

Product Overview

NCP51145: 1.8A Source / Sink VTT DDR Termination Regulator

For complete documentation, see the data sheet.

The NCP51145 is a linear regulator designed to supply a regulated VTT termination voltage for DDR-II, DDR-III, LPDDR-III and DDR-IV memory applications. The regulator is capable of actively sourcing and sinking ± 1.8 A peak currents while regulating an output voltage to within ± 20 mV. The output termination voltage is regulated to track $V_{DDQ} / 2$ by two external voltage divider resistors connected to the PVCC, GND, and VREF pins.

The NCP51145 incorporates a high-speed differential amplifier to provide ultra-fast response to line and load transients. Other features include source/sink current limiting, soft-start and on-chip thermal shutdown protection.

Features

- For DDR VTT Applications, Source/Sink Currents
- Supports DDR-II to ± 1.8 A, DDR-III to ± 1.5 A
- Supports LPDDR-III and DDR-IV to ± 1.2 A
- Stable Using Ceramic-Only (Very Low ESR) Capacitors
- Integrated Power MOSFETs
- High Accuracy VTT Output at Full-Load
- Fast Transient Response
- Built-in Soft-Start
- Shutdown for Standby or Suspend Mode
- Integrated Thermal and Current-Limit Protection

For more features, see the data sheet

Applications

- DDR-II / DR-III / DDR-IV SDRAM Termination Voltage
- Low Power DDR-3LP

End Products

- Motherboard, Notebook, and VGA Card Memory Termination
- Set Top Box, Digital TV, Printers

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	DDR Memory Type	$I_{OUT} V_{TT}$ Max (A)	I_O Typ (μ A)	V_{CC} Bias Min (V)	V_{CC} Bias Max (V)	Remote Sense	Power Good	Package Type
NCP51145MNTAG	0.2787	Pb-free Halide free non AEC-Q and PPAP	Active	DDR DDR2 DDR3 DDR4	1.8	1000	4.75	5.25	No	No	DFN-8
NCP51145PDR2G	0.1533	Pb-free Halide free non AEC-Q and PPAP	Active	DDR DDR2 DDR3 DDR3L DDR4	1.8	1000	4.75	5.25	No	No	SOIC-8 NB EP

For more information please contact your local sales support at www.onsemi.com.

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