

The XC6803/04/05 are Constant-Voltage (CV) and Constant-Current (CC) type charging IC for linear charging of single-cell Li-ion and Li-polymer batteries. The basic charging cycle consists of trickle charge mode followed by main charge mode.

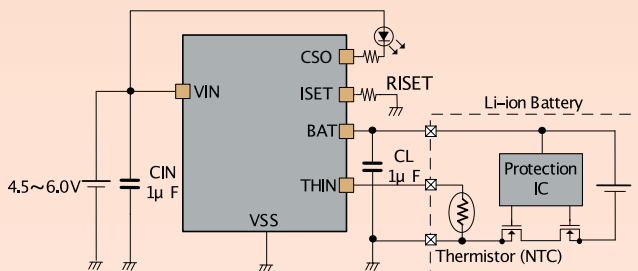
An LED can be connected to the charge status output pin to allow confirmation of charging by LED illumination. The IC is housed in the small USP-6EL package with high heat dissipation, and a charge circuit can be configured using a minimum of external components.

These IC also support **temperature control** based on JEITA, making it possible to safely charge Li-ion batteries by controlling the CV charge voltage and CC charge current according to the temperature.

### KEY FEATURES

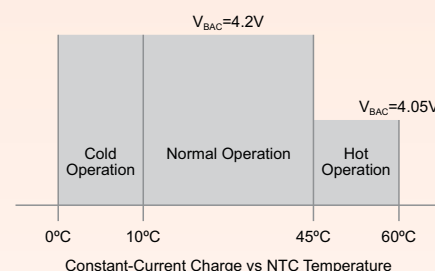
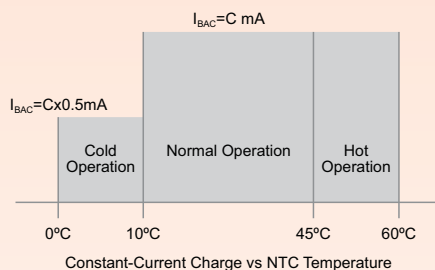
SERIES		XC6803	XC6804	XC6805
Input Voltage		4.5V ~ 6.0V		
Charge Current (Externally Set)		40mA ~ 280mA	200mA ~ 800mA	5mA ~ 40mA
Charge Termination Voltage		4.2V		
Trickle Charge Voltage		2.9V		
Supply Current (Stand-by)		50μA		
Charge Judgment Function				
Trickle Charge Mode		YES	YES	OPTIONAL
Recharge Function		OPTIONAL	OPTIONAL	YES
Battery Temperature Monitor		YES	YES	OPTIONAL
Protection Circuits				
Thermal Shutdown		YES	YES	YES
Dropout Voltage Monitoring		YES	YES	YES
Charging over-Voltage and over-Current monitoring		YES	YES	YES
Safety Timer Function	Main Charge	5hrs	10hrs	3hrs
	Trickle Charge	0.5hrs	2hrs	0.5hrs
Packages		USP-6EL	USP-6EL, SOP-8FD	USP-6EL

### XC6803/04/05 TYPICAL APPLICATION CIRCUIT

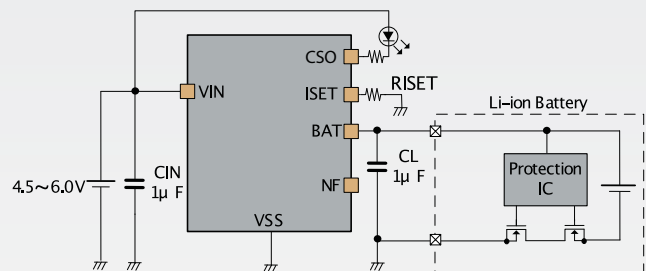


#### Li-ion battery temperature monitoring function

The IC monitors the Li-ion battery temperature during charging by means of an NTC Thermistor connected to the THIN pin. CC charging and CV charging are controlled based on the Li-ion battery temperature as shown below to enable safe charging.



### XC6805xxB TYPICAL APPLICATION CIRCUIT



#### Optimised for Small Batteries

To fit very small batteries, the minimum value of trickle charge current and charge completion current is 0.5mA. This ensures safer charging and longer battery life for small mobile equipment.

