

編號：BMA023

內嵌式三軸加速器模組

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圖一 三軸加速器與 CMOS Sensor



圖二 不同角度地介接排針



圖三 BMA023 IC



圖四 BMA023 與 DMA-6410L 開發平台連接

General Description

The BMA023 is a triaxial, low-g acceleration sensor IC with digital output for consumer market applications. It allows measurements of acceleration in three perpendicular axes.

An evaluation circuitry converts the output of a three-channel micromechanical accelerationsensing structure that works according to the differential capacitance principle.

Package and interface have been defined to match a multitude of hardware requirements. Since the sensor IC has small footprint and flat package it is attractive for mobile applications. The sensor IC can be programmed to optimize functionality, performance and power consumption in customer specific applications.

The BMA023 senses tilt, motion and shock vibration in cell phones, handhelds, computer peripherals, man-machine interfaces, virtual reality features and game controllers.

Key Features

- Three-axis accelerometer
- Small package
 - * LGA package
 - * Footprint 3mm x 3mm, height 0.90mm
- Digital interface
 - SPI (4-wire, 3-wire), I²C, interrupt pin
- Programmable functionality

g-range $\pm 2g/\pm 4g/\pm 8g$, bandwidth 25-1500Hz, internal acceleration evaluation for interrupt trigger, self-test

- Ultra-low power ASIC

Low current consumption, short wake-up time, advanced features for system power management

- Support OS : WinCE6.0 , **Android 1.6 / 2.1 (Option)**
- RoHS compliant
- Halogen-free

■ Typical Application

- Menu scrolling
- Tap sensing functionality
- Gaming
- Pedometer, step-counting
- Drop detection for warranty logging
- Display profile switching
- Advanced system power management for mobile applications
- Shock detection

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