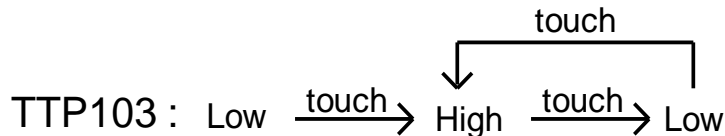


## TTP103 PRODUCT SPECIFICATION

GENERAL DESCRIPTION :

TTP103 IC IS A KIND OF CMOS TECHNOLOGY PERMITTED TO DESIGN TOGGLE OUTPUT.  
THE DETAILED FUNCTIONS ARE AS FOLLOW :



PIN ASSIGNMENT

PIN NO.	PIN NAME	FUNCTION DESCRIPTION	I/O
1	CK	SYSTEM CLOCK INPUT	I
2	FI	60 OR 50 HZ LINE FREQUENCY	I
3	VDD	POWER INPUT PIN FOR VDD	P
4	TI	TOUCH INPUT	B
5	CI	SENSOR CONTROL INPUT	B
6	NC		
7	VSS	POWER INPUT PIN FOR VSS	P
8	AT	TOGGLE OUTPUT	O

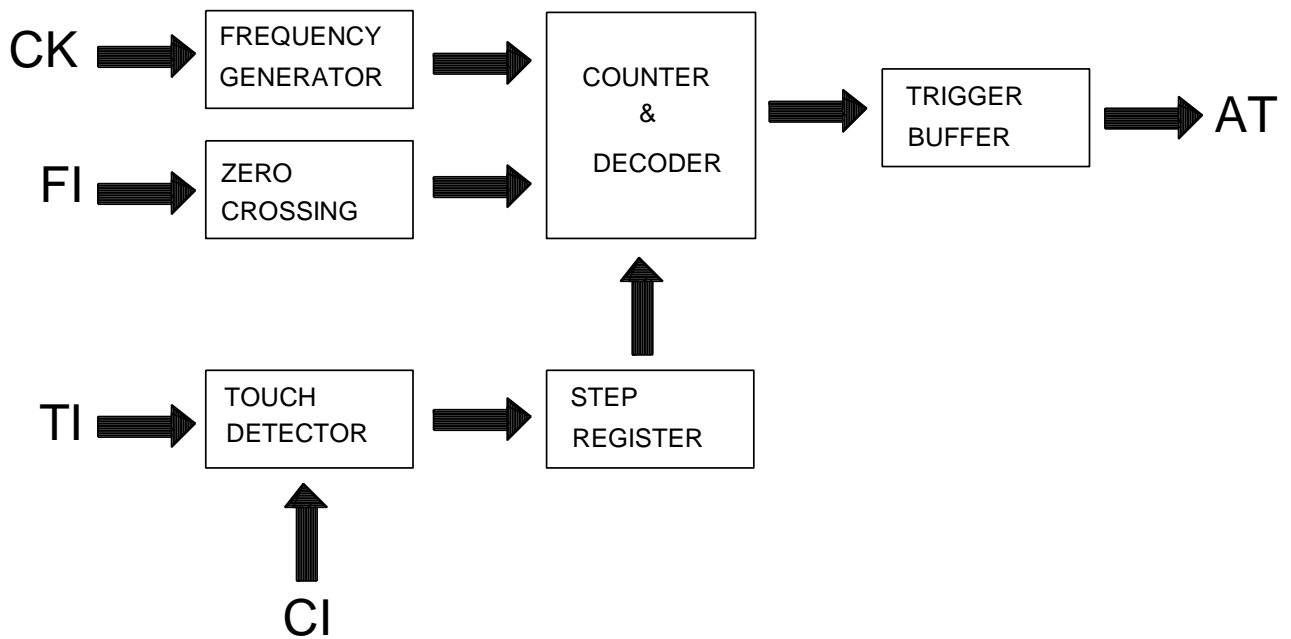
FEATURES :

1. NO MECHANICALLY SWITCH ELEMENTS.
2. HIGH SENSITIVITY AND STABILITY FOR LONG CONNECTING WIRE AND HEAVY LOADING (800pf) ON SENSE-PLATE FOR HUMAN BODY CAPACITY = 50pf
3. VERY SMALL NUMBER OF PERIPHERAL COMPONENTS REQUIRED

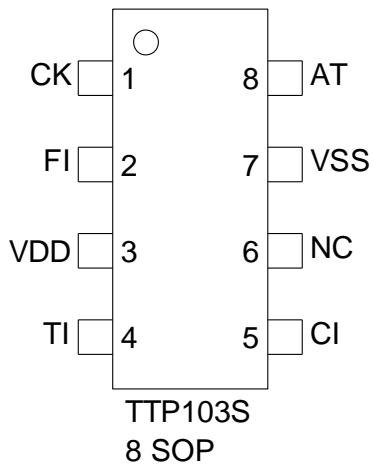
OPERATING PARAMETER :

1. OPERATING VOLTAGE(VDD) : 6.8 V
2. OPERATING CURRENT :  $\leq 1.0$  mA
3. TRIGGER OUTPUT CURRENT (AT PIN) :  $\leq -30$  mA ( $V_{out}=1.0V$ )
4. INPUT LEAKAGE :  $\leq 0.5$   $\mu A$
5. VOLTAGE INPUT RANGE : (VSS - 0.3V) <-> (VDD + 0.3V)
6. OPERATING TEMPERATURE : 0°C ~ 80°C
7. STORAGE TEMPERATURE : -20°C ~ 120°C

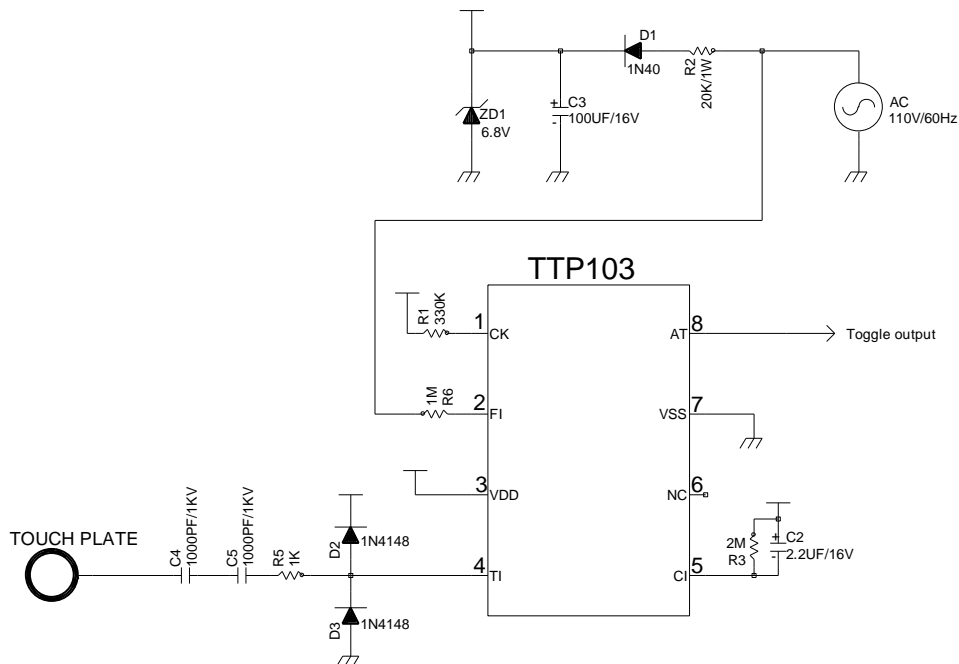
**TTP103 BLOCK DIAGRAM**



**Pin Assignment**

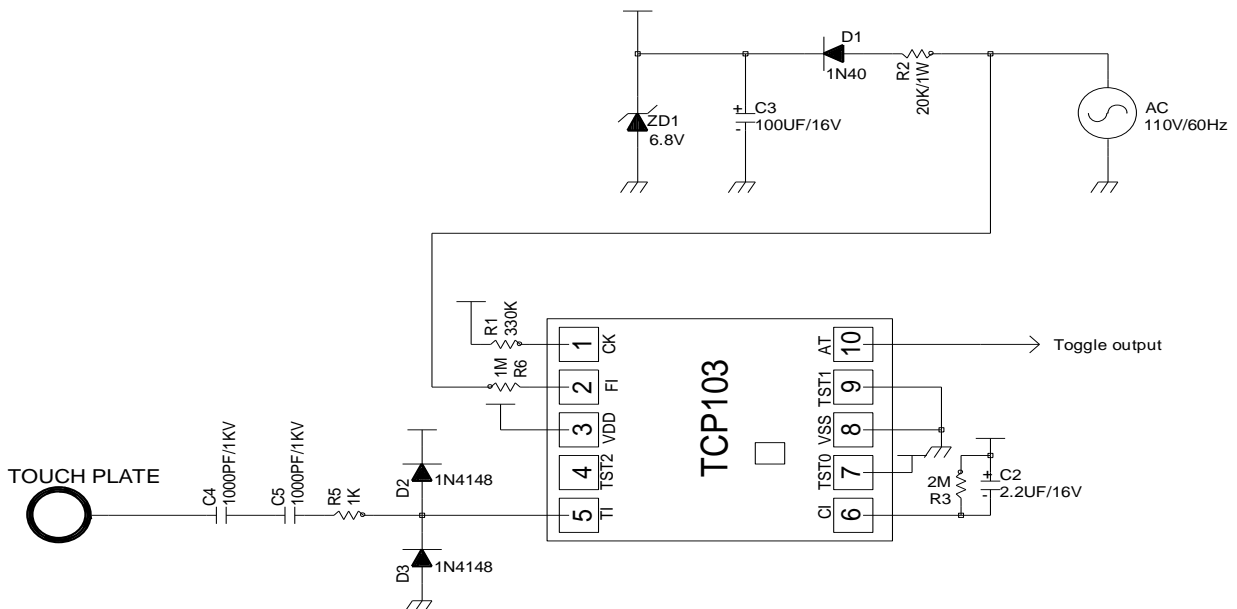


### TTP103 RECOMMEND APPLICATION DIAGRAM



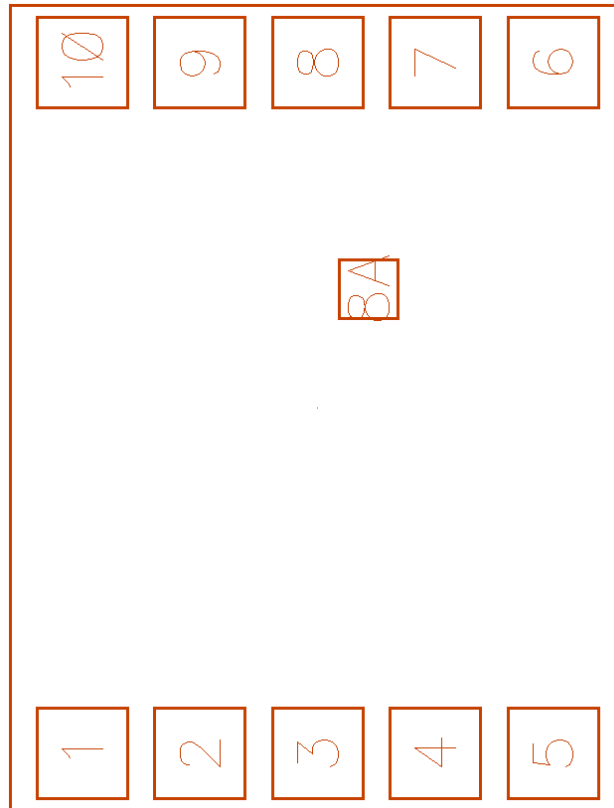
NOTE : FOR 220V/50HZ :  
 CHANGE R1 330K TO 390K ( FOR 60HZ CHANGE TO 50HZ )  
 CHANGE R2 20K/1W TO 39K/2W ( FOR 110V CHANGE TO 220V )  
 CHANGE R6 1M TO 2M ( FOR 110V CHANGE TO 220V )

### TCP103 RECOMMEND APPLICATION DIAGRAM



NOTE : FOR 220V/50HZ :  
 CHANGE R1 330K TO 390K ( FOR 60HZ CHANGE TO 50HZ )  
 CHANGE R2 20K/1W TO 39K/2W ( FOR 110V CHANGE TO 220V )  
 CHANGE R6 1M TO 2M ( FOR 110V CHANGE TO 220V )

**TCP103 Pad diagram and coordinate**



CHIP SIZE = 690um X 880um

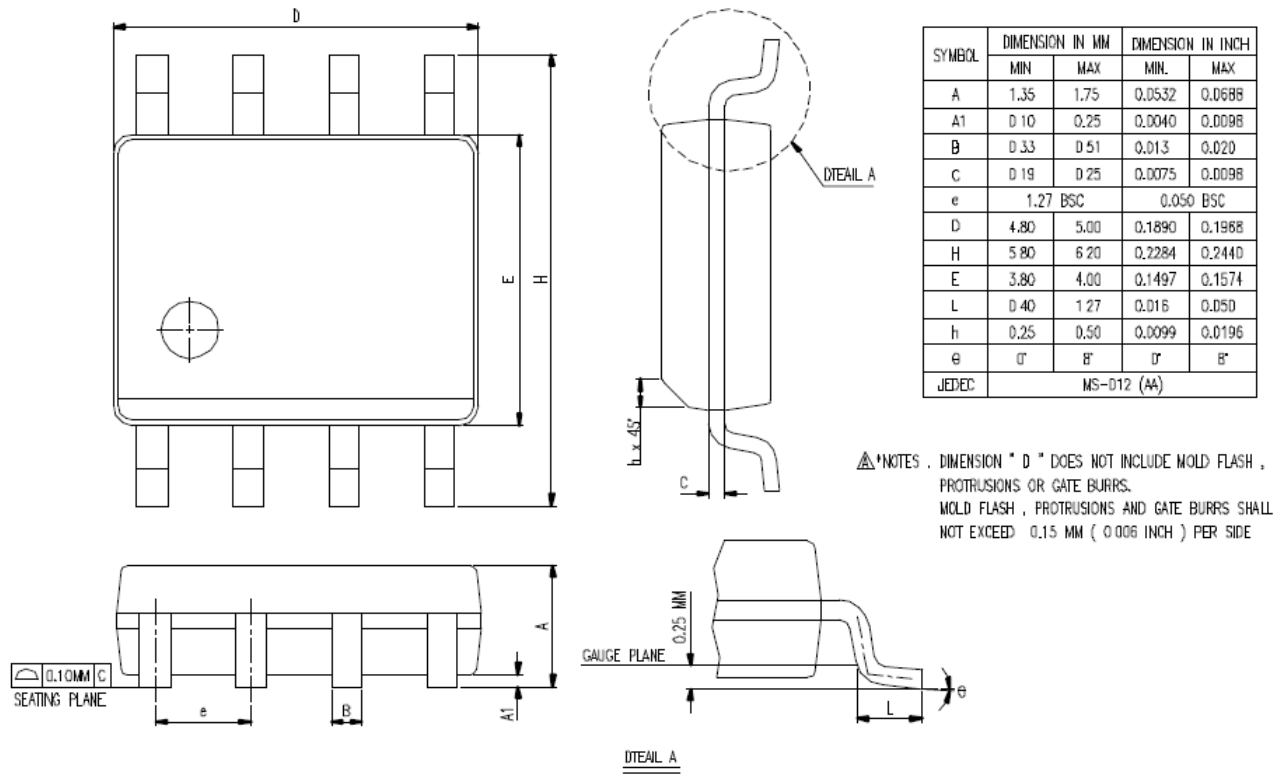
```
*****
PIN   PIN
NO.   NAME      X=      Y=
*****
```

1	CK	X= -244.00	Y= -343.30
2	FI	X= -122.00	Y= -343.30
3	VDD	X= 0.00	Y= -343.30
4	TST2	X= 122.00	Y= -343.30
5	TI	X= 244.00	Y= -343.30
6	CI	X= 244.00	Y= 343.25
7	TST0	X= 122.00	Y= 343.25
8	VSS	X= 0.00	Y= 343.25
9	TST1	X= -122.00	Y= 343.25
10	AT	X= -244.00	Y= 343.25

```
*****
```

## Package Information

### 8-pin SOP (150mil) Outline Dimensions



**ORDER INFORMATION**

- a. Package form: TTP103
- b. Chip form: TCP103
- c. Wafer base: TDP103

**REVISE HISTORY**

- 1. 2009/05/11
  - Original version : V\_1.0
- 1. 2014/06/11 → V\_1.1
  - Add TTP103S(SOP-8) package outline diagram