



**Applicant:** Shenzhen Ai-Thinker Technology Co., Ltd  
**Address:** 410,Block C, Huafeng Smart Innovation Port.Gushu 2nd Road,Gushu Community,Xixiang Street,Baoan District,Shenzhen,China

**Manufacturer:** Shenzhen Ai-Thinker Technology Co., Ltd  
**Address:** 410,Block C, Huafeng Smart Innovation Port.Gushu 2nd Road,Gushu Community,Xixiang Street,Baoan District,Shenzhen,China

The following samples were submitted and identified on behalf of the clients as:

**Sample name:** WiFi Module

**Brand:**



**Model(s):** See next pages

**Sample received date:** Jun.18, 2024



**Testing period:** Jun.18, 2024 to Jun.24, 2024

**Test Method:** Please refer to next page(s).

**Test Result:** Please refer to next page(s).

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**Result Summary :**

Test Requested	Conclusion
European Directive 2011/65/EU and amendment (EU) 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	PASS

<b>Tested By:</b>  Mason Shi	<b>Check By:</b>  Roy Liao	<b>Approve By:</b>   
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Date: Jun.25, 2024

**Model List:**

Ai-M61-32SU,Ai-M61-CBM,Ai-M61-02S,Ai-M62-12F,Ai-M62-13,Ai-M62-13U,  
 Ai-M62-M2-I,Ai-M62-32S,Ai-M62-07S,Ai-M62-CBS,Ai-M62-M01L,Ai-WB2-01F,  
 Ai-WB2-01N,PWM-A01-1,Ai-WB3-12F,Ai-WB3-01C,Ai-WB1-32S,ESP-01F,  
 ESP-07S,ESP-12S,ESP-13,ESP-13U,ESP32-SU,ESP-C3-M1,ESP-C3-M1-I,  
 ESP-S3-12K,ESP-S3-32S,BW20-12F,VC5SL16,TG-12F,Hi-12F,Hi-12FL,Hi-07SL,Hi-07S,  
 XW-01,XW-01D-S,PB-03,PB-03F,PB-03M,TB-04,TB-05,TG-03,Ra-01SCH-P,  
 Ra-08,Ra-08H,Ra-09H,BU03,BU04,NF-05,NF-05-S,A9G,Si4432,  
 VC-01,VC-02,Rd-03,Rd-03L,Rd-04,Ai-BS21-32S,WIFI-Model-20240311-A01,WIFI-Model-20240509-B04

**Test Method:****A. Screening test by XRF spectroscopy**

XRF screening limits for regulated elements according to IEC 62321-3-1:2013

Element	Screening limit / mg/kg		MDL	
	Polymers and metals	Composite material	Polymers	Other material
<b>Pb</b>	$BL \leq (700-3\sigma) < X < (1300+3\sigma)$ $\leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma)$ $\leq OL$	10mg/kg	50mg/kg
<b>Cd</b>	$BL \leq (70-3\sigma) < X < (130+3\sigma)$ $\leq OL$	$LOD \leq (50-3\sigma) < X < (150+3\sigma)$ $\leq OL$	10mg/kg	50mg/kg
<b>Hg</b>	$BL \leq (700-3\sigma) < X < (1300+3\sigma)$ $\leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma)$ $\leq OL$	10mg/kg	50mg/kg
<b>Cr</b>	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$	10mg/kg	50mg/kg
<b>Br</b>	$BL \leq (300-3\sigma) < X$ (non-metal only)	$BL \leq (250-3\sigma) < X$	10mg/kg	50mg/kg

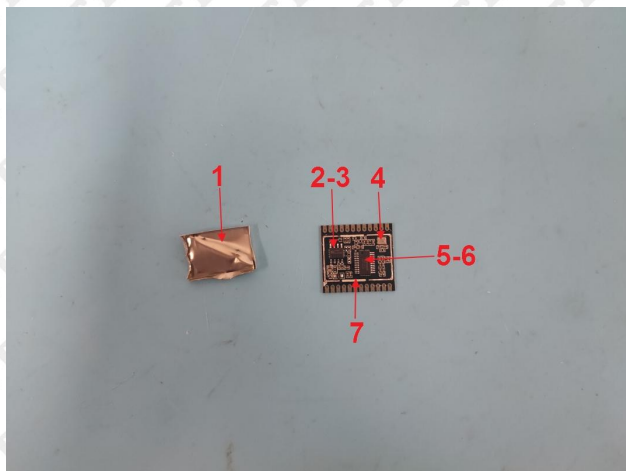
**B. Chemical Test**

Test Item(s)	Test Method	Analysis Equipment(s)	MDL	Limit
Lead (Pb)	IEC 62321-5:2013	ICP-OES	2 mg/kg	1000mg/kg
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES	2 mg/kg	100mg/kg
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	2 mg/kg	1000mg/kg
Hexavalent Chromium Cr(VI)	IEC 62321-7-1:2015	UV-VIS	--	1000mg/kg
	IEC 62321-7-2:2017		8 mg/kg	1000mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	50mg/kg	1000mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS	50mg/kg	1000mg/kg
Phthalate	IEC 62321-8:2017	GC-MS	50mg/kg	1000mg/kg

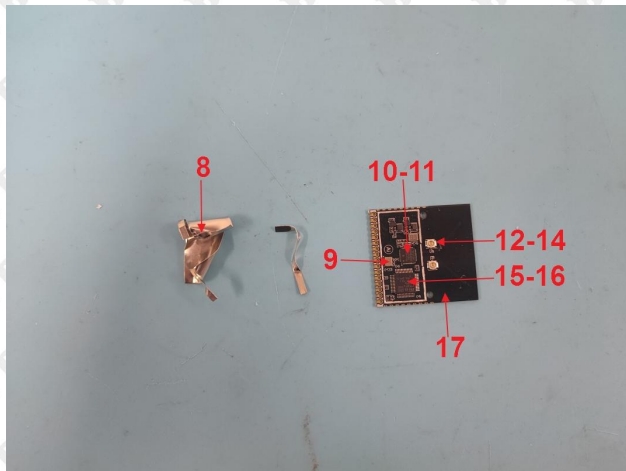


## Tested material list :

### Main test-VC-01

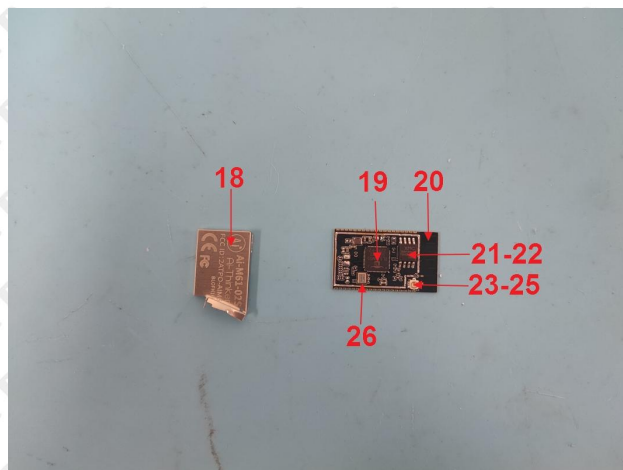
No.	Description	Photo(s) of tested material
1	Silver metal case	
2	Black IC	
3	Silver metal pins	
4	Silvery crystal oscillator	
5	Black IC	
6	Silver metal pins	
7	Black PCB	

### Difference 1-BU04

8	Silver metal case	
9	Silvery crystal oscillator	
10	Black IC	
11	Silver metal pins	
12	White ceramic base	
13	Gold metal ring	
14	Gold metal pin	
15	Black IC	
16	Silver metal pins	
17	Black PCB	

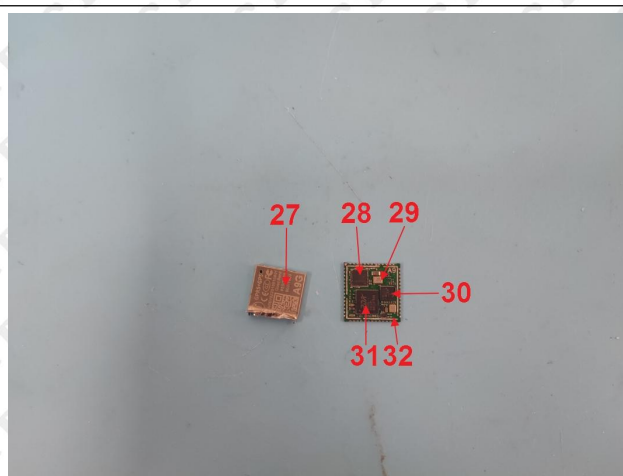
## Difference 2-Ai-M16-02S

18	Silver metal case
19	Black IC
20	Black PCB
21	Black IC
22	Silver metal pins
23	White ceramic base
24	Gold metal ring
25	Gold metal pin
26	Silvery crystal oscillator



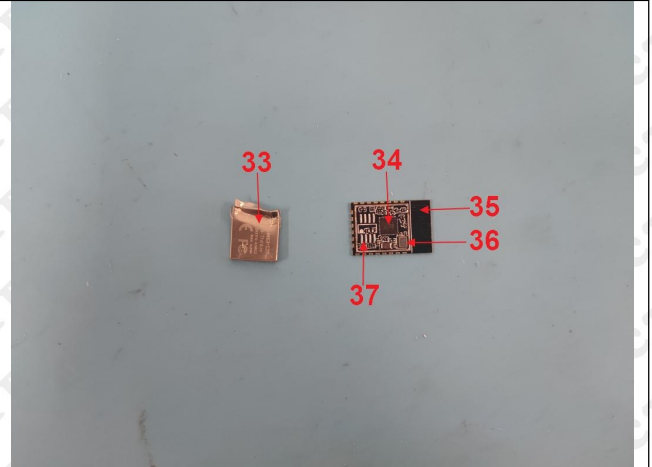
## Difference 3-A9G

27	Silver metal case
28	Black IC
29	Silvery crystal oscillator
30	Black IC
31	Black IC
32	Green PCB



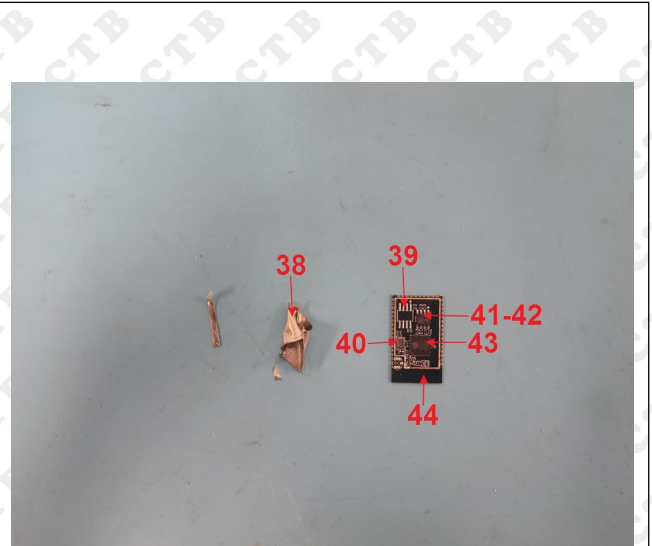
## Difference 4-AI-M62-12F

33	Silver metal case
34	Black IC
35	Black PCB
36	Silvery crystal oscillator
37	Solder point



## Difference 5-ESP-S3-12K

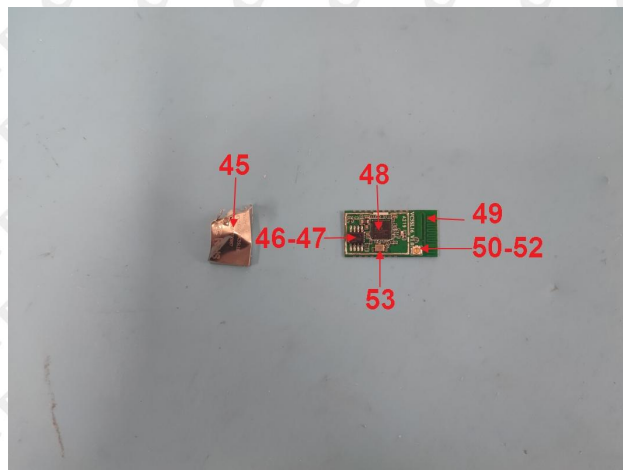
38	Silver metal case
39	Solder point
40	Silvery crystal oscillator
41	Black IC
42	Silver metal pins
43	Black IC
44	Black PCB



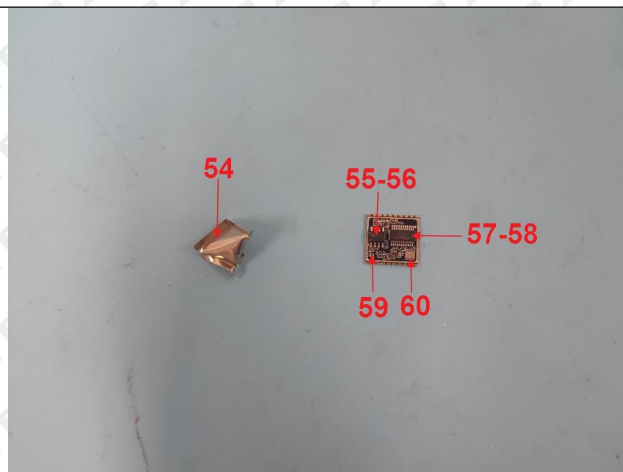


**Difference 6-VC5SL16**

45	Silver metal case
46	Black IC
47	Silver metal pins
48	Black IC
49	Green PCB
50	White ceramic base
51	Gold metal ring
52	Gold metal pin
53	Silvery crystal oscillator

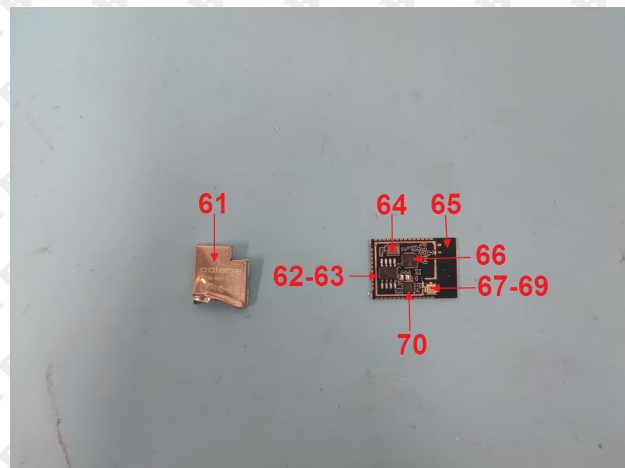
**Difference 7-VC02**

54	Silver metal case
55	Black IC
56	Silver metal pins
57	Black IC
58	Silver metal pins
59	Black PCB
60	Silvery crystal oscillator



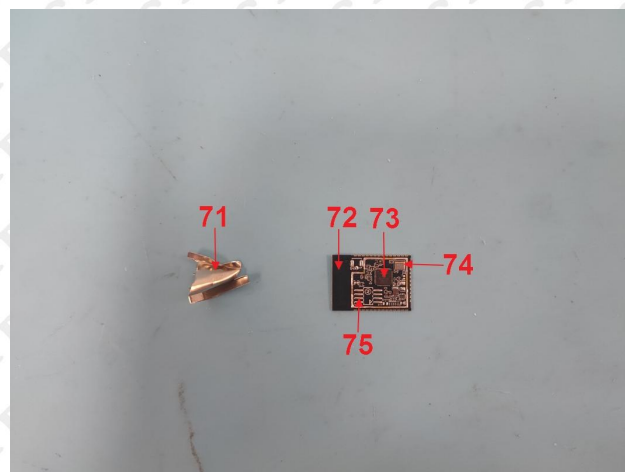
## Difference 8-PWM-A01-1

61	Silver metal case
62	Black IC
63	Silver metal pins
64	Silvery crystal oscillator
65	Black PCB
66	Black IC
67	White ceramic base
68	Gold metal ring
69	Gold metal pin
70	Black IC



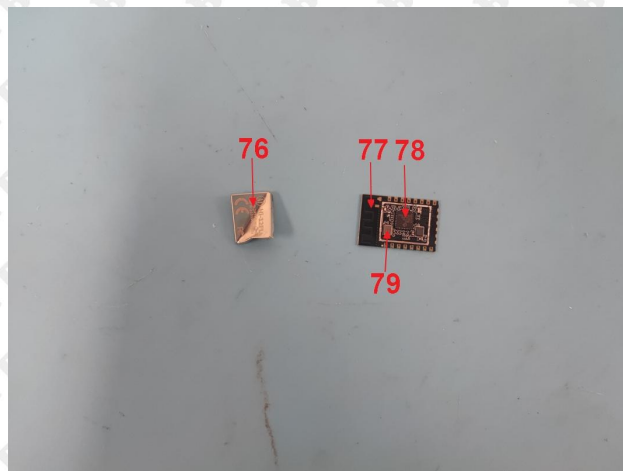
## Difference 9-Ai-M62-32S

71	Silver metal case
72	Black PCB
73	Black IC
74	Silvery crystal oscillator
75	Solder point



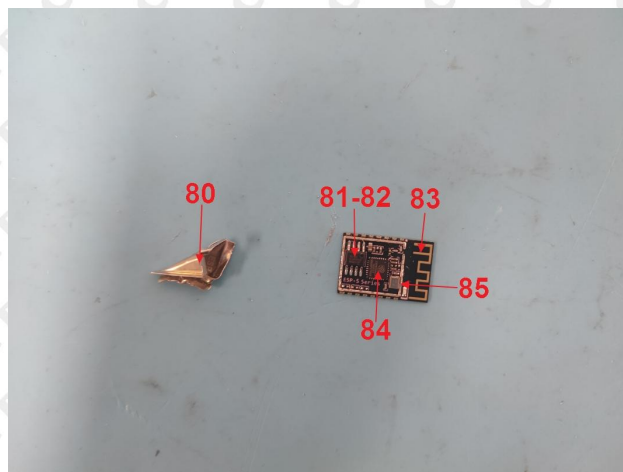
## Difference 10-Hi-12FL

76	Silver metal case
77	Black PCB
78	Black IC
79	Silvery crystal oscillator



## Difference 11-ESP-12S

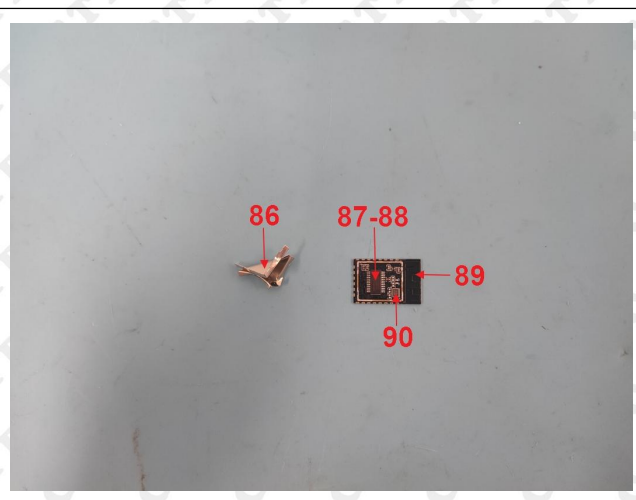
80	Silver metal case
81	Black IC
82	Silver metal pins
83	Black PCB
84	Black IC
85	Silvery crystal oscillator





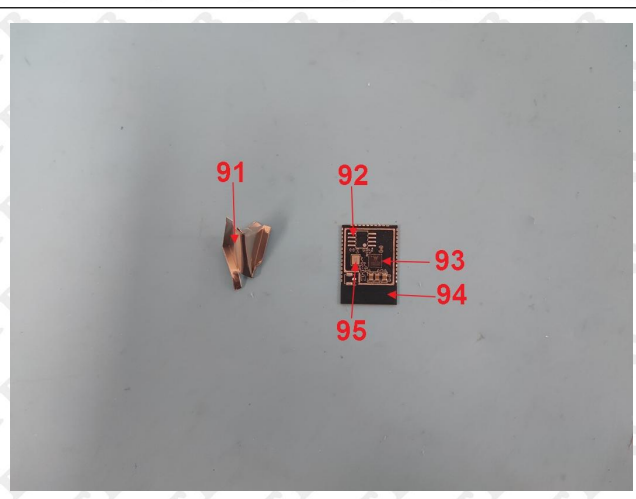
## Difference 12-PB-03F

86	Silver metal case
87	Black IC
88	Silver metal pins
89	Black PCB
90	Silvery crystal oscillator



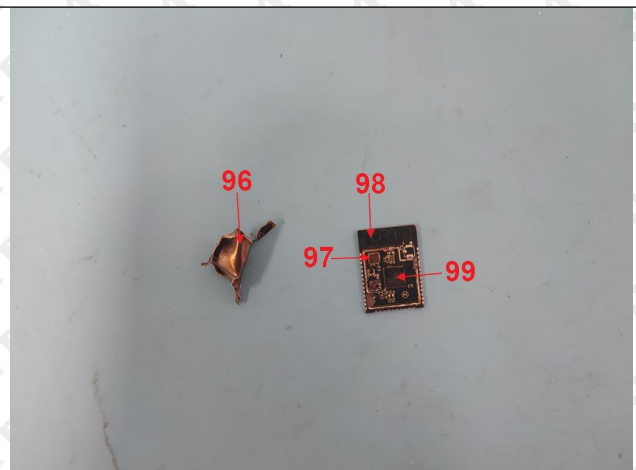
## Difference 13-Ai-WB1-32S

91	Silver metal case
92	Solder point
93	Black IC
94	Black PCB
95	Silvery crystal oscillator



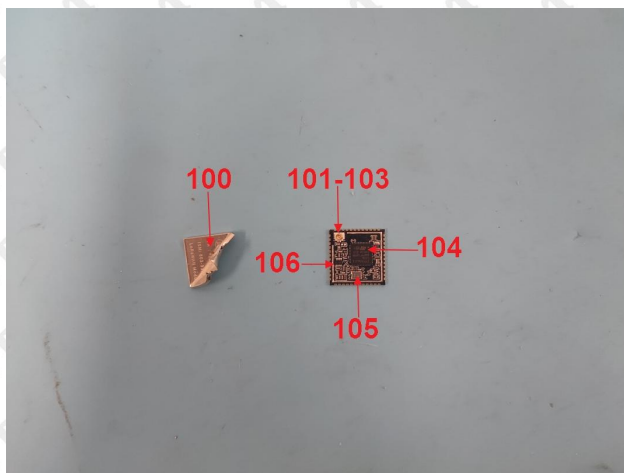
## Difference 14-Ai-SLE2821-32S

96	Silver metal case
97	Silvery crystal oscillator
98	Black PCB
99	Black IC



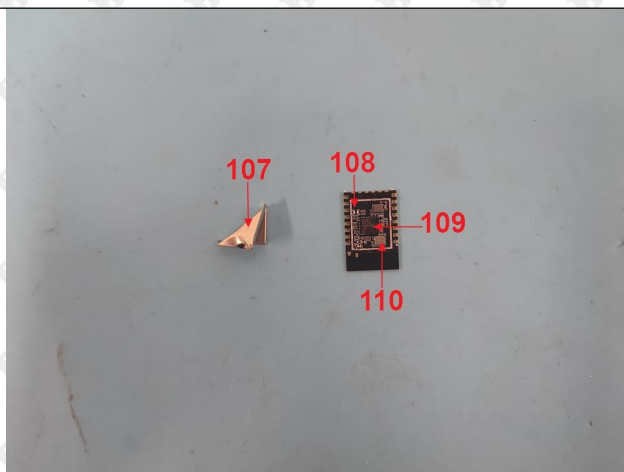
## Difference 15-Ra-09H

100	Silver metal case
101	White ceramic base
102	Gold metal ring
103	Gold metal pin
104	Black IC
105	Silvery crystal oscillator
106	Black PCB



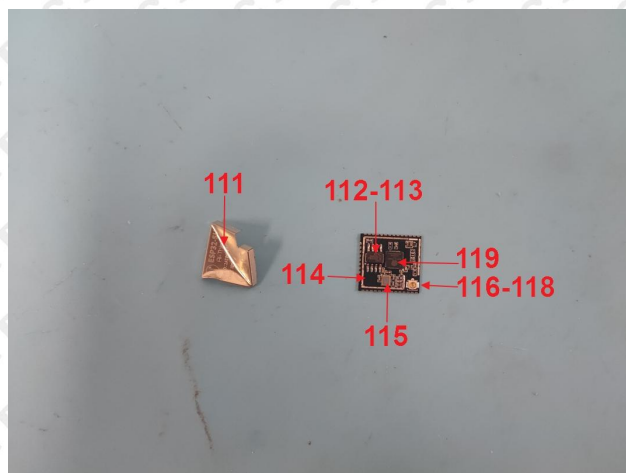
## Difference 16-Hi-12FL

107	Silver metal case
108	Black PCB
109	Black IC
110	Silvery crystal oscillator

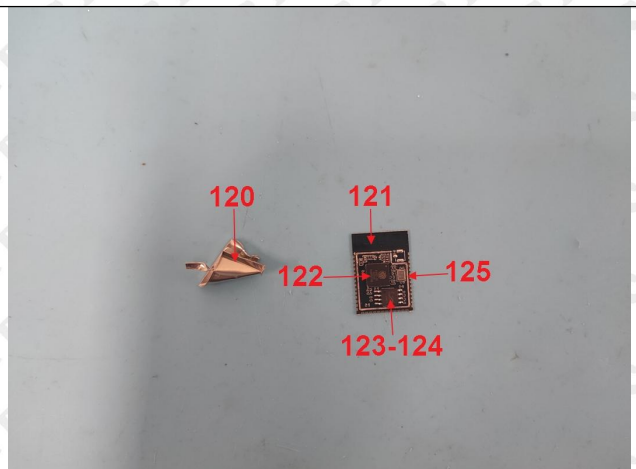


**Difference 17-ESP32-SU**

111	Silver metal case
112	Black IC
113	Silver metal pins
114	Black PCB
115	Silvery crystal oscillator
116	White ceramic base
117	Gold metal ring
118	Gold metal pin
119	Black IC

**Difference 18-ESP-S3-32S**

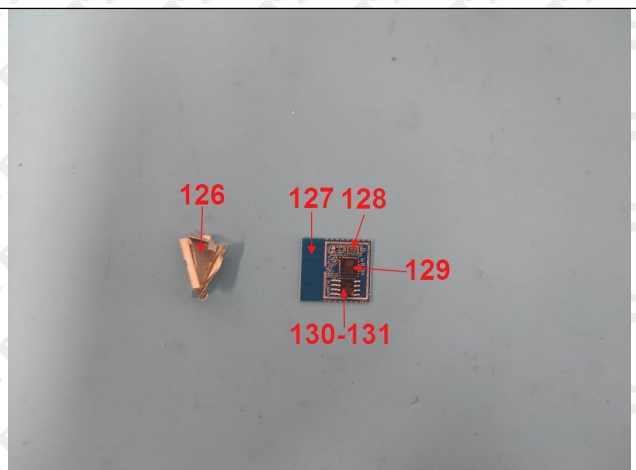
120	Silver metal case
121	Black PCB
122	Black IC
123	Black IC
124	Silver metal pins
125	Silvery crystal oscillator





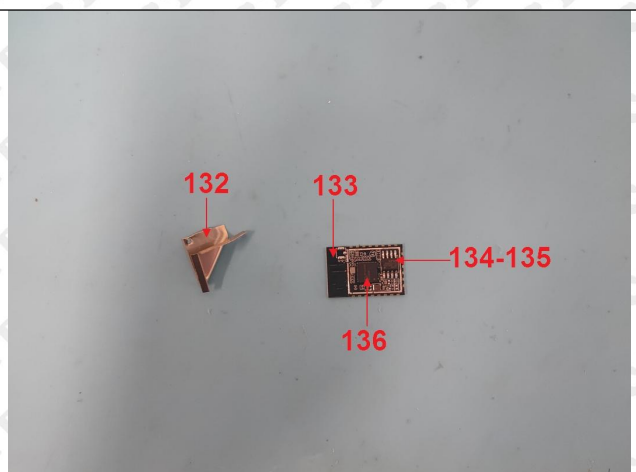
## Difference 19-ESP-13

126	Silver metal case
127	Blue PCB
128	Silvery crystal oscillator
129	Black IC
130	Black IC
131	Silver metal pins



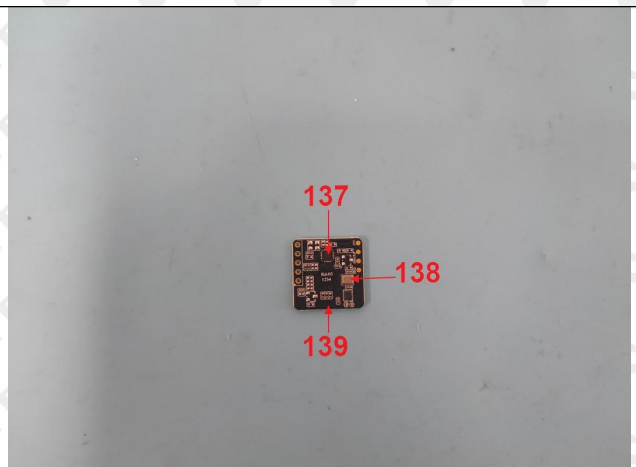
## Difference 20-BW20-12F

132	Silver metal case
133	Black PCB
134	Black IC
135	Silver metal pins
136	Black IC



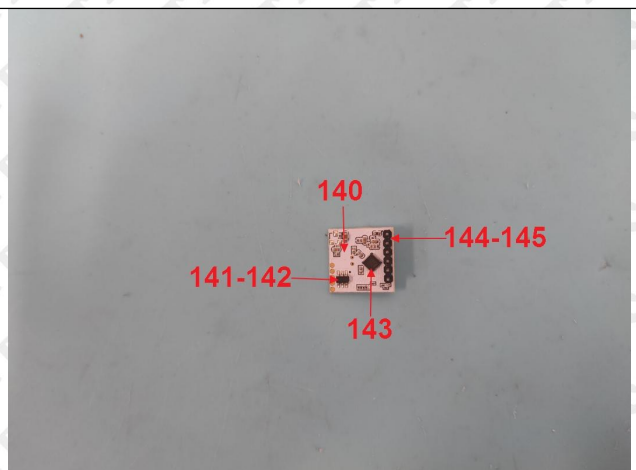
## Difference 21-Rd-03

137	Black IC
138	Silvery crystal oscillator
139	Black PCB



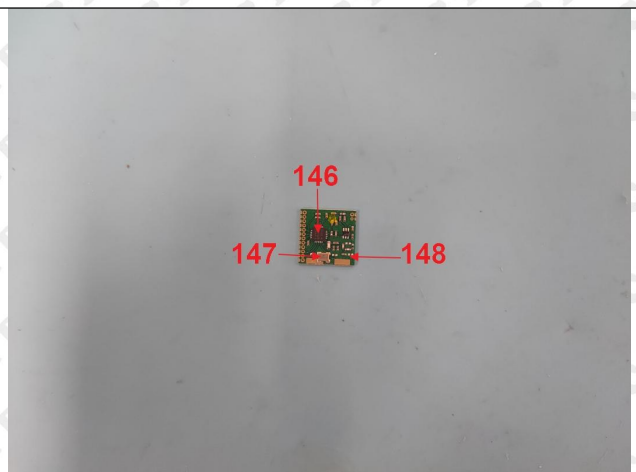
## Difference 22-Rd-04

140	White PCB
141	Black IC
142	Silver metal pins
143	Black IC
144	Black plastic
145	Silver metal



## Difference 23-A251

146	Black IC
147	Silvery crystal oscillator
148	Green PCB



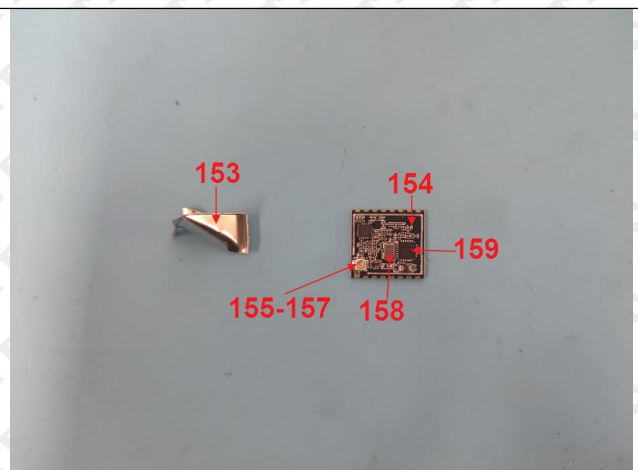
## Difference 24-PB--03

149	Silver metal case
150	Black PCB
151	Black IC
152	Black metal pins



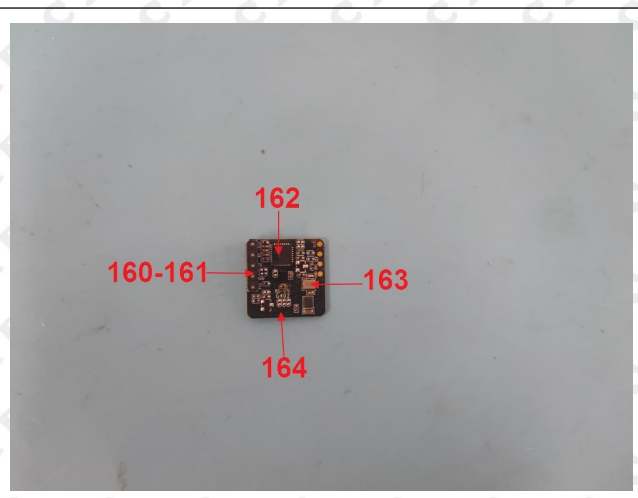
## Difference 25-Ra-01SCH-P

153	Silver metal case
154	Black PCB
155	White ceramic base
156	Gold metal ring
157	Gold metal pin
158	Silvery crystal oscillator
159	Black IC



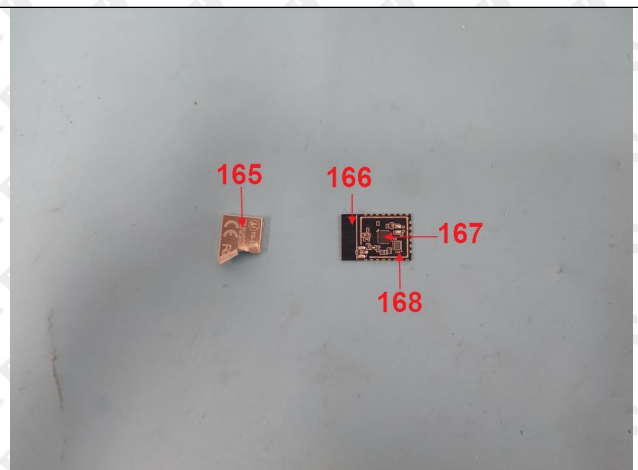
## Difference 26-RD-03L

160	Black plastic
161	Silver metal
162	Black IC
163	Silvery crystal oscillator
164	Black PCB



## Difference 27-TG-12F

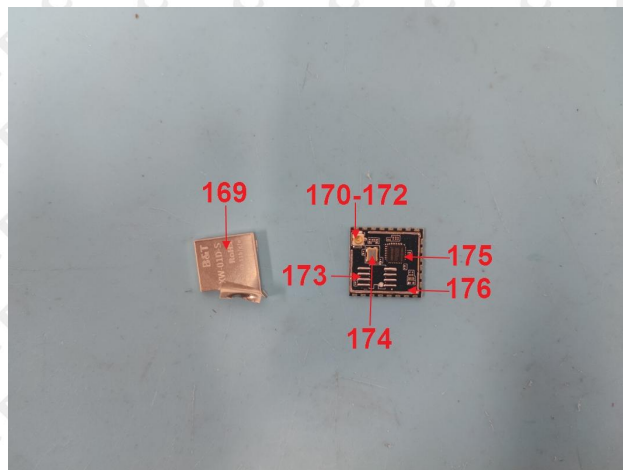
165	Silver metal case
166	Black PCB
167	Black IC
168	Silvery crystal oscillator



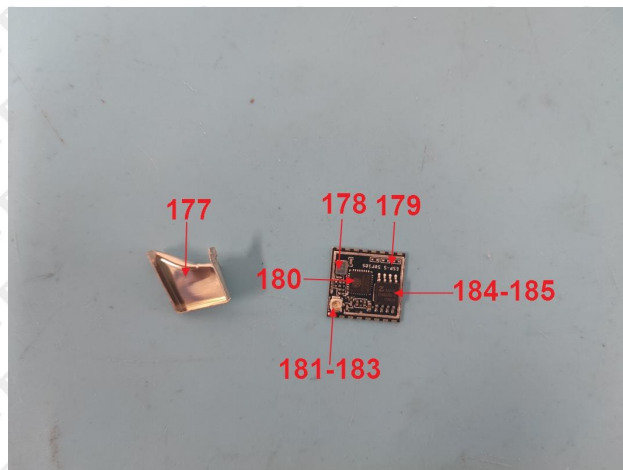


**Difference 28-XW-01D-S**

169	Silver metal case
170	White ceramic base
171	Gold metal ring
172	Gold metal pin
173	Solder point
174	Silvery crystal oscillator
175	Black IC
176	Black PCB

**Difference 29-ESP-07S**

177	Silver metal case
178	Silvery crystal oscillator
179	Black PCB
180	Black IC
181	White ceramic base
182	Gold metal ring
183	Gold metal pin
184	Black IC
185	Silver metal pins



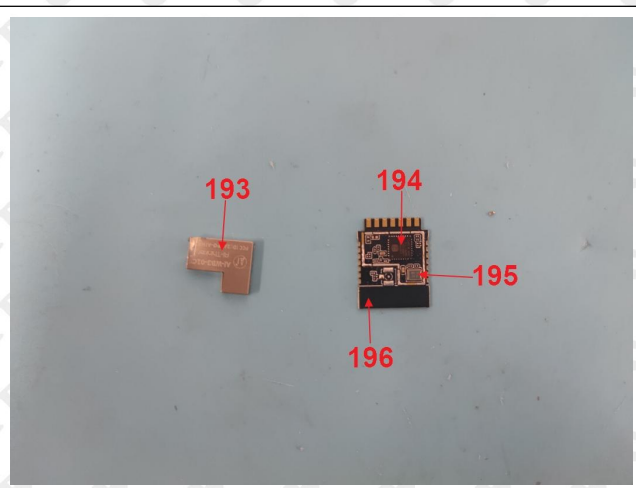
## Difference 30-NF-05-S

186	Black PCB
187	Silvery crystal oscillator
188	Solder point
189	Black plastic
190	Silver metal
191	Black IC
192	Silver metal pins



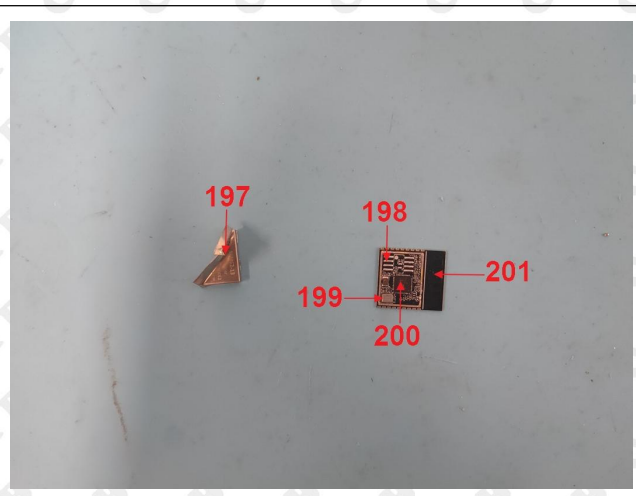
## Difference 31-Ai-WB3-01C

193	Silver metal case
194	Black IC
195	Silvery crystal oscillator
196	Black PCB



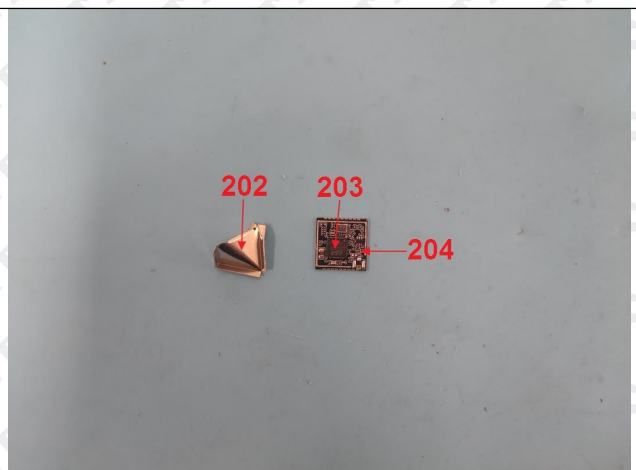
## Difference 32-Ai-M62-13

197	Silver metal case
198	Solder point
199	Silvery crystal oscillator
200	Black IC
201	Black PCB



## Difference 33-Ra-08H

202	Silver metal case
203	Black IC
204	Black PCB



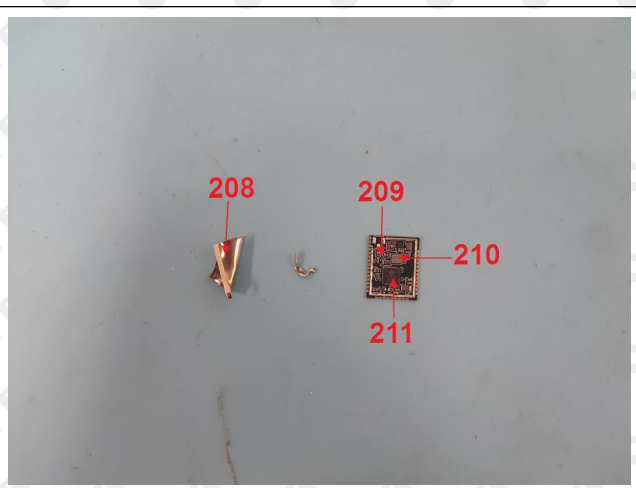
## Difference 34-BU03

205	Silver metal case
206	Silver metal case
207	Black IC



## Difference 35-Ai-M62-M01L

208	Silver metal case
209	Black PCB
210	Silvery crystal oscillator
211	Black IC





## Difference 36-PB-03M

212	Silver metal case
213	Silvery crystal oscillator
214	Black IC
215	Silver metal pins
216	Black PCB



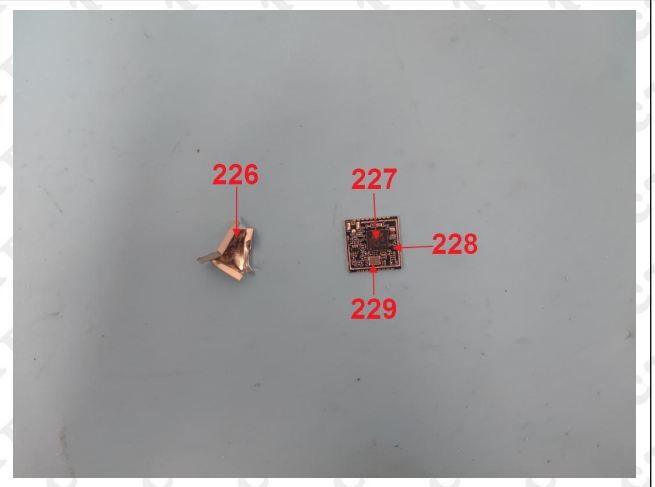
## Difference 37-Ai-M16-32SU

217	Silver metal case
218	Silvery crystal oscillator
219	White ceramic base
220	Gold metal ring
221	Gold metal pin
222	Black IC
223	Silver metal pins
224	Black IC
225	Black PCB



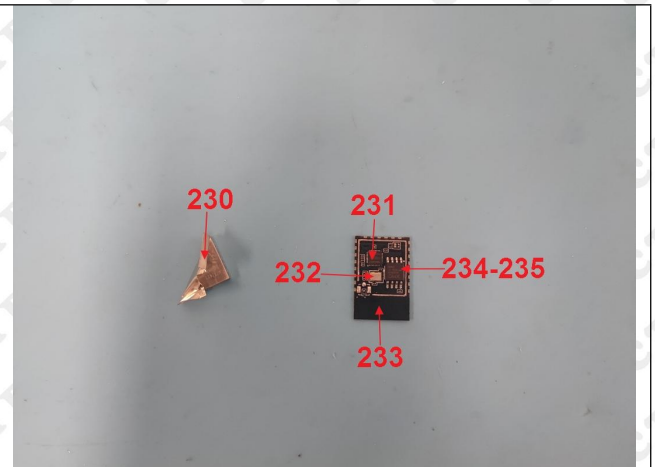
## Difference 38-Ra-08

226	Silver metal case
227	Black IC
228	Black PCB
229	Silvery crystal oscillator



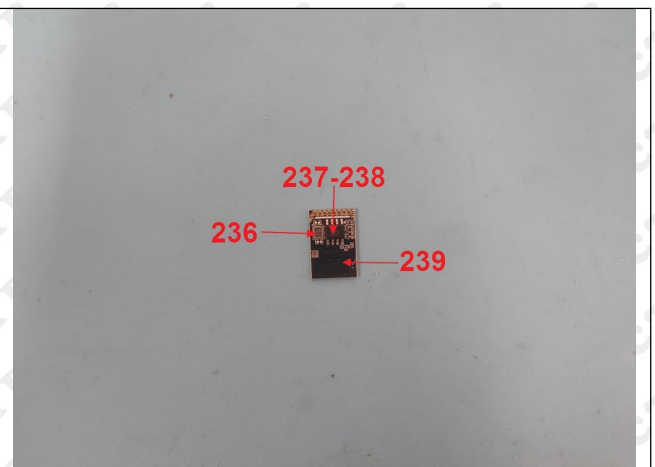
## Difference 39-XW-01

230	Silver metal case
231	Black IC
232	Silvery crystal oscillator
233	Black PCB
234	Black IC
235	Silver metal pins



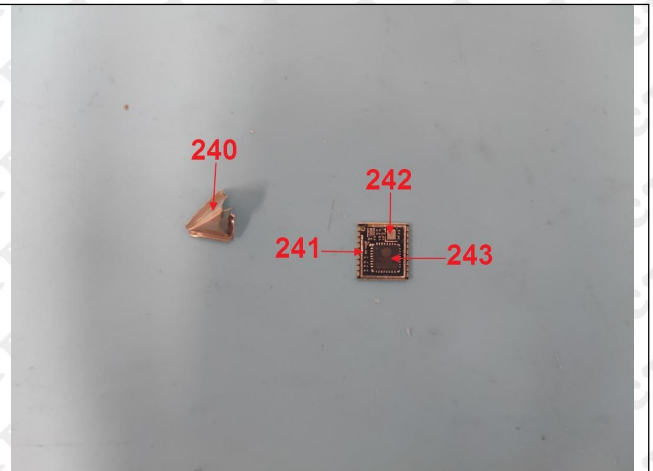
## Difference 40-NF-05

236	Silvery crystal oscillator
237	Black IC
238	Silver metal pins
239	Black PCB



## Difference 41-ESP-01F

240	Silver metal case
241	Black PCB
242	Silvery crystal oscillator
243	Black IC



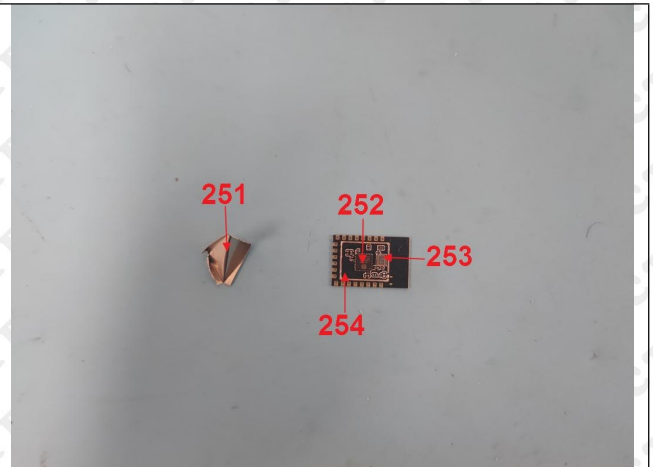
## Difference 42-Hi-07SL

244	Silver metal case
245	Silvery crystal oscillator
246	White ceramic base
247	Gold metal ring
248	Gold metal pin
249	Black PCB
250	Black IC



## Difference 43-Ai-WB3-12F

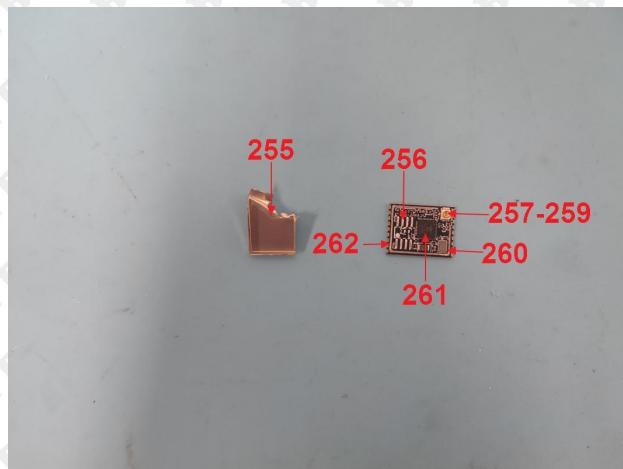
251	Silver metal case
252	Black IC
253	Silvery crystal oscillator
254	Black PCB





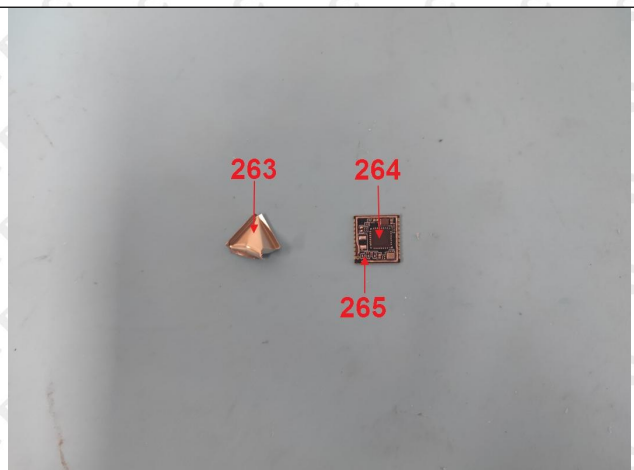
## Difference 44-Ai-M62-13U

255	Silver metal case
256	Solder point
257	White ceramic base
258	Gold metal ring
259	Gold metal pin
260	Silvery crystal oscillator
261	Black IC
262	Black PCB



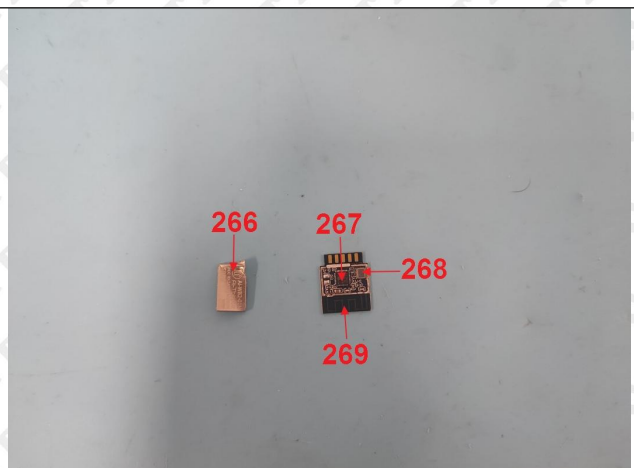
## Difference 45-TB-04

263	Silver metal case
264	Black IC
265	Black PCB



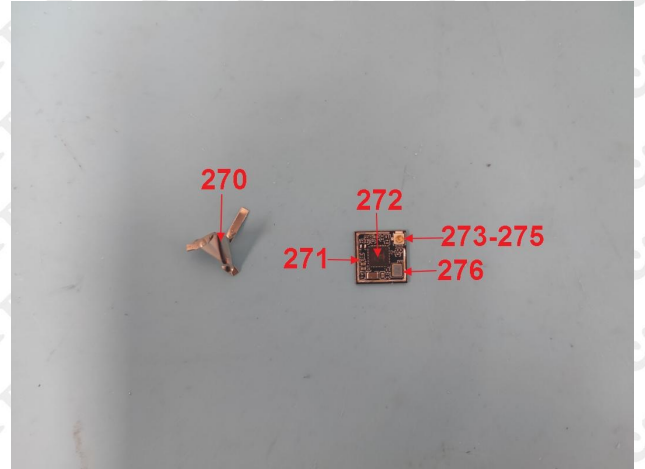
## Difference 46-Ai-WB2-01N

266	Silver metal case
267	Black IC
268	Silvery crystal oscillator
269	Black PCB

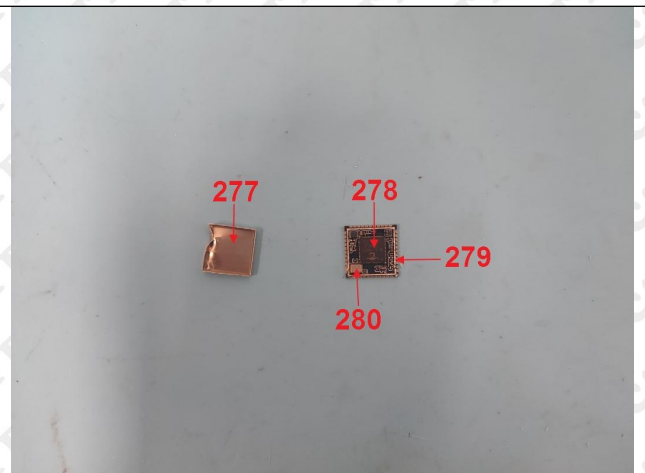


**Difference 47-Ai-M62-M2-1**

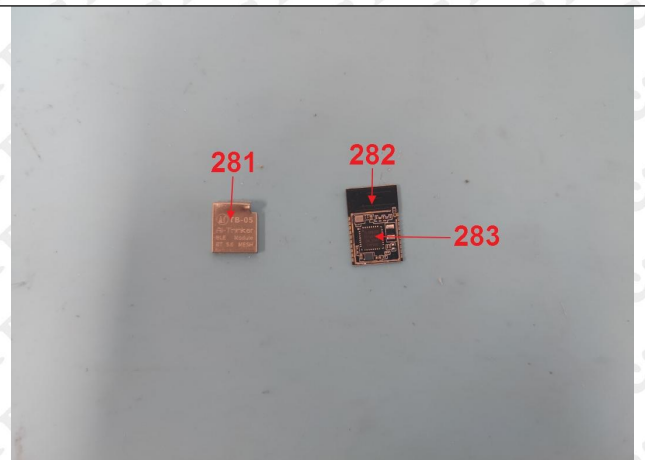
270	Silver metal case
271	Black PCB
272	Black IC
273	White ceramic base
274	Gold metal ring
275	Gold metal pin
276	Silvery crystal oscillator

**Difference 48-Ai-M61-CBM**

277	Silver metal case
278	Black IC
279	Black PCB
280	Silvery crystal oscillator

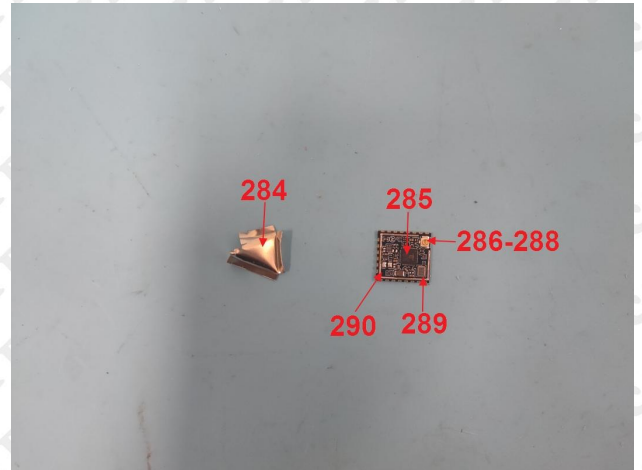
**Difference 49-TB-05**

281	Silver metal case
282	Black PCB
283	Black IC



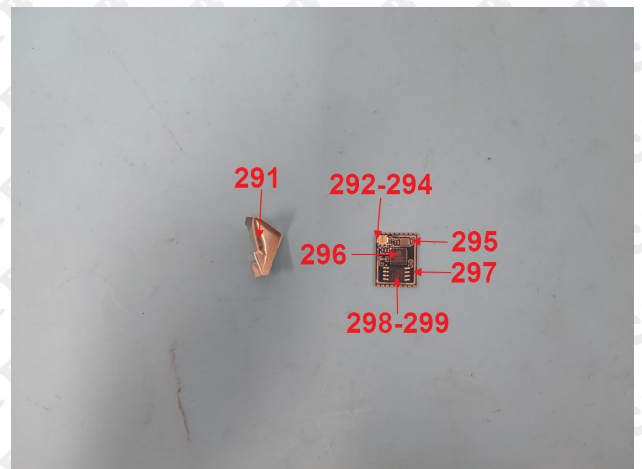
## Difference 50-Ai-M62-07S

284	Silver metal case
285	Black IC
286	White ceramic base
287	Gold metal ring
288	Gold metal pin
289	Silvery crystal oscillator
290	Black PCB



## Difference 51-ESP-13U

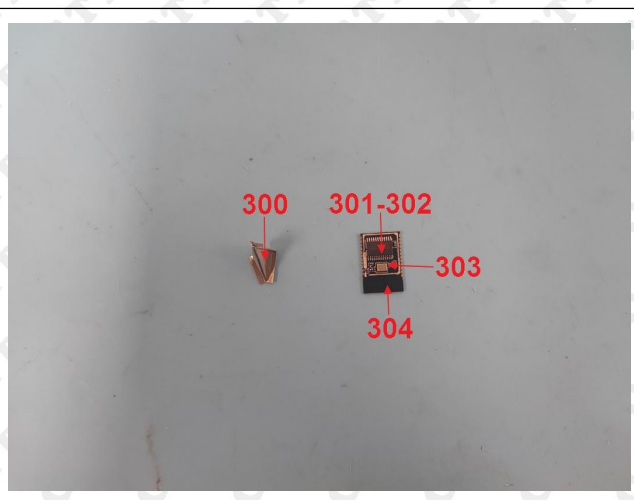
291	Silver metal case
292	White ceramic base
293	Gold metal ring
294	Gold metal pin
295	Silvery crystal oscillator
296	Black IC
297	Black PCB
298	Black IC
299	Silver metal pins





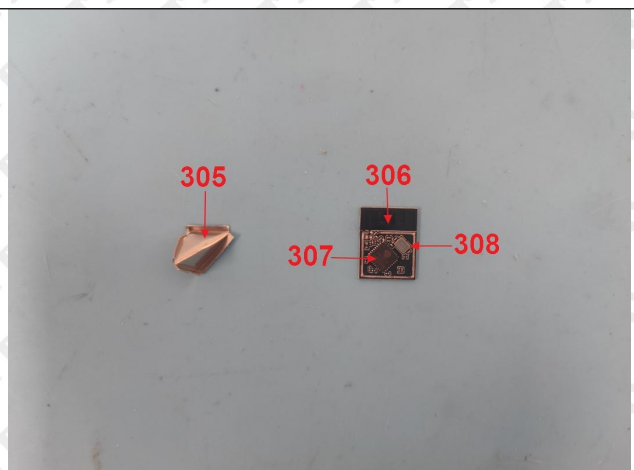
## Difference 52-TG-03

300	Silver metal case
301	Black IC
302	Silver metal pins
303	Silvery crystal oscillator
304	Black PCB



## Difference 53-ESP-C3-M1

305	Silver metal case
306	Black PCB
307	Black IC
308	Silvery crystal oscillator

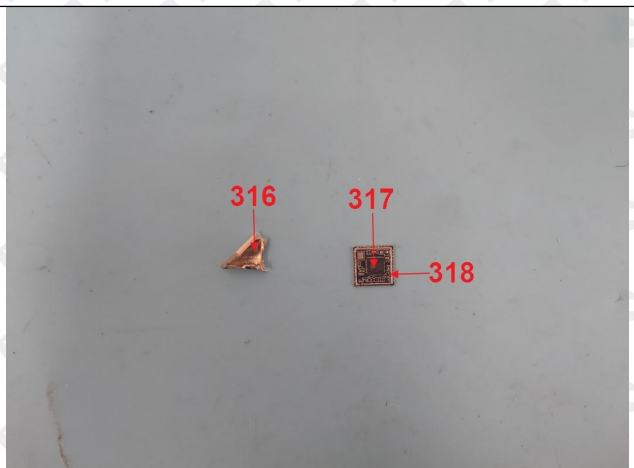


## Difference 54-ESP-C3-M1-1

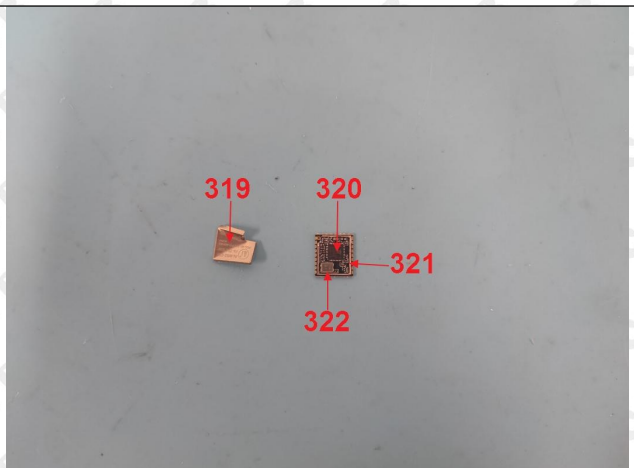
309	Silver metal case
310	White ceramic base
311	Gold metal ring
312	Gold metal pin
313	Black PCB
314	Black IC
315	Silvery crystal oscillator



## Difference 55-Ai-M62-CBS

316	Silver metal case	
317	Black IC	
318	Black PCB	

## Difference 56-Ai-WB2-01F

319	Silver metal case	
320	Black IC	
321	Black PCB	
322	Silvery crystal oscillator	

Note: test samples were specified by applicant.

## Test Result(s):

No.	XRF screening Result					Chemical confirm Result (mg/kg)	Remark	Conclusion
	Pb	Cd	Hg	Cr	Br			
1	BL	BL	BL	BL	NA	---	---	PASS
2	BL	BL	BL	BL	BL	---	---	PASS
3	BL	BL	BL	BL	NA	---	---	PASS
4	BL	BL	BL	BL	NA	---	---	PASS
5	BL	BL	BL	BL	BL	---	---	PASS
6	BL	BL	BL	BL	BL	---	---	PASS

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7	BL	BL	BL	BL	10904	PBB&PBDE:N.D	---	PASS
8	BL	BL	BL	BL	NA	---	---	PASS
9	BL	BL	BL	BL	NA	---	---	PASS
10	BL	BL	BL	BL	BL	---	---	PASS
11	BL	BL	BL	BL	NA	---	---	PASS
12	BL	BL	BL	BL	BL	---	---	PASS
13	BL	BL	BL	BL	NA	---	---	PASS
14	BL	BL	BL	BL	NA	---	---	PASS
15	BL	BL	BL	BL	BL	---	---	PASS
16	BL	BL	BL	BL	NA	---	---	PASS
17	BL	BL	BL	BL	1994	PBB&PBDE:N.D	---	PASS
18	BL	BL	BL	BL	NA	---	---	PASS
19	BL	BL	BL	BL	BL	---	---	PASS
20	BL	BL	BL	BL	13970	PBB&PBDE:N.D	---	PASS
21	BL	BL	BL	BL	BL	---	---	PASS
22	BL	BL	BL	BL	NA	---	---	PASS
23	BL	BL	BL	BL	BL	---	---	PASS
24	BL	BL	BL	BL	NA	---	---	PASS
25	BL	BL	BL	BL	NA	---	---	PASS
26	BL	BL	BL	BL	NA	---	---	PASS
27	BL	BL	BL	BL	NA	---	---	PASS
28	BL	BL	BL	BL	BL	---	---	PASS
29	BL	BL	BL	BL	NA	---	---	PASS
30	BL	BL	BL	BL	BL	---	---	PASS
31	BL	BL	BL	BL	BL	---	---	PASS
32	BL	BL	BL	BL	3397	PBB&PBDE:N.D	---	PASS
33	BL	BL	BL	BL	NA	---	---	PASS
34	BL	BL	BL	BL	BL	---	---	PASS
35	BL	BL	BL	BL	BL	---	---	PASS
36	BL	BL	BL	BL	NA	---	---	PASS
37	BL	BL	BL	BL	NA	---	---	PASS



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38	BL	BL	BL	BL	NA	---	---	PASS
39	BL	BL	BL	BL	NA	---	---	PASS
40	BL	BL	BL	BL	BL	---	---	PASS
41	BL	BL	BL	BL	BL	---	---	PASS
42	BL	BL	BL	BL	NA	---	---	PASS
43	BL	BL	BL	BL	BL	---	---	PASS
44	BL	BL	BL	BL	29272	PBB&PBDE:N.D	---	PASS
45	BL	BL	BL	BL	NA	---	---	PASS
46	BL	BL	BL	BL	BL	---	---	PASS
47	BL	BL	BL	BL	NA	---	---	PASS
48	BL	BL	BL	BL	BL	---	---	PASS
49	BL	BL	BL	BL	22879	PBB&PBDE:N.D	---	PASS
50	BL	BL	BL	BL	BL	---	---	PASS
51	BL	BL	BL	BL	NA	---	---	PASS
52	BL	BL	BL	BL	NA	---	---	PASS
53	BL	BL	BL	BL	NA	---	---	PASS
54	BL	BL	BL	BL	NA	---	---	PASS
55	BL	BL	BL	BL	BL	---	---	PASS
56	BL	BL	BL	BL	NA	---	---	PASS
57	BL	BL	BL	BL	BL	---	---	PASS
58	BL	BL	BL	BL	NA	---	---	PASS
59	BL	BL	BL	BL	2404	PBB&PBDE:N.D	---	PASS
60	BL	BL	BL	BL	NA	---	---	PASS
61	BL	BL	BL	BL	NA	---	---	PASS
62	BL	BL	BL	BL	BL	---	---	PASS
63	BL	BL	BL	BL	NA	---	---	PASS
64	BL	BL	BL	BL	NA	---	---	PASS
65	BL	BL	BL	BL	18235	PBB&PBDE:N.D	---	PASS
66	BL	BL	BL	BL	BL	---	---	PASS
67	BL	BL	BL	BL	BL	---	---	PASS
68	BL	BL	BL	BL	NA	---	---	PASS

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69	BL	BL	BL	BL	NA	---	---	PASS
70	BL	BL	BL	BL	BL	---	---	PASS
71	BL	BL	BL	BL	NA	---	---	PASS
72	BL	BL	BL	BL	11432	PBB&PBDE:N.D	---	PASS
73	BL	BL	BL	BL	BL	---	---	PASS
74	BL	BL	BL	BL	NA	---	---	PASS
75	BL	BL	BL	BL	NA	---	---	PASS
76	BL	BL	BL	BL	NA	---	---	PASS
77	BL	BL	BL	BL	9806	PBB&PBDE:N.D	---	PASS
78	BL	BL	BL	BL	BL	---	---	PASS
79	BL	BL	BL	BL	NA	---	---	PASS
80	BL	BL	BL	BL	NA	---	---	PASS
81	BL	BL	BL	BL	BL	---	---	PASS
82	BL	BL	BL	BL	NA	---	---	PASS
83	BL	BL	BL	BL	BL	---	---	PASS
84	BL	BL	BL	BL	BL	---	---	PASS
85	BL	BL	BL	BL	NA	---	---	PASS
86	BL	BL	BL	BL	NA	---	---	PASS
87	BL	BL	BL	BL	BL	---	---	PASS
88	BL	BL	BL	BL	NA	---	---	PASS
89	BL	BL	BL	BL	13868	PBB&PBDE:N.D	---	PASS
90	BL	BL	BL	BL	NA	---	---	PASS
91	BL	BL	BL	BL	NA	---	---	PASS
92	BL	BL	BL	BL	NA	---	---	PASS
93	BL	BL	BL	BL	BL	---	---	PASS
94	BL	BL	BL	BL	24857	PBB&PBDE:N.D	---	PASS
95	BL	BL	BL	BL	NA	---	---	PASS
96	BL	BL	BL	BL	NA	---	---	PASS
97	BL	BL	BL	BL	NA	---	---	PASS
98	BL	BL	BL	BL	18373	PBB&PBDE:N.D	---	PASS
99	BL	BL	BL	BL	BL	---	---	PASS

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100	BL	BL	BL	BL	NA	---	---	PASS
101	BL	BL	BL	BL	BL	---	---	PASS
102	BL	BL	BL	BL	NA	---	---	PASS
103	BL	BL	BL	BL	NA	---	---	PASS
104	BL	BL	BL	BL	BL	---	---	PASS
105	BL	BL	BL	BL	NA	---	---	PASS
106	BL	BL	BL	BL	2305	PBB&PBDE:N.D	---	PASS
107	BL	BL	BL	BL	NA	---	---	PASS
108	BL	BL	BL	BL	11868	PBB&PBDE:N.D	---	PASS
109	BL	BL	BL	BL	BL	---	---	PASS
110	BL	BL	BL	BL	NA	---	---	PASS
111	BL	BL	BL	BL	NA	---	---	PASS
112	BL	BL	BL	BL	BL	---	---	PASS
113	BL	BL	BL	BL	NA	---	---	PASS
114	BL	BL	BL	BL	1910	PBB&PBDE:N.D	---	PASS
115	BL	BL	BL	BL	NA	---	---	PASS
116	BL	BL	BL	BL	BL	---	---	PASS
117	BL	BL	BL	BL	NA	---	---	PASS
118	BL	BL	BL	BL	NA	---	---	PASS
119	BL	BL	BL	BL	BL	---	---	PASS
120	BL	BL	BL	BL	NA	---	---	PASS
121	BL	BL	BL	BL	7320	PBB&PBDE:N.D	---	PASS
122	BL	BL	BL	BL	BL	---	---	PASS
123	BL	BL	BL	BL	BL	---	---	PASS
124	BL	BL	BL	BL	NA	---	---	PASS
125	BL	BL	BL	BL	NA	---	---	PASS
126	BL	BL	BL	BL	NA	---	---	PASS
127	BL	BL	BL	BL	14736	PBB&PBDE:N.D	---	PASS
128	BL	BL	BL	BL	NA	---	---	PASS
129	BL	BL	BL	BL	BL	---	---	PASS
130	BL	BL	BL	BL	BL	---	---	PASS



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131	BL	BL	BL	BL	NA	---	---	PASS
132	BL	BL	BL	BL	NA	---	---	PASS
133	BL	BL	BL	BL	24917	PBB&PBDE:N.D	---	PASS
134	BL	BL	BL	BL	BL	---	---	PASS
135	BL	BL	BL	BL	NA	---	---	PASS
136	BL	BL	BL	BL	BL	---	---	PASS
137	BL	BL	BL	BL	BL	---	---	PASS
138	BL	BL	BL	BL	NA	---	---	PASS
139	BL	BL	BL	BL	7767	PBB&PBDE:N.D	---	PASS
140	BL	BL	BL	BL	9789	PBB&PBDE:N.D	---	PASS
141	BL	BL	BL	BL	BL	---	---	PASS
142	BL	BL	BL	BL	NA	---	---	PASS
143	BL	BL	BL	BL	BL	---	---	PASS
144	BL	BL	BL	BL	BL	---	---	PASS
145	BL	BL	BL	BL	NA	---	---	PASS
146	BL	BL	BL	BL	BL	---	---	PASS
147	BL	BL	BL	BL	NA	---	---	PASS
148	BL	BL	BL	BL	2859	PBB&PBDE:N.D	---	PASS
149	BL	BL	BL	BL	NA	---	---	PASS
150	BL	BL	BL	BL	16809	PBB&PBDE:N.D	---	PASS
151	BL	BL	BL	BL	BL	---	---	PASS
152	BL	BL	BL	BL	NA	---	---	PASS
153	BL	BL	BL	BL	NA	---	---	PASS
154	BL	BL	BL	BL	3270	PBB&PBDE:N.D	---	PASS
155	BL	BL	BL	BL	BL	---	---	PASS
156	BL	BL	BL	BL	NA	---	---	PASS
157	BL	BL	BL	BL	NA	---	---	PASS
158	BL	BL	BL	BL	NA	---	---	PASS
159	BL	BL	BL	BL	BL	---	---	PASS
160	BL	BL	BL	BL	BL	---	---	PASS
161	BL	BL	BL	BL	NA	---	---	PASS

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162	BL	BL	BL	BL	BL	---	---	PASS
163	BL	BL	BL	BL	NA	---	---	PASS
164	BL	BL	BL	BL	5691	PBB&PBDE:N.D	---	PASS
165	BL	BL	BL	BL	NA	---	---	PASS
166	BL	BL	BL	BL	BL	---	---	PASS
167	BL	BL	BL	BL	BL	---	---	PASS
168	BL	BL	BL	BL	NA	---	---	PASS
169	BL	BL	BL	BL	NA	---	---	PASS
170	BL	BL	BL	BL	BL	---	---	PASS
171	BL	BL	BL	BL	NA	---	---	PASS
172	BL	BL	BL	BL	NA	---	---	PASS
173	BL	BL	BL	BL	15649	PBB&PBDE:N.D	---	PASS
174	BL	BL	BL	BL	NA	---	---	PASS
175	BL	BL	BL	BL	BL	---	---	PASS
176	BL	BL	BL	BL	BL	---	---	PASS
177	BL	BL	BL	BL	NA	---	---	PASS
178	BL	BL	BL	BL	NA	---	---	PASS
179	BL	BL	BL	BL	1806	PBB&PBDE:N.D	---	PASS
180	BL	BL	BL	BL	BL	---	---	PASS
181	BL	BL	BL	BL	BL	---	---	PASS
182	BL	BL	BL	BL	NA	---	---	PASS
183	BL	BL	BL	BL	NA	---	---	PASS
184	BL	BL	BL	BL	BL	---	---	PASS
185	BL	BL	BL	BL	NA	---	---	PASS
186	BL	BL	BL	BL	16787	PBB&PBDE:N.D	---	PASS
187	BL	BL	BL	BL	NA	---	---	PASS
188	BL	BL	BL	BL	NA	---	---	PASS
189	BL	BL	BL	BL	BL	---	---	PASS
190	BL	BL	BL	BL	NA	---	---	PASS
191	BL	BL	BL	BL	BL	---	---	PASS
192	BL	BL	BL	BL	NA	---	---	PASS

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193	BL	BL	BL	BL	NA	---	---	PASS
194	BL	BL	BL	BL	BL	---	---	PASS
195	BL	BL	BL	BL	NA	---	---	PASS
196	BL	BL	BL	BL	7457	PBB&PBDE:N.D	---	PASS
197	BL	BL	BL	BL	NA	---	---	PASS
198	BL	BL	BL	BL	NA	---	---	PASS
199	BL	BL	BL	BL	NA	---	---	PASS
200	BL	BL	BL	BL	BL	---	---	PASS
201	BL	BL	BL	BL	4107	PBB&PBDE:N.D	---	PASS
202	BL	BL	BL	BL	NA	---	---	PASS
203	BL	BL	BL	BL	BL	---	---	PASS
204	BL	BL	BL	BL	1904	PBB&PBDE:N.D	---	PASS
205	BL	BL	BL	BL	NA	---	---	PASS
206	BL	BL	BL	BL	NA	---	---	PASS
207	BL	BL	BL	BL	BL	---	---	PASS
208	BL	BL	BL	BL	NA	---	---	PASS
209	BL	BL	BL	BL	5576	PBB&PBDE:N.D	---	PASS
210	BL	BL	BL	BL	NA	---	---	PASS
211	BL	BL	BL	BL	BL	---	---	PASS
212	BL	BL	BL	BL	NA	---	---	PASS
213	BL	BL	BL	BL	NA	---	---	PASS
214	BL	BL	BL	BL	BL	---	---	PASS
215	BL	BL	BL	BL	NA	---	---	PASS
216	BL	BL	BL	BL	18863	PBB&PBDE:N.D	---	PASS
217	BL	BL	BL	BL	NA	---	---	PASS
218	BL	BL	BL	BL	NA	---	---	PASS
219	BL	BL	BL	BL	BL	---	---	PASS
220	BL	BL	BL	BL	NA	---	---	PASS
221	BL	BL	BL	BL	NA	---	---	PASS
222	BL	BL	BL	BL	BL	---	---	PASS
223	BL	BL	BL	BL	NA	---	---	PASS



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224	BL	BL	BL	BL	BL	---	---	PASS
225	BL	BL	BL	BL	BL	---	---	PASS
226	BL	BL	BL	BL	NA	---	---	PASS
227	BL	BL	BL	BL	BL	---	---	PASS
228	BL	BL	BL	BL	BL	---	---	PASS
229	BL	BL	BL	BL	NA	---	---	PASS
230	BL	BL	BL	BL	NA	---	---	PASS
231	BL	BL	BL	BL	BL	---	---	PASS
232	BL	BL	BL	BL	NA	---	---	PASS
233	BL	BL	BL	BL	BL	---	---	PASS
234	BL	BL	BL	BL	BL	---	---	PASS
235	BL	BL	BL	BL	NA	---	---	PASS
236	BL	BL	BL	BL	NA	---	---	PASS
237	BL	BL	BL	BL	BL	---	---	PASS
238	BL	BL	BL	BL	NA	---	---	PASS
239	BL	BL	BL	BL	BL	---	---	PASS
240	BL	BL	BL	BL	NA	---	---	PASS
241	BL	BL	BL	BL	7702	PBB&PBDE:N.D	---	PASS
242	BL	BL	BL	BL	NA	---	---	PASS
243	BL	BL	BL	BL	BL	---	---	PASS
244	BL	BL	BL	BL	NA	---	---	PASS
245	BL	BL	BL	BL	NA	---	---	PASS
246	BL	BL	BL	BL	BL	---	---	PASS
247	BL	BL	BL	BL	NA	---	---	PASS
248	BL	BL	BL	BL	NA	---	---	PASS
249	BL	BL	BL	BL	1650	PBB&PBDE:N.D	---	PASS
250	BL	BL	BL	BL	BL	---	---	PASS
251	BL	BL	BL	BL	NA	---	---	PASS
252	BL	BL	BL	BL	BL	---	---	PASS
253	BL	BL	BL	BL	NA	---	---	PASS
254	BL	BL	BL	BL	29220	PBB&PBDE:N.D	---	PASS

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255	BL	BL	BL	BL	NA	---	---	PASS
256	BL	BL	BL	BL	NA	---	---	PASS
257	BL	BL	BL	BL	BL	---	---	PASS
258	BL	BL	BL	BL	BL	---	---	PASS
259	BL	BL	BL	BL	NA	---	---	PASS
260	BL	BL	BL	BL	NA	---	---	PASS
261	BL	BL	BL	BL	BL	---	---	PASS
262	BL	BL	BL	BL	10472	PBB&PBDE:N.D	---	PASS
263	BL	BL	BL	BL	NA	---	---	PASS
264	BL	BL	BL	BL	BL	---	---	PASS
265	BL	BL	BL	BL	2309	PBB&PBDE:N.D	---	PASS
266	BL	BL	BL	BL	NA	---	---	PASS
267	BL	BL	BL	BL	BL	---	---	PASS
268	BL	BL	BL	BL	NA	---	---	PASS
269	BL	BL	BL	BL	4894	PBB&PBDE:N.D	---	PASS
270	BL	BL	BL	BL	NA	---	---	PASS
271	BL	BL	BL	BL	4652	PBB&PBDE:N.D	---	PASS
272	BL	BL	BL	BL	BL	---	---	PASS
273	BL	BL	BL	BL	BL	---	---	PASS
274	BL	BL	BL	BL	NA	---	---	PASS
275	BL	BL	BL	BL	NA	---	---	PASS
276	BL	BL	BL	BL	NA	---	---	PASS
277	BL	BL	BL	BL	NA	---	---	PASS
278	BL	BL	BL	BL	BL	---	---	PASS
279	BL	BL	BL	BL	5283	PBB&PBDE:N.D	---	PASS
280	BL	BL	BL	BL	NA	---	---	PASS
281	BL	BL	BL	BL	NA	---	---	PASS
282	BL	BL	BL	BL	10373	PBB&PBDE:N.D	---	PASS
283	BL	BL	BL	BL	BL	---	---	PASS
284	BL	BL	BL	BL	NA	---	---	PASS
285	BL	BL	BL	BL	BL	---	---	PASS

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286	BL	BL	BL	BL	BL	---	---	PASS
287	BL	BL	BL	BL	NA	---	---	PASS
288	BL	BL	BL	BL	NA	---	---	PASS
289	BL	BL	BL	BL	NA	---	---	PASS
290	BL	BL	BL	BL	7983	PBB&PBDE:N.D	---	PASS
291	BL	BL	BL	BL	NA	---	---	PASS
292	BL	BL	BL	BL	BL	---	---	PASS
293	BL	BL	BL	BL	NA	---	---	PASS
294	BL	BL	BL	BL	NA	---	---	PASS
295	BL	BL	BL	BL	NA	---	---	PASS
296	BL	BL	BL	BL	BL	---	---	PASS
297	BL	BL	BL	BL	1382	PBB&PBDE:N.D	---	PASS
298	BL	BL	BL	BL	BL	---	---	PASS
299	BL	BL	BL	BL	NA	---	---	PASS
300	BL	BL	BL	BL	NA	---	---	PASS
301	BL	BL	BL	BL	BL	---	---	PASS
302	BL	BL	BL	BL	NA	---	---	PASS
303	BL	BL	BL	BL	NA	---	---	PASS
304	BL	BL	BL	BL	6095	PBB&PBDE:N.D	---	PASS
305	BL	BL	BL	BL	NA	---	---	PASS
306	BL	BL	BL	BL	8179	PBB&PBDE:N.D	---	PASS
307	BL	BL	BL	BL	BL	---	---	PASS
308	BL	BL	BL	BL	NA	---	---	PASS
309	BL	BL	BL	BL	NA	---	---	PASS
310	BL	BL	BL	BL	BL	---	---	PASS
311	BL	BL	BL	BL	NA	---	---	PASS
312	BL	BL	BL	BL	NA	---	---	PASS
313	BL	BL	BL	BL	1823	PBB&PBDE:N.D	---	PASS
314	BL	BL	BL	BL	BL	---	---	PASS
315	BL	BL	BL	BL	NA	---	---	PASS
316	BL	BL	BL	BL	NA	---	---	PASS



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317	BL	BL	BL	BL	BL	---	---	PASS
318	BL	BL	BL	BL	BL	---	---	PASS
319	BL	BL	BL	BL	NA	---	---	PASS
320	BL	BL	BL	BL	BL	---	---	PASS
321	BL	BL	BL	BL	8249	PBB&PBDE:N.D	---	PASS
322	BL	BL	BL	BL	NA	---	---	PASS

Test Item(s)	Dibutyl Phthalate (DBP) ( mg/kg)	Benzylbutyl Phthalate (BBP) ( mg/kg)	Bis-(2-ethylhexyl) Phthalate (DEHP) ( mg/kg)	Diisobutyl phthalate (DIBP) ( mg/kg)	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit	1000	1000	1000	1000	
No.	Result (mg/kg)				Conclusion
2+5+7+10	N.D	N.D	N.D	N.D	
12+15+17	N.D	N.D	N.D	N.D	
19+20+21	N.D	N.D	N.D	N.D	
23+28+30	N.D	N.D	N.D	N.D	
31+32+34+35	N.D	N.D	N.D	N.D	
41+43+44+46	N.D	N.D	N.D	N.D	
48+49+50	N.D	N.D	N.D	N.D	
55+57+59	N.D	N.D	N.D	N.D	
62+65+66+67	N.D	N.D	N.D	N.D	
70+72+73	N.D	N.D	N.D	N.D	
77+78+81	N.D	N.D	N.D	N.D	
83+84+87+89	N.D	N.D	N.D	N.D	
93+94+98+99	N.D	N.D	N.D	N.D	
101+104+106	N.D	N.D	N.D	N.D	
108+109+112+114	N.D	N.D	N.D	N.D	
116+119+121+122	N.D	N.D	N.D	N.D	
123+127+129+130	N.D	N.D	N.D	N.D	

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133+134+136	N.D	N.D	N.D	N.D	<b>PASS</b>
137+139+140	N.D	N.D	N.D	N.D	<b>PASS</b>
141+143+144	N.D	N.D	N.D	N.D	<b>PASS</b>
146+148+150 +151	N.D	N.D	N.D	N.D	<b>PASS</b>
154+155+159 +160	N.D	N.D	N.D	N.D	<b>PASS</b>
162+164+166 +167	N.D	N.D	N.D	N.D	<b>PASS</b>
170+175+176	N.D	N.D	N.D	N.D	<b>PASS</b>
178+180+181 +184	N.D	N.D	N.D	N.D	<b>PASS</b>
186+189+191	N.D	N.D	N.D	N.D	<b>PASS</b>
194+196+200 +201	N.D	N.D	N.D	N.D	<b>PASS</b>
203+204+207	N.D	N.D	N.D	N.D	<b>PASS</b>
209+211+214 +216	N.D	N.D	N.D	N.D	<b>PASS</b>
219+222+224 +225	N.D	N.D	N.D	N.D	<b>PASS</b>
227+228+231	N.D	N.D	N.D	N.D	<b>PASS</b>
233+234+237 +239	N.D	N.D	N.D	N.D	<b>PASS</b>
241+243+246 +249	N.D	N.D	N.D	N.D	<b>PASS</b>
250+252+254 +257	N.D	N.D	N.D	N.D	<b>PASS</b>
261+262+264 +265	N.D	N.D	N.D	N.D	<b>PASS</b>
267+269+270 +272	N.D	N.D	N.D	N.D	<b>PASS</b>
273+278+279	N.D	N.D	N.D	N.D	<b>PASS</b>
282+283+285 +286	N.D	N.D	N.D	N.D	<b>PASS</b>
290+292+296	N.D	N.D	N.D	N.D	<b>PASS</b>
297+298+301 +304	N.D	N.D	N.D	N.D	<b>PASS</b>
306+307+310	N.D	N.D	N.D	N.D	<b>PASS</b>
313+314+317 +318	N.D	N.D	N.D	N.D	<b>PASS</b>
320+321	N.D	N.D	N.D	N.D	<b>PASS</b>

Remark:

1. BL = below the limit
2. OL = over the limit
3. X = inconclusive, chemical confirm test is needed
4. NA = metal not applicable
5. mg/kg = milligram per kilogram = ppm
6. N.D = not detected
7. Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than  $0.1\mu\text{g}/\text{cm}^2$  with  $50\text{cm}^2$  sample surface area used.
8. Positive = Presence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is equal to or greater than  $0.13\mu\text{g}/\text{cm}^2$  with  $50\text{cm}^2$
9. Sample surface area used. The limit for composite test should be divided by the mixed number.

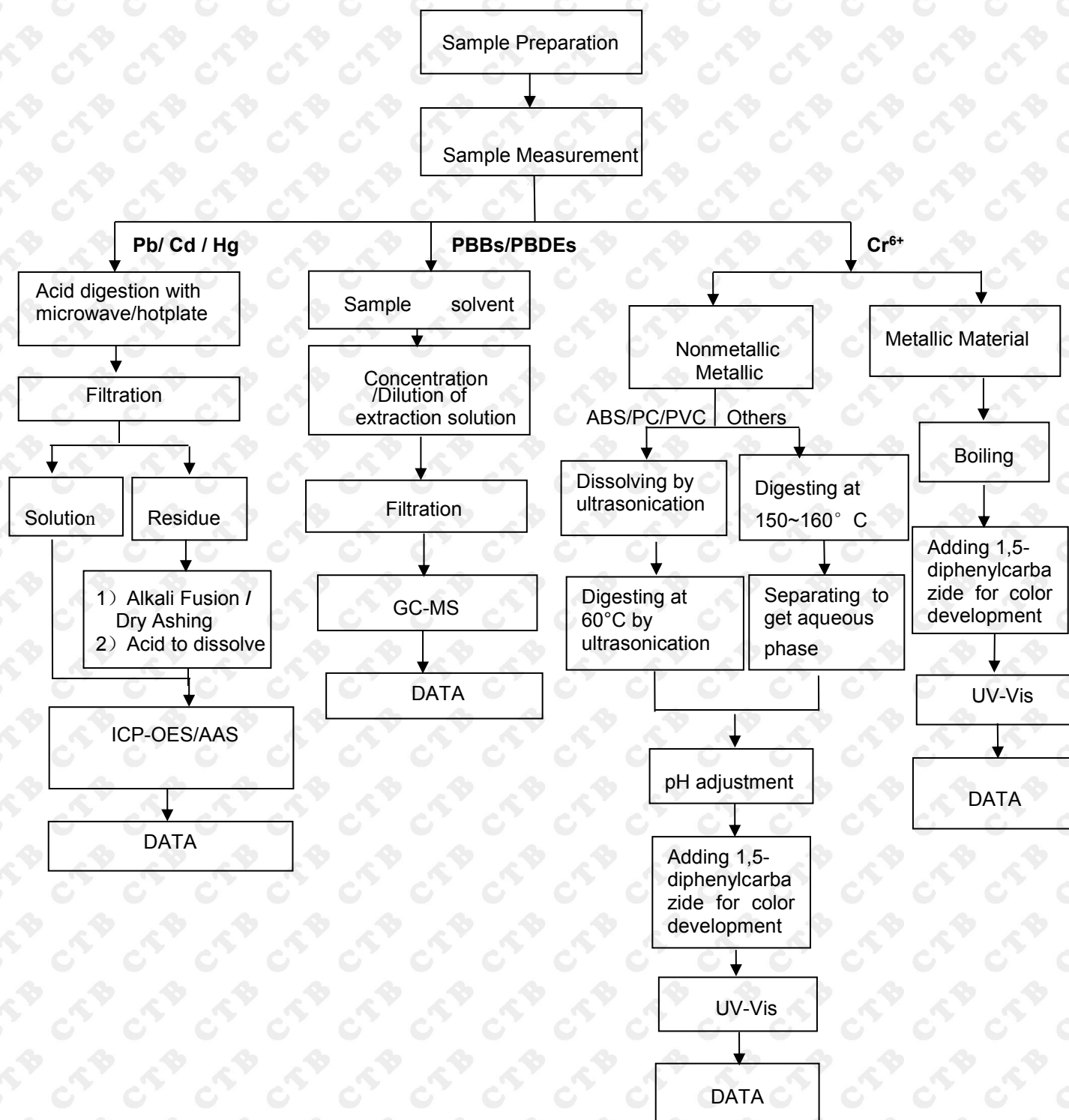
Note:

1. When perform screening tests, it is the result on total Br while test item on restricted substances is PBBs/PBDEs, it is the result on total Cr while test item on restricted substances is  $\text{Cr}^{6+}$ .
2. Pb, Cd, Hg, Cr and Br results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for  $\text{Cr}^{6+}$ ) and GC-MS (for PBBs, PBDEs) is needed to be performed, if the concentration falls into the inconclusive area according to IEC 62321-3-1:2013.
3. For the XRF screening test for RoHS elements, the reading may be different to the actual content in the sample be of non-uniformity composition.
4. # the lead content of tested component exceeded 1000ppm, but less than 40000ppm, it can comply with the RoHS directive, as it is exempted to contain lead with up to 40000ppm according to item 6(c) of annex III of 2011/65/EU, as per applicant's declaration.

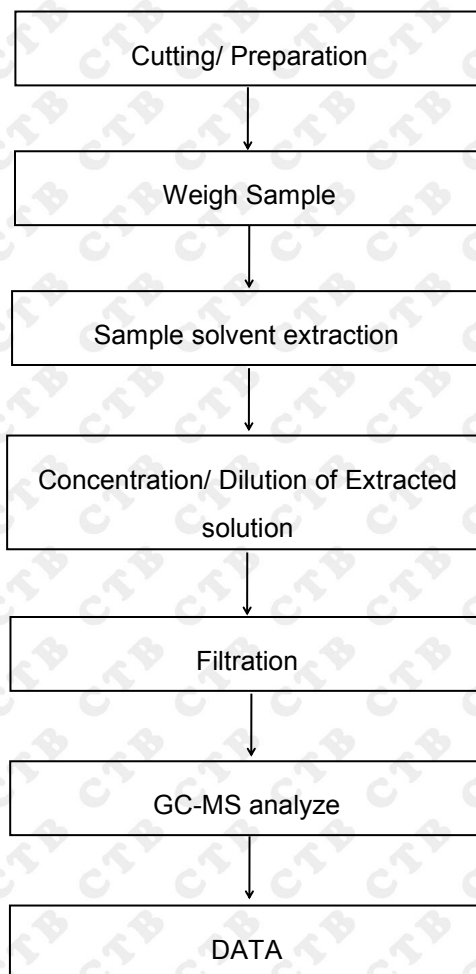


## Test flow chart

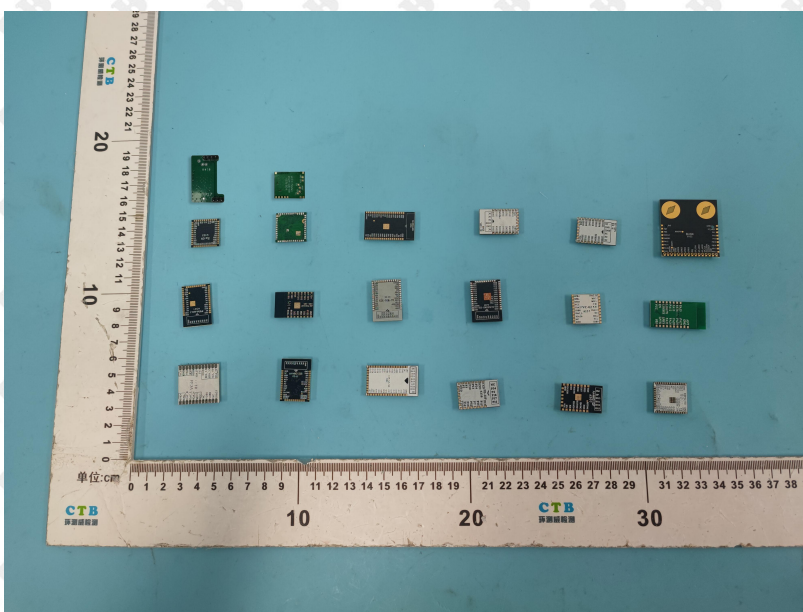
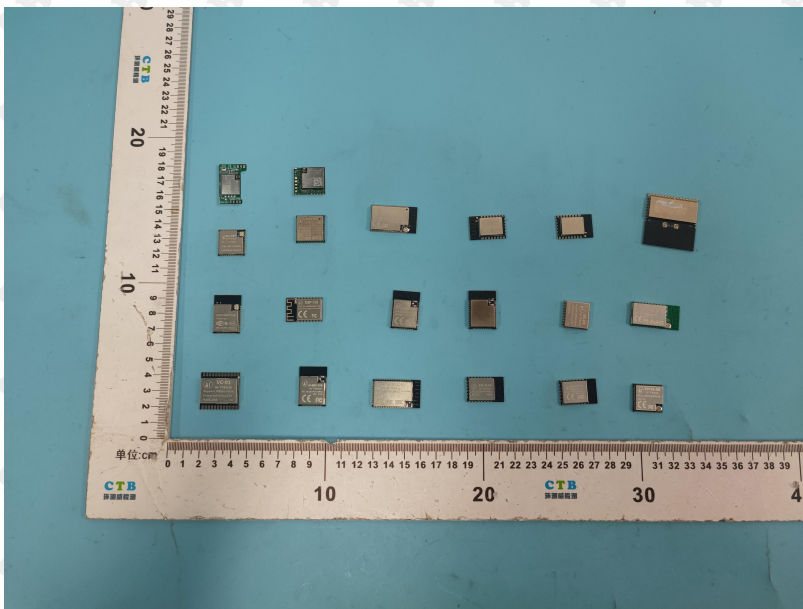
### 1. Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs



## 2. Phthalate test flow chart



## Photo documentation

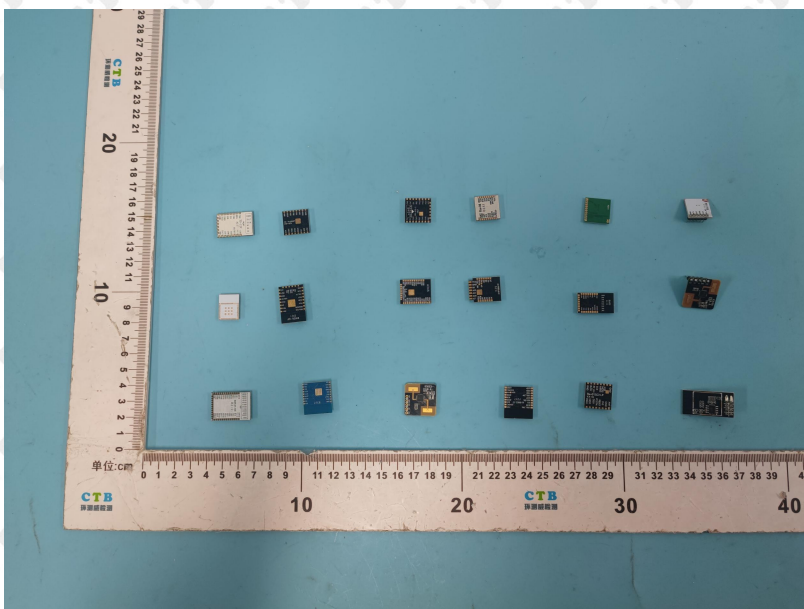
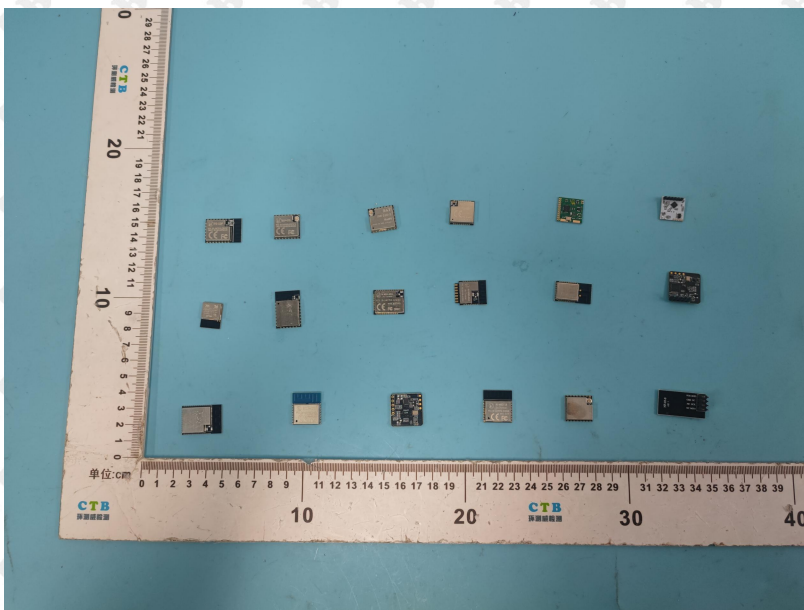




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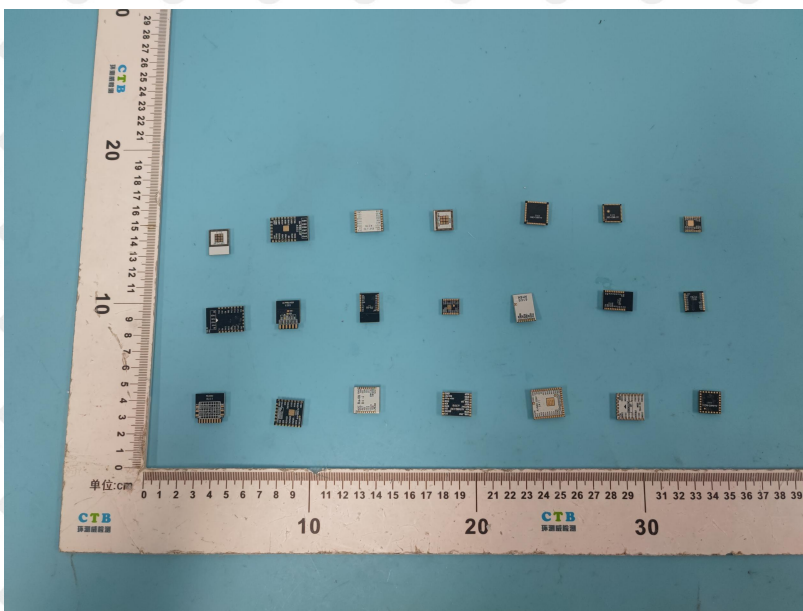
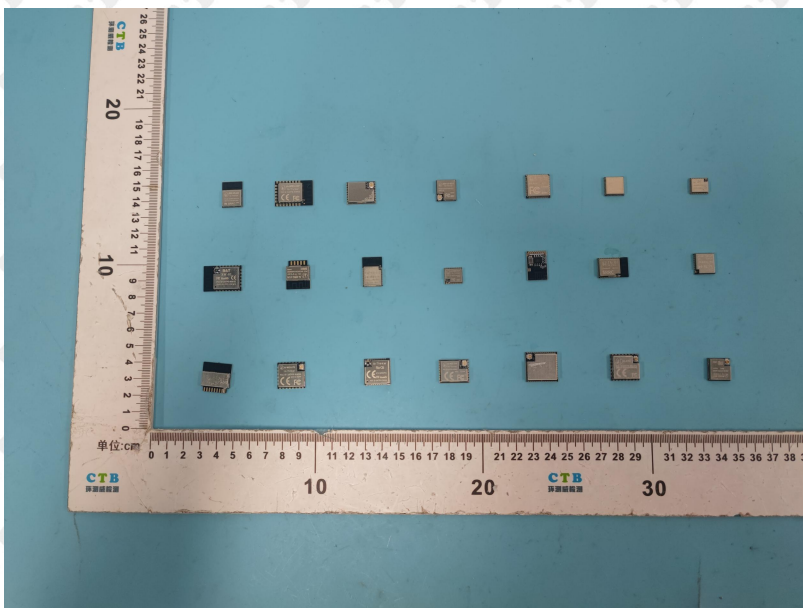
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\*\*\* End of Report \*\*\*

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client. "★" indicates the testing items were fulfilled by subcontracted lab. "☒" indicates the items are not in CNAS accreditation scope.

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