

# HB Lithium Rechargeable Battery

3V Pb-free Reflowable

## HB414



HB lithium rechargeable batteries are environment-friendly rechargeable batteries that can be reflowed (automatic mounting by Pb-free soldering) with lead-free solder. Pb-free reflow mounting is achieved by a reinforced heat-resistant structure.

The HB414 features high capacity and a long cycle life with a wide charge voltage range.

### FEATURES

- Pb-free reflowable:  
Superior heat resistance (260°C peak) allows reflow mounting by Pb-free solder.
- Wide charge voltage range:  
Wide charge voltage range allows use with various applications (2.5V to 3.3V).
- High Capacity:  
0.3mAh typ. (charge voltage: 3V, cut off: 1.2V)
- Long cycle life:  
1,000 cycles or more (10% D.O.D.)
- Excellent overdischarge characteristics
- Wide range of operating temperatures:  
Operating temperature range: -20°C to +60°C  
For using the battery at a temperature out of the above temperature range, please consult us.
- RoHS Compliant

### APPLICATIONS

Backup power supply for memory and clock functions of cellphone, PHS, cordless phone, digital camera, PDA, MD player, game machine, etc.

### SPECIFICATIONS

Type	Nominal Voltage (V)	Charge Voltage <sup>*3</sup> (V)	Nominal Capacity (Voltage Range V) (mAh)	Internal Impedance <sup>*1</sup> (Ω)	Standard Charge/Discharge Current (mA)	Cycle Life <sup>*2</sup> (Time)	Diameter (mm)	Height (mm)	Weight (g)
HB414	3.0	2.5 to 3.3	0.3 (3.0 to 1.2) 0.2 (2.5 to 1.2) 0.14 (3.3 to 2.0)	280	0.005	1000 (10% D.O.D.) 100 (100% D.O.D.)	4.8	1.4	0.07

\*1. Value measured using AC (Alternating Current) method in the fully charged state.

\*2. Counts of charge and discharge repetition that maintains about 50% of the minimum guaranteed capacity

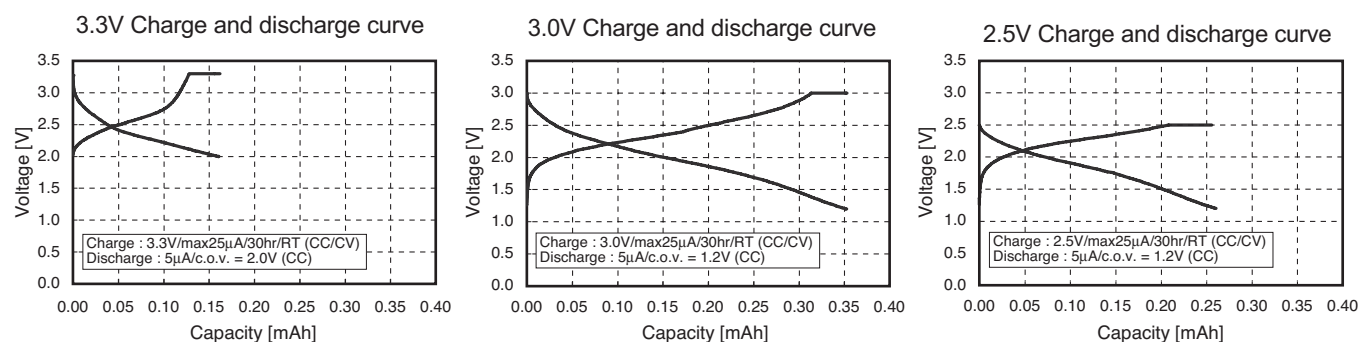
\*3. A constant voltage charge is recommended, but due to a limit in charge current, it is necessary to insert a resistor to regulate charge current.

Please contact us for further details.

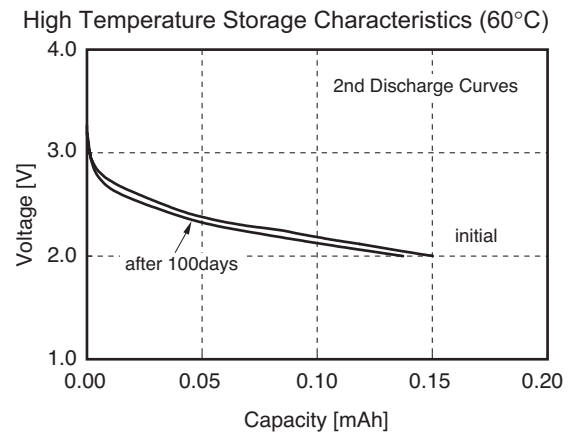
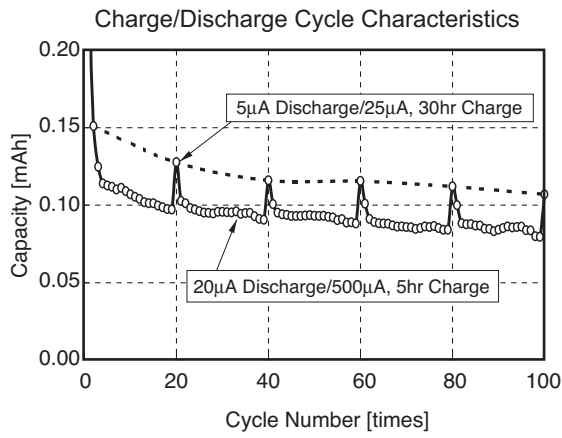
If a constant current charge is required, please contact us for more information.

\*4. D.O.D. : Depth of Discharge

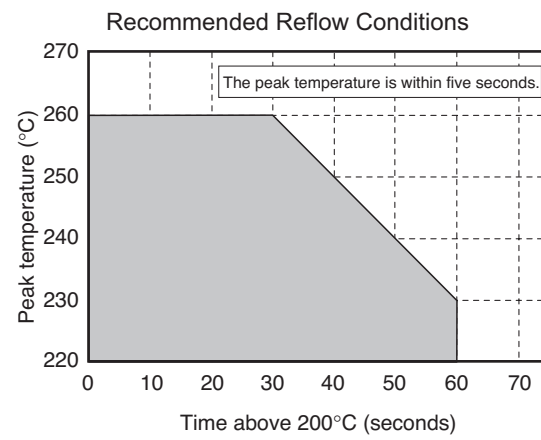
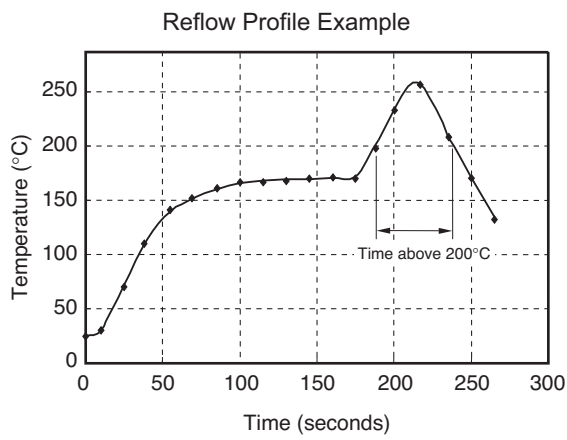
### CHARACTERISTICS



**CHARACTERISTICS**



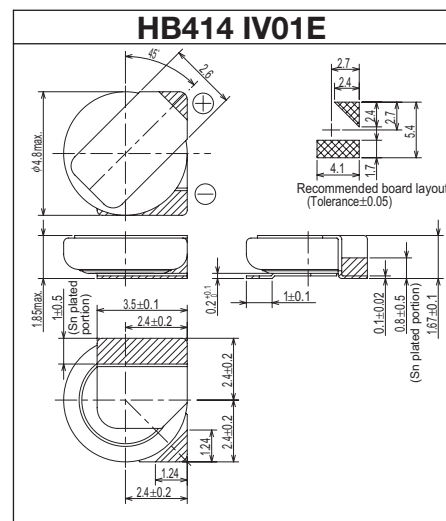
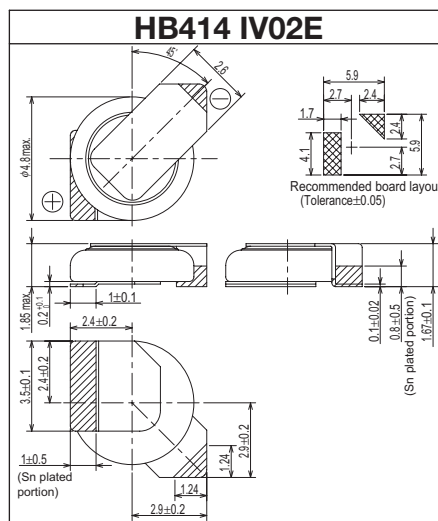
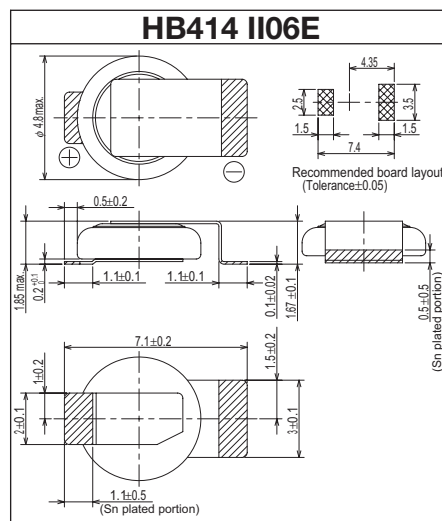
**REFLOW SOLDERING CONDITIONS**



The times of repeated reflow soldering must be two times or less.  
The Temperature must be measured at top of the cell.

Max. 260 °C (within 5 seconds)

**STANDARD TERMINALS**



- Please contact Seiko Instruments Inc. for batteries with terminals other than the above shapes.
- Units: mm
- The hatched parts are tin plated (Sn: 100%).

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- [View HB414-II06E on WIN SOURCE](#)
- [SII Semiconductor Corporation Information](#)

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