

23mΩ OVP Switch with OTG Function

General Description

The ET9902 is a high voltage, high current, bidirectional switch. It provides input over-voltage and surge protection as well as reverse-blocking of output voltage. The logic control of the device is designed to interact with both the system controller and the wireless charging receiver which allows creating a dual input charger application with a single switch.

The device is packaged in advanced WLCSP20, which is ideal for small form factor portable equipment.

Features

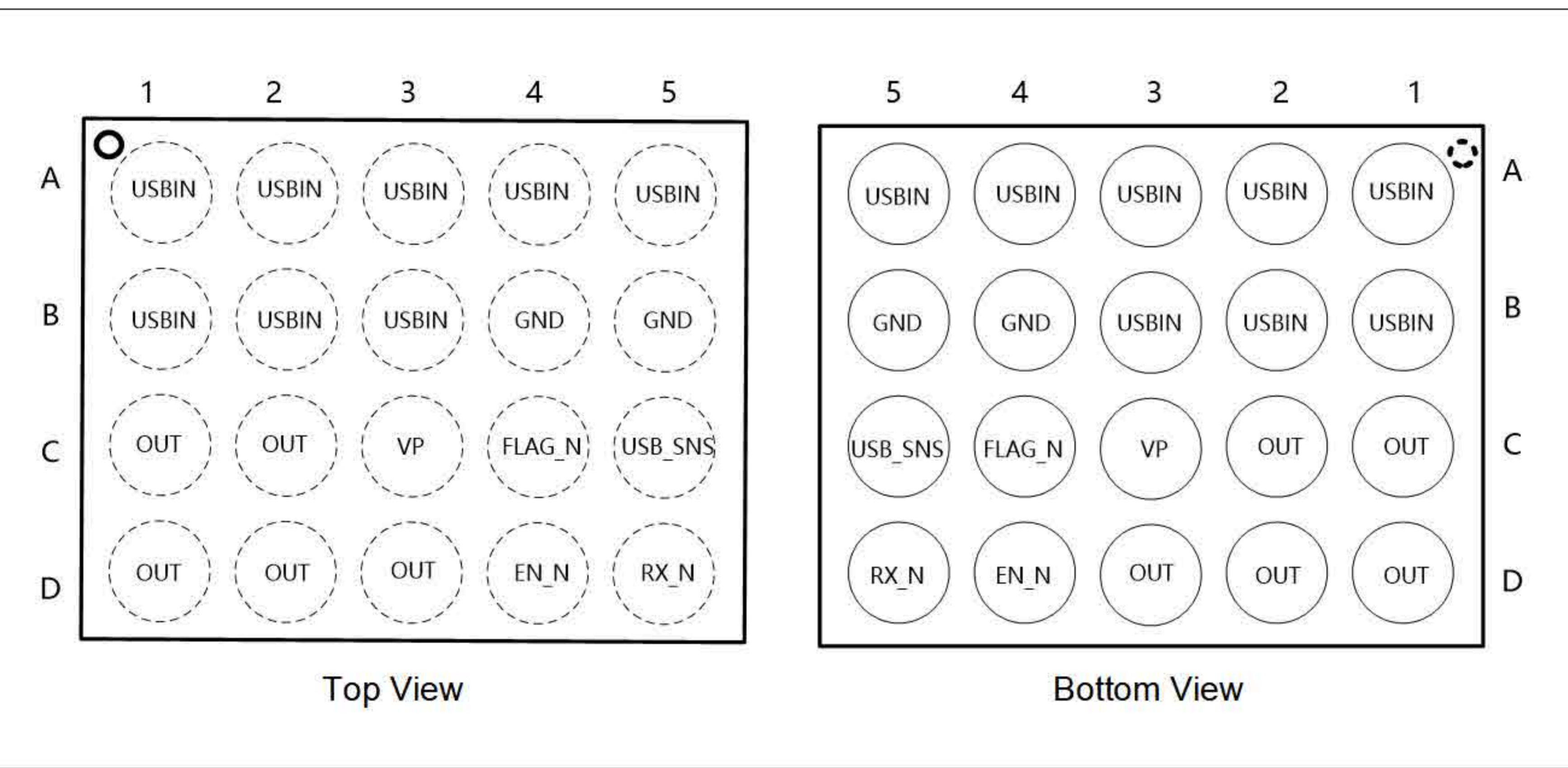
- Operating range from 3.6V to 20V
- Absolute maximum voltage of V_{IN} up to 28V
- Pin-selectable over-voltage protection(13V/17V)
- Input voltage sense output with selectable clamp(16V/20V)
- Low $R_{DS(on)}$ is 23mΩ typical at $V_{IN}=5V/1A$
- 5A DC Nominal and 7A maximum current capability
- Autonomous mode and slave mode operation
- 50ms Input supply detect deglitcher in autonomous mode
- 50ms Break-before-make timing with discharge
- Bi-directional status indicator and OTG enable pin
- Device enable input (active low)
- Wireless enable output (active low)
- Surge immunity to $\pm 100V$
- Compliance to IEC61000-4-2 (Level 4): bypassed with a 1.0μF or larger capacitor
-- 15kV Pass (Air) , 8kV Pass (Contact), ESD Ratings: HBM >2.5kV
- Pat No. and Package

Part No.	Package
ET9902	WLCSP20 (1.67mm × 2.24mm, ball pitch=0.4mm)

Applications

- Smartphones, Tablet PC
- HDD, Storage, and Solid State Memory Devices
- Portable Media Devices, Laptop & MID
- SLR Digital Cameras
- GPS and Navigation Equipment
- Industrial Handheld and Enterprise Equipment

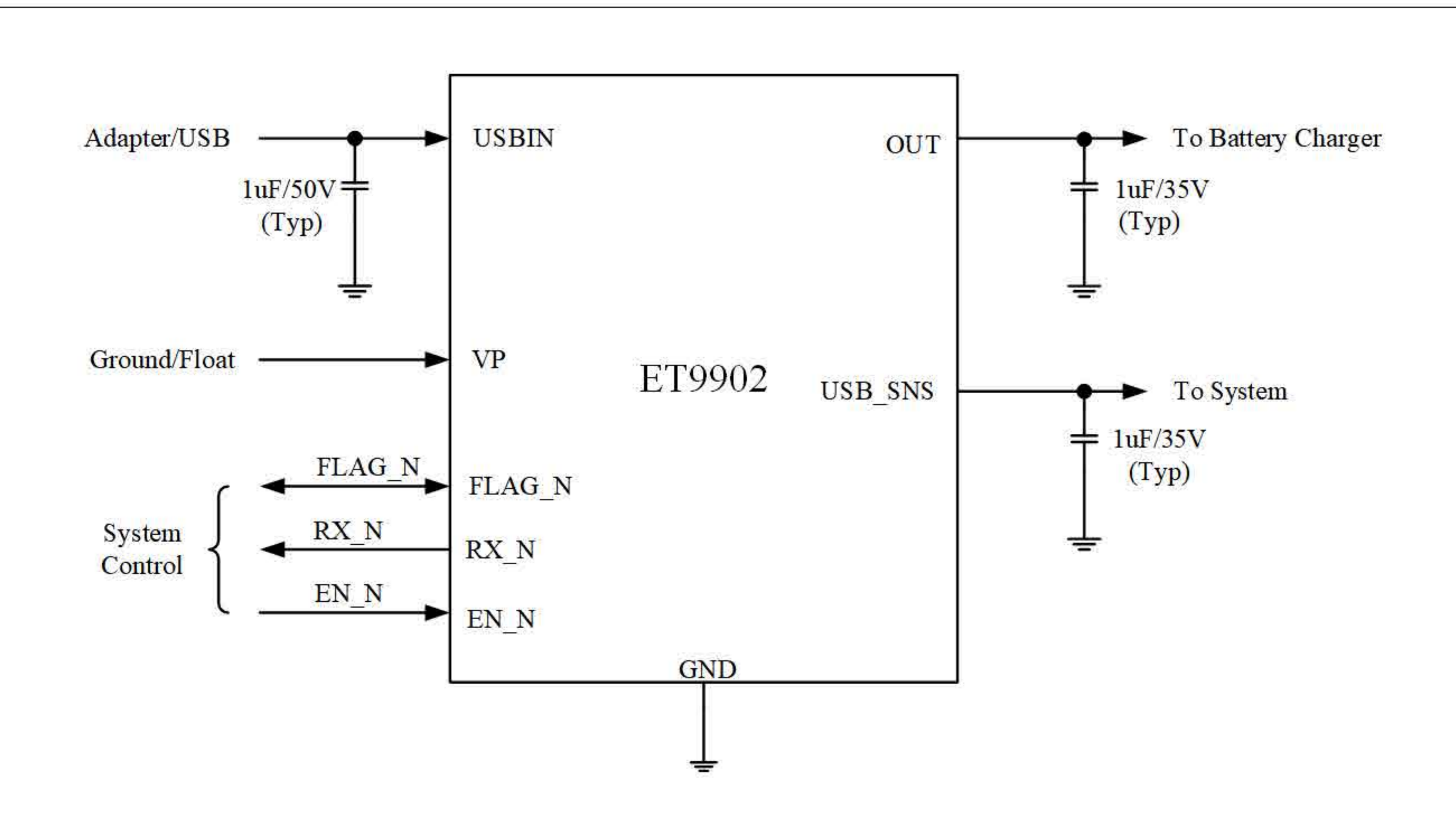
Pin Configuration



Pin Function

Pin No.	Pin Name	Function
A1~A5, B1~B3	USBIN	Load Switch Input
C1,C2, D1~D3	OUT	Load Switch Output
C5	USB_SNS	Clamped USBIN Sense Output
C3	VP	Over-voltage Protection Setting
D4	EN_N	Active Low Logic Enable
D5	RX_N	Wireless Receiver Active Low Enable
C4	FLAG_N	OTG Enable Input/Ready for OTG Output
B4, B5	GND	Ground

Application Circuits



*: This application circuit is only for reference.