

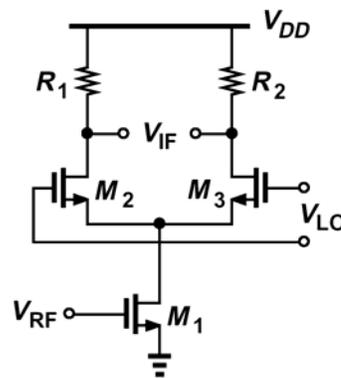
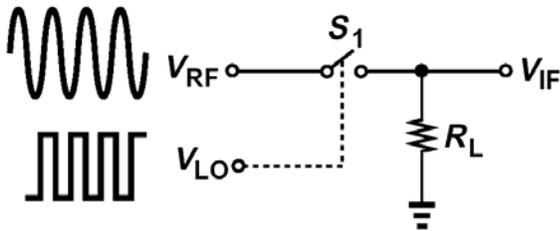
# RF Mixers (I)

## General Considerations

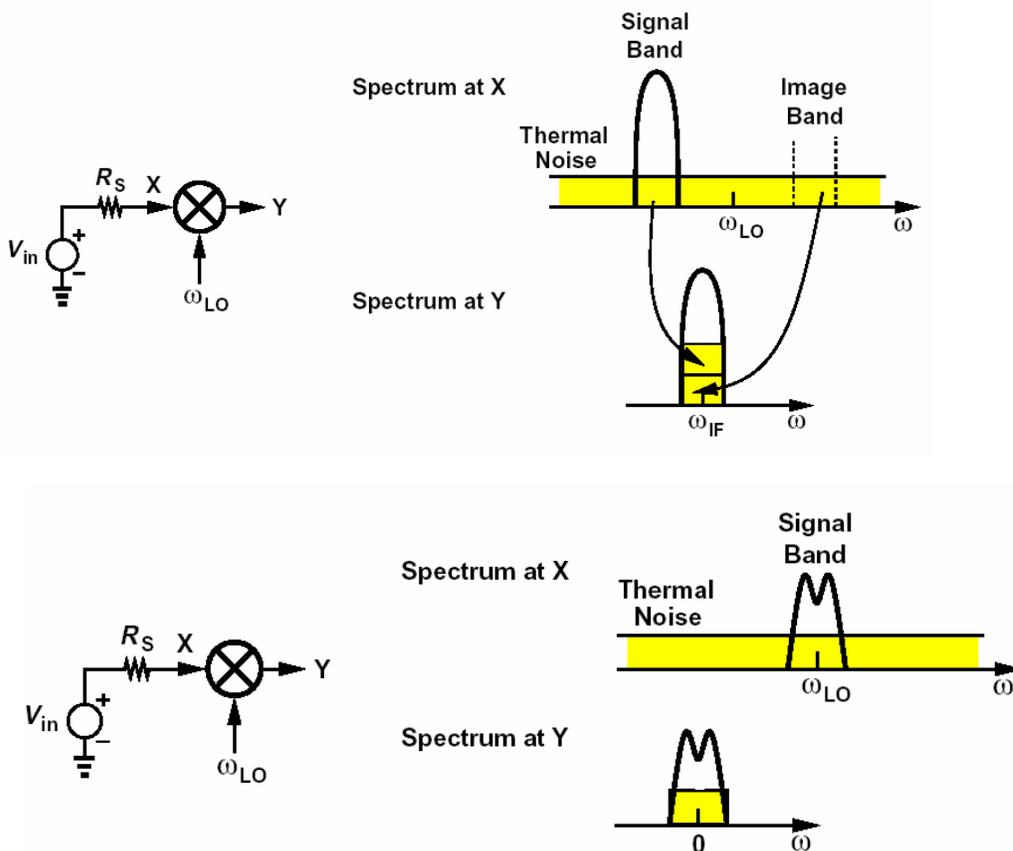
### • Performance Parameters

- Noise
- Linearity: IP3, IP2
- Voltage Conversion Gain
- Supply Voltage
- Power Dissipation

### • Passive and active Mixers



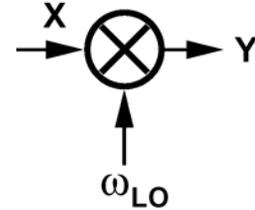
### • SSB and DSB Noise Figures



• **Port-to-Port Isolation**

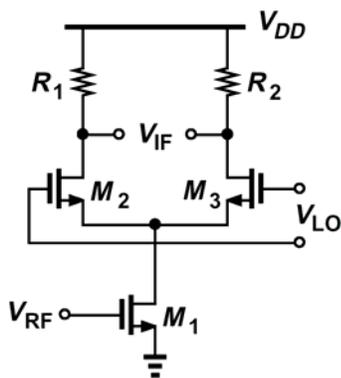
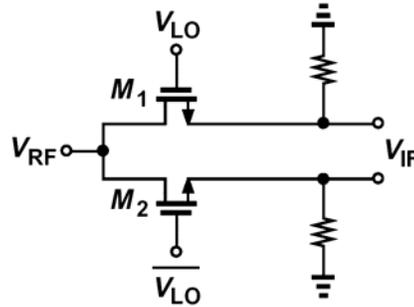
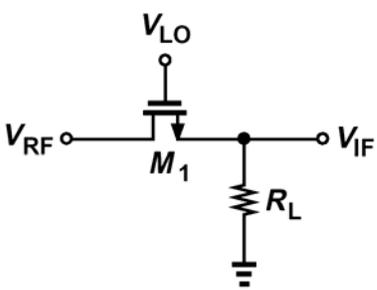
The leakage from each port to the other may degrade the performance:

- LO-RF Feedthrough
- RF-LO Feedthrough
- LO-IF Feedthrough



And all other combinations ...

• **Single-Balanced and Double-Balanced Mixers**



What is the ideal LO waveform?