

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

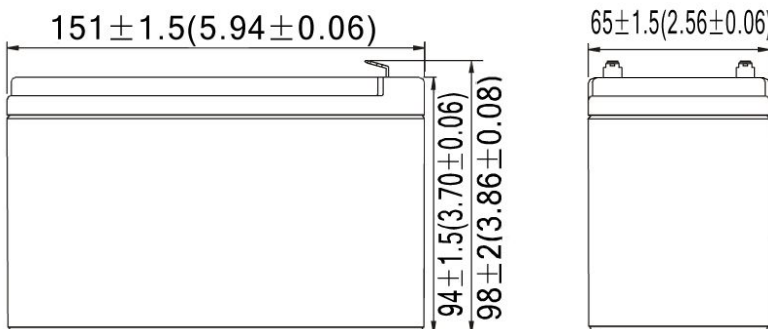
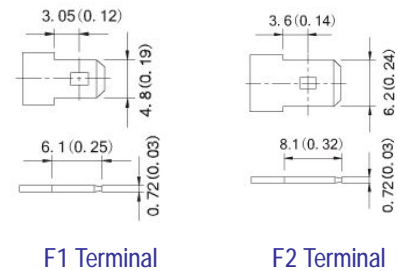
- 100% before shipment testing, stable and reliable long-term quality
- patented grid alloy formula and updated manufacturing technique
- completely sealed and maintenance-free, low self-discharge
- Excellent charging and re-charging acceptance
- Cycle use: More than 260 cycles at 100% DOD
- Floating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

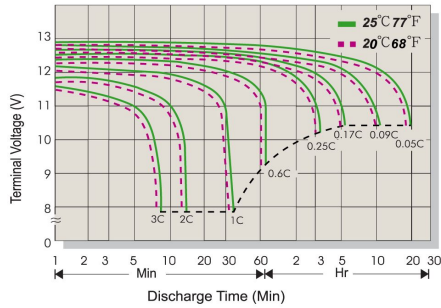
- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy
- Safety valve .... Rubber
- Terminal .....Copper
- Separator .....Fiber glass
- Electrolyte .....Sulfuric acid



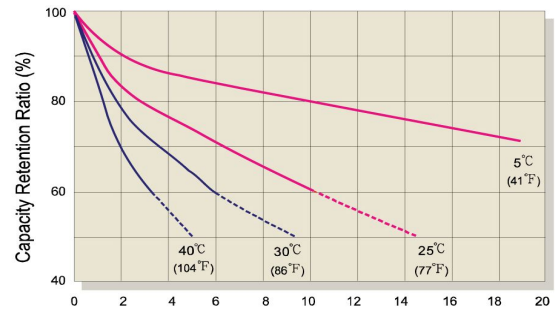
#### Speification:

Battery Model	MS 5.2-12 12V5.2AH			
Designed Floating Life	3~5 Years			
Capacity (25°C)	20HR(0.26A,10.5V)	10HR(0.492A,10.5V)	5HR(0.884A,10.5V)	1HR(3.01A,10.5V)
	5.2AH	4.92AH	4.42AH	3.01AH
Dimensions	Length	Width	Height	Total Height
	151mm (5.94inch)	65mm (2.56inch)	94mm (3.70inch)	98mm (3.86inch)
Approx. Weight	1.88Kg (4.15 lbs) ± 5%			
Internal Resistance	Full charged at 25°C : ≤45mΩ			
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	
	14.4-15.0V(-30mV/°C), max. Current: 1.56A		13.5-13.8V (-20mV/°C)	

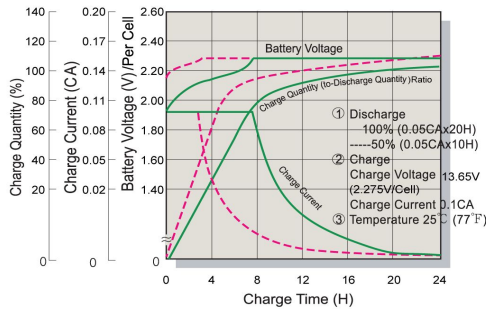
### Terminal Voltage (V) and Discharge Time



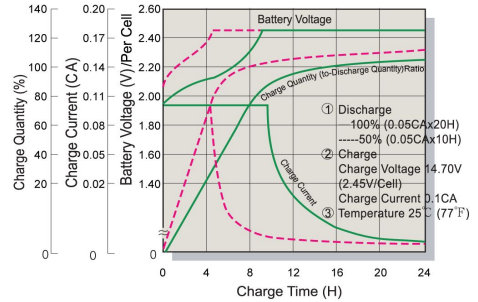
### Capacity Retention Characteristic



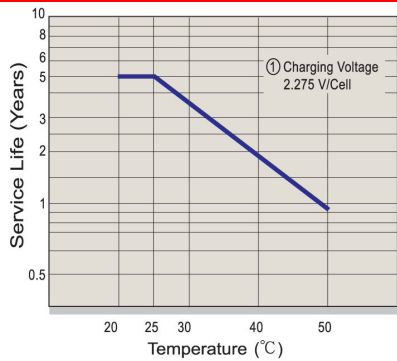
### Battery Voltage and Charge Time for Standby Use



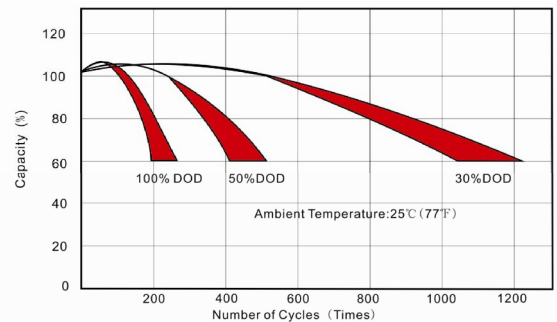
### Battery Voltage and Charge Time for Cycle Use



### 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
1.85V/Cell	14.34	10.19	7.93	4.92	2.90	1.69	1.29	1.025	0.851	0.727	0.474	0.250
1.80V/Cell	14.62	10.39	8.08	5.01	2.96	1.73	1.31	1.044	0.868	0.741	0.483	0.255
1.75V/Cell	14.89	10.58	8.24	5.11	3.01	1.76	1.34	1.064	0.884	0.755	0.492	0.260
1.70V/Cell	16.23	11.22	8.73	5.31	3.06	1.79	1.36	1.083	0.899	0.768	0.501	0.265
1.67V/Cell	17.87	12.17	9.47	5.61	3.10	1.81	1.38	1.094	0.909	0.777	0.507	0.267
1.60V/Cell	19.36	12.80	9.96	5.85	3.13	1.83	1.39	1.106	0.919	0.785	0.512	0.270

### 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
1.85V/Cell	27.97	19.88	15.47	9.59	5.66	3.30	2.51	2.00	1.66	1.42	0.93	0.49
1.80V/Cell	28.50	20.26	15.76	9.78	5.76	3.37	2.56	2.04	1.69	1.45	0.94	0.50
1.75V/Cell	29.04	20.63	16.06	9.96	5.87	3.43	2.61	2.07	1.72	1.47	0.96	0.51
1.70V/Cell	31.65	21.87	17.02	10.36	5.97	3.49	2.66	2.11	1.75	1.50	0.98	0.52
1.67V/Cell	34.84	23.73	18.47	10.94	6.04	3.53	2.68	2.13	1.77	1.51	0.99	0.52
1.60V/Cell	37.75	24.97	19.43	11.41	6.10	3.57	2.71	2.16	1.79	1.53	1.00	0.53