

Offset Voltage

The output offset voltage, (V_{OO}) is the sum of the input offset voltage (V_{IO}) and both input bias currents (I_{IB}) times the corresponding gains. The following schematic and formula can be used to calculate the output offset voltage:

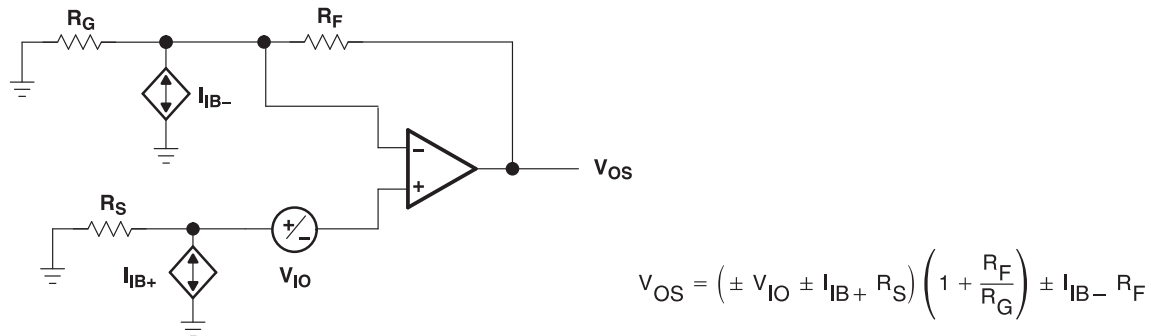
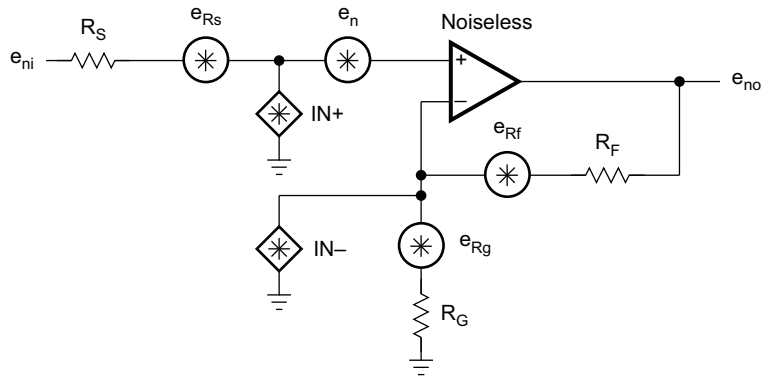


Figure 50. Output Offset Voltage Model

Noise Calculations and Noise Figure

Noise can cause errors on very small signals. This is especially true for amplifying small signals. The noise model for current-feedback amplifiers (CFB) is the same as for voltage-feedback amplifiers (VFB). The only difference between the two is that the CFB amplifiers generally specify different current noise parameters for each input, whereas VFB amplifiers usually only specify one noise-current parameter. The noise model is shown in Figure 51. This model includes all of the noise sources as follows:

- e_n = Amplifier internal voltage noise (nV/\sqrt{Hz})
- $IN+$ = Noninverting current noise (pA/\sqrt{Hz})
- $IN-$ = Inverting current noise (pA/\sqrt{Hz})
- e_{R_x} = Thermal voltage noise associated with each resistor ($e_{R_x} = 4 kTR_x$)



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Figure 51. Noise Model