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MSJ 200 ▶ 2V 205 Ah

MSJ 200 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

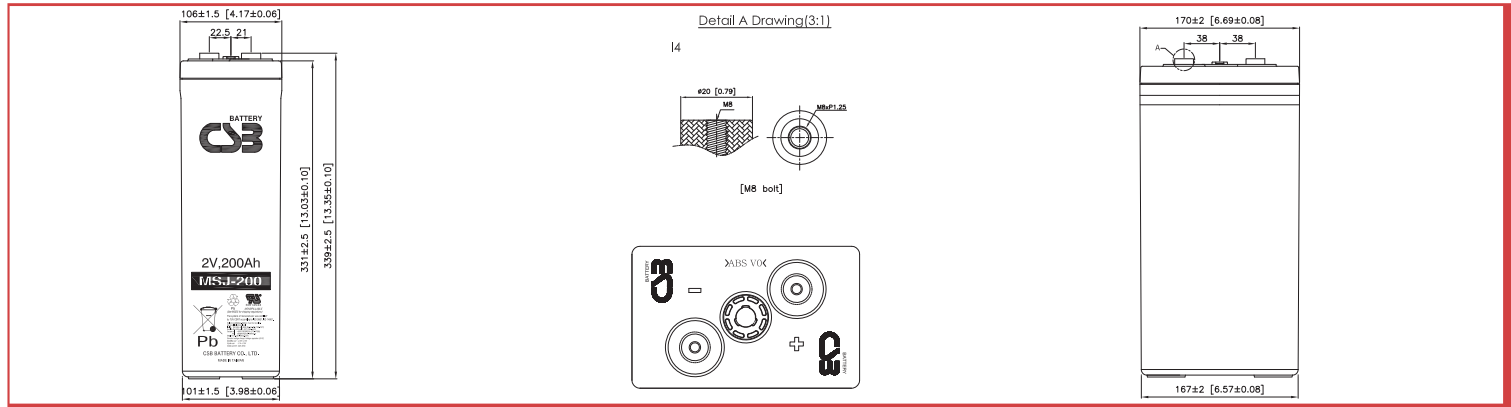
Cells Per Unit	1
Voltage Per Unit	2
Capacity	205Ah @ 10hr-rate to 1.80V per cell @25 °C (77°F)
Weight	Approx. 15.0 kg(33.2 lbs)
Maximum Discharge Current	1200A(5sec)
Internal Resistance	Approx. 0.42 mΩ
Operating Temperature Range	Discharge: -20°C~50°C (-4°F~122°F) Charge: 0°C~40°C (32°F~104°F) Storage: -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	60A
Equalization / Cycle Use Charging Voltage	2.35V Temps coefficient ±3.3mV/°C (±1.8mV/°F)
Terminal	Pb-Ca-Sn Alloy 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** (Absorbent Glass Mat type) batteries are UL-recognized components under 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)
	339±2.5 (13.35±0.10)	331±2.5 (13.03±0.10)	170±2 (6.69±0.08)	106±1.5 (4.17±0.06)



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

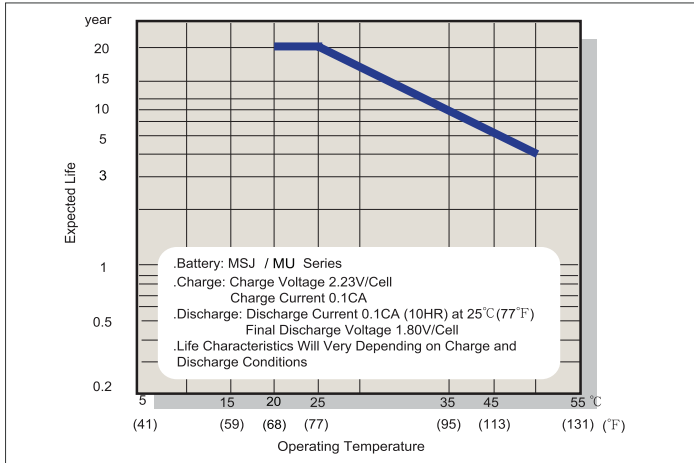
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	371	248	152	87.0	62.4	48.2	39.3	33.3	26.0	21.5
1.67V	332	236	148	86.0	61.7	47.7	38.9	33.0	25.8	21.4
1.70V	312	228	145	85.3	61.3	47.4	38.7	32.8	25.7	21.3
1.75V	281	208	138	83.3	60.2	46.5	38.1	32.3	25.3	21.0
1.80V	240	184	127	79.7	58.1	45.0	36.9	31.4	24.7	20.5
1.83V	212	169	119	76.3	55.8	43.4	35.6	30.5	24.0	19.9

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

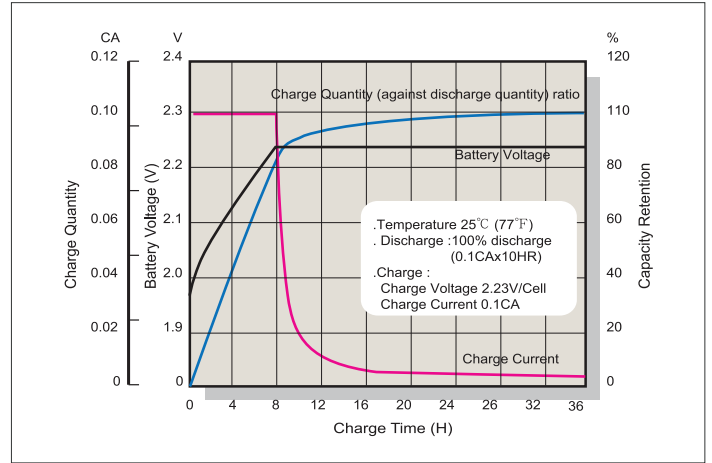
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	649	450	276	166.2	119.1	93.9	78.0	66.9	51.2	40.1
1.67V	603	433	271	164.5	118.1	93.3	77.6	66.5	50.9	39.8
1.70V	579	422	267	163.4	117.4	92.9	77.2	66.2	50.6	39.6
1.75V	529	394	256	160.1	115.5	91.6	76.3	65.4	49.9	39.1
1.80V	475	356	239	153.7	111.8	89.2	74.4	63.8	48.4	38.0
1.83V	428	332	225	147.6	108.1	86.7	72.3	62.2	46.9	36.8

Ratings presented herein are subject to revision without notice. Please refer to www.csb-battery.com to confirm the latest version.

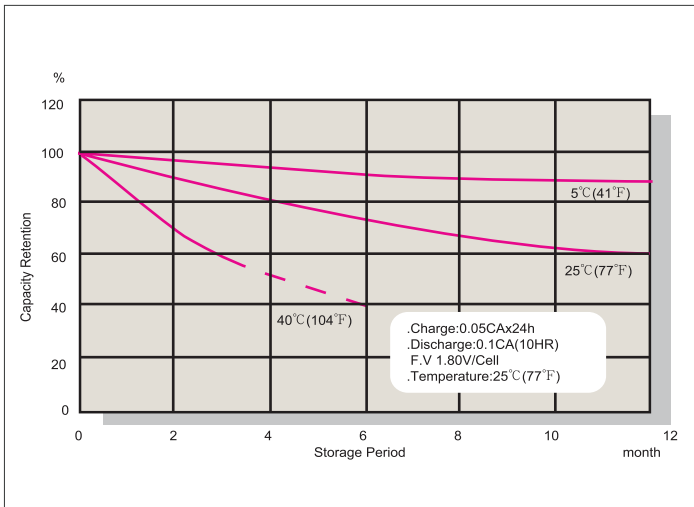
Expected Life V.S Operating Temperature



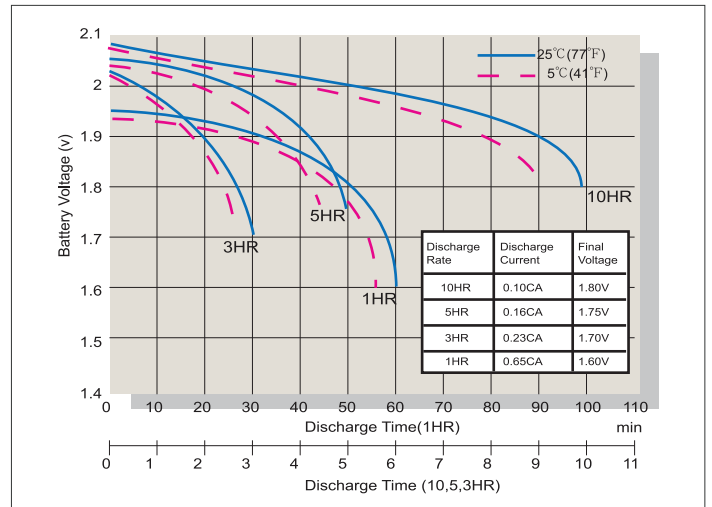
Typical Constant Voltage Charge Characteristics



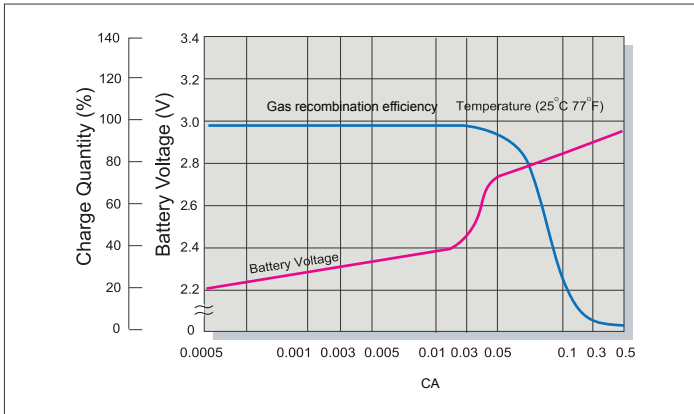
Capacity Retention Characteristics



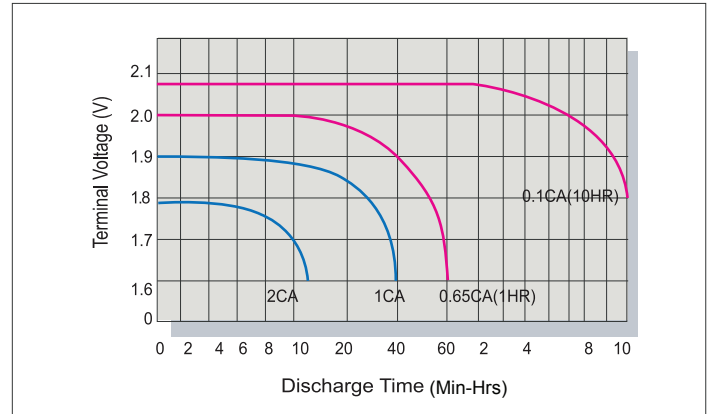
Discharge Characteristics



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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