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## Abstract

In this paper, two configurations of Operational Transconductance Amplifier (OTA), namely Current Mirror and Telescopic are designed and compared on the basis of voltage gain, slew rate and Common Mode Rejection Ratio (CMRR). The design simulation is done using Cadence Analog Design Environment with 0.18 $\mu$ m technology node. Emphasis is laid on reduced power design as analog or mixed signal IC's require low power and low area circuits. OTA forms the basic building block in many analog circuits and replaces Op-amps. Active filter circuits, Power System on a Chip (PSoC), Bio-signal Amplifiers etc. are designed using OTAs. The simulated values of Voltage Gain, CMRR and Slew rate for current mirror

OTA are 34.7814 dB, 93.0159 dB and 18.705 V/ $\mu$ s respectively, and the values of for telescopic OTA are 48.74157 dB, 109.53041 dB and 2.94 V/ $\mu$ s respectively.

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Computer Science

**Index Terms**

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**Keywords**

Operational Transconductance Amplifier (ota); Current Mirror Ota; Telescopic Ota; Voltage Gain; Common Mode Rejection Ratio (cmrr); Slew Rate.