

## 35.00 GHz Doppler Sensor Head, Dual Channel, Long Range

### Description:

**Model SSS-35300-29L-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 +5.0 VDC/250 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-35300-29L-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

### Applications:

- Traffic Management Systems
- Microwave Fence
- Military Surveillance Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Antenna 3 dB Beamwidth		5°	
Antenna Side Lobes		-20 dB	
Antenna Gain		29 dBi	
Antenna Polarization	Right-Handed Circular		
RF Frequency Range	33.9 GHz	35.00 GHz	36.1 GHz
Transmitting Power		0 dBm	
Receiver I/Q Phase $\Delta$	80°		100°
Receiver I/Q Amplitude $\Delta$	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 V <sub>DC</sub> /250 mA	+5.5 V <sub>DC</sub>
Specification Temperature		+25°C	
Case Temperature	-40°C		+85°C



