

# S Series General Purpose Battery

S-12220 (12V19AH) AGM Sealed Lead Acid

Specifications	
Nominal Voltage	12V
Nominal Capacity	19 AH/0.965A (20 hr. to 1.80V/cell @ 77°F/25°C) 18 AH/1.80A (10 hr. to 1.80V/cell @ 77°F/25°C) 18 AH/2.20A (8 hr. to 1.75V/cell @ 77°F/25°C)
Length	7.16 in. (181.5±2mm)
Width	3.03 in. (77±1mm)
Total Height (with Terminal)	6.59 in. (167.5±2mm)
Approx. Weight	Approx. 13.34 lb. (6.05kg)
Tab Terminal	T3
Container Material	ABS
Max. Discharge Current	270A (5s)
Internal Resistance	Approx. 15.0mΩ
Operating Temp. Range	Discharge: 5° to 130°F (-15° to 55°C) Charge: 32° to 104°F (0° to 40°C) Storage: 5° to 104°F (-15° to 40°C)
Nominal Operating Temp.	77±5°F (25±3°C)
Cycle Use	Initial Charging Current less than 5.4A Voltage 14.4V to 15.0V at 77°F (25°C) Temp. Coefficient -30mV/°C
Stand by Use	Float Voltage: 13.5V at 77°F (25°C) Equalize Voltage: 14.1V at 77°F (25°C)
Capacity Affected by Temperature	104°F (40°C) 103% 77°F (25°C) 100% 32°F (0°C) 86%
Self Discharge	SBS S Series batteries may be stored for up to 6 months at 77°F (25°C) and then a freshening charge is required. For higher temperatures the time interval will be shorter.



## Applications

- Telecommunications
- Utility
- Industrial
- Deep cycle
- All purpose



S-12220 (12V19AH)

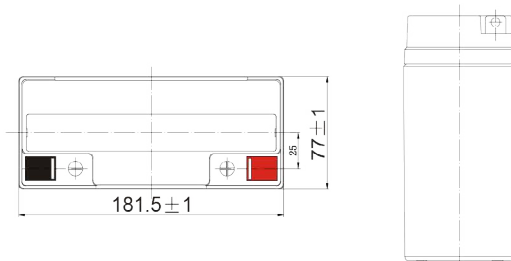
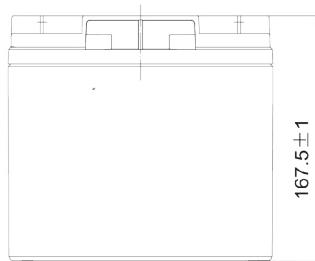
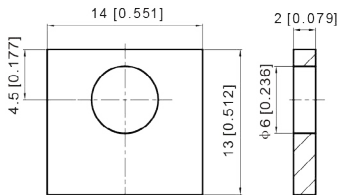
Constant Current Discharge (Amperes) at 77°F (25°C)														
F.V/Time	10 min	15 min	20 min	30 min	45 min	1 hr	2 hr	3 hr	4 hr	5 hr	6 hr	8 hr	10 hr	20 hr
1.85V/cell	26.4	22.2	19.4	13.9	11.1	8.99	5.58	4.35	3.53	2.87	2.50	2.04	1.70	0.956
1.80V/cell	33.7	26.8	22.9	16.5	12.9	10.1	6.09	4.68	3.77	3.08	2.68	2.16	1.80	0.965
1.75V/cell	37.0	29.3	24.6	17.1	13.4	10.5	6.32	4.77	3.85	3.16	2.75	2.20	1.82	0.974
1.70V/cell	40.3	31.2	25.9	17.8	13.9	10.9	6.57	4.90	3.95	3.24	2.81	2.23	1.84	0.992
1.65V/cell	43.5	33.2	27.5	18.8	14.2	11.2	6.75	5.11	4.09	3.33	2.87	2.27	1.87	1.004
1.60V/cell	47.3	35.5	29.3	19.8	14.9	11.6	6.98	5.27	4.22	3.44	2.94	2.29	1.89	1.010

Constant Power Discharge (Watts/cell) at 77°F (25°C)														
F.V/Time	10 min	15 min	20 min	30 min	45 min	1 hr	2 hr	3 hr	4 hr	5 hr	6 hr	8 hr	10 hr	20 hr
1.85V/cell	49.2	41.8	36.9	26.8	21.4	17.4	10.9	8.50	6.90	5.63	4.94	4.04	3.37	1.91
1.80V/cell	62.0	49.8	43.0	31.2	24.7	19.4	11.8	9.11	7.34	6.02	5.28	4.27	3.56	1.93
1.75V/cell	67.3	53.8	45.9	32.3	25.5	20.2	12.2	9.25	7.48	6.17	5.41	4.34	3.60	1.94
1.70V/cell	72.3	57.1	47.9	33.5	26.5	20.8	12.7	9.49	7.67	6.31	5.52	4.40	3.63	1.98
1.65V/cell	77.5	60.3	50.7	35.1	27.0	21.5	13.0	9.86	7.91	6.48	5.63	4.47	3.70	2.00
1.60V/cell	82.7	63.7	53.4	36.7	27.9	22.0	13.3	10.1	8.13	6.66	5.74	4.50	3.74	2.01

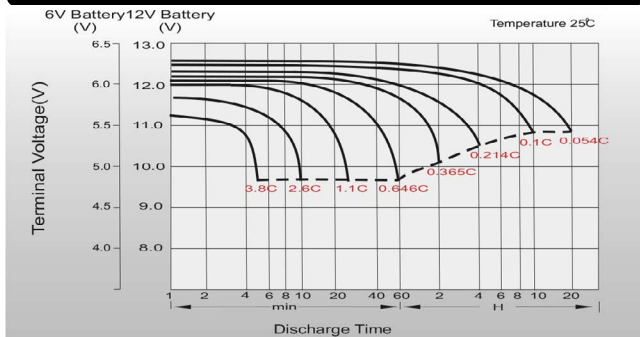
## Dimensions

### T3 Terminal

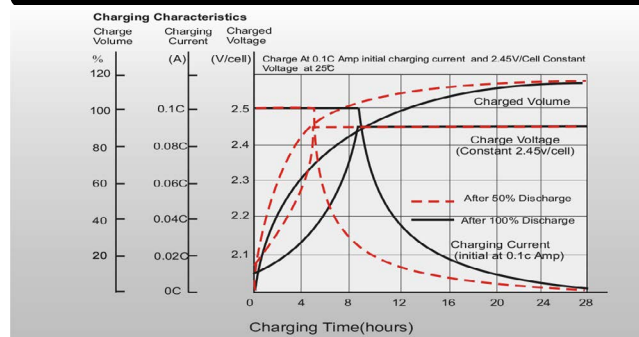
Unit: mm [inches]



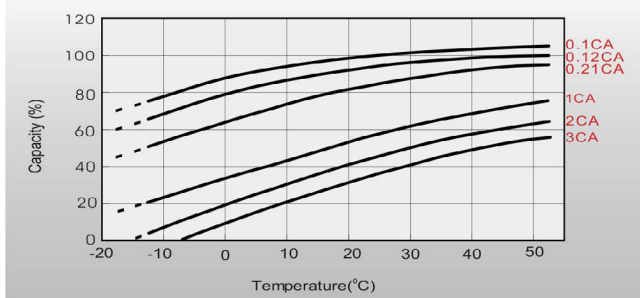
## Discharge Characteristics



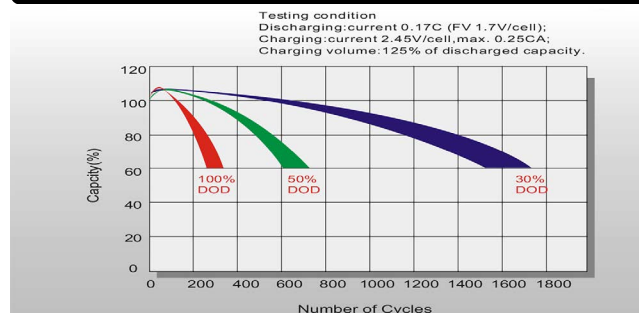
## Float Charging Characteristics



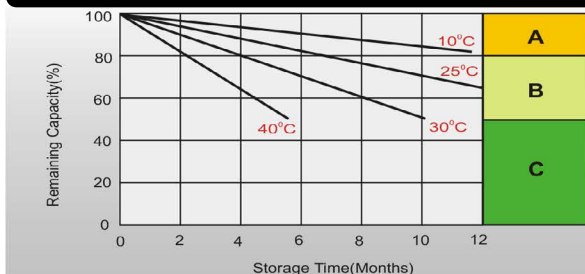
## Temperature Effects in Relation to Battery Capacity



## 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 volatge 2.25V/cell.
  2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
  3. Charged for 8-10hours 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.