

General features for MPE Series (Deep-cycle) battery

- * Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * UL-recognized component.
- * Long service life, float or cyclic applications.
- * Maintenance-free operation.
- * Low self discharge.
- * Case and cover are available in both standard and flame retardant ABS (Standard :UL94V0).



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MPE2-500 (2V500Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		500 Ah
Dimensions (±2mm)	Total Height (Include top cover)	365 mm (14.3 inches)
	Height	331 mm (13.0 inches)
	Length	242 mm (9.5 inches)
	Width	172 mm (6.8 inches)
Weight Approx (±3%)		30.5 Kg (67.2lbs)

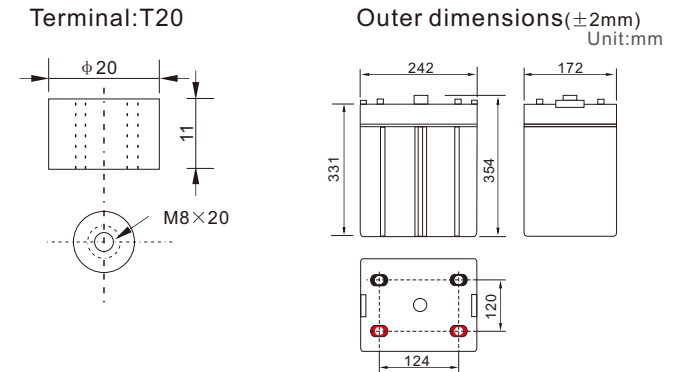
Battery picture and construction



Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fibreglass	Rubber	Copper

Outer dimension and terminal



(Total height 365mm includes the top cover)

Characteristics

Capacity 25°C(77°F)	10 hour rate(50A, 1.8V) 5 hour rate(80A, 1.75V) 1 hour rate(300 A, 1.6V)	500Ah 400Ah 300Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.5mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 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	91% 82% 64%
Terminal type	T20	
Max. Discharge current 25°C/(77°F)	3500A (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	Initial Charging Current less than 125A Voltage 2.42-2.50V Temperature compensation:-5mV/°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)

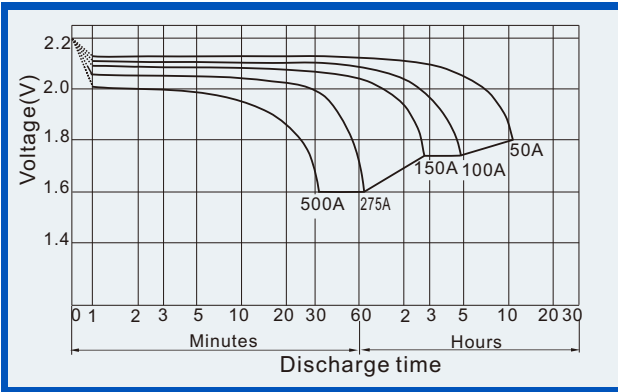
Unit:watts

Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	A	1602	1055	851	570	300	175.0	128.5	100.0	82.5	58.5	28
	W	2755	1878	1520	1021	540	320	238.4	187.5	156.3	111.7	55
1.70V	A	1551	952	801	545	282	167.0	125.0	97.5	81.0	57.0	27.5
	W	2761	1772	1494	1020	532	321	241.3	189.0	157.4	111.2	53.8
1.75V	A	1501	852	701	510	273	163.0	122.0	96.0	80.0	56.5	27.5
	W	2731	1614	1332	978	527	315	236.9	187.2	156.3	110.7	54.2
1.80V	A	1446	803	651	470	264	159.0	119.0	94.5	78.0	55.0	27.0
	W	2704	1542	1250	908	512	310	233.8	186.0	153.7	108.6	53.6
1.85V	A	1398	752	601	420	255	155.0	115.0	92.0	76.0	53.5	25.5
	W	2641	1451	1166	819	500	305	227.7	182.6	151.2	106.8	51.5

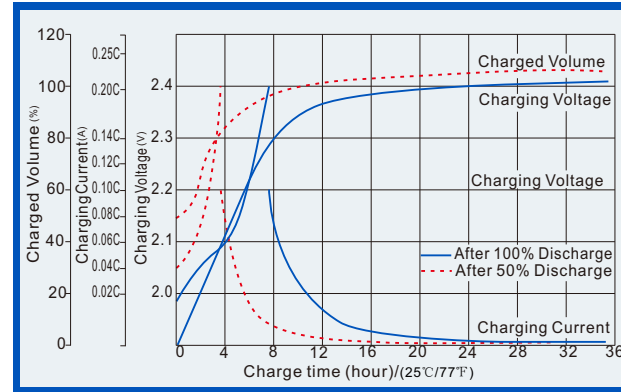
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

Deep Cycle Battery (VRLA Battery, AGM technology) Maintenance-free Sealed Lead Acid Rechargeable Battery

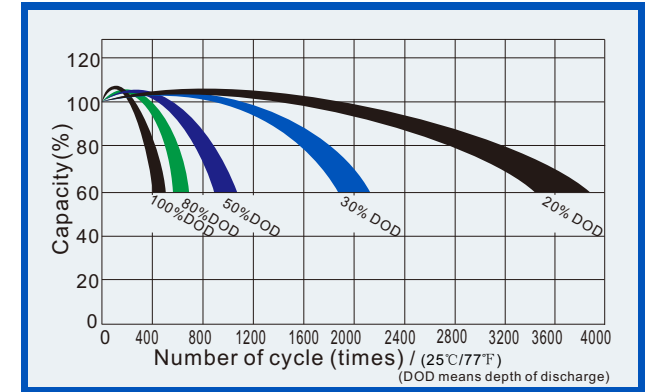
Discharge characteristics (25°C, 77°F)



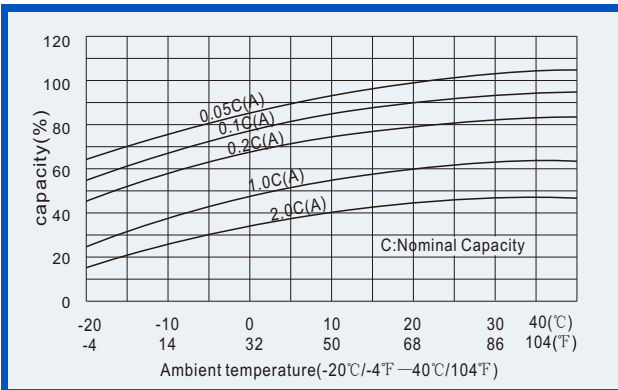
Charge characteristics (25°C, 77°F)



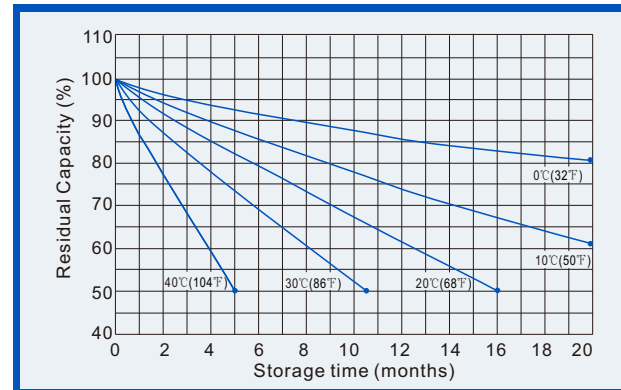
Life characteristics of Cyclic Use (25°C, 77°F)



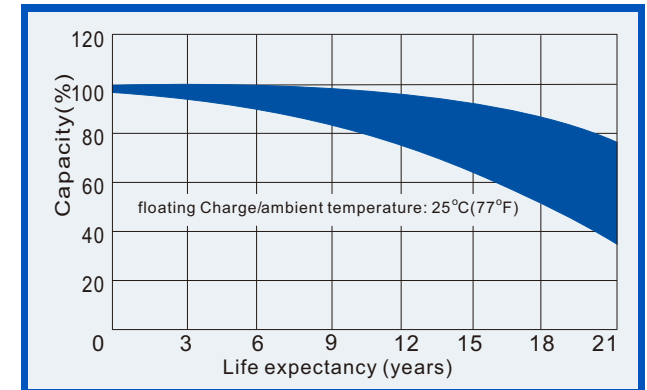
Effect of Temperature on capacity



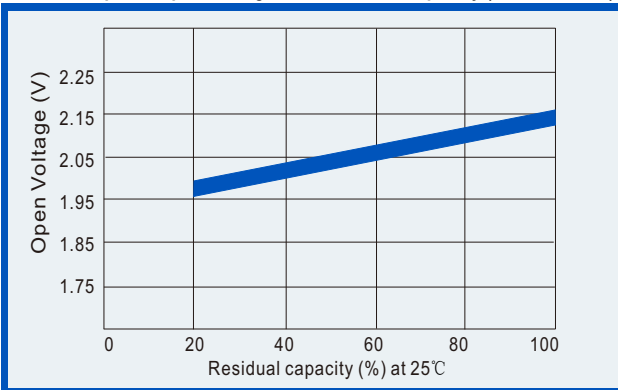
Self-discharge characteristics



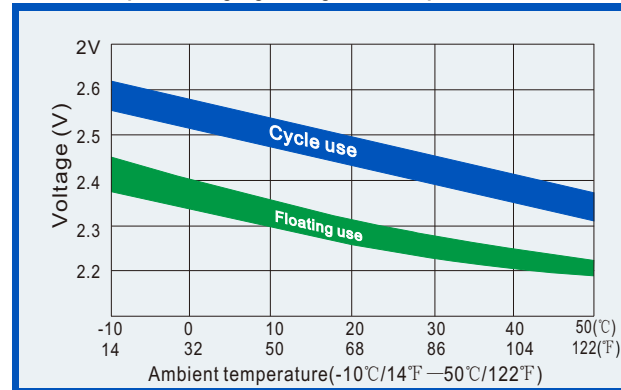
Life Characteristics of float service (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

