

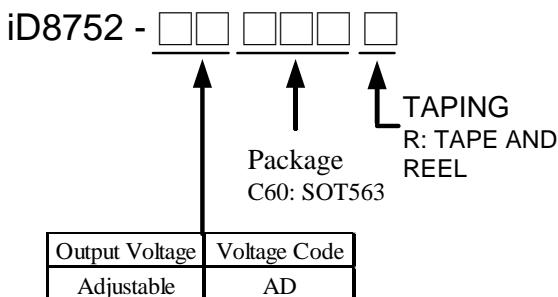
# 18V, 2A, High Efficiency Synchronous Step-Down Converter

## General Description

iD8752 is a wide input range, high-efficiency and high frequency DC-to-DC step-down switching regulator, capable of delivering up to 2A of output current. It adopts an Adaptive COT control scheme that enables very fast transient response and provides a very smooth transition when the output varies from light load to heavy load. During light load, iD8752 goes into a PFM mode that saves switching loss achieving high efficiency. The adaptive COT control also maintains a constant switching frequency across line and load. 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 25V, making it an ideal solution for industrial applications such as LCD TV, Set Top Box, Portable TV, etc.

iD8752 is available in SOT563 package.

## Ordering Information



## Applications

- LCD TV
- Set Top Box
- xDSL Modem
- Wireless Module Application
- Notebook Computer

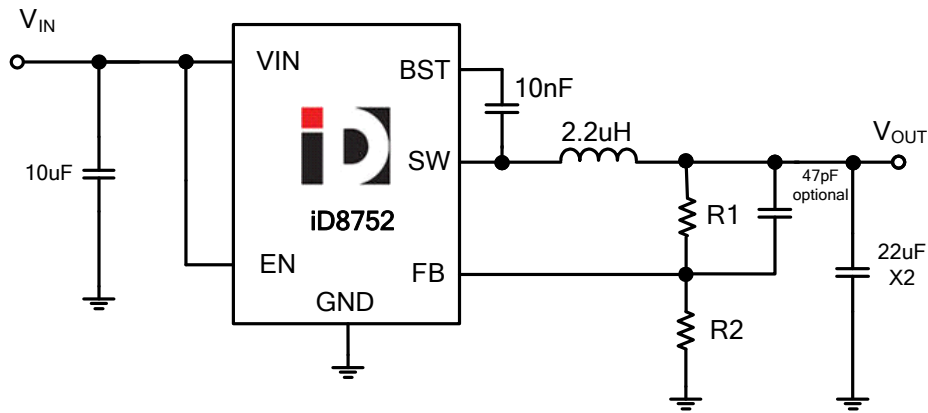
## Features

- Wide Input Range: 4.5V-18V
- Adaptive COT Control
- Ultra- fast load transient response
- High Efficiency PFM mode at light load
- High Efficiency Synchronous operation
- Low Quiescent current 177uA
- Low Rds(on) internal Power MOSFETs
- Capable of Delivering 2A Output Current
- No External Compensation Needed
- Thermal Shutdown and UVLO functions
- Available in SOT563 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 19V
BST Voltage	-0.3V to SW + 6V
FB Voltage	-0.3V to +6V
Power Dissipation, $P_D$ @ $T_A=25^\circ\text{C}$	
SOT563	0.96W
Thermal Resistance, $\theta_{JA}$	
SOT563	130°C/W
Thermal Resistance, $\theta_{JC}$	
SOT563	60°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 19V
Maximum Output Voltage $V_{OUT}$	6.0V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperatures	-40°C to 85°C