

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.

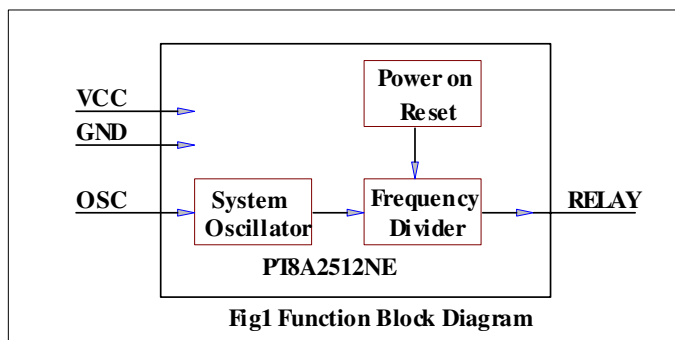
Ordering Information

| Part Number | Package |
|-------------|-----------------|
| PT8A2512NE | Lead free TO-94 |

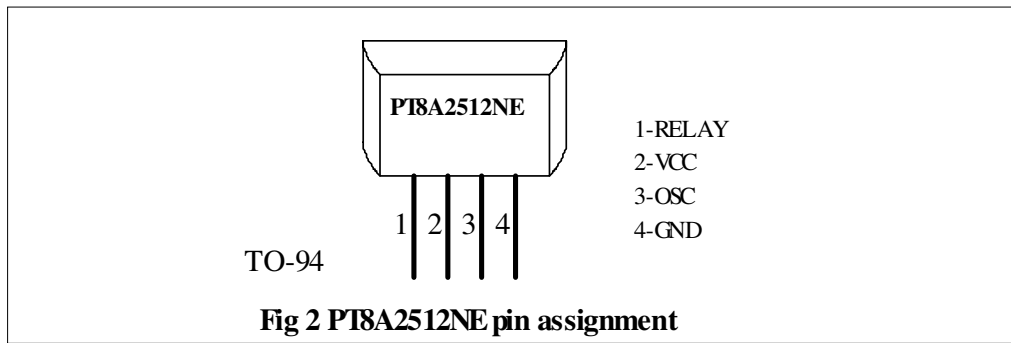
Applications

- 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 _{CC} 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 _{CC} | V _{CC} | Supply voltage | 3.5 | 4 | 5.5 | V |
| T _A | - | Operation Temperature | 0 | 25 | 85 | °C |

DC Electrical Characteristics

(T_A = 0 ~ 85°C, unless otherwise noted)

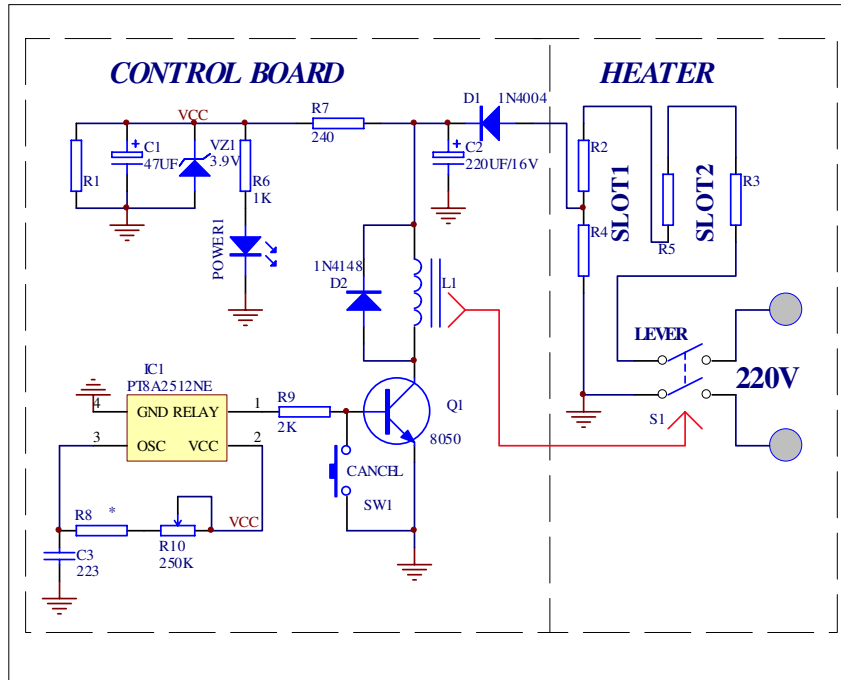
| Symbol | Description | Test Conditions | Min | Typical | Max | Unit |
|------------------|-------------------------|---|-----|---------|------|------|
| I _{OH} | Output source current | V _{CC} = 3.5V, V _{OH} =2.0V | -12 | - | - | mA |
| I _{OL} | Output sink current | V _{CC} = 3.5V, V _{OL} =0.5V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

AC Electrical Characteristics

(T_A = 0 ~ 85°C, unless otherwise noted)

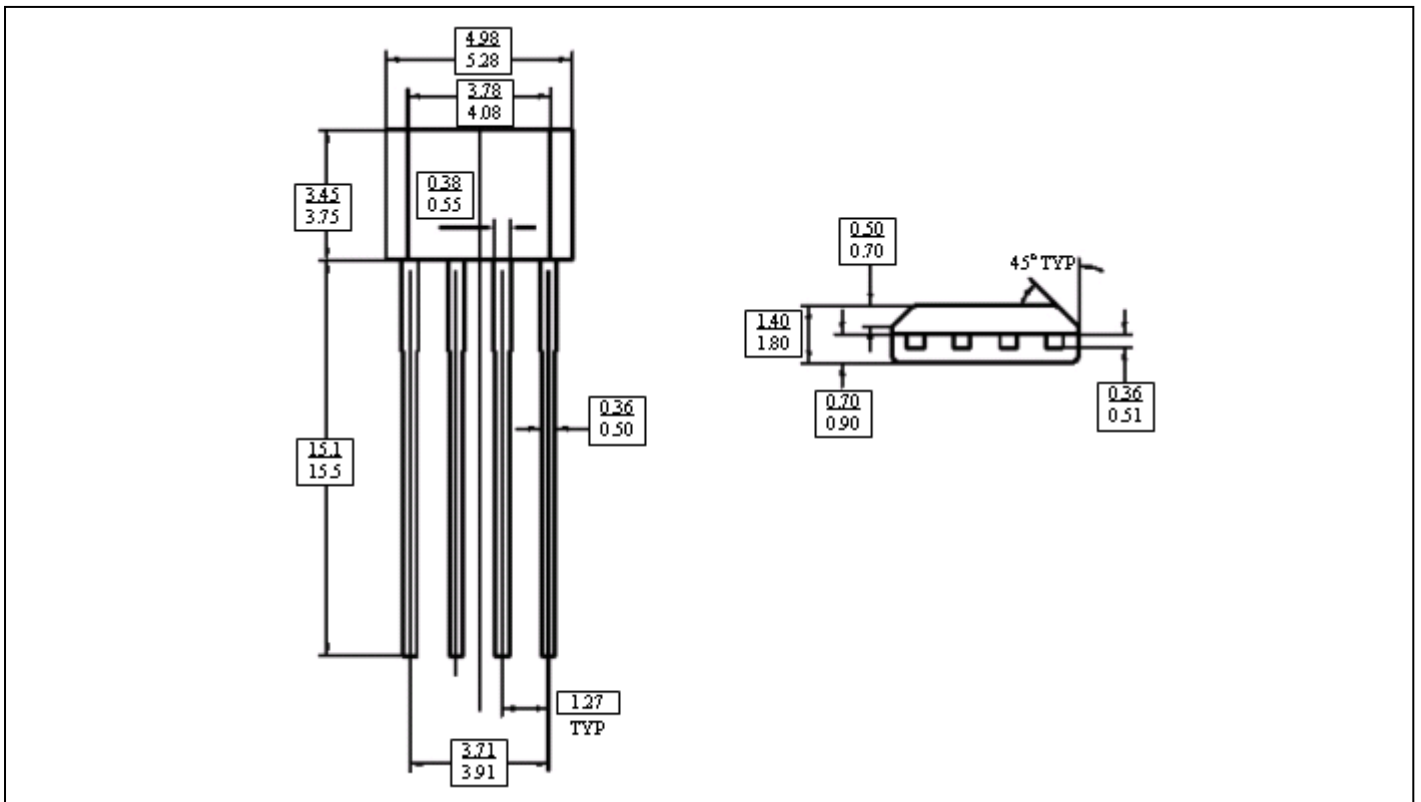
| Symbol | Description | Test Conditions | Min | Typical | Max | Unit |
|-----------------|---------------------|---|-----|---------|-----|------|
| I _{CC} | Current consumption | V _{CC} = 4.0V R _{osc} =56K, C _{osc} =223 | - | - | 100 | uA |

Application Circuit



Mechanical Information

TO-94



Notes

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