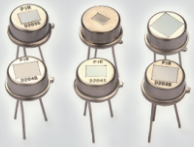
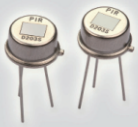
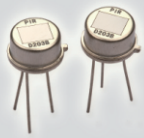
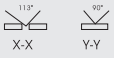
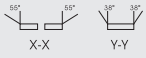
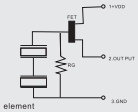
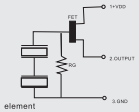
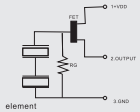
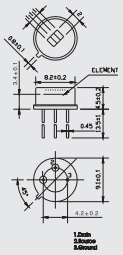
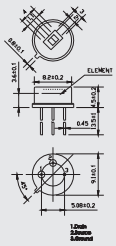
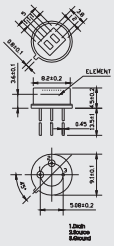
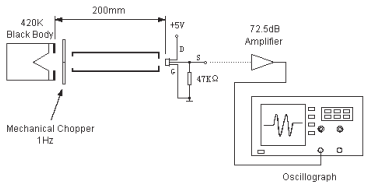
熱釋電紅外傳感器
PYROELECTRIC INFRARED RADIAL SENSOR

Type 型號	D202X	D203S	D203B
				
Window Size 窗口尺寸	2×3mm	3×4mm	5×3.8mm
IR Receiving Electrode 紅外接收電極	2×1mm,2elements	2×1mm, 2 elements	2×1mm, 2 elements
Encapsulation Type 封裝	TO-5	TO-5	TO-5
Spectral Response 接收波長	5~14μm	5~14μm	5~14μm
Transmissivity 透過率	≥75%	≥75%	≥75%
Output Signal[Vp-p] 輸出信號峰值	≥3300mV	≥3500mV	≥3500mV
Sensitivity 靈敏度	≥3100V/W	≥3300V/W	≥3300V/W
Detectivity (D*) 探測率	1.4 ×10⁸ cmHz$^{1/2}$/W	1.4 ×10⁸ cmHz$^{1/2}$/W	1.4 ×10⁸ cmHz$^{1/2}$/W
Noise[Vp-p] 雜訊峰值	<70mV	<70mV	<70mV
Output Balance 輸出平衡度	<10%	<10%	<10%
Offset Voltage 源極電壓	0.3~1.2V	0.3~1.2V	0.3~1.2V
Supply Voltage 電源電壓	3-15V	3-15V	3-15V
Operating Temp 工作溫度範圍	-30~70℃	-30~70℃	-30~70℃
Storage Temp 保存溫度範圍	-40~80℃	-40~80℃	-40~80℃
Field of View 入射視角圖			
Equivalent Circuit 等效電路圖			
Dimensions 外型尺寸			

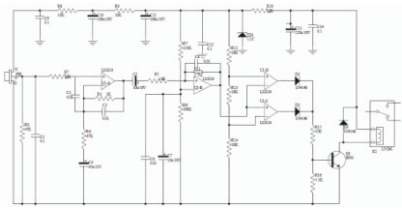
SENBA OPTOELECTRONIC

熱釋電紅外傳感器
PYROELECTRIC INFRARED RADIAL SENSOR

Test Method 測試方法



Typical Application 典型應用電路

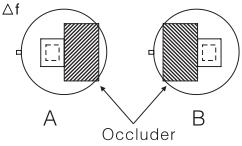


Notice/注意

- U1A–D:LM324 ■ Vdd:12V DC ■ Rs=47KΩ as reference voltage
- IC: Lm324 ■ 電源:12伏直流 ■ Rs=47千歐姆，作爲參考電壓設置電阻

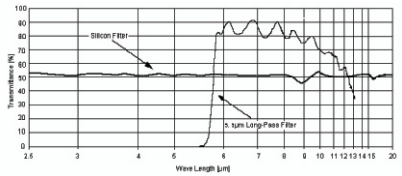
Measurement conditions 測量條件

- Circumstance situation temperature 25℃
- Black–body temperature 420K (@147℃)
- Chopping frequency 1 Hz, 0.3 ~ 3.5Hz △f
- 72.5 dB Amplifier
- 環境溫度 25℃
- 黑體溫度 420K(147℃)
- 調製頻率 1 赫茲, 0.3-3.5 赫茲 △f
- 放大倍數 72.5 dB



- The sensitivity balance of dual elements sensor is calculated by measuring the sensitivity (signal output voltage) of each element and uses the formula as below:
- Balance = $|V_A - V_B|/(V_A+V_B) \times 100\%$ ■ V_A = Sensitivity of side A (mV_{p-p})
- V_B = Sensitivity of side B (mV_{p-p})
- 雙元感測器的靈敏平衡度是通過測量每個單元的靈敏度（即單個輸出峰值電壓），並採用下列公式計算得出。
- 平衡度= $|V_A - V_B|/(V_A+V_B) \times 100\%$ ■ V_A = A 面的靈敏度 (mV_{p-p})
- V_B = B 面的靈敏度 (mV_{p-p})

Spectral Response of Window Materials
窗口材料的可接收通過波長

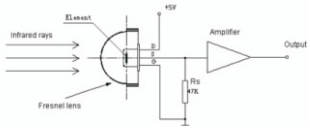


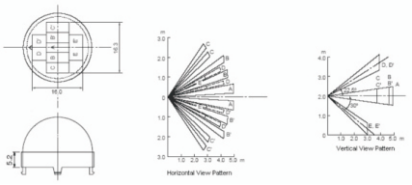
Notice/注意

The typical average transmissivity curve of 5.5 μ m pass IR filter is figured,which is vacuumed on silicon filter.

圖表所示爲典型的5.5 μ m紅外濾光片參考圖，曲線是紅外線通過率的平均值。 該窗口材料是經過特殊真空鍍膜處理過的半導體硅片。

Fresnel Lens for Human Body Detection
菲涅耳透鏡用於感測器的探測方位





PIR Applications 產品應用