

30V / 2A Buck DC/DC converter with a built-in driver transistor

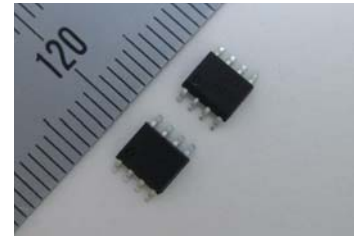
XC9270/XC9271 Series



The XC9270/XC9271 series are high-withstand voltage DC/DC converters with 30V operation, 2A output, and an internal driver Tr.

With an input voltage of 30V, input rating of 36V, peak voltage of 46V - 400ms, and an operating ambient temperature range of -40°C to +105°C, this series is ideal for car accessories and industrial equipment applications.

By synchronizing to an external clock, unwanted noise can be reduced. A latch type or auto reset type can be selected for the current limiting function, and a thermal shutdown circuit is also incorporated to enable safer circuit design.



SOP-8FD
(6.0mm×4.9mm×1.55mm)



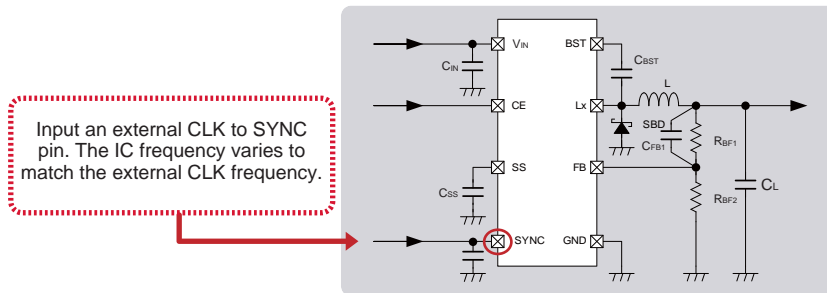
The frequency can be adjusted using the frequency synchronization function

Synchronization function

XC9270/XC9271 series has the synchronization function with an external CLK. It can synchronize with the CLK within +/-25% of an internal CLK using SYNC pin.

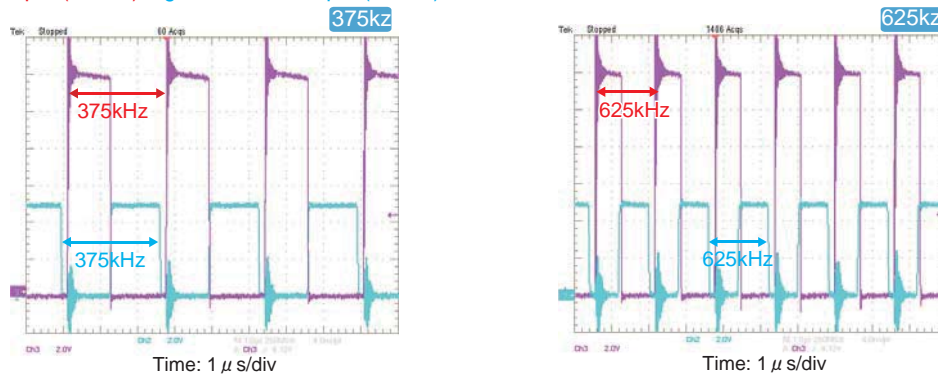
Frequency range for Synchronization

300kHz type : 225kHz ~ 375kHz
500kHz type : 375kHz ~ 625kHz



Synchronized waveform for 500kHz type

Red line: Lx pin (1V/div) Light blue: SYNC pin (1V/div) CLK: 375kHz ~ 625kHz



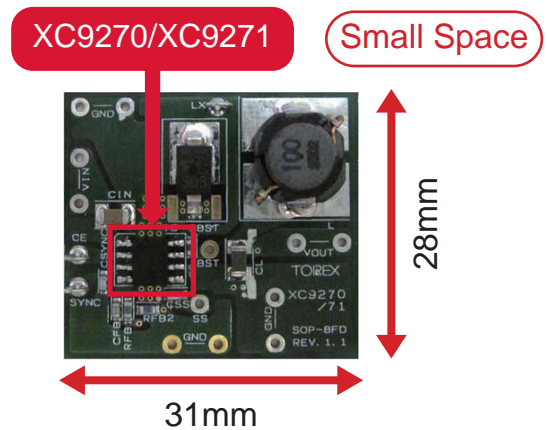
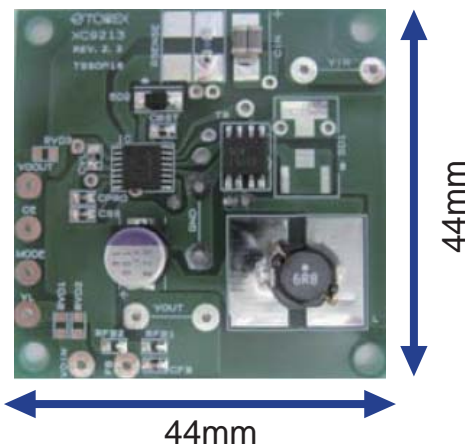
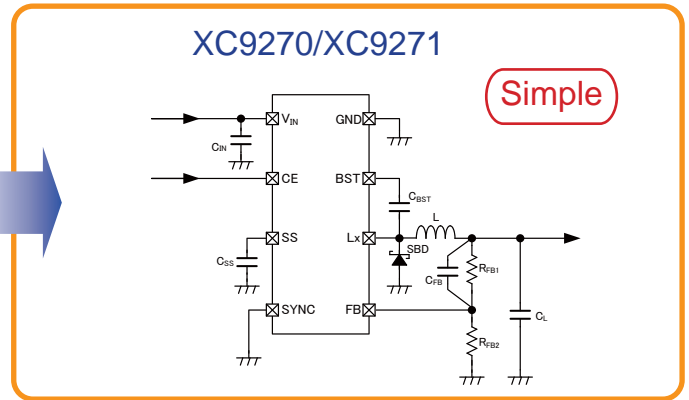
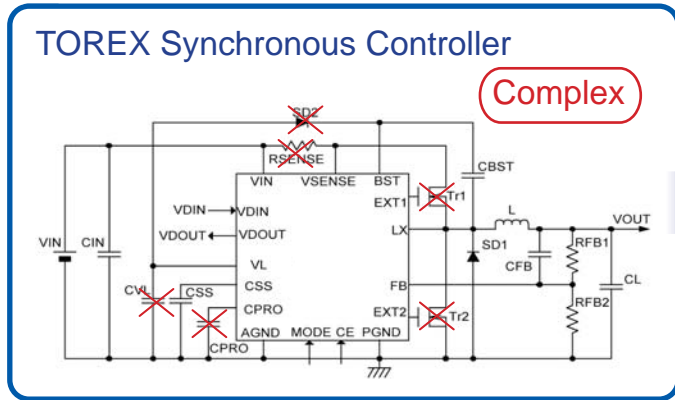
Features			
Input Voltage Range	7.0V~30V	Control Method	PWM(XC9270), PWM/PFM(XC9271)
Load Dump Transients	46V, 400ms (TBD)	Soft-start Function	Adjustable with external cap. (Min. 1.0ms)
FB Voltage	0.8V±2%	Ext. Synchronization	±25% of the oscillation frequency
Operating Ambient Temp.	-40°C~+105°C	Protection Circuit	Over current protection, Thermal shutdown
Quiescent Current	200 μA (300kHz)		Automatic recovery (Type B)
Oscillation Frequency	300kHz, 500kHz (±8%)		Integral latch method (Type A)
Max. Output Current	2.0A	Package	SOP-8FD



30V/2A Buck DC/DC converter with a built-in driver transistor **XC9270/XC9271 Series**



The internal driver Tr. contributes to space saving



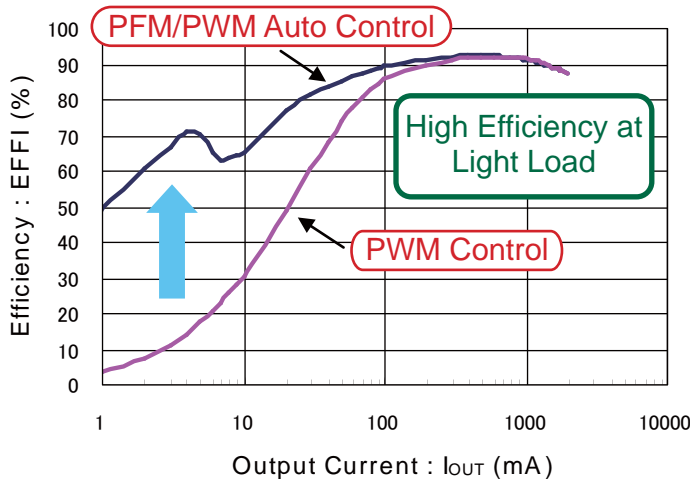
- ◆ The driver Tr. is incorporated to reduce peripheral components and decrease mounting space!
- ◆ SBD is used for the rectifier circuit, also it can dissipate the heat outside of IC.
- ◆ PKG is SOP-8FD



High efficiency even at light loads

Efficiency (PFM/PWM Auto Control vs. PWM Control)

f=500kHz, VIN=12V, VOUT=5.0V, IOUT=2.0A



PFM control can be selected

↓

The stand-by power consumption of a system can be improved.

