

## General features for MPPS Series battery (OPzS)

- \* Tubular positive plate; separator with the combined application of porous rubber and porous PVC, separator is with a high porosity & good corrosion resistance.
- \* Computer designed lead, calcium tin alloy grid for high power density.
- \* Long service life, float or cyclic applications: designed floating life is 20 years at 25°C; Designed cycle life more than 1200 cycles at 80% DOD at 25°C/77°F.
- \* Acid-proof bolt: It is of a special shape of funnel having the function of filtering acid smog and retarding flame, it can measure the density and temperature of electrolyte.
- \* Ensuring sufficient electrolyte for battery discharge.
- \* Battery container is transparent, easy checks electrolyte.



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## MPPS2-2000 (2V2000Ah)

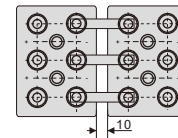
### Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		2000 Ah
Dimensions (±3mm)	Total Height (Include terminal)	826mm (32.5inches)
	Height	771mm (30.4inches)
	Length	399mm (15.7 inches)
	Width	210mm (8.3inches)
Approx Weight (±5%)	Without electrolyte	108.0Kg (238.1lbs)
	With Electrolyte	150Kg (330.8lbs)
	Electrolyte weight (d=1.24kg/l)	Approx 10.0Kg (22.0lbs)

### Battery picture and construction



Connection method for reference:



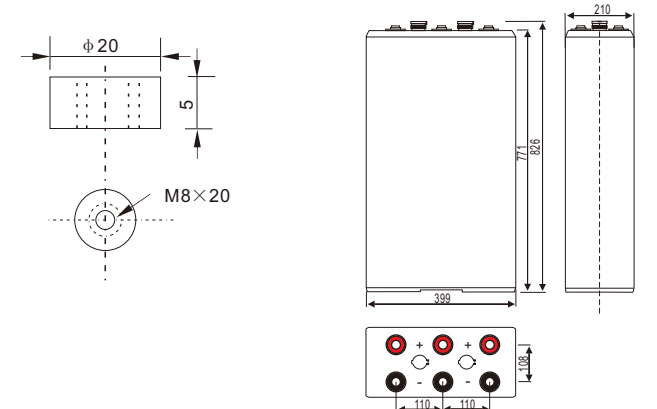
#### Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	SAN transparent	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	PVC	Porous rubber	Copper

### Outer dimension and terminal

Terminal: TP

Outer dimensions(±3mm) Unit:mm



### Characteristics

Capacity 25°C(77°F)	10 hour rate(200A, 1.8V) 3 hour rate(510A, 1.75V) 1 hour rate(1120A, 1.60V)	2000Ah 1530Ah 1120Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.3 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 100% 85% 65%
Remaining capacity Self-Discharge At 25°C(77°F)	Capacity after 3 month storage Capacity after 6 month storage	88% 76%
Terminal type	TP	
Max. Discharge current 25°C/(77°F)	10000A (5Seconds)	
Nominal operating temperature	25°C ±5°C(77□ ±9□)	
Operating Temperature Range	Discharge Charge Storage	-15°C ~50°C (5°F ~122°F) -10°C ~50°C (14°F ~122°F) -20°C ~50°C (-4°F ~122°F)
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use Standby use	Initial Charging Current less than 500A Voltage 2.40-2.45V Temperature compensation:-5mV/°C Voltage 2.25-2.30V Temperature compensation:-3mV/°C

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

Unit:A

Constant Current(Amp) Discharge Table at 25°C(77°F)											
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	
1.70V	1560	1080	660	514	412	362	308	236	202	109	
1.75V	1520	1048	650	510	410	360	306	234	202	109	
1.80V	1464	1024	634	494	398	350	296	226	200	108	
1.85V	1384	960	596	464	374	330	278	212	190	103	

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

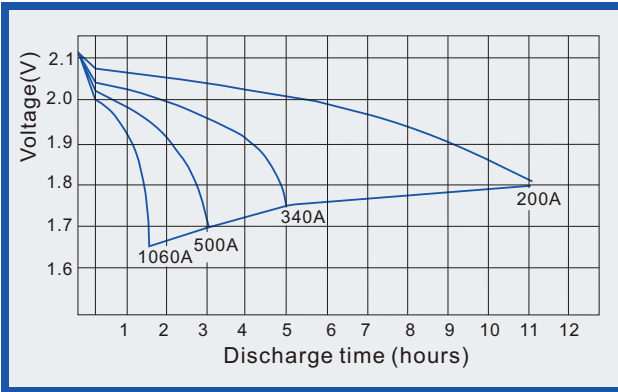
### Constant power discharge (25°C , 77 °F)

Unit:watts

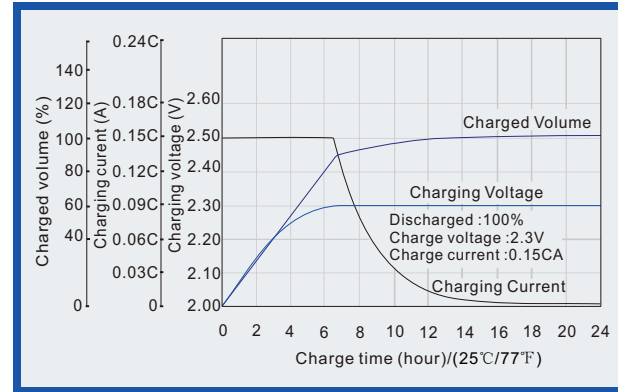
Constant Power(Watt) Discharge Table at 25°C(77°F)											
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	
1.70V	2912	2040	1272	1008	808	714	608	466	404	218	
1.75V	2840	2000	1248	1000	808	710	602	464	400	218	
1.80V	2744	1944	1224	968	780	688	584	450	398	216	
1.85V	2552	1800	1144	904	726	640	544	418	370	200	

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

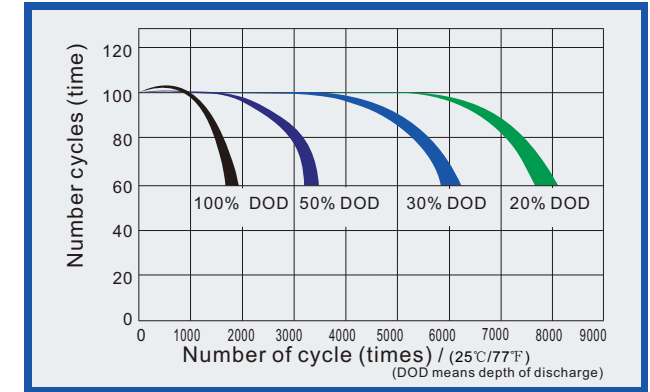
**Discharge characteristics (25°C, 77°F)**



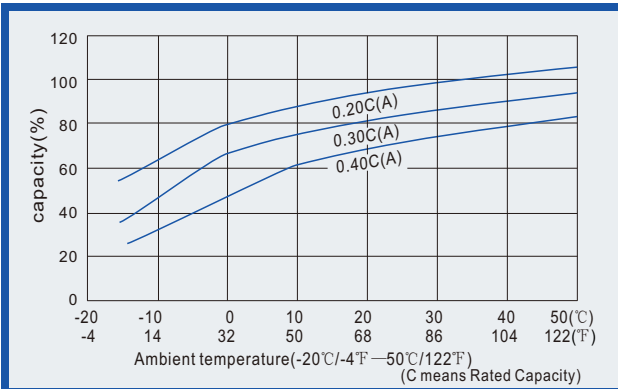
**Charge characteristics (25°C, 77°F)**



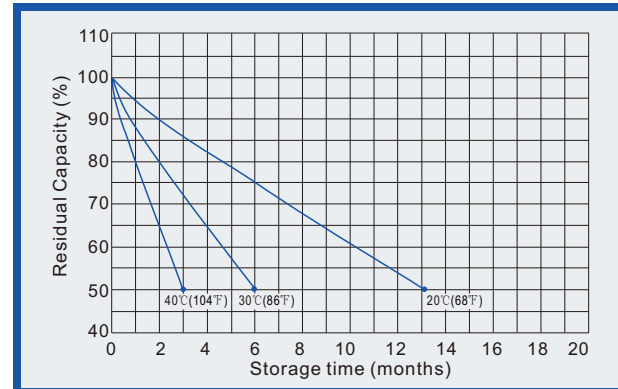
**Life characteristics of Cyclic Use (25°C, 77°F)**



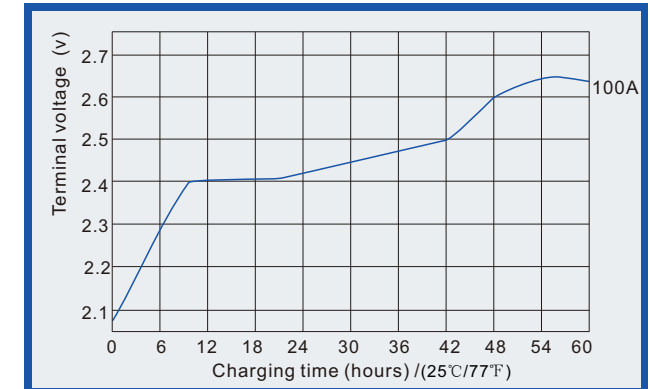
**Effect of Temperature on capacity**



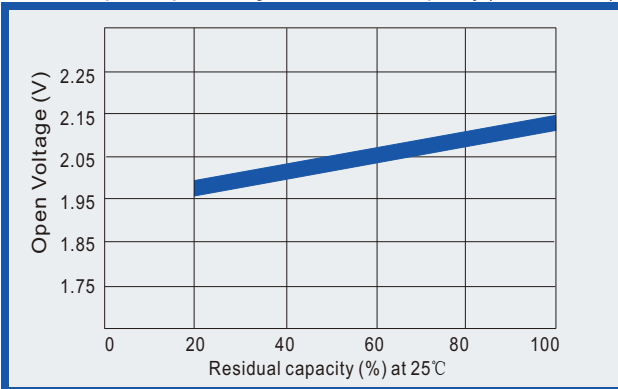
**Self-discharge characteristics (with full charging)**



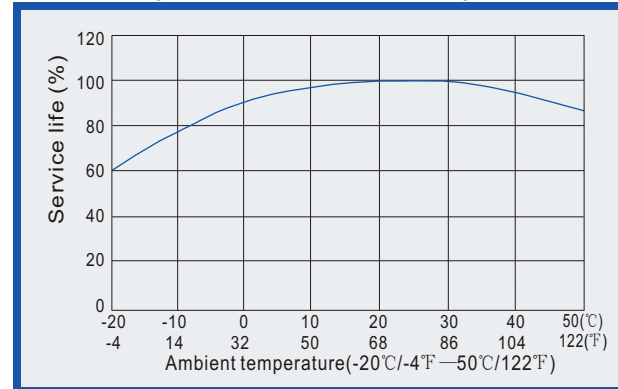
**Initial charging characteristics**



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



**Relationship for service life and temperature**



**Effect of discharge rate on capacity**

