

XC6373 Series

Low Frequency PWM Controlled, Step-up DC/DC Converters

General Description

The XC6373 series is a group of PWM controlled step-up DC/DC converter ICs. The XC6373 series employs CMOS process and laser trimming technologies so as to attain low power and high accuracy.

The implementation of a new phase compensation circuit and a slow start function ensure excellent transient response and improved performance.

The series is particularly suited for use with pager applications because of their low power consumption and low noise characteristics.

Output voltage can be selected from 2.0V to 7.0V in 0.1V increments (accuracy: $\pm 2.5\%$). Oscillator frequency is set at 30kHz ($\pm 20\%$) so as to attain the lowest consumption current possible.

A step-up converter circuit can be configured using the XC6373 IC with a coil, a diode, and a capacitor.

5-pin packages, which are provided with either a CE (Chip enable) function that reduces power consumption during shut-down mode, or a VDD pin (separated power and voltage detect pins) are available.

SOT-89 small package.

Features

Operating (start-up) voltage range: 0.9V ~ 10V

Output voltage range: 2.0V ~ 7.0V in 0.1V increments

Highly accurate: Set-up voltage $\pm 2.5\%$

Oscillator frequency: 30kHz ($\pm 20\%$)

Maximum output currents (Tr built-in):

Typ. 50mA at $V_{IN}=3.0V, V_{OUT}=5.0V$Note(1)

Highly efficient (Tr.Built-in):

82% (TYP) at $V_{IN}=3.0V, V_{OUT}=5.0V$Note(1)

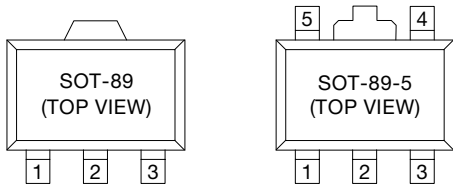
Either chip enable or independent VOUT pin option is selectable for 5-pin package units.

Phase compensation and slow startup circuits included.

Small package: SOT-89 mini-power mold (3-pin, 5-pin)

Note(1) : Performance depends on external components and PCB layout.

Pin Configuration



Pin Assignment

(1) XC6373A

PIN NUMBER	PIN NAME	FUNCTION
XC6373A		
1	VSS	Ground
2	VOUT	Output voltage monitor / IC internal power supply
3	LX	Switch

Pin Assignment

(2) XC6373C

PIN NUMBER	PIN NAME	FUNCTION
XC6373C		
5	VSS	Ground
2	VOUT	Output voltage monitor / IC internal power supply
4	LX	Switch
3	CE	Chip Enable
1	NC	No Connection

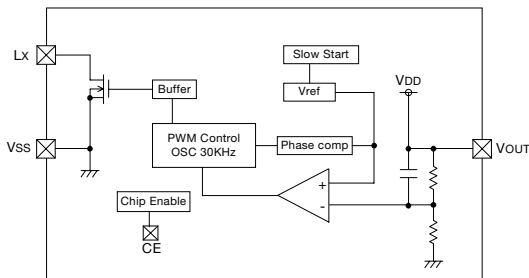
(3) XC6373E

PIN NUMBER	PIN NAME	FUNCTION
XC6373E		
5	VSS	Ground
2	VDD	IC internal power supply
4	LX	Switch
3	VOUT	Output voltage monitor
1	NC	No Connection

Block Diagram

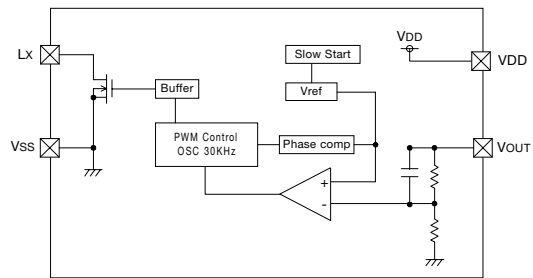
(1) XC6373A and XC6373C

(The VOUT pin is used also for the VDD pin.)



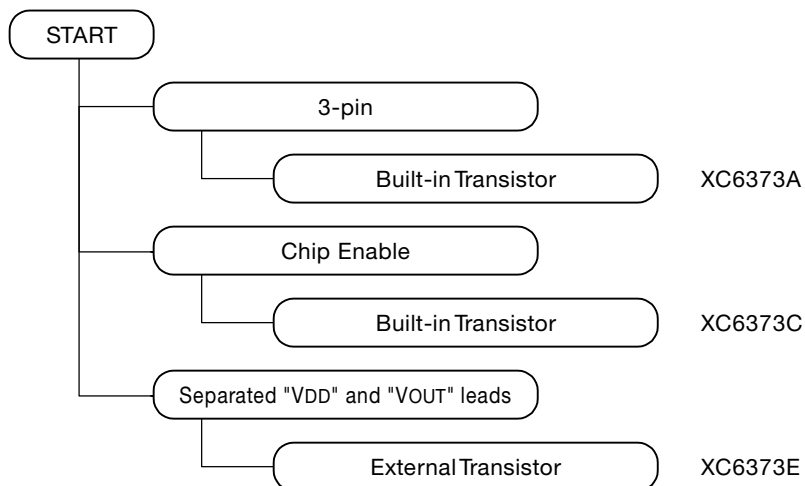
Note : The CE pin is only used with the XC6373C.

(2) XC6373E



Note : FThe VDD pin is only used with XC6373E..

Selection Guide



Ordering Information

XC6373①②③④⑤⑥

①	A	3-pin, Built-in switching transistor
	C	Stand-by capability, Built-in switching transistor
	E	Separated VDD and VOUT, Built-in switching transistor
②		Output Voltage
③		e.g., VOUT=3.5V → ②=3, ③=5
④	0	OSC Frequency 30kHz
⑤	P	Package A → SOT-89-3
		C, E → SOT-89-5
⑥	R	Embossed tape. Orientation of device : Right
	L	Embossed tape. Orientation of device : Left