



Test Report No. 68.413.25.0278.05
Rev. 02
Dated 2026-07-27

Applicant: Dongguan A&S Power Technology Co., Ltd.

Address: Building A, No. 2 Keji 9th Road, Songshan Lake Park, Dongguan City

Sample Description: RECHARGEABLE BATTERY PACK

Model No.: ASJP-XB1400

Sample Received Date: 2025-12-19, 2026-01-19, 2026-03-10, 2026-03-26, 2026-05-13

Test Period: From 2025-12-19 to 2026-01-23, From 2026-03-10 to 2026-03-16
From 2026-03-26 to 2026-04-14, From 2026-05-13 to 2026-05-18

Location of Testing: TÜV SÜD Certification and Testing (China) Co., Ltd.
Shenzhen Branch

Purpose of examination: As specified by client, to test restrictions substances for battery as regulated in Article 6 (1) of Regulation (EU) 2023/1542 on submitted samples

Test Results: Refer to following page(s)

Remark: The result relates only to the items tested.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
TÜV SÜD Group

Prepared by:

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Project Handler



Reviewed by:

Scarlett Liang
Designated Reviewer

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Disclaimer Measurement Uncertainty: Unless otherwise agreed upon, pass or fail verdicts are given based on the measured values without consideration of measurement uncertainties. Please note, every test method has a measurement uncertainty which has been evaluated by the laboratory according to ISO IEC 17025 requirements. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as pass or fail.

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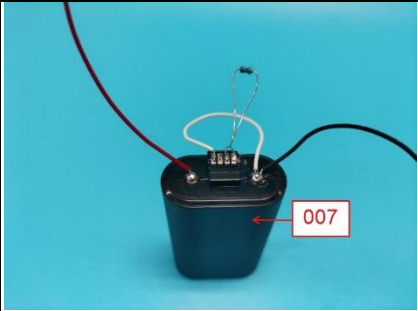
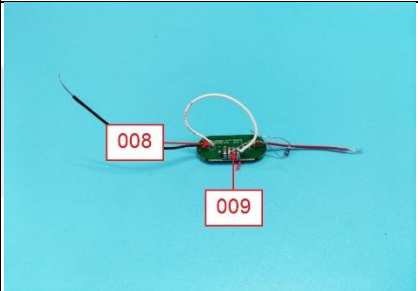
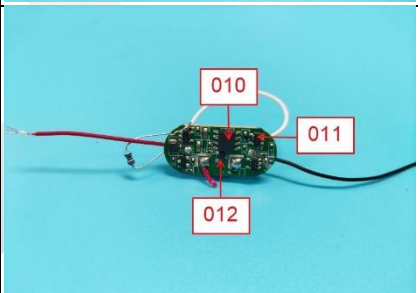
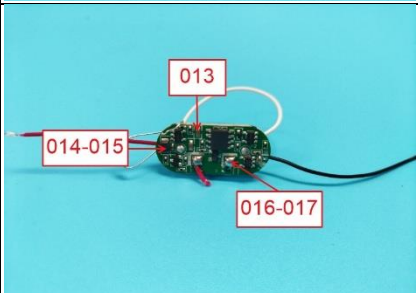
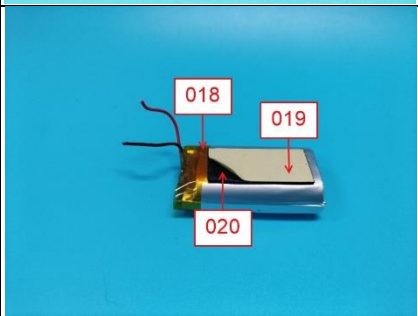


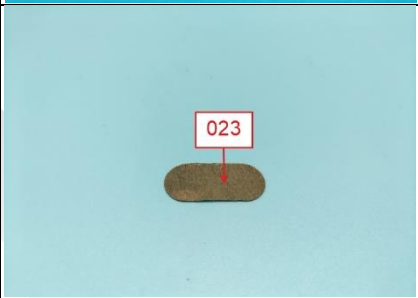
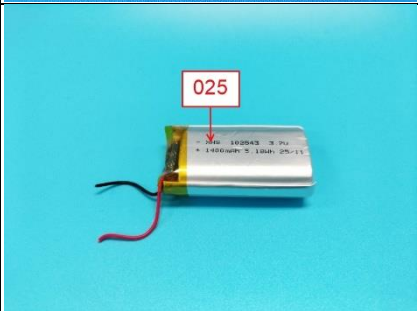
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SUMMARY OF TEST RESULTS

No.	Test Requested	Conclusion	Remarks
Regulation (EU) 2023/1542 Annex I			
1.	Cadmium, Mercury and Lead content	PASS	
Regulation (EC) 1907/2006 (REACH) Annex XVII			
2.	Total Cadmium (Cd) Content	PASS	
3.	Total Lead (Pb) Content	PASS	
4.	Organostannic Compounds (DBT, DOT, TBT, TPhT, TcyT, TOT, TPT and TMT) Content	PASS	
5.	Octabromodiphenyl ether (OctaBDE) Content	PASS	
6.	Phthalates (DEHP, DBP, BBP and DIBP) Content	PASS	
7.	C9-C14 PFCAs Content	PASS	

1. TESTED SUBJECT DESCRIPTION

Test No.	Sample No.	Tested Material Description	Photo
T1	007	Black plastic case	
T2	008	Silvery metal pin	
T3	009	Silvery metal pin	
T4	010	Black body with pin (IC)	
T5	011	Black body with pin (IC)	
T6	012	Black body with pin (EC)	
T7	013	Brown/silvery body (SMD capacity)	
T8	014	Gray magnet (Inductor)	
T9	015	Coppery metal coil (Inductor)	
T10	016	Silvery metal solder	
T11	017	Green PCB	
T12	018	Transparent yellow plastic tape with glue	
T13	019	Yellow paper with glue	
T14	020	Black foam with glue	

Test No.	Sample No.	Tested Material Description	Photo
T15	021	Black body with pin (IC)	
T16	022	Blue PCB	
T17	023	Green paper with glue	
T18	024	Black packed battery	
T19	025	Black printed silvery plastic sleeve	

2. TEST RESULT**2.1. CADMIUM, MERCURY AND LEAD CONTENT TEST**

Test Method: With reference to EN 62321-4:2014 /A1:2017 and EN 62321-5:2014, analyzed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES).

For portable battery:

Test Item	CAS No.	Result [%]	Maximum Permissible Limit [%]
		Sample 024	
Cadmium (Cd)	7440-43-9	< 0.0002	0.002
Mercury (Hg)	7439-97-6	< 0.0002	0.0005
Lead (Pb)	7439-92-1	< 0.0004	0.01

Note:

- “%” denotes percentage by weight
- The specification was quoted from Regulation (EU) 2023/1542.
- If portable batteries containing more than 0,004 % lead, shall be marked with the chemical symbol for the metal concerned: Pb.
- The relevant chemical symbol indicating the heavy metal content shall be printed beneath the separate collection symbol and shall cover an area of at least one-quarter the size of that symbol.

2.2. TOTAL CADMIUM CONTENT TEST

Test method: With reference to EPA 3052:1996 or EPA3050B: 1996, followed by analysis using Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES). [Reporting Limit: 10.0 mg/kg]

Test Item	CAS No.	Result [mg/kg]		Maximum Permissible Limit [mg/kg]
		Sample 007+018+025	Sample 017+022	
Total Cadmium (Cd)	7440-43-9	< 10.0	< 10.0	100

Test Item	CAS No.	Result [mg/kg]		Maximum Permissible Limit [mg/kg]
		Sample 019+023	Sample 020	
Total Cadmium (Cd)	7440-43-9	< 10.0	< 10.0	100

Note:

- “mg/kg” denotes milligram per kilogram
- The specification was quoted from regulation (EC) 1907/2006 (REACH) Annex XVII Entry 23.

2.3. TOTAL LEAD CONTENT TEST

Test method: With reference to EPA 3052:1996 or EPA3050B: 1996, analyzed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES). [Reporting Limit: 10.0 mg/kg]

Test Item	CAS No.	Result [mg/kg]	Maximum Permissible Limit [mg/kg]
		Sample 007	
Total Lead (Pb)	7439-92-1	< 10.0	500

Note:

- “mg/kg” denotes milligram per kilogram
- The specification was quoted from regulation (EC) 1907/2006 (REACH) Annex XVII Entry 63.

2.4. ORGANOSTANNIC COMPOUNDS CONTENT TEST

Test method: With reference to ISO 22744-1: 2020, extracted by acidified methanol, followed by derivatization and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS).

[Reporting limit: 1 mg/kg]

Test Item	CAS No.	Result [mg/kg]
		Sample 007
Dibutyltin (DBT)	14488-53-0	<1
Diocetyl tin (DOT)	250252-87-0	<1
Tributyltin (TBT)	36643-28-4	<1
Triphenyltin (TPhT)	668-34-8	<1
Tricyclohexyltin (TcyT)	3091-32-5	<1
Triocetyl tin (TOT)	2587-76-0	<1
Tripropyltin (TPT)	688-73-3	<1
Trimethyltin (TMT)	1066-45-1	<1

Note:

- “mg/kg” denotes milligram per kilogram
- Limit according to regulation (EC) 1907/2006 (REACH) Annex XVII Entry 20: Concentration of Tri-substituted organostannic (Tributyltin (TBT), Triphenyltin (TPhT), Tricyclohexyltin (TcyT), Triocetyl tin (TOT), Tripropyltin (TPT), and Trimethyltin (TMT)), Dibutyltin (DBT), Diocetyl tin (DOT) and compounds shall not be greater than the equivalent of 0.1 % by weight of tin.

2.5. OCTABROMODIPHENYL ETHER CONTENT TEST

Test method: With reference to EN 62321-6:2015, extracted by organic solvent and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting Limit: 0.0005%]

Test Item	CAS No.	Result [%]		Maximum Permissible Limit [%]
		Sample 010+011	Sample 007+018+025	
Octabromodiphenyl ether (OctaBDE)	32536-52-0	< 0.0005	< 0.0005	0.1

Test Item	CAS No.	Result [%]		Maximum Permissible Limit [%]
		Sample 012+013+021	Sample 017+022	
Octabromodiphenyl ether (OctaBDE)	32536-52-0	< 0.0005	< 0.0005	0.1

Test Item	CAS No.	Result [%]		Maximum Permissible Limit [%]
		Sample 019+023	Sample 020	
Octabromodiphenyl ether (OctaBDE)	32536-52-0	< 0.0005	< 0.0005	0.1

Note:

- “%” denotes percent by weight
- The specification was quoted from regulation (EC) 1907/2006 (REACH) Annex XVII Entry 45.

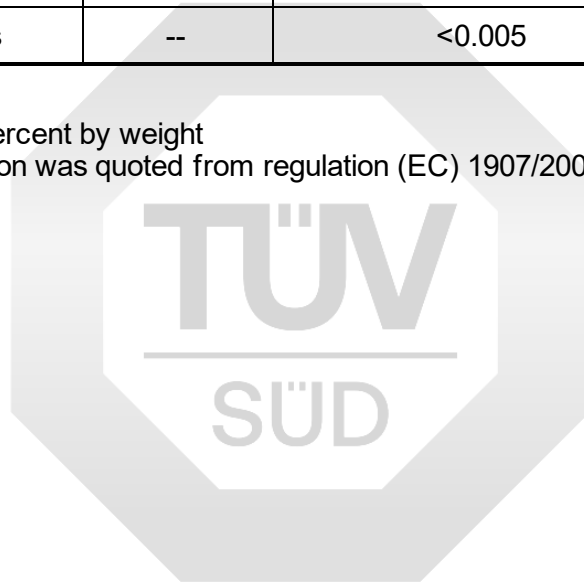
2.5. PHTHALATES CONTENT TEST

Test method: With reference to EN 62321-8:2017, extracted by organic solvent and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.005%]

Test Item	CAS No.	Result [%]	Permissible Limit [%]
		Sample 020	
Di-(2-ethyl-hexyl) Phthalate (DEHP)	117-81-7	<0.005	--
Di-butyl Phthalate (DBP)	84-74-2	<0.005	--
Butyl-benzyl Phthalate (BBP)	85-68-7	<0.005	--
Di-iso-butyl Phthalate (DIBP)	84-69-5	<0.005	--
Sum of above substances	--	<0.005	< 0.1

Note:

- “%” denotes percent by weight
- The specification was quoted from regulation (EC) 1907/2006 (REACH) Annex XVII Entry 51.



2.6. C9-C14 PFCAS CONTENT TEST

Test method: With reference to EN 17681-1: 2025, extracted by organic solvent and analyzed by Liquid Chromatography with Tandem Mass Spectrometry Detection (LC-MS/MS).

Test Item	CAS No.	Result [mg/kg]		Maximum Permissible Limit [mg/kg]
		Sample 017	Sample 022	
C9-C14 PFCAs and their salts				
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	< 0.01	< 0.01	--
Perfluoro-n-decanoic acid (PFDA)	335-76-2	< 0.01	< 0.01	--
Perfluoroundecanoic acid (PFUnA)	2058-94-8	< 0.01	< 0.01	--
Perfluorododecanoic acid (PFDoA)	307-55-1	< 0.01	< 0.01	--
Perfluorotridecanoic acid (PFTrA)	72629-94-8	< 0.01	< 0.01	--
Perfluorotetradecanoic acid (PFTeA/PFTeDA)	376-06-7	< 0.01	< 0.01	--
Perfluoro-n-nonanoic acid salts - Ammonium perfluorononanoate (NH4-PFN)*	4149-60-4	< 0.01	< 0.01	--
Perfluoro-n-nonanoic acid salts - Sodium perfluorononanoate (Na-PFN)*	21049-39-8	< 0.01	< 0.01	--
Perfluoro-n-decanoic acid salts - Ammonium perfluorodecanoate (NH4-PFD)*	3108-42-7	< 0.01	< 0.01	--
Perfluoro-n-decanoic acid salts - Sodium perfluorodecanoate (Na-PFD)*	3830-45-3	< 0.01	< 0.01	--
Perfluoro(3,7-dimethyloctanoic acid) (PF-3,7-DMOA)	172155-07-6	< 0.01	< 0.01	--
Ammonium perfluoro-n-dodecanoate 10 (NH4-PFDoD)*	3793-74-6	< 0.01	< 0.01	--
Sum of above substances	--	< 0.01	< 0.01	0.025
C9-C14 PFCAs related substances				
2-Perfluorodecylethanol (10:2 FTOH)	865-86-1	< 0.01	< 0.01	--
1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)	17741-60-5	< 0.01	< 0.01	--
2H,2H,3H,3H-Heptadecafluoroundecanoic Acid (4HPFUnA)	34598-33-9	< 0.01	< 0.01	--
1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	< 0.01	< 0.01	--
2-Perfluorooctylethanol (8:2 FTOH)	678-39-7	< 0.01	< 0.01	--
1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)	2144-54-9	< 0.01	< 0.01	--
1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)	39239-77-5	< 0.20	< 0.20	--
2H,2H Perfluorodecane Acid (H2PFDA /8:2 FTCA)	27854-31-5	< 0.01	< 0.01	--
Tetrabutylphosphonium 2H,2H-perfluorodecanoate11 (H2PFDA-P(Butyl)4)	882489-14-7	< 0.01	< 0.01	--
Sum of above substances	--	< 0.20	< 0.20	0.26

Note:

- “mg/kg” denotes milligram per kilogram
- “*” denotes the data was converted based on results of related compounds
- The specification was quoted from regulation (EC) 1907/2006 (REACH) Annex XVII Entry 68.

APPENDIX

Photos of submitted products



-----End of Report-----