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### Features

- Operating voltage : 3.5~5.5V
- Few external components
- No start to turn on Relay without oscillation.
- TO-94 package

### Description

The PT8A2512NE is a CMOS LSI chip designed for simple toaster. It provides low cost solution for toaster. The chip is enclosed in a 4 pin TO-94.

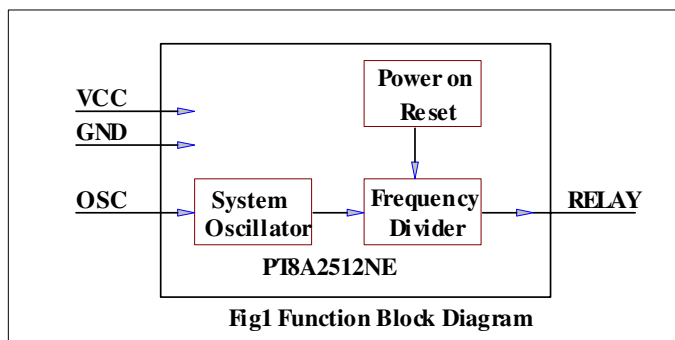
### Ordering Information

Part Number	Package
PT8A2512NE	Lead free TO-94

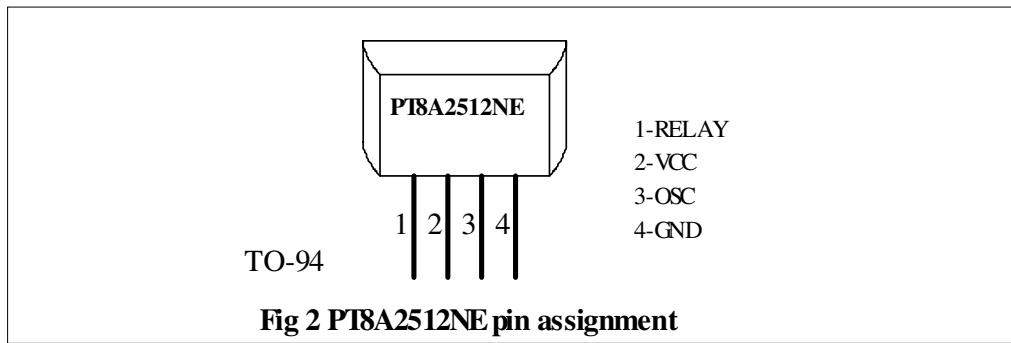
### Applications

- Toaster.

### Block Diagram



**Pin Assignment**



**Pin Description**

Name	Pin No.	Type	Description
RELAY	1	O	Relay control output, high active
VCC	2	-	Power supply
OSC	3	I/O	Input/output of RC oscillator
GND	4	-	GND

**Function Description**

**System oscillator and Frequency divider**

It provides one-stop timer for Toaster after power on.

In general, Fosc=1KHz, RELAY will shut down after 30s.

**Power on reset**

Used to reset internal logic

## Maximum Rating

Storage Temperature.....	- 25°C to +85°C
Supply Voltage to Ground Potential (Inputs & V <sub>CC</sub> only).....	- 0.5 to +5.5V
Supply Voltage to Ground Potential (Outputs only) .....	- 0.5 to +5.5V
DC Input Voltage .....	- 0.5V to +5.5V
Output Current .....	20mA
Power Dissipation.....	500mW

**Note:**

Stresses greater than those listed under AXIMUM RATINGS may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect reliability.

## Recommended Operating Conditions

Symbol	Pin	Description	Min	Typical	Max	Unit
V <sub>CC</sub>	V <sub>CC</sub>	Supply voltage	3.5	4	5.5	V
T <sub>A</sub>	-	Operation Temperature	0	25	85	°C

## DC Electrical Characteristics

(T<sub>A</sub> = 0 ~ 85°C, unless otherwise noted)

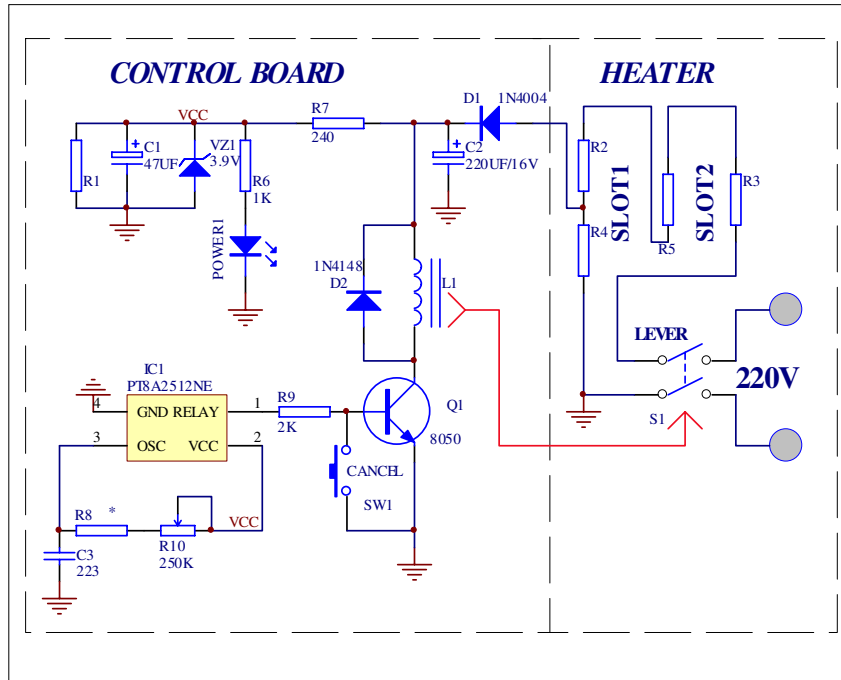
Symbol	Description	Test Conditions	Min	Typical	Max	Unit
I <sub>OH</sub>	Output source current	V <sub>CC</sub> = 3.5V, V <sub>OH</sub> =2.0V	-12	-	-	mA
I <sub>OL</sub>	Output sink current	V <sub>CC</sub> = 3.5V, V <sub>OL</sub> =0.5V	0.5	-	-	mA
F <sub>OSC</sub>	Frequency of oscillator	V <sub>CC</sub> = 4.0V R <sub>osc</sub> =56K, C <sub>osc</sub> =223	952	1024	1096	Hz

## AC Electrical Characteristics

(T<sub>A</sub> = 0 ~ 85°C, unless otherwise noted)

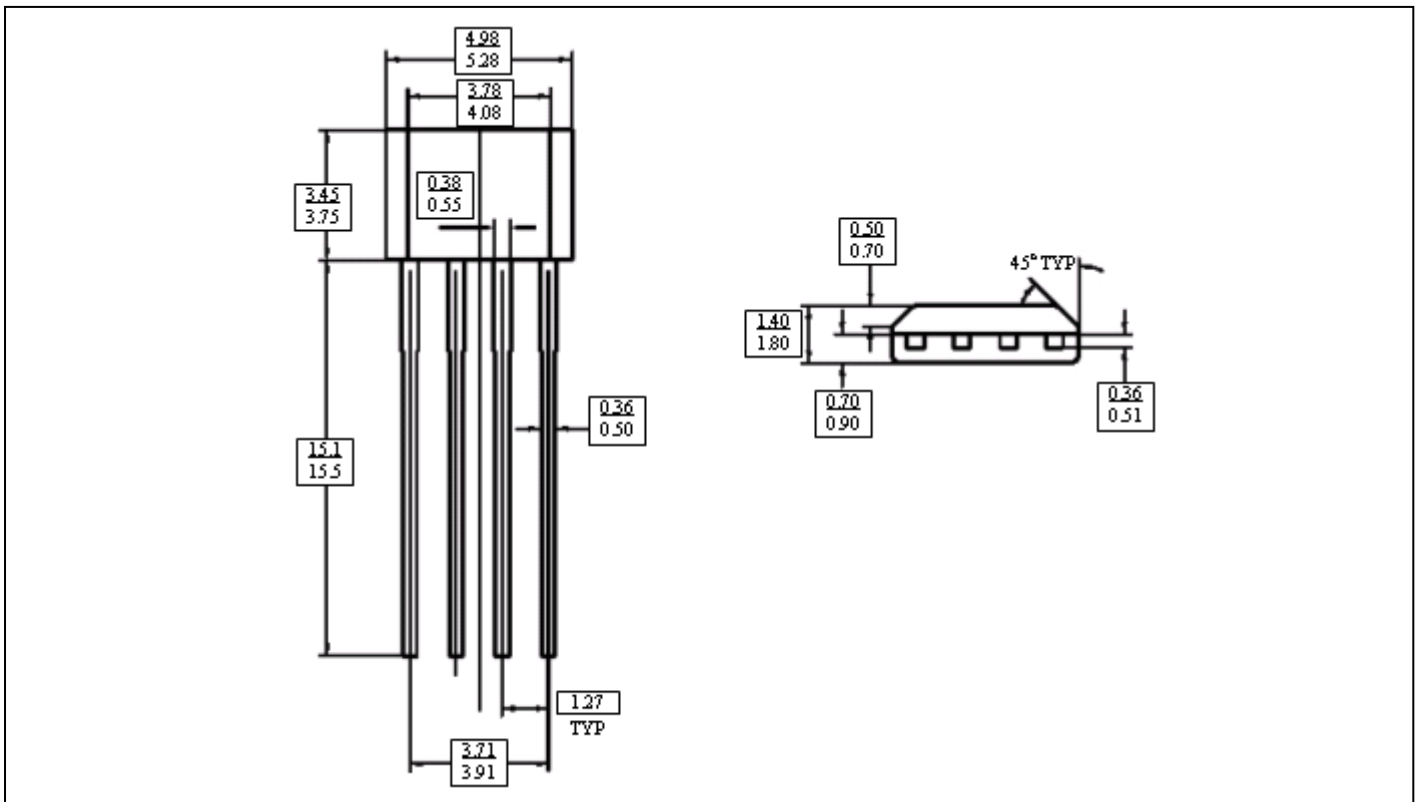
Symbol	Description	Test Conditions	Min	Typical	Max	Unit
I <sub>CC</sub>	Current consumption	V <sub>CC</sub> = 4.0V R <sub>osc</sub> =56K, C <sub>osc</sub> =223	-	-	100	uA

**Application Circuit**



**Mechanical Information**

TO-94





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**Notes**

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