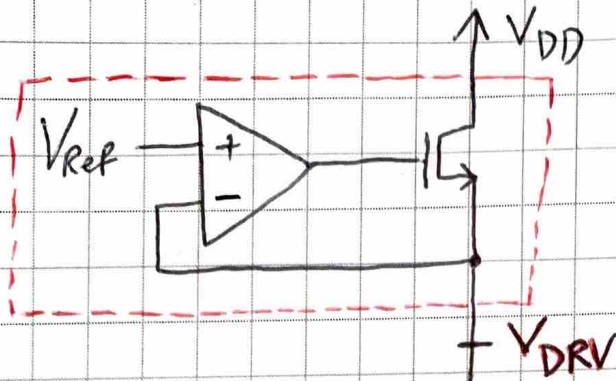
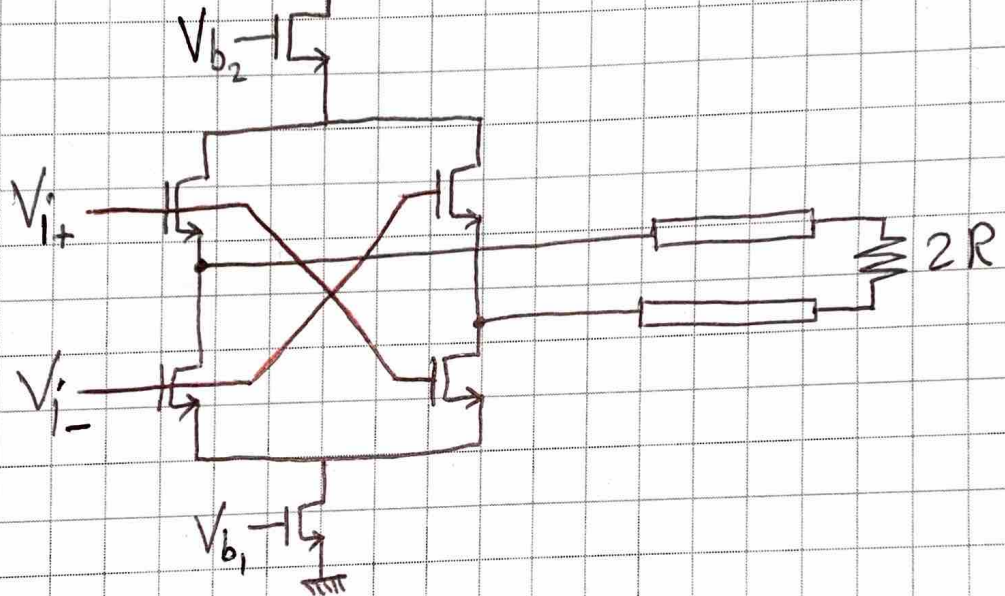


VM Tx-Driver

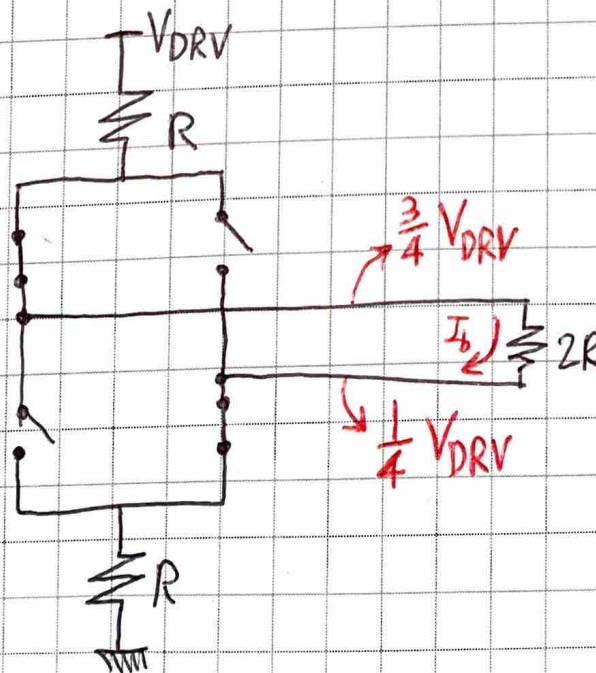
(low-swing)



ALL NMOS



* Swing



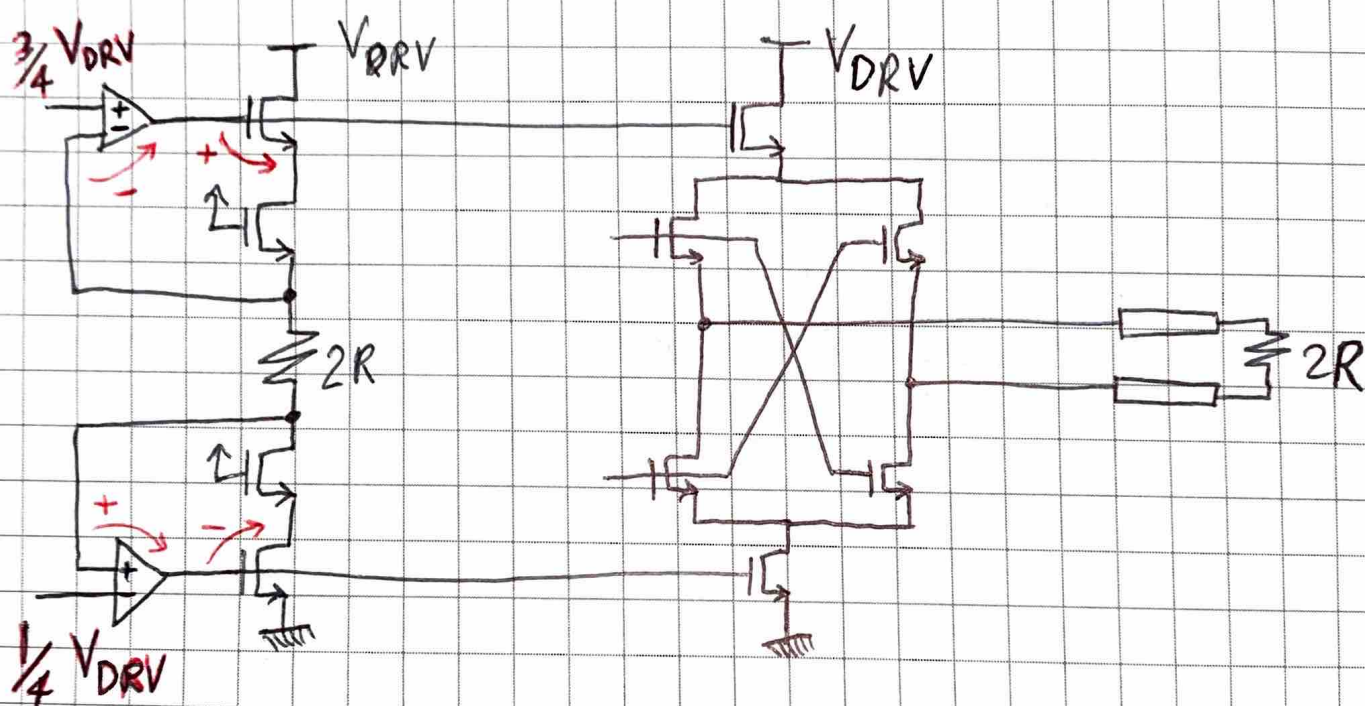
$$V_{sw\ pk} = \pm \frac{1}{2} V_{DRV}$$

$$V_{sw\ pk2pk} = V_{DRV}$$

$$I_b = \frac{V_{sw\ pk}}{2R} = \frac{1}{4} \frac{V_{sw\ pk2pk}}{R}$$

* Replica (for impedance control)

⇒ ~~To~~ ensure the output voltages are at $\frac{3}{4} V_{DRV}$ & $\frac{1}{4} V_{DRV}$, we need to bias the source NMOSs to give an output impedance of R .



⇓
-ve feedback
loops