



## New Product Announcement

APR3415  
APR34330

# APR3415/APR34330 Secondary-Side Synchronous Rectifiers

The APR3415/APR34330 is a secondary-side synchronous rectifier, which combines an N-MOSFET and an optimized driver circuit for DCM synchronous rectification (SR) power supplies. They significantly reduce the power dissipation and provide a more reliable solution than traditional rectifier solutions.

Both devices integrates an output voltage detect function for primary side control systems.

The N-channel MOSFET has been optimized for low gate charge, low  $R_{DS(ON)}$  and fast switching speed with fast body diode reverse recovery performance.

The APR3415/APR34330 senses the MOSFET's drain-to-source voltage, producing the necessary drive signals with a minimal number of external components..

It provides a high performance solutions for 5V output applications.

The APR3415 is available in SO-8 package. The APR34330 is available in SO-8EP package.



### The Diodes' Advantage

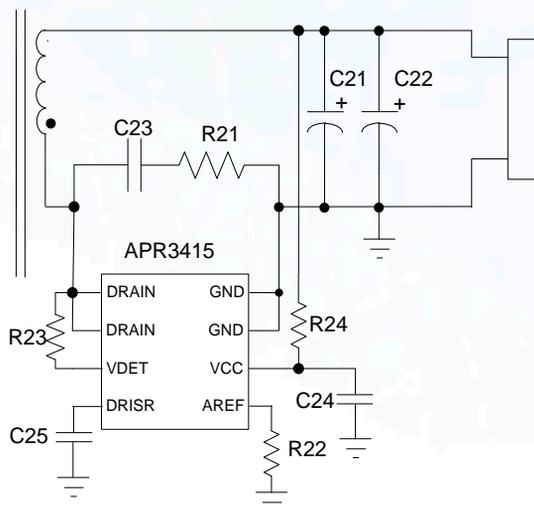
**The APR3415/APR34330 are high performance, and cost effective synchronous rectification solutions for power converters in portable consumer and home appliances.**

- **Synchronous rectification with combined MOSFET:**  
Improves efficiency by reducing the secondary-side rectifier voltage drop and power dissipation
- **Choice of low  $R_{DS(ON)}$  15 or 32m $\Omega$  N-MOSFETs**  
Allows performance/cost optimised solution dependent on load
- **Available in SO-8/8EP package with minimal external components**  
Reduced BOM cost and solution size
- **Over-Voltage Protection, VCC UVLO Protection**  
Increases system reliability and robustness

### Applications

- 5V Adapters and chargers for: cell/cordless phones, ADSL modems, MP3 and other portable devices
- Standby and auxiliary power supplies for 5V systems

**Typical Application Schematic:**



**Diodes' Synchronous Rectification Solutions**

Part Number	Internal Trigger Voltage (V)	VCC MAX (V)	Operating Current (µA)	Turn-Off Threshold Voltage (mV)	Internal Switching FET Drain Rating (V)	Internal Switching FET (Ω)	Package Outlines
AP343	5.3	6	100	-12.5	50	External	SOT25
APR3415	5.3	6	100	-12.5	50	15	SO-8
APR34330C	5.15	6	100	-15	50	32	SO-8EP

To find out more information:

Synchronous Rectifiers Web page: [http://diodes.com/catalog/synchronous\\_rectifiers\\_0810/](http://diodes.com/catalog/synchronous_rectifiers_0810/)

Datasheets: <http://www.diodes.com/datasheets/APR34330.pdf>

<http://www.diodes.com/datasheets/APR34315.pdf>

**Ordering Information**

Device	Temperature Range	Packaging	Part mark	Reel size	Quantity
APR3415MTR-G1	-40 to +85	SO-8	3415M-G1	13", 330mm	4000
APR34330CMPTR-G1	-40 to +85	SO-8EP	34330CMP-G1	13", 330mm	4000

All variants are in packages that are "Green" Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)  
Note: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes