TELTRON
Telecommunications & Electronics

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X-Band Motion Sensor

Model : TMS230

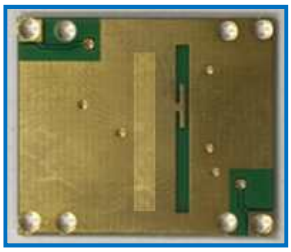
[Features]

TMS230 is X-band Doppler motion sensor to detect motion.
It consists of DR(dielectric resonator) oscillator, passive diode and patch antennas and provides most reliable solution in motion detection.

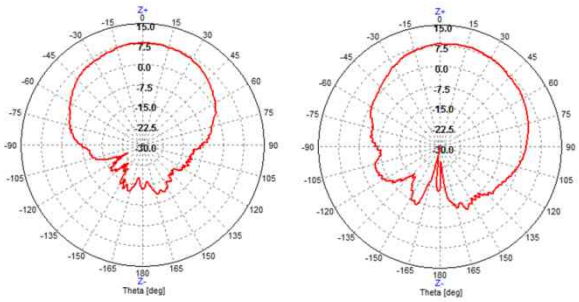
[Applications]

- **Intrusion alarm**
- **Automatic door**
- **Obstruction alarm system**
- **Non-contact measurement**
- **Dual motion sensor with PIR**
- **Velocity measurement**
- **Automatic on and off lamps**

[Picture]



[Antenna beam pattern]



E-axis **H-axis**

[Electrical Specifications]

Parameters		Min.	Typ.	Max.	Unit	Condition
CW	Frequency		10,525 ± 25		MHz	Over Temp.
	Output Power (EIRP)		8		dBm	
	Power Supply	3.0	3.3	3.6	V	
	Current Consumption		24	35	mA	CW
	Settling time			6	μS	
	Noise			10	μVrms	3~80 Hz
	Received Signal			20	mVp-p	max
	3dB Antenna Beam Width – E-axis		84		°	
	3dB Antenna Beam Width – H-axis		85		°	
	Operating temp.	-10		+50	°C	
	Storage temp.	-30		+70		
	Size		20.5*17.5*8.1		mm	
Pulse Operation	Pulse Width	5			μS	
	Duty Cycle		20		%	
	Average Current		5		mA	@20% duty

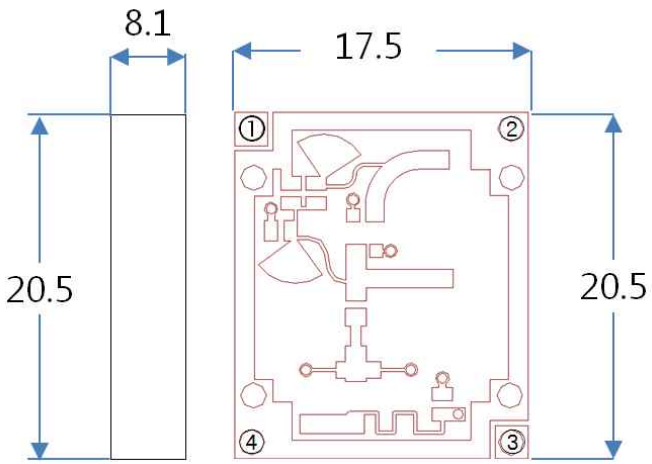
Warning : The specifications can be changed without any notice.

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[Dimension]

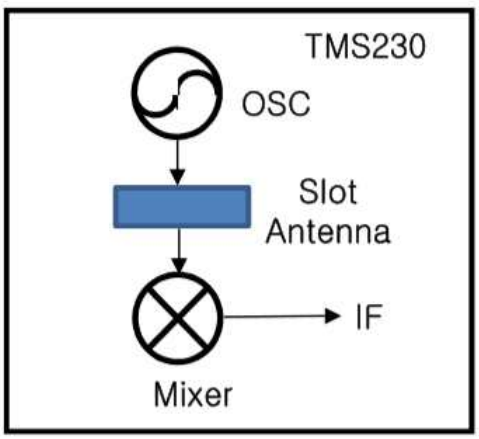


Side view Front view (mm)

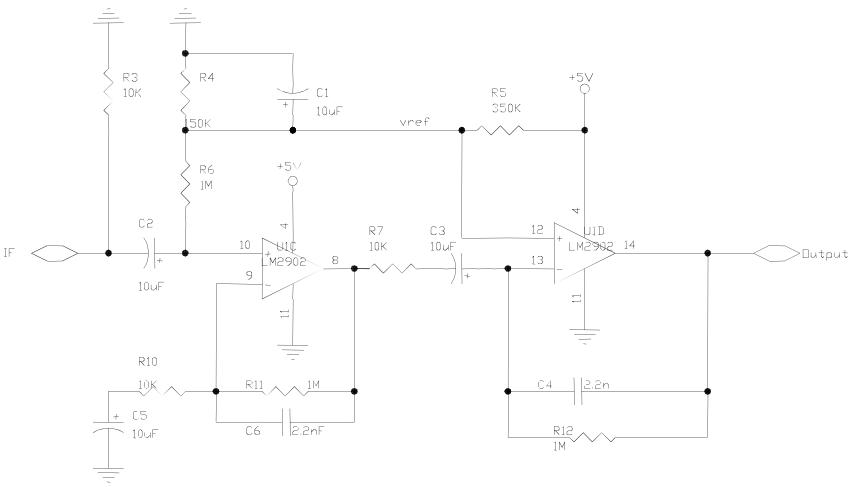
[Pin Description]

#	Pin Name	Explanation
1	VDD	Power, +3.3V
2	GND	Ground
3	IF	Output
4	GND	Ground

[Block Diagram]



[Application Circuit Example]



Warning : TMS230 is very sensitive to ESD, so you should be very careful in installation. Unless, there would be an operational problem or it may be out of order.

Federal Communications Commission (FCC) Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF exposure warning

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

OEM Integration Instructions：

This device is intended only for OEM integrators under the following conditions：

The module can be used to installation in other host. The antenna must be installed such that 20 cm is maintained between the antenna and users, and the transmitter module may not be co-located with any other transmit or antenna. The module shall be only used with the integral antenna(s) that has been originally tested and certified with this module. As long as 3 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirement with this module installed (for example, digital device emission, PC peripheral requirements, etc.)

IMPORTANT NOTE：

In the event that these conditions cannot be met (for example certain laptop configuration or co-location with another transmitter), then the FCC authorization for this module in combination with the host equipment is no longer considered valid and the FCC ID of the module cannot be used on the final product. In these and circumstance, the OEM integrator will be responsible for re-evaluating. The end product (including the transmitter) and obtaining a separate FCC authorization. The final end product must be labeled in a visible area with the following: “**Contains Transmitter Module FCC ID: 2AJWPTMS230** or **Contains FCC ID: 2AJWPTMS230**”.