HT5351: USB-C High-Performance PD 3.2 Sink Controller

APPLICATIONS

- Any USB PD sink devices up to 100 W (20 V 5 A)
- Battery appliances
- Wireless charger

GENERAL DESCRIPTION

HT5351 is a highly integrated USB PD sink controller designed for products with USB-C PD 3.2 SINK that supports Adjustable Voltage Source (AVS) at SPR rating profile.

HT5351 can be configured to supports multiple PDOs from source devices with programmable voltage and current for different applications. All of PDOs are fully compliant with PD3.2 Rev.1.0.

HT5351 integrates a GATE driver to enable the VBUS to charging devices such as Lithium battery to protect the devices connected with Type-C connector.

The high voltage tolerance and protections at CC1, CC2, DP and DM pins provide more reliability for the system.

HT5351 incorporates various protections, such as VBUS's Under Voltage Protection (UVP), Over Voltage Protection (OVP), CC1 and CC2 pins Over Voltage Protection (CC_OVP), and Over Temperature protection (I_OTP)

FEATURES

- 32-bit, RISC-V microcontroller
- USB-C PD 3.2 and Type-C 1.3
- Supports to sink PDO configurable profiles (up to 20V, 5A)
- Supports SPR AVS: 9V - 20V 5A profiles
- Supports SPR PPS: 5V - 21V 5A profiles
- SOP' communication function
- Embeds protection schemes on VBUS, such as Under Voltage Protection (UVP), Over Voltage Protection (OVP)
- Supports Over Temperature protection (I_OTP) from NTC resistor
- CC1 and CC2 pins Over Voltage Protection (CC_OVP) and rating up to 28V
- Operating Voltage Range: 3.3V to 28V
- Supports Dead Battery Mode

DEVICE INFORMATION

Part Number	Package	Dimensions (mm)
HT5351	QFN16	4.0 x 4.0 x 0.75

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TYPICAL APPLICATION

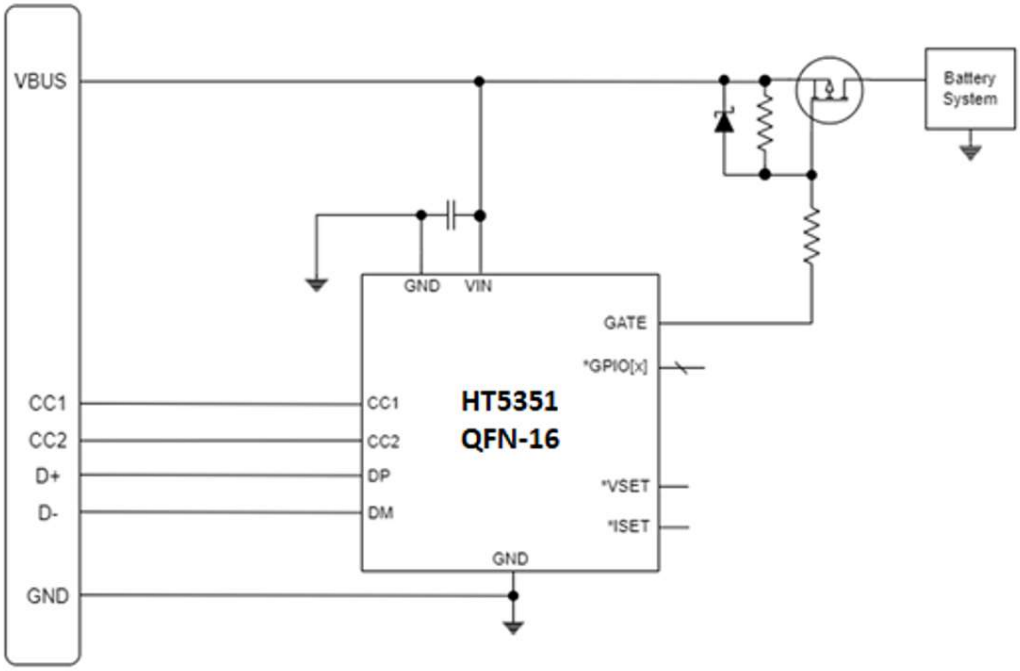

Figure 1. Typical Application Circuit of HT5351

Remarks

* Pins (GPIO[x], VSET, ISET) can be re-configured to the specific pins upon further requested and discussed

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