A 0.8V, 7μA, rail-to-rail input/output, constant Gm operational amplifier in standard digital 0.18μm CMOS - DTU Orbit (13/12/2018)

A 0.8V, 7μA, rail-to-rail input/output, constant Gm operational amplifier in standard digital 0.18μm CMOS

A two-stage amplifier, operational at 0.8V and drawing 7μA, has been integrated in a standard digital 0.18μm CMOS process. Rail-to-rail operations at the input are enabled by complementary transistor pairs with gm control. The efficient rail-to-rail output stage is biased in class AB. The measured DC gain of the amplifier is 75dB, and the unity-gain frequency is 870kHz with a 12pF, 100kΩ load. Both input and output stage transistors are biased in weak inversion.

General information
State: Published
Organisations: Department of Electrical Engineering
Contributors: Citakovic, J., Nielsen, I. R., Nielsen, J. H., Asbeck, P., Andreani, P.
Publication date: 2005

Host publication information
Title of host publication: 23rd NORCHIP Conference, 2005.
Publisher: IEEE
Electronic versions:
Andreani.pdf
DOI:
10.1109/NORCHIP.2005.1596987

Bibliographical note
Copyright: 2005 IEEE. Personal use of this material is permitted. However, permission to reprint/republish this material for advertising or promotional purposes or for creating new collective works for resale or redistribution to servers or lists, or to reuse any copyrighted component of this work in other works must be obtained from the IEEE
Source: orbit
Source-ID: 257022
Research output: Research - peer-review › Article in proceedings – Annual report year: 2005