

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.



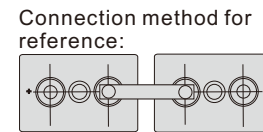
Maxton Power Tech Co., Ltd
www.maxtonpower.com
info@maxtonpower.com

MPPS2-250 (2V250Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		250 Ah
Dimensions (±3mm)	Total Height (Include terminal)	409mm (16.1 inches)
	Height	354mm (13.9 inches)
	Length	124mm (4.8 inches)
	Width	206mm (8.1 inches)
Approx Weight (±5%)	Without electrolyte	16.0Kg (35.2lbs)
	With Electrolyte	21.0Kg (46.3lbs)
	Electrolyte weight (d=1.24kg/l)	Approx 5.0Kg (11.0lbs)

Battery picture and construction



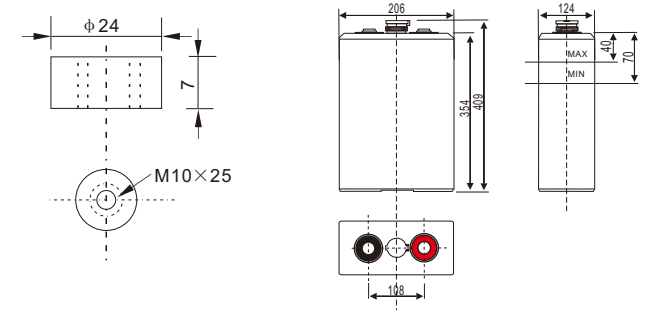
Battery Construction

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(25A, 1.8V) 3 hour rate(64.2A, 1.75V) 1 hour rate(140A, 1.60V)	250Ah 192Ah 140Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 1.2 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	103% 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 (copper)	
Max. Discharge current 25°C/(77°F)	1250A (5Seconds)	
Nominal operating temperature	25°C ±5°C (77°F ±9°F)	
Operating Temperature Range	Discharge Charge Storage	-15°C ~50°C (5°F ~122°F) 0°C ~45°C (32°F ~113°F) -15°C ~45°C (5°F ~113°F)
Charge methods (constant Voltage) At 25°C(77°F)	Boost charge Floating charge	Initial Charging Current less than 62.5A Voltage 2.35-2.45V Temperature compensation:-3mV/°C Voltage 2.25-2.30V Temperature compensation:-3mV/°C

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

Unit:A

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

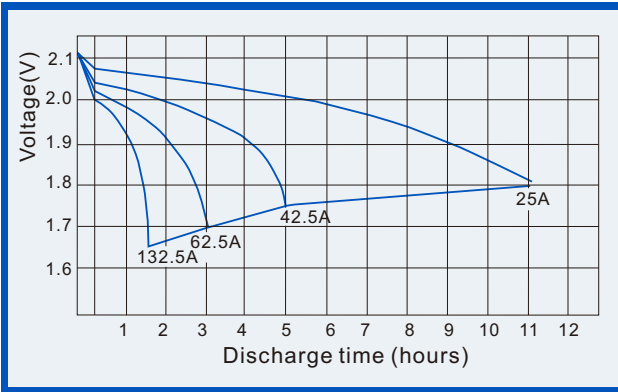
Unit:watts

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

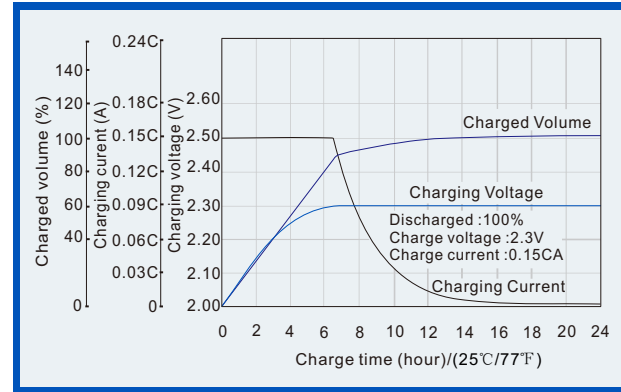
Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A	178.4	138.3	90.8	68.3	46.6	37.7	32.0	26.4	14.3	12.0	6.4	3.2
	W	374	283	204	137	92	85	72	52	27.2	24.5	16.2	8.4
1.70V	A	171.1	132.6	88.8	66.4	45.6	37.0	31.4	26.0	14.1	11.9	6.4	3.1
	W	347	275	202	136	90	83	71	52	26.9	24.2	16.2	8.4
1.75V	A	158.4	125.8	83.8	64.2	44.4	36.1	30.9	25.6	13.9	11.9	6.3	3.1
	W	311	266	201	134	89	81	70	51	26.6	24.0	16.1	8.3
1.80V	A	140.8	115.8	79.2	61.0	42.5	35.3	29.5	25.0	13.5	11.8	6.2	3.1
	W	255	241	196	129	87	80	68	50	26.4	23.8	16.1	8.3
1.85V	A	112.5	99.2	72.5	55.8	39.9	33.6	27.8	23.6	12.8	11.3	6.2	3.1
	W	188	212	179	120	84	79	65	49	26.0	22.7	16.0	8.2

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

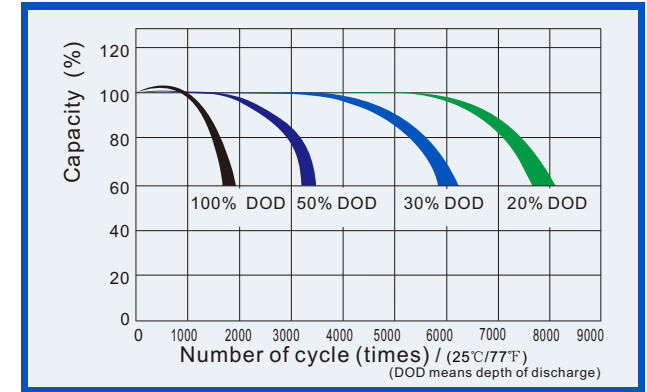
Discharge characteristics (25°C, 77°F)



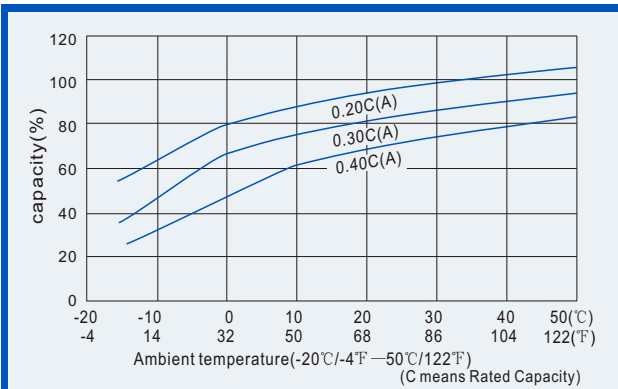
Charge characteristics (25°C, 77°F)



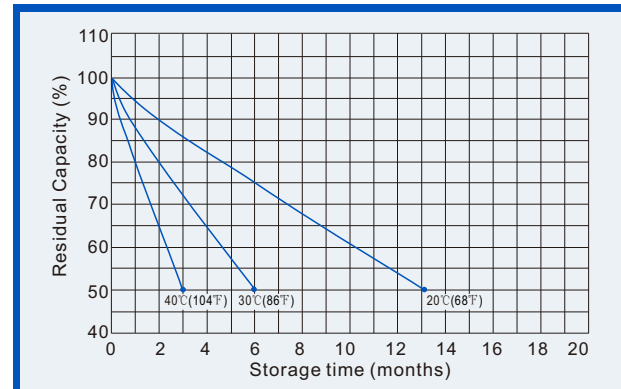
Life characteristics of Cyclic Use (25°C, 77°F)



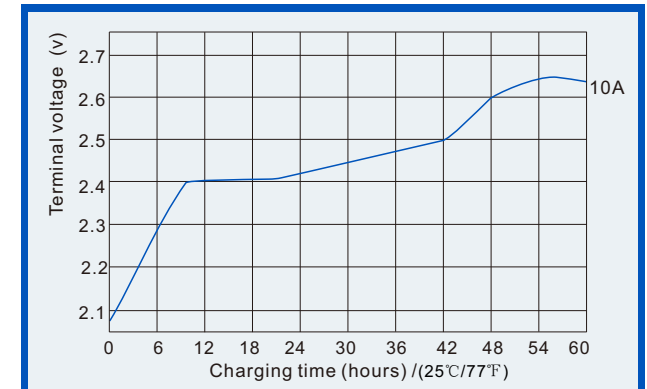
Effect of Temperature on capacity



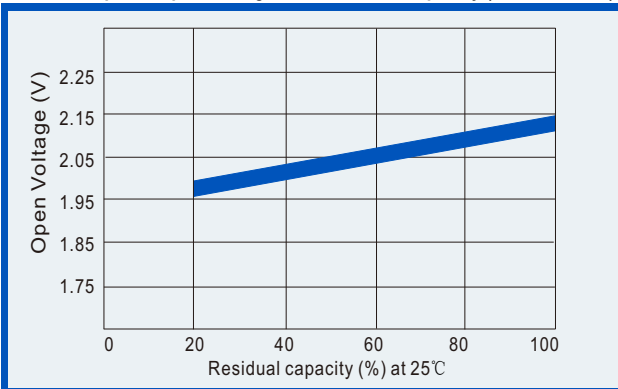
Self-discharge characteristics (with full charging)



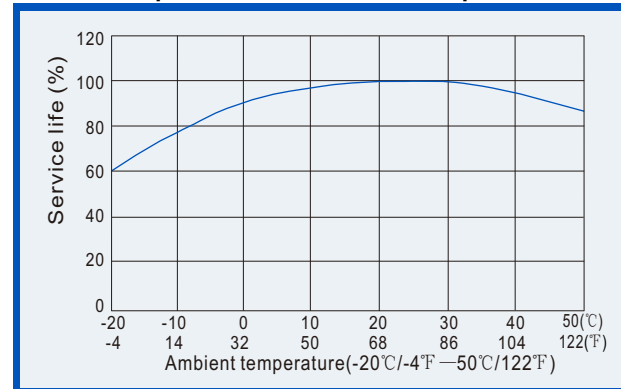
Initial charging characteristics



Relationships for open voltage and remained capacity (for reference)



Relationship for service life and temperature



Effect of discharge rate on capacity

