



New Product Announcement

AP2552/53/52A/53A

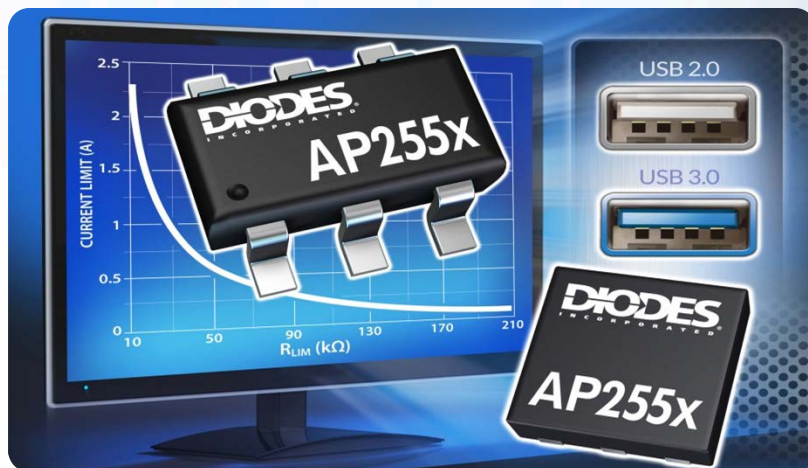
AP255xx Single Channel Adjustable (75mA-2.35A) Current-Limiting Power Switch with $70\text{m}\Omega$ $R_{\text{DS(ON)}}$ with/out Latch-off

The AP2552/53/52A/53A are single channel precision adjustable current-limited switches optimized for applications that require up to 2.1A of continuous load current during heavy loads/short circuits. These devices offer a programmable current-limit threshold between 75mA and 2.35A via an external resistor. Current limit accuracy $\pm 6\%$ can be achieved at high current-limit settings.

All offer reverse current, over-temperature, over-current and short-circuit protection with fast response times as well as controlled output rise times and UVLO all of which improve system reliability.

- AP2552/53 limits output current during faults.
- AP2552A/53A latches-off the output during faults.

They are available in DFN2020C-6 and SOT26 packages.



The Diodes Advantage

The AP2552/53/52A/53A provide fast and accurate adjustable over-current protection for improved USB ports protection

- **± 6 percent current-limit accuracy at 1.5 A**
Allows closer matching of current limits to system requirements; reducing unnecessary overheads
- **Adjustable current limit from 75 to 2,350mA**
Single device used across platforms, with just a resistor change
- **Constant current (AP2552/3) and latch-off (AP2552A/3A) versions**
Fault behavior can be optimized for different designs
- **Fast transient response time: $2\mu\text{s}$**
Prevents unnecessary system shutdown or restart
→ improves system robustness
- **Reverse current blocking/limiting, UVLO, over-current, over-temperature, and short-circuit protection**
Improves robustness of USB ports

Circuit functions

- USB Ports protection
- HDMI Port protection
- 5V/3.3V Power Supply Out-rush Protection

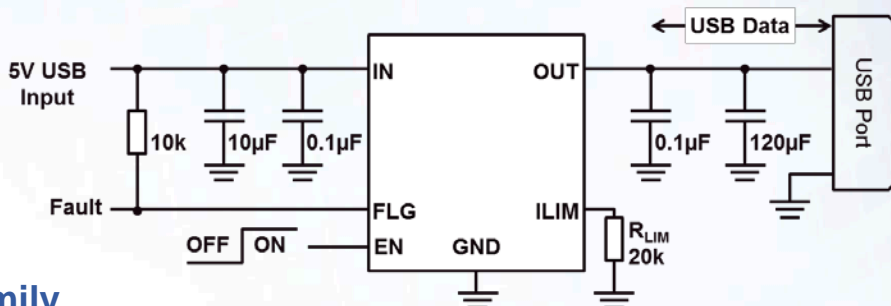


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AP2552/53/52A/53A

AP255xx Adjustable Current-Limiting Power Switch

Typical Application Enable Active High



Single Channel Family

Part Number	Enable (active)	Recommended Max Continuous Load Current	Current Limit	Over-Current Protection	OTP	Soft-start	Reverse blocking	Dis-charge	Output flag	Packages	
AP2331	None	0.2A	0.4A	Current-Limit	Y	Y	Y		N	SOT23, SC59	
AP2141/D	Low	0.5A	0.8A	Current-Limit	Y	Y	Y	N/Y	Y	SOT25, SO-8 MSOP-8EP, DFN2018-6	
AP2151/D	High										
AP2337	None	1.0A	1.5A	Current-Limit	Y	Y	Y	Y	N	SOT23	
AP2161/D	Low	1.0A	1.5A	Current-Limit	Y	Y	Y	N/Y	Y	SOT25, SO-8 MSOP-8EP, DFN2018-6	
AP2171/D	High										
AP2181/D	Low	1.5A	2.1A	Current-Limit	Y	Y	Y	N/Y	Y	SOT25, SO-8 MSOP-8EP, DFN2018-6	
AP2191/D	High										
AP2101	Low	2.0A	2.45A	Current-Limit	Y	Y	Y	Y	Y	SOT25, SO-8 MSOP-8EP	
AP2111	High										
AP2301	Low	2.0A	2.85A	Current-Limit	Y	Y	Y	Y	Y	SO-8, MSOP-8EP U-DFN3030E-8 Type E	
AP2311	High										
AP2401	Low	2.0A	2.5A	Latch-Off	Y	Y	Y	Y	Y	SO-8, MSOP-8EP U-DFN3030E-8 Type E	
AP2411	High										
AP2501	Low	2.5A	4.6A	Current-Limit	Y	Y	Y	Y	Y	SO-8, MSOP-8EP, MSOP-8 U-DFN3030E-8 Type E	
AP2511	High										
AP2552	Low	50mA ~ 2.1A	75mA ~ 2.35A	Current-Limit	Y	Y	Y	Y	Y	U-DFN2020C-6 SOT26	
AP2553	High										
AP2552A	Low			Latch-Off	Y	Y	Y	Y	Y		Y
AP2553A	High										

Ordering Information

Device	Packaging ¹	Package marking info ²		Reel size	Tape width	Quantity
		AP2552	AP2553			
AP255xFDC-7	U-DFN2020C-6	BJ YWX	BK YWX	7"	12mm	3000
AP255xAFDC-7	U-DFN2020C-6	BM YWX	BN YWX			
AP255xW6-7	SOT26	BJ Y W X	BK Y W X	7"	12mm	3000
AP255xAW6-7	SOT26	BM Y W X	BN Y W X			

All variants are in packages that use "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 W A-Z week 1-26 a-z week 27-53 X A-Z: Green