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(54) Title: PRESSURE SENSORS AND PRESSURE TRANSMITTERS

(57) Abstract

First capacitance pressure sensor (70A, B) has a fusion bonded single crystal structure: (sapphire with cavity). Second one (70A, B) has an elongated and thick single crystal structure. Third one (70A, B) uses the electric field emanating from the back sides of the capacitor plates. First differential pressure transmitter uses a process barrier (71) and an elongated member as a sensor (70A, B). Second differential pressure transmitter uses single crystal structures with stress isolation members as sensors (70A, B). Basically thick slab cavity capacitance sapphire sensors are directly exposed to a process fluid. Slab: 15x3x2 cubic mm, cavity cross section: 1mm x 0.5 micro m, capacitance: 42 pF.

