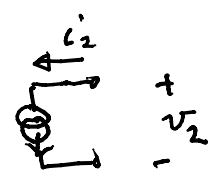
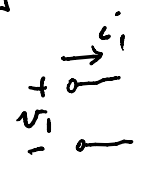


Power in = $v(t) i(t)$

$i(t) = C \frac{dv(t)}{dt}$

$v(t) = \frac{1}{C} \int i(t) dt$

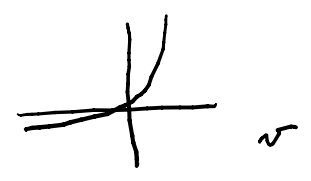
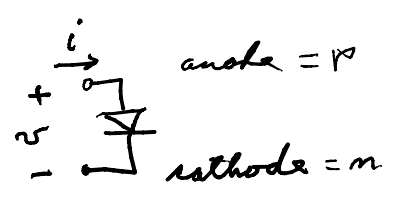
Approx G component (VCCS)



$i_1 = 0$
 $i_2 = g_m v_2$

G value; $i_{source} = \text{value of any specified function}$

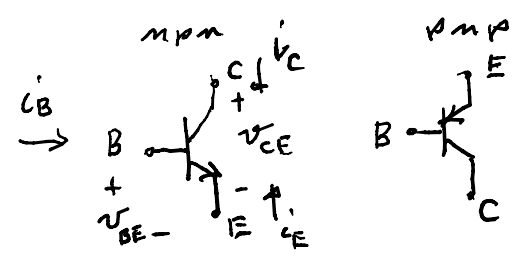
Diodes



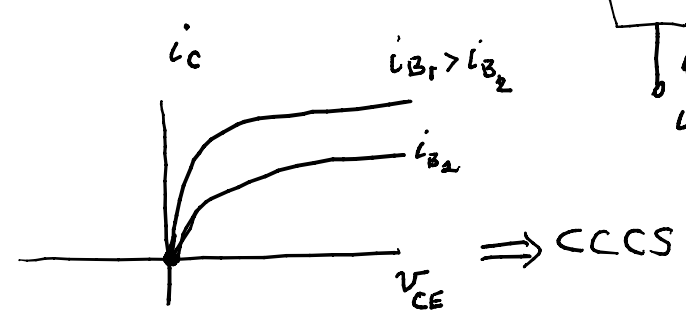
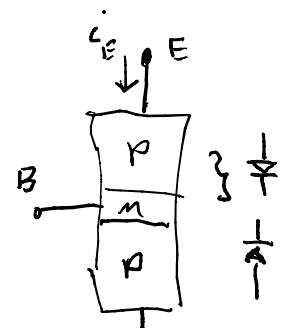
very nonlinear

Transistors

BJT

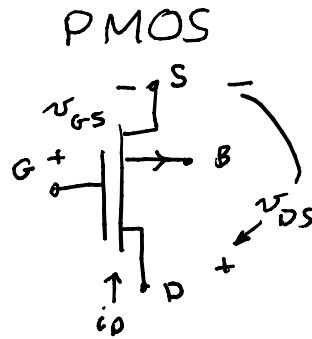
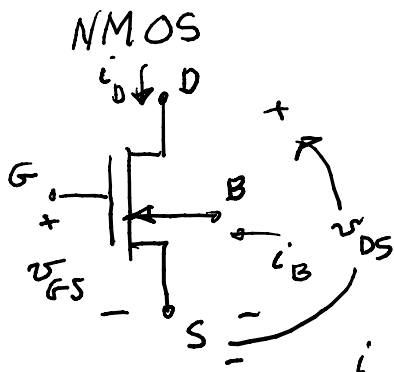


B = base
C = collector
E = emitter

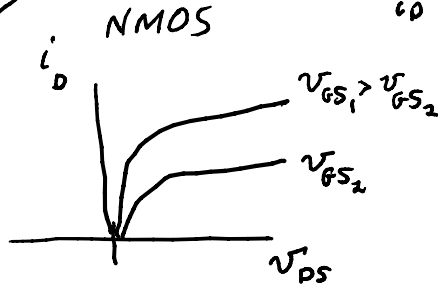


very nonlinear

⇒ CCCS



B = bulk
 G = gate
 D = drain
 S = source



⇒ VCCS
 " voltage controlled
 current source

in lab use 4007 package
 " RCA 3600