

HK612

TOUCH DIMMER IC

LIGHT CONTROL WITH 4 SECTIONS

Features

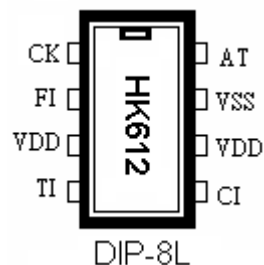
- * No mechanically switch elements.
- * High sensitivity and stability for long connecting wire and heavy loading (400pf) on sense-plate for human body capacity = 50pf.
- * Very small number of peripheral components required.

General Description

The HK612 IC is a kind of CMOS technology permitted to design 4 steps touch-dimmer. The detailed functions are as follow :

STEPS	BRIGHTNESS DELAY (60Hz)	BRIGHTNESS DELAY (50Hz)
Off		
↓		
Night Light	5.9 +/- 0.4 mS	7.0 +/- 0.4mS
↓		
Mood Light	4.6 +/- 0.3 mS	4.7 +/- 0.3mS
↓		
Medium Light	3.0 +/- 0.3 mS	3.5 +/- 0.3mS
↓		
High Light	1.0 +/- 0.2 mS	1.0 +/- 0.2mS
↓		
Off		

PinOut Diagram



Pin Assignment

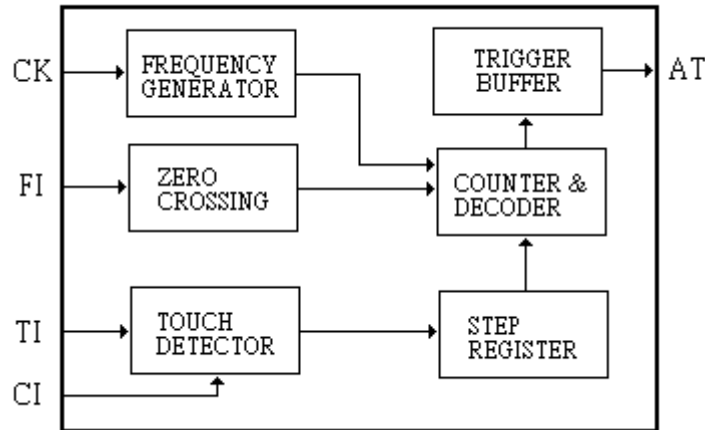
PIN NO	PIN NAME	DESCRIPTION	I/O
1	CK	Clock Input	I
2	FI	60 Or 50 Hz Line Frequency	I
3	VDD	Power Supply Pin	P
4	TI	Touch Input	B
5	CI	Sense Control Input	B
6	VDD	Power Supply Pin	P
7	VSS	Power Supply Pin	P
8	AT	Angle-Trigger Output	O

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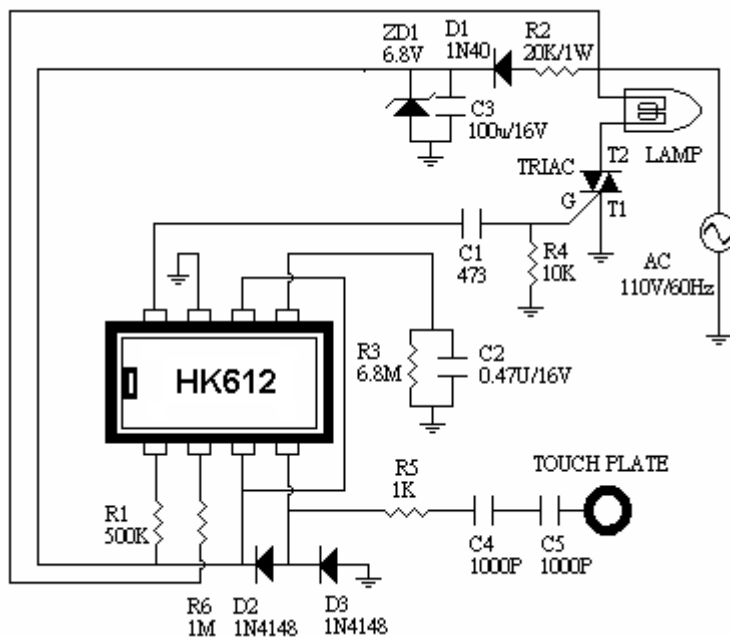
Block Diagram



Operating Parameter :

- (1) Operating Voltage : 5 - 6.8 V
- (2) Operating Current : ≤ 2.0 mA
- (3) Trigger Sinking Current
AT Pin ≤ -40 mA ($V_{out} = 3v$)
- (4) Input Leakage : ≤ 0.5 μ A
- (5) Input Low Voltage : $\leq V_{SS} + 0.5$ V
- (6) Input High Voltage : $\geq V_{DD} - 0.5$ V
- (7) Operating Temperature : $0^{\circ}C \sim 80^{\circ}C$
- (8) Storage Temperature : $-20^{\circ}C \sim 120^{\circ}C$

Application Circuit



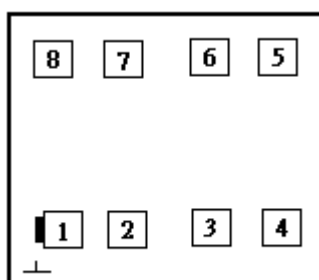
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POWER SUPPLY (AC / F)	100V ~ 120V	220V ~ 240V	50Hz	60Hz
R1	-----	-----	620K	500K
R2	20K/1W	40K/2W	---	---
R6	1M	1.5M	---	---

Pad Diagram



CHIP SIZE : 800 x 810 um*um

PIN NAME	PIN NO.	X	Y
CK	1	-264.70	-274.00
FI	2	-133.20	-274.00
VDD	3	128.40	-274.00
TI	4	254.00	-274.00
CI	5	245.00	274.00
VDD	6	113.20	274.00
VSS	7	-82.20	274.00
AT	8	-248.20	274.00