

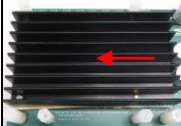
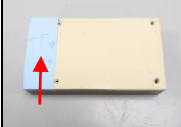
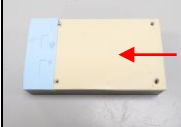
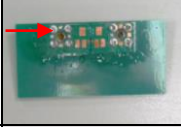
Prüfbericht - Nr.: 238136131a 001 <i>Test Report No.:</i>		Seite 1 von 14 <i>Page 1 of 14</i>	
Auftraggeber: Fu Da Tong Technology Co., Ltd. <i>Client:</i> 10F.-5, No.880, Zhongzheng Rd., Zhonghe Dist., New Taipei City 23586, Taiwan, R.O.C.			
Gegenstand der Prüfung: PCB <i>Test Item:</i>			
Bezeichnung: FDT-EVB-WP300 <i>Identification:</i>			
Anlieferungszustand: apparent good <i>Delivery condition:</i>		Eingangsdatum: 2020-03-10, <i>Date of Receipt:</i> 2020-03-27 (2nd delivery), 2020-04-10 (3 rd delivery), 2020-06-05 (4 th delivery)	
Prüfort: TÜV Rheinland Hong Kong Ltd. <i>Testing location:</i>			
Prüfgrundlage: According to RoHS (recast): Restriction of the Use of Certain Hazardous <i>Test specification:</i> Substances in Electrical and Electronic Equipment, 2011/65/EU Annex II and its amendment Directive (EU) 2015/863: Total Content of Lead, Cadmium, Mercury, Chromium VI, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers; and Benzylbutyl phthalate (BBP), Dibutyl phthalate (DBP), Bis(2-ethylhexyl) phthalate (DEHP), Diisobutyl phthalate (DIBP)			
Prüfergebnis: According to the kind and extend of tests performed the above mentioned test item <i>Test result:</i> passed the test specification.			
geprüft: tested by: Anya Wang		kontrolliert: checked by: Arthur Cheng	
2020-06-16 Anya Wang /Project Coordinator		2020-06-16 Arthur Cheng /Project Manager	
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>
Sonstiges/ Other Aspects: Test period: 2020-03-10 – 2020-03-20 ; 2020-03-27 – 2020-04-07 ; 2020-04-10 – 2020-04-20 ; 2020-06-05 – 2020-06-15			
Abkürzungen: ok / P = entspricht Prüfgrundlage fail / F = entspricht nicht Prüfgrundlage n.a. / N = nicht anwendbar		Abbreviations: ok / P = passed fail / F = failed n.a. / N = not applicable	
Produktinformationen werden vom Kunden bereitgestellt. Das Testergebnis wird nach Art und Umfang der durchgeführten Tests gezogen. Dieser Prüfbericht bezieht sich auf das oben genannte Prüfmuster. Ohne Genehmigung des Testzentrums darf dieser Testbericht nicht in Auszügen vervielfacht werden. Dieser Prüfbericht berechtigt nicht zum Tragen eines Prüfzeichens auf diesem oder ähnlichen Produkten. <i>Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed. This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i>			

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Customer : Fu Da Tong Technology Co., Ltd.

2020-06-16

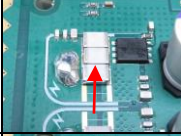
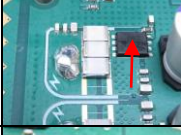
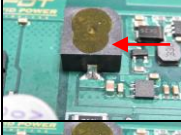
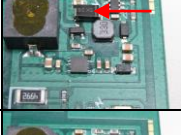
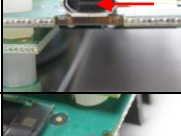
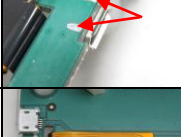
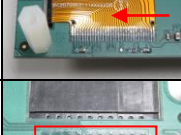
Sample List:

Part No.	Picture	Description:	ID / Model No.:	Lab.-No.:
A		PCB	FDT-EVB-WP300	TCL200310-04

Sample No.	Picture	Part No.	Component	Material	Color
1		A	Bare PCB	PCB board	Green
2		A	Nut	Plastic	Off white
3		A	Sheet	Metal	Black
4		A	Cushion	Polymer	Blue
5		A	Cushion	Polymer	Yellow
6		A	Solder (replaced by TCL200605-01)	Solder	Silver
7		A	Housing	Metal	Silver
8		A	Base	Plastic	Black
9		A	Base	Elastomer	Black

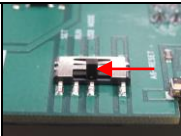
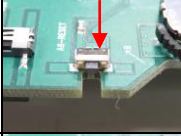
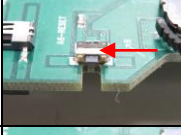
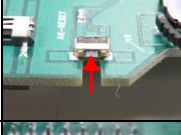
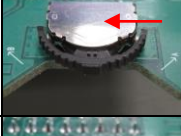
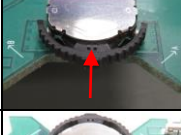
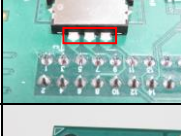
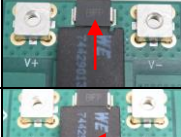
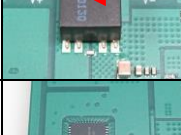
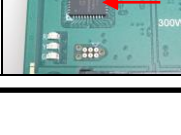
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Customer : Fu Da Tong Technology Co., Ltd.

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Sample No.	Picture	Part No.	Component	Material	Color
10		A	Solder	Solder	Silver
11		A	Electronic components	Electronic components	Grey
12		A	Electronic components	Electronic components	Black
13		A	Housing	Plastic	Black
14		A	Solder (replaced by TCL200327-01#2)	Solder	Silver
15		A	Electronic components	Electronic components	Black
16		A	Electronic components	Electronic components	Black
17		A	Enclosure	Metal	Silver
18		A	Connector	Plastic	Black
19		A	Solder (replaced by TCL200410-13#2)	Solder	Silver
20		A	PFC	Polymer	Orange
21		A	Solder (replaced by TCL200327-01#4)	Solder	Silver

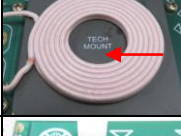
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Sample No.	Picture	Part No.	Component	Material	Color
22		A	Switch	Plastic	Black
23		A	Base	Plastic	Black
24		A	Base	Plastic	Beige
25		A	Button	Plastic	Black
26		A	Frame	Metal	Silver
27		A	Switch	Plastic	Black
28		A	Solder (replaced by TCL200327-01#5)	Solder	Silver
29		A	Screw	Plastic	Transparent
30		A	Nut	Metal	Silver
31		A	Electronic components	Electronic components	Black
32		A	Housing	Plastic + printing	Black / Blue
33		A	Electronic components	Electronic components	Black

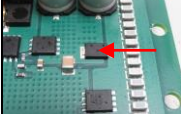
Test Report No. : 238136131a 001
Customer : Fu Da Tong Technology Co., Ltd.

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Sample No.	Picture	Part No.	Component	Material	Color
34		A	Electronic components	Electronic components	Brown
35		A	Cover	Plastic	Transparent
36		A	Screw	Metal	Chrome
37		A	Cover	Textile	White
38		A	Base	Metal	Black
39		A	Screw	Metal	Chrome
40		A	Connector	Plastic	Black
41		A	Pin	Metal	Silver
42		A	Display panel film 1	Plastic + adhesive	Transparent black
43		A	Display panel film 2	Glass	Silver
44		A	Display panel film 3	Glass	Translucence
45		A	Display panel film 4	Plastic + adhesive	Black

Test Report No. : 238136131a 001
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Sample No.	Picture	Part No.	Component	Material	Color
46		A	Tape	Plastic + adhesive	Transparent
47		A	Nut	Plastic	Transparent
48		A	Frame	Metal	Black
49		A	Wire	Metal	Coppery
50		A	Base	Plastic	Black
51		A	Solder	Solder	Silver
52		A	Electronic components	Electronic components	Black
53		A	Electronic components	Electronic components	Black

Remark:

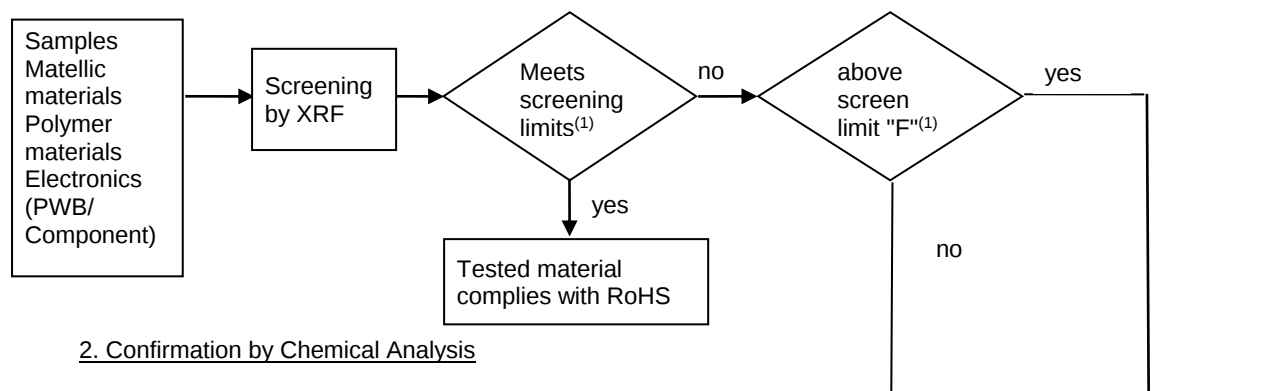
1. Component(s)/ materials(s) with an area of less than 2mm x2 mm will not be selected for testing according to RoHS Directive 2011/65/EU due to technical reason.
2. For the test sample does not have detail materials information provided by client, visually identical materials (e.g. wire insulation, solder points, etc.) will be considered as the same material.
3. Solder points on a printing circuit board will be examined several times based on optical anomalies or discoloration of the solder point(s) unless the solder point(s) is obviously generated automatically during production.
4. All other materials will be sampled and tested at one test point representatively.

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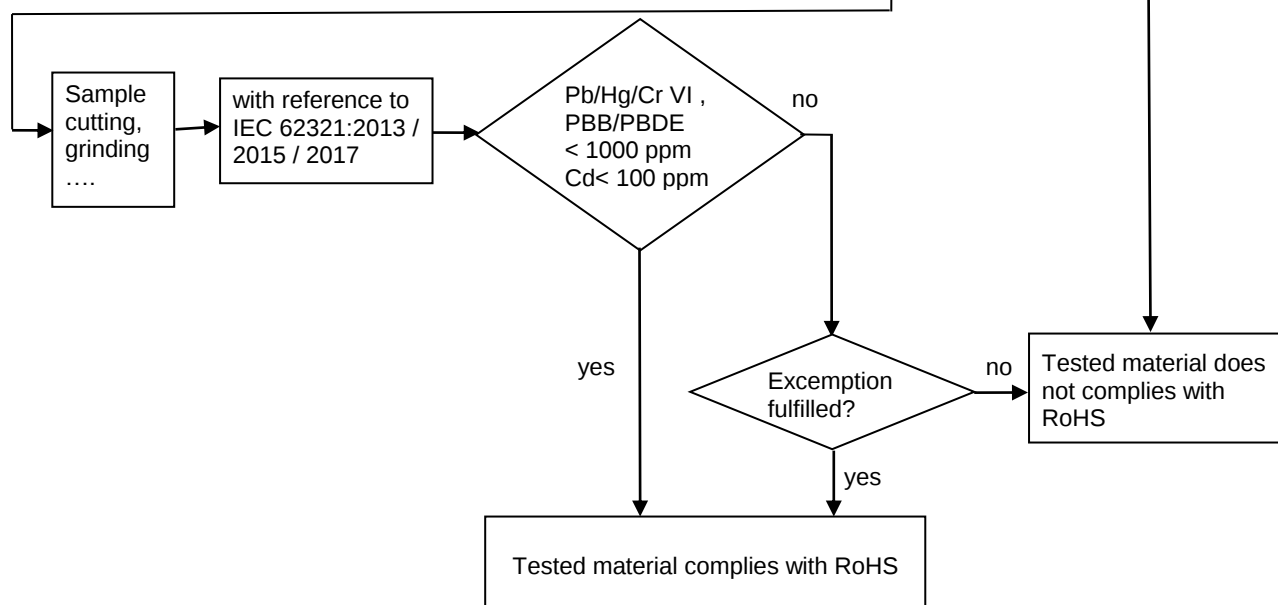
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Testing procedure:

1. Screening by X-RAY Fluorescence Spectrometry (XRF)



2. Confirmation by Chemical Analysis



Test Report No. : 238136131a 001
Customer : Fu Da Tong Technology Co., Ltd.
Test Method : Cadmium, Lead, Mercury, Chromium, Bromine
With reference to IEC 62321-3-1:2013

2020-06-16

1. Screening by X-Ray Fluorescence Spectrometry (XRF)

Sample No.		1	2	3	4
Cadmium (Cd)	[mg/kg]	< RL	< RL	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	< RL	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	< RL	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	< RL	< RL	< RL
Bromine (Br)	[mg/kg]	>240	< RL	N.A.	< RL

Sample No.		5	6	7	8
Cadmium (Cd)	[mg/kg]	< RL	>60	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	>670	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	>660	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	>640	< RL	< RL
Bromine (Br)	[mg/kg]	< RL	N.A.	N.A.	< RL

Sample No.		9	10	11	12
Cadmium (Cd)	[mg/kg]	< RL	>60	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	>670	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	>660	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	>640	< RL	< RL
Bromine (Br)	[mg/kg]	< RL	N.A.	< RL	< RL

Sample No.		13	14	15	16
Cadmium (Cd)	[mg/kg]	< RL	>60	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	>670	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	>660	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	>640	< RL	< RL
Bromine (Br)	[mg/kg]	< RL	N.A.	< RL	< RL

Notes:

- < = less than
- RL = Reporting Limit
- N.A. = Not Applicable
- mg/kg = milligram per kilogram
- figures highlighted in bold letters indicate high findings

Test Report No. : 238136131a 001
Customer : Fu Da Tong Technology Co., Ltd.
Test Method : Cadmium, Lead, Mercury, Chromium, Bromine
With reference to IEC 62321-3-1:2013

2020-06-16

Sample No.		17	18	19	20
Cadmium (Cd)	[mg/kg]	< RL	< RL	>60	< RL
Lead (Pb)	[mg/kg]	< RL	< RL	>670	< RL
Mercury (Hg)	[mg/kg]	< RL	< RL	>660	< RL
Chromium (Cr)	[mg/kg]	< RL	< RL	>640	< RL
Bromine (Br)	[mg/kg]	N.A.	< RL	N.A.	< RL

Sample No.		21	22	23	24
Cadmium (Cd)	[mg/kg]	>60	< RL	< RL	< RL
Lead (Pb)	[mg/kg]	>670	< RL	< RL	< RL
Mercury (Hg)	[mg/kg]	>660	< RL	< RL	< RL
Chromium (Cr)	[mg/kg]	>640	< RL	< RL	< RL
Bromine (Br)	[mg/kg]	N.A.	< RL	< RL	< RL

Sample No.		25	26	27	28
Cadmium (Cd)	[mg/kg]	< RL	< RL	< RL	>60
Lead (Pb)	[mg/kg]	< RL	< RL	< RL	>670
Mercury (Hg)	[mg/kg]	< RL	< RL	< RL	>660
Chromium (Cr)	[mg/kg]	< RL	>640	< RL	>640
Bromine (Br)	[mg/kg]	< RL	N.A.	< RL	N.A.

Sample No.		29	30	31	32
Cadmium (Cd)	[mg/kg]	< RL	< RL	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	< RL	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	< RL	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	< RL	< RL	< RL
Bromine (Br)	[mg/kg]	< RL	N.A.	< RL	< RL

Notes:

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Test Report No. : 238136131a 001
Customer : Fu Da Tong Technology Co., Ltd.
Test Method : Cadmium, Lead, Mercury, Chromium, Bromine
With reference to IEC 62321-3-1:2013

2020-06-16

Sample No.		33	34	35	36
Cadmium (Cd)	[mg/kg]	< RL	< RL	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	< RL	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	< RL	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	< RL	< RL	>640
Bromine (Br)	[mg/kg]	< RL	< RL	< RL	N.A.

Sample No.		37	38	39	40
Cadmium (Cd)	[mg/kg]	< RL	< RL	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	< RL	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	< RL	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	< RL	>640	< RL
Bromine (Br)	[mg/kg]	< RL	N.A.	N.A.	>290

Sample No.		41	42	43	44
Cadmium (Cd)	[mg/kg]	< RL	< RL	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	< RL	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	< RL	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	< RL	< RL	< RL
Bromine (Br)	[mg/kg]	N.A.	< RL	< RL	< RL

Sample No.		45	46	47	48
Cadmium (Cd)	[mg/kg]	< RL	< RL	< RL	< RL
Lead (Pb)	[mg/kg]	< RL	< RL	< RL	< RL
Mercury (Hg)	[mg/kg]	< RL	< RL	< RL	< RL
Chromium (Cr)	[mg/kg]	< RL	< RL	< RL	< RL
Bromine (Br)	[mg/kg]	< RL	< RL	< RL	N.A.

Notes:

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Test Report No. : 238136131a 001
Customer : Fu Da Tong Technology Co., Ltd.
Test Method : Cadmium, Lead, Mercury, Chromium, Bromine
With reference to IEC 62321-3-1:2013

2020-06-16

Sample No.		49	50	51	52
Cadmium (Cd)	[mg/kg]	< RL	< RL	>60	< RL
Lead (Pb)	[mg/kg]	< RL	< RL	>670	< RL
Mercury (Hg)	[mg/kg]	< RL	< RL	>660	< RL
Chromium (Cr)	[mg/kg]	< RL	< RL	>640	< RL
Bromine (Br)	[mg/kg]	N.A.	< RL	N.A.	< RL

Sample No.		53
Cadmium (Cd)	[mg/kg]	< RL
Lead (Pb)	[mg/kg]	< RL
Mercury (Hg)	[mg/kg]	< RL
Chromium (Cr)	[mg/kg]	< RL
Bromine (Br)	[mg/kg]	< RL

Notes:

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- RL = Reporting Limit
- N.A. = Not Applicable
- mg/kg = milligram per kilogram
- figures highlighted in bold letters indicate high findings

Remark:(1)

XRF Screening limits for different matrices. (RL)

Materials	Concentration (ppm)				
	Cd	Cr	Pb	Hg	Br
Polymeric	$P \leq 60 < X \leq 140 < F$	$P \leq 640 < X$	$P \leq 670 < X \leq 1330 < F$	$P \leq 660 < X \leq 1340 < F$	$P \leq 290 < X$
Metallic	$P \leq 60 < X \leq 140 < F$	$P \leq 640 < X$	$P \leq 670 < X \leq 1330 < F$	$P \leq 660 < X \leq 1340 < F$	NA
Electronic Components	$P \leq 40 < X \leq 160 < F$	$P \leq 440 < X$	$P \leq 470 < X \leq 1530 < F$	$P \leq 460 < X \leq 1540 < F$	$P \leq 240 < X$

Test Report No. : 238136131a 001
 Customer : Fu Da Tong Technology Co., Ltd.
 Test Method : Total Cadmium, Lead, Mercury, Chromium
 - Ref. to IEC 62321-4:2013 and IEC 62321-5:2013
 Chromium (VI)
 - For Metal material - Ref. to IEC 62321-7-1:2015
 - For Plastic or Electronic material - Ref. to IEC 62321-7-2:2017
 - For Leather material - Ref. to EN ISO 17075-1:2017
 PBBs, PBDEs - Ref. to IEC 62321-6:2015

2020-06-16

2. Confirmation by Chemical Analysis

Sample No.		RL	1	6	10	14
Cadmium (Cd)	[mg/kg]	2	- ¹⁾	< RL	< RL	< RL
Lead (Pb)	[mg/kg]	2	- ¹⁾	330	70	260
Mercury (Hg)	[mg/kg]	2	- ¹⁾	< RL	< RL	< RL
Chromium VI (Cr VI)*	[mg/kg]	8	- ¹⁾	< RL	< RL	< RL
PBBs	[mg/kg]	10	< RL	- ¹⁾	- ¹⁾	- ¹⁾
PBDEs	[mg/kg]	10	< RL	- ¹⁾	- ¹⁾	- ¹⁾

Sample No.		RL	19	21	26	28
Cadmium (Cd)	[mg/kg]	2	< RL	< RL	- ¹⁾	< RL
Lead (Pb)	[mg/kg]	2	270	840	- ¹⁾	590
Mercury (Hg)	[mg/kg]	2	< RL	< RL	- ¹⁾	< RL
Chromium VI (Cr VI)*	[mg/kg]	8	< RL	< RL	< RL	< RL
PBBs	[mg/kg]	10	- ¹⁾	- ¹⁾	- ¹⁾	- ¹⁾
PBDEs	[mg/kg]	10	- ¹⁾	- ¹⁾	- ¹⁾	- ¹⁾

Sample No.		RL	36	39	40	51
Cadmium (Cd)	[mg/kg]	2	- ¹⁾	- ¹⁾	- ¹⁾	< RL
Lead (Pb)	[mg/kg]	2	- ¹⁾	- ¹⁾	- ¹⁾	80
Mercury (Hg)	[mg/kg]	2	- ¹⁾	- ¹⁾	- ¹⁾	< RL
Chromium VI (Cr VI)*	[mg/kg]	8	< RL	< RL	- ¹⁾	< RL
PBBs	[mg/kg]	10	- ¹⁾	- ¹⁾	<100 ²⁾	- ¹⁾
PBDEs	[mg/kg]	10	- ¹⁾	- ¹⁾	<100 ²⁾	- ¹⁾

Notes:

- < = less than
- RL = Reporting Limit
- N.A. = Not Applicable
- mg/kg = milligram per kilogram
- * Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017
- ¹⁾ Test covered by 1st action procedure
- ²⁾ Due to the lack of sample the client submitted, the reporting limit is scaled up.

	Cd	Cr(VI)	Pb	Hg	PBBs	PBDEs
Maximum permissible Limit acc. to 2011/65/EU (mg/kg)	100	1000	1000	1000	1000	1000

Test Report No. : 238136131a 001
Customer : Fu Da Tong Technology Co., Ltd.
Test Method : BBP/DBP/DEHP/DIBP - Ref. to IEC 62321-8:2017

2020-06-16

Sample No.		RL	1	2+8+13	4+5	9+20
Benzylbutylphthalate (BBP)	mg/kg	50	< RL	< RL	< RL	< RL
Dibutylphthalate (DBP)	mg/kg	50	< RL	< RL	< RL	< RL
Diethylhexylphthalate (DEHP)	mg/kg	50	< RL	< RL	< RL	< RL
Diisobutylphthalate (DIBP)	mg/kg	50	< RL	< RL	< RL	< RL

Sample No.		RL	11+12+15	16+31+33	18+22+23	24+25+27
Benzylbutylphthalate (BBP)	mg/kg	50	< RL	< RL	< RL	< RL
Dibutylphthalate (DBP)	mg/kg	50	< RL	< RL	< RL	< RL
Diethylhexylphthalate (DEHP)	mg/kg	50	< RL	< RL	< RL	< RL
Diisobutylphthalate (DIBP)	mg/kg	50	< RL	< RL	< RL	< RL

Sample No.		RL	29+32+35	34+52+53	37	40+47+50
Benzylbutylphthalate (BBP)	mg/kg	50	< RL	< RL	< RL	< RL
Dibutylphthalate (DBP)	mg/kg	50	< RL	< RL	70	< RL
Diethylhexylphthalate (DEHP)	mg/kg	50	< RL	< RL	< RL	< RL
Diisobutylphthalate (DIBP)	mg/kg	50	< RL	< RL	< RL	< RL

Sample No.		RL	42+45+46
Benzylbutylphthalate (BBP)	mg/kg	50	< RL
Dibutylphthalate (DBP)	mg/kg	50	< RL
Diethylhexylphthalate (DEHP)	mg/kg	50	< RL
Diisobutylphthalate (DIBP)	mg/kg	50	< RL

Notes:

- < = less than
- RL = Reporting Limit
- N.A. = Not Applicable
- mg/kg = milligram per kilogram

Test Report No. : 238136131a 001
Customer : Fu Da Tong Technology Co., Ltd.

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	BBP	DBP	DEHP	DIBP
Maximum permissible Limit acc. to (EU) 2015/863 (mg/kg)	1000	1000	1000	1000

--- End of Test-Report ---