

# DEEP CYCLE MARINE BATTERY

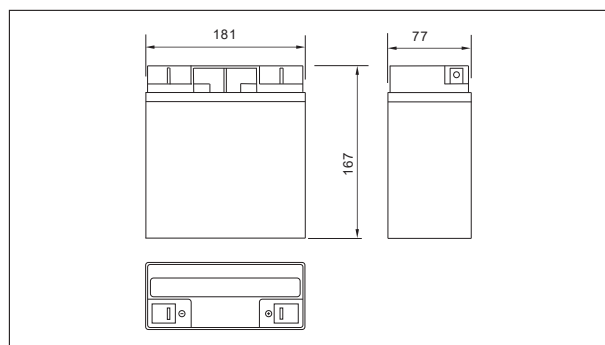


## BB1217FM 12V17Ah

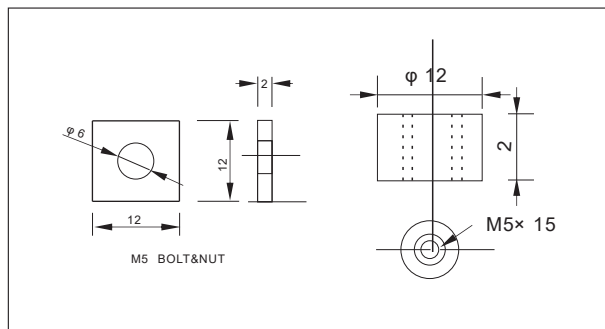
### Specifications

|                               |              |                    |
|-------------------------------|--------------|--------------------|
| Nominal Voltage               |              | 12V                |
| Rated capacity (20 hour rate) |              | 17Ah               |
| Dimensions                    | Length       | 181± 2mm(7.13inch) |
|                               | Width        | 77± 1mm(3.03inch)  |
|                               | Height       | 167± 2mm(6.57inch) |
|                               | Total Height | 167± 2mm(6.57inch) |
| Approx. Weight                |              | 4.8kg(10.5lbs)± 4% |

### Outer dimensions (mm)



### Terminal Type (mm)



### Construction

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

### Constant Current Discharge Characteristics Unit:A(25 °C,77°F)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 64.9 | 41.1  | 32.1  | 18.1  | 11.1  | 6.09 | 4.21 | 3.49 | 2.97 | 1.61 | 0.86 |
| 9.90V    | 63.0 | 39.9  | 31.4  | 17.7  | 11.0  | 6.06 | 4.19 | 3.46 | 2.95 | 1.60 | 0.86 |
| 10.2V    | 60.4 | 38.3  | 30.2  | 17.2  | 10.7  | 6.00 | 4.16 | 3.44 | 2.93 | 1.60 | 0.86 |
| 10.5V    | 57.8 | 36.6  | 29.2  | 16.8  | 10.5  | 5.91 | 4.13 | 3.42 | 2.91 | 1.59 | 0.85 |
| 10.8V    | 54.5 | 34.6  | 27.6  | 16.2  | 10.2  | 5.76 | 4.01 | 3.31 | 2.82 | 1.55 | 0.83 |

### Constant Power Discharge Characteristics Unit:W(25 °C,77°F)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 725  | 464   | 366   | 207   | 129   | 71.3 | 50.1 | 41.5 | 35.4 | 19.3 | 10.4 |
| 9.90V    | 703  | 450   | 357   | 203   | 127   | 70.8 | 49.8 | 41.3 | 35.2 | 19.2 | 10.3 |
| 10.2V    | 674  | 432   | 344   | 197   | 124   | 70.2 | 49.4 | 41.0 | 35.0 | 19.1 | 10.3 |
| 10.5V    | 645  | 413   | 333   | 192   | 121   | 69.2 | 49.1 | 40.7 | 34.7 | 19.0 | 10.2 |
| 10.8V    | 609  | 390   | 315   | 185   | 118   | 67.4 | 47.6 | 39.5 | 33.7 | 18.7 | 10.0 |

Note: The above characteristics data can be obtained within three charge or discharge cycles.

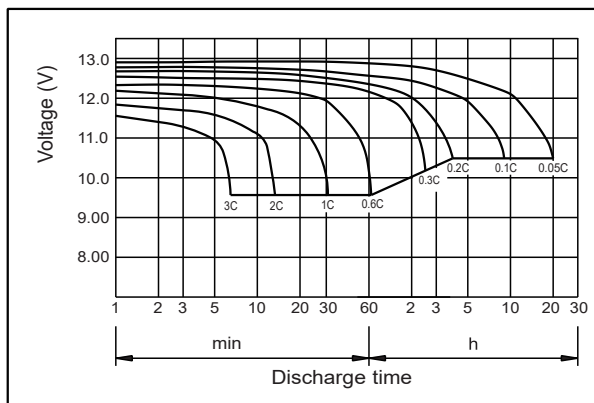


### Characteristics

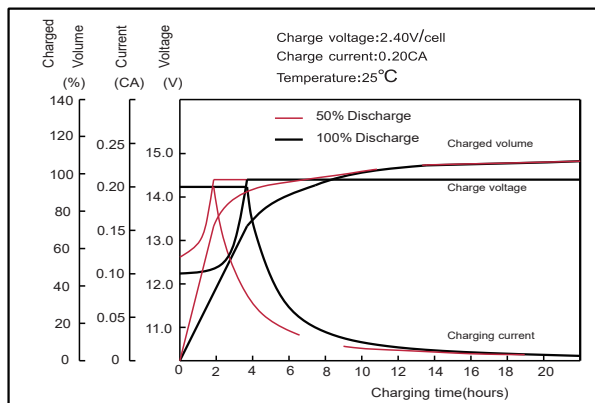
|                                          |             |                                                    |
|------------------------------------------|-------------|----------------------------------------------------|
| Capacity (25°C)                          | 20HR(10.5V) | 17Ah                                               |
|                                          | 10HR(10.5V) | 16Ah                                               |
|                                          | 1HR(9.60V)  | 10.5Ah                                             |
| Terminal type                            |             | T3/T12                                             |
| Internal resistance (Fully charged,25°C) |             | Approx.17m Ω                                       |
| Capacity affected by temperature (20HR)  | 40°C        | 102%                                               |
|                                          | 25°C        | 100%                                               |
|                                          | 0°C         | 85%                                                |
|                                          | -15°C       | 65%                                                |
| Self-discharge (25°C)                    | 3month      | Remaining Capacity:91%                             |
|                                          | 6month      | Remaining Capacity:82%                             |
|                                          | 12month     | Remaining Capacity:65%                             |
| Nominal operating temperature            |             | 25°C± 3C (77°F± 5°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)                             |
| Float charging voltage(25°C)             |             | 13.60 to 13.80V Temperature compensation: -18mV/°C |
| Cyclic charging voltage(25°C)            |             | 14.50 to 15.00V Temperature compensation: -30mV/°C |
| Maximum charging current                 |             | 5.1A                                               |
| Maximum discharge current                |             | 255A(5 sec.)                                       |
| Designed floating life(20°C)             |             | 5 years                                            |

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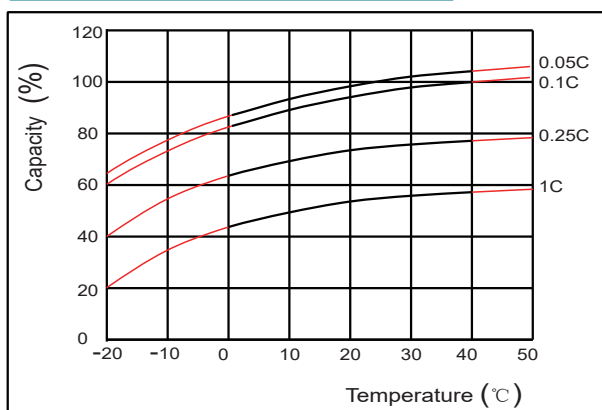
## Discharge characteristics(25°C)



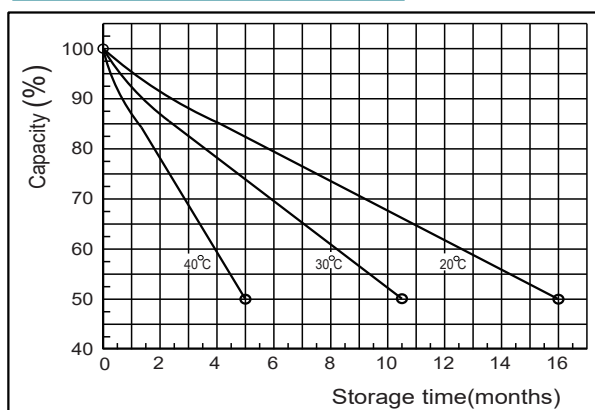
## Charging characteristics (25°C)



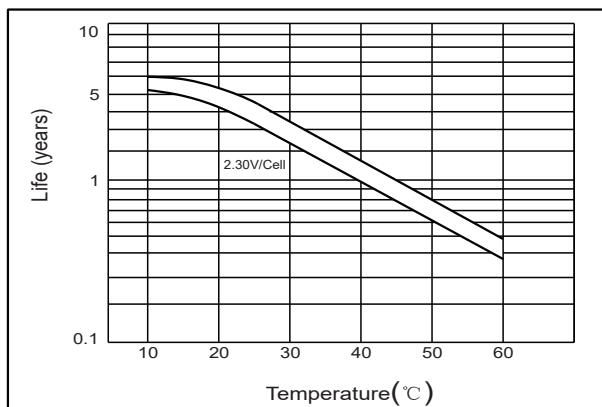
## Effect of temperature on capacity



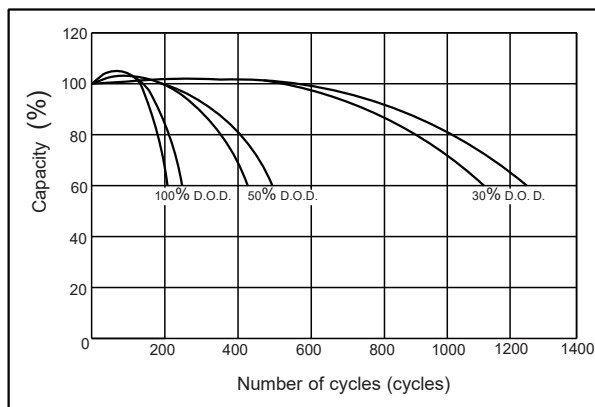
## Self-discharge characteristics



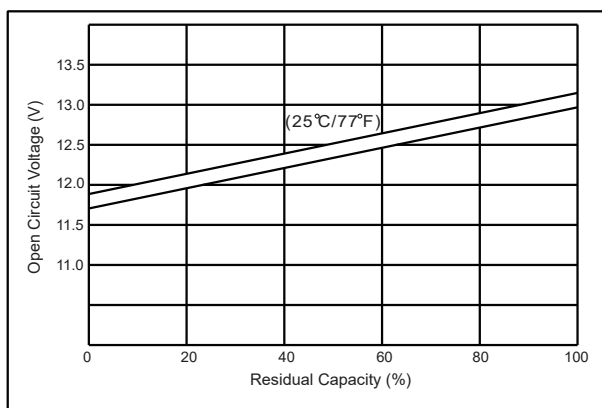
## Floating life on temperature



## Cycle life on D.O.D (25 °C)



## The relationship for OCV and Capacity (25°C)



## The relationship for Charging voltage and Temperature

