

VRLA AGM Battery

BT-12M33AC [12V33Ah]



General Features

- Designed floating charging service life: 12 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.

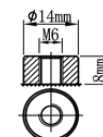
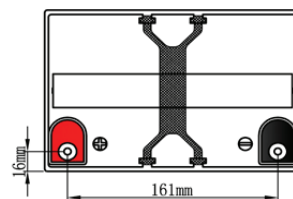
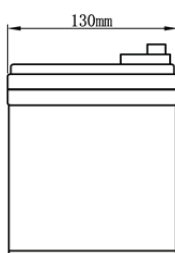
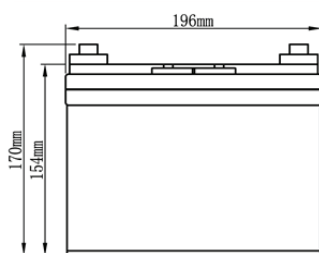
Battery Construction

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 (10HR)	Dimension (±3mm)				Weight (±3%)	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V/6 cells	33Ah	196 mm	130 mm	154 mm	170 mm	Apx. 10 kg (22.0 lbs)	≤ 10 mΩ	T66 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity at 77°F(25°C)	
20 hour rate (1.69A to 10.8V)	33.8Ah
10 hour rate (3.30A to 10.8V)	33.0Ah
5 hour rate (5.60A to 10.5V)	28.0Ah
3 hour rate (8.54A to 10.5V)	25.6Ah
1 hour rate (20.3A to 10.2V)	20.3Ah
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 9.9A
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 0.2A 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 9.9A 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): 350A

Short Circuit Current: 900A

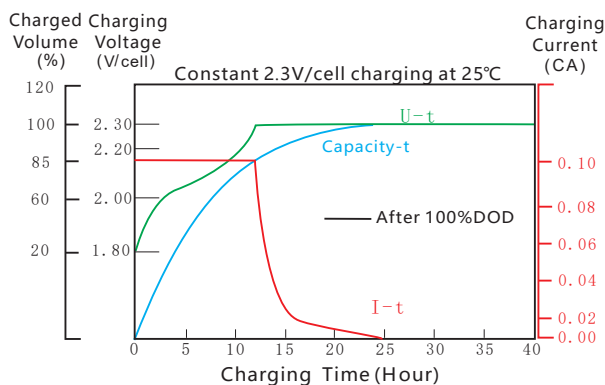
⚠ NOTE: All data shall be changed without notice. Saite reserves the right to explain and update the information contained hereinto. The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

Battery Discharge Table

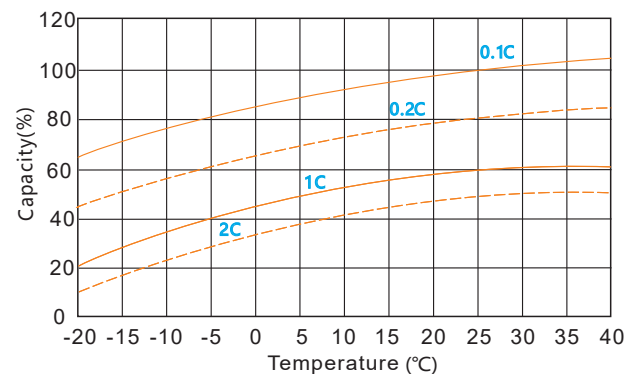
End Volts/ Cell	Minute (M)			Hour (H)							
	10	15	30	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A											
1.60V	88.2	69.1	35.3	20.9	16.5	12.2	9.26	5.98	3.96	3.42	1.77
1.65V	84.6	65.9	34.4	20.6	16.2	11.9	9.03	5.85	3.90	3.39	1.75
1.70V	81.1	62.8	33.4	20.3	15.9	11.5	8.81	5.73	3.85	3.36	1.73
1.75V	77.5	59.6	32.5	20.0	15.6	11.2	8.54	5.60	3.79	3.33	1.71
1.80V	73.9	56.4	31.5	19.7	15.3	10.8	8.26	5.47	3.73	3.30	1.69
Constant Power Discharge Data Sheet (@25°C) Unit: W											
1.60V	167	134	80.3	42.3	32.5	24.5	17.5	11.5	8.03	6.37	3.43
1.65V	160	130	77.5	41.5	31.9	24.0	17.1	11.3	7.92	6.29	3.49
1.70V	153	126	74.8	40.7	31.3	23.6	16.7	11.1	7.80	6.21	3.35
1.75V	145	122	72.0	39.8	30.6	23.1	16.4	10.9	7.68	6.13	3.31
1.80V	138	118	69.2	39.0	30.0	22.7	16.0	10.7	7.57	6.05	3.27

Performance Characteristics

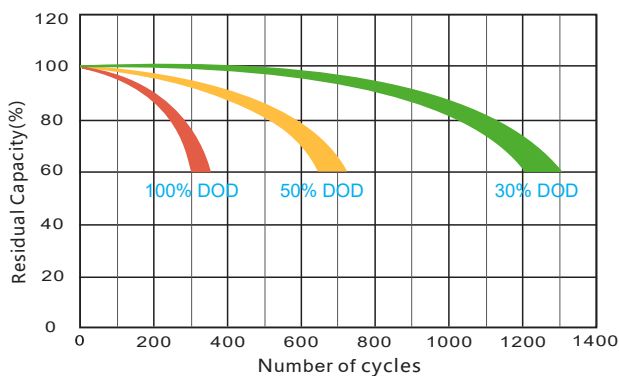
Charge Characteristic (25°C/77°F)



Capacity Curve at Different Temperature



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristic

