SICHUAN HISUN BATTERY CO.,LTD.

SPECIFICATION

To _____

Model JN20H

Code 20H.1

Ver *SPC-16*

Fenggu Town,Mianyang City,Sichuan

0816-2810279 2811112

0816-2811154

hisun@hisun-battery.com

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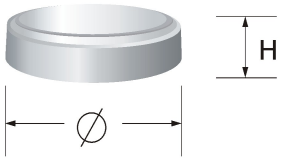
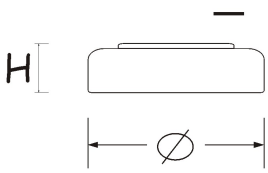
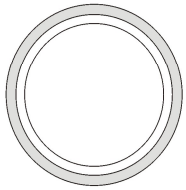






1		2				3			4
Label	H	Ø	d	S	Q	L	W		Weight(g)
Dimensions(mm)	3.1	11.6							1.7
Tolerances	Max.	Max.							Approx.

1.SYSTEM Rechargeable Ni-MH Button Cells

2.DATA SHEET

Nominal Capacity	20mAh 18mAh	min.
Nominal Voltage	1.2 V	
Normal Charging	2mA	for 16h
Trickle Charging	0.6-1 mA	continuous
Normal Discharging	4mA	
Max.Discharging	20mA	COV0.9 V
Discharge cut-off Voltage	1 V	
Temperature Range	0℃~45℃ -10℃~65℃ 0℃~35℃	Charge Discharge Storage

3. TEST CONDITIONS

Test item	Condition	Specification
Condition for standard operation	The test is carried out with new batteries (within a month after delivery). ambient conditions: Temperature: 20±5℃ Humidity: 65±20% Tolerances ±5‰ for voltage and current	
Normal Charge	charging at a constant current of 0.1C(2mA) for 16h.Prior to charging, the cell shall have been discharged at a constant current of 0.2C(4mA), down to a final voltage of 1.0V/cell.	
Open Circuit Voltage (OCV)	After 1 hour normal charge	≥1.25 V
Capacity	The cell shall be charged. After charging, the cell shall be stored for 1h,then the cell shall have been discharged at a constant current of 0.2C(4mA), down to a final voltage of 1.0V/cell. five cycles are permitted for this test.	≥300minutes
Overcharge	Prior to this test,the cell shall be discharged .The cell shall then be charged at a constant current of 0.1C(2mA)for 48h. After this charging operation,the cell shall be stored 1h,The cell shall then be discharged at a constant current of 0.2C(4mA)to a final voltage of 1.0V/cell.	≥255minutes

<table>
<tr><td>Charge retention</td><td colspan="4">The charged cell is stored for 28 days .And the discharge time is measured at normal discharge.</td><td>≥225minutes</td></tr>
<tr><td rowspan="7">(6)Life expectancy (IEC cycle)</td><td>Cycle number</td><td>Charge</td><td>Rest</td><td>Discharge</td><td rowspan="7">Total number of cycles ≥500</td></tr>
<tr><td>1</td><td>2mA x 960min</td><td>None</td><td>5mAx140 min</td></tr>
<tr><td>2-48</td><td>5mAx190 min</td><td>None</td><td>5mAx140 min</td></tr>
<tr><td>49</td><td>5mAx190 min</td><td>None</td><td>5mA to 1.0V/cell</td></tr>
<tr><td>50</td><td>2mA x 960min</td><td>1-4h</td><td>4mA to 1.0V/cell</td></tr>
<tr><td colspan="4">Cycles 1 to 50 shall be repeated until the discharge duration on any 50th cycle becomes less than 3h. At this stage, a repeat capacity measurement as specified for cycle 50 shall be carried out.The endurance test is considered complete when two such successive capacity cycles give a discharge duration of less than 3h. [IEC61951-2:(2003)7.4.1.1]</td></tr>
</table>

4.PRECAUTION

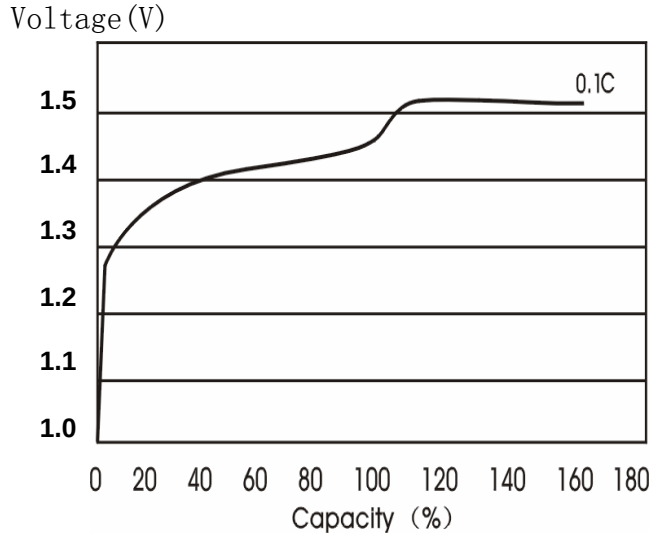
4.1 Never short-circuit or reverse polarity in application.

4.2 Avoid throwing cells into a fire or attempting to disassemble them.

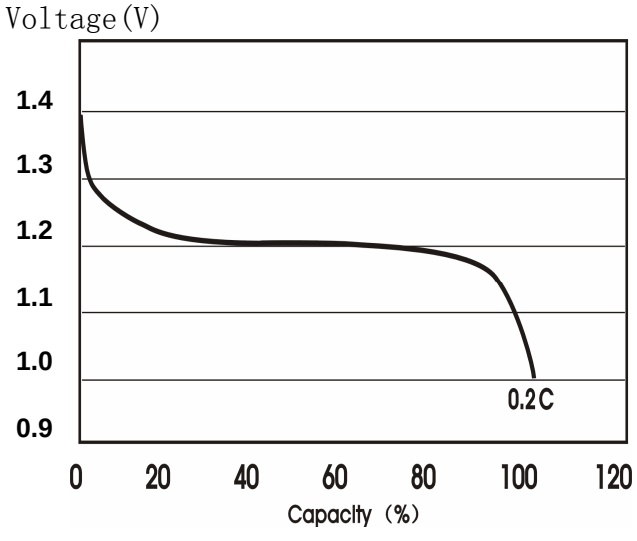
4.3 This is not safety: use the cell without the specified working temperature range, charge and discharge with more than our specified current.

4.4 Do not mix batteries with metal objects during storage or transportation to a

5.Main characteristics of Ni-MH batteries



Charging Curves



Discharging Curves