

2-4 PHASE SELECTABLE VRD10.X CONTROLLER

PRELIMINARY DATA SHEET

DESCRIPTION

The NX2511 is a multiphase PWM controller with the ability to operate in 2,3 or 4 phase control operation. This device with external FET drivers such as NX3202, NX3203 or NX3212 is designed to provide a high performance high current multiphase converter that meets the VRD10.0 specification. The NX2511 uses differential remote sensing using either current sense resistor or inductor DCR sensing to achieve accurate current matching between the three 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 NX2511 offers complete VRD10 signal interface using 6 bit DAC with on the fly DAC change, 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

- VRM9/VRM10 compatible 6 bit VID
- Programmable output voltage droop control.
- Programmable UVLO for both BUS voltage and external drivers.
- Over Voltage Protection (OVP).
- Hiccup Current Limit (OCP).
- Power Good signal for Power Sequencing.
- Differential Inductor voltage current sensing
- 2 to 4 Phase selectable interleaved PWM stages.
- Internal Soft start operation
- Programmable switching frequency from 100kHz to 600kHz per phase.
- Fast Transient Response using High Bandwidth Amplifier.

APPLICATIONS

- Desktop mother board VRD10.X
- Low voltage high current applications

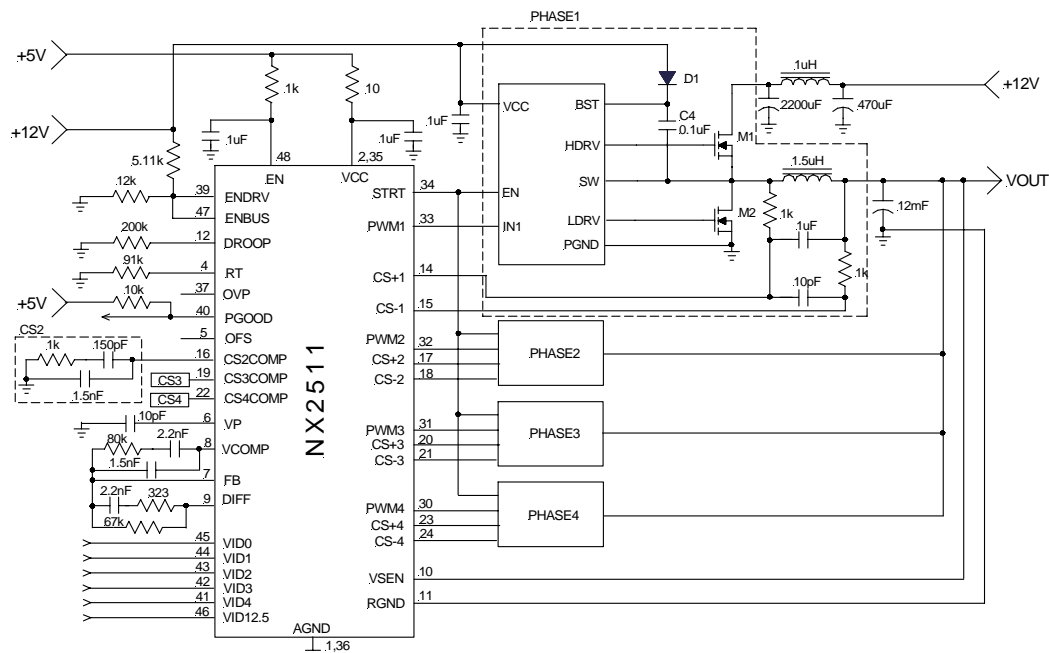
TYPICAL APPLICATION

Figure1 - Typical application of 2511

ORDERING INFORMATION

Device	Temperature	Package	Frequency
NX2511CMTR	0 to 70°C	MLPQ-48 L	200kHz to 1MHz