

General Series Battery

FM series batteries are Maple Armor brand universal lead-acid batteries. Using high-quality lead calcium multi-element alloy plates, with high rate discharge capacity; High performance cast welded grid, with conductivity 30% higher than ordinary batteries; Internally, it adopts integrated casting and welding, reducing internal resistance by 20% and better adapting to high current discharge; Unique AGM technology enables higher energy density and stronger charging acceptance of batteries; Imported ABS raw materials and self-made shell, using self-developed automatic sealing technology, make the battery a complete whole, greatly improving sealing performance; Copper terminals (plug-in/vertical/downward rotation) not only meet the needs of high current charging and discharging, but also have flexible installation and more convenient maintenance. This series of batteries is manufactured using internationally advanced automated production lines, with high stability and consistency, and a longer service life. Design lifespan up to 5 years (25 °C)

Application

- * Emergency Power System
- * Communication equipment
- * Telecommunication systems
- * Uninterruptible power supplies
- * Electric toy car and wheelchairs, etc.
- * Power tools
- * Alarm system
- * Marine equipment
- * Medical equipment
- * Fire and Security System

General Features

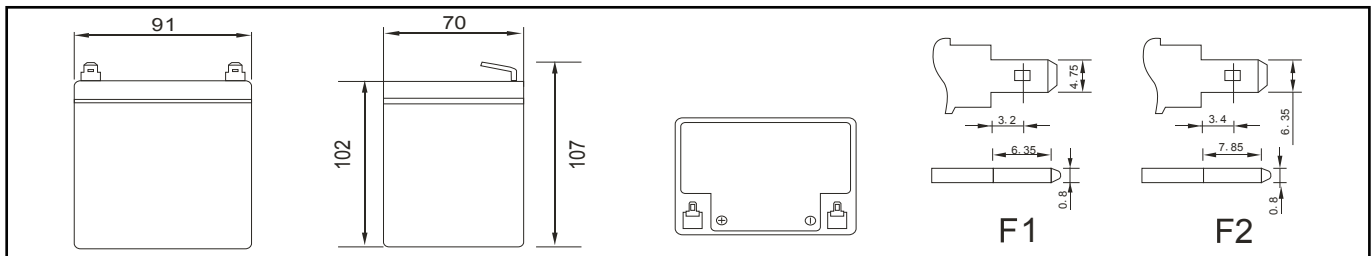
- * Heavy Duty Grid
- * Mechanized assembly
- * Non-spillable construction
- * High Reliability and Stability
- * Sealed and Maintenance-free
- * Long Life and low self-discharge design

Construction

- * Positive Lead dioxide
- * Electrolyte Sulfuric acid
- * Separator Fiber glass
- * Negative Lead
- * Safety Valve EPDR
- * Terminal Copper
- * Container ABS(UL94-HB) / Flame Retardant ABS (UL94-V0)

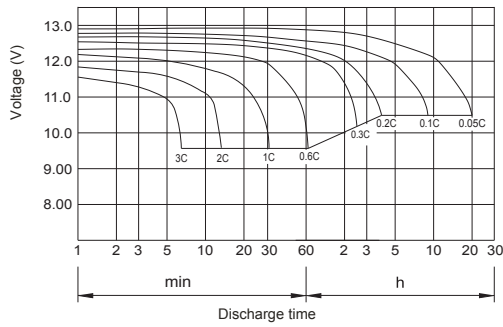
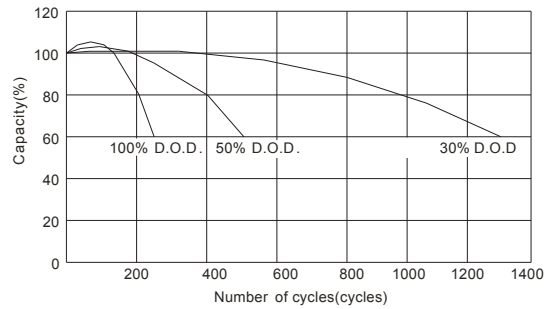
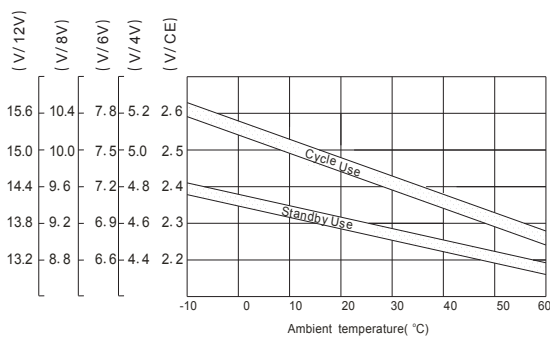
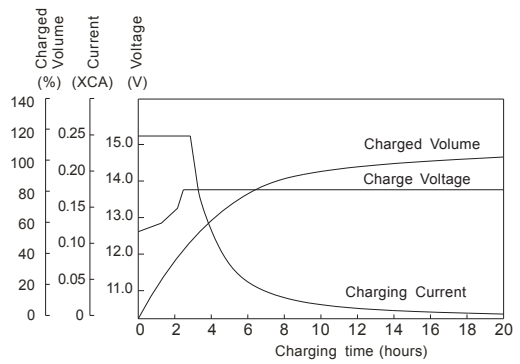
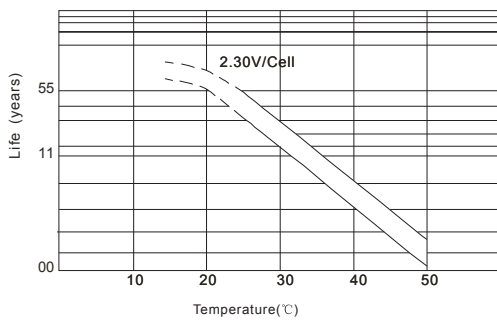
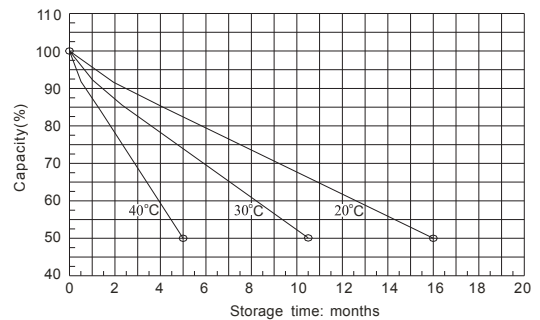
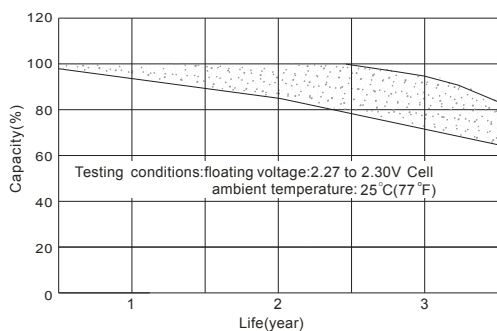

Specification

Battery Model	Nominal Voltage		12V	
	Rated capacity (20 Hour rate)		5.0Ah	
	Cells Per battery		6	
Dimension	Length	Width	Height	Total Height
	91mm (3.58 inches)	70mm (2.75 inches)	102mm (4.01 inches)	107mm (4.21 inches)
Approx Weight	1.41kg(3.10lbs) ± 3%			
Capacity @ 25°C (77°F)	20 hour rate(0.249A,10.5V)	10 hour rate(0.482A,10.8V)	5 hour rate(0.924A,10.5V)	1 hour rate(3.0A,9.6V)
	4.98Ah	9.64Ah	4.62Ah	3.0Ah
Max.discharge current	75A (5 Sec.)			
Internal Resistance	Full charged at 25°C (77°F) : Approx 36mΩ			
Capacity affected by Temp.(20 HR)	40°C (104°F)	25°C (77°F)	0°C (32°F)	-15°C (5°F)
	102%	100%	85%	65%
Self Discharge @25°C (77°F)	After 3 months storage		After 6 months storage	After 12 months storage
	91%		82%	64%
Charge method @25°C (77°F)	Cycle Use		Float Use	
	14.40-15.00V (Initial charging current less than 1.5A)		13.50-13.80V	

Outer dimension (mm)

Terminal Type (mm)
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)

F.V/time	5MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
1.60V	16.500	11.502	8.700	5.120	3.000	2.196	1.922	1.369	0.934	0.624	0.508	0.274
	30.517	21.957	16.791	10.199	5.985	4.384	3.846	2.739	1.870	1.249	1.017	0.547
1.67V	14.648	10.734	8.248	5.011	2.978	2.174	1.912	1.362	0.929	0.619	0.501	0.260
	27.089	20.488	15.931	9.986	5.942	4.342	3.830	2.730	1.863	1.241	1.004	0.521
1.70V	13.867	10.350	8.045	4.967	2.957	2.172	1.908	1.359	0.929	0.613	0.494	0.253
	25.648	19.768	15.550	9.899	5.906	4.339	3.822	2.724	1.863	1.229	0.991	0.508
1.75V	12.550	9.739	7.706	4.879	2.913	2.143	1.896	1.350	0.924	0.611	0.490	0.249
	23.214	18.606	14.911	9.732	5.833	4.287	3.797	2.708	1.854	1.227	0.984	0.500
1.80V	11.213	9.084	7.389	4.770	2.891	2.128	1.884	1.343	0.922	0.606	0.482	0.241
	20.745	17.361	14.321	9.518	5.797	4.267	3.774	2.695	1.849	1.217	0.969	0.484
1.85V	9.875	8.429	7.005	4.639	2.848	2.104	1.867	1.331	0.916	0.598	0.474	0.233
	18.276	16.116	13.590	9.263	5.718	4.230	3.742	2.674	1.841	1.203	0.954	0.468

Note: The above datas are average values. (Edition 2024-05)

Discharge characteristic Curve

Cycle service life in relation to depth of discharge

Relationship between charging voltage and temperature

Constant voltage charging characteristic (0.25CA, at 25°C)

Temperature effects on float life

Self-discharge characteristic

Life characteristics of standby use

Charge characteristic Curve for standby use
