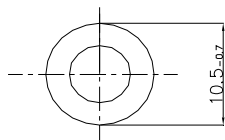
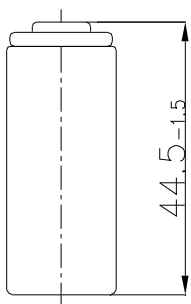
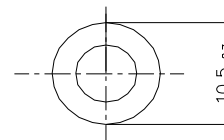
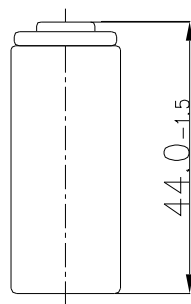


1.SPECIFICATIONS :

Type	Sealed Ni-MH Cylindrical Battery cell
Size	H700AAA
Mode	AA
Nominal Voltage	1.2V
Nominal Capacity(20°C,,0.2CA discharge to 1.0V)	700mAh
Typical Capacity:	720Ah
Minimum Capacity	630 mAh
Typical Internal Impedance(at 1 kHz) (fully charged at 20°Cmax)	≤ 30mΩ
Average Weight	11.5g
Dimensions(including PVC tube)	
Height(h)	high top : 44.5 ^{-1.5} mm flat top : 44.0 ^{-1.5} mm
Diameter(D):	10.5 ^{-0.7} mm
Charging Method: (20°C)	
Standard Charge:	Charge with 70 mA for 16 h
Quick Charge	Charge with 210 mA for 4.5 h
Fast Charge:	Charge with 350mA for 140 min (Under -Δ V controlled 10mV/cell)
Max Overcharge Current	70 mA(No longer than 100 h)
Trickle Current	21~35mA
Operating Temperature(reference only):	
Storage	-20°C ~ +35°C
Discharge:	-20°C ~ +60°C
Standard Charge	0°C ~ +45°C
Fast Charge	+10°C ~ +45°C



(high top)



(flat top)

Approved by :

Checked by:

Documented by :

• Subject to be modified without prior notice

2,Performance

Testing Item	Testing Conditions	Standard
Standard Testing Condition	If not specially described, Temperature 20+/-5°C Relative Humidity: 65±20%。	
(1) Standard Charge	0.2CA discharge to 1.0V/cell, then 0.1CA charge for 16 h (Constant Current)	
(2) Fast Charge	0.2CA discharge to 1.0V/cell, then 1.0CA charge for 1.2 h (Under -Δ V controlled 10mV/cell)	
(3) Open Circuit Voltage	Test within 14 days after standard charge	≥ 1.25V/cell
(4) Nominal Capacity	Have 1-4 h of rest after standard charge, then 0.2CA discharge to 1.0V/cell, 3 cycles permitted	≥ 300 min
(5) High Rate Discharging Capacity	Have 1-4 h of rest after fast charge, Then 0.5CA discharge to 1.0V/cell, 3 cycles permitted	≥ 108 min
(6) Cycle Life	for GB/T 15100.2-2003/IEC61951-2 : 2003(7.4.1.1)	≥ 500 cycles
(7) Over-charge	After(4) testing, 0.1CA charge for 48 h, check cell surface, 0.2CA discharge to 1.0V/cell.	No deformation or leakage can be found, and ≥ 270 min
(8) Over-Discharge	After(4) testing, 0.2CA discharge for 24 h, under constant impedance, then standard charge, rest for 30 min, 0.2CA discharge to 1.0V /cell.	≥ 240 min
(9) Temperature	Fast charged as (2) under 20+/-5°C, stored 3 h, under following temperatures, then 0.5CA discharge to 1.0V/cell: a) Discharging Temperature: 0°C b) Discharging Temperature: 20°C c) Discharging Temperature: 40°C	Discharging Time 90 min 100 min 90 min
	Fast charged as (2) under following temperature, stored 3 h under 20+/-5°C , then 0.5CA discharged to 1.0V/cell: a) Charging Temperature: 0°C b) Charging Temperature: 20°C c) Charging Temperature: 40°C	Discharging Time 100 min 100 min 90 min
(10) Self-discharge	After standard charge, stored for 30 days under 20+/-5°C, then discharged to 1.0V/cell	Discharging Time ≥ 210 min
(11) Storage	Charged or discharged as (1) condition and stored for 180 days under 20+/-5°C, then tested as(4) condition	Discharging Time ≥ 300 min

(12)Humidity	Standard charged and stored under RH of 65±20%.	No deformation or leakage found
(13)Vibration	Vibration in any direction at amplitude of 4 mm and A frequency of 1000 cycles per minute and continue for 60 min.	The battery shall conform electrical spec, mechanical deformation or damage is acceptable
(14)Drop	The battery shall be subjected to drop from the height of 100cm to an oak board more than 10mm thick,the test should be carried for 3 times at each direction of the battery axis.	
(15)Safety	(1)External short:Fast Charged and then short-circuited between terminals of the battery by the lead wire with the cross section area of 0.75 square millimeter.	The battery shall not explode,but electrolyte leakage or deformation of the battery is acceptable.
	(2)Over charge: Charge for 5 h at the constant current of 1.0CA.	
	(3)Reverse charge: Reverse charge for 5 h at the constant current of 1.0CA.	
	(4)Safety vent operation: The reverse-charge is conducted for 30 min at the constant current of 1.0CA.after pre-discharge at the constant current of 0.2CA up to the end voltage of 0V/Cell.	Safety vent shall operate,The battery shall not explode, electrolyte leakage or deformation of the battery is acceptable.

2 . Note:

- 1).Do not dispose of cell into fire or be dismantled under any condition.
- 2).Do not mix different cell types and capacities in the same battery assembly.
- 3).Charge and discharge under specified ambient temperature recommended to BFN specification.
- 4).Short circuit leading to cell venting must be avoided .
- 5).Never solder onto cell directly.
- 6).Cell reversal should be avoided.
- 7).Use batteries in extreme condition may affect the service life, such as:extreme temperature, deep cycle,extreme overhcharge and over discharge.
- 8).Batteries should be stored in a cool dry place.
- 9).Once problems be found,stop using,send batteries to local dealer.

3,Storage

- 1).It is strongly recommended to store Ni-Cd batteries and cells in the temperature range from -20 to 25°C ,and in low humidity and no corrosive gas environment,to maintain a reasonably high capacity recovery level.
- 2). Avoid storage higher (e.g.35°C),lower temperature than -20°C ,or higher humidity which would result in deterioration or damage to the cells and batteries such as follows:
 - 4, Permanent capacity loss
Electrolyte leakage resulted from the expansion or shrinkage of organic material inside the cells
 - 5, Rust of metal parts.

- Subject to be modified without prior notice

6, Up to three full cycles of charge /discharge after long-termed storage may need to obtain highest capacity.

◦

GB/T 15100.2-2003/IEC61951-2 : 2003(7.4.1.1) Endurance in cycles

Cycle number	Charge	Stand in charged condition	Discharge
1	0.1CA (70mA) for 16h	none	0.25CA (175mA) for 2h 20 min
2-48	0.25CA (175mA) for 3h 10 min	none	0.25CA (175mA) for 2h 20 min
49	0.25CA (175mA) for 3h 10 min	none	0.25CA (175mA) to 1.0 V
50	0.1CA (70 mA) for 16h	1 h to 4 h	0.2CA (140mA) to 1.0 V

Cycle 1 to 50 shall be repeated until the discharge duration on any 50th cycle becomes less than 3 h. At this stage, a repeat capacity measurement as specified for cycle 50 shall be carried out.

The endurance test is considered complete when two successive capacity measurement cycles give a discharge duration of less than 3 h. The number of cycles obtained when the test is completed shall be not less than 500.

