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SAITE TECHNOLOGY VIET NAM JSC

VRLA AGM Battery

BT-12M24AT [12V24Ah]

General Features

- Designed floating charging service life: 8 years (25ºC).
- AGM technology for efficient gas recombination of up to 99%.
- Sealed and maintenance free operation, safety valve for explosion proof.
- Low self-discharge characteristic, ≤ 3% of capacity per month at 20ºC (average).
- Wide operating temperature with range charge from -10ºC~60ºC, discharge from -20ºC~60ºC, storage from -20ºC~60ºC.
- Flat Plates in Lead Aluminum Calcium Tin alloy high energy, prevent corrosion.
- ABS flame retardant case, classified to UL94-V0 is available on request.

Applications

- DC power supply.
- UPS/ EPS power supply.
- Electrical devices & instruments.
- Security and fire alarm systems.
- Telecom stations and power stations.
- Medical equipment.
- Emergency lighting systems.

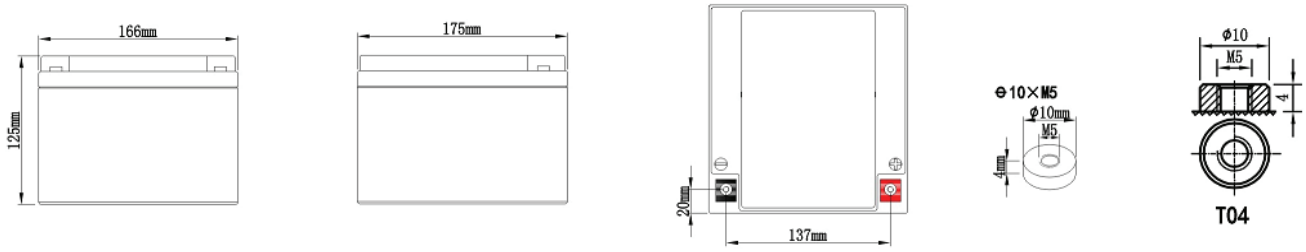
Battery Construction

Component	Battery Container	Safety valve	Terminal	Separator	Electrolyte
Raw material	ABS	Rubber	Copper alloy	Fiberglass	Sulfuric acid

Physical Specifications

Nominal Voltage/ No. of cell	Nominal Capacity (20HR)	Dimension (±3mm)				Weight (±3%)	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V/6 cells	24Ah	175 mm	166 mm	125 mm	125 mm	Apx. 7.4 kg (16.31 lbs)	≤ 14.0 mΩ	T04 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity at 77°F(25°C)	
20 hour rate (1.20A to 10.8V)	24.0Ah
10 hour rate (2.35A to 10.8V)	23.5Ah
5 hour rate (4.25A to 10.5V)	21.2Ah
3 hour rate (6.50A to 10.5V)	19.5Ah
1 hour rate (15.4A to 10.2V)	15.4Ah
Capacity affected by Temperature	
40ºC(104ºF)	103%
25ºC(77ºF)	100%
0ºC(32ºF)	86%

Cycle Application
1. Limit initial current less than 7.2A
2. Charge until battery voltage (under charge) reaches 14.1V to 14.7V at 25ºC(77ºF)
3. Hold at 14.1V to 14.7V until current drop to under 0.14A for at least 3 hours
4. Temperature compensation coefficient of charging voltage is -30mV/ºC
Standby Service
1. Hold battery across constant voltage source of 13.5 to 13.8 volts at 25ºC(77ºF) with current limit 7.2A continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charge status
2. Temperature compensation coefficient of charging voltage is -18mV/ºC
Max. discharge current (5s): 300A **Short Circuit Current:** 1250A

NOTE: All data shall be changed without notice. Saite reserves the right to explain and update the information contained hereinto.
The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

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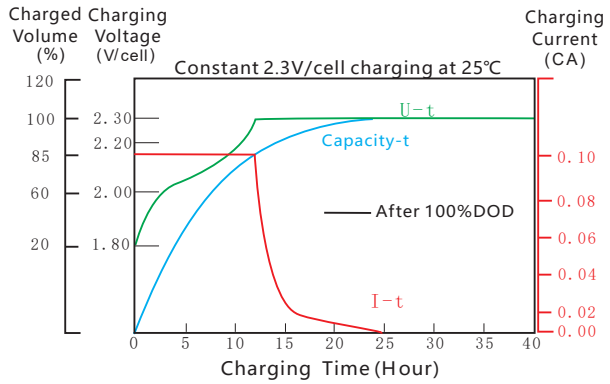
Battery Discharge Table

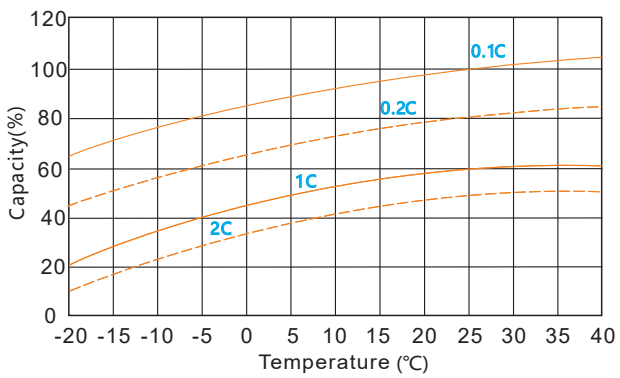
End Volts/ Cell	Minute (M)			Hour (H)							
	10	15	30	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25ºC) Unit: A											
1.60V	66.9	52.4	26.8	15.9	12.6	9.40	7.09	4.54	3.01	2.48	1.28
1.65V	65.0	50.9	26.0	15.6	12.3	9.11	6.89	4.44	2.96	2.43	1.26
1.70V	63.2	49.5	25.3	15.4	12.1	8.83	6.70	4.35	2.92	2.40	1.24
1.75V	61.3	48.0	24.6	15.1	11.8	8.55	6.50	4.25	2.88	2.37	1.22
1.80V	59.5	46.6	23.8	14.9	11.6	8.27	6.31	4.16	2.84	2.35	1.20
Constant Power Discharge Data Sheet (@25ºC) Unit: W											
1.60V	130	105	59.3	31.3	24.0	18.2	12.9	8.52	5.93	4.72	2.53
1.65V	125	101	57.3	30.7	23.5	17.8	12.6	8.40	5.90	4.70	2.50
1.70V	120	97.3	55.2	30.0	23.0	17.4	12.3	8.22	5.77	4.59	2.48
1.75V	115	93.4	53.2	29.4	22.6	17.0	12.0	8.07	5.68	4.53	2.45
1.80V	110	89.5	51.2	28.8	22.2	16.7	11.8	7.92	5.60	4.47	2.42

Performance Characteristics

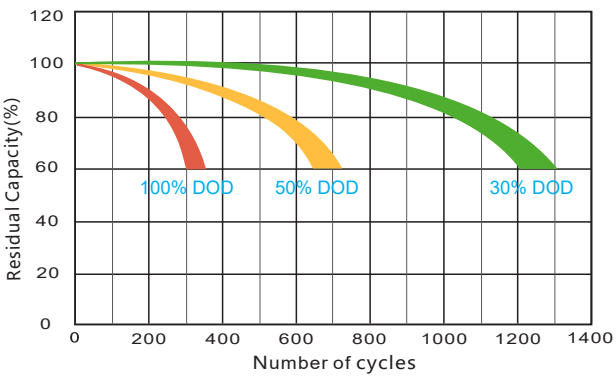
Charge Characteristic (25ºC/77ºF)



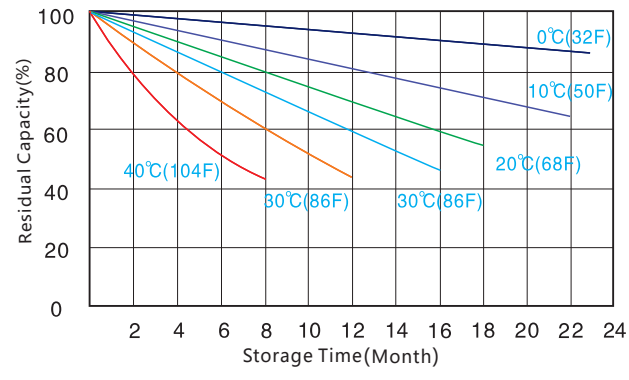
Capacity Curve at Different Temperature



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristic



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