

Digital output gage pressure sensor

MMR901XA



Outline

This product is a small piezoresistive pressure sensor using MEMS technology. The product mounts a $\Delta\Sigma$ AD converter with a resolution of 16 bits and outputs a high-accuracy pressure value as a digital value. SPI is adopted for the interface and communication is performed with a microcomputer. When an incorporated temperature sensor and EEPROM data are used, a characteristic change due to a temperature change can be compensated by the dedicated software on an external microcomputer.

Applications

Blood pressure monitor for home appliance

Devices using air pressure

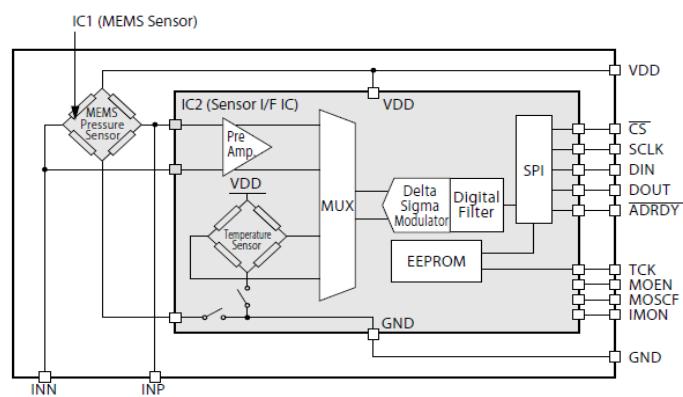
Features

- ① Small package 7.0(W) × 7.0(D) × 7.2(H)mm
- ② A high-accuracy pressure value can be output by mounting a $\Delta\Sigma$ AD converter.
 - Resolution: 3.3 Pa (0.025 mmHg)
 - Accuracy: ± 266 Pa (± 2 mmHg)
- ③ Temperature compensation can be performed by using the incorporated temperature sensor and the compensation data in EEPROM.
 - * No arithmetic function is built in.

Specification

ITEM	SPECIFICATION
Pressure Type	Gage Pressure
Pressure Medium	Air (no Condensation)
Operating Pressure Range	0 ~ 40kPa (0 ~ 300mmHg)
Operating Temperature Range	0 ~ 60°C
Supply Voltage Range	2.4 ~ 3.6V (3.0V typ.)
Conversion Time	5.12msec
Current Consumption	690uA
Current Consumption at Shutdown	2uA Max
Pressure accuracy	± 266 Pa(± 2.0 mmHg)
Pressure effective resolution	3.3Pa(0.025mmHg)
Interface	SPI
Size	7.0(W) × 7.0(D) × 7.2(H)mm

Block Diagram



Typical Performance Characteristics

