

## 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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**MPPS2-2500 (2V2500Ah)**

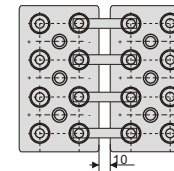
## Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		2500 Ah
Dimensions (±3mm)	Total Height (Include terminal)	826mm (32.5inches)
	Height	771mm (30.4inches)
	Length	487mm (19.2 inches)
Approx Weight (±5%)	Width	212mm (8.4inches)
	Without electrolyte	130.0Kg (286.6lbs)
	With Electrolyte	183.0Kg (403.45lbs)
Electrolyte weight (d=1.24kg/l)		Approx 52.0Kg (114.6lbs)

## Battery picture and construction



Connection method for reference:

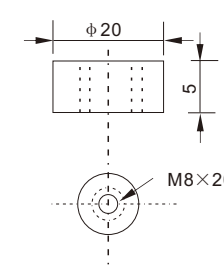


### Battery Construction

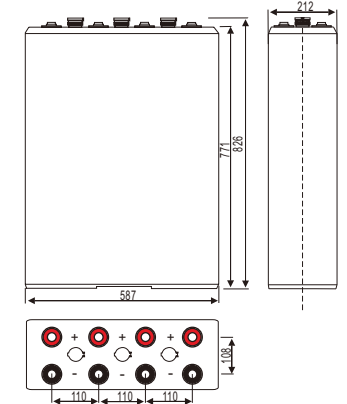
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	SAN transparent	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	PVC	Porous rubber	Copper

## Outer dimension and terminal

Terminal: TP



Outer dimensions(±3mm) Unit:mm



## Characteristics

Capacity 25°C(77°F)	10 hour rate(250A, 1.8V)	2500Ah
	3 hour rate(640A, 1.75V)	1912Ah
	1 hour rate(1400 A, 1.60V)	1400Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.25 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)	-15°C (5°F)	65%
	Capacity after 3 month storage	88%
Capacity after 6 month storage		76%
Terminal type		TP
Max. Discharge current 25°C/(77°F)		12500A (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 625 A Voltage 2.40-2.45V Temperature compensation:-5mV/°C
	Standby use	Voltage 2.25-2.30V Temperature compensation:-3mV/°C

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

Unit:A

Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.70V	1950	1350	825	645	515	453	385	295	253	136
1.75V	1900	1310	815	640	515	450	383	293	253	136
1.80V	1830	1280	795	620	498	438	370	283	250	135
1.85V	1730	1200	745	580	468	413	348	265	238	129

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

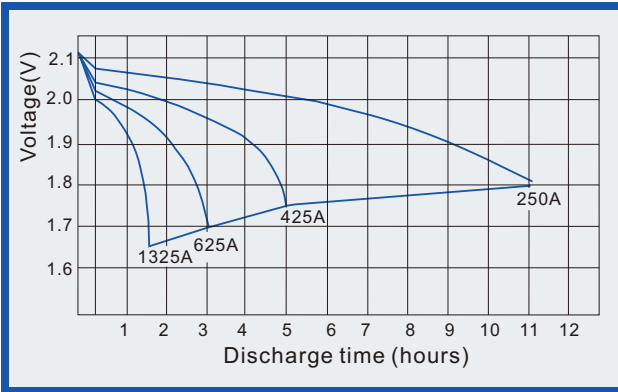
## Constant power discharge (25°C , 77 °F)

Unit:watts

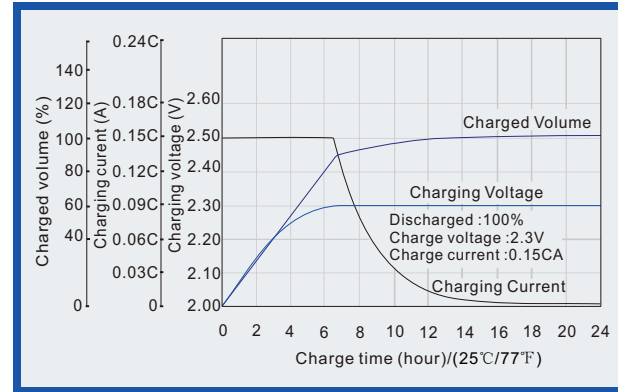
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.70V	3640	2550	1590	1260	1010	895	760	585	505	273
1.75V	3550	2500	1560	1250	1010	890	755	580	500	273
1.80V	3430	2430	1530	1210	975	860	730	565	498	270
1.85V	3190	2250	1430	1130	910	800	680	525	463	250

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

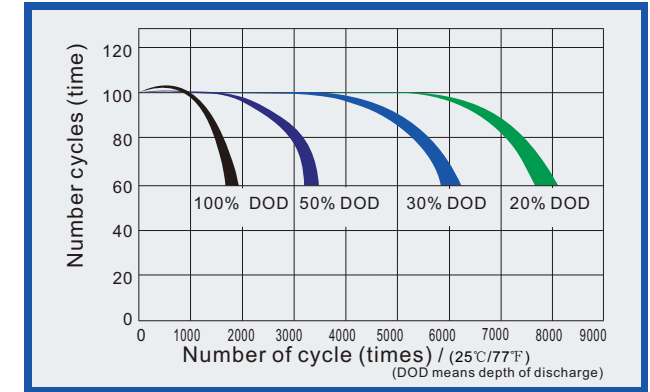
**Discharge characteristics (25°C, 77°F)**



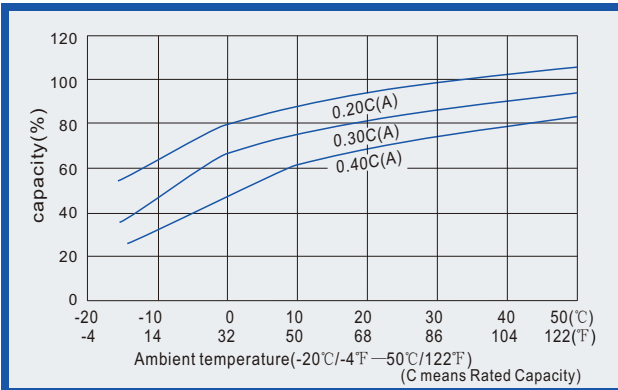
**Charge characteristics (25°C, 77°F)**



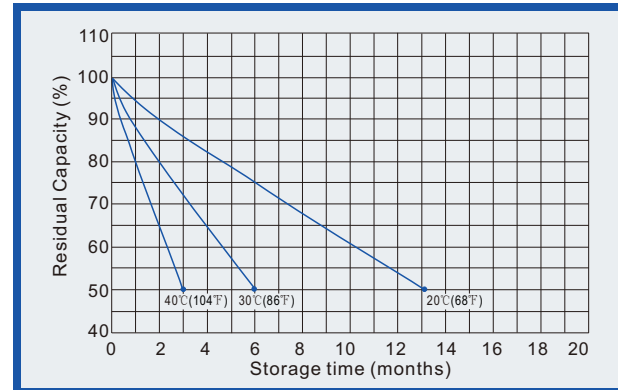
**Life characteristics of Cyclic Use (25°C, 77°F)**



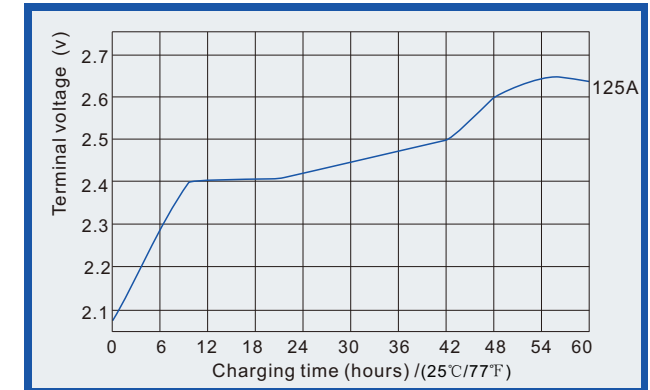
**Effect of Temperature on capacity**



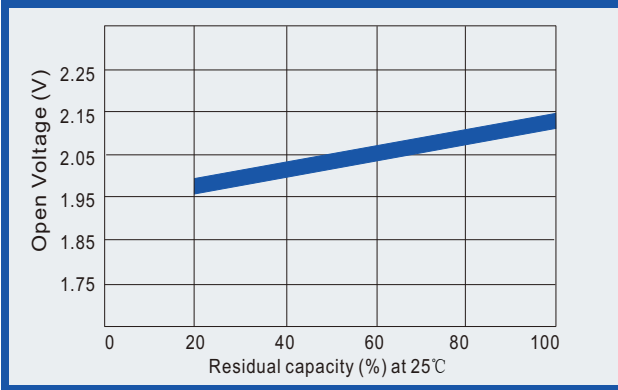
**Self-discharge characteristics (with full charging)**



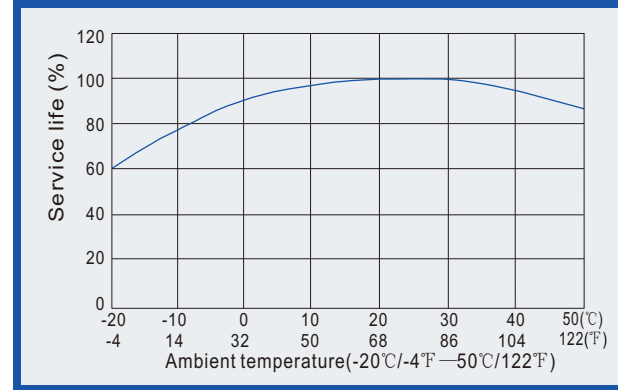
**Initial charging characteristics**



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



**Relationship for service life and temperature**



**Effect of discharge rate on capacity**

