

Product	D2312
Product Info	1A Step-Down DC-DC Converter
Description	<p>The D2312 is a step-down current-mode, DC-DC converter. A heavy load, the constant-frequency PWM control performs excellent stability and transient response. To ensure the longest battery life in portable applications, the D2312 provides a power-saving Pulse-Skipping Modulation (PSM) mode to reduce quiescent current under light load operation to save power.</p> <p>The D2312 supports a range of input voltages from 2.5V to 5.5V, allowing the use of a single Li+/Li-polymer cell, multiple Alkaline/NiMH cell, USB, and other standard power sources. The output voltage is adjustable from 0.6V to the input voltage, while the part number suffix D2312-XX indicates pre-set output voltage of 3.3V, 2.8V, 2.5V, 1.8V, 1.5V, 1.2V or adjustable. All versions employ internal power switch and synchronous rectifier for to minimize external part count and realize high efficiency. During shutdown, the input is disconnected from the output and the shutdown current is less than 1μA. Other key features include under-voltage lockout to prevent deep battery discharge. The D2312 is available in SOT23-5 packages.</p>
Features	<ul style="list-style-type: none"> ● Efficiency up to 96% ● Only 40 μA (TYP.) Quiescent Current ● Output Current: Up to 1A ● Internal Synchronous Rectifier ● 1.5MHz Switching Frequency ● Soft Start ● Under-Voltage Lockout ● Short Circuit Protection ● Thermal Shutdown ● 5-pin Small SOT23-5 Packages ● Pb-Free Package
Applications	<ul style="list-style-type: none"> ● Cellular Phone ● Portable Electronics ● Wireless Devices ● Cordless Phone ● Computer Peripherals ● Battery Powered Widgets ● Electronic Scales

	<ul style="list-style-type: none"> Digital Frame
Typical Application	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Fixed Output Voltage</p> </div> <div style="text-align: center;"> <p>Adjustable Output Voltage</p> $V_o = 0.6 \times \left(1 + \frac{R1}{R2} \right)$ </div> </div>
IOUT (Max)	1A
VIN Range	2.5 to 5.5 V
YOUT	ADJ / 3.3 / 2.8 / 2.5 / 1.5 / 1.8 / 1.2 V
Feed back Voltage	0.6 V
Switch Frequency	1500 kHz
Adjustable Output	0.6 to 5.5
Package	SOT23-5
Datasheet Download	Click here to download datasheet
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