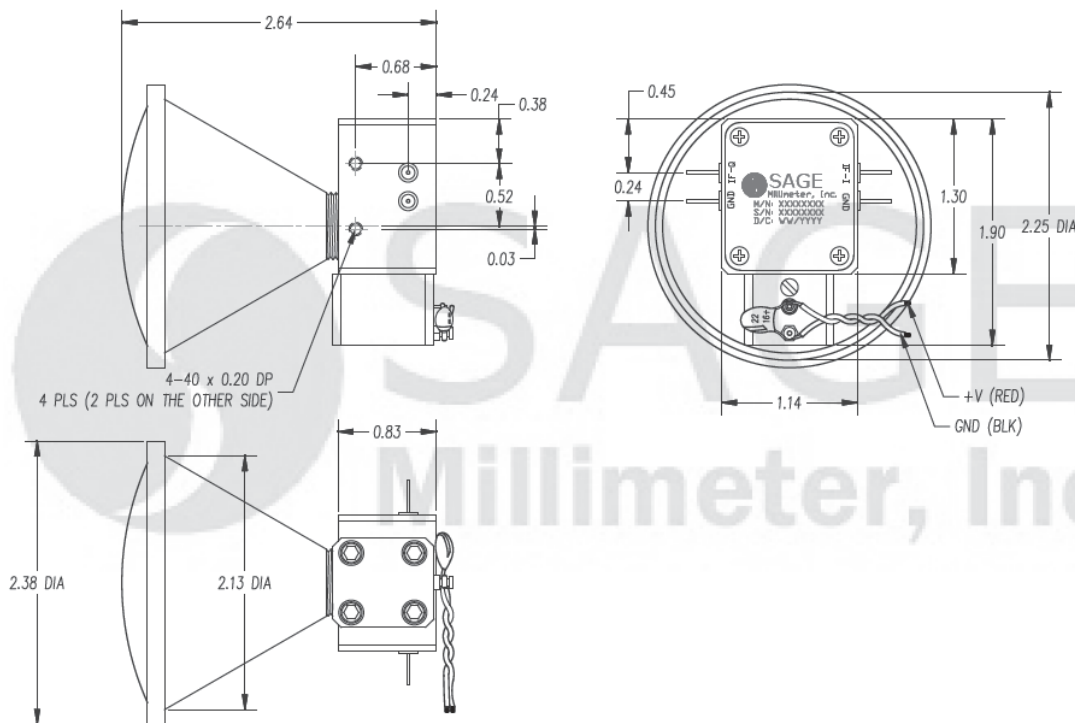


35.00 GHz Doppler Sensor Head, Dual Channel, Long Range, + 15 dBm

Mechanical Specifications:

Item	Specification
Gunn Oscillator Bias Port	Red Wire
Mixer IF _I Port	Solder Pin
Mixer IF _Q Port	Solder Pin
Mixer IF Ground	Solder Pin
Size	2.38" (Ø) X 2.64" (L)
Material	Aluminum
Finish	Chem Film
Weight	5.0 Oz
Outline	SS-LA-D

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



Note:

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- The device is static sensitive. Always follow ESD rules when working with the device.
- Wrong bias or reverse bias on the sensor will damage the device.
- Exceeding absolute maximum ratings shown will damage the device. Use an additional heatsink or fan if necessary.

