

Modified CMFB circuit with enhanced accuracy for data converter application

Abstract

Enhanced feedback voltage of common mode feedback (CMFB) circuit is designed in this work for CMOS data sampling application using 0.18- μm Silterra process technology. The double error detecting point circuit is employed to associate with the feedback point in order to prevent the undesired voltage common mode at the output of operational transconductance amplifier (OTA). The PMOS input transistor for injecting the common mode voltage is used to fit in the limitation of voltage division in low power design. The feedback voltage is strongly pushed to have a stable value as to make the outputs of differential amplifier circuit swing at a nearly constant voltage at 1.2 V for enhancing accuracy of data converter.

Keywords; Common Mode Feedback Circuit, Differential Operational Amplifier, High Frequency Circuit, Hold Circuit, Sample, Signal Sampling