TEST REPORT

Applicant : Shenzhen Reachfar Technology Co.,Ltd.

Applicant Address : 5F, Building A, No. 86 Industrial road, Longhua, 518109, Shenzhen, China

The following sample was submitted by the client as:

Manufacturer	:	Shenzhen Reachfar Technology Co.,Ltd.
Manufacturer Address	:	5F, Building A, No. 86 Industrial road, Longhua, 518109, Shenzhen, China
Sample Description	:	4G Tracker
Model No.	:	V43, V44, V45, V46, V47, V48, V34, V30
Brand Name	:	REACHFAR
Sample Receiving Date	:	May 08, 2019 & May 21, 2019
Test Period	:	May 08, 2019 to May 10, 2019

Test Requested:

As requested by the applicant, test(s) was/were performed as below:

Test Summary		Conclusion
1	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

Test Results: Please refer to following page(s).

Tested by: Daniel Hu Reviewed by: Eric lu Approved by: Jandyso

Declaration：

(1) The report shall not be reproduced partly without the written approval of the laboratory, except in full produced.
(2) All the results shown in the report apply to the tested sample,any erasion on the report is invalid
(3) All tested sample will be kept for one month,if there is any doubt about the test result, please inform within this period

RoHS hazardous substances test

Test method:

IEC 62321-3-1:2013, XRF screening

IEC 62321-4-2013 for Hg, analyzed by ICP-OES

IEC 62321-5-2013 for Cd and Pb, analyzed by ICP-OES

IEC 62321-7-2:2017 method 7.1 and/or IEC 62321-7-1:2015 for Cr^{6+}, analyzed by UV-VIS

IEC 62321-6-2015 for PBBs and PBDEs, analyzed by GC-MS

IEC 62321-8:2017 for phthalates, analyzed by GC-MS

1. XRF results:

No.	Sample Description	Results				
		Pb	Cd	Hg	Cr	Br
1	Silvery metal magnet	BL	BL	BL	BL	NA
2	Coppery metal base（PIN）	IN	BL	BL	BL	NA
3	Silvery metal spring（PIN）	BL	BL	BL	BL	NA
4	Silvery cladding plastic shell	BL	BL	BL	BL	BL
5	Silvery label w/black printing	BL	BL	BL	BL	BL
6	Coppery metal screw nut	IN	BL	BL	BL	NA
7	Dark plastic screen	BL	BL	BL	BL	BL
8	Black plastic	BL	BL	BL	BL	BL
9	Gray plastic	BL	BL	BL	BL	BL
10	Yellow adhesive tape	BL	BL	BL	BL	BL
11	Silvery fabric w/adhesive	BL	BL	BL	BL	BL
12	Golden FPC	BL	BL	BL	BL	BL
13	Silvery metal plate	BL	BL	BL	IN	NA
14	Silvery metal screw	BL	BL	BL	BL	NA
15	Silvery metal cover	BL	BL	BL	BL	NA
16	Brown ceramics body	BL	BL	BL	BL	BL
17	Silvery metal core	BL	BL	BL	BL	NA
18	Green PCB body	BL	BL	BL	BL	IN
19	Solder	BL	BL	BL	BL	NA
20	Black plastic wire jacket	BL	BL	BL	BL	BL
21	Silvery metal core	BL	BL	BL	BL	NA
22	Coppery metal dot	BL	BL	BL	BL	NA
23	Red plastic wire jacket 1	BL	BL	BL	BL	BL
24	Black plastic wire jacket 1	BL	BL	BL	BL	BL
25	Silvery metal core	BL	BL	BL	BL	NA

No.	Sample Description	Results				
		Pb	Cd	Hg	Cr	Br
26	Black plastic shell（buzzer）	BL	BL	BL	BL	BL
27	Silvery metal round cover（buzzer）	BL	BL	BL	BL	NA
28	Silvery metal axle（buzzer）	BL	BL	BL	BL	NA
29	Coppery metal coil（buzzer）	BL	BL	BL	BL	NA
30	Silvery metal base（buzzer）	BL	BL	BL	BL	NA
31	Gray magnet ring（buzzer）	BL	BL	BL	BL	BL
32	Red plastic wire jacket 2	BL	BL	BL	BL	BL
33	Black plastic wire jacket 2	BL	BL	BL	BL	BL
34	Silvery metal core	BL	BL	BL	BL	NA
35	Black rubber cap（microphone）	BL	BL	BL	BL	BL
36	Golden metal shell（microphone）	BL	BL	BL	BL	NA
37	White plastic ring（microphone）	BL	BL	BL	BL	BL
38	Silvery metal ring（microphone）	BL	BL	BL	BL	NA
39	Red PCB body（microphone）	BL	BL	BL	BL	IN
40	Solder（microphone）	BL	BL	BL	BL	NA
41	Silvery metal pole	BL	BL	BL	BL	NA
42	Black IC SMD	BL	BL	BL	BL	BL
43	Green PCB body	BL	BL	BL	BL	BL
44	Solder	BL	BL	BL	BL	NA
45	Black plastic wire jacket 3	BL	BL	BL	BL	BL
46	White plastic wire jacket 3	BL	BL	BL	BL	BL
47	Red plastic wire jacket 3	BL	BL	BL	BL	BL
48	Silvery metal core	BL	BL	BL	BL	NA
49	Black IC SMD 1	BL	BL	BL	BL	BL
50	Black IC SMD 2	BL	BL	BL	BL	BL
51	Black IC SMD 3	BL	BL	BL	BL	BL
52	Black IC SMD 4	BL	BL	BL	BL	BL
53	Black IC SMD 5	BL	BL	BL	BL	BL
54	Black body	BL	BL	BL	BL	BL
55	Silvery metal body	BL	BL	BL	BL	NA
56	Black IC SMD 6	BL	BL	BL	BL	BL
57	Black IC SMD 7	BL	BL	BL	BL	BL
58	Gray solid material	BL	BL	BL	BL	BL

No.	Sample Description	Results				
		Pb	Cd	Hg	Cr	Br
59	Black plastic w/golden metal PIN（socket）	BL	BL	BL	BL	BL
60	Silvery metal cover（SD）	BL	BL	BL	IN	NA
61	Black plastic（SD）	BL	BL	BL	BL	BL
62	Golden metal PIN（SD）	BL	BL	BL	BL	NA
63	Golden metal spring（SD）	BL	BL	BL	IN	NA
64	Silvery metal rod（SD）	BL	BL	BL	BL	NA
65	Golden metal tube	BL	BL	BL	BL	NA
66	Blue PCB body	BL	BL	BL	BL	IN
67	Solder	BL	BL	BL	BL	NA

2. Chemical confirm for XRF results:

Test Item(s)	Result (mg/kg)					Limit (mg/kg)
	2	6	13	60	63	
Lead(Pb)	12100#	21700#	--	--	--	40000
Hexavalent Chromium (Cr^{6+})	--	--	Negative	Negative	Negative	--
Comment	PASS	PASS	PASS	PASS	PASS	--

Test Item(s)	Result (mg/kg)			Limit (mg/kg)
	18	38	66	
Mono-PBB	ND	ND	ND	--
Di-PBB	ND	ND	ND	--
Tri-PBB	ND	ND	ND	--
Tetra-PBB	ND	ND	ND	--
Penta-PBB	ND	ND	ND	--
Hexa-PBB	ND	ND	ND	--
Hepta-PBB	ND	ND	ND	--
Octa-PBB	ND	ND	ND	--
Nona-PBB	ND	ND	ND	--
Deca-PBB	ND	ND	ND	--
Sum of PBBs	ND	ND	ND	1000
Mono-PBDE	ND	ND	ND	--
Di- PBDE	ND	ND	ND	--
Tri- PBDE	ND	ND	ND	--
Tetra- PBDE	ND	ND	ND	--

Penta- PBDE	ND	ND	ND	--
Hexa- PBDE	ND	ND	ND	--
Hepta- PBDE	ND	ND	ND	--
Octa- PBDE	ND	ND	ND	--
Nona- PBDE	ND	ND	ND	--
Deca- PBDE	ND	ND	ND	--
Sum of PBDEs	ND	ND	ND	1000
Comment	PASS	PASS	PASS	--

3. Phthalates results:

Test Item(s)	Result (mg/kg)						Limit (mg/kg)
	4	5	7	8	9	10	
Bis (2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	ND	1000
Benzyl butyl phthalate (BBP)	ND	ND	ND	ND	ND	ND	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	ND	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	ND	ND	1000
Comment	PASS	PASS	PASS	PASS	PASS	PASS	--

Test Item(s)	Result (mg/kg)						Limit (mg/kg)
	11	12	16	18	20	23	
Bis (2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	ND	1000
Benzyl butyl phthalate (BBP)	ND	ND	ND	ND	ND	ND	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	ND	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	ND	ND	1000
Comment	PASS	PASS	PASS	PASS	PASS	PASS	--

Test Item(s)	Result (mg/kg)						Limit (mg/kg)
	24	26	31	32	33	35	
Bis (2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	ND	1000
Benzyl butyl phthalate (BBP)	ND	ND	ND	ND	ND	ND	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	ND	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	ND	ND	1000
Comment	PASS	PASS	PASS	PASS	PASS	PASS	--

Test Item(s)	Result (mg/kg)						Limit (mg/kg)
	37	39	42	43	45	46	
Bis (2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	ND	1000

Benzyl butyl phthalate (BBP)	ND	ND	ND	ND	ND	ND	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	ND	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	ND	ND	1000
Comment	PASS	PASS	PASS	PASS	PASS	PASS	--

Test Item(s)	Result (mg/kg)						Limit (mg/kg)
	47	49	50	51	52	53	
Bis (2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	ND	1000
Benzyl butyl phthalate (BBP)	ND	ND	ND	ND	ND	ND	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	ND	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	ND	ND	1000
Comment	PASS	PASS	PASS	PASS	PASS	PASS	--

Test Item(s)	Result (mg/kg)						Limit (mg/kg)
	54	56	57	58	59	61	
Bis (2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	ND	1000
Benzyl butyl phthalate (BBP)	ND	ND	ND	ND	ND	ND	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	ND	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	ND	ND	1000
Comment	PASS	PASS	PASS	PASS	PASS	PASS	--

Test Item(s)	Result (mg/kg)	Limit (mg/kg)
	66	
Bis (2-ethylhexyl) phthalate (DEHP)	ND	1000
Benzyl butyl phthalate (BBP)	ND	1000
Dibutyl phthalate (DBP)	ND	1000
Diisobutyl phthalate(DIBP)	ND	1000
Comment	PASS	--

Remark:

1. BL = below limit
2. OL = over limit
3. IN = inconclusive, chemical confirm test is recommended
4. NA = not applicable
5. mg/kg = milligram per kilogram = ppm
6. Method Detection Limit (MDL) :10mg/kg for Pb, Cd, Hg and Cr^{6+}; 10mg/kg for PBB and PBDE 50mg/kg for each of phthalate
7. ND = not detected

8. Negative = The Cr^{6+} concentration is below the limit of quantification. The coating is considered a non-Cr^{6+} based coating.
9. Positive = The Cr^{6+} concentration is above the limit of quantification and the statistical margin of error, The sample coating is considered to contain Cr^{6+}.
10. The limit for composite test should be divided by the mixed number.

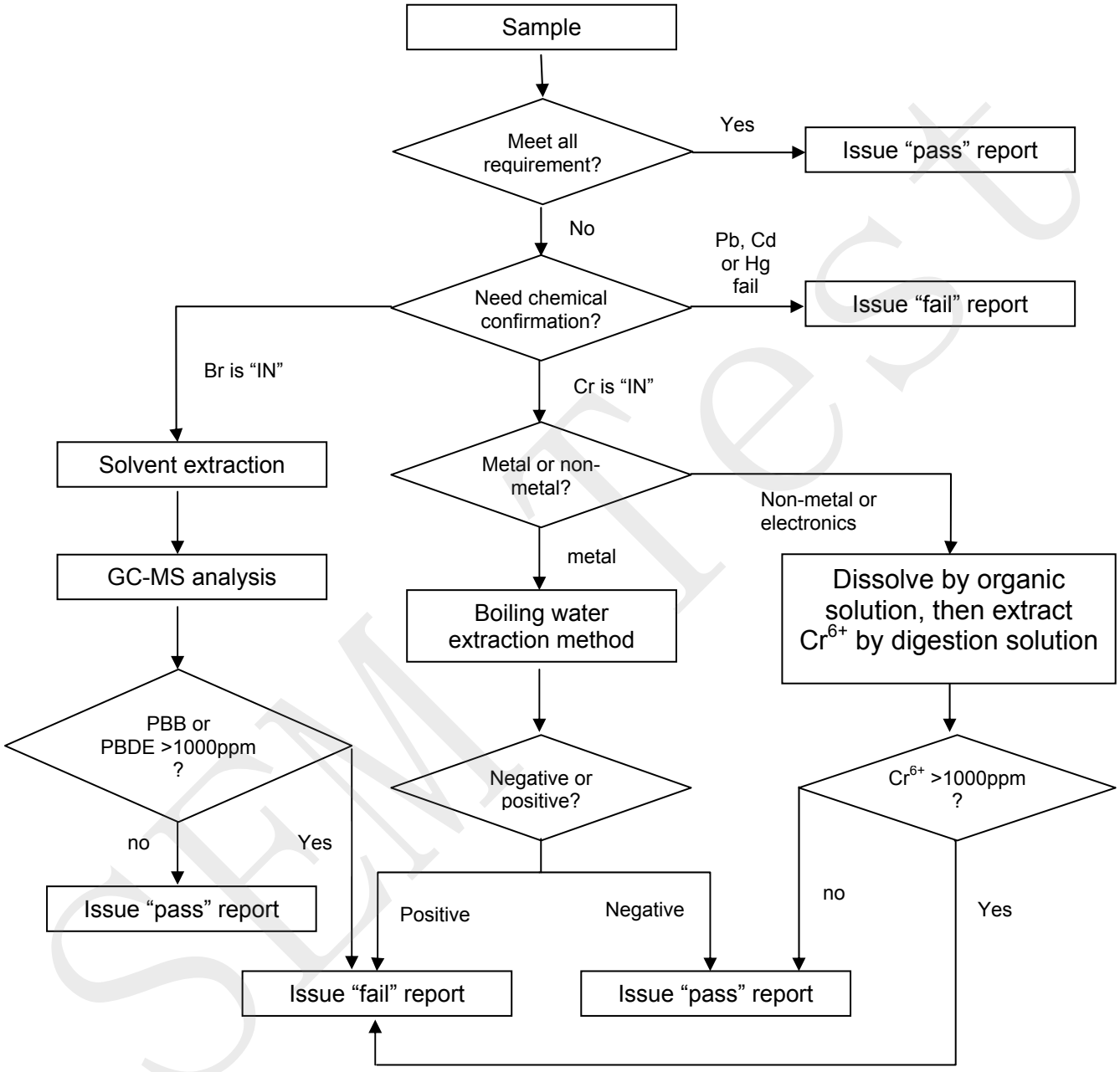
Note:

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 Cr^{6+}.
2. Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr^{6+}) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration falls into the inconclusive area according to IEC 62321-3-1:2013 (unit: mg/kg)

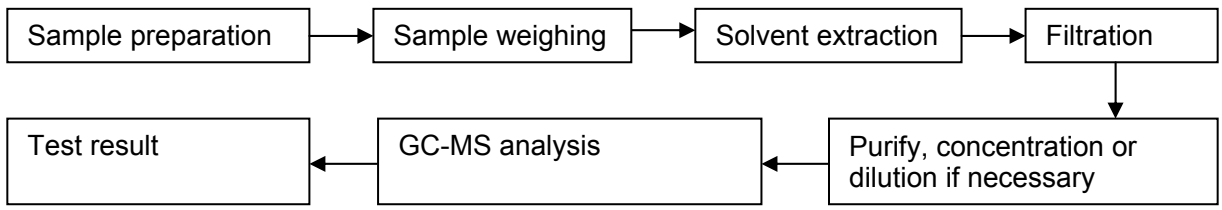
Element	Polymer	Metal	Composite Materials
Cd	BL≤(70-3σ)<X<(130+3σ) ≤OL	BL≤(70-3σ)<X<(130+3σ) ≤OL	LOD<X<(150+3σ) ≤OL
Pb	BL≤(700-3σ) <X<(1300+3σ) ≤OL	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(500-3σ) <X<(1500+3σ) ≤OL
Hg	BL≤(700-3σ) <X<(1300+3σ) ≤OL	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(500-3σ) <X<(1500+3σ) ≤OL
Br	BL≤(300-3σ)<X	---	BL≤(250-3σ)<X
Cr	BL≤(700-3σ)<X	BL≤(700-3σ)<X	BL≤(500-3σ)<X

3. 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.
5. Results shown of component 19 and 67 were based on raw solder wire resubmitted by applicant.

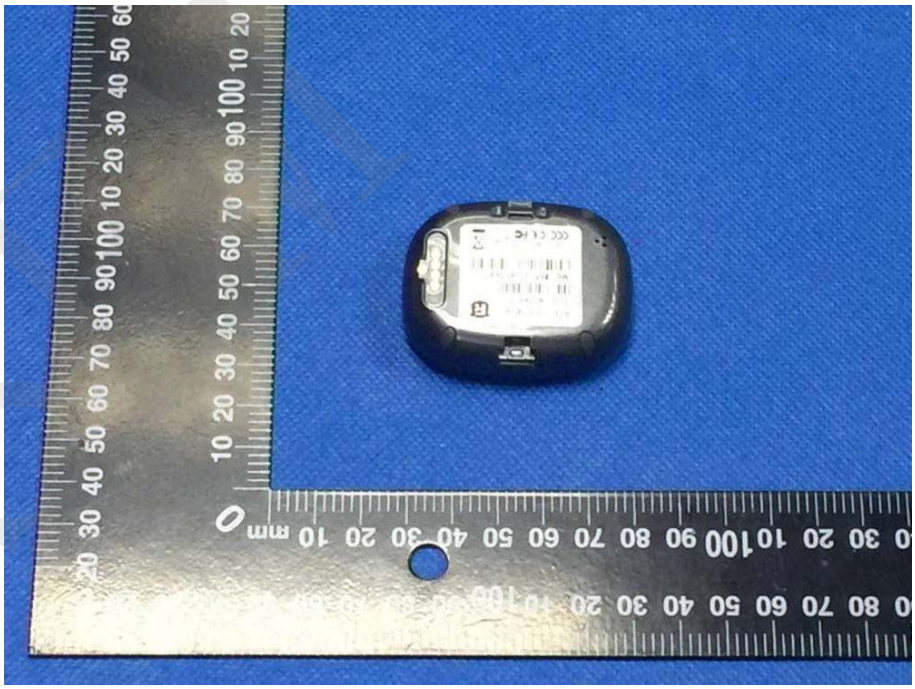
Test flow for Pb, Cd, Hg, Cr^{6+}, PBBs & PBDEs content:

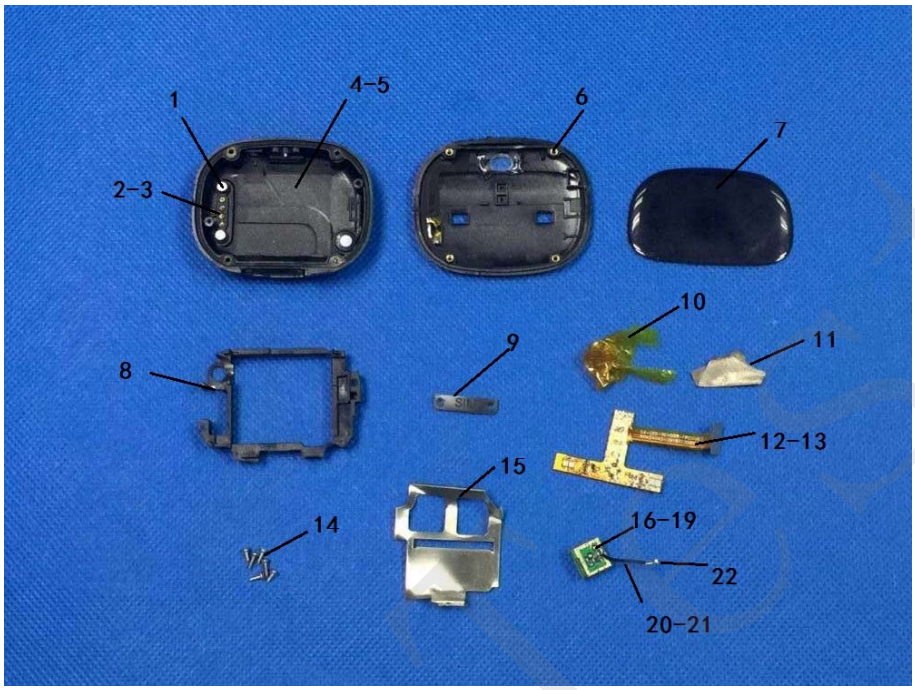


Test flow for phthalates Content:



Tested sample photo:

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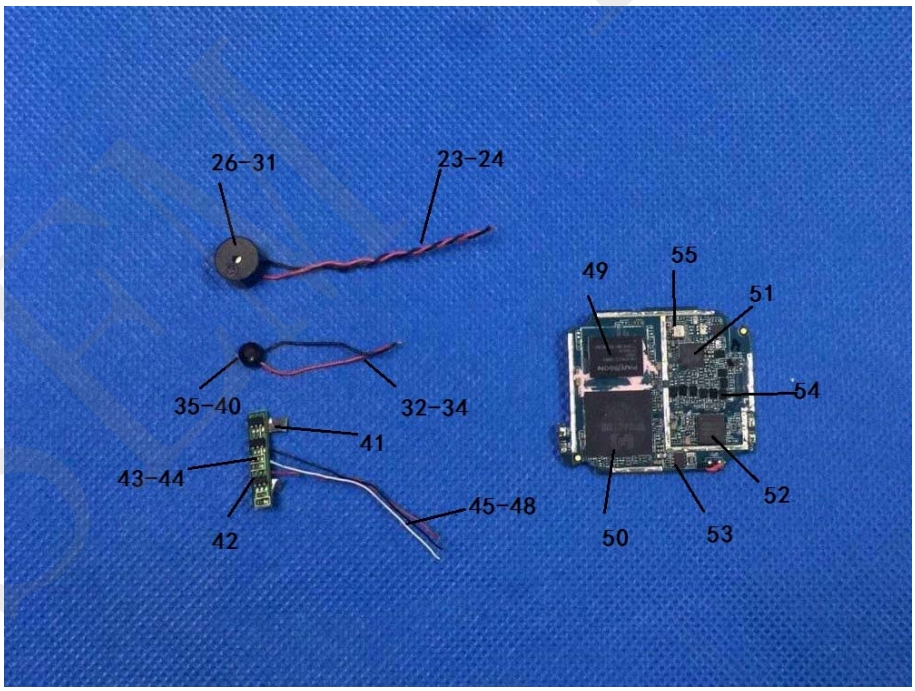
20-21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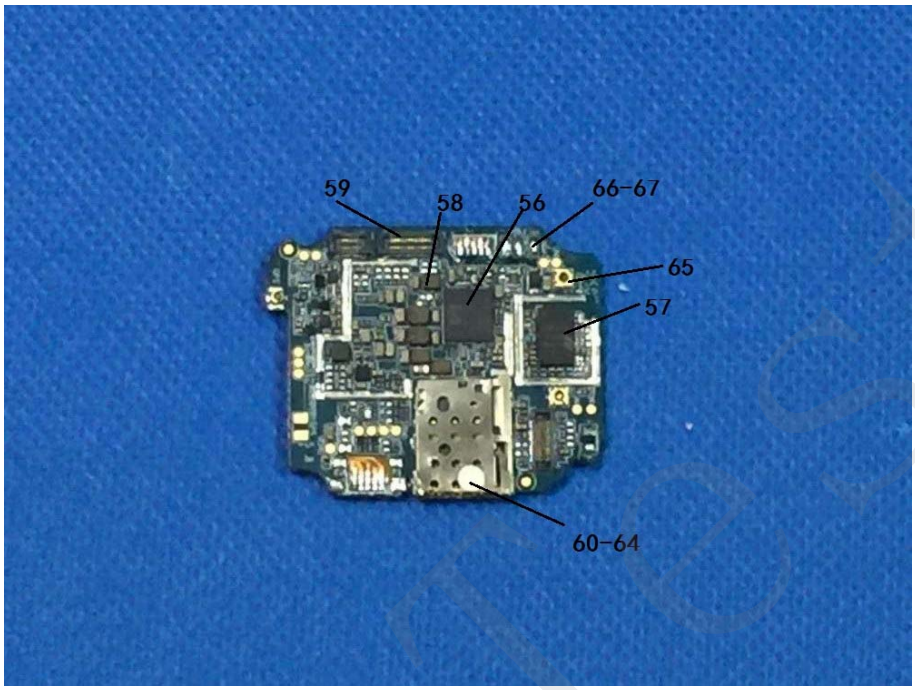

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