

DUAL SYNCHRONOUS PWM CONTROLLER WITH NMOS LDO CONTROLLER & 5V BIAS REGULATOR

PRELIMINARY DATA SHEET

DESCRIPTION

The NX2601 controller IC is a triple controller with a dual channel synchronous Buck controller IC and an LDO controller designed for multiple converters such as PCIe graphic card applications. The two synchronous PWM controllers are 180 degree out of phase which reduces the input ripple current, allowing to reduce the # of input capacitors. Another main feature of the part is that it can operate from single 12V supply while maintaining a regulated 5V supply for the biasing and the internal drivers. Other features of NX2601 are; programmable frequency from 200kHz to 1MHz, independent digital soft start and enable pins for each controller which allows for different power sequencing, Adaptive driver provides optimized efficiency while maintain sufficient deadband, Vcc undervoltage lock out and current limiting using an Rds-on of the external MOSFET with HICCUP feature.

FEATURES

- Two channel PWM with out of phase operation
- Individual digital soft start for two PWM output and LDO controller
- Bus voltage operation from 2V to 25V
- Hiccup Current limit by sensing Rdson of MOSFET
- Adjustable frequency up to 1Mhz per channel
- Adaptive deadband time
- Three enable pin available allows for independent power sequencing
- MLPQ-32L package offers small size

APPLICATIONS

- PCIe Graphic Card on board converters
- Vddq Supply in mother board applications
- On board DC to DC such as 12V to 3.3V, 2.5V or 1.8V
- FPGA and Set Top Box Applications

TYPICAL APPLICATION

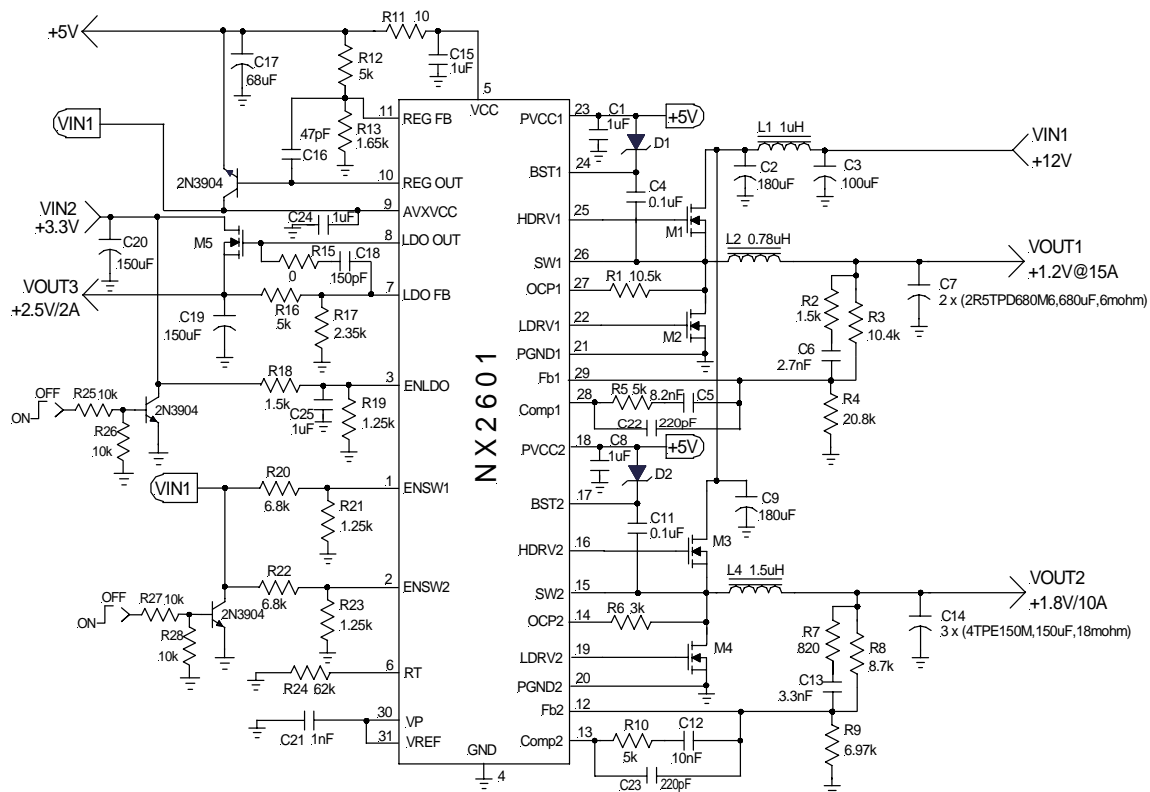


Figure 1 - Typical application of 2601

PATENT PENDING

ORDERING INFORMATION

Device	Temperature	Package	Frequency
NX2601CMTR	0 to 70°C	MLPQ-32L	200kHz to 1MHz