

Capacitive Touch Sensor

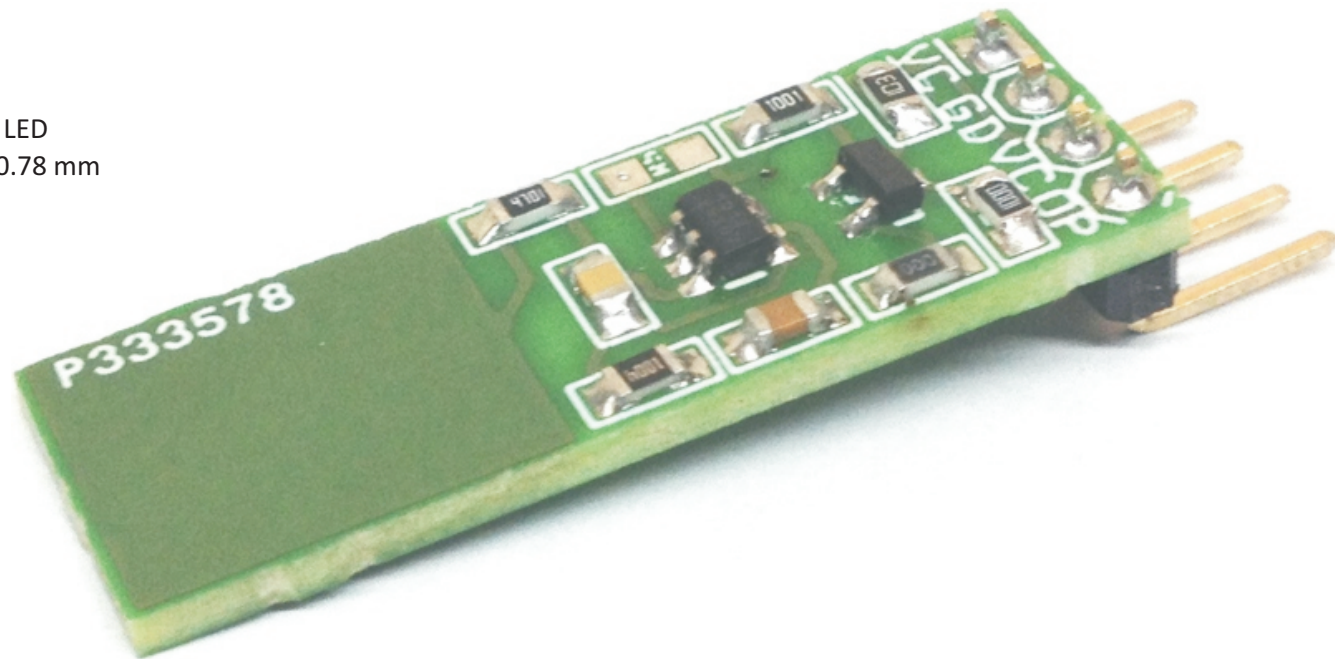
Touch sensors are finding their way into many applications, from remote controls LED light controls and appliance control panels. This is simple solution to replace the Mechanical buttons can be implemented in wide variety of applications. The sensor provides great user experience. It is easy and more convenient to use without moving mechanical parts. The circuit consumes very low current. Circuit has been designed using AT42QT1012 IC from microchip. The IC has many features. The circuit shown here is just Touch On/Off Toggle switch, Read data sheet of the IC to use timer function. The circuit provides TTL toggle Output which can be interface to Micro-controllers or BC847 at output is capable to drive 5MM white LED. Use Output Pin and VCC pin to connect 5MM LED. Small Pad on PCB helps to detect the finger touch.

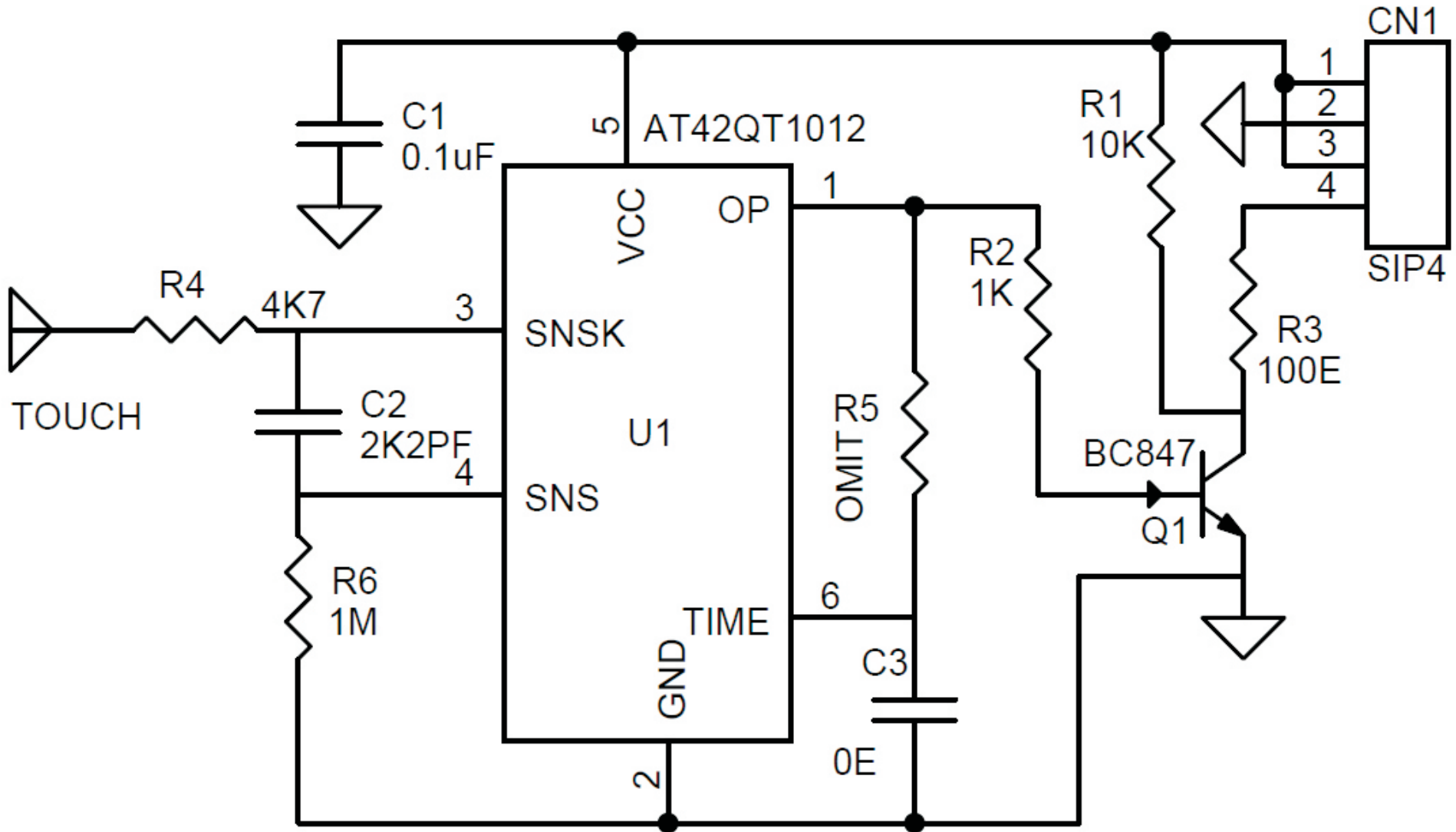
The AT42QT1012 is a single key device featuring a touch on/touch off (toggle) output with a programmable auto switch-off capability. The device is One-channel Toggle-mode QTouch® Touch Sensor IC with Power Management Functions. The QT1012 features a digital burst mode charge-transfer sensor designed specifically for touch controls and a unique “green” feature - the timeout function, which can turn off power after a time delay.

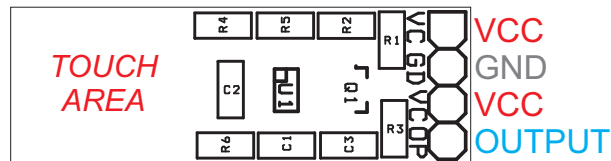
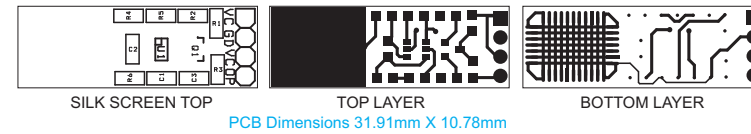
Note: R5 and C3 components are optional can be used for timer operations, refer data sheet of more details. C3 replace with 0 Ohms resistor for normal toggle option.

Features

- Supply 5V DC
- Output TTL (Toggle)
- Output Can drive 5MM White LED
- PCB Dimensions 31.91mm x 10.78 mm







BOM			
SR.	QNTY.	REF.	DESC.
1	1	ANT1	TOUCH AREA ON PCB
2	1	CN1	4 PIN HEADER CONNECTOR
3	1	C1	0.1uF SMD 0805
4	1	C2	2K2PF SMD 0805
5	1	C3	0E SMD 0805 0 OHMS
6	1	Q1	BC847 SMD
7	1	R1	10K SMD 0805
8	1	R2	1K SMD 0805
9	1	R3	100E SMD 0805
10	1	R4	4K7 SMD 0805
11	1	R5	OMIT
12	1	R6	1M SMD 0805
13	1	U1	AT42QT1012