New Product Announcement

AP22916

2A Slew-Rate Controlled Power Switch Protects Systems from Excessive In-Rush Current

The AP22916 is a chip-scale power switch capable of handling 2 amps with an $R_{DS(on)}$ of 60 mΩ (5V).

The AP22916 is available in two versions with different turn-on timings, giving system designers flexibility to choose the best combination for the protection of their system. At 5V the AP22916B has a typical rise time of 42µs, while the AP22916C rise time is 750µs.

Both devices operate from 1.3V to 5.5V making them suitable for 1.5V, 1.8V, 2.5V, 3.3V, and 5V systems. Their typical quiescent current of 0.3µA is enhanced by circuits to control the resistance at the enable pin for additional power savings.

The true reverse current blocking feature effectively eliminates reverse current flow when Vout exceeds Vin. It is useful in systems having multiple power source options or multiple supply voltages that may lead to a conflict.

The AP22916 is available in the X1-WLB0808-4 wafer chip scale package, which is 0.78mm by 0.78mm with four 0.15mm solder balls having 0.4mm pitch. The chip is protected with a backside laminate and is characterized for operation over a temperature range of –40° C to +85° C.

The Diodes Advantage

- **Low On-Resistance of 60mΩ Typical @5V**
  Provides a superior solution in terms of efficiency and thermal power dissipation.
- **Ultra Low Quiescent Current 0.3µA typical extends battery life**
  Very low leakage plus control of the resistance at the enable pin for additional current savings.
- **2.0 A current capability with Slew Rate Control**
  Choice of differing turn-on times to limit potential damage from in-rush current.
- **Wide Input Voltage Range: 1.3V to 5.5V**
  Offers extra voltage margin for systems that need to operate at 1.3V.
- **True Reverse Current Blocking**
  Prevents reverse current flow when Vout exceeds Vin.
- **Package: chip-scale X1-WLB0808-4**
  Available in the 0.78mm x 0.78mm x 0.45mm chip-scale package enabling the highest power density for portable applications.

Application(s)

- Mobile device and smart phones
- Portable media devices
- Wearable devices
- Advanced notebooks
- Portable medical devices
- GPS and navigation equipment

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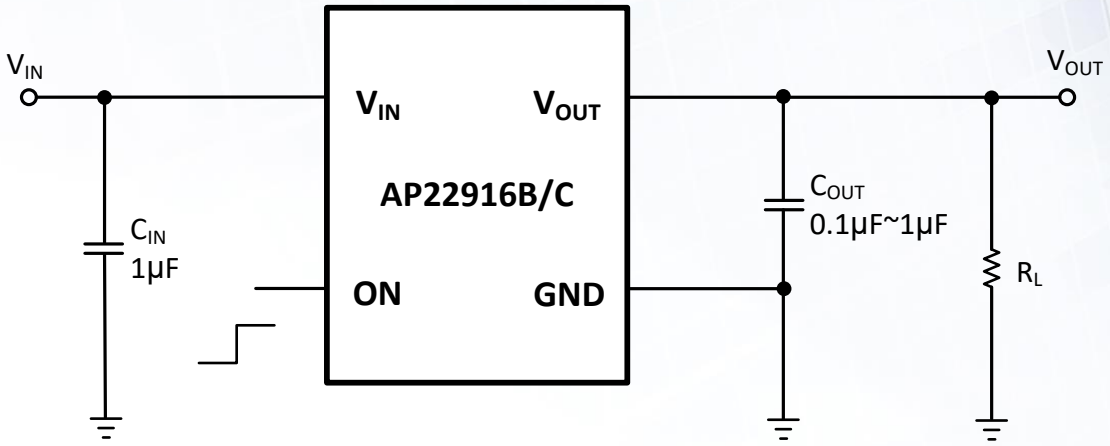

AP22916 Electrical Specification Summary

Part Number	Maximum Continuous Output Current	Maximum Current Limit	Enable Logic (Active)	Operating Voltage		Quiescent Current @ VIN=5.0V	$R_{DS(ON)}$				Output Discharge FET On-Resistance	Output Turn-on Delay Time	Output Turn-on Rise Time	Package Outlines
				Minimum	Maximum		@ VIN = 5.0V	@ VIN = 3.6V	@ VIN = 1.8V	@ VIN = 1.3V				
	A	A		V	V	μA	mΩ	mΩ	mΩ	mΩ	Ω	μs	μs	
AP22916B	2	2.5	High	1.3	5.5	0.3	60	75	150	310	150	85	42	X1-WLB0808-4
AP22916C	2	2.5	High	1.3	5.5	0.3	60	75	150	310	150	1400	750	X1-WLB0808-4

Product and Ordering Information

Part Number	Suffix	Delay	Package Code	Package Outlines	Moisture Sensitivity	7" Tape and Reel		
						Quantity/reel	Tape Width	Reel size Suffix
AP22916BCA4-7	B	Short	CA4	X1-WLB0808-4	MSL-1	3000	8mm	-7
AP22916CCA4-7	C	Long	CA4	X1-WLB0808-4	MSL-1	3000	8mm	-7

To find out more information:
https://www.diodes.com/assets/Datasheets/AP22916.pdf