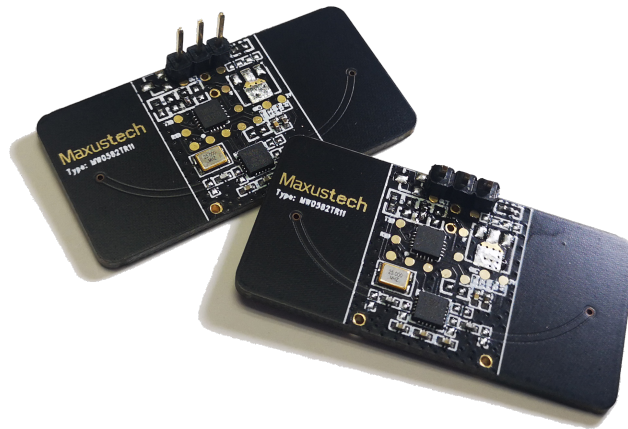


MW0582TR11



Overview

The MW0582TR11 is a highly integrated single chip 5.8GHz microwave motion sensor developed by Maxustech. The MW0582TR11 simplifies the implementation of non-contact detection applications and is an ideal solution for smart lighting, surveillance, automation and any self-monitored radar system.

The module achieves broad sensing coverage given the well-designed 1Tx, 1Rx transceiver antenna and robust performance in anti-interference with built-in PLL. Simple programming model changes can enable a wide variety of sensor implementation (Short, Mid, Long) with the possibility of dynamic reconfiguration for implementing a multimode sensor. SDK is available for developers to adjust the sensing settings as well as to capture the raw radar data in terms of further development.

Features

- **Strong Anti-interference**

Robust performance under radio interference with the built-in PLL and frequency hopping algorithm, supporting large scale deployment.

- **SDK Available**

Raw data can be captured by cross-platform SDK with serial communication. Sensing settings such as distance, sensitivity are adjustable by SDK.

- **Comply with certification**

Comply with FCC/CE/RS certification test standards.

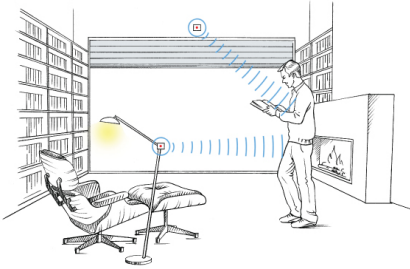
- **Well-designed Antenna**

Well-designed 1Tx, 1Rx antenna pair enables small form factor and maintains a broad sensing coverage with Azimuth of 170°

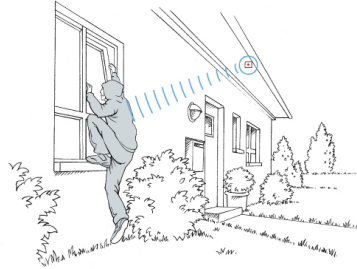
- **Wide Range of Input Voltage**

Support 5~18V voltage input, suitable for various applications

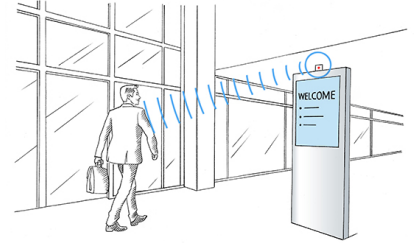
Applications



Home Automation

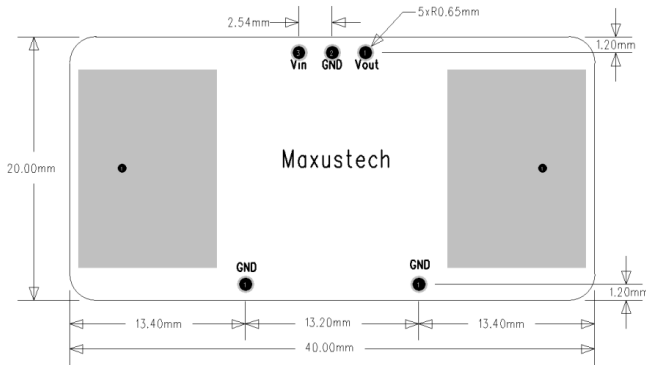


Intrusion Alarm



Movement Detection

Outline Diagram



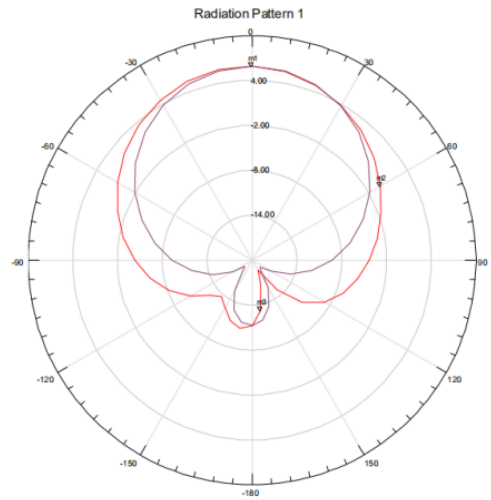
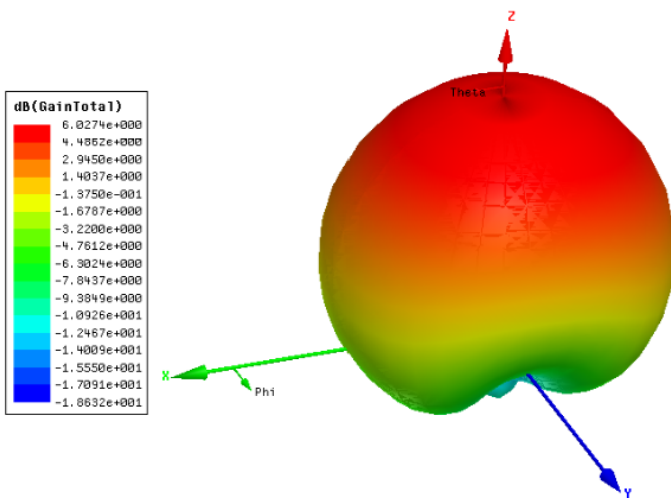
Length: 40mm Width: 20mm Thickness: 1.6mm

Interfaces		
No.	Name	Feature
1	Vin	5V Voltage Input (support 6~18V)
2	GND	Ground
3	Vout	Support raw data and high-low-level pulses

Specification

Parameters	Symbol	Value			Units	Notes
		Min	Typ.	Max		
Supply Voltage	Vin	5	5	18	V	
Current Consumption	I	-	35	50	mA	Vin=5V
Radiated Power	Pout	-20	-	5	dBm	Adjustable by software
Frequency Setting	f _{out}	5.725	-	5.875	GHz	Adjustable by software
Antenna Beam Width(3dB) - Azimuth	θ	-	170	-	°	
Output Control	Vout	-	5V	18	V	
Speed Measurement	Vdet	0.1	-	3	m/s	
Time Delay	ΔT	0	-	ΔT	s	Adjustable by software
Detection Range	L	0	-	20	m	Adjustable by software
Operating Temperature	TA	-30	-	100	°C	
Storage Temperature	TSTG	-40	-	150	°C	

Antenna Beam Pattern



Azimuth: 170°

Notes

- **Installation Guide**

The module antenna should be oriented towards the target sensing area for working probably; Interference such as lamp beads may cause malfunction of the module. Maxustech recommends that the module surface should avoid light emitting circuits during installation;

- **Electrostatic Discharge Caution**



This integrated circuit can be damaged by ESD. Maxustech recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage. ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

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