



TEST REPORT

LAB NO. : (9317)070-0196
DATE : Mar 24, 2017
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APPLICANT : **FLASHBAY ELECTRONICS**
BLDG B&C XI FENG CHENG IND ZONE, NO.2 FU YUAN
ROAD HE PING, VILLAGE, FU YONG TOWN, SHENZHEN

CONTACT PERSON : LEVIN

DATE OF SUBMISSION : Mar 13, 2017

TEST PERIOD : Mar 13, 2017 to Mar 24, 2017

NO. OF WORKING DAYS : 10

SAMPLE DESCRIPTION : BLUETOOTH SPEAKER

Color: /

Style no. / Model no.: CUBE SPEAKER (CU)

P.O. No.: /

Country of Origin: /

Country of Destination: /

MANUFACTURER : **FLASHBAY ELECTRONICS**
BLDG B&C XI FENG CHENG IND ZONE, NO.2 FU YUAN
ROAD HE PING, VILLAGE, FU YONG TOWN, SHENZHEN

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	

RW

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

NINA REN
SENIOR MANAGER



REMARK

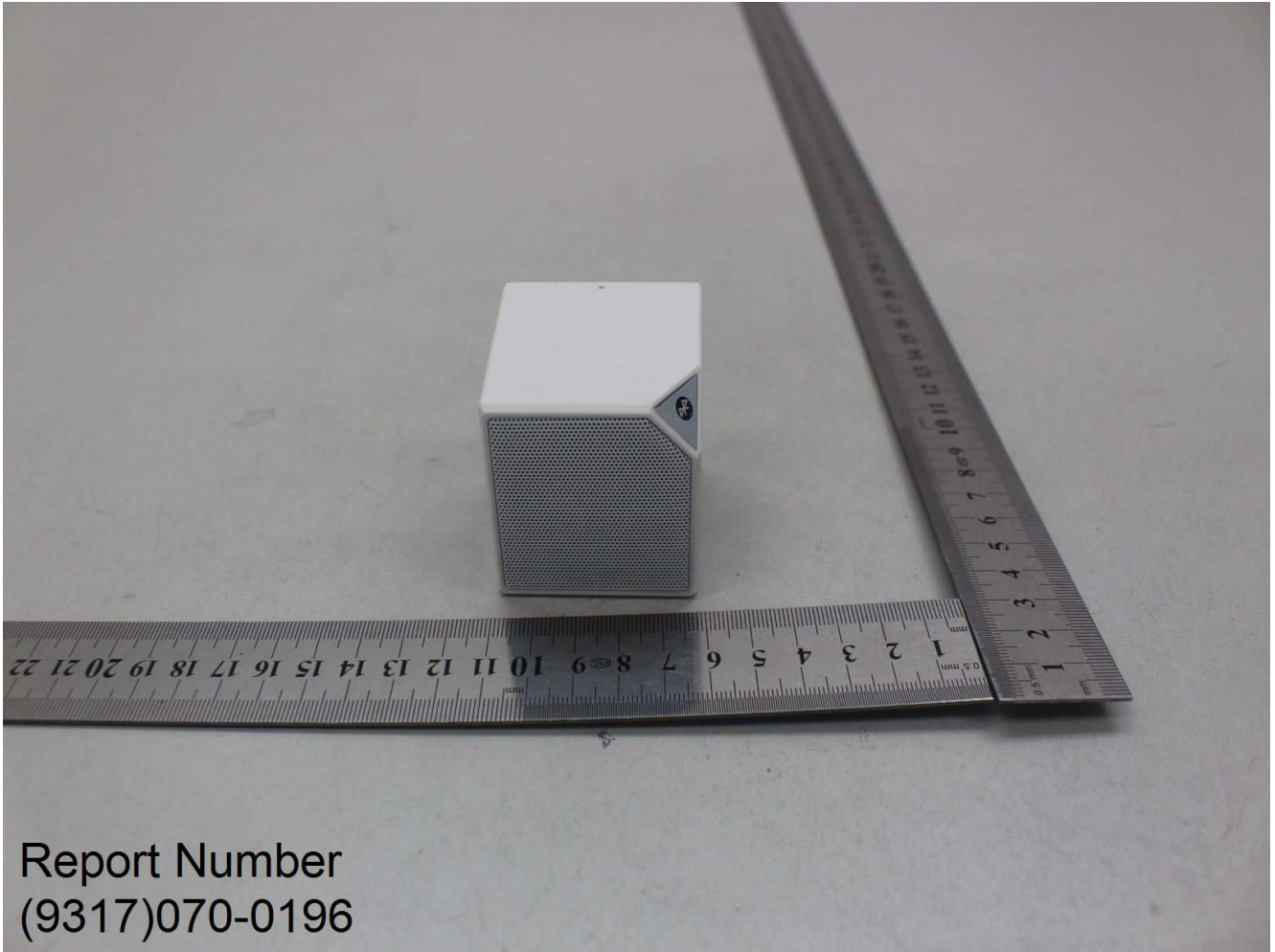
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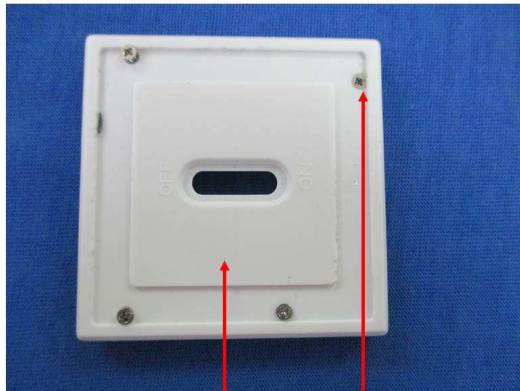
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Photo of the Submitted Sample

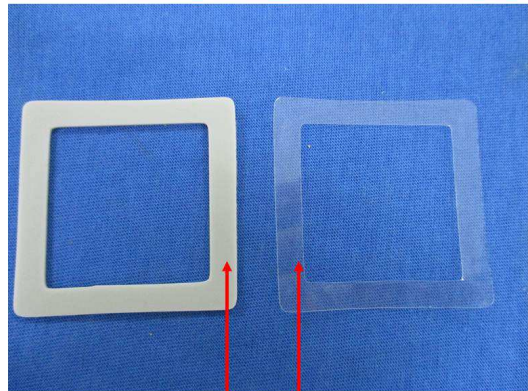


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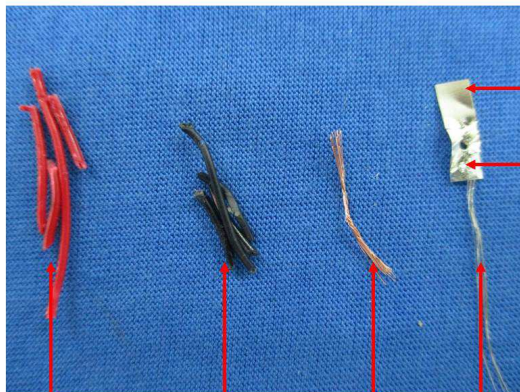
Photograph of test item(s)



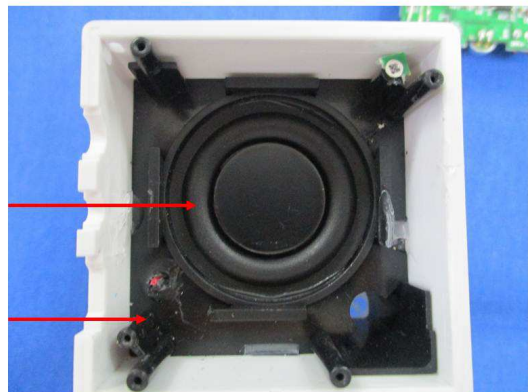
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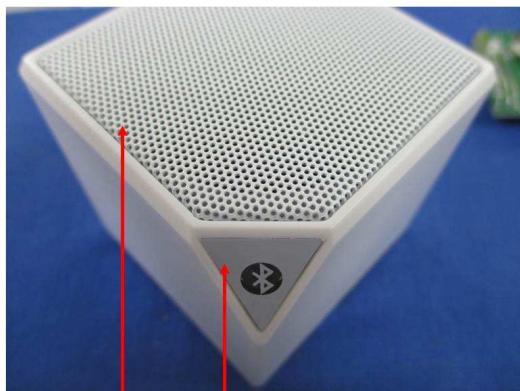
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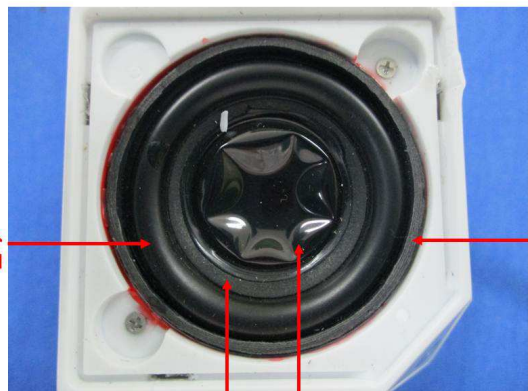
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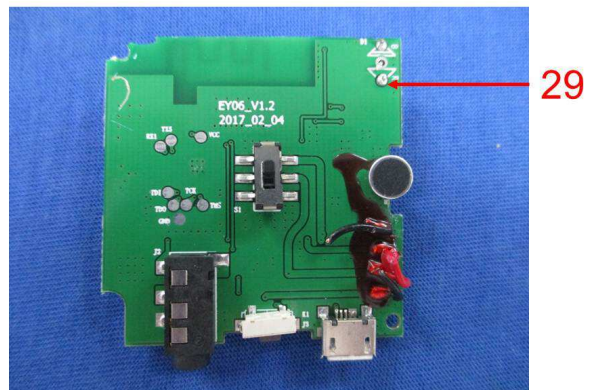
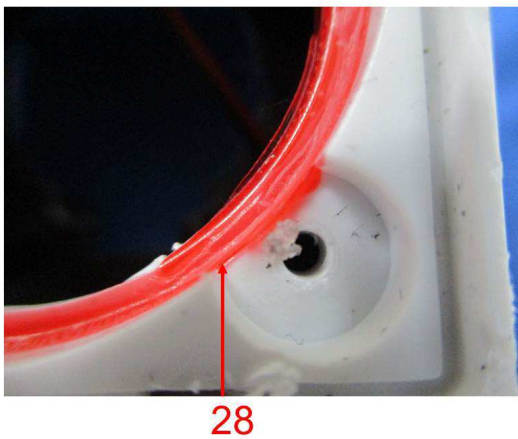
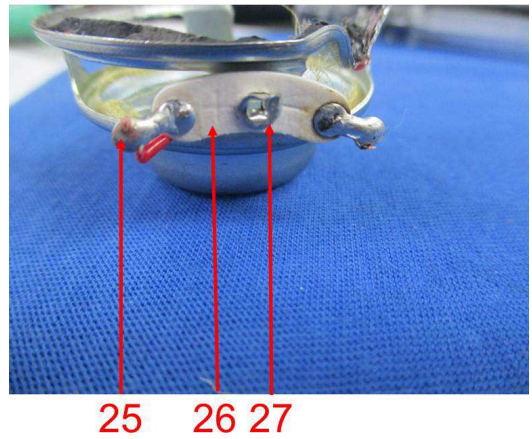
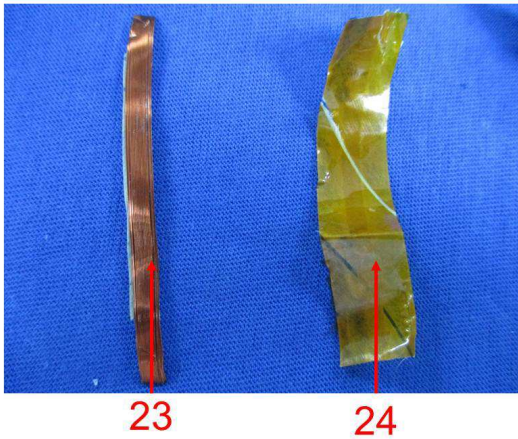
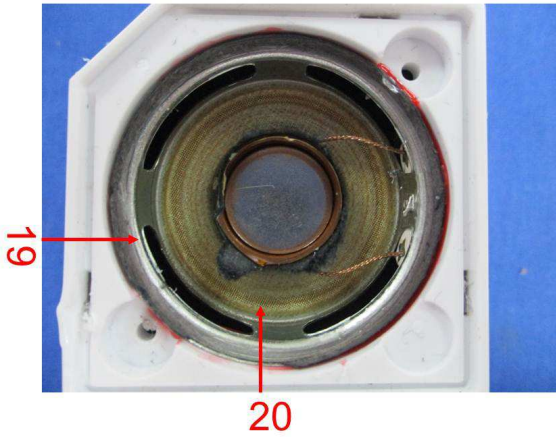
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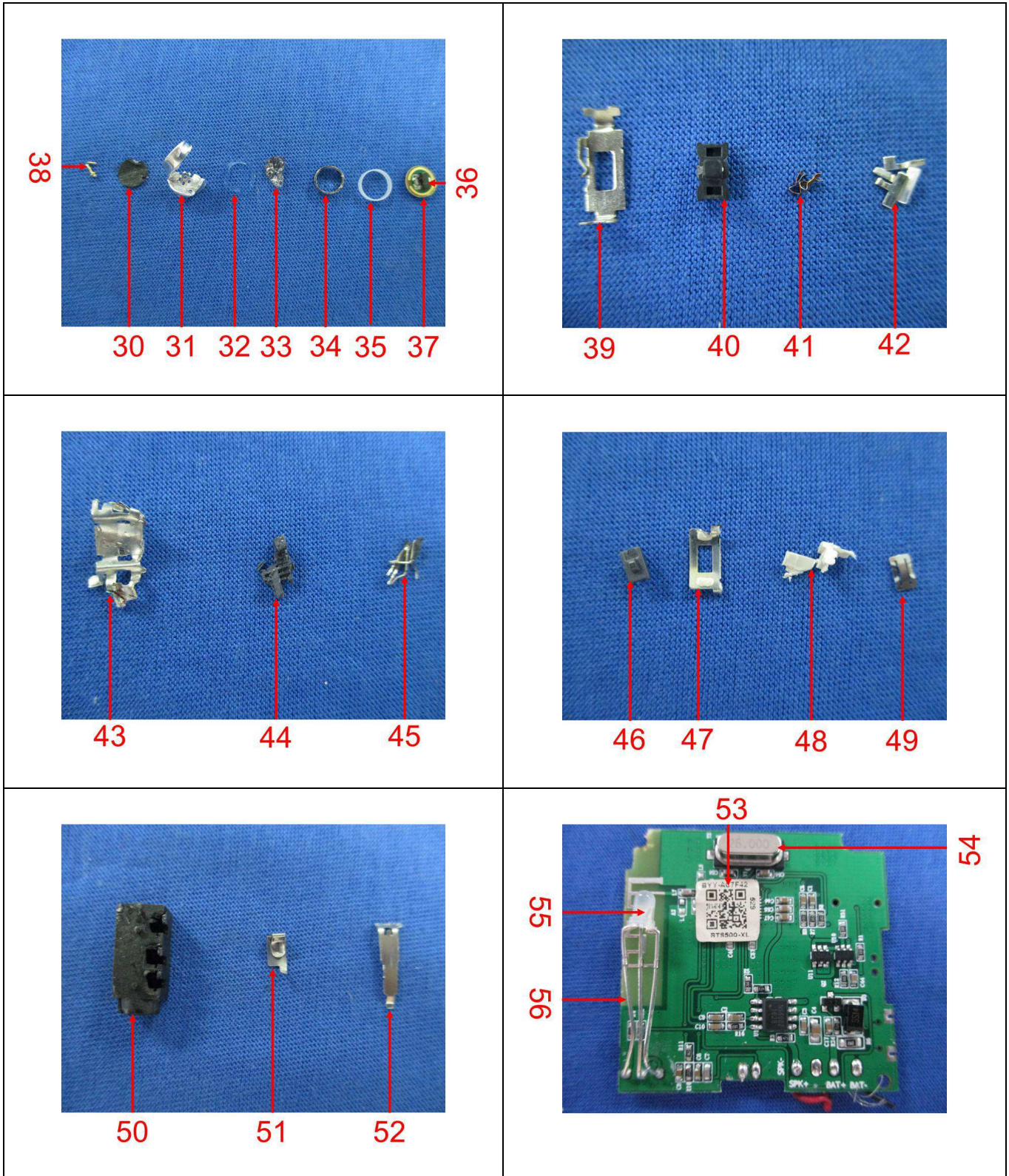


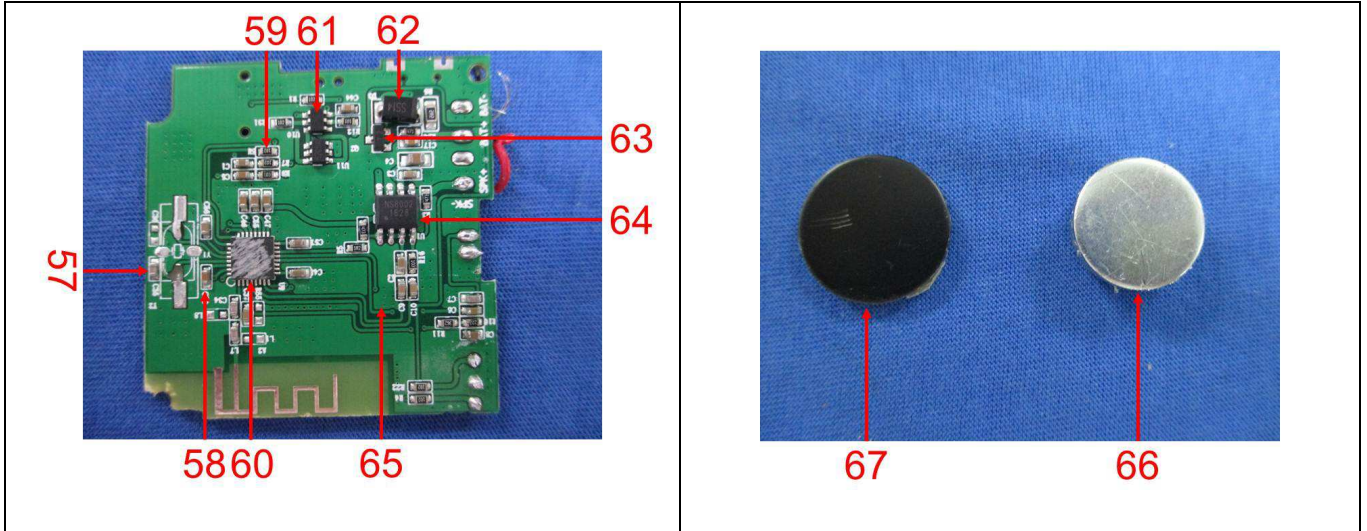
13 14



15 16 17 18









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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 (flap)	-
2	Silvery metal (screw)	-
3	Grey soft plastic (gasket)	-
4	Transparent plastic (foil)	-
5	Red soft plastic (wire jacket)	-
6	Black plastic (wire jacket)	-
7	Coppery metal (wire)	-
8	Silvery metal (wire)	-
9	Silvery solder (on connector)	-
10	Silvery metal (connector)	-
11	Black soft plastic (speaker)	-
12	Black plastic (inner frame)	-
13	Silvery metal with white coating (top)	-
14	Transparent plastic with white coating (bluetooth)	-
15	Black soft plastic (ring)	-
16	Black paper with adhesive (gasket)	-
17	Black soft plastic (drum)	-
18	Dark grey paper (frame)	-
19	Silvery metal (frame)	-
20	Beige fabric (mesh)	-
21	Coppery metal (wire)	-
22	Yellow thread (wire lining)	-
23	Dark brown plated coppery metal (coil)	-
24	Yellow plastic with adhesive (gasket)	-
25	Silvery solder (connector)	-
26	White plastic (plate)	-
27	Silvery metal (connector)	-
28	Red plastic (adhesive)	-
29	Silvery solder (pcb)	-
30	Black paper with adhesive (patch, electron , pcb)	-
31	Silvery metal (flap, electron, pcb)	-
32	Blue plastic (foil, electron, pcb)	-
33	Silvery plastic (foil, electron, pcb)	-
34	Silvery plated golden metal (ring, electron, pcb)	-
35	White plastic (ring, electron, pcb)	-
36	Black body (EC, electron, pcb)	-
37	Green pcb (electron, pcb)	-
38	Golden plated silvery metal (pin, electron, pcb)	-
39	Silvery metal (plate, switch, pcb)	-
40	Black plastic (body, switch, pcb)	-
41	Coppery plated golden metal (gasket, switch, pcb)	-
42	Silvery plated golden metal (pin, switch, pcb)	-



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43	Silvery plated golden metal (frame, charger, pcb)	-
44	Black plastic (body, charger, pcb)	-
45	Silvery plated golden metal (pin, charger, pcb)	-
46	Black plastic (button, switch, pcb)	-
47	silvery plated golden metal (plate, switch, pcb)	-
48	White plastic (body, switch, pcb)	-
49	Silvery metal (gasket, switch, pcb)	-
50	Black plastic (body, pcb)	-
51	Silvery plated golden metal (connector, pcb)	-
52	Silvery plated golden metal (plate, pcb)	-
53	Beige paper with black coating and adhesive (label)	-
54	Silvery body (fuse, pcb)	-
55	Translucent plastic (LED)	-
56	Silvery plated golden metal (pin, LED)	-
57	Pink body (SMD capacitor, pcb)	-
58	Brown body (SMD capacitor, pcb)	-
59	Black/ white body (SMD resistor, pcb)	-
60	Black body (IC, pcb)	-
61	Black body (IC, pcb)	-
62	Black body (diode, pcb)	-
63	Black body (EC, pcb)	-
64	Black body (EC, pcb)	-
65	Green pcb (pcb)	-
66	Silvery metal (magnet)	-
67	Silvery metal with black coating (magnet)	-

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	Negative*	NA	NA	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	ND	ND	ND	PASS
7	ND	ND	ND	ND	NA	NA	PASS
8	ND	ND	ND	ND	NA	NA	PASS
9	ND	ND	ND	ND	NA	NA	PASS
10	ND	ND	ND	Negative*	NA	NA	PASS
11	ND	ND	ND	ND	ND	ND	PASS
12	ND	ND	ND	ND	ND*	895*	PASS
13	ND	ND	ND	Negative*	NA	NA	PASS
14	ND	ND	ND	ND	ND	ND	PASS
15	ND	ND	ND	ND	ND	ND	PASS
16	ND	ND	ND	ND	ND	ND	PASS
17	ND	ND	ND	ND	ND	ND	PASS
18	ND	ND	ND	ND	ND	ND	PASS
19	ND	ND	ND	Negative*	NA	NA	PASS
20	ND	ND	ND	ND	ND	ND	PASS



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21	ND	ND	ND	ND	NA	NA	PASS
22	ND	ND	ND	ND	ND	ND	PASS
23	ND	ND	ND	ND	NA	NA	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
27	ND	ND	ND	ND	NA	NA	PASS
28	ND	ND	ND	ND	ND	ND	PASS
29	ND	ND	ND	ND	NA	NA	PASS
30	ND	ND	ND	ND	ND	ND	PASS
31	ND	ND	ND	ND	NA	NA	PASS
32	ND	ND	ND	ND	ND	ND	PASS
33	ND	ND	ND	ND	ND	ND	PASS
34	ND	ND	ND	ND	NA	NA	PASS
35	ND	ND	ND	ND	NA	NA	PASS
36	ND	ND	ND	ND	ND	ND	PASS
37	ND	ND	ND	ND	ND*	ND*	PASS
38	ND	ND	ND	ND	NA	NA	PASS
39	ND	ND	ND	Negative*	NA	NA	PASS
40	ND	ND	ND	ND	ND	ND	PASS
41	ND	ND	ND	ND	NA	NA	PASS
42	ND	ND	ND	ND	NA	NA	PASS
43	ND	ND	ND	ND	NA	NA	PASS
44	ND	ND	ND	ND	ND	ND	PASS
45	ND	ND	ND	ND	NA	NA	PASS
46	ND	ND	ND	ND	NA	NA	PASS
47	ND	ND	ND	ND	NA	NA	PASS
48	ND	ND	ND	ND	ND	ND	PASS
49	ND	ND	ND	Negative*	NA	NA	PASS
50	ND	ND	ND	ND	ND	ND	PASS
51	ND	ND	ND	ND	NA	NA	PASS
52	ND	ND	ND	ND	NA	NA	PASS
53	ND	ND	ND	ND	ND	ND	PASS
54	ND	ND	ND	ND	ND	ND	PASS
55	ND	ND	ND	ND	ND	ND	PASS
56	ND	ND	ND	ND	NA	NA	PASS
57	ND	ND	ND	ND	ND	ND	PASS
58	ND	ND	ND	ND	ND	ND	PASS
59	ND	ND	ND	ND	ND	ND	PASS
60	ND	ND	ND	ND	ND	ND	PASS
61	ND	ND	ND	ND	ND	ND	PASS
62	>1500 [#]	ND	ND	ND	ND	ND	EXEMPTED [#]
63	ND	ND	ND	ND	ND	ND	PASS
64	ND	ND	ND	ND	ND	ND	PASS
65	ND	ND	ND	ND	ND*	ND*	PASS
66	ND	ND	ND	ND	NA	NA	PASS
67	ND	ND	ND	ND	NA	NA	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



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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.
- #According to Annex III of European Council Directive 2011/65/EU, exemptions were granted a few materials and Clause 7(a) is reiterated here “Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).”. Test Item(s) 62 was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found lead level should be exempted.

END

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. 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					
[j]						



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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)