

## 1.5A, 38V, 650kHz Step-Down Converter

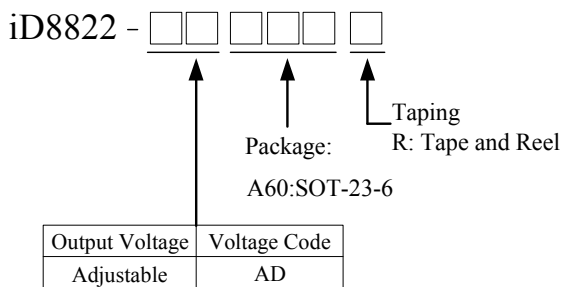
### General Description

The iD8822 is a high voltage buck converter that can support the input voltage range from 4.5V to 38V and the output current can be up to 1.5A. Current Mode operation provides fast transient response and eases loop stabilization.

The iD8822 also employs a proprietary control scheme that switches the device into a power save mode during light load, thereby extending the range of high efficiency operation. An OVP function protects the IC itself and its downstream system against input voltage surges. With this OVP function, the IC can stand off input voltage as high as 42V, making it an ideal solution for industrial applications such as smart meters as well as automotive applications.

The chip also provides protection functions such as cycle-by-cycle current limiting and thermal shutdown protection. The iD8822 is available in a SOT-23-6 packages.

### Ordering Information



### Applications

- Distributed Power Systems
- Smart Meters
- Industrial Applications
- Automotive Applications

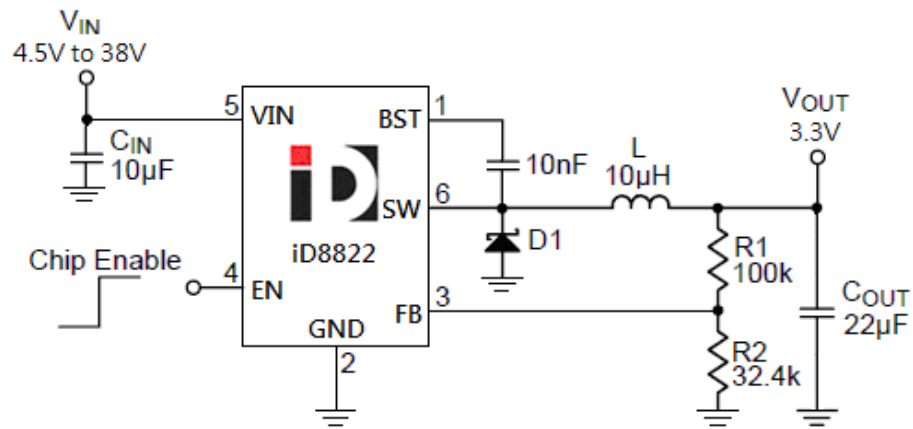
### Features

- Wide Operating Input Voltage Range : 4.5V to 38V
- OVP Protection
- 1.5A Output Current
- 0.4Ω Internal Power MOSFET Switch
- High Efficiency up to 91% at 12V to 5V Output
- 650kHz Fixed Switching Frequency
- Stable with Low ESR Output Ceramic Capacitors
- High Efficiency Mode at Light Load
- Thermal Shutdown
- Cycle-By-Cycle Over Current Protection
- RoHS Compliant and Halogen Free

### Marking Information

For marking information, please contact our sales representative directly or through distributor around your location.

## Typical Application Circuit



### Absolute Maximum Ratings

Supply Voltage $V_{IN}$	42V
SW, EN Voltage	-0.3V to ( $V_{IN} + 0.3V$ )
BST Voltage	-0.3V to SW + 6V
FB Voltage	-0.3V to +6V
Power Dissipation, $P_D$ @ $T_A=25^\circ\text{C}$	
SOT-23-6	0.4W
Thermal Resistance, $\theta_{ja}$	
SOT-23-6	250°C/W
Lead Temperature	260°C
Storage Temperature	-65°C to 150°C

### Recommended Operating Conditions

Supply Voltage $V_{IN}$	4.5V to 38V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperatures	-40°C to 85°C