A High Voltage Charge Pump with Wide Range of Supply Voltage

Abstract

A charge pump circuit utilising CMOS or MOSFET (p-channel or n-channel) configured as switches for charge transfer is proposed. Instead of using the conventional diode-connected transistors, CMOS transistors configured as switches are used so that the threshold voltage drop across the stages of the charge pump is eliminated. Two of these charge pump chains are cross-coupled to bias each other at every stage. Consequently, the charge pump presented achieves higher voltage output efficiency with a wider supply voltage range.

[Figure 3]

162162

G00002