

General features for MPF Series (AGM) battery

- * Thick pasted plates with high quality lead-tin-calcium alloy grids for long service life, design life 10+years in float service.
- * Battery comply to the most popular international standards, like IEC60896-21/22, etc.
- * Centralized venting system for gas ventilation.
- * High conductivity connectors and terminal. High reliability terminal sealing.
- * Self regulating relief valve: Lower-pressure self-return valve prevents ingress of oxygen in the atmosphere.
- * Thick positive plates and balanced negative plates.
- * Scientific grids designed to resist corrosion and increase battery service, also ensure optimum recombination efficiency.
- * Low resistance microporous glassfibre, the electrolyte is absorbed within this materials.
- * flame retardant ABS is available upon require.
- * Easy installation: robust copper terminals providing high conductivity, easy connection, front access terminals for easy & quick connection.



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MPF12-105II (12V100Ah)

Specifications

| | | |
|-------------------------------|--------------|-----------------------|
| Nominal Voltage | | 12V |
| Rated capacity (10 hour rate) | | 105Ah |
| Dimensions (±2mm) | Total Height | 287 mm (11.29 inches) |
| | Height | 287 mm (11.29 inches) |
| | Length | 395 mm (15.51 inches) |
| | Width | 110 mm (4.29 inches) |
| Weight Approx (±3%) | | 32.5 Kg (71.65 lbs) |

Battery picture and construction

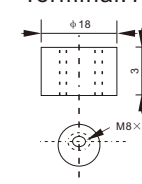


Battery Construction

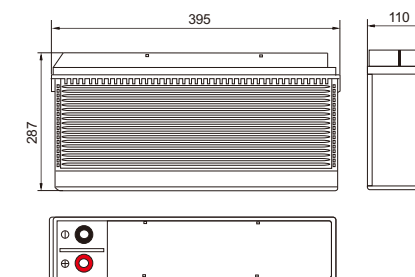
| | | | | |
|--------------|----------------------|----------------|--------------|----------|
| Component | Positive plate | Negative plate | Container | Cover |
| Raw material | Lead dioxide | Lead | ABS | ABS |
| Component | Electrolyte | Separator | Safety valve | Terminal |
| Raw material | Dilute sulfuric acid | Fibreglass | Rubber | Copper |

Outer dimension and terminal

Terminal: T46



Outer dimensions (±2mm) Unit: mm



Characteristics

| | | |
|--|--|--|
| Capacity 25°C (77°F) | 10 hour rate (10.5A, 10.8V) 5 hour rate (16.8A, 10.5V) 1 hour rate (63A, 9.6V) | 105Ah 84Ah 63Ah |
| Internal Resistance | Full charged battery at 25°C (77°F) | Approx 5.5 mΩ |
| Capacity affected by Temperature (10hour rate) | 40°C (104°F) | 102% |
| | 25°C (77°F) | 100% |
| | 0°C (32°F) | 85% |
| Remaining capacity Self-Discharge At 25°C (77°F) | -15°C (5°F) | 65% |
| | Capacity after 3 month storage | 91% |
| | Capacity after 6 month storage | 82% |
| | Capacity after 12 month storage | 64% |
| Terminal type | T46 | |
| Max. Discharge current 25°C/(77°F) | 800A (5Seconds) | |
| Nominal operating temperature | 25°C ±5°C (77°F ±9°F) | |
| Operating Temperature Range | Discharge | -15°C ~ 50°C (5°F ~ 122°F) |
| | Charge | -10°C ~ 50°C (14°F ~ 122°F) |
| | Storage | -20°C ~ 50°C (-4°F ~ 122°F) |
| Charge methods (constant Voltage) At 25°C (77°F) | Cycle use | Initial Charging Current less than 26.3A Voltage 14.5-14.9V Temperature compensation: -30mV/°C |
| | Standby use | Voltage 13.5-13.8V Temperature compensation: -18mV/°C |

Constant current discharge (25°C , 77 °F)

Unit:A

Constant power discharge (25°C , 77 °F)

Unit:watts

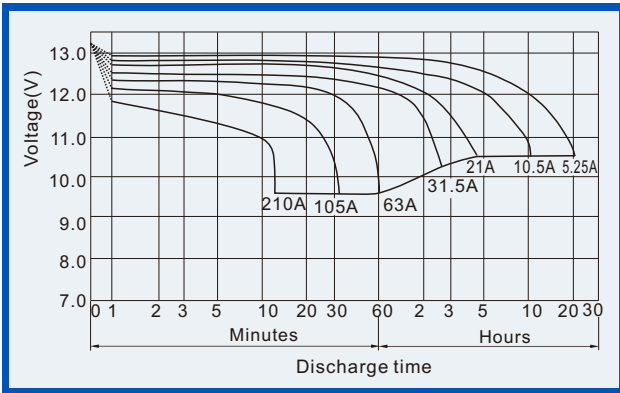
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

| Time | | 5min | 10min | 15min | 30min | 1h | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|--------|---|-------|-------|-------|-------|------|-------|------|------|------|-------|-------|-------|
| | | 9.60V | A | 336 | 222 | 179 | 119.7 | 63.0 | 36.8 | 27.0 | 21.0 | 17.3 | 12.29 |
| | W | 3471 | 2366 | 1915 | 1287 | 680 | 404 | 300 | 236 | 197 | 141 | 127 | 69.2 |
| 10.20V | A | 326 | 200 | 168 | 114.5 | 59.2 | 35.1 | 26.3 | 20.5 | 17.0 | 11.97 | 10.82 | 5.78 |
| | W | 3479 | 2232 | 1882 | 1285 | 670 | 404 | 304 | 238 | 198 | 140 | 127 | 67.7 |
| 10.50V | A | 315 | 179 | 147 | 107.1 | 57.3 | 34.2 | 25.6 | 20.2 | 16.8 | 11.87 | 10.61 | 5.78 |
| | W | 3441 | 2034 | 1679 | 1233 | 664 | 397 | 299 | 236 | 197 | 140 | 125 | 68.3 |
| 10.80V | A | 304 | 169 | 137 | 98.7 | 55.4 | 33.4 | 25.0 | 19.8 | 16.4 | 11.55 | 10.50 | 5.67 |
| | W | 3407 | 1943 | 1575 | 1144 | 645 | 391 | 295 | 234 | 194 | 137 | 125 | 67.5 |
| 11.10V | A | 293 | 158 | 126 | 88.2 | 53.6 | 32.6 | 24.2 | 19.3 | 16.0 | 11.24 | 9.98 | 5.36 |
| | W | 3328 | 1829 | 1469 | 1032 | 630 | 385 | 287 | 230 | 190 | 135 | 120.4 | 64.9 |

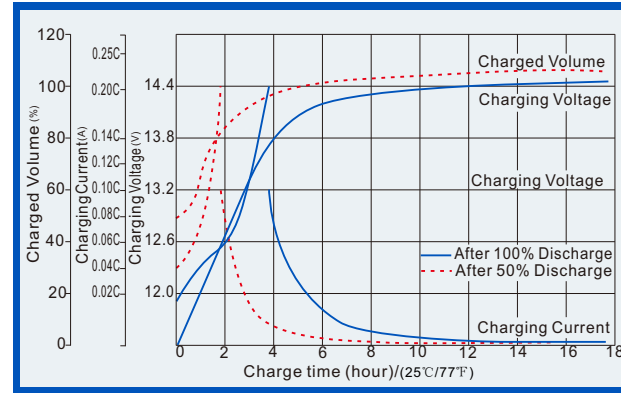
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

VRLA Battery (AGM technology) Maintenance-free Sealed Lead Acid Rechargeable Battery

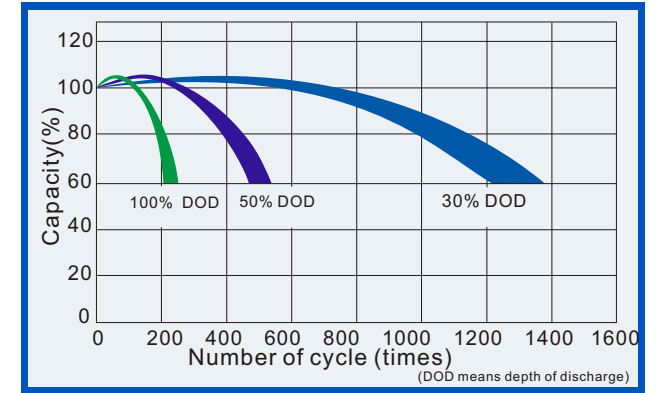
Discharge characteristics (25°C, 77°F)



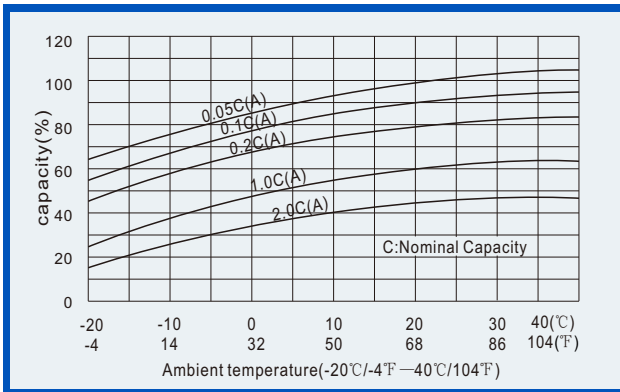
Charge characteristics (25°C, 77°F)



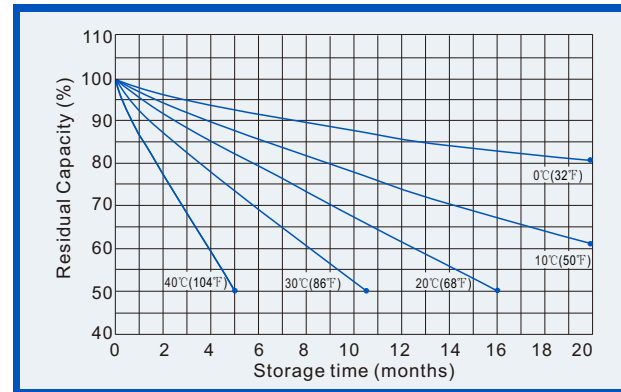
Life characteristics of Cyclic Use (25°C, 77°F)



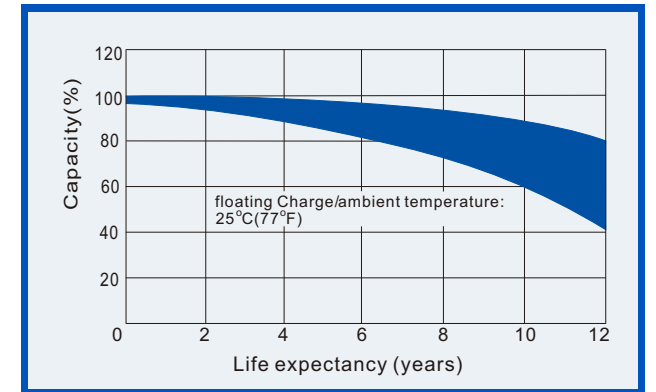
Effect of Temperature on capacity



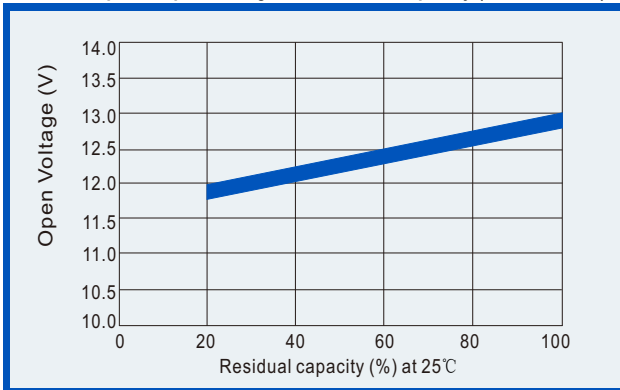
Self-discharge characteristics



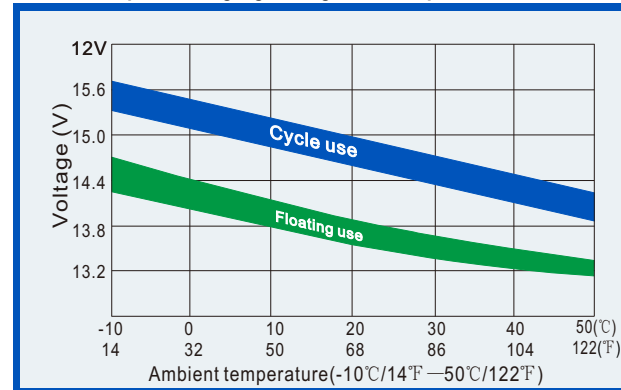
Life Characteristics of float service (25°C, 77°F)



Relationships for open voltage and residual capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

