

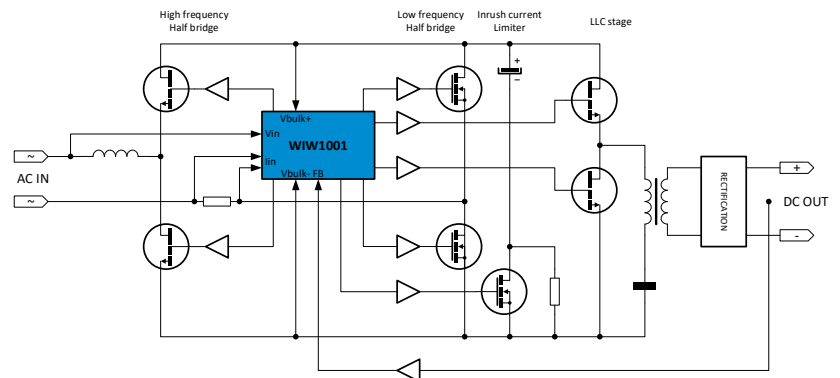
Digital controller for Totem Pole PFC and LLC stages in AC-DC converters optimized for GaN transistors

DESCRIPTION

The WI1001 is a digital AC-DC controller optimized for wide bandgap (WBG) based SMPS. It is dedicated to controlling the totem pole PFC and LLC topologies. The controller can operate the converter at high switching frequencies while ensuring ZVS operation for all the power transistors using a proprietary algorithm. The high frequency of operation allows to reduce the magnetic components size helping to further reduce the converter size, weight and thickness.

APPLICATIONS

- High efficiency power conversion
- High power density converters
- High performance AC-DC power converters
- On Board Charger for electric mobility
- USB PD, Laptop & Notebook adapter
- Display & monitor SMPS



FEATURES

- Switching frequency up to 2 MHz
- PFC CrCM control mode to ensure full Zero Voltage Switching (ZVS)
- Smooth zero cross transition with no current spike
- Accurate system Brown in and Brown out
- Inrush current management without relay or thermistor
- Digitally controlled standby mode and feedback
- Integrated protections (OCP, OVP, OTP, OPP)
- Low standby power consumption (~20 mW)
- Conducted EMI compliant demoboard
- High efficiency system capability (> 95 %)
- 48 pins LQFP package

