

Surge Protected Load Switch with Over-Voltage Protection

Features

- Surge and ESD protected Input
 - ▶ Surge Protection
 - IEC 61000-4-5: >100V
 - ▶ ESD Protection
 - IEC 61000-4-2 (Level 4)
 - Contact: $\pm 8\text{kV}$
 - Air Gap: $\pm 15\text{kV}$
 - Human Body Model $\pm 2\text{kV}$
- Wide Input voltage range
 - ▶ 2.7V to 30V
- Low Quiescent Current 60 μA typ.
- N channel MOSFET load switch with low forward voltage drop
 - ▶ 140mV @ 1A
- Fast turn-off response time 100ns
- Flexible trip-point options
 - ▶ Fixed 6.8V
 - ▶ Adj. 4V to 20V
- Auto-enabled switch with typ. 15ms debounce time
- Additional Under voltage (UVLO), Short-circuit and thermal shutdown protection
- Open-drain power good output
- Pb-free WLCSP-9 package
- -40°C to +85°C Temperature Range

Brief Description

The KTS1685 over-voltage protection device features an ultra-low 140m Ω (typical) on-resistance high current integrated MOSFET which actively protects low-voltage systems from voltage supply faults up to +30VDC. 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 KTS1685 automatically chooses the internal fixed OVLO threshold, preset to 6.8V (typical). The over-voltage protection threshold can be adjusted with optional resistor divider to a voltage between 4V and 22V.

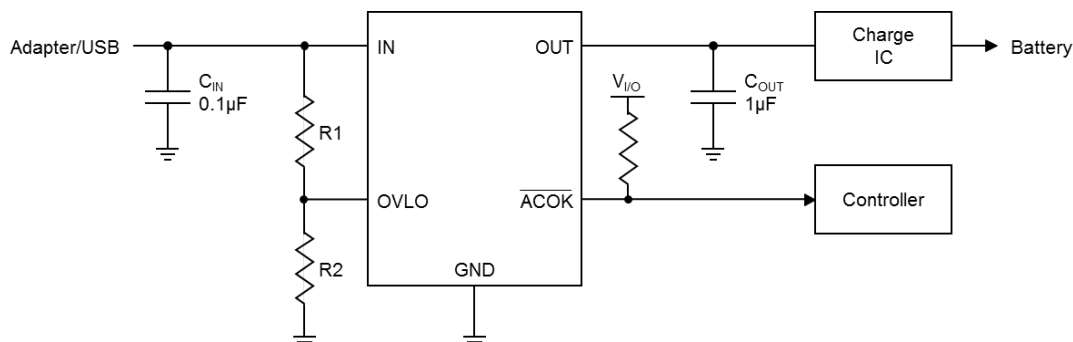
The device features an open-drain output $\overline{\text{ACOK}}$ indicating a stable supply between the minimum supply voltage and OVLO threshold. In case of fault condition and the device temperature exceeds the maximum junction temperature, the device switches off.

The KTS1685 is available in a RoHS and Green compliant 9-Bump 1.33 x 1.33mm WLCSP.

Applications

- Smartphones
- Mobile Internet Devices
- Tablet Computers
- Peripherals

Typical Application



Ordering Information

Part Number	Marking	Operating Temperature	Package
KTS1685EUE-TR	ICXXYYZZZZ ¹	-40°C to +85°C	WLCSP-9

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

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