

IQS323

The IQS323 ProxFusion® IC is a 3 Channel Self-Capacitive / 3 Channel Mutual-Capacitive / 2 Channel Inductive sensing controller with Touch and Proximity user interfaces. The device features an I2C communications interface, low power options, wear detection, metal detection and a slider with on-chip gesture calculations.



OVERVIEW

Main Features

- Highly flexible ProxFusion® device
- 3 external sensor pad connections
- Configure multiple channels on external pins (Self/Mutual/Inductive).
- External sensor options:
 - 3 self capacitive buttons
 - Up to 2 wear detection pairs (with shared physical reference)
 - 3 mutual capacitive touch/proximity sensors
 - 2 inductive mode sensors
- Built-in basic functions:
 - Automatic tuning
 - Noise filtering
 - Differential measurements (reference channels)
 - Debounce & Hysteresis
 - Dual direction trigger indication
 - Halt Mode
- Built-in Signal processing options:
 - Touch/Prox output
 - Slider output
 - Gesture output
 - Reference User Interface
 - Release User Interface
- Design simplicity
 - PC Software for debugging & optimal setup for performance
- Automated system power modes for optimal response vs consumption
 - Distributed ultra low power (ULP) mode
- I2C communication interface with IRQ/RDY(up to fast plus - 1MHz)
- Event and streaming modes
- Supply Voltage 1.8V(-5%)to 3.5V
- Package options

- WLCSP11 (1.48 x 1.08 x 0.345 mm) - interleaved 0.35mm x 0.35mm ball pitch
- DFN12 (3 x 3 x 0.75 mm) - 0.5mm pitch

Applications

- TWS earphones
- Waterproof Buttons (Inductive)
- Watches and fitness bands
- Wear Detection
- Low power Wake-up Buttons / Proximity
- SAR Safety Sensor