

# EW-450, EW-550

## UNIPOLAR HALL EFFECT SWITCHES

### ASAHI HALL EFFECT ICs

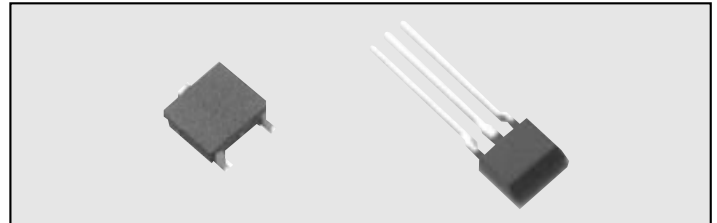
ASAHI KASEI ELECTRONICS Hall Effect ICs are composed of a Ultra-high sensitive InSb Hall element and a signal processing IC chip in a package. ASAHI KASEI ELECTRONICS Hall Effect ICs have high sensitivity and good stability.

### FEATURES

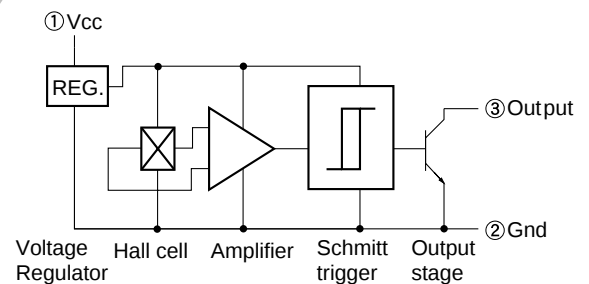
- Bop(max): 20mT
- Effective Performance at Low Magnetic Field
- 4.5V to 18V Operation
- Highly Resistant to Mechanical Stress
- Stable Operation in Broad Temperature Range
- Compact Size
- Open Collector

### APPLICATIONS

- Rotor Position Sensor for Precision Motors.
- Stroke Sensor
- Proximity Switch
- Encoder
- Current Switch etc.



### FUNCTIONAL BLOCK DIAGRAM

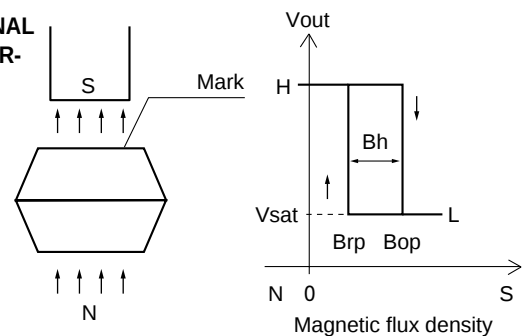


### ABSOLUTE MAXIMUM RATINGS(Ta = 25 °C)

| Item                        | Symbol  | Limit        | Unit |
|-----------------------------|---------|--------------|------|
| Supply Voltage * 1          | Vcc     | 18           | V    |
| Output "OFF" Voltage        | Vo(off) | 18           | V    |
| Output "ON" Current         | I sink  | 15           | mA   |
| Operating Temperature Range | Topr    | - 20 ~ + 115 |      |
| Storage Temperature Range   | Tstg    | - 40 ~ + 125 |      |

\* 1: Please refer to (Fig 1) DERATING CURVE "

### OPERATIONAL CHARACTERISTICS



### ELECTRICAL CHARACTERISTICS(Ta = 25 °C, Vcc = 4.5 ~ 18V DC.)

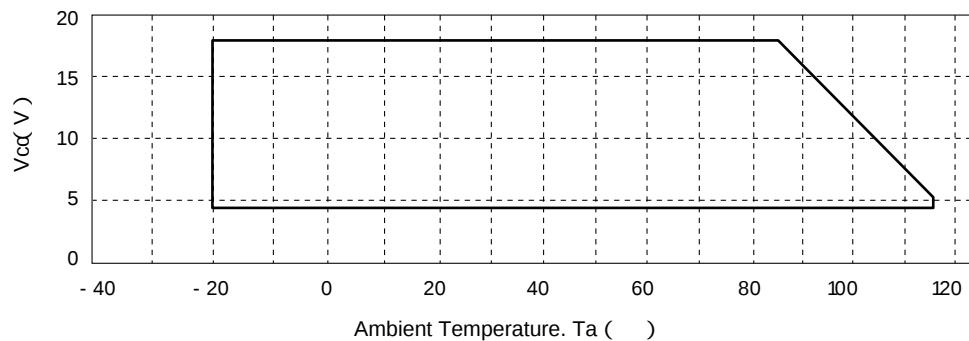
| Item                      | Symbol | Conditions              | Min. | Typ. | Max. | Unit |
|---------------------------|--------|-------------------------|------|------|------|------|
| Operate Point             | Bop    | Vcc=12V                 |      |      | 20   | mT   |
| Release Point             | Brp    | Vcc=12V                 | 5    |      |      | mT   |
| Hysteresis                | Bh     |                         | 1.5  |      |      | mT   |
| Output Saturation Voltage | Vsat   | Output "L", I sink=10mA |      |      | 0.4  | V    |
| Supply Current            | I cc   | Output "H", Vcc=12V     |      |      | 8    | mA   |
| Output Leakage Current    | I leak | Output "H", Vo=12V      |      |      | 1    | μA   |

1mT = 10Gauss

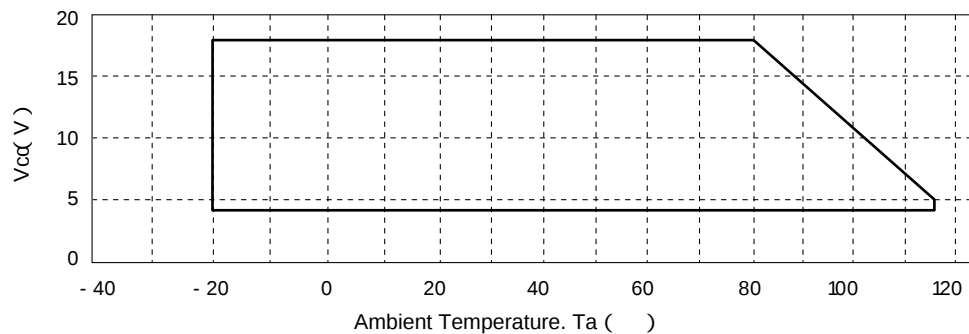
## SUPPLY VOLTAGE DERATING CURVE

(Fig . 1)

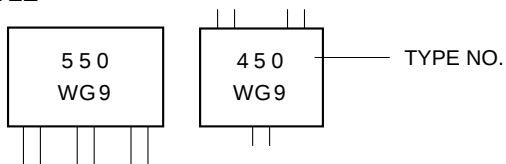
**EW-550**



**EW-450**

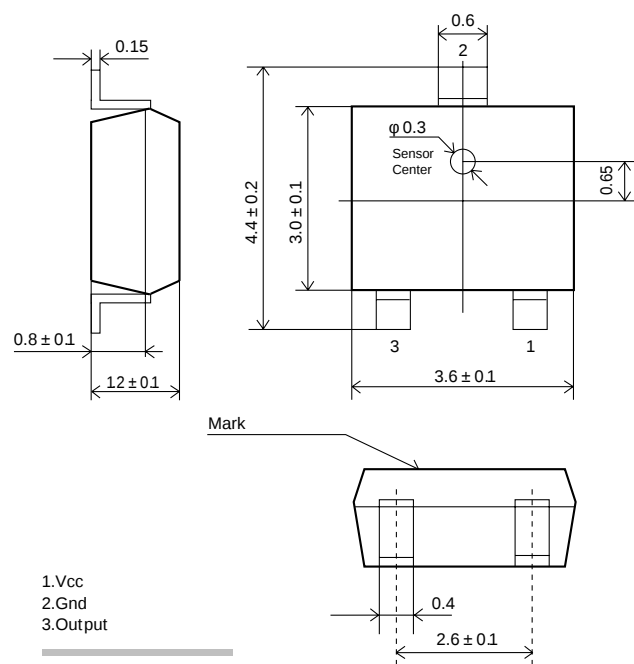


## MARK AND SUPPLY STYLE



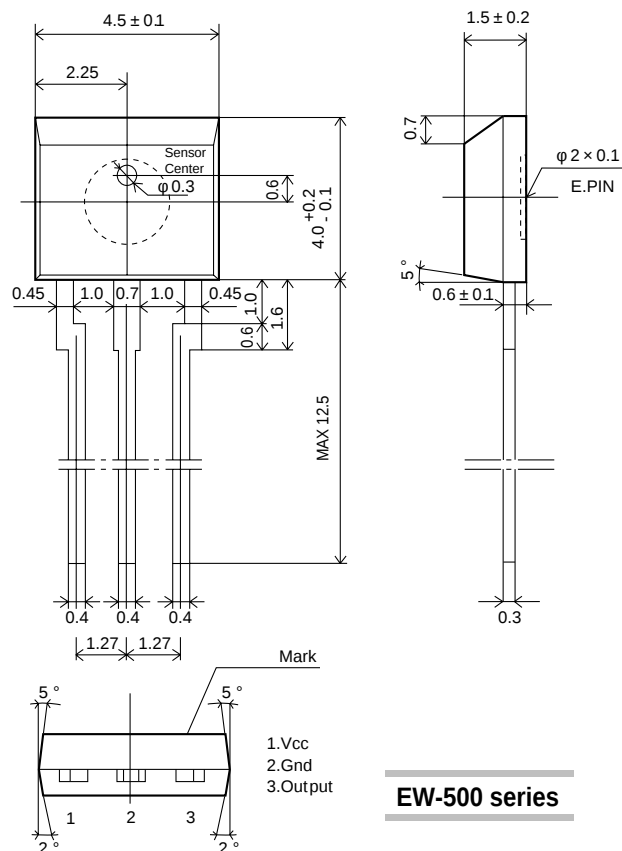
Supplied by  
EW-550:500pcs. / Pack.  
EW-450:5000pcs. / Reel

## PACKAGE [ Unit : mm ]



1.Vcc  
2.Gnd  
3.Output

**EW-400 series**



1.Vcc  
2.Gnd  
3.Output

**EW-500 series**