



## E&J TECHNOLOGY GROUP CO., LTD

# Ni-MH Low Self-Discharge Battery Specification

Model Number: EJ50AA2200S

Doc No: <u>SPE-NH-0138</u>

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# 1、Scope

This specification is suitable for the performance of the E&J Ni-MH Low Self rechargeable battery.

## 2. Model

EJ50AA2200S

## 3.Appearance

There shall be no such defects as deformation, flaw, stain, discoloration or electrolyte leakage.

# 4. Nominal specification

Desription			Specification				
Model			EJ50AA2200S				
Size			AA				
Dimensio	Diameter(mm)		14.5+0/-0.7				
	Height(mm)		50.5+0/-1.5				
ns	Weight(g)		Approx. 28g				
No	Nominal Voltage(V)		1.2				
Non	Nominal capacity(mAh)		2200				
Internal Impedance(mΩ)		ance(mΩ)	≤30				
Discharge Cut-off Voltage		off Voltage	1.0V				
	Charge	standard	0°C to 40°C				
		fast	10℃ to 40℃				
Ambient	Ambient D		-10℃ to 50℃				
temperature	Storage	<1 year	-10℃ to 30℃				
		<3 months	-10°C to 40°C				
		The relative humidity should keep with in 6					

## 5. Characteristics

Unless otherwise specified, test: should be done within one month of delivery under the following conditions:

◆ Ambient temperature 20±5°C

◆ Relative humidity 65±20%

◆ Atmospheric pressure 960±100mbar

Accuracy of voltmeters and amperometers to be used in testing shall be equal to or better than the grade 0.5.



# **Professional NI-MH Battery manufacturer**

Test item		Condition				Specification			
1. Charge	Standard	Charge at 0.1C for 16 hours			Ta=0~40°C				
	Fast	Cha -△V=0	arge ~5mV	at	0.5C	to	Ta=10~40°C		
	Trickle		(0.03	BC)-(0.0	05C)		Ta=0~40°C		
2. Discharge		At 0.2C to 1.0V							
3. Discharge cut-off voltage						1.0V			
4.Capacity	Minimum	Standar	lard charge/discharge			2100			
(mAh)	Typical	Standard charge/discharge			2200				
5. Internal resistance		After fully charge,rest 1 hour, measured at 1000Hz			≤30mΩ				
6.Hight Rate Dicharge(0.5C)		Standard charge 1hour rest Before Discharge by 0.5C to 1.0V			≥114minutes				
7. Self-Discharge		The charged battery is stored for 12months at 20°C. And the discharge time is measured at standard discharge			Capacity retention≥75%				
8. Overcharge		0.1C charge 28 days			No leakage				
					nor deformation				
9. High temperature test		Store at 40°C、50°C、60°C for 2 hours then charge/discharge			No leakage				
10. Low temperature test		Store at 0°C for 2 hours then charge/discharge		No leakage					
11. Short circuit test		Short circuit after fully charge			No explode				
12. Drop test		Free fall on the concerte from 1 meters after fully charged		No leakage No short-circuit					
13.Leakage test		standard charge stand for 14days		No leakage nor deformation					
14.Cycle life	Charge	Rest			Dischar	ge	Capacity		
1	0.1C for 16h		(	).25C f	or 2h20r	min	retention		
2~48	0.25C for 3h10min		(	0.25C f	or 2h20r	min	- ≥60% after _ 500cycles		
49	0.25C for 3h10min		0	.2C to	1.0V				
50	0.1C for 16h	1-4h	0	.2C to	1.0V				

#### **Professional NI-MH Battery manufacturer**

## 6. Cautions in use

To ensure proper use of the battery please read the manual carefully before using it.

#### Handling

Do not expose to, dispose of the battery in fire.

Do not put the battery in a charger or equipment with wrong terminals connected.

Avoid shorting the battery.

Avoid excessive physical shock or vibration.

Do not disassemble or deform the battery.

Do not immerse in water.

Do not use the battery mixed with other different make, type, or model batteries.

Keep out of the reach of children

#### Storage

Cycle(charge and discharge)the battery every 6-9month to maintain cell/battery performance ,When being stored for an extended period of time

Store the battery in a cool, dry and well-ventilated area.

## Disposal

Regulations vary for different countries.

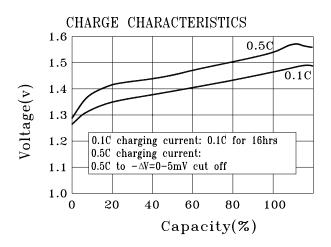
Dispose of in accordance with local regulations.

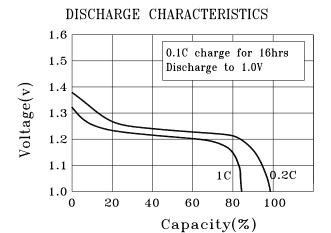
## 7. Note

Any other items which are not covered in this specification shall be agreed by both parties.

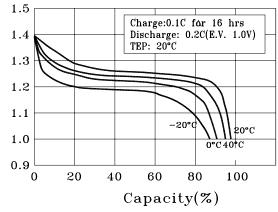


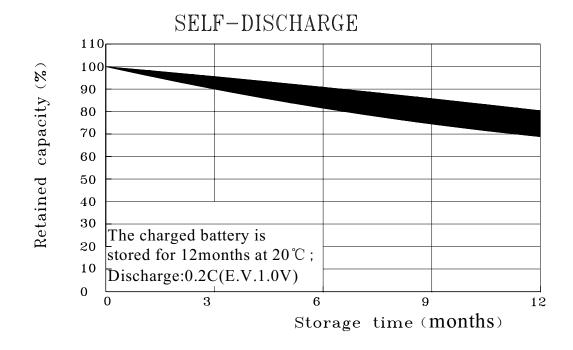
# Appendix:Battery performace curve





# DISCHARGE CHARACTERISTICS AT DIFFERENT TEMPERATURE 1.5 1.4 1.3





Voltage(v)