

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.



Maxton Power Tech Co., Ltd
www.maxtonpower.com
info@maxtonpower.com

MPPS2-3000 (2V3000Ah)

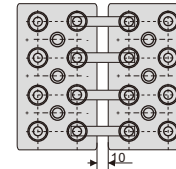
Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		3000 Ah
Dimensions (±3mm)	Total Height (Include terminal)	826mm (32.5inches)
	Height	771mm (30.4inches)
	Length	576mm (22.7 inches)
Approx Weight (±5%)	Width	212mm (8.4inches)
	Without electrolyte	157.0Kg (346.2lbs)
	With Electrolyte	220.0Kg (485.1lbs)
Electrolyte weight (d=1.24kg/l)		Approx 63.0Kg (138.9lbs)

Battery picture and construction



Connection method for reference:



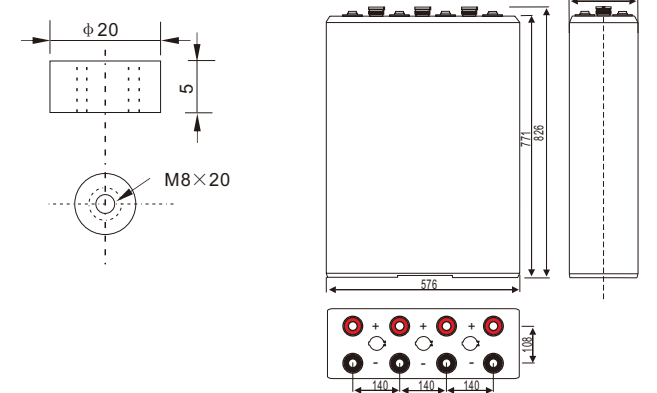
Battery Construction

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(300A, 1.8V) 3 hour rate(765A, 1.75V) 1 hour rate(1680 A, 1.60V)	3000Ah 2295Ah 1680Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.20 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)	15000A (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 750 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	2340	1620	990	771	618	543	462	354	303	163
1.75V	2280	1572	975	765	615	540	459	351	303	163
1.80V	2196	1536	951	741	597	525	444	339	3000	162
1.85V	2076	1440	894	696	561	495	417	318	286	155

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

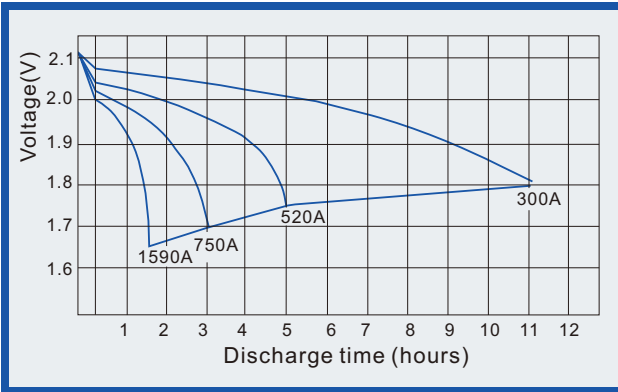
Constant power discharge (25°C , 77 °F)

Unit:watts

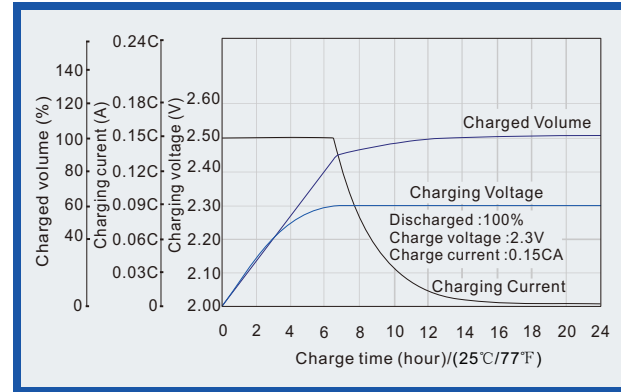
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.70V	4368	3060	1908	1512	1212	1072	912	700	606	328
1.75V	4260	3000	1872	1500	1212	1066	904	696	600	328
1.80V	4116	2916	1836	1452	1170	1032	876	676	598	324
1.85V	3828	2700	1716	1356	1090	960	816	628	556	300

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

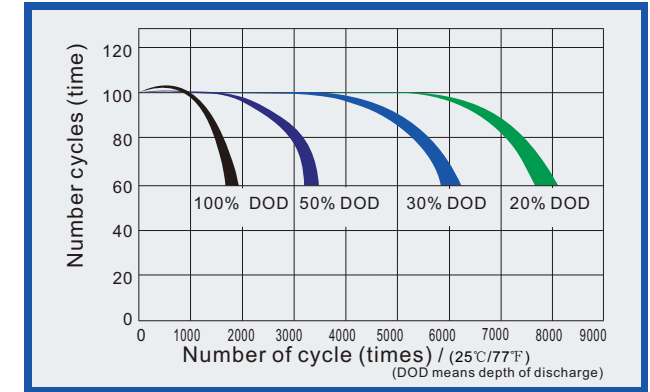
Discharge characteristics (25°C, 77°F)



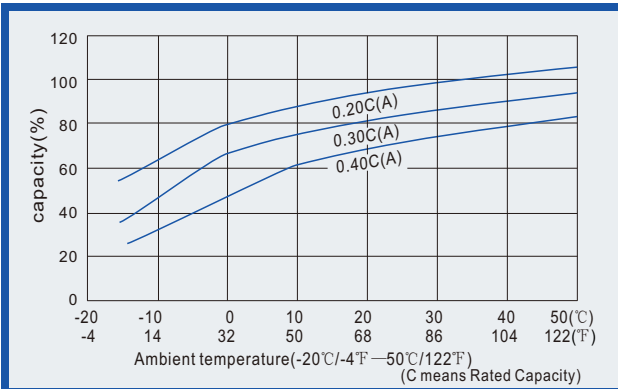
Charge characteristics (25°C, 77°F)



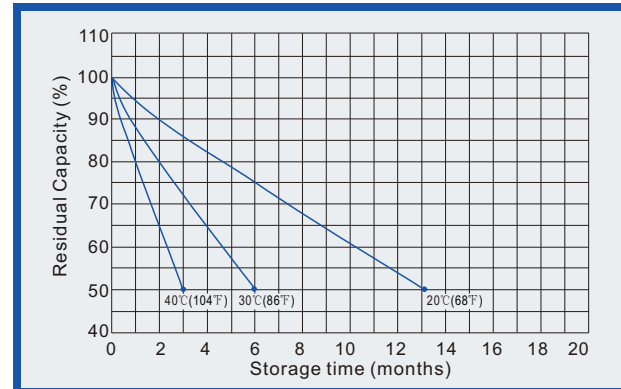
Life characteristics of Cyclic Use (25°C, 77°F)



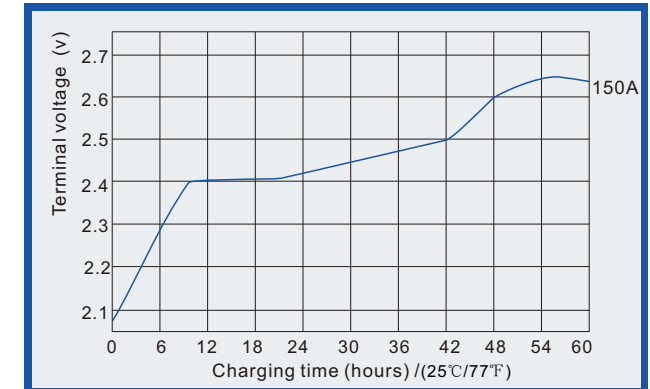
Effect of Temperature on capacity



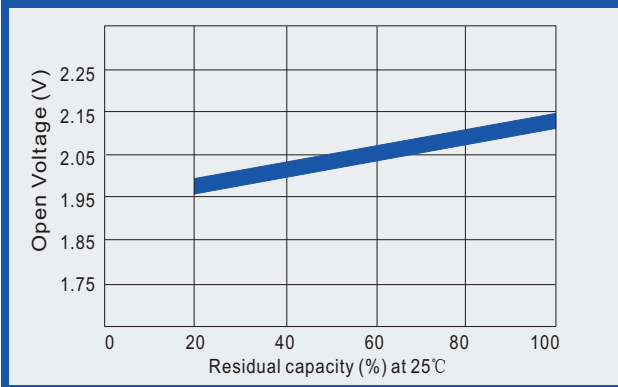
Self-discharge characteristics (with full charging)



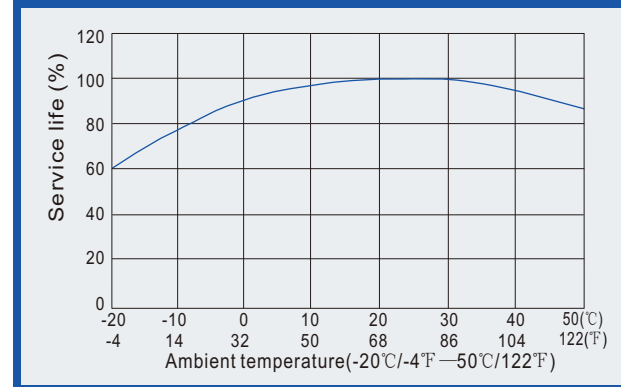
Initial charging characteristics



Relationships for open voltage and remained capacity (for reference)



Relationship for service life and temperature



Effect of discharge rate on capacity

