

Wireless Thermal Bubble Type Accelerometer for Sport Science Monitor
System Design

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Abstract

This research proposes a method of wireless thermal bubble type accelerometer for sport science monitor system design. The key technology is to integrate both a thermal bubble type accelerometer and a wireless antenna on the same substrate. We used xenon inert gas in the chamber instead of traditional air or carbon dioxide to increase molecular weight (or mass) as well as the acceleration sensitivity. On the other hand, the bandwidth of the proposed accelerometer is larger and the power consumption is lower.

Keyword : Sport science. Wireless RFID. Thermal bubble type accelerometer. Flexible substrate