

INTRODUCING MS5837-02BA ULTRA SMALL GEL-FILLED PRESSURE SENSOR

- Enable waterproof performance with altitude resolution of 13 cm
- Provide precise digital 24-bit pressure and temperature value with ultra-low power consumption



TE Connectivity's (TE) MS5837-02BA is an ultra-small gel-filled pressure sensor optimized for both altimeter and barometric applications. This waterproof sensor module includes a high-linearity pressure sensor and an ultra-low power 24 bit $\Delta\Sigma$ ADC with internal factory-calibrated coefficients. It provides a precise digital 24-bit pressure and temperature value with different operation modes that allow the user to optimize for conversion speed and current consumption. A high-resolution temperature output allows the implementation of an altimeter/thermometer function without any additional sensor. The MS5837-02BA sensor can be interfaced to any microcontroller with I²C-bus interface. The communication protocol is simple, without the need of programming internal registers in the device.

KEY BENEFITS

- Enable waterproof performance with altitude resolution of 13 cm with gel-filled design
- Provide precise digital 24-bit pressure and temperature value with ultra-low power consumption
- Support design flexibility with ultra-small size while providing precise outputs
- Optimize conversion speed (down to 0.5 ms) and power consumption (0.6 μ A; standby \leq 0.1 μ A at 25°C) with different operation modes
- Protect from underwater applications with a ceramic-metal package and sealing designed for 1.8 x 0.8mm o-ring

LEARN MORE

[MS5837-02BA Data Sheet](#)

[MS5837-02BA Application Note](#)

[MS5837-02BA Parts List](#)

APPLICATIONS

- Fitness trackers
- Mobile altimeter / barometer systems
- Bike computers
- Personal navigation devices
- Multisport watch
- Tire pressure

DISTINGUISHING CHARACTERISTICS

Extended Pressure Range	10 - 2000mbar
Pressure Accuracy	Down to \pm 0.5mbar
Pressure Resolution	0.016 mbar (OSR 8192)
Overpressure	10bar
Operating Temperature Range	-20 to +85°C
Temperature Accuracy	\pm 2°C
Temperature Resolution	0.002°C (OSR 8192)
Supply Voltage	1.5 to 3.6V
Long Term Stability	\pm 2mbar/yr
Standby Supply Current	< 0.1 μ A
Interface	I ² C
Output Word	24 bit

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