

The background features a large, light blue watermark of the Yonsei University logo. The logo is circular with the text 'YONSEI UNIVERSITY' around the top and '1885' at the bottom. In the center is a shield with a book, a lamp, and a central circle.

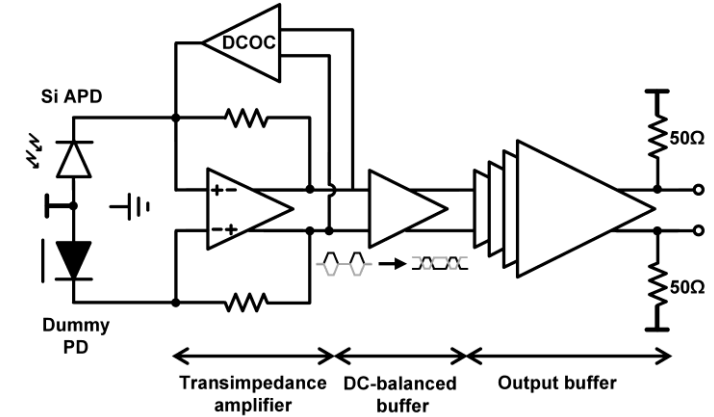
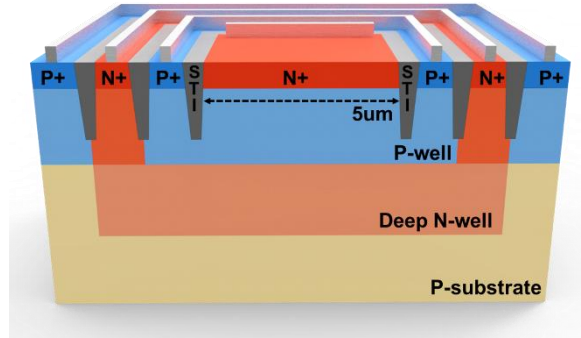
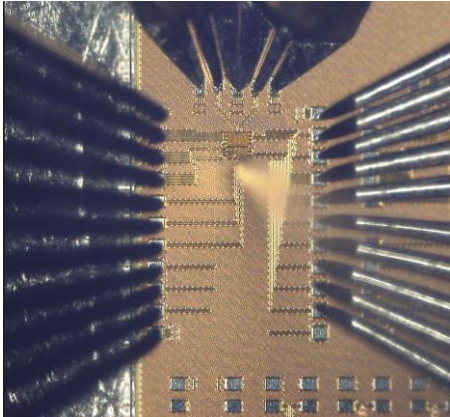
2023 Workshop

Jae-Ho Lee

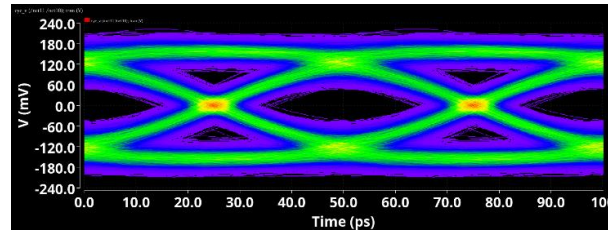
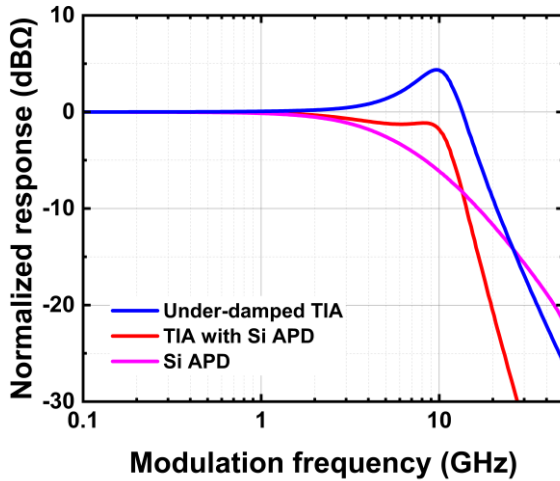
**High-Speed Circuits & Systems Lab.
Dept. of Electrical and Electronic Engineering
Yonsei University**

2023.01

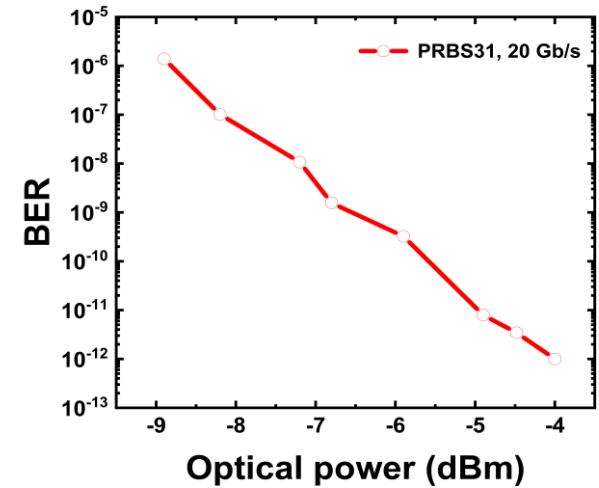
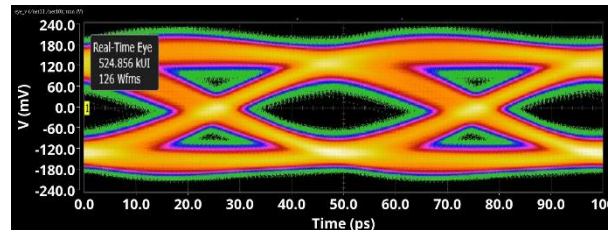
- Monolithic ORx with 28-nm CMOS APD



Simulation

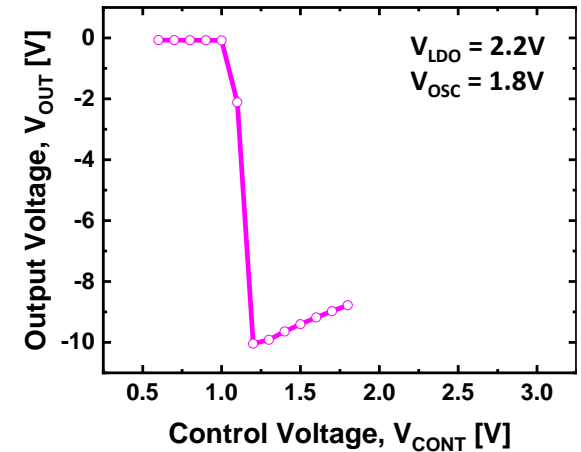
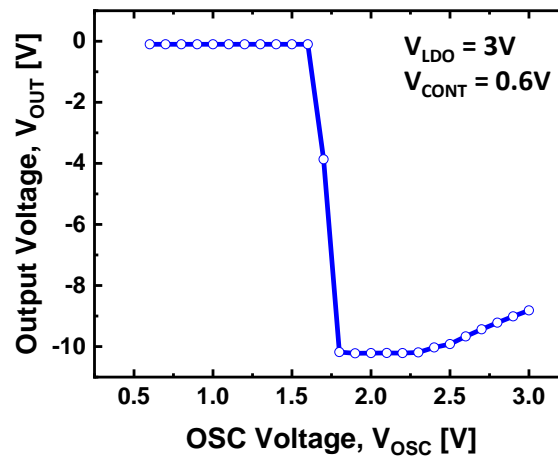
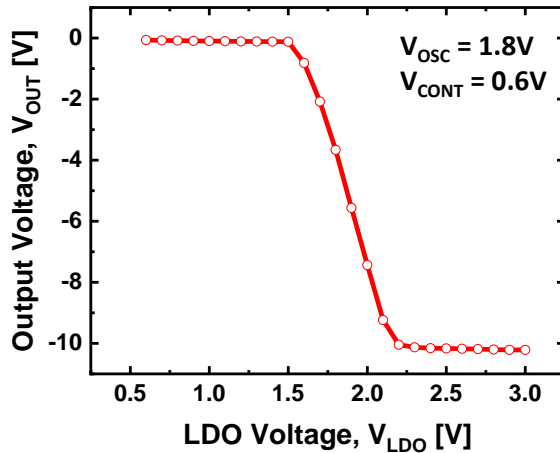
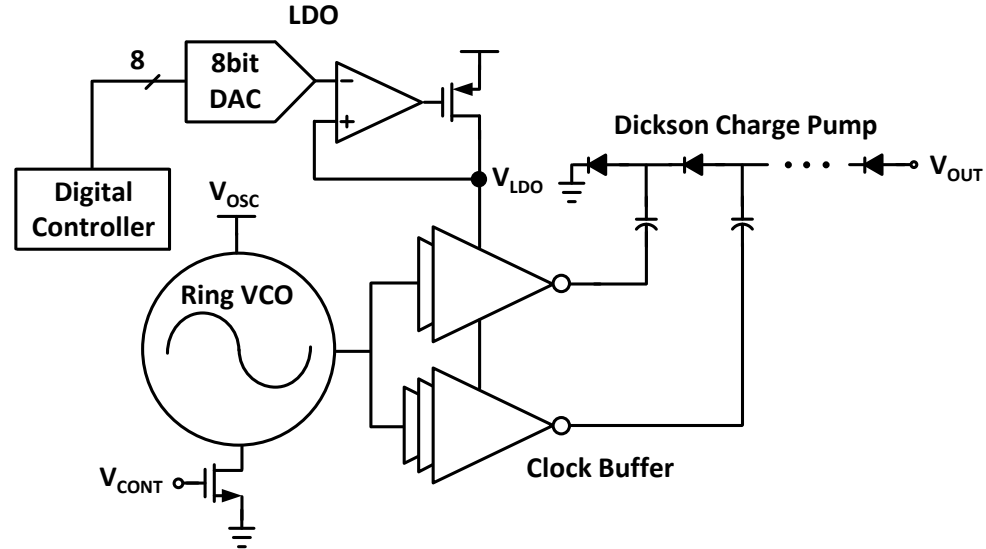
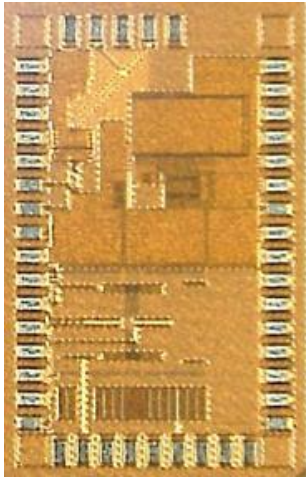


Measurement



- CML-based TIA without inductor operating at 20Gb/s, PRBS31 data

- On-chip Negative Voltage Multiplier in 28nm CMOS Technology

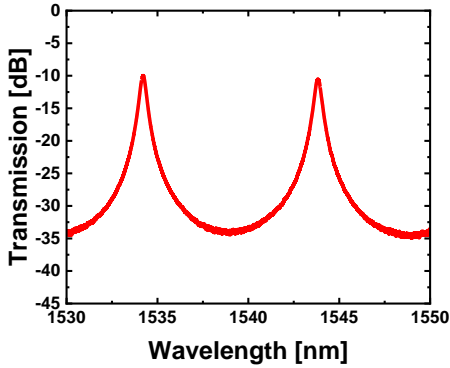


- Successfully generates -10V in 28nm CMOS Technology

- AMF PIC (MRR, Ring PD, 4CH Demux)

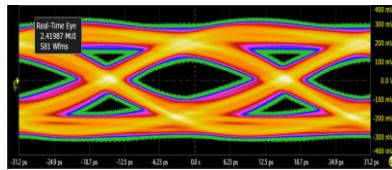
- Inverter based inductor-less 64Gb/s PAM4 ORx

1CH MRR

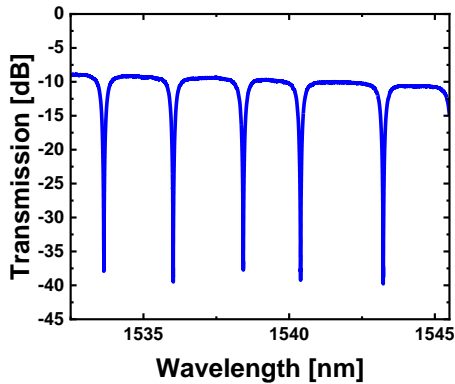


Radius: 10 [μm]
 Gap: 180 [nm]
 FSR: 9.7 [nm]
 FWHM: 410 [pm]

32 Gb/s (Commercial Orx)

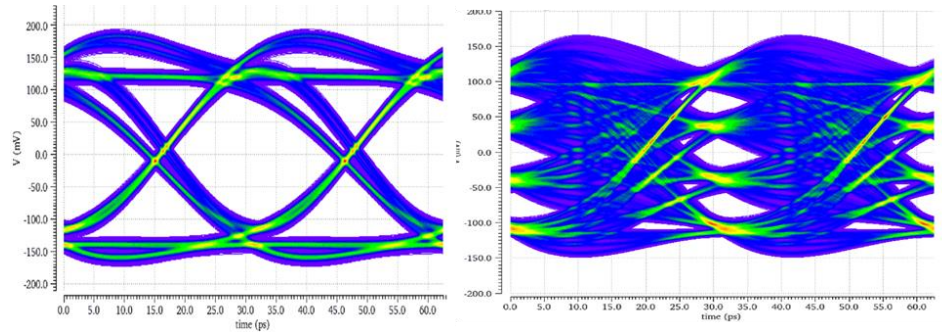
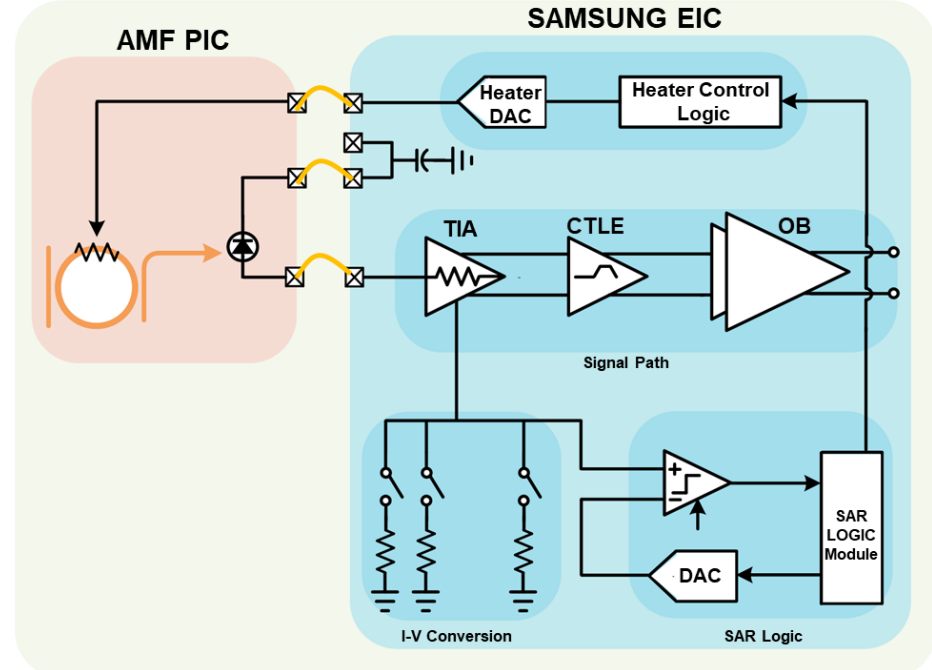


4CH MRR



Radius: 10 [μm]
 Gap: 200 [nm]
 FSR: 9.6 [nm]

24 nm radius 차이



- Weightbank Controller

