

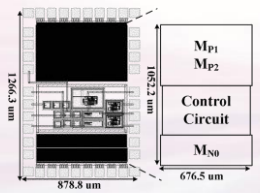
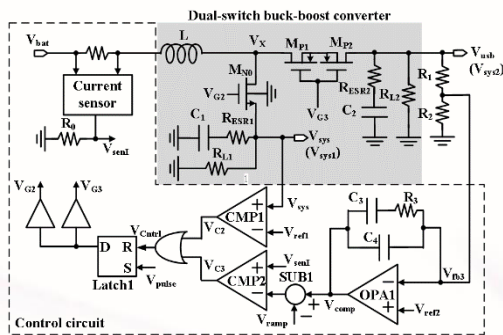
Mixed-Signal IC Design Laboratory

Main Research

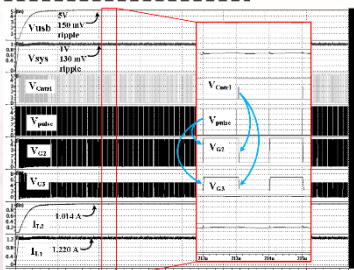
- Mixed-signal IC
- Wide-range I/O buffer
- Biomedical IC
- Power management IC

Highlight

Single-inductor dual outputs buck-boost converter with dual switches

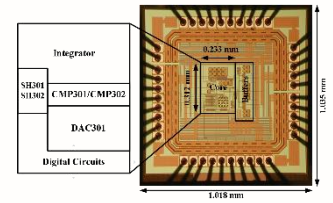
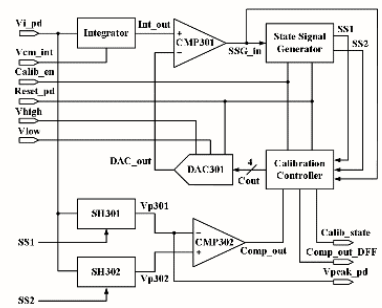


Layout of the proposed design

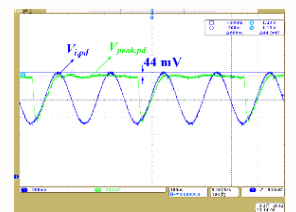
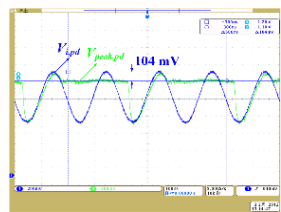


Simulated waveforms in steady state

Delay-Time-Compensated Peak Detector for Medium-Frequency Band

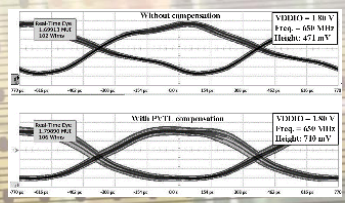
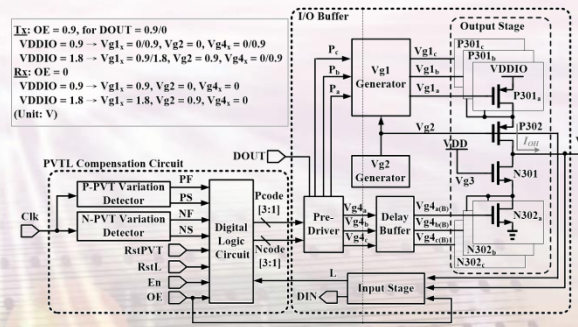


The die photograph of the proposed design

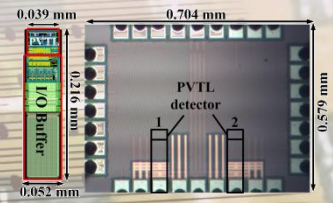


Measured waveforms after compensation

A Slew Rate Variation Compensated 2xVDD I/O Buffer

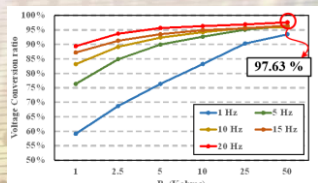
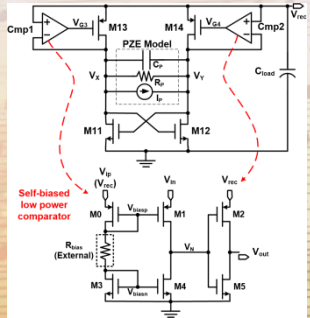


Measured eye diagram

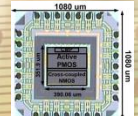


Die photo

99.01% PCE and 97.63% VCE Active Rectifier for Low-Frequency Ocean Wave Piezoelectric Vibration Energy Harvesting



Measured VCR



Diephoto