

VRLA AGM Battery

BT-12M7.0AT [12V7Ah]



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, $\leq 3\%$ of capacity per month at 20°C (average).
- Wide operating temperature range with 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.

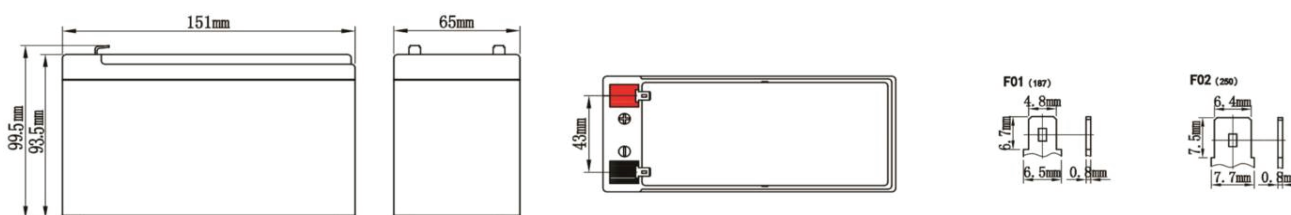
Battery Construction

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 ($\pm 2\text{mm}$)				Weight	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V/6 cells	7.0Ah	151 mm	65 mm	93.5 mm	99.5 mm	$\geq 2.20 \text{ kg}$ (4.85 lbs)	$\leq 26 \text{ m}\Omega$	F01/F02 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity at 77°F(25°C)	
20 hour rate (0.35A to 10.8V)	7.00Ah
10 hour rate (0.67A to 10.8V)	6.70Ah
5 hour rate (1.14A to 10.5V)	5.70Ah
3 hour rate (1.71A to 10.5V)	5.13Ah
1 hour rate (4.45A to 10.2V)	4.45Ah
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 2.1A
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 0.04A 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 2.1A 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): 110A Short Circuit Current: 400A

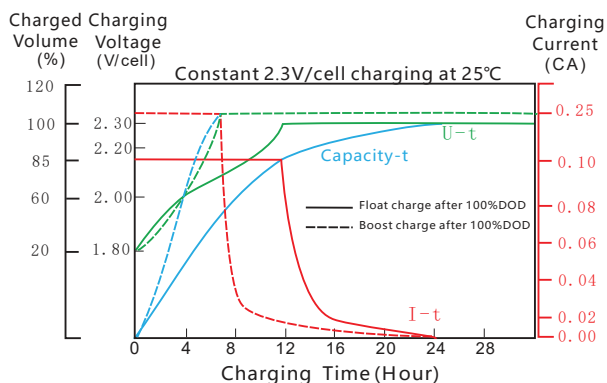
NOTE: All data shall be changed without notice. Saite reserves the right to explain and update the information contained hereinto. The battery should be charged within 6 months of storage. Otherwise, permanent loss of capacity might occur as a result of sulfation

Battery Discharge Table

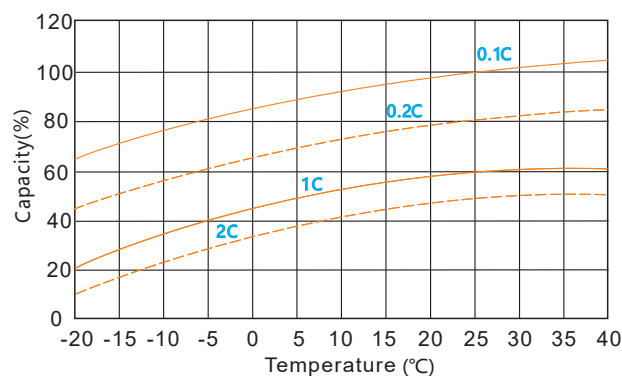
End Volts/ Cell	Minute (M)			Hour (H)							
	10	15	30	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A											
1.60V	19.0	15.1	8.50	4.80	3.84	2.69	1.90	1.25	0.88	0.700	0.380
1.65V	18.0	14.4	8.18	4.63	3.70	2.59	1.84	1.21	0.85	0.693	0.373
1.70V	17.1	13.8	7.85	4.45	3.56	2.49	1.78	1.18	0.83	0.685	0.365
1.75V	16.1	13.1	7.53	4.28	3.42	2.39	1.71	1.14	0.80	0.678	0.358
1.80V	15.1	12.4	7.20	4.10	3.28	2.30	1.65	1.10	0.77	0.670	0.350
Constant Power Discharge Data Sheet (@25°C) Unit: W											
1.60V	35.8	28.2	15.5	9.38	7.51	5.25	3.70	2.40	1.68	1.365	0.771
1.65V	34.1	27.1	14.9	9.03	7.23	5.06	3.60	2.35	1.65	1.350	0.756
1.70V	32.3	26.0	14.4	8.68	6.95	4.86	3.50	2.30	1.61	1.336	0.741
1.75V	30.6	24.9	13.8	8.33	6.67	4.67	3.40	2.25	1.58	1.321	0.725
1.80V	28.8	23.8	13.2	7.98	6.39	4.47	3.30	2.20	1.54	1.307	0.710

Performance Characteristics

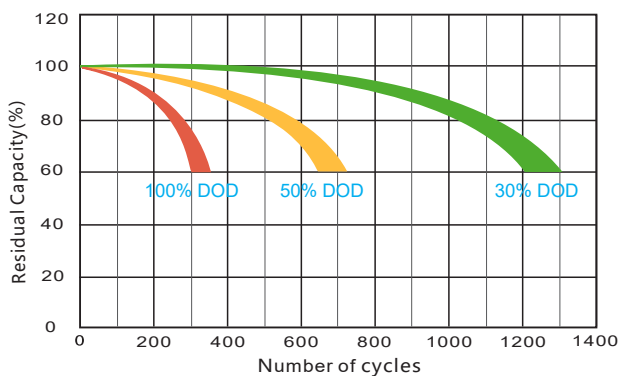
Charge Characteristic (25°C/77°F)



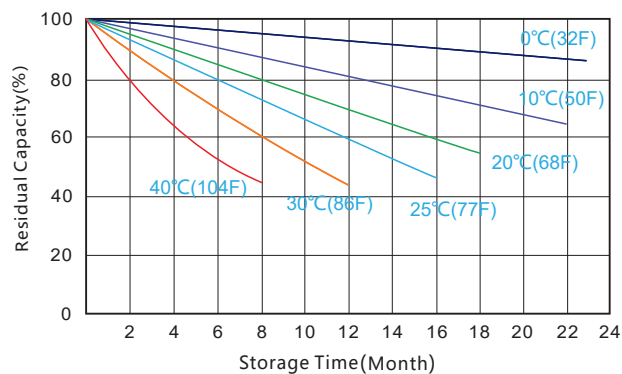
Capacity Curve at Different Temperature



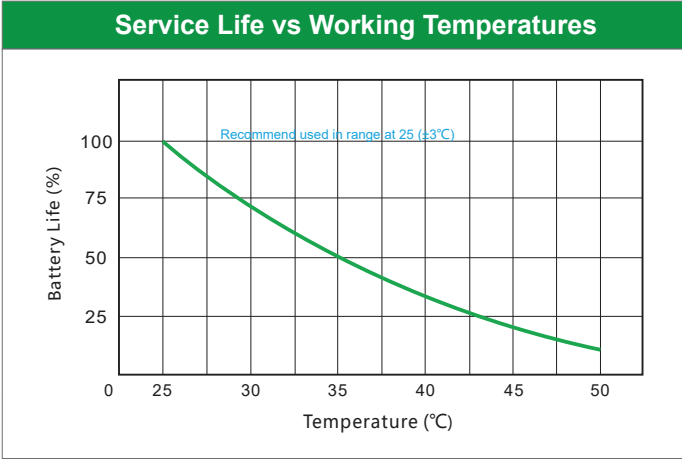
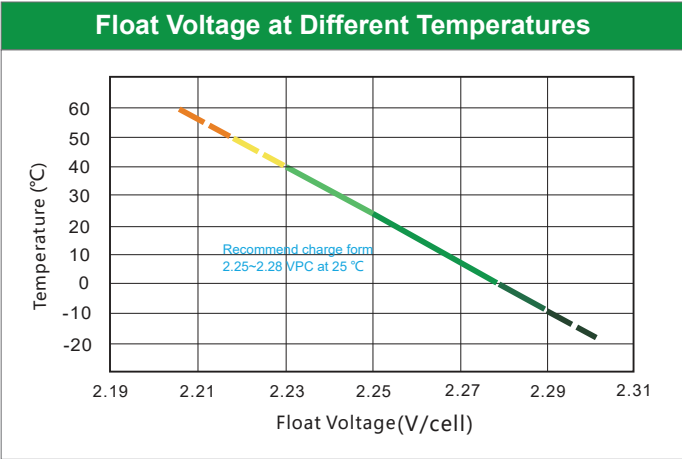
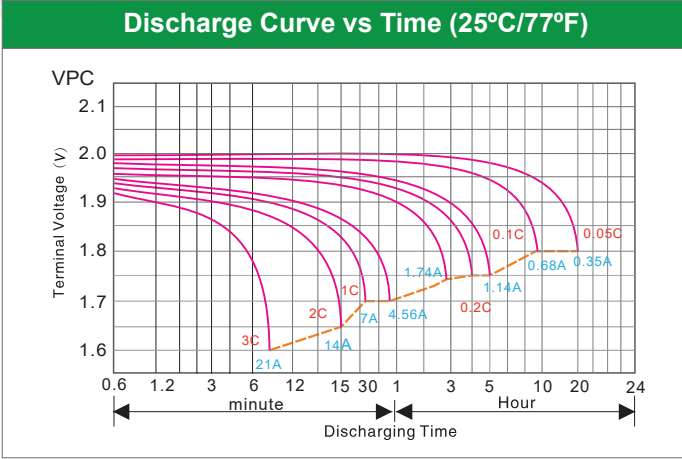
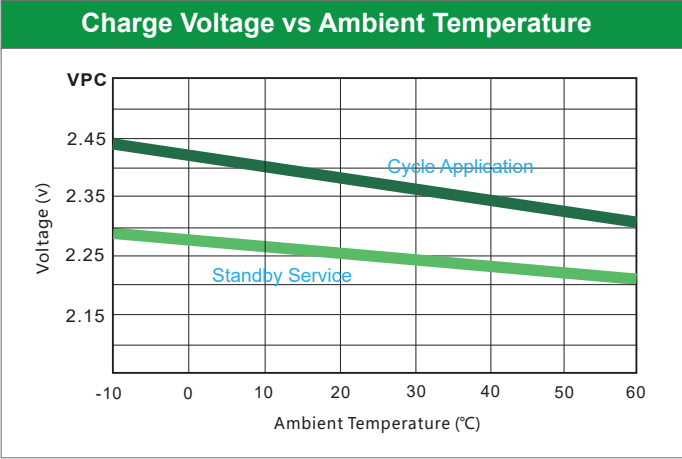
Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristic



Performance Characteristics



T2501-APBT-7.0-12_V2