Test Report No. : NICERD220211.0012

RoHS TEST REPORT

European Directive 2011/65/EU, 2015/863/EU

Evaluation of RoHS Requirements for Electrical and Electronic Equipment

Date of receipt..... : Feb 11, 2022

Test of Period..... : Feb 11 ~ 22, 2022

Date of issue..... : Feb 25, 2022

The following product was submitted and identified on behalf of the applicant as:

Applicant's name..... : Suprema ID Inc.

1207, 37, Sagimakgol-ro 62beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do, Republic of Korea

Manufacturer name.... : The same as above

Factory name..... : The same as above

Product name..... : BioMini Combo 2

Basic Model..... : BMC-2

Multiple Model..... : N.A.

Model differences..... : N.A.

RoHS TEST REPORT

European Directive 2011/65/EU, 2015/863/EU

Evaluation of RoHS Requirements for Electrical and Electronic Equipment

Trade mark…….. : N.A.

Type of Category…….. : Category 03. IT and telecommunications equipment.

Directive..... : 2011/65/EU, 2015/863/EU

Test Standard(s)..... : IEC 63000:2016, IEC 62321-3-1:2013, IEC 62321-4:2013 + AMD1:2017 CSV, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015, IEC 62321-7-2:2017, IEC 62321-8:2017

Test Result..…….. : The equipment which was evaluated has fulfilled with requirement of 2011/65/EU, 2015/863/EU Directive for the materials :
Pb, Cd, Hg, Cr(VI), PBBs, PBDEs, DEHP, BBP, DBP, DIBP

Final test result ; PASS

Approved by :

Technical Manager : Kyung Jun Choi

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Clause	Requirement - Test	Result	Verdict
1	RoHS Compliance based on test reports		
1.1	Review of component's test reports according to BOM	Checked	P
1.1.1	Dose evaluated product is composed by components which is listed in BOM?	Checked	P
1.1.2	Dose each components is complied with the requirement of employed directive or manufacturer declared limits?	Checked	P
1.2	Review of verification test reports according to sampling	Checked	P
1.2.1	If it was performed the item 1.1, did sampling was performed in appropriate?	Refer to Appendix lll	P
1.2.2	If it was not performed the item 1.1, did it was fully considered the materials of component and does it was performed the sampling which is enough to represent the characteristics of population?		N/A
1.2.3	Is it complied with the requirements of employed directive or manufacturer declares limits for sample tested?		P
1.3	Requirements of test report		P
1.3.1	Is it included the information of manufacturer, sample, test lab or etc?	Refer to Appendix II	P
1.3.2	Is it clearly specified the test object as the port of components or product?		P
1.3.3	Is it described the information of directive or standards of test methods?		P
1.3.4	Is it described the results with accurately for interpretation, using or etc?		P
1.3.5	Is it confirmed the validity of test equipment and information of calibration?		P
1.4	Other information		
	Directive 2011/65/EU, Directive 2015/863/EU IEC 63000:2016, IEC 62321-3-1:2013 IEC 62321-4:2013+AMD1:2017 CSV, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015, IEC 62321-7-2:2017, IEC 62321-8:2017, IEC 62474:2018, IEC/TR 62476:2010		

Appendix I
Photos of product

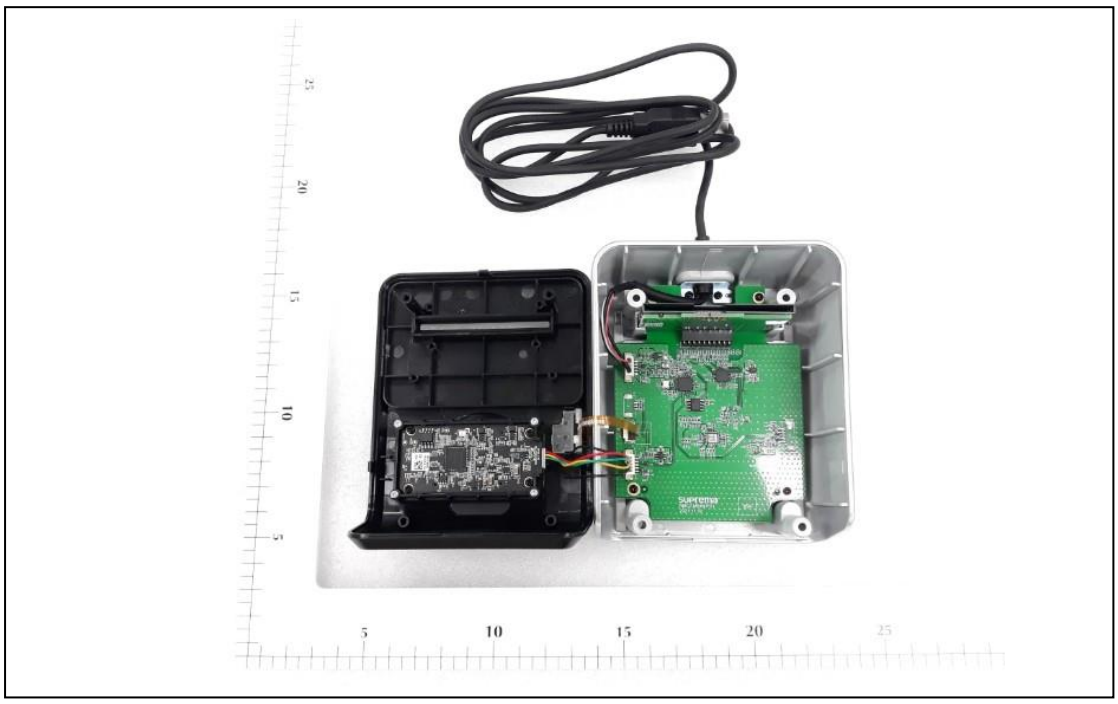


Front view



Rear view

Appendix I
Photos of product



Inner view



Packaging view

Appendix II
Test method & Lab information

1. General

1.1 Employed standard : IEC 63000:2016

IEC 62321-3-1:2013

IEC 62321-4:2013+AMD1:2017 CSV

IEC 62321-5:2013

IEC 62321-6:2015

IEC 62321-7-1:2015

IEC 62321-7-2:2017

IEC 62321-8:2017

1.2 Applied sampling criteria

- Kind of components could be disassembled mechanically by using disassembly tools
- High risk components

2. Laboratory Information

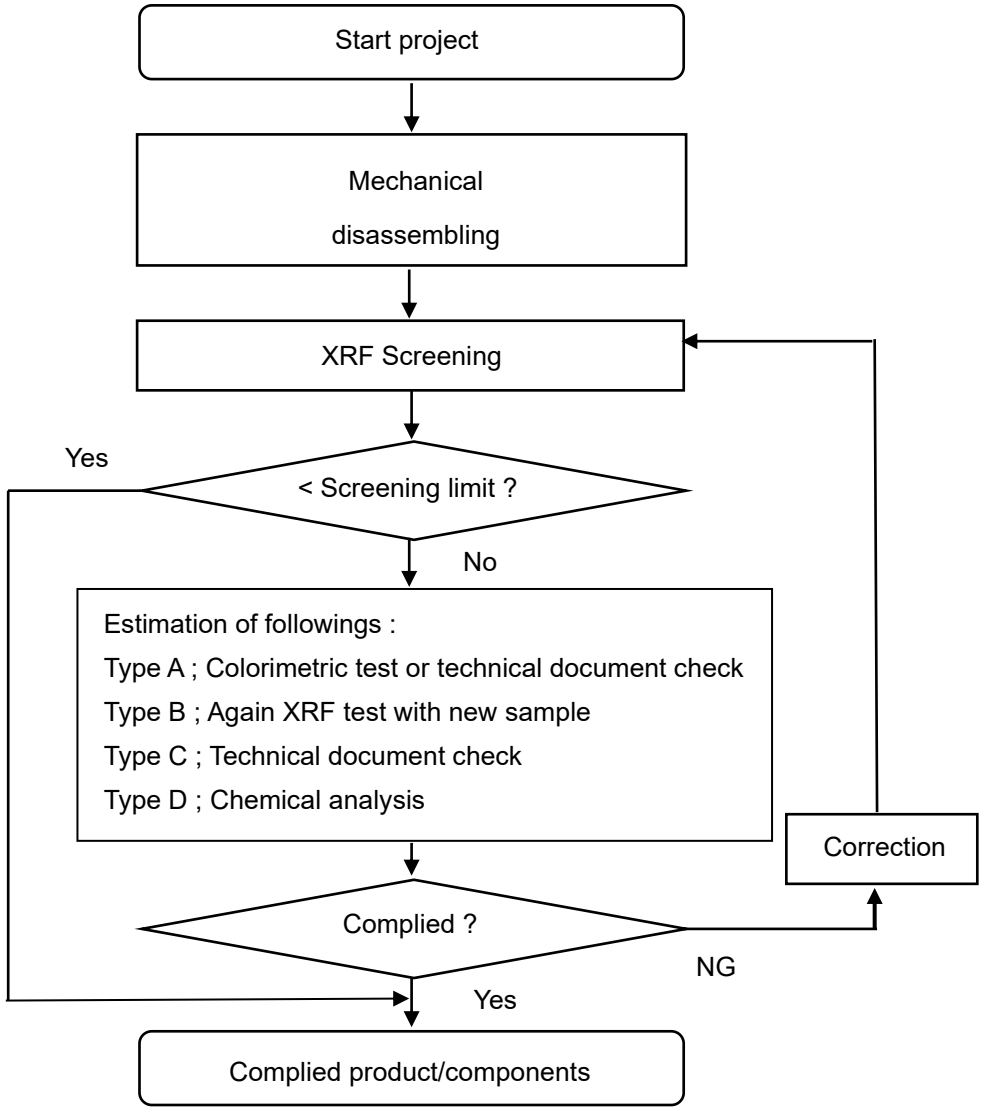
- Laboratory's Name : NICE Certification Co., Ltd.
- Address : 3F, 46, Gunpocheomdansaneop 2-ro, Gunpo-si, Gyeonggi-do, Republic of Korea
- Facilities used : ED-XRF (EA1000AIII, HITACHI)

ICP-OES (iCAP PRO XP Duo)

GC/MS (Clarus 690, Clarus SQ 8T)

UV/VIS Spectrometer (Lambda 365)

Appendix III
Verification XRF Test Results



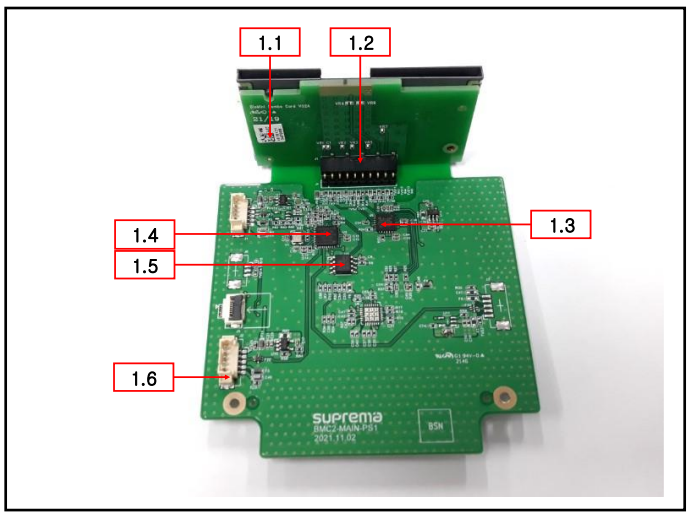
Note :

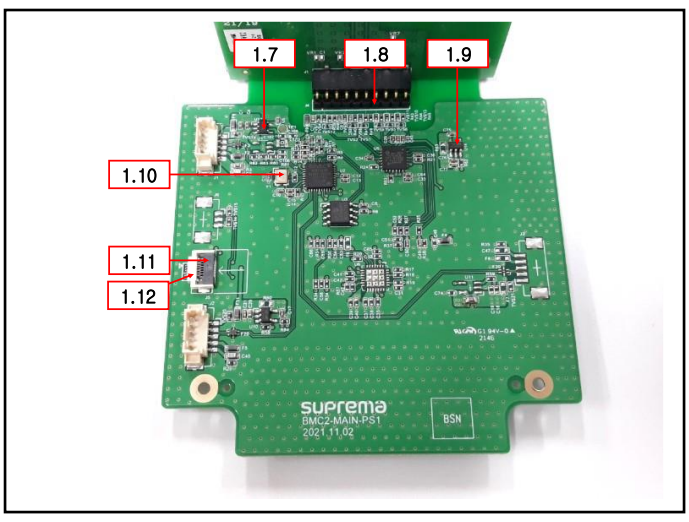
1. Basic acceptance criteria of XRF screening is IEC 62321-3-1:2013 Annex A
   (Screening limit refer to Appendix IV, 3 clause)
2. The additional investigation procedures are taken where doubtful test result for XRF screening
3. For maintaining product quality, the comparison and verification are required between analytical test reports and XRF screening results if possible

Appendix III

Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
1.1	Label	Solbar Tech	BL	BL	BL	BL	BL	N.A.	Pass
1.2	Connector	SHINHWA TECH	BL	BL	BL	BL	433	Br - Type C	Pass
1.3	CR-30	GEMALTO	BL	BL	BL	BL	BL	N.A.	Pass
1.4	USB2514B-AEZG	MAXLINEAR	BL	BL	BL	BL	BL	N.A.	Pass
1.5	24LC02BT-I/SN	MICROCHIP	BL	BL	BL	BL	BL	N.A.	Pass
1.6	Connector	MOLEX	BL	BL	BL	BL	136624	Br - Type C	Pass
1.7	TC1017-3.3VCTTR	MICROCHIP	BL	BL	BL	BL	BL	N.A.	Pass
1.8	Connector	SHINHWA TECH	BL	BL	BL	BL	728	Br - Type C	Pass
1.9	FP6861E-C1AS5CTR	FITI POWER	BL	BL	BL	BL	BL	N.A.	Pass
1.10	SX-32-20-20D3-24.000MHZ-9PF	SHINSUNG SAW	BL	BL	BL	4092	N.A.	Cr - Type A	Pass
1.11	TF31-6S-0.5SH	HIROSE	BL	BL	BL	BL	BL	N.A.	Pass
1.12			BL	BL	BL	BL	BL	N.A.	Pass

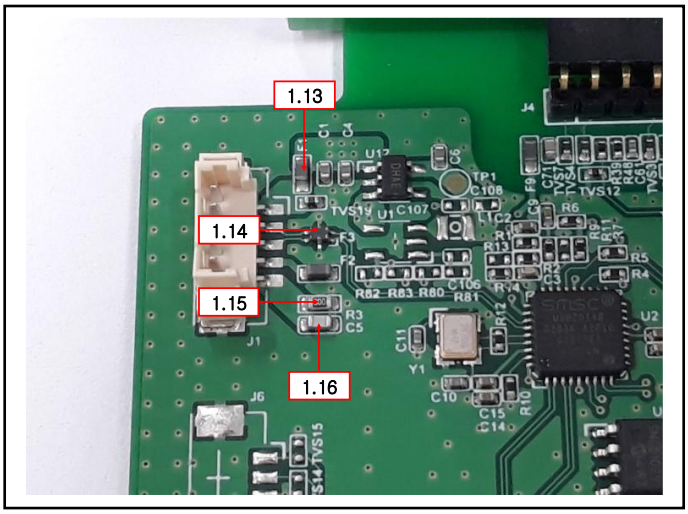


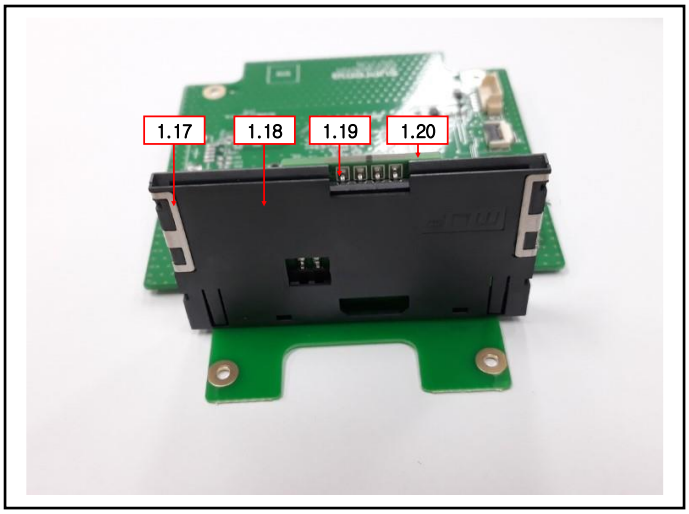


Appendix III

Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
1.13	MHC1608S121PBP	INPAQ	BL	BL	BL	BL	BL	N.A.	Pass
1.14	ICMEF112P900MFR	INNOCHIPS	BL	BL	BL	BL	BL	N.A.	Pass
1.15	Resistor	SAMSUNG	BL	BL	BL	1214	BL	Cr - Type A	Pass
1.16	Capacitor	TDK	BL	BL	BL	BL	BL	N.A.	Pass
1.17	Contact card socket	MUP	BL	BL	BL	168856	N.A.	Cr - Type A	Pass
1.18			BL	BL	BL	BL	BL	N.A.	Pass
1.19	Solder	SMIC	BL	BL	BL	BL	N.A.	N.A.	Pass
1.20	PCB	CHOMDAN	BL	BL	BL	BL	53950	Br - Type C	Pass

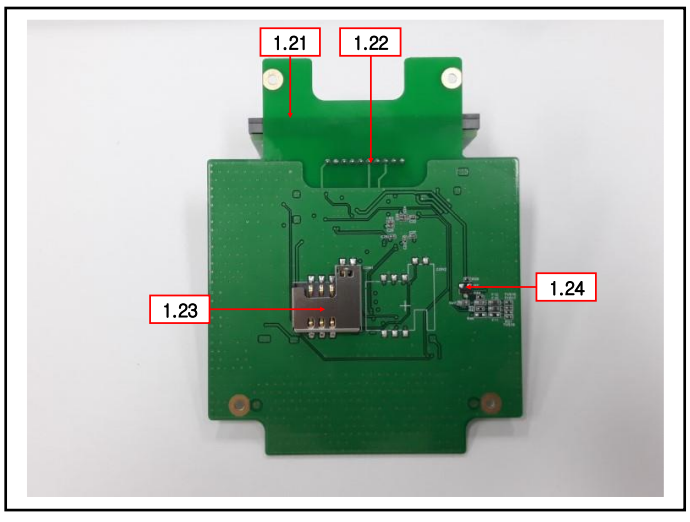


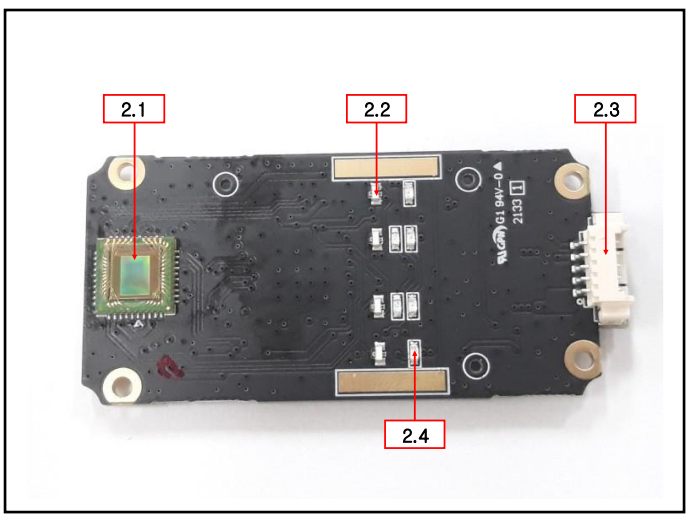


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Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
1.21	PCB-MLB	GPN	BL	BL	BL	BL	36123	Br - Type D	Pass
1.22	Solder	SMIC	BL	BL	BL	BL	N.A.	N.A.	Pass
1.23	SIM2070-6-1-30-00-A	GLOBAL CONNECTOR	BL	BL	BL	179673	N.A.	Cr - Type A	Pass
1.24	MMBT3904	TOPDYNAMIC	BL	BL	BL	BL	BL	N.A.	Pass
2.1	PO1150K	PIXELPLUS	BL	BL	BL	BL	592	Br - Type C	Pass
2.2	LED	LITEON	BL	BL	BL	BL	BL	N.A.	Pass
2.3	Connector	MOLEX	BL	BL	BL	BL	131379	Br - Type C	Pass
2.4	LED	BRIGHT LED	BL	BL	BL	BL	BL	N.A.	Pass

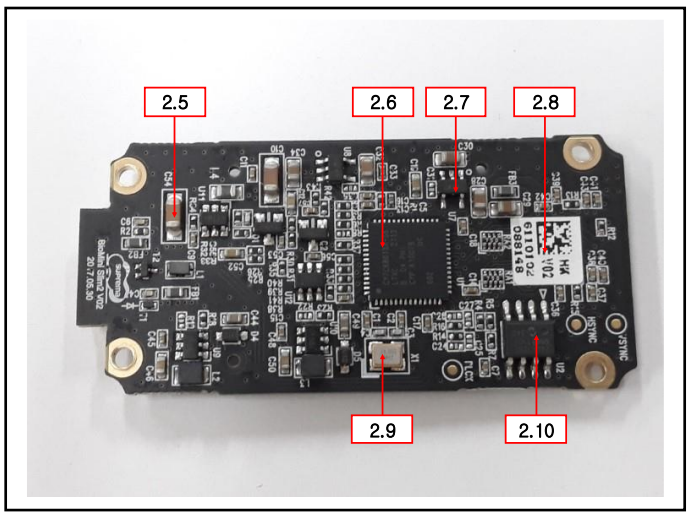


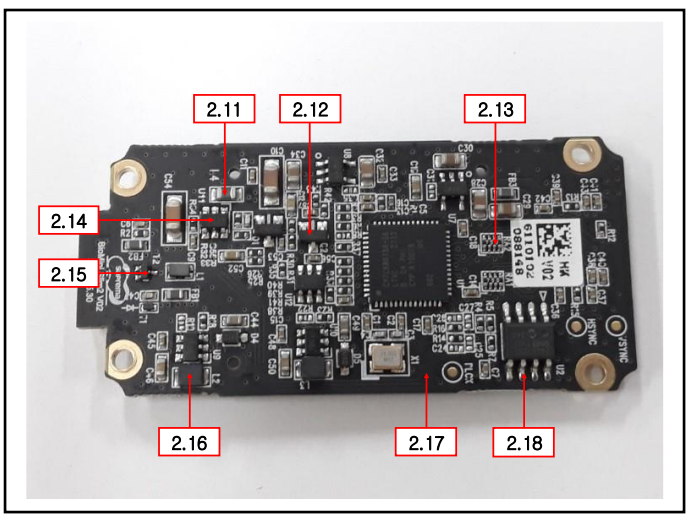


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Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
2.5	Capacitor	SAMSUNG	BL	BL	BL	BL	BL	N.A.	Pass
2.6	CY7C68013A-56LTXC	INFINEON	BL	BL	BL	BL	BL	N.A.	Pass
2.7	GS7119ST-2P8-R	GSTEK	BL	BL	BL	BL	BL	N.A.	Pass
2.8	Label	Solbar Tech	BL	BL	BL	BL	BL	N.A.	Pass
2.9	SX-32-20-20D3-24.000MHZ-9PF	SHINSUNG SAW	BL	BL	BL	2978	N.A.	Cr - Type A	Pass
2.10	24LC128-I/SN	MICROCHIP	BL	BL	BL	BL	BL	N.A.	Pass
2.11	Capacitor	SAMSUNG	BL	BL	BL	BL	BL	N.A.	Pass
2.12	IRLML6402TRPBF	INFINEON	BL	BL	BL	BL	BL	N.A.	Pass
2.13	Resistor	SAMSUNG	BL	BL	BL	1960	BL	Cr - Type A	Pass
2.14	AP5724WUG-7	DIODES	BL	BL	BL	BL	BL	N.A.	Pass
2.15	BV-FA05ZC	BENCENT	BL	BL	BL	BL	BL	N.A.	Pass
2.16	NLV25T-100J-EF	TDK	BL	BL	BL	BL	BL	N.A.	Pass
2.17	PCB	GPN	BL	BL	BL	BL	15257	Br - Type C	Pass
2.18	Solder	SMIC	BL	BL	BL	BL	N.A.	N.A.	Pass

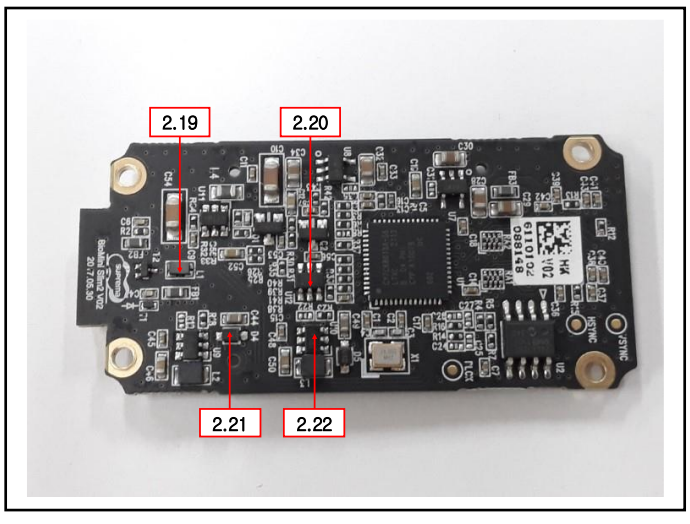


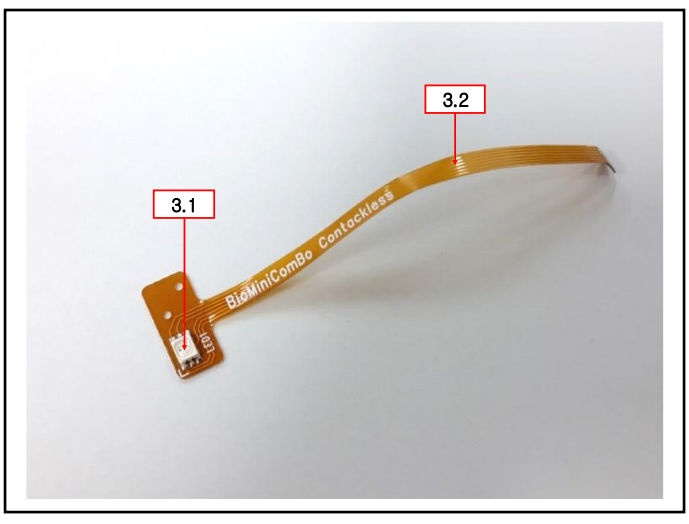


Appendix III

Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
2.19	ICMF212P121MFR	MODA INNOCHIPS	BL	BL	BL	BL	BL	N.A.	Pass
2.20	MTCH101T-I/OT	MICROCHIP	BL	BL	BL	BL	BL	N.A.	Pass
2.21	SD103AWS	MDD	BL	BL	BL	BL	3528	Br - Type C	Pass
2.22	FP6381AS5CTR	FITI POWER	BL	BL	BL	BL	BL	N.A.	Pass
3.1	AAAF3529SEEZGQBDS	KINGBRIGHT	BL	BL	BL	BL	747	Br - Type C	Pass
3.2	FPCB	MIRAE SYSTEM	BL	BL	BL	BL	BL	N.A.	Pass

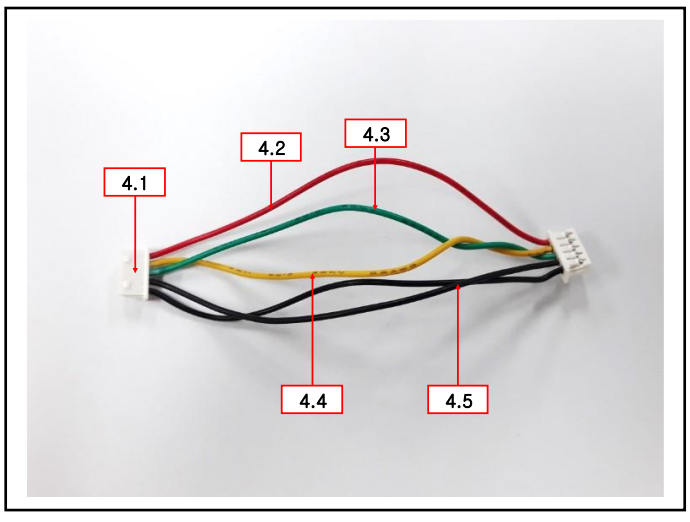


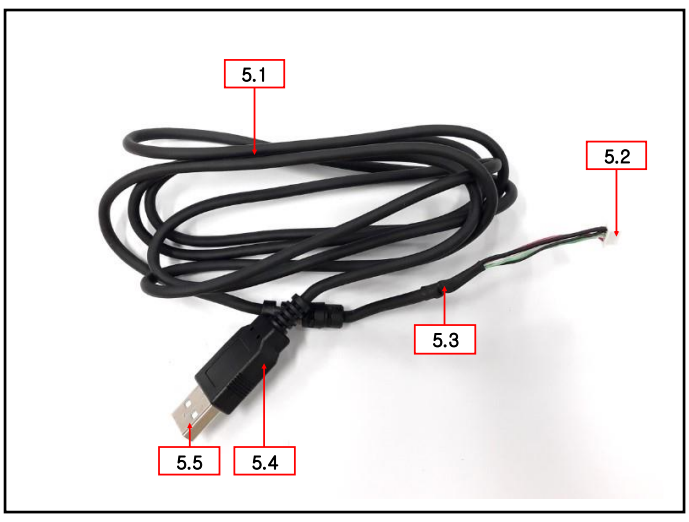


Appendix III

Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
4.1	Cable	Jaewoo E&C	BL	BL	BL	BL	155718	Br - Type D	Pass
4.2			BL	BL	BL	BL	BL	N.A.	Pass
4.3			BL	BL	BL	BL	BL	N.A.	Pass
4.4			BL	BL	BL	BL	BL	N.A.	Pass
4.5			BL	BL	BL	BL	BL	N.A.	Pass
5.1	USB Cable assy	Jaewoo E&C	BL	BL	BL	BL	BL	N.A.	Pass
5.2			BL	BL	BL	BL	84224	Br - Type D	Pass
5.3			BL	BL	BL	BL	BL	N.A.	Pass
5.4			BL	BL	BL	BL	BL	N.A.	Pass
5.5			BL	BL	BL	BL	N.A.	N.A.	Pass

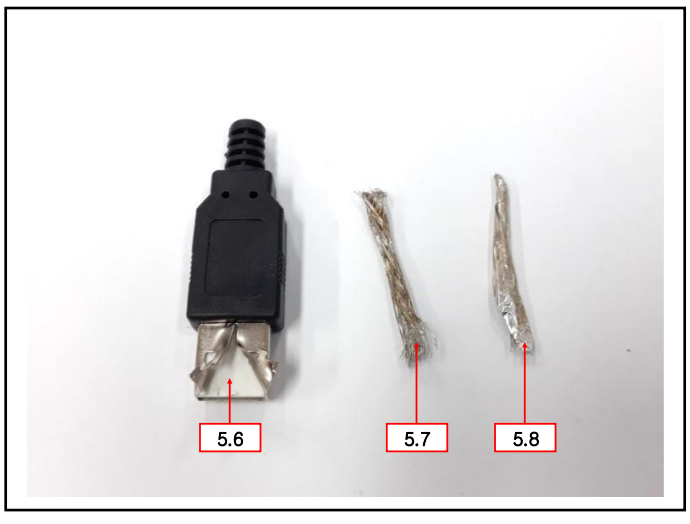


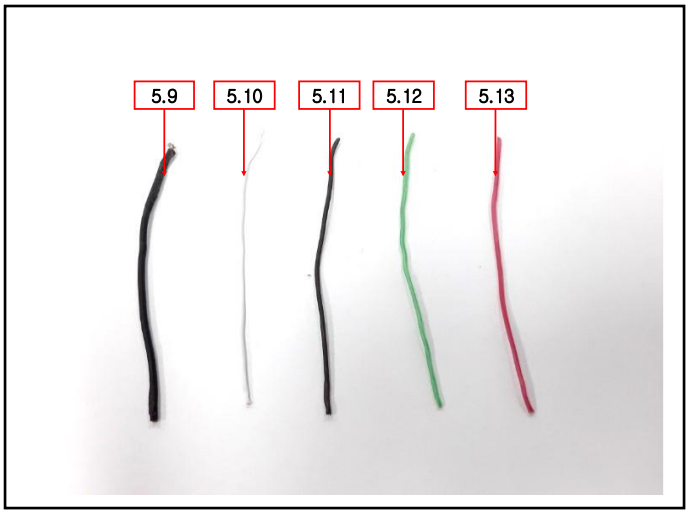


Appendix III

Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
5.6	USB Cable assy	Jaewoo E&C	BL	BL	BL	BL	2413	Br - Type D	Pass
5.7			BL	BL	BL	BL	N.A.	N.A.	Pass
5.8			BL	BL	BL	BL	N.A.	N.A.	Pass
5.9			BL	BL	BL	BL	BL	N.A.	Pass
5.10			BL	BL	BL	BL	BL	N.A.	Pass
5.11			BL	BL	BL	BL	BL	N.A.	Pass
5.12			BL	BL	BL	BL	BL	N.A.	Pass
5.13			BL	BL	BL	BL	BL	N.A.	Pass



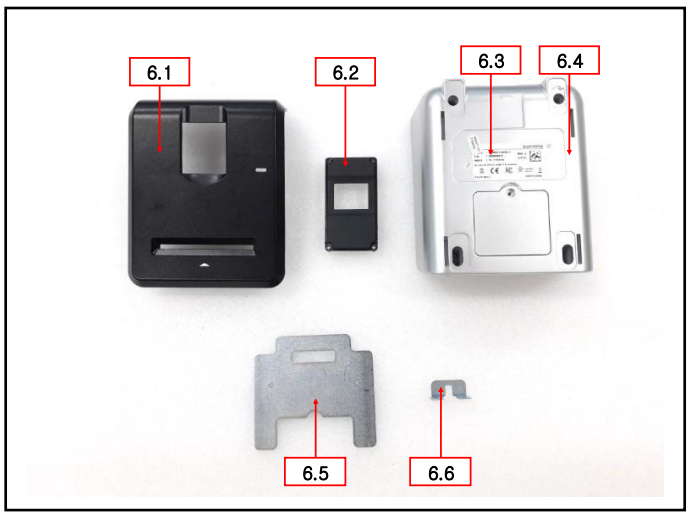


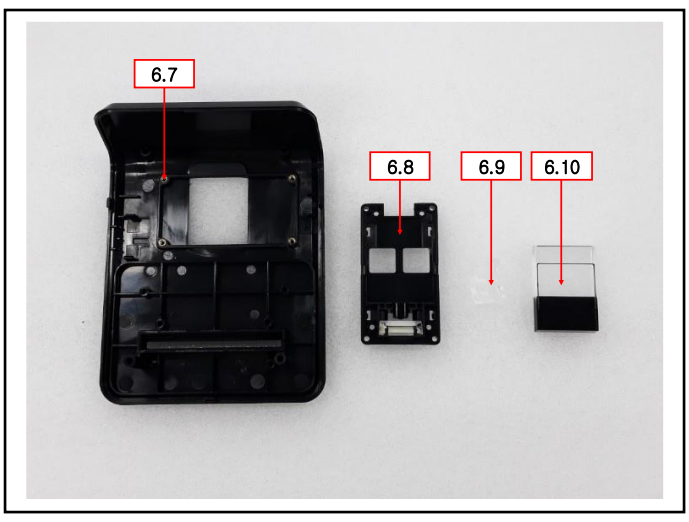
Appendix III

Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
6.1	Case	Hyechang	BL	BL	BL	BL	BL	N.A.	Pass
6.2	Case	Qingdao Omec	BL	BL	BL	BL	BL	N.A.	Pass
6.3	Label	Solbar Tech	BL	BL	BL	BL	BL	N.A.	Pass
6.4	Rear Case	Hyechang	BL	BL	BL	BL	BL	N.A.	Pass
6.5	Weight plate	D&H	BL	BL	BL	1305	N.A.	Cr - Type A	Pass
6.6	Cable plate	D&H	BL	BL	BL	1087	N.A.	Cr - Type A	Pass
6.7	Insert nut	Hyechang	BL	30912	BL	BL	N.A.	Pb - Exemption ANNEX Ⅲ 6(c)	Pass
6.8	BM-Slim2 Cover Bottom	Qingdao Omec	BL	BL	BL	BL	BL	N.A.	Pass
6.9	Spacer sheet	Qingdao Omec	BL	BL	BL	BL	BL	N.A.	Pass
6.10	Prism	Qingdao Omec	BL	BL	BL	BL	BL	N.A.	Pass

*** Note ; ANNEXⅢ 6(c) : Copper alloy containing up to 4% lead by weight**

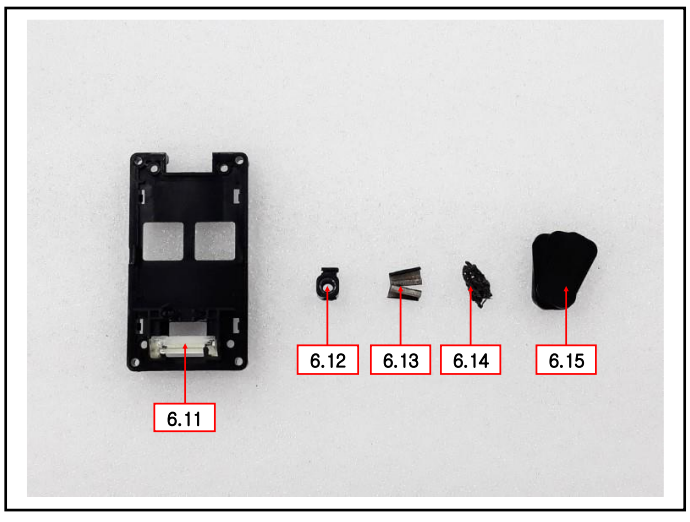


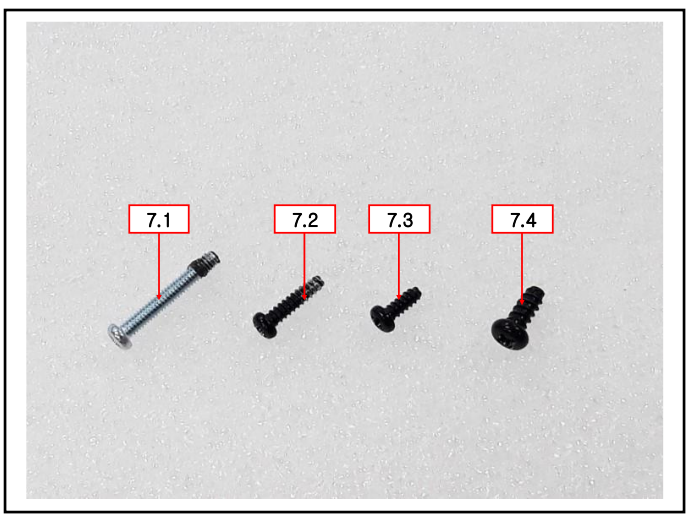


Appendix III

Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
6.11	Mirror	Qingdao Omec	BL	BL	BL	BL	BL	N.A.	Pass
6.12	Lens assy	Qingdao Omec	BL	BL	BL	BL	BL	N.A.	Pass
6.13	EMI Cushion	Qingdao Omec	BL	BL	BL	BL	BL	N.A.	Pass
6.14	Double sided tape	Sungjin printec	BL	BL	BL	BL	BL	N.A.	Pass
6.15	Rubber	Sungjin printec	BL	BL	BL	BL	BL	N.A.	Pass
7.1	Screw	Jungwoo bolt	BL	BL	BL	1826	N.A.	Cr - Type A	Pass
7.2			BL	BL	BL	978	N.A.	Cr - Type A	Pass
7.3			BL	BL	BL	3034	N.A.	Cr - Type A	Pass
7.4			BL	BL	BL	1415	N.A.	Cr - Type A	Pass





Appendix III

Verification XRF Test Results

No.	Part name	Supplier	XRF Data (mg/kg)					Evaluation	Result
			Cd	Pb	Hg	Cr	Br		
8.1	Unit box	Shinan D&P	BL	BL	BL	BL	N.A.	Applied packaging directive	Pass
8.2	PE bag	Deagun	BL	BL	BL	BL	N.A.		Pass
8.3	Cable holder	Jaewoo E&C	BL	BL	BL	BL	N.A.		Pass



Appendix III
Verification XRF Test Results

1. Results are obtained by ED XRF in regulated substances according to IEC 62321-3-1:2013 Annex A.

2. It is the result on total Br while test item on restricted substances is PBBs & PBDEs.
   Also, it is the result on total Cr while test item on restricted substance is hexavalent chromium.

3. Screening limits in mg/kg for regulated elements in various matrices

Element	Polymers	Metals	Composite material
Cd	BL ≤ 70-3σ < X 130+3σ ≤ OL	BL ≤ 70-3σ < X 130+3σ ≤ OL	BL ≤ 70-3σ < X 130+3σ ≤ OL
Pb	BL ≤ 700-3σ < X 130+3σ ≤ OL	BL ≤ 700-3σ < X 130+3σ ≤ OL	BL ≤ 700-3σ < X 130+3σ ≤ OL
Hg	BL ≤ 700-3σ < X 130+3σ ≤ OL	BL ≤ 700-3σ < X 130+3σ ≤ OL	BL ≤ 700-3σ < X 130+3σ ≤ OL
Br	BL ≤ 300-3σ < X	--	BL ≤ 250-3σ < X
Cr	BL ≤ 700-3σ < X	BL < 700-3σ < X	BL ≤ 500-3σ < X

4. Abbreviation :

Pb = Lead
Cd = Cadmium
Hg = Mercury
Cr = Chromium
Cr (VI) = Chromium (VI)
PBBs = Total Polybrominated Biphenyls
PBDEs = Total Polybrominated Diphenyl Ethers

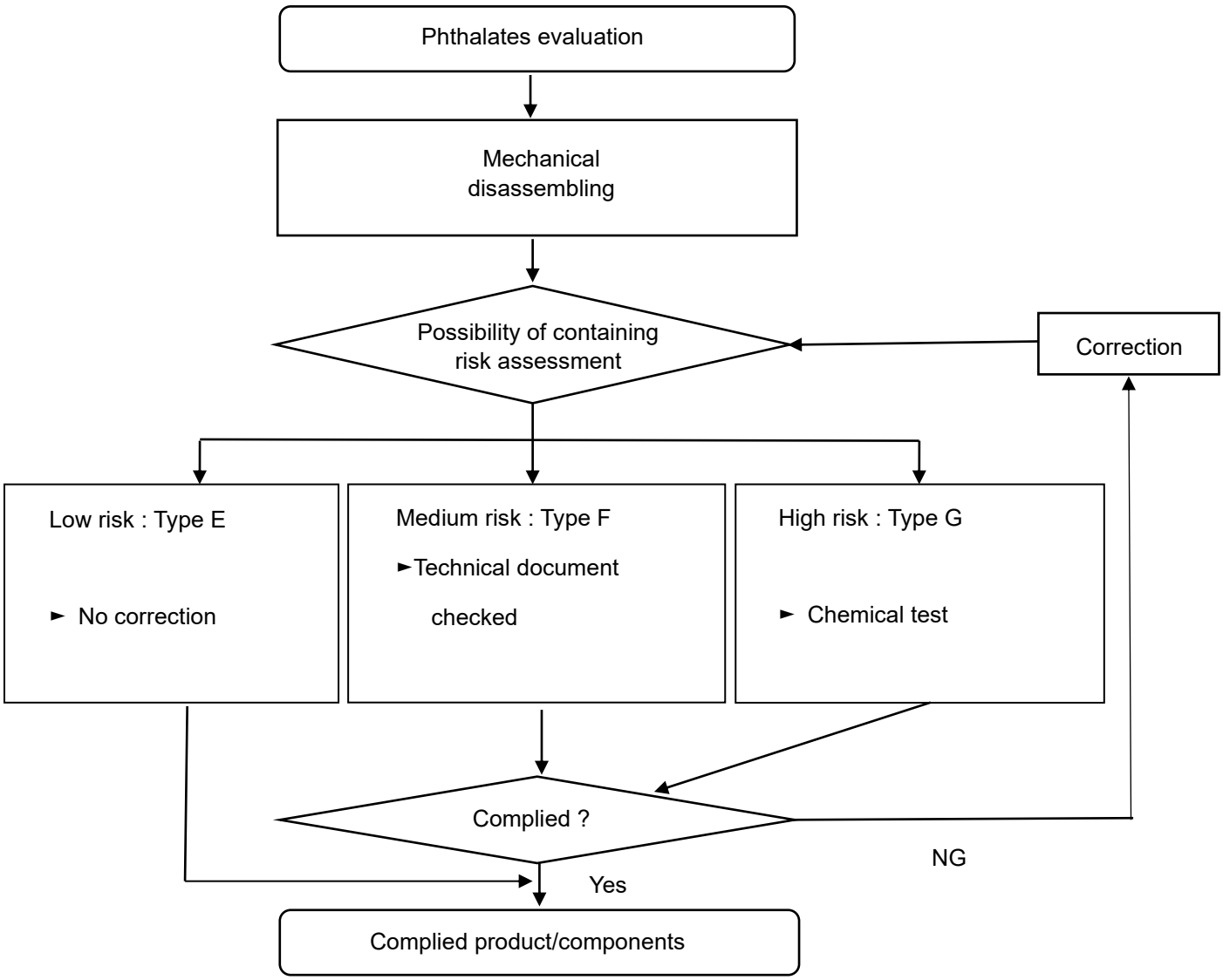
N.A. = Not Applicable
N.D. = Not Detected
BL = Below limit
OL = Over limit
X = Inconclusive

5. The type of estimation

Type A	Detected more than screening limits on total Cr and confirmed absence of Cr^{6+} by diphenylcarbazide reagent.
Type B	Primary test result failed and replaced new sample. Finally confirmed through again XRF test.
Type C	Detected more than screening limits on total Br and confirmed absence PBBs/PBDEs through technical document of detected parts or material.
Type D	Detected components/materials was tested by chemical analysis

Appendix IV

Phthalates risk evaluation



Note : 1. Basic acceptance criteria for possibility of containing phthalate is the following.

- If the XRF test result detected the Cl, the part is doubted to be PVC containing phthalate
- Polymer with elasticity and flexibility
- Kind of foreseeable skin-contact materials such as case, cable, rubber.
- Component / materials known to contain materials of high concern

2. Phthalates are materials that help to increase elasticity and flexibility when processing plastics.
3. For maintaining product quality, the comparison and verification are required between analytical test reports and risk assessment if possible

Appendix IV
Phthalates risk evaluation

No.	XRF Data CI	Possibility of containing phthalate	Evalution	Result	No.	XRF Data CI	Possibility of containing phthalate	Evalution	Result
1.1	BL	Low Risk	Type E	Pass	1.19	N.A.	N.A.	N.A.	Pass
1.2	BL	Low Risk	Type E	Pass	1.20	BL	Medium Risk	Type F	Pass
1.3	BL	Low Risk	Type E	Pass	1.21	BL	High Risk	Type G	Pass
1.4	BL	Low Risk	Type E	Pass	1.22	N.A.	N.A.	N.A.	Pass
1.5	BL	Low Risk	Type E	Pass	1.23	N.A.	N.A.	N.A.	Pass
1.6	BL	Low Risk	Type E	Pass	1.24	BL	Low Risk	Type E	Pass
1.7	BL	Low Risk	Type E	Pass	2.1	BL	Low Risk	Type E	Pass
1.8	BL	Low Risk	Type E	Pass	2.2	BL	Low Risk	Type E	Pass
1.9	BL	Low Risk	Type E	Pass	2.3	BL	Low Risk	Type E	Pass
1.10	N.A.	N.A.	N.A.	Pass	2.4	BL	Low Risk	Type E	Pass
1.11	BL	Low Risk	Type E	Pass	2.5	BL	Low Risk	Type E	Pass
1.12	BL	Low Risk	Type E	Pass	2.6	BL	Low Risk	Type E	Pass
1.13	BL	Low Risk	Type E	Pass	2.7	BL	Low Risk	Type E	Pass
1.14	BL	Low Risk	Type E	Pass	2.8	BL	Low Risk	Type E	Pass
1.15	BL	Low Risk	Type E	Pass	2.9	N.A.	N.A.	N.A.	Pass
1.16	BL	Low Risk	Type E	Pass	2.10	BL	Low Risk	Type E	Pass
1.17	N.A.	N.A.	N.A.	Pass	2.11	BL	Low Risk	Type E	Pass
1.18	BL	Low Risk	Type E	Pass	2.12	BL	Low Risk	Type E	Pass

Appendix IV
Phthalates risk evaluation

No.	XRF Data CI	Possibility of containing phthalate	Evalution	Result	No.	XRF Data CI	Possibility of containing phthalate	Evalution	Result
2.13	BL	Low Risk	Type E	Pass	5.2	BL	Low Risk	Type E	Pass
2.14	BL	Low Risk	Type E	Pass	5.3	BL	High Risk	Type G	Pass
2.15	BL	Low Risk	Type E	Pass	5.4	Detected	High Risk	Type G	Pass
2.16	BL	Low Risk	Type E	Pass	5.5	N.A.	N.A.	N.A.	Pass
2.17	BL	Medium Risk	Type F	Pass	5.6	BL	Low Risk	Type E	Pass
2.18	N.A.	N.A.	N.A.	Pass	5.7	N.A.	N.A.	N.A.	Pass
2.19	BL	Low Risk	Type E	Pass	5.8	N.A.	N.A.	N.A.	Pass
2.20	BL	Low Risk	Type E	Pass	5.9	BL	High Risk	Type G	Pass
2.21	BL	Low Risk	Type E	Pass	5.10	BL	High Risk	Type G	Pass
2.22	BL	Low Risk	Type E	Pass	5.11	BL	High Risk	Type G	Pass
3.1	BL	Low Risk	Type E	Pass	5.12	BL	High Risk	Type G	Pass
3.2	BL	High Risk	Type G	Pass	5.13	BL	High Risk	Type G	Pass
4.1	BL	Low Risk	Type E	Pass	6.1	BL	High Risk	Type G	Pass
4.2	Detected	High Risk	Type G	Pass	6.2	BL	High Risk	Type G	Pass
4.3	Detected	High Risk	Type G	Pass	6.3	BL	Low Risk	Type E	Pass
4.4	Detected	High Risk	Type G	Pass	6.4	BL	High Risk	Type G	Pass
4.5	Detected	High Risk	Type G	Pass	6.5	N.A.	N.A.	N.A.	Pass
5.1	Detected	High Risk	Type G	Pass	6.6	N.A.	N.A.	N.A.	Pass

Appendix IV

Phthalates risk evaluation

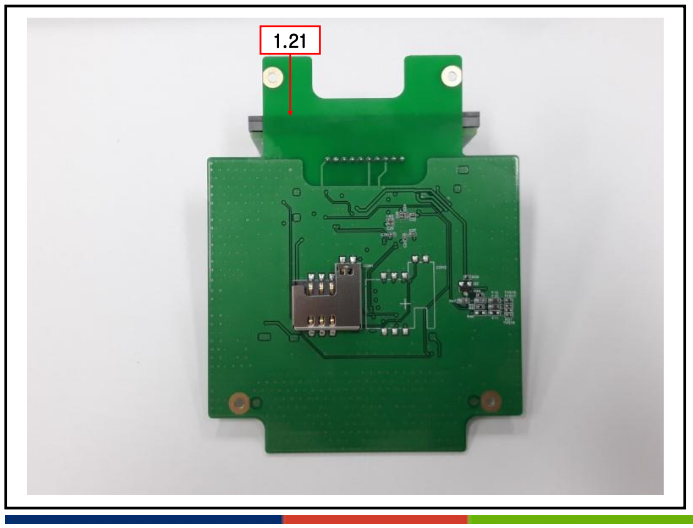
No.	XRF Data CI	Possibility of containing phthalate	Evalution	Result	No.	XRF Data CI	Possibility of containing phthalate	Evalution	Result
6.7	N.A.	N.A.	N.A.	Pass					
6.8	BL	High Risk	Type G	Pass					
6.9	BL	High Risk	Type G	Pass					
6.10	BL	Low Risk	Type E	Pass					
6.11	BL	Low Risk	Type E	Pass					
6.12	BL	Low Risk	Type E	Pass					
6.13	BL	Low Risk	Type E	Pass					
6.14	BL	High Risk	Type G	Pass					
6.15	BL	High Risk	Type G	Pass					
7.1	N.A.	N.A.	N.A.	Pass					
7.2	N.A.	N.A.	N.A.	Pass					
7.3	N.A.	N.A.	N.A.	Pass					
7.4	N.A.	N.A.	N.A.	Pass					
8.1	N.A.	N.A.	N.A.	Pass					
8.2	N.A.	N.A.	N.A.	Pass					
8.3	N.A.	N.A.	N.A.	Pass					

Appendix V

Phthalates Chemical test result

No.	Part name	Chemical analysis data (mg/kg)				Evaluation	Result
		DEHP	BBP	DBP	DIBP		
1.21	PCB-MLB	N.D.	N.D.	N.D.	N.D.	Type G Chemical test	Pass
3.2	FPCB	96	N.D.	N.D.	N.D.		Pass

▶MDL in phthalate : 50 mg/kg



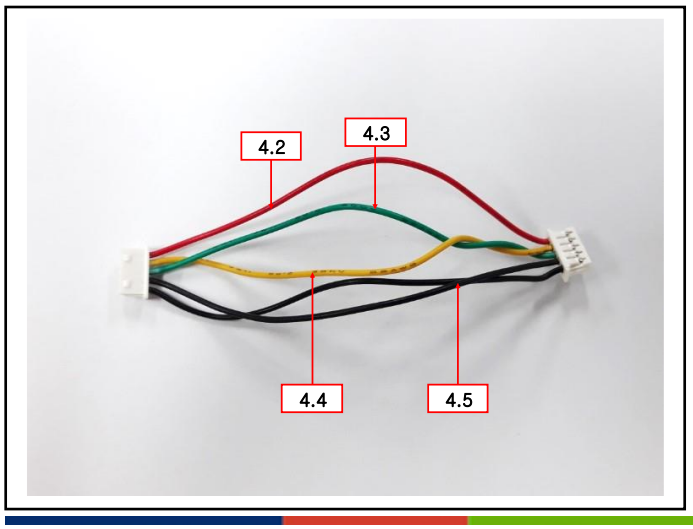


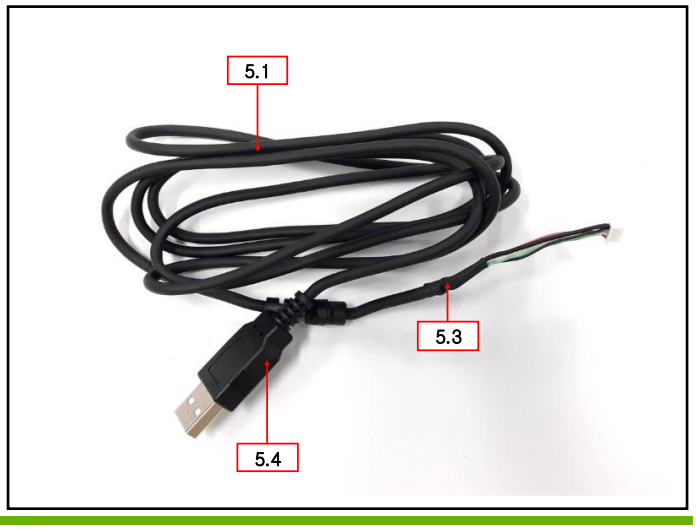
Appendix V

Phthalates Chemical test result

No.	Part name	Chemical analysis data (mg/kg)				Evaluation	Result
		DEHP	BBP	DBP	DIBP		
4.2	Cable	N.D.	N.D.	N.D.	N.D.	Type G Chemical test	Pass
4.3		N.D.	N.D.	N.D.	N.D.		Pass
4.4		N.D.	N.D.	N.D.	N.D.		Pass
4.5		N.D.	N.D.	N.D.	N.D.		Pass
5.1	Outer cable	N.D.	N.D.	N.D.	N.D.		Pass
5.3	Shrinkable tube	N.D.	N.D.	N.D.	N.D.		Pass
5.4	Cable molding black	347	N.D.	183	N.D.		Pass

▶MDL in phthalate : 50 mg/kg



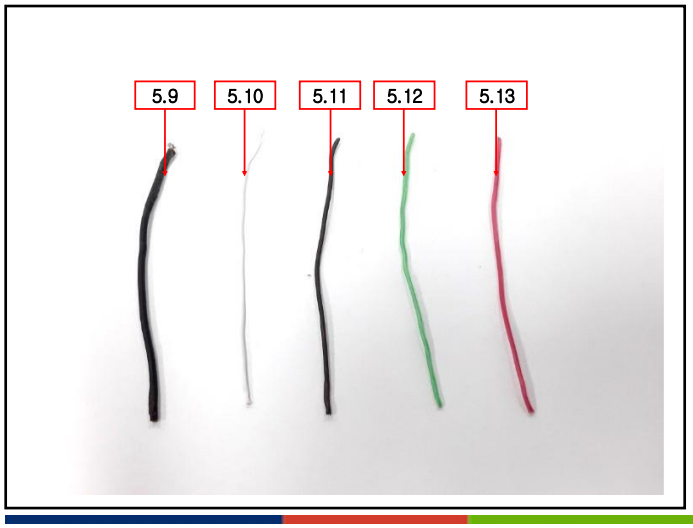


Appendix V

Phthalates Chemical test result

No.	Part name	Chemical analysis data (mg/kg)				Evaluation	Result
		DEHP	BBP	DBP	DIBP		
5.9	Black cable	N.D.	N.D.	N.D.	N.D.	Type G Chemical test	Pass
5.10	Cable	N.D.	N.D.	N.D.	N.D.		Pass
5.11		N.D.	N.D.	N.D.	N.D.		Pass
5.12		N.D.	N.D.	N.D.	N.D.		Pass
5.13		N.D.	N.D.	N.D.	N.D.		Pass
6.1	Case	N.D.	N.D.	N.D.	N.D.		Pass
6.2		N.D.	N.D.	N.D.	N.D.		Pass
6.4	Rear Case	N.D.	N.D.	N.D.	N.D.		Pass

▶MDL in phthalate : 50 mg/kg



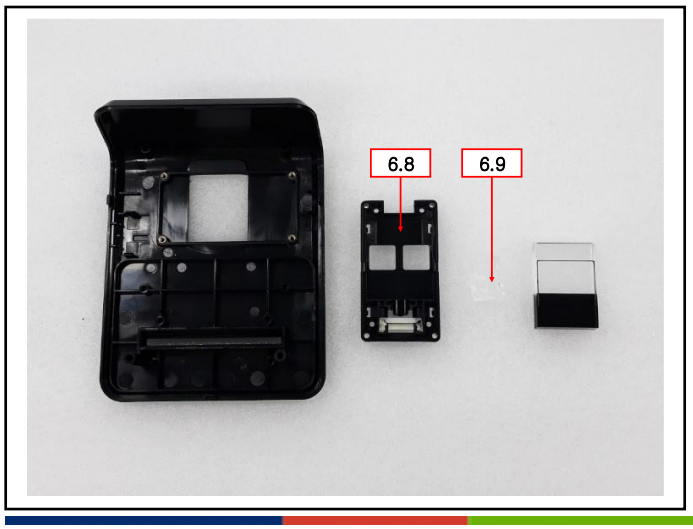


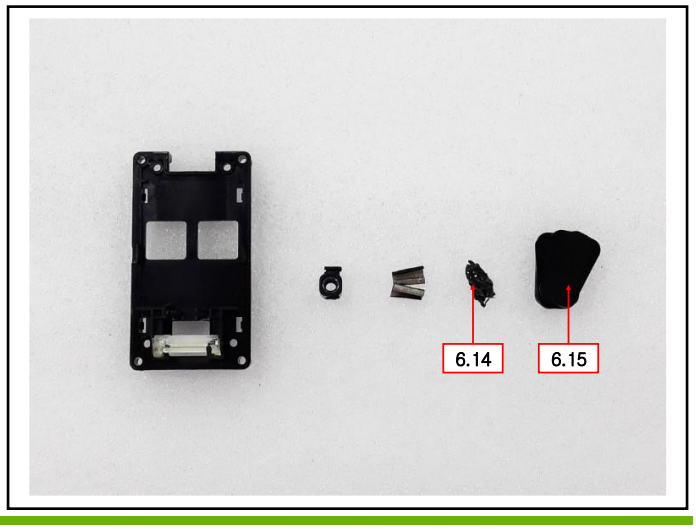
Appendix V

Phthalates Chemical test result

No.	Part name	Chemical analysis data (mg/kg)				Evaluation	Result
		DEHP	BBP	DBP	DIBP		
6.8	BM-Slim2 Cover Bottom	N.D.	N.D.	N.D.	N.D.	Type G Chemical test	Pass
6.9	Spacer sheet	N.D.	N.D.	N.D.	N.D.		Pass
6.14	Double sided tape	N.D.	N.D.	N.D.	N.D.		Pass
6.15	Rubber	N.D.	N.D.	N.D.	N.D.		Pass

▶MDL in phthalate : 50 mg/kg





Appendix V
Phthalates Chemical test result

1. Chemical test results are obtained by GC/MS in regulated substances according to IEC 62321-8:2017.

2. Phthalates are materials that help to increase elasticity and flexibility when processing plastics.
Especially, PVC(Polyvinyl chloride) material is likely to contain phthalate.

- If the XRF test result detected the Cl, the part is doubted to be PVC containing phthalate
- There is at least a few percent of Cl in the PVC material
Therefore, XRF screen test results were recorded 'Detected' only at detection of at least 1 %.
- Other components/materials, including plastics, were evaluated according to a risk assessment of the possibility of containing phthalates.
- The following materials are not likely to contain phthalates.
Metal (Copper alloy, Steel alloy, Aluminum alloy etc), Ceramic, Glass, Paper, Wood

3. Abbreviation :

DEHP = Bis(2-ethylhexyl)phthalate
BBP = Butyl benzyl phthalate
DBP = Dibutyl phthalate
DIBP = Diisobutyl phthalate
N.A. = Not Applicable
N.D. = Not Detected
BL = Below limit
Detected = Cl > 1%
Cl = Clorine

4. The type of comprehension

Type E	It was evaluated no exist or remarkable low risk of the possibility for containing phthalates. Applied parts/materials were not required the corrective action
Type F	It was evaluated maybe of the possibility of containing phthalates. Applied parts/materials were confirmed absence phthalates through technical document
Type G	It was evaluated high risk of the possibility of containing phthalates. Applied parts/materials were tested by chemical analysis

Appendix VI

Reference document

1. Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

2. Directive 2015/863/EU of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances.

3. IEC 63000:2016
   Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

4. IEC 62321-3-1:2013
   Determination of certain substances inelectrotechnical products - Part 3-1 : Screening - Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry.

5. IEC 62321-4:2013+AMD1:2017 CSV
   Determination of certain substances in electrotechnical products - Part 4: Mercury in polymers, metals and electronics by CV-AAS, CV-AFS, ICP-OES and ICP-MS.

6. IEC 62321-5:2013
   Determination of certain substances in electrotechnical products - Part 5: Cadmium, lead and chromium in polymers and electronics and cadmium and lead in metals by AAS, AFS, ICP-OES and ICP-MS.

7. IEC 62321-6:2015
   Determination of certain substances in electrotechnical products - Part 6: Polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatography-mass spectrometry(GC-MS).

8. IEC 62321-7-1:2015
   Determination of certain substances in electrotechnical products - Part 7-1 : Hexavalent chromium – Presence of hexavalent chromium (Cr(VI)) in colourless and coloured corrosion- protected coatings on metal by the colorimetric method.

9. IEC 62321-7-2:2017
   Determination of certain substances in electrotechnical products - Part 7-2: Hexavalent chromium – Determination of hexavalent chromium(Cr(VI)) in polymers and electronics by the colormetric method.

10. IEC 62321-8:2017
    Determination of certain substances in electrotechnical products - Part 8: Phthalates in polymers by gas chromatography-mass spectrometry(GC-MS), gas chromatography-mass spectrometry using a pyrolyzer/thermal desorption accessory(Py/TD-GC-MS).

11. IEC 62474:2018
    Material declaration for products of and for the electrotechnical industry.

12. IEC/TR 62476:2010
    Guidance for evaluation of products with respect to substance use restrictions in electrical and electronic products.

~~ THE END ~~