



TEST REPORT

LAB NO. : (9317)313-0504
DATE : Nov 20, 2017
PAGE : 1 OF 15

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

CONTACT PERSON : LEVIN

DATE OF SUBMISSION : Nov 09, 2017

TEST PERIOD : Nov 10, 2017 to Nov 20, 2017

NO. OF WORKING DAYS : 7

SAMPLE DESCRIPTION : Bluetooth speaker

Color: /

Style no. / Model no.: Ace(AE), Unison(UN)

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	

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: BVCPSP_yinfo@cn.bureauveritas.com
Website: cps.bureauveritas.com

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LAB NO. : (9317)313-0504
DATE : Nov 20, 2017
PAGE : 2 OF 15

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NINA REN
SENIOR MANAGER



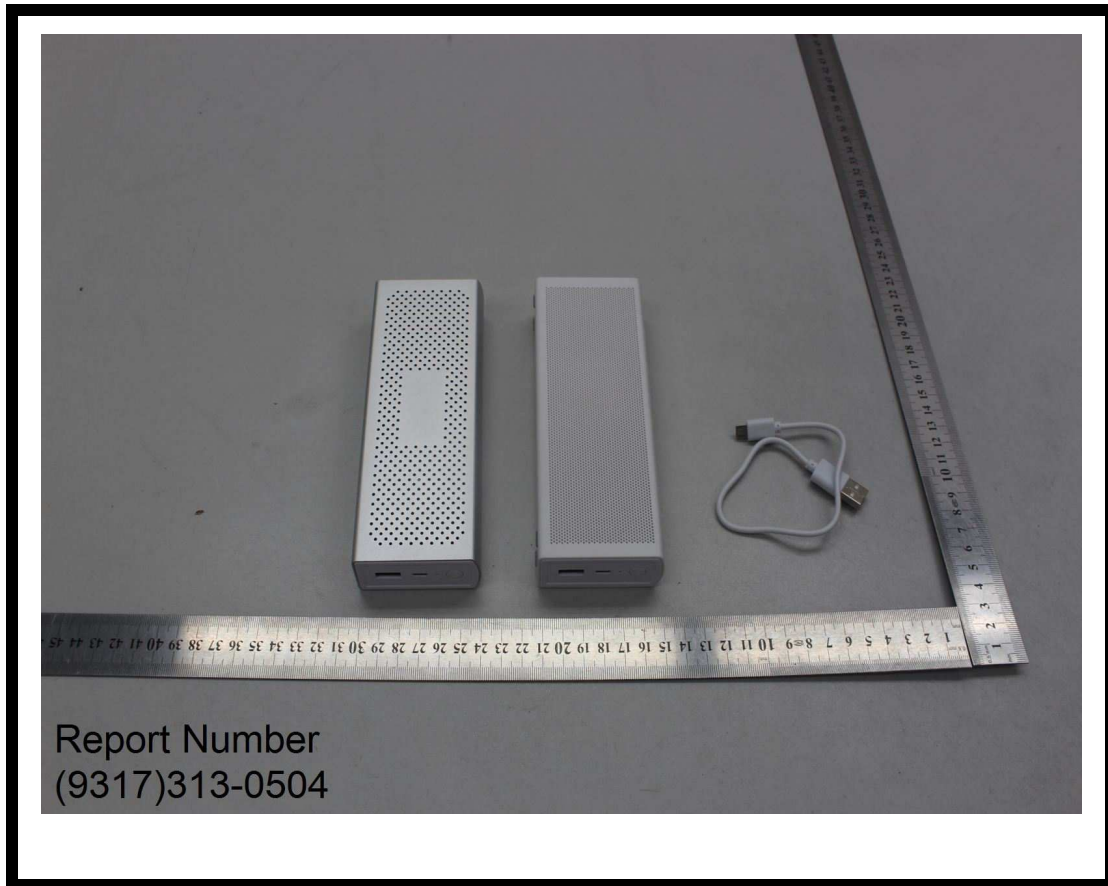
REMARK

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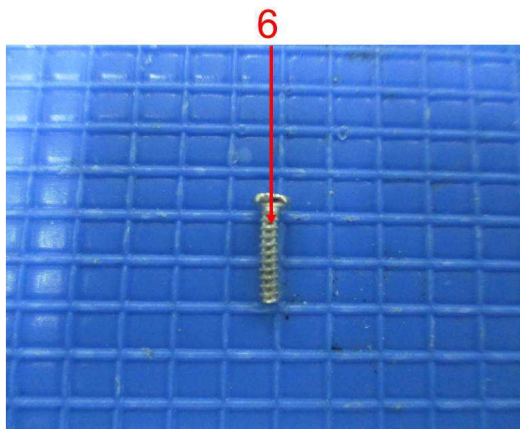
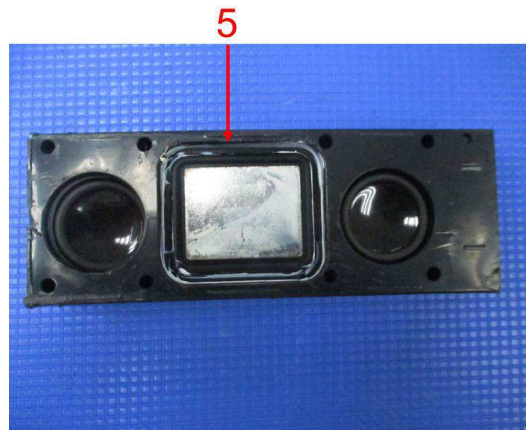
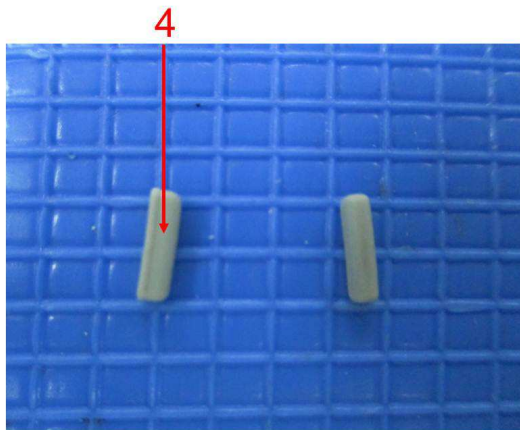
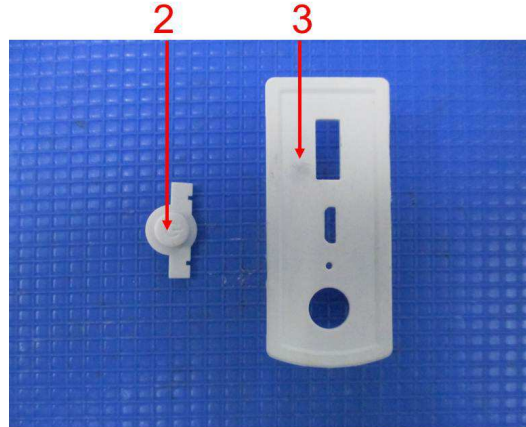
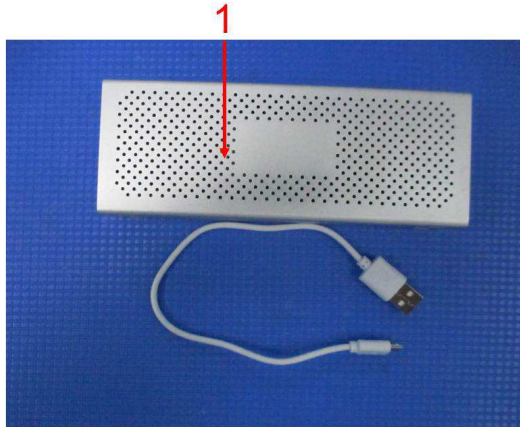
- a) GENERAL TEL: (86)755 83437287
FAX: (86)755 83439100
- b) BUSINESS SZ TEL: (86)755 21534695
FAX: (86)755 83439100
- BUSINESS GZ TEL: (86) 20 87148525
FAX: (86) 20 87148528

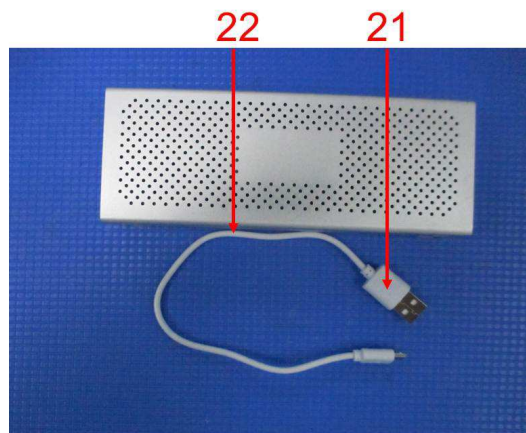
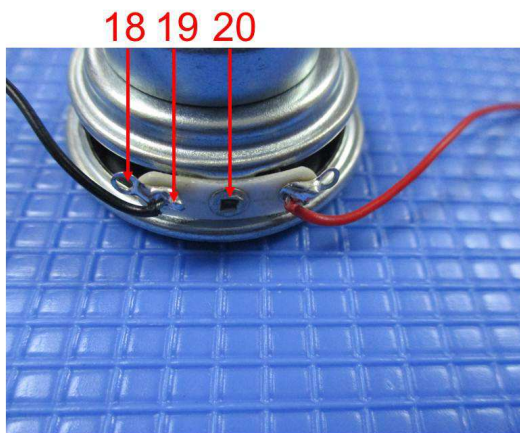
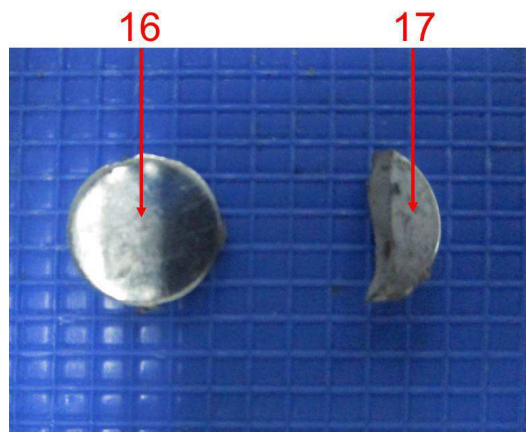
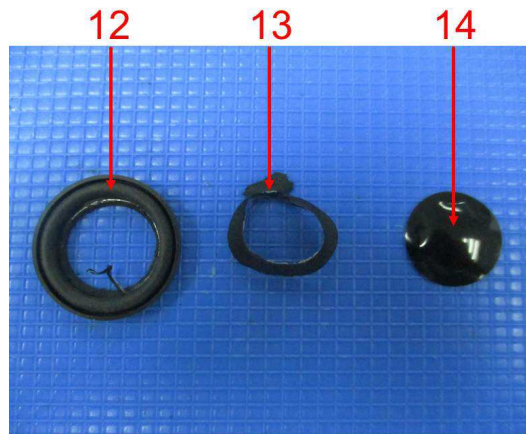
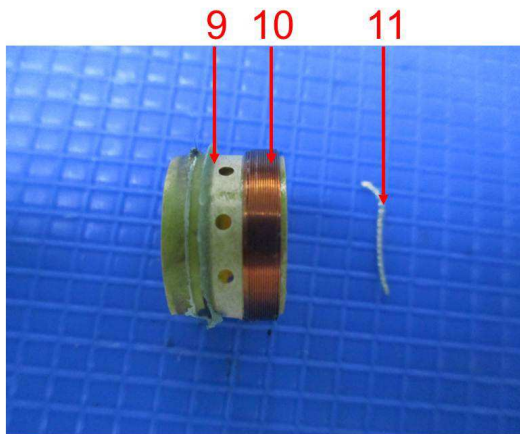
EMAIL: eechemical.sc@cn.bureauveritas.com
WEBSITE: cps.bureauveritas.cn

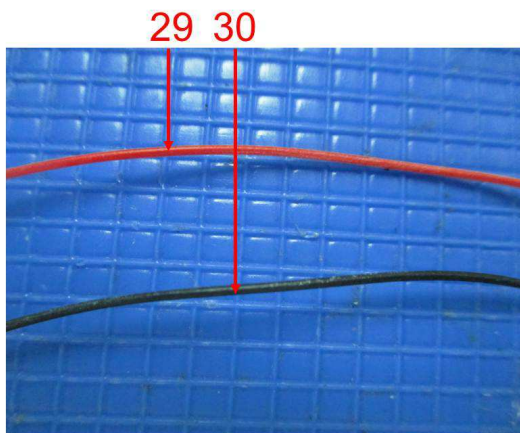
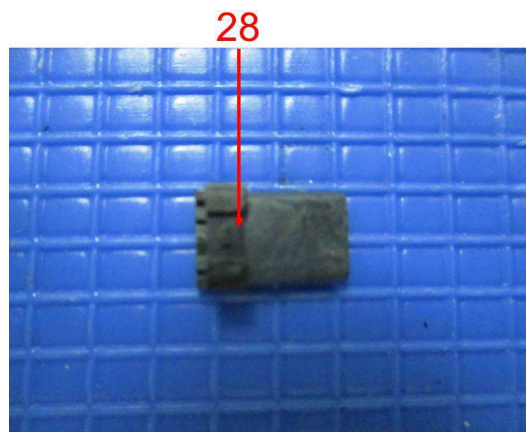
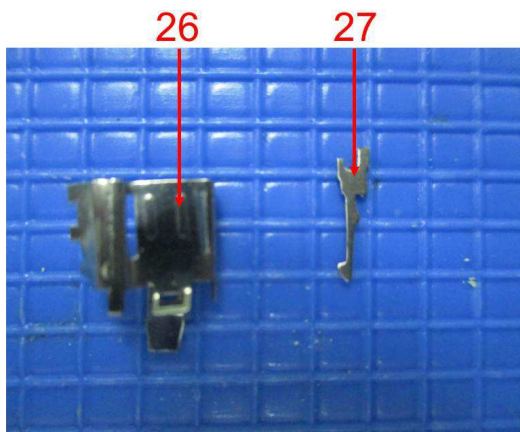
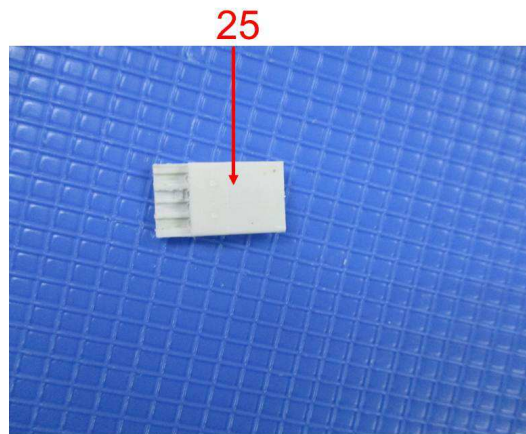
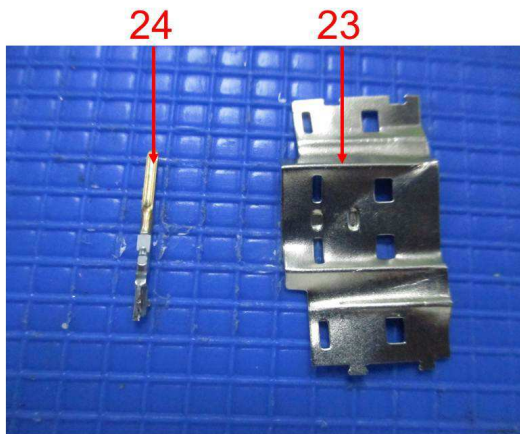
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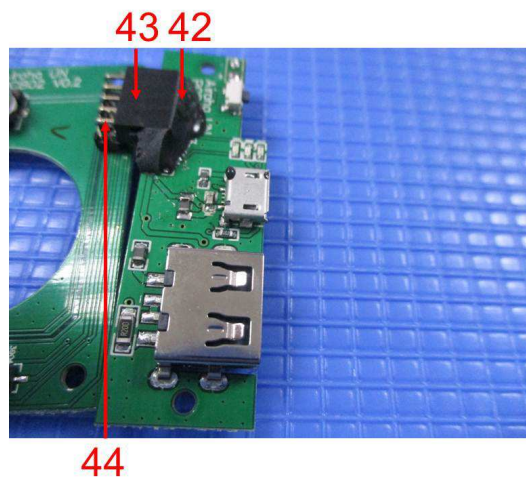
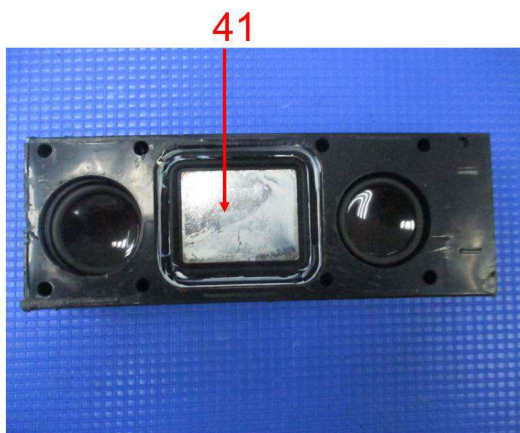
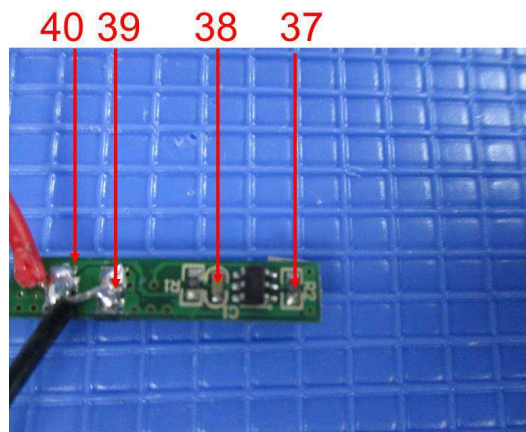
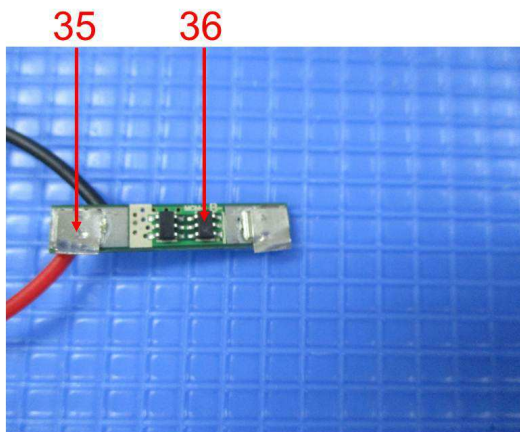
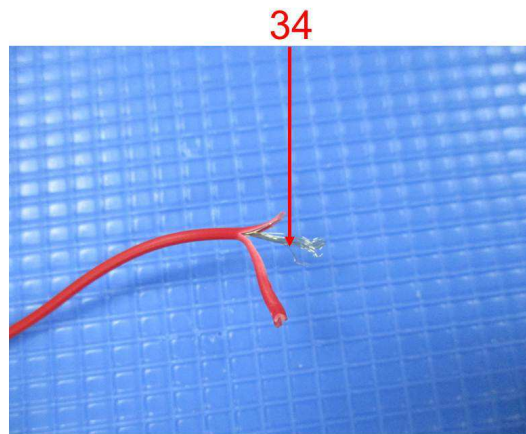
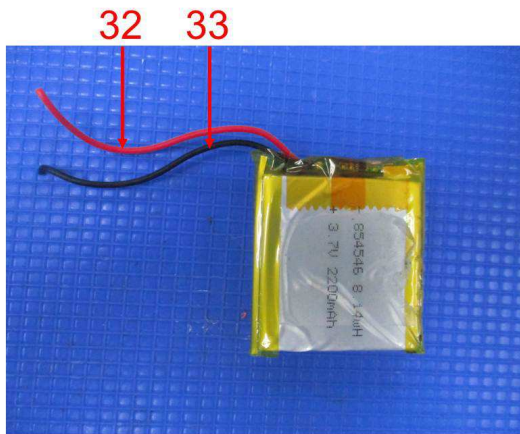


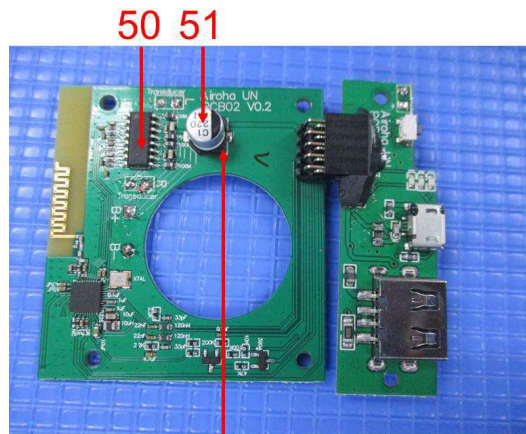
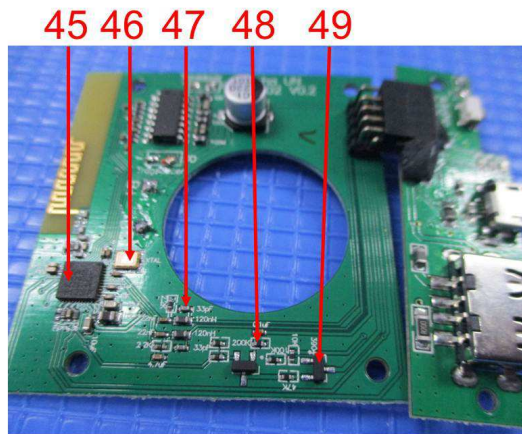
Photograph of test item(s)



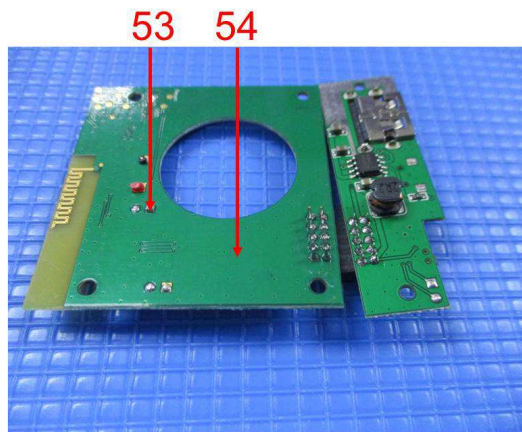




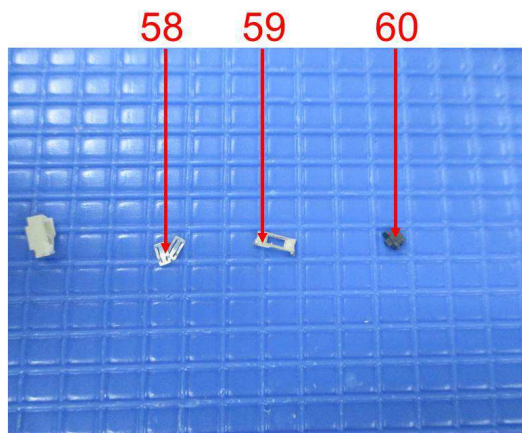




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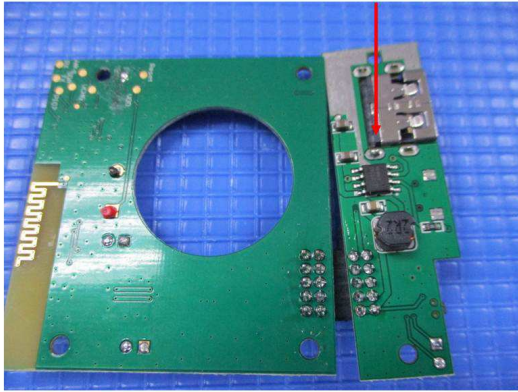


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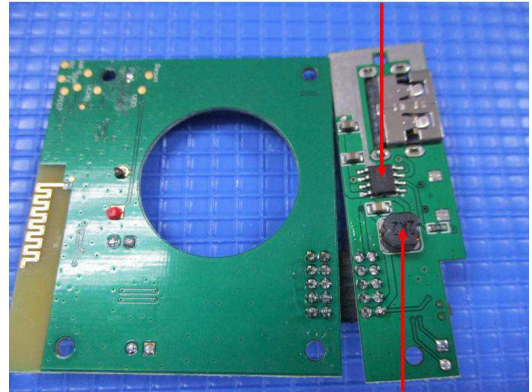


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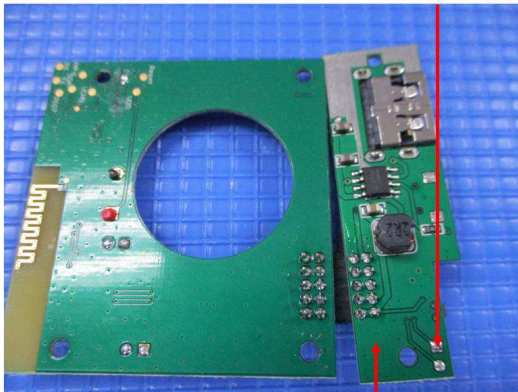


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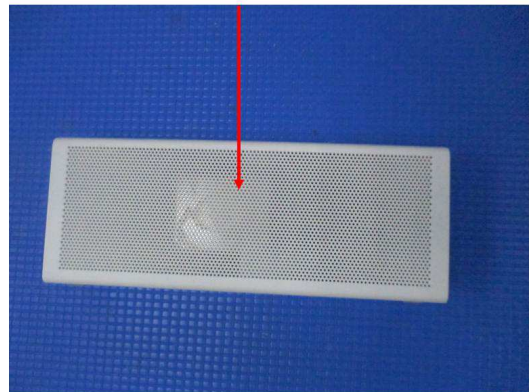
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69



70

71





LAB NO. : (9317)313-0504
DATE : Nov 20, 2017
PAGE : 10 OF 15

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	Silvery metal (case)	-
2	White plastic (button)	-
3	White plastic (cover)	-
4	Grey soft plastic (decoration)	-
5	Black plastic (base)	-
6	Silvery metal (screw)	-
7	Silvery metal (cover, speaker)	-
8	Bone paper (speaker)	-
9	Brown paper (speaker)	-
10	Coppery metal (coil, speaker)	-
11	Silvery metal (speaker)	-
12	Black soft plastic (speaker)	-
13	Black paper (diaphragm, speaker)	-
14	Black plastic (cover, speaker)	-
15	Black fabric (speaker)	-
16	Silvery metal (speaker)	-
17	Silvery magnet (speaker)	-
18	Silvery metal (connector, speaker)	-
19	Silvery solder (speaker)	-
20	Silvery metal (speaker)	-
21	White soft plastic (case, usb)	-
22	White plastic (sleeve, wire, usb)	-
23	Silvery metal (connector, usb)	-
24	Golden metal (pin, usb)	-
25	White plastic (inner case, usb)	-
26	Silvery metal (connector, usb)	-
27	Silvery metal (pin, usb)	-
28	Black plastic (inner case, usb)	-
29	Red rose plastic (wire jacket)	-
30	Black plastic (wire jacket)	-
31	Coppery metal (wire)	-
32	Red plastic (wire jacket)	-
33	Black soft plastic (wire jacket)	-
34	Silvery metal (wire)	-
35	Silvery metal (connector, pcb, battery)	-
36	Black body (smd ic, pcb, battery)	-
37	Silvery printed black body (smd resistor, pcb)	-
38	Brown body (sme capacitor, pcb)	-
39	Silvery solder (pcb, battery)	-
40	Green pcb (pcb, battery)	-
41	Silvery metal (connector base)	-
42	Black soft glue (pcb)	-
43	Black plastic (case, connector, pcb)	-
44	Golden metal (pin, pcb)	-



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LAB NO. : (9317)313-0504
DATE : Nov 20, 2017
PAGE : 11 OF 15

45	Black body (ic, pcb)	-
46	Silvery body (ec, pcb)	-
47	Grey body (smd ec, pcb)	-
48	Black body (smd diode, pcb)	-
49	Black body (smd transistor, pcb)	-
50	Black body (ic, pcb)	-
51	Black printed silvery body (capacitor, pcb)	-
52	Black plastic (base, capacitor, pcb)	-
53	Silvery solder (pcb)	-
54	Green pcb (pcb)	-
55	Silvery printed black body (smd resistor, pcb)	-
56	Black body (smd diode, pcb)	-
57	Bone plastic (case, tack switch, pcb)	-
58	Silvery metal (contact plate, tack switch, pcb)	-
59	Silvery metal (cover, tack switch, pcb)	-
60	Black plastic (tack switch, pcb)	-
61	Silvery metal (connector, pcb)	-
62	Black plastic (inner case, plug, pcb)	-
63	Silvery metal (case, plug, pcb)	-
64	Black plastic (inner case, plug, pcb)	-
65	Golden metal (pin, plug, pcb)	-
66	Grey printed black body (ic, pcb)	-
67	Black core (coil holder, inductor, pcb)	-
68	Copper metal (coil, inductor, pcb)	-
69	Silvery solder (small pcb)	-
70	Green pcb (small pcb)	-
71	White plastic (case)	-

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	NA	NA	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	ND	NA	NA	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	NA	NA	PASS
11	ND	ND	ND	ND	NA	NA	PASS
12	ND	ND	ND	ND	ND	ND	PASS
13	ND	ND	ND	ND	ND	ND	PASS
14	ND	ND	ND	ND	ND	ND	PASS
15	ND	ND	ND	ND	ND	ND	PASS
16	ND	ND	ND	ND	NA	NA	PASS
17	ND	ND	ND	Negative*	NA	NA	PASS
18	ND	ND	ND	ND	NA	NA	PASS



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LAB NO. : (9317)313-0504
DATE : Nov 20, 2017
PAGE : 12 OF 15

-	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)	-	-	-	-	-	-	-
19	ND	ND	ND	ND	NA	NA	PASS
20	ND	ND	ND	ND	NA	NA	PASS
21	ND	ND	ND	ND	ND	ND	PASS
22	ND	ND	ND	ND	ND	ND	PASS
23	ND	ND	ND	ND	NA	NA	PASS
24	ND	ND	ND	ND	NA	NA	PASS
25	ND	ND	ND	ND	ND	ND	PASS
26	ND	ND	ND	Negative*	NA	NA	PASS
27	ND	ND	ND	ND	NA	NA	PASS
28	ND	ND	ND	ND	ND	ND	PASS
29	ND	ND	ND	ND	ND	ND	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	ND	ND	PASS
39	ND	ND	ND	ND	ND	ND	PASS
40	ND	ND	ND	ND	ND*	ND*	PASS
41	ND	ND	ND	ND	NA	NA	PASS
42	ND	ND	ND	ND	ND	ND	PASS
43	ND	ND	ND	ND	ND*	ND*	PASS
44	ND	ND	ND	ND	NA	NA	PASS
45	ND	ND	ND	ND	ND	ND	PASS
46	ND	ND	ND	ND	NA	NA	PASS
47	ND	ND	ND	ND	ND	ND	PASS
48	ND	ND	ND	ND	ND	ND	PASS
49	ND	ND	ND	ND	ND	ND	PASS
50	ND	ND	ND	ND	ND	ND	PASS
51	ND	ND	ND	ND*	ND	ND	PASS
52	ND	ND	ND	ND	ND	ND	PASS
53	ND	ND	ND	ND	NA	NA	PASS
54	ND	ND	ND	ND	ND*	ND*	PASS
55	ND	ND	ND	ND	ND	ND	PASS
56	ND	ND	ND	ND	ND	ND	PASS
57	ND	ND	ND	ND	ND	ND	PASS
58	ND	ND	ND	Negative*	NA	NA	PASS
59	ND	ND	ND	ND	NA	NA	PASS
60	ND	ND	ND	ND	ND	ND	PASS
61	ND	ND	ND	ND	NA	NA	PASS
62	ND	ND	ND	ND	ND	ND	PASS
63	ND	ND	ND	ND	NA	NA	PASS
64	ND	ND	ND	ND	ND	ND	PASS
65	ND	ND	ND	ND	NA	NA	PASS



LAB NO. : (9317)313-0504
 DATE : Nov 20, 2017
 PAGE : 13 OF 15

-	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)	-	-	-	-	-	-	-
66	ND	ND	ND	ND	ND	ND	PASS
67	ND	ND	ND	ND*	NA	NA	PASS
68	ND	ND	ND	ND	NA	NA	PASS
69	ND	ND	ND	ND	NA	NA	PASS
70	ND	ND	ND	ND	ND	ND	PASS
71	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 %

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.
- 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.

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] :

Compliance Test for European Parliament and Council Directive 2011/65/EC [1]						
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: 2017.

^[d] Polymers and Electronics - Test method with reference to European Standard EN 62321-7-2: 2017.

^[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



LAB NO. : (9317)313-0504
DATE : Nov 20, 2017
PAGE : 15 OF 15

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)

END