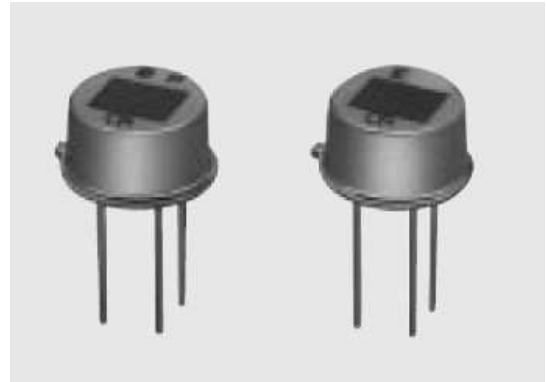


## RD-622 electric heat scattering infrared sensor

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

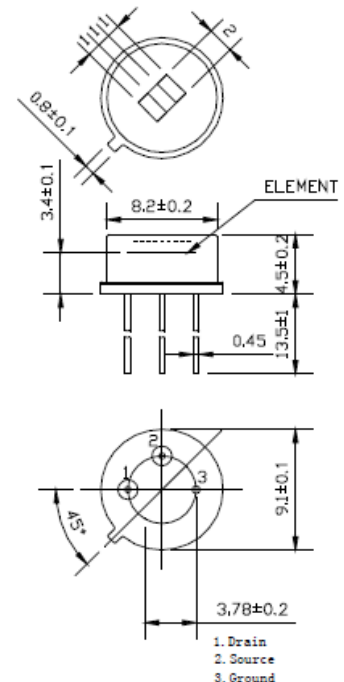
### Application

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

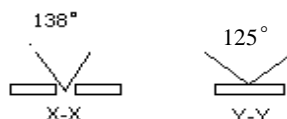
### Specification

Sensor Type:	RD-622 series
Standard Encapsulation:	TO-5
Infrared receiving Electrode:	2×1mm, 2 sensitive elements
Window Size:	3×4mm
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—15V
Working temperature:	-30—70°C
Storage temperature:	-40—80°C

### Component Structure

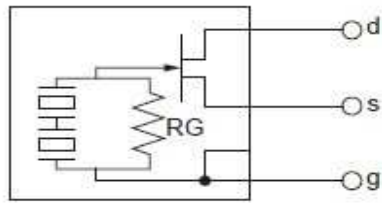


Incidence angle map:

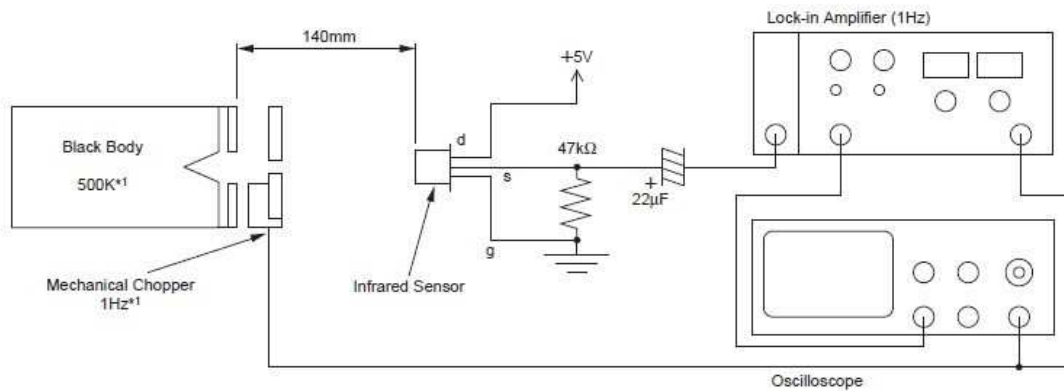


# RD-622

## Basic Test Circuit

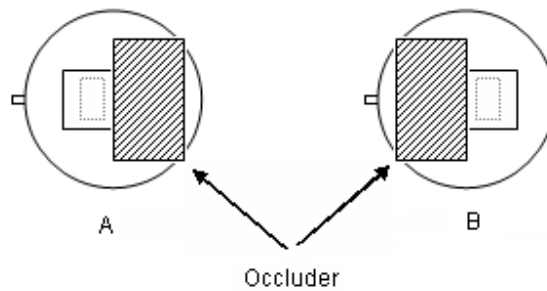


## Test Manner



## Testing Condition

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



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

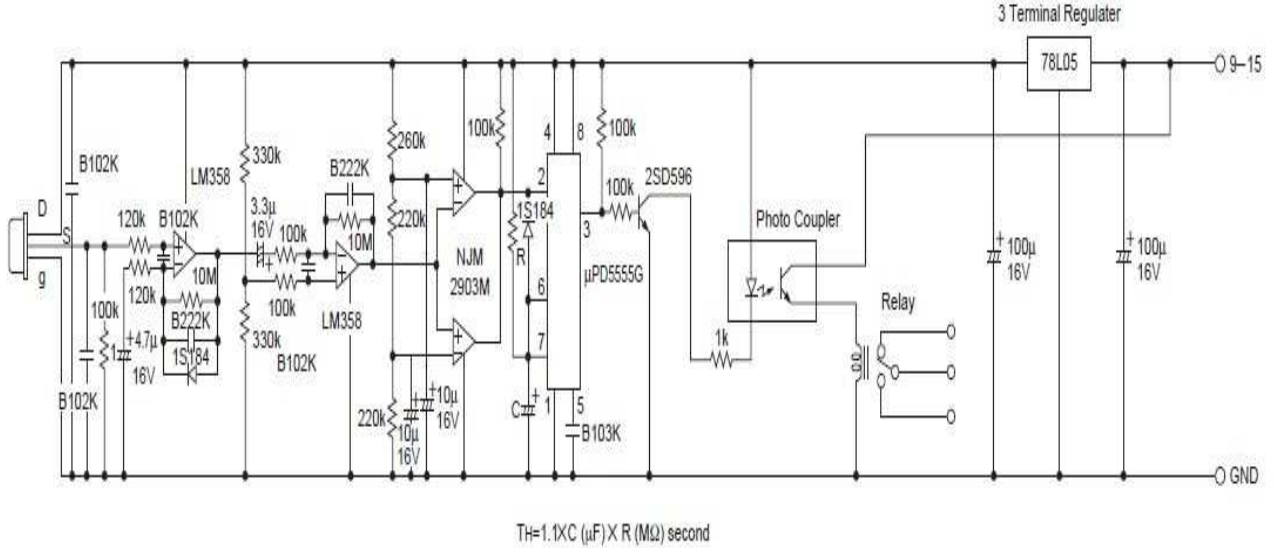
$$\text{Balance degree} = |V_A - V_B| / (V_A + V_B) \times 100\%$$

$V_A$  = Surface A sensitivity ( mVp-p )

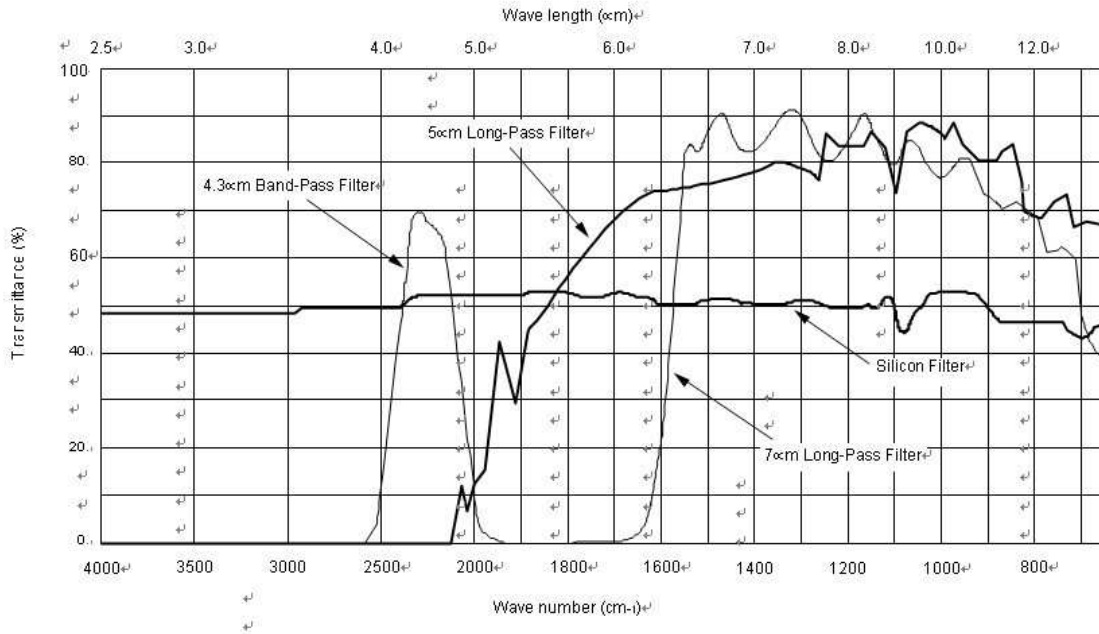
$V_B$  = Surface B sensitivity ( mVp-p )

# RD-622

## 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.