

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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MPPV2-300 (2V300Ah)

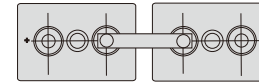
Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		300 Ah
Dimensions (±3mm)	Total Height (Include terminal)	390mm (15.3inches)
	Height	355mm (13.9inches)
	Length	145mm (5.71inches)
	Width	206mm (8.11inches)
Approx weight (±4%)		23.5Kg (51.7lbs)

Battery picture and construction



Connection method for reference:



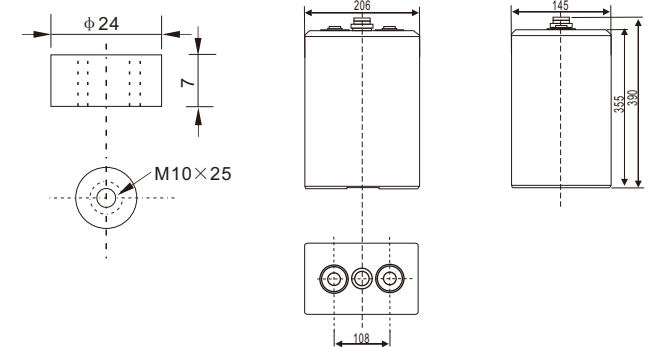
Battery Construction

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

Terminal: TP

Outer dimensions(±3mm) Unit:mm



Characteristics

Capacity 25°C(77°F)	10 hour rate(30A, 1.8V) 3 hour rate(80A, 1.75V) 1 hour rate(178A, 1.60V)	300Ah 240Ah 178Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.9 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	103%
	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	94%
	Capacity after 6 month storage	88%
	Capacity after 12 month storage	75%
Terminal type	TP (copper)	
Max. Discharge current 25°C/(77°F)	1500A (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 75 A Voltage 2.35-2.45V Temperature compensation:-3mV/°C
	Standby use	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)

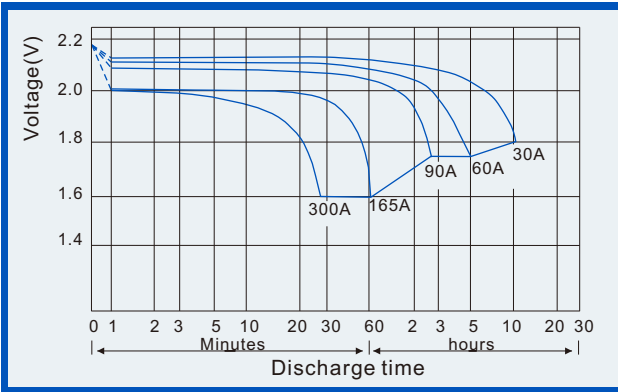
Unit:watts

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

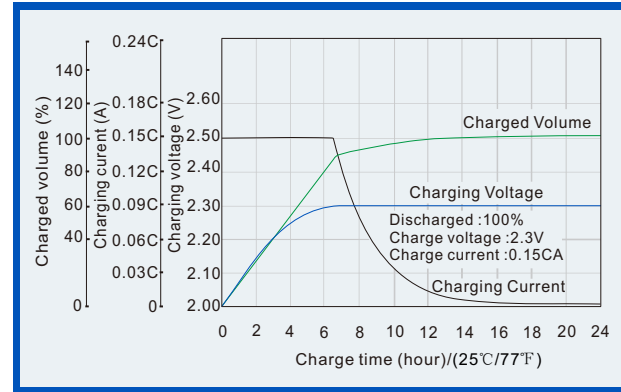
Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A	261	173	113	89	61	49	40	35	18	15	8	4
	W	548	353	253	177	115	110	91	68	34	31	20	11
1.70V	A	254	165	107	84	58	47	38	33	18	15	8	4
	W	515	342	248	171	113	106	87	66	34	30	20	10
1.75V	A	240	158	101	80	55	44	37	32	17	15	8	4
	W	471	333	241	166	111	103	84	63	33	30	20	10
1.80V	A	231	150	95	75	51	42	35	30	16	15	8	4
	W	419	312	236	159	108	99	81	62	33	30	20	10
1.85V	A	218	143	91	71	49	40	33	28	15	14	8	4
	W	363	305	224	151	104	95	78	59	31	28	20	10

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

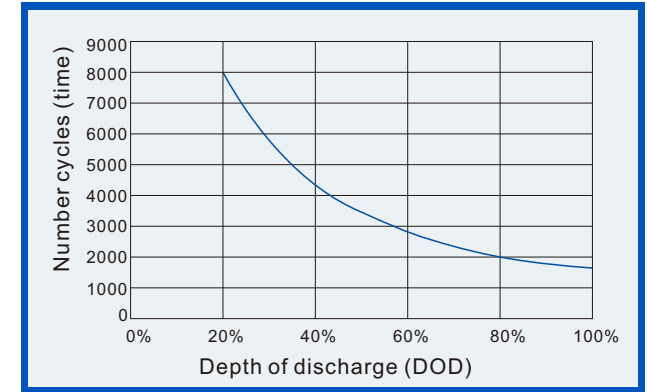
Discharge characteristics (25°C, 77°F)



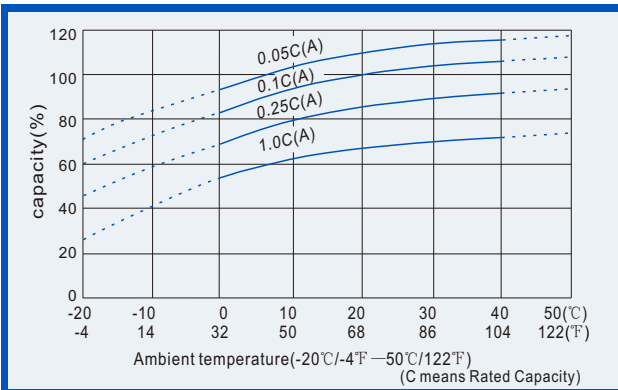
Charge characteristics (25°C, 77°F)



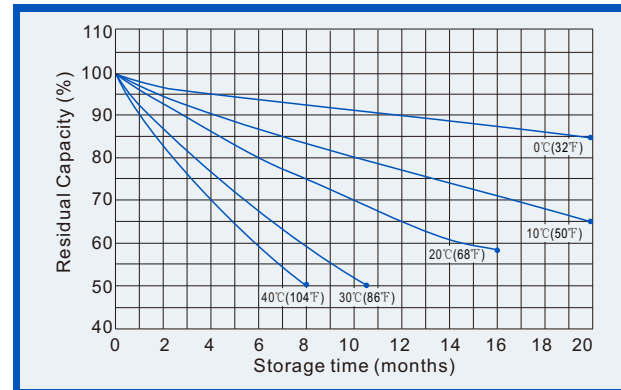
Life characteristics of Cyclic Use (25°C, 77°F)



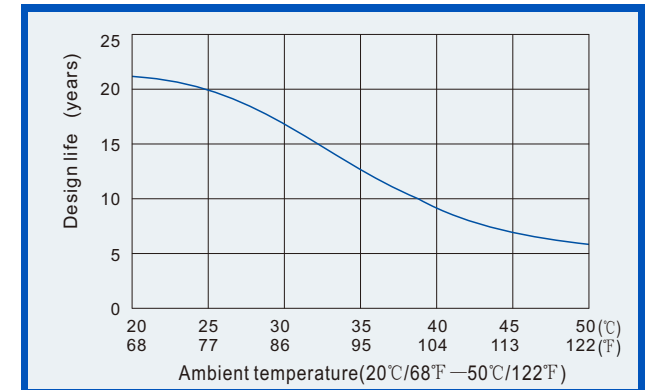
Effect of Temperature on capacity



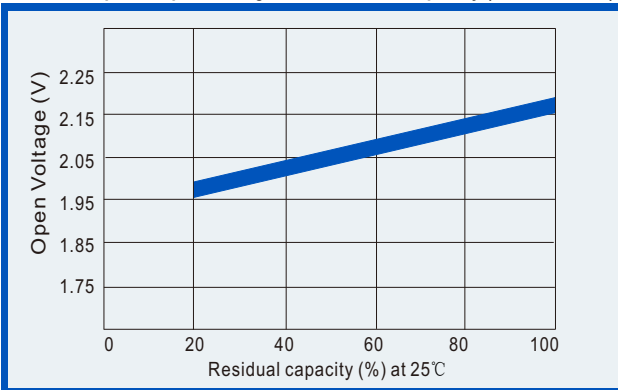
Self-discharge characteristics (with full charging)



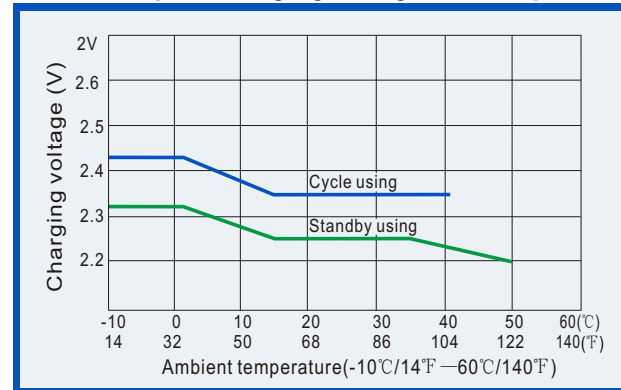
Relationships for design life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

