



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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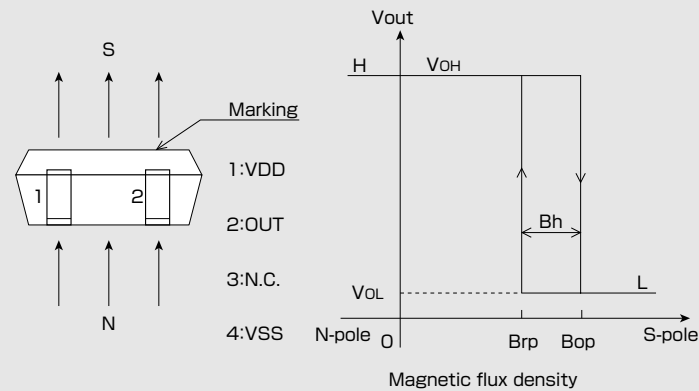
EM-1771

Shipped in packet-tape reel(5000pcs/Reel)

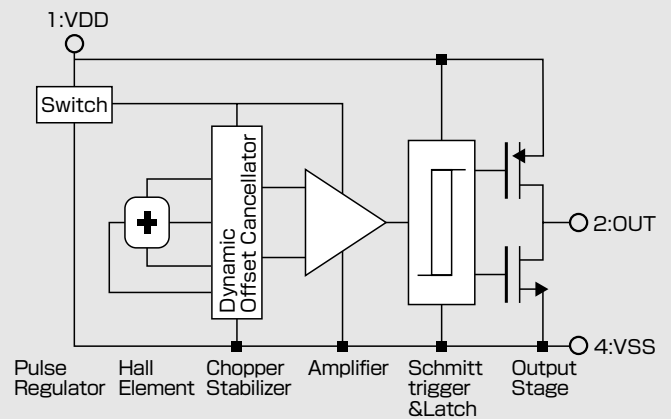
EM-1771 is ultra-small Hall effect ICs of a single silicon chip composed of Hall element and a signal processing IC.

Unipolar Hall Effect Switch	Supply Voltage 1.6~5.5V	Hall Element Pulse Excitation	High Sensitivity Bop:3mT	Output CMOS	SMT
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●Operational Characteristics



●Functional Block Diagram



●Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Limit	Unit
Supply Voltage	VDD	-0.1 ~ 6.0	V
Output Current	I _{out}	±0.5	mA
Operating Temperature Range	Topr	-30 ~ 85	°C
Storage Temperature Range	Tstg	-40 ~ 125	°C

●Magnetic ① and Electrical Characteristics (Ta=25°C VDD=1.85V)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Supply Voltage	VDD		1.6		5.5	V
Operating Point	B _{op}		1.4*	3.0	4.0	mT
Release Point	B _{rp}		1.1	2.2	3.7*	mT
Hysteresis	B _h		0.3*	0.8	1.5*	mT
Period	T _p			50	100	ms
Output High Voltage	V _{oh}	I _o =-0.5mA	VDD - 0.4			V
Output Low Voltage	V _{ol}	I _o =+0.5mA			0.4	V
Supply Current	I _{DD}	Average		4	9	μA

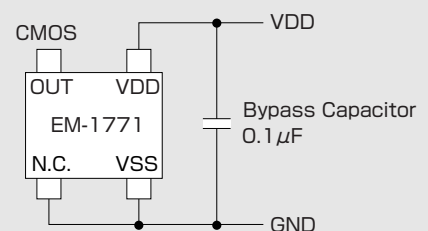
The characteristics with [*] marks are design targets. 1 [mT]=10 [Gauss]

●Magnetic Characteristics ② (Ta=-30°C~85°C VDD=1.85V)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Operating Point	B _{op}		1.2	3.0	4.4	mT
Release Point	B _{rp}		0.9	2.2	4.1	mT
Hysteresis	B _h		0.1	0.8	1.7	mT

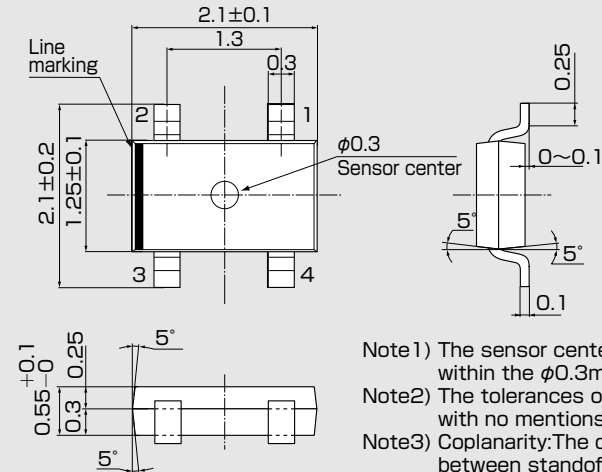
Note) The above specifications are design targets.

●Application Circuit



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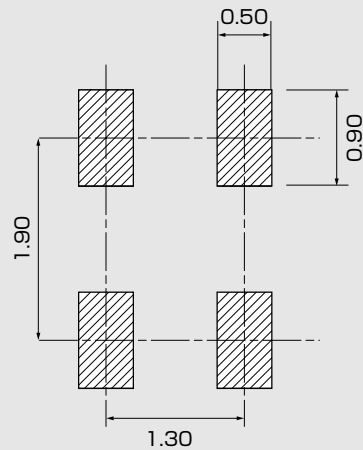
●Package (Unit:mm)



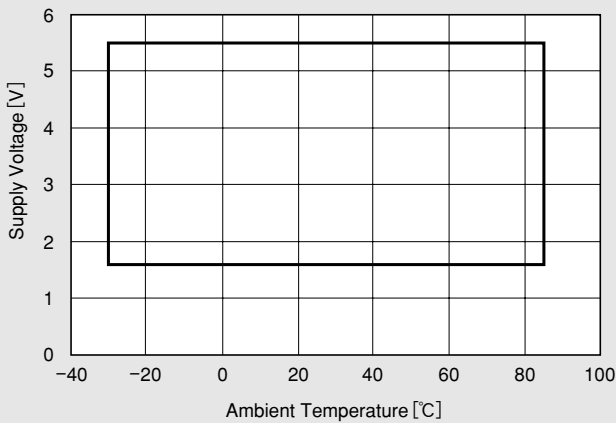
Pin No.	Pin Name	Function	Comment
1	VDD	Supply Voltage	
2	OUT	Output Voltage	
3	N.C.	—	Short to GND
4	VSS	GND	

- Note 1) The sensor center is located within the $\phi 0.3$ mm circle.
- Note 2) The tolerances of dimensions with no mentions is ± 0.1 mm.
- Note 3) Coplanarity: The differences between standoff of terminals are max. 0.1mm.
- Note 4) The sensor part is located 0.4mm (typ.) far from marking surface.

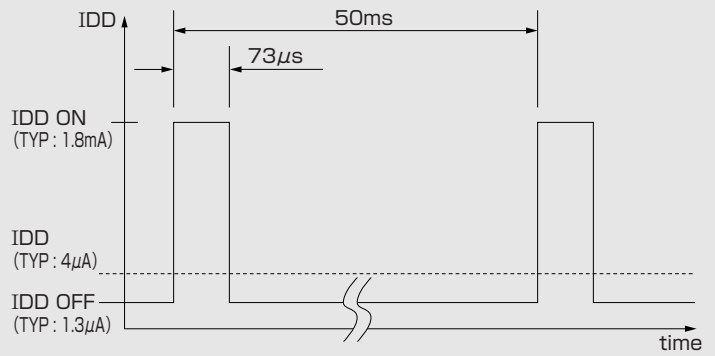
●(For reference only) Land Pattern (Unit:mm)



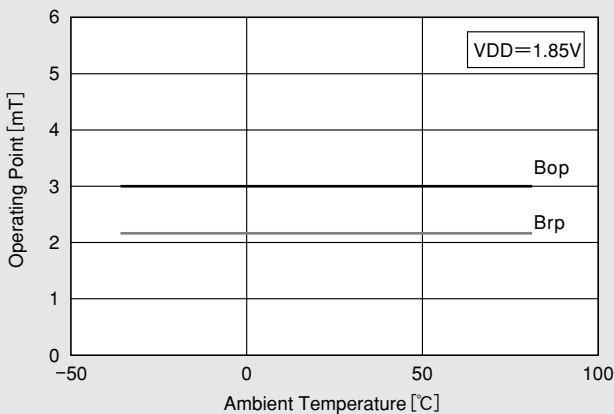
●Supply Voltage



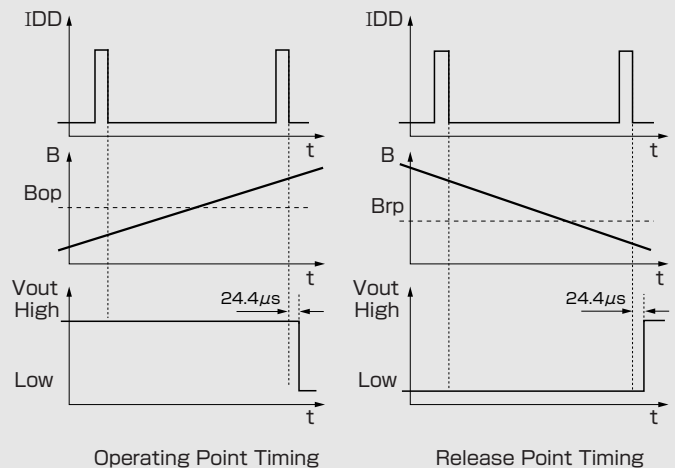
●IDD Pulse Driving (VDD=1.85V)



●Temperature Dependence of Bop, Brp



●Function Timing Chart



This Hall IC's output is held as internal data just before the internal circuit turns OFF (IDD OFF). And after 24.4 μ s, the output changes.
 Note) 24.4 μ s in figures is typical value

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April 4, 2012