

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)

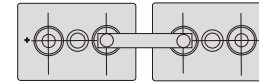
Specifications

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:



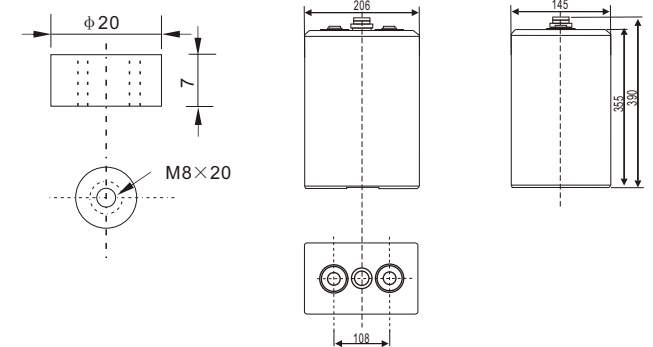
Battery Construction

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(78A, 1.75V) 1 hour rate(171A, 1.60V)	300Ah 234Ah 171Ah
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%
	-15°C (5°F)	65%
Remaining capacity Self-Discharge At 25°C(77°F)	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 2.40-2.50V Temperature compensation:-3mV/°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
1.65V	250	168	103	79.2	63.9	54.6	46.8	36.9	30.6	16.1
1.70V	242	164	102	78.6	63.3	54.0	46.5	36.6	30.3	16.1
1.75V	236	161	101	78.0	63.0	53.7	46.2	36.3	30.3	16.0
1.80V	228	156	97.8	75.6	61.2	52.2	44.7	35.1	30.0	15.9
1.85V	216	148	93.0	71.7	58.2	49.5	42.6	33.3	28.5	15.1

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

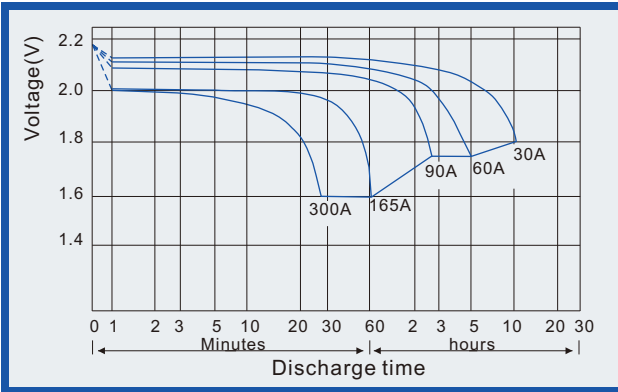
Constant power discharge (25°C , 77 °F)

Unit:watts

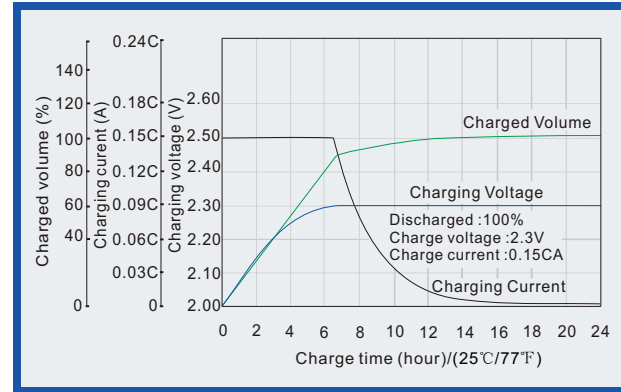
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.65V	467	320	199	155	125	107	92.4	72.9	60.6	32.4
1.70V	453	312	197	154	124	107	91.8	72.3	60.6	32.1
1.75V	442	306	194	153	124	106	90.9	72.0	60.0	32.1
1.80V	426	296	189	148	120	103	88.2	69.6	59.7	31.8
1.85V	404	282	180	141	114	97.3	83.7	66.0	56.7	30.2

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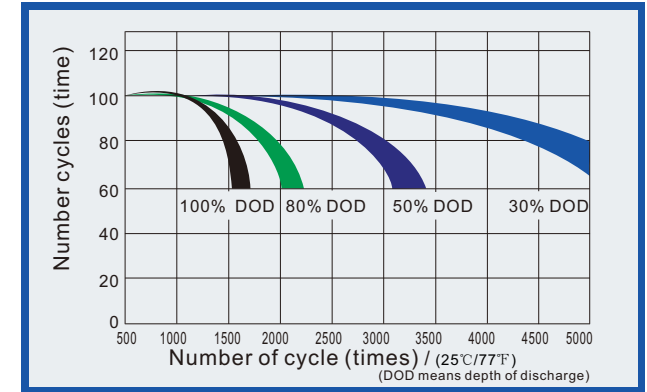
Discharge characteristics (25°C, 77°F)



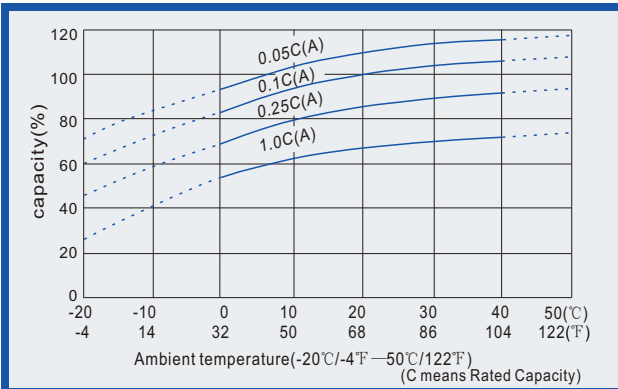
Charge characteristics (25°C, 77°F)



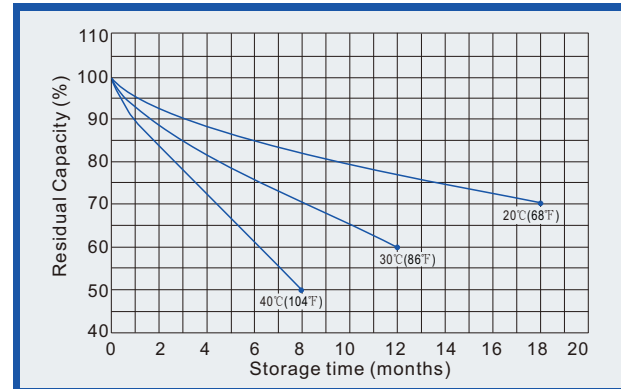
Life characteristics of Cyclic Use (25°C, 77°F)



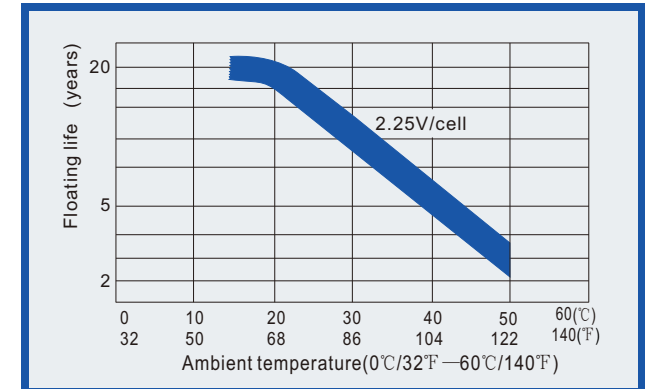
Effect of Temperature on capacity



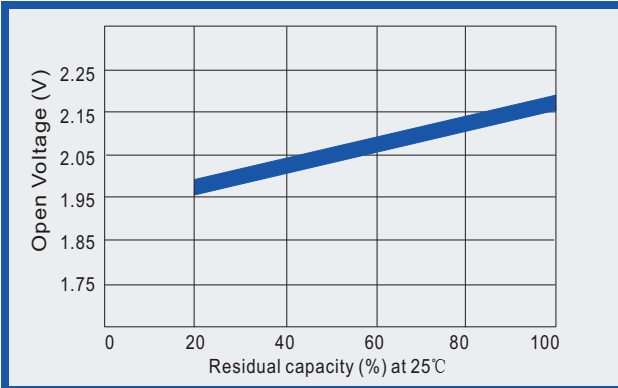
Self-discharge characteristics (with full charging)



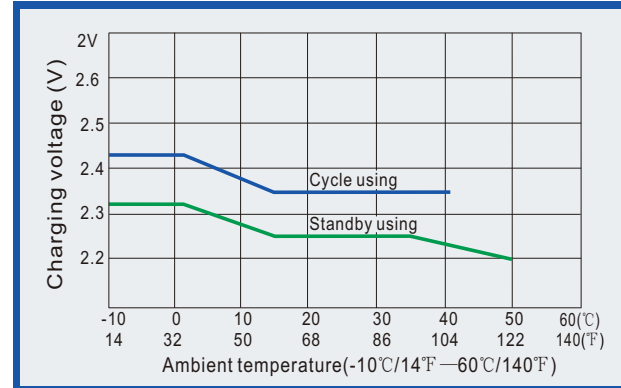
Relationships for floating life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

