



Description

The PS3120A is a low noise switched capacitor voltage doubler. It produces a regulated output voltage from a 2.7V to 4.5V input. Low external parts count (one flying capacitor and two small bypass capacitors at VIN and VOUT) make the PS3120A ideally suited for small, battery-powered applications.

The PS3120A have thermal shutdown capability and can survive a continuous short circuit from VOUT to GND. A low current shutdown feature disconnects the load from VIN and reduces quiescent current to <math><1\mu\text{A}</math>.

The PS3120A is available in the industry standard SOT-23-6L power packages.

Features

- Fixed 4.94V±3% Output
- VIN Range: 2.7V to 4.5V
- Output Current: Up to 110mA (VIN≥3V)
Up to 230mA (VIN≥3.6V)
- Low Noise Constant Frequency (360kHz) Operation
- Shutdown Current <math><1\mu\text{A}</math>
- No Inductors
- Available in Low Profile 6-Lead SOT23 Package

Applications

- White LED Backlighting
- Li-Ion Battery Backup Supplies
- Smart Card Readers
- PCMCIA Local 5V Supplies

Typical Application

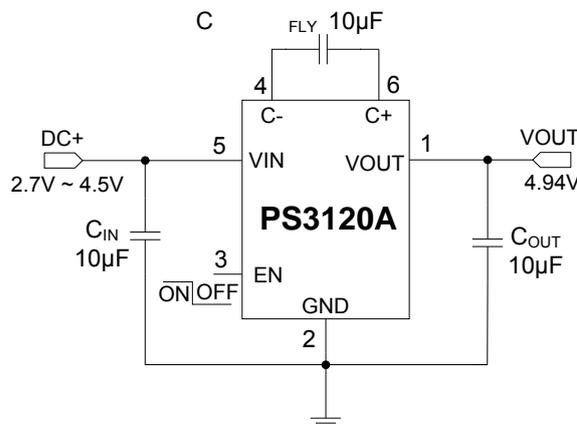


Figure 1: Regulated 4.94V Output



Pin Assignment and Description

<p>SOT-23-6L</p>	PIN	NAME	DESCRIPTION
	1	VOUT	Output
	2	GND	Ground
	3	EN	ON/OFF Control (High Enable)
	4	C-	Flying Capacitor Negative Terminal.
	5	VIN	Input
	6	C+	Flying Capacitor Positive Terminal.

Absolute Maximum Ratings (Note 1)

- V_{IN} -0.3V ~ 6V
- V_{OUT}-0.3V ~ 5.5V
- V_{EN}-0.3V ~ 6V
- I_{OUT} (Note 2) 300mA
- Operating Temperature Range (Note 3).....-40°C ~ +85°C
- Lead Temperature (Soldering, 10 sec).....+265°C
- Storage Temperature Range-65°C ~ +125°C

Note 1: Stresses listed as the above “Absolute Maximum Ratings” may cause permanent damage to the device. Exposure to absolute maximum rating conditions for extended periods may remain possibility to affect device reliability.

Note 2: Based on long term current density limitations.

Note 3: The PS3120A are guaranteed to meet performance specifications from 0 °C to 70 °C. Specifications over the -40 °C to 85 °C operating temperature range are assured by design, characterization and correlation with statistical process controls.