



NH300AAAJF • Nickel metal hydride battery



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1. Introduction

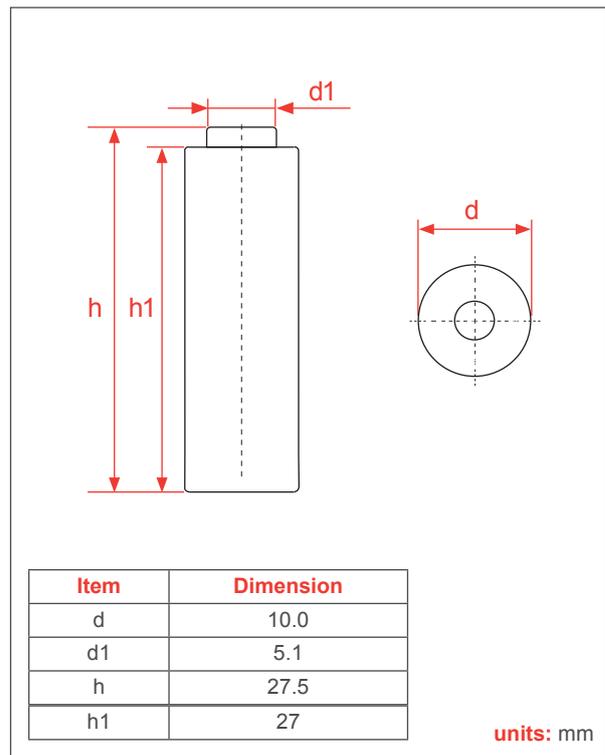
This specification governs the performance of the following FULLWAT Nickel-Metal Hydride Cylindrical cell (NH300AAAJF) and its stack-up batteries.

2. Data of stack up batteries

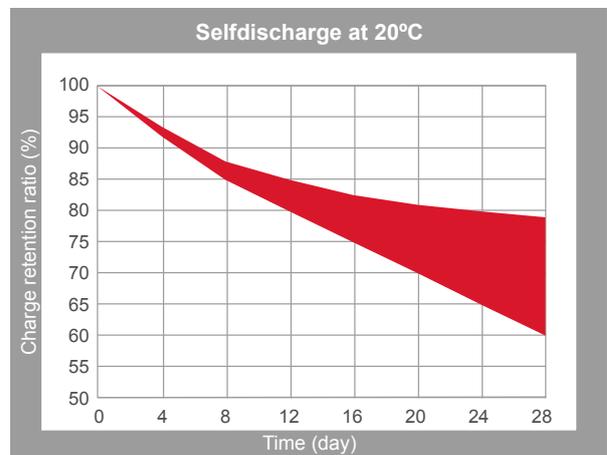
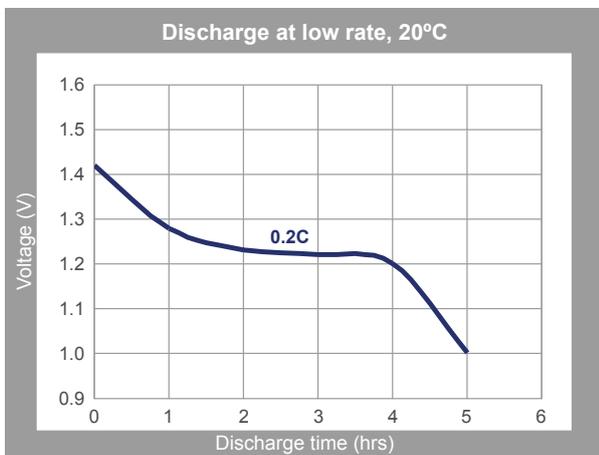
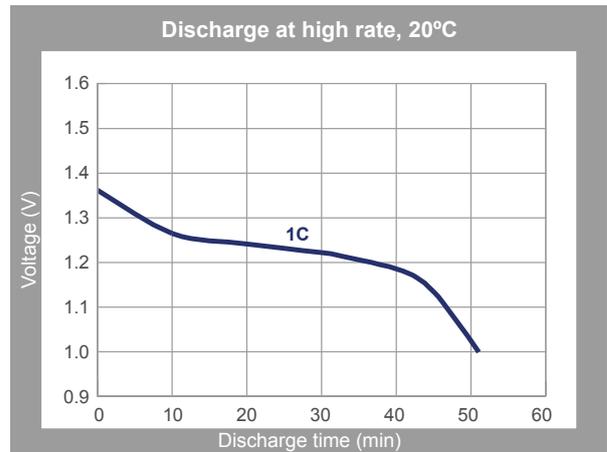
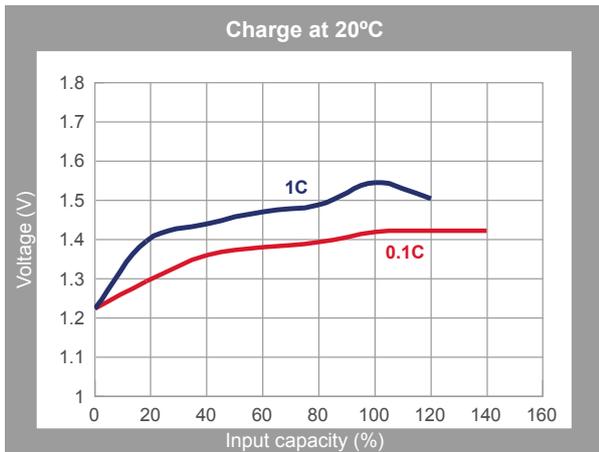
All data involves and weight to stack-up battery are equal to the value of unit cell time the number of unit cell which consisted in the stack batteries.

3. Ratings

Nominal capacity		300mAh	
Nominal voltage		1.2V	
Charge current	Pulse	<15mA	
	Standard	30mA	
	Medium	90mA	
	Quick	300mA	
Charge time	Pulse	No limit	
	Standard	14~16hrs	
	Medium	4~5hrs	
	Quick	1.2hrs	
Temperature	Charge	Standard	0 ~ 50°C
		Medium	10 ~ 50°C
		Quick	10 ~ 50°C
	Discharge	-30 ~ 60°C	
	Storage	-30 ~ 65°C	
Impedance (mohmios) (After charge)	Medium	38	
	Max.	45	
Weight		6.9gr.	



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4. Performance

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

Ambient temperature (T1): 20±5°C

Relative humidity: 60±20%

Charge conditions: 30 mA (C/10) x 14 hours

Discharge conditions: 60 mA (C/5) to 1,0 V/cell

Test	Unit	Value	Conditions	Remarks
Capacity	mAh	>300	Standard charge discharge	Up to 3 cycles are allowed
Open circuit voltage	V/cell	>1,25	Within 1 hour after standard charge	
Internal impedance	mohms/cell	Medium<38 Maximum<45	Upon fully charge (1KHz)	
High rate discharge (1C)	Minute	>54	Standard charge, 1 hour rest before discharge by 300mA (1C) to 1,0V/cell	Up to 3 cycles are allowed
Overcharge		No leakage No explosion	30mA (C/10). Charge 28 days.	
Charge retention	mAh	>210 (70 %)	Standard charge. Storage: 28 days. Standard discharge.	
Cycle life	Cycle	>500	IEC285 (1993) 4.4.1	
Accelerated cycle life	Cycle	>400	Charge 150mA (C/2). Discharge 300mA (C) to 1,0V/cell, End-of 80% nominal capacity.	Cycling charging cut-off condition. V=0~5 mV/cell and timer cut-off 110% nominal capacity input and temp. cut-off 55°C
Leakage		No leakage No explosion	Fully charge at 150mA (C/2)	
Vibration resistance		Change of voltage should be under 0,02V/cell, change of impedance should be under 5 mohms/cell.	Charge the battery at C/10 for 14 hours, then leave for 24hrs, check battery before/after vibration. Amplitude 1,5mm. Vibration 3000 CPM. Any direction for 60min.	
Impact resistance		Change of voltage should be under 0,02V/cell, change of impedance should be under 5 mohms/cell.	Charge the battery at C/10 for 14 hours, then leave for 24hrs, check battery before/after dropped. Height = 50cm. Wooden board (thickness 30mm) Direction not specified, 3 times.	

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5. External appearance

The cell/battery shall be free from cracks, scars, breakage, rust, discoloration, leakage nor deformation.

6. Warranty

The warranty is specified in our warranties section of *Terms of Sales*. If the product is to be stored for more than three months it is necessary to perform the appropriate maintenance to ensure the good condition of the batteries. Consult our annex to the *Terms of Sales* on the recommended maintenance.

7. Caution

- Reverse charging is not acceptable.
- Charge before use. The cells/batteries are delivered in an uncharged state.
- Do not charge/discharge with more than our specified current.
- Do not short circuit the cell/battery. Permanent damage to the cell/battery may result.
- Do not incinerate or mutilate the cell/battery.
- Do not solder directly to the cell/battery.
- The life expectancy may be reduced if the cell/battery is subjected adverse conditions like: extreme temperature, deep cycling, excessive overcharge/ over-discharge.
- Store the cell/battery uncharged in a cool dry place. Always discharge batteries before bulk storage or shipment.