



ROHS TEST REPORT

Product: COMPUTER CASE

Model No.: 610

Applicant : Solleron Corporation

4F-1 No .859 Ching Kuo Rd.,Taoyuan,Taiwan R.O.C.

Manufacturer : Solleron Corporation

4F-1 No .859 Ching Kuo Rd.,Taoyuan,Taiwan R.O.C.

Testing laboratory : Guangzhou Deu Technology Testing Co.,Ltd

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Report Number : DEU(15)-07-0214S

Date of Report : 12 August,2015

Test Result : PASS



1. The following sample(s) was/were submitted and identified on behalf of the client as:

Product: COMPUTER CASE

Model: 610

Applicant: Solleron Corporation
4F-1 No.859 Ching Kuo Rd., Taoyuan, Taiwan R.O.C.

Factory:
Solleron Corporation
4F-1 No.859 Ching Kuo Rd., Taoyuan, Taiwan R.O.C.

Test period: 31 July, 2015~12 August, 2015

Test request: With reference to RoHS directive 2011/65/EU recasting 2002/95/EC.

Test method: Please see next page(s).

Applicable Standards: EN 50581: 2012
IEC 62321-1: 2013

Conclusion: The results shown on the report do not exceed the limit of the council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment under directive 2011/65/EU of the European parliament.

Note: The test results are related only to the tested items. The report shall not be reproduced except in full without the written approval of the testing laboratory.

Tested By: Su San Date: 2015-08-12

Approved By: Fego Liu Date: 2015-08-12





- Test Method:**
- 1. Review was performed for the samples disjointed from the submitted articles and the Related test reports submitted by the applicant.**
 - 2. Tests were 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 Six Regulated Substances in Electrotechnical Products**
 - (1) Screening by XRF Spectroscopy**
 - (2) Wet chemical Test Method**
 - A. Determination of Lead & Cadmium by ICP-OES or AAS**
 - B. Determination of Mercury by ICP- OES**
 - C. Determination of Hexavalent Chromium by Spot test or Colorimetric Method**
 - D. Determination of PBBs and PBDEs by GC-MS**



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
01	Top board-Magnet metal bar	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.
02	Top board-Black metal net	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.
03	USB interface-Green PCB	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
04	USB interface- Silvery metal shell	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.
05	USB interface-Blue plastic	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL BL BL	-- -- -- -- -- --	Comply Comply Comply Comply Comply Comply
06	USB interface-Black plastic	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
07	USB interface-White plastic socket	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
08	USB port-Black plastic	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL BL BL	-- -- -- -- -- --	Comply Comply Comply Comply Comply Comply
09	USB port-Silvery metal sheet	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.
10	Power line	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
11	Ear/Microphone Jack-Black plastic shell	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
12	Ear/ Microphone Jack- Yellow wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL BL IN	-- -- -- -- -- ND	Comply Comply Comply Comply Comply Comply



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
13	Ear/ Microphone Jack- Blue wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
14	Ear/ Microphone Jack- Purple wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
15	Ear/ Microphone Jack- Green wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
16	Ear/ Microphone Jack- Orange wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
17	Ear/ Microphone Jack- White wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
18	Ear/ Microphone Jack- Red wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
19	Ear/ Microphone Jack- Black wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
20	Heat shrinkable tube	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN BL	-- -- -- -- N.D. --	Comply Comply Comply Comply Comply Comply
21	Tact switch- Silver-color plastic (PVC)	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN BL	-- -- -- -- N.D. --	Comply Comply Comply Comply Comply Comply
22	Tact switch- White plastic	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
23	HD audio port-Black plastic	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
24	HD audio port-silvery metal sheet	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
25	Tact switch-Black plastic	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
26	Tact switch-LED	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
27	Tact switch-Transparent solid glue	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
28	Tact switch-Red insulated tape	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
29	Slide switch-Black plastic	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
30	Slide switch-Silvery metal sheet	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
31	Slide switch-White plastic jack	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
32	Slide switch-Black wire	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
33	Slide switch-Brown PCB	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
34	Slide switch-Solder	Pb Cd Hg Cr(VI) PBBs PBDEs	OL BL BL BL -- --	65400 ^① -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.
35	DC fan-Black plastic shell	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
36	DC fan-White plastic leaf(PC)	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
37	DC fan-White paper lable	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL BL BL	-- -- -- -- -- --	Comply Comply Comply Comply Comply Comply
38	DC fan-Motor-PCB	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
39	DC fan-Motor-electrolytic capacitor	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
40	DC fan-Motor-metal rotor -Copper alloy	Pb Cd Hg Cr(VI) PBBs PBDEs	OL BL BL BL IN IN	48500 [®] -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
41	DC fan-Motor-lubricant oil	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
42	DC fan-Motor-Metal up cover	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
43	DC fan-Motor-stator	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.
44	DC fan-Motor-stator winding-Copper wire	Pb Cd Hg Cr(VI) PBBs PBDEs	OL BL BL BL -- --	48000 ^③ -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.
45	Black metal shell	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL -- --	-- -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.
46	Transparent plastic(PC)	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
47	Black PCB	Pb Cd Hg Cr(VI) PBBs PBDEs	BL BL BL BL IN IN	-- -- -- -- N.D. N.D.	Comply Comply Comply Comply Comply Comply
48	Copper color pillar	Pb Cd Hg Cr(VI) PBBs PBDEs	OL BL BL BL -- --	48000 ^④ -- -- -- -- --	Comply Comply Comply Comply N.A. N.A.



Test result

Part No.	Part Description	Restricted Substances	Results of EDXRF (1)	Result of Wet Chemical testing (2) (mg/kg)	Conclusion on EU RoHS
49	Black plated Zn screw	Pb	BL	--	Comply
		Cd	BL	--	Comply
		Hg	BL	--	Comply
		Cr(VI)	BL	--	Comply
		PBBs	--	--	N.A.
		PBDEs	--	--	N.A.
50	Silvery metal screw	Pb	BL	--	Comply
		Cd	BL	--	Comply
		Hg	BL	--	Comply
		Cr(VI)	BL	--	Comply
		PBBs	--	--	N.A.
		PBDEs	--	--	N.A.
51	Black rubber feet	Pb	BL	--	Comply
		Cd	BL	--	Comply
		Hg	BL	--	Comply
		Cr(VI)	BL	--	Comply
		PBBs	IN	N.D.	Comply
		PBDEs	IN	N.D.	Comply
52	Black plastic net	Pb	BL	--	Comply
		Cd	BL	--	Comply
		Hg	BL	--	Comply
		Cr(VI)	BL	--	Comply
		PBBs	IN	N.D.	Comply
		PBDEs	IN	N.D.	Comply

Remark:

- (a) There are the results on total Br while test items on restricted substances are PBBs and PBDEs. There is the result on Total Cr while test item on restricted substances is Cr(VI).
- (b) Results are obtained by EDXRF 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 IEC62321 (UNIT: MG/kg)



Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (70-36) < X < (130+36) \leq OL$	$BL \leq (70-36) < X < (130+36) \leq OL$	$LOD < X < (150+36) \leq OL$
Pb	$BL \leq (70-36) < X < (1300+36) \leq OL$	$BL \leq (70-36) < X < (1300+36) \leq OL$	$BL \leq (500-36) < X < (1500+36) \leq OL$
Hg	$BL \leq (70-36) < X < (1300+36) \leq OL$	$BL \leq (70-36) < X < (1300+36) \leq OL$	$BL \leq (500-36) < X < (1500+36) \leq OL$
Br	$BL \leq (300-36) < X$	--	$BL \leq (250-36) < X$
Cr	$BL \leq (700-36) < X$	$BL \leq (700-36) < X$	$BL \leq (500-36) < X$

(c)BL=Below Limit,OL=Over Limit,IN=Inconclusive,LOD=Limit of Detction, --=Not regulated.

(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)mg/kg=0.0001%,MDL=Method detection limit,ND=Not Detected(<MDL),---=Not conducted

(b)Unit and MDL in wet chemical test

Test Item	Pb	Cd	Hg
Unit	mg/kg	mg/kg	mg/kg
MDL	2	2	2

The MDL for single compound of PBBs and PBDEs is 5 mg/kg,MDL of Cr(VI) for polymer and 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,Positive=Presence of Cr(VI)coating.

(d) ①7(a), Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead).

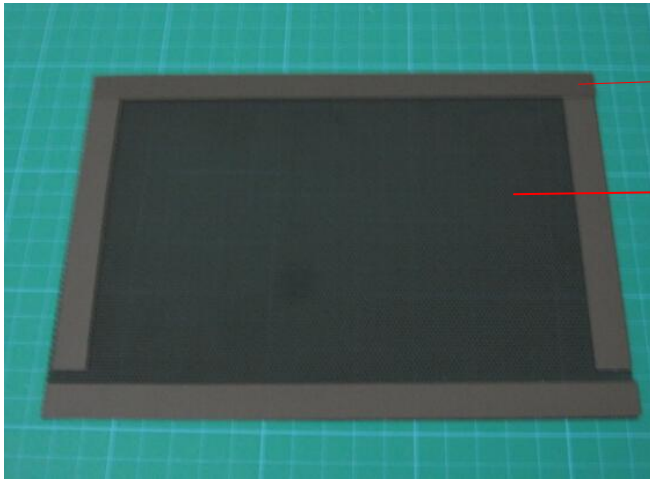
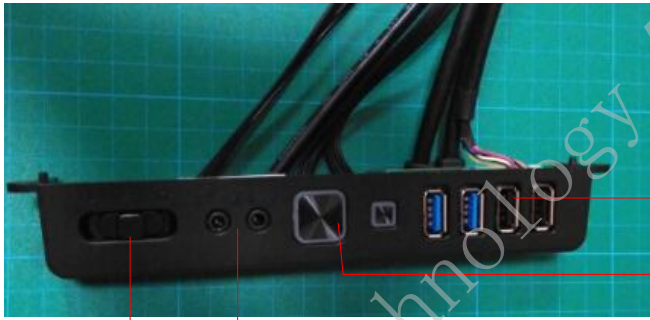
(e) ②③④6(C), Copper alloy containing up to 4 % lead by weight (RoHS Exemption 6(c)).



Sample photo	
	

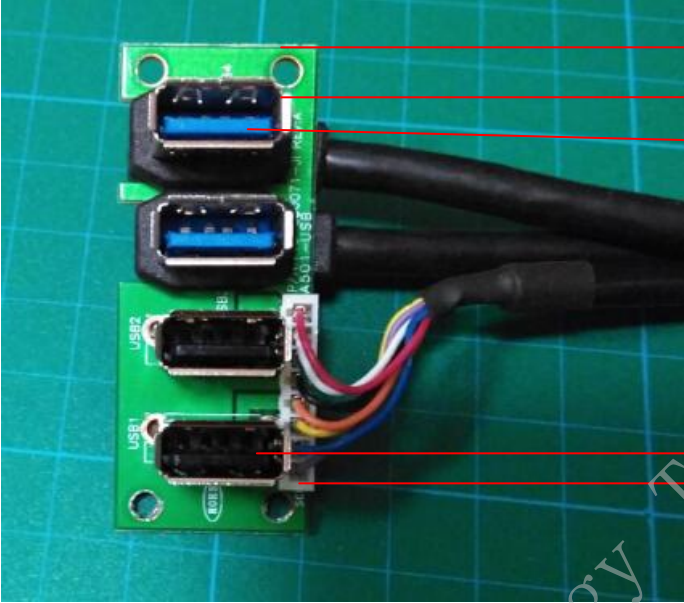
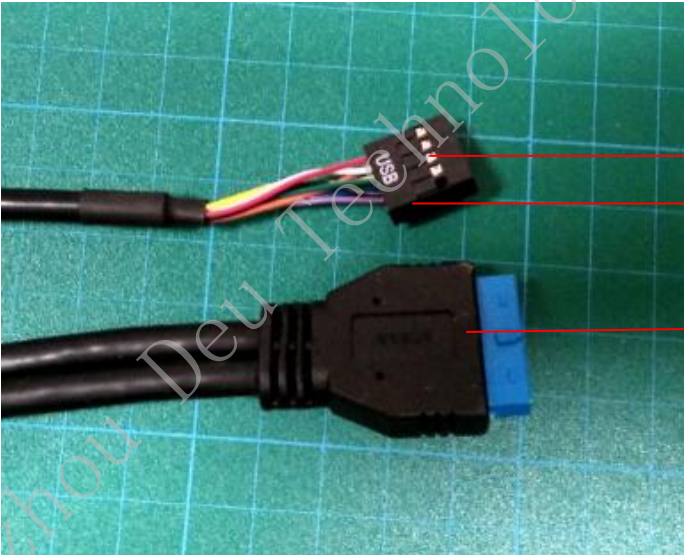
Guangzhou Deu Technology Testing Co., Ltd



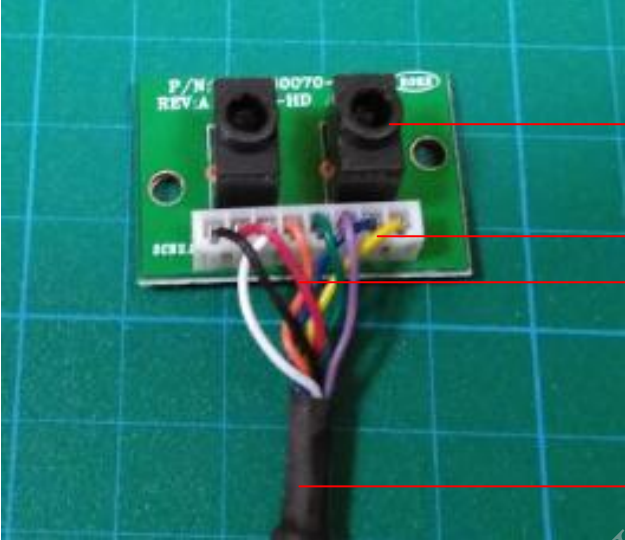

exploded view	
	1 2
	Part 1 Part 2 Part 3 Part 4

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Part 1-USB	
	3 4 5 6 7
	8 9 10

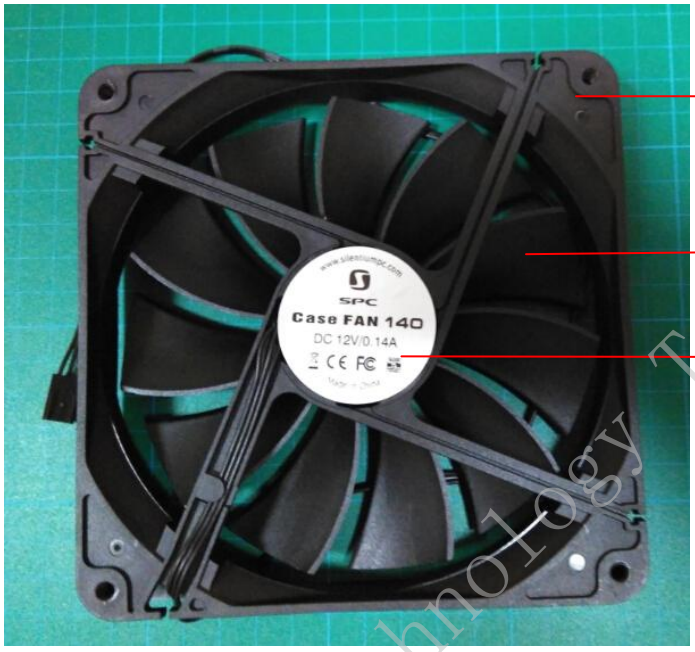



Part 2-Ear/Mic jack	
	11 12~19 20
Part 3-Tact Switch	
	21 22 23 24 25 26 27 28



Part 4-Slide Switch	
	29 30 31 32
	33 34



Part 5- DC fan	
	35 36 37
	38 39 40.41 42 43 44



exploded view	
	45 46 47
	48 49 50



exploded view	
	51 52

*****END OF REPORT*****