

Feature

- ✓ On-chip Multiple Charging Standard Identification:
 - ★ USB Power Delivery 3.0 Fix PDO (support 18W/20W/25W configurations)
 - ★ USB Power Delivery 2.0 Fix PDO
 - ★ USB Type C CC-logic
- ✓ 4kV HBM and 200V MM contact ESD Level
- ✓ -40°C ~ +125°C Operating Temperature
- ✓ Package: SOT23-6
- ✓ RoHS compliant and Halogen free

Function Block Diagram (Ref.)

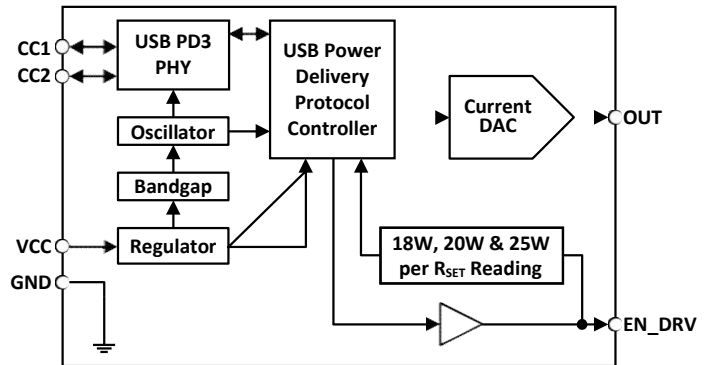


Fig.1 Function Block

Applications

- ★ Wall Adapter
- ★ Car Charger
- ★ Portable Power Bank
- ★ USB Power Plugs

Pin Definition

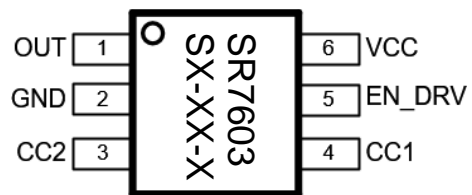


Fig.2 SOT23-6L (Top View)



SOT23-6L (3D View)

Ordering Information

Part No.	Package	Packing Type	Quantity
PD 6	SOT23-6L	7" Tape & Reel	3,000

Notes:

1. For marking information, contact our sales representative directly or through a PD 6 Image distributor located in your area.

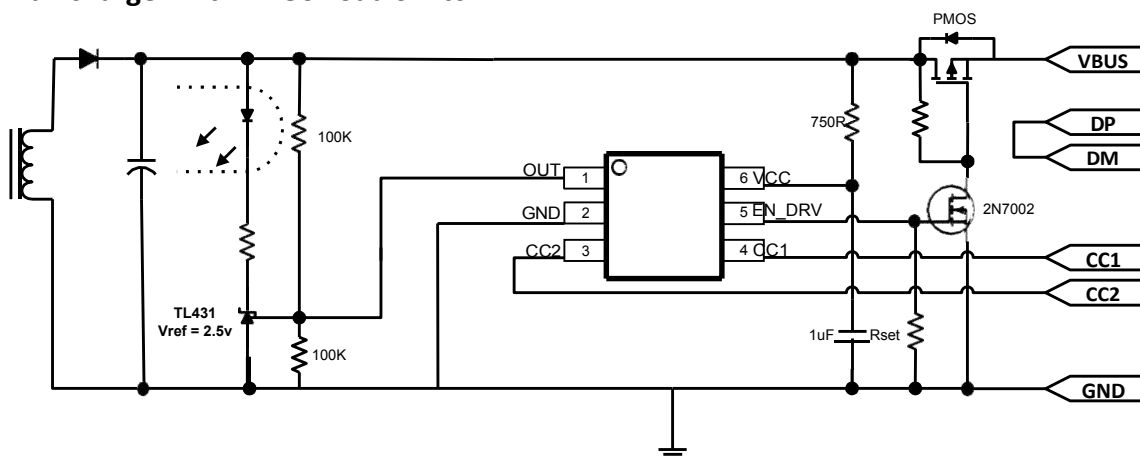
Information

1.Pin Description

Pin Number	Pin Name	Description
1	OUT	Feedback output
2	GND	Ground.
3	CC2	USB Type-C Configuration channel signal2.
4	CC1	USB Type-C Configuration channel signal1.
5	EN_DRV	Multi-PDO configuration: Tight GND: 18W (5V/3A, 9V/2A, 12V/1.5A) 160k R _{SET} Pull Low: 25W(5V3A, 9V/2.77A) 390k R _{SET} Pull Low: 20W(5V/3A, 9V/2.22A, 12V/1.67A) 620k R _{SET} Pull Low: 20W(5V/3A, 9V/2.22A) Open : 18W(5V/2.4A, 9V/2A)
6	VCC	Supply input voltage pin.

2. Recommended Application Circuit

Wall charger with VBUS Load Switch



Wall charger without VBUS Load Switch

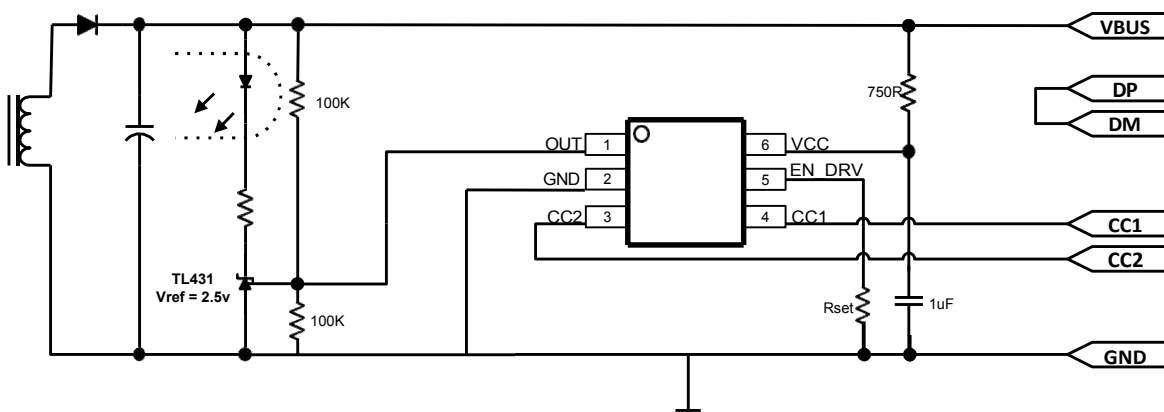


Fig.3 Application Circuit

PDO configuration

The PDO configuration is configured by external pull-down resistor attached on Pin5, details

Table 1.

Rset	PDO configuration
0R	18W (5V3A, 9V2A, 12V1.5A)
160K	25W (5V3A, 9V2.77A)
390K	20W (5V3A, 9V2.22A, 12V1.67A)
620K	20W (5V3A, 9V2.22A)
OPEN	18W (5V2.4A, 9V2A)

Specification

1. Absolute Maximum Rating

Exceeding these ratings could cause damage to the device. All voltages are with respect to ground. Currents are positive into and negative out of the specified terminal. This is a mechanical shock sensitive and an ESD sensitive device, and improper handling can cause permanent damages to the IC.

Symbol	Parameter	Min.	Typ.	Max.	Unit	Comments
V _{CC}	Supply Voltage	-0.3		6.5	V	
FB, EN_DRV	Other Pins	-0.3		6.5	V	
CC1, CC2	CC1, CC2	-0.3		6.5	V	
T _O	Operation Temperature	-40		125	°C	
T _{STG}	Storage Temperature	-60		150	°C	
-	Lead Temperature (Soldering, 10 sec.)			260	°C	
ESD _{HBM}	ESD Rating - HBM (Human Body Mode)			TBD	V	
ESD _{MM}	ESD Rating - MM (Machine Mode)			TBD	V	
ESD _{sCDM}	ESD Rating - sCDM (Socket Charge Device Mode)			TBD	V	

Notes:

1. Exceeding the absolute maximum ratings may damage the device.

2. Recommended Operation Conditions

Symbol	Parameter	Min.	Typ.	Max.	Unit	Comments
V _{CC}	Supply Voltage	3.3		5.6	V	(1)
CC1,CC2,FB	Other pins	0		V _{CC}	V	
T _{OPe}	Operating Temperature	-40		+125	°C	
I _{OPe}	Operating current		1		mA	

Notes:

2. The device is not guaranteed to operate beyond the Maximum Recommended Operation Conditions.

3. Electrical Specifications

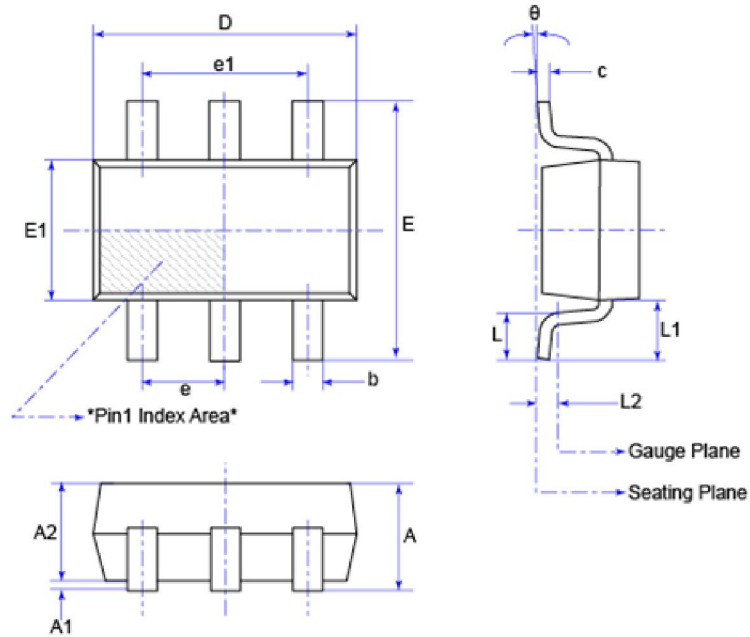
V_{CC}=5V, T_A=25°C and the recommended supply voltage range, unless otherwise specified.

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
Supply Input						
V _{CC}	Supply Voltage Range	3.3	-	5.6	V	
V _{UVLO}	Input UVLO Threshold	-	2.9		V	V _{CC} rising.
V _{UVLO(HYS)}	Input UVLO Hysteresis	-	0.2	-	V	V _{CC} falling.
I _{CC}	VCC Supply Current	-	1	-	mA	V _{CC} = 5.0V
V _{CC}	VCC Clamp Voltage	-	5.8	-	V	I _{CC} = 3mA

Package Information

1. Package Outline Dimensions

SOT23-6L



Unit: mm

Symbol	Min	Max
A	-	1.35
A1	-	0.15
A2	1.00	1.20
b	0.30	0.50
c	0.08	0.21
D	2.72	3.12
E	2.60	3.00
E1	1.40	1.80
e	0.95 BSC	
e1	1.80	2.00
L	0.30	0.60
L1	0.60 REF	
L2	0.25 BSC	
θ	0°	8°

4. Revision History:

Rev. 1.00	Initial Release	2021/Jan/12
Rev. 1.01	Update electrical parameters	2021/Jan/20