

EM-1011

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

EM-1011 is ultra-small Hall effect ICs of a single silicon chip composed of Hall element and a signal processing IC.

Bipolar Hall Effect Latch

Supply Voltage 3.5~18V

Hall Element Continuous Excitation

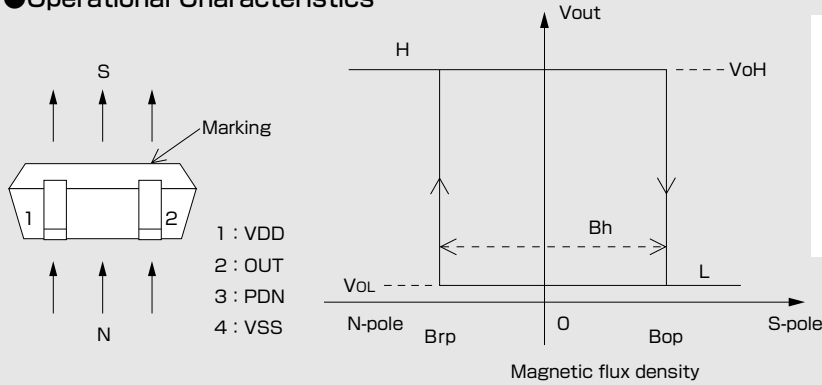
High Sensitivity $B_{op}:3mT$

Output Open Drain

SMT

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

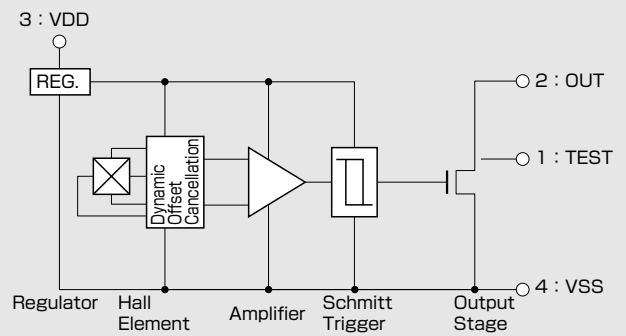
●Operational Characteristics



●Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Limit	Unit
Supply Voltage	VDD	-0.3 ~ 25	V
Output Current	I_{sink}	12	mA
Output Supply Voltage	V_{out}	-0.3 ~ 25	V
Operating Temperature Range	T_{opr}	-30 ~ 115	°C
Storage Temperature Range	T_{stg}	-40 ~ 125	°C

●Functional Block Diagram



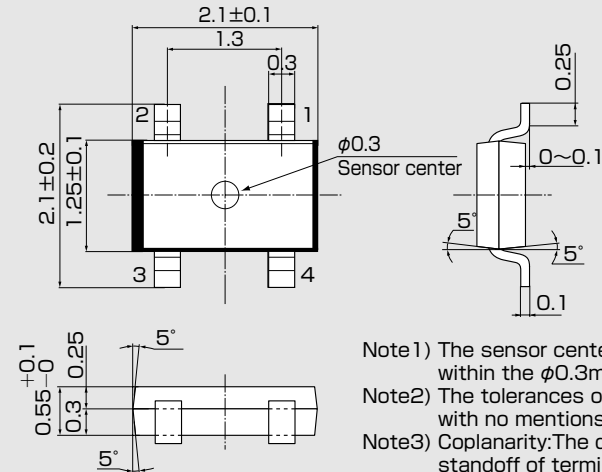
●Magnetic and Electrical Characteristics (Ta=25°C VDD=12V)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Supply Voltage	VDD		3.5		18	V
Operating Point	B_{op}		0.5	3	6	mT
Release Point	B_{rp}		-6	-3	-0.5	mT
Hysteresis	B_h		1	6	12	mT
Output Saturation Voltage	V_{sat}	OUT="L" $I_{sink}=10mA$		0.2	0.4	V
Output Leakage Current	I_{leak}	OUT="H"			1	μA
Supply Current	IDD	OUT="H"	0.5	3	6	mA

1 [mT] = 10 [Gauss]

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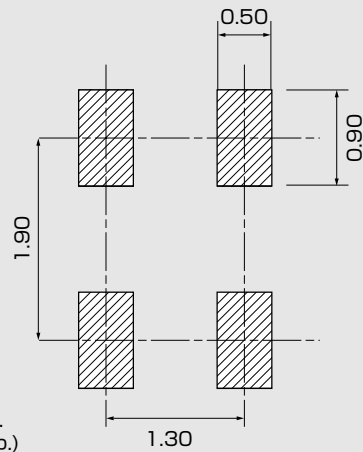
●Package (Unit:mm)



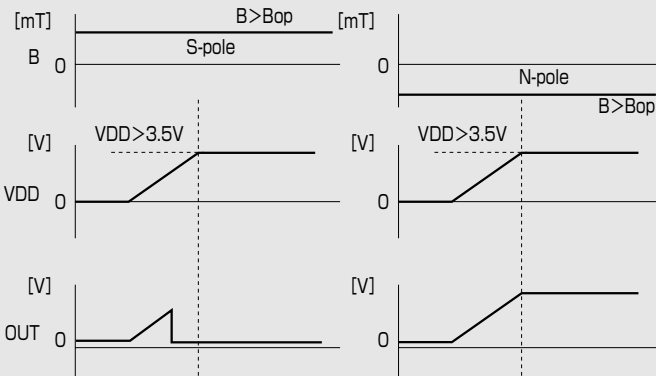
Pin No.	Pin Name	Function	Comment
1	TEST	TEST	N.C
2	OUT	Output Voltage	
3	VDD	Supply Voltage	
4	VSS	GND	

- 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. 0.1 mm.
- Note 4) The sensor part is located 0.4mm (typ.) far from marking surface.

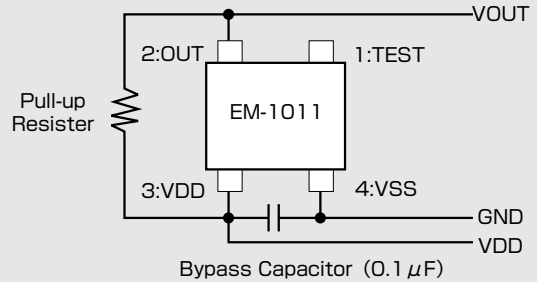
●(For reference only) Land Pattern (Unit:mm)



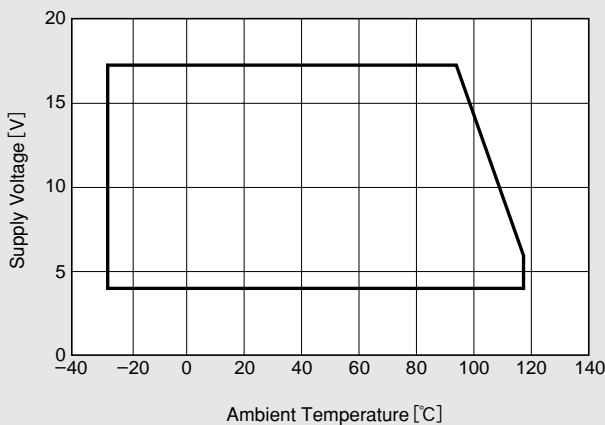
●Output during start-up period



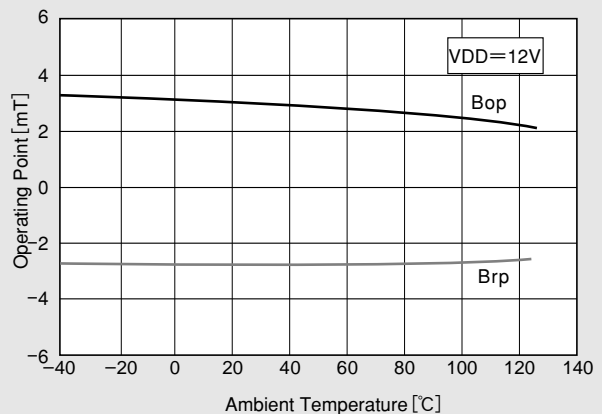
●Application Circuit



●Supply Voltage



●Temperature Dependence of Bop, Brp



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April 4, 2012