

The low open-loop inverting input impedance also causes much concern among designers and is often viewed as making CFB amplifiers unsuitable as differential amplifiers. In fact, the low input impedance can result in a better high-frequency differential amplifier than a similar circuit implementing a VFB amplifier.

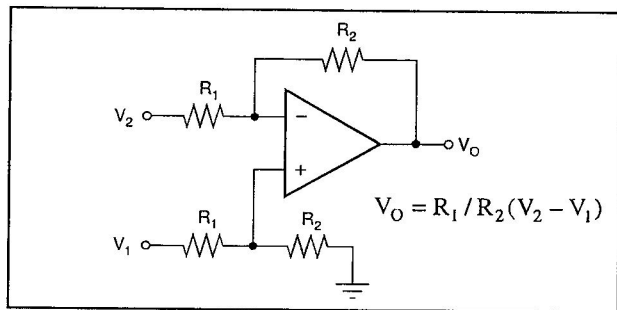


FIGURE 6. Differential Amplifier.

It can be seen that both VFB and CFB allow the same closed-loop assumptions to be made. VFB has a gain-bandwidth product, which limits the lowest stable gain. The lowest stable feedback impedance limits the lowest stable gain, for a CFB amplifier.

Both amplifier topologies can be used in closed-loop configurations implementing the same methods of analysis. CFB amplifiers can be designed into any arbitrary gain configuration and implement many circuit functions gaining better performance at higher frequencies.