



TEST REPORT

Applicant: Jiuhe IoT (Shenzhen) Information Technology Co., Ltd
Address: 529, No. 93 Qianjin 2nd Road, Hexi Community, Xixiang Street, Bao'an District, Shenzhen, China
Manufacturer: Jiuhe IoT (Shenzhen) Information Technology Co., Ltd
Address: 529, No. 93 Qianjin 2nd Road, Hexi Community, Xixiang Street, Bao'an District, Shenzhen, China
The following sample(s) and sample information by the applicant.
Product Name: Vehicle positioning terminal
Trade Mark: JIUHEWULIAN
Model Number: CK100
See Appendix
Sample Received Date: Mar. 05, 2025
Testing Period: Mar. 05, 2025 - Mar. 10, 2025
Test Requested: With reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.
Test Method: Please refer to next page(s).
Test Results: Please refer to next page(s).

Conclusion:

As requested by applicant, the submitted sample was tested which is listed as specimen description in the following page, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Prepared (Engineer):

Shely Mo

Approved (Manager):

Xiaoshan Ni



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.

**Version**

Version No.	Date	Description
00	Mar. 10, 2025	Original

Test Method:

1. With reference to IEC 62321-2:2013, review was performed for the samples disjointed from the submitted articles.
2. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in this report
 - (1) With reference to IEC 62321-3-1:2013, screening by EDXRF spectroscopy
 - (2) Wet chemical test method
 - a. With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES
 - b. With reference to IEC 62321-5:2013, determination of Lead by ICP-OES
 - c. With reference to IEC 62321-4:2013+ A1:2017, determination of Mercury by ICP-OES
 - d. With reference to IEC 62321-7-1:2015 & IEC 62321-7-2:2017, determination of Hexavalent chromium by Colorimetric method using UV-Vis.
 - e. With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS
3. With reference to IEC 62321-8:2017, determination of phthalates by GC-MS

**Test Part Description:**

Part No.	Part Description(s)	Style
A01	Black plastic	-
A02	White sticker	-
A03	White paper	-
A04	Silver metal	-
A05	Black plastic	-
A06	Black plastic film	-
A07	Black rubber skin	-
A08	Black rubber	-
A09	Silver metal	-
A10	Black IC	-
A11	Silver-gray metal element	-
A12	Black IC	-
A13	Black IC	-
A14	Silver capacitor	-
A15	Black triode	-
A16	Silver metal	-
A17	Black IC	-
A18	Black diode	-
A19	Silver metal	-
A20	Grey plastic	-
A21	Pink ceramics	-
A22	Blue PCB	-
A23	Silver solder	-
B01	Black plastic	-
B02	Red rubber skin	-
B03	Black rubber skin	-
B04	Orange rubber skin	-
B05	Yellow rubber skin	-
B06	Black rubber	-

**Test Results:**

The results of XRF screening and chemical test (Unit: mg/kg)

Part No.	Element	X-ray Screening	Results of chemical test	Conclusion on RoHS EU	Sample Resubmitted
A01	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A02	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A03	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A04	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	---	---		
	PBDEs	---	---		
	DIBP	---	---		
	DBP	---	---		
	BBP	---	---		
	DEHP	---	---		



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Part No.	Element	X-ray Screening	Results of chemical test	Conclusion on RoHS EU	Sample Resubmitted
A05	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A06	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A07	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A08	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		

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Part No.	Element	X-ray Screening	Results of chemical test	Conclusion on RoHS EU	Sample Resubmitted
A09	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	---	---		
	PBDEs	---	---		
	DIBP	---	---		
	DBP	---	---		
	BBP	---	---		
	DEHP	---	---		
A10	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A11	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	---	---		
	PBDEs	---	---		
	DIBP	---	---		
	DBP	---	---		
	BBP	---	---		
	DEHP	---	---		
A12	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		



Part No.	Element	X-ray Screening	Results of chemical test	Conclusion on RoHS EU	Sample Resubmitted
A13	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A14	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	---	---		
	PBDEs	---	---		
	DIBP	---	---		
	DBP	---	---		
	BBP	---	---		
	DEHP	---	---		
A15	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A16	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	---	---		
	PBDEs	---	---		
	DIBP	---	---		
	DBP	---	---		
	BBP	---	---		
	DEHP	---	---		



Part No.	Element	X-ray Screening	Results of chemical test	Conclusion on RoHS EU	Sample Resubmitted
A17	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A18	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A19	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	---	---		
	PBDEs	---	---		
	DIBP	---	---		
	DBP	---	---		
	BBP	---	---		
	DEHP	---	---		
A20	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		



Part No.	Element	X-ray Screening	Results of chemical test	Conclusion on RoHS EU	Sample Resubmitted
A21	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	---	---		
	PBDEs	---	---		
	DIBP	---	---		
	DBP	---	---		
	BBP	---	---		
	DEHP	---	---		
A22	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
A23	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	---	---		
	PBDEs	---	---		
	DIBP	---	---		
	DBP	---	---		
	BBP	---	---		
	DEHP	---	---		
B01	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		



Part No.	Element	X-ray Screening	Results of chemical test	Conclusion on RoHS EU	Sample Resubmitted
B02	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
B03	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
B04	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		
B05	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		



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Part No.	Element	X-ray Screening	Results of chemical test	Conclusion on RoHS EU	Sample Resubmitted
B06	Pb	BL	---	Pass	/
	Cd	BL	---		
	Hg	BL	---		
	Cr(Cr ⁶⁺)	BL	---		
	PBBs	BL	---		
	PBDEs	BL	---		
	DIBP	---	N.D.		
	DBP	---	N.D.		
	BBP	---	N.D.		
	DEHP	---	N.D.		

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**Remark:**

(1) There are the results on total Br while test items on restricted substances are PBBs and PBDEs. There are the results on total Cr while test items on restricted substances Cr(VI)

(2) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013 (unit:mg/kg)

Element	Polymer Materials	Metal Materials	Composite Materials
Cd	$BL \leq 70-3\sigma < X < 130+3\sigma \leq OL$	$BL \leq 70-3\sigma < X < 130+3\sigma \leq OL$	$BL \leq 50-3\sigma < X < 150+3\sigma \leq OL$
Pb	$BL \leq 700-3\sigma < X < 1300+3\sigma \leq OL$	$BL \leq 700-3\sigma < X < 1300+3\sigma \leq OL$	$BL \leq 500-3\sigma < X < 1500+3\sigma \leq OL$
Hg	$BL \leq 700-3\sigma < X < 1300+3\sigma \leq OL$	$BL \leq 700-3\sigma < X < 1300+3\sigma \leq OL$	$BL \leq 500-3\sigma < X < 1500+3\sigma \leq OL$
Br	$BL \leq 300-3\sigma < X$	---	$BL \leq 250-3\sigma < X$
Cr	$BL \leq 700-3\sigma < X$	$BL \leq 700-3\sigma < X$	$BL \leq 500-3\sigma < X$

(a) BL= Below Limit, OL=Over Limit, X= Inconclusive, LOD= Limit of Detection, -- = Not regulated.

(b) The XRF screening test for RoHS elements - the reading may be different to actual content in the sample be of non-uniformity composition

(c) mg/kg=0.0001%, MDL=MDL=Method Detection Limit, ND=Not Detected (<MDL), --- = Not Regulated

Unit and MDL in wet chemical test

Test Item	Pb	Cd	Hg	DBP	BBP	DEHP	DIBP
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL	10	10	10	100	100	100	100

The MDL for single compound of PBBs and PBDEs is 100 mg/kg

MDL of Cr(VI) for polymer and composite sample is 10 mg/kg

MDL of Cr(VI) for metal sample is 0.10ug/cm²

(c) ▼ =Metal sample

a. The sample is negative for Cr⁶⁺ if Cr⁶⁺ is N.D. (below the limit 0.10ug/cm²). The coating is considered a non Cr⁶⁺ based coating.

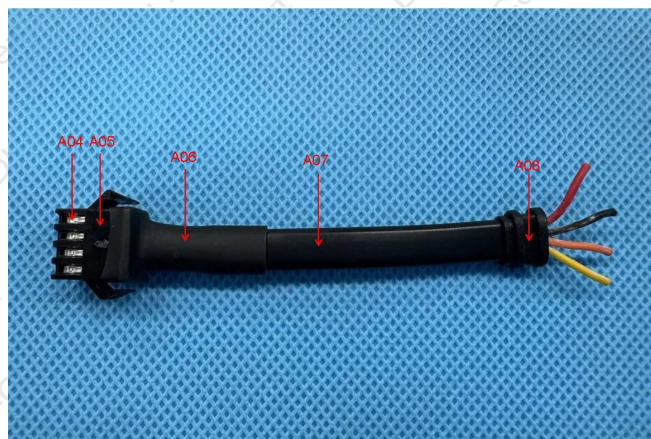
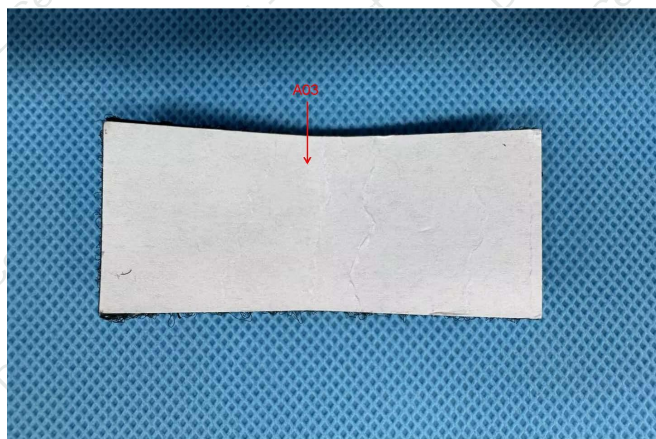
b. The sample positive for Cr⁶⁺ if the Cr⁶⁺ concentration is greater than 0.13ug/cm². The sample coating is considered to contain Cr⁶⁺.

c. The result between 0.10ug/cm² and 0.13ug/cm² is considered to be inconclusive unavoidable coating variations may influence the determination.

Note: This report only applies to samples of model CK100.



Sample photo:





Appendix:

CK100A, CK100B, CK101, CK101A, CK101B, CK102, CK102, CK102B, CK103, CK103A, CK103B, CK105, CK105A, CK105B, CK106, CK106A, CK106B, CK108, CK108A, CK108B, CK201, CK201A, CK201B, CK203, CK203A, CK203B, CK205, CK205A, CK205B, CK206, CK206A, CK206B, CK208, CK208A, CK208B, CK300, CK300A, CK300B, CK301, CK301A, CK301B, CK302, CK302A, CK305, CK305A, CK305B, CK306, CK306A, CK306B, CK308, CK308A, CK308B, CK500, CK500A, CK500B, CK501, CK501A, CK501B, CK503, CK503A, CK503B, CK505A, CK503B, CK508, CK508A, CK508B, CK510, CK510A, CK510B, CCK608, CK800, CK801, CK803, CK808, W102, W208, CT10, GT08, GFO6R, GFO6T, BSJ-EGO5E, T94, T92, 109

***** **END OF REPORT** *****