

XC9141/42 0.9V 800mA SW Step-Up DC/DC Converter



The new XC9141/42 series is a synchronous boost converter optimised to provide high efficiencies under all load conditions. This DC/DC integrates a 0.3Ω Nch driver transistor and a 0.4Ω synchronous Pch switching transistor and it will be readily available with either a 1.2MHz or 3.0MHz switching frequency. Output currents up to 500mA can be realised with only two low cost ceramic capacitors and an Inductor placed externally.

The internal circuit can start operation from Input Voltages as low as 0.85V and once started will continue to operate until the input goes below 0.65V. This series also features an optional load disconnect

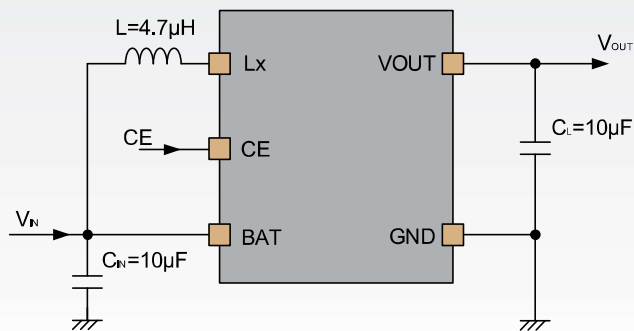
function that prevents the battery charge from leaking to the output while the IC is not operating or an Input bypass mode function to keep the connection between the input and output side during shutdown.

The XC9141/42 is available in the USP-6C package for applications that require a small form factor or in the industry standard SOT-25 package.

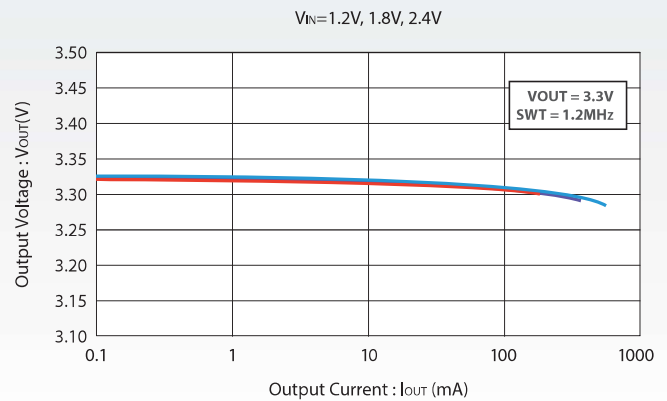
KEY FEATURES

Input Current		800mA
ON Resistance	N-Ch	0.3Ω (typ)
	P-Ch	0.4Ω (typ)
Input Voltage Range		0.65V ~ 6.0V
Output Voltage Range		1.8V ~ 5.5V (0.1V steps)
Switching Frequency		1.2MHz, 3.0MHz (±15%)
Quiescent Current		19μA
Product Select	XC9141	Fixed PWM Control
	XC9142	PWM/PFM Automatic Switching
Max Duty Cycle		93% (typ)
Protection Circuits	Current Limit	
	Short Circuit	
Additional Features	Soft Start	
	Load Disconnect (A Type)	
	Bypass Switch (B Type)	
Low ESR Ceramic Capacitors		
Op. Ambient Temperature		-40°C ~ +105°C
Packages		SOT-25, USP-6C

TYPICAL APPLICATION CIRCUIT



OUTPUT VOLTAGE VS. OUTPUT CURRENT



EFFICIENCY VS. OUTPUT CURRENT

