

	Common-Emitter	Common-Base	Common-Collector
Input Impedance Z_{in}	Moderate $R_1 \parallel R_2 \parallel r_{\pi}$	Low $R_E \parallel r_{\pi} \parallel \frac{1}{g_m}$	High $R_1 \parallel R_2 \parallel [r_{\pi} + (1 + \beta_0) R_E \parallel R_L]$
Output Impedance Z_{out}	Moderate R_C	Moderate R_C	Low $R_E \parallel \left[\frac{r_{\pi} + R_1 \parallel R_2 \parallel R_S}{1 + \beta_0} \right]$
Voltage Gain $A_{V_i} = \frac{V_{out}}{V_{in}}$	High Inverting $-g_m (R_C \parallel R_L)$	High $g_m (R_C \parallel R_L)$	Low < 1 $\frac{(1 + \beta_0) R_E \parallel R_L}{r_{\pi} + (1 + \beta_0) R_E \parallel R_L}$
Current Gain $A_I = \frac{I_{out}}{I_{in}} = A_{V_i} \left(\frac{Z_{in}}{R_L} \right)$	High	Low < 1	High
Power Gain $A_P = \frac{V_{out} I_{out}}{V_{in} I_{in}} = A_{V_i}^2 \left(\frac{Z_{in}}{R_L} \right)$	High	Moderate	Moderate
Capacitor controlling ω_L	C_E	C_{in}	C_{out}
Capacitor controlling ω_H	C_u (Miller Effect)	C_u	C_u

Assuming $r_d = \infty$