TABLE 11.1

Inverting and Noninverting Amplifier Summary

n

Input resistance $R_{\rm in}$

Output resistance R_{out}

Fractional gain error (FGE)

$\beta = \frac{R_1}{R_1 + R_2} \text{ and } T = A\beta$	
Voltage gain A_v	

$$-\frac{R_2}{R_1} \left(\frac{T}{1+T} \right) \cong -\frac{R_2}{R_1}$$

INVERTING AMPLIFIER

$$R_1 + \left(R_{id} \left\| \frac{R_2}{1+A} \right) \cong R_1$$

$$\frac{R_o}{1+T}$$

$$R_{id}(1 +$$

$$\left(1 + \frac{R_2}{R_1}\right) \left(\frac{T}{1+T}\right) \cong 1 + \frac{R_2}{R_1}$$

$$R_{id}(1+T)$$

$$R_{id}(1+T)$$

 $\frac{1}{1+T}$

NONINVERTING AMPLIFIER

$$R_{id}(1+T)$$

$$R_{i,i}(1+T)$$

$$R_{i,i}(1+T)$$