

# US12-5.4 (12V5.4AH)

## Applications

- Telecommunication center room
- 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

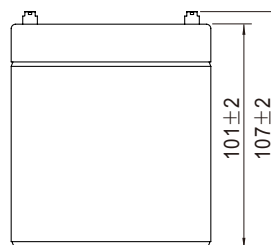
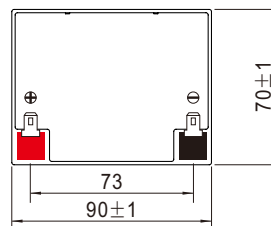


## Features

- Stand commercial: 3~5 years design life
- VRLA Battery, maintenance-free
- Low self-discharge rate
- Silver-coated copper terminals
- PbCaSn alloy for plate grids: less gassing, less self-discharge
- ABS container, Flame retardant UL94-V0

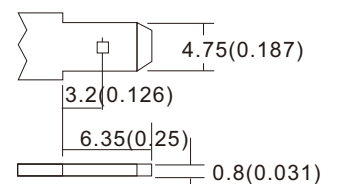
### Layout

Unit: mm



### Terminal

**T1 Terminal**  
Unit: mm [inches]

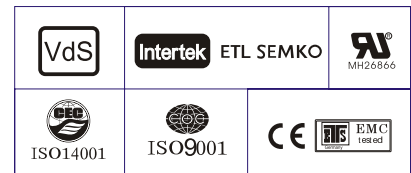


## General Purpose AGM Battery-US Series

# US12-5.4 (12V5.4AH)

### Specification

Nominal Voltage	12V	
Rated Capacity (Ah)	5.40 AH/0.27A	(20hr, 1.80V/cell, 25°C/77°F)
	5.04 AH/0.504A	(10hr, 1.80V/cell, 25°C/77°F)
	4.61 AH/0.922A	(5hr, 1.75V/cell, 25°C/77°F)
	4.14 AH/1.38A	(3hr, 1.75V/cell, 25°C/77°F)
	3.31 AH/3.31A	(1hr, 1.60V/cell, 25°C/77°F)
Dimension	Length	90±1mm (3.54 inches)
	Width	70±1mm (2.76 inches)
	Container Height	101±2mm (3.98 inches)
	Total Height (with Terminal)	107±2mm (4.21 inches)
Approx Weight	Approx 1.65 kg (3.64lbs)	
Terminal	T1/T2	
Container Material	ABS	
Max. Discharge Current	81A (5s)	
Internal Resistance	Approx 30mΩ	
Operating Temp. Range	Discharge	-15 ~ 50°C
	Charge	0 ~ 40°C
	Storage	-15 ~ 40°C
Capacity affected by Temperature	40°C	106%
	25°C	100%
	0°C	86%
Self Discharge	US series batteries can be stored up to 6 months at 25°C and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



### Performance - 25 °C

#### 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	13.1	9.49	7.73	6.53	4.85	3.56	2.85	1.73	1.30	1.05	0.880	0.760	0.597	0.493	0.267
1.80V/cell	14.8	10.3	8.26	6.95	5.14	3.75	3.01	1.80	1.35	1.08	0.903	0.779	0.610	0.504	0.270
1.75V/cell	16.6	11.2	8.85	7.30	5.34	3.89	3.10	1.85	1.38	1.10	0.922	0.794	0.621	0.512	0.275
1.70V/cell	18.1	11.9	9.31	7.67	5.53	4.02	3.19	1.90	1.41	1.12	0.938	0.806	0.630	0.519	0.279
1.65V/cell	19.4	12.8	9.80	8.02	5.72	4.13	3.26	1.93	1.44	1.14	0.952	0.817	0.637	0.524	0.281
1.60V/cell	20.0	13.2	10.1	8.20	5.85	4.20	3.31	1.95	1.46	1.16	0.963	0.826	0.643	0.529	0.283

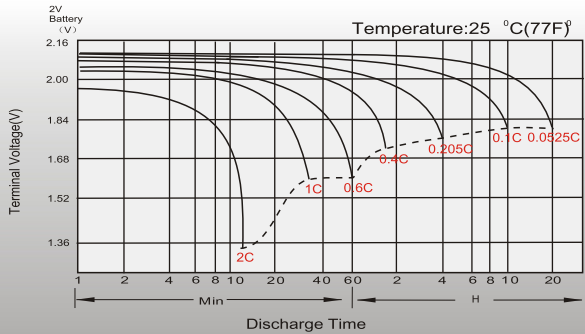
#### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	24.7	18.1	14.9	12.6	9.46	6.99	5.62	3.43	2.59	2.09	1.76	1.52	1.201	0.995	0.538
1.80V/cell	27.7	19.5	15.8	13.4	10.0	7.33	5.90	3.55	2.67	2.14	1.80	1.56	1.223	1.012	0.543
1.75V/cell	30.7	21.0	16.8	14.0	10.3	7.57	6.07	3.65	2.73	2.18	1.83	1.58	1.240	1.024	0.552
1.70V/cell	33.0	22.1	17.5	14.6	10.6	7.77	6.20	3.71	2.76	2.21	1.85	1.59	1.247	1.029	0.554
1.65V/cell	34.9	23.3	18.1	15.0	10.8	7.89	6.28	3.72	2.79	2.23	1.86	1.60	1.253	1.033	0.555
1.60V/cell	35.1	23.5	18.3	15.1	10.9	7.91	6.30	3.74	2.81	2.24	1.88	1.62	1.248	1.038	0.559

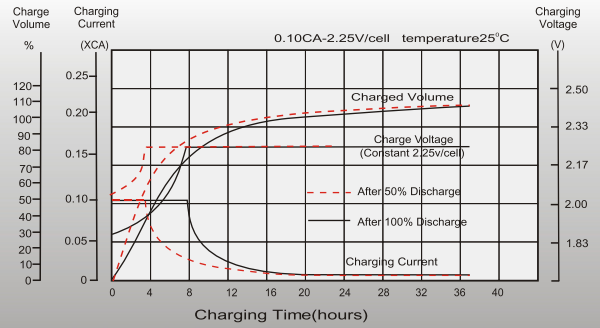
## General Purpose AGM Battery-US Series

### Characteristic Curve

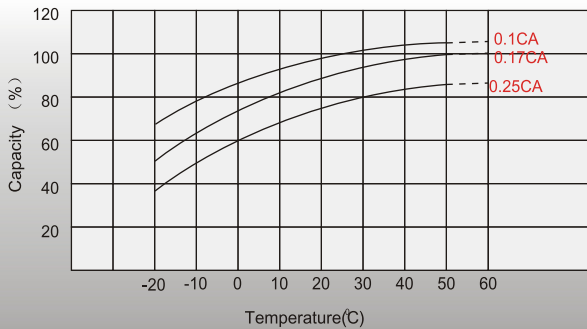
#### Discharge Characteristics



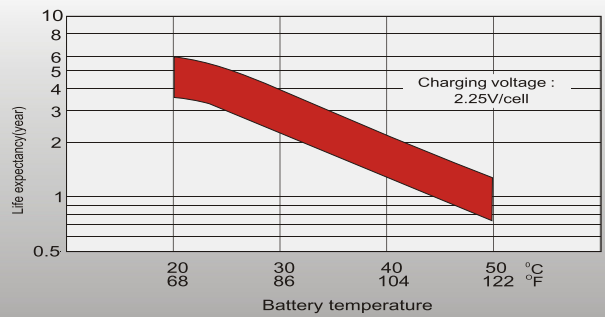
#### Float Charging Characteristics



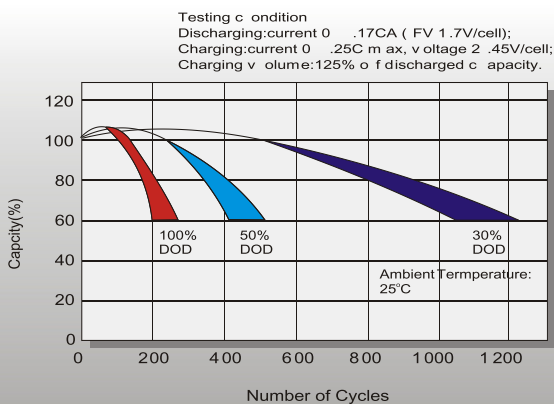
#### Temperature Effects in Relation to Battery Capacity



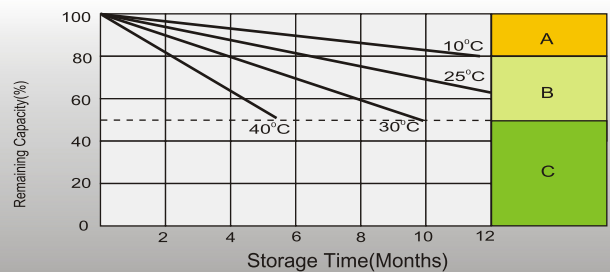
#### Effect of Temperature on Long Term Float Life



#### 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.)

Supplementary charge required before use. Optional charging way as below:

- B**
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.