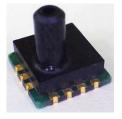
MITSUMI

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

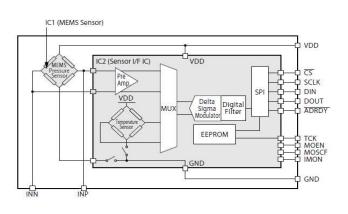
- ① Small package 7.0(W) ×7.0(D) ×7.2(H)mm
- 2 A high-accuracy pressure value can be output

by mounting a ⊿Σ 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.

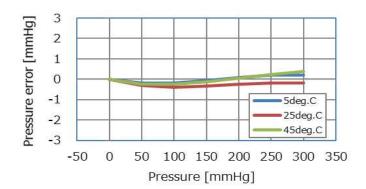
Block Diagram



Specification

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

Typical Performance Characteristics



MinebeaMitsumi

Mitsumi Q

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es or organ

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