Report No.: 18300RC20069001

Test Report

Client Name	:	Seeed Technology Co., Ltd.
Address	:	9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen, Guangdong Province, P.R.C
Product Name	:	SenseCAP M2 LoRaWAN Indoor Gateway
Date	:	Mar. 07, 2022

Shenzhen Anbotek Compliance Laboratory Limited

Test Report

Applicant	:	Seeed Technology Co., Ltd.
Address	:	9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen, Guangdong Province, P.R.C

The submitted sample and sample information was/were submitted and identified by/on the behalf of the client

Sample Name	:	SenseCAP M2 LoRaWAN Indoor Gateway
Test Model No.	:	M2-EU868G-4G
Reference Model No.	:	M2-EU868-4G，M2-EU868G，M2-EU868，M2-EU868BG-4G，M2-EU868B-4G，M2-EU868BG，M2-EU868B
Manufacturer	:	Seeed Technology Co., Ltd.
Address	:	9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen, Guangdong Province, P.R.C
Trade Mark	:	Seeed Studio
Sample Received Date	:	Feb. 21, 2022
Testing Period	:	Feb. 21, 2022 to Mar. 04, 2022
Test Requested	:	As specified by client, based on the list published by European chemicals agency (ECHA) for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the two hundred and twenty-three (223) Substances of Very High Concern (SVHC) in the submitted sample.

Test Method: In-House method-Analyzed by ICP-OES, UV-Vis, HPLC, LC-MS-MS, GC, GC-MS and colorimetric method

Test Result(s): Please refer to the following page(s).

Summary:

According to the ruling of the Court of Justice of the European Union on the definition of an article under REACH, and the specified scope and evaluation screening, the test results of SVHC are ≤0.1%(w/w) in the articles of the submitted sample.	PASS

Edited by Fang Mo Reviewed by QinNa Authorized Signatory Wendy Wang

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Test Report

Tested Sample/Part Description:

Tested Groups	Description	Photo No.	Component
A#	Metal mixed	7	Silvery metal soldering tin
		11	Copper-colored metal pin
		13	Copper-colored metal stud
		14	Copper-colored metal nut
		15	Copper-colored metal sheet
		17	Silvery metal shell
		18	Metal screw with black coating
		27	Silvery metal shell
		30	Silvery metal soldering tin
		38	Silvery metal pin
		40	Silvery metal shell
		41	Silvery metal pin
		44	Silvery metal shell
		46	Copper-colored metal pin
		47	Silvery metal shell
		48	Copper-colored metal pin
		50	Silvery metal spring
		52	Silvery metal shell
		54	Silvery metal sheet
		55	Silvery metal shrapnel
		59	Silvery metal frame
		65	Silvery metal crystal oscillator
		69	Silvery metal pin
		70	Silvery metal crystal oscillator
		73	Silvery metal crystal oscillator
		76	Copper-colored metal ring
		77	Silvery metal pin
		79	Silvery metal stud
		81	Silvery metal aluminum shell
		83	Silvery metal pin
		85	Silvery metal foil sheet
		89	Silvery metal shell
		91	Silvery metal crystal oscillator

Test Report

Tested Groups	Description	Photo No.	Component
A#	Metal mixed	95	Silvery metal soldering tin
		100	Silvery metal pin
		104	Silvery metal soldering tin
		106	Silvery metal pin
		107	Copper-colored metal coil
		111	Silvery metal pin
		120	Silvery metal pin
		123	Silvery metal crystal oscillator
		132	Silvery metal soldering tin
		133	Silvery metal shell
		141	Silvery metal shell
B#	Nonmetal mixed	1	Green plastic shell
		2	White plastic shell
		3	Grey plastic shell
		4	Grey rubber pedestal
		5	Silvery woven scarfskin
		6	Black foam
		8	Black plastic jacket
		9	Translucent plastic light guide
		10	White inner plastic
		12	Black heat shrink sleeve
		16	Yellow tantalum capacitor
		19	White label
		20	Rectifier bridge
		21	Chip diode
		22	IC
		23	Inductor
		24	IC
		25	Beige plastic key
		26	Chip capacitor
		28	IC
		29	Inductor
		31	Black plastic buckle
		32	Chip resistor
		33	Chip capacitor

Test Report

Tested Groups	Description	Photo No.	Component
B#	Nonmetal mixed	34	Chip audion
		35	Chip diode
		36	Black PCB board
		37	Black plastic shell
		39	Yellow LED
		42	Green LED
		43	Black inner plastic
		45	Black inner plastic
		49	Black inner plastic
		51	Chip LED
		53	Beige plastic key
		56	Beige plastic shell
		57	White glue
		58	Flesh colored silicone
		60	Blue PCB board
		61	Chip capacitor
		62	IC
		63	Chip capacitor
		64	Chip bead
		66	IC
		67	Microphone
		68	Black plastic frame
		71	IC
		72	Beige plastic pedestal
		74	Inductor
		75	IC
		78	IC
		80	Black electrolytic capacitor scarfskin
		82	Black rubber block
		84	Black electrolyte
		86	White paper
		87	Yellow transparent sticker
		88	White label
		90	IC
		92	Inductor

Test Report

Tested Groups	Description	Photo No.	Component
B#	Nonmetal mixed	93	Chip capacitor
		94	IC
		96	IC
		97	Chip audion
		98	Chip bead
		99	Green PCB board
		101	White label
		102	Chip capacitor
		103	Chip resistor
		105	Chip resistor
		108	Black magnet frame
		109	Black plastic frame
		110	Chip capacitor
		112	Black inner plastic
		113	IC
		114	Chip audion
		115	IC
		116	Chip resistor
		117	Chip diode
		118	Chip diode
		119	Chip capacitor
		121	IC
		122	Chip resistor
		124	Black bead
		125	IC
		126	Black PCB board
		127	IC
		128	Chip resistor
		129	Yellow transparent tape
		130	White label
		131	Black glue
		134	White component
		135	IC
		136	IC
		137	Chip capacitor

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Tested Groups	Description	Photo No.	Component
B#	Nonmetal mixed	138	Inductor
		139	IC
		140	Flesh colored silicone

Test Result(s): (Substances in the Candidate List of SVHC)

Tested Groups	Test Item	Report Results (%)
A#	All tested SVHC in Candidate List	N.D.
B#	All tested SVHC in Candidate List	N.D.

Test Report

Attachment (Full list of tested SVHC):

The first: Fifteen Substances of Very High Concern (Released in Oct, 2008)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
1	Bis(tributyltin)oxide (TBTO)	56-35-9	200-268-0	0.005
2	Diarsenic pentaoxide**	1303-28-2	215-116-9	0.01
3	Diarsenic trioxide**	1327-53-3	215-481-4	0.01
4	Triethyl arsenate**	15606-95-8	427-700-2	0.01
5	Lead hydrogen arsenate**	7784-40-9	232-064-2	0.01
6	Cobalt dichloride**	7646-79-9	231-589-4	0.01
7	Sodium dichromate **	7789-12-0, 10588-01-9	234-190-3	0.01
8	Anthracene	120-12-7	204-371-1	0.005
9	4,4'-Diaminodiphenylmethane (MDA)	101-77-9	202-974-4	0.005
10	Dibutyl phthalate (DBP)	84-74-2	201-557-4	0.005
11	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	0.005
12	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	0.005
13	Di-2-ethylhexyl phthalate(DEHP)	117-81-7	204-211-0	0.005
14	Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified	25637-99-4, 3194-55-6 (134237-50-6, 134237-51-7, 134237-52-8)	247-148-4, 221-695-9	0.005
15	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	0.01

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The second: Thirteen Substances of Very High Concern (Released in Jan, 2010 and Mar, 2010)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
16	Anthracene oil	90640-80-5	292-602-7	0.05
17	Anthracene oil, anthracene paste,distn. lights	91995-17-4	295-278-5	0.05
18	Anthracene oil, anthracene paste,anthracene fraction	91995-15-2	295-275-9	0.05
19	Anthracene oil, anthracene-low	90640-82-7	292-604-8	0.05
20	Anthracene oil, anthracene paste	90640-81-6	292-603-2	0.05
21	Pitch, coal tar, high temp.	65996-93-2	266-028-2	0.05
22	Acrylamide	79-06-1	201-173-7	0.01
23	2,4-Dinitrotoluene	121-14-2	204-450-0	0.01
24	Diisobutyl phthalate (DIBP)	84-69-5	201-553-2	0.005
25	Lead chromate**	7758-97-6	231-846-0	0.05
26	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) **	12656-85-8	235-759-9	0.05
27	Lead sulfochromate yellow (C.I.Pigment Yellow 34) **	1344-37-2	215-693-7	0.05
28	Tris(2-chloroethyl)phosphate	115-96-8	204-118-5	0.01

The third: Eight Substances of Very High Concern (Released in Jun, 2010)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
29	Trichloroethylene	79-01-6	201-167-4	0.005
30	Boric acid**	10043-35-3/ 11113-50-1	233-139-2/ 234-343-4	0.01
31	Disodium tetraborate, anhydrous**	1330-43-4/ 12179-04-3/ 1303-96-4	215-540-4	0.01
32	Tetraboron disodium heptaoxide, hydrate**	12267-73-1	235-541-3	0.01

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Code	Test Item	CAS No.	EC No.	Report Limit (%)
33	Sodium chromate**	7775-11-3	231-889-5	0.01
34	Potassium chromate**	7789-00-6	232-140-5	0.01
35	Ammonium dichromate**	7789-09-5	232-143-1	0.01
36	Potassium dichromate**	7778-50-9	231-906-6	0.01

The fourth: Eight Substances of Very High Concern (Released in Dec, 2010)

Code	Test Item		CAS No.	EC No.	Report Limit (%)
37	Cobalt(II) sulphate**		10124-43-3	233-334-2	0.01
38	Cobalt(II) dinitrate**		10141-05-6	233-402-1	0.01
39	Cobalt(II) carbonate**		513-79-1	208-169-4	0.01
40	Cobalt(II) diacetate**		71-48-7	200-755-8	0.01
41	2-Methoxyethanol		109-86-4	203-713-7	0.005
42	2-Ethoxyethanol		110-80-5	203-804-1	0.005
43	Chromium trioxide**		1333-82-0	215-607-8	0.01
44	Acids generated from chromium trioxide and their oligomers	Chromic acid**	7738-94-5	231-801-5	0.01
		Dichromic acid**	13530-68-2	236-881-5	0.01
		Oligomers of chromic acid and dichromic acid**	--	--	0.01

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The fifth: Seven Substances of Very High Concern (Released in Jun, 2011)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
45	2-Ethoxyethyl acetate	111-15-9	203-839-2	0.01
46	Strontium chromate**	7789-06-2	232-142-6	0.01
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters(DHNUP)*	68515-42-4	271-084-6	0.01
48	Hydrazine	7803-57-8/ 302-01-2	206-114-9	0.01
49	1-Methyl-2-pyrrolidone	872-50-4	212-828-1	0.01
50	1,2,3-Trichloropropane	96-18-4	202-486-1	0.01
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters,C7-rich(DIHP)	71888-89-6	276-158-1	0.01

The sixth: Twenty Substances of Very High Concern (Released in Dec, 2011)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
52	Dichromium tris(chromate)**	24613-89-6	246-356-2	0.01
53	Potassium hydroxyoctaoxodizincatedichromate**	11103-86-9	234-329-8	0.01
54	Pentazinc chromate octahydroxide**	49663-84-5	256-418-0	0.01
55	Aluminosilicate Refractory Ceramic Fibres (RCF)**	--	--	0.05
56	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)**	--	--	0.05
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	500-036-1	0.01
58	Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	204-212-6	0.005
59	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	0.005

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Code	Test Item	CAS No.	EC No.	Report Limit (%)
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	205-426-2	0.005
61	1,2-Dichloroethane	107-06-2	203-458-1	0.005
62	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	0.005
63	Arsenic acid**	7778-39-4	231-901-9	0.01
64	Calcium arsenate**	7778-44-1	231-904-5	0.01
65	Trilead diarsenate**	3687-31-8	222-979-5	0.01
66	N,N-dimethylacetamide (DMAC)	127-19-5	204-826-4	0.005
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9	0.005
68	Phenolphthalein	77-09-8	201-004-7	0.005
69	Lead diazide Lead azide **	13424-46-9	236-542-1	0.01
70	Lead styphnate**	15245-44-0	239-290-0	0.01
71	Lead dipicrate**	6477-64-1	229-335-2	0.01

The seventh: Thirteen Substances of Very High Concern (Released in Jun, 2012)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
72	1,2-bis(2-methoxyethoxy)ethane(TEGDME; triglyme)	112-49-2	203-977-3	0.01
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	0.01
74	Diboron trioxide**	1303-86-2	215-125-8	0.01
75	Formamide	75-12-7	200-842-0	0.01
76	Lead(II) bis(methanesulfonate) **	17570-76-2	401-750-5	0.01
77	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine- 2,4,6(1H,3H,5H)-trione)	2451-62-9	219-514-3	0.01

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Code	Test Item	CAS No.	EC No.	Report Limit (%)
78	β-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6	423-400-0	0.01
79	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	90-94-8	202-027-5	0.01
80	N,N,N',N'-tetramethyl-4,4'-methylenedi aniline (Michler's base)	101-61-1	202-959-2	0.01
81	[4-[4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	208-953-6	0.01
82	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl] methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5	219-943-6	0.01
83	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino) naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	229-851-8	0.01
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	209-218-2	0.01

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The eighth: Fifty-four Substances of Very High Concern (Released in Dec, 2012)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	214-604-9	0.05
86	Pentacosafluorotridecanoic acid	72629-94-8	276-745-2	0.05
87	Tricosafluorododecanoic acid	307-55-1	206-203-2	0.05
88	Henicosafluoroundecanoic acid	2058-94-8	218-165-4	0.05
89	Heptacosafluorotetradecanoic acid	376-06-7	206-803-4	0.05
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues	--	--	0.05
91	4-Nonylphenol, branched and linear - substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	--	--	0.05
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	0.05
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7 13149-00-3 14166-21-3	201-604-9 236-086-3 238-009-9	0.05

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Code	Test Item	CAS No.	EC No.	Report Limit (%)
94	Hexahydromethylphthalic anhy, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	247-094-1, 243-072-0, 256-356-4, 260-566-1	0.05
95	Methoxy acetic acid	625-45-6	210-894-6	0.05
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	0.05
97	Diisopentylphthalate (DIPP)	605-50-5	210-088-4	0.05
98	N-pentyl-isopentylphtalate	776297-69-9	--	0.05
99	1,2-Diethoxyethane	629-14-1	211-076-1	0.05
100	N,N-dimethylformamide	68-12-2	200-679-5	0.05
101	Dibutyltin dichloride (DBTC)	683-18-1	211-670-0	0.05
102	Acetic acid, lead salt, basic**	51404-69-4	257-175-3	0.01
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide) **	1319-46-6	215-290-6	0.01
104	Lead oxide sulfate (basic lead sulfate) **	12036-76-9	234-853-7	0.01
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate) **	69011-06-9	273-688-5	0.01
106	Dioxobis(stearato)trilead**	12578-12-0	235-702-8	0.01
107	Fatty acids, C16-18, lead salts**	91031-62-8	292-966-7	0.01
108	Lead bis(tetrafluoroborate) **	13814-96-5	237-486-0	0.01
109	Lead cynamidate**	20837-86-9	244-073-9	0.01
110	Lead dinitrate**	10099-74-8	233-245-9	0.01
111	Lead oxide (lead monoxide) **	1317-36-8	215-267-0	0.01
112	Lead tetroxide (orange lead) **	1314-41-6	215-235-6	0.01

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Code	Test Item	CAS No.	EC No.	Report Limit (%)
113	Lead titanium trioxide**	12060-00-3	235-038-9	0.01
114	Lead Titanium Zirconium Oxide**	12626-81-2	235-727-4	0.01
115	Pentalead tetraoxide sulphate**	12065-90-6	235-067-7	0.01
116	Pyrochlore, antimony lead yellow**	8012 -00-8	232-382-1	0.01
117	Silicic acid, barium salt, lead-doped**	68784-75-8	272-271-5	0.01
118	Silicic acid, lead salt**	11120-22-2	234-363-3	0.01
119	Sulfurous acid, lead salt, dibasic**	62229-08-7	263-467-1	0.01
120	Tetraethyllead**	78-00-2	201-075-4	0.01
121	Tetralead trioxide sulphate**	12202-17-4	235-380-9	0.01
122	Trilead dioxide phosphonate**	12141-20-7	235-252-2	0.01
123	Furan	110-00-9	203-727-3	0.05
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	200-879-2	0.05
125	Diethyl sulphate	64-67-5	200-589-6	0.05
126	Dimethyl sulphate	77-78-1	201-058-1	0.05
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxaz olidine	143860-04-2	421-150-7	0.05
128	Dinoseb	88-85-7	201-861-7	0.05
129	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	0.05
130	4,4'-oxydianiline and its salts	101-80-4	202-977-0	0.05
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	200-453-6	0.05
132	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	202-453-1	0.05
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	0.05
134	Biphenyl-4-ylamine	92-67-1	202-177-1	0.05
135	o-aminoazotoluene	97-56-3	202-591-2	0.05
136	o-Toluidine; 2-Aminotoluene	95-53-4	202-429-0	0.05

Code	Test Item	CAS No.	EC No.	Report Limit (%)
137	N-methylacetamide	79-16-3	201-182-6	0.05
138	1-bromopropane; n-propyl bromide	106-94-5	203-445-0	0.05

The ninth: Six Substances of Very High Concern (Released in Jun, 2013)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
139	Cadmium **	7440-43-9	231-152-8	0.01
140	Cadmium oxide **	1306-19-0	215-146-2	0.01
141	Dipentyl phthalate (DPP)	131-18-0	205-017-9	0.01
142	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol , ethoxylated covering UVCB- and well-defined substances, polymers and homologues]	/	/	0.05
143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4	0.01
144	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	0.01

The tenth: Seven Substances of Very High Concern (Released in Dec, 2013)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
145	Cadmium sulphide**	1306-23-6	215-147-8	0.01
146	Dihexyl phthalate	84-75-3	201-559-5	0.01
147	C.I. Direct Red 28	573-58-0	209-358-4	0.01

Code	Test Item	CAS No.	EC No.	Report Limit (%)
148	C.I. Direct Black 38	1937-37-7	217-710-3	0.01
149	2-imidazoline-2-thiol	96-45-7	202-506-9	0.01
150	Lead di(acetate)**	301-04-2	206-104-4	0.01
151	Trixylyl phosphate	25155-23-1	246-677-8	0.01

The eleventh: Four Substances of Very High Concern (Released in Jun, 2014)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	0.01
153	Cadmium chloride**	10108-64-2	233-296-7	0.01
154	Sodium perborate; perboric acid, sodium salt**	-	239-172-9; 234-390-0	0.01
155	Sodium peroxometaborate**	7632-04-4	231-556-4	0.01

The twelfth: Six Substances of Very High Concern (Released in Dec, 2014)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
156	Cadmium fluoride**	7790-79-6	232-222-0	0.01
157	Cadmium sulphate**	10124-36-4, 31119-53-6	233-331-6	0.01
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	0.05
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-284-8	0.05

Code	Test Item	CAS No.	EC No.	Report Limit (%)
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3, 5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4	0.01
161	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3, 5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2 -oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	--	--	0.05

The thirteenth: Two Substances of Very High Concern (Released in Jun, 2015)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5, 68648-93-1	271-094-0 272-013-1	0.05
163	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]	--	--	0.05

The fourteen: Five Substances of Very High Concern (Released in Dec, 2015)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
164	Nitrobenzene	98-95-3	202-716-0	0.05
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	0.05

Test Report

Code	Test Item	CAS No.	EC No.	Report Limit (%)
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1	0.05
167	1,3-propanesultone	1120-71-4	214-317-9	0.05
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	206-801-3	0.05

The fifteen: One Substance of Very High Concern (Released in Jun, 2016)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5	0.05

The sixteen: Four Substance of Very High Concern (Released in Jan, 2017)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	201-245-8	0.005
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2 3830-45-3 3108-42-7	206-400-3 - 221-470-5	0.005
172	p-(1,1-dimethylpropyl)phenol	80-46-6	201-280-9	0.005
173	4-heptylphenol, branched and linear (4-HPbl)	-	-	0.005

The seventeen: One Substance of Very High Concern (Released in Jul, 2017)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-	-	0.005

The eighteen: Seven Substances of Very High Concern (Released in Jan, 2018)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
175	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"TM) [covering any of its individual anti- and syn-isomers or any combination thereof]	-	-	0.005
176	Benz[a]anthracene	56-55-3, 1718-53-2	200-280-6	0.005
177	Cadmium nitrate**	10022-68-1, 10325-94-7	233-710-6	0.01
178	Cadmium carbonate**	513-78-0	208-168-9	0.01
179	Cadmium hydroxide**	21041-95-2	244-168-5	0.01
180	Chrysene	218-01-9, 1719-03-5	205-923-4	0.005
181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]	-	-	0.005

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Hotline 400-003-0500
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Test Report

The nineteen: Ten Substances of Very High Concern (Released in Jun, 2018)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
182	Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7	0.01
183	Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	0.01
184	Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	0.01
185	Lead**	7439-92-1	231-100-4	0.01
186	Disodium octaborate**	12008-41-2	234-541-0	0.01
187	Benzo[ghi]perylene	191-24-2	205-883-8	0.01
188	Terphenyl hydrogenated	61788-32-7	262-967-7	0.01
189	Ethylenediamine (EDA)	107-15-3	203-468-6	0.01
190	Trimellitic anhydride (TMA)	552-30-7	209-008-0	0.01
191	Dicyclohexyl phthalate (DCHP)	84-61-7	201-545-9	0.01

The twenty: Six Substances of Very High Concern (Released in Jan, 2019)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
192	Pyrene	129-00-0	204-927-3	0.01
193	Phenanthrene	85-01-8	201-581-5	0.01
194	Fluoranthene	206-44-0	205-912-4	0.01
195	Benzo[k]fluoranthene	207-08-9	205-916-6	0.01
196	2,2-bis(4'-hydroxyphenyl)-4-methylpentane (Bisphenol P)	6807-17-6	401-720-1	0.01
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor; 3-BC)	15087-24-8	239-139-9	0.01

Test Report

The twenty one: Four Substances of Very High Concern (Released in July, 2019)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
198	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	-	-	0.01
199	4-tert-butylphenol	98-54-4	202-679-0	0.01
200	2-methoxyethyl acetate	110-49-6	203-772-9	0.01
201	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	-	0.01

The twenty two: Four Substances of Very High Concern (Released in Jan, 2020)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	404-360-3	0.01
203	2-methyl-1- (4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	400-600-6	0.01
204	Diisohexyl phthalate	71850-09-4	276-090-2	0.01
205	Perfluorobutane sulfonic acid (PFBS) and its salts	-	-	0.01

Test Report

The twenty three: Four Substances of Very High Concern (Released in June 2020)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
206	1-vinylimidazole	1072-63-5	214-012-0	0.01
207	2-methylimidazole	693-98-1	211-765-7	0.01
208	Butyl 4-hydroxybenzoate	94-26-8	202-318-7	0.01
209	Dibutylbis(pentane-2,4-dionato-O,O') tin	22673-19-4	245-152-0	0.01

The twenty four: Two Substances of Very High Concern (Released in Jan. 2021)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
210	Bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	205-594-7	0.01
211	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	-	-	0.01

The twenty five: Eight Substances of Very High Concern. (Released in July. 2021)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
212	1,4-dioxane	123-91-1	204-661-8	0.01
213	2,2-bis(bromomethyl) propane1,3-diol (BMP)	3296-90-0	221-967-7	0.01
	2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA)	36483-57-5/ 1522-92-5	253-057-0	0.01
	2,3-dibromo-1-propanol (2,3-DBPA)	96-13-9	202-480-9	0.01

Test Report

Code	Test Item	CAS No.	EC No.	Report Limit (%)
214	2-(4-tert-butylbenzyl) propionaldehyde and its individual stereoisomers	-	-	0.01
215	4,4'-(1-methylpropylidene) bisphenol (bisphenol B)	77-40-7	201-025-1	0.01
216	Glutaral	111-30-8	203-856-5	0.01
217	Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17]	-	-	0.01
218	Orthoboric acid, sodium salt**	13840-56-7	237-560-2	0.01
219	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual（PDDP)	-	-	0.01

The twenty six: Four Substances of Very High Concern (Released in Jan. 2022)

Code	Test Item	CAS No.	EC No.	Report Limit (%)
220	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-	-	0.01
221	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC)	119-47-1	204-327-1	0.01

Test Report

Code	Test Item	CAS No.	EC No.	Report Limit (%)
222	S-(tricyclo[5.2.1.0'2,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8	401-850-9	0.01
223	tris(2-methoxyethoxy)vinylsilane	1067-53-4	213-934-0	0.01

Note:

1. mg/kg =ppm=10^{-6}
2. %=w/w
3. N.D. :< Report Limit
4. * The detected DHNUP are consisted of six phthalates which CAS number are 85507-79-5, 68515-44-6, 68515-45-7, 111381-89-6, 111381-90-9 and 111381-91-0. according to the Annex 15 of REACH.
5. ** According to the 5.2.1 item of the second version of ECHA “Guidance on requirements for substances in articles”, 2011, the selected test methods only show the existence of certain elements rather than the existence of substances, using additional measurements to screen for the existence and identification of substances in a sample when necessary.
6. Report Results: based on measurements in most cases will identify the chemical constituents in the sample but not necessarily “the substance” which were originally used to produce the article, professional consults, products information, testing processes, features of materials, characteristics of the SVHC and chemical analysis etc to obtain the assessments results according to the 5.2 item of the second version of ECHA “Guidance on requirements for substances in articles”, 2011.
7. Report Limit: Be obtained from the uncertainty, the 0.1 % threshold and the ECHA “Guidance on requirements for substances in articles”.
8. #: According to the applicant's request, the admixture of specimen A/B are tested as a whole. The testing results of specimen A/B may be different from that of any sole material in specimen A/B.

Test Report

Appendix:

1. Any supplier of an article containing a substance that is included in the Candidate List in a concentration above 0.1 % weight by weight (w/w) has the duty to communicate information in accordance with Article 33 of European Union regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

1) Any supplier shall provide the recipient of the article with sufficient information to allow safe use of the article including, as a minimum, the name of that substance.

2) On request by a consumer any supplier shall provide the consumer with sufficient information to allow safe use of the article including, as a minimum, the name of that substance within 45 days of receipt of the request, free of charge.

2. The supplier of a substance that is included in the Candidate List on their own shall provide the recipient of the substance with a safety data sheet for free compiled in accordance with Article 3 and Annex II of REACH.

3. The supplier of a mixture that containing a substance that is included in the Candidate List shall exchange information in accordance with Article 31, Article 32, and Annex II of REACH.

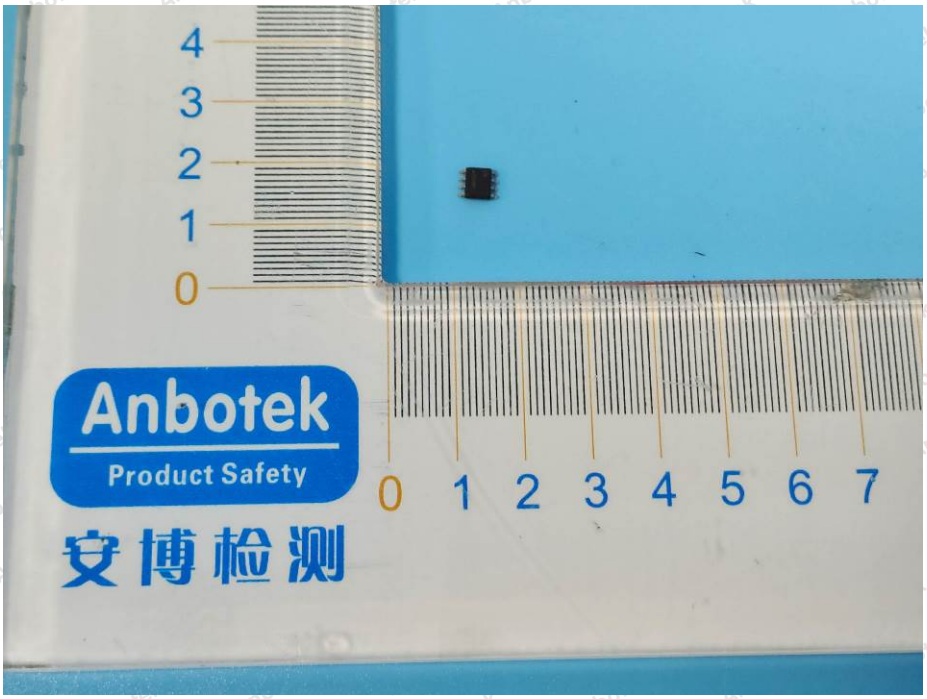
1) Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation meets the criteria for classification as dangerous in accordance with Directives 1999/45/EC.

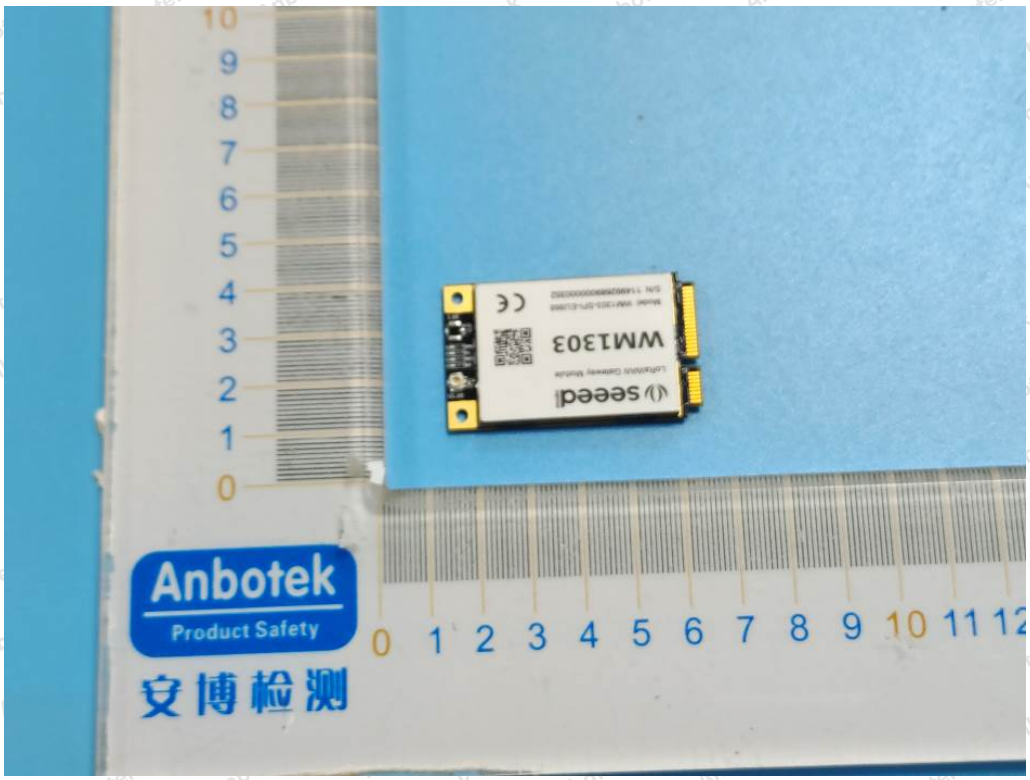
2) Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation does not meet the criteria for classification as dangerous in accordance with Directive 1999/45/EC, but contains any substance that is included in the Candidate List in an individual concentration of ≥ 0.1 % by weight for non-gaseous mixtures or ≥ 0.2 % by volume for gaseous mixtures.

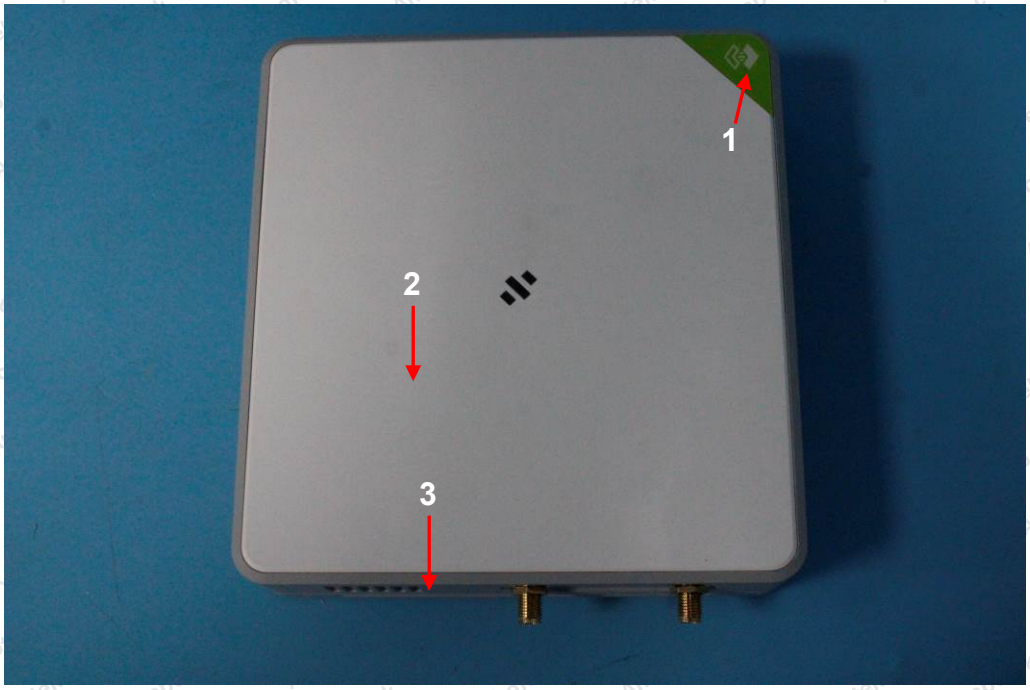
Test Report

Photograph of Sample

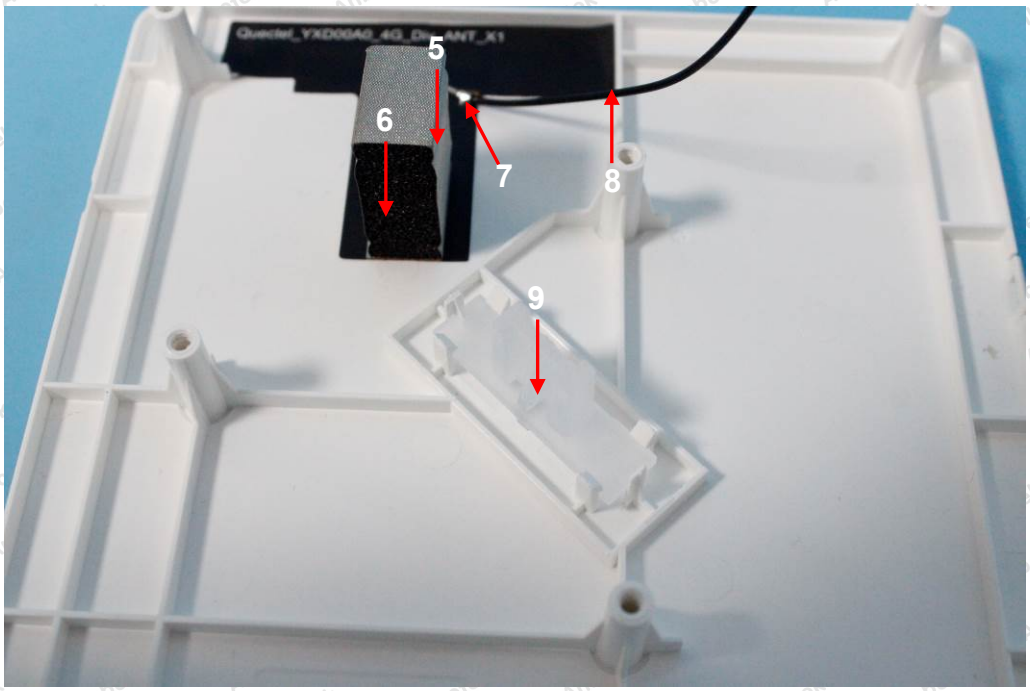


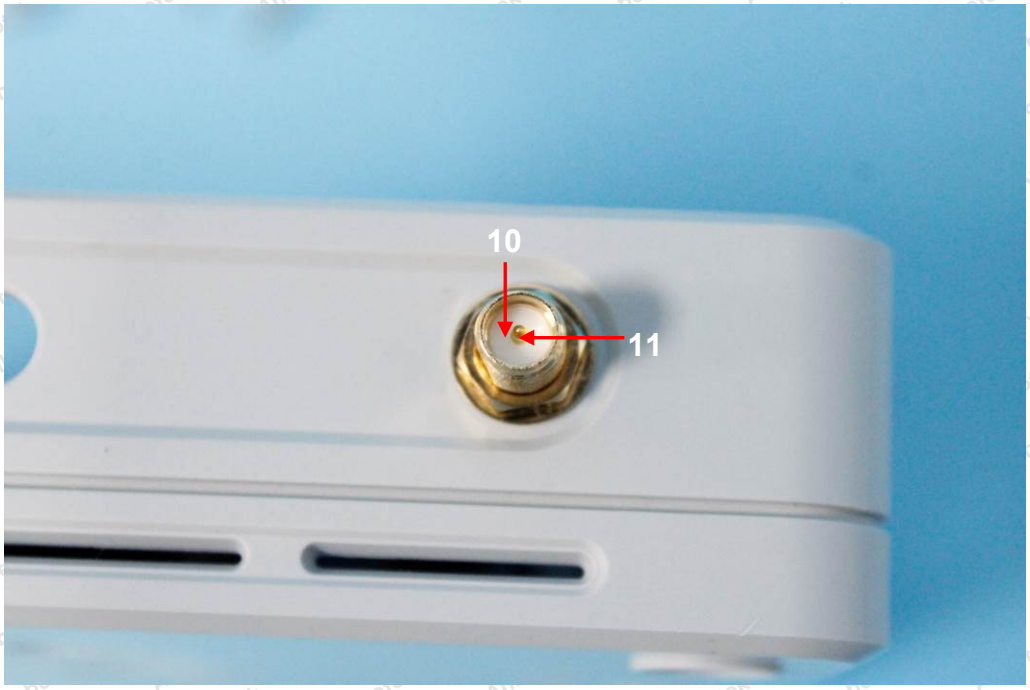


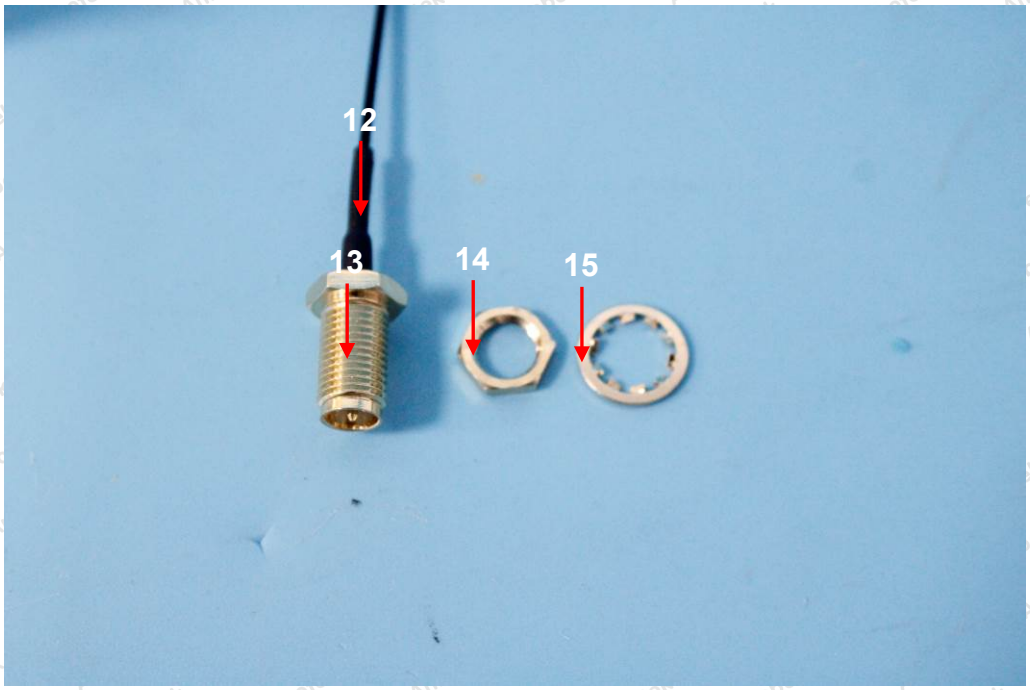

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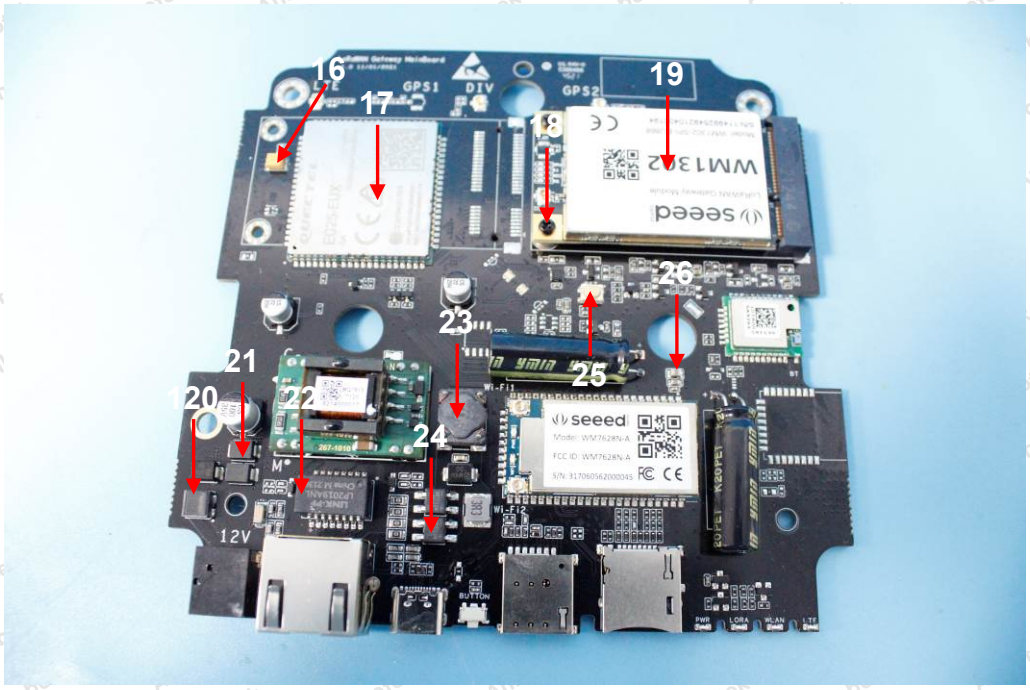

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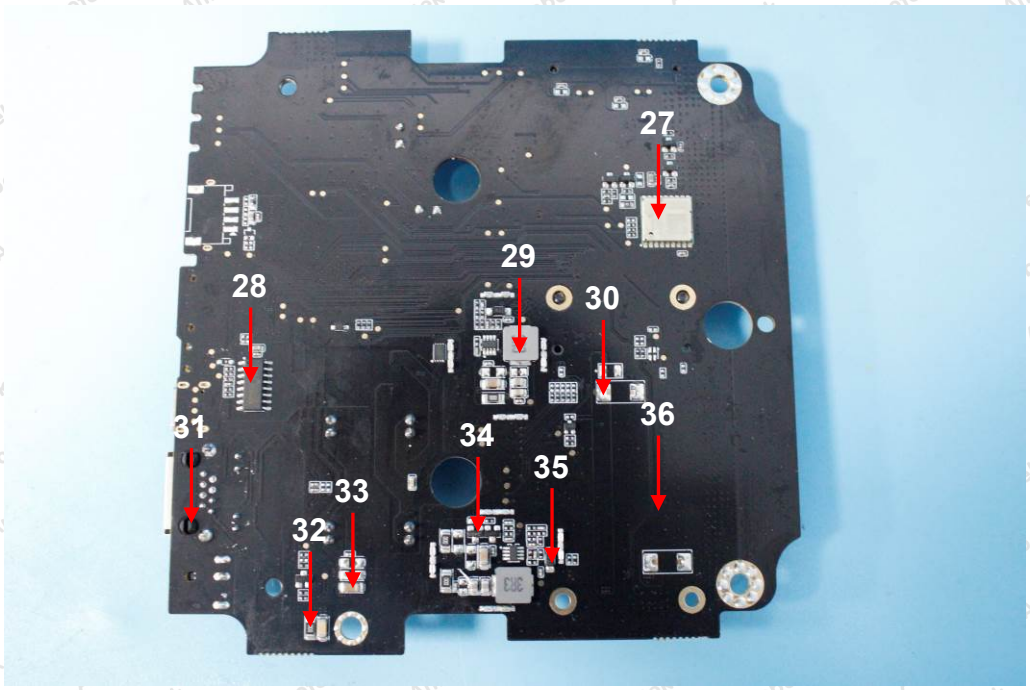

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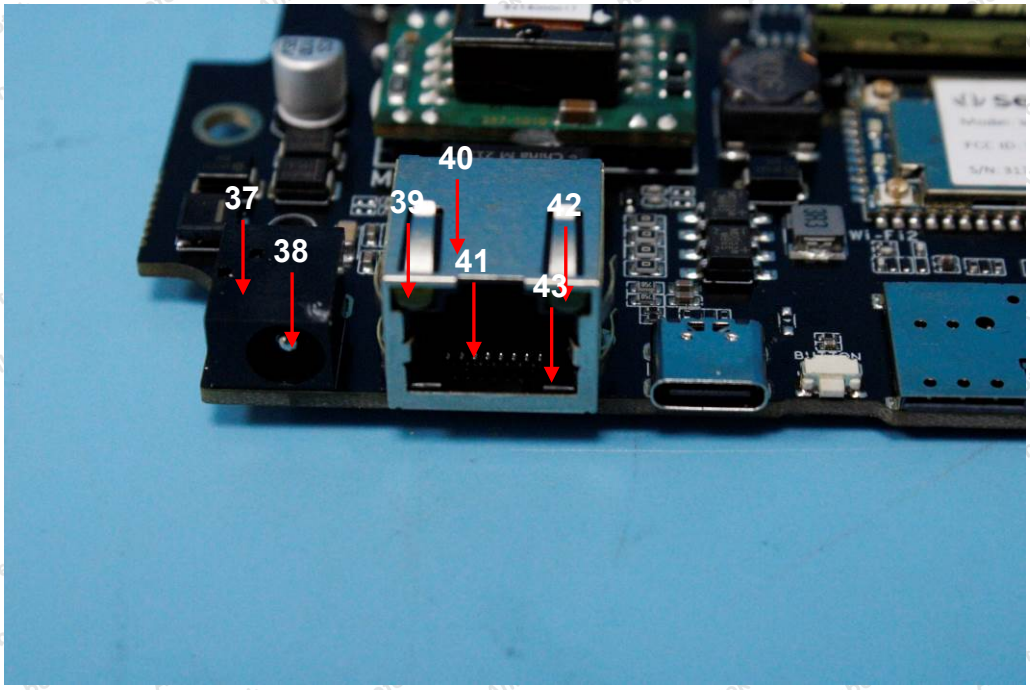

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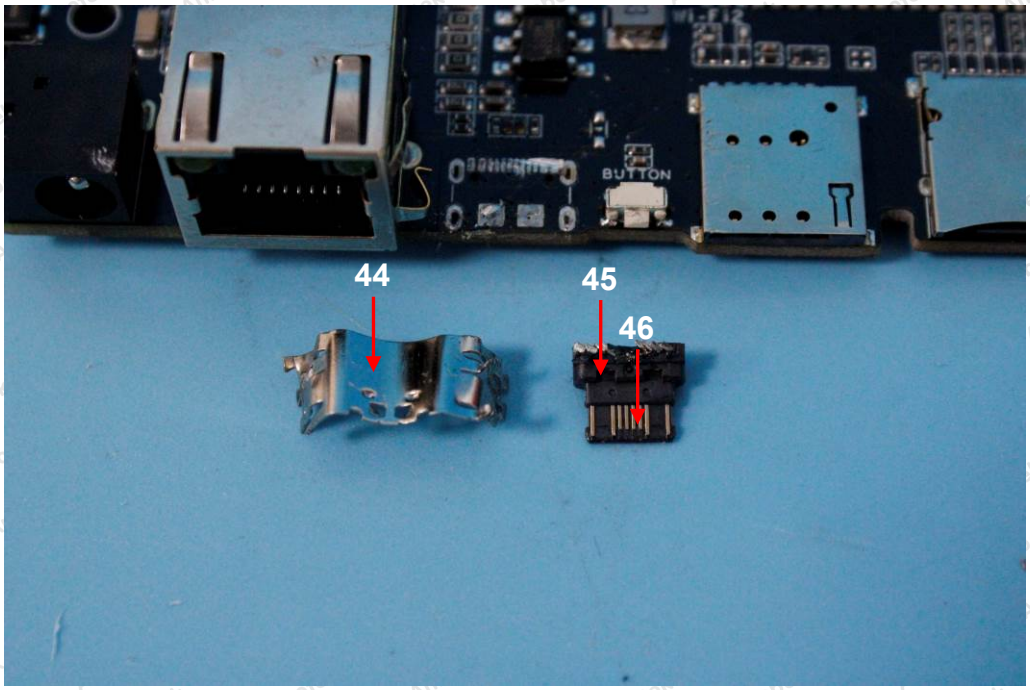

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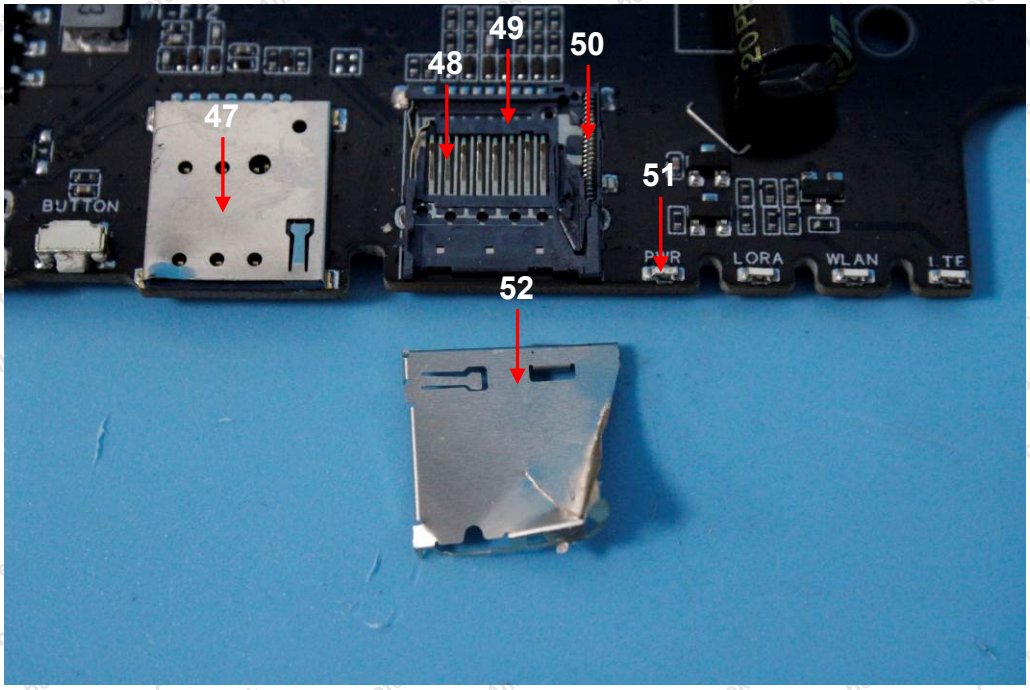
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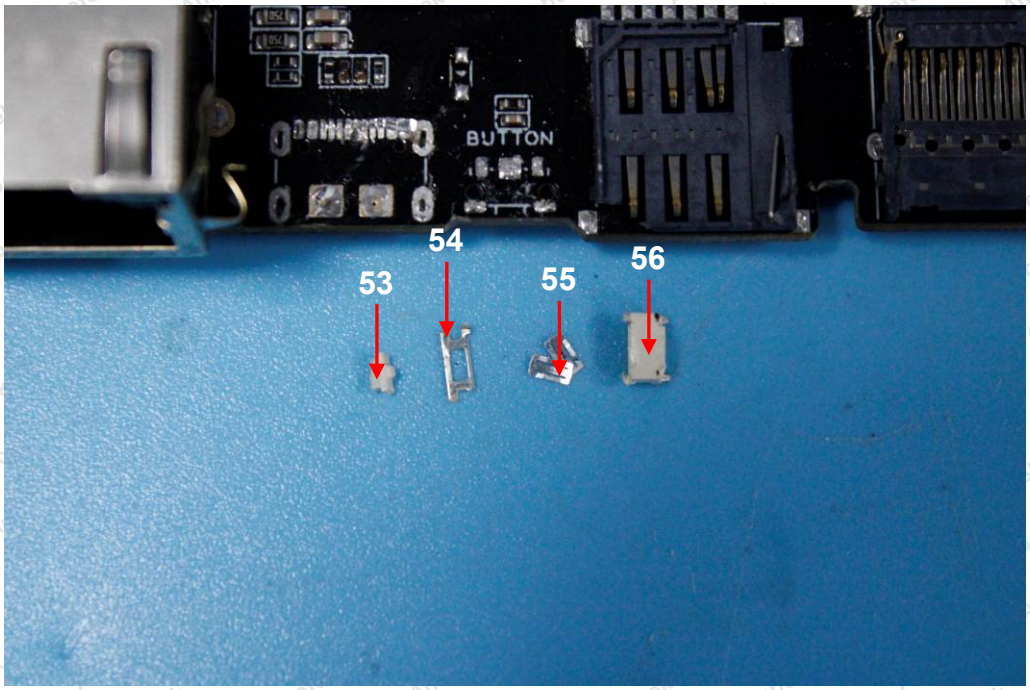


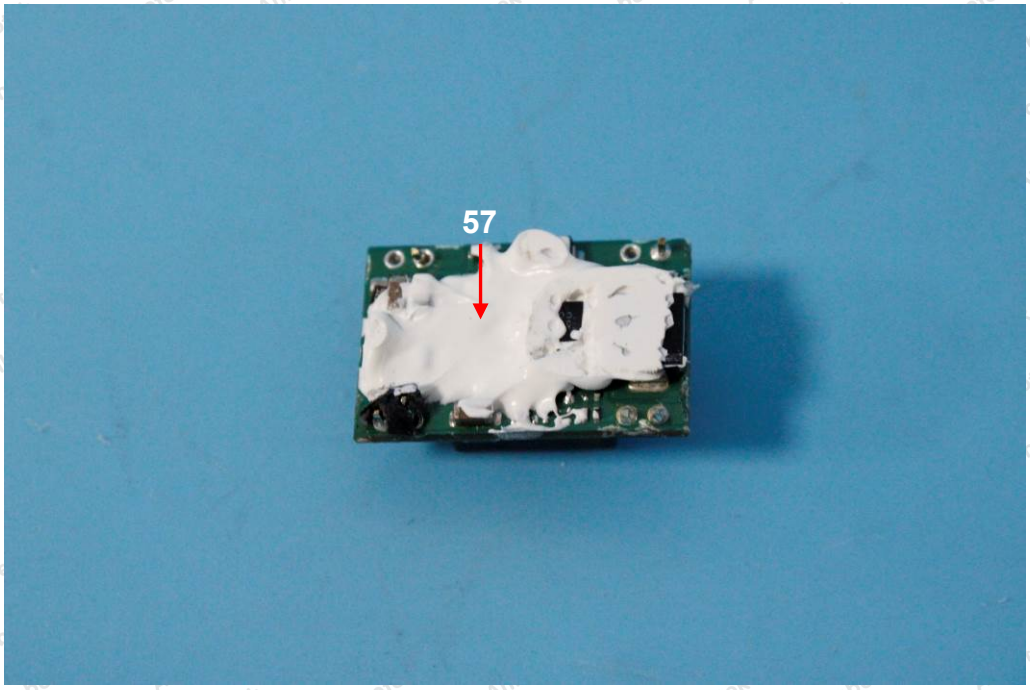


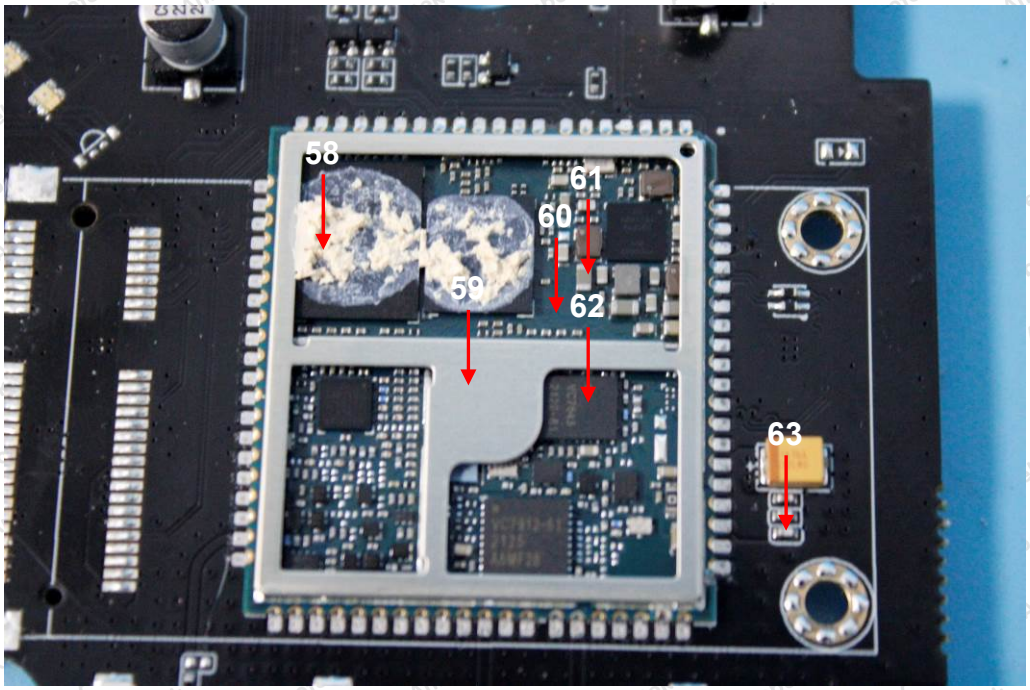

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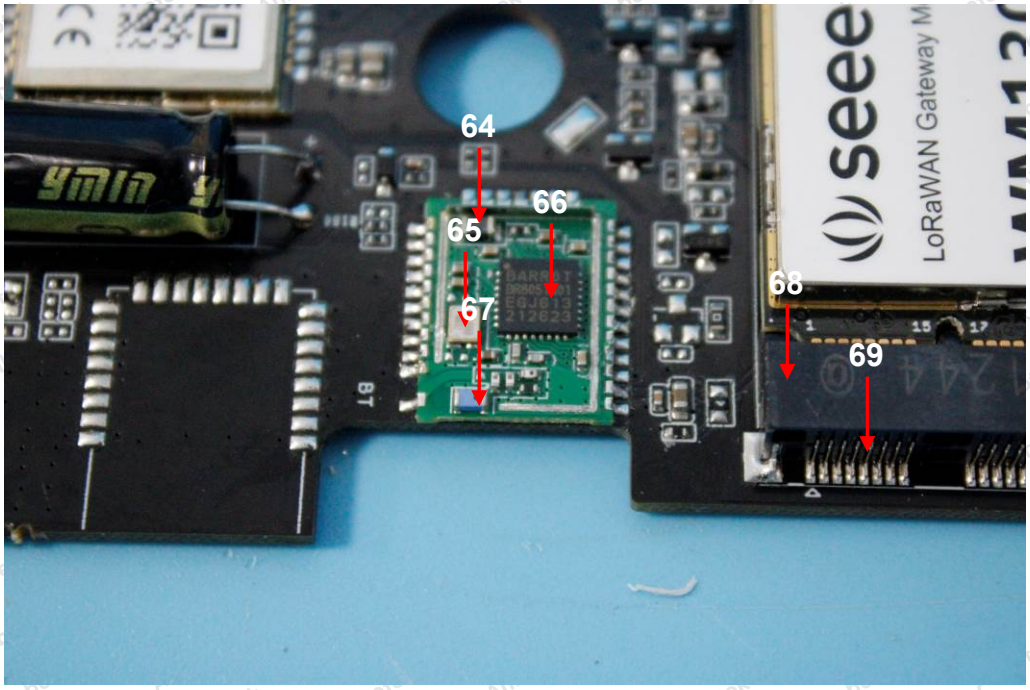

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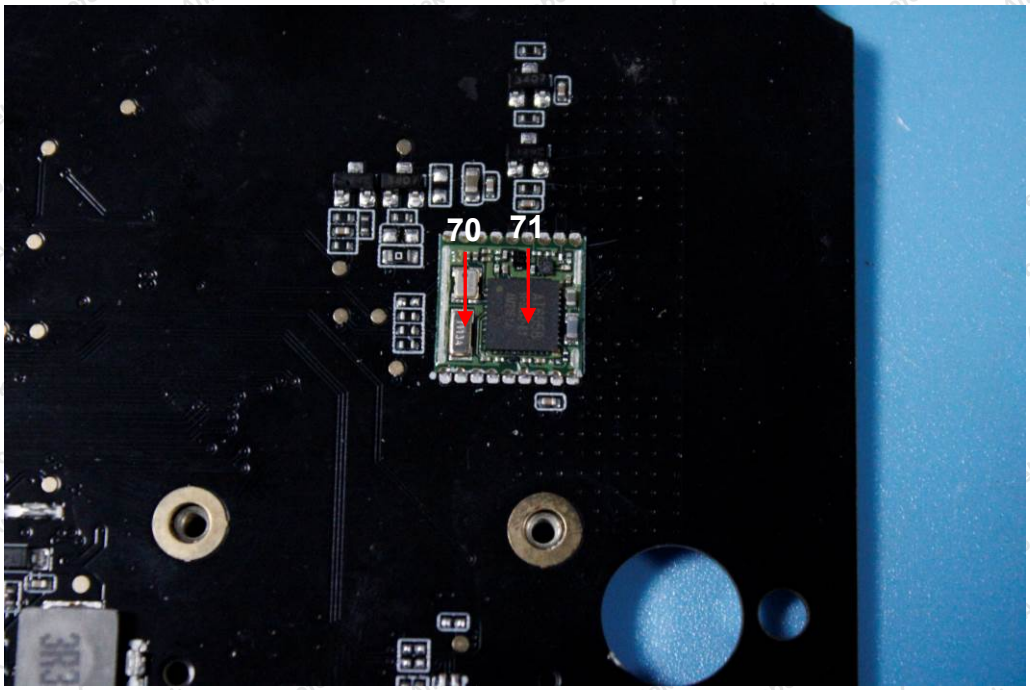

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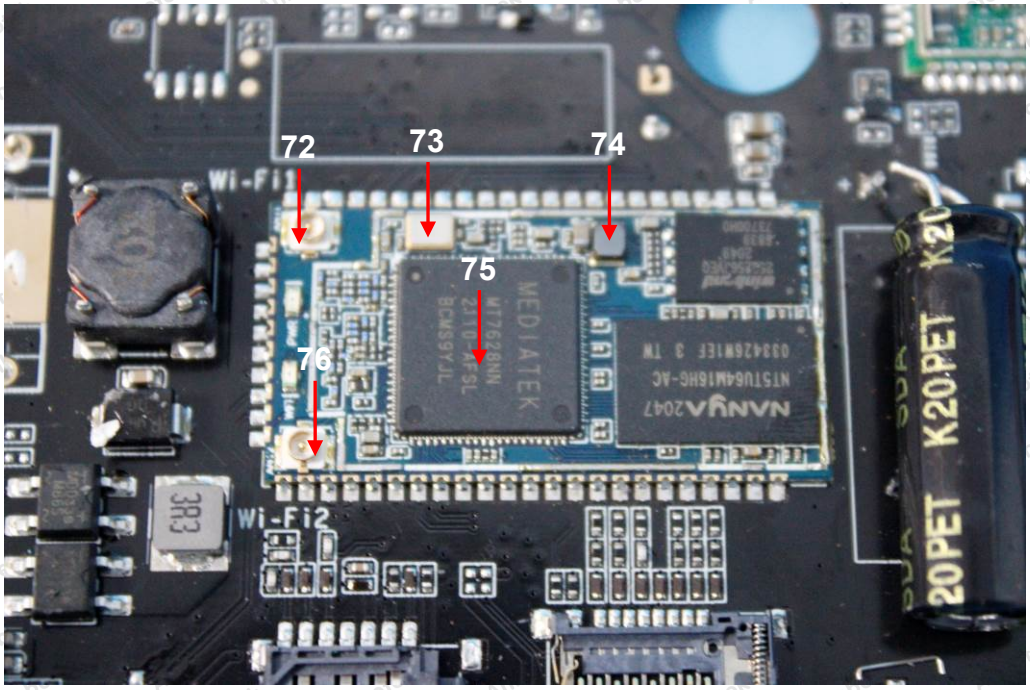

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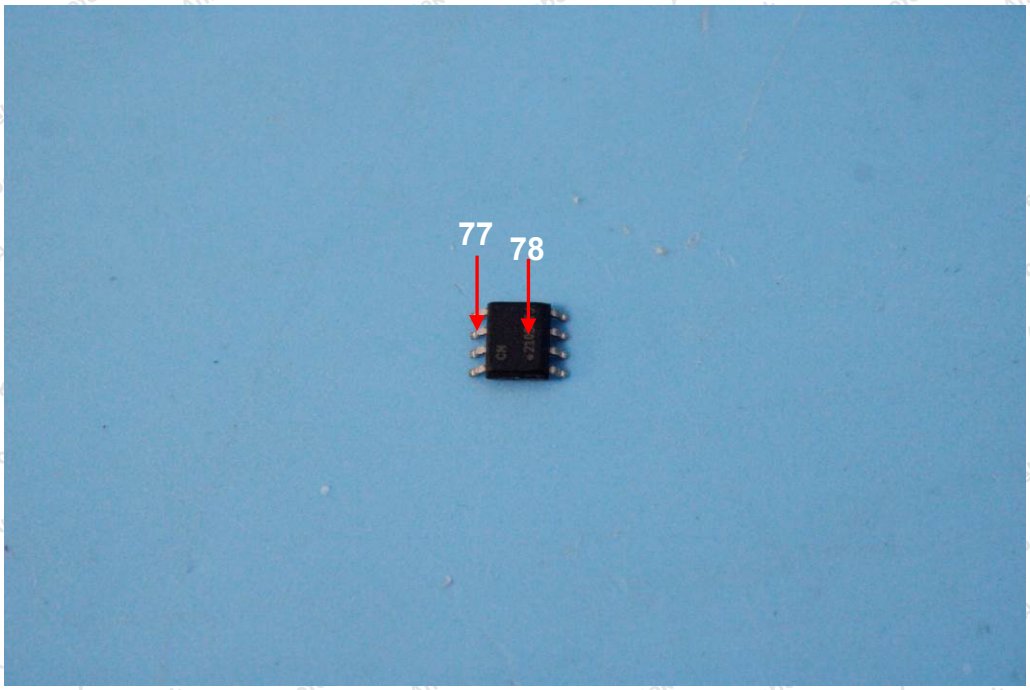

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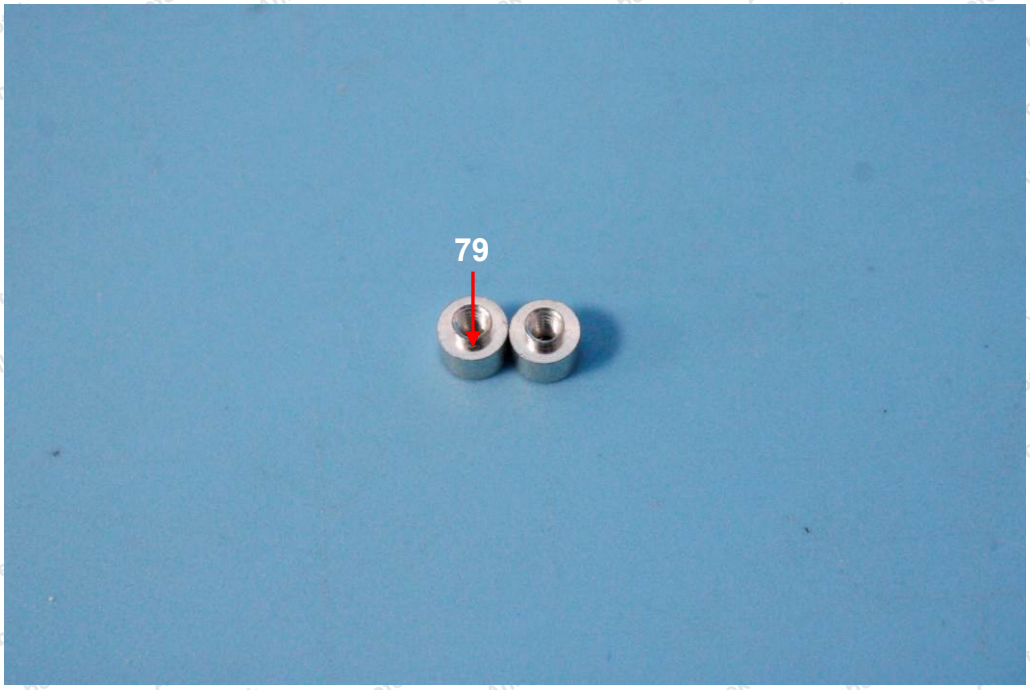

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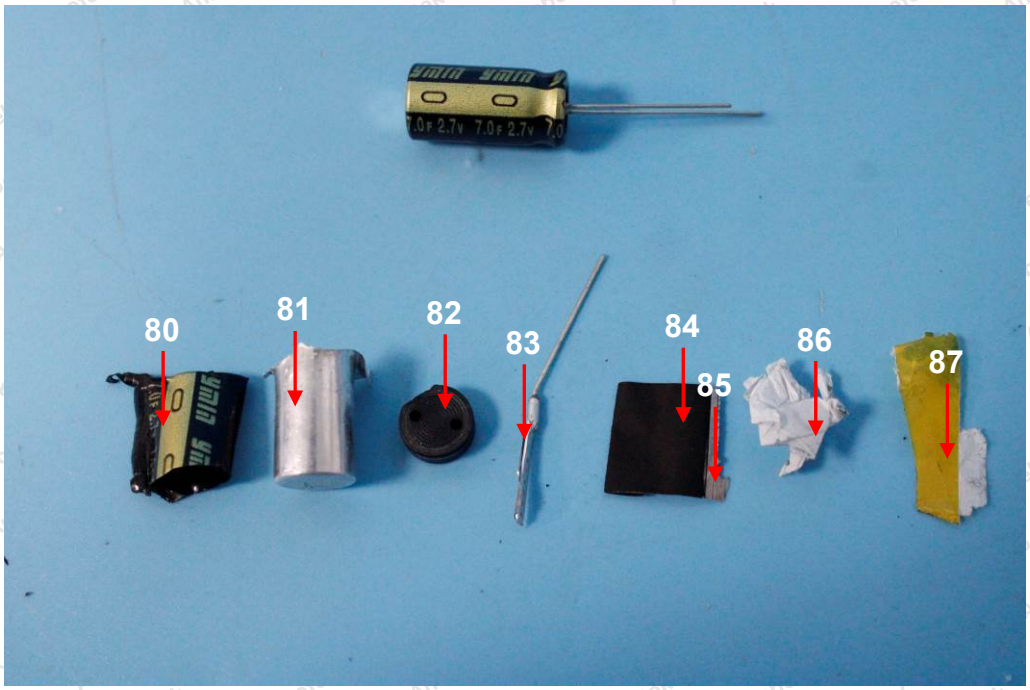

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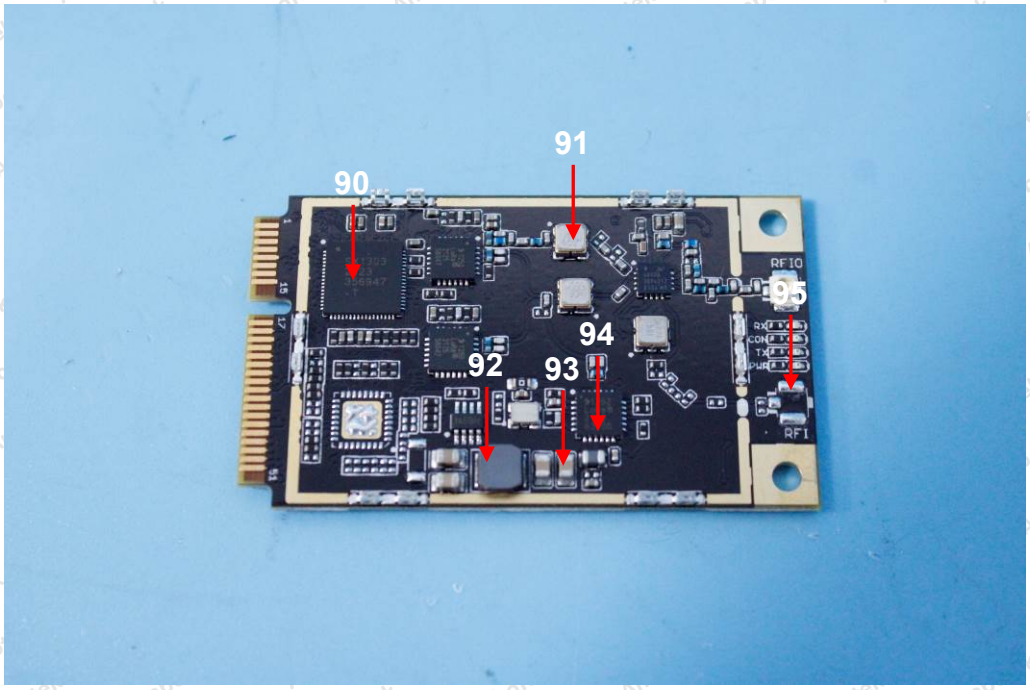

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Test Report

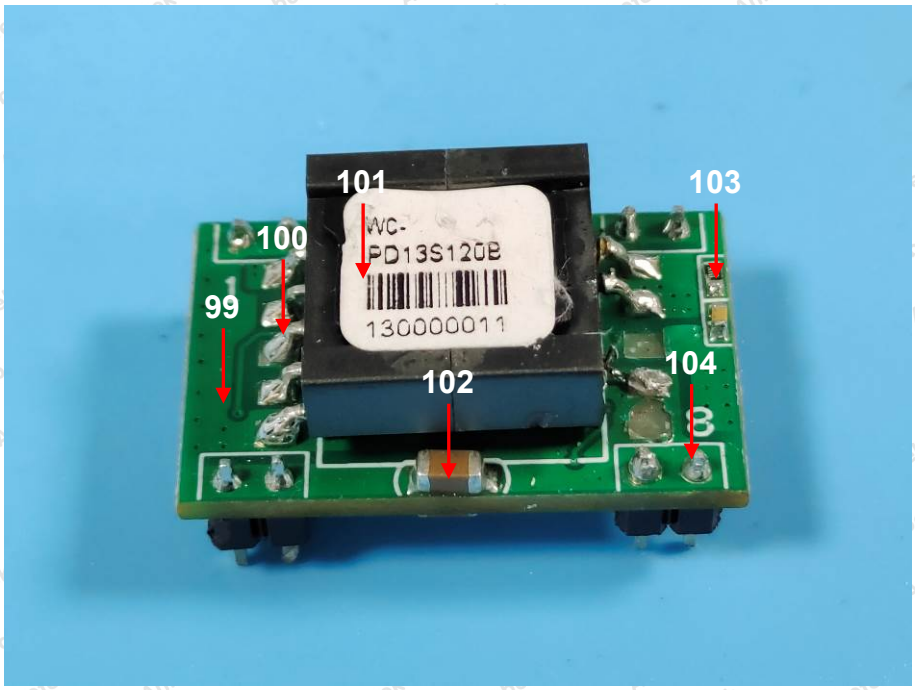




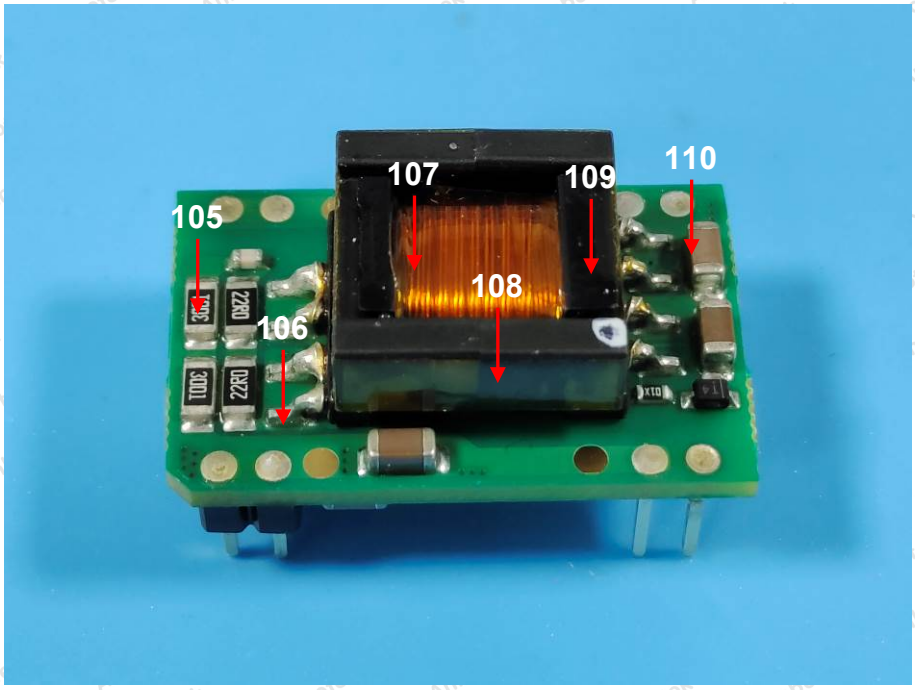

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LoRaWAN Gateway Module
WM1303
Model: WM1303-SPI-EU868
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88
89
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RFI

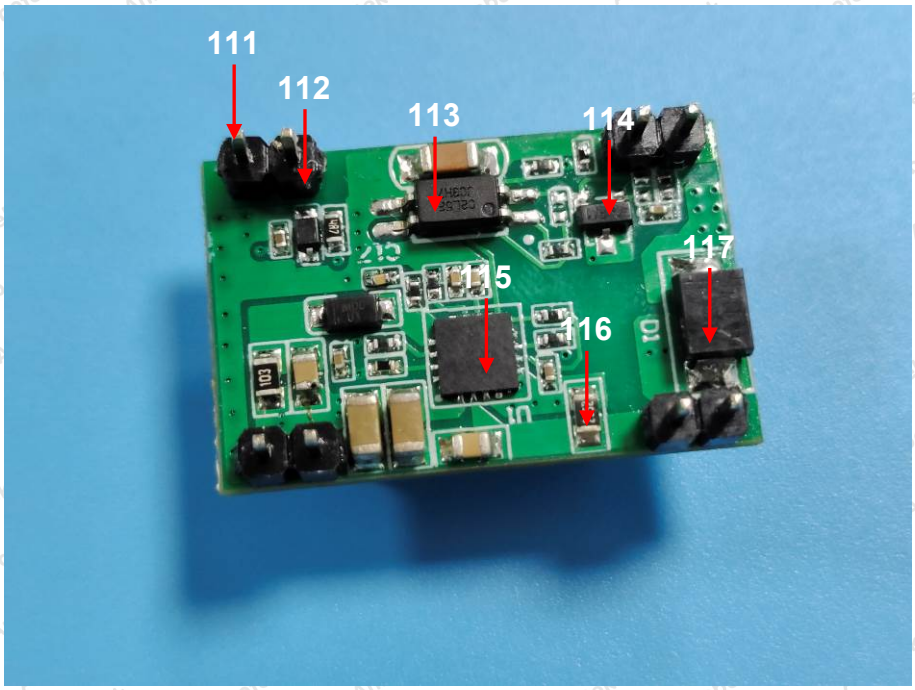

90
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92
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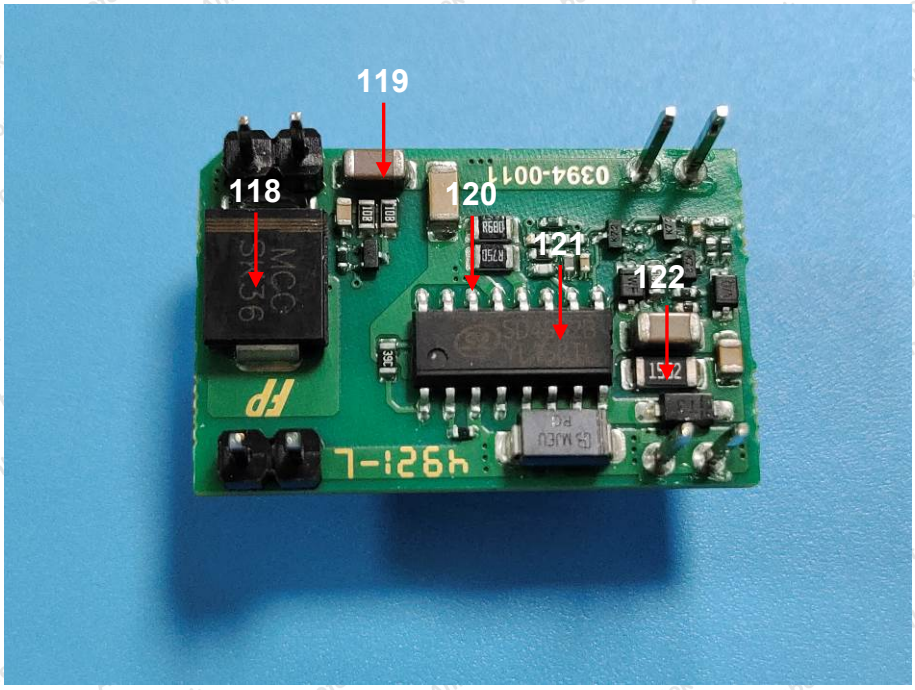

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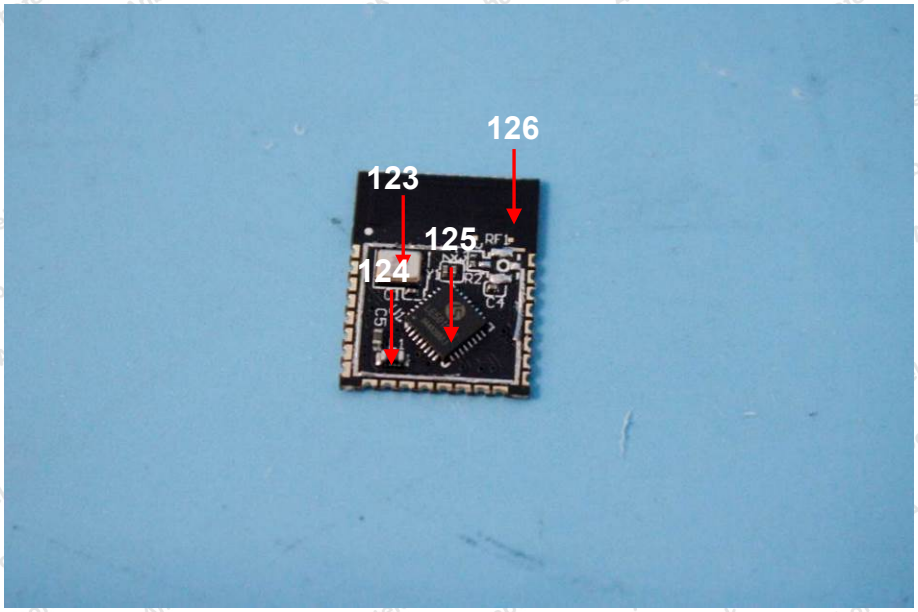

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104
102

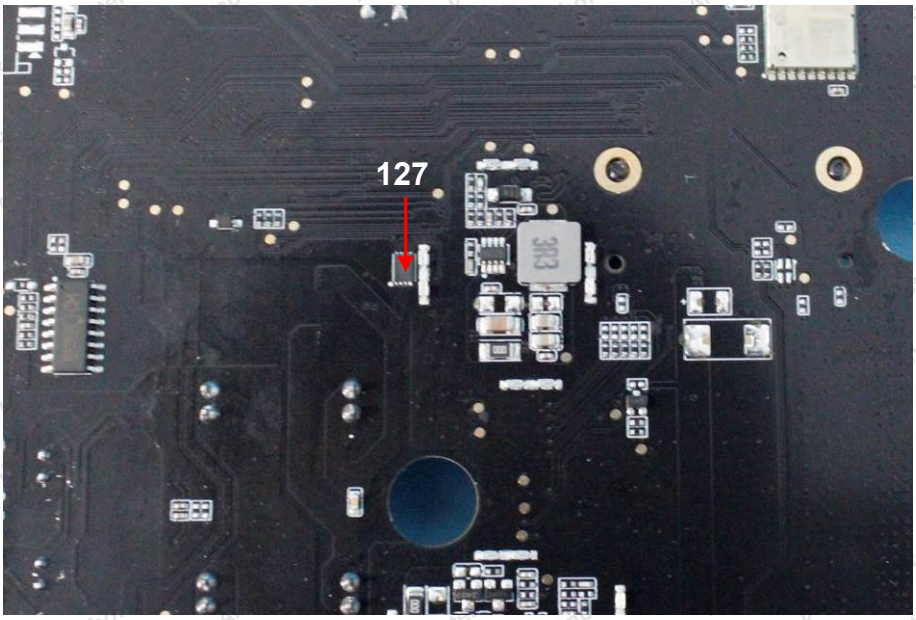
Test Report

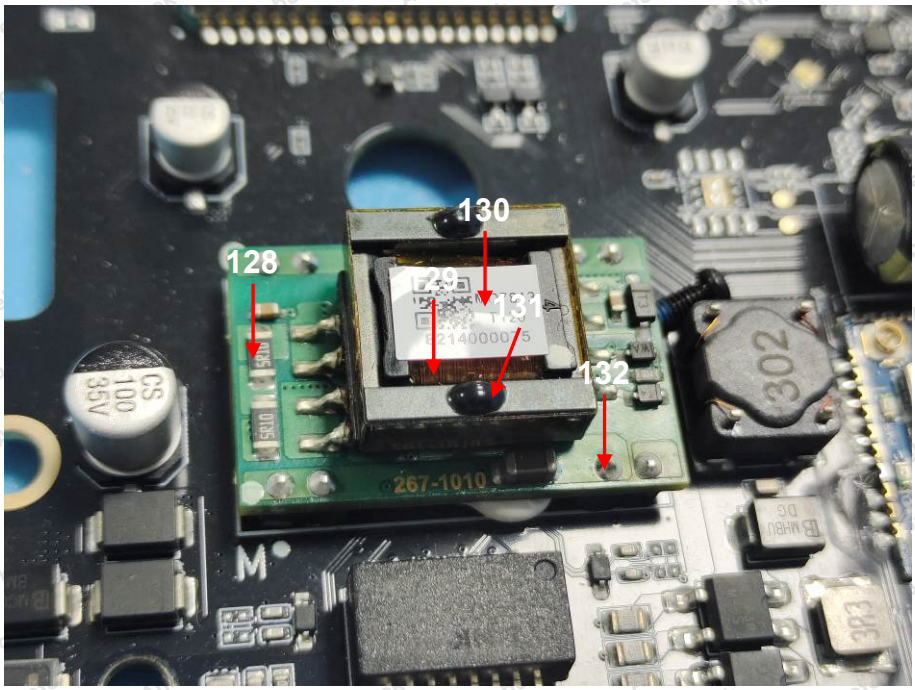




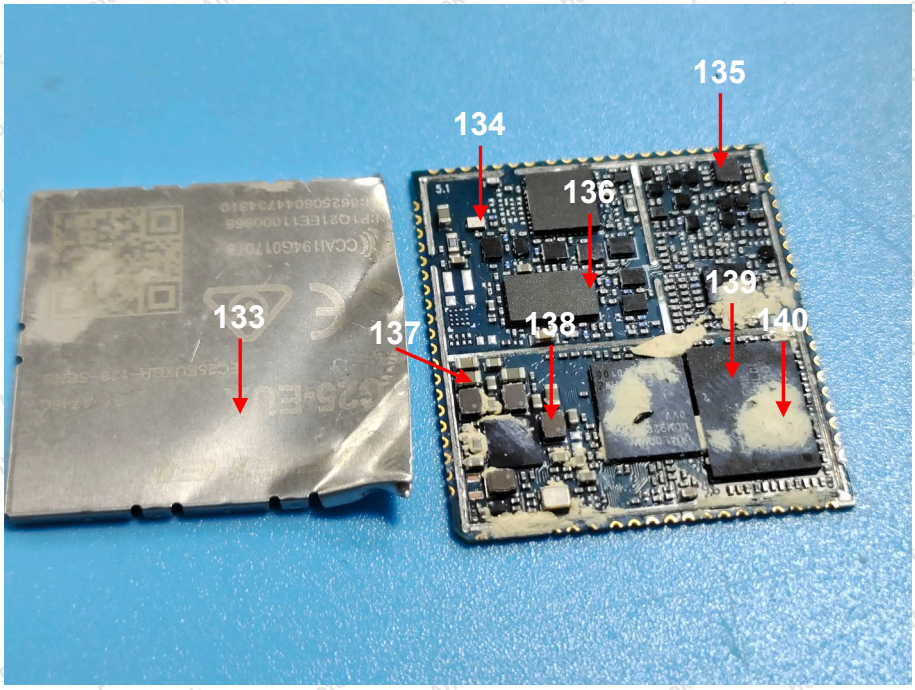

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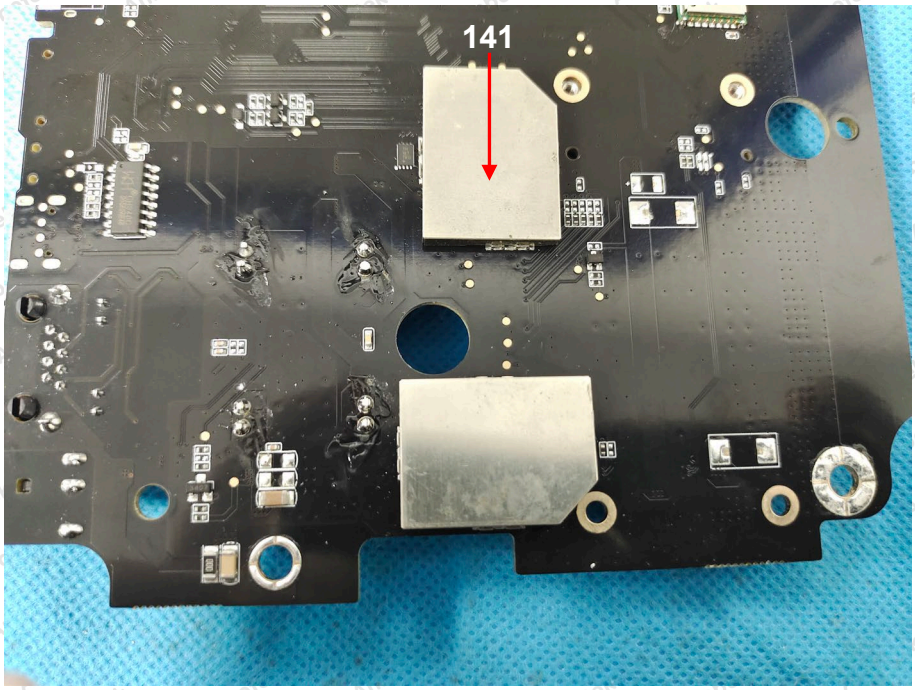

126
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124


127


130
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132
302
267-1010

Test Report





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

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