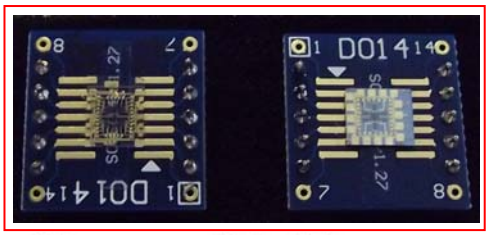
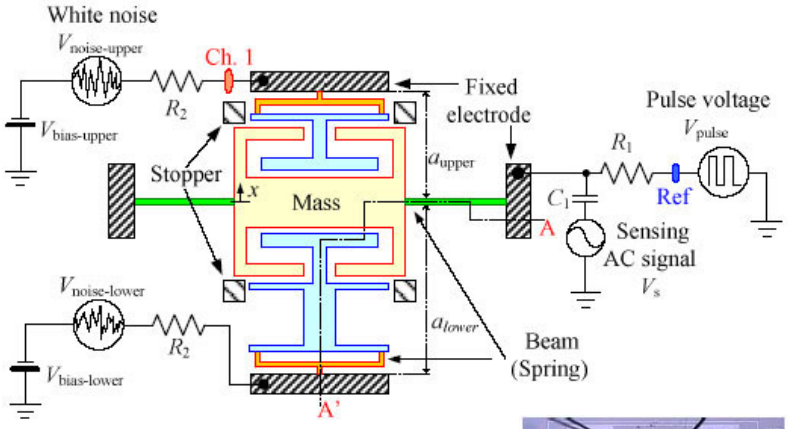
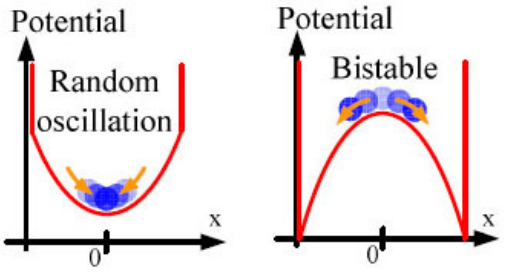
E1

Sensing in Harsh Environment

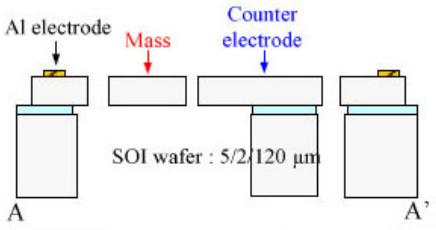




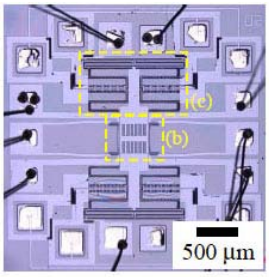
(a) Planar structure



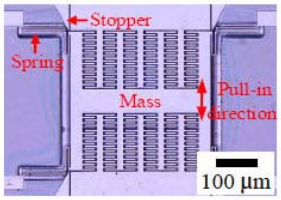
(a) V_{pulse} is zero or low. (b) V_{pulse} is high.



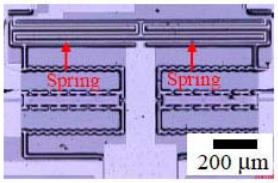
(b) Cross-sectional structure



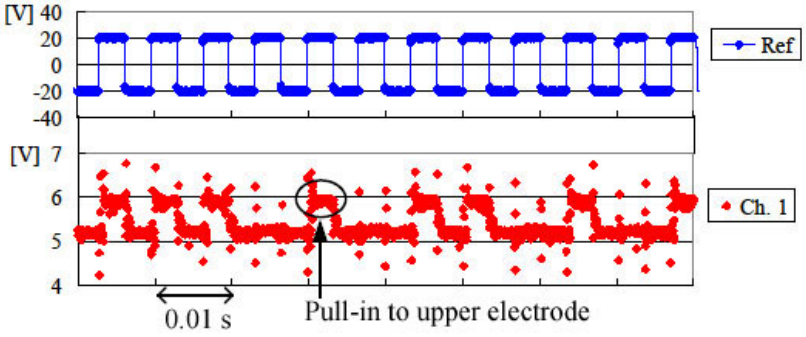
(a) Overall top view

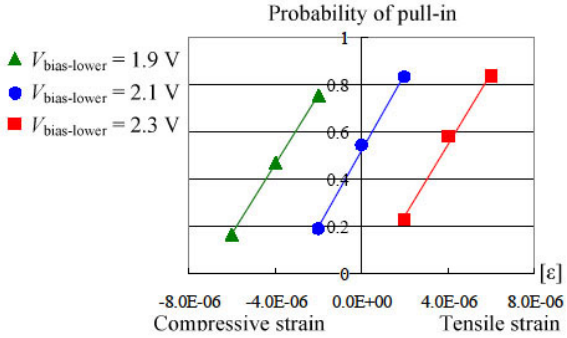


(b) Magnified view of the mass



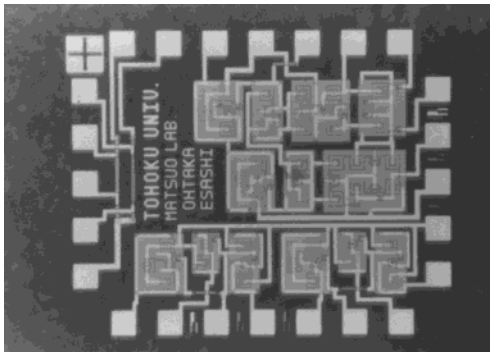
(c) Magnified view of springs supporting counter electrode

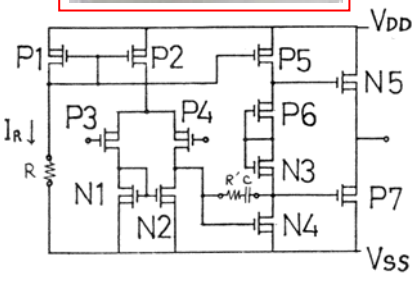


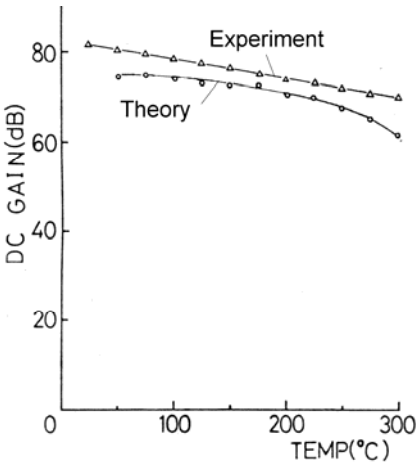


Stochastic sensor

Reference : Y.Hatakeyama, M.Esashi and S.Tanaka, Stochastic Gravity Sensor with Robust Output Using White-Noise-Applied Vi-Stable State for Low S/N Environments, Tech. Digest IEEE MEMS 2012 (2012) pp.132-135







Operational amplifier for high temperature SOS (Silicon On Sapphire) OMOS

Reference : M.Esashi, S.Ohtaka, T.Matsuo, Fabrication of High Temperature Integrated Circuit and High Temperature Pressure Sensor, Technical Report, IEICE of Japan, SSD86-57 (1986) pp.67-74