



Electronic Parts and Components

Press Release for the Trade Media

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MEMS technology Smallest digital barometric pressure sensors

EPCOS has set a further milestone in the miniaturization of pressure sensors: with dimensions of only 2.2 x 2.6 x 0.9 mm³ the calibrated and temperature-compensated T5300 digital pressure sensor is the world's most compact packaged sensor of its kind. Designed for measuring absolute pressures from 300 to 1200 mbar, it provides a 14 bit resolution at the serial digital interface. It has a low power consumption of only 2 µA in sleep mode and <2 mA while operating, and requires a supply voltage of 2.7 to 5.5 V. This makes it particularly suitable for battery-powered devices. Data transfer is according to the I²C and SPI protocols.

The T5300 requires no further calibration. This benefits developers of navigation equipment and mobile phones, for example, who wish to accurately determine altitude above sea level with the aid of air pressure measurements. Together with a GPS-determined location, the altitude measurement permits precise 3D positioning. Applications include navigation with 3D maps for vehicles and pedestrians as well as in open terrain. It also enables position information accurate to within a single story of a building for emergency calls from mobile phones.

The heart of the digital T5300 is – as for the T5000 analog sensor – a piezoresistive MEMS sensor chip from Aktiv Sensor, a wholly-owned EPCOS subsidiary. In the T5300, the MEMS sensor chip and the semiconductor chip for signal processing are mounted on top of each other in stacked-die technology. The sensor's exceptionally compact package is made possible by the CSMP[®] (chip-sized MEMS package) technology developed by EPCOS. It is designed for the automated manufacture of mass products and is based on EPCOS' packaging competence for SAW filters. Samples of the T5300 are available from May.

EPCOS is presenting the T5300 at the SENSOR+TEST exhibition from May 26 to 28, 2009, in Nuremberg/ Germany, as well as at the Sensors Expo & Conference from June 8 to 10, 2009, in Rosemont, Illinois/ USA.

You can download the text of this press release and the related images from www.epcos.com/tradepress
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