G2986

LPDDR2/LPDDR3 Termination Regulator

Features

- **Support 1.2V LPDDR2/LPDDR3 and DDR IIIL (0.675VTT) Requirements**
- **Input Voltage Range: 3V to 5.5V**
- **VLDOIN Voltage Range: 1.2V to 3.6V**
- **Requires Only 20µF 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 (VTTSNS)**
- **±20mV Accuracy for VTT and VTTREF**
- **10mA Buffered Reference (VTTREF)**
- **Built-In Soft-Start**
- **Over Current Protection**
- **Thermal Shutdown Protection**
- **TDFN2X2-10 Package**

Applications

- **DDR IIIL Memory Termination**
- **LPDDR2/LPDDR3 Memory Termination**
- **SSTL−2, SSTL−18**
- **HSTL Termination**

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 20µF (2×10µF) of ceramic output capacitance. The G2986 supports remote sensing functions and all features required to power the LPDDR2 /LPDDR3 /DDR IIIL 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.

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

G2986

VDDQSNS 1	10 VIN
VLDOIN 2	9 S5
VTT 3	8 GND
PGND 4	7 S3
VTTSNS 5	6 VTTREF
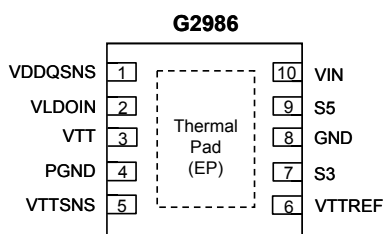
Thermal Pad (EP)

TDFN2X2-10

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

Typical Application Circuit

LPDDRII/LPDDRIII