

### MHB MS Series--Small-size batteries

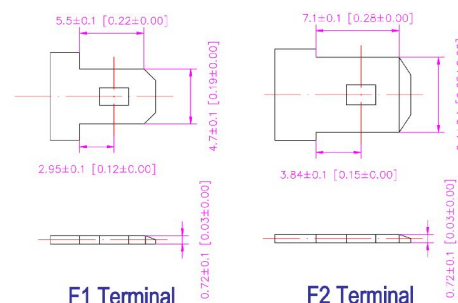
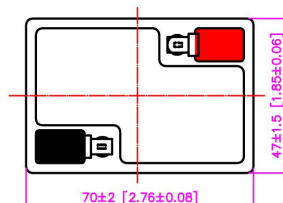
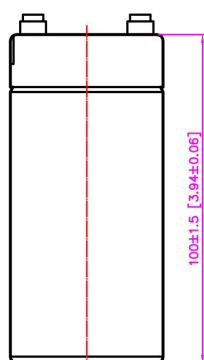
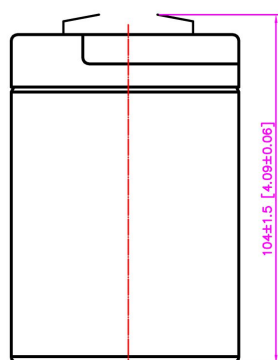
- 100% before shipment testing, stable and reliable long-term quality
- patented grid alloy formula and updated manufacturing technique
- completely sealed and maintenance-free, low self-discharge
- Excellent charging and re-charging acceptance
- Cycle use: More than 260 cycles at 100% DOD
- Floating & standby use: 3-5 years

### Application:

- Alarm System
- Cable Television
- Communication Equipment
- Emergency Power System
- Security System
- Medical Equipment
- UPS
- Power tools
- Control Equipment
- Toys

### Construction:

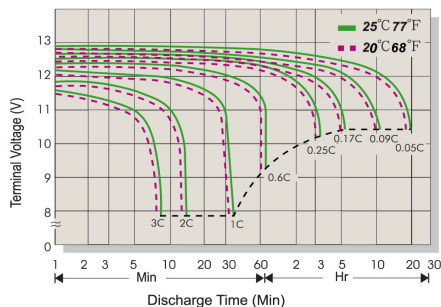
- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy
- Safety valve .... Rubber
- Terminal .....Copper
- Separator .....Fiber glass
- Electrolyte .....Sulfuric acid



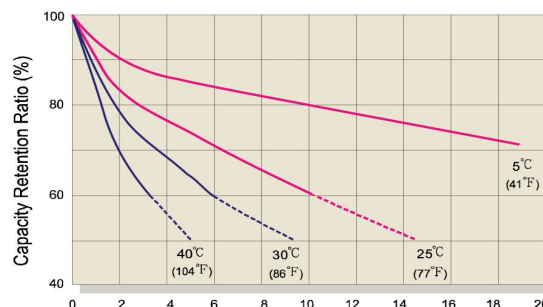
### Speification:

| Battery Model                    | MS4-6B 6V4.0AH                             |                    |                      |                   |
|----------------------------------|--------------------------------------------|--------------------|----------------------|-------------------|
| Designed Floating Life           | 3~5 Years                                  |                    |                      |                   |
| Capacity (25℃)                   | 20HR(0.200A,5.25V)                         | 10HR(0.363A,5.25V) | 5HR(0.660A,5.25V)    | 1HR(2.040A,5.25V) |
|                                  | 4.00 AH                                    | 3.63 AH            | 3.30 AH              | 2.04 AH           |
| Dimensions                       | Length                                     | Width              | Height               | Total Height      |
|                                  | 70 mm                                      | 47 mm              | 100 mm               | 106 mm            |
| Approx. Weight                   | 0.68Kg ±3%                                 |                    |                      |                   |
| Internal Resistance              | Full charged at 25℃ : ≤24.00 mΩ            |                    |                      |                   |
| Self Discharge                   | 2% of capacity declined per month at (25℃) |                    |                      |                   |
| Capacity Affected by Temp.(20HR) | 40℃                                        | 25℃                | 0℃                   | -15℃              |
|                                  | 102%                                       | 100%               | 85%                  | 65%               |
| Charge Voltage(25℃)              | Cycle use                                  |                    | Float use            |                   |
|                                  | 7.20-7.50V(-15mV/℃), max. Current: 1.00A   |                    | 6.75-6.90V (-10mV/℃) |                   |

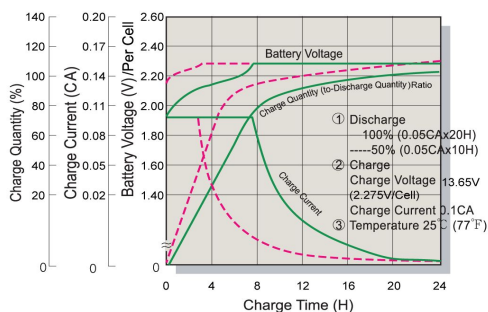
### Terminal Voltage (V) and Discharge Time



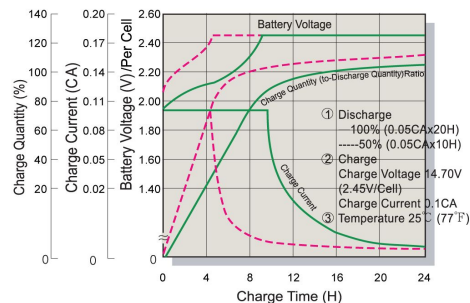
### Capacity Retention Characteristic



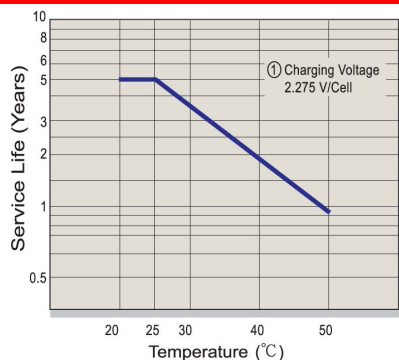
### Battery Voltage and Charge Time for Standby Use



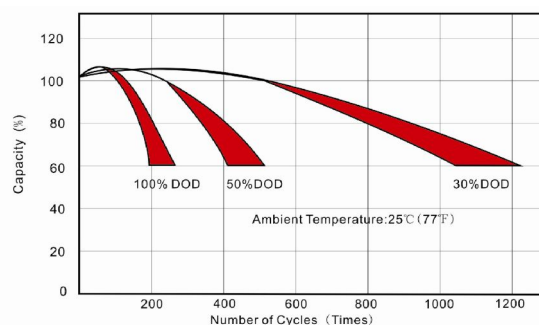
### Battery Voltage and Charge Time for Cycle Use



### Tickle(or Float) Service Life



### Cycle Service Life



### Constant Current Discharge(CC,Unit:A) at 25°C(77°F)

| F.V/Time   | 5Min  | 10Min | 15Min | 30Min | 1Hr   | 2Hr   | 3Hr   | 4Hr   | 5Hr   | 6Hr   | 10Hr  | 20Hr  |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.80V/Cell | 12.03 | 8.24  | 5.77  | 3.66  | 2.002 | 1.250 | 0.972 | 0.764 | 0.648 | 0.433 | 0.356 | 0.196 |
| 1.75V/Cell | 12.25 | 8.40  | 5.87  | 3.73  | 2.040 | 1.273 | 0.990 | 0.778 | 0.660 | 0.441 | 0.363 | 0.200 |
| 1.70V/Cell | 12.62 | 8.65  | 6.05  | 3.84  | 2.101 | 1.311 | 1.019 | 0.802 | 0.680 | 0.454 | 0.374 | 0.204 |
| 1.67V/Cell | 12.99 | 8.90  | 6.23  | 3.95  | 2.162 | 1.350 | 1.049 | 0.825 | 0.699 | 0.467 | 0.385 | 0.208 |
| 1.60V/Cell | 13.36 | 9.15  | 6.40  | 4.07  | 2.224 | 1.388 | 1.079 | 0.849 | 0.719 | 0.481 | 0.395 | 0.214 |

### Constant Power Discharge (CP,Unit:W) at 25°C(77°F)

| F.V/Time   | 5Min  | 10Min | 15Min | 30Min | 1Hr  | 2Hr  | 3Hr  | 4Hr  | 5Hr  | 6Hr  | 10Hr | 20Hr |
|------------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.80V/Cell | 23.46 | 16.07 | 11.25 | 7.14  | 3.90 | 2.44 | 1.89 | 1.49 | 1.26 | 0.84 | 0.69 | 0.38 |
| 1.75V/Cell | 23.89 | 16.37 | 11.46 | 7.27  | 3.98 | 2.48 | 1.93 | 1.52 | 1.29 | 0.86 | 0.71 | 0.39 |
| 1.70V/Cell | 24.61 | 16.86 | 11.80 | 7.49  | 4.10 | 2.56 | 1.99 | 1.56 | 1.33 | 0.89 | 0.73 | 0.40 |
| 1.67V/Cell | 25.33 | 17.35 | 12.14 | 7.71  | 4.22 | 2.63 | 2.05 | 1.61 | 1.36 | 0.91 | 0.75 | 0.41 |
| 1.60V/Cell | 26.05 | 17.85 | 12.49 | 7.93  | 4.34 | 2.71 | 2.10 | 1.65 | 1.40 | 0.94 | 0.77 | 0.42 |