

1. Scope

This specification governs the performance of the following Nickel-Metal Hydride cylindrical battery pack 1.2V AAA 600mAh.

Model: H-AAA600HT.

Cell size: AAA.

The data involving the nominal voltage and the approximate weight of the battery pack.

2. Ratings

Description	Unit	Specification	Conditions
Nominal Voltage	V	1.2	Unit cell
Nominal Capacity	mAh	600	Standard charging / discharging
Standard Charge	mA	60 (0.1C)	Ta=0-70°C
	hrs	14	
Trickle Charge	mA	30 (0.05C)	Ta=0~70°C
Maximum Continuous Discharge Current	mA	1200 (2.0C)	Ta= -10~70°C
Storage Temperature	°C	-20-35	Percent 30-50 charged state
Typical Weight	g	11.5	Unit cell

3. Performance

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

Relative humidity : 65+20% RH

Ambient Temperature (Ta) : 20+5°C

***Notes: Standard charge / discharge condition

Charge: 60 mA (0.1C) x 14 hrs

Discharge: 120 mA (0.2C) to 1.0V

***The batteries must be standard discharged before charging

***Battery test vide infra:

Test	Unit	Specification	Conditions	Remarks
Capacity	mAh	≥ 550	Standard Charge / Discharge	Up to 3 cycles allowed
Open Circuit Voltage (OCV)	V	≥ 1.25	Within 1 hr after standard charge	Unit cell
Internal Impedance (Ri)	mΩ	≤ 35	Upon fully charge (1 Khz)	Unit cell
High Rate Discharge (1.0C)	min	≥ 52	Standard charge, 1 hr rest before discharge	Discharge cut-off voltage 1.0V
Overcharge	mAh	No leakage nor explosion ≥ 450 (75%)	30mA (0.05C) for 5 years standard discharge	
Charge Retention	mAh	≥ 450 (75%)	Standard charge, storage for 28 days, standard discharge	
Permanent Charge endurance			IEC 61951-2 (7.4.2.3) For LT,MT cell.	
Short Circuit	N/A	Deformation & leakage may occur but no explosion	After standard charge, short circuit for 1 hr (lead wire = 0.5mm ² x 20mm)	

Vibration Resistance	N/A	$\Delta V < 0.02V$	Charge at 0.1C for 14 hrs, then leave for 24 hrs. Check battery before / after vibration Amplitude: 1.5mm, Vibration: 3000CPM (and direction for 60 mins)	Unit cell
Impact Resistance	N/A	$\Delta V < 0.02V$	Charge at 0.1C for 14 hrs, then leave for 24 hrs. Check battery before / after drop the wooden board of thickness: 30 mm Height: 50 cm, test for 3 times. Direction is not specified	Unit cell

4. Configurations, Dimensions And Markings

Please refer to the related drawing.

5. External Appearance

The cell / battery shall be free from cracks, scars, breakage, rust, discoloration, leakage and deformation.

6. Warranty

One year limited warranty against workmanship and material defect.

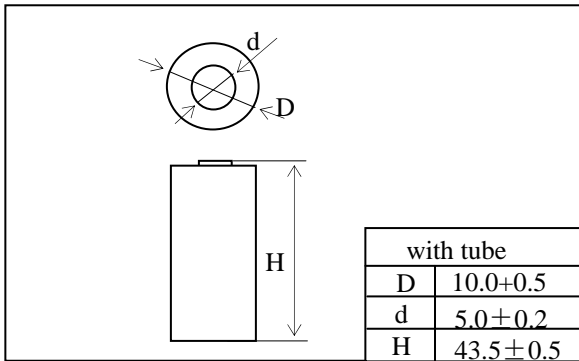
7. Cautions

1. Reverse charging is not acceptable.
2. Charge before use.
3. Do not charge / discharge with more than the specified current.
4. Do not short circuit the cell / battery.
5. Do not incinerate or mutilate the cell / battery.
6. Do not solder directly to the cell / battery.
7. The life expectancy may be reduced if the cell / battery is subjected to adverse conditions, like extreme temperature, deep cycling, excessive overcharge /over-discharge.
8. Store the cell / battery in a cool dry place.
9. Keep away from children. If swallowed, contact a physician at once.

Ni-MH BATTERY SPECIFICATION

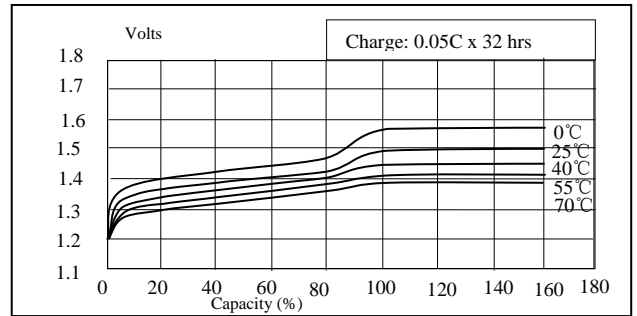
H-AAA600H (HR11/44T)

Dimensions (mm)

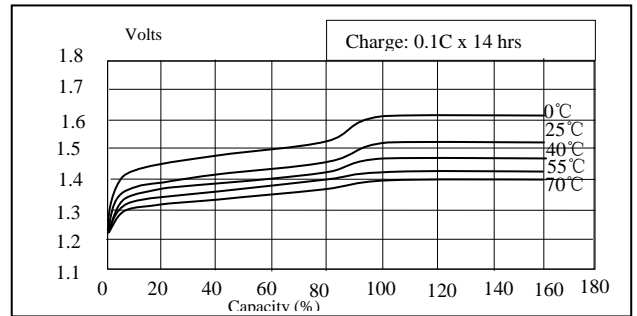


Nominal Voltage:	1.2V
Nominal Capacity:	600 mAh
Minimal Capacity:	550 mAh
Standard Charge:	60 mA, 14 hrs
Trickle Charge:	30mA, 32 hrs
Durable Overcharge Life:	4 year (Trickle Charge)
Continuous Discharge :	less than 1200 mA
Weight:	11.5 g (Approx)
Internal Resistance:	25 m Ω (Approx)
Ambient Temperature:	Standard charge : 0 ~ 70°C Discharge: -10 ~ 70°C
Store: (65+20% RH)	Less than 30 days: -20 ~-50°C Less than 90 days: -20 ~-40°C Less than 360 days: -20 ~-30°C

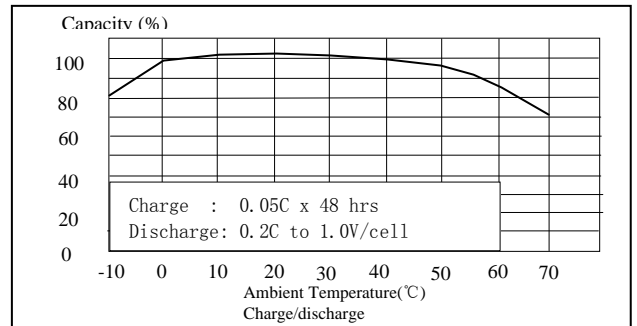
Note:
After charge at 0.1C for 14 hrs and discharge at 0.2C to 1.0V at 25°C



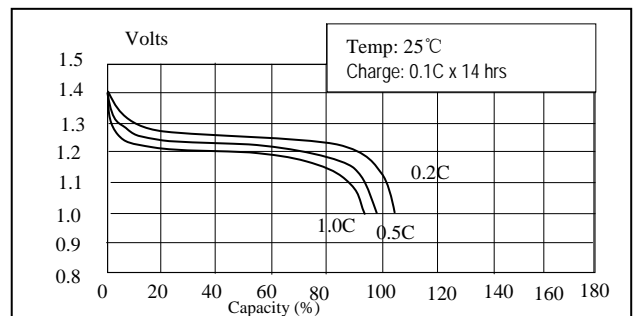
0.05C Rate Charging Curves



0.1C Rate Charging Curves



Charging Efficiency



1.0C/0.5C/0.2C Rate Discharging Curves