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# CM501 Microwave Motion Sensor Module

## PRODUCT

DESCRIPTION

10.525GHz Microwave Motion Sensor Module

CM501 is X-Band Doppler motion sensor to detect motion. It consists of DRO (Dielectric Resonator Oscillator), passive diode and patch antennas and provides most reliablesolution in motion detection.

PICTURE

#### **FEATURES**

» Flat profile

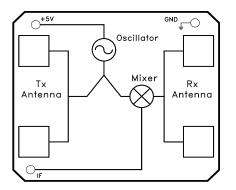
» Low current consumption

Low harmonics emission

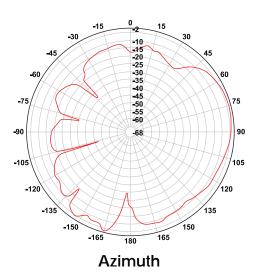
» CW or Pulse operation

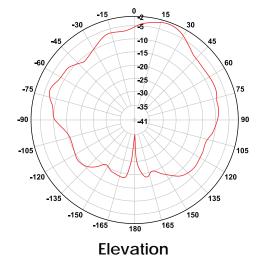
- APPLICATIONS
- Energy Saving
- Microwave-PIR Motion Detector
- Lighting Control
- Security System

## **BLOCK DIAGRAM**



#### ANTENNA BEAM PATTERN





#### CONFIDENTIAL AND PROPRIETARY

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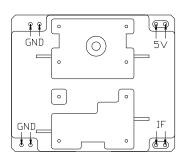
## ELECTRICAL SPECIFICATIONS

PARAMETER	MIN	TYP	MAX	UNITS
Frequency	10.520	10.525	10.530	GHz
Radiated Power (EIRP)	12	15	20	dBm
Supply Voltage	4.8	5	5.2	VDC
Current Consumption		30	40	mA
Noise			10	μVrms
Received Signal Strength		100		μVp-р
3dB Antenna Beam width - Azimuth		80		o
3dB Antenna Beam width - Elevation		40		o
Pulse Repetition Frequency		2		KHz
Pulse Width	10			μSec
Operating Temperature	-15		+55	°C
Weight		10		gm

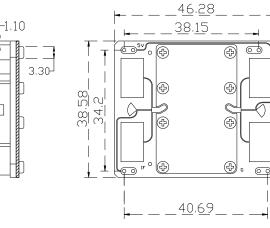
Warning : The specifications can be changed without any notice.

#### DIMENSION

#### Torerance : ± 0.2

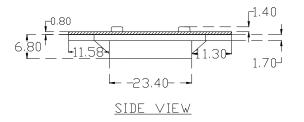


<u>BOTTOM VIEW</u>



<u>SIDE VIEW</u>

TOP VIEW



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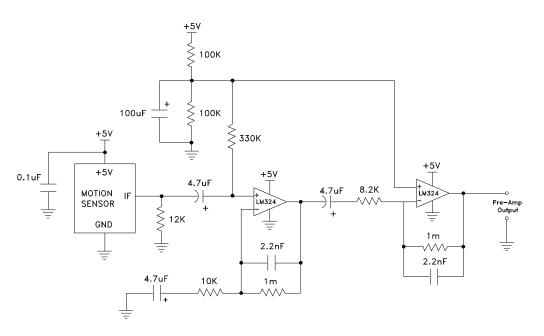
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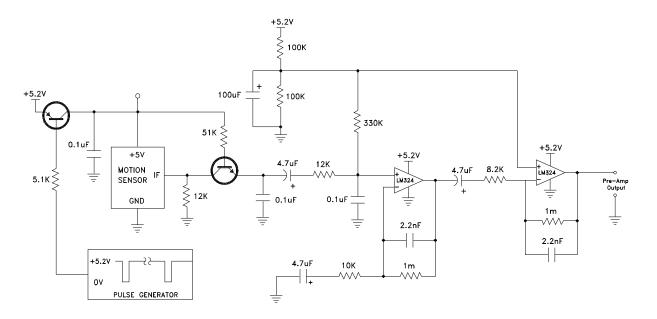
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## APPLICATION CIRCUIT EXAMPLE

Amplifier Circuit (CW operation)



Amplifier Circuit (Pulse operation, PRF=2 KHz, Duty Cycle=4%)



Warning : To avoid a fatal damage, it should be carefully handled and installed under ESD protection condition.

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