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MAX14743

Over Voltage and Surge Protected Dual SPDT Data Line Switch

Protect the data line from a high-voltage short or surge event

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Description

The MAX14743/MAX14743A are 2 x SPDT switches with overvoltage protection intended for use with portable devices. As the high-voltage charging solution starts to spread out, a data line short event to the high-voltage V_{BUS} can result in either charger misdetection or permanent damage to the portable device. The MAX14743/MAX14743A are designed to protect the downstream data line from a high-voltage short or surge event.

The device combines low on-capacitance (C_{ON}) and low on-resistance (R_{ON}) necessary for high-performance switching applications in portable electronics. The MAX14743/MAX14743A feature internal positive overvoltage, negative overvoltage, and surge protection. The devices handle USB low/full/high-speed signaling and operate from a 2.7V to 5.5V supply.

The MAX14743/MAX14743A are available in a 12-bump (1.22mm x 1.62mm) wafer-level package (WLP) and operates over the -40°C to +85°C extended temperature range.

Key Features

- Distortion-Free, High-Speed Signaling
 - Dual SPDT
 - Signal Range: -1V to +3.5V
 - R_{ON} : 5.5Ω (typ)
 - C_{ON} : 4.5pF (typ)
 - Bandwidth > 1GHz
- Flexible System Design
 - Separate Control for Each Switch Path
 - Active Low EN to Save Supply Current
 - Active Low FLAG Signals Fault Event
 - 12-Bump WLP (1.22mm x 1.62mm) Package
 - -40°C to +85°C Operating Temperature Range
- Robust and Safety
 - Positive Overvoltage Protection up to +12.5V
 - Hot Plug-In Robustness: MAX14743A

Applications/Uses

- Phablets
- Smartphones
- Tablets

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