

2A Slew-Rate Controlled, High-Side Load Switch with True Reverse Current Blocking Improves System Reliability

The AP22913 is a 2A slew-rate controlled load switch with true reverse-current blocking (TRCB). The device is designed for high-side, load-switching applications, with a typical $R_{DS(ON)}$ of 54m Ω (at 5V), which reduces the voltage drop across the device, improving power dissipation and system performance.

The AP22913's TRCB eliminates reverse currents flowing from output to input, which could be an issue in USB applications where the load is externally powered or the rails have large capacitance.

The slew-rate control and TRCB mitigate inrush and reverse currents, allowing the designer to select capacitors best suited for their application.

The AP22913 is available in both chip-scale X1-WLB0909-4 and standard SOT26 packages.



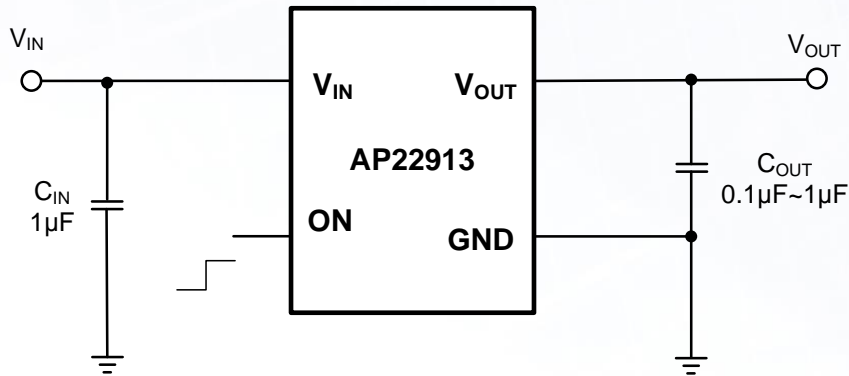
DIODES Advantage

- Wide Input Voltage Range: 1.4V to 5.5V with Low On-Resistance:**
 - ✓ Provides low-voltage drop in USB, I/O, and core rail, high-side switch applications
- Truly Reverse Current Block (TRCB) Protection**
 - ✓ Prevents unwanted current flow from output to input, which otherwise could damage the system or peripheral
- Automatic V_{OUT} Discharge Resistor when Disabled**
 - ✓ Discharges any output capacitor ensuring output rail starts in a known state
- Ultra-Low Quiescent Current 1 μ A**
 - ✓ Minimal battery drain in portable equipment
- Small WLB0909-4 Package Form-Factor and Industry-Standard SOT26 Package for Application Flexibility**
 - ✓ <1mm² footprint for high-density portable applications
 - ✓ SOT26 supports performance upgrades from standard USB power switches

Applications

- Mobile Device and Smart Phones
- Portable Media Devices
- Wearable Devices
- Advanced Notebook, UMPC, & MID
- Portable Medical Devices
- GPS and Navigation Equipment

Typical Application Circuit



Product Portfolio

Part Number	Maximum Continuous Output Current	Maximum Current Limit	Enable Logic (Active)	Minimum Operating Voltage	Maximum Operating Voltage	Quiescent Current @3.6V	R _{DS(ON)} @ V _{IN} = 5.0V	Output Discharge FET On-resistance	Truly Reverse Current Block (TRCB)	Package Outlines
	A	A		V	V	µA	mΩ	mΩ		
AP22913CN4-7	2.0	2.5	High	1.4	5.5	0.7	54	120	Y	X1-WLB0909
AP22913W6-7	2.0	2.5	High	1.4	5.5	0.7	65	150	Y	SOT-26

For more information:

AP22913: <https://www.diodes.com/part/AP22913>

Ordering Information

Device	Package Code	Packaging	Package Marking Info.	Reel Size	Tape Width	Quantity
AP22913CN4-7	CN4	X1-WLB0909-4	XX Y W X	7"	8mm	3000
AP22913W6-7	W6	SOT26	XX Y W X	7"	8mm	3000