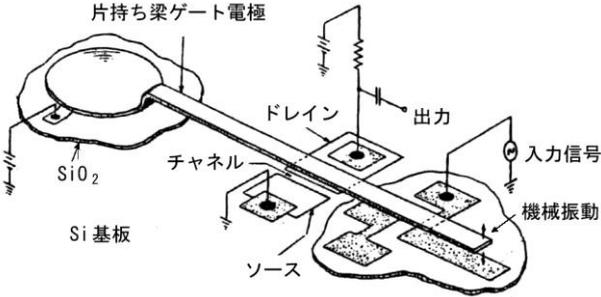
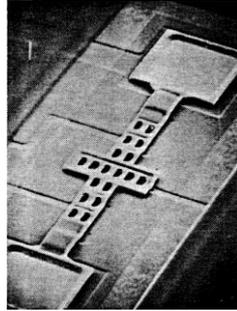


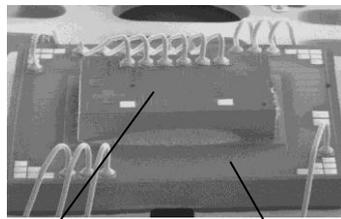
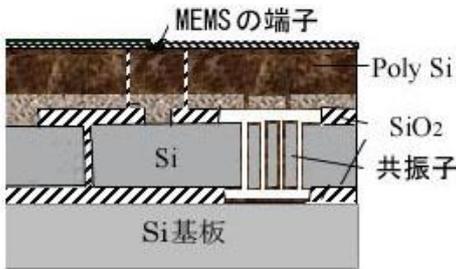
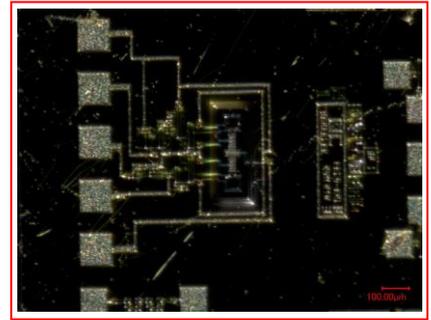
MEMS 共振子 (米国)



共振ゲートトランジスタ (ウェスティングハウス)
 参考文献 : H.C.Nathanson et al. The resonant gate transistor, IEEE Trans. on Electron Devices, ED-14 (1967) 117-133



共振マイクロブリッジ (U.C.Berkeley)
 R.T.Howe and R.S.Muller, Resonant-Microbridge Vapor Sensor, IEEE Trans. on Electron Devices, ED-33 (1986) pp.499-506



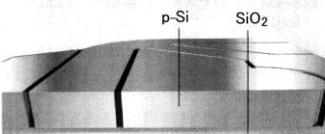
MEMS 共振子チップ 回路チップ

MEMS 発振器 (SiTime)

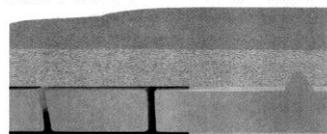
mm	7.0 x 5.0	5.0 x 3.2	3.5 x 3.0	3.2 x 2.5	2.5 x 2.0	2.0 x 1.6	2.0 x 1.2	1.5 x 0.8
Single-Ended XO, VCXO, TCXO, DCXO	0.25 mm H Thinned XO							
Differential XO, VCXO, TCXO, DCXO								
Clock Generator								

SiTime Silicon MEMS Timing 100% Pin Compatible with QUARTZ

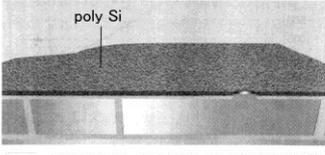
(1) SOIウェハ活性層のRIE



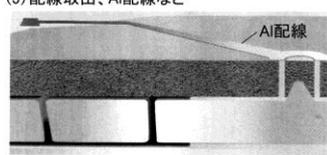
(4) 高温高真空クリーニング、poly Si堆積封止



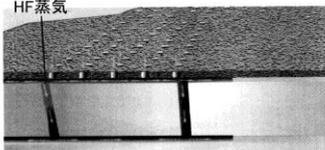
(2) SiO2による穴埋と部分除去、poly SiのCVD



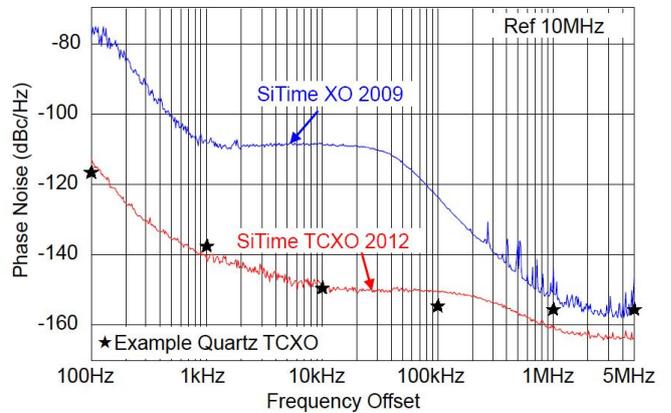
(5) 配線取出、Al配線など



(3) poly Siの穴あけ、SiO2途中まで除去(HFガス)



100x Lower Phase Noise in 3 Years



江刺 正喜
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 SiTime Corp. 代表取締役

John McDonald
 SiTime Corp. Vice President

Aaron Partridge
 SiTime Corp. Chief Technical Officer

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