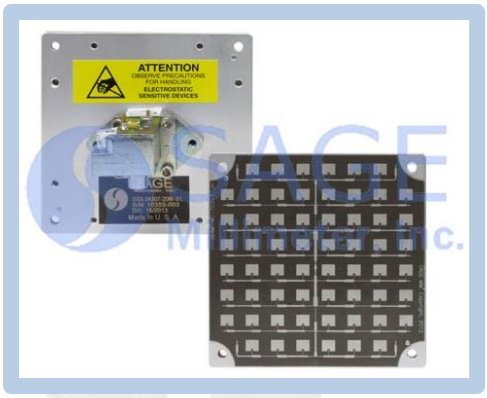
SSS-24307-20M-SW

Rev. 1.0

24.125 GHz Doppler Sensor Head, Single Channel, Short Range

Description:

Model SSS-24307-20M-SW is a K Band, microstrip antenna-based Doppler sensor head that is designed and manufactured for **short range** measurements of a moving target's speed. The sensor head has a center frequency of 24.125 GHz and takes a nominal bias of +5.0 VDC/250 mA. The sensor heads are configured with a microstrip antenna, T/R diplexer, a single channel receiver and a transmitter/receiver oscillator in an integrated die-cast housing. Sensor heads with a dual receiver are offered under model number **SSS-24307-20M-DW** and can detect both the speed and direction of a moving target.



Features:

- 24.125 GHz Operation
- Low Flicker Noise and High Sensitivity
- Low Harmonic Emission

Applications:

- Traffic Management Systems
- Law Enforcement
- Military Surveillance Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Antenna 3 dB Beamwidth		12° (H) x 12° (V)	
Antenna Side Lobes		-20 dBc	
Antenna Gain		20 dBi	
Antenna Polarization		Linear, Vertical	
RF Frequency Range	24.050 GHz	24.125 GHz	24.200 GHz
Transmitting Power		+7 dBm	
IF Frequency Range	DC		100 MHz
IF Offset Voltage		-0.5 V_{DC}	
Frequency Stability		-0.8 MHz/°C	
Power Stability		-0.03 dB/°C	
DC Supply Voltage		+5 V_{DC}/250 mA	+5.5 V_{DC}
Specification Temperature		+25˚C	
Operating Temperature	-40˚C		+85˚C

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Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

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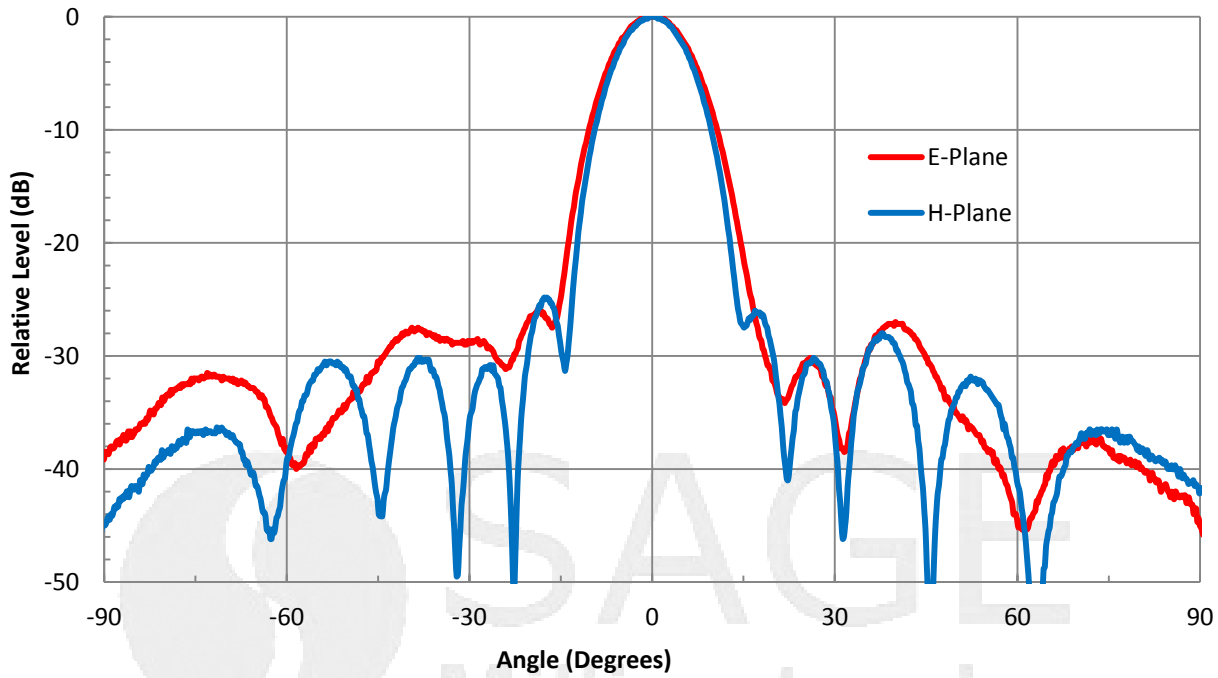
Mechanical Specifications:

Item	Specification
Gunn Oscillator Bias Port	Solder Pad
Mixer IF Port	Solder Pad
Ground	Solder Pad
Size	2.95” (W) x 2.95” (H) x 1.38” (L)
Sensor Module Case Material	Die Casted Zinc
Finish	Chem Film
Weight	3.9 Oz
Outline	SS-MK-W

Typical Measured Co-pol E and H Plane Patterns @ 24.125 GHz



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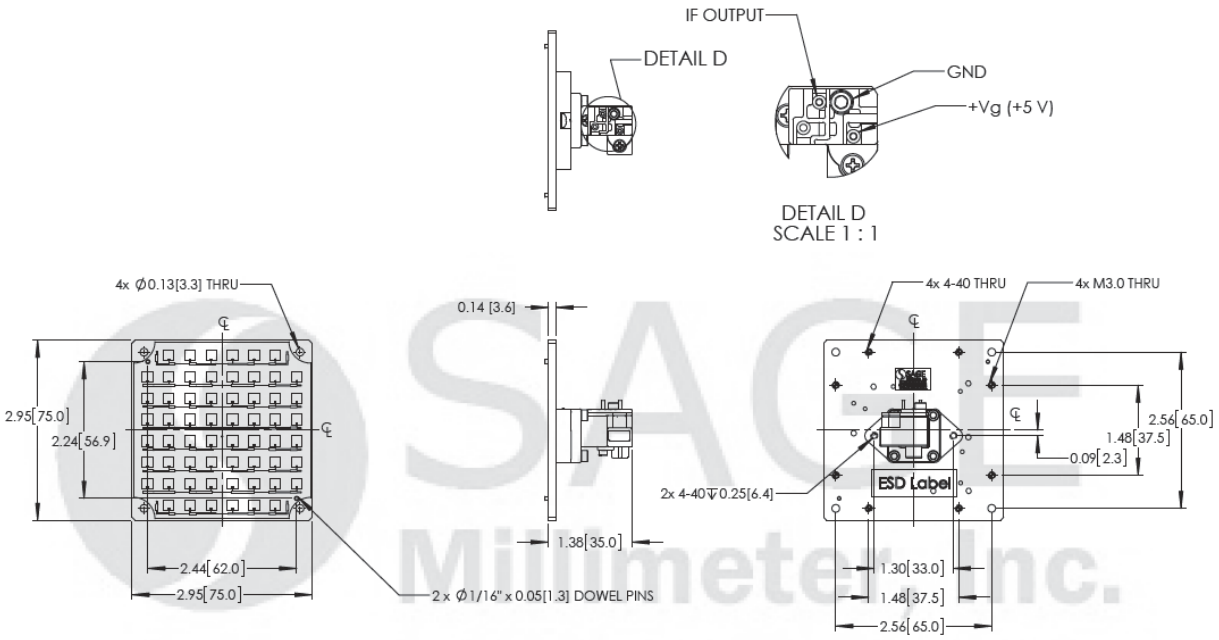
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [mm])



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 additional heatsink or fan if necessary.

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