

EM-1011

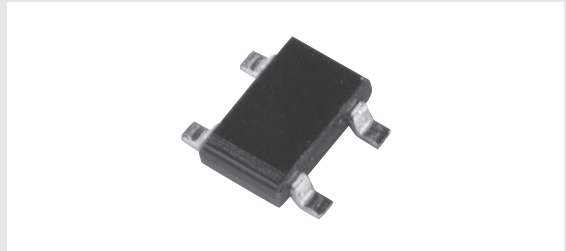
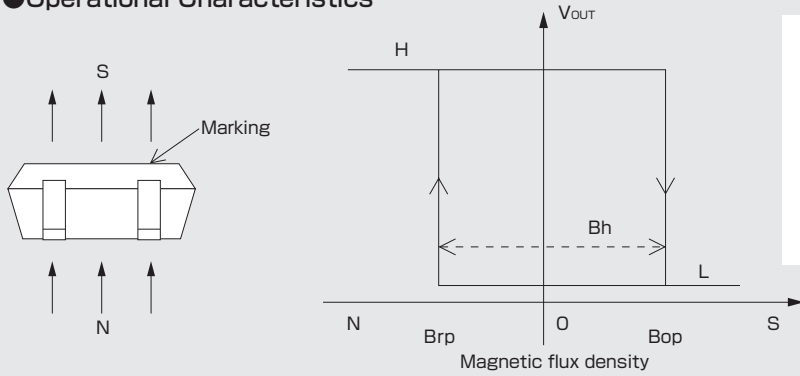
Shipped in packet-tape reel(5000pcs/Reel)

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 Bop:3mT	Output Open Drain	SMT
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Notice:It is requested to read and accept "IMPORTANT NOTICE" written on the back of the front cover of this catalogue.

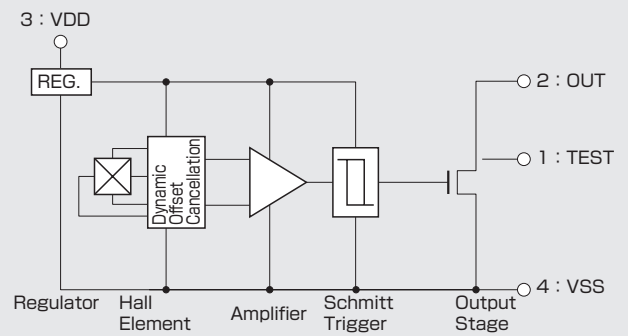
●Operational Characteristics



●Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Min.	Max.	Unit
Supply Voltage	V_{DD}	-0.3	25	V
Output Current	I_{SINK}	0	12	mA
Output Supply Voltage	V_{OUT}	-0.3	+25	mA
Storage Temperature Range	T_{STG}	-40	+125	°C

●Functional Block Diagram



●Recommended Operating Conditions

Item	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	V_{DD}	3.5	12	18	V
Operating Temperature Range	T_{opr}	-30	+25	+115	°C

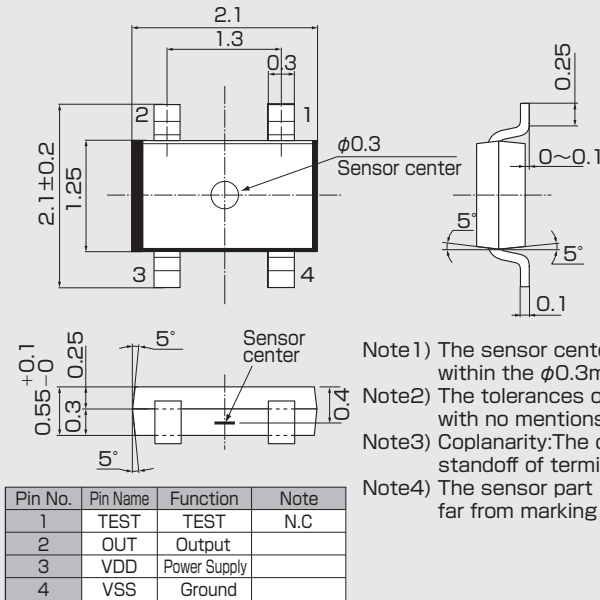
●Magnetic and Electrical Characteristics (Ta=25°C VDD=12V)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Operating Point	B_{op}		0.5	3	6	mT
Releasing 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	I_{DD}	OUT="H"	0.5	3	6	mA

1 [mT] = 10 [Gauss]

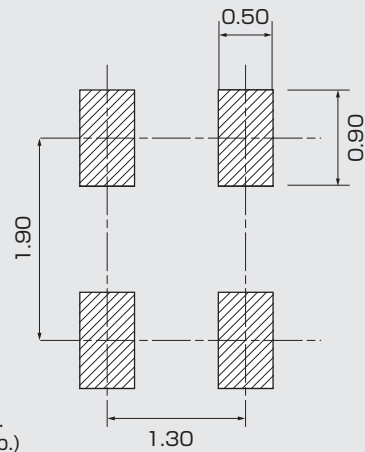
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●Package (Unit:mm)

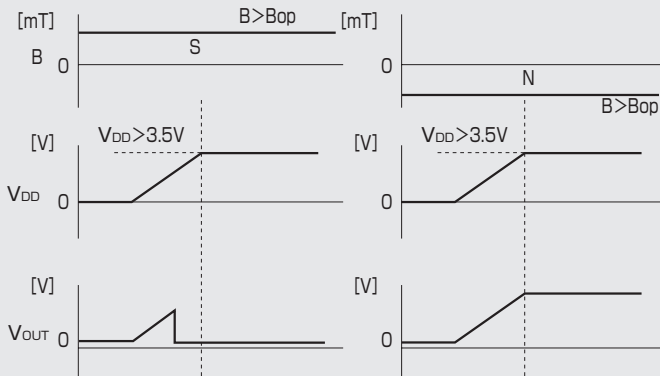


- Note 1) The sensor center is located within the $\phi 0.3$ mm circle.
- Note 2) The tolerances of dimensions with no mentions is ± 0.1 mm.
- Note 3) Coplanarity: The differences between standoff of terminals are max. 0.1mm.
- Note 4) The sensor part is located 0.4mm (typ.) far from marking surface.

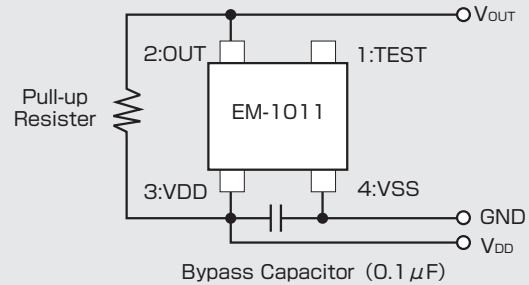
●(For reference only) Land Pattern (Unit:mm)



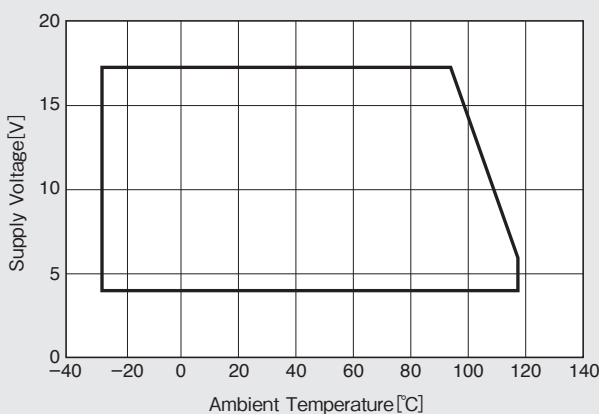
●Output during start-up period



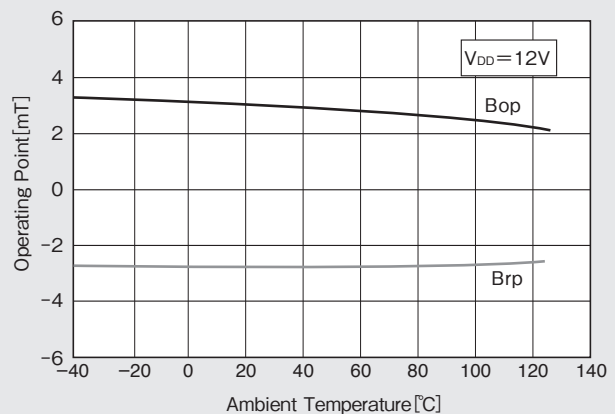
●Application Circuit



●Supply Voltage



●Temperature Dependence of Bop, Brp



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February 21, 2013

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