IQS7222C

The IQS7222C ProxFusion® IC is a sensor fusion device for various multi-button applications. The sensor is fully I2C compatible and on-chip calculations enable the IC to respond effectively even in lowest power modes.

OVERVIEW

Main Features

- Highly flexible ProxFusion® device
- 9 (QFN) / 8 (WLCSP) external sensor pad connections
- Configure up to 10 Channels using the external connections
- External sensor options:
    - Up to 8 self capacitive buttons
    - Up to 4 self capacitive wear detection pairs (with physical reference)
    - Up to 10 projected capacitive touch/proximity sensors
    - Up to 4 inductive sensor elements
- Built-in basic functions:
    - Automatic tuning
    - Noise filtering
    - Differential measurements (reference channels)
    - Debounce & Hysteresis
    - Dual direction trigger indication
- Built-in Signal processing options:
    - Slider output
    - Wheel output
- Design simplicity
    - PC Software for debugging and obtaining optimal settings and performance
    - One-time programmable settings for custom power-on IC configuration
    - Auto-run from programmed settings for simplified integration
- Automated system power modes for optimal response vs consumption
- I2C communication interface with IRQ/RDY(up to fast plus -1MHz)
- Event and streaming modes
- Customizable user interface due to programmable memory
- Supply Voltage 1.8V(-5%)to 3.5V
- Small packages

- WLCSP18 (1.62 x 1.62 x 0.5 mm) - interleaved 0.4mm x 0.6mm ball pitch
- QFN20 (3 x 3 x 0.5 mm) - 0.4mm pitch

Applications

- SAR Compliance in Mobile devices
- Waterproof Buttons (Inductive)
- Wear Detection
- Low power Wake-up Buttons / Proximity
- Appliance user interface (Sliders, Wheels & Buttons)