

General features for MPPV Series battery (OPzV)

- * Tubular positive plate; separator with the combined application of porous rubber and porous PVC, separator is with a high porosity & good corrosion resistance. Gelled electrolyte technology.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * Long service life, maintenance-free during the whole service life.
- * Alloy (no antimony) and internal oxygen recombination ensure low gassing.
- * High cyclic ability, no internal short circuits in the GEL structure.
- * Easy to move and handle, easy using cable connectors or copper connectors in the battery connection..



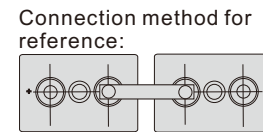
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MPPV2-250 (2V250Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		250 Ah
Dimensions (±3mm)	Total Height (Include terminal)	390mm (15.3inches)
	Height	355mm (13.9inches)
	Length	124mm (4.88inches)
	Width	206mm (8.11inches)
Approx weight (±5%)		20.0Kg (44.1lbs)

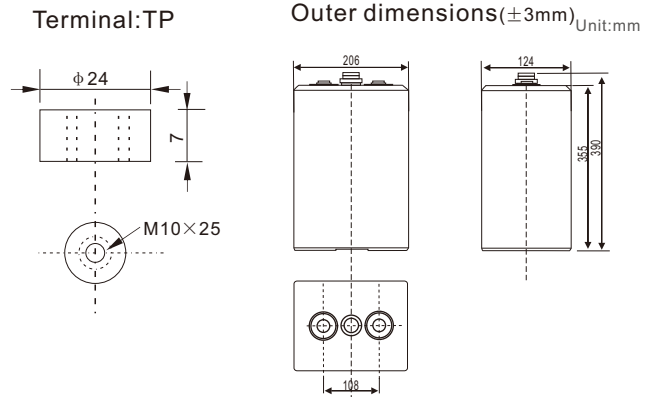
Battery picture and construction



Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Gelled acid	PVC	Rubber	Copper

Outer dimension and terminal



Characteristics

Capacity 25°C(77°F)	10 hour rate(25A, 1.8V) 3 hour rate(66A, 1.75V) 1 hour rate(148A, 1.60V)	250Ah 198Ah 148Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 1.0 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 Capacity after 12 month storage	94% 88% 75%
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) -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 62.5A Voltage 2.35-2.45V Temperature compensation:-4mV/°C Voltage 2.25-2.30V Temperature compensation:-3mV/°C

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

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

Unit:A

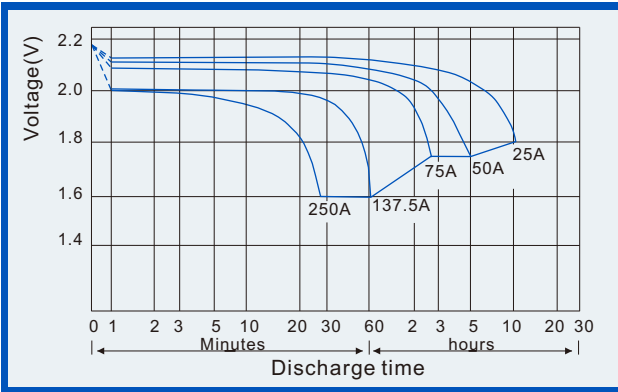
Unit:watts

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

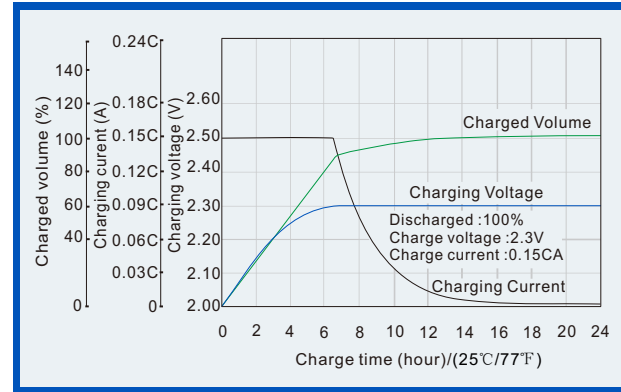
Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A	218	144	94	74	51	41	33	29	15	12	7	3
	W	456	294	210	148	95	91	75	56	28	26	17	9
1.70V	A	211	138	89	70	48	39	32	28	15	12	7	3
	W	429	285	206	143	94	88	73	55	28	25	17	9
1.75V	A	200	131	84	66	45	37	31	26	14	12	7	3
	W	392	278	201	138	93	86	70	53	28	25	17	9
1.80V	A	193	125	79	63	43	35	29	25	14	12	7	3
	W	349	260	196	133	90	83	68	51	28	25	17	9
1.85V	A	181	119	75	59	41	34	28	24	13	12	6	3
	W	303	254	186	126	86	79	65	49	26	24	17	9

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

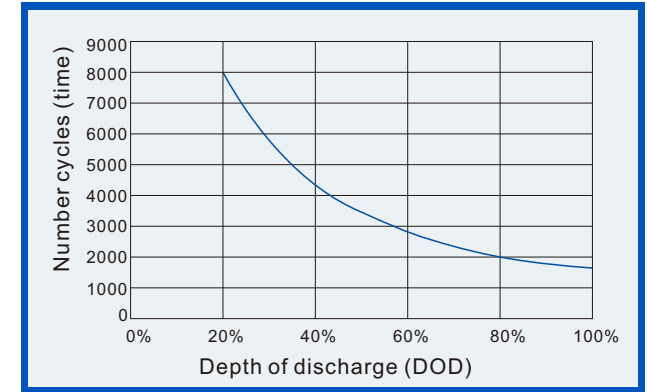
Discharge characteristics (25°C, 77°F)



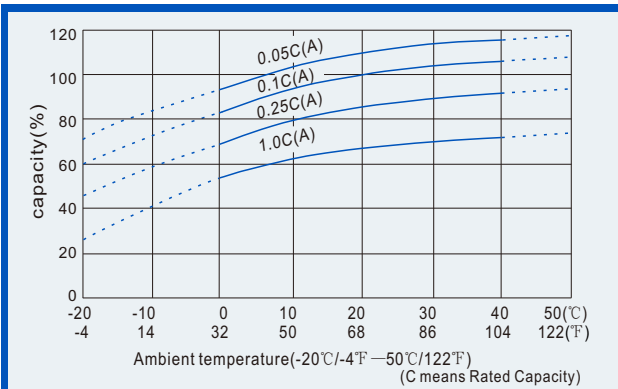
Charge characteristics (25°C, 77°F)



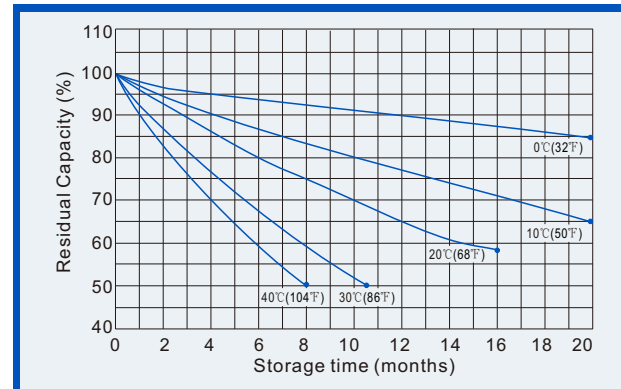
Life characteristics of Cyclic Use (25°C, 77°F)



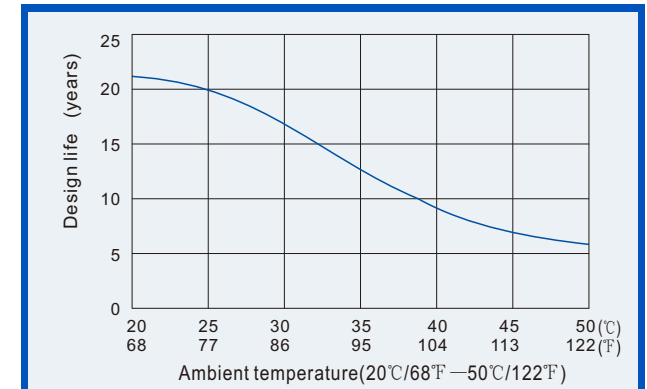
Effect of Temperature on capacity



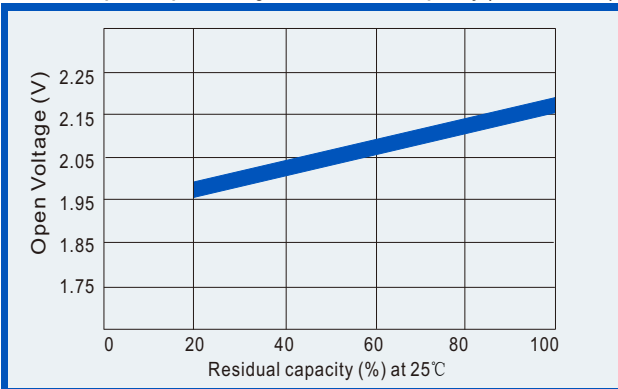
Self-discharge characteristics (with full charging)



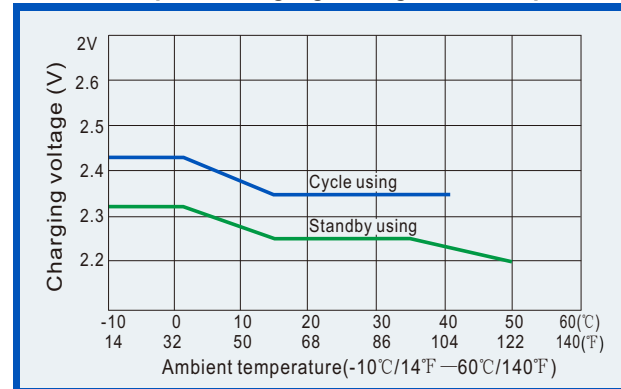
Relationships for design life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

