

PG24999 2.5V to 16V, 90A, High-Efficiency Half-Bridge Power-stage with Current and Temperature Sense in 4x6mm Package

Features

- Wide 2.5V to 16V Operating Input Range
- 5V VDD supply for internal logic
- Integrated power stage with High/Low-side MOSFETs and Drivers
- 90A Max, 45A TDC Output Current
- Operation Frequency up to 3MHz with 5V VIN and 2MHz with 12V VIN.
- Compatible with 3.3V tri-state PWM input
- Internal Current Sense and Temperature Sense
- Built in Protection
 - Vin and VDD UVLO
 - High side Over Current Protection
 - Cycle-by-cycle Over Current Limit
 - Over Temperature Protection (OTP)
- Common Footprint Small Package Size 4x6mm
- RoHS Compliant and Green

Description

The PG24999 is a compact TLGA device measuring 4mm x 6mm, designed for use in Server and Telecom applications that require high efficiency and small size.

It is a monolithic half-bridge that includes internal power MOSFETs and gate drivers, enabling it to achieve a continuous output current of 45A over a wide input supply range of 2.5V to 16V. The integration of driver and MOSFETs ensures high efficiency by reducing parasitic inductance and optimizing dead time.

This device can operate from 100kHz to 2MHz with a 12V input voltage and up to 3MHz with a 5V input voltage. It is compatible with tri-state output controllers and includes a general-purpose current sense and temperature sense, meeting industry specifications.

Applications

- Server and Telecom Voltage Regulators
- Graphic Card Core Regulators
- Power Module

Typical Application Circuit

