

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..



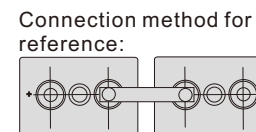
Maxton Power Tech Co., Ltd
www.maxtonpower.com
info@maxtonpower.com

MPPV2-490 (2V490Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		490 Ah
Dimensions (±3mm)	Total Height (Include terminal)	506mm (19.9inches)
	Height	471mm (18.5inches)
	Length	166mm (6.53inches)
	Width	206mm (8.11inches)
Approx weight (±5%)		35.0Kg (77.0lbs)

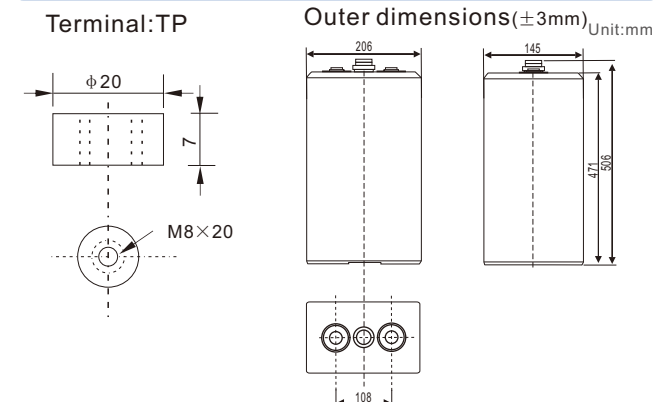
Battery picture and construction



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(49A, 1.8V) 3 hour rate(127A, 1.75V) 1 hour rate(279A, 1.60V)	490Ah 381Ah 279Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.6 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)	2450A (5Seconds)	
Nominal operating temperature	25°C ±5°C(77□ ±9□)	
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 122.5 A Voltage 2.40-2.50V Temperature compensation:-3mV/°C 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	408	275	168	129	104	182	76	60	50.0	26.3
1.70V	396	268	166	128	103	88	76	59	49.5	26.3
1.75V	386	262	164	127	102	87	75	59	49.0	26.2
1.80V	372	254	159	123	100	85	73	57	49.0	26.1
1.85V	353	242	152	117	95	81	69	54	46.5	24.7

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

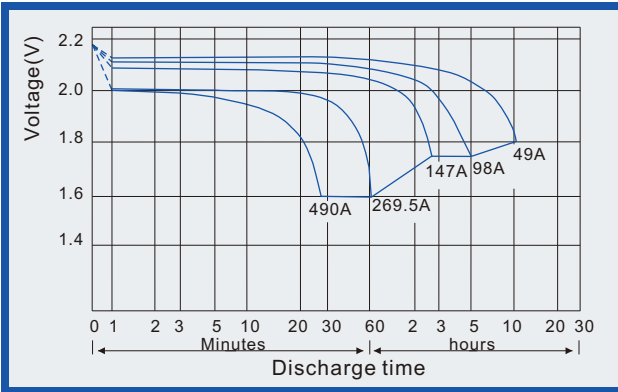
Constant power discharge (25°C , 77 °F)

Unit:watts

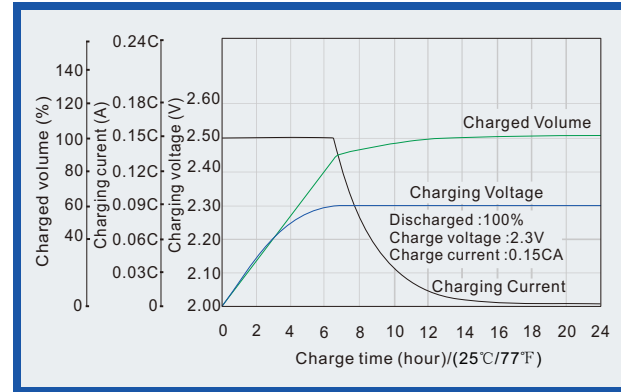
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.65V	763	523	324	253	204	175	150	119	99	53.0
1.70V	740	509	321	251	202	174	149	118	99	52.4
1.75V	722	499	316	250	201	173	148	117	98	52.4
1.80V	695	484	308	242	196	167	144	113	98	52.0
1.85V	660	460	294	230	186	159	137	107	93	49.4

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

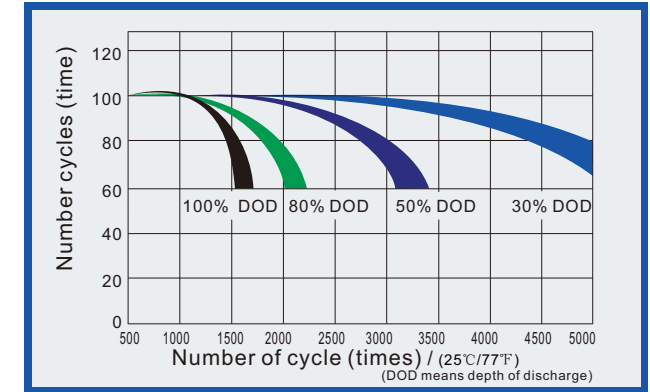
Discharge characteristics (25°C, 77°F)



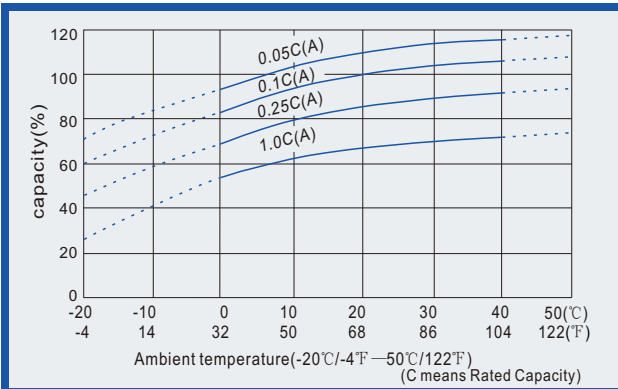
Charge characteristics (25°C, 77°F)



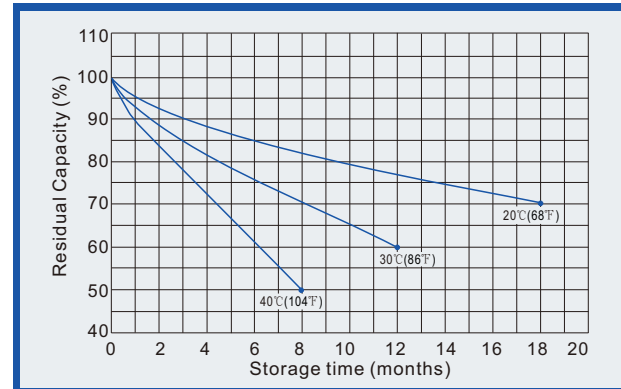
Life characteristics of Cyclic Use (25°C, 77°F)



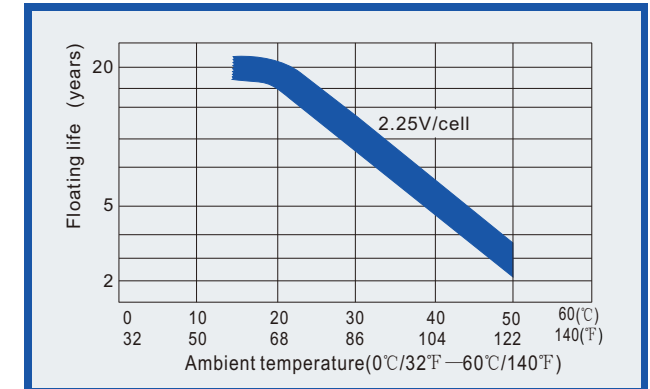
Effect of Temperature on capacity



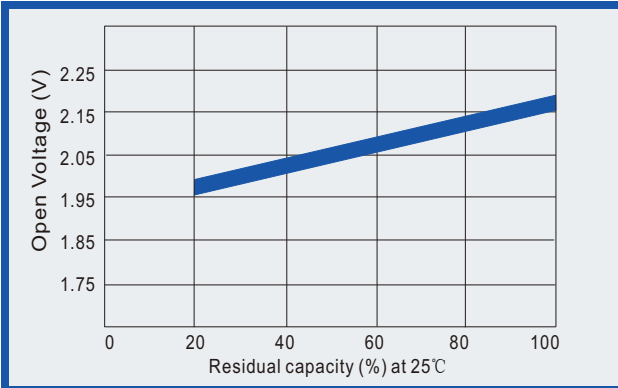
Self-discharge characteristics (with full charging)



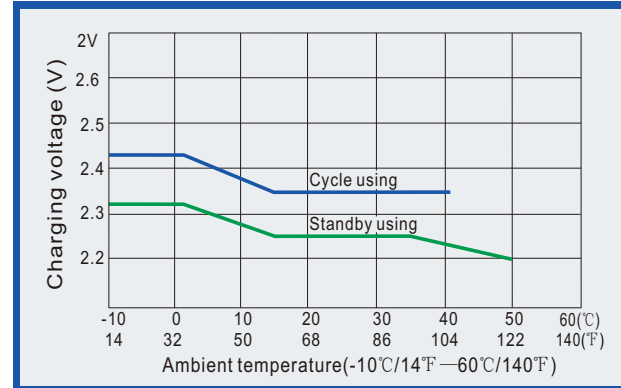
Relationships for floating life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

