Power Management IC for Handheld Portable Equipments

Features

- Input Voltage of the IC: 1V～VL
- Low voltage start-up：1V
- Output Voltage: 3.3 V
- VL is Programmable: VL=1.2V • [1+ (R1/R2)].
- Minimal External Components
- Package : SOT23-6LG

Applications

- Portable Devices and PDAs
- MP3/MP4 Players
- Wireless Handhelds
- GPS Receivers, etc.

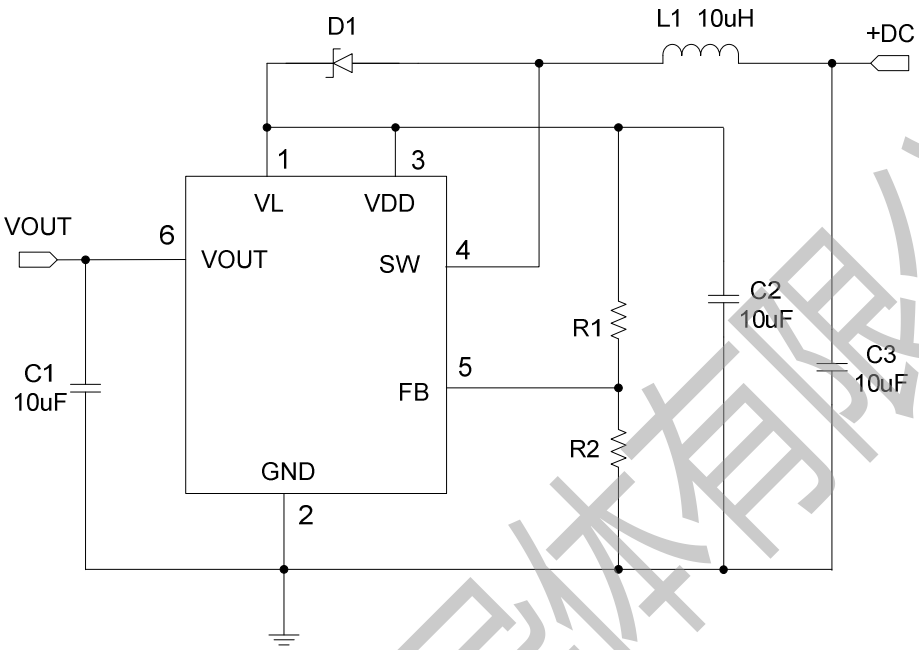
Description

The HX7201 is a complete, cost effective, highly-efficient power management solution that is ideal for a wide range of portable handheld equipments. The device can operate from input voltage as low as 1V and can provide 300mA output current with low dropout voltage, thus providing an efficient linear solution for low power system.

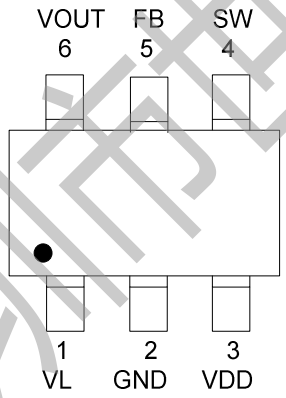
This IC allows the user to optimize the setting of VL, so that the device offers a new level of cost-effective performance in cellular phones, laptop and notebook computers, and other portable devices. Proprietary design techniques ensure high performance.

The HX7201 is available in a tiny SOT23-6LG package.

Typical Application



Pin Assignment



SOT23-6LG

PIN NUMBER SOT23-6LG	PIN NAME	DESCRIPTION
1	VL	Programmable Input Voltage
2	GND	Ground
3	VDD	Power Input
4	SW	Switching node Output for VL
5	FB	Output Feedback Sense for VL
6	VOUT	Output Voltage（3.3V）

Absolute Maximum Ratings（Note 1）

- SW , VL, VDD, FB, VOUT to GND……..…. -0.3 ~ +6V
- Operating Temperature Range （Note 2）……- 30℃ ～ + 85℃
- Lead Temperature (Soldering 10 sec.) ……+ 300℃
- Storage Temperature Range ……..……..- 65℃ ～ + 125℃

Note 1: Absolute Maximum Ratings are those values beyond which the life of a device may be impaired.

Note 2: The HX7201 are guaranteed to meet performance specifications from 0℃ to 70℃. Specifications over the –30℃ to 85℃ operating temperature range are assure d by design, characterization and correlation with statistical process controls.

Application Information

VL (Pin 1): Programmable Input Voltage. This pin directly connected to the inductor.

GND (Pin 2): Power Ground for VOUT.

VDD (Pin 3): Power Input for IC. Bypass to GND with a high quality ceramic capacitor placed as close as possible to the IC.

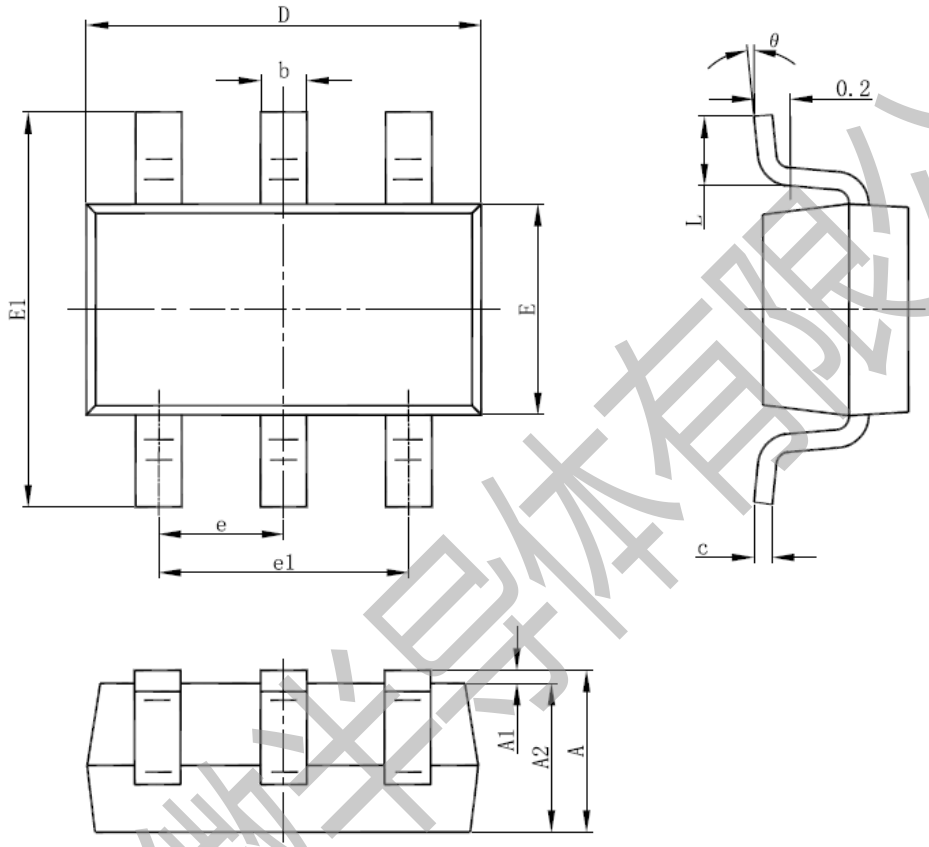
SW (Pin 4): Switching node Output for VL. Connect this pin to the switching end of the inductor.

FB (Pin 5): Output Feedback Sense for VL. The voltage at this pin is regulated to 1.2V. Connect a resistor divider to this pin. The voltage of VL can be adjusted by: VL = 1.2V • [1 + (R1/R2)]

VOUT (Pin 6): Fixed Output Voltage（V_{OUT}=3.3V）. It is capable of delivering up to 300mA of output current.

Packaging Information

SOT-23-6LG Package Outline Dimension



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°