

# OH82A Hall Effect Element

## 1. Order Information

Part Number	Operation Temperature	Available Rank	Min Packing
<b>OH82A</b> (Old part number SH82AE)	-40 ~ 120°C	Rank E.	4000 pcs/reel

## 2. Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Maximum Input Current	I <sub>max</sub>	20 (at 25°C)	mA
Maximum Power Dissipation	P <sub>max</sub>	150 (at 25°C)	mW
Operating Temperature Range	T <sub>op</sub>	- 40 ~ + 120	°C
Storage Temperature Range	T <sub>st</sub>	- 40 ~ + 150	°C

## 3. Electrical Characteristics (Measured at 25°C)

Parameter	Symbol	Measurement Conditions	Min	Max	Unit
Output Hall Voltage	V <sub>H</sub>	V <sub>in</sub> = 1V, B = 500G	196	320	mV
Input Resistance	R <sub>in</sub>	I = 0.1mA	240	390	Ω
Output Resistance	R <sub>out</sub>	I = 0.1mA	240	390	Ω
Offset Voltage	V <sub>O</sub>	V <sub>in</sub> = 1V, B = 0G	- 7	+ 7	mV
Temp. Coeff. of V <sub>H</sub>	α	T <sub>a</sub> = 0 ~ +40°C AVG.	-	- 1.8	% /°C
Temp. Coeff. of R <sub>in</sub> , R <sub>out</sub>	β	T <sub>a</sub> = 0 ~ +40°C AVG.	-	- 1.8	% /°C

※ V<sub>H</sub> = V<sub>HM</sub> - V<sub>O</sub> ( V<sub>HM</sub> : The output voltage measured at 500G.)

## 4. Rank Classification and Mark on Output Hall Voltage

Output Hall Voltage V <sub>H</sub> (mV)	Rank	Mark	Measurement Conditions
196 ~ 236	D	.D	V <sub>in</sub> = 1V, B = 500G (Constant Voltage)
228 ~ 274	E	.E	
266 ~ 320	F	.F	



## 5. Method for Mounting

### 5-1. Soldering Conditions on PCB

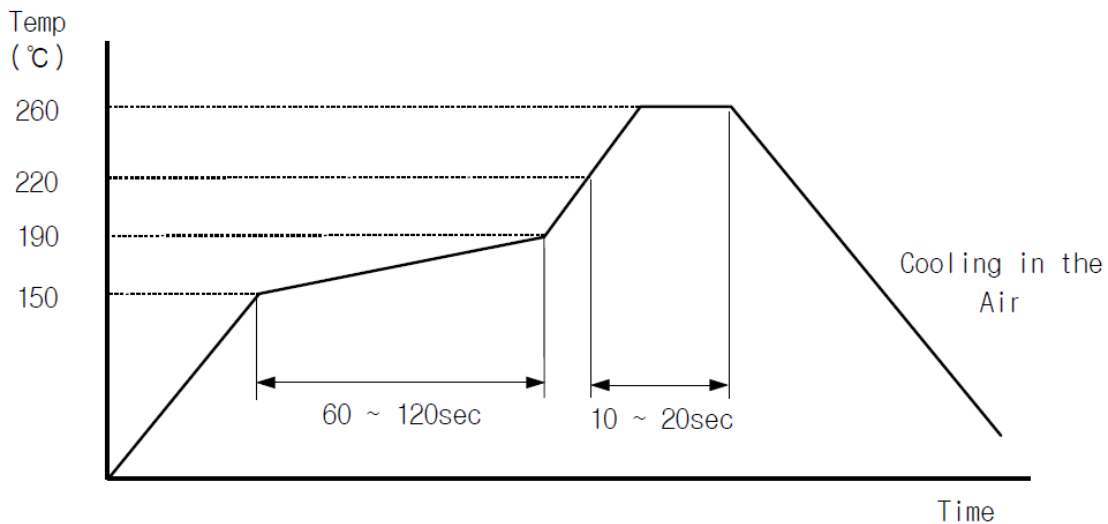
No Rapid Heating and Cooling is desired.

The Recommended Preheating condition is at 150 ~ 190°C for 1 ~ 2minutes.

The Recommended Reflowing condition is at 220 ~ 260°C for 10 ~ 20 seconds.

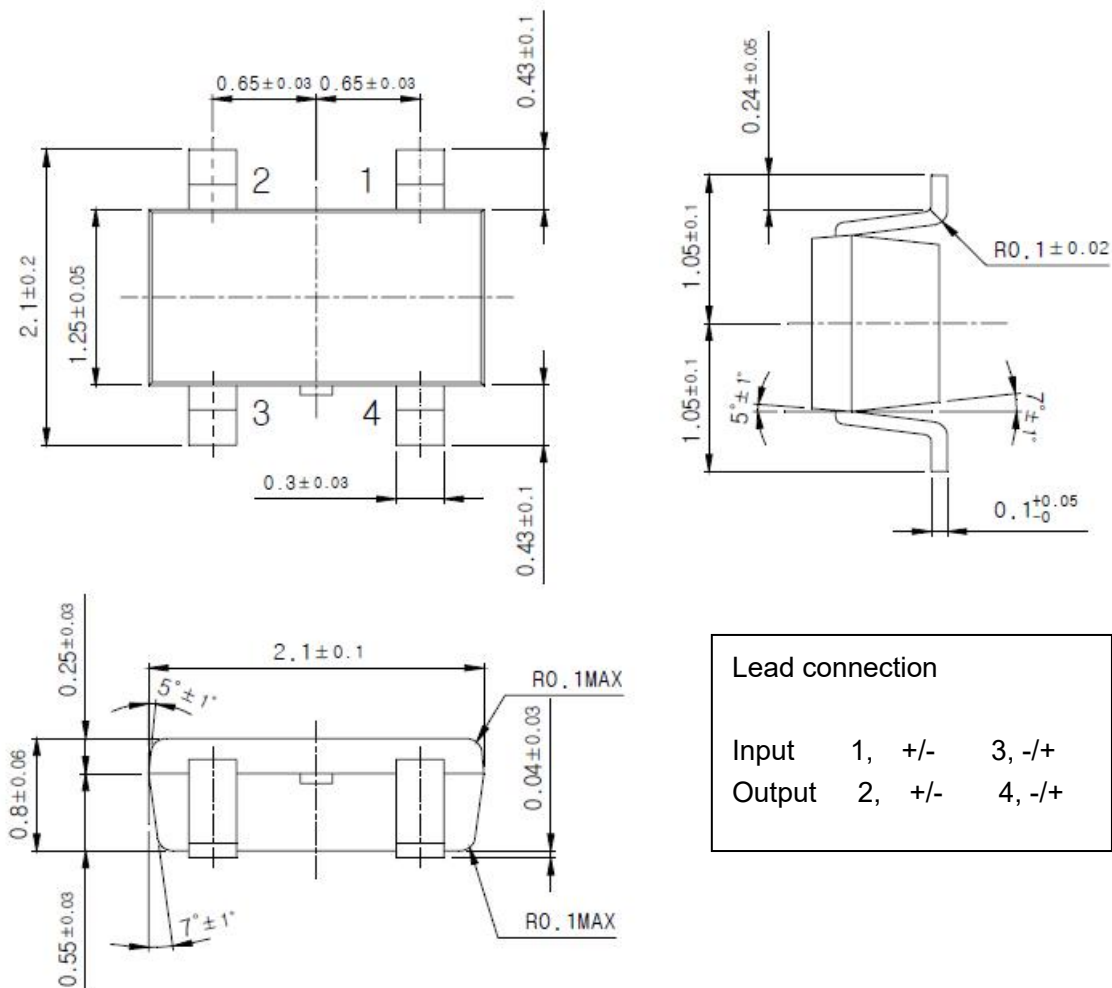
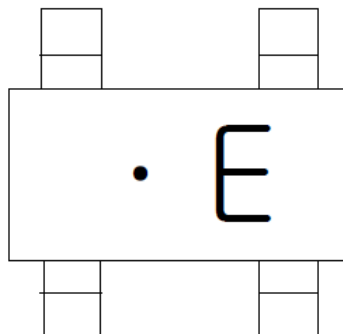
### 5-2. Soldering Method and Temperature

Items	Methods	Temperature
Reflow	Soldering by Passing the Heated Zone	Max 260°C, in 20sec
Solder Iron	Soldering by Soldering Iron	Max 350°C, in 3sec



Reflow Method



**6. Dimension unit: mm**
**SOT143**

**7. Mark method**


## 8. RELIABILITY

### 8.1 TEST CONDITION

	CONDITION
HIGH TEMP. STORAGE	Ta=150°C,t=1000HR
HIGH TEMP. OPERATION	Ta=120°C,Iopr=10mA,t=1000HR
LOW TEMP. OPERATION	Ta=-40°C,Iopr=10mA,t=1000HR
HIGH TEMP. HIGH HUMIDITY OPERATION	Ta=85°C,HR=85%,Iopr=9mA,t=1000HR
PCT	Ta=121°C,HR=100%,Pv=2atm,t=24HR
THERMAL SHOCK	T(L)=-55°C,T(H)=150°C,t=(L,H)=30min,M=30CYCLE
SOLDERING HEAT RESISTANCE	Peak Temp=260°C,t=10sec,REFLOW
SOLDABILITY	Peak Temp=260°C,t=5sec,REFLOW
ESD(MM)	V=500V,C=200pF,R=0Ω (EIAJ TEST CONDITION)
VIBRATION TEST	Frequency:10~55 Hz, Amplitude:1.5mm(p-p), Sweep Time 1min, X, Y, Z Each Direction 2HR
IMPACT TEST	1500G, 0.5ms, Half Sine Wave Pulse, 4 Impacts Per Axis
TERMINAL STRENGTH	Pulling Strength Over 0.5Kg, 30mm/min

### 8.2 CRITERION FOR JUDGING

After each reliability test, samples should be kept for at least 24 hrs at room temp. & humidity, and then measured.

The change rates should be confined within the ranges as follows.

item	OK SPEC	NG/OK
Rin	Under Initial±20%	OK (SPEC SATISFYING)
Rout		
VH		
Vo	Under Initial±5%	



For more information:

Ouzhuo Technology service you through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing, or the nearest Authorized Distributor, you could reach us the way you are convenient, thank you for your support!

[www.ohhallsensor.com](http://www.ohhallsensor.com)

[sale@ohhallsensor.com](mailto:sale@ohhallsensor.com)

China headquarters: 86-25-52312738

Canada Office: 1-514-995-5788

**NOTICE:**

The information presented in this datasheet is for reference only. Specifications may change without notice.

