



EM-6781

Shipped in packet-tape reel(3000pcs/Reel)

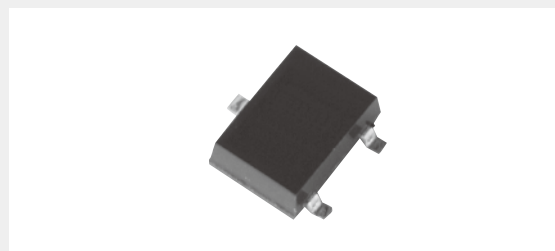
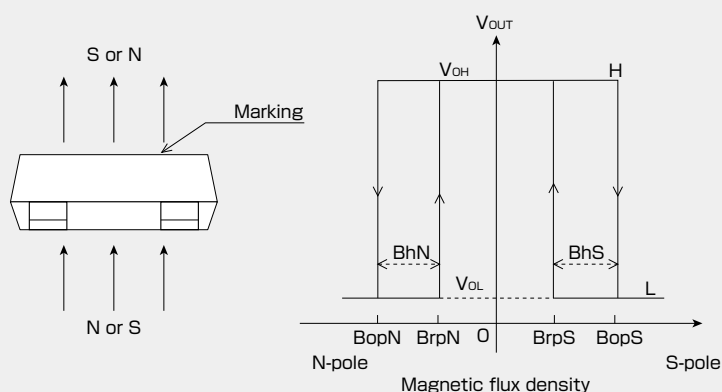
EM-6781 is ultra-small Hall effect ICs of a single silicon chip composed of Hall element and a signal processing IC.

Omnipolar Hall
Effect SwitchSupply Voltage
1.6~5.5VHall Element
Pulse
ExcitationHigh Sensitivity
Bop:3mTOutput
CMOS

SMT

Notice:It is requested to read and accept "IMPORTANT NOTICE" written on the back of the front cover of this catalogue.

●Operational Characteristics



●Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Min.	Max.	Unit
Supply Voltage	V _{DD}	-0.1	6.0	V
Output Current	I _{OUT}	-0.5	+0.5	mA
Storage Temperature Range	T _{STG}	-40	+125	°C

●Recommended Operating Conditions

Item	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	V _{DD}	1.6	1.85	5.5	V
Operating Temperature Range	Topr	-30	+25	+85	°C

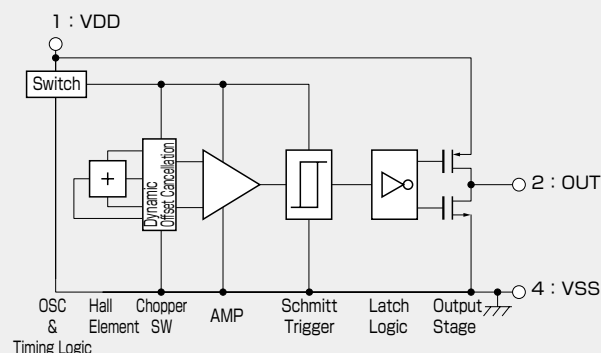
●Magnetic ① and Electrical Characteristics (Ta=25°C V_{DD}=1.85V)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Operating Point	BopS [BopN]		1.4*	3.0	4.0	mT
Releasing Point	BrpS [BrpN]		1.1	2.2	3.7*	mT
Hysteresis	BhS [BhN]		0.3*	0.8	1.5*	mT
Period	Tp			50	100	ms
Output High Voltage	V _{OH}	I _o =-0.5mA	V _{DD} -0.4			V
Output Low Voltage	V _{OL}	I _o =+0.5mA			0.4	V
Supply Current	I _{DD}	Average		6.5	9	μA

The characteristics with[*] marks are design targets.

1 [mT] = 10 [Gauss]

●Functional Block Diagram

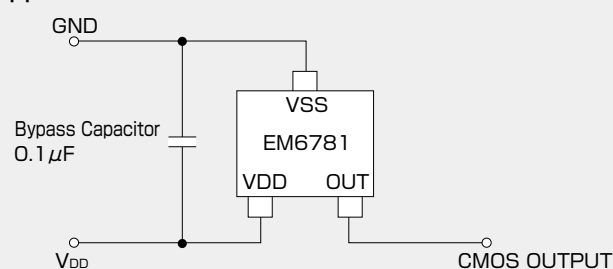


●Magnetic Characteristics ② (Ta=-30~+85°C V_{DD}=1.85V)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Operating Point	BopS [BopN]		1.2	3.0	4.4	mT
Releasing Point	BrpS [BrpN]		0.9	2.2	4.1	mT
Hysteresis	BhS [BhN]		0.1	0.8	1.7	mT

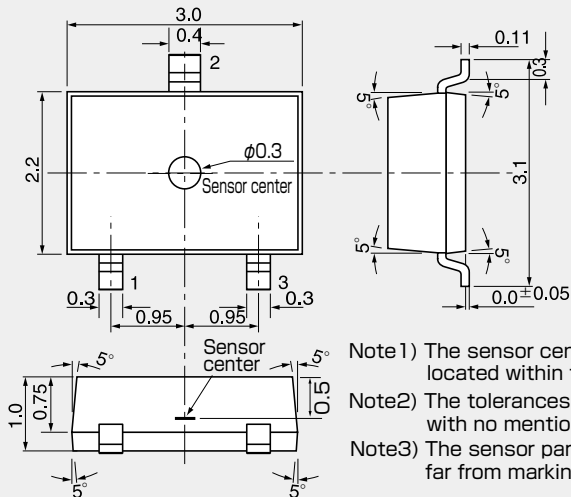
Note) The above specifications are design targets.

●Application Circuit



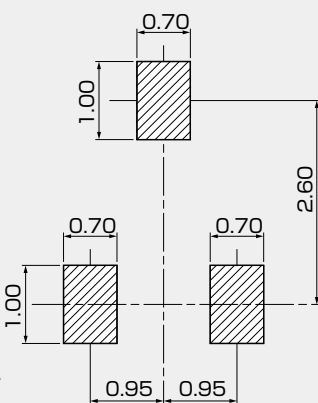
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●Package (Unit:mm)

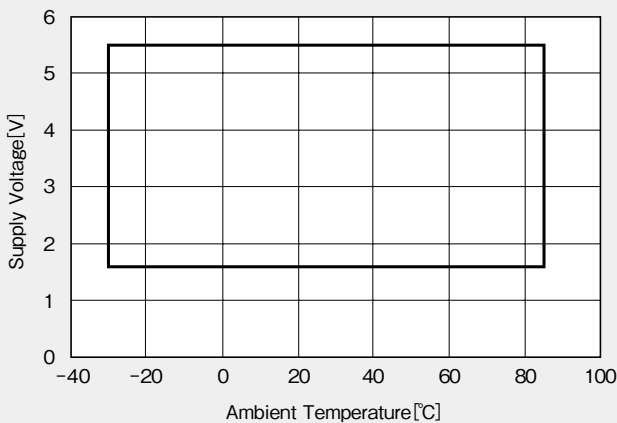


Pin No.	Pin Name	Function
1	VDD	Power Supply
2	VSS	Ground
3	OUT	Output

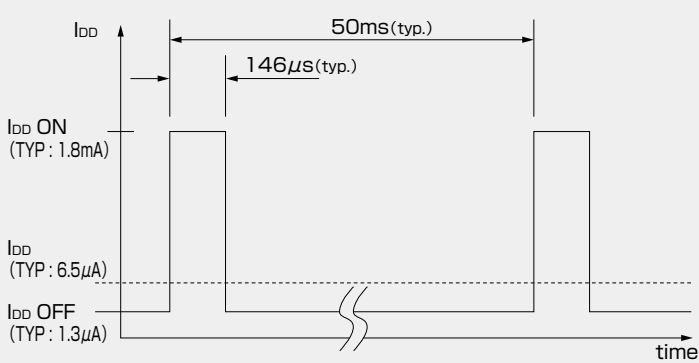
●(For reference only)Land Pattern (Unit:mm)



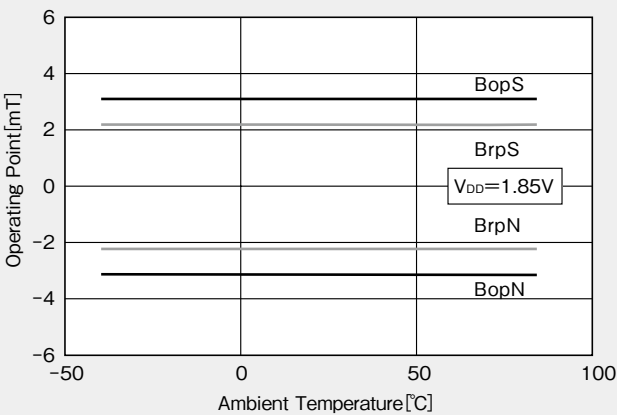
●Supply Voltage



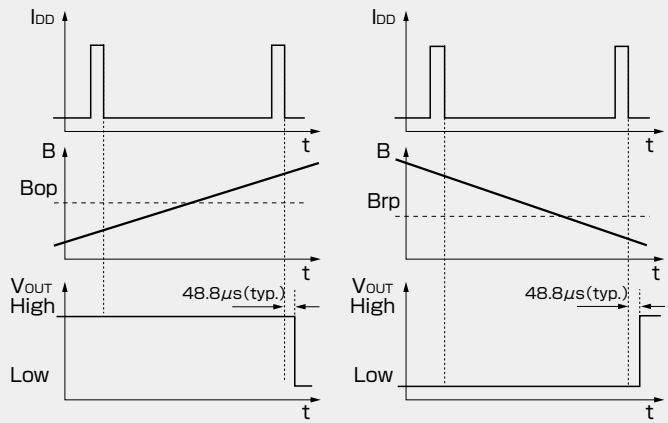
●IDD Pulse Driving (VDD=1.85V)



●Temperature Dependence of Bop, Brp



●Function Timing Chart



This Hall effect IC's output is held as internal data just before the internal circuit turns OFF (IDD OFF). And after 48.8 µs, the output changes.

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