

MHB MM Series—Medium-size Battery

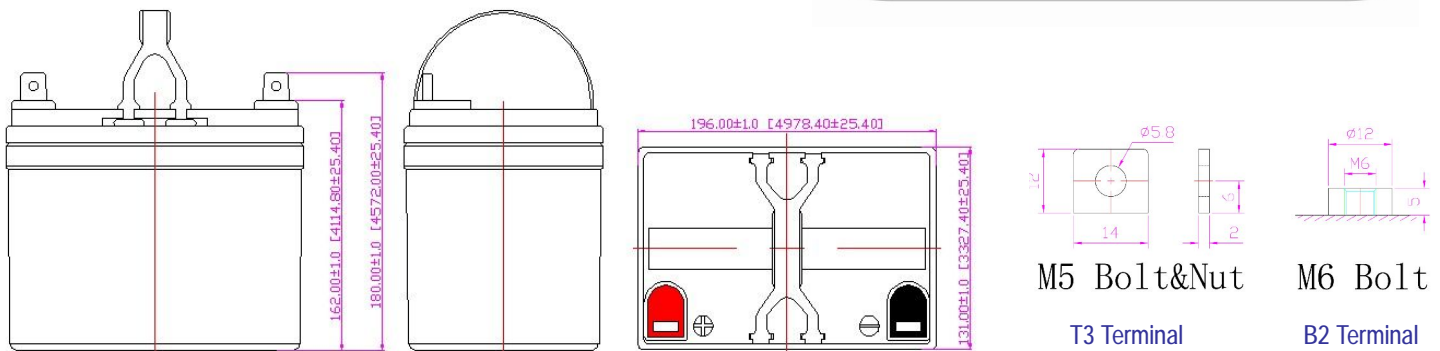
- High performance, completely maintenance-free, low self-discharge
- 100% precise quality testing, stable quality and high reliable performance
- Unique grid alloy formula and updated manufacturing technique
- Floating & standby use: up to 8 years
- Cycle use 1: Up to 260 cycles at 100% DOD
- Cycle use 2: Up to 500 cycles at 50% DOD

Application:

- Telecommunications
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

Construction:

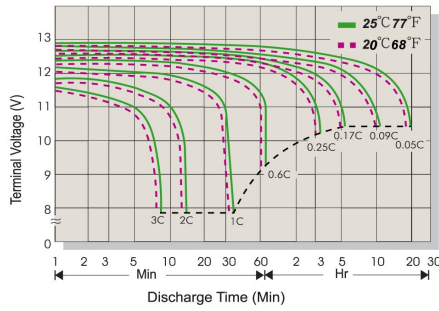
- ComponentRaw material
- PositiveLead dioxide
- NegativeLead
- ContainerABS
- CoverABS
- SealantEpoxy
- Safety valve Rubber
- TerminalCopper/Pb
- SeparatorFiber glass
- Electrolyte Sulfuric acid



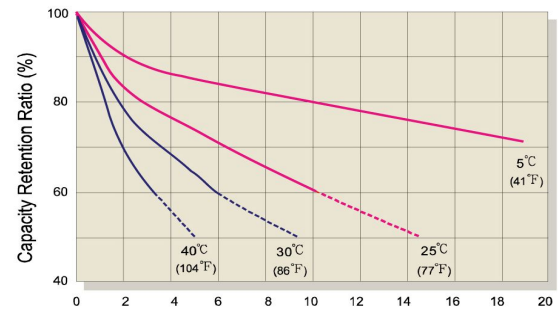
Speification:

Battery Model	MM 33-12E 12V33AH			
Designed Floating Life	Up to 8 Years			
Capacity (25°C)	20HR(1.730A,10.8V)	10HR(3.300A,10.8V)	5HR(5.790A,10.5V)	1HR(17.890A,10.5V)
	34.60 AH	33.00 AH	28.95 AH	17.89 AH
Dimensions	Length	Width	Height	Total Height
	196 mm	133 mm	161 mm	170 mm
Approx. Weight	10.80Kg ±3%			
Internal Resistance	Full charged at 25°C: ≤13.80 mΩ			
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	
	14.40-15.00V(-30mV/°C), max. Current:8.00A		13.50-13.80V (-20mV/°C)	

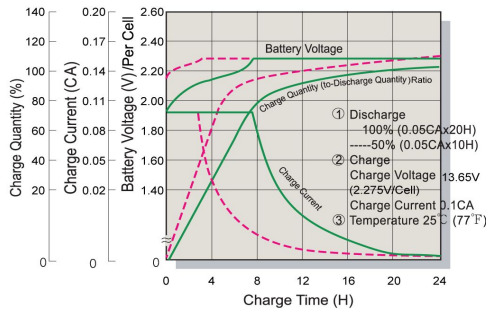
Terminal Voltage (V) and Discharge Time



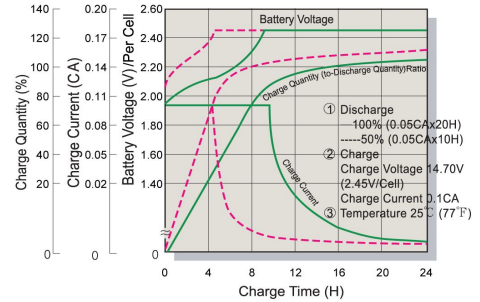
Capacity Retention Characteristic



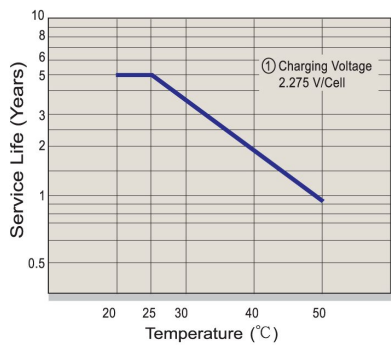
Battery Voltage and Charge Time for Standby Use



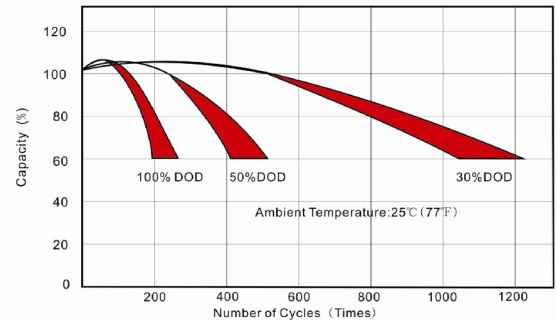
Battery Voltage and Charge Time for Cycle Use



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
1.80V/Cell	102.1	69.52	47.60	28.95	17.74	11.07	8.61	6.77	5.74	3.83	3.30	1.73
1.75V/Cell	103.0	70.11	48.00	29.19	17.89	11.16	8.68	6.83	5.79	3.87	3.35	1.75
1.70V/Cell	105.6	71.86	49.20	29.92	18.33	11.44	8.90	7.00	5.93	3.96	3.40	1.78
1.67V/Cell	108.2	73.62	50.41	30.65	18.78	11.72	9.11	7.17	6.08	4.06	3.45	1.81
1.60V/Cell	113.0	76.89	52.65	32.02	19.62	12.24	9.52	7.49	6.35	4.24	3.50	1.83

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	181.2	123.2	84.38	51.32	31.44	19.62	15.26	12.00	10.17	6.80	5.85	3.06
1.75V/Cell	182.7	124.3	85.10	51.75	31.71	19.79	15.39	12.10	10.26	6.85	5.94	3.11
1.70V/Cell	187.3	127.4	87.23	53.05	32.50	20.28	15.77	12.40	10.51	7.02	6.03	3.15
1.67V/Cell	191.8	130.5	89.35	54.34	33.29	20.78	16.15	12.71	10.77	7.20	6.11	3.20
1.60V/Cell	200.4	136.3	93.33	56.76	34.78	21.70	16.87	13.27	11.25	7.52	6.20	3.25