

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.



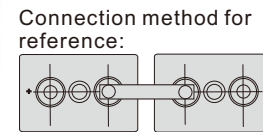
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MPPS2-200 (2V200Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		200 Ah
Dimensions (±3mm)	Total Height (Include terminal)	409mm (16.10 inches)
	Height	354mm (13.90 inches)
	Length	103mm (4.06 inches)
	Width	206mm (8.11 inches)
Approx Weight (±5%)	Without electrolyte	13.0Kg (28.7lbs)
	With Electrolyte	18.0Kg (40.8lbs)
	Electrolyte weight (d=1.25kg/l)	Approx 5.0Kg (11.0lbs)

Battery picture and construction



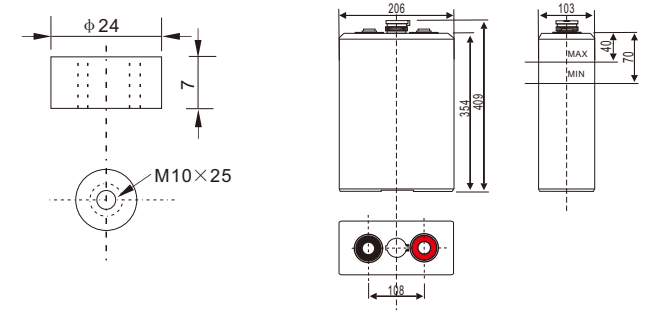
Battery Construction

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(20A, 1.8V) 3 hour rate(51A, 1.75V) 1 hour rate(112A, 1.60V)	200Ah 153Ah 112Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 1.5 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	85%
	-15°C (5°F)	65%
Remaining capacity Self-Discharge At 25°C(77°F)	Capacity after 3 month storage	≥ 88%
	Capacity after 6 month storage	≥ 76%
Terminal type	TP (copper)	
Max. Discharge current 25°C/(77°F)	1000A (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	0°C ~ 45°C (32°F ~ 113°F)
	Storage	-15°C ~ 45°C (5°F ~ 113°F)
Charge methods (constant Voltage) At 25°C(77°F)	Boost charge	Initial Charging Current less than 50A Voltage 2.35-2.45V Temperature compensation: -3mV/°C
	Floating charge	Voltage 2.25-2.30V Temperature compensation: -3mV/°C

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

Unit:A

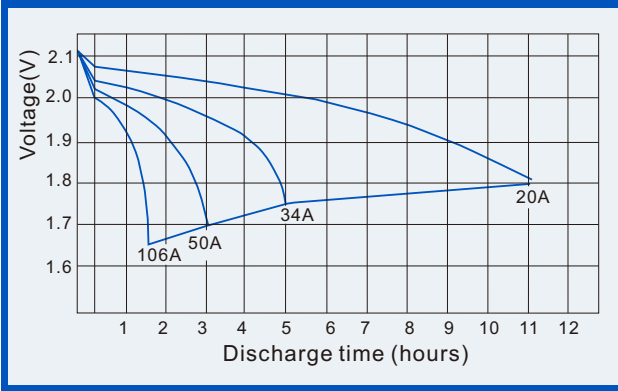
Constant power discharge (25°C , 77 °F)

Unit:watts

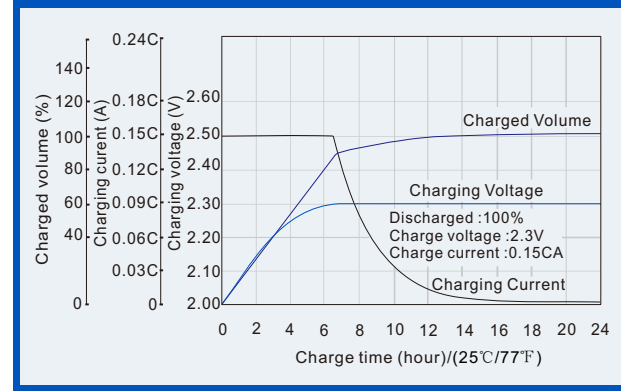
Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
		1.65V	A	142.7	110.6	72.7	54.6	37.3	30.1	25.6	21.1	11.4	9.6
	W	299	226	163	109	73	68	58	42	21.8	19.6	13.0	6.7
1.70V	A	136.9	106.0	71.0	53.1	36.5	29.6	25.1	20.8	11.3	9.5	5.1	2.5
	W	278	220	162	109	72	66	57	41	21.5	19.4	12.9	6.7
1.75V	A	126.7	100.7	67.0	51.4	35.5	28.9	24.7	20.5	11.1	9.5	5.0	2.5
	W	248	213	161	107	71	65	56	41	21.3	19.2	12.9	6.7
1.80V	A	112.7	92.7	63.3	48.8	34.0	28.2	23.6	20.0	10.8	9.5	5.0	2.5
	W	204	193	157	103	70	64	54	40	21.1	19.0	12.9	6.6
1.85V	A	90.0	79.3	58.0	44.7	31.9	26.9	22.2	18.9	10.2	9.0	5.0	2.5
	W	150	170	143	96	67	63	52	39	20.8	18.1	12.8	6.6

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

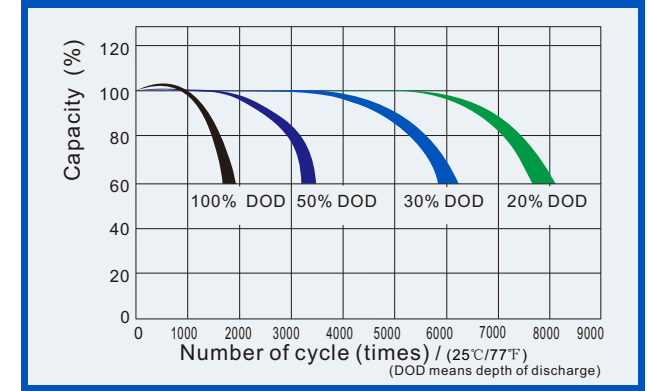
Discharge characteristics (25°C, 77°F)



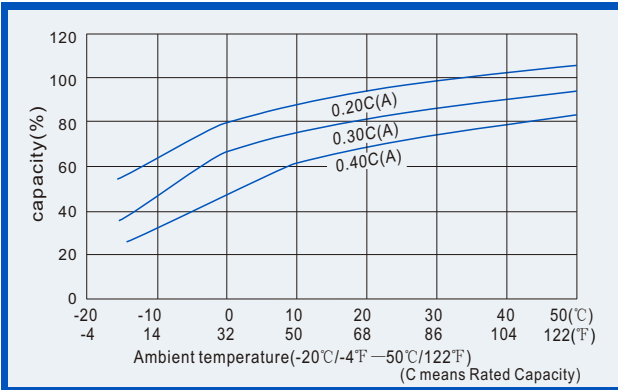
Charge characteristics (25°C, 77°F)



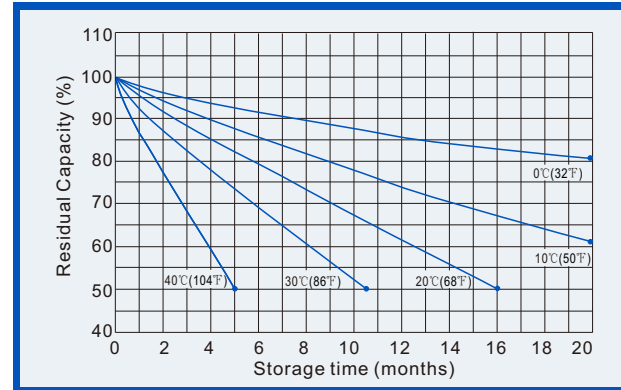
Life characteristics of Cyclic Use (25°C, 77°F)



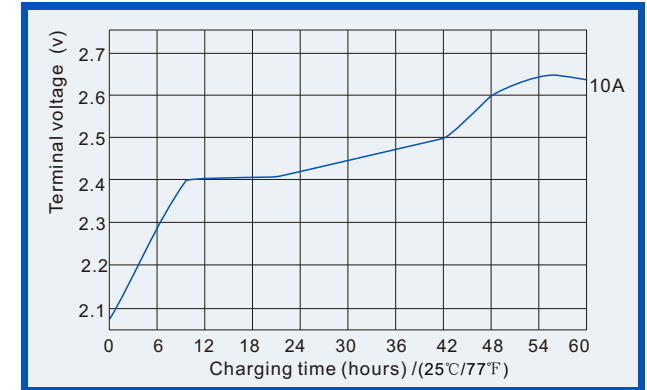
Effect of Temperature on capacity



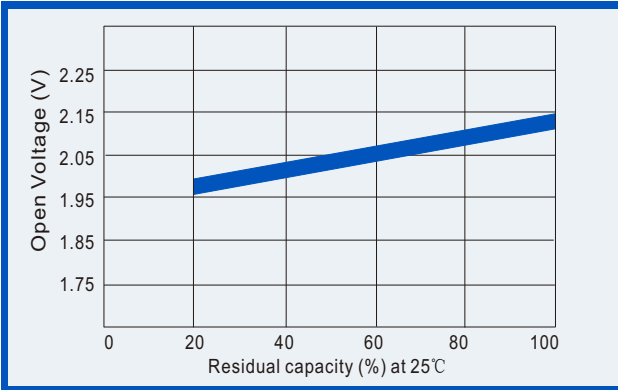
Self-discharge characteristics (with full charging)



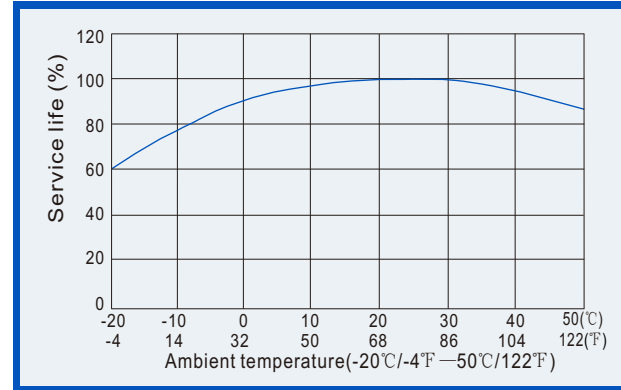
Initial charging characteristics



Relationships for open voltage and remained capacity (for reference)



Relationship for service life and temperature



Effect of discharge rate on capacity

