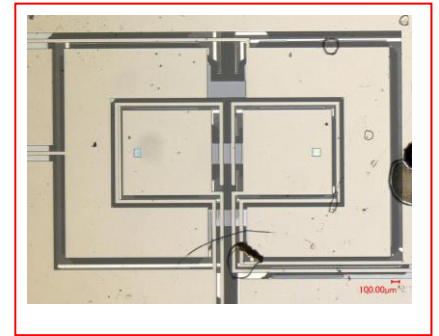
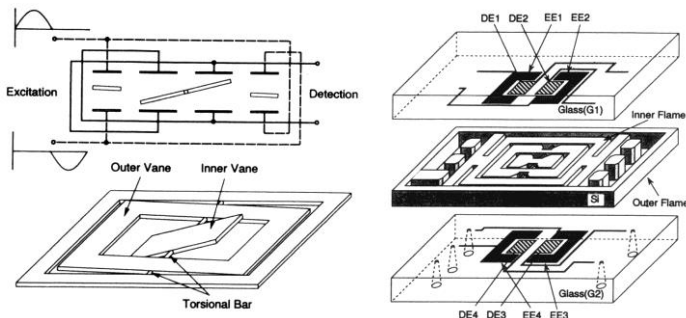
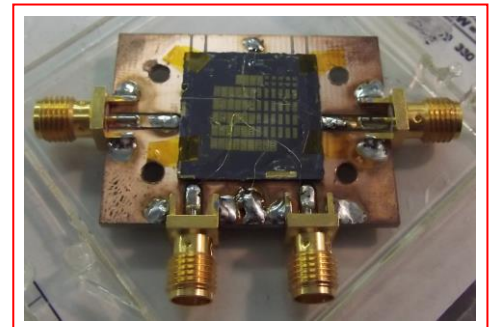
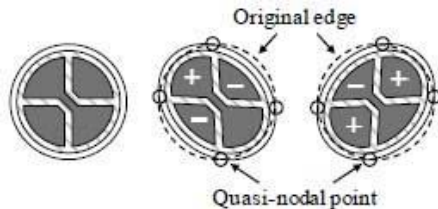
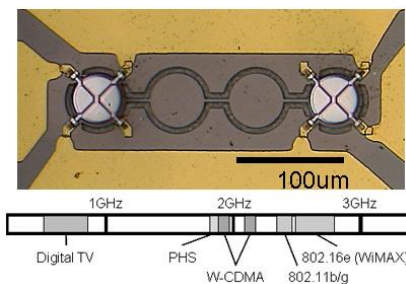


# MEMS 共振子 (ディスク、Lamb 波 他)

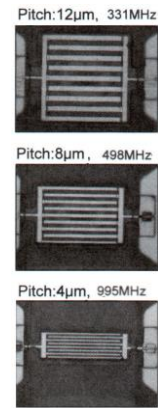
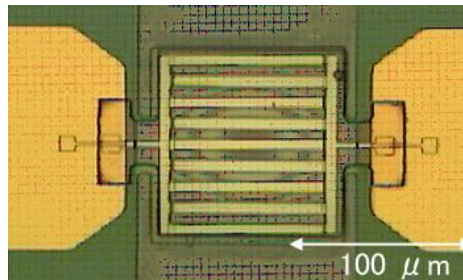
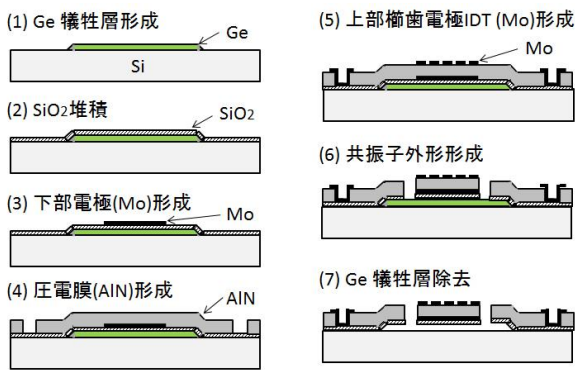


パッケージングした高 Q の MEMS 共振子 (東北大 - 島津製作所)

参考文献 : K.Yoshimi, K.Minami, Y.Wakabayashi and M.Esashi, Packaging of Resonant Sensors, Technical Digest of the 11th Sensor Symposium(1992) pp.35-38

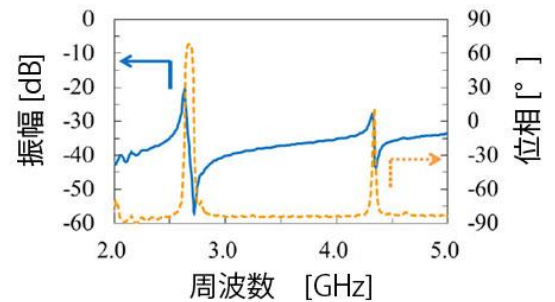
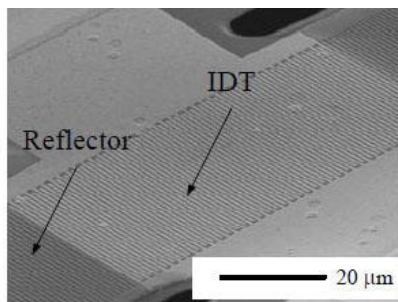
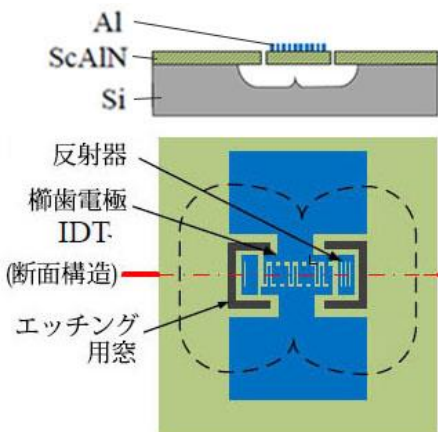


マイクロディスク共振子 (東北大 - 情報通信研究機構(NICT)) 参考文献 : T.Matsumura, M.Esashi, H.Harada and S.Tanaka : Multi-band Radio-frequency Filter Fabricated Using Polyimide-based Membrane Transfer Bonding Technology, J. of Micromech. Microeng., 20, 9 (2010) 095027(9pp)



Lamb 波共振子 (東北大 - 日本電波)

参考文献 : K.Hirano, M.Esashi and S.Tanaka, Aluminum Nitride Lamb Wave Resonator Using Germanium Sacrificial Layer, 2<sup>nd</sup> International Workshop on Piezo-devices Based on Latest MEMS Technologies (2008) pp.111-117



Sc-AIN を用いた Lamb 波共振子, 参考文献 : A.Konno et.al ::ScAlN Lamb Wave Resonator in GHz Range Released by XeF<sub>2</sub> Etching, 2013 IEEE Ultrasonics Symposium 2013 1378-1381)