

### Over-Voltage Protected Load Switch with Surge Protection

#### Features

- Surge and ESD protected Input
  - Surge Protection
    - IEC 61000-4-5: > 100V
  - ESD Protection
    - IEC 61000-4-2 (Level 4)
      - Contact: ±8kV
      - Air Gap: ±15kV
    - Human Body Model: ±2kV
- Wide Input voltage range
  - 2.3V to 28V
- Low Quiescent Current: 70µA (typ.)
- Integrated 28mΩ (typ) N-Channel MOSFET
- Fast turn-off response time
  - 100ns
- Flexible trip-point options
  - Fixed 6.3V
  - Adj. 4V to 25V
- 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-12 package
- -40°C to +85°C Temperature Range

#### Brief Description

The KTS1680C over-voltage protection device features an ultra-low 28mΩ (typical) on-resistance high current integrated MOSFET which actively protects low-voltage systems from voltage supply faults up to +28V<sub>DC</sub>. 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 KTS1680C automatically chooses the internal fixed OVLO threshold, preset to 6.3V (typical). The over-voltage protection threshold can be adjusted with optional resistor divider to a voltage between 4V and 25V.

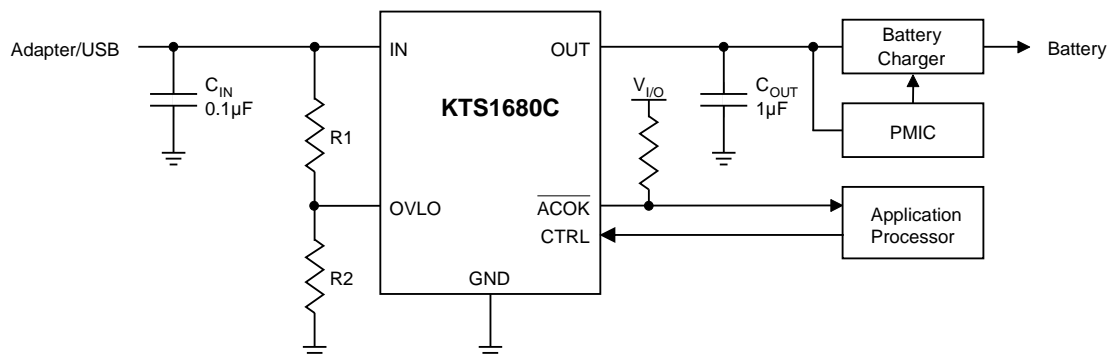
The device features an open-drain output  $\overline{ACOK}$  indicating a stable supply between the minimum supply voltage and OVLO threshold. The KTS1680C is also protected against over-current faults and has thermal protection.

The KTS1680C is available in a RoHS and Green compliant 12-Bump 1.16mm x 1.65mm x 0.64mm WLCSP.

#### Applications

- Smartphones
- Tablet Computers
- Mobile Internet Devices
- Peripherals

#### Typical Application



### Ordering Information

| Part Number    | Marking <sup>1</sup> | Operating Temperature | Package  |
|----------------|----------------------|-----------------------|----------|
| KTS1680CEUZ-TR | MFXXYYZZZZ           | -40°C to +85°C        | WLCSP-12 |

1. "XXYYZZZZ" is the date code, assembly code and serial number.

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