



Up to 140kHz, All-in-One Flyback Controller with Integrated Primary Control Circuitry and Secondary Synchronous Rectification Driver



The MPX2003 is an all-in-one flyback controller with an integrated primary driving circuit, secondary controller, synchronous rectification driver, and safety-compliant feedback. It offers the benefits of both primary-side regulation (PSR) and secondary-side regulation (SSR).

The MPX2003 is available in SOICW-16 and TSOICW16-15 packages.

Features & Benefits

- Isolation Voltage $>3750V_{AC}$
- 100% Production HIPOT Compliance Testing
- UL1577 and IEC62368 Safety Approved, DIN VDE V 0884-17 in Process
- Integrated Multi-Mode: Discontinuous Conduction Mode (DCM), Quasi-Resonant (QR) Mode, and Continuous Conduction Mode (CCM)
- Flyback Controller, Secondary-Side Synchronous Rectifier (SR) Sensing/Driving Circuitry, and Safety-Compliant Feedback Link
- Integrated 650V Primary-Side Current Source and 150V Secondary-Side Current Source
- Less than 30mW in Standby Mode
- Improved SR Control for Reliable Operation and Higher Efficiency
- V_{CC} Over-Voltage Protection (OVP), Primary Over-Current Protection (POCP), Secondary-Sense Output Overload Protection (OLP), Internal Brown-In and Brownout (B/O and B/I) Protection, Short-Circuit Protection (SCP), Current-Sense Short Protection (SSP), Current-Sense Open Protection (SOP), SR Gate Open and Short Protection (SGOP and SGSP), SRD Abnormal Protection (SRDP), FB OVP and Under-Voltage Protection (UVP), Internal Thermal Shutdown, Under-Voltage Lockout (UVLO) Protection, and an Externally Triggered Protection (Ext.P)
- Available in TSOICW16-15 and SOICW-16 Packages