



New Product Announcement

AP43770

High-Performance Protocol Decoder Supporting USB Type-C Power Delivery

The AP43770 is a USB Type-C™ Power Delivery PD3.0 PPS decoder dedicated to power source applications with legacy capability. It is compliant with USB Type-C specification rev1.2 and USB power delivery (PD) specification Rev 3.0 V1.1 (USB PD 3.0 PPS Silicon Compliance Certification: TID – 1090017). It also passed QC4/4+ Compliance Certification by GRL (Report Number QC2019041564).

AP43770 supports PPS APDO with 20mV/step resolution and 50mA/step current resolution for optimal battery thermal management. In addition, cable-loss compensation and SOP command for e-Marker detection are supported.

AP43770 has 45W and 65W reference designs for USB PD 3.0, based on AP3108L (PWM Controller) and APR346 (synchronous rectifier Controller). Power Brick certification TID – 605 for 65W design.

It is available in the TSSOP-16 package.

USB Type-C™ is a trademark of USB Implementers Forum.



The Diodes Advantage

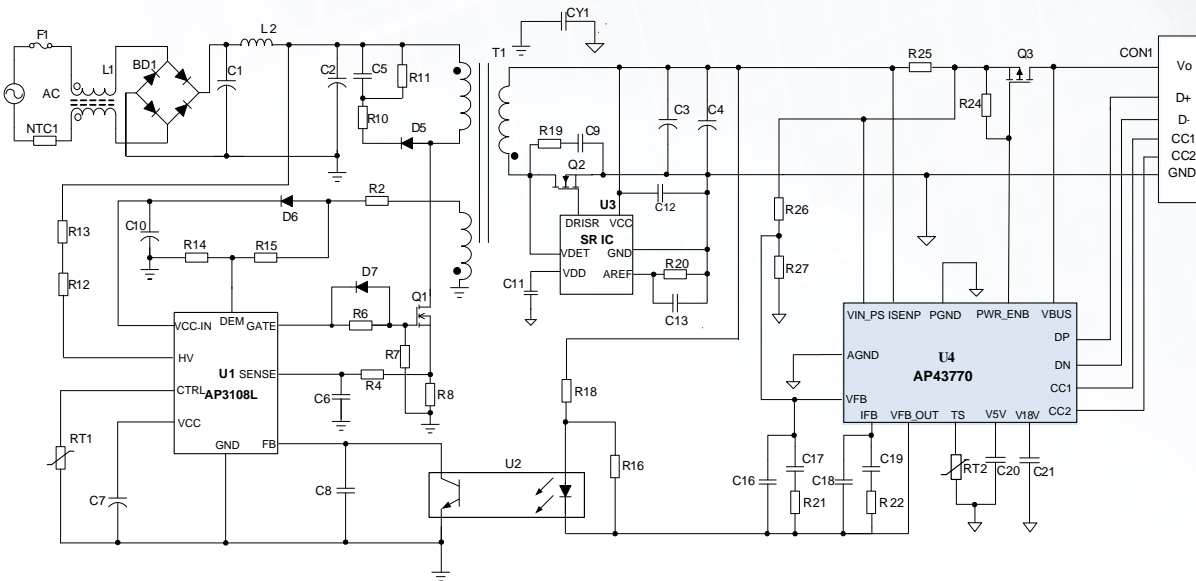
AP43770 is a high-performance, MCU and OTP (One-Time-Programmable), USB PD 3.0 PPS/QC4/4+ protocol decoder

- **8KB OTP Memory Integrated**
Programmable for Configuration and ID Code
- **Built-In CC/CV**
Constant current mode provides good protection for charger applications
- **Supports E-Marker Cable Detection with Built-In VCONN Switch and Overcurrent Protection (OCP)**
Supports Type-C cable authentication
- **Built-In Cable Compensation for Different Load Conditions**
Enhanced output voltage load regulation at the end of adapter cable

Applications

- Adapter/Charger with USB PD
- USB PD After-Market Car Charger

Typical Application



Offline USB-PD Solution

Ordering Information

Part Number	MAX VIN (V)	Operating Current (µA)	Compatible Protocols	UVLO Voltage (V)	Package
AP43770T16-13	25	4500	USB PD3.0	2.8	TSSOP16

To find out more information:

Product Page: <https://www.diodes.com/part/AP43770>

Application Notes:

65W PD3.0 EV1 Adapter Reference Design:

<https://www.diodes.com/assets/Evaluation-Boards/65W-USB-PD-3.0-Adaptor-Reference-Design-User-Guide-Release-1.0.pdf>

45W PD3.0 EV2 Adapter Reference Design:

<https://www.diodes.com/assets/Evaluation-Boards/45W-USB-PD3.0-Adaptor-EV2-User-Guide-Rev-1.0.pdf>