

SMD PIR SENSOR

P/N: RDI-9810-S000

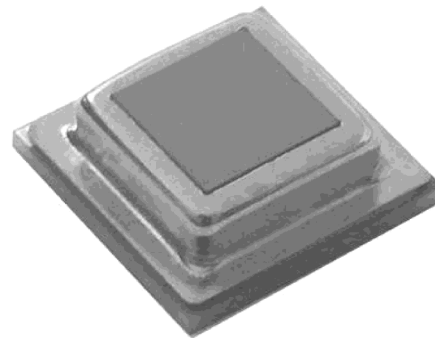


MINI SMD Dual-element Analog PIR Sensor Features

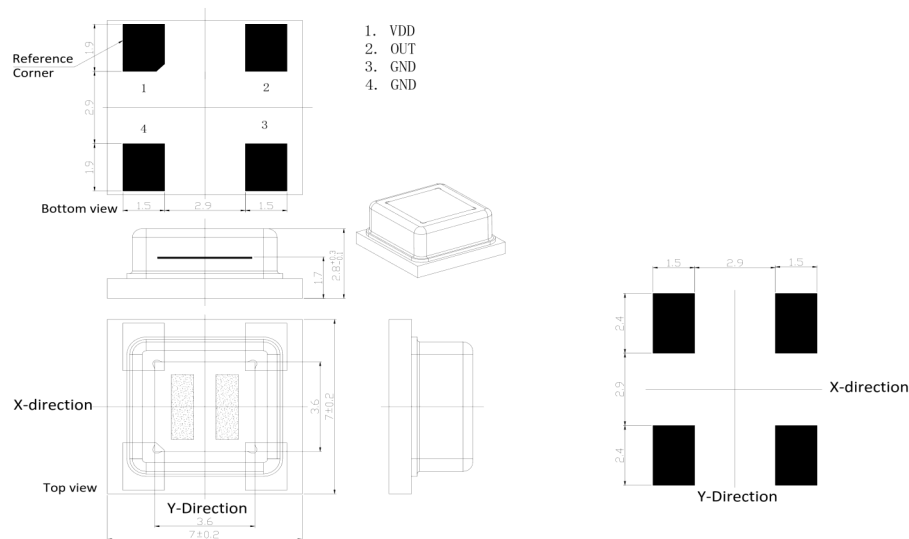
Mini SMD with reflowed SMT
Analog signal processing
Low voltage, low power consumption
Excellent anti-interference

Application

PIR motion detection
Intruder detection
Occupancy detection
Motion sensor lights
Computer monitor
Security system



•Dimension



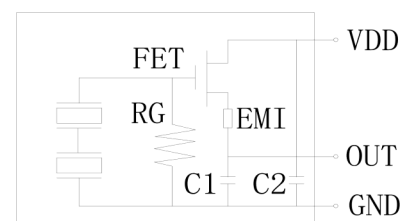
The chart of recommended welding plate

•Technical Data

Electrical characteristics(Stresses beyond those listed below may cause permanent damage to the device. Exposure to absolute maximum ratings may affect the device reliability.)

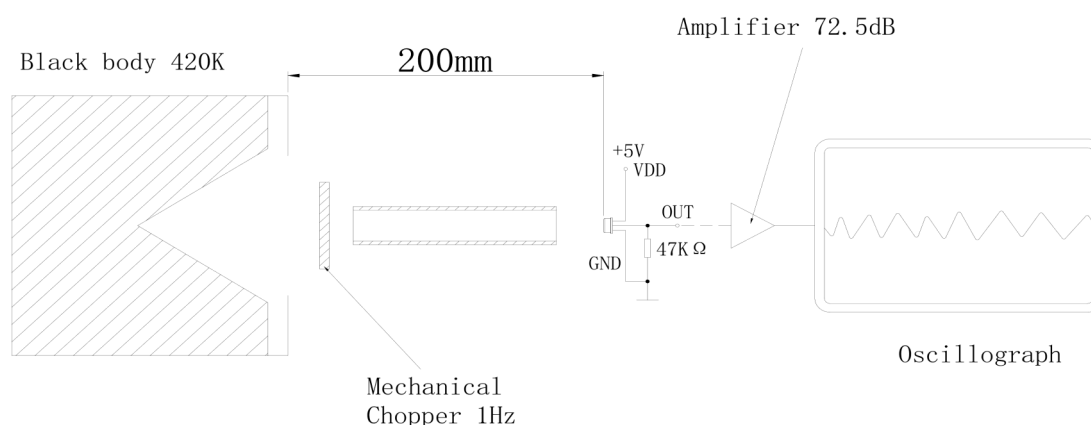
Parameter	Symbol	Min	Max	Unit	Remarks
Operating Temp	Tot	-30	70	°C	
Storage Temp	Tst	-40	80	°C	
View Angle		X=100	Y=90	°	The thetical value
Spectral Response	λ	5	14	μm	
Infrared Receiving Electrode		2*1		mm	2 elements

Equivalent Circuit

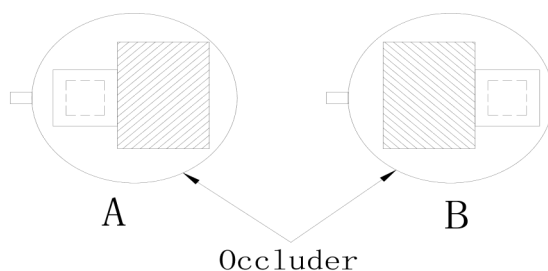



Working Conditions (T=25° C, VDD=3V Except other requirements)

Characteristics	Symbol	Min.	Type	Max.	Unit	Remarks
Supply Voltage	V _{DD}	3		15	V	
Source Voltage		0.3		0.8	V	
Signal Output	V _{p-p}	≥ 3000			mV	
Sensitivity		≥ 3300			V/W	
Detectivity	D*	$1.4 \times 10^8 \text{ cmHz}^{1/2}$			/W	
Noise	V _{p-p}	<70mV			mV	
Output Balance		<10%				

Test Method

Test Conditions

Ambient temperature 25°C Modulating frequency 1Hz, 0.3-3.5Hz f Black-body temperature 420K (@147) 72.5 dB Amplifier

Test Conditions


The sensitivity balance of dual element sensor is calculated through testingsensitivity (single signal output voltage) of each element and using the following formula:

$$\text{Balance} = \frac{|V_A - V_B|}{(V_A + V_B)} \times 100\%$$

V_A = Sensitivity of side A (mV_{p-p})

V_B = Sensitivity of side B (mV_{p-p})