

2A Sink/Source Bus Termination Regulator

DESCRIPTION

The EUP7171 is a high performance linear regulator designed to provide power for termination of a DDR memory bus. It significantly reduces parts count, board space and overall system cost over previous switching solutions.

The EUP7171 contains a high-speed operational amplifier to provide excellent response to load transients. It also has an independent power source pin (VCNTL) for achieving better output driving capability. The regulator can both sink and source up to 2A current. The output termination voltage can be tightly regulated to track $1/2 V_{DDQ}$ by two external voltage divider resistors.

The EUP7171, used in conjunction with series termination resistors, provides an excellent voltage source for active termination schemes of high speed transmission lines as those seen in high speed memory buses. A typical DDR memory system is seen in Figure 1.

FEATURES

- Compatible with DDR-I (1.25VTT), DDR-II (0.9VTT) and DDR-III (0.75VTT) SDRAM Systems.
- Low Quiescent Current (1.1mA)
- Fast Transient Response Time
- Capable of Sourcing and Sinking 2A
- Adjustable VOUT by Two External Resistors
- Current Limiting Protection
- Over-Temperature Protection
- High Accuracy Output Voltage at Full-Load
- Low External Component Count
- Available in SOP-8 (EP) Package
- RoHS Compliant and 100% Lead (Pb)-Free Halogen-Free

APPLICATIONS

- DDR SDRAM Termination Voltage

Simplified System Diagram

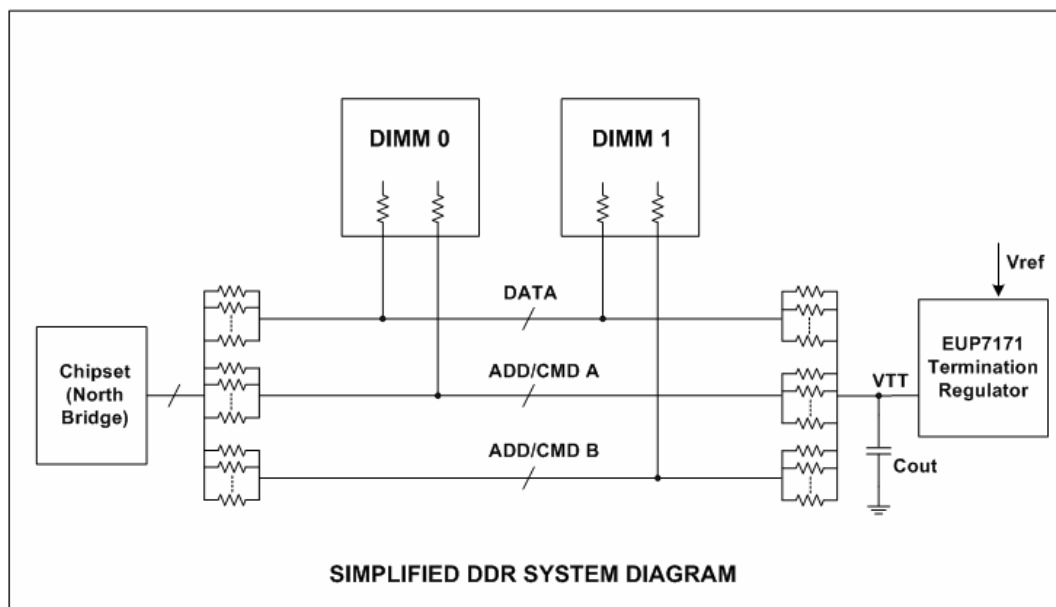


Figure1.