

## VRLA Rechargeable Battery

# MSB-500 (MSB-500FR) (2V, 500Ah)



### FEATURES

- Sealed structure, no electrolyte leakage or spill.
- High performance alloy to secure corrosion-proof feature.
- Unique electrolyte system achieves maximum service life.
- Low self-discharge rate, lower than 3% capacity loss per month.
- Special paste formula promotes the good charging acceptance.
- Electrolyte with gel technology.

### APPLICATION

- Telecom
- UPS
- Central Office
- Energy Storage Systems



### SPECIFICATIONS

|                             |   |
|-----------------------------|---|
| Nominal Voltage             | 2 V   |
| Nominal Capacity            | 500Ah @ 10 hour rate F.V.(1.80V/cell)   |
| Approx. Weight              | 36.0Kg(79.4lbs.)  |
| Terminals                   | B6 (Fitting M8 bolt & nut) I3 is optional   |
| Internal Resistance         | ≤ 0.8m Ω (Fully Charged)  |
| Max. Discharge Current      | 2200 A (5 sec.)   |
| Max. Charge Current         | 125 A   |
| Operating Temperature Range | Charge : 0°C~40°C(32°F~104°F)<br>Discharge : -20°C~50°C(-4°F~122°F)<br>Storage : -20°C~40°C(-4°F~104°F) |
| Safety Valve                | Opening pressure 10~35 kPa  |
| Container Material          | ABS(UL94-HB, UL94-V0 is optional)   |

|                  |  |
|------------------|--|
| ISO 9001         |  |
| ISO14001         |  |
| UL               |  |
| TLC              |  |
| TSE              |  |
| ● IEC60896-21/22 |  |
| ● JIS C 8704-2   |  |
| ● GB/T19638.2    |  |
| ● YD/T799        |  |

### DIMENSION(mm/inch)

### OUTER DIMENSIONS

### TERMINAL TYPE

#### Length

241±2.0 (9.49±0.08)

#### Width

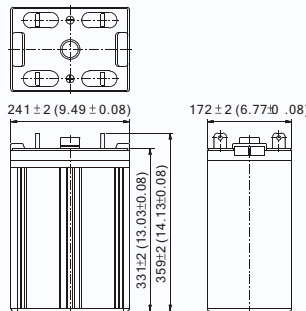
172±2.0 (6.77±0.08)

#### Container Height

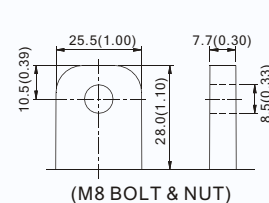
331±2.0 (13.03±0.08)

#### Total Height

359±2.0 (14.13±0.08)

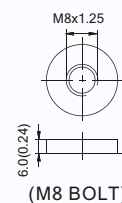


#### Terminal B6



(M8 BOLT & NUT)

#### Terminal I3



(M8 BOLT)

Terminal Hardware Initial Torque: 10.0 Nm ± 5%

### Constant power discharge characteristics at 25 °C/77 °F Unit: W

| F.V. (V/cell) \ Discharge Time | 30 Min | 1 Hr  | 2 Hr  | 3 Hr  | 4 Hr  | 5 Hr  | 6 Hr  | 8 Hr  | 10 Hr | 12 Hr | 20 Hr |
|--------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.85V                          | 655.8  | 450.0 | 289.5 | 225.5 | 175.3 | 151.0 | 134.5 | 111.3 | 93.0  | 80.60 | 50.22 |
| 1.80V                          | 727.5  | 495.0 | 312.5 | 238.9 | 193.0 | 164.5 | 143.3 | 119.0 | 98.4  | 84.49 | 52.66 |
| 1.75V                          | 797.0  | 525.0 | 331.3 | 251.5 | 202.2 | 172.0 | 149.5 | 122.8 | 102.8 | 87.39 | 54.23 |
| 1.70V                          | 875.0  | 560.0 | 342.5 | 260.1 | 206.3 | 176.3 | 153.3 | 125.3 | 106.3 | 89.43 | 55.13 |
| 1.65V                          | 940.0  | 577.5 | 347.5 | 265.4 | 210.5 | 178.8 | 156.3 | 127.5 | 107.8 | 90.69 | 55.59 |
| 1.60V                          | 958.8  | 582.5 | 352.5 | 267.9 | 213.0 | 181.3 | 157.0 | 129.0 | 108.8 | 91.11 | 55.75 |

### Constant current discharge characteristics at 25 °C/77 °F Unit: A

| F.V. (V/cell) \ Discharge Time | 30 Min | 1 Hr  | 2 Hr  | 3 Hr  | 4 Hr  | 5 Hr | 6 Hr | 8 Hr | 10 Hr | 12 Hr | 20 Hr |
|--------------------------------|--------|-------|-------|-------|-------|------|------|------|-------|-------|-------|
| 1.85V                          | 350.0  | 240.0 | 152.5 | 117.9 | 92.5  | 78.3 | 67.5 | 55.0 | 46.8  | 40.52 | 25.25 |
| 1.80V                          | 390.0  | 265.0 | 165.0 | 125.0 | 102.0 | 85.0 | 72.5 | 60.5 | 50.0  | 42.92 | 26.75 |
| 1.75V                          | 430.8  | 282.5 | 175.8 | 132.4 | 107.0 | 90.0 | 77.5 | 63.3 | 52.8  | 44.84 | 27.83 |
| 1.70V                          | 477.5  | 303.0 | 183.3 | 137.9 | 109.8 | 93.0 | 80.0 | 65.5 | 54.8  | 46.08 | 28.63 |
| 1.65V                          | 511.3  | 315.3 | 188.3 | 142.5 | 112.5 | 95.5 | 83.0 | 67.5 | 55.8  | 46.67 | 29.00 |
| 1.60V                          | 537.5  | 323.3 | 193.8 | 145.6 | 114.5 | 97.0 | 83.8 | 68.8 | 56.3  | 47.11 | 29.08 |

All data shall be changed without prior notice, BB reserves the right to explain and update the information contained herein.