

Features

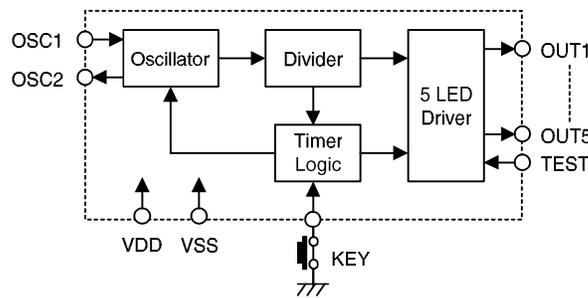
- CMOS Metal-Gate process technology
- Operating voltage: 1.2V~4.5V
- Low stand-by current: 1 μ A at 3V (Typ.)
- A five lamps and LED driver with a 10mA driving capability
- Over 15sec output time

General Description

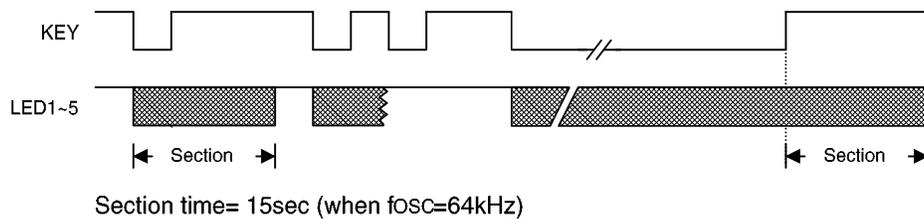
The HT2052 is a low cost, low-power CMOS LSI chip designed for lamps and LED drivers. It contains five concurrent outputs with a 10mA

driving capability when press KEY. The chip requires only one external resistor for normal applications.

Block Diagram

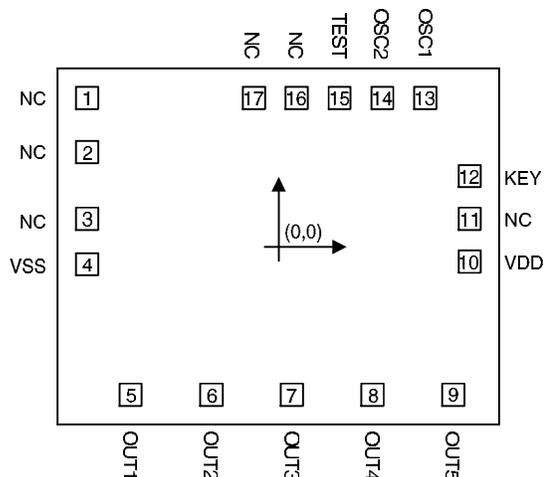


KEY Function



Pad Coordinates

Unit: mil



Pad No.	X	Y	Pad No.	X	Y
1	-32.26	24.91	10	32.26	-2.72
2	-32.26	15.81	11	32.26	4.51
3	-32.26	4.51	12	32.26	11.73
4	-32.26	-3.14	13	24.78	24.91
5	-24.91	-25.20	14	17.55	24.91
6	-11.31	-25.20	15	10.33	24.91
7	2.30	-25.20	16	3.10	24.91
8	15.90	-25.20	17	-4.12	24.91
9	29.50	-25.20			

 Chip size: $76 \times 62 \text{ (mil)}^2$

* The IC substrate should be connected to VDD in the PCB layout artwork.

Pad Description

Pad No.	Pad Name	I/O	Description
1~3, 11 16~17	—	—	Not connected
4	VSS	I	Negative power supply, GND
5	OUT1	O	Lamp/LED drive output
6	OUT2	O	Lamp/LED drive output
7	OUT3	O	Lamp/LED drive output
8	OUT4	O	Lamp/LED drive output
9	OUT5	O	Lamp/LED flash drive output
10	VDD	I	Positive power supply
12	KEY	I	It drive five concurrent Lamp/LED outputs when press KEY
13	OSC1	I	Oscillator input
14	OSC2	O	Oscillator output
15	TEST1	I/O	For IC test only

Absolute Maximum Ratings*

Supply Voltage -0.3V to 5V Storage Temperature..... -50°C to 125°C
 Input/Output Voltage $V_{SS}-0.3V$ to $V_{DD}+0.3V$ Operating Temperature..... -25°C to 75°C

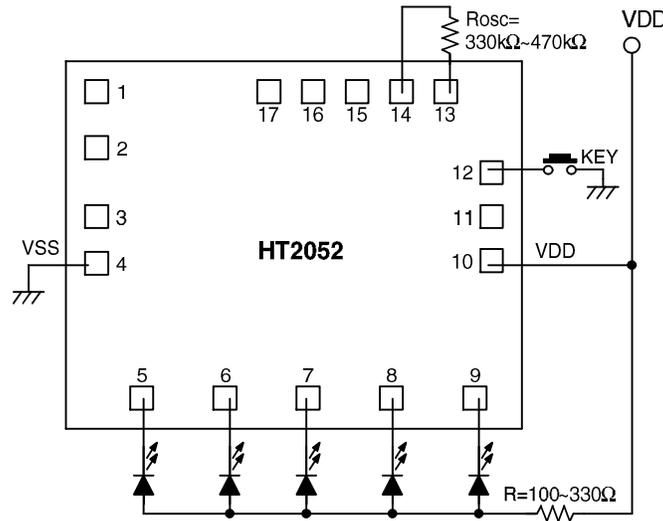
*Note: Stresses above those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only. Functional operation of this device at these or any other conditions above those indicated in the operational sections of this specification is not implied and exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Electrical Characteristics

($T_a=25^\circ C$)

Symbol	Parameter	Test Condition		Min.	Typ.	Max.	Unit
		VDD	Condition				
VDD	Operating Voltage	—	—	1.2	3	4.5	V
I _{STB}	Standby Current	3V	—	—	1	2	μA
I _{DD}	Operating Current	3V	No load, F _{OSC} =64kHz	—	15	30	μA
I _{OL}	Output Sink Current	1.5V	V _{OL} =0.15V	5	8	—	mA
		3V	V _{OL} =0.3V	10	15	—	mA
F _{OSC}	Oscillator Frequency	3V	R=330~470kΩ	—	64	—	kHz

Application Circuit



* The IC substrate should be connected to VDD in the PCB layout artwork.