



MELFAS Inc.

BioPoint™ MCS-8040® Datasheet

Capacitive Touch Screen Sensor IC

Feature Overview

- **Embedded MCU**
 - 32-bit ARM Cortex™ M0+ Processor
 - Wake-up interrupt controller
- **On-chip memory**
 - 48kbytes E-FLASH and 5kBytes SRAM
 - ISC by serial interface, F/W can be updated in systems
- **Proprietary Self-Capacitance Sensor**
 - 40 Capacitive touch sensing channels
 - Compensation scheme for external capacitance condition for each channel
 - Proximity Sensing support up to 25mm (Test condition : 30Φ conducted rod)
 - Available for all sensing channels as GPIO
- **Low power consumption**
 - 2.6V to 3.3V Single supply voltage input
 - Active current : 4.0 mA @ 3.0V, 60Hz
 - Idle current : 2.89 mA @ 3.0V, 30Hz
 - Deep sleep current : < 3uA @ CE is "LOW"
- **Two clock sources**
 - RC feed-back oscillator type
 - Internal main oscillator : 20/80 MHz
 - Internal low-speed oscillator at 1 MHz for Low power mode
- **Communication interface and I/O mode**
 - I²C-compatible for Standard (100kbps) / Fast (400kbps) mode as Slave
 - Available for Open-drain/Push-pull mode on GPIO pins
 - Adjust INTR pin to Open-drain mode
 - Available for CE pin as wake-up function
- **Robust to the noisy environment**
 - Immune to the AC charger noise
- **Package**
 - UQFN 48ld 5×5×0.5T, 0.35mm lead pitch
- **Environmental condition**
 - Operation temperature -30°C to +85°C

Datasheet (REV. 1.0)

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