

# SPT12-5<sub>(12V5AH)</sub>

## Features

Maintenance-free operation  
Compact design

Stable quality and high reliability  
5 years design time (at 25°C)



## Application

- Telecommunication system
- Alarm and security system
- Backup power for testing and measuring instruments
- UPS
- Emergency lighting
- Fire alarm and security systems
- Auto control system
- Electronic apparatus and equipment
- Communication power supply
- DC power supply

## Specifications

Nominal Voltage	12V (6 cells)	Operating Temp.Range	Discharge: -15 50°C (5 122°F)
Nominal Capacity	5.0AH (20hr, 1.80V/cell, 25 °C/76°F)		Charge : 0 40°C (32 104°F)
	4.7AH (10hr, 1.80V/cell, 25 °C/77°F)	Storage : -15 40°C (5 104°F)	
	4.25AH (5hr, 1.75V/cell, 25 °C/77°F)	Nominal Operating Temp.Range	25 ± 3°C ( 77 ± 5°F)
Dimension	3.0AH (1hr, 1.60V/cell, 25 °C/77°F)	Cycle Use	14.2~14.4V (25°C/77°F) Temp.Coecient -30mV/ °C
	Length 90 ±1mm		Initial Charging Current Less than 1.5A
	Width 70±1mm	Standby Use	13.5~13.8V (25°C/77°F) Temp.Coecient -20mV/ °C
	Container Height 101 ± 2mm		No limit on Initial Charging Current
Approx Weight	Approx 1.5Kg	Capacity aected by Temperature	40°C (104°F) 103%
Terminal	F1 or F2		25°C (77°F) 100%
Container Material	ABS		0°C (32°F) 86%
Max. Discharge Current	75A (5S)	Self Discharge	Sunstone SPT series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required.
Internal Resistance	Approx 36mΩ		For higher temperatures the time interval will be shorter.

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

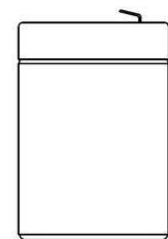
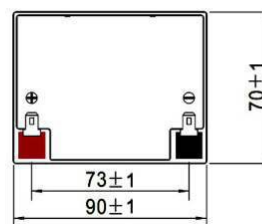
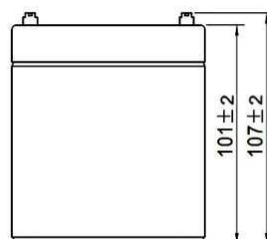
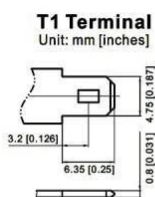
F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.80V/cell	12.37	8.91	7.26	4.53	3.45	2.701	1.624	1.209	0.839	0.477	0.256
1.75V/cell	14.05	10.07	7.88	4.72	3.58	2.838	1.670	1.249	0.858	0.486	0.259
1.70V/cell	15.34	10.87	8.51	4.88	3.69	2.920	1.716	1.277	0.874	0.492	0.263
1.65V/cell	16.70	11.70	8.99	5.14	3.85	3.035	1.765	1.314	0.891	0.497	0.266
1.60V/cell	18.19	12.74	9.40	5.37	3.99	3.102	1.814	1.336	0.908	0.502	0.267

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

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.80V/cell	23.14	16.32	13.78	8.51	6.55	5.356	3.125	2.365	1.658	0.948	0.495
1.75V/cell	25.58	18.01	14.47	8.85	6.82	5.478	3.210	2.415	1.682	0.960	0.502
1.70V/cell	27.31	19.14	15.22	9.15	7.04	5.554	3.286	2.462	1.702	0.967	0.509
1.65V/cell	29.72	20.23	15.79	9.65	7.25	5.737	3.356	2.508	1.737	0.974	0.518
1.60V/cell	32.01	21.45	16.47	9.95	7.44	5.916	3.423	2.555	1.762	0.981	0.524

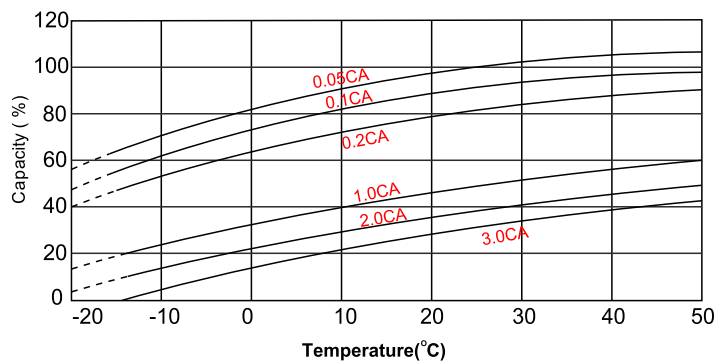
Note: The above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.

## Dimensions unitmm[inches]

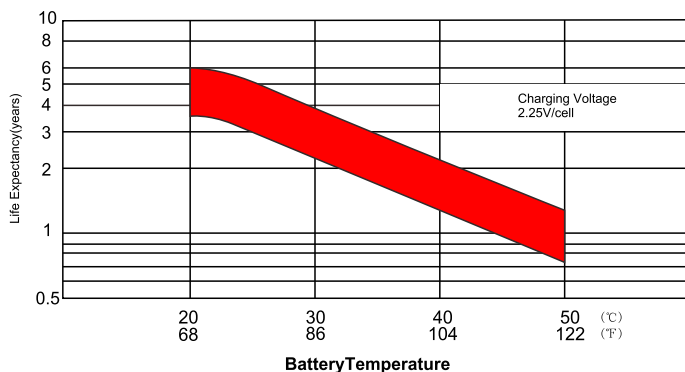


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## Temperature Effects in Relation to Battery Capacity

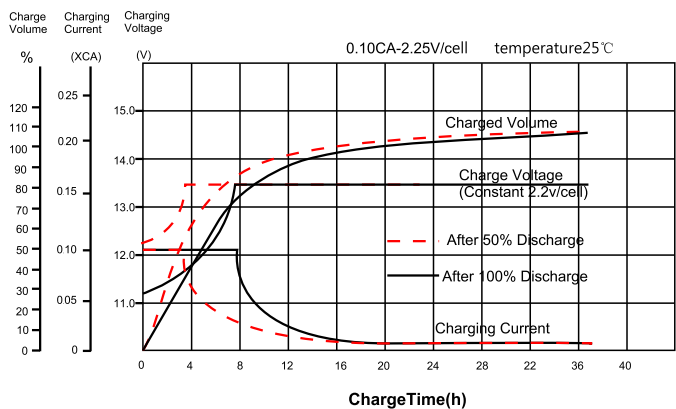


## Effect of temperature on long term oat life



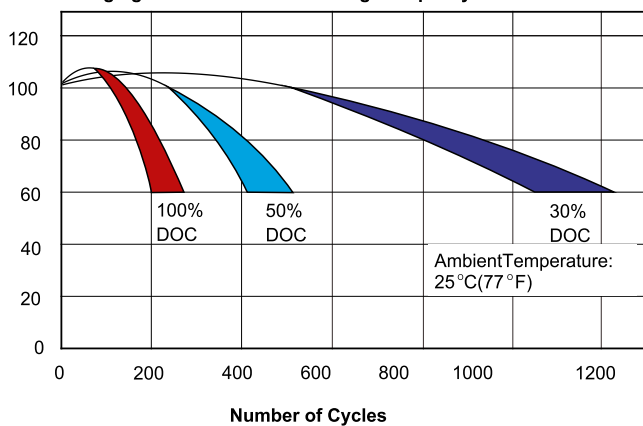
## Float charging characteristic

## Cycle Life in Relation to Depth of Discharge



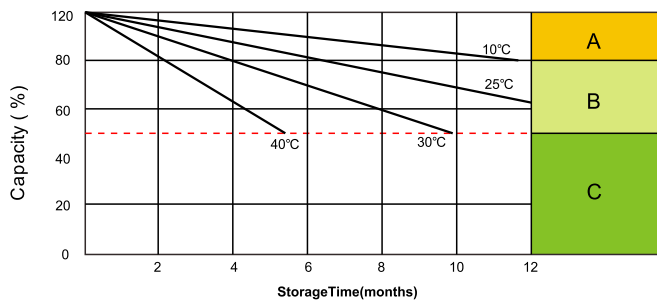
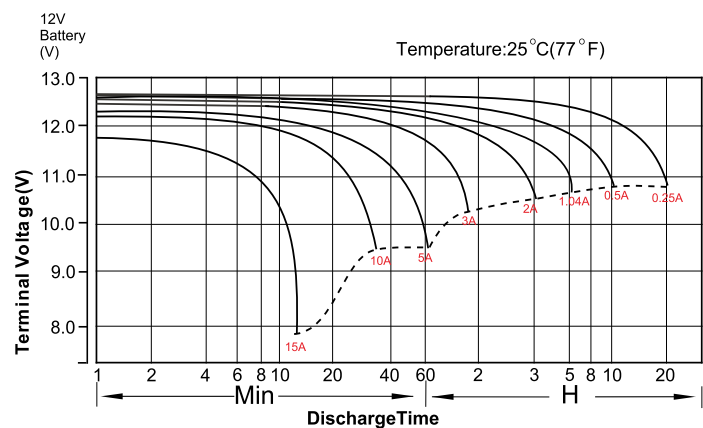
### Testing condition

Discharging: current 0.17C(FV 1.7V/cell);  
Charging: current 0.25C max, voltage 2.45V/cell;  
Charging volume:125% of discharged capacity.



## Discharge characteristic Curve

## 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.