

Title (en)
Wristwatch with atomic oscillator

Title (de)
Armbanduhr mit Atomoszillator

Title (fr)
Montre bracelet avec oscillateur atomique

Publication
EP 2738628 B1 20160106 (FR)

Application
EP 14157063 A 20110309

Priority
• EP 14157063 A 20110309
• EP 11405232 A 20110309

Abstract (en)
[origin: EP2498151A1] The oscillator has a laser diode (1) e.g. vertical-cavity surface-emitting laser (VCSEL) laser diode, emitting a linearly polarized laser beam (11), and a cell (3) placed so as to receive the laser beam, where the cell contains atoms e.g. cesium/rubidium atoms. A detection system includes a photodetector (4) and an amplifier, and is placed to receive the laser beam output by the cell in order to detect a beat frequency obtained by the beam output by the laser diode and transmitted through the cell, and a beam is induced by the Raman Effect within the atoms in the cell. An independent claim is also included for a method for emitting a time signal within a wristwatch by an atomic oscillator.

IPC 8 full level
G04F 5/14 (2006.01)

CPC (source: EP US)
G04F 5/14 (2013.01 - EP US)

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