# 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**
  - $I^2C$-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℃ to +85℃

Datasheet (REV. 1.0)


World Wide Web Site: http://www.melfas.com/english/index.asp
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