



**BUREAU
VERITAS**

TEST REPORT

LAB NO. : (9312)244-0770
DATE : Sep 11, 2012
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APPLICANT : **FLASHBAY ELECTRONICS (SHENZHEN) CO., LTD**
3-5/F, BLDG B, XIFENGCHENG INDUSTRIAL PARK, NO.2
FUYUAN RD, 2ND HIGH-TECH AREA, HEPING, FUYONG,
BAOAN, SHENZHEN 518103, GUANGDONG PROVINCE,
P.R.CHINA

CONTACT PERSON : Ted Tu

DATE OF SUBMISSION : Aug 31, 2012

TEST PERIOD : Aug 31, 2012 to Sep 11, 2012

NO. OF WORKING DAYS : 8

SAMPLE DESCRIPTION : Torpedo Series

Color: White

Style No.: TO

P.O. No.: /

Country of Origin: /

Country of Destination: /

MANUFACTURER : Flashbay Electronics (Shenzhen) Co., Ltd
3-5/F, Bldg B, Xifengcheng Industrial Park, No.2 Fuyuan Rd, 2nd
High-Tech Area, Heping, Fuyong, Baoan, Shenzhen 518103,
Guangdong Province, P.R.China

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS	

RW

**Bureau Veritas Consumer Products Services (Guangzhou)
Co.,Ltd**
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BUREAU VERITAS CONSUMER PRODUCTS SERVICES (GUANGZHOU) CO., LTD

PREPARED BY : Caidi Peng

APPROVED BY: _____

CHARLES WONG
ANALYTICAL LAB MANAGER

JOEIE TSANG
REGIONAL LABORATORY DIRECTOR

REMARK

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Photo of the Submitted Sample





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TEST RESULT

Compliance Test - European 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/ cap	-
2	Silvery/ coppery plated white plastic	Case	-
3	Silvery metal	Ring	-
4	Silvery plated golden metal	Hanger	-
5	Silvery/ coppery plated silvery meal	Plug	-
6	Black plastic	Insulator	-
7	Silvery plated golden metal	-	-
8	Black body	Large IC, PCB	-
9	Black body	Small IC, PCB	-
10	Brown ceramic body	SMD capacitor, PCB	-
11	Black ceramic body	SMD capacitor, PCB	-
12	Black/ white body	SMD resistor, PCB	-
13	Transparent/ white body	EC "A0", PCB	-
14	Silvery solder	PCB	-
15	Green coated brown plastic with coppery metal	PCB	-

See Analytes and their corresponding Maximum Allowable Limit in Appendix

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
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	NA	NA	PASS
4	25400* [#]	ND	ND	ND	NA	NA	EXEMPTED [#]
5	ND	ND	ND	ND	NA	NA	PASS
6	ND	ND	ND	ND	ND*	ND*	PASS
7	ND	ND	ND	ND	NA	NA	PASS
8	ND	ND	ND	ND	ND	ND	PASS
9	ND	ND	ND	ND	ND	ND	PASS
10	ND	ND	ND	ND	ND	ND	PASS
11	ND	ND	ND	ND	ND	ND	PASS
12	>1500 [#]	ND	ND	ND	ND	ND	EXEMPTED [#]
13	ND	ND	ND	ND	ND	ND	PASS
14	ND	ND	ND	ND	NA	NA	PASS
15	ND	ND	ND	ND	ND*	ND*	PASS



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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

10000 mg/kg = 1 %

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 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.
- #According to Annex III of European Council Directive 2011/65/EU, exemptions were granted a few materials and Clause 7(c)-I is reiterated here “Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.”. Test Item(s) 12 was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found lead level should be exempted.
- #According to Annex III of European Council Directive 2011/65/EU, exemptions were granted a few materials and Clause 6(c) is reiterated here “Copper alloy containing up to 4 % lead by weight.”. Test Item(s) 4 was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found lead level should be exempted.



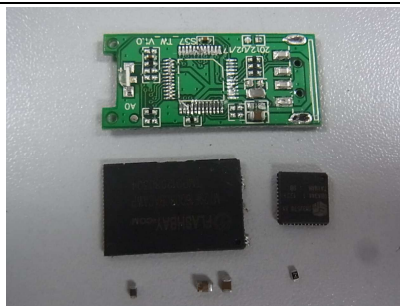
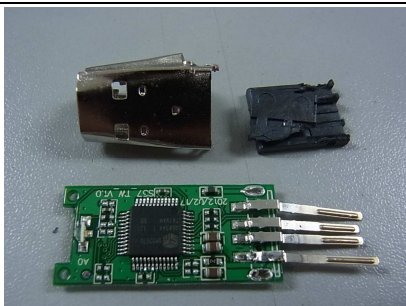
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Comment :

Photograph(s) [Compliance Test for European Council Directive 2011/65/EU] :

Photograph of Test Item(s)



END



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APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European 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]	1000
2	Cadmium (Cd)	50	50	50	10 ^[b]	100
3	Mercury (Hg)	100	200	200	10 ^[c]	1000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	10 ^[d] / See ^[e, h]	1000 / Negative ^[h]
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 1000
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 1000



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NA = Not applicable

- [a] Test method with reference to EN 62321: 2009, Clause 6.
- [b] Test method with reference to EN 62321: 2009, Clauses 8, 9 and 10.
- [c] Test method with reference to EN 62321: 2009, Clause 7.
- [d] Test method with reference to EN 62321: 2009, Annex C.
- [e] Test method with reference to EN 62321: 2009, Annex B^[g].
- [f] Test method with reference to EN 62321: 2009, Annex A.
- [g] 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. 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 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 Council Directive 2011/65/EU, Article 4(1).
- [h]

Testing Approach [Compliance Test for European Council Directive 2011/65/EU] :

The testing approach was with reference to the following document(s).

1	“RoHS Enforcement Guidance Document Version 1” by EU RoHS Enforcement Authorities Informal Network. (May 2006)
2	“RoHS Regulations - Government Guidance Notes” by United Kingdom Department for Business Innovation & Skills. (February 2011)
3	“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)