



# SP12-45

## Specifications

Nominal Voltage(V) **12V**

### Nominal Capacity

|              |         |    |         |         |
|--------------|---------|----|---------|---------|
| 20 hour rate | (2.25A  | to | 10.50V) | 45Ah    |
| 10 hour rate | (4.275A | to | 10.50V) | 42.75Ah |
| 5 hour rate  | (7.65A  | to | 10.20V) | 38.25Ah |
| 1 C          | (45A    | to | 9.60V)  | 25.5Ah  |
| 3 C          | (135A   | to | 9.60V)  | 18Ah    |

Weight **Approx. 14.5kg(31.9Lbs.)**

Internal Resistance (at 1KHz) **Approx. 7 mΩ**

### Maximum Discharge Current for

5 seconds: **540A**

### Charging Methods at 25 (77 )

Cycle use:

Charging Voltage **14.4 to 15.0V**

Coefficient -5.0mv/ /cell

Maximum Charging Current : **13.5A**

Standby use:

Float Charging Voltage **13.50 to 13.80V**

Coefficient -3.0mv/ /cell

### Operating Temperature Range

|           |          |    |           |
|-----------|----------|----|-----------|
| Charge    | -15 (5 ) | to | 40 (104 ) |
| Discharge | -15 (5 ) | to | 50 (122 ) |
| Storage   | -15 (5 ) | to | 40 (104 ) |

### Charge Retention (shelf life) at 20 (68 )

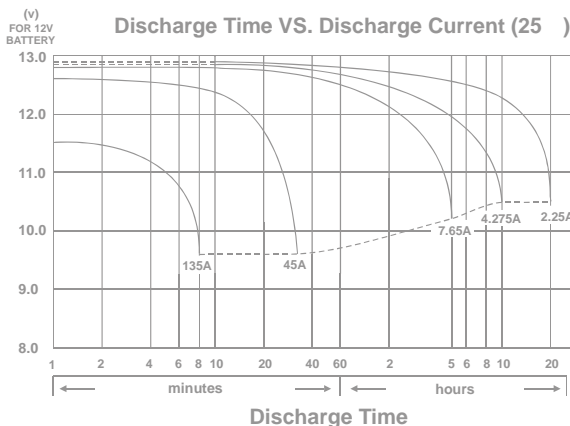
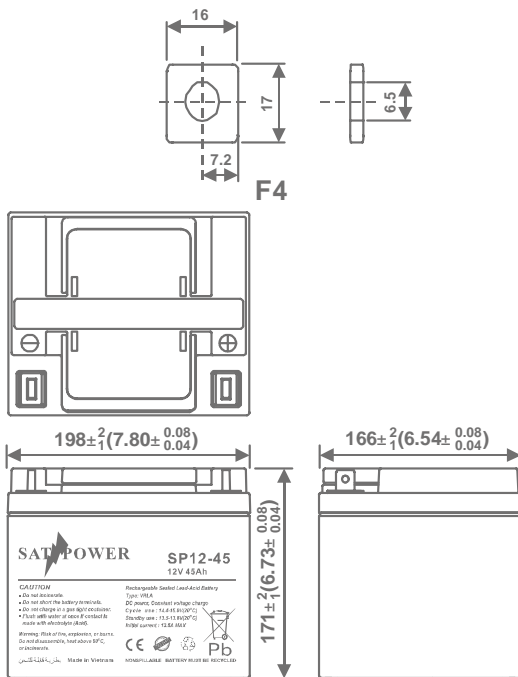
|         |            |
|---------|------------|
| 1 month | <b>92%</b> |
| 3 month | <b>90%</b> |
| 6 month | <b>80%</b> |

Case Material **ABS (UL94 HB)**

Terminal **F4**

## Dimensions

mm(inch)



## Applications

- UPS System
- Alarm Systems & Security equipment
- Telephone & telecom equipment
- Emergency lighting
- Fire & gas detection devices
- Portable measuring instruments
- Medical equipment
- Portable video cameras & television
- Solar systems
- Power tools

## - PERFORMANCE DATA

### Discharge Rates in Watts to Various End Voltages at 25 (77 )

| End Voltage |     | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| Time        |     |       |       |       |       |       |       |       |
| 5           | min | 1399  | 1683  | 1884  | 2014  | 2048  | 2085  | 2122  |
| 10          | min | 890   | 1071  | 1199  | 1281  | 1303  | 1327  | 1350  |
| 15          | min | 694   | 816   | 901   | 955   | 969   | 985   | 1001  |
| 30          | min | 372   | 438   | 483   | 512   | 519   | 528   | 537   |
| 60          | min | 293   | 311   | 321   | 329   | 332   | 336   | 338   |
| 120         | min | 154   | 164   | 169   | 174   | 175   | 177   | 178   |
| 180         | min | 123   | 131   | 135   | 138   | 139   | 141   | 142   |
| 240         | min | 98.4  | 104   | 108   | 111   | 112   | 113   | 114   |
| 300         | min | 84.0  | 89.1  | 92.2  | 94.4  | 95.3  | 96.3  | 97.1  |
| 600         | min | 49.4  | 52.4  | 54.2  | 55.6  | 56.1  | 56.6  | 57.1  |
| 1200        | min | 26.0  | 27.6  | 28.6  | 29.3  | 29.6  | 29.9  | 30.1  |

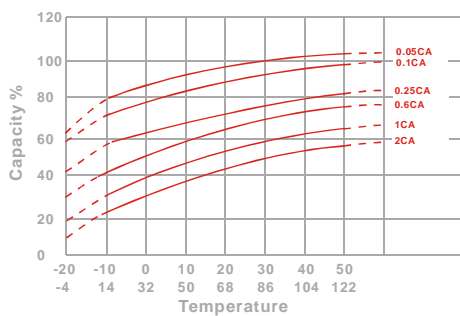
### - Discharge Rates in Amperes to Various End Voltages at 25 (77 )

| End Voltage |     | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| Time        |     |       |       |       |       |       |       |       |
| 5           | min | 127   | 153   | 171   | 183   | 186   | 190   | 193   |
| 10          | min | 79.5  | 95.6  | 107   | 114   | 116   | 118   | 121   |
| 15          | min | 60.3  | 71.0  | 78.3  | 83.1  | 84.2  | 85.6  | 87.0  |
| 30          | min | 31.7  | 37.3  | 41.1  | 43.6  | 44.2  | 45.0  | 45.7  |
| 60          | min | 24.6  | 26.1  | 27.0  | 27.7  | 27.9  | 28.2  | 28.4  |
| 120         | min | 12.9  | 13.7  | 14.2  | 14.6  | 14.7  | 14.8  | 14.9  |
| 180         | min | 10.3  | 10.9  | 11.3  | 11.5  | 11.6  | 11.8  | 11.9  |
| 240         | min | 8.20  | 8.70  | 9.00  | 9.22  | 9.31  | 9.40  | 9.48  |
| 300         | min | 6.97  | 7.40  | 7.65  | 7.84  | 7.91  | 7.99  | 8.06  |
| 600         | min | 4.10  | 4.35  | 4.50  | 4.61  | 4.65  | 4.70  | 4.74  |
| 1200        | min | 2.15  | 2.28  | 2.36  | 2.42  | 2.44  | 2.47  | 2.49  |

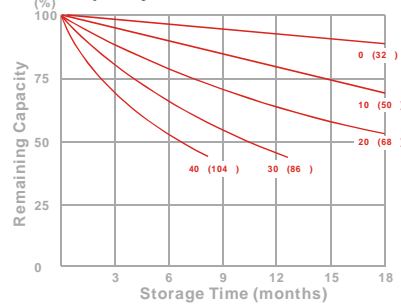
All data on the spec. sheet is an average value:

The tolerance range : X<6min(+15%~-15%), 6min X<10min(+12%~-12%),10min X < 60min(+8%~-8%), X 60min(+5%~-5%)

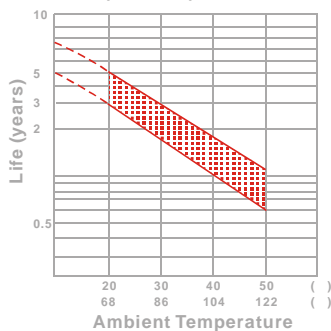
Effect of Temperature on Capacity 25 (77 )



Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life

