



ZPS288

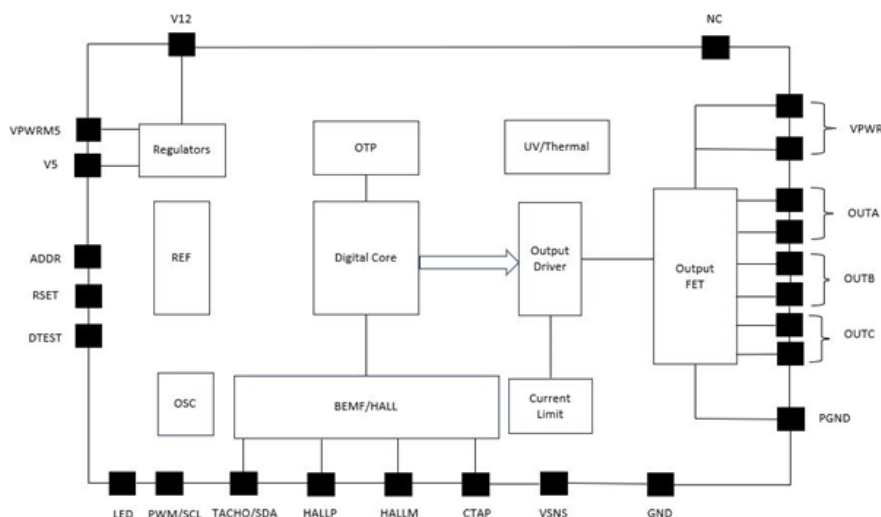
Product Overview

The ZPS288 drives a 3-phase brushless and sensorless DC motor in full bridge mode. Various functions and parameters 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 start-up includes an inductive sense routine, blind spin routine or hall assisted start-up followed by a six-step spin up and then hand over to sine mode. The speed of the motor can be controlled through the PWMIN pin.

Features

- Sensor-less 3 phase fan motor control
- Integrated pre-drivers and internal MOSFET
- Up to 3A drive capability
- Auto spin-up using inductive sensing for position detect or blind spin startup or hall assisted startup mechanism
- Open or closed loop speed control
- 8-point Programmable PWM profile
- Sinusoidal (sine) PWM drive with bit selectable option for a 6-step drive
- Pole mismatch compensation to minimize jitter
- 5-bit torque adjustment for best torque ripple
- Programmable spin up current limit
- Speed fault detection
- I²C compatible PWM/TACHO pins
- Multi options for FG/TACHO signal output
- 5.0V/5mA linear regulator
- Programmable acceleration and deceleration control.
- Open loop PWMIN mapping
- Windowless hall sensor only operation.
- Programmable alarm and retry timing.
- 6V to 22.0V operation
- Guaranteed start-up from reverse spin condition.
- ZPS288-1 up to 1A drive
- ZPS288-2 up to 2A drive
- ZPS288-3 up to 3A drive
- QFN24L 4x4

Figure 1: Chip Level Block Diagram

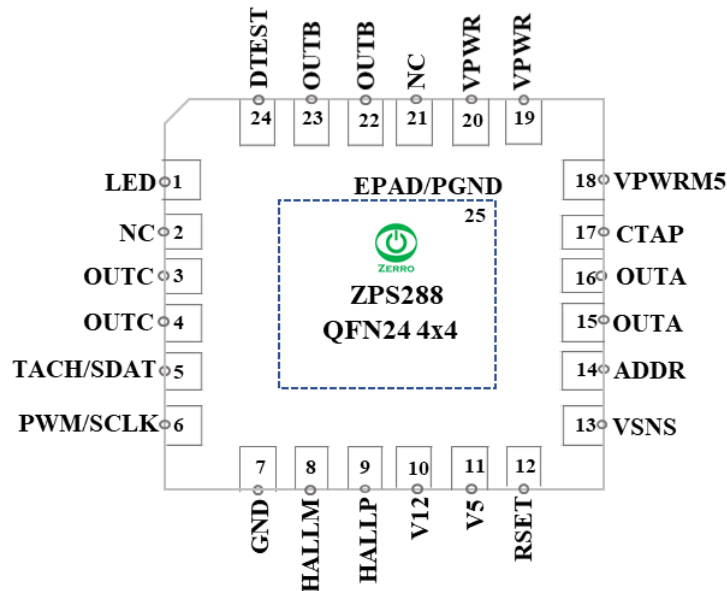




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1. QFN 4x4 Pin Configurations and Description

Figure 2: QFN 4x4 Pin Configurations and Description



2. Application Information

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

