Abstract

Power management in a battery operated device can be done with the help of voltage regulators. This work proposes the design of a low drop out (LDO) regulator that provides the required supply voltage to different modules of the battery operated devices. The system is designed in 180nm technology with 1.8 V supply. Low power implementation of the design can be achieved using the self-sustainability of the regulator. The proposed regulator system can be made as self-sustainable by providing the 1.8 V regulated output as the supply for some blocks of the system. So the battery voltage is no longer required for the functioning of those blocks. The current gain of the operational amplifier has been improved by adding a buffer
stage after the common source amplifier. This buffer will improve the ability of the LDO regulator to drive large capacitive and resistive loads.

References

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Index Terms

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Power Systems
Keywords
Low Drop Out  Power Management  Voltage Regulator  Self-sustainability.