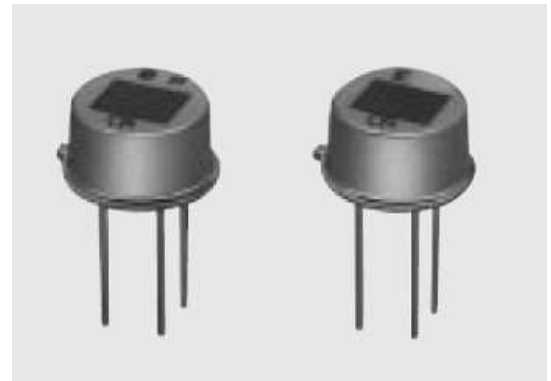


RD-623 electric heat scattering infrared sensor

Electric heat scattering infrared sensor detects the infrared radiation by using the temperature-dependent feature. It suppresses the interference caused by temperature change adopting the method of two sensitive elements complementary which improves the stability of the sensor. The sensors can be widely used in safety device, burglar alarm, automatic door, automatic lighting, intelligent toys, etc.



Features

- * High sensitivity and excellent signal to noise ratio
- * High temperature-dependent stability
- * Strong anti-jamming ability (e.g. vibration, radio-frequency interference etc.)
- * High value with competitive price

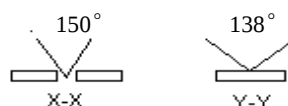
Application

1. Safety
2. Electricity Lighting
3. House-hold and other fields

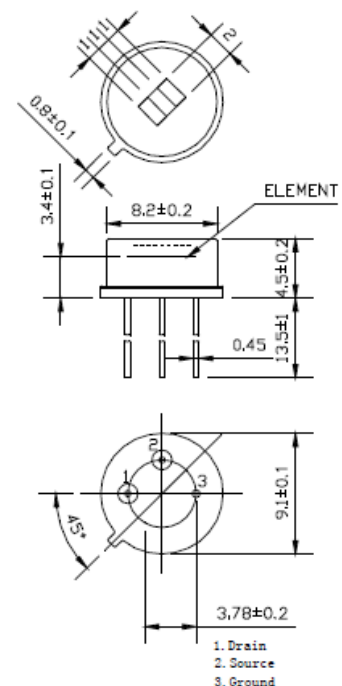
Specification

Sensor Type:	RD-623 series
Standard Encapsulation:	TO-5
Infrared receiving Electrode:	2×1mm, 2 sensitive elements
Window Size:	3.8×5mm
Receiving Wavelength:	7—14μm
Transmittance:	>75%
Output signal peak[Vp-p]:	3500 mV
Sensitivity:	3200 V/W
Detection Rate (D*):	$1.4 \times 10^8 \text{ cmHz}^{1/2}/\text{W}$
Noise peak[Vp-p]:	<70 mV
Output balance degree:	<10%
Source Voltage:	0.2~1.5V
Working Voltage:	2—15 V
Working temperature:	-30—70°C
Storage temperature:	-40—80°C

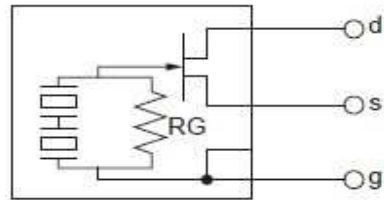
Incidence angle map:



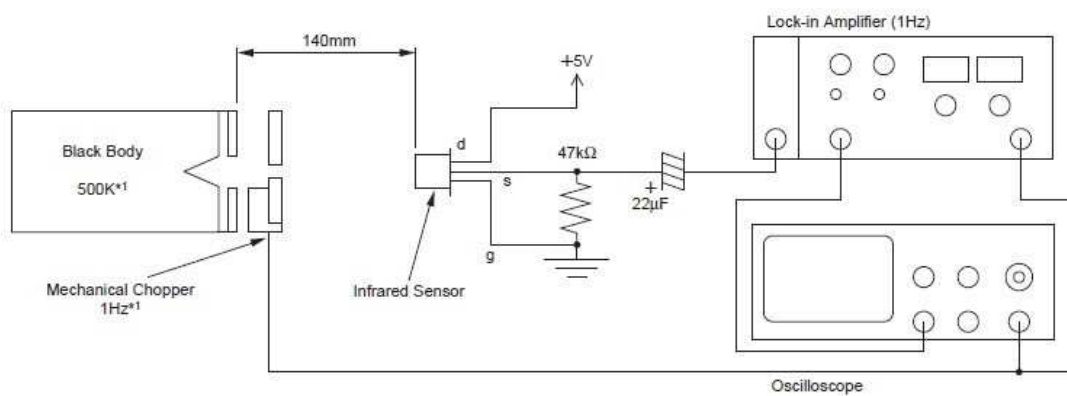
Component Structure



Basic Test Circuit

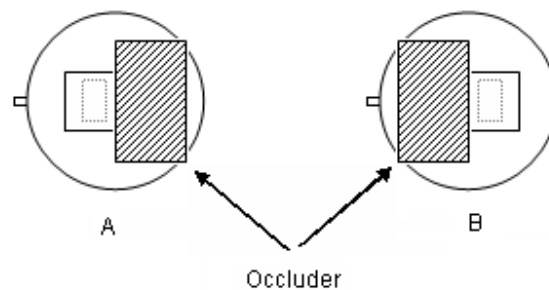


Test Manner



Testing Condition

- ◆ Environment Temperature: 25°C
- ◆ Blackbody temperature: 420K
- ◆ Modulation frequency 1HZ, 0.3~3.5HZ Δf
- ◆ Magnification: 72.5 dB



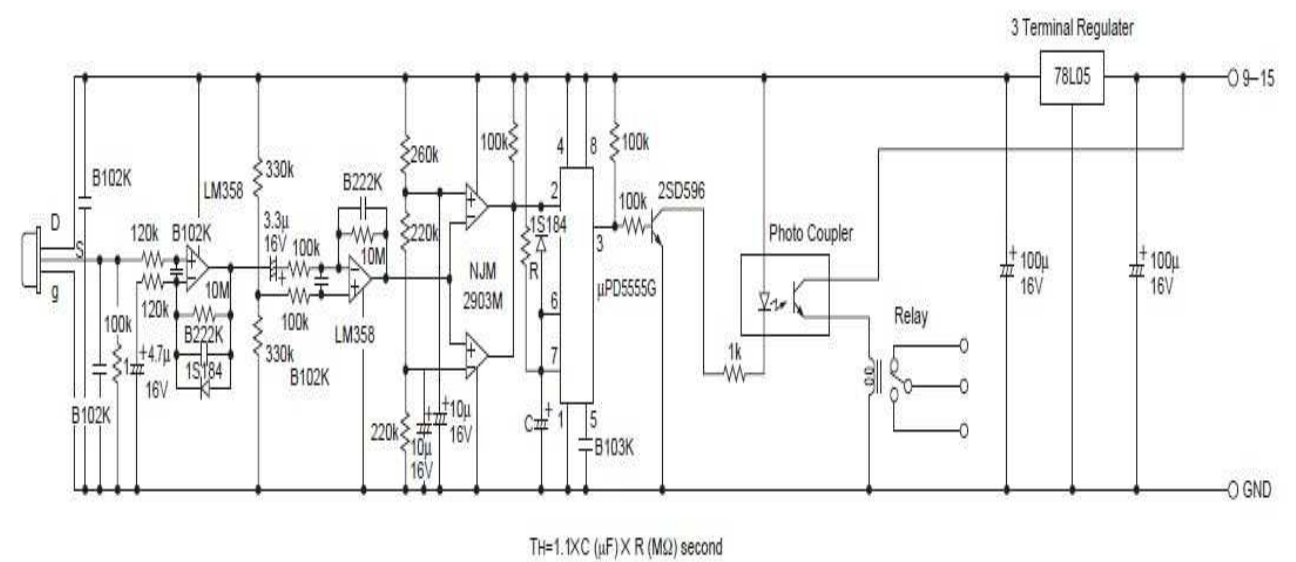
Dual sensor sensitivity can be got by detecting each cell's sensitivity and calculate in following formula:

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

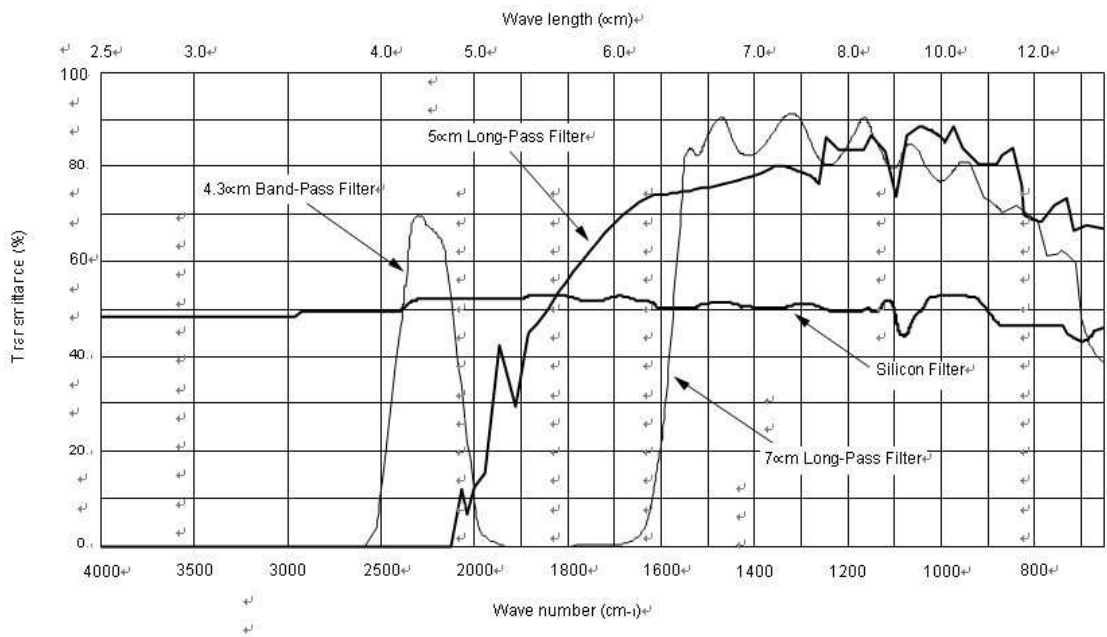
V_A = Surface A sensitivity (mVp-p)

V_B = Surface B sensitivity (mVp-p)

Typical application circuit



The receiving wavelength of the window material



Note: To keep continual product development, we reserve the right to change design features without prior notice.