Low Supply Voltage, Digital Output Gage Pressure Sensor
MMR902

Outline

This product is a Gage pressure sensor which MEMS*1 Gage pressure sensor and AFE IC*2 are modularized. It digitally outputs a pressure value which was corrected in the module.
Customers need no correction because it corrects and outputs the differences of sensors and temperature characteristics. It does not require complicated sensor drive or control circuit, and devices with high performance can be made only with this module and an external microcontroller which will be the host.

*1 MEMS : Micro-Electro-Mechanical Systems
*2 AFE IC : Analog Front End IC

Features (Unless otherwise specified, Topr=+25℃)

(1) Small package 7.0(W)×7.0(D)×7.2(H) mm

(2) It corrects the differences of sensors and temperature characteristics when shipped from our factor

(3) It digitally outputs pressure value by a built-in sequencer. (SPI, I^2C)

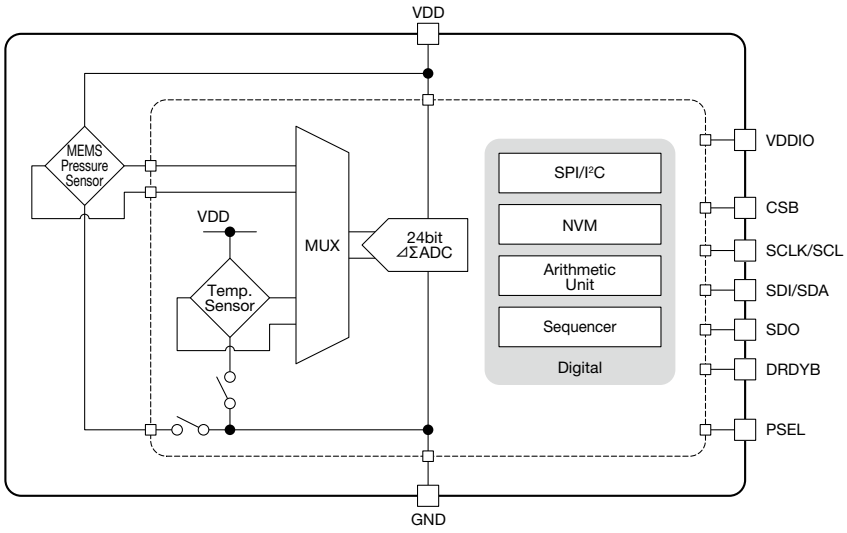
(4) Specifications

• Pressure type	Gage pressure (Based on atmospheric pressure)
• Pressure medium	Air (no condensation)
• Operating pressure range	−10 to +330mmHg (−1.33 to +43.99kPa)
• Pressure effective resolution	0.040/0.028/0.020/0.005mmHgRMS
• Accuracy	±2mmHg (266Pa)
• Power supply voltage range	1.7 to 3.6V
• Conversion time	3.91/7.81/15.625/250msec
• Current consumed when pressure is measured	650μA
• Standby current consumption	0.1μA
• Operating temperature range	5 to 45℃

Applications

Sphygmomanometer

Block Diagram



Line-up

Parts No.	Supply voltage	Current consumption	Operating pressure range	Package
MMR902A22A	2.2V typ.	575μA	−10~+330mmHg	7.0(W) × 7.0(D) × 7.2(H) mm
MMR902A27A	2.7V typ.	605μA	−10~+330mmHg	7.0(W) × 7.0(D) × 7.2(H) mm
MMR902A34A	3.4V typ.	650μA	−10~+330mmHg	7.0(W) × 7.0(D) × 7.2(H) mm

Dimensions (Unit : mm)