

# HL5075

## Back to Back OVP with Adjustable Current Limit

### Overview

The HL5075 is a slew-rate controlled, low  $R_{dson}$ , over-voltage protection device. It is used in between a power source and a load to protect and isolate power source against unwanted abnormal voltage and current condition. Especially, in the OTG mode of smartphone, the HL5075 could be placed between OTG boost regulator and USB port. The HL5075 can protect boost regulator in smartphone from the USB fault conditions like over-voltage or over-current.

In order to be used at high voltage application (9V or above), the HL5075 apply a high voltage device power FET switch which allows a maximum input voltage of 13.5V. The over-voltage protection threshold is set to 14.2V in HL5075WL01, 10.4V in HL5075WL02, 5.8V in HL5075WL03 and 11.5V in HL5075WL04.

To prevent excessive input voltage or battery droop resulting from a large inrush current, the HL5075 also implements several protection functions, such as over-current protection with FLT flag, input under-voltage protection, reverse-current protection and over-temperature protection.

HL5075 is available in a 9-pin WLCSP package.

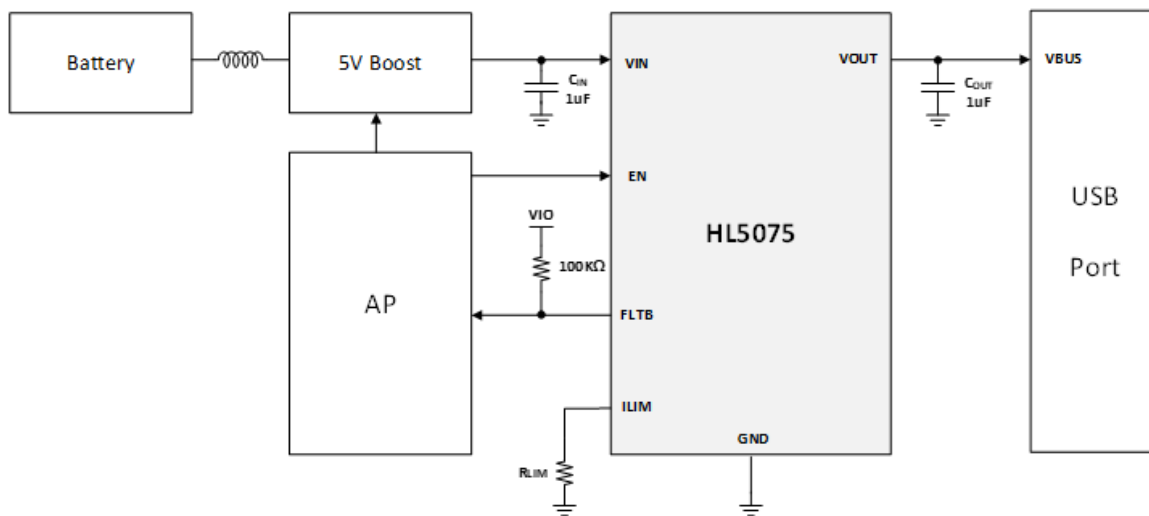
### Features

- Input Voltage Range :
  - HL5075WL01: 2.5V ~ 13.5V
  - HL5075WL02 : 2.5V ~ 10V
  - HL5075WL03 : 2.5V ~ 5.5V
  - HL5075WL04 : 2.5V ~ 11V
- 28V Absolute Maximum Voltage Rating of VOUT
- Adjustable Current Limit with external resistor
- Integrated Power FET switch with 53m $\Omega$   $R_{ds(on)}$  @ 5V/1A
- Built in Soft Start to prevent inrush current
- Protection
  - Over Temperature Protection (OTP)
  - Over Voltage Protection (OVP) :
- HL5075WL01 : 14.2V
- HL5075WL02 : 10.4V
- HL5075WL03 : 5.8V
- HL5075WL04 : 11.5V
  - Over Current Protection
  - Reverse Current Protection
- Compliance to IEC61000-4-2 on VOUT
  - Contact discharge:  $\pm 8$ kV
  - Air Gap discharge:  $\pm 15$ kV
- 1.2V IO compatible – EN, FLT
- Package:
  - 9-Bump WLCSP, 0.4mm Pitch, 1.22mm x 1.22mm

### Applications

- Smartphones
- Tablet PC
- Note PC
- Mobile IoT Devices

## Typical Application Diagram



## Ordering Information

Part Number	VOUT OVP threshold	Package	Packing Method
HL5075WL01	14.2V	WLCSP-9	Tape & Reel
HL5075WL02	10.4V	WLCSP-9	Tape & Reel
HL5075WL03	5.8V	WLCSP-9	Tape & Reel
HL5075WL04	11.5V	WLCSP-9	Tape & Reel

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