



# SB SERIES-General Purpose

## SB6-1.3 (6V1.3AH)

### Specification

Nominal Voltage	6V	
Nominal Capacity(20HR)	1.3AH	
Dimensions	Length	97 ± 1mm (3.82 inches)
	Width	24 ± 1mm (0.94 inches)
	Container Height	51.5 ± 1mm (2.03 inches)
	Total Height (with Terminal)	57.5 ± 1mm (2.26 inches)
Approx Weight	Approx 0.29 kg (0.64lbs)	
Terminal	T1	
Container Material	ABS	
Rated Capacity	1.30 AH/0.065A	(20hr, 1.80V/cell, 25°C/77°F)
	1.21 AH/0.121A	(10hr, 1.80V/cell, 25°C/77°F)
	1.11 AH/0.221A	(5hr, 1.75V/cell, 25°C/77°F)
	0.996 AH/0.332A	(3hr, 1.75V/cell, 25°C/77°F)
	0.816 AH/0.816A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	18A (5s)	
Internal Resistance	Approx 65mΩ	
Operating Temp. Range	Discharge	-15~50°C (5~122°F)
	Charge	0~40°C (32~104°F)
	Storage	-15~40°C (5~104°F)
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 0.36A. Voltage	
	7.2V~7.5V at 25°C(77°F)Temp. Coefficient -15mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	6.75V~6.9V at 25°C(77°F)Temp. Coefficient -10mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	SB series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



### Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system

### Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	2.48	1.90	1.57	1.36	1.05	0.776	0.654	0.387	0.303	0.246	0.201	0.174	0.140	0.117	0.064
1.80V/cell	3.32	2.43	1.90	1.61	1.24	0.902	0.732	0.422	0.326	0.263	0.215	0.187	0.149	0.121	0.065
1.75V/cell	3.75	2.67	2.08	1.73	1.29	0.936	0.766	0.438	0.332	0.268	0.221	0.192	0.151	0.124	0.066
1.70V/cell	4.13	2.91	2.22	1.82	1.34	0.973	0.790	0.449	0.341	0.276	0.227	0.196	0.154	0.127	0.067
1.65V/cell	4.55	3.14	2.36	1.93	1.42	0.998	0.809	0.455	0.355	0.285	0.233	0.200	0.156	0.129	0.068
1.60V/cell	5.02	3.41	2.52	2.06	1.50	1.040	0.816	0.475	0.366	0.294	0.241	0.204	0.158	0.131	0.068

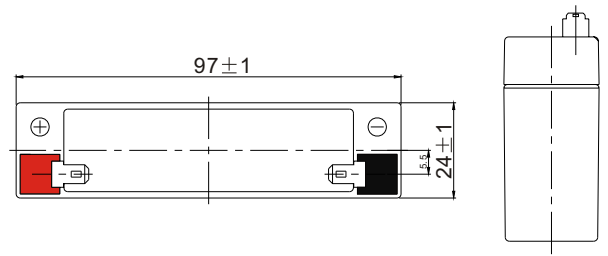
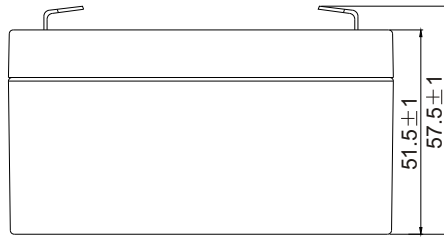
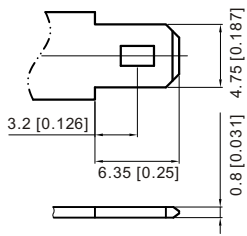
### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.53	3.51	2.94	2.57	2.01	1.49	1.26	0.751	0.590	0.481	0.393	0.342	0.277	0.232	0.127
1.80V/cell	6.01	4.43	3.50	2.99	2.33	1.72	1.40	0.814	0.631	0.511	0.420	0.366	0.293	0.239	0.129
1.75V/cell	6.63	4.79	3.78	3.19	2.40	1.77	1.46	0.841	0.640	0.520	0.430	0.374	0.297	0.245	0.130
1.70V/cell	7.10	5.11	3.98	3.32	2.48	1.83	1.50	0.860	0.657	0.533	0.440	0.382	0.301	0.250	0.132
1.65V/cell	7.72	5.46	4.20	3.50	2.60	1.86	1.53	0.868	0.682	0.549	0.450	0.389	0.305	0.254	0.134
1.60V/cell	8.32	5.79	4.42	3.69	2.73	1.93	1.53	0.900	0.699	0.565	0.464	0.396	0.308	0.257	0.134

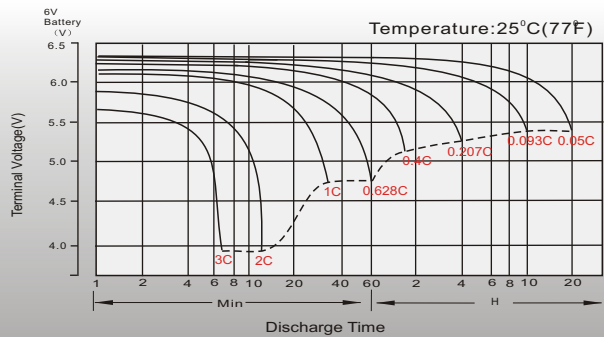
# Dimensions

## T1 Terminal

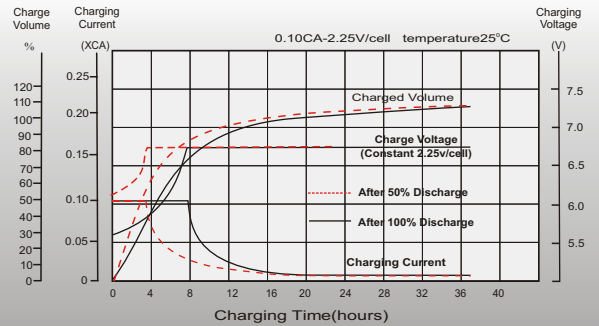
Unit: mm [inches]



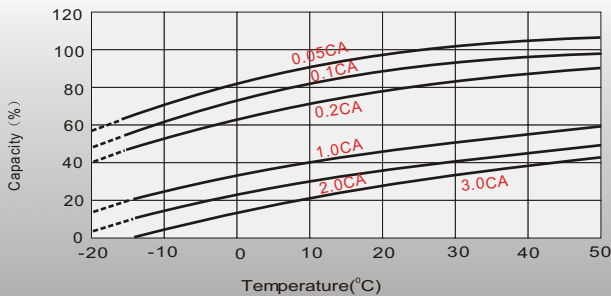
## Discharge Characteristics



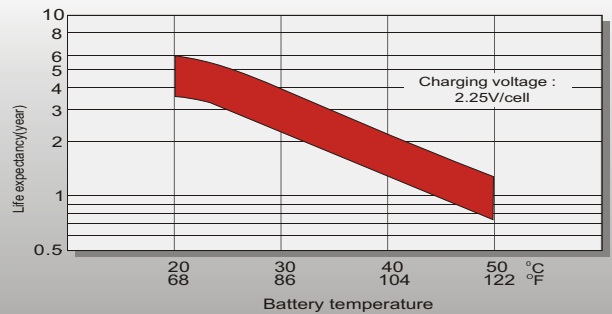
## Float Charging Characteristics



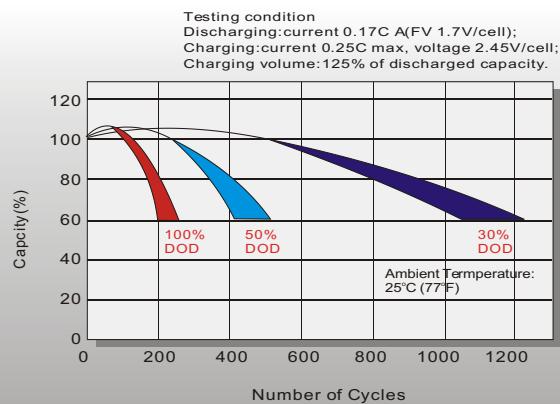
## Temperature Effects in Relation to Battery Capacity



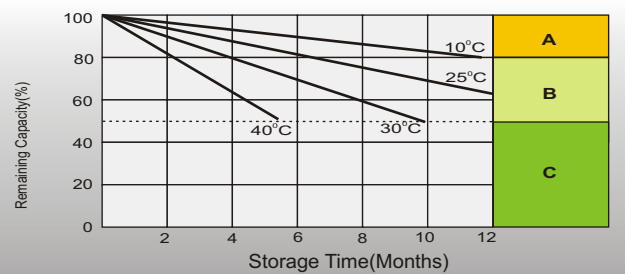
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



- A** No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required).
- B** Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.