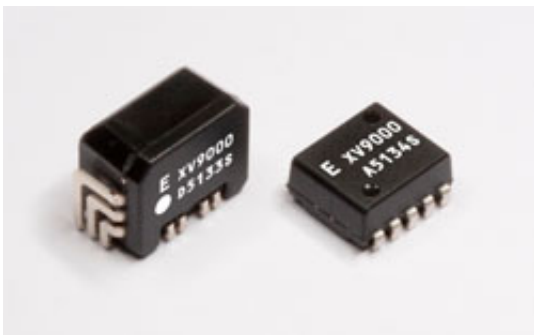


Epson develops new XV-9000 series of gyro-sensors for vehicle attitude sensing

September 9 2010



Epson Toyocom Corporation, the leader in crystal devices, today announced the development of a new series of compact, reliable gyro-sensors (angular rate sensors) capable of withstanding temperatures as high as 125°C. The new XV-9000 series of gyro-sensors is designed for vehicle attitude sensing applications in the automotive industry.

Product samples will become available in September 2010. Volume production is scheduled for December 2011.

More and more vehicles are coming standard-equipped with driving safety devices as calls for safer vehicles grow louder. The United States, Europe, and Japan have all introduced legislation mandating that vehicles be equipped with active safety systems such as [electronic stability](#)

[control](#) (ESC) to detect skidding and correct vehicle attitude. In addition, manufacturers are increasingly installing passive safety features, such as rollover protection systems that detect vehicle rollovers and side curtain airbags. These safety systems, which have to be able to correctly sense skidding, rollovers, and other hazardous vehicular behavior, are driving growth in demand for gyro-sensors that detect changes in attitude by measuring angular velocity.

The sensors in the new XV-9000 series are designed to meet these needs. By applying QMEMS 1 technology to fabricate crystal sensing elements in an original hammerhead structure, Epson Toyocom was able to realize very small sensors that exhibit stable characteristics over a wide temperature range (-40 to +125°C). In addition, Epson Toyocom increased sensor reliability by providing a diagnostic circuit that detects failures at any given time and at startup. The sensors have also achieved excellent vibration resistance and shock survivability by optimizing the sensing elements and their support structure.

[Epson Toyocom](#) will continue to contribute to greater traffic safety by providing stable, reliable angular rate sensors for automotive applications.

Provided by Seiko Epson

Citation: Epson develops new XV-9000 series of gyro-sensors for vehicle attitude sensing (2010, September 9) retrieved 18 April 2024 from <https://phys.org/news/2010-09-epson-xv-series-gyro-sensors-vehicle.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--