

## VRLA AGM Battery

**BT-12M18AC [12V18Ah]**



### General Features

- Designed floating charging service life: 8 years (25°C).
- 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 20°C (average).
- Wide operating temperature with range charge from -10°C~60°C, discharge from -20°C~60°C, storage from -20°C~60°C.
- 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.

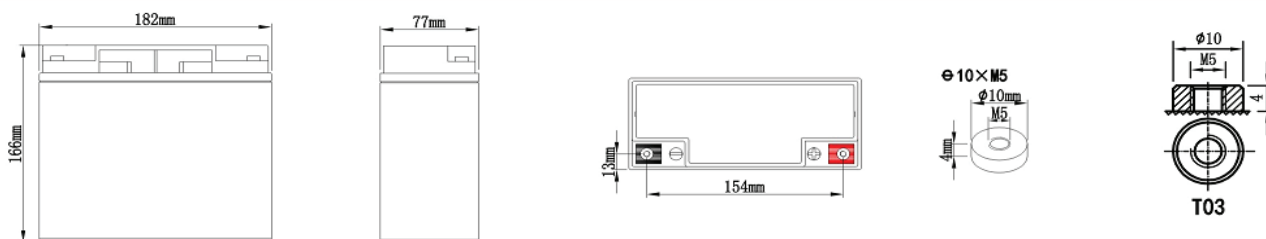
### Battery Construction

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	18Ah	182 mm	77 mm	166 mm	166 mm	Apx. 5.15 kg (11.35 lbs)	≤ 15.5 mΩ	T03 (standard)

### Dimensions



### Constant-Voltage Charge

Rated Capacity at 77°F(25°C)	
20 hour rate (0.90A to 10.8V)	18.0Ah
10 hour rate (1.68A to 10.8V)	16.8Ah
5 hour rate (3.05A to 10.5V)	15.2Ah
3 hour rate (4.65A to 10.5V)	13.9Ah
1 hour rate (11.1A to 10.2V)	11.1Ah
Capacity affected by Temperature	
40°C(104°F)	103%
25°C(77°F)	100%
0°C(32°F)	86%

### Cycle Application

1. Limit initial current less than 5.4A
2. Charge until battery voltage (under charge) reaches 14.1V to 14.7V at 25°C(77°F)
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/°C

### Standby Service

1. Hold battery across constant voltage source of 13.5 to 13.8 volts at 25°C(77°F) with current limit 5.4A 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/°C

**Max. discharge current (5s): 270A**

**Short Circuit Current: 900A**

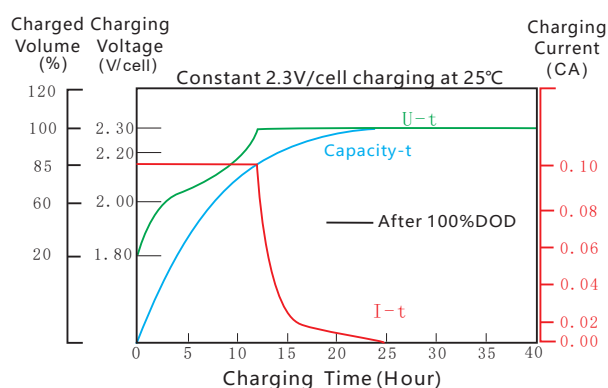
**NOTE:** All data shall be changed without notice. Saite reserves the right to explain and update the information contained hereinto. The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

## Battery Discharge Table

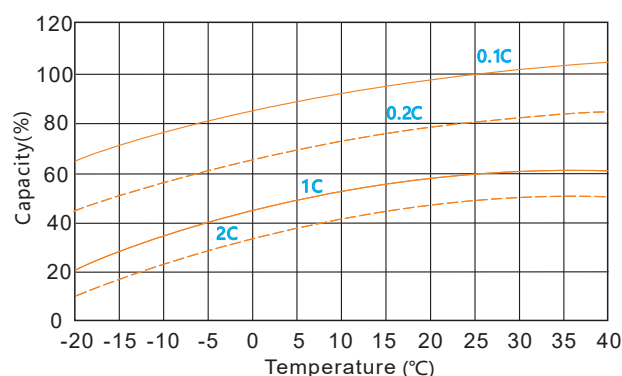
End Volts/ Cell	Minute (M)			Hour (H)							
	10	15	30	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A											
<b>1.60V</b>	47.8	37.5	19.2	11.4	9.03	6.72	5.07	3.24	2.15	1.75	0.94
<b>1.65V</b>	46.5	36.4	18.6	11.2	8.85	6.52	4.93	3.18	2.12	1.73	0.93
<b>1.70V</b>	45.2	35.4	18.1	11.1	8.67	6.32	4.79	3.11	2.09	1.72	0.92
<b>1.75V</b>	43.8	34.3	17.5	10.9	8.48	6.11	4.65	3.05	2.05	1.70	0.91
<b>1.80V</b>	42.5	33.2	16.9	10.7	8.30	5.91	4.51	2.98	2.02	1.68	0.90
Constant Power Discharge Data Sheet (@25°C) Unit: W											
<b>1.60V</b>	97.2	78.8	44.5	23.5	18.0	13.6	9.67	6.37	4.45	3.53	1.90
<b>1.65V</b>	93.4	75.9	43.0	23.0	17.7	13.3	9.46	6.26	4.39	3.49	1.88
<b>1.70V</b>	89.6	72.9	41.4	22.6	17.3	13.1	9.25	6.15	4.33	3.44	1.86
<b>1.75V</b>	85.8	70.0	39.9	22.1	17.0	12.8	9.04	6.04	4.26	3.40	1.84
<b>1.80V</b>	82.0	67.0	38.3	21.7	16.7	12.6	8.83	5.93	4.20	3.35	1.82

## Performance Characteristics

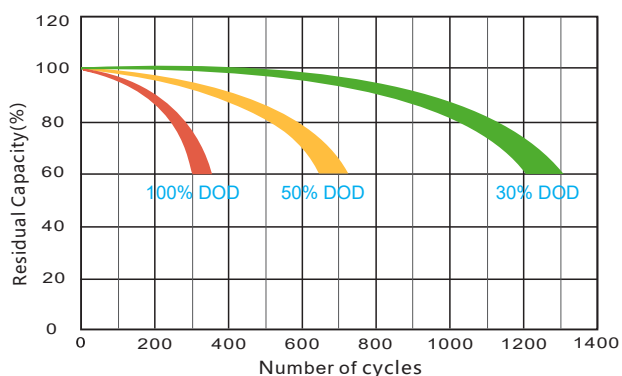
### Charge Characteristic (25°C/77°F)



### Capacity Curve at Different Temperature



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristic

