USB PD Source Controller with MCU

Hynetek Semiconductor Co., Ltd.

HUSB363

FEATURES

- USB Type-C PD Source with PPS Supported
  - Compliant with USB Type-C Specification Reversion 2.1
  - Compliant with USB PD Specification Reversion 3.1
  - Compliance certification, TID:9521
- Integrated VCONN Power for eMarker Detection
- Integrated high voltage driver for N-MOSFET
- Multiple DPDM Charging Protocols Implemented
  - BC1.2 DCP and Divider 3
  - QC2.0, QC3.0, AFC, FCP, SCP, UFCS
- Up to 30 V Maximum Voltage Rating at USB Type-C Connector Pins
- Programmable Constant Voltage and Constant Current Control
- Fault Protections including Over-Voltage Protection, Over-Current Protection, Short Circuitry Protection, Over-Temperature Protection, Under-Voltage Protection, CC Over-Voltage Protection, DPDM Over-Voltage Protection, Thermal Shut Down
- Integrated MCU with MTP Memory
- ±1500 V HBM ESD Rating for all of Type-C Connector Pins

APPLICATIONS

Travel Adaptor

Car Charger

GENERAL DESCRIPTION

HUSB363 is designed for a USB Type-C PD Source product. It can support up to multiple PDOs with programmable voltage and current for different applications, such as PPS PDOs. All of PDOs are fully compliant with USB PD 3.1 Specification Rev.1.8.

Besides, HUSB363 implements DPDM charging protocols. Both D+ and D- pins can be configured to support QC2.0, QC3.0, AFC, FCP, SCP, UFCS and divider 3 mode which provide excellent compatibility for the legacy devices.

It integrates an GATE driver to enable the VBUS from VIN to protect the devices connected with Type-C connector.

The high voltage tolerance and protections at CC1, CC2, D+ and D- pins provide more reliability for the system.

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