

➤ **DESCRIPTION :**

RT1325 is a slight signal detector utilizing CMOS technology. It is designed for security service and burglarproof systems.

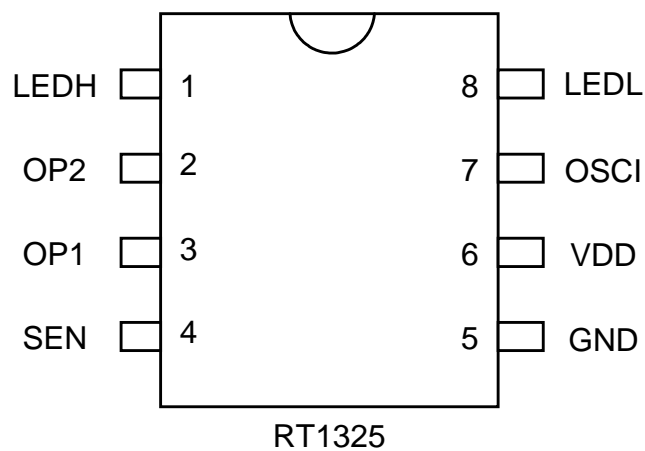
➤ **FEATURES :**

1. CMOS technology
2. An oscillator can be constructed by connecting an RC circuit
3. Two sensational range can be adjust by external circuit

➤ **APPLICATIONS:**

1. Burglarproof system for car
2. Burglarproof system for motorcycle
3. Security service system

➤ **PIN CONFIGURATION:**

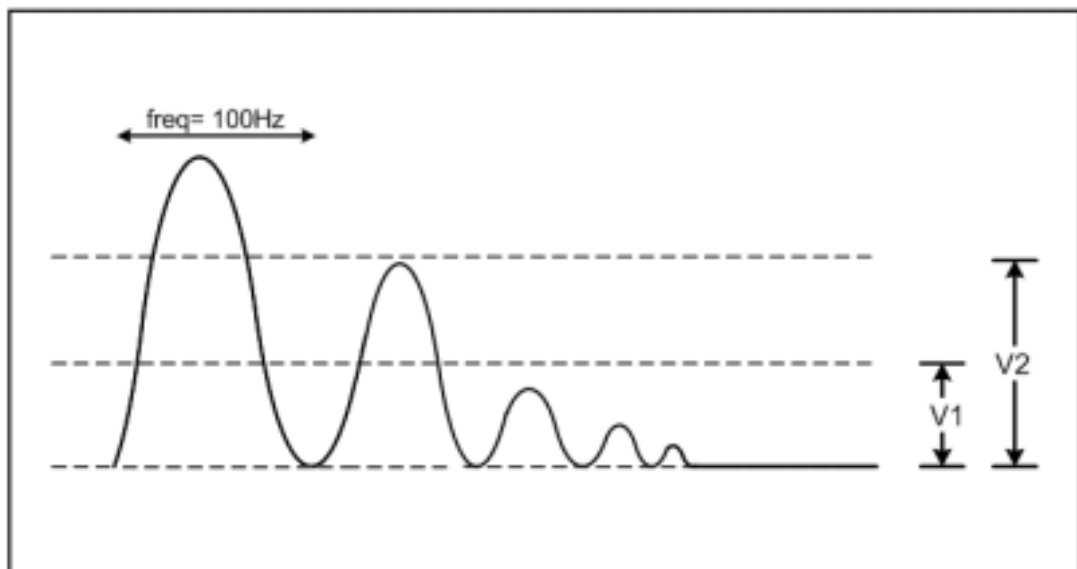


➤ **PIN DESCRIPTION:**

PIN NO.	PIN NAME	I/O	DESCRIPTION
1	LEDH	O	The detection of second sensational range output. It actives high.
2	OP2	I	The signal input pin for second sensational amplifier.
3	OP1	O	The signal output pin for first sensational amplifier.
4	SENSOR	I	Input pin for signal of sensor.
5	GND	-	Negative power supply.
6	VDD	-	Positive power supply.
7	OSCI	I	Oscillator input pin. It must be connecting an RC circuit
8	LEDL	O	The detection of first sensational range output. It actives high.

➤ **FUNCTION DESCRIPTION:**

1. RT1325 is a CMOS slight signal detector integrator circuit. There are two sensational range can be detected by RT1325, and the range can be adjust by external circuit.
2. Sensor input:



The trigger point of first sensational range is $V1 = 1.6\text{mV}$, and the frequency is 100Hz . This trigger point was be designed in chip, you must adjust the strength of sensor circuit to fit the trigger point.

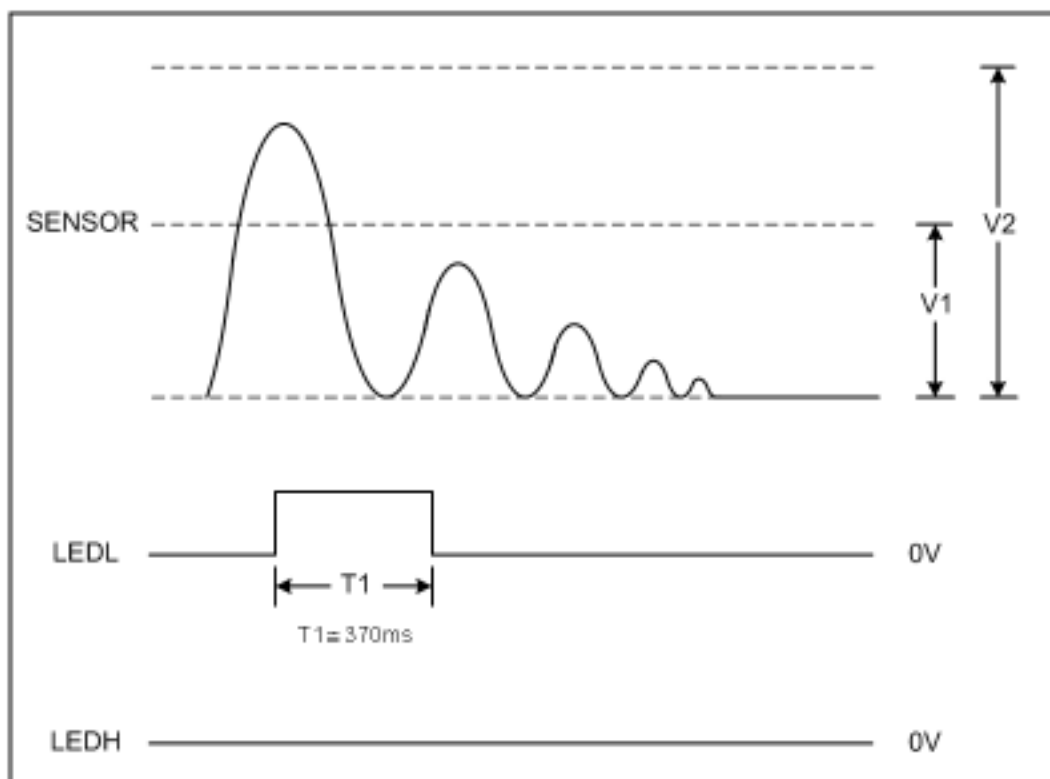
The trigger point of second sensational range is $V_2 = 3.2\text{mV}$, you can adjust external circuit to redefine it for your application.

3. Signal output:

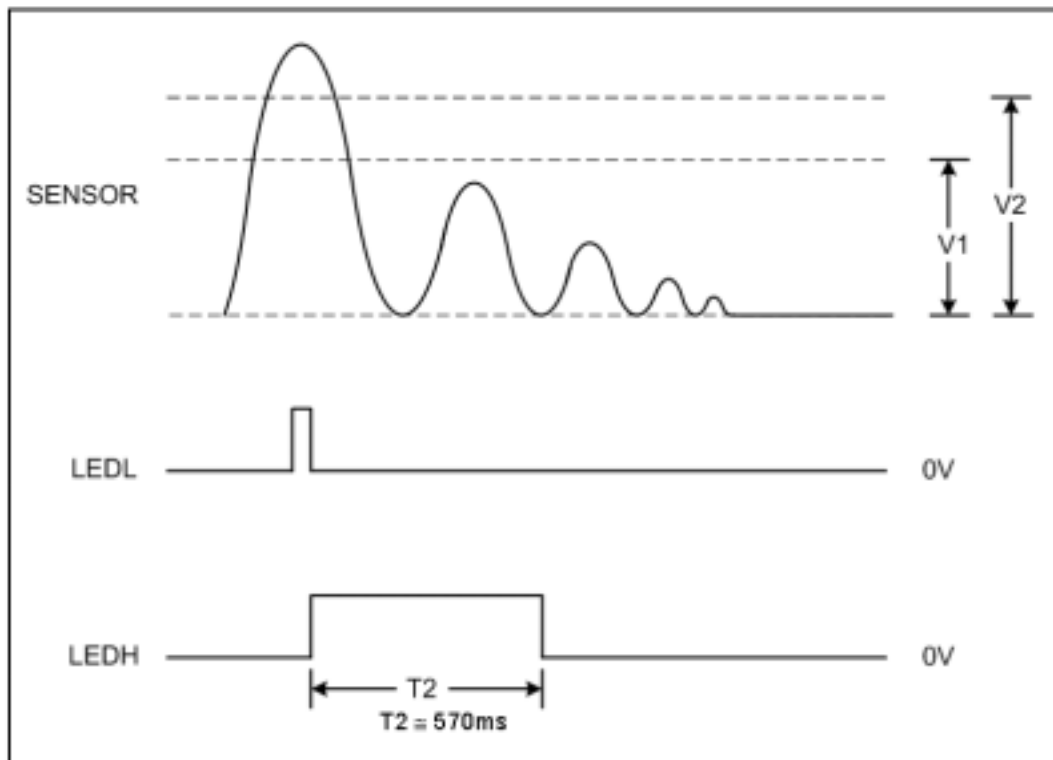
When the strength of sensor signal is $V_1 < V_{\text{Sensor}} < V_2$, the detection of first sensational range output pin (LEDL) will from 'L' to 'H'..

When the strength of sensor signal is $V_{\text{Sensor}} > V_2$, the detection of second sensational range output pin (LEDH) will from 'L' to 'H' and the LEDL will from 'H' to 'L'.

(1) First sensational range :



(2) Second sensational range:



[Note]: (1) There interval of output pulse (LEDL or LEDH) between different trigger must large then 50ms.

(2) When the LEDH from 'L' to 'H', the LEDL will from 'H' to 'L'.

➤ **Maximum Rating:**

(Temp=25)

Characteristic	Symbol	Rating	Unit
Supply Voltage	V_{DD}	5.5	V
Input Voltage	V_{IN}	($V_{SS}-0.5$) ($V_{DD}+0.5$)	V
Power Dissipation	P_d	200	mW
Storage Temperature	T_{STR}	-40 +125	
Operating Temperature	T_{OP}	-40 +75	

➤ **Electrical Characteristic:**

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
System Frequency	F_{OSC}	-	--	50	--	KHz
Supply Voltage	V_{DD}	All Function Operations	4.5	5.0	5.5	V
Stand-by Current	I_{STB}	-	--	-	300	uA
Output Sink Current	$I_{OL(LEDH)}$	$V_O=0.5V$	1	-	--	mA
	$I_{OL(LEDL)}$					
Output Source Current	$I_{OH(LEDH)}$	$V_O=4.5V$	1	-	--	mA
	$I_{OL(LEDL)}$					