

**■ General Description**

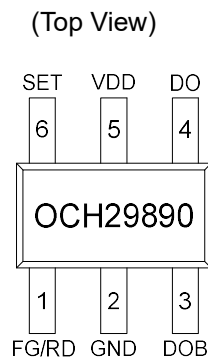
The OCH29890 is an integrated Hall Effect Sensor IC designed for electric commutation of single-phase DC brushless motor applications. The device is built-in lock protection. When fan is locked, the device will enter the lock protection mode. It is also with thermal shutdown function. OCH29890 built-in power supply reverse connection protection circuit enables the OCH29890 do no need for external reverse diode in application, can reducing the fan cost. OCH29890 is available in SOT23-6F package and is rated over the -40°C to 125°C.

**■ Features**

- **12V One-chip Solution**
- **Built-in VDD to GND Reverse Voltage Protection**
- **RD/FG Signal Output Select By SET Pin**
- Input Voltage Range:3V ~ 17V
- $R_{DS(ON)}$  :1.35Ω
- High Sensitivity Hall Effect Sensor IC: ±20G(Typ.)
- Built-in Lock Protection and Auto Restart Function
- Thermal Shutdown Protection
- RoHS Compliant
- Available in SOT23-6F package

**■ Applications**

- 5V/12V Single Coil Design Cooling Fan
- 5V/12V Single Coil DC Brushless Motor

**■ Pin Configuration**


SOT23-6F

Figure 1, Pin Assignments Of OCH29890

Pin Name	Pin Number	Pin Function
RD/FG	1	FG Or RD Signal Output
GND	2	IC Ground
DOB	3	Output 2
DO	4	Output 1
VDD	5	Power Supply
SET	6	SET Pin (when SET Pin connected to the GND, the PIN 1 output is FG signal , and when SET Pin NC, the PIN 1 output is RD signal)

### ■ Typical Application Circuit

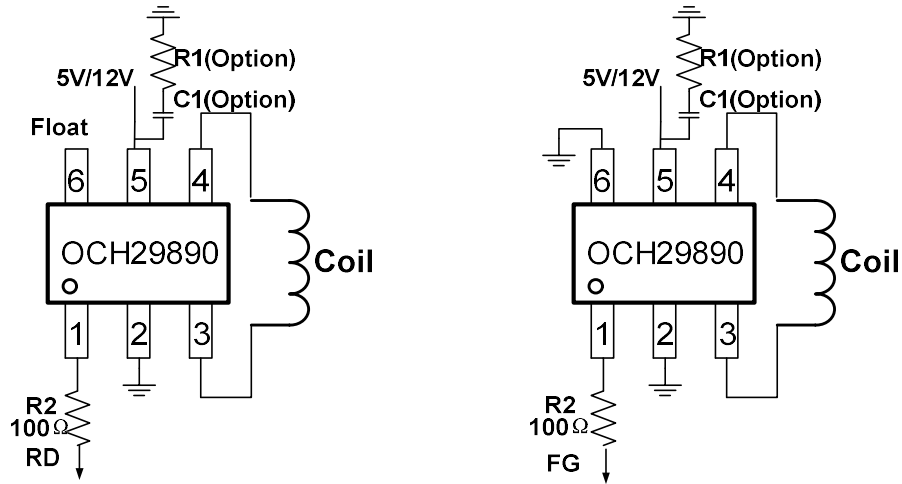


Figure 2, Typical Application Circuit Of OCH29890

**Note1:** When the power pulse is relatively large, must use least C1=1~2.2μF ceramic capacitor and R1=2Ω(Typ.) for the decoupling between VDD and GND and place the capacitor as close to the IC as possible.

**Note2:** The R2 is used to prevent FG/RD pin · typical value is 50~100 Ω

### ■ Block Diagram

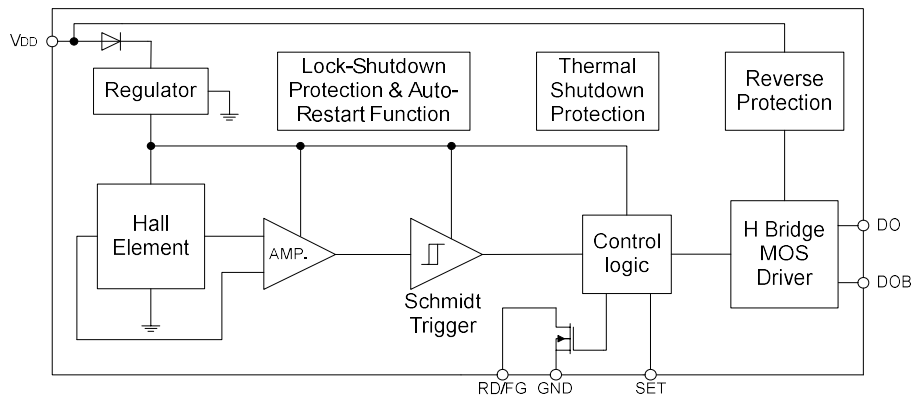


Figure 3, Block Diagram Of OCH29890