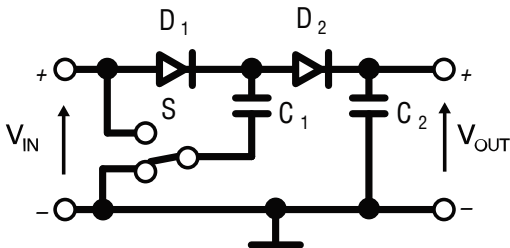**Charge Pumps** DC/DC converters that use capacitors as the storage element are known as Charge Pumps. Suitable for low-power applications, they are typically used to boost or invert Input voltage. They may be cascaded in order to obtain even-numbered multiples or fractions.

Voltage doubling charge pump

$V_{out} = 2*V_{in} - 2*V_D$

(Where V_d is the voltage drop across the diodes)

Inverting charge pump

$V_{OUT} = -V_{IN} + 2*V_D$

(Where V_d is the voltage drop across the diodes)