



Specification Sheet Long Life 2V VRLA Battery FM2-300 (2V300Ah)

| | |
|---|---|
| Cells Per Unit | 1 |
| Voltage Per Unit | 2 |
| Nominal Capacity | 300Ah@10hour-rate to 1.80V per cell @25°C |
| Weight | Approx. 17 Kg (Tolerance ±3.0%) |
| Internal Resistance | Approx. 0.72 mΩ |
| Terminal | F10(M8) |
| Max. Discharge Current | 1500A (5 sec) |
| Short Circuit Current | 2910A |
| Design Life | 20 years (Float charging) |
| Max. Charging Current | 60 A |
| Reference Capacity | C1 170.0AH C3 231.1AH C5 261.0AH C10 300.0AH |
| Standby Use Voltage | 2.27 V~2.30 V @ 25°C Temperature Compensation: -3mV/°C/Cell |
| Cycle Use Voltage | 2.43 V~2.47 V @ 25°C Temperature Compensation: -4mV/°C/Cell |
| Operating Temperature Range | Discharge: -20°C~60°C Charge: -0°C~50°C Storage: -20°C~60°C |
| Normal Operating Temperature Range | 25°C ±5°C |
| Self Discharge | Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charge batteries before using. |
| Container Material | A.B.S. UL94-HB, UL94-V0 Optional. |



Dimensions

F10 TERMINAL

| | |
|--------------|-----------------------|
| Length | 170±2mm (6.69 inches) |
| Width | 150±2mm (5.91 inches) |
| Height | 330±2mm (13.0 inches) |
| Total Height | 342±2mm (13.5 inches) |
| Terminal | Value |
| M5 | 6~7 N*m |
| M6 | 8~10 N*m |
| M8 | 10~12 N*m |

Unit: mm

Constant Current Discharge Characteristics : A (25°C)

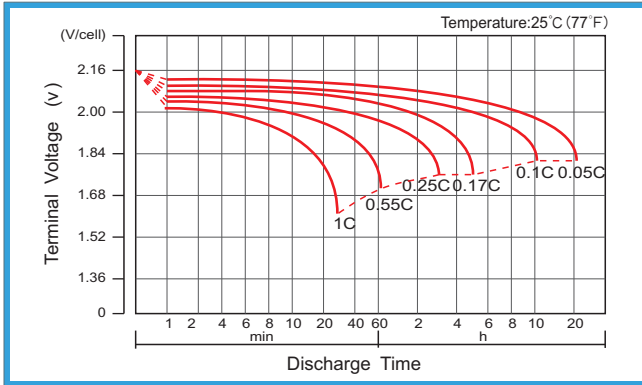
| F.V/Time | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR |
|----------|-------|-------|-------|-------|------|------|------|------|------|
| 1.60V | 470.9 | 296.1 | 183.3 | 112.9 | 84.6 | 68.1 | 56.6 | 38.0 | 31.6 |
| 1.65V | 441.2 | 284.2 | 177.0 | 109.3 | 82.0 | 66.3 | 55.1 | 37.6 | 31.3 |
| 1.70V | 413.2 | 271.7 | 171.3 | 105.7 | 79.8 | 64.5 | 53.7 | 37.0 | 30.8 |
| 1.75V | 384.5 | 259.7 | 170.0 | 102.0 | 77.0 | 62.8 | 52.2 | 36.5 | 30.4 |
| 1.80V | 355.1 | 248.2 | 158.7 | 98.3 | 75.0 | 61.0 | 51.0 | 35.9 | 30.0 |
| 1.85V | 294.6 | 213.8 | 142.3 | 90.1 | 69.3 | 56.7 | 47.6 | 33.7 | 28.2 |

Constant Power Discharge Characteristics : WPC (25°C)

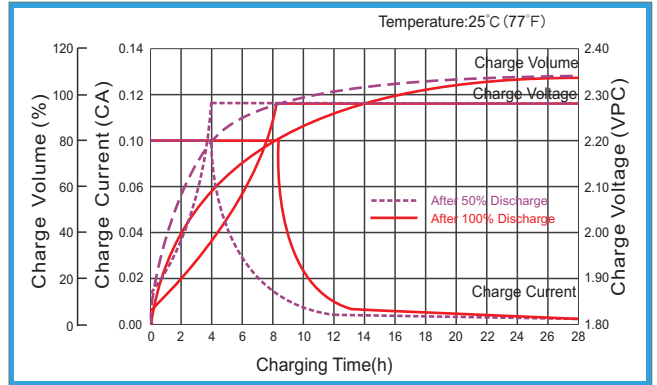
| F.V/Time | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR |
|----------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 1.60V | 823.2 | 537.8 | 344.5 | 213.9 | 161.6 | 130.8 | 109.1 | 74.3 | 62.2 |
| 1.65V | 782.7 | 521.7 | 334.6 | 208.1 | 157.3 | 127.7 | 106.7 | 73.6 | 61.5 |
| 1.70V | 744.0 | 503.6 | 325.7 | 202.4 | 153.7 | 124.7 | 104.3 | 72.6 | 60.7 |
| 1.75V | 702.5 | 486.3 | 315.7 | 196.2 | 149.7 | 122.0 | 102.0 | 71.8 | 60.0 |
| 1.80V | 657.8 | 469.5 | 305.4 | 190.1 | 145.7 | 118.9 | 99.7 | 70.7 | 59.3 |
| 1.85V | 553.6 | 408.4 | 275.6 | 175.2 | 135.3 | 110.9 | 93.3 | 66.5 | 55.9 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C₁₀ should reach 95% after the first cycle and 100% after the third cycle.

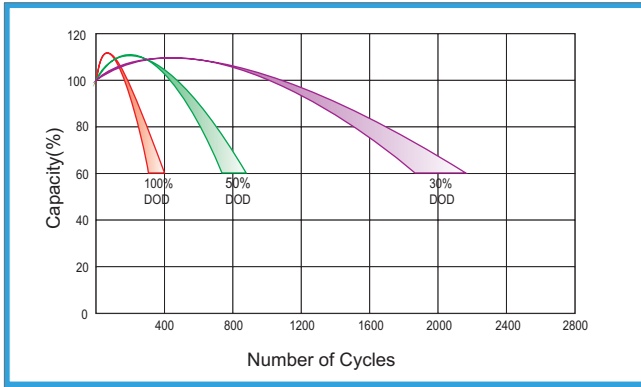
Discharge Characteristics Curve



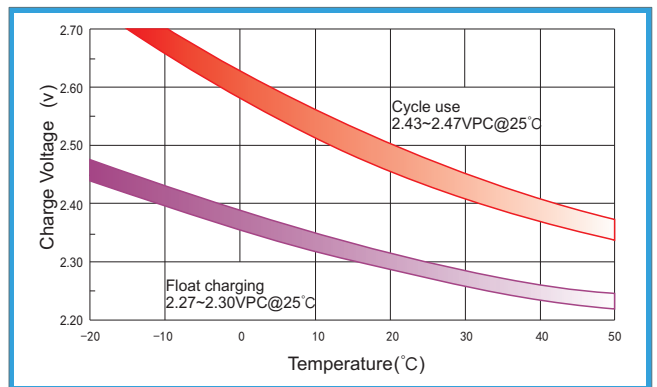
Charge Characteristic Curve For Standby Use



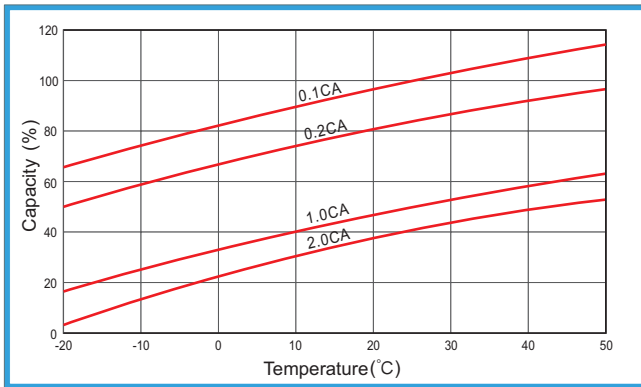
Cycle Life In Relation To Depth Of Discharge



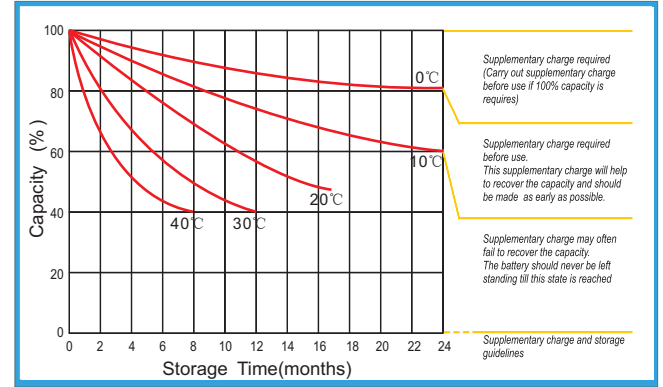
Relationship Between Charging Voltage And Temperature



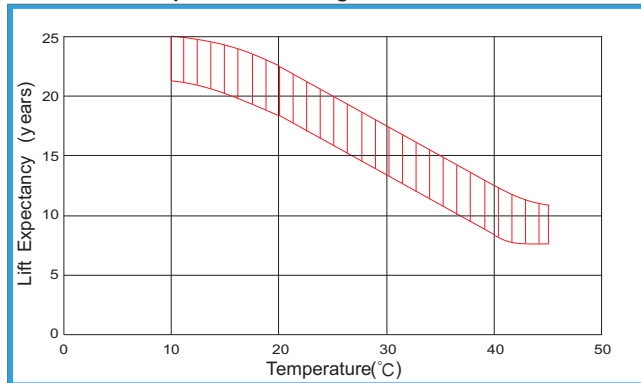
Temperature Effects On Capacity



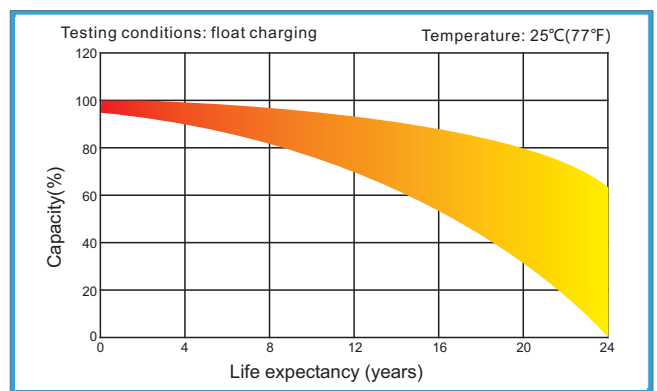
Storage Characteristics



Effect Of Temperature On Long Term Life



Charge Characteristic Curve For Standby Use



(Note) All above information shall be changed without prior notice, AxiWin reserves the right to explain and update the latest information