



MS2.3-12 (12V2.3Ah)

Rechargeable VRLA Battery



FEATURES

- AGM technology for efficient gas recombination and lower I.R.
- Individually tank-formated plates optimize uniformity of cell
- high performance alloy to secure corrosion-proof feature
- long service life, float or cyclic application
- Maintenance-free operation
- Sealed construction, no electrolyte leakage or spill
- Computer-aided design and manufacturing ensures quality products through control of process and standards

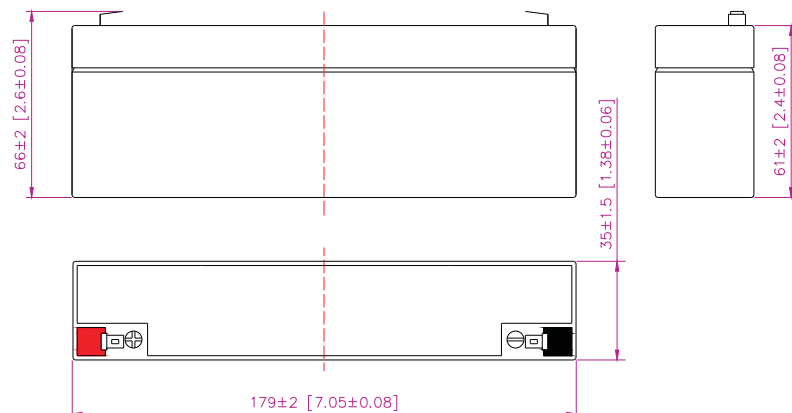
SPECIFICATION

Nominal Voltage	12V
Nominal Capacity	2.3Ah@20Hr-rate to 1.75V/cell
Approx. Weight	0.96Kg (2.12Lbs)
Internal Resistance	40mΩ(Fully Charged)@25℃
Self-Discharge	Average 3% of capacity declined per month@25℃
Nominal Operating Temp.	25±3℃ (77±5°F)
Operating Temp. Range	Discharge: -20℃ ~50℃ (-4 ~ 122°F)
	Charge: -15~40℃ (5 ~ 104°F)
	Storage: -20℃ ~40℃ (-4 ~ 104°F)
Max. Discharge Current	35A(5 sec.)
	40℃ (104°F) 102%
	25℃ (77°F) 100%
	0℃ (32°F) 85%
Capacity Affected by Temp.	-15℃ (5°F) 65%
Container Material	ABS(UL94-HB,UL94-V0 is optional)

OUTER DIMENSION

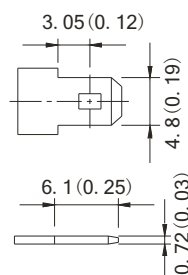
- Length 179±1.5(7.05±0.06)
- Width 35±1.5(1.38±0.06)
- Height 61±1.5(2.40±0.06)
- Total height 66±2.0(2.60±0.06)

Unit: mm(inch)

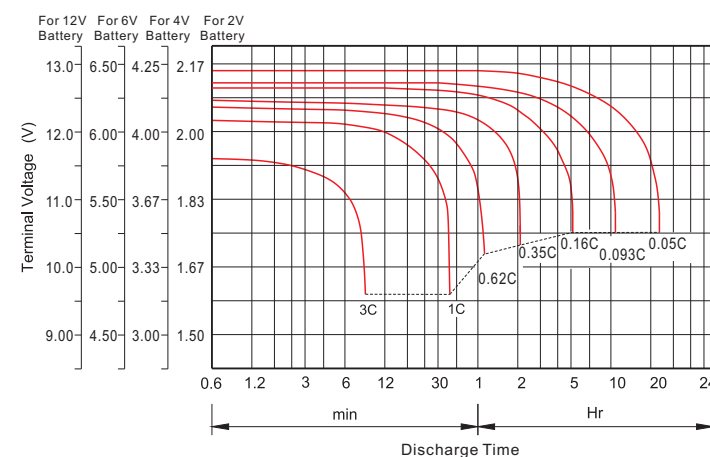


Terminal Type

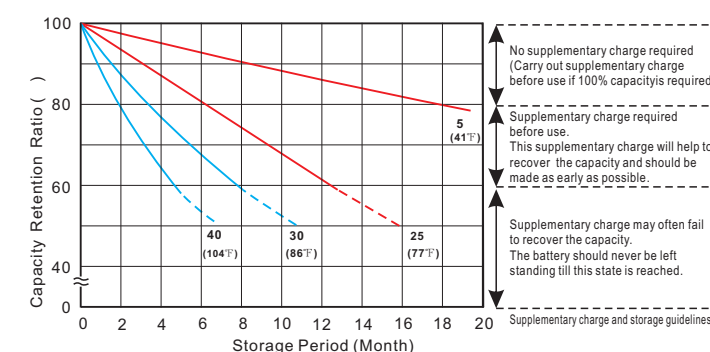
- Terminal F0



Discharge Characteristics@25



Capacity Retention Characteristics

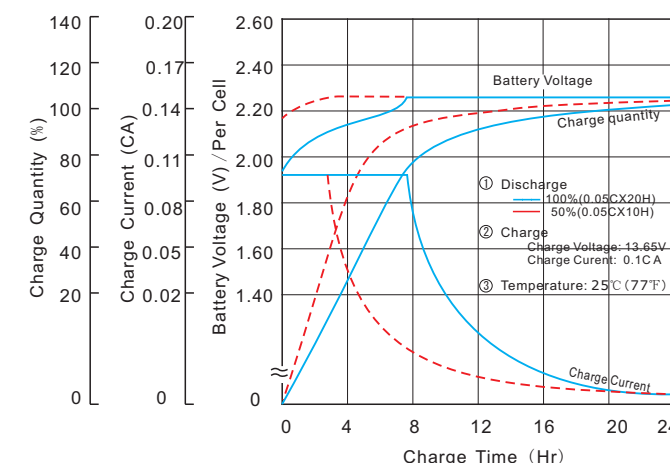


Charge Procedure

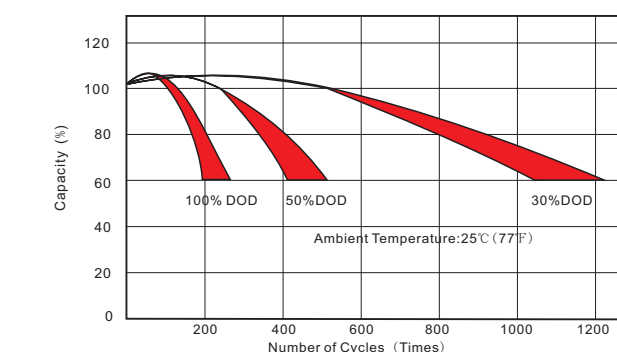
Application	Constant Voltage Charge(V/cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25℃ (77°F)	2.425	2.40~2.45	0.3C
Standby Use	25℃ (77°F)	2.275	2.25~2.30	

Note: Temp. Compensation Coefficient of Charge Voltage, Cycle use:-4mv/℃/cell, Standby Use:-3mv/℃/cell

Charge Characteristics(Standby Use)



Cycle Service life



Discharge Retention vs. Discharge Voltage

Final Discharge Voltage(V/cell)	1.75	1.70	1.60	1.30
Discharge Current(A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1C	(A)>1C

Constant Current (CC,Unit:A)&Constant Power(CP, Unit:W)Discarge Table at 25 (77°F)

F.V. (V/cell)	Model	Time											
		5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
1.60V	CC(A)	8.28	5.43	4.03	2.65	1.38	0.81	0.59	0.48	0.40	0.27	0.22	0.12
	CP(W)	97.7	61.3	46.4	28.1	15.9	9.3	6.85	5.50	4.67	3.08	2.52	1.38
1.70V	CC(A)	7.59	5.19	3.70	2.51	1.30	0.77	0.58	0.46	0.40	0.26	0.21	0.12
	CP(W)	91.9	58.1	43.6	27.9	15.0	8.9	6.66	5.33	4.58	3.03	2.47	1.34
1.75V	CC(A)	6.91	4.85	3.45	2.43	1.25	0.76	0.57	0.44	0.39	0.26	0.21	0.12
	CP(W)	88.7	56.4	41.7	27.6	14.5	8.8	6.55	5.06	4.55	3.00	2.45	1.33
1.80V	CC(A)	6.64	4.64	3.22	2.37	1.21	0.74	0.56	0.43	0.37	0.25	0.21	0.11
	CP(W)	77.8	54.6	40.2	27.5	14.1	8.6	6.47	5.00	4.35	2.88	2.40	1.30
1.85V	CC(A)	6.14	4.37	2.99	2.30	1.17	0.72	0.53	0.42	0.36	0.25	0.20	0.11
	CP(W)	75.2	52.8	38.2	27.3	13.9	8.5	6.28	4.98	4.26	2.78	2.35	1.29

Note: The above data are average values, and can be obtained with 3 charge/discharge cycles.



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