3A DDR Bus Termination Regulator

Features

- **V_{CNTL} Supply Voltage: 3.3V to 5.5V**
- **Termination Supply Voltage: 1.2V to 3.6V**
- **Support DDR I(1.25V_{TT}), DDR II (0.9 V_{TT}), DDR III (0.75V_{TT}), and DDR IIIL (0.675V_{TT}) Requirements**
- **Requires Only 20µF Ceramic Output Capacitor**
- **Low Output Offset**
- **3A Source and Sink Current**
- **Low External Component Count**
- **No Inductor Required**
- **Thermal Shutdown Protection**
- **Over Current Protection**
- **Suspend to RAM (STR) Function with High-impedance output**
- **SOP-8 (FD) Package**

Applications

- **DDR-SDRAM Termination Voltage**
- **DDR I / DDR II / DDR III / DDR IIIL Termination Voltage**
- **SSTL-18**
- **SSTL-2**
- **SSTL-3**

General Description

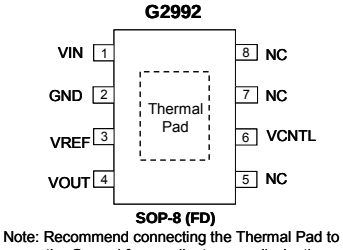
The G2992 is a linear regulator designed to meet the JEDEC SSTL-18, SSTL-2 and SSTL-3 (Series Stub Termination Logic) specifications for termination of DDR I/II/III/IIIL -SDRAM. It contains a high-speed operational amplifier that provides excellent response to the load transients. This device can deliver 3A continuous current in the application such as required for DDR I/II/III /IIIL SDRAM termination. The G2992 can easily provide the accurate V_{TT} voltage with two external resistors generating reference voltage. The quiescent current is as low as 750µA @ V_{CNTL} = 3.3V. So the power consumption can meet the low power consumption applications. The G2992 also has a shutdown function by setting V_{REF} smaller than 0.2V, that provides Suspend to RAM (STR) functionality. When in the shutdown mode, the V_{TT} output (on V_{OUT} pin) will be tri-state providing a high impendence. A power saving advantage can be obtained in this mode through lowering the quiescent current to 50µA @ V_{CNTL} = 3.3V.

Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G2992F1U	G2992	-40°C to +85°C	SOP-8 (FD)

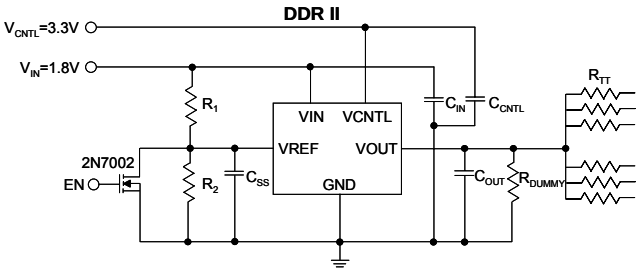
Note: F1: SOP-8 (FD)
U: Tape & Reel

Pin Configuration

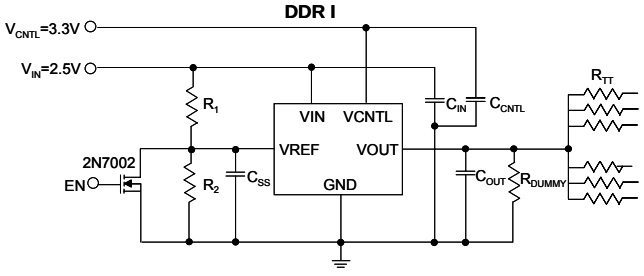


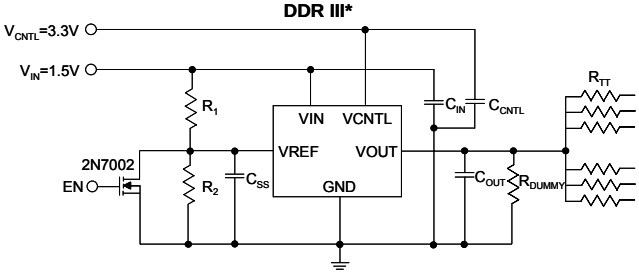
SOP-8 (FD)

Note: Recommend connecting the Thermal Pad to the Ground for excellent power dissipation.



Typical Application Circuit





* Recommended V_{CTRL} =3.3V