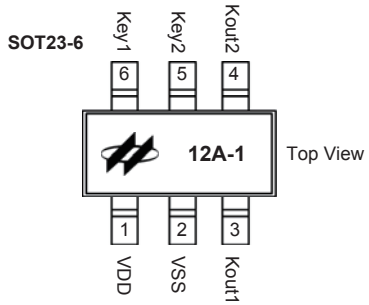
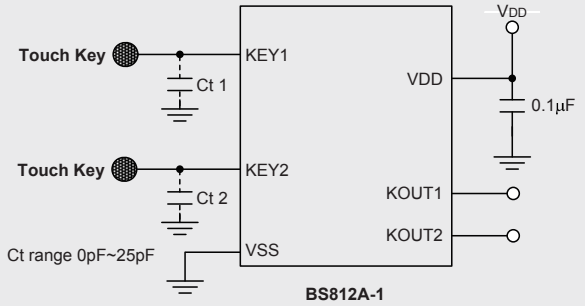
# TOUCH KEY – SERIES BS81x

## PIN ASSIGNMENT – BS812A-1




## EXAMPLE OF APPLICATION – BS812A-1




Note:

1. Ct (C threshold) is used for adjustment of Trigger Threshold. Recommended value: 0~25 pF
2. Ct value can be changed to obtain different sensitivity values. Higher Ct values will result in lower sensitivity levels. (0pF = no Ct)

The **BS81x** is a series of 2~16 key touch key devices which can detect human body contact using external touch pads. The high level of device integration enable applications to be implemented with a minimum number of external components. The BS81x series devices are equipped with serial or parallel interfaces to allow easy communication with an external MCU for device setup and for touch pin monitoring purposes. Special internal circuitry is also employed to ensure excellent power noise rejection toreduce the possibility of false detections, increasing the touch switch application reliability under adverse environmental conditions. With auto-calibration, low standby current, excellent resistance to voltage fluctuation and other features, this range of touch key devices provide a simple and effective means of implementing touch key operation in a wide variety of applications

## FEATURES

- Operating voltage: 2.2V~5.5V
- Low standby current
- Auto-calibration
- Reliable touch detections
- Standby and normal operating modes
- Maximum key on duration time detection
- Adaptive voltage drop function
- Level Hold, selectable active level- low or high
- NMOS output with internal pull-high/CMOS Direct Output
- Both serial interface and parallel outputs
- Sensitivity adjustment using an external capacitor

## SELECTION TABLE

| PART NUMBER | TOUCH KEY | $I_{STB}$ @ 3V | PARALLEL OUTPUTS | SERIAL INTERFACE | AUTO CALIBRATION | PACKAGE |
|---|---|---|---|---|---|---|
| BS812A-1 | 2-Key | 2.0 µA | NMOS (internal pull-high) | × | × | SOT23-6 |
| BS813A-1 | 3-Key | 4.5 µA | | × | × | 8SOP |
| BS814A-1 | 4-Key | 5.0 µA | | × | × | 10MSOP |
| BS814A-2 | 4-Key | 5.0 µA | × | × | × | 8SOP |
| BS816A-2 | 6-Key | 12.0/6.0 µA | NMOS (internal pull-high)/ CMOS-Direct | × | × | 16NSOP |
| BS818A-1 | 8-Key | 12.0/6.0 µA | Binary | × | × | 16NSOP |
| BS8112A-3 | 12-Key | 13.0/3.0 µA | × | I²C | × | 16NSOP |
| BS8116A-3 | 16-Key | 17.0/3.5 µA | × | I²C | × | 20SOP/SSOP |

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