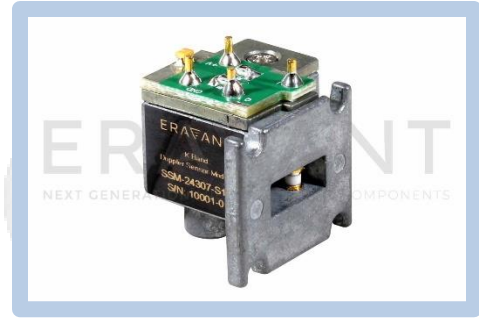


## 24.125 GHz Doppler Sensor Module, Single Channel

### Description:

**Model SSM-24307-S1-1** is a K Band Doppler sensor module that is designed and manufactured for short range measurements of a moving target's speed. The sensor module has an operating frequency range of 24.05 to 24.2 GHz and takes a nominal bias of +5 V<sub>DC</sub>/250 mA. The sensor modules are configured with a T/R diplexer, a single channel receiver and a transmitter/receiver oscillator in a die-cast housing. Sensor modules with a dual receiver are offered under model number SSM-24307-D1-1 and can detect both the speed and direction of a target.



### Features:

- 24.125 GHz Operation
- Low Flicker Noise and High Sensitivity
- Low Harmonic Emission
- FCC Part 15 Compliant
- RoHS Compliant

### Applications:

- Traffic Management Systems
- Microwave Fence
- Automatic Door Openers
- Automatic Production Lines

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency Range	24.05	24.125 GHz	24.2 GHz
Transmitting Power		+7 dBm	
IF Frequency Range	DC		100 MHz
IF Offset Voltage		±0.5 V <sub>DC</sub>	
Frequency Stability		-0.8 MHz/°C	
Power Stability		-0.03 dB/°C	
DC Supply Voltage		+5 V <sub>DC</sub> /250 mA	+6 V <sub>DC</sub>
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

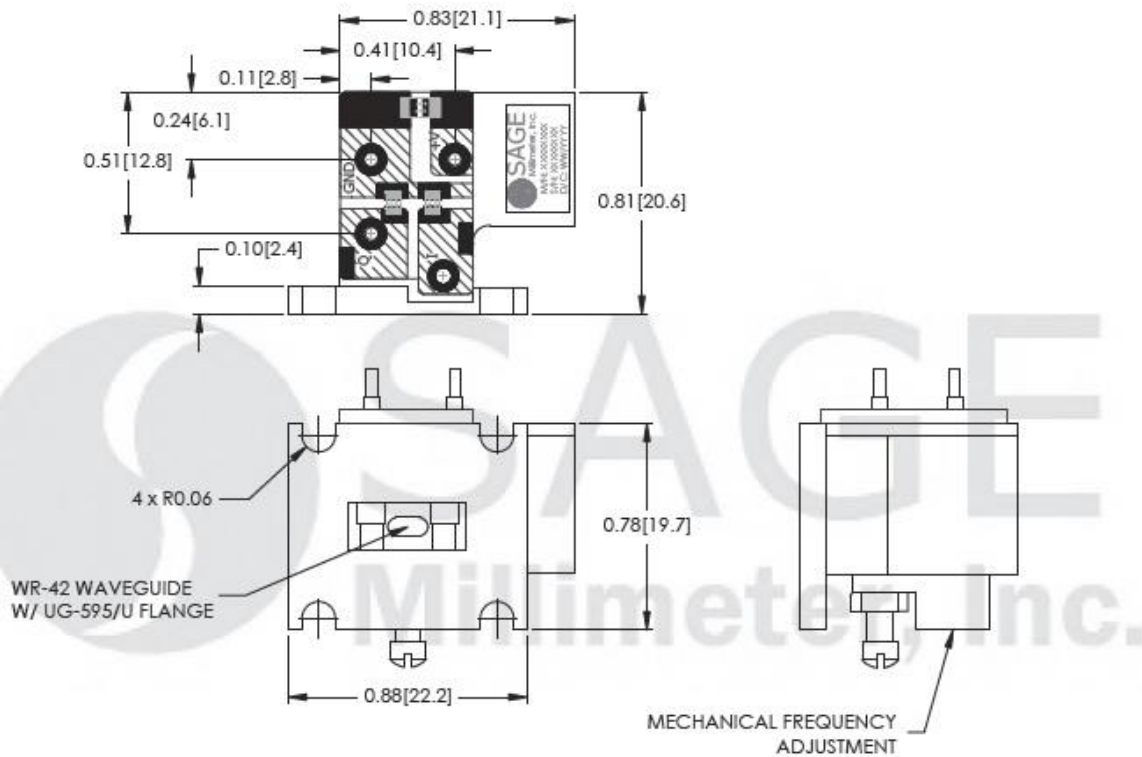
Item	Specification
Gunn Oscillator Bias Port	Solder Pad
Varactor Tuning Port	Solder Pad
Mixer IF Port	Solder Pad
Case Material	Die Casted Zinc
Finish	Chem Film
Weight	0.9 Oz
Size	0.88" (W) X 0.81" (H) X 0.78" (L)
Outline	SM-DK-S1-M





## 24.125 GHz Doppler Sensor Module, Single Channel

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



**Note:**

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

**Caution:**

- Exceeding absolute maximum ratings shown will damage the device.
- 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.
- Use an additional heatsink or fan if necessary.

