

## 18V, 4A, High Efficiency Synchronous Step-Down Converter

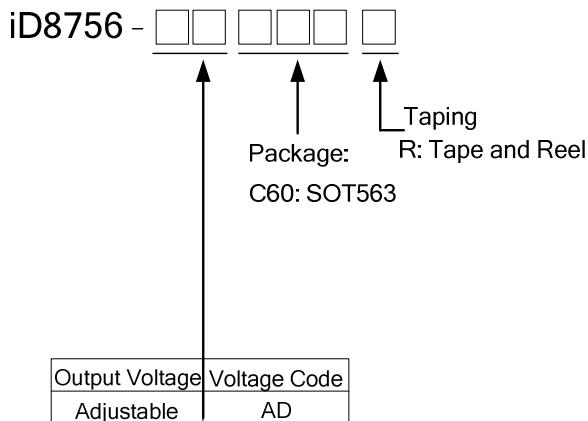
### General Description

iD8756 is a wide input range, high efficiency and high frequency DC to DC step-down switching regulator, capable of delivering up to 4A 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, iD8756 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.

iD8756 is available in a tiny SOT563 package.

### Ordering Information



### Applications

- USB ports/Hubs
- 5G CPE
- LCD TV
- Tablet PC
- Set Top Boxes

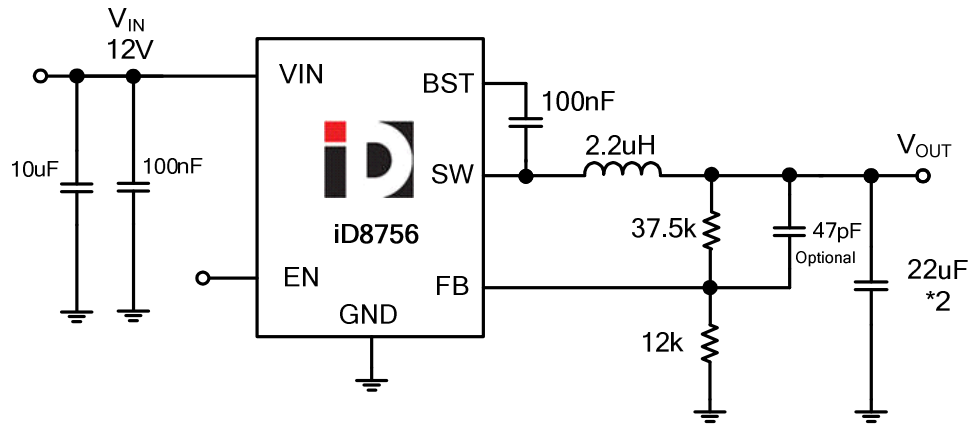
### Features

- Up to 4A Max Output Current
- 4.5V to 18V Input Voltage Range
- Adaptive COT Control
- Ultra-Fast Load Transient Response
- High Efficiency PFM at Light Load
- Low  $R_{DS-ON}$  Internal Power FETs
- Thermal Shutdown and UVLO
- RoHS Compliant and Halogen Free
- Available in SOT563.

### 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)

V <sub>IN</sub> , SW, EN Voltage	-0.3V to 19 V
BST Voltage	-0.3V to SW+6 V
FB Voltage	-0.3V to 6 V
Power Dissipation, P <sub>D</sub> @ T <sub>A</sub> =25°C	
SOT563	760mW
Thermal Resistance, $\theta_{JA}$	
SOT563	130°C/W
Lead Temperature	260°C
Storage Temperature	-55°C to 150°C
Thermal Resistance, $\theta_{JC}$	
SOT563	60°C/W

#### Recommended Operating Conditions

Input Voltage V <sub>IN</sub>	4.5V to 18V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperature	-40°C to 85°C