

Title (en)

TWO AXIS NAVIGATION GRADE MICROMACHINED ROTATION SENSOR SYSTEM

Title (de)

ZWEIACHSIGES MIKROMECHANISCHES DREHSENSORSYSTEM, DAS NAVIGATIONSANSPRÜCHE ERFÜLLT

Title (fr)

SYSTEME DE CAPTEUR DE ROTATION MICRO-USINE A DEUX AXES POUR NAVIGATION

Publication

**EP 0772762 A2 19970514 (EN)**

Application

**EP 95934958 A 19950728**

Priority

- US 9509533 W 19950728
- US 28275794 A 19940729

Abstract (en)

[origin: WO9604525A2] A two axis closed loop angular rate sensor which provides a digital delta theta output signal. A drive member is formed of a single, silicon wafer having a pair of oppositely-facing planar surfaces. The drive member includes a frame and a drive member central portion connected to the frame and arranged to have rotational compliance between the frame and the central portion about an axis perpendicular to the planar surfaces of the silicon wafer. Drive signals are applied to a plurality of electrodes on the central portion to cause rotational oscillation of the drive member central portion about a drive axis perpendicular to the planar surfaces of the silicon wafer. A silicon sensing member is connected to the drive member. The sensing member has a central support member connected to the drive member central portion such that rotational oscillations of the drive member central portion are transmitted to the sensing member central portion. A sensing portion is connected to the sensing member central support member to allow the sensing portion to oscillate about the drive axis and to allow an input rotation rate about an axis perpendicular to the drive axis to produce out-of-plane oscillations of the sensing portions. Signal processing apparatus is connected to the sensing portion for producing a signal indicative of the input rotational rate as a function of the amplitude of the out-of-plane oscillations of the sensing portion.

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**G01C 19/56**

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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