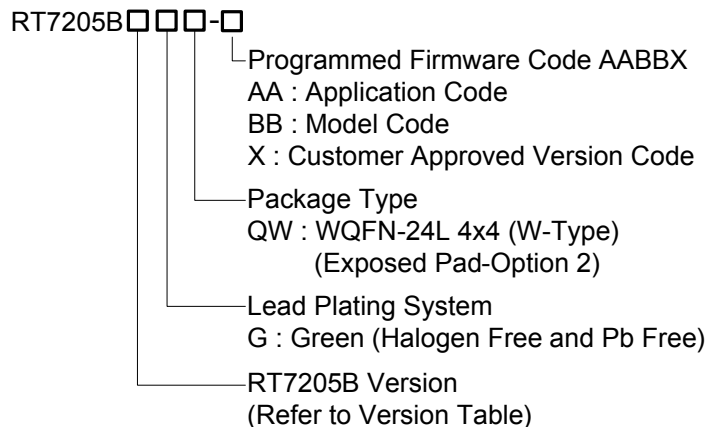


Programmable SMPS and USB Type-C Controller

General Description

The RT7205B is a highly integrated and programmable SMPS controller at the secondary side. It provides the necessary functions and protections for high efficient and high power density off-line AC-DC converter designs. The RT7205B integrates an MCU to handle various proprietary protocols (e.g., FCP, SCP and AFC) through D+/D- interface and also support USB Type-C via CC1/CC2 pins. An internal synchronous rectifier controller can optimize efficiency and provide safe operate in both continuous-conduction mode (CCM) and discontinuous-conduction mode (DCM) even in the condition of a wide output voltage range of 3V to 12V. Dual operational amplifiers with respectively programmable reference voltages are included for voltage-loop and current-loop regulation to provide programmable constant-voltage (CV) and constant-current (CC) regulation in high precision.

Ordering Information



Note :

Richtek products are :

- ▶ RoHS compliant and compatible with the current requirements of IPC/JEDEC J-STD-020.
- ▶ Suitable for use in SnPb or Pb-free soldering processes.

Features

- **Protocols Supported**
 - ▶ SCP, FCP, AFC and Proprietary Protocols
 - ▶ USB Type-C
- **Highly Integrated**
 - ▶ Embedded MCU with an Mask-ROM of 16kB, an OTP-ROM of 8kB, and an SRAM of 0.75kB
 - ▶ Built-in Synchronous Rectifier Driver and Controller
 - ▶ Built-in Charge Pump for a Wide V_{DD} Operation Range of 3V to 12V
 - ▶ Built-in Shunt Regulator for Programmable Constant-Voltage and Constant-Current Control
 - ▶ Programmable Cable Compensation
 - ▶ BLD Pin for Quick Discharge of Output Capacitor
 - ▶ USBP Pin for Direct Drive of External Blocking N-MOSFET
 - ▶ Power-Saving Mode in Standby Mode
- **Protection**
 - ▶ Adaptive Over-Voltage Protection
 - ▶ Adaptive Under-Voltage Protection
 - ▶ Firmware-Programmable Over-Current Protection
 - ▶ Firmware-Programmable Over-Temperature Protection

Applications

- Travel Adaptors with Fast Charge Protocols (e.g., FCP, SCP and AFC)
- Travel Adaptors with USB Type-C Control (e.g., 5V/1.5A and 5V/3A)

Marking Information

For marking information, contact our sales representative directly or through a Richtek distributor located in your area.