

### General features for MPF Series (AGM) battery

- \* Thick pasted plates with high quality lead-tin-calcium alloy grids for long service life ,design life 10+years in float service.
- \* Battery comply to the most popular international standards, like IEC60896-21/22, etc.
- \* Centralized venting system for gas ventilation.
- \* High conductivity connectors and terminal. High reliability terminal sealing.
- \* Self regulating relief valve: Lower-pressure self-return valve prevents ingress of oxygen in the atmosphere.
- \* Thick positive plates and balanced negative plates.
- \* Scientific grids designed to resist corrosion and increase battery service, also ensure optimum recombination efficiency.
- \* Low resistance microporous glassfibre, the electrolyte is absorbed within this materials.
- \* flame retardant ABS is available upon require.
- \* Easy installation: robust copper terminals providing high conductivity, easy connection, front access terminals for easy & quick connection.



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**MPF12-105 (12V105Ah)**

### Specifications

Nominal Voltage		12V
Rated capacity (10 hour rate)		105Ah
Dimensions (±2mm)	Total Height	238 mm (9.37 inches)
	Height	223 mm (8.78inches)
	Length	508 mm (20.0 inches)
	Width	109 mm (4.29 inches)
Weight Approx (±3%)		30.5 Kg (67.10 lbs)

### Battery picture and construction



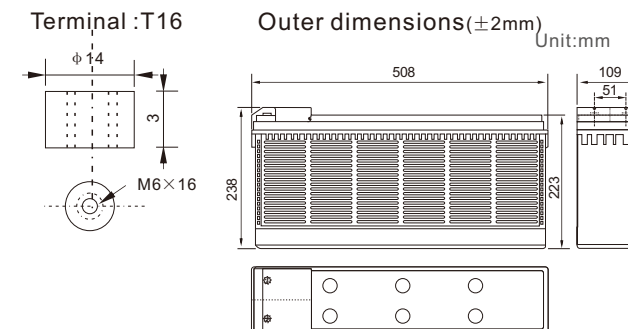
Terminal:



#### Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fibreglass	Rubber	Copper

### Outer dimension and terminal



### Characteristics

Capacity 25°C(77°F)	10 hour rate(10.5A,10.8V) 5 hour rate(16.8A,10.5V) 1 hour rate(63 A,9.6V)	105Ah 84Ah 63Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 5.5 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
Remaining capacity Self-Discharge At 25°C(77°F)	Capacity after 3 month storage	91%
	Capacity after 6 month storage	82%
	Capacity after 12 month storage	64%
Terminal type	T16	
Max. Discharge current 25°C/(77°F)	800A (5Seconds)	
Nominal operating temperature	25°C ±5°C(77°F ±9°F)	
Operating Temperature Range	Discharge	-15°C ~50°C (5°F ~122°F)
	Charge	-10°C ~50°C (14°F ~122°F)
	Storage	-20°C ~50°C (-4°F ~122°F)
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use	Initial Charging Current less than 26.3 A Voltage 14.5-15.0V Temperature compensation:-30mV/°C
	Standby use	Voltage 13.5-13.8V Temperature compensation:-18mV/°C

### Constant current discharge (25°C , 77 °F)

Unit:A

### Constant power discharge (25°C , 77 °F)

Unit:watts

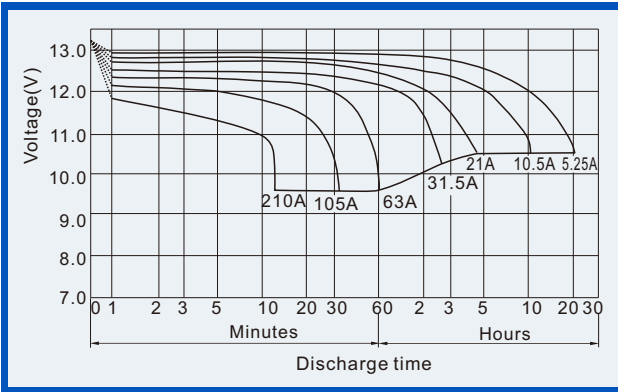
#### Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
		9.60V	A	336	222	179	119.7	63.0	36.8	27.0	21.0	17.3	12.29
	W	3471	2366	1915	1287	680	404	300	236	197	141	127	69.2
10.20V	A	326	200	168	114.5	59.2	35.1	26.3	20.5	17.0	11.97	10.82	5.78
	W	3479	2232	1882	1285	670	404	304	238	198	140	127	67.7
10.50V	A	315	179	147	107.1	57.3	34.2	25.6	20.2	16.8	11.87	10.61	5.78
	W	3441	2034	1679	1233	664	397	299	236	197	140	125	68.3
10.80V	A	304	169	137	98.7	55.4	33.4	25.0	19.8	16.4	11.55	10.50	5.67
	W	3407	1943	1575	1144	645	391	295	234	194	137	125	67.5
11.10V	A	293	158	126	88.2	53.6	32.6	24.2	19.3	16.0	11.24	9.98	5.36
	W	3328	1829	1469	1032	630	385	287	230	190	135	120.4	64.9

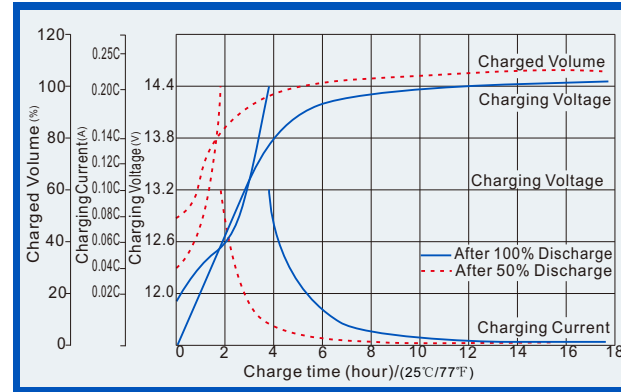
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

# VRLA Battery (AGM technology) Maintenance-free Sealed Lead Acid Rechargeable Battery

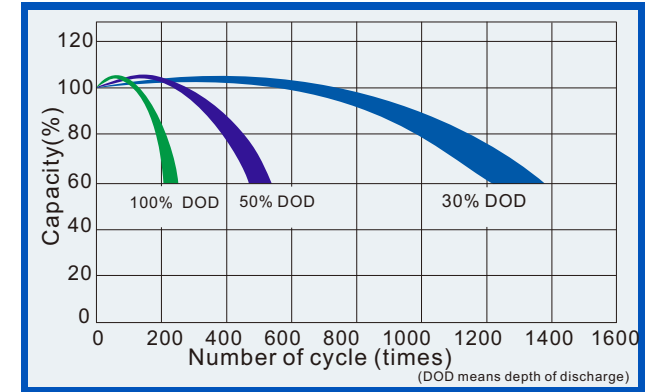
**Discharge characteristics (25°C, 77°F)**



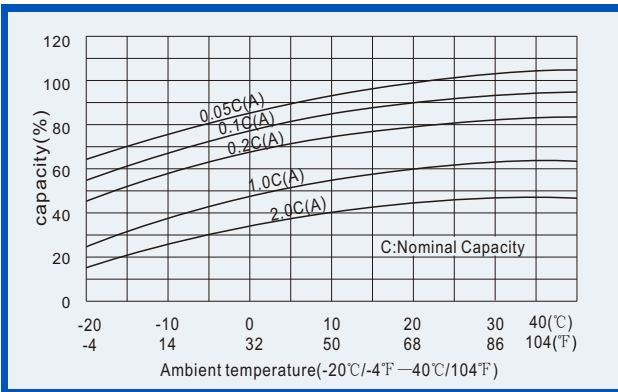
**Charge characteristics (25°C, 77°F)**



**Life characteristics of Cyclic Use (25°C, 77°F)**



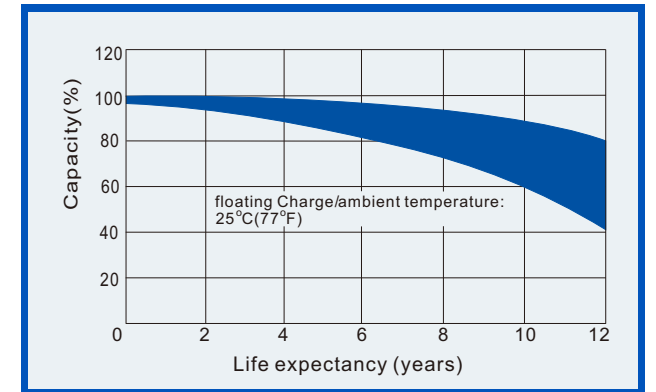
**Effect of Temperature on capacity**



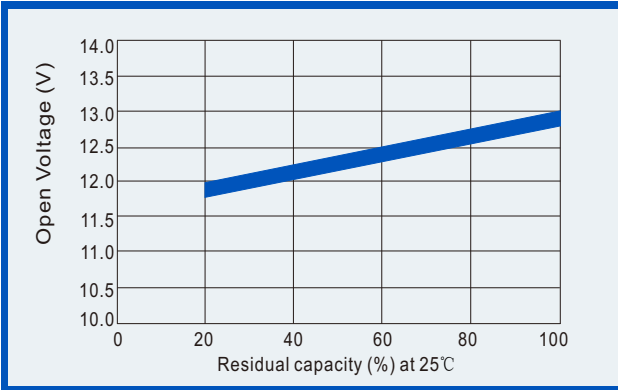
**Self-discharge characteristics**



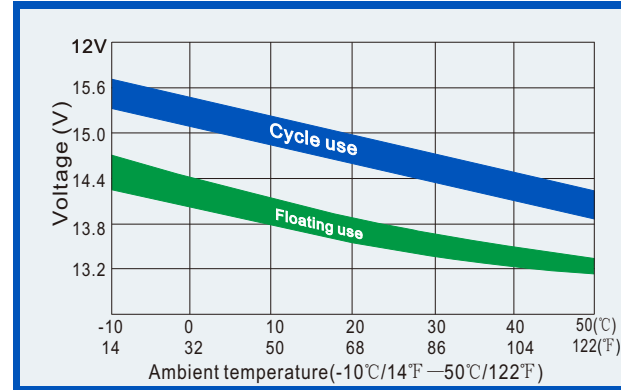
**Life Characteristics of float service (25°C, 77°F)**



**Relationships for open voltage and residual capacity (for reference)**



**Relationship for charging voltage and temperature**



**Temperature effects on floating life**

