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(54) Title: SELF-CALIBRATING PRESSURE SENSOR SYSTEM WITH PRESSURE SENSOR AND REFERENCE SENSOR THAT SHARE COMMON SEALED CHAMBER

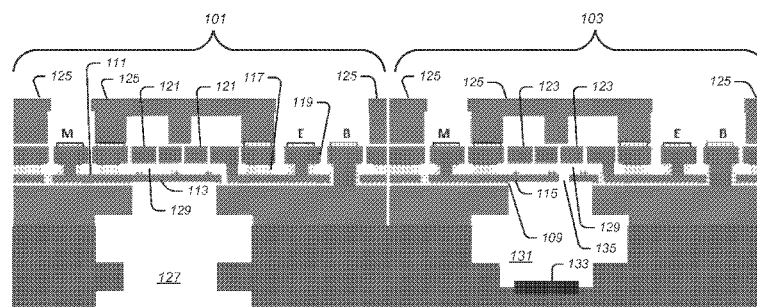


FIG. 1

(57) Abstract: A self-calibrating pressure sensor system may measure the pressure of a gas or liquid. The system may include a pressure sensor, a reference sensor, and a drift compensation system. The pressure sensor may include a pressure-sensing flexible diaphragm with one side exposed to the gas or liquid and another side forming a wall of a sealed chamber. The reference sensor may include a reference flexible diaphragm that has two sides that are both within or exposed to the same sealed chamber. The drift compensation system may produce information that is indicative of the pressure of the gas or liquid based on the signal from the pressure sensor, and compensate for drift in this signal based on changes in the signal from the reference sensor. The pressure-sensing flexible diaphragm and the reference flexible diaphragm may be made at substantially the same time by depositing or growing a single layer of material in a single continuous step.