

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

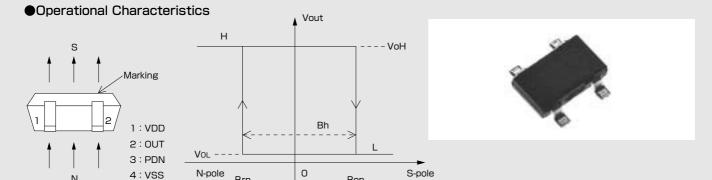
Hall Element Continuous Excitation

High Sensitivity Bop:3mT

Output Open Drain SMT

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

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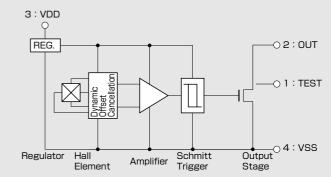
Вор

Magnetic flux density ●Absolute Maximum Ratings (Ta=25°C)

4: VSS

| 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 | Topr | −30 ~ 115 | °C | |
| Storage Temperature Range | Tstg | −40 ~ 125 | °C | |

Functional Block Diagram



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

N-pole

| Item | Symbol | Conditions | Min. | Тур. | Max. | Unit |
|---------------------------|------------------|-------------------|------|------|------|------|
| Supply Voltage | VDD | | 3.5 | | 18 | ٧ |
| Operating Point | B _{OP} | | 0.5 | 3 | 6 | mT |
| Release Point | B _{rp} | | -6 | -3 | -0.5 | mT |
| Hysteresis | Bh | | 1 | 6 | 12 | mT |
| Output Saturation Voltage | V _{sat} | OUT="L"Isink=10mA | | 0.2 | 0.4 | ٧ |
| Output Leakage Current | Ileal | OUT="H" | | | 1 | μΑ |
| Supply Current | IDD | OUT="H" | 0.5 | 3 | 6 | mA |

1 [mT] =10 [Gauss]

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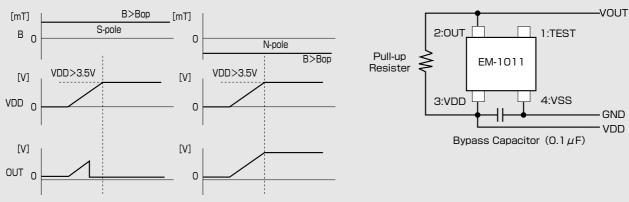
●Package (Unit:mm) ●(For reference only)Land Pattern (Unit:mm) 2.1±0.1 0.25 03 0.50 ϕ 0.3 2.1±0.2 25±0. 0~0.1 0.90 Sensor center 3 8 0.1 Note1) The sensor center is located within the ϕ 0.3mm circle. 0.55 Note2) The tolerances of dimensions with no mentions is ± 0.1 mm. Note3) Coplanarity: The differnces between standoff of terminals are max.0.1mm. 1.30 Note4) The sensor part is located 0.4mm(typ.) Pin No. | Pin Name | Function | Comment far from marking surface. TEST TEST OUT **Dutput Voltage VDD** Supply Voltage

Output during start-up period

GND

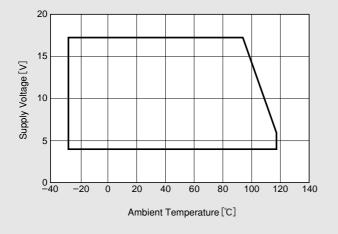
VSS

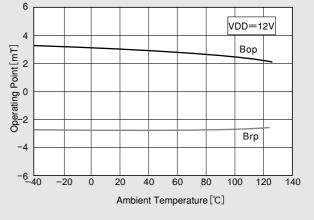
Application Circuit



Supply Voltage

●Temparature Dependence of Bop. Brp





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reliability.

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