IEC IECEE CB SCHEME

Ref. Certif. No.

JPTUV-040720

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC

Product Produit	Rechargeable Lithium-Ion Battery Cell
Name and address of the applicant Nom et adresse du demandeur	JORDAN GREEN TECHNOLOGY (DG) CO., LTD. No.19, Qigu E. Rd. Chenwu Ind. Zone, Houjie, Dongguan, Guangdong, P.R. China
Name and address of the manufacturer Nom et adresse du fabricant	JORDAN GREEN TECHNOLOGY (DG) CO., LTD. No.19, Qigu E. Rd. Chenwu Ind. Zone, Houjie, Dongguan, Guangdong, P.R. China
Name and address of the factory Nom et adresse de l'usine	JORDAN GREEN TECHNOLOGY (DG) CO., LTD. No.19, Qigu E. Rd. Chenwu Ind. Zone, Houjie, Dongguan, Guangdong, P.R. China
Rating and principal characteristics Valeurs nominales et caractéristiques principales	3.2V, 30Ah
Trade mark (if any) Marque de fabrique (si elle existe)	JD
Model/type Ref. Ref. de type	JD 30Ah(IFP36/130/142)
Additional information (if necessary) Information complémentaire (si nécessaire)	For model differences, refer to the test report.
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 62133:2002 National differences see test report
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce Certificat	17022518 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

TÜVRheinland®

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Global Technology Assessment Center
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Date: 25.10.2011

Signature: Dipl.-Ing. S. O. Steinke

TÜV Rheinland (China) Ltd.
Member of TÜV Rheinland Group

TÜVRheinland®
Precisely Right.

JORDAN GREEN TECHNOLOGY (DG) CO., LTD.
Mr. Hui Zeng
-
No.19, Qigu E. Rd.
Chenwu Ind. Zone, Houjie
Dongguan, Guangdong
P.R. China

Date : 25.10.2011
Our ref. : ZJ
Your ref.: 163083128

Ref : CB Certificate Japan

Type of Equipment : Rechargeable Lithium-Ion Battery Celll
Model Designation : See Certificate
Certificate No. : JPTUV-040720
Report No. : 17022518 001

Dear Mr. Hui Zeng,

Thank you very much for your interest in our services.

Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services.

Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body

Dipl.-Ing. S. O. Steinke

Enclosure

证书的详细资料请登陆 www.tuvdotcom.com 查阅,或拨打我司客服热线 800 999 3668 / 400 883 1300 咨询

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Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT
IEC 62133, First Edition
Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications

Report Reference No. ..... :	17022518 001
Date of issue ..... :	2011-Oct-21
Total number of pages	16 pages
CB Testing Laboratory ..... :	TÜV Rheinland (Shenzhen) Co., Ltd.
Address ..... :	3&4 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057 Shenzhen, P.R. China
Applicant's name ..... :	JORDAN GREEN TECHNOLOGY(DG) CO., LTD
Address ..... :	NO.19, QiGu East Road, ChenWu Industrial Zone, Houjie Town, Dongguan City, Guangdong Province, China.
Test specification:	
Standard ..... :	IEC 62133: 2002 (1st Edition)
Test procedure ..... :	CB/CAA
Non-standard test method..... :	N/A
Test Report Form No. ..... :	IEC62133A
Test Report Form(s) Originator..... :	UL International Demko A/S
Master TRF ..... :	Dated 2008-02

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description ..... :	Rechargeable Lithium-Ion Battery cell
Trade Mark ..... :	JD
Manufacturer ..... :	Same as applicant
Address ..... :	Same as applicant
Model/Type reference ..... :	JD 30Ah(IFP36/130/142)
Factory ..... :	Same as applicant
Address of the factory ..... :	Same as applicant
Ratings ..... :	3.2V, 30Ah

Testing procedure and testing location:	
☒ **CB Testing Laboratory:**	TÜV Rheinland (Shenzhen) Co., Ltd.
Testing location/ address.....:	1 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057 Shenzhen, P.R. China
☐ **Associated CB Test Laboratory:**	
Testing location/ address.....:	
Tested by (name + signature).....:	Black Lang Black . Long
Approved by (+ signature) .....:	Daniel Dai Daniel Dai
☐ Testing procedure: TMP	
Tested by (name + signature).....:	
Approved by (+ signature) .....:	
Testing location/ address.....:	
☐ Testing procedure: WMT	
Tested by (name + signature).....:	
Witnessed by (+ signature).....:	
Approved by (+ signature) .....:	
Testing location/ address.....:	
☐ Testing procedure: SMT	
Tested by (name + signature).....:	
Approved by (+ signature) .....:	
Supervised by (+ signature).....:	
Testing location/ address.....:	
☐ Testing procedure: RMT	
Tested by (name + signature).....:	
Approved by (+ signature) .....:	
Supervised by (+ signature).....:	
Testing location/ address.....:	

Summary of testing:

Tests performed (name of test and test clause):

Test items:

cl.4.1 Charging procedure for test purpose;
cl.4.2.1 Continuous low-rate charging;
cl.4.2.2 Vibration;
cl.4.2.3 Moulded case stress at high ambient temperature;
cl.4.2.4 Temperature cycling;
cl.4.3.2 External short circuit;
cl.4.3.3 Free fall;
cl.4.3.4 Mechanical shock (crash hazard);
cl.4.3.5 Thermal abuse;
cl.4.3.6 Crushing of cells;
cl.4.3.7 Low pressure;
cl.4.3.9 Overcharge for lithium systems;
cl.4.3.10 Forced discharge;
cl.4.3.11 Cell protection against a high charging rate (lithium systems only).

Charging method declared by the manufacturer in specification: Charging the battery with 6A constant current and 3.75V constant voltage until charging current reaches 300mA.

Tests are made with the number of cells specified in IEC 62133 Table 1.

Testing location:

TÜV Rheinland (Shenzhen) Co., Ltd.

1 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057 Shenzhen, P.R. China

Summary of compliance with National Differences:

AT, DE, DK, FI, FR, HU, KR, NL, SA, SE, SG, TR.

AT=Austria, DE=Germany, DK=Denmark, FI=Finland, FR=France, HU=Hungary, KR=Republic of Korea, NL=The Netherlands, SA=Saudi Arabia, SE=Sweden, SG=Singapore, TR=Turkey.

All national differences of EU group considered according to EN 62133: 2003.

Copy of marking plate:

Test item particulars	:	
Classification of installation and use	:	Class III
Supply Connection	:	DC connector
Cell type	:	JD 30Ah(IFP36/130/142)
Application	:	Portable
Nominal Voltage	:	3.2V
Rated Capacity	:	30Ah
Recommended charge current	:	6A
Recommended discharge current	:	6A
Max. charge current	:	30A
Max. discharge current	:	150A
Electrolyte	:	LiFP6
Dimension(mm)	:	36 mm × 130 mm × 142 mm
Possible test case verdicts:		
- test case does not apply to the test object	:	N/A
- test object does meet the requirement	:	P (Pass)
- test object does not meet the requirement	:	F (Fail)
Testing	:	
Date of receipt of test item	:	Sep 13, 2011
Date (s) of performance of tests	:	Sep 13, 2011 - Oct 21, 2011

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
The completed test report includes the **attachment 1: Photo documents (2 pages)**.

Throughout this report a point is used as the decimal separator.

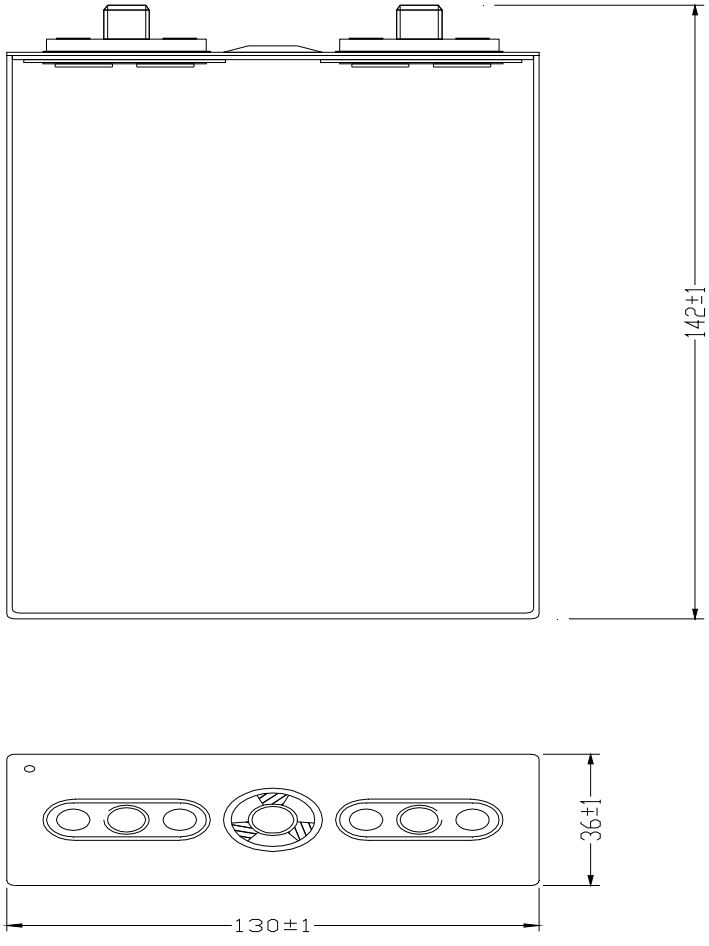
General product information:

The cell consists of the positive electrode plate, negative electrode plate, separator, electrolyte and aluminum case. The positive and negative electrode plates are housed in the case in the state being separated by the separator.

The main features of this model are shown as below:

Model	Nominal capacity	Nominal voltage	Nominal Charge Current	Nominal Discharge Current	Maximum Charge Current	Maximum Discharge Current	Maximum Charge Voltage	Cut-off Voltage
JD 30Ah(IFP36/ 130/142)	30Ah	3.2V	6A	6A	30A	150A	3.75	2.3

Construction:



Circuit diagram:

None, cell only

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict
1	**General**		P
	Parameter measurement tolerances		P
2	**General Safety Considerations**		P
	Cells and batteries subject to intended use be safe and continue to function in all respects		P
	Cells and batteries subject to reasonably foreseeable misuse do not present significant hazards.		P
2.1	**Insulation and Wiring**		P
	Insulation Resistance between an accessible metal case (excluding electrical contacts) and positive terminals ≥ 5MΩ.	≥ 5MΩ.	P
	Internal wiring and insulation are sufficient to withstand maximum anticipated current, voltage and temperature requirements	No internal wire	N/A
	Orientation of wiring maintains adequate creepage and clearance distances between conductors. Mechanical integrity of internal connections are sufficient to accommodate conditions of reasonably foreseeable misuse.	No internal wire	N/A
2.2	**Venting**		P
	Battery cases and cells incorporate a pressure relief mechanism or are constructed so that they relieve excessive internal pressure at a value and rate that will preclude rupture, explosion and self-ignition.	Explosion-proof safety valve for venting exists.	P
	Encapsulant used to support cells within an outer casing does not cause the battery to overheat during normal operation no inhibit pressure relief.	Explosion-proof safety valve for venting exists.	P
2.3	**Temperature/current management**	Cell only	N/A
	The batteries are designed such that abnormal temperature rise conditions are prevented.		N/A
	Means is provided to limit current to safe levels during charge and discharge.		N/A
2.4	**Terminal contacts**		P
	Terminals have a clear polarity marking on the external surface of the battery.	The “+” and “-“ polarity explicitly marked on surface of the battery.	P
	The size and shape of the terminal contacts ensure that they can carry the maximum anticipated current.		P
	External terminal contact surfaces are formed from conductive materials with good mechanical strength and corrosion resistance.		P
	Terminal contacts are arranged to minimize the risk of short circuits.		P
2.5	**Assembly of cells into batteries**	Cell only	N/A

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict
	Cells used in the battery assembly have closely matched capacities, are of the same design, and are of the same chemistry and same manufacturer.		N/A
	The battery incorporates separate circuitry to prevent cell reversal from uneven charges as the pack is designed for the selective discharge of a portion of its series connected cells.		N/A
2.6	**Quality Plan**		P
	The manufacture has prepared a quality plan defining the procedures for the inspection of materials, components, cells and batteries and which covers the process of producing each type of cell and battery.	Complied.	P
3	**Type Test Conditions**		P
	Tests were conducted with the number of cells or batteries as outlined in Table 1 of IEC 62133 with cells or batteries that were not more than 3 months old.	Complied.	P
	Unless noted otherwise in the test methods, testing was conducted in an ambient of 20°C ± 5°C.	Tests are carried out at 20°C-25°C.	P
4	**Specific requirements and tests**		P
4.1	**Charging procedure for test purposes**	Test is carried out at 22°C-25°C. Charging method: CC= 6A, CV=3.75V, Cut off current=300mA.	P
4.2	**Intended Use**	See below	P
4.2.1	Continuous Low-Rate Charging	CC=6A, CV=3.75V, Duration: 28 days.	P
	Fully charged cells are subjected for 28 days to a charge as specified by the manufacturer.	See above.	P
	Nickel systems: no fire, no explosion	Lithium system.	N/A
	Lithium systems: no fire, no explosion, no leakage	See table 4.2.1.	P
4.2.2	Vibration		N/A
	The measured open circuit voltage of the fully charged cells or batteries is within anticipated parameters	Test complied	P
	The cells or batteries are subjected to a vibration sequence as outlined in Table 2 of IEC 62133 with amplitude of 0.75 mm and a total maximum excursion of 1.52 mm. The frequency was varied at the rate of 1 Hz/min between the limits of 10 Hz and 55 Hz. The entire range of frequencies (10 Hz to 55 Hz) and return (55 Hz to 10 Hz) was traversed in 90 min ± 5 min for each mounting position.		P
	The vibration was applied in each of three mutually perpendicular directions.		P
	Results: no fire, no explosion, no leakage	No fire, explosion or leakage.	P

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict
4.2.3	Moulded case stress at high ambient temperature	No moulded casing exists	N/A
	Fully charged batteries were placed in an air-circulating oven at a temperature of 70°C ± 2°C for 7 hours. Afterwards, they are removed and allowed to return to room temperature.		N/A
	Results: no physical distortion of the battery casing resulting in exposure if internal components.		N/A
4.2.4	Temperature cycling		P
	Fully charged cells or batteries were subjected to temperature cycling (-20°C, +75°C) in forced draught chambers according to the procedure outlined in 4.2.4 b) and Fig. 1 of IEC 62133.	Tested complied.	P
	After the fifth cycle, the cells or batteries were stored for 7 days prior to examination.		P
	Results: No fire, no explosion, no leakage	No fire, explosion or leakage.	P
4.3	**Reasonably foreseeable misuse**		P
4.3.1	Incorrect installation of a cell (nickel systems only)	Lithium systems.	N/A
	Four fully charged cells of the same brand, type, size and age were connected in series with one of the four cells reversed. The assembly was connected across a 1-ohm resistor until the vent opens or until the temperature of the reversed cell returns to ambient temperature.		N/A
	Alternatively, a stabilized dc power supply was used t simulate the conditions imposed on the reversed cell.		N/A
	Results: no fire, no explosion		N/A
4.3.2	External short circuit		P
	Fully charged cells or batteries were subjected to a short circuit test at 20°C ± 5°C.	Max. temperature rise 35.74K	P
	Fully charged cells or batteries were subjected to a short circuit test at 55°C ± 5°C.	Max. temperature rise 11.02K	P
	The external resistance did not exceed 100 mΩ.	See Table 4.3.2.	P
	The cells or batteries were tested for 24 h or until the case temperature declined by 20% of the maximum temperature rise.	Tested until the case temperature declined by 20% of the maximum temperature rise.	P
	Results: no fire, no explosion.	See Table 4.3.2.	P
4.3.3	Free fall		P
	Fully charged cells or batteries were dropped 3 times from a height of 1.0 m onto a concrete floor.	Tested complied.	P
	Results: no fire, no explosion	No fire or explosion.	P
4.3.4	Mechanical shock (crash hazard)		P

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict
	Fully charged cells or batteries were subjected to a total of three shocks of equal magnitude applied in each of three mutually perpendicular directions. At least on of the directions was perpendicular to a flat face. During the initial 3 milliseconds, the minimum average acceleration was 75 g_n. The peak acceleration was between 125 g_n and 175 g_n.	Tested complied.	P
	Results: no fire, no explosion, no leakage	No fire or explosion.	P
4.3.5	Thermal abuse		P
	Fully charged cells were placed in a gravity or circulating air-convention oven. The oven temperature was raised at a rate of 5°C/min ± 2°C/min to a temperature of 130°C ± 2°C. The cell remained at that temperature for 10 minutes before the test was discontinued.	Tested complied.	P
	Results: no fire, no explosion	No fire or explosion.	P
4.3.6	Crushing of cells		P
	Fully charged cells were crushed between two flat surfaces with a hydraulic ram exerting a force of 13 kN ± 1 kN.	Tested complied.	P
	A cylindrical or prismatic cell was crushed with its longitudinal axis parallel to the flat surfaces of the crushing apparatus.		P
	A second set of prismatic cells was tested, rotated 90 degrees around their longitudinal axis compared to the first set.		P
	Results: no fire, no explosion.	No fire or explosion.	P
4.3.7	Low pressure		P
	Fully charged cells are placed in a vacuum chamber whose internal pressure was gradually reduced to a pressure equal to or less than 11.6 kPa and held at that value for 6 hours.	Tested complied.	P
	Results: no fire, no explosion, no leakage	No fire, explosion or leakage.	P
4.3.8	Overcharge for nickel systems	Lithium systems.	N/A
	A discharged cell or battery was subjected to a high-rate charge of 2.5 times the recommended charging current for a time that produced a 250% charge input (250% of rated capacity).		N/A
	Results: no fire, no explosion.		N/A
4.3.9	Overcharge for lithium systems		P
	A discharged cell was charged from a power supply of ≥ 10 V, at a charging current I_{rec} recommended by the manufacturer for 2.5 C_5/I_{rec} hours.	10V, 6000mA, 12.5 hours.	P
	Results: no fire, no explosion.	See table 4.3.9.	P
4.3.10	Forced discharge		P

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict
	Discharged cells intended for use in multi-cell applications, were subjected to a reverse charge 1t 1.0 I_t (A) for 90 minutes.	Reverse charge = 30A.	P
	Results: no fire, no explosion	See table 4.3.10.	P
4.3.11	Cell protection against a high charging rate (lithium systems only)		P
	Discharged cells were charged at three times the charging current recommended by the manufacturer until the cells was fully charged or an internal safety devices cut off the charge current before the cell became fully charged.	6A x 3 = 18A	P
	Results: no fire, no explosion		P
5	**Information for safety**		P
	Information is provided to equipment manufacturers in the form of instructions to minimize and mitigate hazards associated with the cells or batteries in accordance with guidelines outlined in informative Annex A.	Information for safety mentioned in manufacturer's specification.	P
	Information is provided to end-users in the form of instructions to minimize and mitigate hazards associated with the batteries in accordance with guidelines outlined in informative Annex B.	Information for safety mentioned in manufacturer's specification.	P
6	**Marking**		
6.1	**Cell Marking**		P
	Nickel system cells are marked in accordance with IEC 61951-1, -2, IEC 61440, or IEC 61436 as applicable. See Copy of Marking Plate item in the beginning of this report.	Lithium system.	N/A
	Lithium system cells are marked in accordance with IEC 61960. See Copy of Marking Plate item in the beginning of this report.	See page 3.	P
6.2	**Battery Marking**	Cell	N/A
	Batteries of nickel systems are marked in accordance with IEC 61951, or IEC 61951 -2 as applicable. See Copy of Marking Plate item in the beginning of this report	Lithium systems.	N/A
	Batteries of lithium system are marked in accordance with IEC 61960. See Copy of Marking Plate item in the beginning of this report.		N/A
	Batteries are marked with the cautionary marks.		N/A
6.3	**Other Information**		P
	Disposal instructions are marked on the battery or supplied in the information packaged with the battery.	Information for safety mentioned in manufacturer's specification.	P

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict
	Recommended charging instructions are marked on the battery or supplied in the information packaged with the battery.	Information for safety mentioned in manufacturer's specification.	P
7	**Packaging**		P
	Cells or batteries were provided with packaging that was adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design was chosen to prevent the development of unintentional electrical conduction, corrosion of the terminal and ingress of moisture.		P

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict

2.1 – 2.5	**TABLE: List of Critical Components（Cell）**				P
Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard	Marks of Conformity
Cell Case	JinYang	Aluminium	36*130*120mm	--	--
Cathode	Changs	SFCM3005E	2＜D50＜8 Cu＜0.1%	--	--
Anode	HongYuan	F1-20	D50:20±3 C:≧99.2%	--	--
Separator	Celgard	0.025*104mm	Shutdown Temp:133±3℃	--	--
Electrolyte	TianJiao	JDP	H_2O ＜20ppm HF<30ppm	--	--
Conductive Adhesive	HaiYue	F-01	Visccity:2200-2800 mPa·s	--	--
Insulating tape	SanJing	0.06*12mm/ 0.06*18mm	Width:12±0.05/18±0 .05mm	--	--
Supplementary information:					

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict

	TABLE: 4.2.1 Continuous Low Rate Charge Test (Cell)				P
Model	Recommended Charging Method, CC, CV, or CC/CV	Recommended Charging Voltage Vc, Vdc	Recommended Charging Current Irec, A	OCV at Start of Test, Vdc	Results
#1	CC and CV	3.75	6	3.358	P
#2	CC and CV	3.75	6	3.412	P
#3	CC and CV	3.75	6	3.409	P
#4	CC and CV	3.75	6	3.352	P
#5	CC and CV	3.75	6	3.375	P
Supplementary information: no fire, explosion or leakage observed					

	TABLE: 4.2.2 – Vibration Test (Cell)		P
Model	OCV at Start of Test, Vdc	Results	
#1	3.358	P	
#2	3.352	P	
#3	3.361	P	
#4	3.410	P	
#5	3.353	P	
Supplementary information: no fire, explosion or leakage observed			

	TABLE: 4.3.1 – Incorrect Installation of a Cell Test (Nickel Systems)		N/A
Model	OCV (reversed cell) Vdc	Results	
Supplementary information: no fire or explosion			

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict

	TABLE: 4.3.2 – External Short Circuit Test (Cell)				P
Model	Ambient (At 20°C ± 5ºC)	OCV at start of test, Vdc	Resistance of Circuit, Ω	Maximum Case Temperature Rise ΔT, ºC	Results
#1	20°C ± 5ºC	3.351	0.075	33.56	P
#2	20°C ± 5ºC	3.342	0.075	35.74	P
#3	20°C ± 5ºC	3.354	0.075	34.67	P
#4	20°C ± 5ºC	3.348	0.075	32.24	P
#5	20°C ± 5ºC	3.351	0.075	29.76	P
	Ambient (At 50°C ± 5ºC)	OCV at start of test, Vdc	Resistance of Circuit, Ω	Maximum Case Temperature Rise ΔT, ºC	Results
#1	50°C ± 5ºC	3.349	0.075	8.76	P
#2	50°C ± 5ºC	3.357	0.075	11.02	P
#3	50°C ± 5ºC	3.353	0.075	9.0	P
#4	50°C ± 5ºC	3.375	0.075	7.8	P
#5	50°C ± 5ºC	3.352	0.075	8.7	P
Supplementary information: no fire or explosion					

	TABLE: 4.3.8 – Overcharge Test (Nickel Systems)				N/A
Model	OCV prior to charging, Vdc	Maximum Charge Current, A	Time for Charging, h	Results	
supplementary information: no fire or explosion					

	TABLE: 4.3.9 – Overcharge Tests (Lithium Systems)				P
Model	OCV at start of test, Vdc	Maximum Charging Current, mA	Maximum Charging Voltage, Vdc	Total Time of Charging, h	Results
#1	3.201	6000	10	12.5	P
#2	3.187	6000	10	12.5	P
#3	3.215	6000	10	12.5	P
#4	3.204	6000	10	12.5	P
#5	3.212	6000	10	12.5	P
Supplementary information: no fire or explosion					

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict

	TABLE: 4.3.10 – Forced Discharge Test (Cell)				P
Model	OCV before application of reverse charge, Vdc	Measured Reverse Charge It, A	Total Time for Reversed Charge Application, Min	Results	
#1	3.205	30	90	P	
#2	3.210	30	90	P	
#3	3.201	30	90	P	
#4	3.211	30	90	P	
#5	3.213	30	90	P	
Supplementary information: no fire or explosion					

	TABLE: 4.3.11 – Cell Protection Against a High Charging Rate Test (Lithium Systems)				P
Model	OCV at start of test, Vdc	Maximum Charging Current, mA	Maximum Charging Voltage, Vdc	Results	
#1	3.201	18000	3.75	P	
#2	3.215	18000	3.75	P	
#3	3.212	18000	3.75	P	
#4	3.217	18000	3.75	P	
#5	3.208	18000	3.75	P	
Supplementary information: no fire or explosion					

IEC 62133:2002			
Cl.	Requirement - Test	Result - Remark	Verdict

List of test equipment used:

ID #	Equipment	Type	Manufacturer	Date of Calibration	Next Calibration Date
1.901	Low pressure chamber	HG-LQ600	DongGuan HengGong	08/21/2011	08/20/2012
1.902	Crush tester	HY-920HC	XinYu HengYu	09/10/2011	09/09/2012
1.903	Hydraulic shock tester	SY10-50	SuZhou DongLing	06/17/2011	06/16/2012
1.904	Battery charger	BK-7802Z/50	GuangZhou Blue-key	12/03/2010	12/02/2011
1.905	Battery charger	BK-6008A/20	GuangZhou Blue-key	12/03/2010	12/02/2011
1.906	Battery charger	BK-7128L/5	GuangZhou Blue-key	12/03/2010	12/02/2011
1.908	Electro-dynamic vibration test system	V850-440-LPT600/SPA32K	LDS	06/17/2011	06/16/2012
1.909	Steel ruler(2 m)	2m	ZhengJiang YongKang	08/30/2011	08/29/2012
1.915	Hygro-Thermo graph	7210-00	SATO KEIRYOKI	08/25/2011	08/24/2012
1.917	Timer	PC9903	Shenzhen TianFu	09/15/2011	09/14/2012
1.918	Thermal cycling chamber	ESS-KWGD605IIF	YinHe (ChongQing)	08/25/2011	08/24/2012
1.919	Midi logger	GL200A	DATAQ Instruments,	12/07/2010	12/06/2011
1.921	Oven	SPH201	Guangzhou Espec	09/05/2011	09/04/2012
1.922	Multimeter	F117C	Fluke	09/15/2011	09/14/2012

-- End of Report --

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Figure 1 Cell view

Figure 2 Final version label

Type Designation: JD 30Ah(1IFP36/130/142)
Report Number: 17022518 001

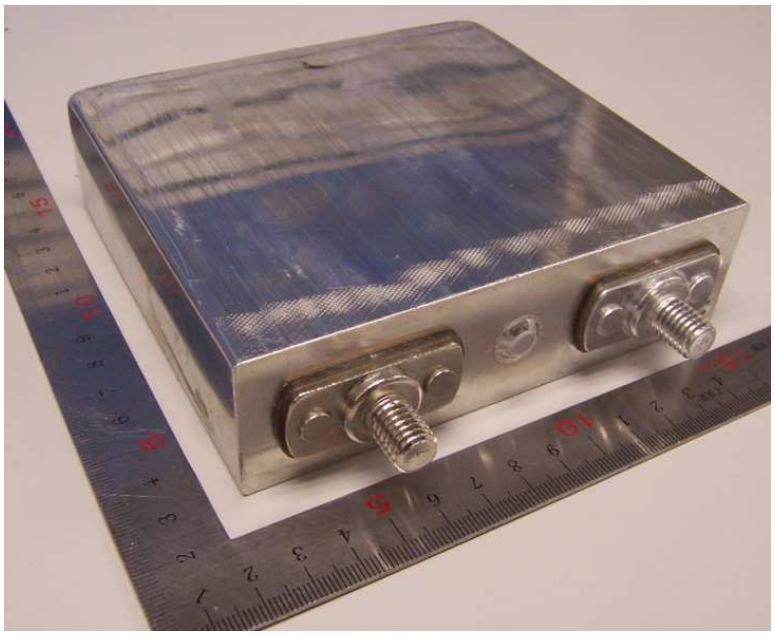

Figure 3 Cell terminal side

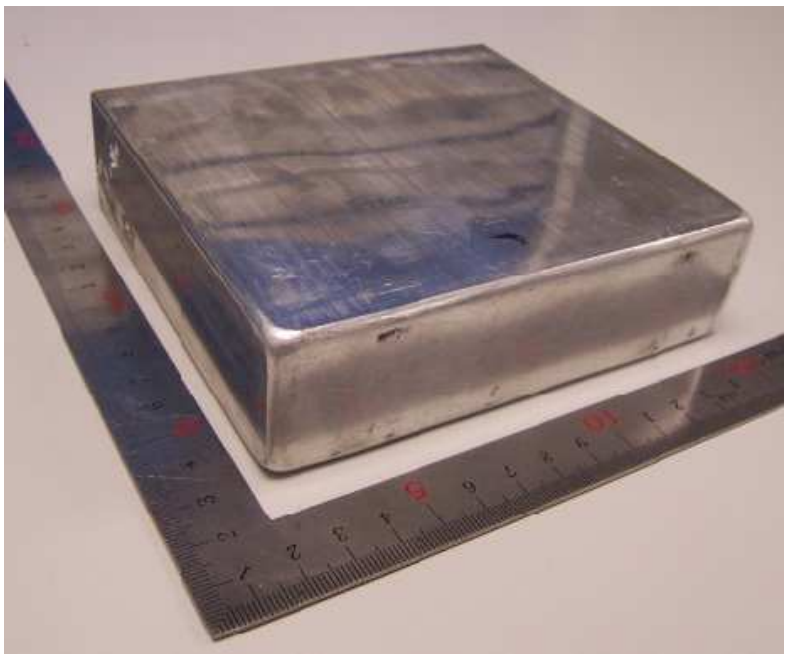

Figure 4 Cell bottom side