PIN CONFIGURATION

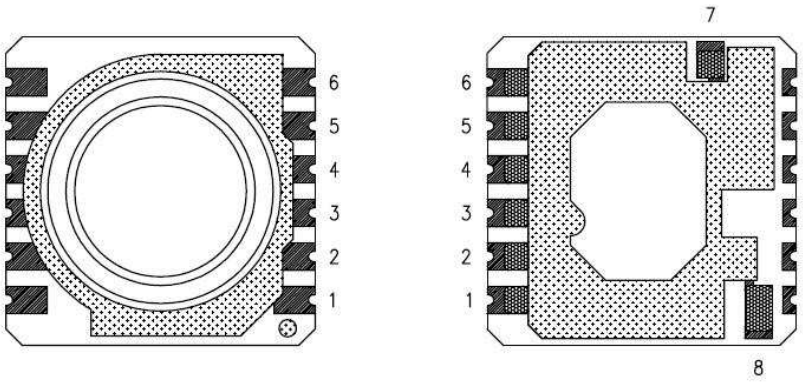

Fig. 2: Pin configuration of MS5534C

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 (PV) and Pin 8 (PEN) 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	V_{DD}	Ta = 25 °C	-0.3	4	V	
Storage temperature	T_S		-40	+125	°C	1
Overpressure	P	MS5534-CP, Ta = 25 °C		5	bar	
		MS5534-CM, Ta = 25 °C		10	bar	2

NOTES

1) Storage and operation in an environment of dry and non-corrosive gases.
2) The MS5534-CM is qualified referring to the ISO 2281 standard and can withstand an absolute pressure of 11 bar in salt water or 100 m water respectively.

RECOMMENDED OPERATING CONDITIONS

(Ta = 25 °C, V_{DD} = 3.0 V unless noted otherwise)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Operating pressure range	p		10		1100	mbar abs.
Supply voltage	V_{DD}		2.2	3.0	3.6	V
Supply current, average (1) during conversion (2) standby (no conversion)	 I_{avg} I_{sc} I_{ss}	V_{DD} = 3.0 V		 4 1	 0.1	 µA mA µA
Current consumption into MCLK (3)		MCLK = 32.768 kHz			0.5	µA
Operating temperature range	T		-40		+125	°C
Conversion time	t_{conv}	MCLK = 32.768 kHz			35	ms
External clock signal (4)	MCLK		30.000	32.768	35.000	kHz
Duty cycle of MCLK			40/60	50/50	60/40	%
Serial data clock	SCLK				500	kHz

NOTES

1) Under the assumption of one conversion every second. Conversion means either a pressure or a temperature measurement started by a command to the serial interface of MS5534C.
2) During conversion the sensor will be switched on and off in order to reduce power consumption; the total on time within a conversion is about 2 ms.
3) This value can be reduced by switching off MCLK while MS5534C is in standby mode.
4) It is strongly recommended that a crystal oscillator be used because the device is sensitive to clock jitter. A square-wave form of the clock signal is a must.