

350mA Single Phase Hall-Effect DC Fan Driver

General Description

The OCH2987 is an integrated Hall sensor with H-Bridged output driver designed for brushless DC motor applications. The device is using HV process includes an on-chip Hall sensor for magnetic sensing, an amplifier that amplifies the Hall voltage, a comparator to provide switching hysteresis for noise rejection, a bi-directional drivers for sinking and driving large current load.

Placing the device in a variable magnetic field, if the magnetic flux density is larger than threshold BOP, the DO is turned to sink and DOB is turned to drive. This output state is held until the magnetic flux density reverses and falls below BRP, then causes DO to be turned to drive and DOB turned to sink.

OCH2987 is available in SIP-4L(TO94), SIP-4L-D4, SOP-8F package and is rated over the -40°C to 125°C.

Features

- One-chip Solution (Hall Element + Driver)
- Input Voltage Range: 3V to 24V
- Low Output Switching Current Noise
- Built-in VDD To GND reverse voltage protection
- Rotor Lock Protection (Lock detection, output shutdown and automatic re-start)
- High Sensitivity Hall Sensor
BOP (25GS), BRP(-25GS)
- Thermal Shutdown Protection
- -40°C to +125°C Temperature Range
- RoHS Compliant
- Available in SIP-4L(TO94), SIP-4L-D4, SOP-8F package

Applications

- Single Coil Design Cooling Fans
- Single Coil DC Brushless Fan
- Single Coil DC Brushless Motor
- Office Automated Equipment
- Brown-Goods
- Home Applications
- Car Audio Cooling Fan

Pin Configuration

(Top View)

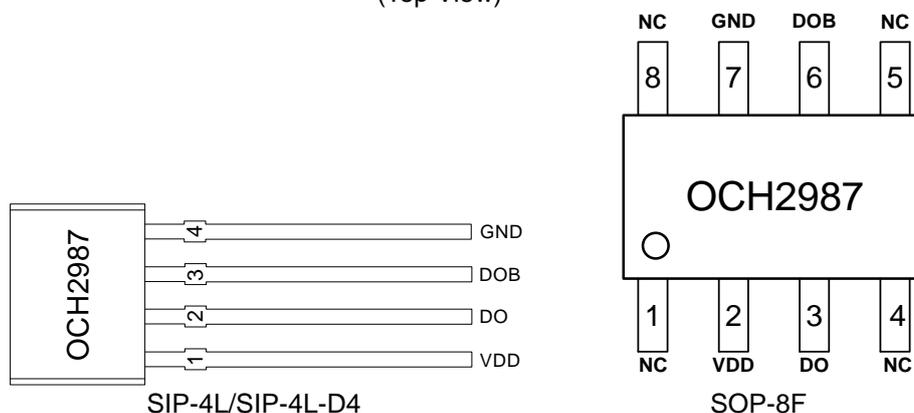


Figure 1, Pin Assignments of OCH2987

Pin Name	Pin Number		Pin Function
	SIP-4L	SOP-8F	
VDD	1	2	Positive Power Supply
DO	2	3	Output 1
DOB	3	6	Output 2
GND	4	7	Ground
NC	-	1、4、5、8	NC



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Typical Application Circuit

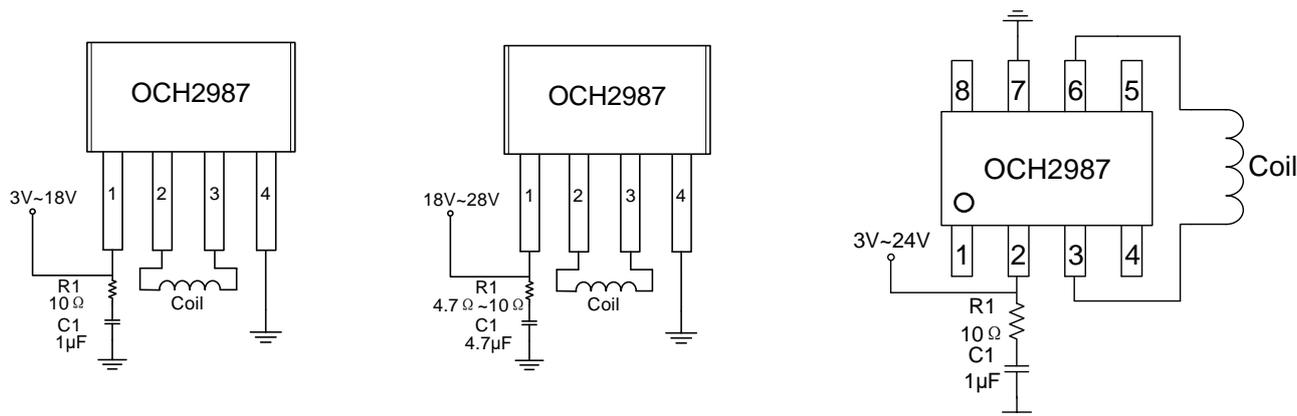


Figure 2, Typical Application Circuit Of OCH2987

Note1: When the power pulse is relatively large, Must use least C1=4.7μF(ceramic capacitor) capacitor & R1=4.7~10Ω for the decoupling between VDD and GND and place the capacitor as close to the IC as Possible.

Ordering Information

Part Number	Output Current	Package Type	Packing Qty	B _{OP} (Gauss)	B _{RP} (Gauss)	Temperature	Eco Plan	Lead
OCH2987MD-D	350mA	SIP-4L	1000pcs /Bag	25(Typ.)	-25(Typ.)	-40 ~ 125°C	ROHS	Cu
OCH2987MD-D4	350mA	SIP-4L-D4	2000pcs /Bag	25(Typ.)	-25(Typ.)	-40 ~ 125°C	ROHS	Cu
OCH2987SFAE	350mA	SOP-8F	4000pcs /Reel	25(Typ.)	-25(Typ.)	-40 ~ 125°C	ROHS	Cu

Block Diagram

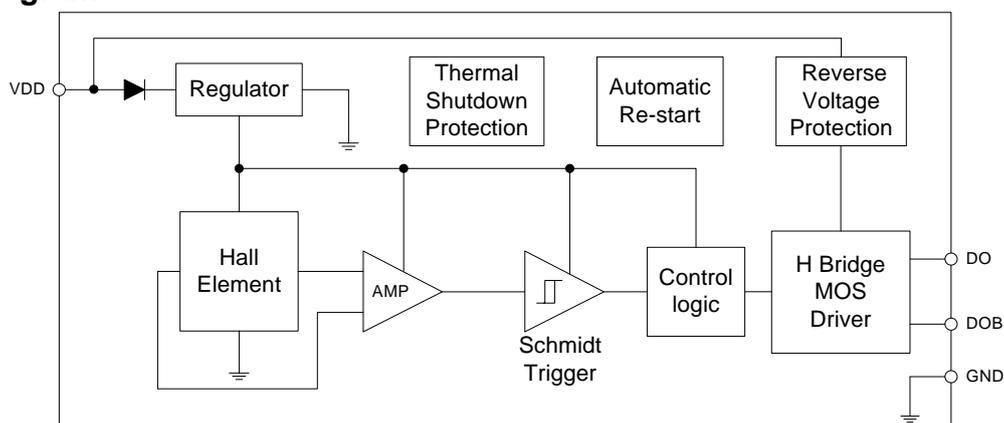


Figure 3, Block Diagram Of OCH2987



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