

# SB1.2-12 (12V1.2Ah)

## Applications

- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Emergency light
- Railway signal
- Alarm and security system
- Communication power supply
- DC power supply



## Certificates



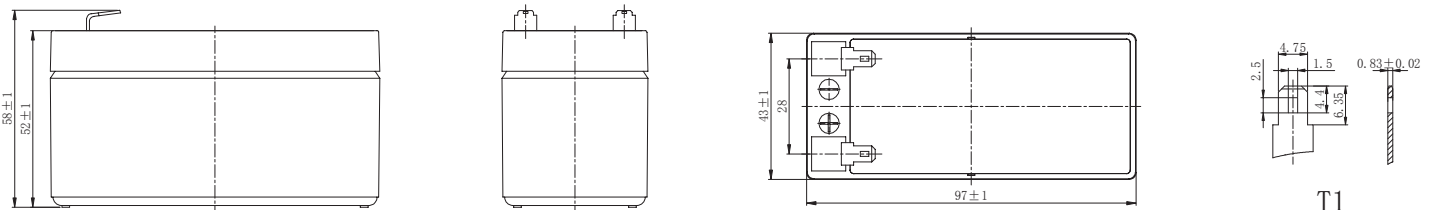
## Specifications

|   |  |                                   |   |
|---|--|-----------------------------------|---|
| <b>Nominal Voltage</b>                        | 12V  | <b>Nominal Oper. Temp. R.</b>     | 20±3°C  |
| <b>Nominal Capacity</b>                       | 1.2Ah (C <sub>20</sub> 10.5V)  | <b>Cycle Use</b>                  | Initial Charging Current less than 0.36A.<br>Voltage 14.55V ±1% at 20°C.<br>Temperature Coefficient -30mV/°C.   |
| <b>Approx. Weight</b>                         | 0.57kg   | <b>Standby Use</b>                | No limit on Initial Charging Current.<br>Voltage 13.65V ±1% at 20°C.<br>Temperature Coefficient -20mV/°C.   |
| <b>Terminal</b>                               | T1   | <b>Capacity affected by Temp.</b> | 40°C            103%<br>25°C            100%<br>0°C              86%  |
| <b>Container Material</b>                     | ABS UL94 HB  | <b>Self Discharge</b>             | SSB batteries may be stored for up to 6 months at 20°C and then a freshening charge is required. For higher temperatures the time interval will be shorter. |
| <b>Rated Capacity (20°C)</b>                  | 1.20Ah/0.060A, 20hr, 10.5V<br>1.13Ah/0.113A, 10hr, 10.5V<br>1.04Ah/0.207A, 5hr, 10.5V<br>0.92Ah/0.306A, 3hr, 10.5V<br>0.79Ah/0.789A, 1hr, 9.6V | <b>Life Expectancy</b>            | 6-9 years according to EUROBAT  |
| <b>Max. Discharge Current</b>                 | 18A (5s)   |                                   |   |
| <b>Internal Resistance / Impedance (1kHz)</b> | Approx. 110mΩ  |                                   |   |
| <b>Operating Temp. Range</b>                  | Discharge:        -15~50°C<br>Charge:            0~40°C<br>Storage:           -15~40°C   |                                   |   |

## Dimensions

### ■ T1 Terminal

Unit: mm | Dimensions: 97 Length X 43 Width X 52 Height (58 Height incl. Terminal)



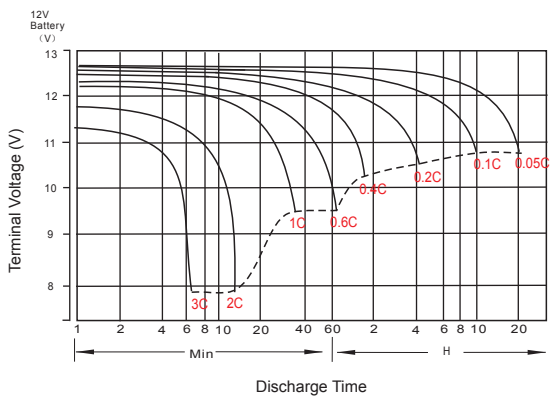
### Constant Current Discharge (Amperes) at 20°C

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h    | 2h    | 3h    | 4h    | 5h    | 6h    | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.85V/cell | 3.73 | 2.28  | 1.78  | 1.48  | 1.10  | 0.813 | 0.714 | 0.411 | 0.296 | 0.236 | 0.201 | 0.172 | 0.136 | 0.111 | 0.059 |
| 1.80V/cell | 4.01 | 2.42  | 1.86  | 1.54  | 1.14  | 0.835 | 0.731 | 0.418 | 0.301 | 0.240 | 0.204 | 0.175 | 0.138 | 0.112 | 0.059 |
| 1.75V/cell | 4.23 | 2.52  | 1.92  | 1.59  | 1.17  | 0.853 | 0.746 | 0.426 | 0.306 | 0.243 | 0.207 | 0.177 | 0.139 | 0.113 | 0.060 |
| 1.70V/cell | 4.43 | 2.62  | 1.99  | 1.63  | 1.20  | 0.872 | 0.760 | 0.432 | 0.311 | 0.246 | 0.209 | 0.179 | 0.141 | 0.115 | 0.060 |
| 1.65V/cell | 4.58 | 2.69  | 2.04  | 1.67  | 1.22  | 0.886 | 0.771 | 0.437 | 0.314 | 0.249 | 0.211 | 0.181 | 0.142 | 0.115 | 0.061 |
| 1.60V/cell | 4.86 | 2.80  | 2.11  | 1.72  | 1.25  | 0.908 | 0.789 | 0.446 | 0.319 | 0.253 | 0.215 | 0.183 | 0.144 | 0.117 | 0.062 |

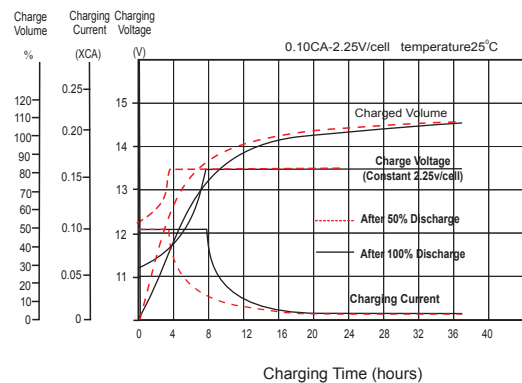
### Constant Power Discharge (Watts/cell) at 20°C

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 2h    | 3h    | 4h    | 5h    | 6h    | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.85V/cell | 7.06 | 4.34  | 3.40  | 2.86  | 2.13  | 1.58  | 1.39 | 0.804 | 0.583 | 0.465 | 0.397 | 0.341 | 0.269 | 0.220 | 0.117 |
| 1.80V/cell | 7.52 | 4.57  | 3.55  | 2.96  | 2.19  | 1.61  | 1.42 | 0.817 | 0.591 | 0.471 | 0.402 | 0.345 | 0.273 | 0.223 | 0.119 |
| 1.75V/cell | 7.84 | 4.72  | 3.64  | 3.02  | 2.23  | 1.64  | 1.44 | 0.830 | 0.599 | 0.477 | 0.407 | 0.349 | 0.275 | 0.225 | 0.120 |
| 1.70V/cell | 8.13 | 4.87  | 3.74  | 3.09  | 2.28  | 1.67  | 1.46 | 0.840 | 0.607 | 0.483 | 0.412 | 0.353 | 0.278 | 0.227 | 0.121 |
| 1.65V/cell | 8.34 | 4.98  | 3.82  | 3.15  | 2.32  | 1.70  | 1.48 | 0.848 | 0.612 | 0.487 | 0.415 | 0.356 | 0.280 | 0.229 | 0.122 |
| 1.60V/cell | 8.68 | 5.13  | 3.92  | 3.23  | 2.37  | 1.73  | 1.51 | 0.862 | 0.621 | 0.494 | 0.420 | 0.360 | 0.284 | 0.232 | 0.123 |

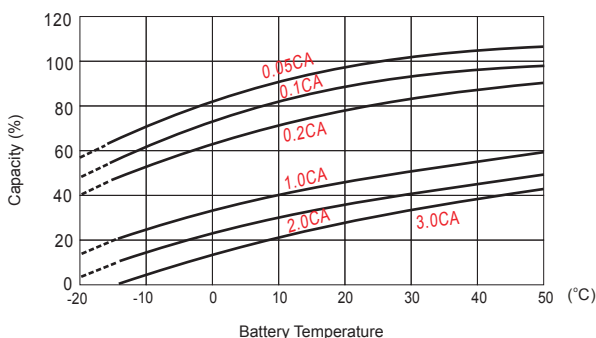
### Discharge Characteristics



### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### Effect of Temperature on Long Term Float Life

