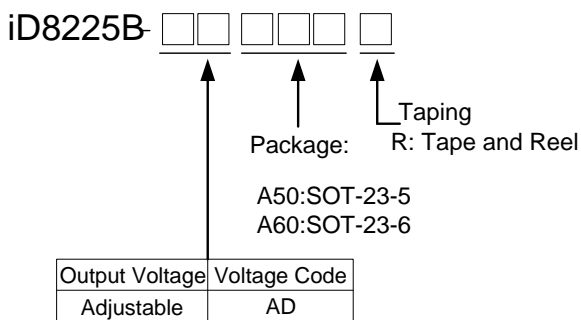


## 1.5MHz, 3A, High Efficiency PWM Step-Down DC/DC Converter

### General Description

The ID8225B is a high-efficiency, DC-to-DC step-down switching regulator, capable of delivering up to 2.5A continuous, 3A peak current of output current. The devices operate from an input voltage range of 2.7V to 6.0V making the iD8225B ideal for low voltage power conversions. Running at a fixed frequency of 1.5MHz allows the use of small inductance value and low DCR inductors, thereby achieving higher efficiencies. Other external components, such as ceramic input and output caps, can also be small due to higher switching frequency, while maintaining exceptional low noise output voltages. Built-in EMI reduction circuitry makes this converter ideal power supply for RF applications. Internal soft-start control circuitry reduces inrush current. Short-circuit and thermal-overload protection improves design reliability.

### Ordering Information



### Applications

- USB ports/Hubs
- Hot Swaps
- Cell Phones
- Tablet PC
- Set Top Boxes

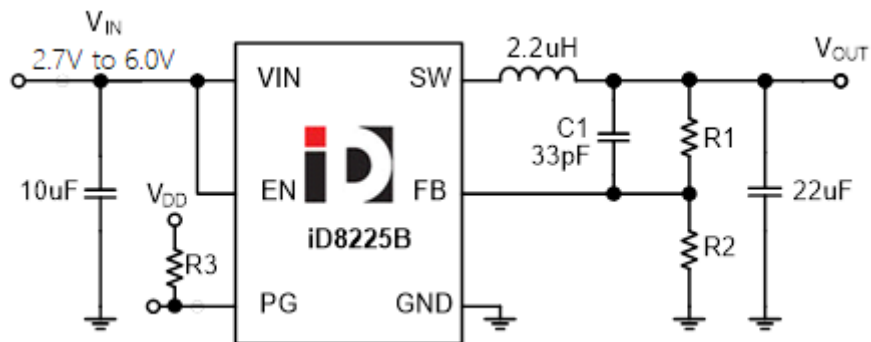
### Features

- Up to 3A Max Output Current (D<75%)
- 2.7V to 6.0 V Input Voltage Range
- Fixed 1.5MHz Switching Frequency
- Light Load Operation
- 100% Duty Operation
- Internal Compensation
- 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 (Adjustable Operation)



#### Absolute Maximum Ratings (Note 1)

VIN Voltage	-0.3V to 7 V
SW, FB, EN, PG Voltage	-0.3V to 6 V
Power Dissipation, $P_D$ @ $T_A=25^\circ\text{C}$	
SOT-23-5	600mW
SOT-23-6	600mW
Thermal Resistance, $\theta_{JA}$	
SOT-23-5	167°C/W
SOT-23-6	167°C/W
Lead Temperature	260°C
Storage Temperature	-65°C to 150°C
Thermal Resistance, $\theta_{JC}$	
SOT-23-5	130°C/W
SOT-23-6	110°C/W

#### Recommended Operating Conditions

Input Supply Voltage $V_{IN}$	2.7V to 6.0V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperature	-40°C to 85°C