



Test Report

Applicant : RICON TECHNOLOGIES FZE
Address : Ras Al Khaimah, UAE P.O. Box 16111

Manufacturer : RICON TECHNOLOGIES FZE
Address : Ras Al Khaimah, UAE P.O. Box 16111

Sample Name : Cellular Router
Sample Model : S9922

Sample received Date : April 3, 2013
April 15, 2013
April 23, 2013

Testing Period : April 3, 2013 ~ April 16, 2013
April 23, 2013 ~ April 24, 2013

Testing Requested : In accordance with the RoHS Directive 2011/65/EU and its subsequent amendments.

Testing Method : Please refer to next page

Testing Results : Please refer to next page(s).

Conclusion : Based on the performed tests on submitted sample(s), the results Comply with the RoHS Directive 2011/65/EU and its subsequent amendments.

For and on behalf of
Shenzhen Huatongwei International Inspection Co., Ltd.

Lab Manager Calor Li

R/C: 11414





- Testing Method (s)** : **Tests was performed for the samples indicated by the photos in the report with Test Methods reference to IEC 62321:2008 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.**
- (1) Screening by XRF Spectroscopy:** according to IEC 62321:2008 (Edition 1.0) Part 6.
- (2) Chemical Test Method**
- a. Determination of Lead, Cadmium and Mercury by ICP-OES:** according to IEC 62321:2008 (Edition 1.0) Part 7 and 8, Part 7 and 9 or Part 7 and 10.
- b. Determination of hexavalent chromium (Cr(VI)) in polymers and electronics by the colorimetric method:** according to IEC 62321:2008 (Edition 1.0) Annex C.
- c. Determination of hexavalent chromium (Cr(VI)) in colourless and coloured corrosion-protected coatings on metals:** according to IEC 62321:2008 (Edition 1.0) Annex B.
- d. Determination of PBBs and PBDEs by GC-MS:** according to IEC 62321:2008 (Edition 1.0) Annex A.





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
1	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
2	Silver color metal	Cd	IN	Cd:22.7 Pb:2.54×10 ⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
3	White plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
4	Silver color metal wire	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
5	Silver color metal	Cd	IN	Cd:19.3 Pb:2.30×10 ⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
6	Red plastic ring	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
7	Copper color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
8	White plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
9	Golden color metal plug	Cd	ND	Pb: 2.17×10^4 See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
10	Transparent plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
11	Golden color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
12	Grey plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
13	Grey plastic (cable jacket)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
14	Multicolor plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
15	Multicolor plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
16	Multicolor plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
17	Multicolor plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
18	Green plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
19	Brown plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
20	Blue plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
21	Yellow plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
22	Copper color metal wire	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
23	Golden color metal	Cd	IN	Cd: 29.6 Pb: 2.36 × 10⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
24	Black plastic tube	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
25	Golden color metal plug	Cd	ND	Pb: 1.22 × 10⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
26	Red plastic ring	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
27	Copper color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
28	Golden color metal	Cd	IN	Cd:25.0 Pb: 2.67 × 10⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
29	Black plastic (cable jacket)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
30	White plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
31	Silver color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
32	Copper color metal	Cd	IN	Cd:25.5 Pb: 2.68 × 10⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
33	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
34	White plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
35	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
36	Silver color metal with black coating	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
37	Silver color metal with black coating	Cd	ND	Pb:48.1	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
38	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
39	Black plastic label	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
40	Copper color metal	Cd	IN	Cd:53.6 Pb: 3.15×10⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
41	Silver color metal (solder)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
42	Yellow plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
43	Silver color metal	Cd	ND	Cr(VI): Negative	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	IN		PASS
		PBBs	NA		PASS
		PBDEs			PASS
44	Silver color metal (magnet)	Cd	ND	Cr(VI): Negative	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	IN		PASS
		PBBs	NA		PASS
		PBDEs			PASS
45	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
46	Silver color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
47	Black metal screw	Cd	ND	Cr(VI): Negative	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	IN		PASS
		PBBs	NA		PASS
		PBDEs			PASS
48	Blue plastic label	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
49	Green paper label with black printing	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
50	Silver color metal with black coating	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
51	Silver color metal with black coating	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
52	Silver color metal screw	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
53	Red plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
54	Golden color metal	Cd	IN	Cd: 9.91 Pb: 1.45 × 10⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
55	White plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
56	Golden color metal plug	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
57	Golden color metal	Cd	IN	Cd:41.4 Pb: 2.34×10 ⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
58	Black plastic tube	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
59	White plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
60	Grey plastic (cable jacket)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
61	Golden color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
62	Transparent plastic (wire insulation)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
63	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
64	Black plastic	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
65	Silver color metal plug	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
66	Silver color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
67	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
68	Black plastic	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
69	Silver color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
70	Silver color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
71	Black plastic	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
72	Black plastic	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
73	Golden color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
74	Yellow ceramic capacitor	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
75	Capacitor	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
76	Black plastic	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
77	Black plastic (IC)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
78	Black plastic (triode)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
79	Inductor	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
80	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
81	Blue ceramic capacitor	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
82	Black plastic	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
83	Black plastic (IC)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
84	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
85	Metal with black coating	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
86	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
87	Crystal oscillator	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
88	Silver color metal	Cd	ND	Pb: 2.71×10^4 See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
89	Yellow material	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
90	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
91	Black plastic (IC)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
92	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
93	Golden color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
94	Green plastic (LED)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
95	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
96	Silver color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
97	Silver color metal screw	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
98	White plastic label with black printing	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
99	Silver color metal with yellow plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
100	White plastic label with black printing	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
101	Silver color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
102	Black plastic (IC)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
103	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
104	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
105	White & red plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
106	Black material with white material	Cd	ND	Pb: see remark (2)	PASS
		Pb	>1300		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
107	Black material with white material	Cd	ND	Pb: see remark (2)	PASS
		Pb	>1300		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
108	Black plastic (diode)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
109	Black plastic (triode)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
110	Inductor	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
111	Crystal oscillator	Cd	ND	Pb: 3.06 × 10⁴ See remark (1)	PASS
		Pb	IN		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
112	Black plastic (IC)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
113	Black plastic (IC)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
114	Black plastic	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
115	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
116	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
117	Black plastic (IC)	Cd	ND	Pb: see remark (3)	PASS
		Pb	>1300		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
118	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
119	Green PCB	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
120	Black plastic	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
121	Yellow plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
122	Black plastic	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
123	Silver color metal	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
124	Metal spring	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
125	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
126	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
127	Black plastic (IC)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
128	Black plastic (IC)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS





Part No.	Part Name	Restricted Substance	Results of EDXRF ⁽¹⁾	Result of Chemical Testing ⁽²⁾	Conclusion on RoHS
129	SMD capacitor	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
130	Black plastic (triode)	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
131	White paper label with black printing	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS
132	Silver color metal (solder)	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	NA		PASS
		PBDEs			PASS
133	Green PCB	Cd	ND	PBBs/ PBDEs: ND	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	IN		PASS
		PBDEs			PASS
134	Grey plastic label with black printing	Cd	ND	\	PASS
		Pb	ND		PASS
		Hg	ND		PASS
		Cr(VI)	ND		PASS
		PBBs	ND		PASS
		PBDEs			PASS

Note:

- (1) (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr (VI) .
- (b) Results are obtained by ED-XRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr (VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321:2008(unit: mg/kg)





Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	---	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

BL = Below Limit, OL = Over Limit, LOD = Limit of Detection,

- (c) > = More than, IN = Inconclusive, NA = Not applicable,
- (d) The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition
- (2) (a) Unit: mg/kg, ND = Not detected (<MDL), \ = Not available.
- (b) Unit and Method Detection Limit (MDL) in chemical test

Test Items	Pb	Cd	Hg
Units	mg/kg	mg/kg	mg/kg
MDL	2	2	2

The MDL for single compound of PBBs & PBDEs is 5 mg/kg and MDL of Cr (VI) for polymer & composite sample is 2 mg/kg.

- (c) According to IEC 62321:2008, result on Cr(VI) for metal sample is shown as Positive/Negative.
- # Negative = Absence of Cr(VI) coating, indicates the result accord with RoHS directive.
- (3) RoHS limit:

Restricted substances	Cd	Pb	Hg	Cr (VI)	PBBs	PBDEs
RoHS limit	100	1000	1000	1000	1000	1000

Remark:

- (1) According to the product specification from client, **No.2、No.5、No.9、No.23、No.25、No.28、No.32、No.40、No.54、No.57、No.88、No.111** is copper alloy, while Lead as an alloying element in copper alloy containing up to 4.0% Lead by weight is exempted by Directive 2011/65/EU of the European Parliament and of the council of 8 June 2011.
- (2) According to the declaration from client, the source of Lead in **No.106、No.107** could be from the electronic ceramic parts and the high melting temperature type solder, while Lead in electronic ceramic parts is exempted by RoHS Directive 2011/65/EU of the European Parliament and of the council of 8 June 2011, and Lead in high melting temperature type solders above 85% by weight is exempted by RoHS Directive 2011/65/EU of the European Parliament and of the council of 8 June 2011.
- (3) According to the declaration from client, the source of Lead in **No.117** could be from the high melting temperature type solder, while Lead in high melting temperature type solders above 85% by weight is exempted by RoHS Directive 2011/65/EU of the European Parliament and of the council of 8 June 2011.

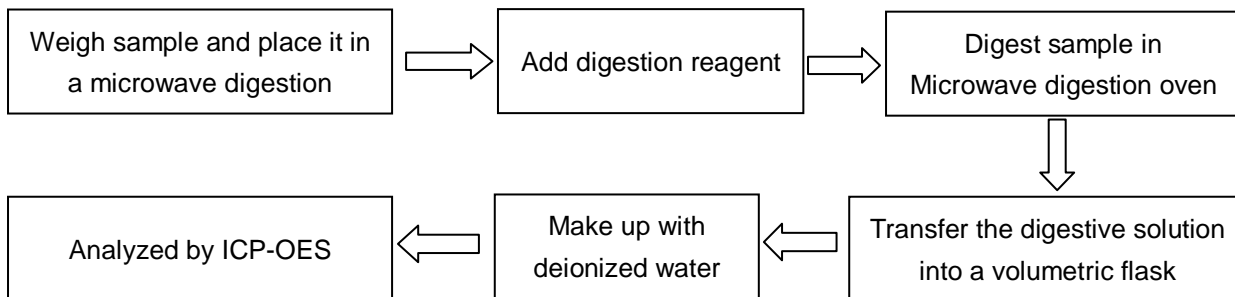




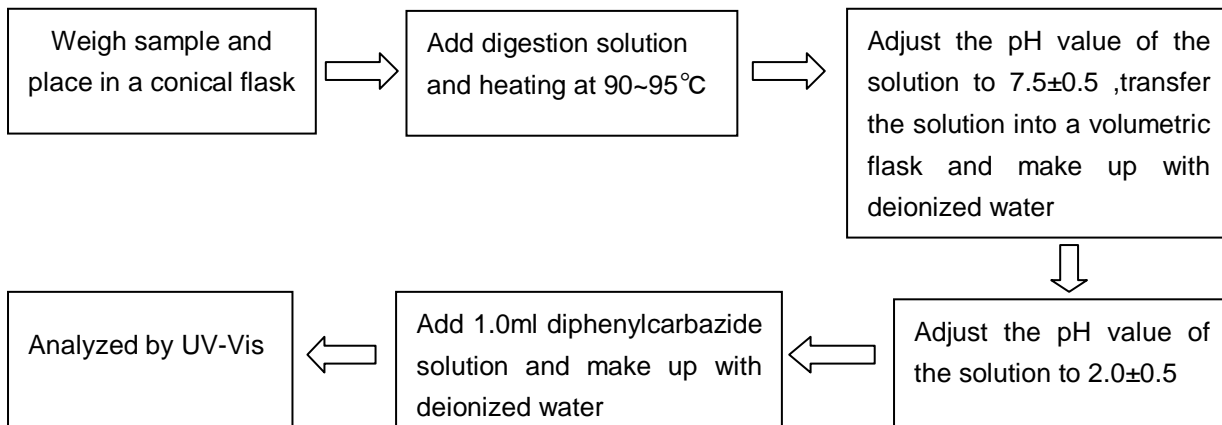
(4) The tested components **No.43**、**No.80**、**No.132** were replaced by the client in **April 23, 2013**.

Test Process:

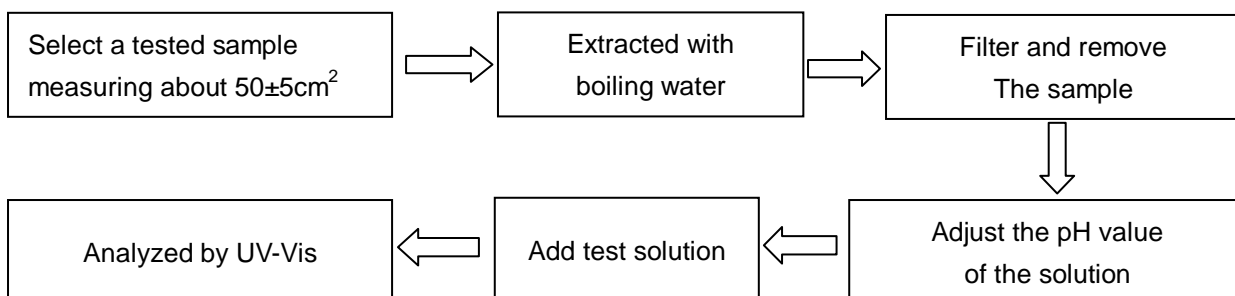
1. Lead(Pb)、Cadmium (Cd)、Mercury(Hg)



2. Hexavalent Chromium(Cr(VI)) (Alkaline extraction)

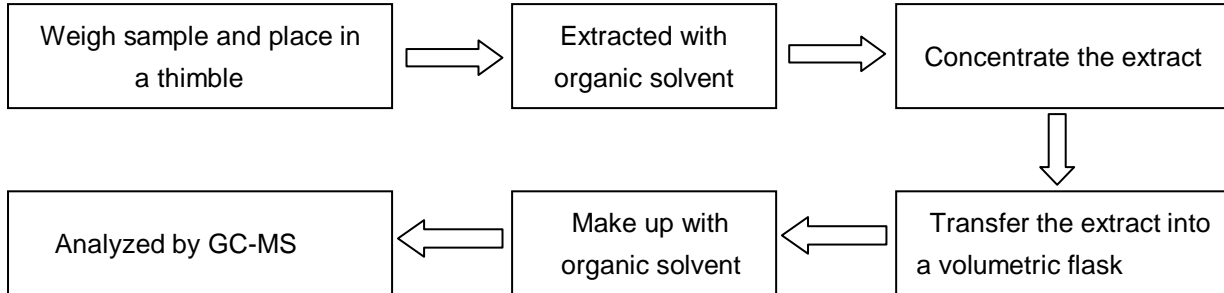


3. Hexavalent Chromium(Cr(VI)) (Boiling water extraction)



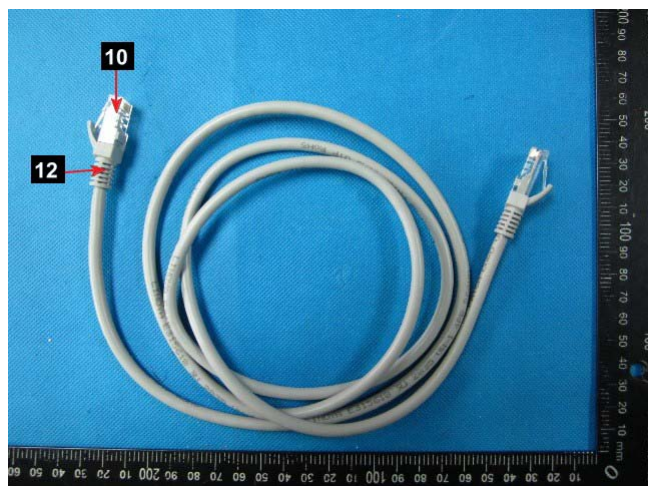
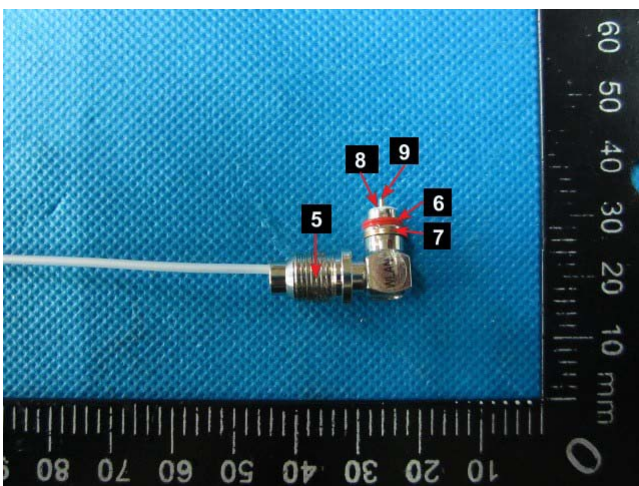
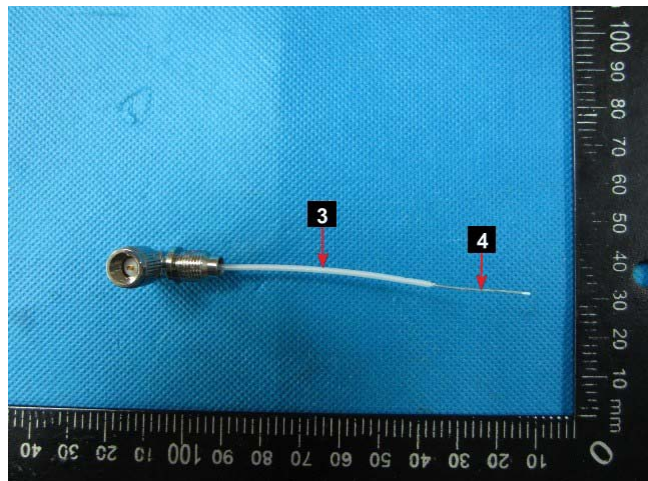
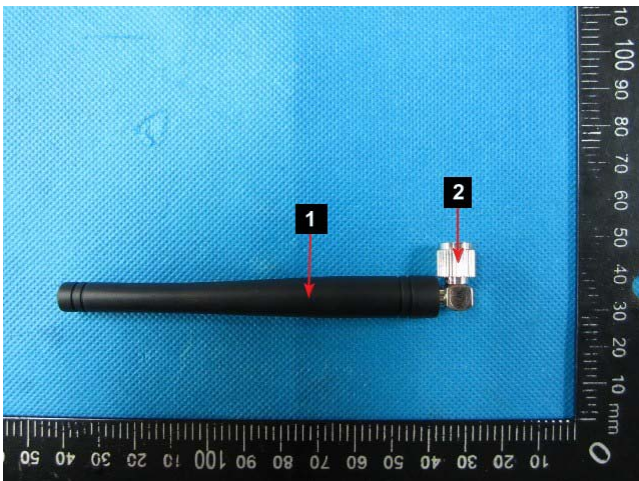


4. PBBs /PBDEs



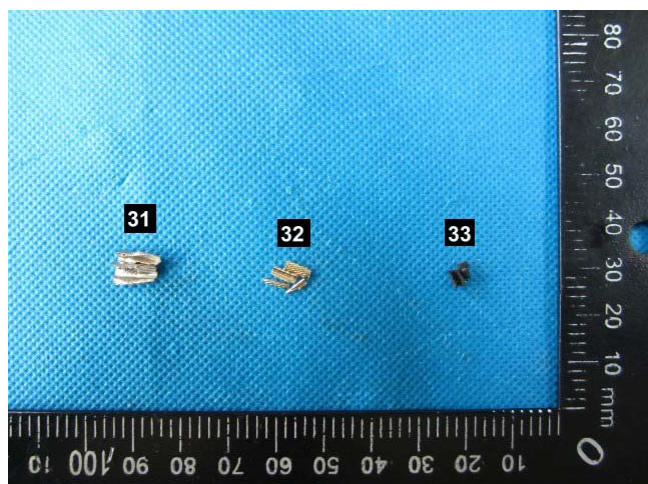
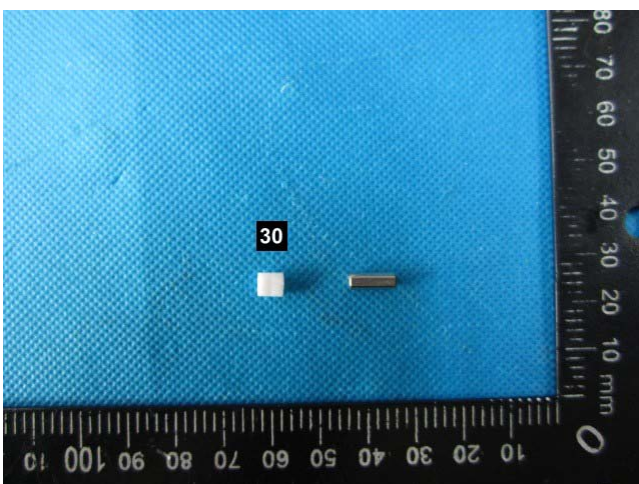
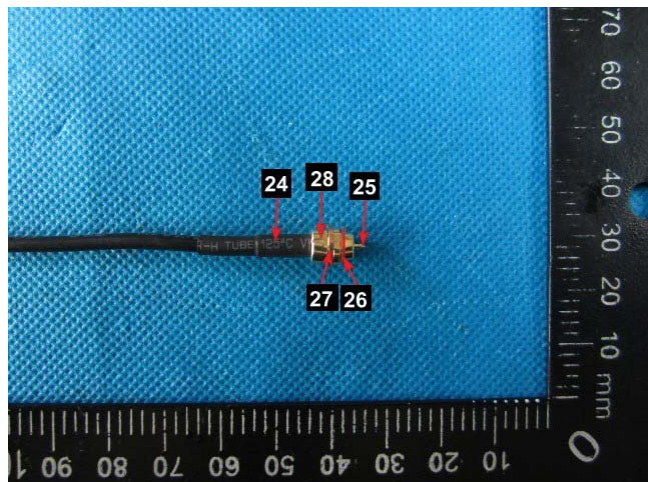
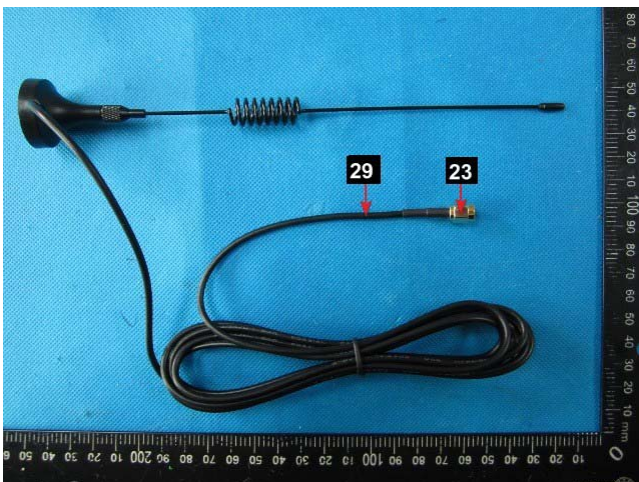
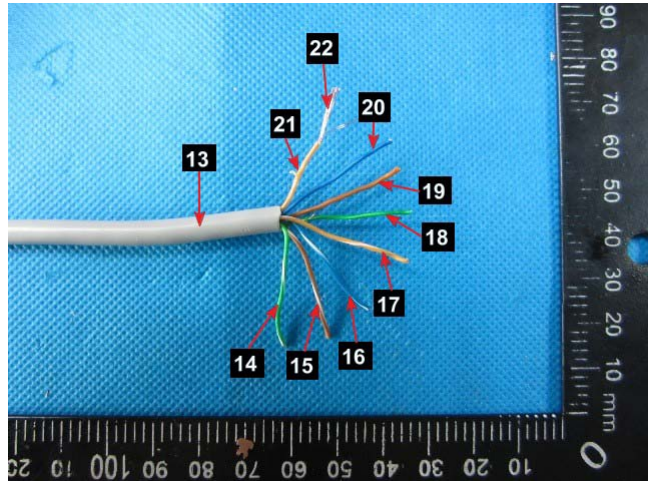
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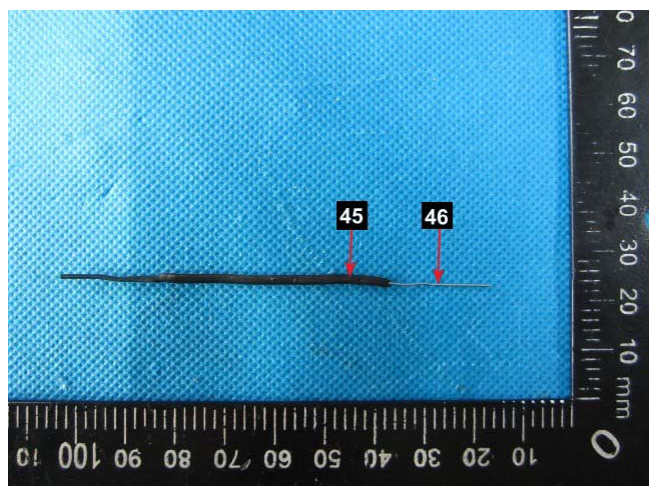
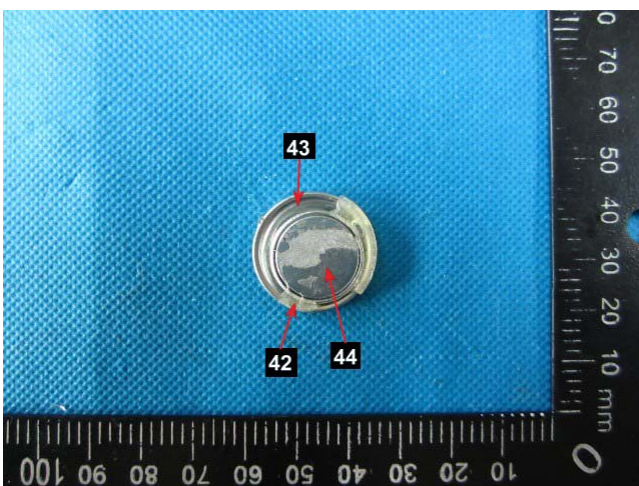
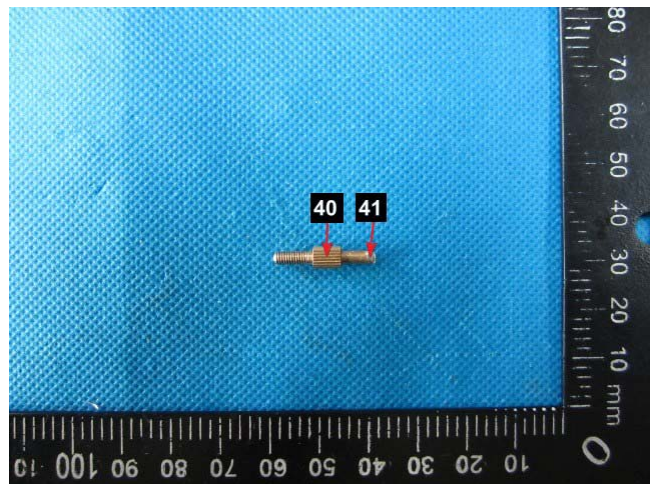
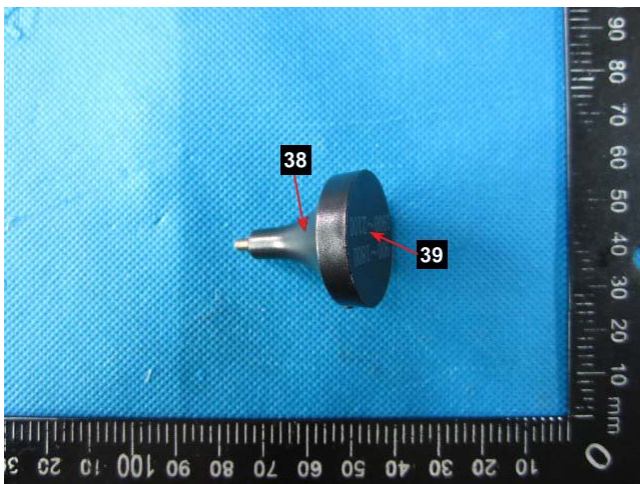
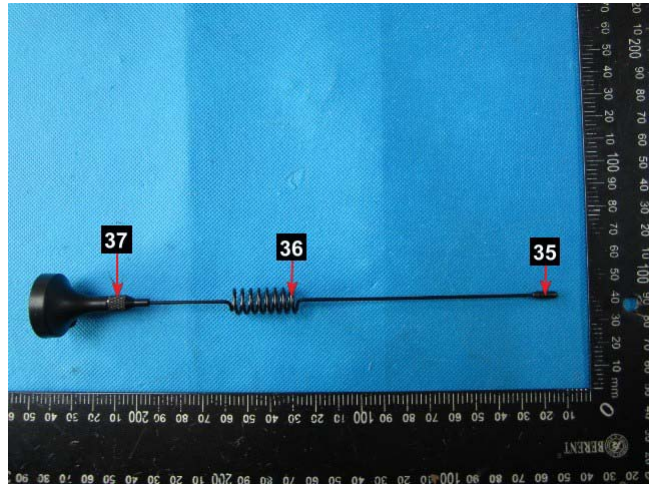
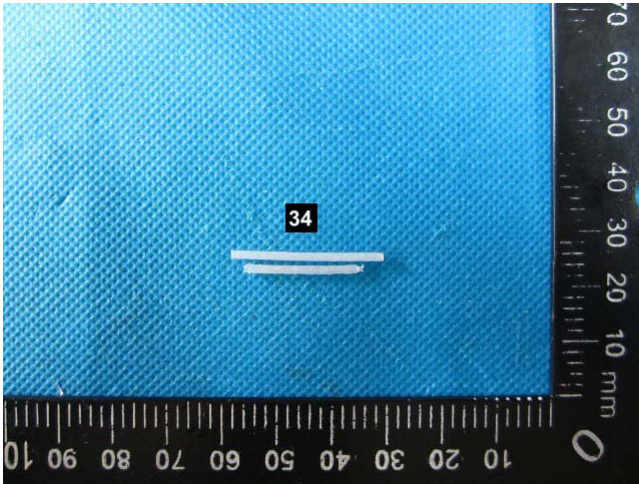


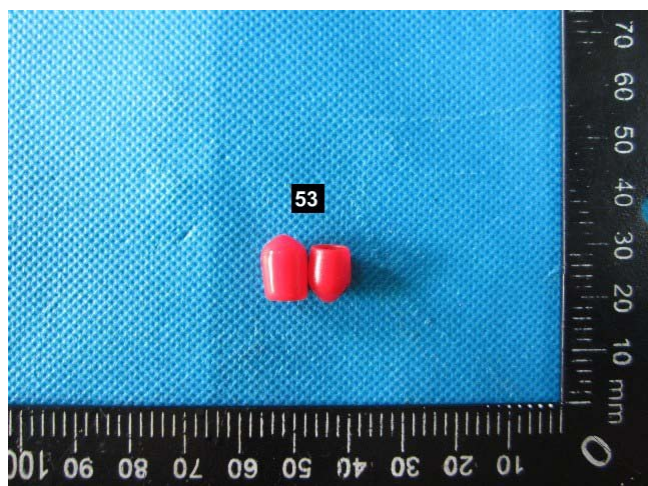
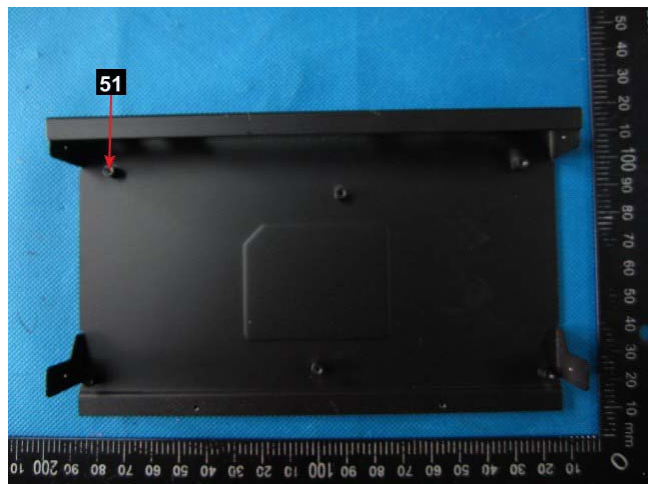
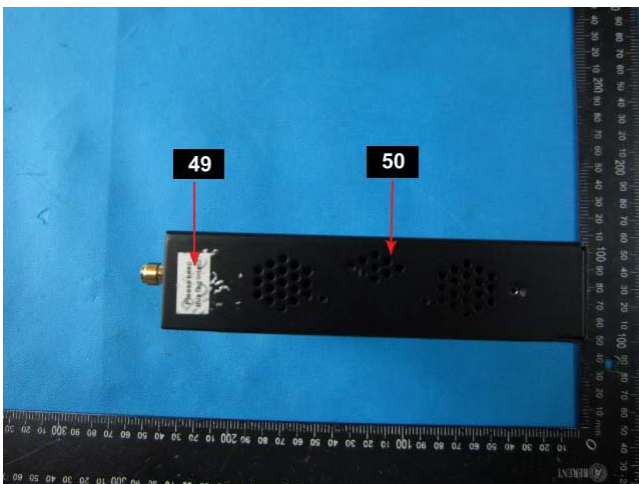
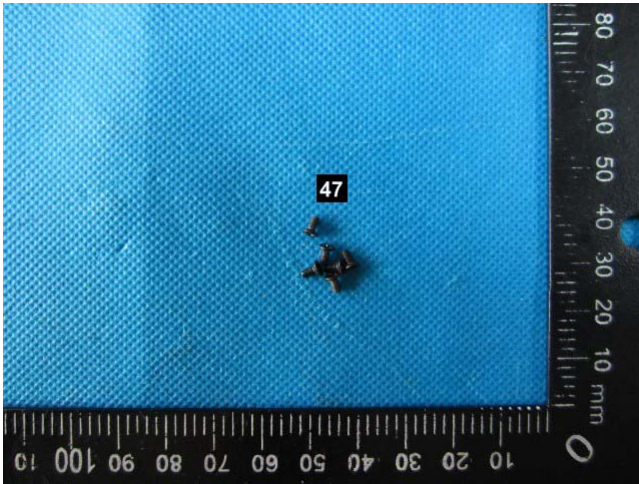


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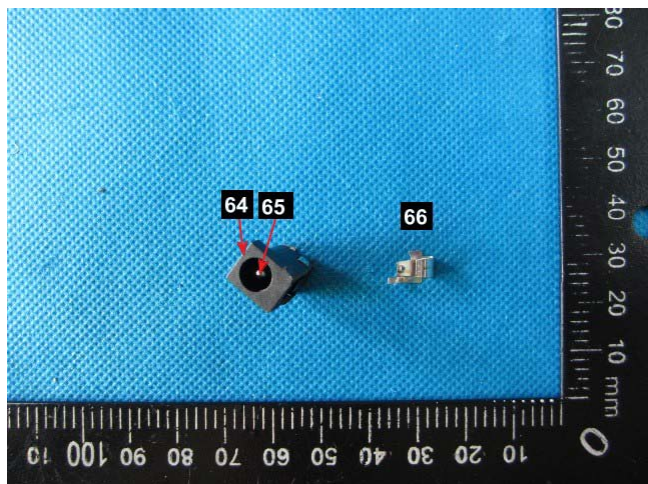
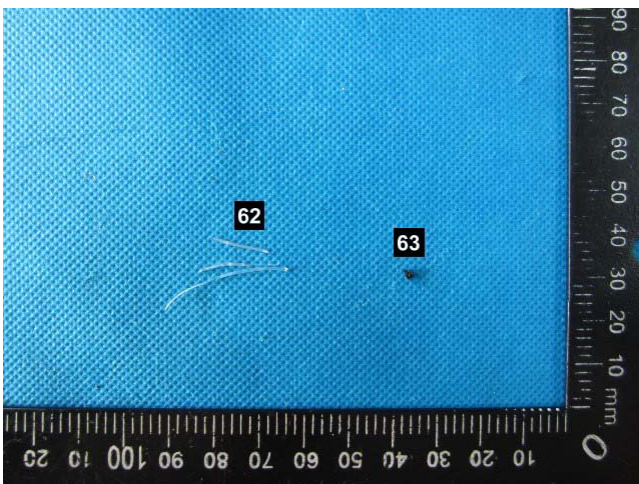
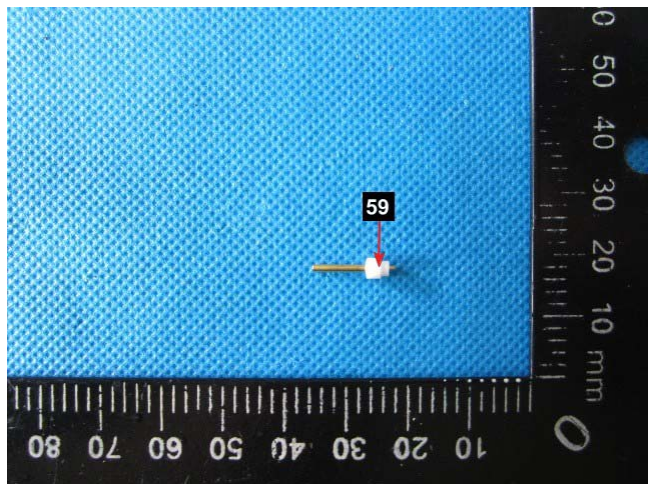
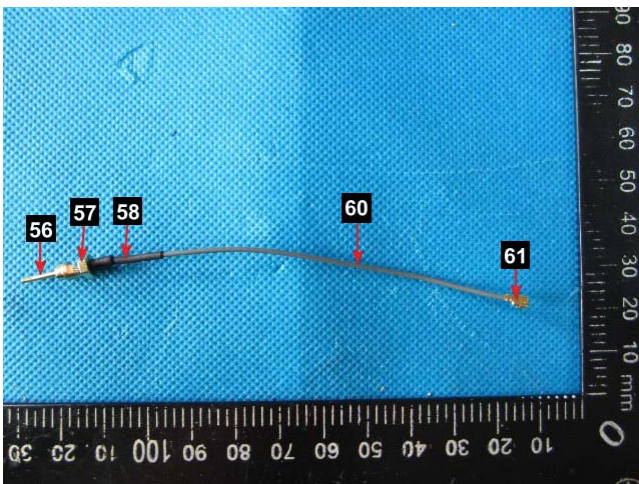
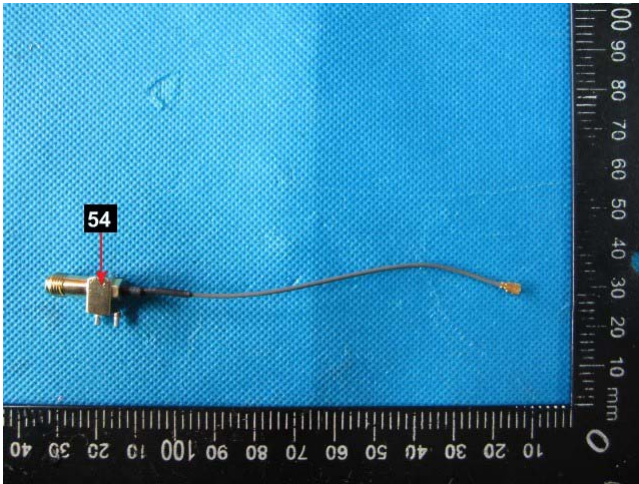






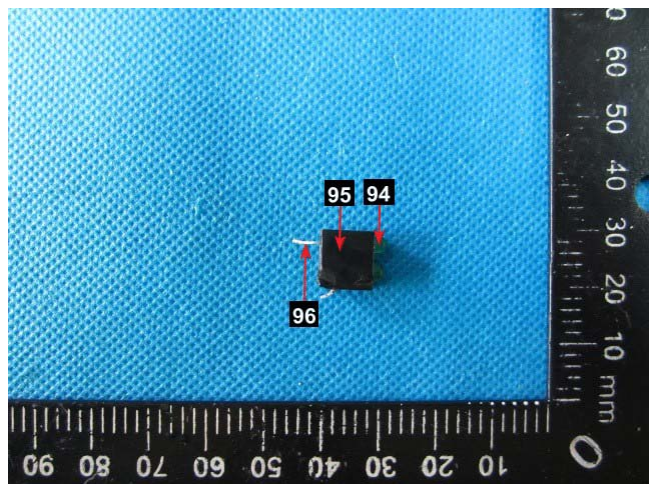
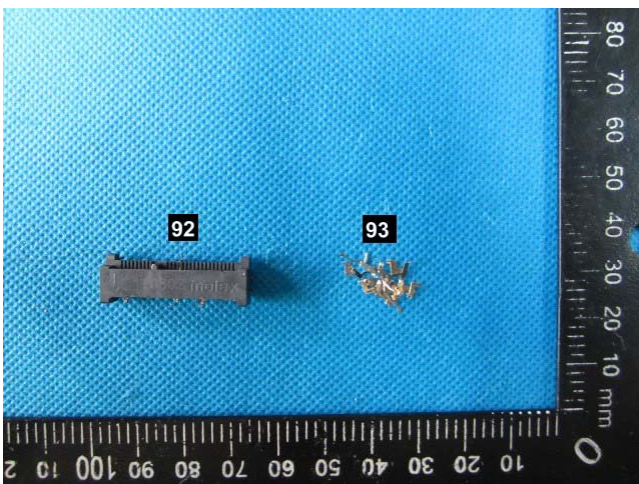
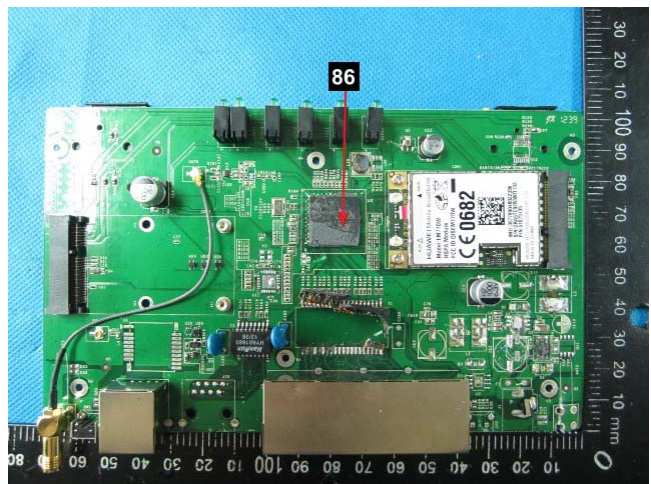
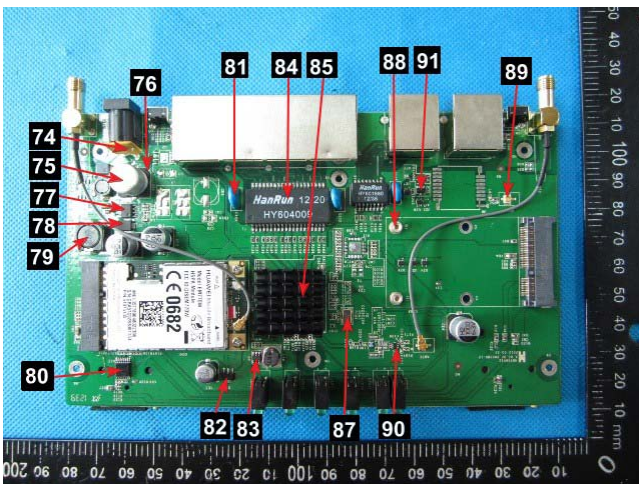
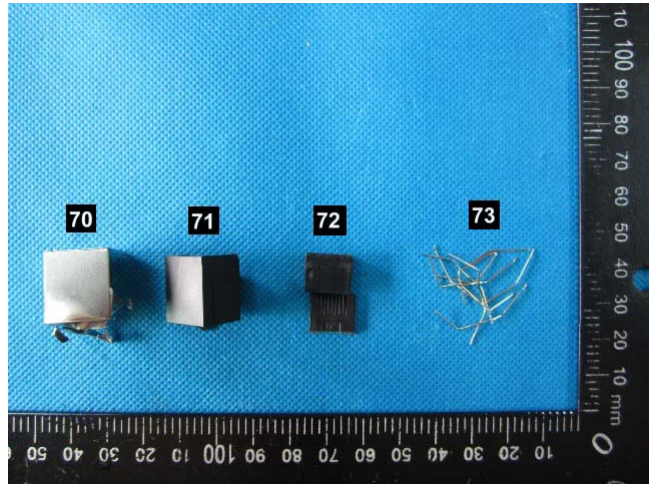
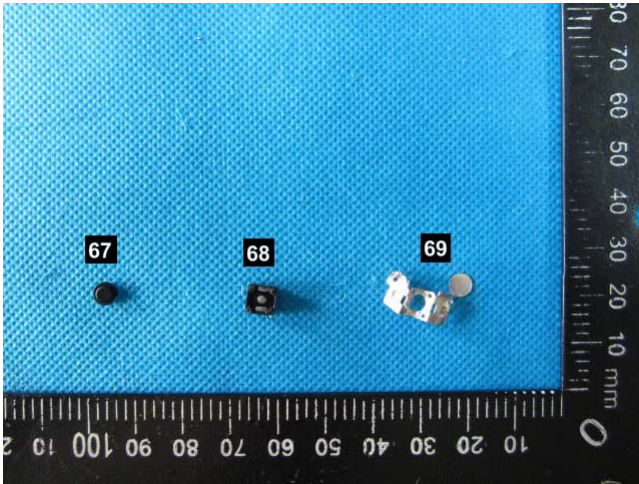
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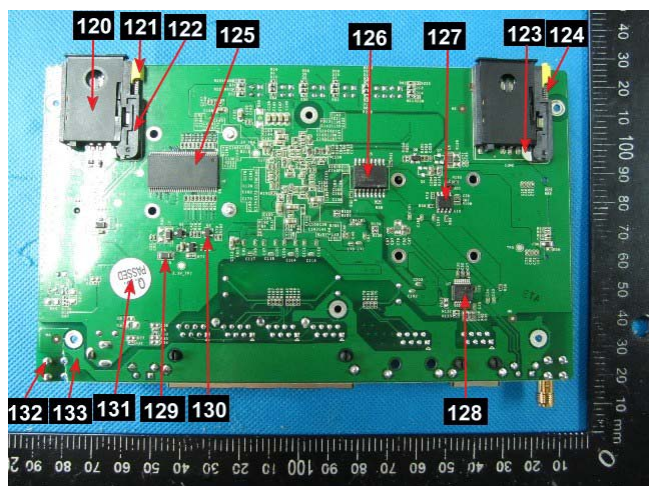
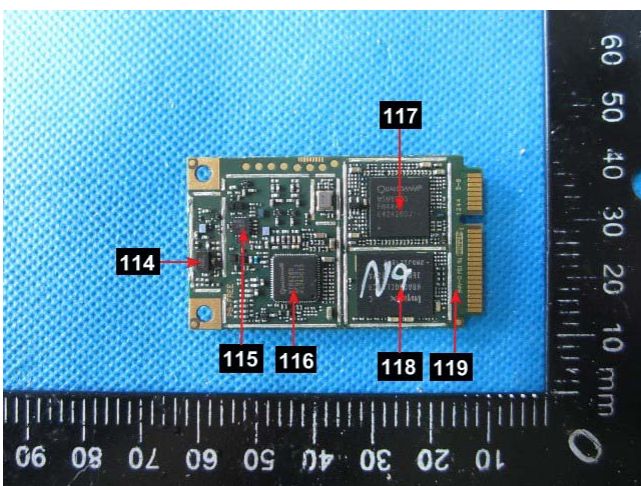
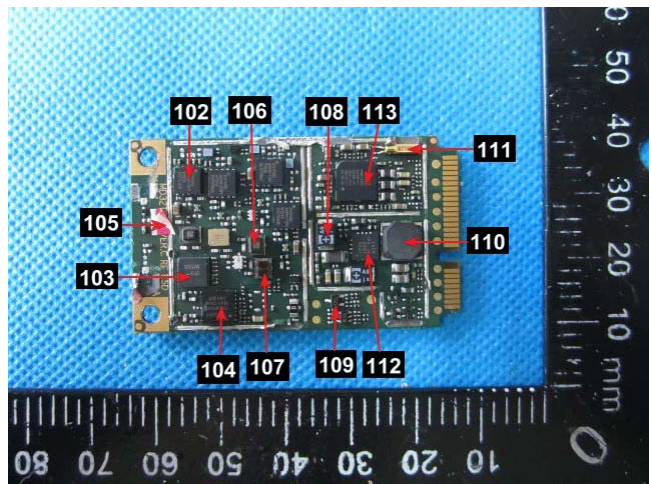
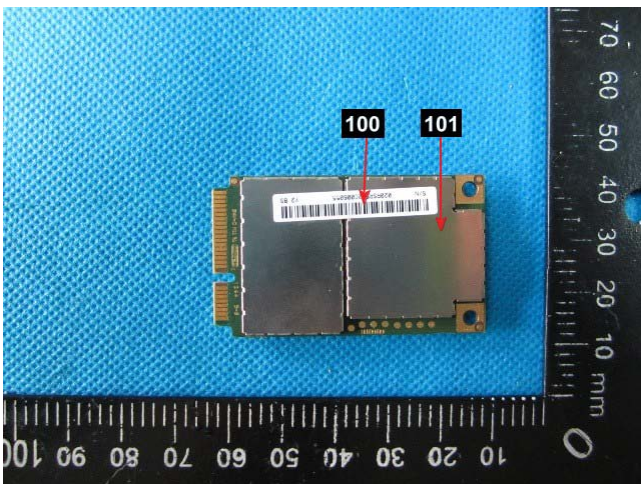
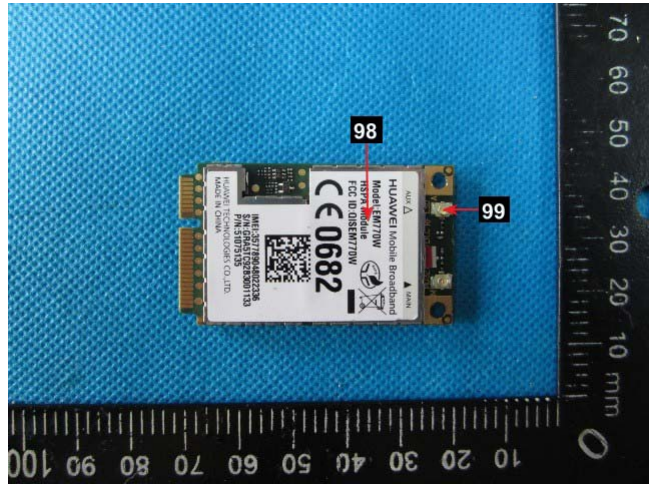
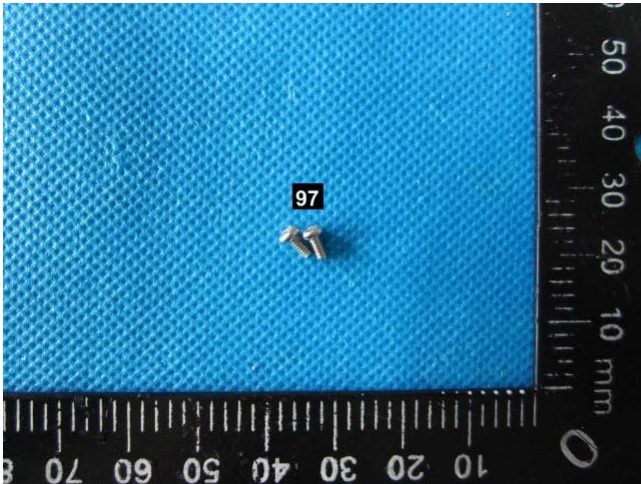
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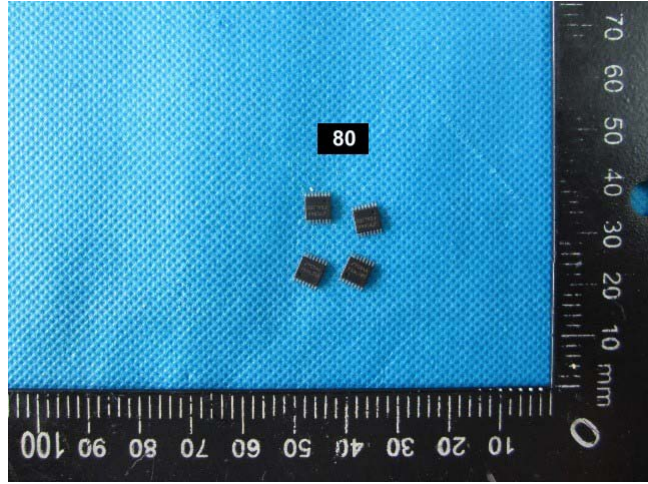




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*****End of Report*****

