



MSV1200

2V 1200Ah

MSV 1200 is a long service life battery up to 15 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	1200Ah @ 10hr-rate to 1.80V per cell @25 °C (77°F)
Weight	Approx. 66.2 kg(158.73 lbs)
Maximum Discharge Current	7200A(5sec)
Internal Resistance	Approx. 0.39 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	360A
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



MH14533(N)



ISO 9001
No.:041005117

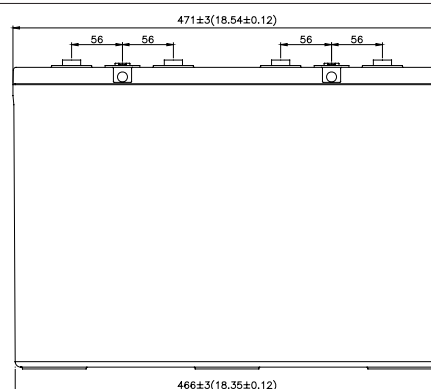
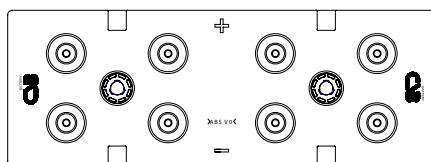
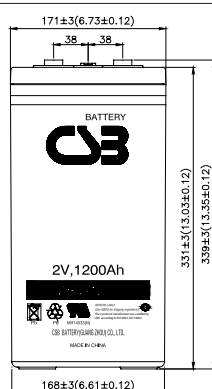


ISO 14001
NO. UM 1-12-0045

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)

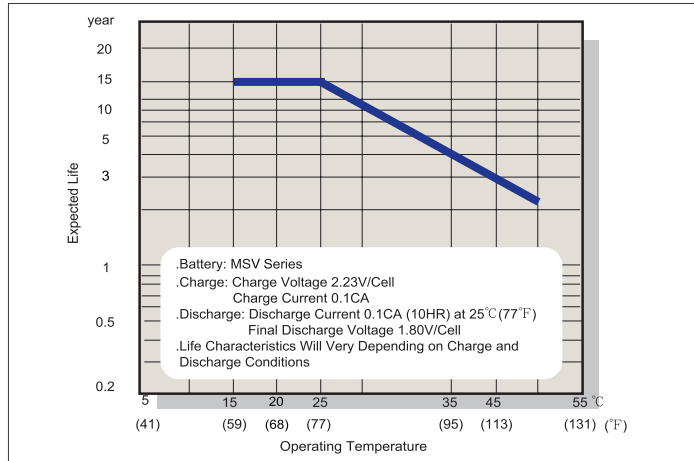
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	1904	1264	776	460	344	272	232	200	160	136
1.65V	1812	1212	740	444	328	264	222	193	156	130
1.70V	1692	1144	728	436	324	260	218	190	152	128
1.75V	1500	1016	672	412	304	248	208	180	148	124
1.80V	1292	936	632	396	292	245	200	176	144	120
1.83V	1092	844	584	372	280	224	192	168	136	116

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

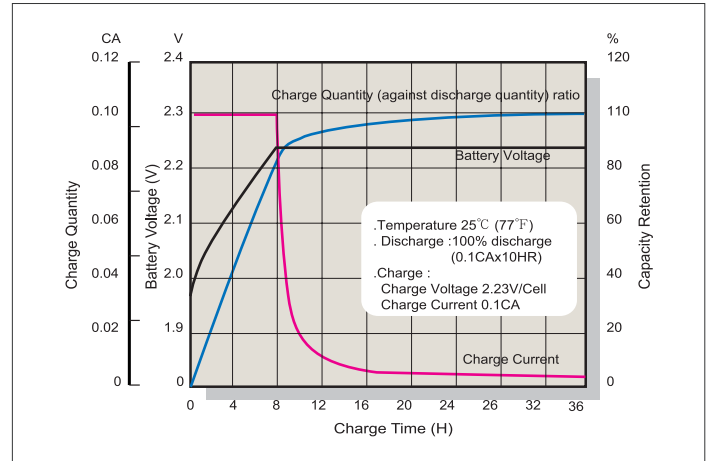
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	3336	2248	1384	832	624	500	424	372	300	252
1.65V	3304	2236	1380	824	616	496	420	368	296	250
1.70V	3040	2080	1336	808	604	492	416	364	292	248
1.75V	2736	1876	1248	772	580	472	400	348	284	240
1.80V	2352	1728	1176	740	556	460	388	340	276	236
1.83V	1988	1556	1084	696	532	420	368	324	264	228

- All mentioned values are average values.
- Cycle Information : 300~400 cycles@DOD80%, 600~700 cycles@DOD50%, 900~1200 cycles@DOD30%

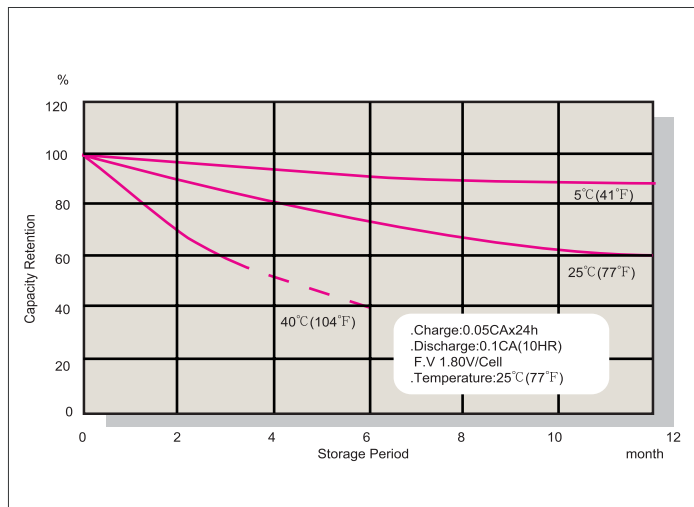
Expected Life V.S Operating Temperature



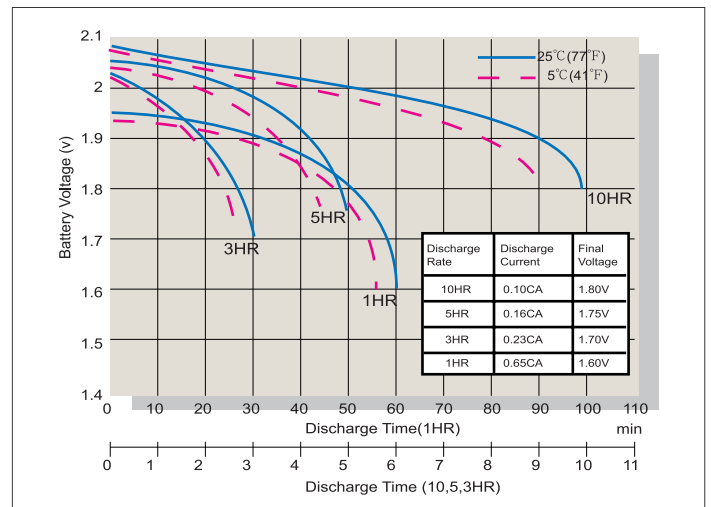
Typical Constant Voltage Charge Characteristics



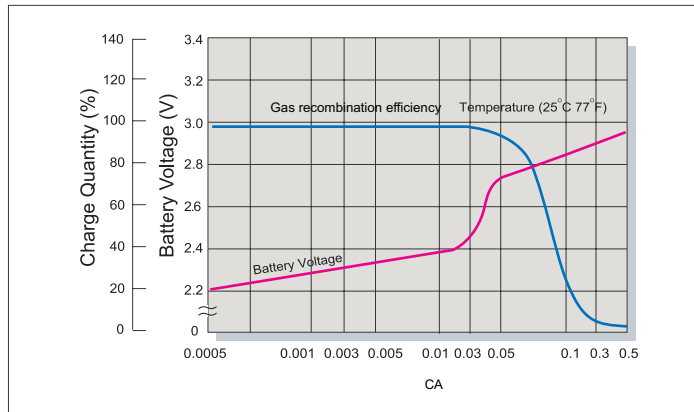
Capacity Retention Characteristics



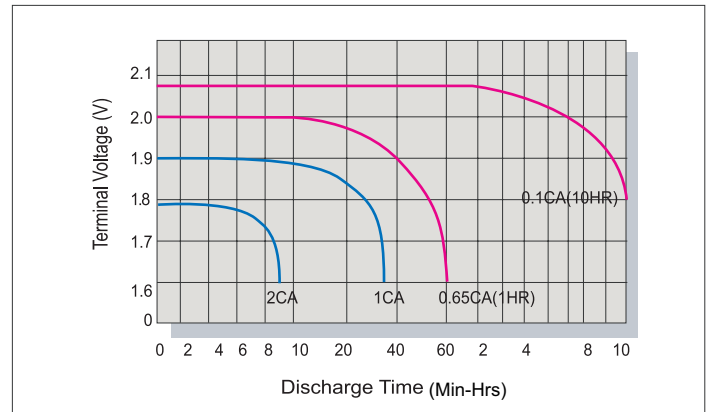
Discharge Characteristics



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 LOGISTICS (SHANGHAI) CO., LTD.
SHANGHAI OFFICE
Tel: +86-21-5046-1622, 5046-0833
Fax: +86-21-5064-3314
E-mail: chinasls@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.
BEIJING OFFICE
Tel: +86-10-6597-8060, 6597-8070
Fax: +86-10-6597-8050
E-mail: chinasls@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: eurossales@csb-battery.com

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