Test Report

Report No.: AGC01722181201-001S1 Date: Jan.15, 2019 Page 1 of 12

Applicant:	GLOBAL MEI CHUANG CO., LIMITED
Address:	Chayuan Building, Chayuan Village, Qiuchang, Huiyang, Huizhou, Guangdong
Test site:	6/F.,Building 2,No. 1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong, China

Report on the submitted sample(s) said to be:

Sample Name:	walkie talkie
Sample Model:	T3
Manufacturer:	Global Mei Chuang Co., Ltd.
Address:	Chayuan Building, Chayuan Village, Qiuchang, Huiyang, Huizhou, Guangdong
Sample Received Date:	Dec.18, 2018
Testing Period:	Dec.18, 2018 to Dec.21, 2018

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

Approved by:

Liulinwen, Lewis

Technical Director

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Test Report

Test Requested: **Conclusion**

As specified by client, to determine the Pb, Cd, Hg, Cr^{6+}, PBBs, PBDEs content in the submitted sample in accordance with EU RoHS Directive 2011/65/EU(RoHS) and its amendment directives on XRF and Chemical Method. **Pass**

Test Methods:

A: Screening by X-ray Fluorescence Spectrometry (XRF) :With reference to IEC 62321-3-1:2013 Ed 1.0 Screening – Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry

B: Chemical test:

Test Item	**Test Method**	**Measuring Instrument**	**MDL**
Cadmium (Cd)	IEC 62321-5:2013 Ed 1.0	ICP-OES	2 mg/kg
Lead (Pb)	IEC 62321-5:2013 Ed 1.0	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321-4:2013+A1:2017 Ed 1.1	ICP-OES	2 mg/kg
Non-metal Hexavalent Chromium (Cr^{6+})	IEC 62321-7-2:2017 Ed 1.0	UV-Vis	1 mg/kg
Metal Hexavalent Chromium (Cr^{6+})	IEC 62321-7-1:2015 Ed 1.0	UV-Vis	/
PBBs/PBDEs	IEC 62321-6:2015 Ed 1.0	GC-MS	5 mg/kg

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Test Report

Test Results:

A、EU RoHS Directive 2011/65/EU and its amendment directives on XRF

Seq. No.	Tested Part(s)	Results(mg/kg)				
		Cd	Pb	Hg	Cr	Br
1	Blue plastic face shell(Shell)	BL	BL	BL	BL	BL
2	Black plastic shell(Shell)	BL	BL	BL	BL	BL
3	Black rubber button(Shell)	BL	BL	BL	BL	BL
4	Ivory rubber button(Shell)	BL	BL	BL	BL	BL
5	Black dust proof net(Shell)	BL	BL	BL	BL	BL
6	Metal cell sheet(Shell)	BL	BL	BL	X*	-
7	Black screw(Shell)	BL	BL	BL	BL	-
8	Black foam(Horn)	BL	BL	BL	BL	BL
9	Black dust proof net(Horn)	BL	BL	BL	BL	BL
10	Black wire jacket(Horn)	BL	BL	BL	BL	BL
11	Tin solder(Horn)	BL	BL	BL	BL	-
12	PCB board(Horn)	BL	BL	BL	BL	X*
13	Black glue(Horn)	BL	BL	BL	BL	BL
14	Red wire jacket(Horn)	BL	BL	BL	BL	BL
15	Wire core(Horn)	BL	BL	BL	BL	-
16	Silver metal shell(Horn)	BL	BL	BL	BL	-
17	Silver magnet(Horn)	BL	BL	BL	BL	-
18	Black vibrating film(Horn)	BL	BL	BL	BL	BL
19	Enameled coil(Horn)	BL	BL	BL	BL	-
20	Black press ring(Horn)	BL	BL	BL	BL	BL
21	Metal spring(A main board)	BL	BL	BL	BL	-
22	Coil(A main board)	BL	BL	BL	BL	BL
23	Chip diode(A main board)	BL	BL	BL	BL	BL
24	Chip capacitor(A main board)	BL	BL	BL	BL	BL

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Seq. No.	Tested Part(s)	Results(mg/kg)				
		Cd	Pb	Hg	Cr	Br
25	Chip resistor(A main board)	BL	BL	BL	BL	BL
26	Chip triode(A main board)	BL	BL	BL	BL	BL
27	IC body(A main board)	BL	BL	BL	BL	BL
28	Tin plated pin(A main board)	BL	BL	BL	BL	-
29	Glass diode(A main board)	BL	OL*	BL	BL	BL
30	Chip crystal oscillator(A main board)	BL	BL	BL	BL	BL
31	Chip LED(A main board)	BL	BL	BL	BL	BL
32	Tin solder(A main board)	BL	BL	BL	BL	-
33	PCB board(A main board)	BL	BL	BL	BL	X*
34	Aluminum shell(Mi tou)	BL	BL	BL	BL	-
35	Black dust proof net(Mi tou)	BL	BL	BL	BL	BL
36	White plastic ring(Mi tou)	BL	BL	BL	BL	BL
37	Vibrating diaphragm(Mi tou)	BL	BL	BL	BL	BL
38	Metal ring(Mi tou)	BL	BL	BL	BL	-
39	Triode(Mi tou)	BL	BL	BL	BL	BL
40	PCB board(Mi tou)	BL	BL	BL	BL	BL
Shell difference						
41	Pink plastic shell(Shell)	BL	BL	BL	BL	BL
42	Camouflage blue plastic case(Shell)	BL	BL	BL	BL	BL
43	Yellow plastic shell(Shell)	BL	BL	BL	BL	BL
44	Camouflage green plastic shell(Shell)	BL	BL	BL	BL	BL
45	Red plastic shell(Shell)	BL	BL	BL	BL	BL
46	Orange plastic shell(Shell)	BL	BL	BL	BL	BL
47	Camouflage grey plastic shell(Shell)	BL	BL	BL	BL	BL

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	BL≤70-3σ<X <130+3σ≤OL	BL≤70-3σ<X <130+3σ≤OL	BL≤50-3σ<X <150+3σ≤OL
Pb	mg/kg	BL≤700-3σ<X <1300+3σ≤OL	BL≤700-3σ<X <1300+3σ≤OL	BL≤500-3σ<X <1500+3σ≤OL
Hg	mg/kg	BL≤700-3σ<X <1300+3σ≤OL	BL≤700-3σ<X <1300+3σ≤OL	BL≤500-3σ<X <1500+3σ≤OL
Cr	mg/kg	BL≤700-3σ<X	BL≤700-3σ<X	BL≤500-3σ<X
Br	mg/kg	BL≤300-3σ<X	-	BL≤250-3σ<X

Note: BL= Below Limit
OL= Over limited
X= Inconclusive
"-"= Not regulated
*= Scanning by XRF and detected by chemical method. The test results of chemical method please refer to next pages.

Attestation of Global Compliance Std. & Tech.
Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Remark:

i Results were obtained by XRF for primary scanning, and further chemical testing by ICP (for Cd, Pb, Hg), UV-Vis (for Cr(Ⅵ)) and GC-MS (for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the above warning value according to IEC 62321-3-1:2013 Ed 1.0.

ii The XRF scanning test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

iii The maximum permissible limit is quoted from RoHS directive 2011/65/EU:

RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium (Cd)	100
Lead (Pb)	1000
Mercury (Hg)	1000
Hexavalent Chromium (Cr(Ⅵ))	1000
Polybrominated biphenyls (PBBs)	1000
Polybrominated diphenylethers (PBDEs)	1000

Disclaimers:

This XRF Scanning report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF scanning report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

Attestation of Global Compliance Std. & Tech.

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118

Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

B、The Test Results of Chemical Method:

1) The Test Results of Pb

Test Item(s)	Unit	Result(s)
		29
Lead(Pb)	mg/kg	14138*

Note: N.D. = Not Detected or less than MDL
mg/kg = parts per million
MDL = Method Detection Limit
* =As claimed by the material declaration submitted by the client, the materials of the sample No.29 is glass, according to the ROHS 2011/65 / EU, lead in glass of electronic components is exempted.

2)The Test Results of metal Cr^{6+}

Test Item(s)	MDL	Result(s)	Limit
		6	
Hexavalent Chromium (Cr^{6+})	See note	Negative	#

Note:
- Negative = Absence of Cr(Ⅵ) on the tested areas
- MDL = Method Detection Limit

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

- Boiling-water-extraction:

Number	Colorimetric result (Cr(VI) concentration)	Qualitative result
1	The sample solution is<the 0,10 µg/cm2 equivalent comparison standard solution	The sample is negative for Cr(VI) − The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
2	The sample solution is ≥ the 0,10 µg/cm2 and ≤ the0,13 µg/cm2 equivalent comparison standard solutions	The result is considered to be inconclusive – Unavoidable coating variations may influence the determination.
3	The sample solution is > the 0,13 µg/cm2 equivalent comparison standard solution	The sample is positive for Cr(VI) − The Cr(VI) concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

- # =Negative indicates the absence of Cr(Ⅵ) on the tested areas concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.

Uncertainty indicates the absence of Cr(Ⅵ) on the tested areas unavoidable coating variations may influence the determination.

Positive indicates the presence of Cr(Ⅵ) on the tested areas concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

Storage conditions and production date of the tested sample are unavailable and thus result of Cr(VI) represent status of the sample at the time of testing.

Attestation of Global Compliance Std. & Tech.

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118

Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

3) The Test Results of PBBs & PBDEs

Unit: mg/kg

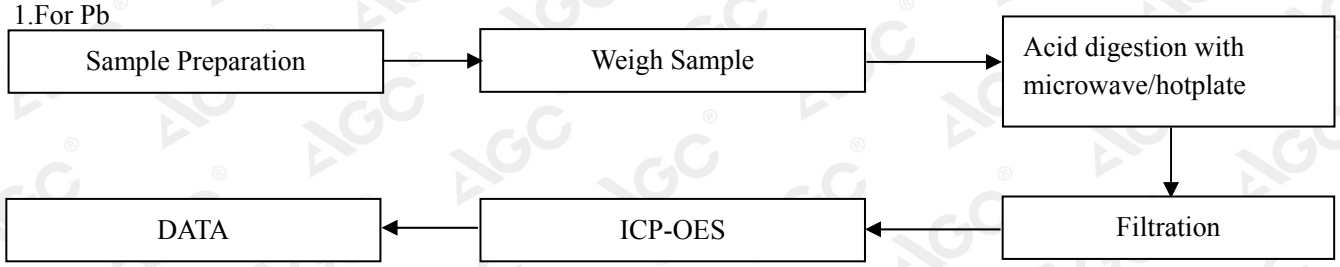
Item(s)	MDL	Result(s)		Limit
		12	33	
Polybrominated Biphenyls (PBBs)				
Monobromobiphenyl	5	N.D.	N.D.	Total PBBs Content <1000
Dibromobiphenyl	5	N.D.	N.D.	
Tribromobiphenyl	5	N.D.	N.D.	
Tetrabromobiphenyl	5	N.D.	N.D.	
Pentabromobiphenyl	5	N.D.	N.D.	
Hexabromobiphenyl	5	N.D.	N.D.	
Heptabromobiphenyl	5	N.D.	N.D.	
Octabromobiphenyl	5	N.D.	N.D.	
Nonabromodiphenyl	5	N.D.	N.D.	
Decabromodiphenyl	5	N.D.	N.D.	
Total content	/	N.D.	N.D.	
Polybrominated Diphenylethers (PBDEs)				
Monobromodiphenyl ether	5	N.D.	N.D.	Total PBDEs Content <1000
Dibromodiphenyl ether	5	N.D.	N.D.	
Tribromodiphenyl ether	5	N.D.	N.D.	
Tetrabromodiphenyl ether	5	N.D.	N.D.	
Pentabromodiphenyl ether	5	N.D.	N.D.	
Hexabromodiphenyl ether	5	N.D.	N.D.	
Heptabromodiphenyl ether	5	N.D.	N.D.	
Octabromodiphenyl ether	5	N.D.	N.D.	
Nonabromodiphenyl ether	5	N.D.	N.D.	
Decabromodiphenyl ether	5	N.D.	N.D.	
Total content	/	N.D.	N.D.	
Conclusion	/	**Pass**	**Pass**	/

Note: N.D. = Not Detected or less than MDL
mg/kg = parts per million
MDL = Method Detection Limit

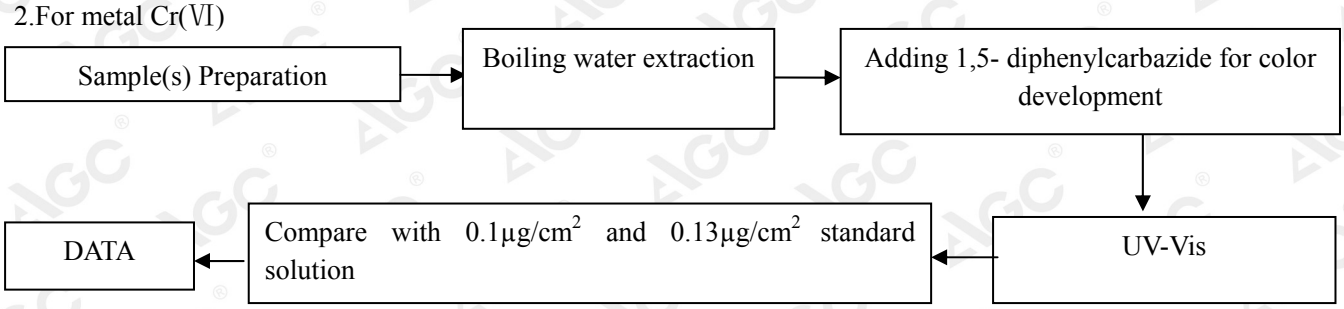
Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Test Flow Chart

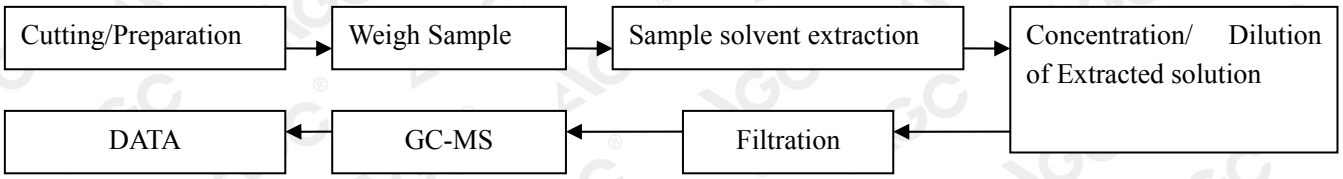
1.For Pb



2.For metal Cr(Ⅵ)



3.For PBBs & PBDEs



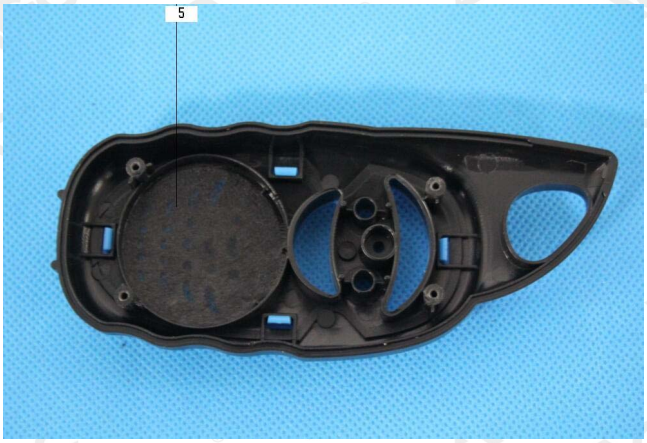
This report is to supersede the report with No.: AGC01722181201-001 dated on Dec.21.2018.

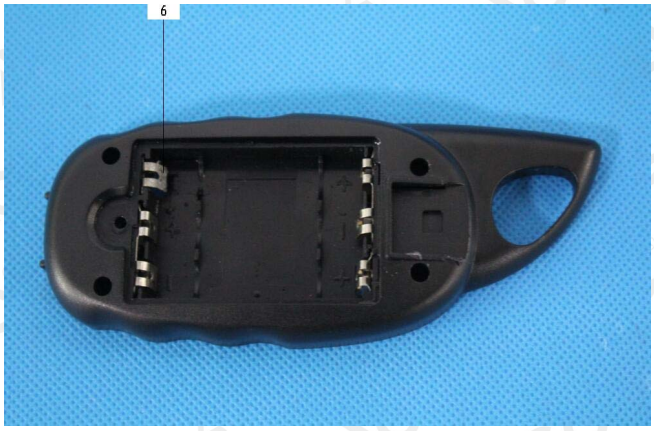
Attestation of Global Compliance Std. & Tech.

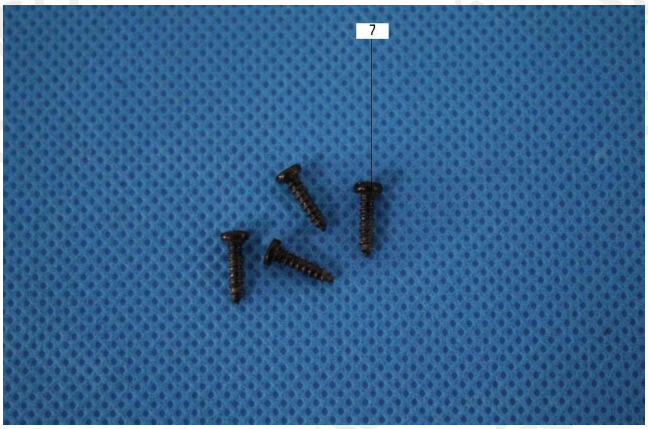
Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118

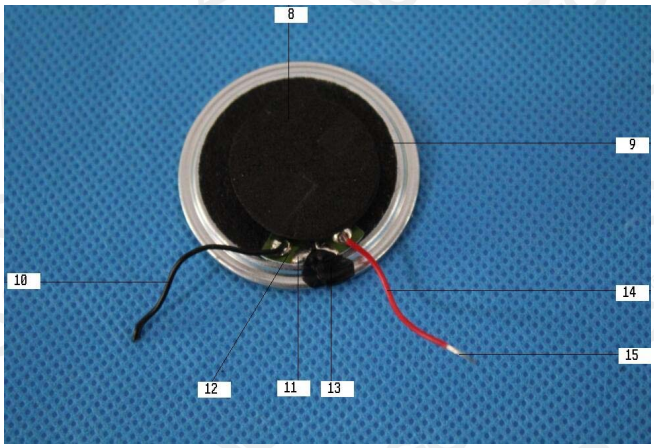
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

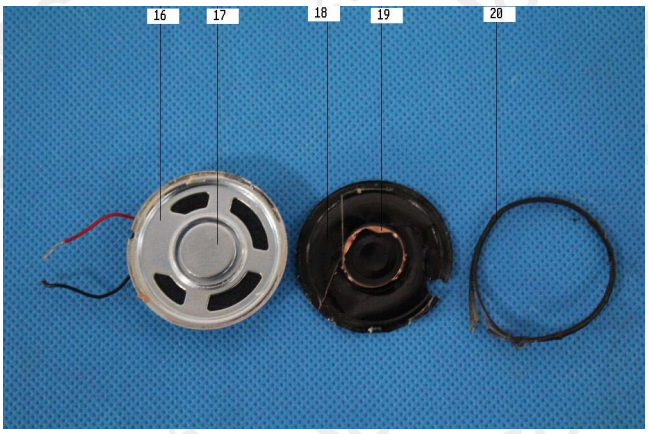
The photo of the sample





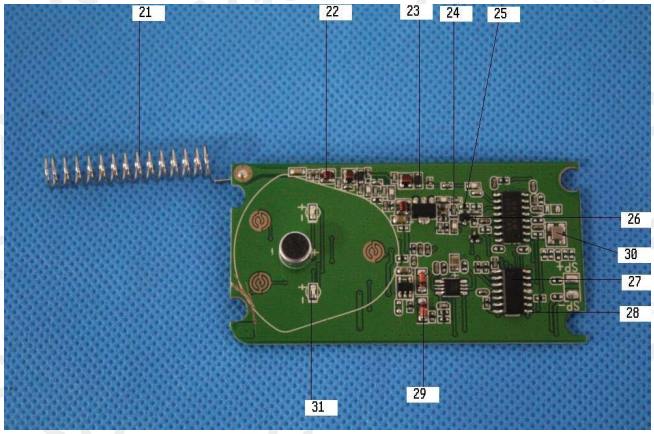


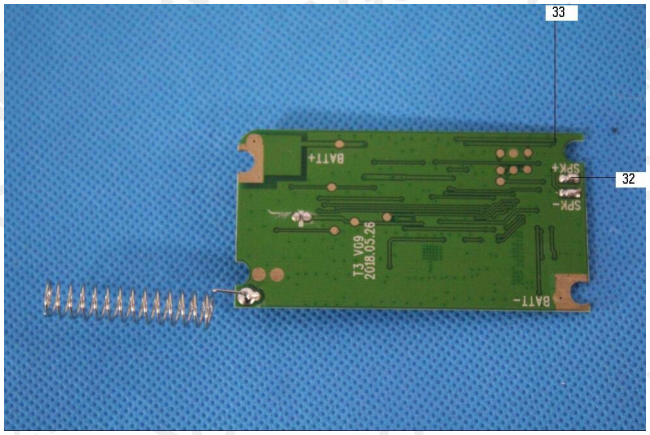


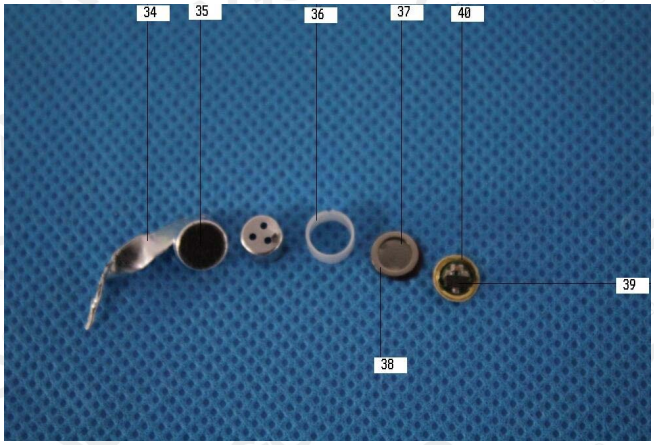


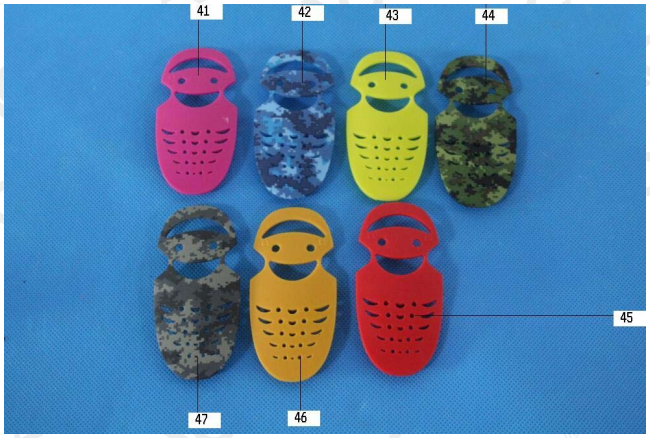
Attestation of Global Compliance Std. & Tech.

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China









AGC01722181201-001S1

AGC authenticate the photo only on original report

*** End of Report ***

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China