Implementation of a CIS Cochlear Implant with Fully Differential Operational Transconductance Amplifiers

Ligia RÎTEA, Claudia MOISĂ, Paul FARAGÓ

Abstract

This paper presents the results of a cochlear implant study. A cochlear implant using the Continuous Interleaved Sampling algorithm was implemented with analog integrated circuits. A fully differential operational amplifier was used and the benefits as opposed to single-ended OTA were highlighted. The cochlear implant circuits were simulated in LTSpice.

Biography

The author is a student at Technical University of Cluj-Napoca and has chosen the Aplicated Electronics specialization from the desire to learn more about such a vast and fascinating domain. She can only say what Richard Feynman said: "I was born not knowing and have had only a little time to change that here and there".

Ligia RÎTEA, 4th year student
Technical University of Cluj-Napoca
Faculty of Electronics, Telecommunications and Information Technology
26-28 George Bariţiu Street, 400027 Cluj-Napoca, ROMANIA
E-mail: ligia.ritea@gmail.com
Manuscript received on May 14, revised on October 30, 2013