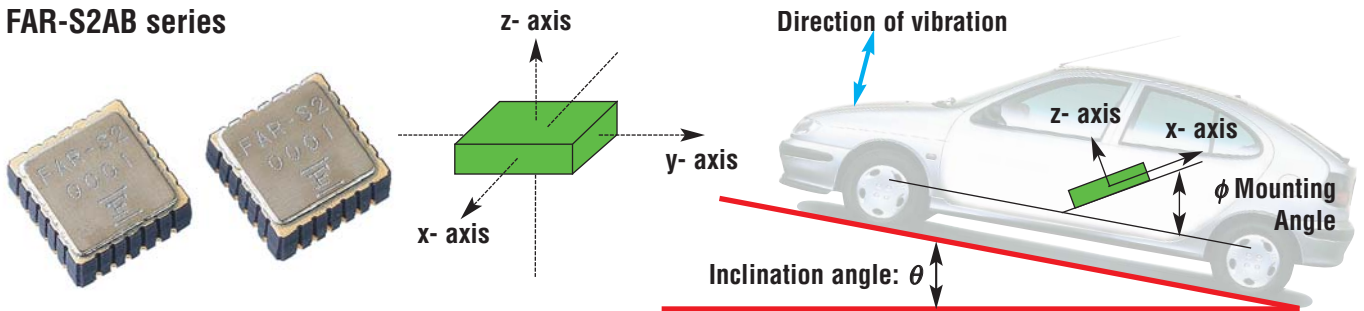


## ACCELEROMETER FACTSHEET

# MEMS 3-AXIS ACCELEROMETER

### FAR-S2AB series



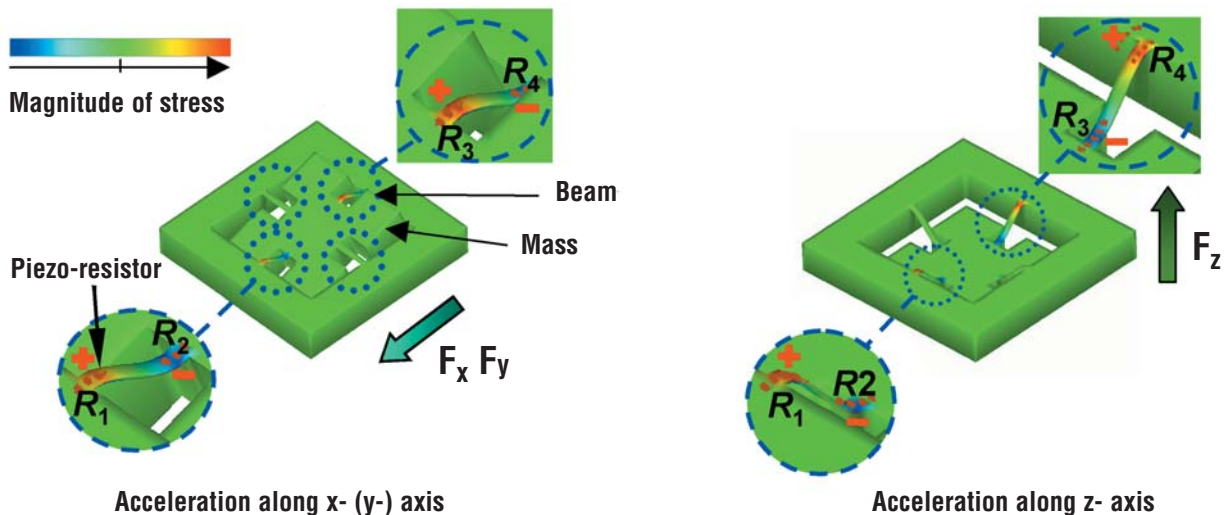
Fujitsu successfully developed the 'FAR-S2AB' series, 3-axis Accelerometer, using state-of-the-art MEMS technology. This small and highly sensitive accelerometer can detect acceleration, inclination and

vibration by measuring the motion in the x-, y-, and z-axis simultaneously.

By sensing the mounting angle, the sensor can assist in compensating for the devices mounting angle, and therefore makes it possible to use

normal SMD technology in high-density boards, and also to realise the precise detection of the inclination angle. An interface IC within the sensor package also has temperature sensing and self-diagnosis functions.

### Principle of detection



The MEMS 3-axis accelerometer consists of a Mass at the centre of the sensor's chip, which is suspended by 4 Beams doped with Piezo-resistive material.

When the sensor is subjected to acceleration in any direction, the movement of the Mass causes the 4 Beams to deform and so change the resistance in the piezo material.

This enables the sensor to detect the acceleration motion.

# ACCELEROMETER FACTSHEET

## Features

- 3-axis single-chip accelerometer
- Built-in IC integrating temperature sensor and self-diagnosis function
- High sensitivity: up to 1,000 mV/G
- External connection for low pass filters
- Automatic correction of mounting angle
- Small size: 5.0 x 5.0 x 2.3mm
- Lead-free

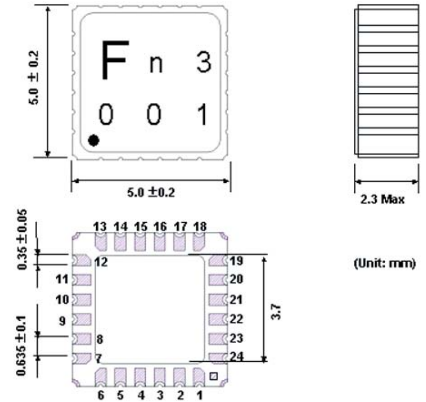
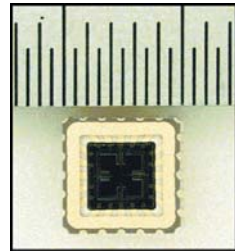
## Applications

- Navigation system
- Automotive stability system
- Roll-over system
- Stability control of industrial machinery
- Industrial and home appliances
- Humanoid robots

## Ideal solution for automotive stability system

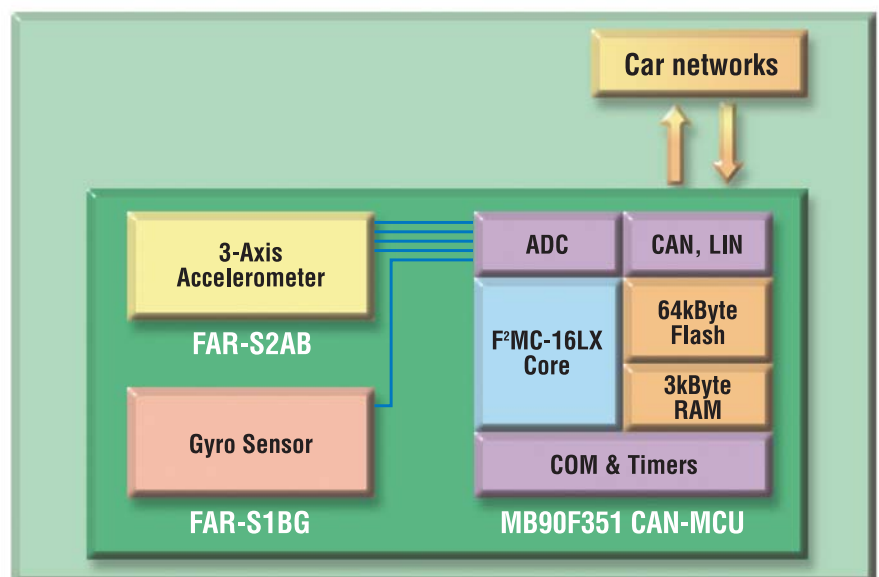
- Fujitsu MEMS 3-axis accelerometer: FAR-S2AB
- Fujitsu gyro sensor: FAR-S1BG
- Fujitsu automotive MCU: MB90F351
- Connected to the stability control main ECU via CAN

## Small size & high sensitivity FAR-S2AB series



## Specification

Detection method	Piezo-resistive
Operation temperature range	-40 to +85°C
Supply voltage	3 to 5.5V
Current consumption	3mA
Sensitivity	~1,000mV/G
0G offset voltage	2.5V ± 5%
Shock resistance	< 5,000G
Dimensions	5.0 x 5.0 x 2.3mm (Packaged with IC)



[www.fme.fujitsu.com](http://www.fme.fujitsu.com)

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