Deep Cycle Batteries

SY12045

Deep cycle Series Battery is specially designed for frequent cycling applications.The series battert uses high-tin alloy positive plate, active paste materials and stronger electrolyte,which gives 30% longer life than normal battery. Suitable for solar and wind energy systems.

Application

- Emergency Power System
- Communication equipment
- Telecommunication systems
- Uninterruptible power supplies
- Electric toy car and wheelchairs, etc
- Power tools
- Alarm system
- Marine equipment
- Medical equipment
- Fire and Security System

General Features

- Heavy Duty Grid
- Mechanized assembly
- Non-spillable construction
- High Reliability and Stability
- Sealed and Maintenance-free
- Long Life and low self-discharge design

Construction

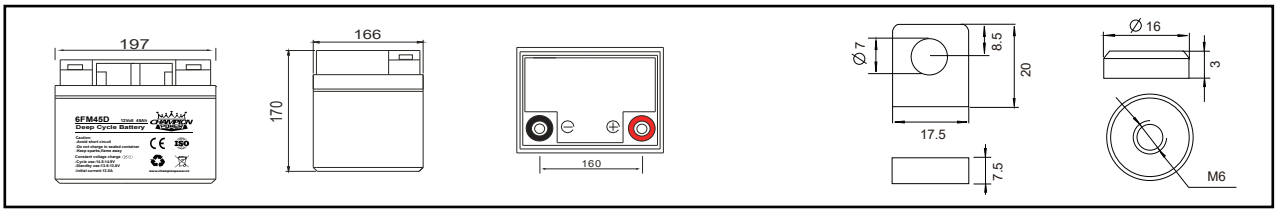
- Positive.....Lead dioxide
- Electrolyte.....Sulfuric acid
- Separator.....Fiber glass
- Negative.....Lead
- Safety Valve.....EPDR
- Terminal.....Copper
- Container.....ABS(UL94-HB) / Flame Retardant ABS (UL94-V0)

Specification

Battery Model	Nominal Voltage	12V		
	Rated capacity (10Hour rate)	45Ah		
	Cells Per battery	6		
Dimension	Length	Width	Height	Total Height
	197mm	166mm	170mm	170mm
Approx Weight	13Kg			
Internal Resistance	Full charged at 25℃(77℉): Approx 8mΩ			
Max.discharge current	360A(5s)			
Floating design life @ 25℃ (77℉)	15 years			
Capacity @ 25℃ (77℉)	10Hour rate(4.5A/10.8V)	5Hour rate(6.5A/10.5V)	3Hour rate(8.4A/10.5V)	1Hour rate(17.3A/10.5V)
	45Ah	32.5Ah	25.3Ah	17.3Ah
Capacity affected by Temp(10 HR)	40℃ (104℉)	25℃ (77℉)	0℃ (32℉)	-15℃(5℉)
	102%	100%	85%	65%
Self Discharge @ 25℃ (77℉)	After 3 months storage	After 6 months storage	After 12 months storage	
	93%	84%	65%	
Charge method @ 25℃ (77℉)	Cycle Use	14.5-14.9V (Initial charging current less than 13.5A)		
	Float Use	13.6-13.8V		

Outer Dimension(mm)

Terminal Type(mm)



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

F.V / TIME		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	162.00	99.00	78.75	51.75	27.00	15.75	11.70	9.45	7.89	5.21	4.95	2.57
	W	1717.20	1051.38	842.63	558.90	294.30	171.68	128.70	103.95	86.83	57.86	54.95	28.86
10.20V	A	148.50	99.37	72.37	49.13	27.90	15.11	11.48	9.00	7.74	5.13	4.73	2.52
	W	1618.65	1103.06	806.98	552.66	313.88	170.77	129.67	102.15	87.89	58.23	53.63	28.60
10.50V	A	137.72	94.95	67.50	47.62	27.00	14.81	11.25	8.55	7.65	5.06	4.64	2.49
	W	1514.91	1068.19	762.75	542.92	307.80	169.60	128.81	98.33	87.98	58.22	53.30	28.62
10.80V	A	125.40	90.75	63.00	45.45	26.10	14.44	11.03	8.40	7.31	4.93	4.50	2.46
	W	1379.40	1034.55	721.35	524.95	301.46	166.75	127.89	97.86	85.19	57.45	52.43	28.62
11.10V	A	108.45	85.50	58.50	42.30	24.75	14.06	10.58	8.25	6.99	4.80	4.39	2.43
	W	1225.49	987.53	678.60	494.91	289.58	164.53	124.26	97.35	82.53	56.64	51.77	28.67

ACDC DYNAMICS

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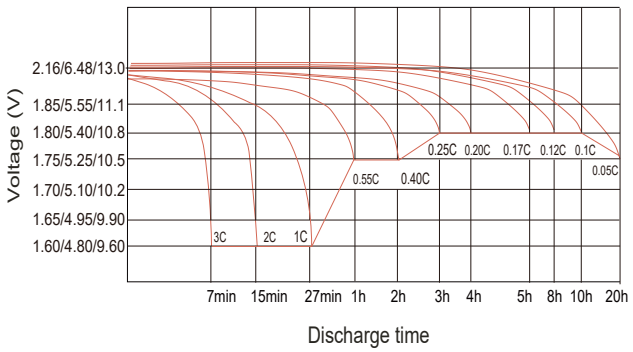
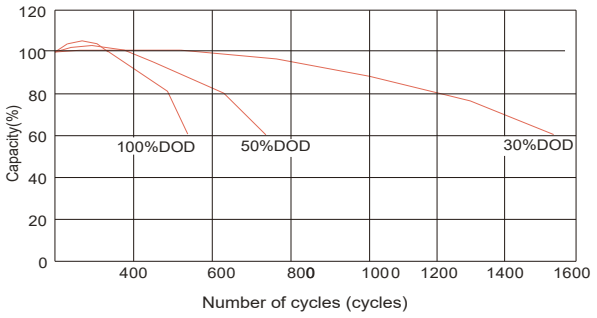
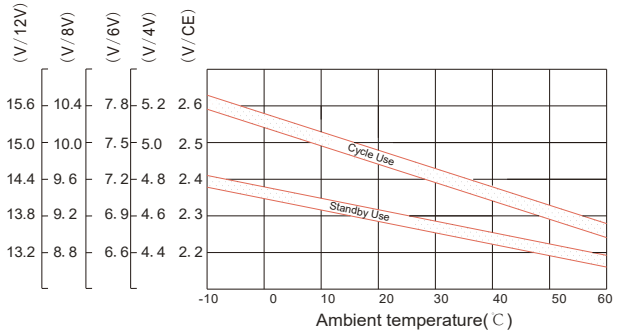
Discharge characterstic Curve



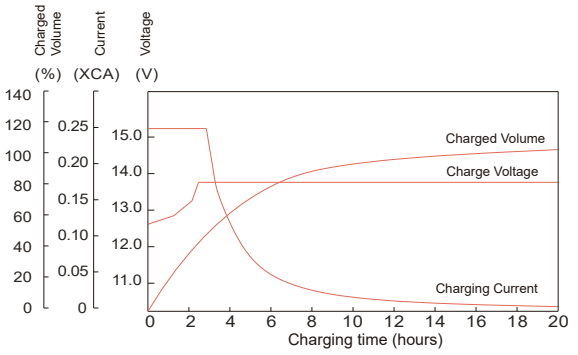
Cycle service life in relation to depth of discharge



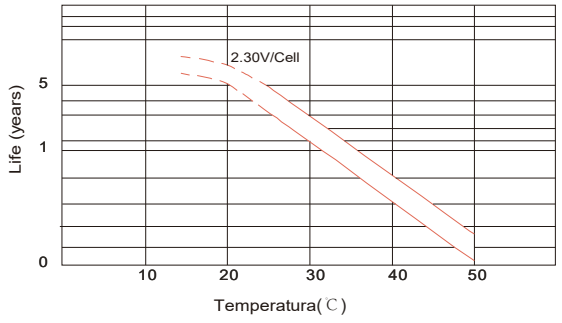
Relationship between charging voltage and temperature



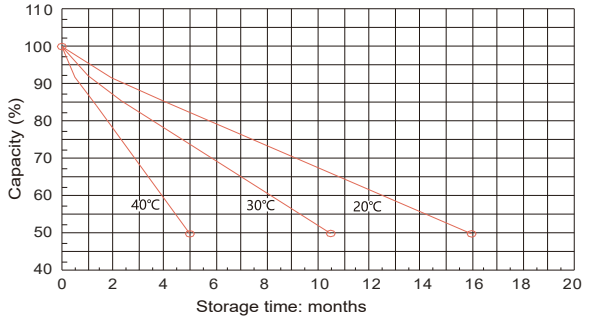
Constant voltage charging characteristic (0.25CA, at 25˚C)



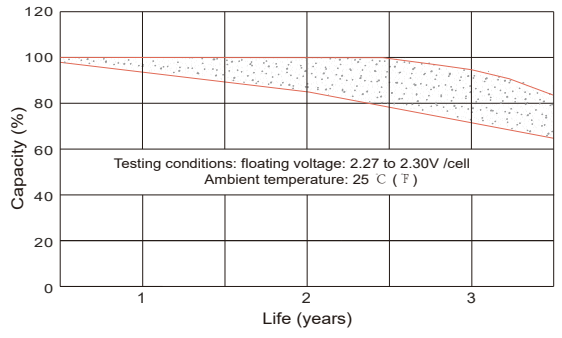
Temperature effects on float life



Self-discharge characteristic



Life characteristics of standby use



Charge characterstic for standby use

