

MEMS barometric pressure sensor **BMP085 from Bosch Sensortec follows successful SMD500**

April 2008

PI 6214 BST Wü/Vi

- ▶ Tightly packaged in a low profile only 5mm x 5mm x 1.2mm LCC8
- ▶ Extremely low 0.1 µA standby current
- ▶ Resolution to 0.25 m in altitude change

The new BMP085 enters the market as the smallest and most accurate micromechanical (MEMS) pressure sensor with a digital I²C output. Maintaining pin and software compatibility with Bosch Sensortec's 1st generation SMD500, customers can now achieve even greater performance without impacting designs already in production. With a 25 percent package height reduction and a remarkable reduction to a seventh in standby current to 0.1 µ, BMP085 makes way for navigation applications in the mobile space. Both enhancements add to the attractiveness of the device for manufacturers of mobile consumer electronics. But without in any way degrading sensitivity – the 0.03 hectopascal maximum resolution of the BMP085 is an optimum enabling the sensor to respond to differences in altitude of just 25 cm. BMP085 as part of a mobile platform can thus enable new levels of vertical accuracy at a fraction of the overall system cost.

The new barometric pressure sensor perfectly goes with the current trend of integrating navigation functions into mobile phones. Together with an acceleration sensor, the BMP085 with its fine resolution can easily resolve many of conventional short falls of low cost GPS technology now making its way into mobile platforms. For many years, GPS solution providers and consumers have struggled with poor performance in dense urban canyons, tunnels, stacked roadways and on/off ramps where accurate navigation performance is even more critical and essential. The movement of pedestrian navigation indoors and the BMP085's ability to detect floor by floor transitions, make the long time promise of Location Based Services (LBS) in shopping malls and public spaces a near term reality. Other

typical applications of BMP085 are miniaturized weather stations, electronic barometers and altimeters.

At 300 through 1 100 hectopascal, the measurement range of the BMP085 is scaled for barometric pressures ranges that planet Earth can present – from the deepest mine to the summit of Everest. Robust enough to survive a 10 000 hectopascal burst, the BMP085 is also highly resistant to humidity with an MSL of 1. Needing no added external circuitry and equipped with an easy to use I²C digital interface, the BMP085 has also slashed the conversion time to acquire a pressure reading over its predecessor by 80 percent to 7.5 Milliseconds. With a minimum voltage down to 1.8 V and an active current at 3 µAmpère in low power mode, Bosch Sensortec's latest edition is the ideal choice for powering via battery.

RoHS compliant, halogen-free and factory calibrated, the BMP085 is ready for customer designs and immediately available in volume quantities upon this press release.

About Bosch Sensortec

Bosch Sensortec GmbH, a 100 percent subsidiary of Robert Bosch GmbH, offers micromechanical sensors, application and foundry services for consumer electronics, security systems and logistics. Its product portfolio to date includes triaxial acceleration sensors as well as pressure sensors. The company was founded in early 2005 and is headquartered near Reutlingen to the south of Stuttgart (Germany). For more information about Bosch Sensortec, visit www.bosch-sensortec.com.

Bosch has been active in the field of MEMS since 1988, being one of the pioneers in this technology. Today, hundreds of engineers of the Bosch Group work in the field of MEMS. A wide selection of products – from pressure and acceleration sensors to yaw-rate sensors – is manufactured for the automotive industry. Annual production at Bosch is more than 160 million sensors.

Press photo: 1-UBI-14724

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The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant up-front investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.

Additional information can be accessed at www.bosch.com.