

عنوان مقاله:

Low Noise Bio-potential Signals Amplifier with high Common Mode Rejection Ratio

محل انتشار:

اولین کنفرانس بین المللی دستاوردهای نوین پژوهشی در مهندسی برق و کامپیوتر (سال: 1395)

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خلاصه مقاله:

This work presents a bio-potential front-end amplifier with low input referred noise, high common mode rejection ratio and differential gain. The core of the amplifier is 2 stage opamp that in the first stage, folded cascade differential opamp with PMOS entries for increasing input common mode range is used. Since flicker noise at low frequencies is significant amount, thus for reducing the noise that referred to input of amplifier, Chopper topology is used. This amplifier is designed and simulated in 180nm-CMOS technology. Simulations results show that this amplifier has 72db differential gain and 190db common mode rejection ratio in 0.01HZ up to 10KHZ frequency range. Input common mode range and output swing are between 0 to 1.2 Volts and 0.4 to 1.4 Volts and circuits power consumption with 1.8 volt power supply is equal to 18 μ w. also amplifier input referred noise is against 60nV

کلمات کلیدی:

bio-potential signals recording system; differential amplifier; folded cascade; common mode feedback; chopper topology

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/496992>

