

### 600mA Step-Down Converter

#### Features

- Vin Range: 2.7V to 5.5V
- Maximum Output Current 600mA
- High Efficiency Up to 98%
- Low Quiescent Current
- High Switching Frequency: 1.6MHz
- Low Dropout in 100% Duty Cycle
- Shutdown Current < 1 $\mu$ A
- No Schottky Diode Required
- Output Auto Discharge when Disabled (Option)
- Integrated Soft-Start : 170 $\mu$ s
- Adjustable Output Voltage Down to 0.6V
- Short Circuit Protection
- Over-Temperature Protection
- Pb-Free Packages:
  - ▶ KTB851 : UTDFN-6, 1.6x1.6x0.55mm
  - ▶ KTB851 : TDFN-6, 1.6x1.6x0.75mm
  - ▶ KTB851A/B : TSOT23-5
- RoHS and Green Compliant
- -40°C to +85°C Temperature Range

#### Brief Description

The KTB851 is a high efficiency step down converter, using constant frequency PWM current mode control. It uses 1.6MHz high switching frequency which allows the use of small external components. The 2.7V to 5.5V input operating range is ideal for Li-Ion/Polymer powered devices and systems running from regulated 3.3V or 5V voltage rails. 100% duty cycle operation provides the greatest design flexibility for achieving the lowest dropout.

Low output voltage down to 0.6V can be achieved due to the KTB851's low internal voltage reference.

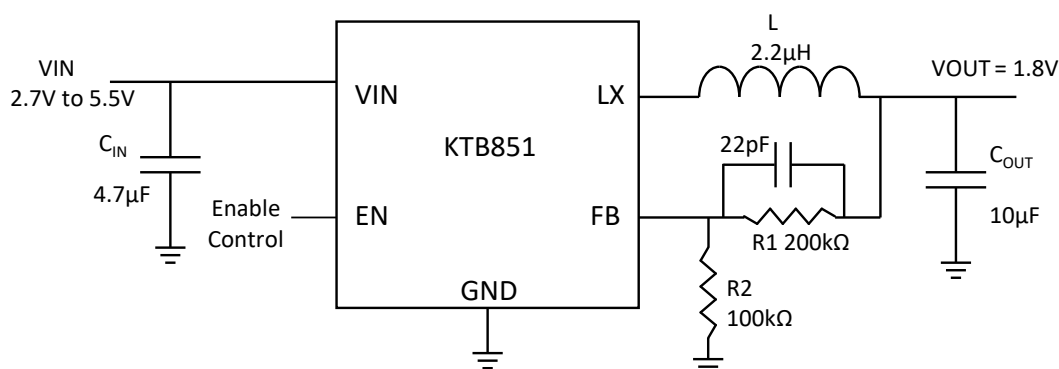
The KTB851 is designed to maintain high efficiency throughout the operating range, which is critical for portable applications. In addition, the KTB851 has an option for output auto discharge feature. This enables the device to quickly discharge the output when the device is disabled.

The KTB851 is available in a small 5-pin TSOT23, 6-pin TDFN 1.6 x 1.6 x 0.75mm and 6-pin UTDFN 1.6 x 1.6 x 0.55mm package.

#### Applications

- Mobile Phones
- Portable Instruments
- Digital Still Cameras
- Microprocessor Power
- MP3 Players

#### Typical Application



**Ordering Information**

Part Number	Auto Discharge	Marking <sup>1</sup>	Operating Temperature	Package
KTB851EVD-ADJ-TR	YES	EKYYZ	-40°C to +85°C	UTDFN-6 1.6x1.6x0.55mm
KTB851EVD-ADJ-1-TR	NO	IMYYZ	-40°C to +85°C	UTDFN-6 1.6x1.6x0.55mm
KTB851EVD-ADJ-TR	YES	EKYYZ	-40°C to +85°C	TDFN-6 1.6x1.6x0.75mm
KTB851AEHC-ADJ-TR	YES	EKYYZ	-40°C to +85°C	TSOT23-5
KTB851BEHC-ADJ-TR	YES	CAYYZ	-40°C to +85°C	TSOT23-5

1. "YYZ" is the date code and assembly code.

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