

LOW-VOLTAGE, BROADBAND OPERATIONAL AMPLIFIER

ABSTRACT

A low voltage, broadband differential operational amplifier which eliminates the long tail current source from the amplifier, thereby relieving the headroom requirements by a few tenths of a volt. An input common mode feedback circuit (11) is used to overcome the problems arising from the removal of the long tail current source of prior art circuits. This circuit monitors the common mode feedback current (CMFB) and when the value of the current exceeds a specified range around the nominal amplifier bias current, an appropriate correction in the common mode input voltage (V_{in}) is made. This novel amplifier will be valuable for use in pipelined analog-to-digital converter applications, as well as many other low voltage and/or portable applications.

Figure 2