CALIBRATED ABSOLUTE PRESSURE SENSOR E984.01

Features

- Calibrated absolute pressure sensor system with signal conditioning
- Supply voltage range 4.5 V to 5.5 V
- Pressure range 30 kPa to 130 kPa (4.35 psi to 18.85 psi)
- Ratiometric analog output
- Response time typ. 30 µs
- Onboard temperature measurement and embedded algorithm to adjust gain and offset for high accuracy over temperature
- Pre molded cavity for pressure sensor with gel protection
- Signal conditioning chip completely encapsulated
- Operating temperature range -40°C to +125°C
- Standard package outline based on JEDEC SOIC 20 for easy assembly

Applications

- Automotive systems e.g. MAP
- Industrial systems e.g. Air condition
- Barometric application
- Medical instrumentation

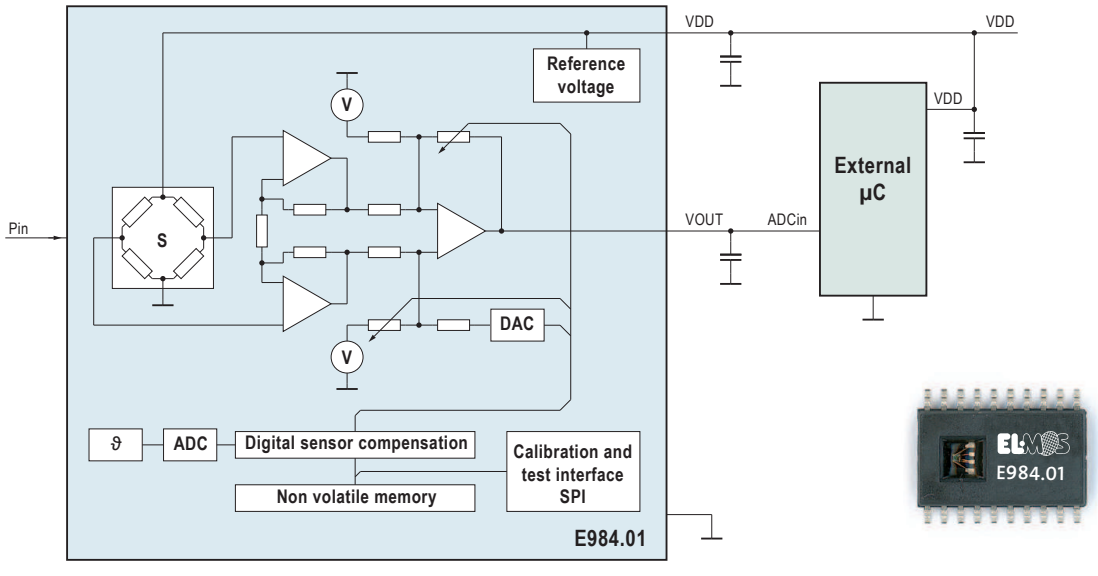
General Description

The E984.01 is an high speed, amplified and calibrated absolute pressure sensor in one surface mounted package based on JEDEC SOIC 20. The Si-MEMS sensor is attached in a package cavity and covered by a protective gel. This microsystem is a space and cost saving product for low and high volume applications.

The sensor's piezo resistive Wheatstone bridge converts the applied pressure into a voltage signal which is processed by the subsequent instrumentation amplifier. The whole signal path up to the output is analog and allows fast response without sampling artefacts.

The sensor's gain and offset temperature dependencies are compensated by the signal conditioning. The on-chip temperature measurement is digitized by an ADC feeding the calibration engine. Together with the calibration data contained in an OTP memory, the calibration engine adjusts the amplifier gain and offset according to the temperature.

Alternative pressure ranges on request.



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