



Test Report issued under the responsibility of:



TEST REPORT IEC 62133 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 Number	BATT-4787484023-A-1
Date of issue	2016-06-23
Total number of pages	25
Applicant's name	TCL HYPERPOWER BATTERIES INC
Address	3 HECHANG DONG SIX RD, HUITAI INDUSTRIAL ZONE, HUICHENG DISTRICT, HUIZHOU, GUANGDONG 516005 CHINA
Test specification:	
Standard	IEC 62133: 2012 (Second Edition)
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC62133B
Test Report Form(s) Originator	UL(Demko)
Master TRF	Dated 2013-03
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Test item description	Rechargeable Li-ion Polymer Battery Pack
Trade Mark	N/A
Manufacturer	Same as applicant
Model/Type reference	PR-3258C7G, 1ICP4/58/127
Ratings	3.8Vdc, Nominal 3380mAh, 12.84Wh 3.8Vdc, Minimum 3300mAh, 12.54Wh

Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	Shanghai Truron Testing Technology Co., Ltd.
Testing location/ address :		1 F and 2F, BLDG 1, No. 685, Huishan Road, Shanghai, China
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address :		
Tested by (name + signature) :		Tom Song 
Approved by (name + signature) :		Joe Chen 
<hr/>		
<input type="checkbox"/>	Testing procedure: TMP	
Testing location/ address :		
Tested by (name + signature) :		
Approved by (name + signature) :		
<hr/>		
<input type="checkbox"/>	Testing procedure: WMT	
Testing location/ address :		
Tested by (name + signature) :		
Witnessed by (name + signature) :		
Approved by (name + signature) :		
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<input type="checkbox"/>	Testing procedure: SMT	
Testing location/ address :		
Tested by (name + signature) :		
Approved by (name + signature) :		
Supervised by (name + signature) .. :		
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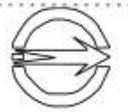
List of Attachments (including a total number of pages in each attachment): National Differences (0 page) Enclosures (9 pages)	
Summary of testing:	
Tests performed (name of test and test clause): - 8.2.2 Moulded case stress at high ambient temperature (battery) - 8.3.2 External short circuit (battery) - 8.3.3 Free fall - 8.3.6 Over-charging of battery	Testing location: Shanghai Truron Testing Technology Co., Ltd. 1 F and 2F, BLDG 1, No. 685, Huishan Road, Shanghai, China
Summary of compliance with National Differences List of countries addressed: N/A	

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

(型號/型号)Model PR-3258C7G 1ICP4/58/127
 Rechargeable Li-ion Polymer Battery Pack
 (二次鋰離子電池組/二次锂离子電池組)
 (电压/電壓)Rating:
 3.8V (容量/容量) Typical 3380mAh/12.84Wh
 Minimum 3300mAh/12.54Wh
 Red (+), Black (-)
 TCL Hyperpower Batteries Inc. in CHINA





廢電池請回收
 R33168
 標稱電壓 3.8V
 額定電容量 3300mAh





Li-ion
 EU 3300mAh

⚠ CAUTION: Risk of explosion if battery is replaced by an incorrect type.
 Dispose of used batteries according to the instructions.
 Do not incinerate,(or)disassemble;may explode or release toxic materials.
 Do not short circuit;may cause burns.European Regulatory Address:
 Acer italy s.r.l Via Lepetit,40,20020 Lainate(MI) Italy
 Made in China(中國制造/中国制造) (Cell Origin China)
 注意事項: 請參閱說明書的安全指示使用電池, 如有問題請與電腦供應商聯系,
 使用其他電池替換, 將可能引起安全問題。
 注意事項: 請參閱說明書的安全指示使用電池, 如有問題請與電腦供應商聯系,
 使用其他電池替換, 將可能引起安全問題。



KT0010H004XXXXXXXXXXXXXX

Test item particulars	See below
Classification of installation and use	For built-in
Supply connection	N/A
Recommend charging method declared by the manufacturer	CC/CV 660mA 4.35Vdc
Discharge current (0,2 I_t A)	676mA
Specified final voltage	3.0Vdc
Chemistry	<input type="checkbox"/> nickel systems <input checked="" type="checkbox"/> lithium systems
Recommend of charging limit for lithium system	
Upper limit charging voltage per cell	4.35Vdc
Maximum charging current	3300mA
Charging temperature upper limit	45°C
Charging temperature lower limit	10°C
Polymer cell electrolyte type	<input checked="" type="checkbox"/> gel polymer <input type="checkbox"/> solid polymer <input type="checkbox"/> N/A
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	2016-06-03
Date (s) of performance of tests	2016-06-07 to 2016-06-22
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. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC62133B:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies) : Same as applicant

General product information:

- Electronic components mounted on PWB with 1S1P cells, which approved by IEC62133 test, the PCB was covered with insulation tape.
- Maximum charge current/voltage of 3300mA/4.35V, Maximum discharge current 3300mA and end of discharge voltage is 3.0V;
- Operating Temperature: Charge: 0~50°C; Discharge: -10~60°C;
- The product was investigated to the following additional Standard for EN 62133: 2013;
- 1ICP4/58/127 is IEC 62133 model designation and identical to model PR-3258C7G except for model designation.

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict
4	Parameter measurement tolerances		P
	Parameter measurement tolerances	Comply with relevant requirements.	P
5	General safety considerations		P
5.1	General	See below	P
5.2	Insulation and wiring		P
	The insulation resistance between the positive terminal and externally exposed metal surfaces of the battery (excluding electrical contact surfaces) is not less than 5 MΩ	No metal enclosure provided	N/A
	Insulation resistance (MΩ) :		—
	Internal wiring and insulation are sufficient to withstand maximum anticipated current, voltage and temperature requirements	Adequate wire used.	P
	Orientation of wiring maintains adequate creepage and clearance distances between conductors		P
	Mechanical integrity of internal connections accommodates reasonably foreseeable misuse		P
5.3	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	Aluminium foil used for cell encapsulation. Battery case should be evaluated in end application.	P
	Encapsulation used to support cells within an outer casing does not cause the battery to overheat during normal operation nor inhibit pressure relief		N/A
5.4	Temperature/voltage/current management		P
	Batteries are designed such that abnormal temperature rise conditions are prevented		P
	Batteries are designed to be within temperature, voltage and current limits specified by the cell manufacturer	Specified.	P
	Batteries are provided with specifications and charging instructions for equipment manufacturers so that associated chargers are designed to maintain charging within the temperature, voltage and current limits specified		P
5.5	Terminal contacts		P
	Terminals have a clear polarity marking on the external surface of the battery		P

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict
	The size and shape of the terminal contacts ensure that they can carry the maximum anticipated current	Considered	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	Terminal contacts are recessed.	P
5.6	Assembly of cells into batteries	See below	P
5.6.1	If there is more than one battery housed in a single battery case, cells used in the assembly of each battery have closely matched capacities, be of the same design, be of the same chemistry and be from the same manufacturer		N/A
	Each battery has an independent control and protection		N/A
	Manufacturers of cells make recommendations about current, voltage and temperature limits so that the battery manufacturer/designer may ensure proper design and assembly		P
	Batteries that are designed for the selective discharge of a portion of their series connected cells incorporate separate circuitry to prevent the cell reversal caused by uneven discharges	No selective discharge function.	N/A
	Protective circuit components are added as appropriate and consideration given to the end-device application		P
	When testing a battery, the manufacturer of the battery provides a test report confirming the compliance according to this standard		N/A
5.6.2	Design recommendation for lithium systems only		P
	For the battery consisting of a single cell or a single cellblock: - Charging voltage of the cell does not exceed the upper limit of the charging voltage specified in Clause 8.1.2, Table 4; or		N/A
	- Charging voltage of the cell does not exceed the different upper limit of the charging voltage determined through Clause 8.1.2, NOTE 1.		P
	For the battery consisting of series-connected plural single cells or series-connected plural cellblocks: - The voltages of any one of the single cells or single cellblocks does not exceed the upper limit of the charging voltage, specified in Clause 8.1.2, Table 4, by monitoring the voltage of every single cell or the single cellblocks; or		N/A

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict
	- The voltages of any one of the single cells or single cellblocks does not exceed the different upper limit of the charging voltage, determined through Clause 8.1.2, NOTE 1, by monitoring the voltage of every single cell or the single cellblocks		N/A
	For the battery consisting of series-connected plural single cells or series-connected plural cellblocks: - Charging is stopped when the upper limit of the charging voltage, specified in Clause 8.1.2, Table 4, is exceeded for any one of the single cells or single cellblocks by measuring the voltage of every single cell or the single cellblocks; or		N/A
	- Charging is stopped when the upper limit of the different charging voltage, determined through Clause 8.1.2, NOTE 1, is exceeded for any one of the single cells or single cellblocks by measuring the voltage of every single cell or the single cellblocks		N/A
5.7	Quality plan		P
	The manufacturer prepares and implements a quality plan that defines procedures for the inspection of materials, components, cells and batteries and which covers the whole process of producing each type of cell or battery	The manufacture has ISO 9001 certification, see enclosure ID 09	P

6	Type test conditions		P
	Tests were made with the number of cells or batteries specified in Table 1 for nickel-cadmium and nickel-metal hydride systems and Table 2 for lithium systems, using cells or batteries that are not more than six months old	Considered.	P
	Unless noted otherwise in the test methods, testing was conducted in an ambient of 20°C ± 5°C.	Considered.	P

7	Specific requirements and tests (nickel systems)		N/A
7.1	Charging procedure for test purposes	Not applicable for Lithium system.	N/A
7.2	Intended use		N/A
7.2.1	Continuous low-rate charging (cells)		N/A
	Results: No fire. No explosion		N/A
7.2.2	Vibration		N/A
	Results: No fire. No explosion. No leakage		N/A
7.2.3	Moulded case stress at high ambient temperature		N/A
	Oven temperature (°C).....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Results: No physical distortion of the battery casing resulting in exposure if internal components		N/A
7.2.4	Temperature cycling		N/A
	Results: No fire. No explosion. No leakage.		N/A
7.3	Reasonably foreseeable misuse		N/A
7.3.1	Incorrect installation cell		N/A
	The test was carried out using: - Four fully charged cells of the same brand, type, size and age connected in series, with one of them reversed; or		N/A
	- A stabilized dc power supply.		N/A
	Results: No fire. No explosion..... :		N/A
7.3.2	External short circuit		N/A
	The cells or batteries were tested until one of the following occurred: - 24 hours elapsed; or		N/A
	- The case temperature declined by 20% of the maximum temperature rise		N/A
	Results: No fire. No explosion..... :		N/A
7.3.3	Free fall		N/A
	Results: No fire. No explosion.		N/A
7.3.4	Mechanical shock (crash hazard)		N/A
	Results: No fire. No explosion. No leakage.		N/A
7.3.5	Thermal abuse		N/A
	Oven temperature (°C)..... :		—
	Results: No fire. No explosion.		N/A
7.3.6	Crushing of cells		N/A
	The crushing force was released upon: - The maximum force of 13 kN ± 1 kN has been applied; or		N/A
	- An abrupt voltage drop of one-third of the original voltage has been obtained		N/A
	The cell is prismatic type and a second set of samples was tested, rotated 90° around longitudinal axis compared to the first set		N/A
	Results: No fire. No explosion..... :		N/A
7.3.7	Low pressure		N/A
	Chamber pressure (kPa)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Results: No fire. No explosion. No leakage.		N/A
7.3.8	Overcharge		N/A
	Results: No fire. No explosion..... :		N/A
7.3.9	Forced discharge		N/A
	Results: No fire. No explosion..... :		N/A
8	Specific requirements and tests (lithium systems)		P
8.1	Charging procedures for test purposes	See below	P
8.1.1	First procedure: This charging procedure applied to tests other than those specified in 8.1.2		P
8.1.2	Second procedure: This charging procedure applied to the tests of 8.3.1, 8.3.2, 8.3.4, 8.3.5, and 8.3.9		P
	If a cell's specified upper and/or lower charging temperature exceeds values for the upper and/or lower limit test temperatures of Table 4, the cells were charged at the specified values plus 5 °C for the upper limit and minus 5 °C for the lower limit	10°C to 45°C used.	P
	A valid rationale was provided to ensure the safety of the cell (see Figure A.1)		P
	For a different upper limit charging voltage (i.e. other than for lithium cobalt oxide systems at 4,25 V), the applied upper limit charging voltage and upper limit charging temperatures were adjusted accordingly		P
	A valid rationale was provided to ensure the safety of the cell (see Figure A.1)		P
8.2	Intended use	See below	P
8.2.1	Continuous charging at constant voltage (cells)		N/A
	Results: No fire. No explosion..... :		N/A
8.2.2	Moulded case stress at high ambient temperature (battery)		P
	Oven temperature (°C)..... :	70°C	—
	Results: No physical distortion of the battery casing resulting in exposure if internal components		P
8.3	Reasonably foreseeable misuse	See below	P
8.3.1	External short circuit (cell)		N/A
	The cells were tested until one of the following occurred: - 24 hours elapsed; or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- The case temperature declined by 20% of the maximum temperature rise		N/A
	Results: No fire. No explosion..... :		N/A
8.3.2	External short circuit (battery)		P
	The cells were tested until one of the following occurred: - 24 hours elapsed; or		N/A
	- The case temperature declined by 20% of the maximum temperature rise		P
	In case of rapid decline in short circuit current, the battery pack remained on test for an additional one hour after the current reached a low end steady state condition		N/A
	Results: No fire. No explosion..... :	(See Table 8.3.2)	P
8.3.3	Free fall		P
	Results: No fire. No explosion.	No fire. No explosion.	P
8.3.4	Thermal abuse (cells)		N/A
	The cells were held at 130°C ± 2°C for: - 10 minutes; or		N/A
	- 30 minutes for large cells (gross mass of more than 500 g as defined in IEC 62281)		N/A
	Oven temperature (°C)..... :		—
	Gross mass of cell (g)..... :		—
	Results: No fire. No explosion.		N/A
8.3.5	Crush (cells)		N/A
	The crushing force was released upon: - The maximum force of 13 kN ± 1 kN has been applied; or		N/A
	- An abrupt voltage drop of one-third of the original voltage has been obtained; or		N/A
	- 10% of deformation has occurred compared to the initial dimension		N/A
	Results: No fire. No explosion..... :		N/A
8.3.6	Over-charging of battery		P
	Test was continued until the temperature of the outer casing: - Reached steady state conditions (less than 10°C change in 30-minute period); or		P
	- Returned to ambient		P
	Results: No fire. No explosion..... :	(See Table 8.3.6)	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.7	Forced discharge (cells)		N/A
	Results: No fire. No explosion..... :		N/A
8.3.8	Transport tests		N/A
	Manufacturer's documentation provided to show compliance with UN Recommendations on Transport of Dangerous Goods		N/A
8.3.9	Design evaluation – Forced internal short circuit (cells)		N/A
	The cells complied with national requirement for :		—
	The pressing was stopped upon: - A voltage drop of 50 mV has been detected; or		N/A
	- The pressing force of 800 N (cylindrical cells) or 400 N (prismatic cells) has been reached		N/A
	Results: No fire :		N/A
9	Information for safety		P
	The manufacturer of secondary cells ensures that information is provided about current, voltage and temperature limits of their products.	Specification provided.	P
	The manufacturer of batteries ensures that equipment manufacturers and, in the case of direct sales, end-users are provided with information to minimize and mitigate hazards.	Specification provided.	P
	Systems analyses performed by device manufacturers to ensure that a particular battery design prevents hazards from occurring during use of a product	Considered in end product.	N/A
	As appropriate, information relating to hazard avoidance resulting from a system analysis is provided to the end user :	Considered in end product.	N/A
10	Marking		P
10.1	Cell marking		N/A
	Cells marked as specified in the applicable cell standards: IEC 61951-1, IEC 61951-2 or IEC 61960.		N/A
10.2	Battery marking	See below	P
	Batteries marked in accordance with the requirements for the cells from which they are assembled.		P
	Batteries marked with an appropriate caution statement.	See Marking plate for detailed information.	P
10.3	Other information		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Storage and disposal instructions marked on or supplied with the battery.		P
	Recommended charging instructions marked on or supplied with the battery.		P

11	Packaging		P
	The materials and packaging design are chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of environmental contaminants.	See enclosure ID 08	P

Annex A	Charging range of secondary lithium ion cells for safe use		P
A.1	General		P
A.2	Safety of lithium-ion secondary battery		P
A.3	Consideration on charging voltage		P
A.3.1	General		P
A.3.2	Upper limit charging voltage	See below	P
A.3.2.1	General		P
A.3.2.2	Explanation of safety viewpoint		P
A.3.2.3	Safety requirements, when different upper limit charging voltage is applied		P
A.4	Consideration of temperature and charging current		P
A.4.1	General		P
A.4.2	Recommended temperature range		P
A.4.2.1	General		P
A.4.2.2	Safety consideration when a different recommended temperature range is applied		N/A
A.4.3	High temperature range		N/A
A.4.3.1	General		N/A
A.4.3.2	Explanation of safety viewpoint		N/A
A.4.3.3	Safety considerations when specifying charging conditions in high temperature range		N/A
A.4.3.4	Safety consideration when specifying new upper limit in high temperature range		N/A
A.4.4	Low temperature range		N/A
A.4.4.1	General		N/A
A.4.4.2	Explanation of safety viewpoint		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
A.4.4.3	Safety considerations, when specifying charging conditions in low temperature range		N/A
A.4.4.4	Safety considerations when specifying a new lower limit in the low temperature range		N/A
A.4.5	Scope of the application of charging current		P
A.5	Sample preparation		N/A
A.5.1	General		N/A
A.5.2	Insertion procedure for nickel particle to generate internal short		N/A
	The insertion procedure carried out at 20°C±5°C and under -25 °C of dew point		N/A
A.5.3	Disassembly of charged cell		N/A
A.5.4	Shape of nickel particle		N/A
A.5.5	Insertion of nickel particle to cylindrical cell		N/A
A.5.5.1	Insertion of nickel particle to winding core		N/A
A.5.5.2	Mark the position of nickel particle on the both end of winding core of the separator		N/A
A.5.6	Insertion of nickel particle to prismatic cell		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Critical components information					P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity ¹⁾
1. Cells	TCL HYPERPOWER BATTERIES INC	PR-3258C7G	3.8V/3380mAh	IEC 62133	Ref.Certif.No : DK- 54451-UL
2. PCB	Aisheng Exactitude Circuitry Co Ltd (E248037)	RD	V-0, 130°C	UL 796	UL
2.1 PCB (Alternate)	Interchangeable	Interchangeable	V-0, 130°C	UL 796 UL94	UL
3. Control IC	Seiko Instruments Inc.	S8211CDI	Vdet1: 4.425±0.025V; Vdet2: 2.5±0.05V	--	Tested with appliance
4. MOSFET	Panasonic	FC8V22090L	VDS=24V, VGS=±12V, ID=8A	--	Tested with appliance
5. Insulation tape	Interchangeable	Interchangeable	Min130 °C	UL510	UL
6. Leading wire	Interchangeable	Interchangeable	3302,26AWG 105°C, 30V	UL758	UL
7. Breaker	KOMATSU LITE MFG CO LTD (E215638)	LC72AY-1	72+/- 5degree	UL873	UL
Supplementary information: N/A					
¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict

7.2.1	TABLE: Continuous low rate charge (cells)					N/A
Model	Recommended charging method, (CC, CV, or CC/CV)	Recommended charging voltage V_c , (Vdc)	Recommended charging current I_{rec} , (A)	OCV at start of test, (Vdc)	Results	

Supplementary information:

- No fire or explosion
- No leakage
- Leakage
- Fire
- Explosion
- Bulge
- Others (please explain)

7.2.2	TABLE: Vibration		N/A
Model	OCV at start of test, (Vdc)	Results	

Supplementary information:

- No fire or explosion
- No leakage
- Leakage
- Fire
- Explosion
- Bulge
- Others (please explain)

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict

7.3.1	TABLE: Incorrect installation (cells)			N/A
Model	OCV of reversed cell, (Vdc)		Results	

Supplementary information:

- No fire or explosion
- No leakage
- Leakage
- Fire
- Explosion
- Bulge
- Others (please explain)

7.3.2	TABLE: External short circuit					N/A
Model	Ambient (at 20°C ± 5°C or 55°C ± 5°C)	OCV at start of test, (Vdc)	Resistance of circuit, (Ω)	Maximum case temperature rise ΔT, (°C)	Results	

Supplementary information:

- No fire or explosion
- No leakage
- Leakage
- Fire
- Explosion
- Bulge
- Others (please explain)

IEC 62133				
Clause	Requirement + Test	Result - Remark	Verdict	
7.3.6	TABLE: Crush			N/A
Model	OCV at start of test, (Vdc)	OCV at removal of crushing force, (Vdc)	Results	
Supplementary information: <ul style="list-style-type: none"> - No fire or explosion - No leakage - Leakage - Fire - Explosion - Bulge - Others (please explain) 				

7.3.8	TABLE: Overcharge				N/A
Model	OCV prior to charging, (Vdc)	Maximum charge current, (A)	Time for charging, (hours)	Results	
Supplementary information: <ul style="list-style-type: none"> - No fire or explosion - No leakage - Leakage - Fire - Explosion - Bulge - Others (please explain) 					

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict

7.3.9	TABLE: Forced discharge (cells)				N/A
Model	OCV before application of reverse charge, (Vdc)	Measured reverse charge I_t , (A)	Time for reversed charge, (minutes)	Results	
Supplementary information:					
<ul style="list-style-type: none"> - No fire or explosion - No leakage - Leakage - Fire - Explosion - Bulge - Others (please explain) 					

8.2.1	TABLE: Continuous charging at constant voltage (cells)				N/A
Model	Recommended charging voltage V_c , (Vdc)	Recommended charging current I_{rec} , (A)	OCV at start of test, (Vdc)	Results	
Supplementary information:					
<ul style="list-style-type: none"> A – No fire or explosion B – No Leakage C – Leakage D – Fire E – Explosion 					

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.1	TABLE: External short circuit (cell)					N/A
Model	Ambient, (°C)	OCV at start of test, (Vdc)	Resistance of circuit, (Ω)	Maximum case temperature rise ΔT , (°C)	Results	
Samples charged at charging temperature upper limit						
Samples charged at charging temperature lower limit						
Supplementary information:						
A – No fire or Explosion						
B – Fire						
C – Explosion						
D – The test was completed after 24 h						
E – The test was completed after the cell casing cooled to 20% of the maximum temperature rise.						

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.2	TABLE: External short circuit (battery)					P
Model	Ambient, (°C)	OCV at start of test, (Vdc)	Resistance of circuit, (Ω)	Maximum case temperature rise ΔT, (°C)	Results	
Samples charged at charging temperature upper limit						
PR-3258C7G	21.2	4.31	0.081	0.0	A,E	
PR-3258C7G	21.2	4.32	0.082	0.0	A,E	
PR-3258C7G	21.2	4.31	0.082	0.0	A,E	
PR-3258C7G	21.2	4.31	0.082	0.0	A,E	
PR-3258C7G	21.2	4.31	0.082	0.0	A,E	
Samples charged at charging temperature lower limit						
PR-3258C7G	21.2	4.20	0.079	0.0	A,E	
PR-3258C7G	21.2	4.20	0.077	0.4	A,E	
PR-3258C7G	21.2	4.20	0.079	0.3	A,E	
PR-3258C7G	21.2	4.20	0.081	0.1	A,E	
PR-3258C7G	21.2	4.20	0.081	0.0	A,E	
Supplementary information:						
A – No fire or Explosion						
B – Fire						
C – Explosion						
D – The test was completed after 24 h						
E – The test was completed after the pack casing cooled to 20% of the maximum temperature rise						

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.5	TABLE: Crush					N/A
Model	OCV at start of test, (Vdc)	OCV at removal of crushing force, (Vdc)	Width/ diameter of cell before crush, (mm)	Required deformation for crush, (mm)	Results	
Samples charged at charging temperature upper limit						
Samples charged at charging temperature lower limit						
Supplementary information: A – No fire or explosion B – Fire C – Explosion D – Force released after maximum level reached E – Force released after abrupt voltage drop of one-third the original F - Force released after 10 % of deformation has occurred G – Crush Direction: Longitudinal axis was parallel to the flat surface H – Crush Direction: 90° from the longitudinal axis (nickel prismatic only)						

IEC 62133			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.6	TABLE: Over-charging of battery			P
Constant charging current (A)..... :		6.76		—
Supply voltage (Vdc)..... :		5		—
Model	OCV before charging, (Vdc)	Resistance of circuit, (Ω)	Maximum outer casing temperature, ($^{\circ}$ C)	Results
PR-3258C7G	3.47	--	19.8	A
PR-3258C7G	3.41	--	19.6	A
PR-3258C7G	3.45	--	19.6	A
PR-3258C7G	3.46	--	19.4	A
PR-3258C7G	3.45	--	19.2	A
Supplementary information: A- No fire or explosion B- Fire C- Explosion				

8.3.7	TABLE: Forced discharge (cells)			N/A
Model	OCV before application of reverse charge, (Vdc)	Measured Reverse charge I_r , (A)	Time for reversed charge, (minutes)	Results
Supplementary information: A – No fire or explosion B – Fire C – Explosion				

Enclosure

Supplement ID	Description
01-01	Front view of Battery
01-02	Back view of Battery
02	Internal PCB of Battery
03	PCB Layout of Battery
04	Protection board principle diagram
05	Specification of Battery
06	Outline Dimension of Battery
07	Manufacturer date code of Battery
08	Packaging Illustration of Battery
09	ISO 9001 Certification for manufacturer

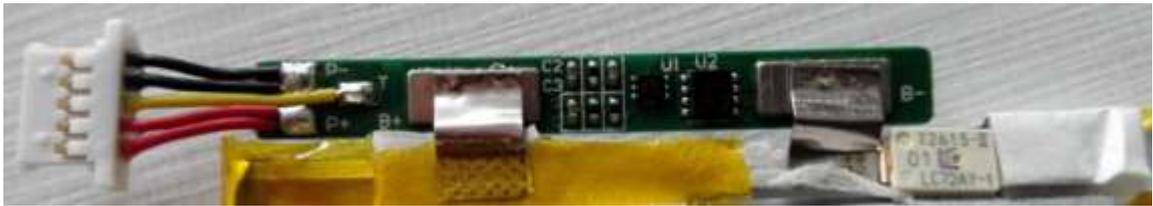
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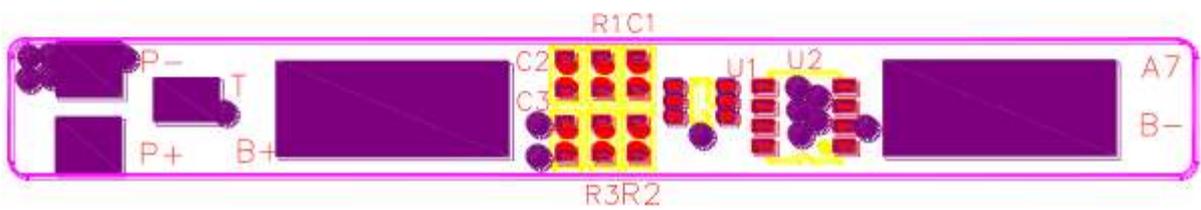
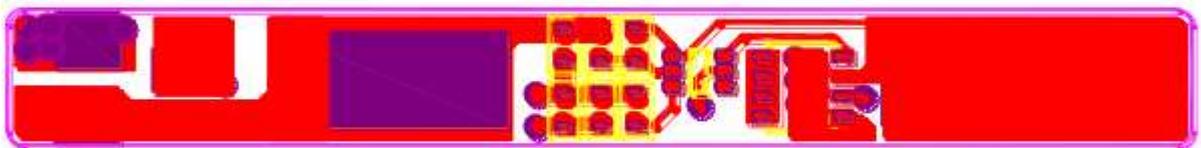
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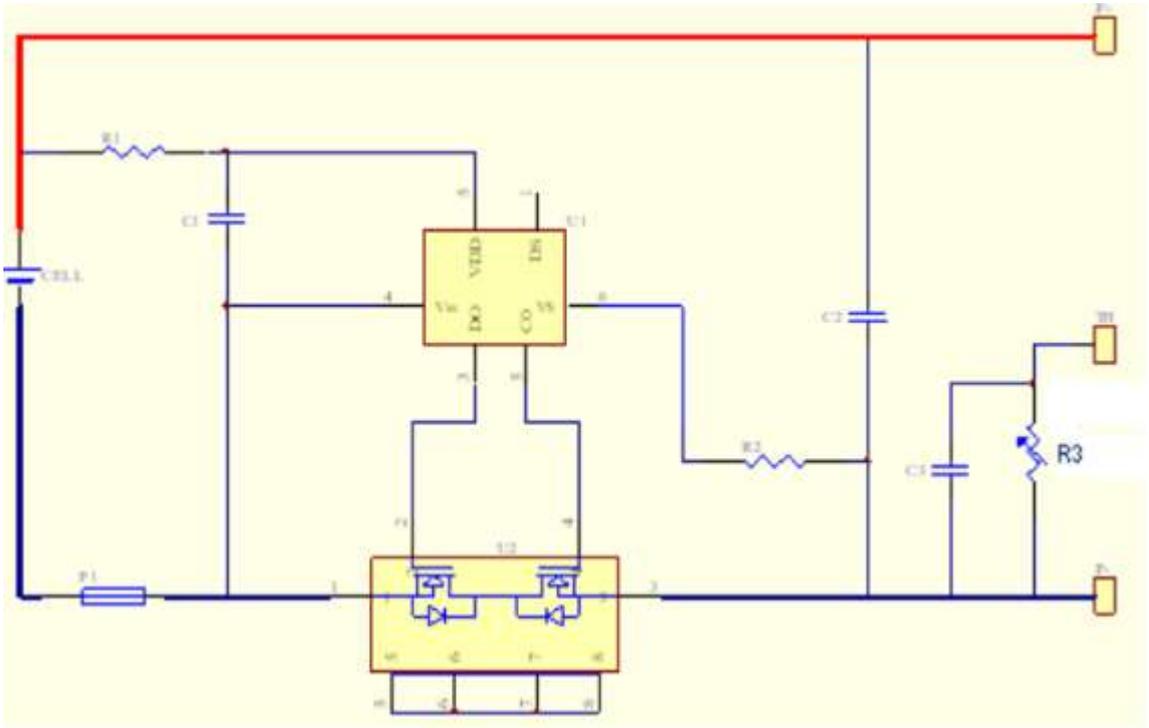
ID 02



ID 03



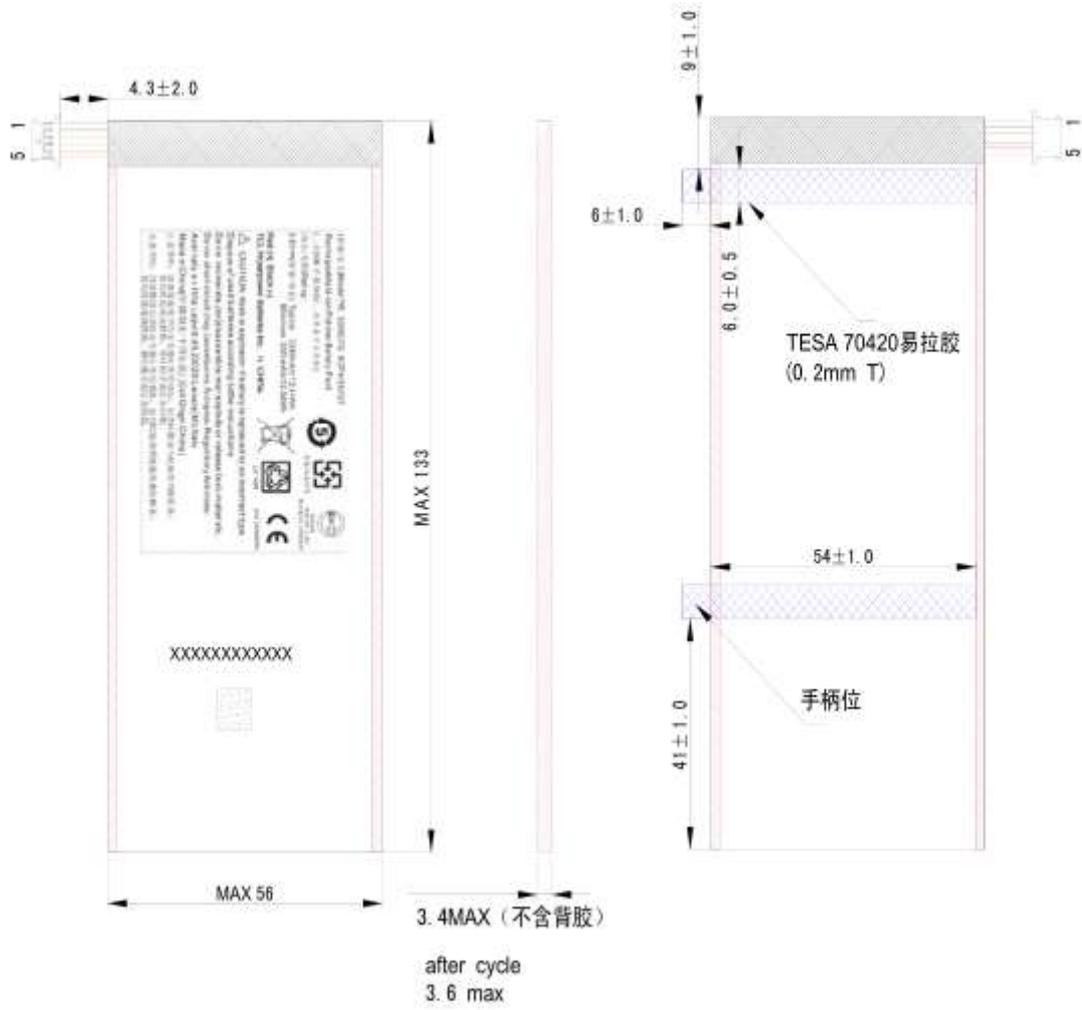
ID 04



ID 05

NO	Items	Criteria	Remarks
2.1	Typical Capacity 典型容量	3380mAh	0.2CmA charge and discharge for cut-off voltage 3.0 V 0.2 CmA 充放电至终止电压 3.0V
	Minimum Capacity 最小容量	3300mAh	
2.2	Nominal Voltage 标称电压	3.8V	
2.3	Internal Impedance 内阻	Cell: $\leq 35\text{m}\Omega$	
		Battery: $\leq 150\text{m}\Omega$	
2.4	Charge voltage 充电电压 (V)	4.35V	
2.5	Standard charge current 标准充电电流	660mA	Standard Charging: 0.2CmA 标准充电: 0.2 CmA
2.6	Max. charge current 最大充电电流	3300mA	
2.7	Standard dis-charge current 标准放电电流	660mA	
2.8	Max. discharge current 最大放电电流	3300mA	
2.9	Shipment & storage 出货电压	3.8V-3.9V	
2.10	Weight 重量	52.5 \pm 1.5g	
2.11	Operating Temperature 工作温度	0 $^{\circ}$ C ~ +50 $^{\circ}$ C	Charging 充电
		-10 $^{\circ}$ C ~ +60 $^{\circ}$ C	Discharging 放电

ID 06



ID 07

Date of Manufacture:



KT0010H004XXXXXXXXXXXX

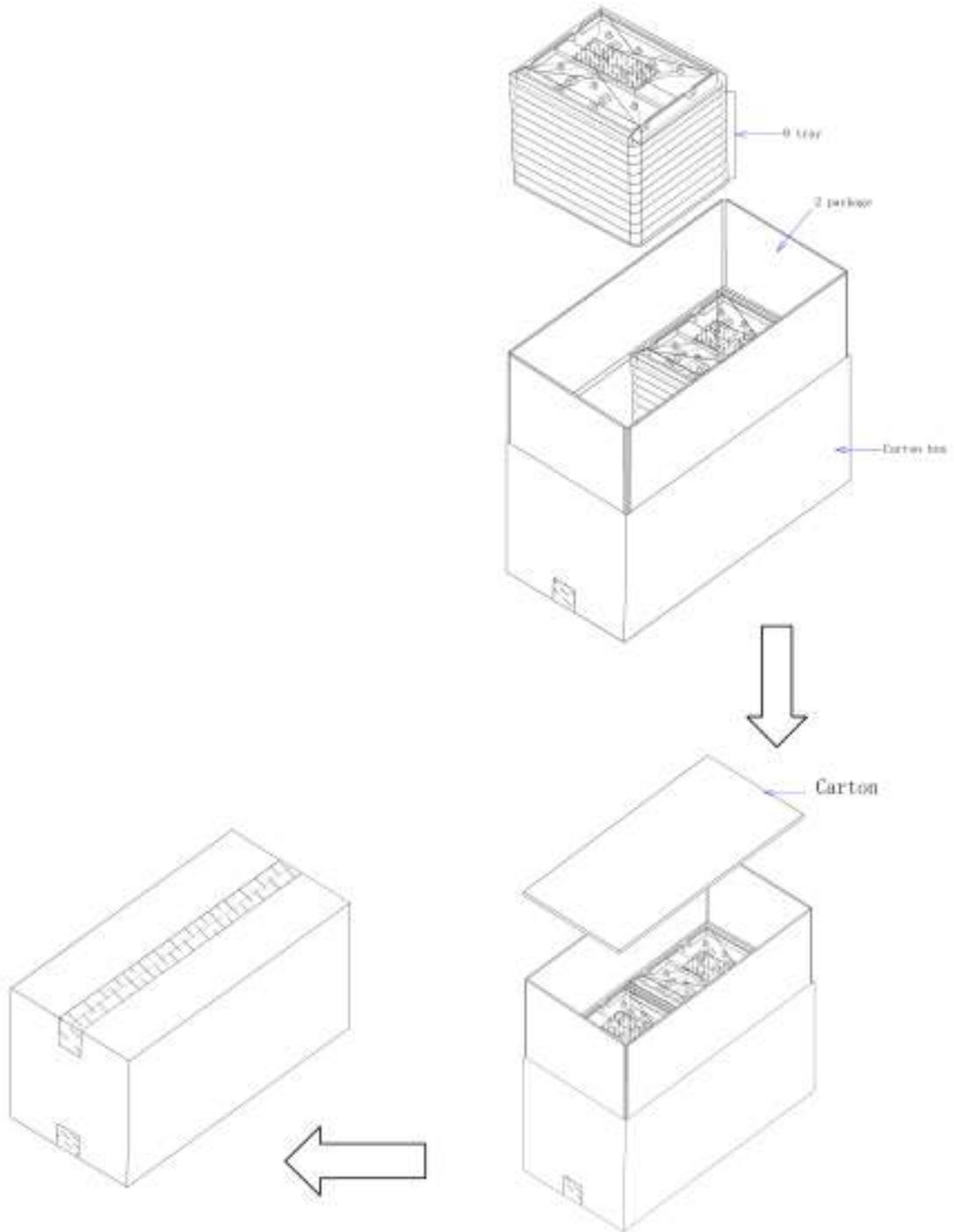
KT0010H004 is customer material number, total 10 numbers.

XXX with red line is year and week, the first X is year from 1 to 0 is 2011 to 2020year.

The second and third X is week from 01 to 56week.

The other X is serial no between TCL and customer agreement.

ID 08



ID 09

