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# MSJ 300 ▶ 2V 300Ah

MSJ 300 is a long service life battery up to 20 years expected life under normal float charge. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



## ► Specification

Cells Per Unit	1
Voltage Per Unit	2
Capacity	300Ah @ 10hr-rate to 1.80V per cell @25 °C (77°F)
Weight	Approx. 22.2 kg(48.98 lbs)
Maximum Discharge Current	1800A(5sec)
Internal Resistance	Approx. 0.88 mΩ
Operating Temperature Range	Discharge: -20°C~50°C (-4°F~122°F) Charge: 0°C~40°C (32°F~104°F) Storage: -20°C~40°C (-4°F~104°F)
Nominal Operating Temperature Range	25°C±3°C (77°F±5°F)
Float Charging Voltage	2.23±0.02/Cell at 25 °C (77°F) Temp. Coefficient ±3.3mV/°C (±1.8mV/°F)
Recommended Maximum Charging Current Limit	90A
Equalization / Cycle Use Charging Voltage	2.35V Temps coefficient ±3.3mV/°C (±1.8mV/°F)
Terminal	Pb-Ca-Sn Alloy(L / Recessed Terminal)
Container Material	The container and cover are made of flame retardant plastics which meet ABS(UL 94-V0) specifications. The oxygen index level is higher than 28

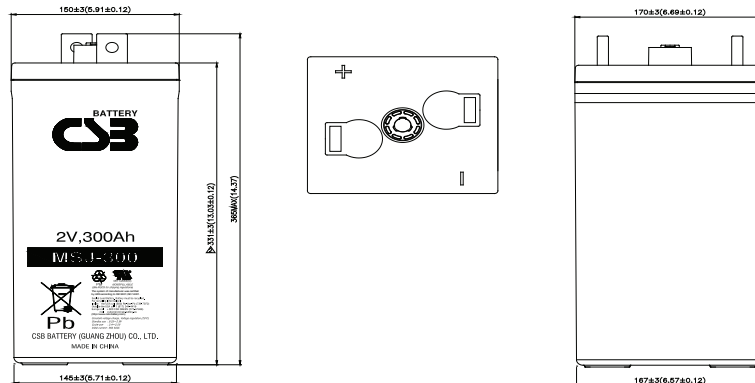
CSB-manufactured VRLA batteries are UL-recognized components under UL924 and UL1989.

CSB is also certified by ISO 9001 and ISO 14001.

## ► Dimensions :

Unit: mm (inch)

Overall Height (H)	Container height (h)	Length (L)	Width (W)
365±3 (14.37±0.12)	330±3 (13.0±0.12)	170±3 (6.69±0.12)	150±3 (5.91±0.12)



## Constant Current Discharge Characteristics Unit:A (25°C, 77°F)

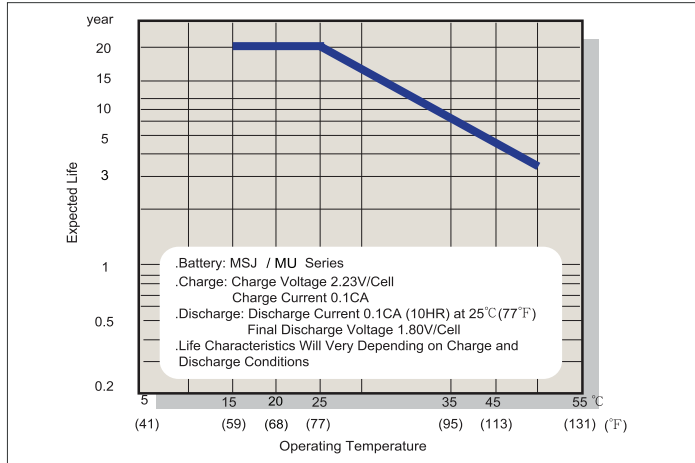
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	476	316	194	115	86.0	68.0	58.0	50.0	40.0	34.0
1.67V	453	303	185	111	82.0	66.0	55.5	48.3	39.0	32.4
1.70V	423	286	182	109	81.0	65.0	54.6	47.6	38.0	32.0
1.75V	375	254	168	103	76.0	61.9	52.0	45.0	37.0	31.0
1.80V	323	234	158	99.0	73.0	61.2	50.0	44.0	36.0	30.0
1.83V	273	211	146	93.0	70.0	56.0	48.0	42.0	34.0	29.0

## Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

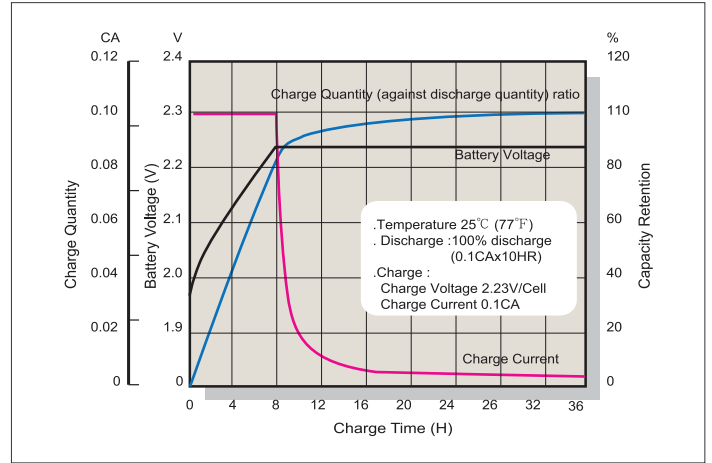
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	834	562	346	208	156	125	106	93.0	75.0	63.0
1.67V	826	559	345	206	154	124	105	92.0	74.0	62.5
1.70V	760	520	334	202	151	123	104	91.0	73.0	62.0
1.75V	684	469	312	193	145	118	100	87.0	71.0	60.0
1.80V	588	432	294	185	139	115	97.0	85.0	69.0	59.0
1.83V	497	389	271	174	133	105	92.0	81.0	66.0	57.0

Ratings presented herein are subject to revision without notice. Please refer to [www.csb-battery.com](http://www.csb-battery.com) to confirm the latest version.

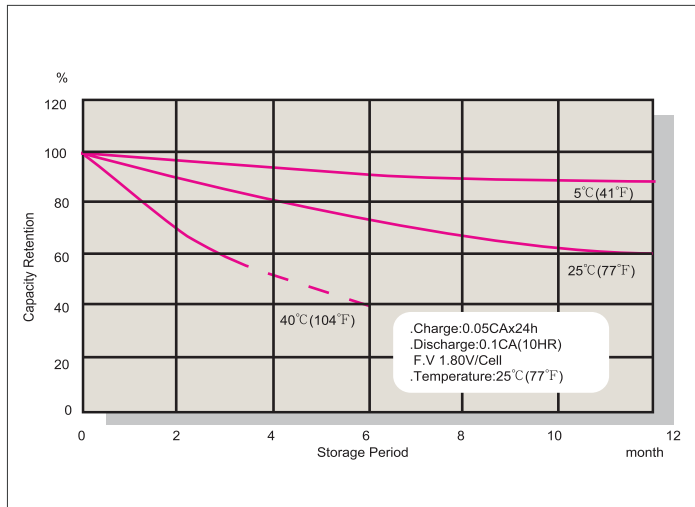
### Expected Life V.S Operating Temperature



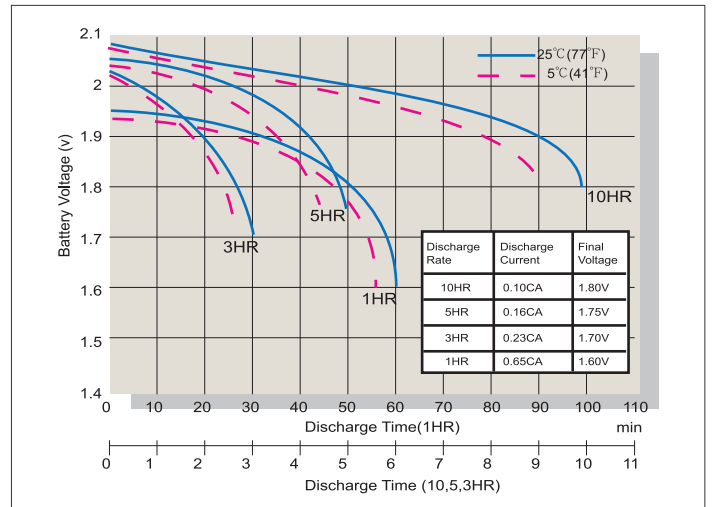
### Typical Constant Voltage Charge Characteristics



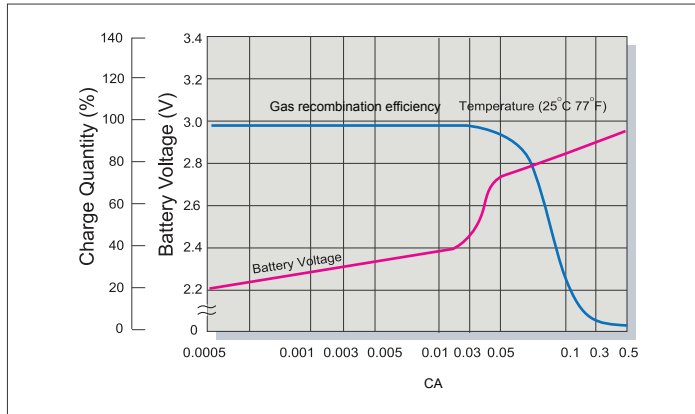
### Capacity Retention Characteristics



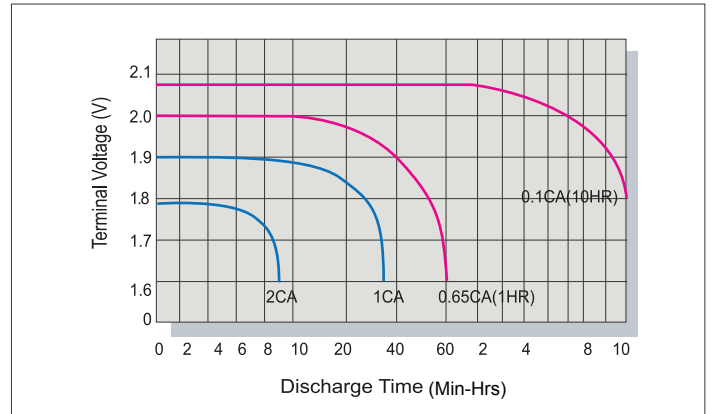
### Discharge Characteristics



### Oxygen Recombination Efficiency Chart



### Terminal Voltage (V) and Discharge Time 25°C (77°F)



### Charging Procedures

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Standby	25°C (77°F)	2.23	2.21~2.25	0.3C

### Discharge Current VS. Discharge Voltage

Discharge Current (A)	Final Discharge Voltage (V/Cell)
0.05C > A	1.90
0.15C > A ≥ 0.05C	1.80
0.20C > A ≥ 0.15C	1.75
0.40C > A ≥ 0.20C	1.70
A > 0.40C	1.60

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