P101

1st International Symposium of Gunma University Medical Innovation and
6th International Conference on Advanced Micro-Device Engineering
(GUMI&AMDE 2014)

Phase Noise Performance Analysis of VCO Circuit

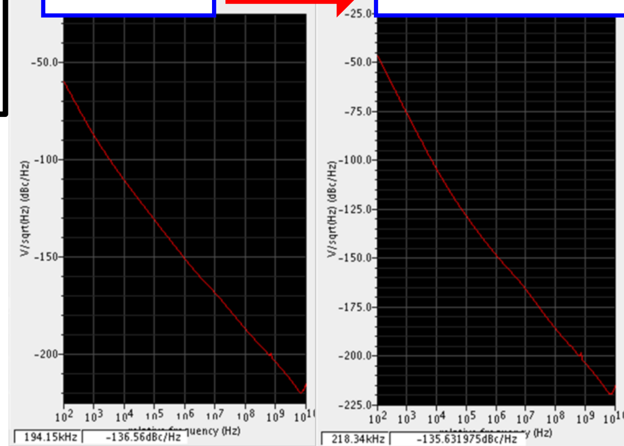
Shunichiro Todoroki, Hitoshi Aoki, Fumitaka Abe, Khatami Ramin, Yukiko Arai
Masaki Kazumi, Takuya Totsuka, Haruo Kobayashi
Division of Electronics and Informatics, Gunma University, JAPAN

- HCI degradation model
- 1/f noise model development (n-MOSFETs)

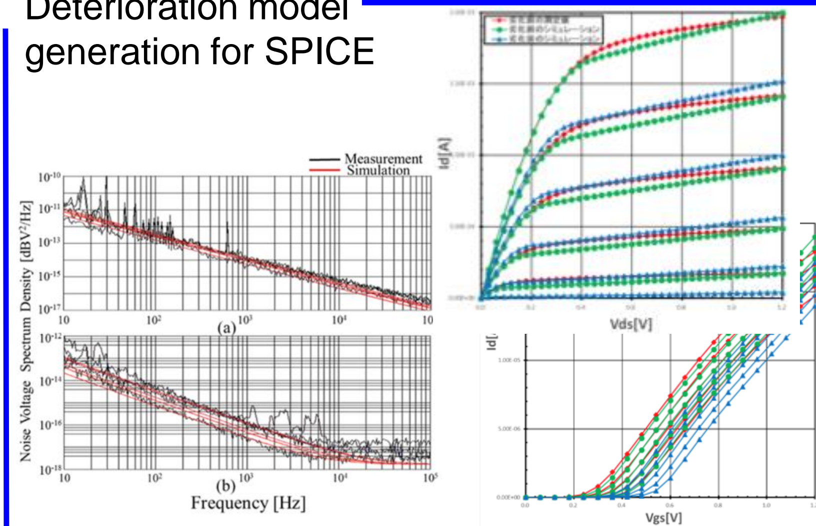
- HCI measurement
- 1/f noise variability measurement (n-MOSFETs)

- Successfully simulated the phase noise degradation

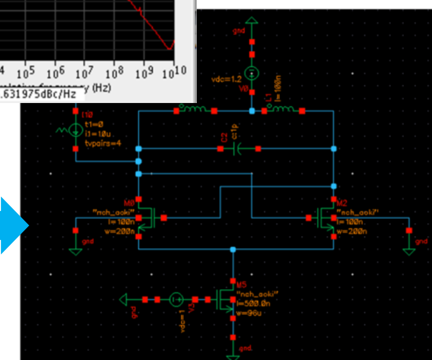
Fresh → After Stress



Deterioration model generation for SPICE



Deterioration SPICE model library



VCO equivalent circuit