NEWS RELEASE

PR1011E

ALPS Develops and Commences Mass Production of “HSCDTD004A” 3-Axis Geomagnetic Sensor for Electronic Compass

Suited to Smartphones and Tablet PCs

Duesseldorf, Germany, June 01, 2011 – ALPS ELECTRIC EUROPE GmbH has developed the HSCDTD004A geomagnetic sensor enabling electronic compass functions in smartphones and tablet PCs. Mass production commenced in May 2011.

Many of today's mobile phones and smartphones contain navigation applications or applications used to indicate a user's current location. To function, these applications require both a global positioning system (GPS), for pinpointing the user's location, and an electronic compass, for detecting the direction the device is facing. Geomagnetic sensors enabling the latter must be highly accurate in order to provide a reliable azimuth reading as well as have low current consumption for use with a limited power supply.

The HSCDTD004A geomagnetic sensor, with its high-precision magnetic element optimized to increase sensor output, generates 30% less noise than the earlier model. This has improved azimuth detection accuracy by approximately 40% and helps to reduce calibration time. Low current consumption (200μA) is also realized.

Geomagnetic sensors in mobile phones and smartphones are increasingly susceptible to the effects of speakers and other components that generate magnetic fields because more and more functional components are being incorporated into these devices and PCBs are becoming smaller. The HSCDTD004A has a measurement range extended to ±1.2mT (millitesla),

contributing to enhanced set layout flexibility within magnetic field environments. The product is compatible with Inter-Integrated Circuit (I2C) and Serial Peripheral Interface (SPI).

ALPS engages in independent algorithm development with an aim to create geomagnetic sensors that facilitate set design. Support for operating system drivers and embedded systems is offered in the form of novel software allowing completion of auto-calibration through simple procedures. ALPS also provides mounting and evaluation support, applying more than 40 years of technical involvement in magnetic design.

Features

Geomagnetic sensor for electronic compass realizing high azimuth accuracy

1. Azimuth accuracy* improved 40% using new high-precision magnetic element.
2. Noise reduced 30%, simplifying and shortening calibration.
3. Low current consumption (200μA).
4. Software enables both azimuth and 3-axis angular velocity calculations.

Principal Applications

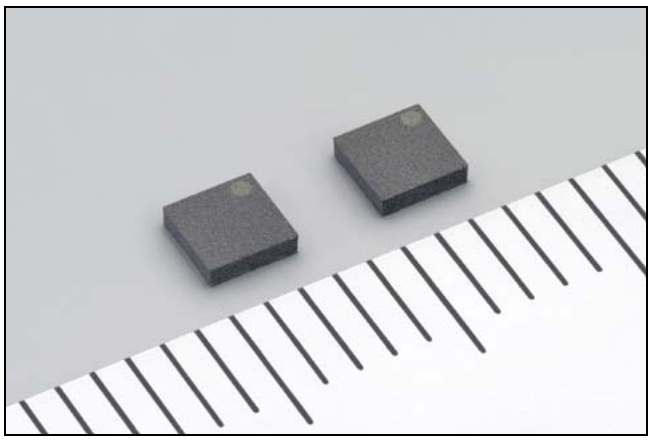
Electronic compasses for smartphones and digital cameras
Motion control for game consoles and head-mounted displays

Specifications

Product name	HSCDTD004A
Dimensions (W × D × H)	2.5mm x 2.5mm x 0.7mm
Output resolution	0.3μT/LSB (Least Significant Bit)
Measurement range	±1.2mT
Current consumption	200μA max.（110μA typ.）
Drive voltage (Analog; AVDD)	2.4 to 3.6V
Drive voltage (Digital; DVDD ）	1.7 to 3.6V
Interface	I^2C (Inter-Integrated Circuit) SPI (Serial Peripheral Interface)
Operating temperature range	-30 to +85℃

*Azimuth accuracy may be influenced by environmental conditions, other devices and acceleration sensing error.

For more information on the new product please visit
http://www.alps.com/products/e/npv_product/110527_HSCD/HSCD_E.PDF



ALPS Electric Co., Ltd.
ALPS Electric (Tokyo: 6770) is a leading global manufacturer of high-quality electronic components for mobile devices, home electronics, vehicles and industrial equipment. With the philosophy of "Perfecting the Art of Electronics" ALPS Electric supplies over 40,000 different components to about 2,000 companies all over the world. For more information, visit www.alps.com.

ALPS ELECTRIC EUROPE GmbH, a subsidiary of ALPS Electric Co., Ltd., was established in 1979. Since 1989 the European Head Office has been located in Düsseldorf, where a team of specialists works in Sales, Marketing, and Product Engineering. The activities of our branch offices in Munich, Paris, Milton Keynes, Stockholm, Gothenburg, and our sales office in Milan are coordinated from Düsseldorf.

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