

## 4.5V-16V, 3A, 500Khz Synchronous Step-Down Converter Applications

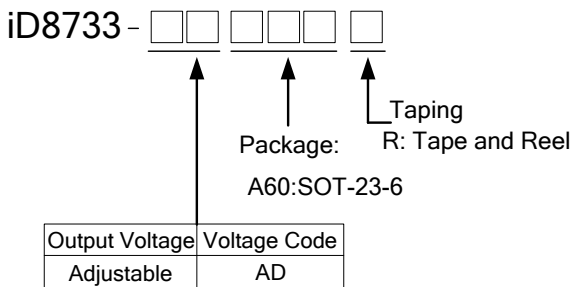
### General Description

The iD8733 is a fully integrated, high– efficiency 3A synchronous rectified step-down converter. The iD8733 operates at high efficiency over a wide output current load range.

This device offers two operation modes, PWM control and PFM Mode switching control, which allows a high efficiency over the wider range of the load.

The iD8733 requires a minimum number of readily available standard external components and is available in an 6-pin SOT23 ROHS compliant package.

### Ordering Information



- Flat Panel Television and Monitors
- Digital Set Top Boxes
- Distributed Power Systems
- Wireless and DSL Modems
- Notebook Computer

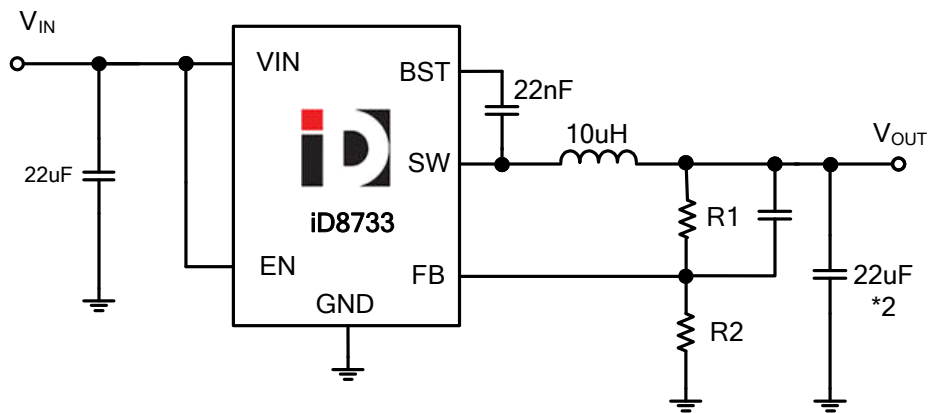
### Features

- Wide Input Range: 4.5V-16V
- High Efficiency: Up to 96%
- 500KHz Frequency Operation
- 3A Output Current
- 0.6V Reference
- Slope Compensated Current Mode Control for Excellent Line and Load Transient Response
- Inrush Current Limit and Soft Start
- Over Current Protection with Hiccup-Mode
- Thermal Shutdown
- Integrated internal compensation
- Stable with Low ESR Ceramic Output Capacitors
- Available in SOT23-6 Package

### Marking Information

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

### Typical Application Circuit



#### Absolute Maximum Ratings

$V_{IN}$ , SW, EN	-0.3V to 17V
BST Voltage	-0.3V to SW + 5V
FB Voltage	-0.3V to +6V
Power Dissipation, $P_D$ @ $T_A=25^\circ\text{C}$	
SOT-23-6	0.6W
Thermal Resistance, $\theta_{JA}$	
SOT-23-6	170°C/W
Thermal Resistance, $\theta_{JC}$	
SOT-23-6	130°C/W
Lead Temperature	260°C
Storage Temperature	-55°C to 150°C
ESD HBM (Human Body Mode)	2KV
ESD MM (Machine Mode)	200V

#### Recommended Operating Conditions

Supply Voltage $V_{IN}$	4.5V to 16V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperatures	-40°C to 85°C