

TTP 23 (Touch Sensors)

1. Capacitive Sensing:

- The TTP223 chip monitors the capacitance of the touchpad.
- When no conductive object is near the sensor, the capacitance remains constant.
- When a finger approaches, the capacitance increases due to the dielectric effect of the finger.
- The chip detects this change and registers it as a touch event.

2. Modes of Operation:

- **Active High Mode:** The output pin goes HIGH (logic 1) when a touch is detected.
- **Active Low Mode:** The output pin goes LOW (logic 0) when a touch is detected.

3. Configuration Options:

- **Toggle Mode:** The output state toggles (ON/OFF) with each touch.
- **Momentary Mode:** The output remains HIGH as long as the touch is detected.
- These modes can be configured using external connections on the TTP223 module.

4. Sensitivity Adjustment:

- The sensitivity of the TTP223 can be adjusted by changing the size of the touchpad or modifying external components like resistors and capacitors.

- **Voltage Range:** Operates typically at 2.0V to 5.5V.
- **Output Type:** Digital output (active HIGH or LOW).
- **Compact Size:** Usually comes on a small PCB with a touch-sensitive area.
- **Applications:**

Touch buttons in home automation.

Keyless switches.

Wearable devices.

