TEST REPORT

LAB NO. : **(9317)193-0029**
DATE : **Jul 18, 2017**

APPLICANT : **FLASHBAY ELECTRONICS**
BLDG B&C XI FENG CHENG IND ZONE, NO. 2 FUYUAN ROAD HEPING, VILLAGE, FUYONG TOWN, SHENZHEN

CONTACT PERSON : LEVIN

DATE OF SUBMISSION : Jul 12, 2017

TEST PERIOD : Jul 12, 2017 to Jul 18, 2017

NO. OF WORKING DAYS : 5

SAMPLE DESCRIPTION : Car charger

Color: /

Style no. / Model no.: Master (MA)

P.O. No.: /

Country of Origin: China

Country of Destination: /

MANUFACTURER : /

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS	
Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) (Note: The amendment will be effective on 22 July 2019. For medical devices and control instruments, effective date will be 22 July 2021.)	PASS	

LA
Bureau Veritas Consumer Products Services (Guangzhou) Co., Ltd
No. 183, Shinan Road, Meilin Plaza, Dongchong, Nansha, Guangzhou, Guangdong Province, China 511453
Tel: (86) 20 2290 2088 Fax: (86) 20 3490 9303
Email: BVCPS_pyinfo@cn.bureauveritas.com
Website: cps.bureauveritas.com

BUREAU VERITAS CONSUMER PRODUCTS SERVICES (GUANGZHOU) CO., LTD

NINA REN
SENIOR MANAGER

广州必维技术检测有限公司 报告专用章

REMARK

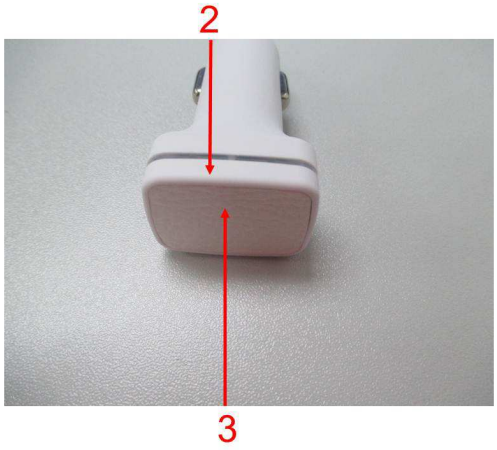
If there are questions or concerns on this report, please contact the following persons:

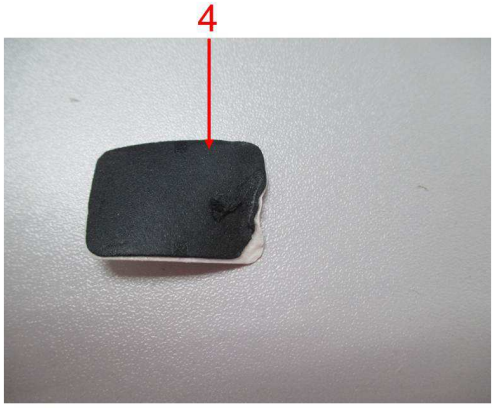
a) GENERAL TEL: (86)755 83437287
FAX: (86)755 83439100
b) BUSINESS SZ TEL: (86)755 21534695
FAX: (86)755 83439100
BUSINESS GZ TEL: (86) 20 87148525
FAX: (86) 20 87148528

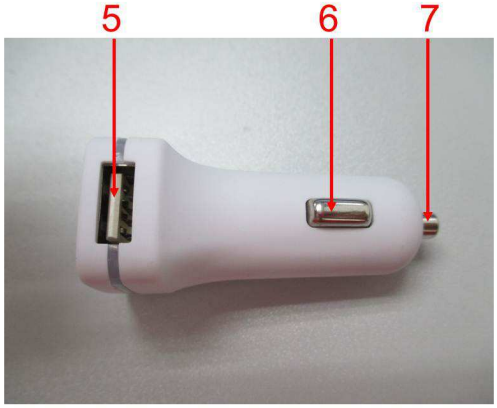
EMAIL: eechemical.sc@cn.bureauveritas.com
WEBSITE cps.bureauveritas.cn

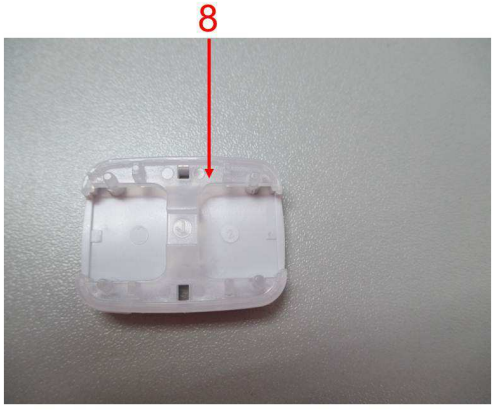
Photo of the Submitted Sample

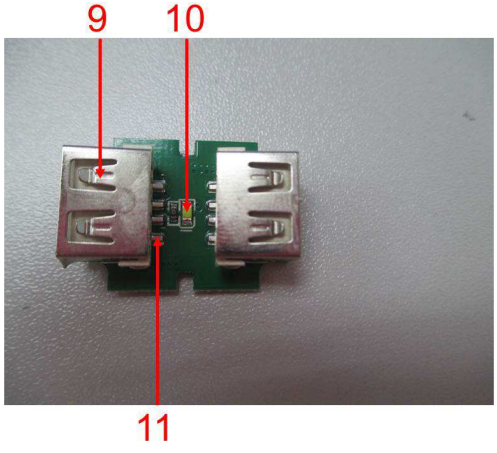
Photograph of test item(s)

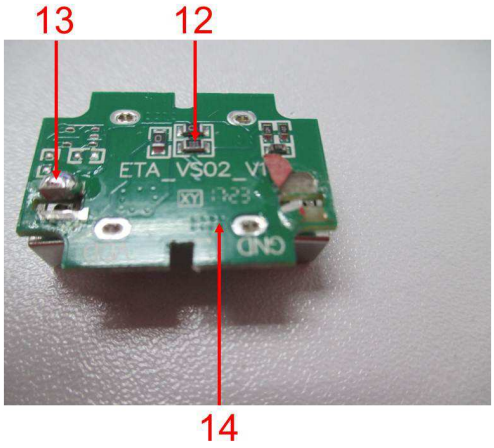


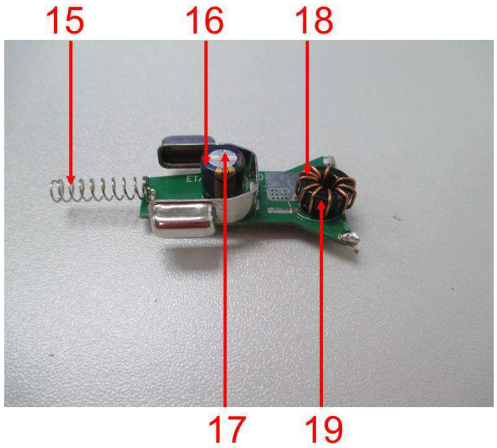


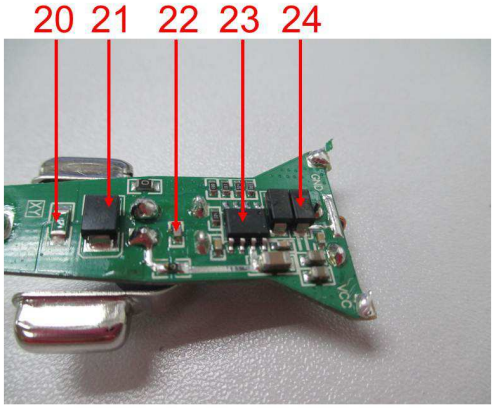


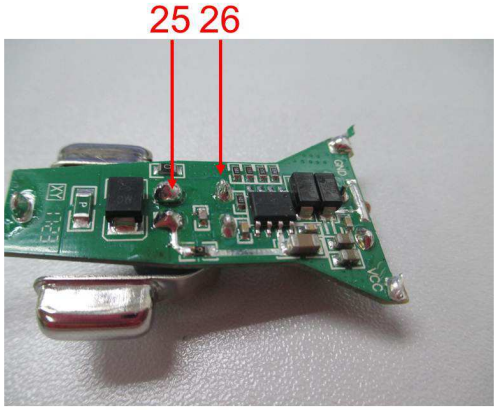












TEST RESULT

Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Test Method : See Appendix.

Test Item(s)	Item / Component Description(s) + Location(s)	Style(s)
1	White plastic (case)	-
2	White plastic (cover)	-
3	White fabric (cover)	-
4	Black soft plastic with adhesive (tape)	-
5	Bone plastic (connector, plug)	-
6	Silvery metal (contact plate)	-
7	Silvery metal (connector, car charger)	-
8	White transparent plastic (connector cover)	-
9	Silvery metal (connector, plug)	-
10	Yellow body (smd resistor, pcb)	-
11	Silvery plated golden metal (pin, plug)	-
12	Silvery printed black body (smd resistor, pcb)	-
13	Silvery solder (pcb)	-
14	Green pcb (small pcb)	-
15	Silvery metal (spring, pcb)	-
16	Grey printed blue soft plastic (sleeve, capacitor, pcb)	-
17	Silvery body (capacitor, pcb)	-
18	Coppery metal (coil.inductor, pcb)	-
19	Black core (coil holder, inductor, pcb)	-
20	Silvery printed green body (smd resistor, pcb)	-
21	Black body (smd ec, pcb)	-
22	Brown body (smd capacitor, pcb)	-
23	Grey printed black body (ic, pcb)	-
24	Black body (smd diode, pcb)	-
25	Silvery solder (pcb)	-
26	Green pcb (pcb)	-

See Analytes and their corresponding Maximum Allowable Limit in Appendix

-	Result						
Parameter	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	**Conclusion**
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item(s)	-	-	-	-	-	-	-
1	ND	ND	ND	ND	ND	ND	PASS
2	ND	ND	ND	ND	ND	ND	PASS
3	ND	ND	ND	ND	ND	ND	PASS
4	ND	ND	ND	ND	ND	ND	PASS
5	ND	ND	ND	ND	ND	ND	PASS
6	ND	ND	ND	Negative*	NA	NA	PASS
7	ND	ND	ND	ND	NA	NA	PASS
8	ND	ND	ND	ND	ND	ND	PASS
9	ND	ND	ND	ND	NA	NA	PASS

-	**Result**						
Parameter	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	**Conclusion**
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item(s)	-	-	-	-	-	-	-
10	ND	ND	ND	ND	ND	ND	PASS
11	ND	ND	ND	ND	NA	NA	PASS
12	ND	ND	ND	ND	ND	ND	PASS
13	ND	ND	ND	ND	NA	NA	PASS
14	ND	ND	ND	ND	ND*	ND*	PASS
15	ND	ND	ND	ND	NA	NA	PASS
16	ND	ND	ND	ND	ND	ND	PASS
17	ND	ND	ND	ND	ND	ND	PASS
18	ND	ND	ND	ND	NA	NA	PASS
19	ND	ND	ND	ND*	NA	NA	PASS
20	ND	ND	ND	ND	ND	ND	PASS
21	ND	ND	ND	ND	ND	ND	PASS
22	ND	ND	ND	ND	ND	ND	PASS
23	ND	ND	ND	ND	ND	ND	PASS
24	ND	ND	ND	ND	ND	ND	PASS
25	ND	ND	ND	ND	NA	NA	PASS
26	ND	ND	ND	ND	ND	ND	PASS

Note / Key :

ND = Not detected
NR = Not requested
% = percent
Detection Limit : See Appendix.
">" = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
10 000 mg/kg = 1 %
NA = Not applicable

Remark :

- The testing approach is listed in table of Appendix.
- *denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- Only selected example(s) is (are) indicated on the photograph(s) in Comment.
- According to European Parliament and Council Directive 2011/65/EU, Article 5 "Adaptation of the Annexes to scientific and technical progress", exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.

TEST RESULT

Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Test Method : With reference to draft International Standard IEC 62321-8.

Test Item(s)	Item / Component Description(s) + Location(s)	Style(s)
1	White plastic (case)	-
2	White plastic (cover)	-
4	Black soft plastic with adhesive (tape)	-
5	Bone plastic (connector, plug)	-
8	White transparent plastic (connector cover)	-
14	Green pcb (small pcb)	-
16	Grey printed blue soft plastic (sleeve, capacitor, pcb)	-
21	Black body (smd ec, pcb)	-
23	Grey printed black body (ic, pcb)	-
24	Black body (smd diode, pcb)	-
26	Green pcb (pcb)	-

Maximum Allowable Limit:	**DEHP, BBP, DBP & DIBP: 0.1% (Each)**

Tested Item(s)	Result			Conclusion
	Detected Analyte(s)	Conc.	Unit	
1+2+4	DEHP	0.007	%	PASS
5+8+14	ND	ND	%	PASS
16+21+23	ND	ND	%	PASS
24+26	ND	ND	%	PASS

Note / Key :

ND = Not detected
NR = Not requested
% = percent
Detection Limit (%) : 0.005
">" = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
10 000 mg/kg = 1 %

Remark : The list of phthalates is summarized in table of Appendix.

APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

No.	Name of Analytes	Detection Limit (mg/kg)				Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF)[a]			Wet Chemistry	
		Plastic	Metallic / glass / ceramic	Others		
1	Lead (Pb)	100	200	200	10[b]	1 000
2	Cadmium (Cd)	50	50	50	10[b]	100
3	Mercury (Hg)	100	200	200	10[c]	1 000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3[g, h] / 10[d] / See [e, j]	1 000 / Negative[j]
6	Bromine (Br)	200	NA	200	NA	NA
7	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50[f]	Sum 1 000
8	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	NA	NA	NA	Each 50[f]	Sum 1 000

NA = Not applicable

[a] Test method with reference to International Standard IEC 62321-3-1: 2013.

[b] Test method with reference to International Standard IEC 62321-5: 2013.

[c] Test method with reference to International Standard IEC 62321-4: 2013.

[d] Polymers and Electronics - Test method with reference to European Standard EN 62321: 2009, Annex C.

[e] Metal - Test method with reference to International Standard IEC 62321-7-1: 2015 [i].

[f] Test method with reference to International Standard IEC 62321-6: 2015.

[g] Leather - Test method International Standard ISO 17075: 2007.

[h] Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2007.

[i] The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples.

[j] Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested

areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).

Testing Approach [Compliance Test for European Parliament and Council Directive 2011/65/EU] :	
The testing approach was with reference to the following document(s).	
1	International Standards IEC 62321-1: 2013 and IEC 62321-2: 2013
2	"RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)
3	"RoHS Regulations - Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)
4	"Final Report to RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium Federal Public Service Health, Food Chain Safety and Environment. (November 2005)

List of Phthalates:

No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	3	Dibutyl phthalate (DBP)	84-74-2
2	Butyl benzyl phthalate (BBP)	85-68-7	4	Diisobutyl phthalate (DIBP)	84-69-5

END