

■ General Description

OCH8309 is a 3D digital linear hall sensor to measure magnetic flux intensity. It is an integrated chip with magnetic sensors and control ASIC with 16-bit ADC output. OCH8309 provides an I²C digital output with fast mode up to 400 kHz. Wide dynamic range operation, high resolution and compact form factor features make it the best candidate for smartphone, wearable and IoT devices.

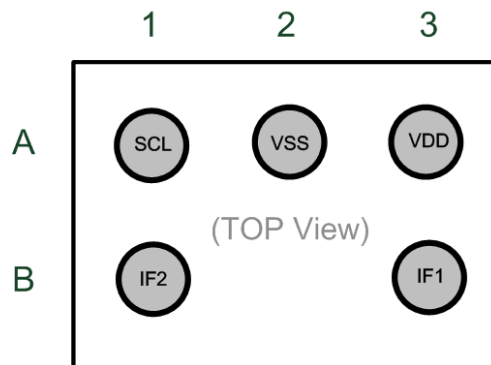
■ Features

- Single chip 3-axis linear hall sensor with digital output
- 3-axis programmable magnetic switch function
- INTB pin for event notification (Magnetic switch, DRDY, Overflow)
- Compact form factor, 1.29 x 0.99 x 0.53 mm³, 5-pin WLCSP-BGA package
- I²C slave, Fast Mode up to 400 kHz
- Two slave addresses
- High dynamic range of maximum ±30 mT
- High resolution of maximum 2.5 uT/LSB
- Absolute 360° angle output
- High output data rate of maximum 500Hz
- Operation Temperature -30~85 °C
- Built-in oscillator for internal clock source
- Power on Reset circuit

■ Applications

- Magnetometer for external magnet detection
- Displacement detection
- Foldable device angle detection
- Angle sensor application

■ Pin Configurations and Application Circuit



Case 1. Slave Address = 0, (0x18)

	Name	Function name	Type	Function
A1	SCL	SCL	Input	I ² C clock
A2	VSS	VSS	Power	Ground
A3	VDD	VDD	Power	Power Supply
B1	IF2	SDA	I/O	I ² C data
B3	IF1	INTL	Output	Interrupt output

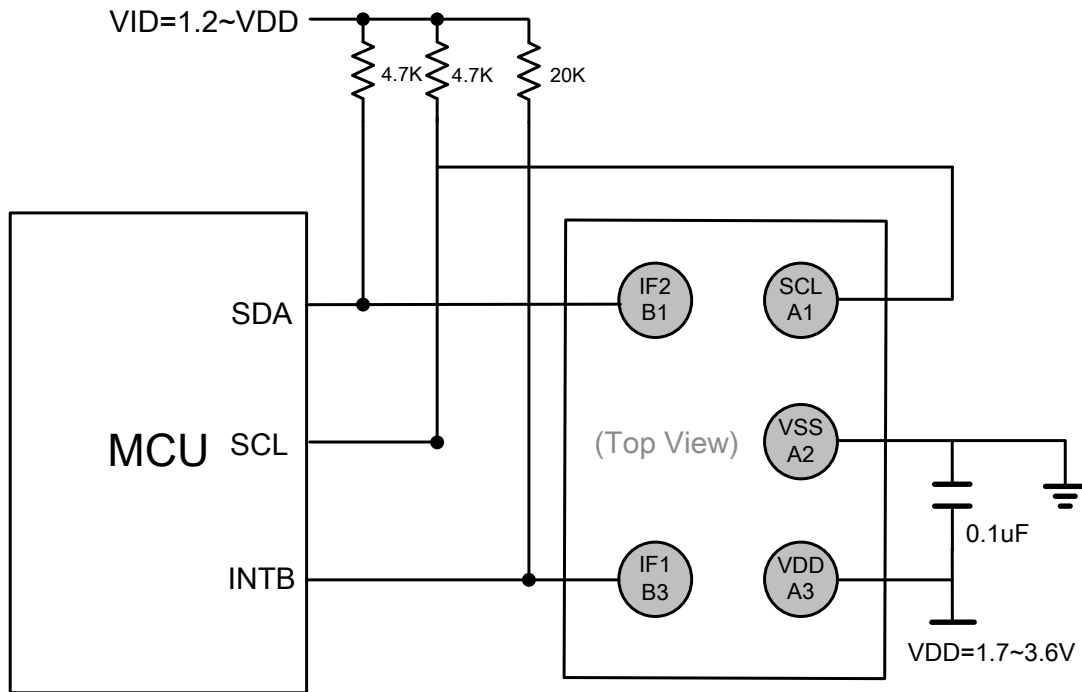


Figure 1. Application Circuit

Note: VID must be powered up no later than VDD.

Case 2. Slave Address = 1, (0x19)

	Name	Function name	Type	Function
A1	SCL	SCL	Input	I ² C clock
A2	VSS	VSS	Power	Ground
A3	VDD	VDD	Power	Power Supply
B1	IF2	INTL	Output	Interrupt output
B3	IF1	SDA	I/O	I ² C data