Abstract

This paper presents a high PSRR full on-chip and area efficient low dropout voltage regulator (LDO), exploiting the nested miller compensation technique with active capacitor (NMCAC) to eliminate the external capacitor. A novel technique is used to boost the important characteristic for wireless applications regulators PSRR. The idea is applied to stabilize the Low dropout regulator. The proposed regulator LDO works with a supply voltage as low as 1.8 V and provides a load current of 50 mA with a dropout voltage of 200 mV. It is designed in 0.18 μm CMOS technology and the active area on chip measures 241×187 μm². Simulation results show that the PSR of LDO is -60 dB at a frequency of 60 KHz and -41.7 dB at a frequency of 1 MHz.

References


Index Terms

Computer Science

Wireless

Keywords

Low Dropout Regulator (LDO) MOSCAP NMCAC active feedback high PSR system on chip