

AP43771

AP3303

APR347

## 27W~33W Solution for USB PD 3.0 PPS and QC 4/4+

The combination of the AP43771, AP3303, and APR347 provides a highly integrated, efficient 27W~33W solution to USB PD 3.0 and QC 4/4+.

The AP43771 is a USB Type-C® Power Delivery PD 3.0 PPS decoder dedicated to power source applications with legacy capability. It is compliant with USB Type-C specification Rev 1.2 and USB power delivery (PD) specification Rev 3.0 V 1.1 (USB PD 3.0 PPS Silicon Compliance Certification: TID – 11090028). It also passes QC 4/4+ Compliance Certification by GRL (Report Number QC2019040851).

The AP3303 is a quasi-resonant (QR) PWM controller with a standby power of <math><30\text{mW}</math>. It integrates a 120V  $V_{CC}$  LDO circuitry, allowing the LDO to regulate the wide range  $V_{CC\_IN}$  to an acceptable value.

The APR347 is a secondary side MOSFET driver for synchronous rectification in DCM operation

*USB Type-C is registered trademark of USB Implementers Forum.*



### DIODES Advantage

**AP43771+AP3303+APR347 delivers high-integration, cost-effective 27W~33W USB PD/QC4+ solutions for portable and consumer applications.**

▪ **AP43771 Decoder with both OTP and MTP ROM**

Supports a cost-effective and flexible program mode:  
One-Time-Programmable ROM for main firmware  
Multi-Time-Programmable ROM for user configuration data

▪ **AP3303 Quasi-Resonant Controller with Internal 120V LDO to Regulate  $V_{CC}$**

Supports a wider range of output applications, reducing BOM quantity and simplifying system design.

▪ **APR347 Synchronous Rectifier Integrates a Pulse Linear Regulator**

Supports Constant Current (CC) mode in which the system output voltage can drop as low as 2V. This is good for PPS applications where the lowest voltage is 3.3V.

### Applications

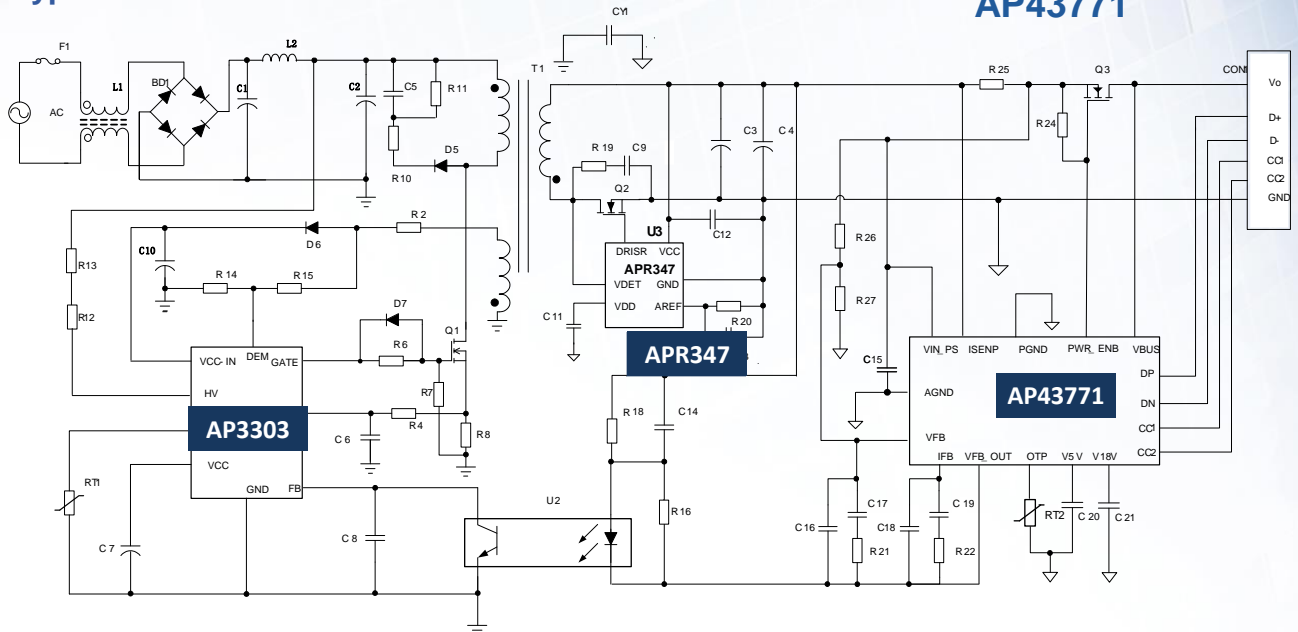
- USB PD
- Rapid Charger
- General AC/DC Adaptor



# New Product Announcement

AP3303  
APR347  
AP43771

## Typical USB PD 3.0 Solution



### Secondary Side Decoder

Part Number	MAX VCC (V)	Operating Current (μA)	Protocol Compatible	Current sense reference (5V/9V/12V)	UVLO voltage	Package
AP43771	24	3300	PD3.0/QC4+	Programmable	2.7V	W-DFN3030-14

### Quasi-resonant PWM Controller

Part Number	HV Start-Up Circuit	Startup Current (μA)	UVLO Threshold on/off (V)	Gate Output Current (mA)	Maximum Frequency (kHz)	Package
AP3303	Yes	1	15.8/7.6	350	120	SSOP9

### Synchronous Rectification Solutions

Part Number	VCC MAX (V)	Operating Current (μA)	Drain Rating (V)	Mosfet R <sub>dson</sub> (mΩ)	Package
APR347	28	150	External	External	SOT26

Device	Packaging	Quantity	Datasheet
AP43771FBZ-13	W-DFN3030-14	3000	<a href="https://www.diodes.com/assets/Datasheets/AP43771.pdf">https://www.diodes.com/assets/Datasheets/AP43771.pdf</a>
AP3303S9-13	SSOP9	4000	<a href="https://www.diodes.com/assets/Datasheets/AP3303.pdf">https://www.diodes.com/assets/Datasheets/AP3303.pdf</a>
APR347W6-7	SOT26	3000	<a href="https://www.diodes.com/assets/Datasheets/APR347.pdf">https://www.diodes.com/assets/Datasheets/APR347.pdf</a>