

Synchronous Rectifier Controller

DESCRIPTION

The EUP9290 is a high performance controller used to secondary side synchronous rectifier (SR).

The fundamental of EUP9290 is utilized N-channel MOSFET power devices used for secondary side synchronous to emulate a near-ideal diode rectifier. This method not only directly reduces power dissipation of the rectifier but also reduces primary side losses as well.

The EUP9290 is applied voltage-second balancing control method and not directly connected to the MOSFET drain, so it is ideal for flyback power supplies over the wide-output voltage range. The SR drive turn-off threshold is not related to the MOSFET $R_{DS(on)}$, which allows optimizing for maximum conduction time.

The EUP9290 offers a frequency detector to automatically switch to standby mode during low power conditions and pin fault protections. It is compatible with DCM, TM and CCM operation

FEATURES

- Secondary-Side SR Optimized Controller for 5V to 24V Flyback Systems
- Volt-Second Balance SR On-Time Control
- Compatible with Primary-Side and Second-Side Control
- CCM Operation Compatibility
- Short Pin Fault Protection
- Available in SOP-8 and SOT23-6 Packages
- RoHS Compliant and 100% Lead (Pb)-Free Halogen-Free

APPLICATIONS

- Switching Mode Power Supply(DCM, TM and CCM)
- Chargers for Smart Phones and Tablets
- High Efficiency Auxiliary Power in Server Desktop and Appliance Application

Typical Application Circuit

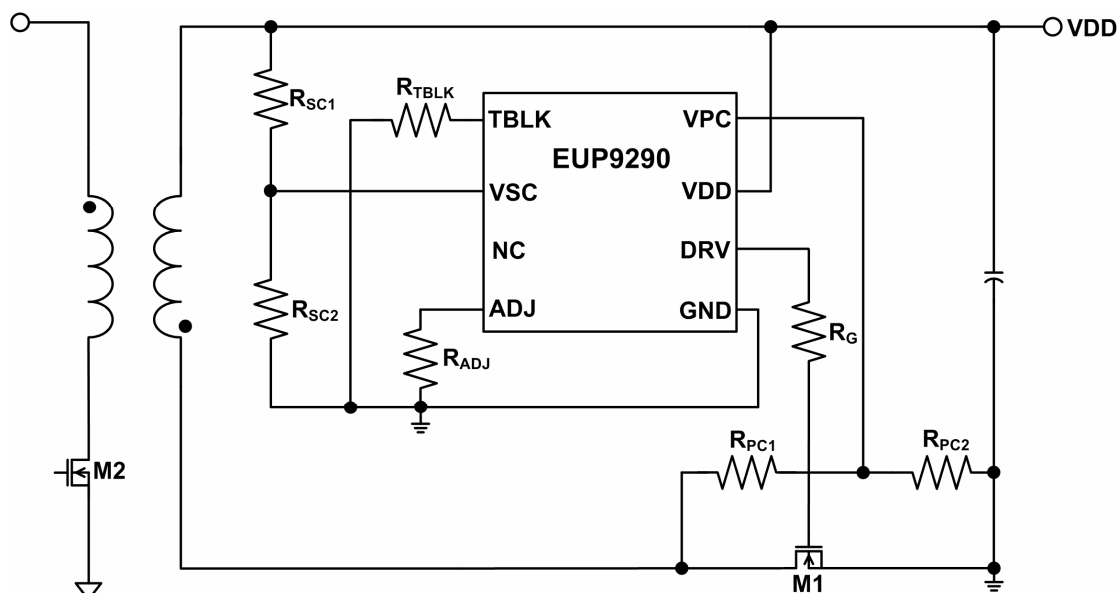


Figure 1. SOP-8 Typical Application