

1.5A DDR Termination Regulator

DESCRIPTION

The EUP7996 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 EUP7996 contains a high-speed operational amplifier to provide excellent response to load transients. The EUP7996 also incorporates a V_{SENSE} pin to provide superior load regulation and a V_{REF} output as a reference for chipset and DIMMs.

An additional feature found on the EUP7996 is an active low shutdown (SD) pin. When SD is pulled low the V_{TT} output will Tri-state providing a high impedance output, but, V_{REF} will remain active. A power savings advantage can be obtained in this mode through lower quiescent current.

The EUP7996, 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

- Extremely low quiescent current (305uA)
- Fast transient response time
- Capable of sourcing and sinking 1.5A for DDR-I termination
- Reference out for other memory and control components
- Low-current shutdown mode
- 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-I and DDR-II termination voltage

SIMPLIFIED SYSTEM DIAGRAM

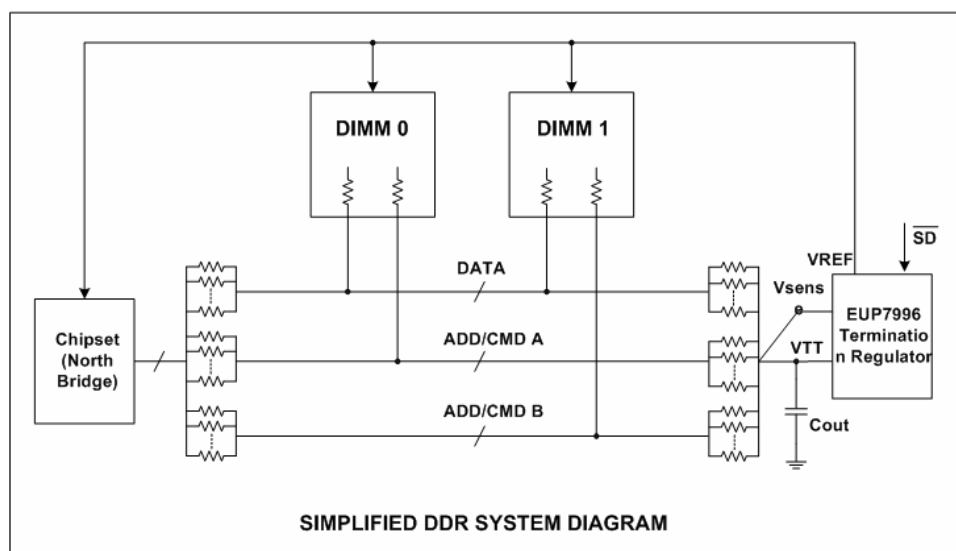


Figure 1.