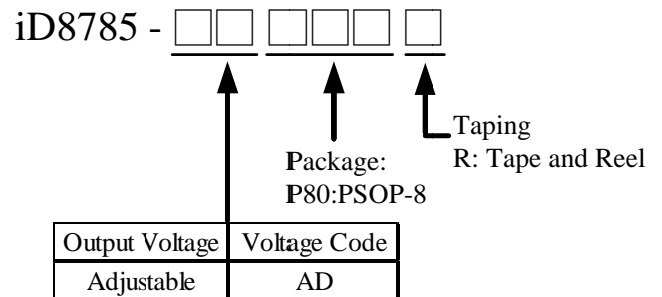


## 3A, 18V High Efficiency Synchronous Step-Down Converter

### General Description

The iD8785 is a wide input range, high-efficiency, DC-to-DC step-down switching regulator, capable of delivering up to 3A of output current. Current mode PWM control allows the use of small external components, such as ceramic input and output caps, as well as small inductors, while still providing low output ripples. On top of the integrated internal synchronous rectifier that eliminates external Schottky diode, iD8785 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. Therefore, iD8785 is a much superior solution in comparison to other competitions in terms of efficiency and cost. Overall, iD8785 is a highly efficient and robust solution for DC-DC step-down applications that requires wide input ranges. iD8785 is available PSOP8 Packages.

### Ordering Information



### Applications

- LCD TVs
- Notebook computers
- FPGA power supplies
- LED drivers

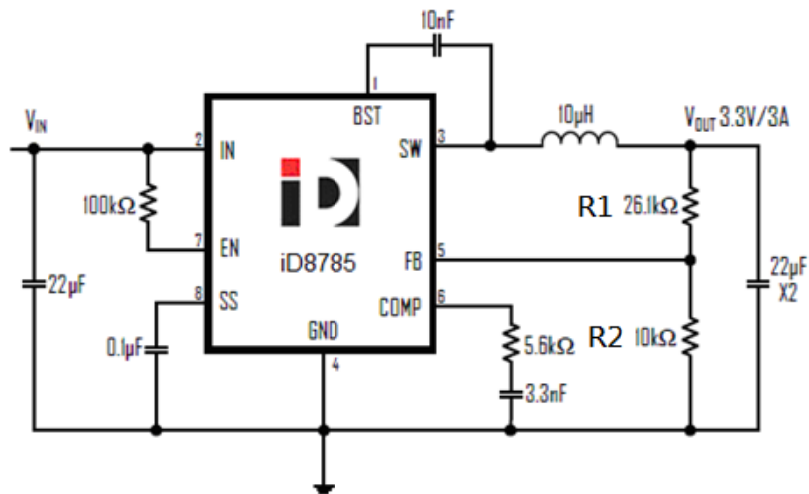
### Features

- Wide Input Operating Range from 4.5V to 18V
- High Efficiency: Up to 90% at Light Load
- Capable of Delivering 3A
- Input OVP at 20V
- No External Schottky Diode Needed
- Current Mode control
- 0.923V Reference for Low Output voltages
- Logic Control Shutdown
- Thermal shutdown and UVLO
- Available in PSOP8 Package

### Marking Information

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

### Typical Application Circuit (Adjustable Operation)



#### Absolute Maximum Ratings (Note 1)

IN Voltage	-0.3V to 20V
SW, EN Voltage	-0.3V to $V_{IN}+0.3V$
BST Voltage	-0.3V to $V_{IN}+6V$
FB Voltage	-0.3V to 6V
Power Dissipation, $P_D$ @ $T_A=25^\circ C$	
PSOP-8	1.33W
Thermal Resistance, $\theta_{ja}$	
PSOP-8	75°C/W
Lead Temperature	260°C
Storage Temperature	-65°C to 150°C
ESD Susceptibility	
HBM (Human Body Mode)	2kV
MM (Machine Mode)	200V

#### Recommended Operating Conditions

Input Voltage $V_{IN}$	4.5V to 18V
EN Input Voltage	0V to $V_{IN}$
Junction Temperature	-40°C to 125°C
Ambient Operating Temperature	-40°C to 85°C