

CHT500-2

2V 500AH

High Temperature Battery



CHT500-2



Physical Specification

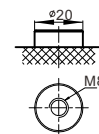
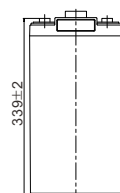
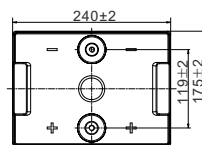
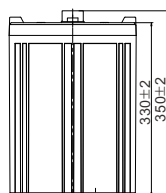
Part Number:	CHT500-2
Length:	240 ± 2 mm (9.45 inches)
Width:	175 ± 2 mm (6.89 inches)
Container Height:	327.5 ± 2 mm (12.89 inches)
Total Height (with terminal):	347.5 ± 2 mm (13.68 inches)
Approx Weight:	34.6 kg (76.3 lbs)

Specifications

	Nominal Voltage	2V					
	Nominal Capacity (10HR)	500AH					
Terminal Options	Standard Terminal	T11					
	Terminal Specs	(M8,Torque11~14.7N m)					
Container Material	Standard Option	ABS (High Temperature Resistant Material)					
	Flame Retardant Option (FR)	ABS (UL94:VO)					
Rated Capacity(35°)	C20(26.5A,1.80V/cell)	530.0 Ah					
	C10(50.0A,1.80V/cell)	500.0 Ah					
	C5(88.8A,1.75V/cell)	444.0Ah					
	C3(106.0A,1.75V/cell)	397.5 Ah					
	C1(307.5A,1.67V/cell)	307.5 Ah					
Max Discharge Current	3000A (5s)						
Internal Resistance	Approx 0.6mΩ						
Discharge Characteristics	Operating Temp. Range	The battery can operate at temperatures of -40C ~ +65C. Extreme temperature can be up to 80C.					
	Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)					
	Cycle Use	Initial Charging Current less than 125A.Voltage 2.35V ~ 2.40V at 25°C (77°F) Temp. Coefficient -30mV/°C					
	Standby Use	Initial Charging Current less than 125A.Voltage 2.25V at 25°C (77°F) Temp. Coefficient -20mV/°C					
	Capacity affected by Temperature	<table border="1"> <tr> <td>40°C (104°F)</td> <td>103%</td> </tr> <tr> <td>25°C (77°F)</td> <td>100%</td> </tr> <tr> <td>0°C (32°F)</td> <td>79%</td> </tr> </table>	40°C (104°F)	103%	25°C (77°F)	100%	0°C (32°F)
40°C (104°F)	103%						
25°C (77°F)	100%						
0°C (32°F)	79%						
Design Floating Life at 20°C	5 Years						
Self Discharge	Canbat High Temperature Batteries may be stored for up to 6 months at 25°C(77F) and then a refresh charge is required. For higher temperatures the time interval will be shorter.						

Dimensions

T11 Terminal



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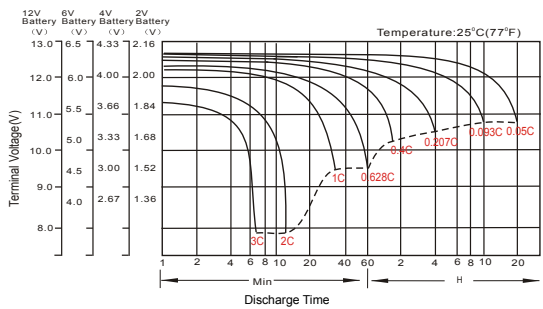
Constant Current Discharge (Amperes) at 35°C (95°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	583.4	495.0	451.8	406.5	342.0	280.0	235.5	156.0	120.3	97.1	81.9	71.4	57.0	47.8	25.3
1.80V/cell	710.0	579.0	514.9	457.5	377.0	304.0	255.3	166.5	126.3	101.3	85.3	74.0	59.4	50.0	26.5
1.75V/cell	829.8	666.0	582.5	513.0	413.0	331.3	278.8	176.0	132.5	106.3	88.8	76.8	61.0	51.0	27.0
1.70V/cell	949.7	747.0	643.8	558.0	444.0	351.3	295.0	184.8	138.3	110.0	91.4	79.2	62.8	52.3	27.7
1.67V/cell	1019.6	804.0	694.0	600.0	470.0	366.7	307.5	192.0	142.7	113.1	94.0	81.0	63.6	53.1	28.1
1.60V/cell	1110.0	861.0	736.0	630.0	491.0	382.7	320.6	199.3	146.1	115.6	95.9	82.5	64.8	53.6	28.4

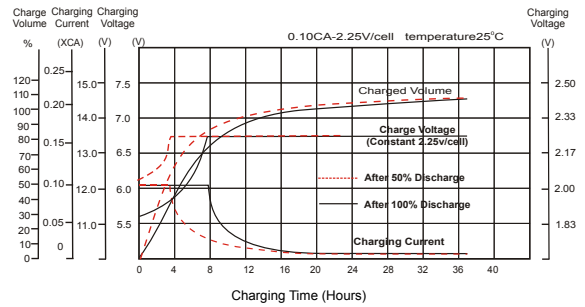
Constant Power Discharge (Watts/cell) at 35°C (95°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	1089.5	931.2	855.4	773.2	653.6	538.4	455.5	303.4	235.1	190.5	161.3	141.1	113.1	95.1	50.4
1.80V/cell	1304.3	1073.5	962.3	861.0	714.7	580.6	491.1	322.3	245.7	197.9	167.3	145.6	117.5	99.3	52.7
1.75V/cell	1497.9	1215.1	1073.3	954.4	777.0	629.1	533.9	339.3	257.1	207.0	173.6	150.6	120.4	101.2	53.7
1.70V/cell	1685.7	1343.9	1174.2	1029.3	828.3	662.5	561.9	354.7	267.4	213.4	178.2	155.1	123.9	103.6	55.0
1.67V/cell	1777.1	1424.8	1249.9	1094.9	870.3	687.5	582.4	367.1	274.7	218.7	182.5	158.2	125.2	105.1	55.8
1.60V/cell	1894.8	1496.0	1303.6	1136.5	900.0	710.8	603.0	378.6	279.7	222.6	185.5	160.6	127.1	105.9	56.1

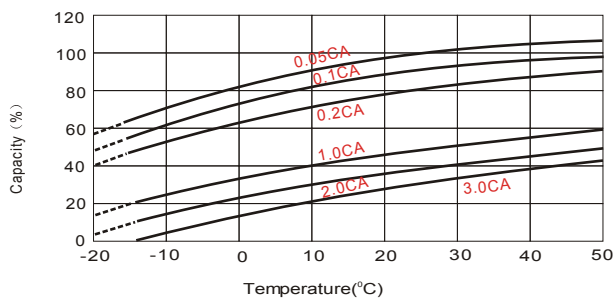
Discharge Characteristics



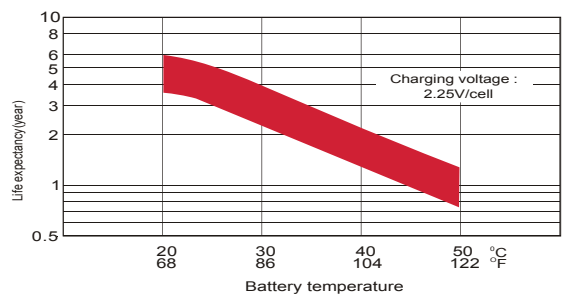
Float Charging Characteristics



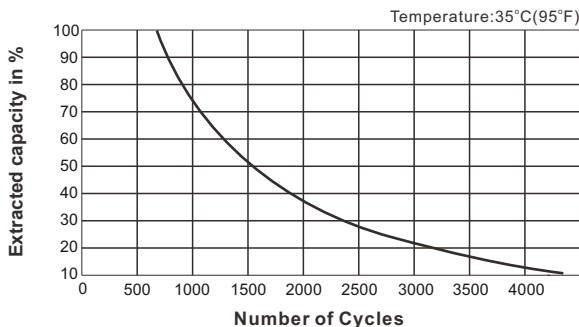
Temperature Effects in Relation to Battery Capacity



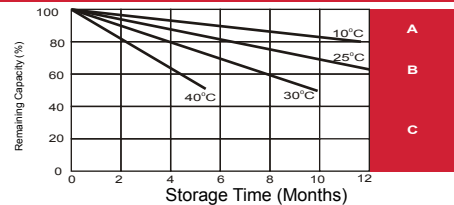
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary required
(Carryout supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
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 2.25V/cell.
3. Charged for 8 ~ 10 hours at limited current 0.05 CA.
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

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