

Title (en)

POWER-FREE/WIRELESS SENSOR BASED ON SURFACE ACOUSTIC WAVE WITH ENERGY COLLECTING TYPE

Title (de)

STROMLOSER/DRAHTLOSER SENSOR AUF DER BASIS VON OBERFLÄCHENWELLEN MIT ENERGIESAMMELTYP

Title (fr)

CAPTEUR SANS ELECTRICITE/SANS FIL FONCTIONNANT SUR LA BASE D'UNE ONDE ACOUSTIQUE SUPERFICIELLE AVEC DISPOSITIF DE TYPE COLLECTEUR D'ENERGIE

Publication

EP 1828736 A1 20070905 (EN)

Application

EP 05740839 A 20050503

Priority

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- KR 20040101500 A 20041204

Abstract (en)

[origin: WO2006059822A1] A power-free/wireless sensor based on a surface acoustic wave with an energy collecting type comprises: an energy converting unit for converting mechanical energy generated by changes of peripheral physical environment into electric energy; an energy storing unit for rectifying and storing the electric energy generated from the energy converting unit; a pulse generating unit for receiving the electric energy stored in the energy storing unit to output a RF signal; a sensing unit for sensing an externally applied pressure; and a SAW transponder for receiving the RF signal from the pulse generating unit to output a surface acoustic wave, varying the wave acoustic wave depending on the pressure applied to the sensing unit to output the varied surface acoustic wave as the RF sensor signal. The power-free/wireless sensor performs a sensing operation without external power supply and transmits sensed data wirelessly to a long distance. As a result, the power-free/wireless sensor coincides with a tendency of miniaturizing, intelligent and wireless sensors, and is semi-permanently used after installation without maintenance.

IPC 8 full level

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