

Preliminary

- ◆ Input Voltage Range : 1.8V ~ 5.5V
- ◆ Small Input Current : 80 μ A (PFM mode)
- ◆ Maximum Output Current : 80mA (3.6V \rightarrow 5V step-up)
- ◆ Low Ripple
- ◆ PFM (pulse skip) Operation During Light Loads
- ◆ CE (chip enable) Function
- ◆ Ultra Small MSOP-8 Package

General Description

The XC9801 series are step-up charge pump ICs which provide stable, highly efficient, positive voltages with the only external components required being 2 capacitors. Output voltage is selectable in 0.1V steps within a 2.5V ~ 5.2V range and with output stabilised through the control of the charge pump's output impedance, ripple is minimal. Control switches to PFM (pulse skip) during light loads without affecting output impedance or ripple so that the IC is protected against drops in efficiency.

As well as the ultra small MSOP-8 package, the small consumption current and high efficiencies of the series make the XC9801 suitable for use with all types of battery operated applications.

Applications

- Palm top computers, PDAs
- On Board Local Power Supplies
- Various Battery Powered Devices

Features

Input Voltage Range : 1.8V ~ 5.5V
 Output Voltage Range : 2.5V ~ 5.2V
 Small Input Current : 80 μ A (no load)
 Output Current : 80mA (3.6V \rightarrow 5V step-up)
 Oscillation Frequency : 300kHz
 Stand-By Current (CE 'L') : 2.0 μ A (max)
 Can be used as a Step-Up Doubler (sense = 0V)
 MSOP-8 Package

Pin Assignment

PIN NUMBER	PIN NAME	FUNCTION
1	SENSE	Output Voltage Monitor
2	CE	Chip Enable
3	VIN	Input (power supply)
4	GND	Ground
5	PGND	Power Ground
6	C1-	External Capacitor -
7	C1+	External Capacitor +
8	VOUT	Output

Absolute Maximum Ratings

Ta = 25°C, GND = 0V

PARAMETER	SYMBOL	CONDITIONS	UNITS
VIN pin voltage	VIN	-0.3 ~ 6	V
VOUT pin voltage	VOUT	-0.3 ~ 12	V
C1+ pin voltage	C1+	-0.3 ~ VOUT + 0.3	V
C1- pin voltage	C1-	-0.3 ~ VOUT + 0.3	V
CE pin voltage	VCE	-0.3 ~ VIN + 0.3	V
VOUT pin output current	IOUT	200	mA
Power dissipation	Pd	150	mW
Operating Temperature	Topr	-30 ~ +80	°C
Storage Temperature	Tstg	-40 ~ +125	°C

Pin Configuration, Circuit Connection Example

