

General features for MPPV Series battery (OPzV)

- * Tubular positive plate; separator with the combined application of porous rubber and porous PVC, separator is with a high porosity & good corrosion resistance. Gelled electrolyte technology.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * Long service life, maintenance-free during the whole service life.
- * Alloy (no antimony) and internal oxygen recombination ensure low gassing.
- * High cyclic ability, no internal short circuits in the GEL structure.
- * Easy to move and handle, easy using cable connectors or copper connectors in the battery connection..



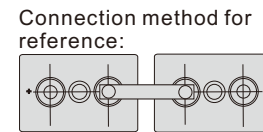
Maxton Power Tech Co., Ltd
www.maxtonpower.com
info@maxtonpower.com

MPPV2-250 (2V250Ah)

Specifications

| | | |
|-------------------------------|------------------------------------|--------------------|
| Nominal Voltage | | 2 V |
| Rated capacity (10 hour rate) | | 250 Ah |
| Dimensions (±3mm) | Total Height (Include terminal) | 390mm (15.3inches) |
| | Height | 355mm (13.9inches) |
| | Length | 124mm (4.88inches) |
| | Width | 206mm (8.11inches) |
| Approx weight (±5%) | | 21.0Kg (46.3lbs) |

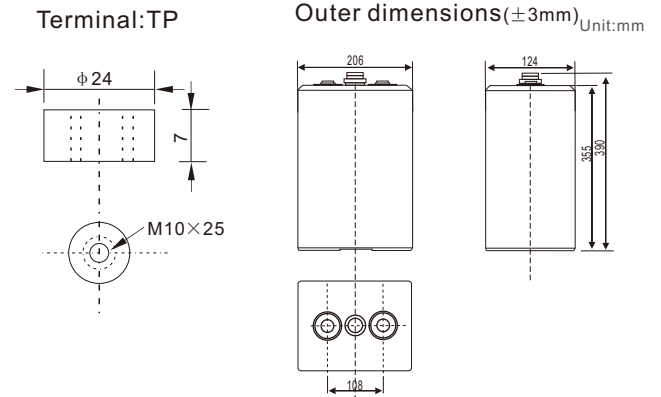
Battery picture and construction



Battery Construction

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

Outer dimension and terminal



Characteristics

| | | |
|---|---|--|
| Capacity 25°C(77°F) | 10 hour rate(25A, 1.8V) 3 hour rate(66A, 1.75V) 1 hour rate(131A, 1.75V) | 250Ah 198Ah 131Ah |
| Internal Resistance | Full charged battery at 25°C(77°F) | Approx 1.0 mΩ |
| Capacity affected by Temperature (10hour rate) | 40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F) | 103% 100% 85% 65% |
| Remaining capacity Self-Discharge At 25°C(77°F) | Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage | 94% 88% 75% |
| Terminal type | TP (copper) | |
| Max. Discharge current 25°C/(77°F) | 1250A (5Seconds) | |
| Nominal operating temperature | 25°C ±5°C(77°F ±9°F) | |
| Operating Temperature Range | Discharge Charge Storage | -15°C ~50°C (5°F ~122°F) -10°C ~50°C (14°F ~122°F) -20°C ~50°C (-4°F ~122°F) |
| Charge methods (constant Voltage) At 25°C(77°F) | Cycle use Standby use | Initial Charging Current less than 62.5A Voltage 2.35-2.45V Temperature compensation:-4mV/°C Voltage 2.25-2.30V Temperature compensation:-3mV/°C |

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

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

Unit:A

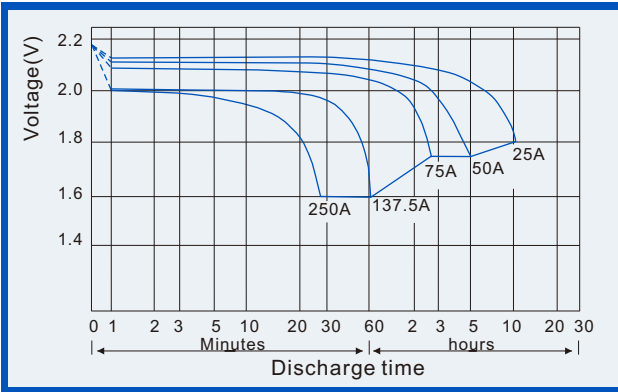
Unit:watts

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

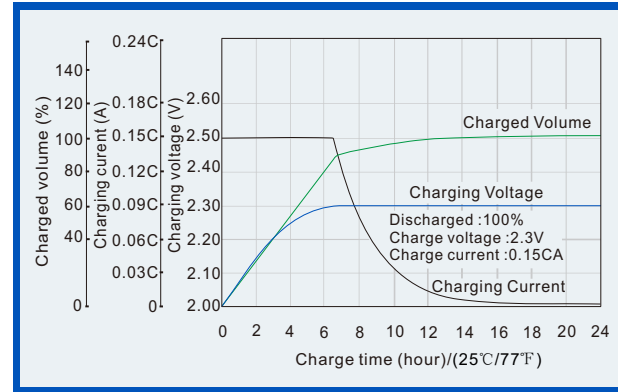
| Time | | 30min | 1h | 2h | 3h | 5h | 6h | 8h | 10h | 20h | 24h | 48h | 100h |
|-------|---|-------|-----|-----|-----|----|----|----|-----|-----|-----|-----|------|
| 1.65V | A | 218 | 144 | 94 | 74 | 51 | 41 | 33 | 29 | 15 | 12 | 7 | 3 |
| | W | 456 | 294 | 210 | 148 | 95 | 91 | 75 | 56 | 28 | 26 | 17 | 9 |
| 1.70V | A | 211 | 138 | 89 | 70 | 48 | 39 | 32 | 28 | 15 | 12 | 7 | 3 |
| | W | 429 | 285 | 206 | 143 | 94 | 88 | 73 | 55 | 28 | 25 | 17 | 9 |
| 1.75V | A | 200 | 131 | 84 | 66 | 45 | 37 | 31 | 26 | 14 | 12 | 7 | 3 |
| | W | 392 | 278 | 201 | 138 | 93 | 86 | 70 | 53 | 28 | 25 | 17 | 9 |
| 1.80V | A | 193 | 125 | 79 | 63 | 43 | 35 | 29 | 25 | 14 | 12 | 7 | 3 |
| | W | 349 | 260 | 196 | 133 | 90 | 83 | 68 | 51 | 28 | 25 | 17 | 9 |
| 1.85V | A | 181 | 119 | 75 | 59 | 41 | 34 | 28 | 24 | 13 | 12 | 6 | 3 |
| | W | 303 | 254 | 186 | 126 | 86 | 79 | 65 | 49 | 26 | 24 | 17 | 9 |

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

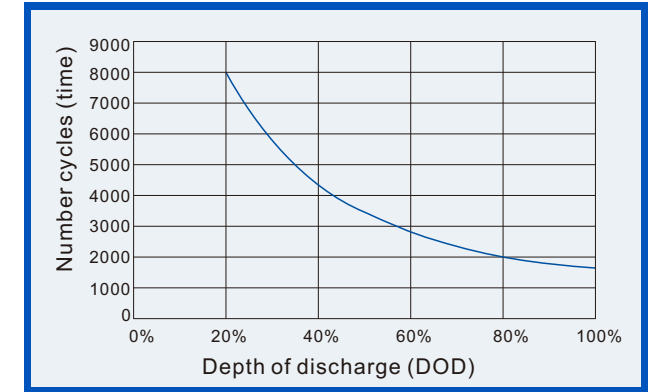
Discharge characteristics (25°C, 77°F)



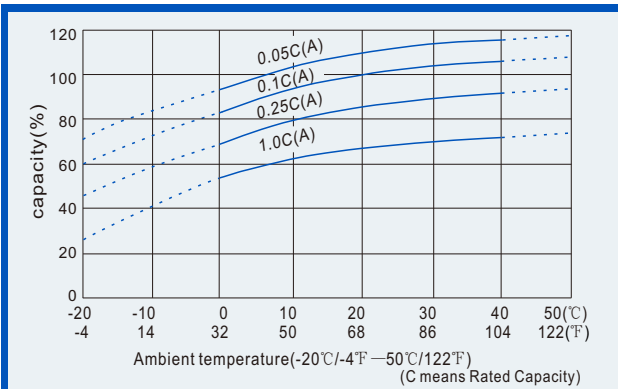
Charge characteristics (25°C, 77°F)



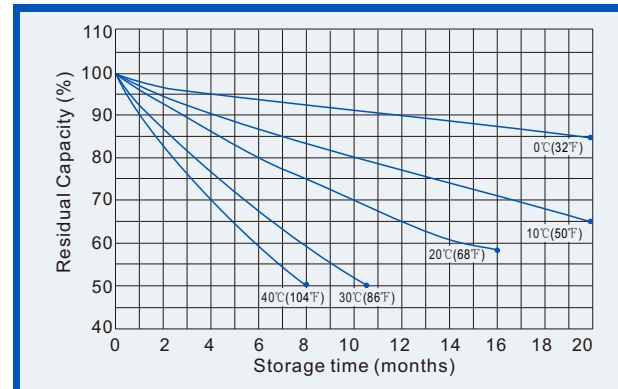
Life characteristics of Cyclic Use (25°C, 77°F)



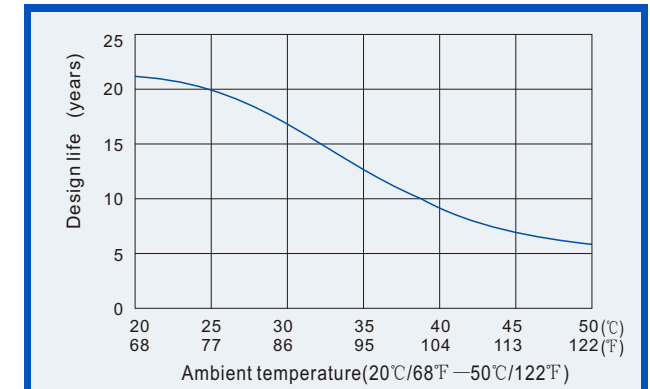
Effect of Temperature on capacity



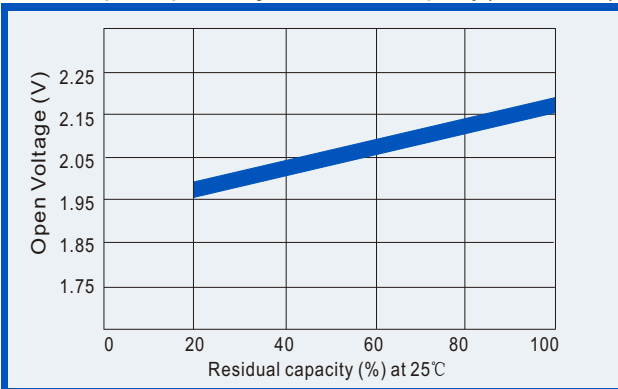
Self-discharge characteristics (with full charging)



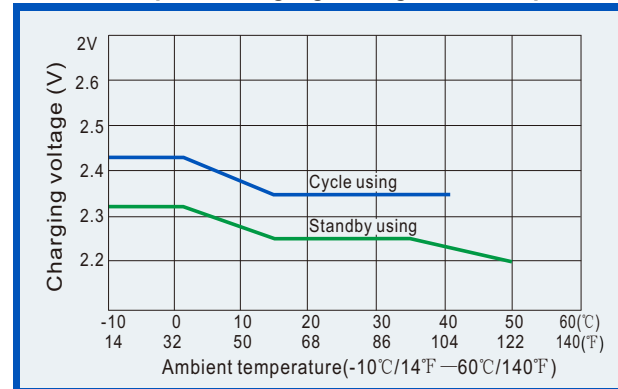
Relationships for design life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

