

4 Amp Over-Voltage Protection IC with Sense Output

Features

- Wide Input voltage range: 2.3V to 28V
- Up to 4A Continuous current capability
- Integrated 38mΩ (typ) N-Channel MOSFET
- Wide Over-Voltage threshold range
 - ▶ Fixed internal: 5.95V
 - ▶ Adjustable: 4V to 22V
- Fast OVP response time: 0.1μs (typ.)
- Microphone Mode for audio signal on IN
- Internal 15ms Startup Debounce
- Integrated Surge Protection up to 100V
- Low Quiescent Current: 70μA (typ.)
- Thermal Shutdown and Short Circuit Protection
- Compliance to IEC61000-4-2 (Level 4)
 - ▶ Contact: ±8kV
 - ▶ Air Gap: ±15kV
- ESD Protection
 - ▶ Human Body Model: ±2kV
- Pb-free Package: 12-Bump WLCSP
- -40°C to +85°C Temperature Range

Brief Description

The KTS1681 over-voltage protection (OVP) device features an ultra-low 38mΩ (typical) on-resistance high current integrated MOSFET which actively protects low-voltage systems from voltage supply faults up to +28V_{DC}. An internal clamp protects the device from surges up to 100V.

An input voltage exceeding the over-voltage threshold will cause the internal MOSFET to turn off, preventing excessive voltage from damaging downstream devices. When the OVLO input set below the external OVLO select voltage, the KTS1681 automatically chooses the internal fixed OVLO threshold, preset to 5.95V (typical). The over-voltage protection threshold can be adjusted with optional resistor divider to a voltage between 4V and 22V.

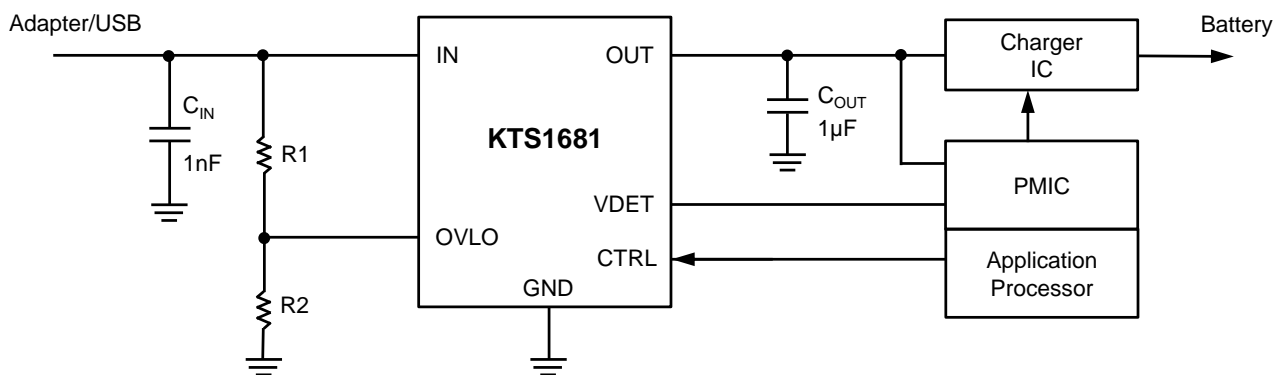
The device features a microphone mode which disables the OVP switch and allows the microphone signal present on the input to be output at VDET pin without an additional multiplexer circuit. The KTS1681 is protected against over-current faults by an internal over-temperature protection shutdown feature.

Applications

- Smartphones
- Tablet
- Mobile Internet Devices, Peripherals

The KTS1681 is available in a RoHS and Green compliant 12-Bump 1.288mm x 1.988mm x 0.64mm WLCSP.

Typical Application



Ordering Information

Part Number	Marking	OVLO Threshold	Operating Temperature	Package
KTS1681EAY-TR	GQXXYYZZZZ ¹	5.95V	-40°C to +85°C	WLCSP-12

1. XX = Date Code, YY = Assembly Code, ZZZZ = Serial Number.

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