ZERRO

ZPS285

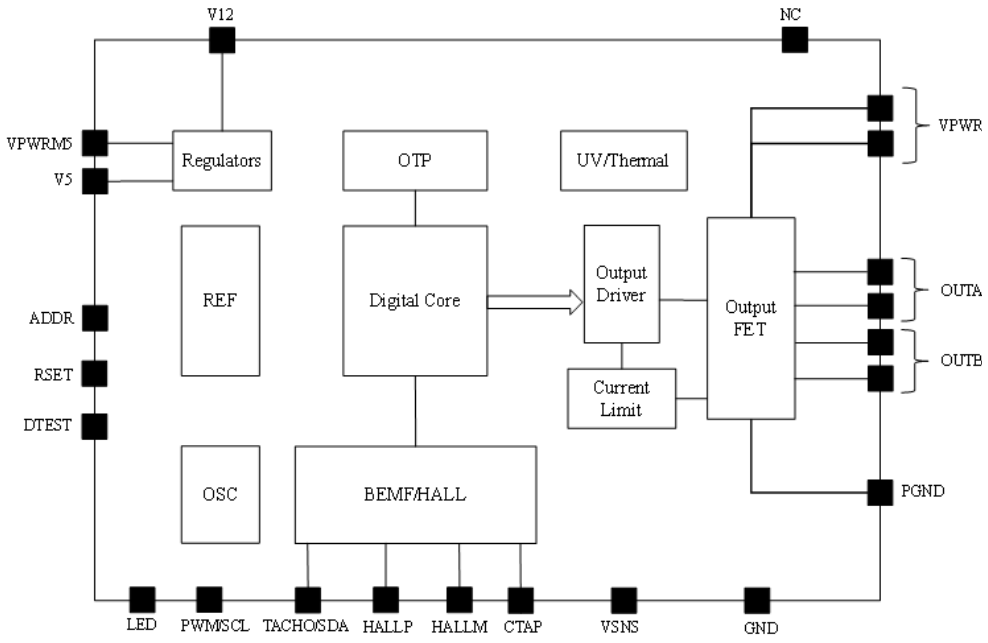
Product Overview

The ZPS285 drives a 1-phase brushless hall sensor-based DC motor controller in full bridge mode. Various functions and parameter are predefined in the OTP registers. The OTP registers can be programmed through standard I2C protocol. The motor driver block integrates the pre-drivers, internal power FETs and commutation logic. This device is capable of spin-up the motor and maintain constant speed. The speed of the fan can be controlled through the PWMIN pin.

Features

- Hall sensor based 1 phase fan motor control
- Integrated pre-drivers and internal MOSFET
- Up to 3A drive capability
- Open or closed loop speed control
- 8-point Programmable PWM profile
- Sinusoidal (sine) PWM drive with bit selectable option for a trapezoidal drive and square drive
- Pole mismatch compensation to minimize jitter
- Programmable spin up current limit
- Speed fault detection
- I2C compatible PWMIN pin
- 5.0V/5mA linear regulator
- Programmable acceleration and deceleration control
- Open loop PWMIN mapping
- Multi options for FG signal output
- Programmable alarm and retry timing
- 6V to 22.0V operation
- Guaranteed start-up from reverse spin condition
- ZPS2851 up to 1A drive
- ZPS2852 up to 2A drive
- ZPS2853 up to 3A drive
- QFN24L 4x4

Figure 1: Chip Level Block Diagram

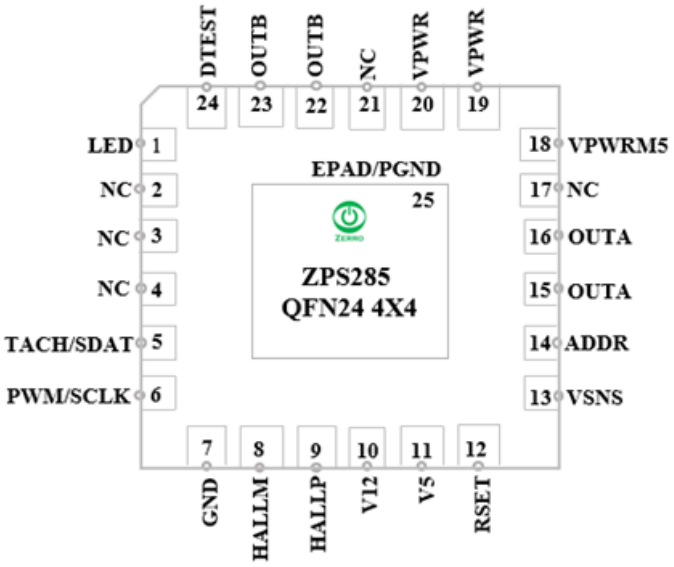


ZERRO

ZPS285

1. QFN 4x4 Pin Configurations and Description

Figure 2: 24-Pin QFN 4x4 Package Top View



2. Application Information

2.1. Fan with all Device Features

The Shown for information about all the features. When RADDR is used to select communication address (40h to 47h), the default address (49h) is also valid (both addresses can be used to access the device).

Figure 3: Configuration of the device with all features

