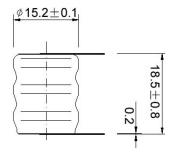
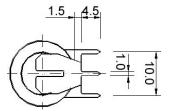
# 80H3A3H Ni-MH BUTTON CELL

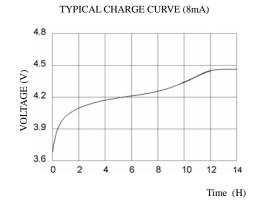
# TECHNICAL DATA





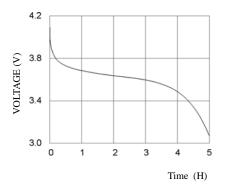
| Model   | Voltage | Capacity | Recommended<br>Trickle Charge Current | Nominal<br>Charge Current | Normal<br>Charging Time | Nominal<br>Discharge Current | Weight |
|---------|---------|----------|---------------------------------------|---------------------------|-------------------------|------------------------------|--------|
| 80H3A3H | 3.6V    | 80mAh    | 2.4~4mA                               | 8mA                       | 14~16h                  | 16mA                         | 10.2g  |

## CHNICAL CHARACTERISTICS

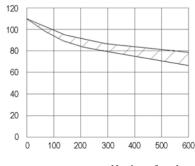


Έ

TYPICAL DISCHARGE CURVE (16mA)

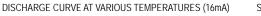


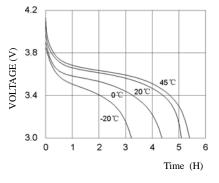
CYCLE LIFE CURVE



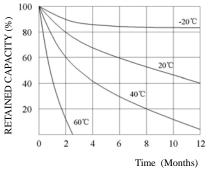
% NOMINAL CAPACITY

Number of cycles





SELF DISCHARGE RATE AT VAROUS TEMPERATURES

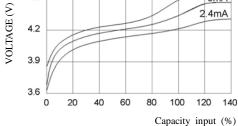


 TYPICAL CHARGE CURVE AT VARIOUS CURRENTS

 4.8
 16mA

 4.5
 2.4mA

 4.2
 2.4mA



# **TECHNICAL INFORMATION**

#### 1. APPLICATION

This specification applies to the Ni-MH batteries Model :80H3A3H

#### 2. CELL AND TYPE

- 2.1 Cell :Sealed Ni-MH Button Cell
- 2.2 Type :Button type
- 2.3 Size type : 3.6V

#### 3. RATINGS

- 3.1 Nominal voltage : 3.6V
- 3.2 Nominal capacity : 80mAh/0.2CmA
- 3.3 Typical weight : 10.2g
- 3.4 Standard charge  $: 8mA \times 14hours$
- 3.5 Rapid charge : 16mA×6hours
  - Trickle current : 2.4mA
- 3.6 Discharge cut-off voltage: 3.0V

#### 3.7 Temperature range for operation (Humidity: Max.85%)

| 0~+45°C           |
|-------------------|
| +10 <b>~</b> +45℃ |
| 0~+45 ℃           |
| -10~+45℃          |
|                   |

3.8 Temperature range for storage (Humidity: Max.85%)

| Within 2 years  | -20~+35℃ |
|-----------------|----------|
| Within 6 months | -20~+45℃ |
| Within a month  | -20~+45℃ |
| Within a week   | -20~+55℃ |

4. ASSEMBLY & DIMENSIONS

Per attached drawing

5. PERFORMANCE

#### 5.1 TEST CONDITIONS

The test is carried out with new batteries (within a month after delivery)

ambient conditions

Temperature:  $+25\pm5^{\circ}$ C

Humidity:  $60\pm20\%$ 

Note 1

Standard charge : 8mA×14hours Standard discharge : 0.2C to 3.0V

#### 5.2 TEST METHOD & PERFORMANCE

| Test         | Unit            | Specification | Conditions            | Remarks        |
|--------------|-----------------|---------------|-----------------------|----------------|
| Capacity     | mAh             | ≥80           | Standard              | Up to 3 cycies |
|              |                 |               | Charge/discharge      | Are allowed    |
| Open Circuit | Voltage         | ≥3.8          | After 1 hour standard |                |
| Voltage(OCV) | (V)             |               | Charge                |                |
| Internal     | $m \Omega/cell$ | ≤900          | Upon fully charge     |                |
| Impedance    |                 |               | (1KHz)                |                |

| High rate       | Minute | ≥60            | Standard charge      |
|-----------------|--------|----------------|----------------------|
| Discharge(0.5C) |        |                | Before discharge     |
| Discharge       | mA     | 40             | Maximum continuous   |
| Current         |        |                | Discharge current    |
| Over charge     |        | No leakage     | 2.4mA(0.03C) charge  |
|                 |        | Not explosion  | one year             |
| Charge          | mAh    | 64             | Standard charge;     |
| Retention       |        |                | Storage: 28 days;    |
|                 |        |                | Standard discharge   |
| Cycle Life      | Cycle  | ≥500           | IEC285(1993)4.4.1    |
| Leakage         |        | No leakage nor | Fully charge at 8mA, |
|                 |        | Deformation    | Stand 14 days        |

Note 2 IEC285(1993)4.4.1 cycle life

| Cycle number | Charge      | Rest | Discharge   |
|--------------|-------------|------|-------------|
| 1-50         | 8mA for 14h |      | 16mA for 5h |

50 cycles of test as in the following table condition is repeated, The discharge time of the  $100^{\text{th}},200^{\text{th}},400^{\text{th}},500^{\text{th}}$  is more than 5 hours. (Ambient temperature is  $20\pm5^{\circ}$ C)

### 5.3 Humidity

The battery shall not leak during the 14 days which it is submitted to the condition of a temperature of  $33\pm3$ °C and a relative humidity of  $80\pm5\%$ 

### 6. OTHERS

- 6.1 We recommend you to set the cut-off voltage at 1.0V/cell
- 6.2 If the cut-off voltage is above 1.1V/cell, the battery may be underutilized resulting insufficient use of the available capacity
- 6.3 If it is below 1.0V/cell,the battery may have discharge or reverse charge to the cell

### 7. PRECAUTION

The cells shall be delivered in charged condition. Before testing or using, the cell shall be discharged at  $20\pm5^{\circ}$  at a constant current of 0.2CmA to a final voltage of 1.0V/cell.

- 7.1 Avoid throwing cells into a fire or attempting to disassemble them.
- 7.2 Avoid short circuiting the cells.
- 7.3 Avoid direct solidarity to cells.
- 7.4 Observe correct polarity when connecting.
- 7.5 Do not charge with more than our specified current.
- 7.6 Use cells only within the specified working temperature range.
- 7.7 Store cells in dry and cool place.