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## GPM8F372A SIX INPUT CAPACITIVE TOUCH

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### 1. General Description

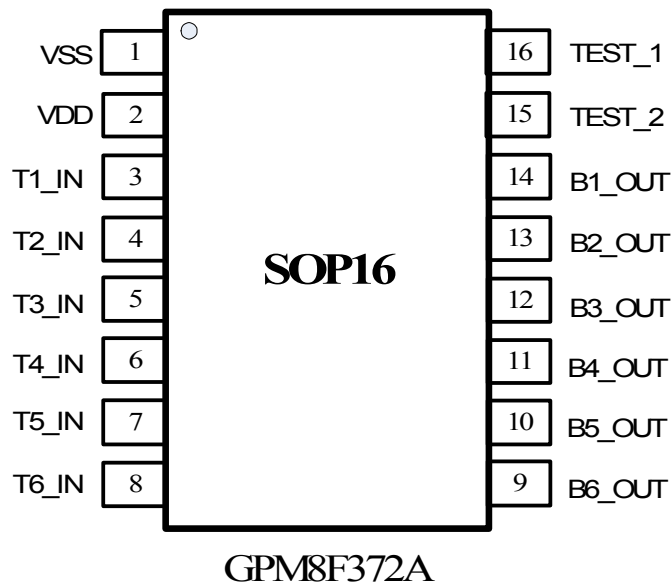
GPM8F372A is a capacitive touch sensor with SOC integrated serving as a detecting the change which examine the electric capacity and forming it to export through judging.

### 2. Features

- Internal oscillator 16MHz  $\pm 2\%$
- I/O port with 12mA current sink or drive
- 6 Input capacitive touch key whit 6 output
- Three mode output mode
- Support G+ TouchMagician tools. User smart.
- High noise immunity

### 3. GPM8F372A Pin Configuration

#### 3.1 Pin Assignment

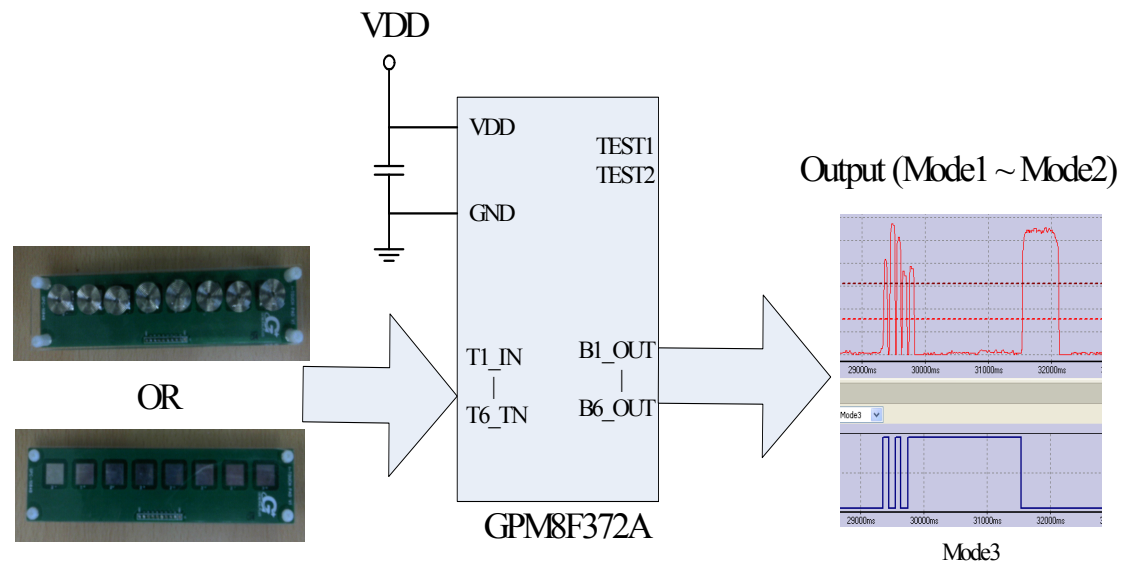


### 3.2 Pin Description

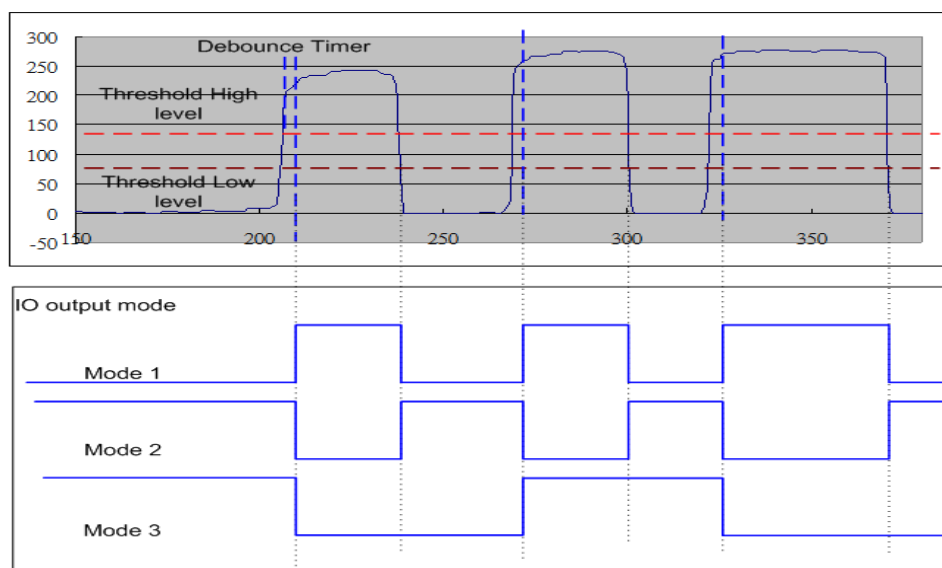
SOP16:

Pin No	Name	Type	Description
1	VSS	PWR	System ground
2	VDD	PWR	System Power
3	T1_IN	I	Capacitive touch sensor input pin1
4	T2_IN	I	Capacitive touch sensor input pin2
5	T3_IN	I	Capacitive touch sensor input pin3
6	T4_IN	I	Capacitive touch sensor input pin4
7	T5_IN	I	Capacitive touch sensor input pin5
8	T6_IN	I	Capacitive touch sensor input pin6
9	B6_OUT	O	Output pin6
10	B5_OUT	O	Output pin5
11	B4_OUT	O	Output pin4
12	B3_OUT	O	Output pin3
13	B2_OUT	O	Output pin2
14	B1_OUT	O	Output pin1
15	TEST2	I/O	Test2 pin of download registor
16	TEST1	I/O	Test1 pin of download registor

### 3.3 Application circuit



## Output mode selection



## 4. Application Specification

DC Characteristics (VDD = 5V, TA = 25°C)

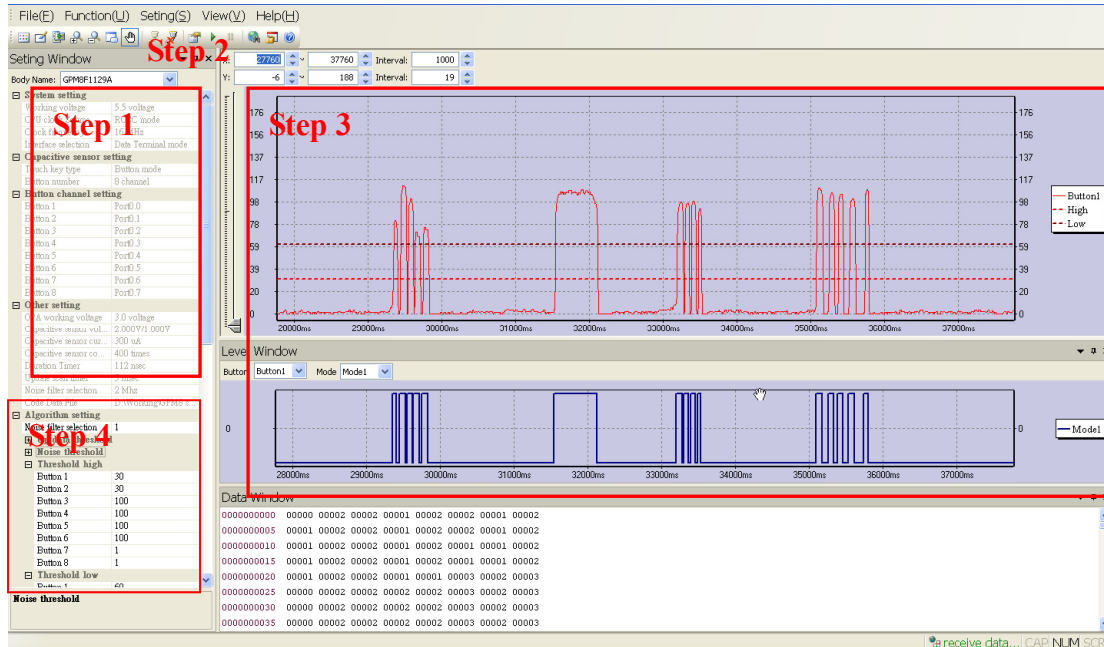
Characteristics	Symbol	Limit			Unit	Condition
		Min.	Typ.	Max.		
Operating Voltage	VDD	3.5	5	5.5	V	
Operating Current	IOP	-	5	8	mA	FCPU = 16MHz @ 5.0V, no load
Standby Current	ISTBY			8.0	uA	VDD = 5.0V
Input High Level	VIH	0.7VDD	-	-	V	VDD = 5.0V
Input Low Level	VIL	-	-	0.3VDD	V	VDD = 5.0V
Output High Level	VOH	0.8VDD	-	-	V	IOH > -12mA at VDD = 5.0V
Output Low Level	VOL	-	-	0.2VDD	V	IOL > 12mA at VDD = 5.0V

AC Characteristics (TA = 25°C)

Characteristics	Symbol	Limit			Unit	Condition
		Min.	Typ.	Max.		
INOSC Frequency	FOSC	16×(2.0%)	16	16×(2.0%)	MHz	VDD = 3.5~5.5V

## 5. Step by Step

1. Setting H.W Register and sensor scan timer
2. Download setting register to chip
3. Take capacitive touch sensor variation information
4. Setting High/Low level limit and output mode



6. Programming bin file and register setting to IC.