

MEMS Technology: Smallest Barometric Pressure Sensor

EPCOS is introducing the most compact packaged sensors for barometric pressure measurement. With dimensions of only $1,7 \times 1,7 \times 0,9 \text{ mm}^3$, the components are many times smaller than comparable competitor products and underscore EPCOS' competence in innovative miniaturization solutions. The new pressure sensors open up numerous application perspectives for future generations of equipment and systems – above all for portable electronics. Portable navigation devices, watches and mobile phones, for example, will be able to measure air pressure and/or altitude above sea level.

A further advantage of the new sensors is the packaging cost-effective CSMP™ (chip-sized MEMS package) packaging technology developed by EPCOS. As an SMD pressure sensor



▲ SMD pressure sensors T5000 and ASB1200E with MEMS Technology

the T5000 is very well equipped for the highly automated production of mass products.

EPCOS also offers a sensor variant in a conventional package with a gel-protected stainless steel pressure port. With a footprint of only $3 \times 3 \text{ mm}^2$ the ASB1200E SMD pressure sensor enables the further miniaturization

of barometric applications that are exposed to high humidity.

The SMD pressure sensors T5000 and ASB1200E are optimized for an absolute pressure measurement of 300 to 1200 mbar and cover a measurement range of 20 mV/V/bar. The heart of the pressure sensors is a piezo-resistive MEMS sensor chip manufactured by Aktiv Sensor, a wholly owned EPCOS subsidiary. Samples of the T5000 and ASB1200E are now available. Further current developments include a pressure sensor with integrated temperature compensation and a digital interface.

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