

## NCP51200

# 3A Sink/Source DDR Termination Regulator w/ VTTREF Buffered Reference for DDR2, DDR3, DDR3L and DDR4

## Product Overview

For complete documentation, see the data sheet.



The NCP51200 is a source/sink Double Data Rate (DDR) termination regulator specifically designed for low input voltage and low-noise systems where space is a key consideration. The NCP51200 maintains a fast transient response and only requires a minimum output capacitance of 20  $\mu$ F. The NCP51200 supports a remote sensing function and all power requirements for DDR VTT bus termination. The NCP51200 can also be used in low-power chipsets and graphics processor cores that require dynamically adjustable output voltages. In addition, the NCP51200 provides an open-drain PGOOD signal to monitor the output regulation and an EN signal that can be used to discharge VTT during S3 (suspend to RAM) for DDR applications. The NCP51200 is available in the thermally-efficient DFN10 Exposed Pad package, and is rated both Green and Pb-free.

## Features

- Input Voltage Rails: Supports 2.5 and 3.3 V Rails
- PVCC Voltage Range: 1.1 to 3.5 V
- Integrated Power MOSFETs
- Fast Load-Transient Response
- PGOOD-Logic output pin to Monitor VTT Regulation
- EN-Logic input pin for Shutdown mode
- VRI-Reference Input Allows for Flexible Input Tracking Either Directly or Through Resistor Divider
- Remote Sensing (VTTS)
- Built-in Soft Start, Under Voltage Lockout and Over Current Limit














## Applications

- DDR Memory Termination
- Graphics Processor Core Supplies
- Chipset/RAM Supplies as Low as 0.5 V
- Active Bus Termination
- TPS51200 upgrade with improved output accuracy and transient response

## End Products

- Desktop PC's, Notebooks, and Workstations
- Servers and Networking equipment
- Set Top Boxes, LCD-TV/PDP-TV, Copier/Printers

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	DDR Memory Type	$I_{OUT} V_{TT}$ Max (A)	$I_Q$ Typ ( $\mu$ A)	$V_{CC}$ Bias Min (V)	$V_{CC}$ Bias Max (V)	Remote Sense	Power Good	Package Type
NCP51200AMN XG	0.3049	 	Active		3	700	2.375	3.5	Yes	Yes	DFN-10
NCP51200MNT XG	0.2987	 	Active		3	700	2.375	3.5	Yes	Yes	DFN-10
NCV51200MLTX G	0.3335	  	Active		3	700	2.375	3.5	Yes	Yes	DFNW-10
NCV51200MNT XG	0.4456	  	Active		3	700	2.375	3.5	Yes	Yes	DFN-10
NCV51200MWT XG	0.3335	  	Active		3	700	2.375	3.5	Yes	Yes	DFN-10