

## ■ General Description

SE3835 is designed to work from 7~35V, and with the maximum voltage rating at 40V. It is DC/DC converter capable of both Constant Voltage (CV) and Constant Current (CC) control over the load.

It has internal Power NMOS built-in, which has a typical  $R_{ds(ON)}$  of 85 m $\Omega$ , and capable of 3.5A continuous current.

SE3835 has much better Line regulation and Load regulation, and with high precision of  $\pm 3\%$  CC control. The overall spec is much better than similar DC/DC converter on the market.

SE3835 does not need external compensations. The Line IR Drop compensation is built-in. The CC limit can be set with external resistor.

SE3835 is designed to drive external NMOS for Synchronous DC/DC operation to achieve up to 93% efficiency. Alternatively, a regular Schottky can also used to non-sync operation.

## ■ Features

- Complete Car Charger Solution
- $V_{in(max)}$  is up to 40V
- Internal 85m $\Omega$  NMOS capable of 3.5A continuous current.
- High precision internal CV and CC Control.
- High precision CC  $\pm 3\%$
- High precision CV  $\pm 1.5\%$
- No external compensations
- CC Limit can be set via a resistor
- Support both Sync and Non-Sync Operations.
- The efficiency is up to 93% at 5V.
- External Low-side NMOS control allows for high power applications.
- 150k Hz fixed operating frequency.
- Internal Dither for better EMC.
- 0/100mV/300mV/500mV Line IR Drop compensation.
- Internal SCP, OTP, OVP, and UVLO
- SOP8 Pkg

