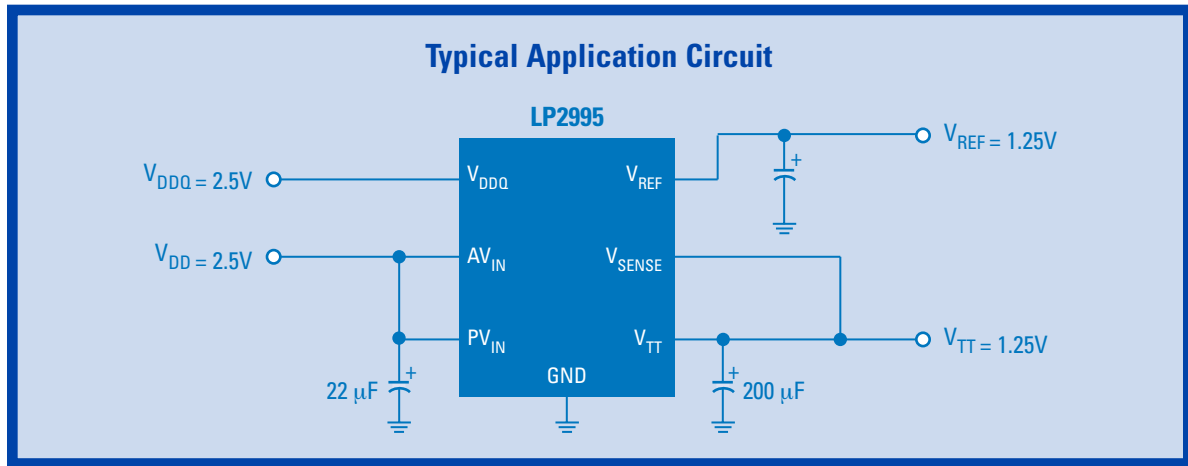


### Introducing the World's Smallest DDR SDRAM Termination Regulator



#### Product Description

The LP2995 is a linear regulator designed to meet the active termination requirements of DDR (double data-rate) memory. The LP2995 operates from a 5V, 3.3V or a 2.5V rail and regulates the output to half the external reference input ( $V_{DDQ}$ ) as required by the JEDEC specification. The part also provides a  $V_{REF}$  output that can be used as a global reference for the Chipset and DDR SDRAM DIMMS. The SO-8 (or LLP-16) package, linear topology and only three external components make the LP2995 the smallest, easiest to use solution in the known universe.

#### Applications

- Desktop computers
- Notebook computers
- Graphics accelerators
- High-end games
- Set-top boxes
- Servers
- Internet appliances
- Where ever DDR SDRAM can be used

#### National Outperforms the Competition

The LP2995 is intended to replace all existing solutions for DDR termination supply. DDR memory architecture effectively doubles the data transfer rate over SDRAM, but as a result it requires the memory bus to be actively terminated in accordance with the JEDEC SSTL specification. Misinterpretation of the application has led power designers to design a termination power supply to handle a maximum load current of  $\pm 3.2$  Amps resulting in an expensive and complex synchronous switcher based design using in excess of 12 external components. Working with key customers National Semiconductor discovered that the application typically requires only 200 mA of continuous current. Using the LP2995, designers now have a solution centered about a linear topology that allows for a simplified design and only 3 external components. This topology results in a lower system cost. It is therefore: Everything that is needed for reliable operation but nothing more!

#### Features and Benefits

- Linear Topology
  - Fast Transient Response
  - Low output ripple
- 3 External Components
  - Small, low-cost overall solution
- 2.2V - 5.5V input voltage range
  - Will work from 2.5V, 3.3V and 5V rails
- SO-8 and LLP-16 package
  - Small size, increased thermal performance, easy to use

#### Pricing/Order Info

NSID	Price
LP2995	\$0.85

Price shown is for 1k units, in USD. FOB Santa Clara, CA, USA.

#### Product Availability

Manufacturing Started (Code R)

- March 2002
- Full Availability (Code S)
- March 2002

#### Packaging

The LP2995 is available in the following packages:

- SO-8
- LLP-16