



New Product Announcement

APR34309, APR3415,
APR34330 & APR34309C

APR34309/APR3415/APR34330 Secondary-Side Synchronous Rectifiers

The APR3415, APR34330 and APR34309 are secondary-side synchronous rectifiers, which combines an N-MOSFET and an optimized driver circuit for DCM synchronous rectification (SR) power supplies.

The APR3415, APR34330 APR34309 devices significantly reduce the power dissipation and provide a more reliable solution than traditional rectifier solutions.

All devices integrate 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 and APR34309 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 and APR34309 are available in SO-8EP package.



The Diodes' Advantage

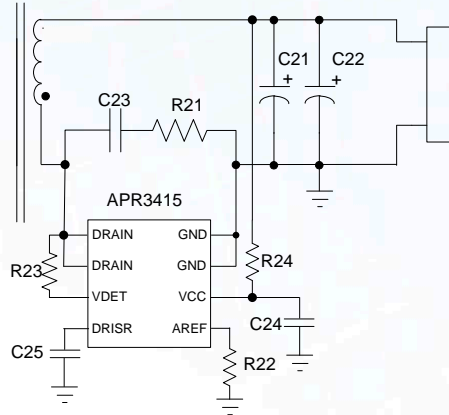
The APR3415, APR34330 and APR34309 are high performance, and cost effective synchronous rectification solutions for power converters in portable consumer and home appliances.

- **Synchronous rectification with combined MOSFET:**
Improves efficiency by reducing the secondary-side rectifier voltage drop and power dissipation
- **Choice of low $R_{DS(ON)}$ 8, 15 or 32m Ω 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
APR34309CA	5.15	6	100	-9	50	8	SO-8EP
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/

Datasheets: <http://www.diodes.com/datasheets/APR34330.pdf>
<http://www.diodes.com/datasheets/APR34315.pdf>
<http://www.diodes.com/datasheets/APR34309.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
APR34309CAMPTR-G1	-40 to +85	SO-8EP	34309CMP-G1	13", 330mm	4000
APR34309CMPTR-G1	-40 to +85	SO-8EP	34309CMP-G1	13", 330mm	4000