

Simple Toaster Controller

Features

- Operating voltage : 3.5~5.5V
- Few external components
- No start to turn on Relay without oscillation.
- TO94-4 package

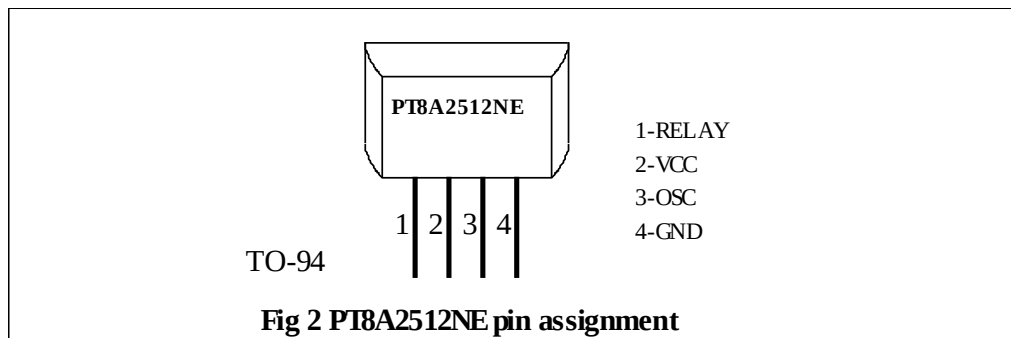
Description

The PT8A2512 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.

Applications

- Toaster.

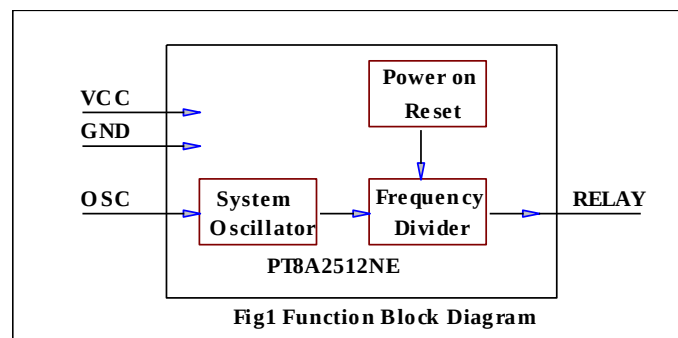
Pin Assignment



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

Block Diagram



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

Function Description

System oscillator and Frequency divider

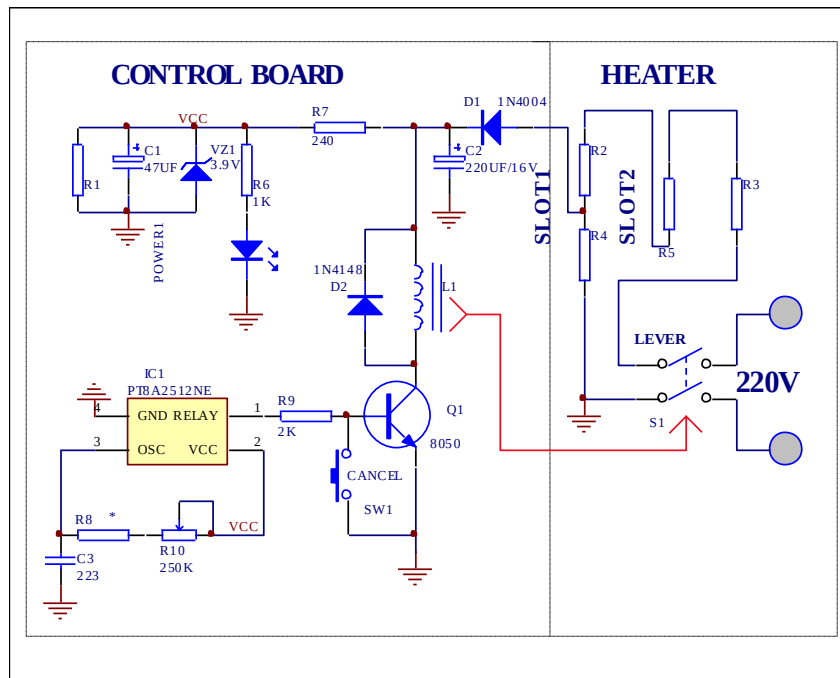
It provides one-stop timer for Toaster after power on.

In general, $F_{osc}=1\text{KHz}$, RELAY will shut down after 30s.

Power on reset

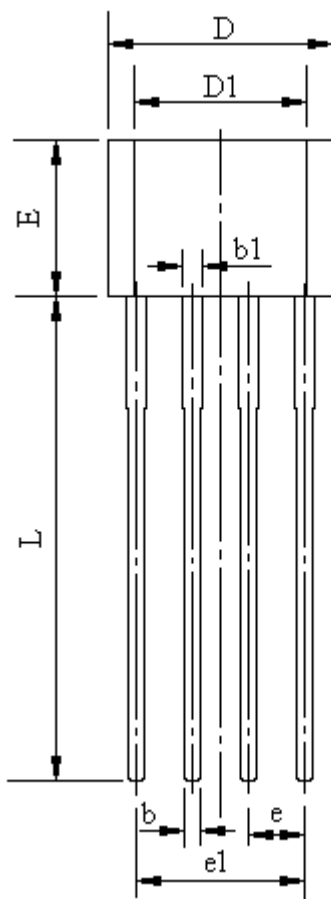
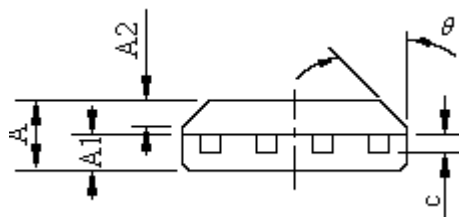
Used to reset internal logic

Application Circuit



Mechanical Information

TO94-4



PKG. DIMENSIONS(MM)		
SYMBOL	MIN	MAX
A	1.40	1.80
A1	0.70	0.90
A2	0.50	0.70
b	0.36	0.50
b1	0.38	0.55
c	0.36	0.51
D	4.98	5.28
D1	3.78	4.08
E	3.45	3.75
e	1.27 BSC	
e1	3.71	3.91
L	14.90	15.30
θ	45° BSC	

Note:

1) Controlling dimensions in millimeters.

Ordering Information

Part Number	Package Code	Package
PT8A2512NE	N	Lead free TO94-4

Note:

- E = Pb-free
- Adding X Suffix= Tape/Reel

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