

TWO PHASE SYNCHRONOUS PWM CONTROLLER WITH INTEGRATED FET DRIVER AND DIFFERENTIAL CURRENT SENSE

PRELIMINARY DATA SHEET

DESCRIPTION

The NX2415 is a two-phase PWM controller with integrated FET driver designed for low voltage high current application. The two phase synchronous buck converter offers ripple cancelation for both input and output. The NX2415 uses differential remote sensing using either current sense resistor or inductor DCR sensing to achieve accurate current matching between the two channels. Differential sensing eliminates the error caused by PCB board trace resistance that is otherwise present when using a single ended voltage sensing. In addition the NX2415 offers high drive current capability especially for keeping the synchronous MOSFET off during SW node transition, accurate programmable droop allowing to reduce number of output capacitors, accurate enable circuit provides programmable start up point for Bus voltage, PGOOD output, programmable switching frequency and hiccup current limiting circuitry.

FEATURES

- Differential inductor DCR sensing eliminates the problem with layout parasitic
- External programmable voltage droop
- Low Impedance On-board Drivers
- Hiccup current limit
- Power Good for power sequencing
- Enable Signal allows external shutdown as well as programming the BUS voltage start up threshold
- Programmable frequency

APPLICATIONS

- Graphic card High Current Vcore Supply
- High Current +40A on board DC to DC converter applications

TYPICAL APPLICATION

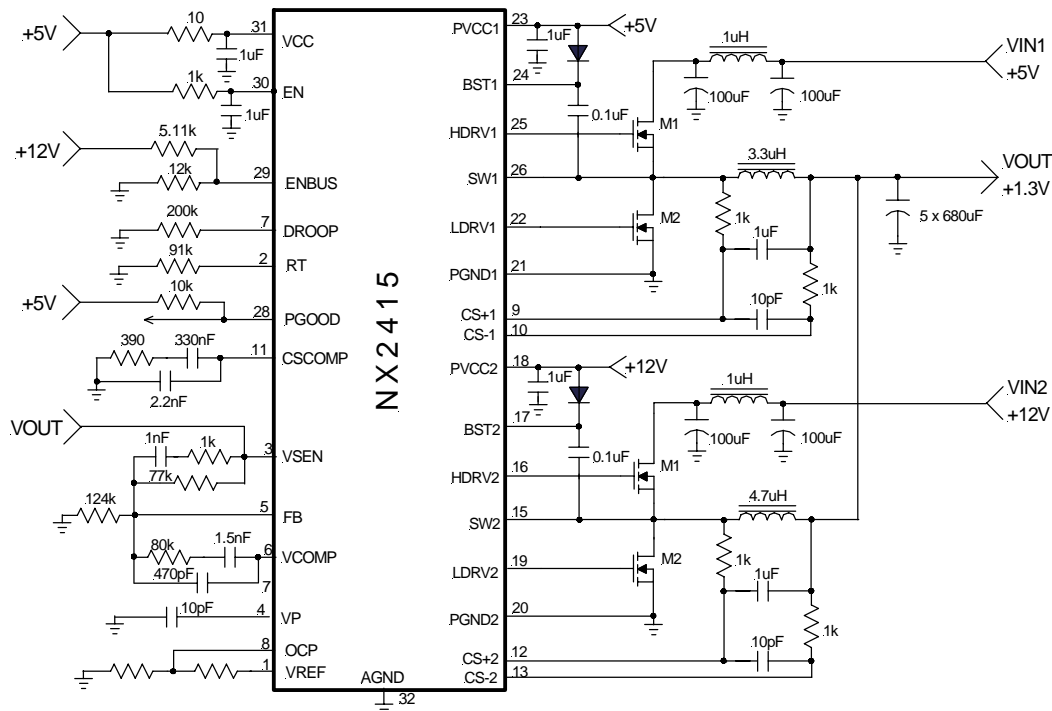


Figure1 - Typical application of NX2415

ORDERING INFORMATION

| Device | Temperature | Package | Frequency |
|------------|-------------|----------|----------------|
| NX2415CMTR | 0 to 70°C | MLPQ-32L | 200kHz to 1MHz |