

AsahiKASEI Hall Effect Switch

[New] EM-1671

<http://www.asahi-kasei.co.jp/ake>

HALL EFFECT SWITCH EM-1671

◆ FEATURES

- High-sensitive Hall effect SWITCH.....Non-contact magnetic switch
 - Small-thin package
 - Suitable for battery operation.....Vdd=2.4V to 3.3V
 - Low power consumption.....Average 5 μ A (at Vdd=3V)
 - Extremely high-sensitive.....Operate with typical 3mT
 - Wide operating temperature range.....-30°C to +85°C
 - CMOS output

◆ MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	Limit	Unit
Supply Voltage	Vdd	-0.1 to +5	V
Output Current	Iout	\pm 1	MA
Operating Temperature Range	Topr	-30 to +85	°C
Storage Temperature Range	Tstg	-40 to +125	°C

◆ ELECTRICAL CHARACTERISTICS (Ta=25°C Vdd=3V)

Item	Symbol	Unit	Conditions	Min.	Typ.	Max.
Operate Point	Bop	mT		2.0*	3.0	4.0
Release Point	Brp	mT		1.2	2.2	3.2*
Hysteresis	Bh	mT		0.3*	0.8	1.5*
Period	Tp	ms			50	70
Output High Voltage	VOH	V	I _o = - 1.0mA	Vdd - 0.4		
Output Low Voltage	VOL	V	I _o =+1.0mA			0.4
Supply Current	I _{dd}	μ A	Average		5	7
Supply Voltage	Vdd	V		2.4	3.0	3.3

1mT=10Gauss

Note: Characteristics marked * are design targets.

•This specification is subject to change without notice. August 22, 2003

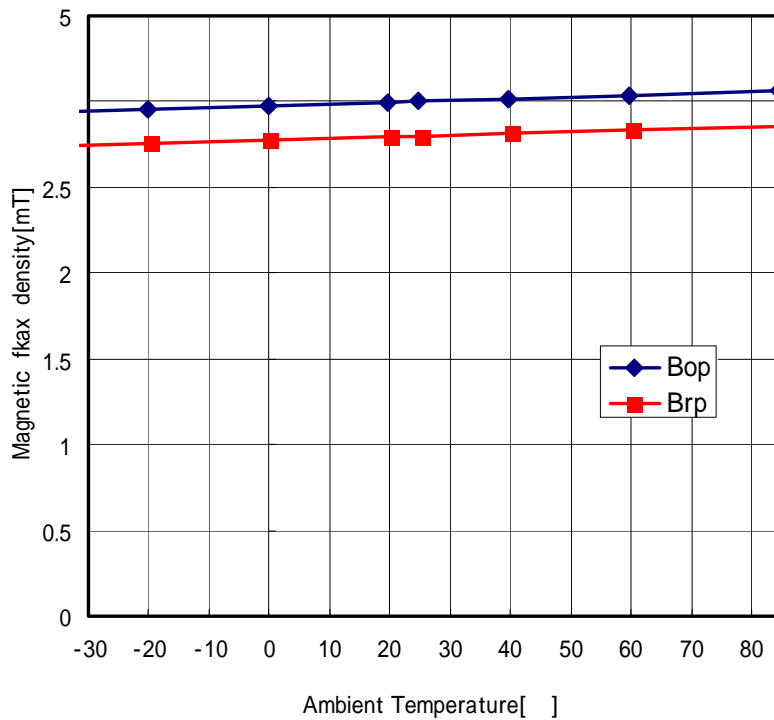
—REFERENCE—

◆ MAGNETIC CHARACTERISTICS (Ta=-30°C to +85°C Vdd=3V)

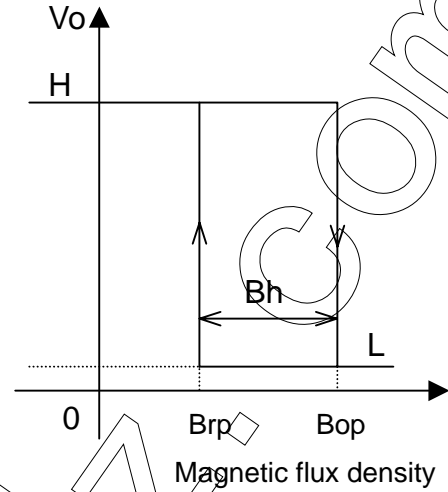
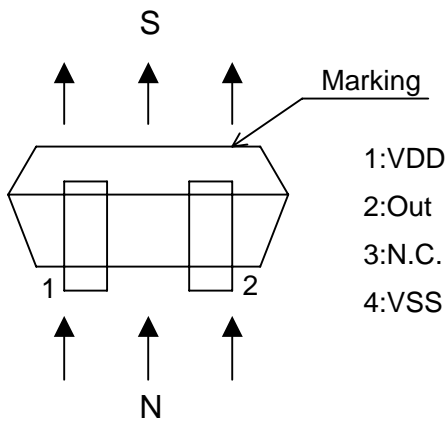
Item	Symbol	Unit	Min.	Typ.	Max.
Operate Point	Bop	mT	1.8	3.0	4.2
Release Point	Brp	mT	1.0	2.2	3.4
Hysteresis	Bh	mT	0.3	0.8	1.5

Note: These characteristics are design targets.

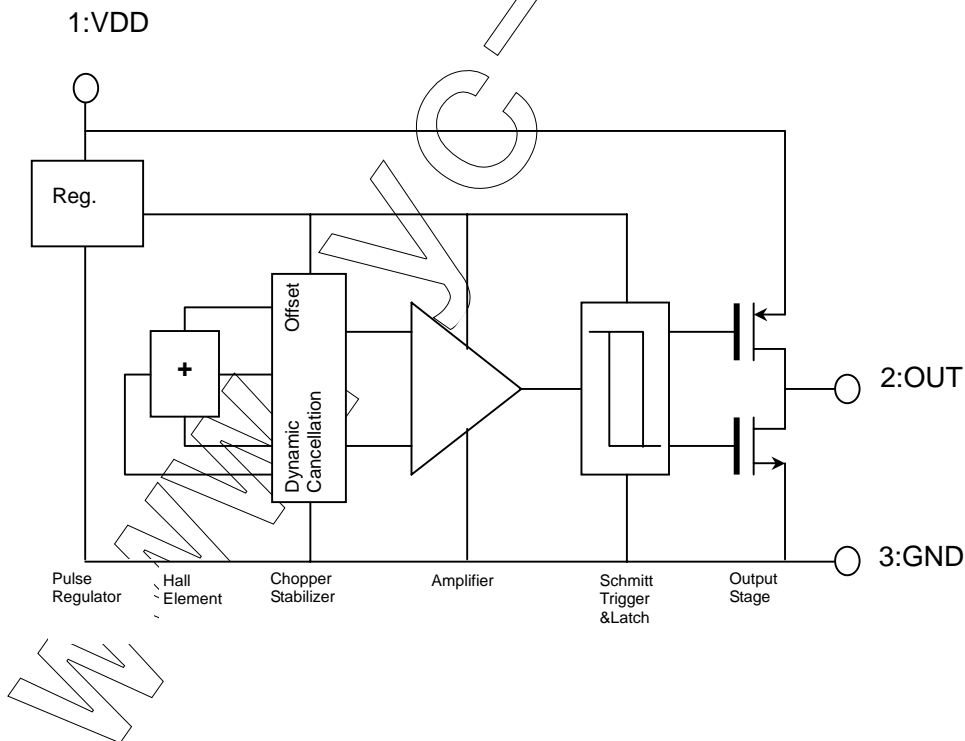
◆ TYPICAL CHARACTERISTICS vs. TEMPERATURE (Vdd=3V)



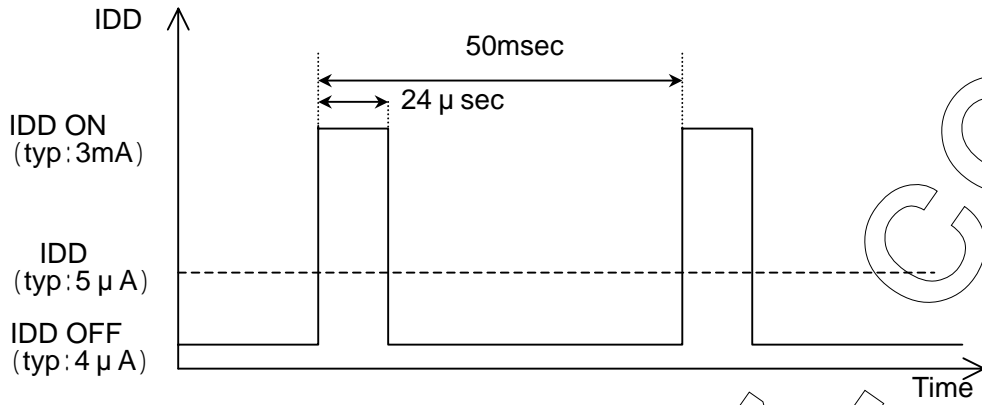
◆ OPERATIONAL CHARACTERISTICS



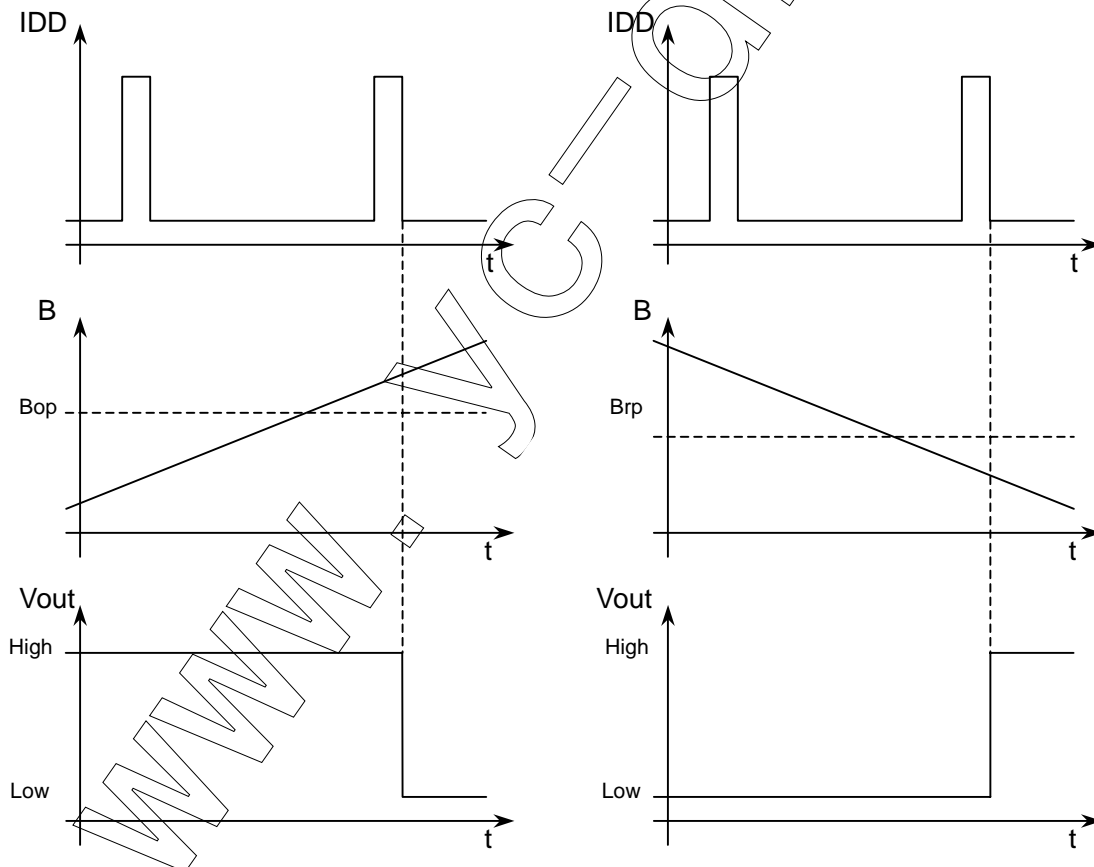
◆ FUNCTIONAL BLOCK DIAGRAM



◆ Idd PULSE DRIVING



◆ FUNCTION TIMING CHART



◆ DIMENSIONS (Unit: mm)

