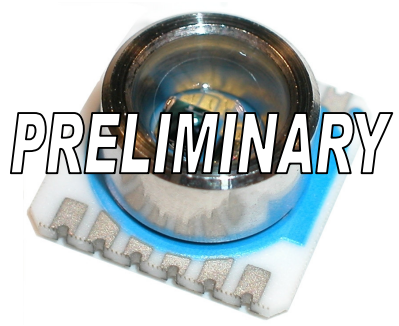
MS5535-30C (RoHS*) PRESSURE SENSOR MODULE



- **0 - 30 bar absolute pressure range**
- **6 coefficients for software compensation stored on-chip**
- **Piezoresistive silicon micromachined sensor**
- **Integrated miniature pressure sensor 9 x 9 mm**
- **16 Bit ADC**
- **3-wire serial interface**
- **1 system clock line (32.768 kHz)**
- **Low voltage and low power consumption**
- **RoHS-compatible & Pb-free***

DESCRIPTION

The MS5535-30C is a high-pressure version of MS5535C pressure sensor module. It contains a precision piezoresistive pressure sensor and an ADC-Interface IC. It uses an antimagnetic polished stainless ring for sealing O-ring. It provides a 16 Bit data word from a pressure and temperature dependent voltage. Additionally the module contains 6 readable coefficients for a highly accurate software calibration of the sensor. MS5535-30C is a low power, low voltage device with automatic power down (ON/OFF) switching. A 3-wire interface is used for all communications with a microcontroller.

FEATURES

- Resolution 3.0 mbar
- Supply voltage 2.2 V to 3.6 V
- Low supply current < 5uA
- Standby current < 0.1 uA
- -40°C to +125°C operation temperature
- 16 Bit ADC resolution pressure measurement and control systems

APPLICATIONS

- Mobile water depth measurement systems
- Diving computers and divers watches

BLOCK DIAGRAM

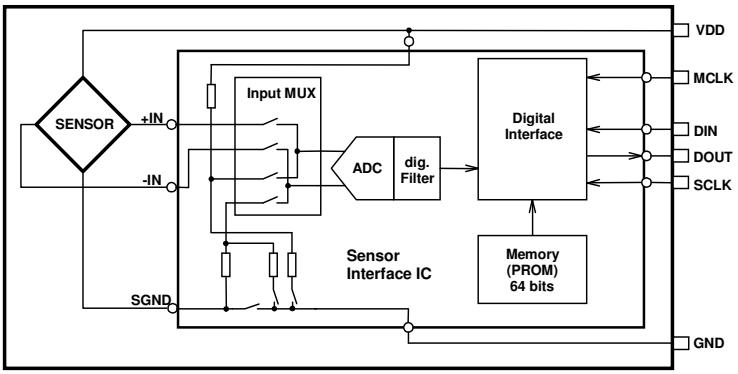


Fig. 1: Block diagram MS5535-30C.

* The European RoHS directive 2002/95/EC (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment) bans the use of lead, mercury, cadmium, hexavalent chromium and polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).

PIN CONFIGURATION

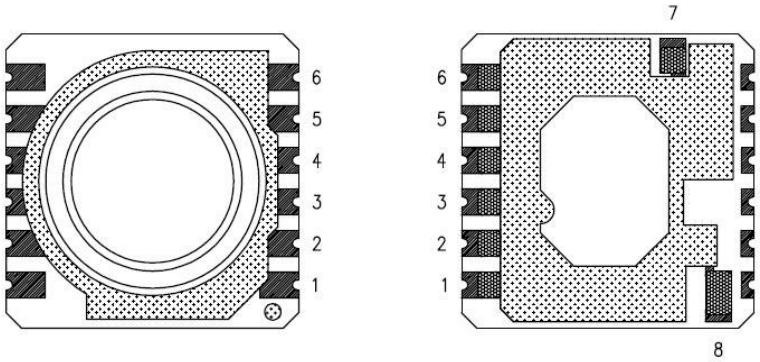


Fig. 2: Pin configuration of MS5535-30C.

Pin Name	Pin	Type	Function
GND	1	G	Ground
SCLK	2	I	Serial data clock
DOUT	3	O	Data output
DIN	4	I	Data input
MCLK	5	I	Master clock (32.768 kHz)
VDD	6	P	Positive supply voltage
PEN (1)	7	I	Programming enable
PV (1)	8	N	Negative programming voltage

NOTE

1) Pin 7 (PEN) and PIN 8 (PV) are only used by the manufacturer for calibration purposes and should not be connected.

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Conditions	Min	Max	Unit	Notes
Supply voltage	VDD	Ta = 25 °C	-0.3	4	V	
Storage temperature	T_S		-40	+125	°C	1
Overpressure	P	Ta = 25 °C		50	bar	2

NOTE

1) Storage and operation in an environment of dry and non-corrosive gases.