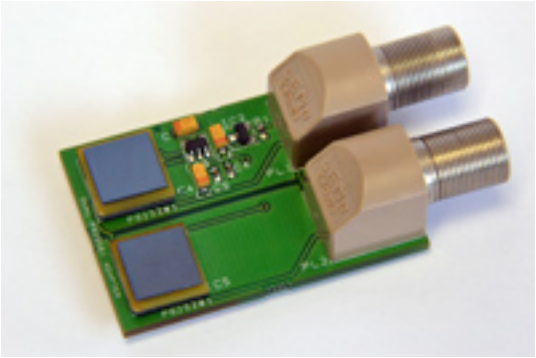
Electric Potential Sensor Detects Changes in Electric Field, in Contact, at Distance, Even Through Walls



Plessey Semiconductors announced that commercial samples of its Electric Potential Integrated Circuit (EPIC) sensors are available. The first products are optimized for use as an ECG sensor and provide a resolution as good as or better than conventional electrodes, according to the company. These EPIC sensors are dry contact, and they can be simply cleaned between uses. Only a pair of sensors are required that are held in each hand. This ease of detection even through clothes or at a distance means that new ways of taking ECG measurements are being investigated by customers. Since the EPIC sensor opens up the opportunity for ECG monitoring over a long period of time, abnormalities can be picked up during normal activities without the stress of being in a hospital or doctor's room. The EPIC sensor measures changes in an electric field in a similar way to a magnetometer detecting changes in a magnetic field. The technology works at normal room temperatures and functions as an ultra-high, input impedance sensor that acts as a highly stable, extremely sensitive, contactless digital voltmeter to measure tiny changes in the electric field down to milliVolts. Most places on Earth have a vertical electric field of about 100 Volts per meter. The human body is mostly water, and this interacts with the electric field. EPIC technology is asserted to detect these changes at a distance and even through a solid wall.

Plessey Semiconductors
+44 1752 693000, www.plesseysemi.com
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