

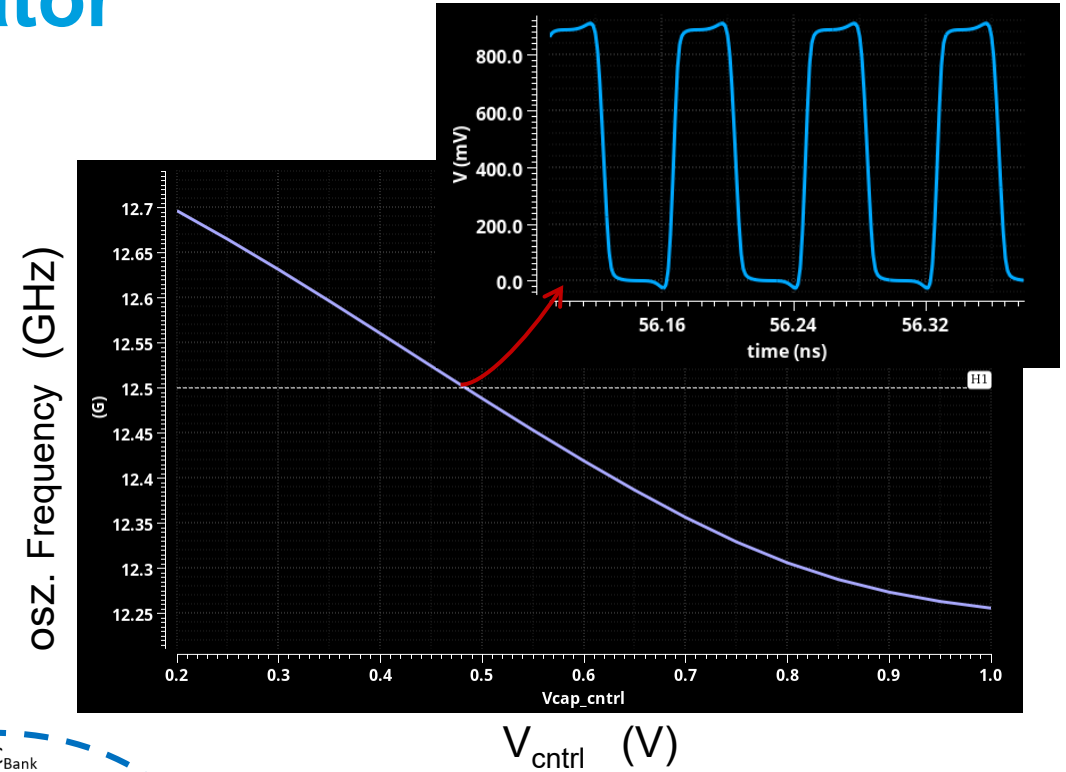
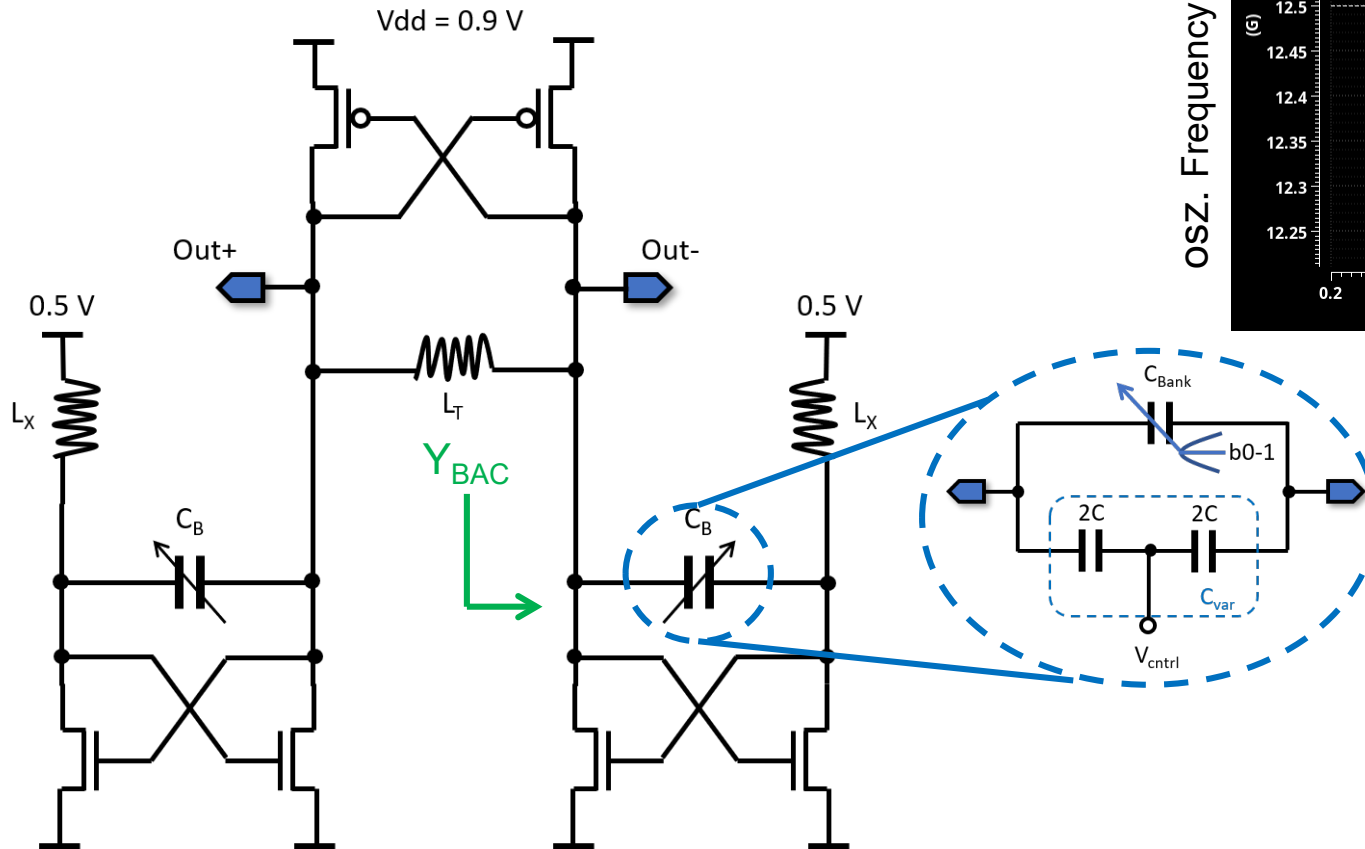
Swinging Christmas

Oscillators are a must



12.5 GHz Voltage-Controlled Oscillator

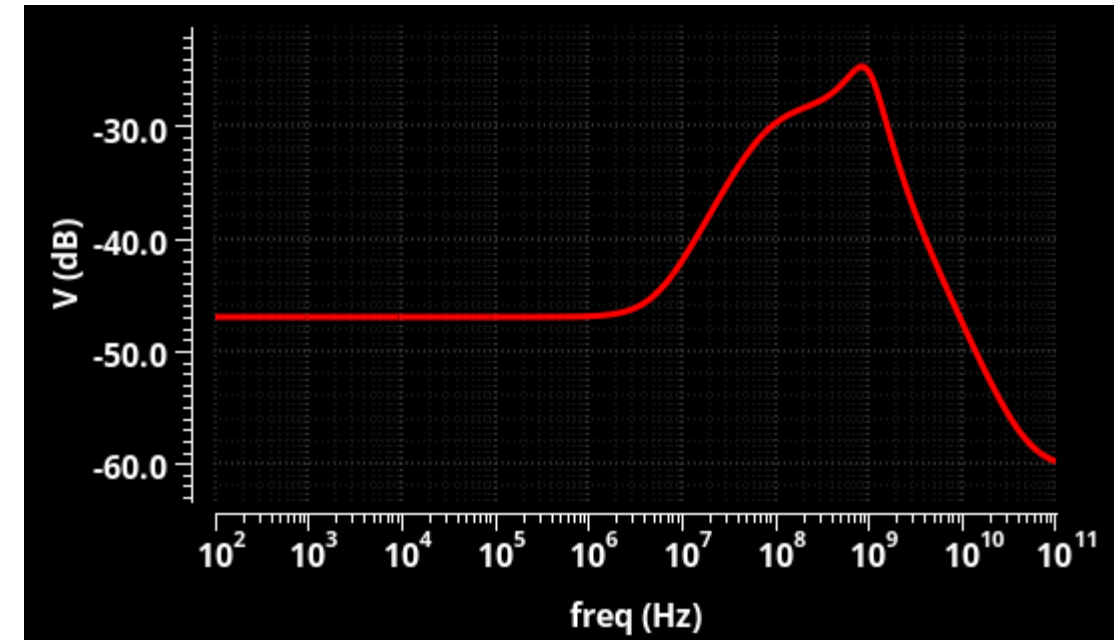
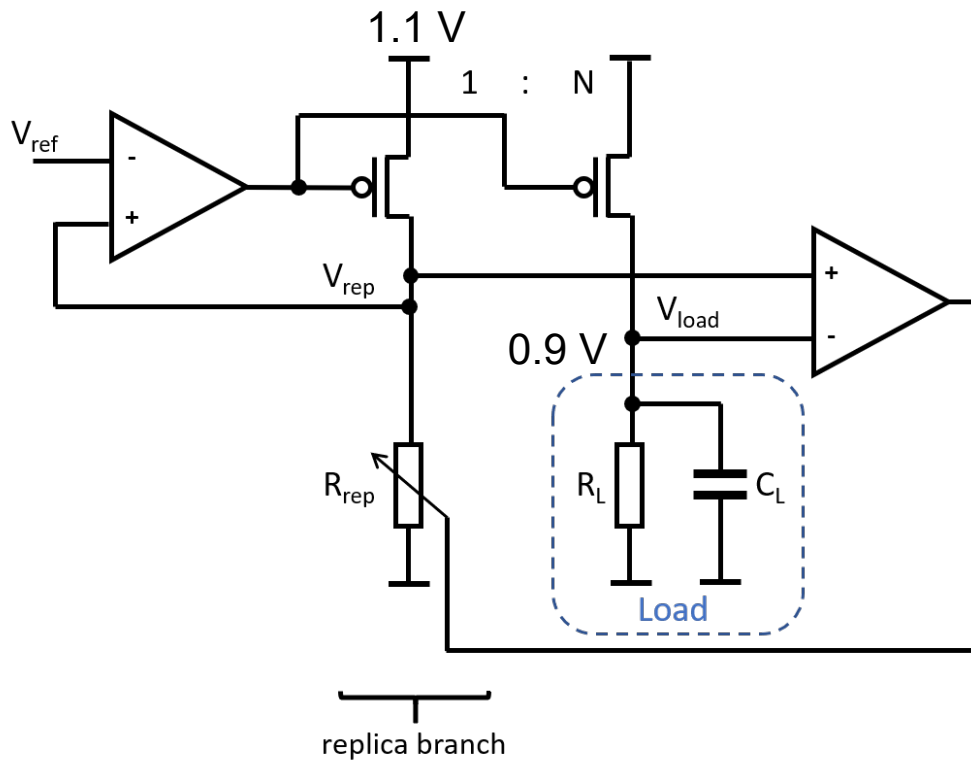
- Non-linear circuit converts DC power to an ac-waveform
- For use in clock-and-data recovery block on RX side
- Boosted active-capacitor improves phase noise and jitter



- Switched capacitor bank, 2 bits
- Varactor for continuous trimming

Low-Dropout Voltage Regulator LDO

- Clock generation circuits show high sensitivity to supply noise
 - ⇒ Need to be operated under regulated supply
- Replica load introduced
 - ⇒ High-Bandwidth power supply rejection & large phase margin



... and the bells are ringing out
for Christmas day



Merry Christmas and a Happy and Healthy 2025!