

# LPDDR2/LPDDR3 Termination Regulator

## Features

- Support 1.2V LPDDR2/LPDDR3 and DDR III/L (0.675VTT) Requirements
- Input Voltage Range: 3V to 5.5V
- VLDOIN Voltage Range: 1.2V to 3.6V
- Requires Only 20 $\mu$ F Ceramic Output Capacitance
- Supports High-Z in S3 and Soft-Off in S5
- Integrated Divider Tracks 1/2 VDDQSNS for Both VTT and VTTREF
- Remote Sensing (VTTSENS)
- $\pm 20$ mV Accuracy for VTT and VTTREF
- 10mA Buffered Reference (VTTREF)
- Built-In Soft-Start
- Over Current Protection
- Thermal Shutdown Protection
- TDFN2X2-10 Package

## General Description

The G2986 is a 3A sink/source tracking termination regulator. It is specifically designed for low-cost/low-external component count systems. The G2986 maintains a high speed operational amplifier that provides fast load transient response and only requires 20 $\mu$ F (2 $\times$ 10 $\mu$ F) of ceramic output capacitance. The G2986 supports remote sensing functions and all features required to power the LPDDR2 /LPDDR3 /DDR III/L VTT bus termination according to the JEDEC specification. In addition, the G2986 includes integrated sleep-state controls placing VTT in High-Z in S3 (suspend to RAM) and soft-off for VTT and VTTREF in S5 (Shutdown). The G2986 is available in the thermally efficient TDFN2X2-10.

## Applications

- DDR III/L Memory Termination
- LPDDR2/LPDDR3 Memory Termination
- SSTL-2, SSTL-18
- HSTL Termination

## Ordering Information

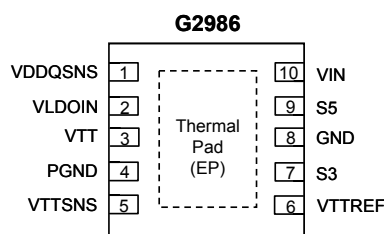
| ORDER NUMBER | MARKING | TEMP. RANGE | PACKAGE (Green) |
|--------------|---------|-------------|-----------------|
| G2986K21U    | 2986    | -40°C~85°C  | TDFN2X2-10      |
| G2986K21D    | 2986    | -40°C~85°C  | TDFN2X2-10      |

Note: K2:TDFN 2X2-10

1: Bonding Code

U & D: Tape & Reel

## Pin Configuration



**TDFN2X2-10**

Note: Recommend connecting the Thermal Pad to the GND or let it keep floating.

## Typical Application Circuit

