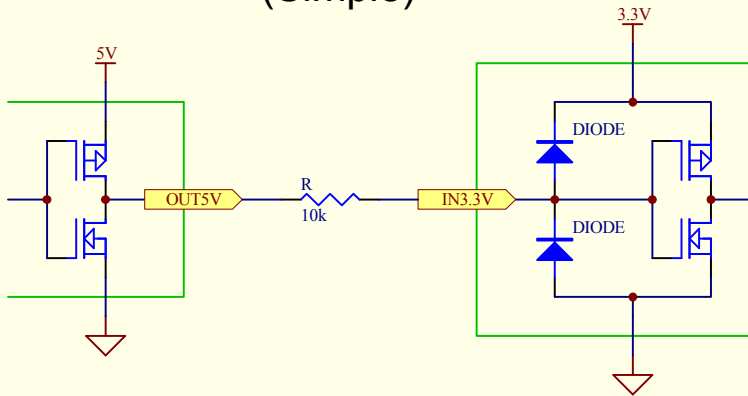
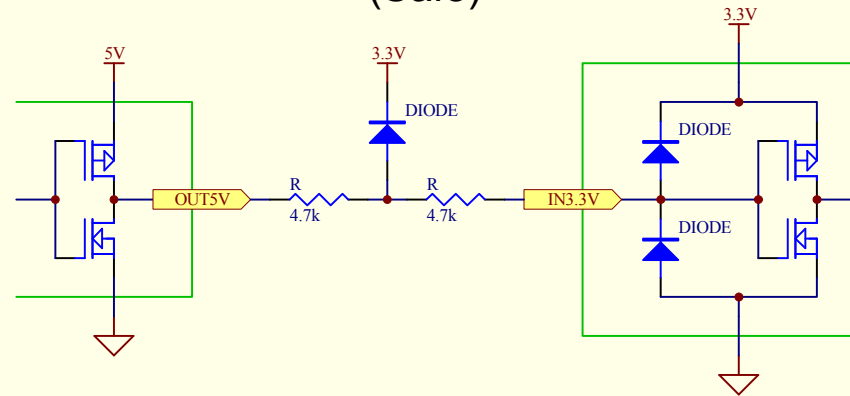


5V to 3.3V (Simple)



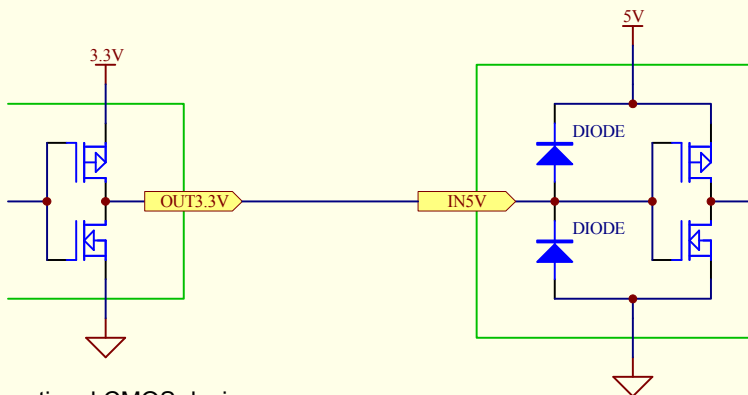
Conventional CMOS device
with protection diodes

5V to 3.3V (Safe)



Conventional CMOS device
with protection diodes

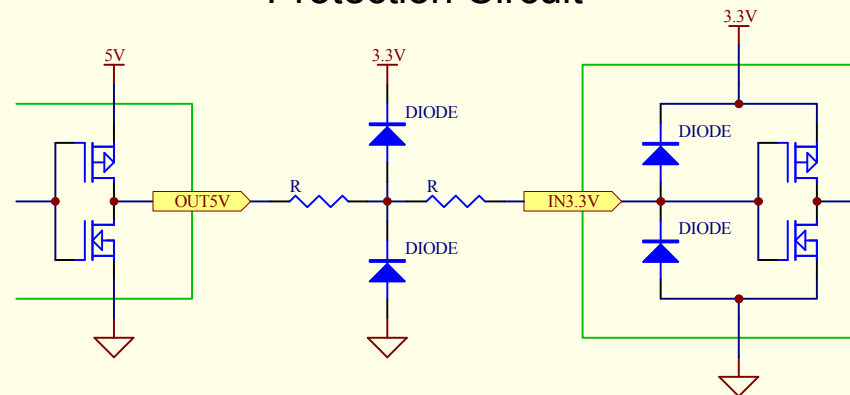
3.3V to 5V



Conventional CMOS device
($V_{ol}=0V/V_{oh}=3.3V$ full swing)

Conventional CMOS device
($V_{th}=2.5V$)

Positive/Negative Voltage Protection Circuit



Conventional CMOS device
with protection diodes

Simple Signal Connection between 3.3V and 5V CMOS Device
(for hobby electronics circuit)

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