



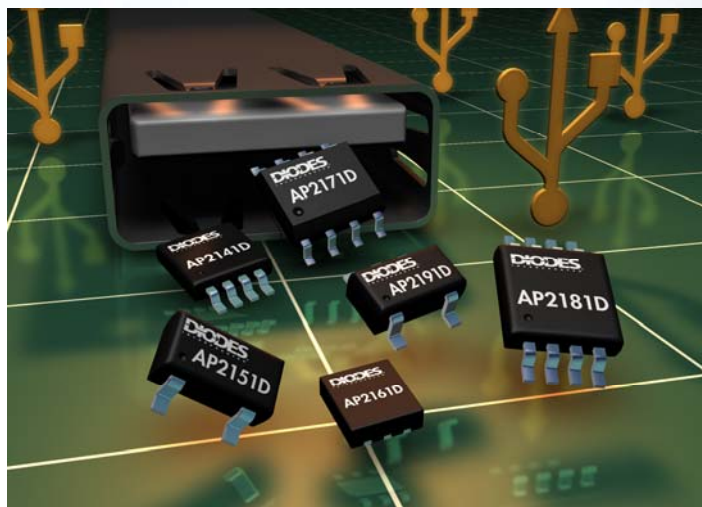
New Product Announcement

AP21X1D

0.5A/1A/1.5A Single Channel Current-Limiting Power Switch with Output Discharge

AP21X1D

- 0.5A/1A/1.5A single channel current limited high-side power switches optimized for USB port protection and 3V-5V hot-swap interconnects.
- 90m Ω $R_{\text{DS(on)}}$ with output discharge
- Available with both polarities of enable
- Comply with USB 2.0 and 3.0 standards
- UL Recognized (in progress) and IEC 60950-1 certified
- Available in SO-8, MSOP-8, MSOP-8-EP, SOT25 and DFN2018-6 green packages
- End equipment: LCD TVs and monitors, set-top boxes, computers, e-Readers, smart phones, etc



The Diodes advantage

The AP21X1D series provides fast and accurate over-current protection for robust USB ports protection

- **Output discharge function**
Complements existing AP21X1 series with controlled discharging of the output voltage stored on the output capacitor when disabled
- **Reverse current blocking, UVLO, over-current, short-circuit and over-temperature protection**
Improves robustness of USB ports
- **Fast transient response time**
Prevents unnecessary system shutdown or restart and improve system robustness
- **Wide range of current limiting options: 0.8A, 1.5A, 2.1A**
Provides complete selection of USB ports protection for different system requirements
- **Form-fit-function in SO-8, MSOP-8, MSOP-8-EP, SOT25 and space saving DFN2018-6**
Cost effective, small surface mount solutions

Circuit functions

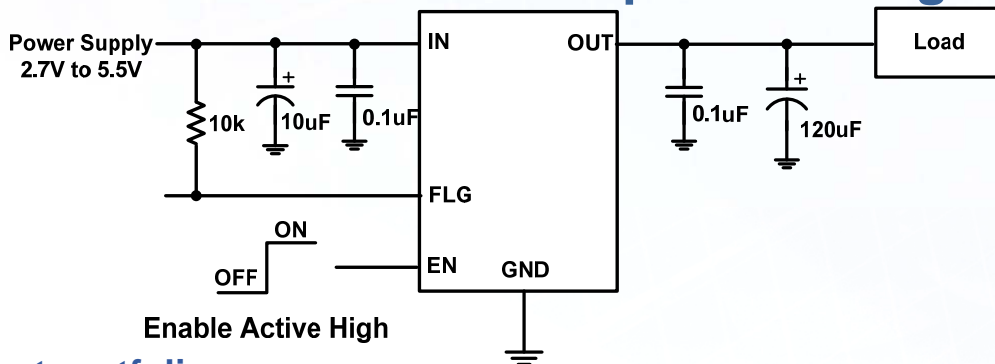
- USB ports protection
- Short-circuit protection
- Heavy capacitive loads protection



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Product portfolio

Diodes P/N	Channel	Enable Polarity	Vin	Max Output Current (A)	Typ Current Limit (A)	R _{DS(on)} @ 5V (mΩ)	New Release with Output Discharge	UL and IEC 60950-1 Certified	Package
AP2141	1	Active low	2.7-5.5V	0.5	0.8	90	AP2141D	Yes	DFN2018-6 SOT25 SO-8 MSOP-8-EP MSOP-8 (MSOP-8 for AP2181D & AP2191D)
AP2151		Active high					AP2151D		
AP2161		Active low		1.0	1.5		AP2161D		
AP2171		Active high					AP2171D		
AP2181		Active low		1.5	2.1		AP2181D		
AP2191		Active high					AP2191D		
AP2101	1	Active low	2.7-5.5V	2.0	2.45	90 95	Yes	Yes	MSOP-8-EP SO-8
AP2111		Active high							

To find out more information:

Product page <http://www.diodes.com/products/catalog/list.php?parent-id=71>

Datasheet AP2141D/AP2151D http://www.diodes.com/datasheets/AP2141D_51D.pdf

AP2161D/AP2171D http://www.diodes.com/datasheets/AP2161D_71D.pdf

AP2181D/AP2191D http://www.diodes.com/datasheets/AP2181D_91D.pdf

Ordering information

Device	Packaging	Package marking info	Reel size	Tape width	Quantity
AP21X1DSG-13	SO-8	AP21X1D YYWWXX	13"	12mm	2500
AP21X1DM8G-13	MSOP-8	YWX AP21X1D	13"	12mm	2500
AP21X1DMPG-13	MSOP-8-EP	YWXE AP21X1D	13"	12mm	2500
AP21X1DWG-7	SOT25	XX YWX	7"	12mm	3000
AP21X1DFMG-7	DFN2018-6	XX YWX	7"	12mm	3000

All variants are in packages that are "Green" Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)

Notes:1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes

2 Codes for date coding on part marks

Y Year 0~9

YY Year 08, 09 etc

W A~Z week 1~26 a~z week 27~53

WW Week 01~52

X A~Z: Green