



General Description

The OCH170 Ultra-Sensitive Hall effect switch is fabricated from mixed signal CMOS technology, mainly designed for battery-operation, hand-held equipment (such as Cellular and Cordless Phone, PDA). The total power consumption in normal operation is typically 24 μ W with a 3V power source. Either north or south poles of sufficient strength will turn the output off. The output will be turned on under no magnetic field. While the magnetic flux density (B) is larger than operating point (BOP), the output will be turned off (high), the output is held until B is lower than release point (BRP), and then turned on(low).

The OCH170 is available in many flexible packaging options, such as SIP-3L, TSOT23-3L, and DFN2020-6L. Operating temperature range of the OCH170 is from -40°C to 85°C.

Features

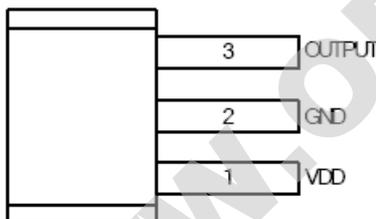
- Micropower consumption ideal for battery-powered applications
- Omnipolar (operation with magnetic field of either north or south pole), easy to use as output switches with both North and South pole
- Input Voltage Range: 2.4V to 5.5V
- Very High Sensitivity Hall Sensor
- Chopper stabilized amplifier stage
- Good RF noise immunity
- SIP-3L/TSOT23-3L/Low profile DFN2020-6L package
- ESD (HBM) > 4KV
- Not need the push-high resistance

Applications

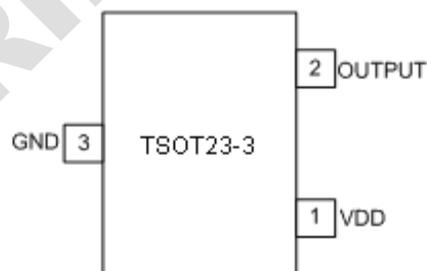
- Cover switch in clam-shell cellular phones
- Cover switch in Notebook PC/PDA
- Contact-less switch in consumer products
- Solid State Switch
- Handheld Wireless Handset Awake Switch
- Lid close sensor for battery-powered devise
- Magnet proximity sensor for reed switch replacement in low duty cycle applications

Pin Configuration

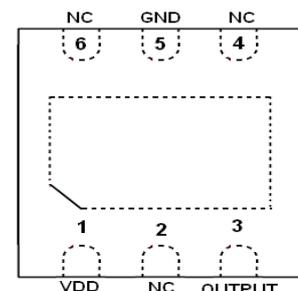
(1) SIP_3L (Top View)



(2) TSOT23-3L (Top View)



(3) DFN2020_6L (Top View)



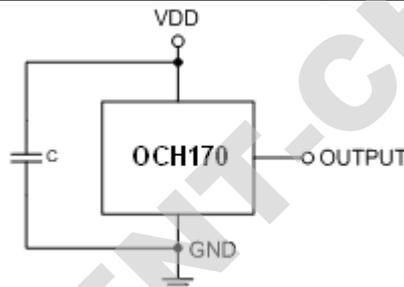
Note: NC is "No Connection" which is recommended to be tied to ground.

Pin Name	Pin No.			Pin Function
	SIP-3L	TSOT23-3L	DFN2020-6L	
VDD	1	1	1	Power Supply Input
GND	2	3	5	Ground
OUTPUT	3	2	3	Output Pin
N.C	-	-	2,4,6	Not Connected



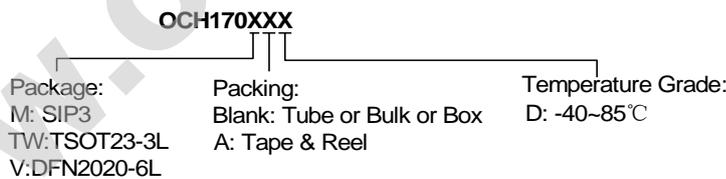
Typical Application Circuit

Part Number	Package Type	Package Qty	Brp (Gauss)	Bop (Gauss)	Temperature	Eco Plan	Lead/Ball Finish
OCH170MD	SIP-3L	Bulk 1000pcs/bag	$\pm 10 \sim \pm 50$	$\pm 20 \sim \pm 60$	-40~85°C	ROHS	Cu Sn
OCH170TWAD	TSOT23-3L	7-in reel 3000pcs/reel	$\pm 10 \sim \pm 50$	$\pm 20 \sim \pm 60$	-40~85°C	Green	Cu Sn
OCH170VAD	DFN2020-6L	7-in reel 3000pcs/reel	$\pm 10 \sim \pm 50$	$\pm 20 \sim \pm 60$	-40~85°C	Green	Cu NIPDAU



Note: C is for power stabilization and to strengthen the noise immunity, the recommended capacitance is 10nF~100nF.

Ordering Information



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