



New Product Announcement

AP22815
AP22615

Adjustable Single Channel Power Distribution Switch with Output OVP

The AP22815/615 is a 3A single channel current-limited high-side power switch with output OVP optimized for USB and other hot-swap applications which need to have over voltage protection from output to protection the system. AP22815 supports fixed current-limited feature, while AP22615 equips adjustable current-limited feature optimized for applications that require precision current limiting support. It supports USB PD3.0 fast role swap function. The output voltage could recovery to USB valid voltage range within 110 μ s during USB PD fast role swap event.

The device has fast short-circuit and output over-voltage response time for improved overall system robustness. Both TSOT-25 and TSOT-26 packages integrated discharge circuitry inside OUT pin. They provide a complete protection solution for applications subject to heavy capacitive loads and the prospect of short circuit, and offer output overvoltage protection, reverse current blocking, overcurrent, over-temperature and short circuit protection, as well as controlled rise time and undervoltage lockout functionality.



The Diodes Advantage

- **Low $R_{DS(ON)}$ of 40m Ω**
Decreases voltage drops and power losses
- **Soft Start Time & Fault Indicate**
 - Built-in soft-start with 2.1ms typical rise time
 - Fault report (FLG) with blanking time (7ms typ.)
- **Wide Ranging Protection Feature Set**
 - Overvoltage with Auto Recovery
 - Overcurrent with Auto Recovery
 - Short Circuit with Auto Recovery
 - Over-Temperature with Auto Recovery
 - Output Reverse Voltage Protection
- **Fixed 3.0A/Accurate Adjustable Current Limit**
 - AP22615 Programmable Current Range: 0.4A~4.0A
 - AP22815 Current Range: 3.0A
- **Industry Standard Packages**
 - TSOT-26 for AP22615
 - TSOT-25 for AP22815

Circuit functions

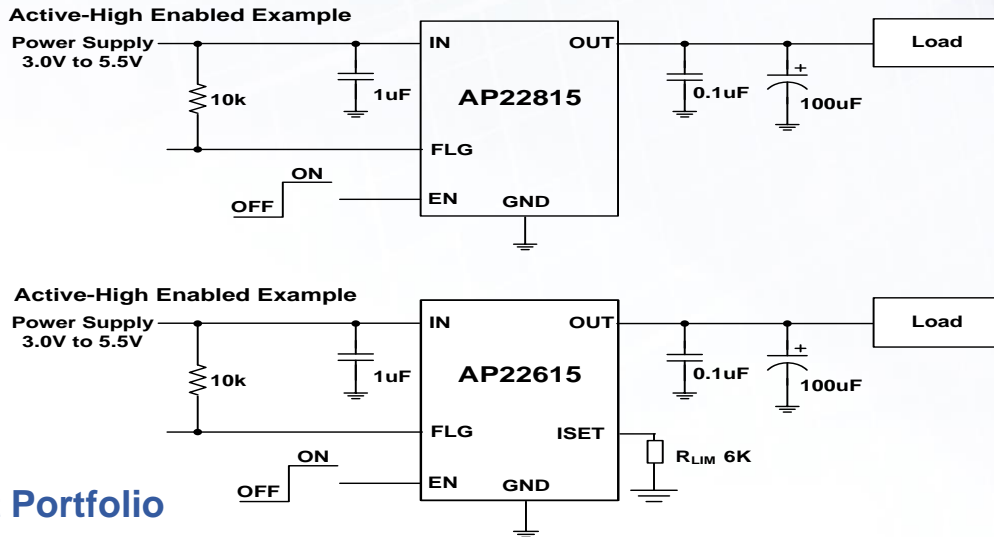
- Notebook PCs
- Tablet PCs
- Motherboards
- Set-Top-Boxes
- USB Charger
- Telecom Systems



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Typical Application Diagram



Product Portfolio

Part Number	Maximum Continuous Output Current	Maximum Current Limit	Enable Logic (Active)	Minimum Operating Voltage		Maximum Operating Current	Quiescent Current @ VIN = 5.0V	Output Discharge	OCP Output Latch Off	OCP Flag	Reverse Current Protection	UL Listed, File Number E322375	IEC 60950-1 CB Scheme Certified	Package Outlines
	A	A		V	V	μA	mΩ							
AP22815AW5-7	3.0	4.2	High	3.0	5.5	300	40	Y	N	Y	Y	Y	Y	TSOT-25
AP22815BW5-7	3.0	4.2	Low	3.0	5.5	300	40	Y	N	Y	Y	Y	Y	TSOT-25
AP22615AW5-7	3.0	4.2	High	3.0	5.5	300	40	Y	N	Y	Y	Y	Y	TSOT-26
AP22615BW5-7	3.0	4.2	Low	3.0	5.5	300	40	Y	N	Y	Y	Y	Y	TSOT-26

Ordering Information

Device	Package Code	Packaging	Package marking info.	Reel Size	Tape Width	Quantity Per Reel
AP22815AWT-7	WT	TSOT25	XX Y W X	7"	8mm	3,000
AP22815BWT-7	WT	TSOT25	XX Y W X	7"	8mm	3,000
AP22615AWT-7	WT	TSOT26	XX Y W X	7"	8mm	3,000
AP22615BWT-7	WT	TSOT26	XX Y W X	7"	8mm	3,000

To find out more information:

AP22615: <https://www.diodes.com/part/AP22615>

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