# SAITE TECHNOLOGY VIET NAM JSC

## VRLA AGM Battery

**BT-12M9.0AC[12V9.0Ah]**


## General Features

- Designed floating charging service life: 8 years (25ºC)
- Sealed and maintenance free operation
- Safety valve installation for explosion proof
- Low self-discharge characteristic, approx3% of capacity per month at 20ºC (average)
- Wide operating temperature range from 0ºC~40ºC
- Lead-Aluminum-Calcium-Tin alloy high energy, prevent corrosion

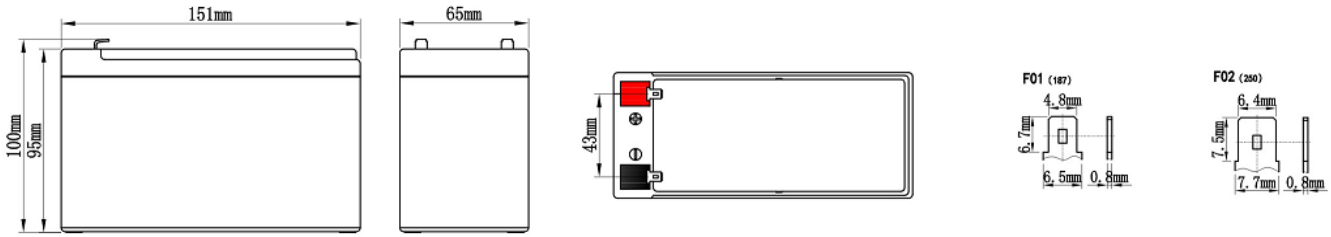
## Application

- 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

## Physical Specifications

| Nominal Voltage | Nominal Capacity (20HR) | Dimension | | | | Weight ±3% | Internal Resistance (In full charge status) | Standard Terminals |
|---|---|---|---|---|---|---|---|---|
| | | L | W | H | TH | | | |
| 12V | 9.0AH | 151±2mm | 65±2mm | 93±2mm | 100±2mm | Approx2.55kg (5.62lbs) | ≈ 14.0mΩ | F01/F02 (standard) |

## Dimensions




## Constant-Voltage Charge

| Rated Capacity | |
|---|---|
| 20 hours rate (0.45A) | 9.00AH |
| 10 hours rate (0.90A) | 8.37AH |
| 5 hours rate (1.53A) | 7.45AH |
| 27 minutes rate (9.0A) | 4.50AH |
| 7 minutes rate (27.0A) | 3.60AH |
| **Capacity affected by Temperature** | |
| 40ºC (104ºF) | 103% |
| 25ºC (77ºF) | 100% |
| 0ºC (32ºF) | 86% |

| Cycle Application |
|---|
| 1. Limit initial current less than 2.25A. |
| 2. Charge until battery voltage (under charge) reaches 14.1V to 14.4V at 25ºC(77ºF). |
| 3. Hold at 14.1V to 14.4V until current drop to under 0.054A 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 13.6 to 13.8 volts with current limit 2.25A 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. |

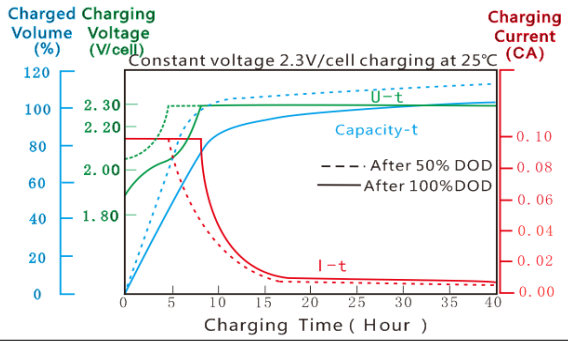
⚠ NOTE : The battery should be charged within 6 months of storage. Otherwise, permanent loss of capacity might occur as a result of sulfation.

# Battery Discharge Table

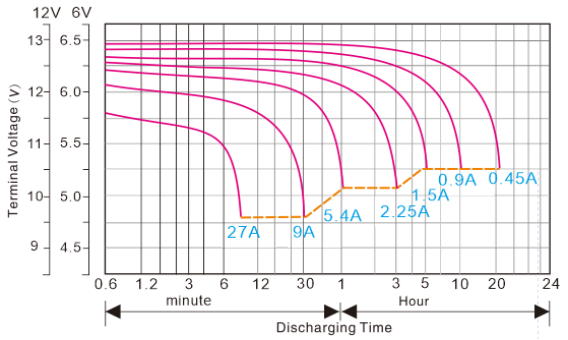
| End Voltage | Minute (M) | | | | Hour (H) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | 15 | 30 | 45 | 1 | 1.5 | 2 | 3 | 5 | 8 | 10 | 20 |
| Constant Current Discharge Data Sheet (@25ºC) Unit: A | | | | | | | | | | | | |
| 9.6V | 28.9 | 22.2 | 13.1 | 9.4 | 7.01 | 5.03 | 3.59 | 2.73 | 1.81 | 1.21 | 0.875 | 0.468 |
| 9.9V | 27.6 | 21.2 | 12.5 | 9.1 | 6.84 | 4.90 | 3.51 | 2.67 | 1.77 | 1.19 | 0.866 | 0.464 |
| 10.2V | 26.2 | 20.2 | 11.9 | 8.8 | 6.67 | 4.78 | 3.42 | 2.60 | 1.72 | 1.17 | 0.858 | 0.459 |
| 10.5V | 25.0 | 19.2 | 11.3 | 8.5 | 6.51 | 4.67 | 3.34 | 2.54 | 1.68 | 1.14 | 0.849 | 0.455 |
| 10.8V | 23.8 | 18.3 | 10.8 | 8.2 | 6.35 | 4.55 | 3.26 | 2.48 | 1.64 | 1.12 | 0.841 | 0.450 |
| Constant Power Discharge Data Sheet (@25ºC) Unit: W | | | | | | | | | | | | |
| 9.6V | 355 | 278 | 160 | 110 | 81.9 | 59.8 | 45.0 | 31.8 | 21.31 | 14.79 | 11.34 | 6.14 |
| 9.9V | 338 | 265 | 153 | 106 | 79.9 | 58.4 | 43.9 | 31.0 | 20.79 | 14.50 | 11.23 | 6.07 |
| 10.2V | 322 | 252 | 146 | 103 | 78.0 | 56.9 | 42.9 | 30.2 | 20.28 | 14.21 | 11.12 | 6.01 |
| 10.5V | 307 | 240 | 139 | 99 | 76.1 | 55.5 | 41.8 | 29.5 | 19.79 | 13.94 | 11.01 | 5.95 |
| 10.8V | 292 | 229 | 132 | 96 | 74.2 | 54.2 | 40.8 | 28.8 | 19.31 | 13.66 | 10.90 | 5.90 |

# Performance Characteristics

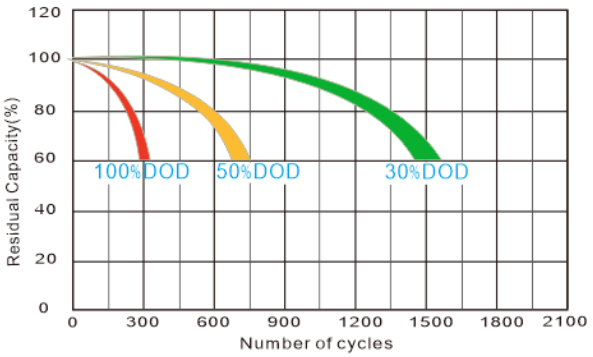
## Charge Characteristics (25ºC/77ºF)



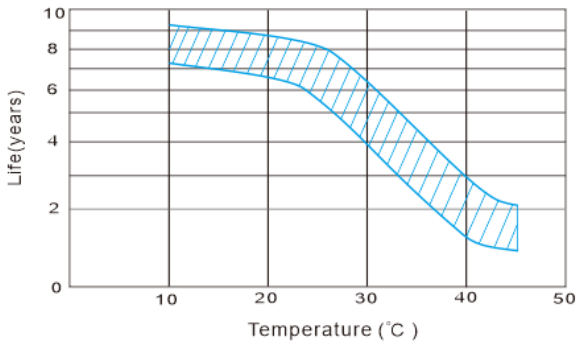

## Discharge Characteristic (25ºC/77ºF)



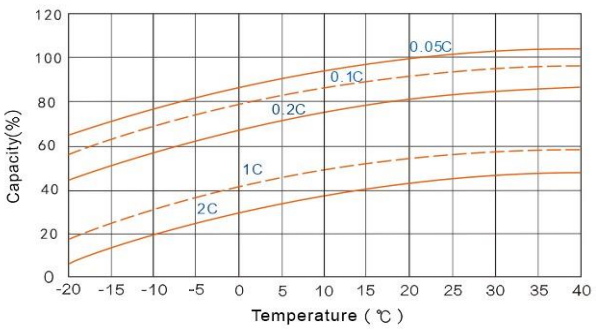

## Cycle Life in Relation to Depth of Discharge



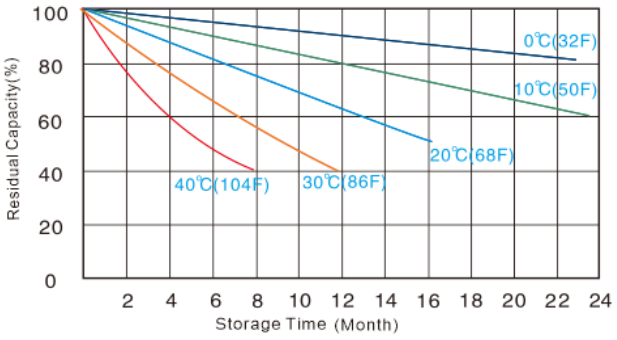

## Temperature vs Float Life




## Capacity Curve At Different Temperature




## Self Discharge Characteristics

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