Ceramic Heating Controller (LCD)

Features

- High watt density Alumina Heaters
- Pulse trigger with high current for SCR
- Quickly Heat-Up and Quickly Lost-Heat Recover
- External adjustable to fit wide range heating plates
- External adjustable to fit TCR of sensors
- Full temperature compensation and insensitive to environment temperature
- Internal zener
- 11 heat temperature settings
- Auto power off for PT8A3351/3/5/7
- Backlights for indicating work status
- LCD screen for showing temperature setting
- Dual Temperature (Fahrenheit/Centigrade) Display
- Wet function: It will keep heating on state to level 2.
- Dual voltage (120V/240V) operations.
- Support 3 keys, on/off, up and down
- SOIC-24, QFN-24 and TSSOP-24 package

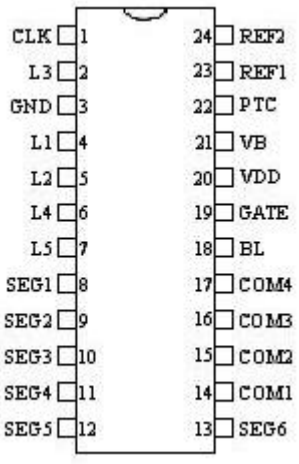
Description

The PT8A335xA/B is special designed for ceramic heating control with 11 temperature levels(show as below function comparison table). It can drive SCR directly and detect heater temperature by heater-self without extra temperature sensor. It has 3 keys for function setting. LCD displays and backlight indicate the working status. Build-in timer will be auto-power off after power on 1 hour for 60Hz or 1.2 hour for 50Hz.

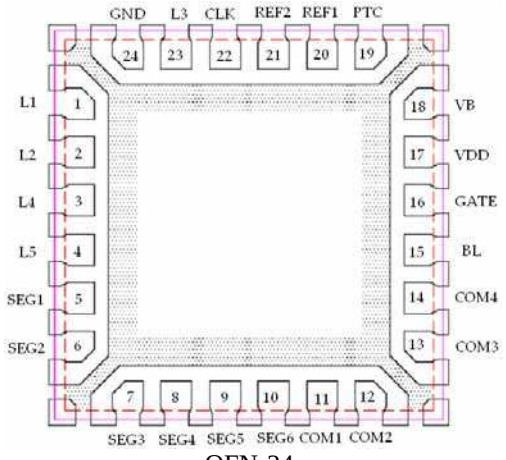
Applications

- Ceramic heating controller

Pin Configuration



SOIC-24/TSSOP-24

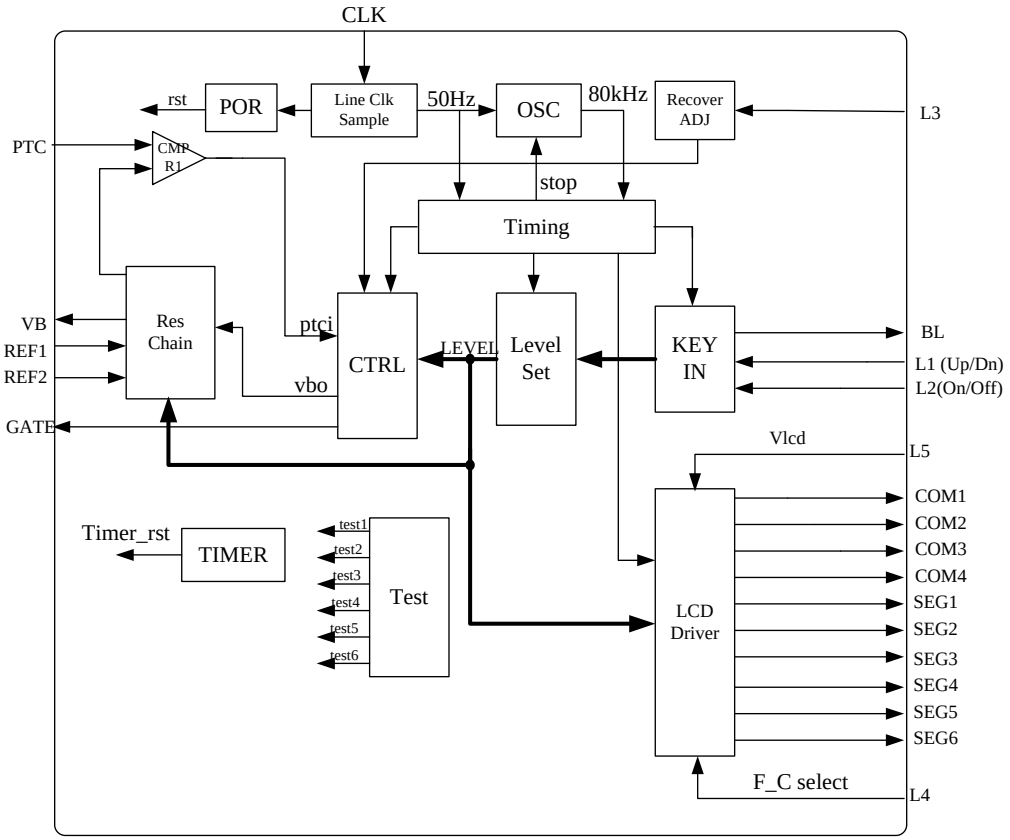


QFN-24

Pin Description

Name	Pin No.		Type	Description
	SOIC-24/TSSOP-24	QFN-24		
CLK	1	22	I	Clock input from power line and Detect operation voltage.
L3	2	23	I	Input to adjust Recovery Rate.
L1	4	1	I	Power on/off key inputs
L2	5	2	I	Up and down key inputs.
L4	6	3	I	High: LCD shows °F, Low : LCD shows °C.
L5	7	4	I	Supply LCD power.
SEG1,SEG2, SEG3,SEG4, SEG5,SEG6,	8,9,10,11,12,13	5,6,7,8,9,10	O	LCD digits control output.
COM1,COM 2, COM3,COM 4	14,15,16,17	11,12,13,14	O	LCD digits control output.
BL	18	15	O	Drive LCD backlight
GATE	19	16	O	SCR trigger output, active high
VB	21	18	O	PTC sampling power source
PTC	22	19	I	Temperature sensor input
REF1	23	20	I	Reference 1 for internal comparator
REF2	24	21	O	Reference 2 for internal comparator
GND	3	24	Power	Ground and Power
VDD	20	17		

Block Diagram



Maximum Ratings

Storage Temperature	-55°C to +150°C
Ambient Temperature with Power applied	-20°C to +85°C
Supply Voltage to Ground Potential (Input & V_{DD} Only)	-0.5V to+6.5V
Supply Voltage to Ground Potential (Output s Only)	-0.5V to+6.5V
DC Input Voltage	-0.5V to +6.5V
Input/Output Current	50mA
Input/Output Current (Pin VDD, VB only)	200mA
Power Dissipation	500mW

Note:
Stresses greater than those listed under MAXIMUM 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 operation conditions

Sym	Parameter	Pin	Min	Typ	Max	Unit
V_{DD}	Operating Voltage	VDD	4.0	-	Vz	V
T_A	Operating temperature	-	-20	-	85	°C