

## Product Overview

### NCP81233: Multi-Phase Controller, Configurable, 4.5 V to 20 V, I2C

For complete documentation, see the data sheet.

The NCP81233 is a multi-phase controller capable of operating as a 1, 2, 3, 4, or 6 phase controller. The device offers an I2C interface can be used for configuring the output voltage, slew rate, overvoltage and undervoltage thresholds, and input UVLO.

The NCP81233 provides the PWM signal to interface to DrMOS and can support both 3.3V/5V logic. The device features remote sense for maintaining the voltage accuracy for high current designs. Differential current sense can be used for inductor DCR sensing or with the Iout signal from the DrMOS. The device allows Vout and Iout to be read out through the I2C interface.

The part can be interfaced to the NCP81162 phase double circuitry to allow for operation up to 12 phases.

#### Features

- Selectable 1,2,3,4 or 6 phase operation
- Supports up to 12 phases using phase doublers
- I2C configuration
- 4.5V to 20V
- Differential current sense
- Remote differential voltage sense
- Supports 3.3V/5V PWM
- Report Iout and Vout
- Overcurrent, Overvoltage Voltage, and Thermal Protection

#### Benefits

- Scalability allows same IC solution to be used for multiple rails
- Allow flexibility for higher current designs
- Flexibility in design
- Ideal for 12V bus designs
- Supports DCR or IMON sense
- Better output voltage accuracy
- Allows use of wide range of DrMOS solutions
- Monitoring capability
- Protects against faults

#### Applications

- Network Processor
- ASICs

#### End Products

- Network Switch
- Routers
- Telecom Equipment

#### Part Electrical Specifications

Product	Compliance	Status	Topology	Phases	Control Mode	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	f <sub>SW</sub> Typ (kHz)	Package Type
NCP81233MNTXG	Pb-free	Active	Step-Down	4/5/6	Current/Voltage Mode	4.5	20V	200 to 1200	QFN-52
	Halide free								

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