Title (en)

BATCH FABRICATED SEMICONDUCTOR THIN-FILM PRESSURE SENSOR AND METHOD OF MAKING SAME

Title (de)

IN SERIE HERGESTELLTER HALBLEITER-DÜNNFILMDRUCKSENSOR UND ZUGEHÖRIGE HERSTELLUNGSMETHODE

Title (fr)

SONDE MANOMETRIQUE A SEMI-CONDUCTEUR COUCHES MINCES FABRIQUEE PAR LOTS ET PROCEDE DE FABRICATION CORRESPONDANT

Publication

**EP 0970355 A1 20000112 (EN)**

Application

**EP 98910183 A 19980324**

Priority

- US 9804331 W 19980324
- US 82283997 A 19970324
- US 93785997 A 19970925

Abstract (en)

[origin: WO9843057A1] A pressure sensor having a flexible membrane which is moved by an external force, such as pressure from an air flow. The flexible membrane extends over a semiconductor frame having an opening, such that a portion of the flexible membrane extends over the semiconductor frame, and a portion of the flexible membrane extends over the opening. An inherent tensile stress is present in the membrane. One or more strain gage resistors are formed on the portion of the membrane which extends over the opening of the semiconductor frame. The membrane deforms in response to an externally applied pressure. As the membrane deforms, the strain gage resistors elongate, thereby increasing the resistances of these resistors. This change in resistance is measured and used to determine the magnitude of the external pressure. In one embodiment, a Wheaststone bridge circuit is used to translate the change in resistance of the strain gage resistors into a differential voltage.

IPC 1-7

**G01L 9/00**

IPC 8 full level

**G01L 9/00** (2006.01); **G01L 9/04** (2006.01); **H01L 29/84** (2006.01)

CPC (source: EP)

**G01L 9/0051** (2013.01); **G01L 9/0073** (2013.01); **G01L 9/0075** (2013.01)

Citation (search report)

See references of WO 9843057A1

Designated contracting state (EPC)

DE GB

DOCDB simple family (publication)

**WO 9843057 A1 19981001**; AU 6448398 A 19981020; CN 1257578 A 20000621; EP 0970355 A1 20000112; JP 2001524212 A 20011127

DOCDB simple family (application)

**US 9804331 W 19980324**; AU 6448398 A 19980324; CN 98805432 A 19980324; EP 98910183 A 19980324; JP 54572398 A 19980324