

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*3 (V)	Nominal Capacity (Voltage Range V) (mAh)	Internal Impedance*1 (Ω)	Standard Charge/Discharge Current (mA)	Cycle Life*2 (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.

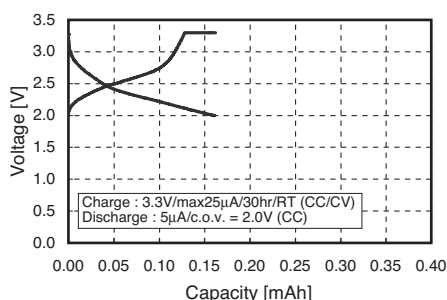
Please contact us for further details.

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

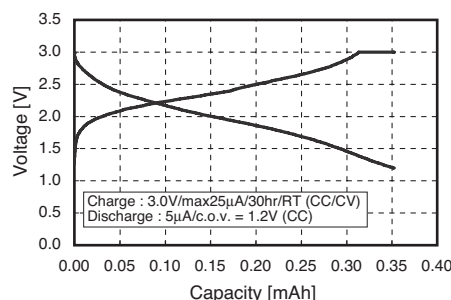
*4. D.O.D. : Depth of Discharge

CHARACTERISTICS

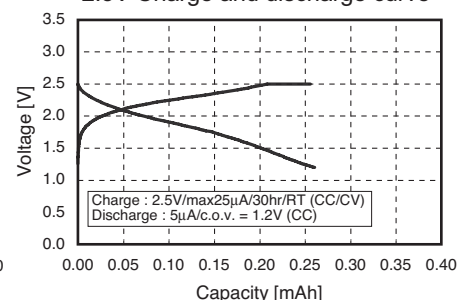
3.3V Charge and discharge curve



3.0V Charge and discharge curve

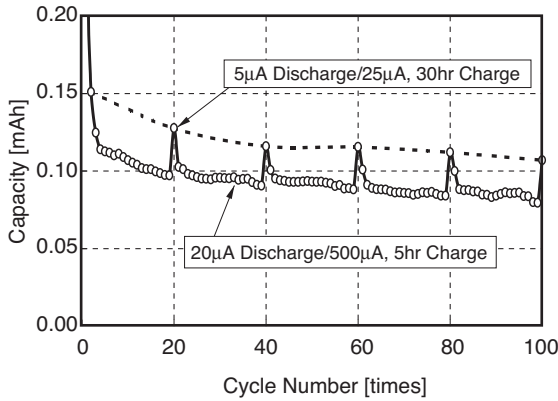


2.5V Charge and discharge curve

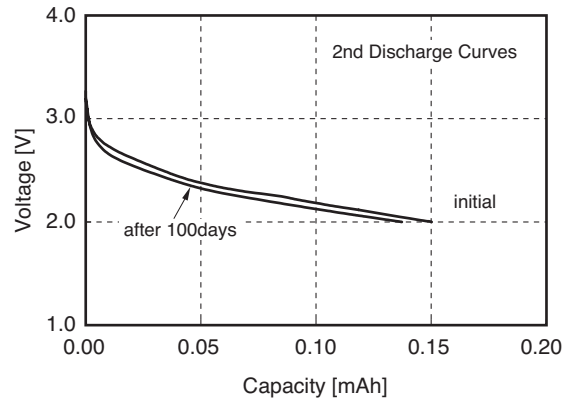


CHARACTERISTICS

Charge/Discharge Cycle Characteristics

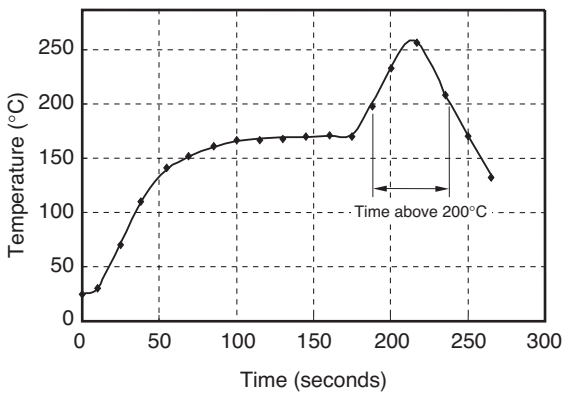


High Temperature Storage Characteristics (60°C)

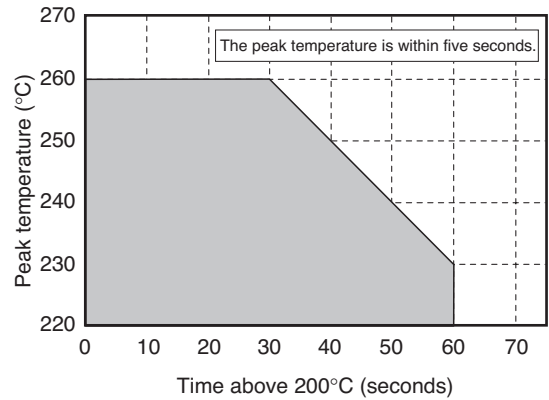


REFLOW SOLDERING CONDITIONS

Reflow Profile Example



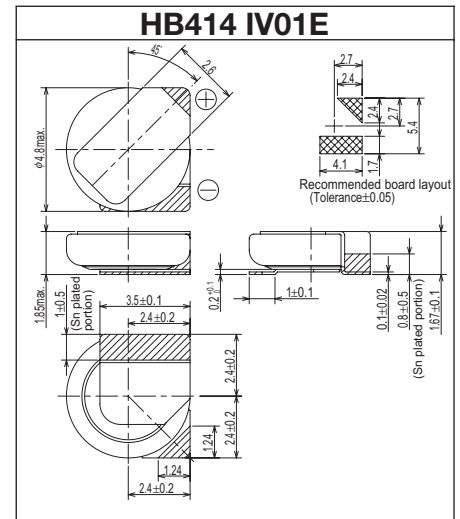
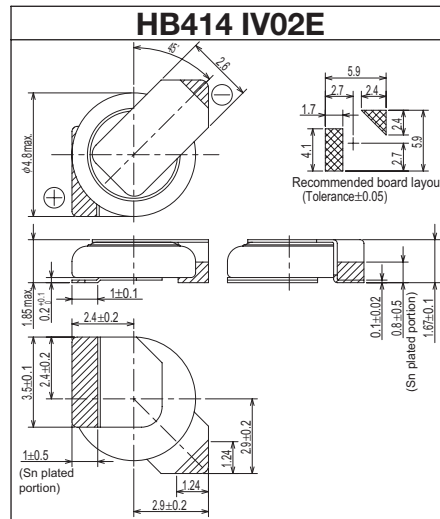
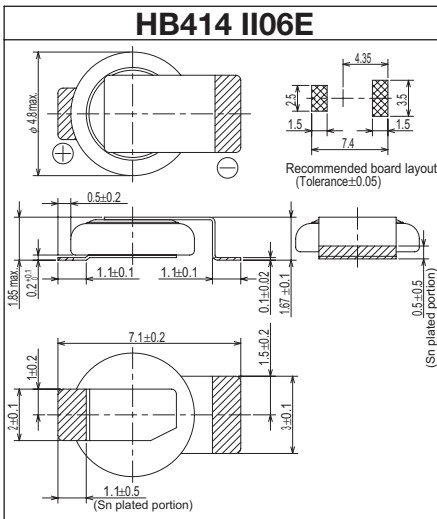
Recommended Reflow Conditions



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%).