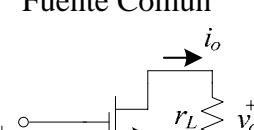
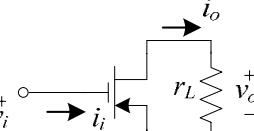
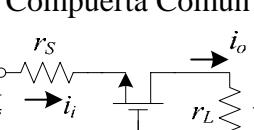
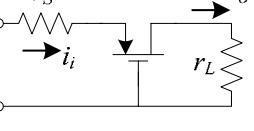
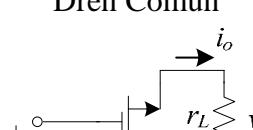
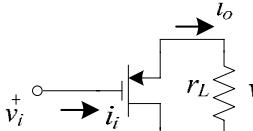
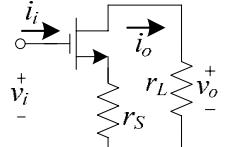
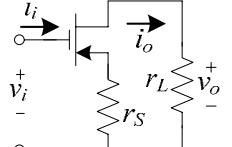


CONFIGURACIONES FUNDAMENTALES DE AMPLIFICACIÓN CON FETS

Dr. J. E. Rayas Sánchez

Circuitos equivalentes para señal pequeña:	Fuente Común	Compuerta Común	Dren Común	Degeneración de Fuente
	 	 	 	 
$A_v = \frac{v_o}{v_i}$	$A_v = -g_m(r_o \parallel r_L)$ Si $r_L \ll r_o$, $A_v \approx -g_m r_L$	$A_v = \frac{(1+g_m r_o)r_L}{r_o + r_S(1+g_m r_o) + r_L}$ Si $g_m r_o \gg 1$, $A_v \approx \frac{g_m r_L r_o}{r_L + r_o(1+g_m r_s)}$ Si $r_L \ll r_o$, $A_v \approx \frac{g_m r_L}{1+g_m r_s}$ Si $g_m r_s \ll 1$, $A_v \approx g_m(r_L \parallel r_o)$	$A_v = \frac{g_m(r_o \parallel r_L)}{1+g_m(r_o \parallel r_L)}$ Si $r_L \ll r_o$, $A_v \approx \frac{g_m r_L}{1+g_m r_L}$ y si $g_m r_L \gg 1$, $A_v \approx 1$	$A_v = \frac{-g_m r_o r_L}{r_L + r_S(1+g_m r_o) + r_o}$ Si $g_m r_o \gg 1$, $A_v \approx \frac{-g_m r_o r_L}{r_L + r_o(1+g_m r_s)}$ y si $r_o(1+g_m r_s) \gg r_L$, $A_v \approx \frac{-g_m r_L}{1+g_m r_s}$ y si $g_m r_s \gg 1$, $A_v \approx -r_L / r_s$
$R_i = \frac{v_i}{i_i}$	$R_i = \infty$	$R_i = r_s + \frac{r_o + r_L}{1+g_m r_o} \approx r_s + \frac{r_o + r_L}{g_m r_o}$ Si $r_L \ll r_o$, $R_i \approx r_s + \frac{1}{g_m}$ y si $r_s \ll 1/g_m$, $R_i \approx \frac{1}{g_m}$	$R_i = \infty$	$R_i = \infty$
$R_o = \left. \frac{v_o}{-i_o} \right _{v_i=0}$	$R_o = r_o$	$R_o = r_s + r_o(1+g_m r_s)$ $R_o \approx r_o(1+g_m r_s)$	$R_o = r_o \parallel \frac{1}{g_m} \approx \frac{1}{g_m}$	$R_o = r_s + r_o(1+g_m r_s)$ $R_o \approx r_o(1+g_m r_s)$
$A_i = \frac{i_o}{i_i}$	$A_i = -\infty$	$A_i = 1$	$A_i = \infty$	$A_i = -\infty$