



VRLA Battery

**MS4.5-6** 6V4.5Ah

**MS Series SLA Battery**

**MHB MS Series--Small-size batteries**

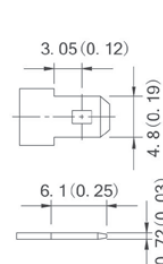
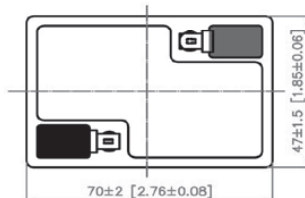
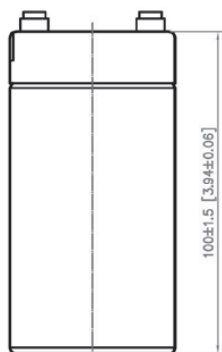
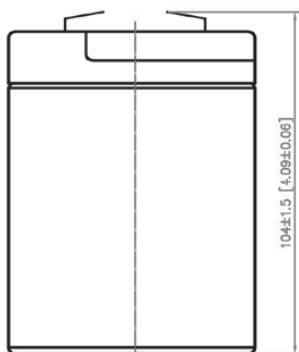
- 100% before shipment testing, stable and reliable long-term quality
- patented grid alloy formula and updated manufacturing technique
- completely sealed and maintenance-free, low self-discharge
- Excellent charging and re-charging acceptance
- Cycle use: More than 260 cycles at 100% DOD
- Floating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

**Application:**

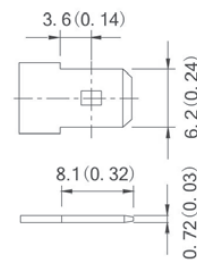
- Alarm System
- Cable Television
- Communication Equipment
- Emergency Power System
- Security System
- Medical Equipment
- UPS
- Power tools
- Control Equipment
- Toys

**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



F1 Terminal



F2 Terminal

**Specification:**

Battery Model	MS 4.5 - 6 6V4.5AH			
Designed Floating Life	3~5 Years			
Capacity@(40°C)	20HR(0.225A,5.25V)	10HR(0.435A,5.25V)	5HR(0.855A,5.25V)	1HR(2.92A,5.25V)
	4.50AH	4.35AH	4.27AH	2.92AH
Dimensions	Length	Width	Height	Total Height
	70mm (2.76inch)	47mm (1.85inch)	100mm (3.94inch)	104mm (4.09inch)
Approx. Weight	0.76Kg (1.68 lbs) ± 5%			
Internal Resistance	Full charged at 25°C: ≤17.5mΩ			
Self Discharge	2% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	7.20-7.50V(-15mV/°C), max. Current: 1.35A		6.75-6.90V (-10mV/°C)	

**FUJIAN MINHUA POWER SOURCE CO., LTD.**

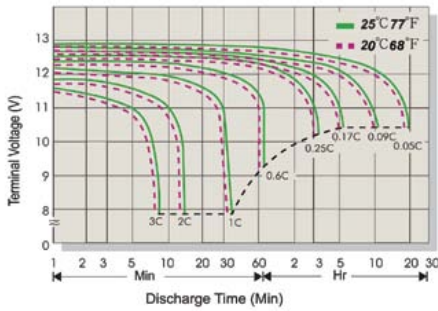
www.mhb-battery.com



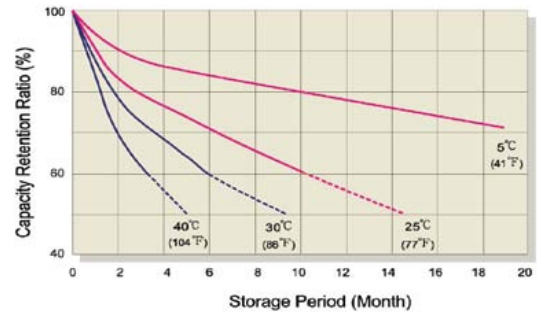
VRLA Battery

MS4.5-6 6V4.5Ah

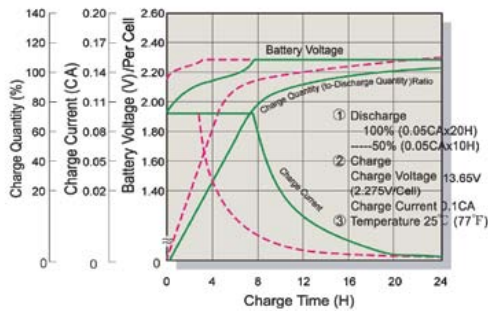
Terminal Voltage (V) and Discharge Time



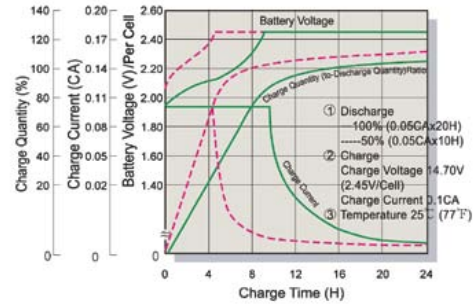
Capacity Retention Characteristic



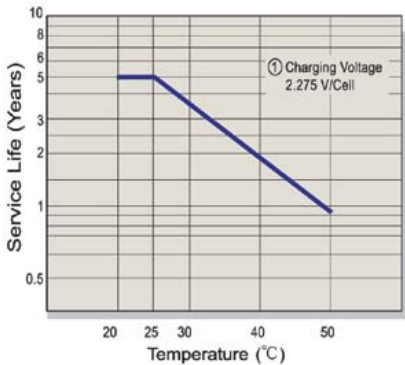
Battery Voltage and Charge Time for Standby Use



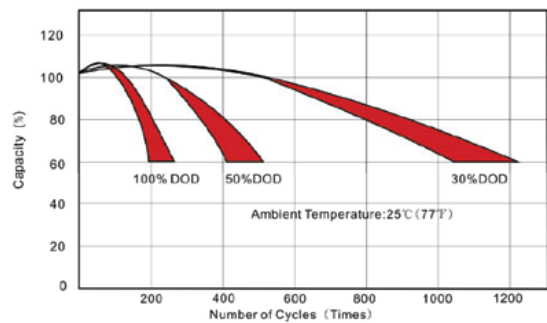
Battery Voltage and Charge Time for Cycle Use



Tickle(or Float) Service Life



Cycle Service Life



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

F.V/Time	5Min	10Min	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.85V/Cell	13.71	10.25	7.51	4.91	2.81	1.51	1.25	0.952	0.823	0.658	0.419	0.217
1.80V/Cell	13.97	10.45	7.66	5.00	2.87	1.54	1.27	0.970	0.839	0.670	0.427	0.221
1.75V/Cell	14.24	10.64	7.80	5.10	2.92	1.57	1.29	0.988	0.855	0.683	0.435	0.225
1.70V/Cell	15.52	11.28	8.27	5.30	2.97	1.59	1.32	1.006	0.870	0.695	0.443	0.229
1.67V/Cell	17.08	12.24	8.97	5.59	3.00	1.61	1.33	1.016	0.879	0.702	0.448	0.231
1.60V/Cell	18.51	12.88	9.44	5.83	3.04	1.63	1.34	1.027	0.889	0.710	0.452	0.234

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

F.V/Time	5Min	10Min	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.85V/Cell	26.74	19.99	14.65	9.57	5.49	2.94	2.43	1.86	1.61	1.28	0.82	0.42
1.80V/Cell	27.25	20.37	14.93	9.75	5.59	3.00	2.48	1.89	1.64	1.31	0.83	0.43
1.75V/Cell	27.76	20.75	15.21	9.94	5.69	3.06	2.52	1.93	1.67	1.33	0.85	0.44
1.70V/Cell	30.26	22.00	16.13	10.33	5.80	3.11	2.57	1.96	1.70	1.35	0.86	0.45
1.67V/Cell	33.31	23.87	17.50	10.91	5.86	3.14	2.59	1.98	1.71	1.37	0.87	0.45
1.60V/Cell	36.09	25.11	18.41	11.38	5.92	3.18	2.62	2.00	1.73	1.38	0.88	0.46