

MSJ 500

2V 500Ah

MSJ 500 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

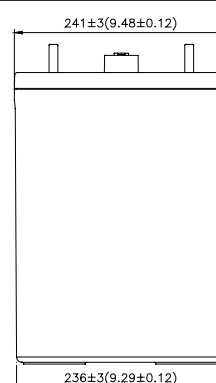
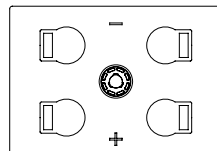
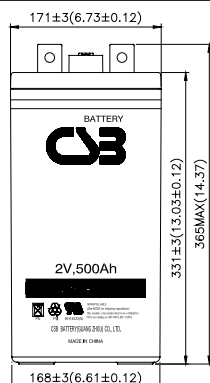
Cells Per Unit	1
Voltage Per Unit	2
Capacity	500Ah @ 10hr-rate to 1.80V per cell @25 °C (77°F)
Weight	Approx. 36.5 kg(80.47 lbs)
Maximum Discharge Current	3000A(5sec)
Internal Resistance	Approx. 0.42 mΩ
Operating Temperature Range	Discharge: -20°C~50°C (-4°F~122°F) Charge: 0°C~40°C (32°F~104°F) Storage: -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	150A
Equalization and Cycle Service	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/File E88637) specifications. The oxygen index level is higher than 28



CSB-manufactured batteries are UL-recognized components under UL924 and UL1989. CSB is also certified by ISO 9001 and ISO 14001.

Dimensions

Unit:(mm)



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

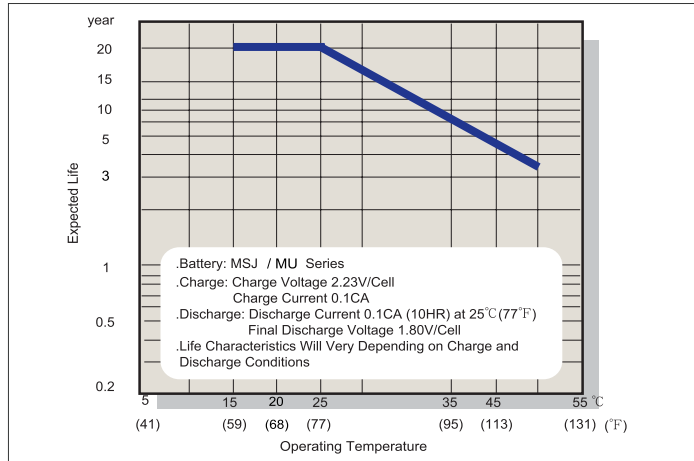
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	794	527	323	192	143	114	96.0	83.0	67.0	56.0
1.65V	755	506	309	185	137	110	92.0	81.0	64.0	54.0
1.70V	704	477	303	182	134	109	91.0	79.0	63.0	53.0
1.75V	625	424	279	172	127	103	87.0	75.0	61.0	52.0
1.80V	538	391	263	164	122	102	84.0	74.0	60.0	50.0
1.83V	455	352	243	155	116	94.0	80.0	70.0	57.0	48.0

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

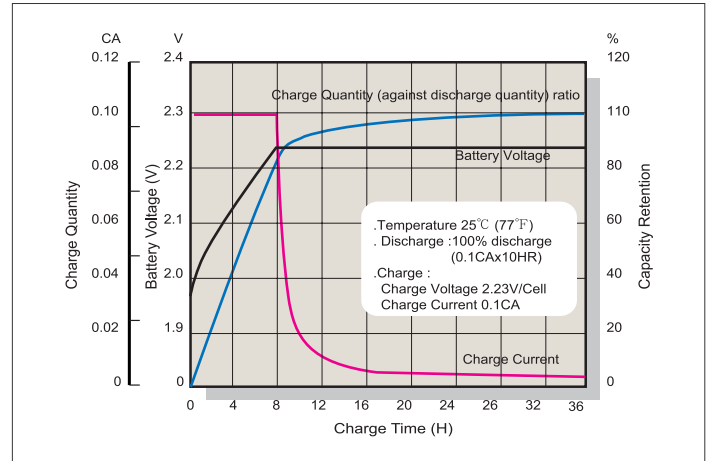
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	1390	937	577	347	260	209	177	157	125	106
1.65V	1377	932	575	342	259	207	175	155	124	105
1.70V	1267	867	557	337	251	204	173	152	122	104
1.75V	1139	781	520	322	242	197	166	145	119	101
1.80V	980	720	490	308	232	191	161	142	115	98.0
1.83V	829	649	452	290	221	176	154	134	110	95.0

- All mentioned values are average values.
- Cycle Information : 300~400 cycles@DOD80%, 600~700 cycles@DOD50%, 900~1200 cycles@DOD30%
- Tolerance: X<6min(+15%~-15%), 6min ≤ X<10min(+12%~-12%), 10min ≤ X<60min(+8%~-8%), X ≥ 60min(+5%~-5%)

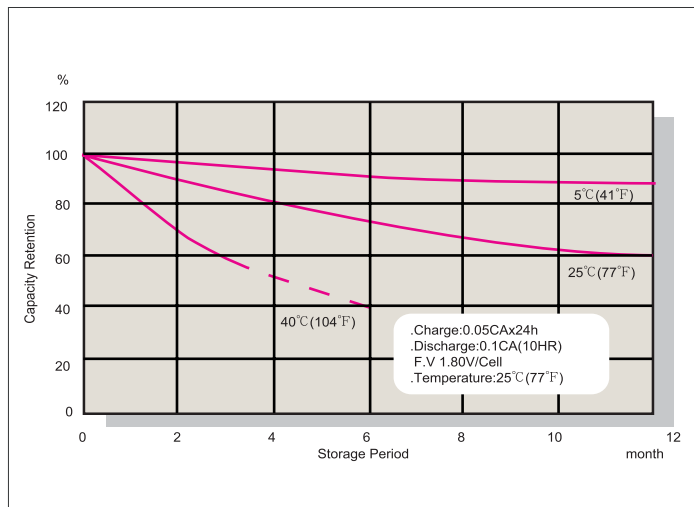
Expected Life V.S Operating Temperature



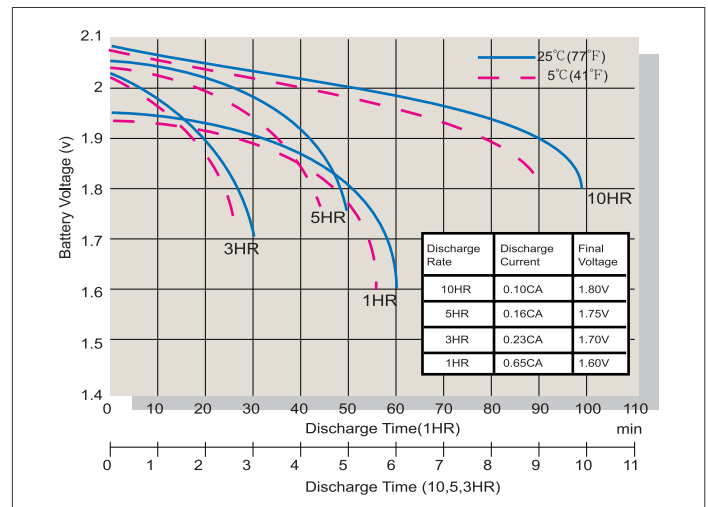
Typical Constant Voltage Charge Characteristics



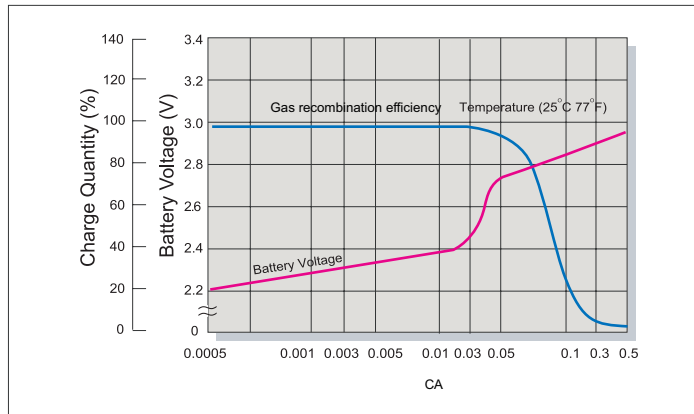
Capacity Retention Characteristics



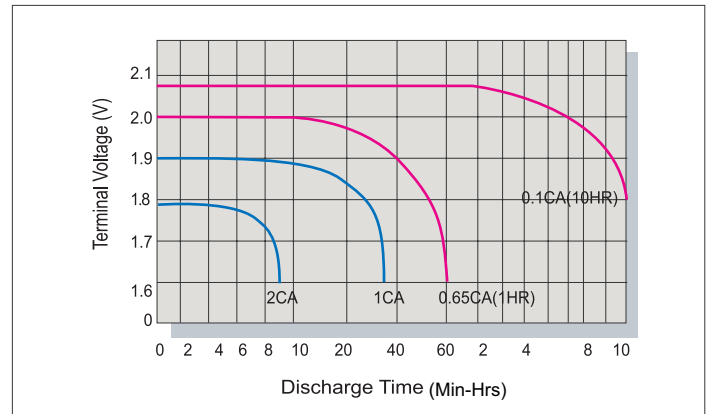
Discharge Characteristics



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

Sales Office URL: WWW.CSB-BATTERY.COM

CSB BATTERY CO., LTD.
 TAIWAN OFFICE
 Tel: +886-2-2555-5600
 Fax: +886-2-2555-3300
 E-mail: service@csb-battery.com.tw

CSB BATTERY TECHNOLOGIES (BEIJING) CO., LTD.
 BEIJING OFFICE
 Tel: +86-10-59621300/59621301/59621302/59621303
 Fax: +86-10-59621304
 mail: chinasisl@csb-battery.com

CSB BATTERY TECHNOLOGIES, INC
 USA OFFICE
 Tel: +1-817-244-7777/1-8003 CSBUSA(272872)
 Fax: +1-817-244-4445
 E-mail: csb@csb-battery.com

CSB BATTERY LOGISTICS (SHANGHAI) CO., LTD.
 SHANGHAI OFFICE
 Tel: +86-21-5046-1622, 5046-0833
 Fax: +86-21-5064-3314
 E-mail: chinasisl@csb-battery.com

CSB BATTERY OF NETHERLANDS B.V
 NETHERLANDS OFFICE
 Tel: +31(0) 180 418 140
 Fax: +31(0) 180 418 327
 E-mail: eurosales@csb-battery.com

CSB BATTERY LOGISTIC (SHANGHAI) CO., LTD.
 SHENZHEN OFFICE
 Tel: +86-755-8831-6488/6396/16356
 Fax: +86-755-8831-6548
 mail: she@csb-battery.com.cn