



VRLA Battery

**MS1.3-6** 6V 1.3Ah

**MS Series SLA Battery**

**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



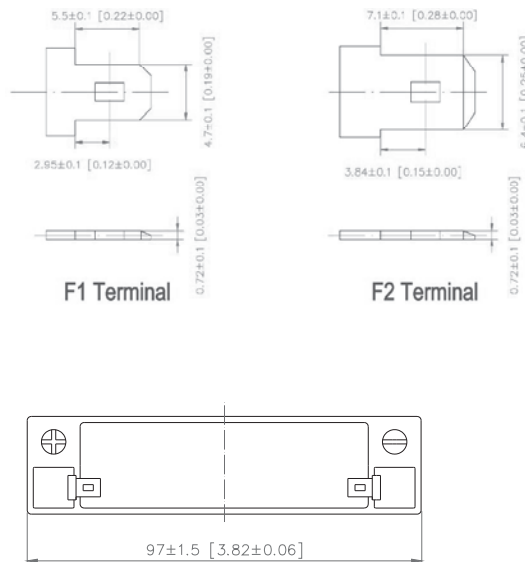
ISO:9001



ISO:14001



TB 09075935 MH 47104



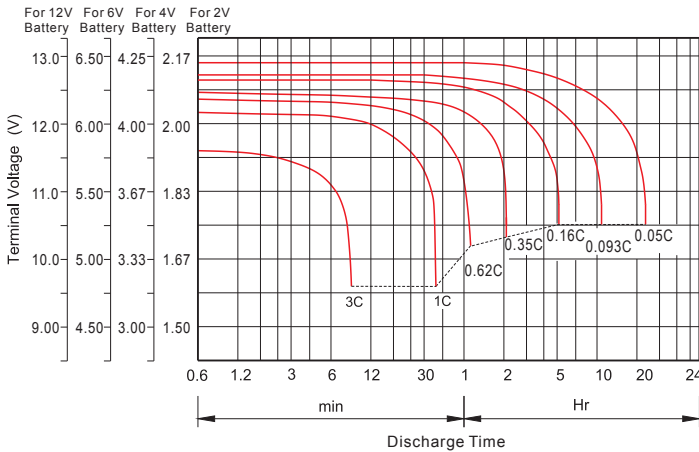
**Specification:**

Battery Model	MS 1.3 - 6 6V 1.3AH			
Designed Floating Life	3~5 Years			
Capacity@(40°C)				
Dimensions	Length 97mm (3.82inch)	Width 24mm (0.94inch)	Height 51mm (2.01inch)	Total Height 55mm (2.17inch)
Approx. Weight	0.29Kg (0.64 lbs) ± 1%			
Internal Resistance	Full charged at 25°C: ≤ 45m Ω			
Self Discharge	3% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C 102%	25°C 100%	0°C 85%	-15°C 65%
Charge Voltage(25°C)	Cycle use 14.4-15.0V(-30mV/°C), max. Current: 2.10A		Float use 13.6-13.8V (-20mV/°C)	

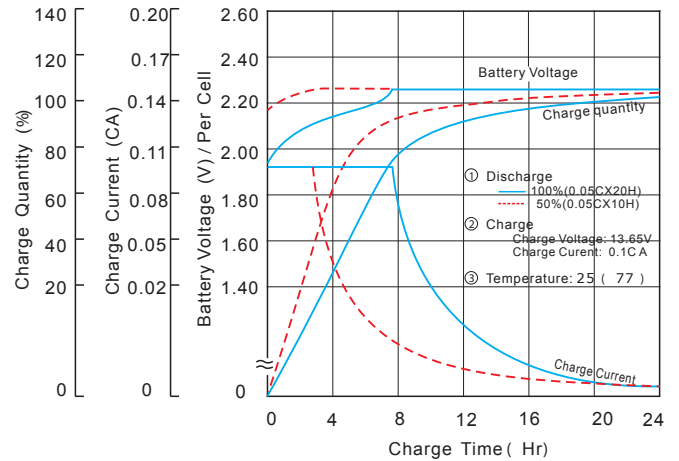
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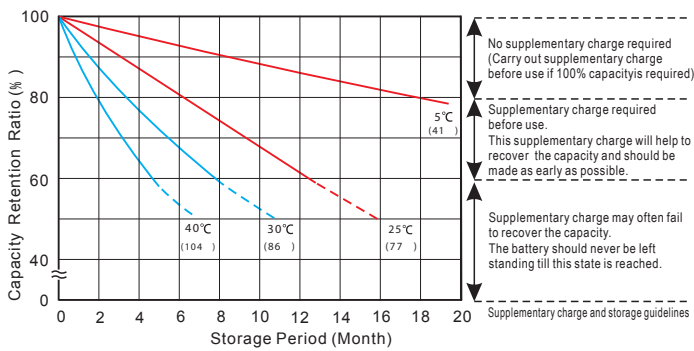
### Discharge Characteristics @ 25°C



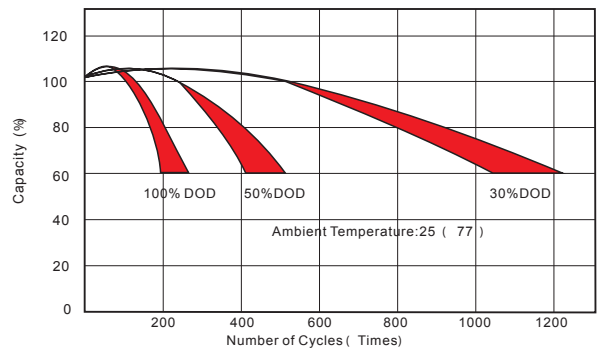
### Charge Characteristics (Standby Use)



### Capacity Retention Characteristics



### Cycle Service Life



### Charge Procedure

Application	Constant Voltage Charge (V/cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25 ( 77 )	2.425	2.40~2.45	0.3C
Standby Use	25 ( 77 )	2.275	2.25~2.30	

### Discharge Current V.S. Discharge Voltage

Final Discharge Voltage (V/cell)	1.75	1.70	1.60	1.30
Discharge Current (A)	0.2C > (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1C	(A) > 1C

Note: Temp. Compensation Coefficient of Charge Voltage, Cycle use: -4mV /cell, Standby Use: -3mV /cell

### Constant Current (CC, Unit: A) & Constant Power (CP, Unit: W) Discharge Table at 25°C (77)

F.V. (V/cell) Model	Time	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
		1.60V	CC (A)	4.68	3.07	2.28	1.50	0.78	0.46	0.33	0.27	0.23	0.15
	CP (W)	27.60	17.33	13.11	7.94	4.50	2.63	1.94	1.55	1.32	0.87	0.71	0.39
1.70V	CC (A)	4.29	2.94	2.09	1.42	0.73	0.44	0.33	0.26	0.22	0.15	0.12	0.07
	CP (W)	25.97	16.41	12.32	7.88	4.23	2.53	1.88	1.51	1.29	0.86	0.70	0.38
1.75V	CC (A)	3.91	2.74	1.95	1.38	0.71	0.43	0.32	0.25	0.22	0.15	0.12	0.07
	CP (W)	25.08	15.93	11.78	7.80	4.10	2.48	1.85	1.43	1.29	0.85	0.69	0.38
1.80V	CC (A)	3.75	2.62	1.82	1.34	0.68	0.42	0.31	0.24	0.21	0.14	0.12	0.06
	CP (W)	21.99	15.44	11.35	7.77	3.98	2.43	1.83	1.41	1.23	0.81	0.68	0.37
1.85V	CC (A)	3.47	2.47	1.69	1.30	0.66	0.41	0.30	0.24	0.20	0.14	0.11	0.06
	CP (W)	21.26	14.92	10.81	7.72	3.93	2.41	1.77	1.41	1.20	0.79	0.66	0.37

Note: The above data are average values, and can be obtained with 3 charge/discharge cycles.