

# **NEWS RELEASE**

PR1907E

# **ALPS Offers Geomagnetic Sensors**

Geomagnetic Sensor with Tilt Compensation Function and Industry-Standard Compactness

Duesseldorf, Germany, October 23, 2007 – ALPS ELECTRIC EUROPA GmbH has developed the HSCD Series Geomagnetic Sensor for use in portable devices such as mobile phones and wristwatches.

More and more of the latest models of mobile phones are being equipped with such functions as GPS location indicators and navigation systems. Mobile phones with these functions make navigation easy because in contrast to ordinary maps that use "north" as a point of reference, these systems use the direction the user is facing as the point of reference. In order to provide this function, these devices require a geomagnetic sensor to detect the direction in which users are moving.

Mobile phones are not usually held parallel to the earth during usage, but rather slightly tilted upward. Consequently, there is demand for devices that are able to compensate for this tilt, in order to accurately indicate a user's location while maintaining ease of use.

Alps Electric's new HSCD Series features a tilt compensation function and meets the industry standard for small and thin sensors (2.5mm wide x 2.5mm deep x 0.7mm high). Alps Electric achieved this small size and thin by applying its unique high-precision, high-density mounting technologies.

Furthermore, a highly reliable magnetic element that realizes higher sensitivity detection than other magnetic elements has been integrated in a three-axes-type direction detector for

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forward / backward, left / right and vertical directions. Consequently, the HSCD Series can precisely read extremely weak magnetic fields, or geomagnetism, to accurately detect direction.

Alps Electric applied its unique algorithms to realize a tilt compensation function. The application of these algorithms also cut down on the need for parts and packaging for the tilt compensation function and for acceleration sensors, enabling a compact size and reduced number of parts. As a result, Alps Electric is able to offer a low-priced geomagnetic sensor.

In addition, on-the-go portable devices including mobile phones that use rechargeable or dry cell batteries have only a limited supply of power, so in order to reduce the amount of power used, the HSCD Series Geomagnetic Sensor has been designed to realize low current consumption by optimizing digital and other circuitry.

### **Features**

Development of a geomagnetic sensor featuring a tilt compensation function and industry-standard compactness

- Realizes the industry standard for small and thin geomagnetic sensors equipped with a tilt compensation function
- 2. Integration of a highly reliable magnetic element enables accurate detection of geomagnetism
- 3. Alps Electric's unique algorithms enable a tilt compensation function and contribute to making a compact size and lowering costs
- 4. Achieves low current consumption by optimizing digital and other circuitry

# **Principal Applications**

For use in mobile phones, wristwatches, PDAs and other portable devices

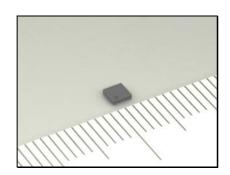
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## **Specifications**

Product name	HSCD Series
Dimensions (WxDxH)	2.5mm × 2.5mm × 0.7mm
Azimuth accuracy	±5°
Current consumption	200μΑ
Measurement range	- 0.6mT to 0.6mT
Interface	I <sup>2</sup> C



#### ALPS Electric Co., Ltd.

Since its establishment in 1948 ALPS has grown as a comprehensive manufacturer of electronic components. At present ALPS is creating innovative high-value-added products in its main business segments — Components, Magnetic Devices, Communications, Peripheral Products, and Automotive Electronics — which are contributing to the advance of a digital society. ALPS is a global company that carries out its operations with 23 production bases in 9 countries as well as 57 sales bases in 14 countries. Consolidated net sales in the year ended March 31, 2007 amounted to YEN 708 billion.

**ALPS ELECTRIC EUROPA 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 and Milton Keynes, our sales office in Milan and our European distribution work are co-ordinated from Düsseldorf. ALPS Nordic AB, a 100 percent subsidiary of ALPS ELECTRIC EUROPA GmbH, is based in Sweden and services the Scandinavian market.

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