TEST REPORT

Applicant	:	STAR WAVE TECHNOLOGY CO.,LTD
Address	:	4F, Building 6, 2nd Area, Sanxing Industrial park, Fuhai Avenue, Fuyong Street, Bao'an District, Shenzhen, China

REPORT ON THE SUBMITTED SAMPLE SAID TO BE:

Sample name	:	Wired Keyboard
Manufacturer	:	STAR WAVE TECHNOLOGY CO.,LTD
Address	:	4F, Building 6, 2nd Area, Sanxing Industrial park, Fuhai Avenue, Fuyong Street, Bao'an District, Shenzhen, China
Brand Name	:	N/A
Model	:	SW-GK320,SW-GK3,SW-GK002,SW-GK003,SW-GK004,SW-GK005, SW-GK006,SW-GK801,SW-GK802,SW-GK803,SW-GK804,SW-GK805, SW-GK806,SW-GK807,SW-GK808,SW-GK809,SW-GK810,SW-GK811, SW-GK812,SW-GK813,SW-GK814,SW-GK815,SW-GK816,SW-HK817, SW-GK910,SW-GK930,SW-GK950,SW-GK971
Testing period	:	Nov.18,2019---- Nov.22,2019
Test request	:	Selected test(s) as requested by client.
Test method	:	Please refer to next page(s).
Test Result	:	Please refer to next page(s).
Conclusion	:	Selected test (s) in the selected parts as requested by client with the RoHS 2 Directive 2011/65/EU Annex II (EU) 2015/863 as last amended by Directive(EU) 2017/2102.

Signed for and on behalf of HSO

SHENZHEN HSO TEST TECHNOLOGY CO.,LTD APPROVED

Frank Liu , Senior Manager

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Test Content:

Test Item(s)	Test Method	Reference	Unit	Limit	MDL
Cadmium(Cd)	IEC 62321-5:2013	ICP-OES	mg/kg	100	2
Lead(Pb)	IEC 62321-5:2013	ICP-OES	mg/kg	1000	2
Mercury(Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	mg/kg	1000	2
Hexavalent Chrormium(CrVI) (Metal)	IEC 62321-7-1:2015	UV-Vis	μg/cm2	0.13	0.1
Hexavalent Chrormium (CrVI)(Nonmetal)	IEC 62321-7-2:2017	UV-Vis	mg/kg	1000	8
PBBs (Next form)	IEC 62321-6:2015	GC-MS	mg/kg	1000	5
PBDEs (Next form)	IEC 62321-6:2015	GC-MS	mg/kg	1000	5
Dibutyl Phthalate (DBP)	IEC 62321-8:2017	GC-MS	mg/kg	1000	30
Butyl benzyl phthalate (BBP)	IEC 62321-8:2017	GC-MS	mg/kg	1000	30
Di-(2-ethylhexyl) Phthalate (DEHP)	IEC 62321-8:2017	GC-MS	mg/kg	1000	30
Diisobutyl phthalate (DIBP)	IEC 62321-8:2017	GC-MS	mg/kg	1000	30

PBBs		PBDEs	
Monobromobiphenyl	Hexabromobiphenyl	Monobromodiphenyl ether	Hexabromodiphenyl ether
Dibromobiphenyl	Heptabromobiphenyl	Dibromodiphenyl ether	Heptabromodiphenyl ether
Tribromobiphenyl	Octabromobiphenyl	Tribromodiphenyl ether	Octabromodiphenyl ether
Tetrabromobiphenyl	Nonabromobiphenyl	Tetrabromodiphenyl ether	Nonabromodiphenyl ether
Pentabromobiphenyl	Decabromobiphenyl	Pentabromodiphenyl ether	Decabromodiphenyl ether

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Sample Description :

No.	Description	Name
1	PCB board	PCB board single panel 1.6MM
2	keycap	Black button cap
3	Upper cover	White cover
4	lower lid	White lower cover
5	Silk screen	Silk screen
6	multimedia	multimedia
7	Laser carving	Laser carving
8	Tripod	Tripod
9	Hand rest	Hand rest
10	USB cable	3.2USB wire black wire drawing
11	Lower cover screw	Lower cover screw
12	Iron plate screw	Iron plate screw
13	Beading screw	Beading screw
14	Silica gel	Silicone 9*6MM
15	Conductive film	Silver conductive film
16	Luminous board	Monochrome mixed color illuminating board
17	Silicone bead	Silicone bead
18	Bottom mark	Bottom mark
19	Foot pad	Foot pad
20	External iron plate	External iron plate iron gray
21	Built-in iron plate	Built-in iron plate
22	Spring	Spring

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Test Results:

Test Item(s)	No.1	No.2	No.3	No.4	No.5
Cadmium (Cd)	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	N.D.	N.D.	N.D.	N.D.	N.D.
Hexavalent Chrormium (CrVI)	N.D.	N.D.	N.D.	N.D.	N.D.
PBBs	N.D.	N.D.	N.D.	N.D.	N.D.
PBDEs	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.

Test Item(s)	No.6	No.7	No.8	No.9	NO.10
Cadmium (Cd)	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	N.D.	N.D.	N.D.	N.D.	N.D.
Hexavalent Chrormium (CrVI)	N.D.	N.D.	N.D.	N.D.	N.D.
PBBs	N.D.	N.D.	N.D.	N.D.	N.D.
PBDEs	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.

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Test Item(s)	No.11	No.12	No.13	No.14	No.15
Cadmium (Cd)	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	N.D.	N.D.	N.D.	N.D.	N.D.
Hexavalent Chrormium (CrVI)	N.D.	N.D.	N.D.	N.D.	N.D.
PBBs	----	----	----	N.D.	N.D.
PBDEs	----	----	----	N.D.	N.D.
Dibutyl Phthalate (DBP)	----	----	----	N.D.	N.D.
Butyl benzyl phthalate (BBP)	----	----	----	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	----	----	----	N.D.	N.D.
Diisobutyl phthalate (DIBP)	----	----	----	N.D.	N.D.

Test Item(s)	No.16	No.17	No.18	No.19	No.20
Cadmium (Cd)	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	N.D.	N.D.	N.D.	N.D.	N.D.
Hexavalent Chrormium (CrVI)	N.D.	N.D.	N.D.	N.D.	N.D.
PBBs	N.D.	N.D.	N.D.	N.D.	----
PBDEs	N.D.	N.D.	N.D.	N.D.	----
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	----
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	----
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	----
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	----

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Test Item(s)	**No.21**	**No.22**	/	/	/
Cadmium (Cd)	N.D.	N.D.			
Lead (Pb)	N.D.	N.D.			
Mercury (Hg)	N.D.	N.D.			
Hexavalent Chrormium (CrVI)	N.D.	N.D.			
PBBs	----	----			
PBDEs	----	----			
Dibutyl Phthalate (DBP)	----	----			
Butyl benzyl phthalate (BBP)	----	----			
Di-(2-ethylhexyl) Phthalate(DEHP)	----	----			
Diisobutyl phthalate (DIBP)	----	----			

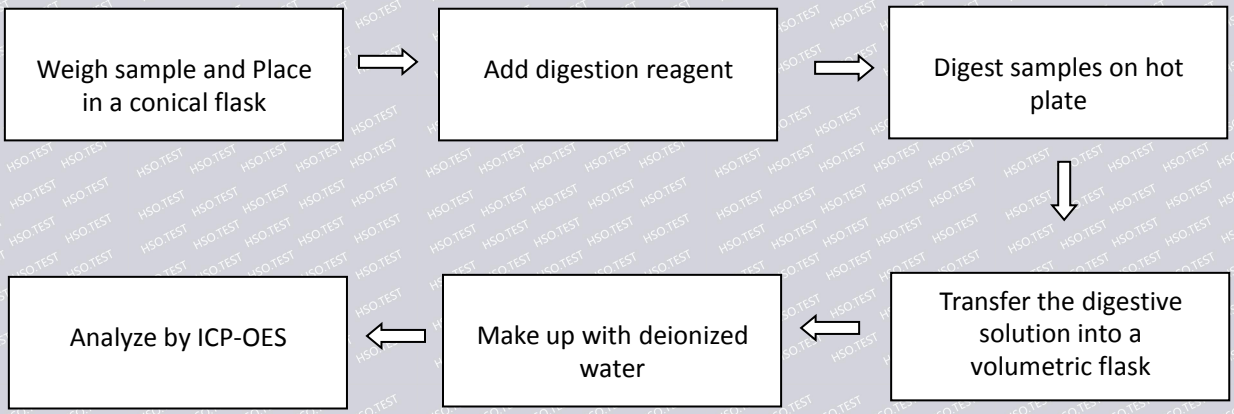
Note：

1. mg/kg= ppm
2. N.D.= Not Detected(<MDL)
3. MDL = Method Detection Limit
4. -- = No Testing
5. when Cr(VI) in a sample is detected below the 0.10 μg/cm2 LOQ (limit of quantification), the sample is considered to be negative for Cr(VI). Since Cr(VI) may not be uniformly distributed in the coating even within the same sample batch, a "grey zone" between 0.10 μg/cm2 and 0.13 μg/cm2 has been established as "inconclusive" to reduce inconsistent results due to unavoidable coating variations. In this case, additional testing may be necessary to confirm the presence of Cr(VI). When Cr(VI) is detected above 0.13 μg/cm2, the sample is considered to be positive for the presence of Cr(VI) in the coating layer. unavoidable coating variations may influence the determination Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

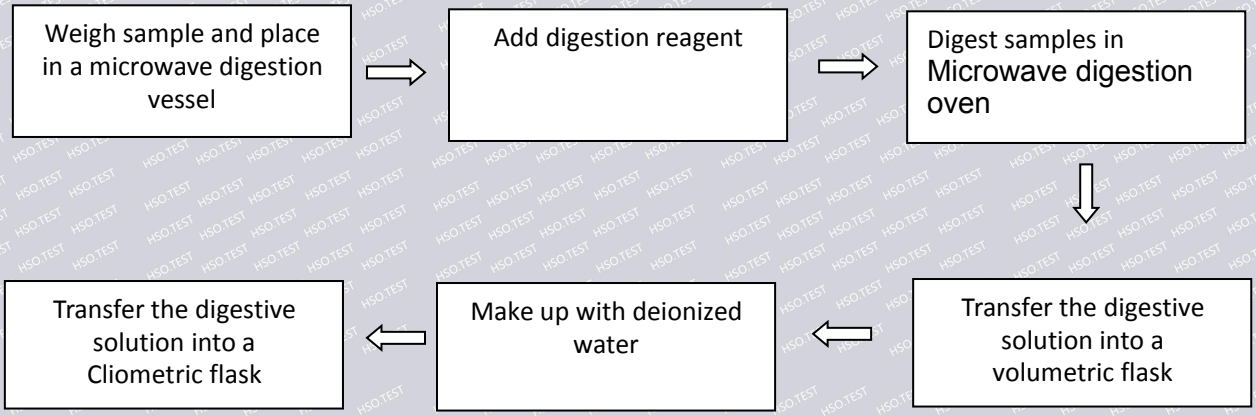
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Test Process:

1. Test for Cd/Pb Content

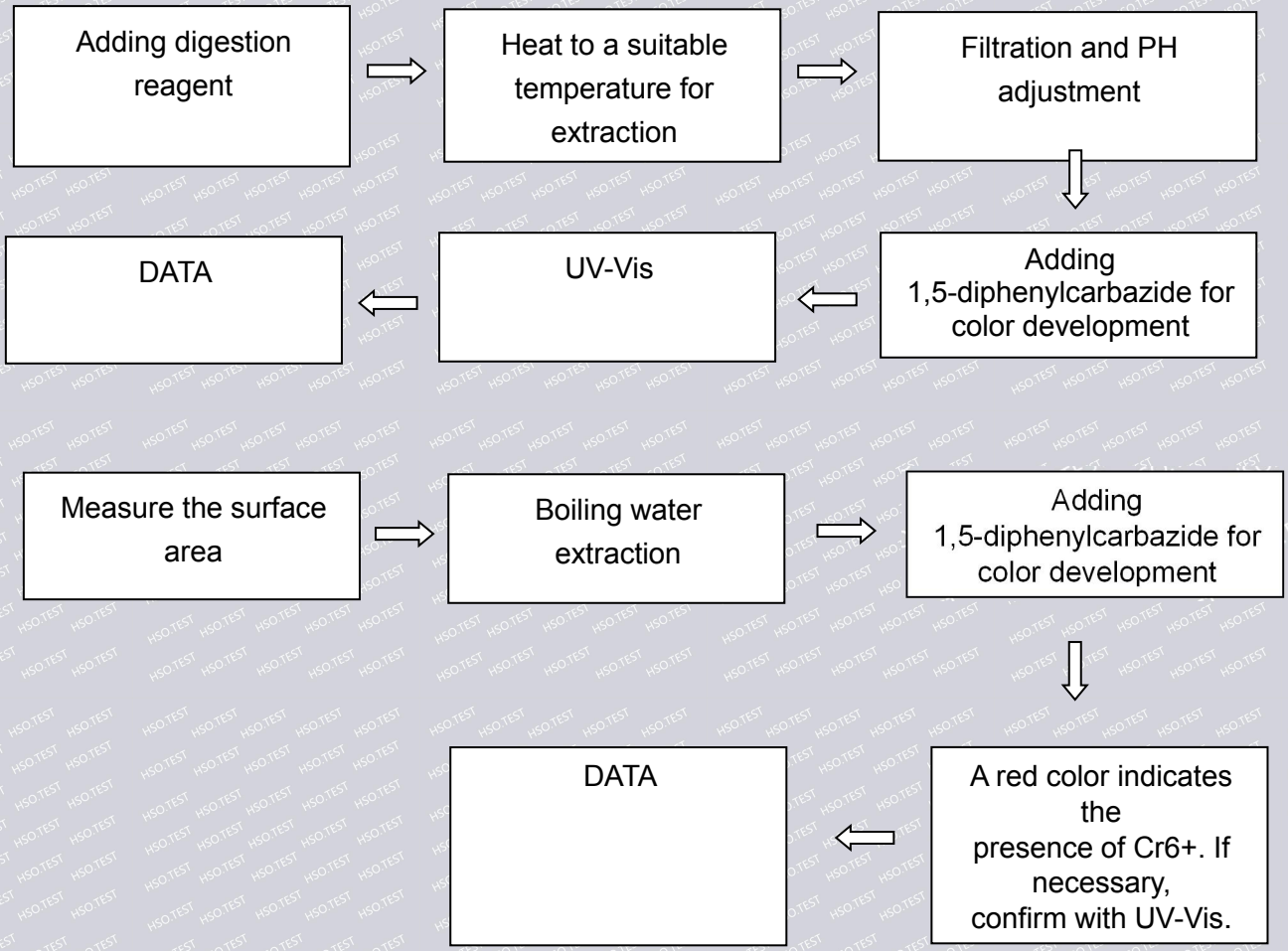


2. Test for Hg Content

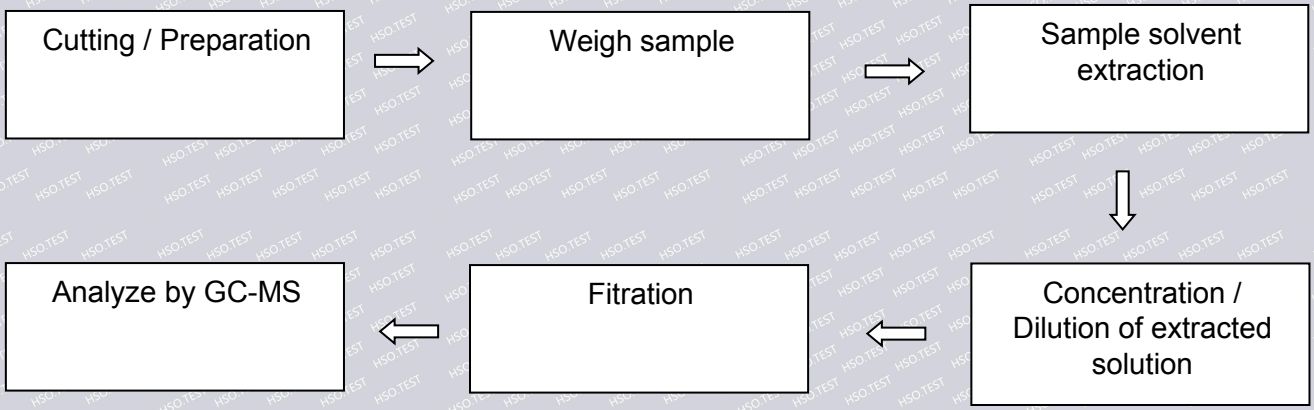


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3.Test for Chromium (VI) Content
Nonmetal material



4.Test for DBP, BBP, DEHP, DIBP, PBB, PBDE Content



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Photo Documentation

Fig. 1

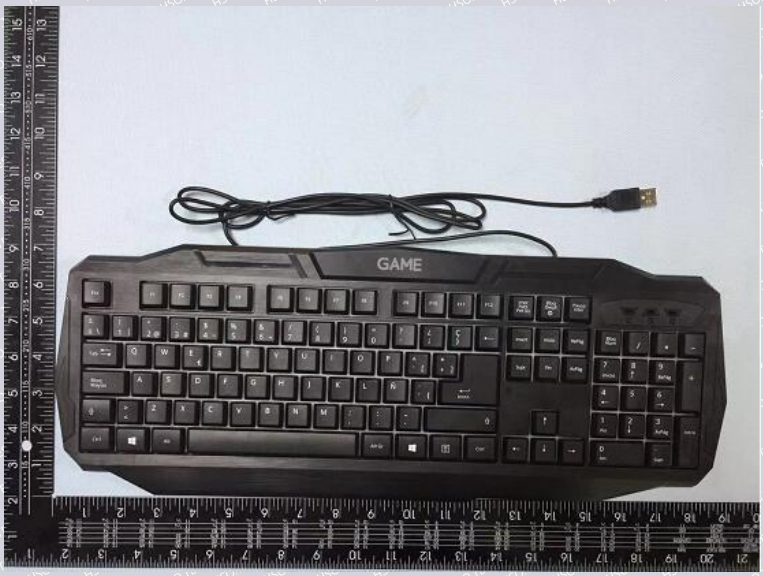


Fig. 2

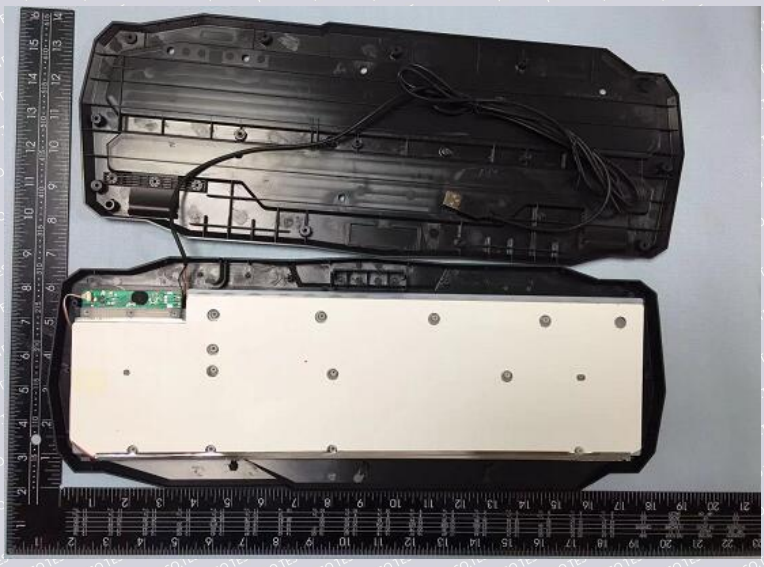


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Fig. 3



Fig. 4

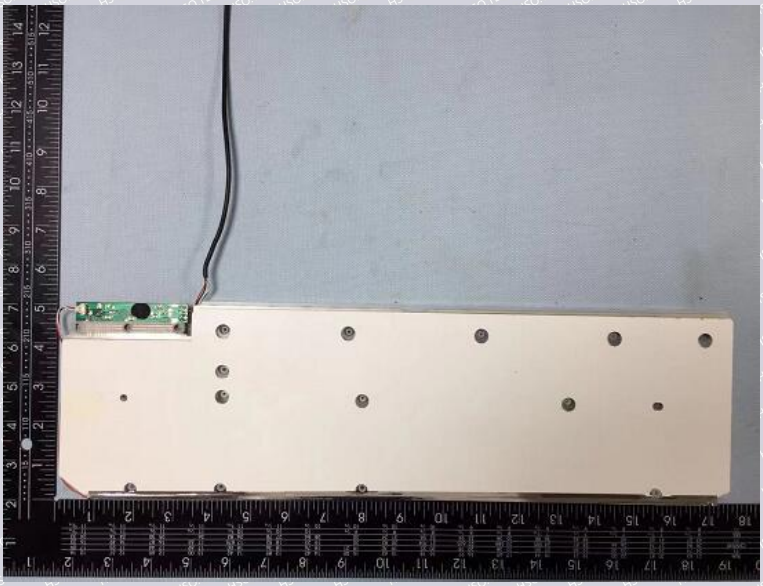


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Fig. 5



Fig. 6



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Fig. 7

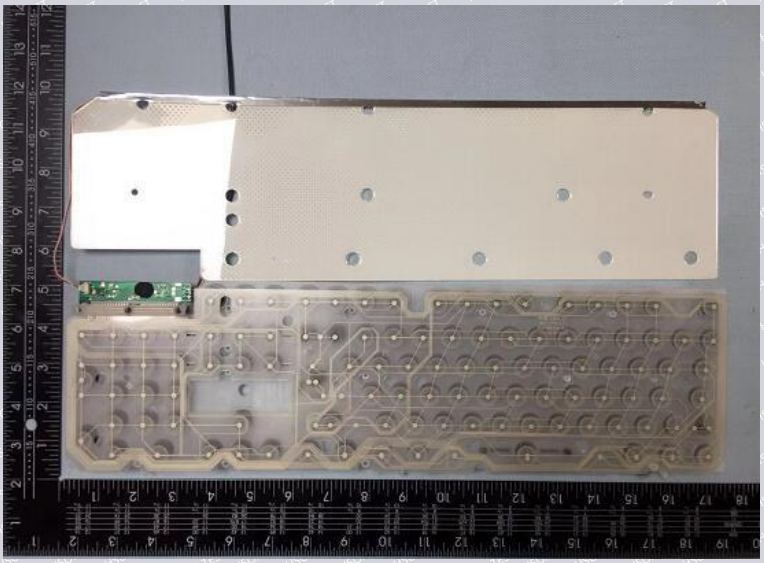
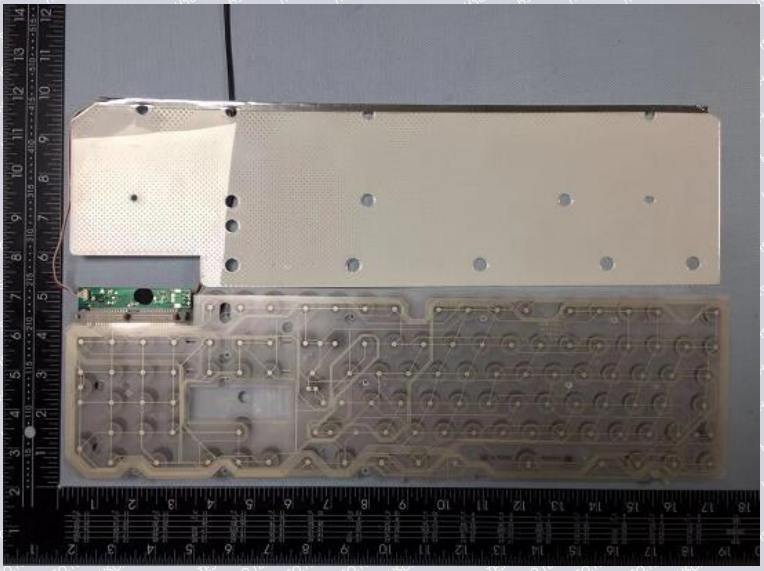


Fig. 8



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Fig. 9

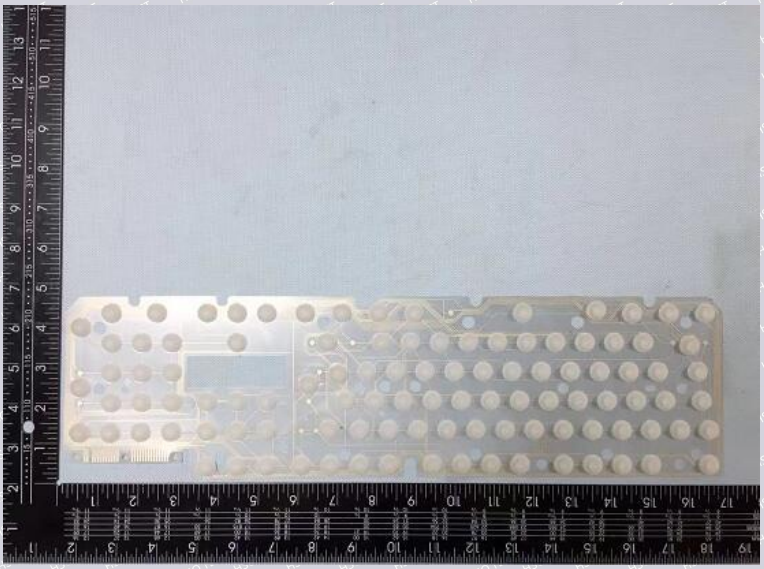
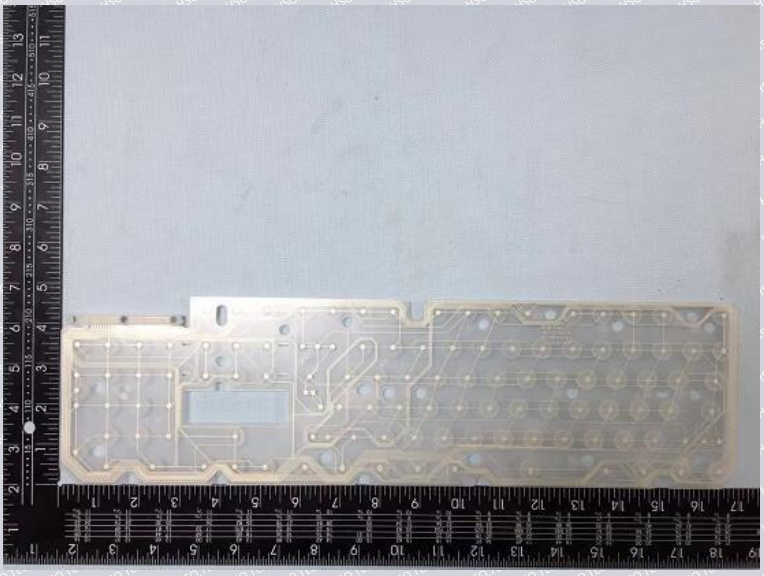


Fig. 10



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Fig. 11

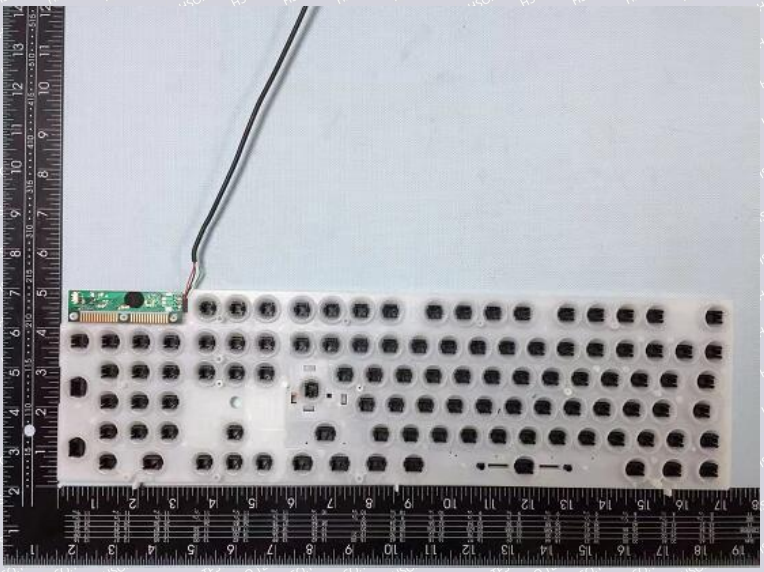
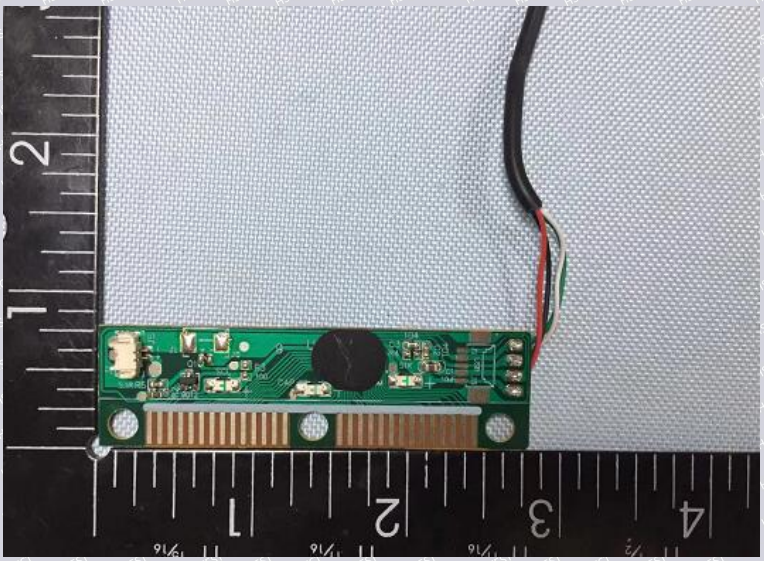


Fig. 12



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Fig. 13

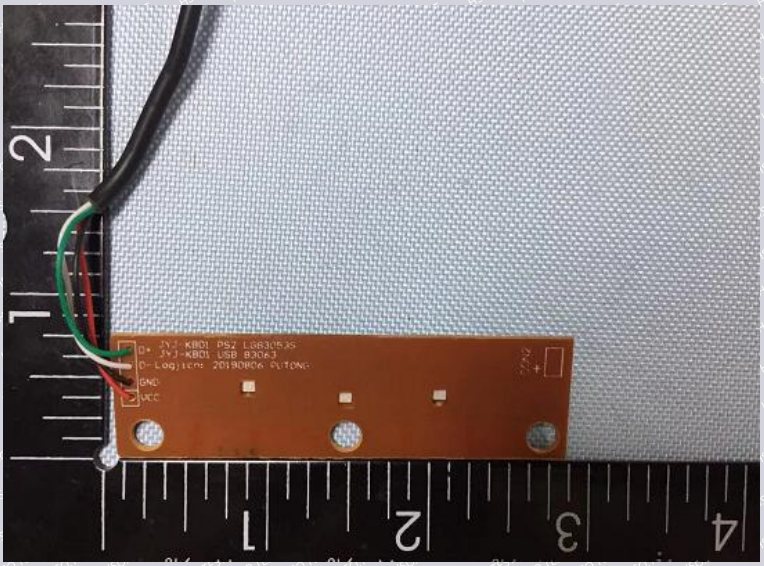
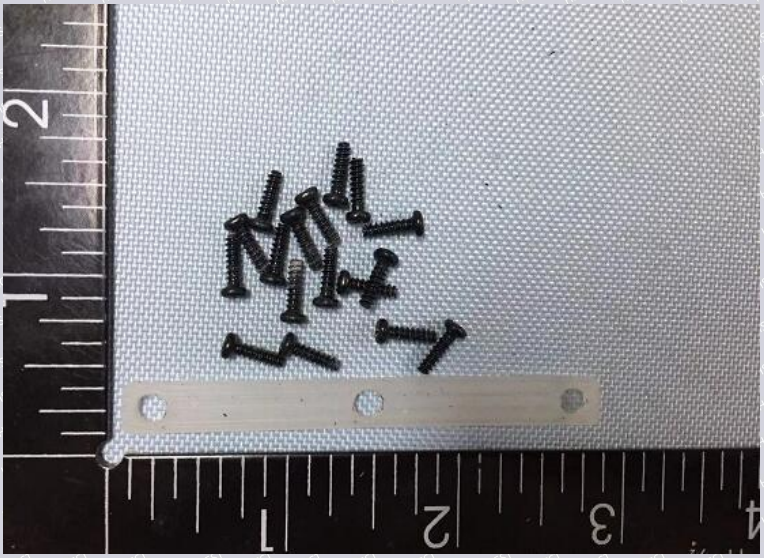
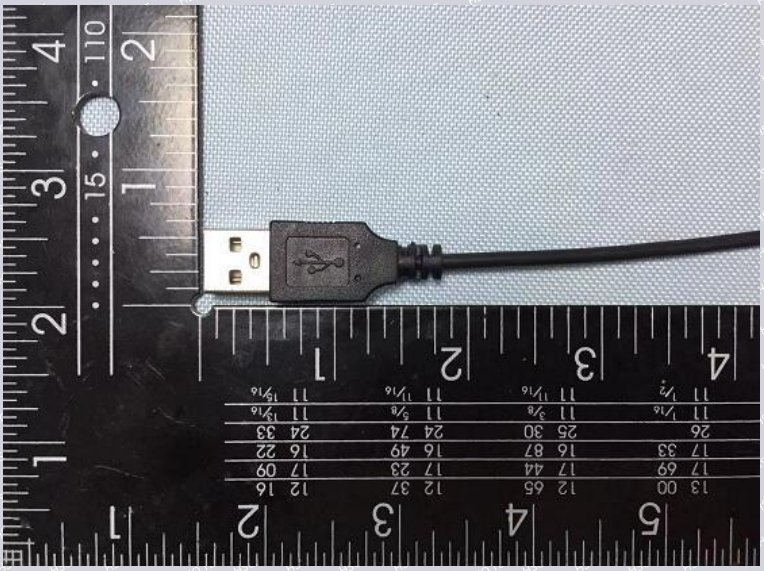


Fig. 14



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Fig. 15



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

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