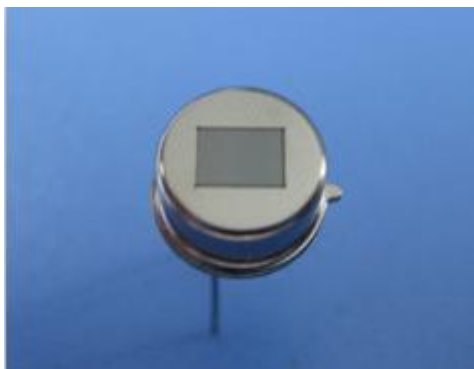


SPECIFICATION of PIR200B

DESCRIPTION: Pyroelectric Infrared Sensor

Part NO.: PIR200B



1. Part NO.: PIR200B
2. Usage: Universal big window probe, can be used for automatic lighting automatic door toy into alarming, etc
3. Sensitive type: double type series
4. Size: TO-5 packaging, pls see chart 1.
5. Performance index

5.1

Project	Testing condition	specification
signal output	ambient temperature 25°C blackbody temperature 420K(147°C) modulation frequency 1HZ magnification 72.5 dB (operational amplifier 5000X) Vd= 5V, Rs=47K Ω	≥ 4 Vp-p
Noise	ambient temperature 25°C magnification 72.5 dB (operational amplifier 5000X) Vd= 5V, Rs=47KΩ	<150mVp-p Max. (Typ. 90mVp-p)
degree of balance [*]	blackbody temperature 420K(147°C) magnification 72.5 dB (operational amplifier 5000X) Vd= 5V, Rs=47KΩ	<15%
Mains voltage		3~15V
Source Voltage	Vd= 5V, Rs=47KΩ	0.4~1.1V
response time	Plus electric signal stability after the time required for output	<12S

[*] degree of balance = $V_{AB}/|V_A+V_B| \times 100\%$

V_{AB} = double sensitivity (mVp-p)

V_A = A 'sensitivity (mVp-p)

V_B = B 'sensitivity (mVp-p)

Testing way, pls see chart 2、 3.

5.2 optical property

Project	Specification
View Angle	X: 140° Y: 130°; pls see chart 4

Accept wavelength	5.5~14μm; pls see chart 5
cut-off wavelength	5.2±0.5μm; pls see chart 5
Average transmittance	>72%, 7~14μm
Filter materials	silicon
Thickness of filter	0.50mm

5.3 Environmental performance

Project	Specification
Operating temperature	-30—70°C
Storage Temperature	-35—80°C

6. reliability evaluation

test project	Testing condition	tester	Testing standard	
high-temperature working	70°C 72 hours	temperature-regulated oven	After the test, put the sensor in the natural environment 3hours, then test electrical performance measurement. 1. appearance no change 2. keep electric performance parameters within 20%	
sweat resistance	60°C, 95%RH, 72 hours	temperature and humidity regulator		
LTST	-40°C 72 hours	temperature-regulated oven		
HTST	70°C 72 hours	temperature-regulated oven		
Thermal shock	-40°C, 1hour→Room Temperature, 1hour→70°C, 1hour 10 ↑ recycle	temperature-regulated oven		
natural aging	Outside 30days	Test prototype		
soldering resistance	260±5°C, 10s Dip depth 3.0mm	soldering furnace		
Seal	133.3 pascal, 1minute	vacuum pump		No bubble

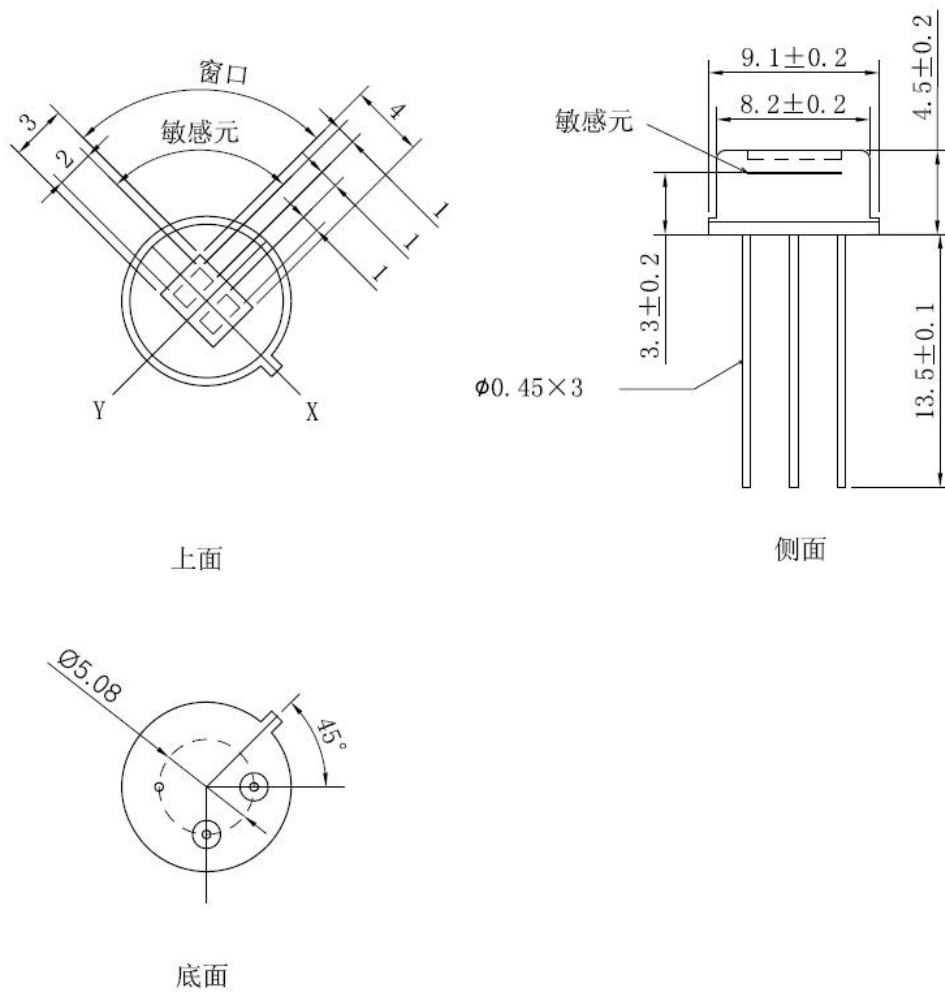
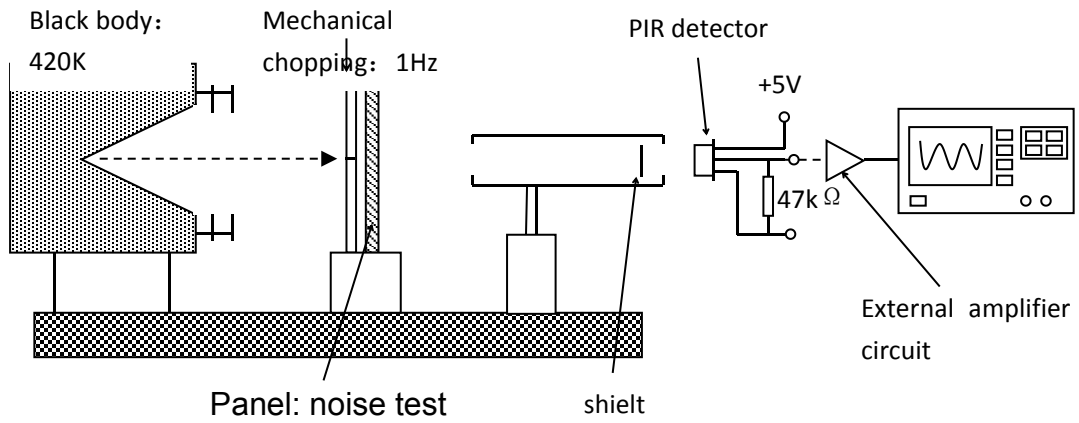


Chart 1.: Specification of the sensor



The distance between black body and PIR sensor: 200mm
 Amplifier circuit: 72.5 dB

Chart 2: Testing Schematic plot

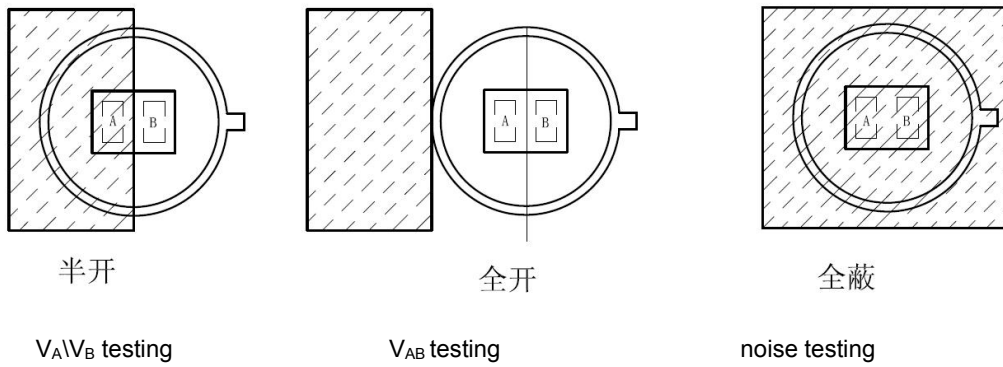


Chart 3. PIR sensor testing Schematic plot

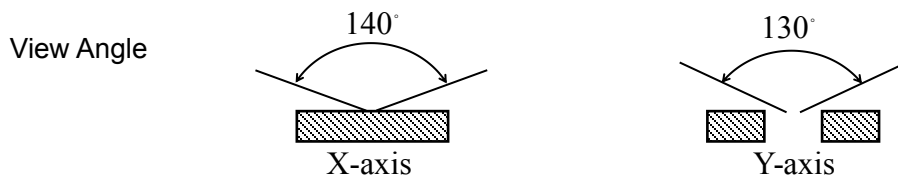


Chart 4: View angle testing Schematic plot

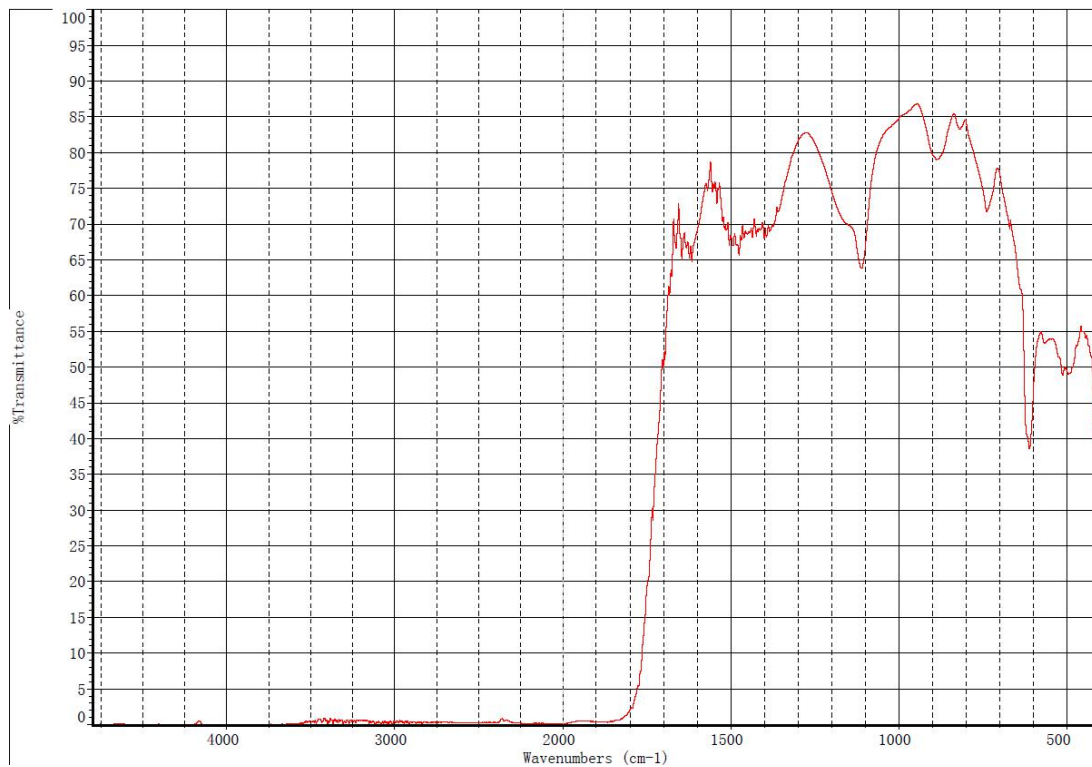


Chart 5: : filter through characteristic curve