

Test Report No.:

**0154297141a 001**

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**Client:** Xiangshan Zhengtai Electrical Appliance Co.,Ltd.  
No.593 Wanlong Road, Chengdong Industrial Zone, Xiangshan, Ningbo,  
Zhejiang, China

**Test item(s):** Bluetooth Body Fat Scale

**Identification/Model No(s):** ZT5104  
Please refer to page 2

**Sample Receiving date:** 2017-12-12

**Testing Period:** 2017-12-12 – 2017-12-20

**Delivery condition:** **Apparent good, Samples tested as received**

**Test location:** TÜV Rheinland (Shanghai) Co. Ltd.  
12F, TÜV Rheinland Building  
No. 177 Lane 777, Guangzhong Road West  
Shanghai 200072, P.R.China

**Test specification:**

**Test result:**

**Overall results according to tests performed**

**1. Reference to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU**

**Pass**

**Abbreviations:** ok / P = passed  
fail / F = failed  
n.a. / N = not applicable

**For and on behalf of  
TÜV Rheinland (Shanghai) Co., Ltd.**



2017-12-21  
Date

Nicky Chen Project Manager  
Name/Position

*Test result is drawn according to the kind and extent of tests performed.  
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.*

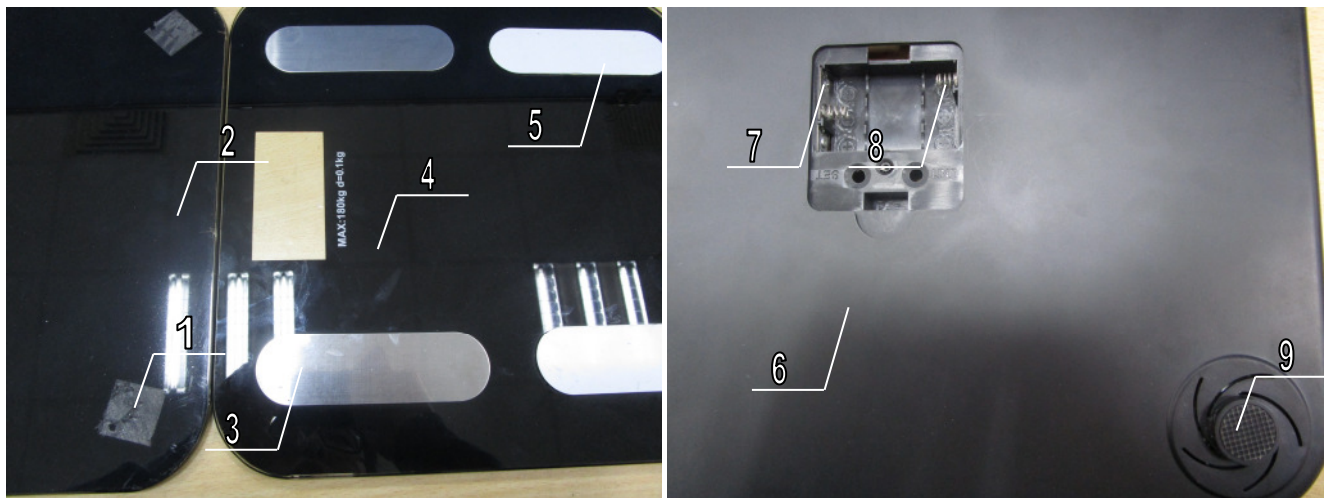
**Additional Model No(s):**

ZTE-2010A2, ZTE-2009H1, ZTE-2005B1, ZTE-2004B4, ZTE-2004B5, SYE-2004D1, SYE-2004A2, SYE-2005A11, SYE-2002A1, SYE-2002A2, SYE-2002A3, SYE-2004C1, KCE-021, KCE-022, KCE-023, KCE-025, KCE-027, KCE-028, KCE-029, KCE-030, ZT2101, ZT2102, ZT2103, ZT2104, ZT2105, ZT2106, ZT2107, ZT2108, ZT2109, ZT2110, ZT2111, ZT2112, ZT2113, ZT2114, ZT2115, ZT2116, ZT2117, ZT2118, ZT2119, ZT2120, ZT2121, ZT2122, ZT2123, ZT2124, ZT2125, ZT2126, ZT2127, ZT2128, ZT2129, ZT2130, ZT5101, ZT5102, ZT5103, ZT5104, ZT5105, ZT5106, ZT5107, ZT5108, ZT5109, ZT5110, ZT5111, ZT5112, ZT5113, ZT5114, ZT5115, ZT5116, ZT5117, ZT5118, ZT5119, ZT5120, ZT6101, ZT6102, ZT6103, ZT6104, ZT6105, ZT6106, ZT6107, ZT6108, ZT6109, ZT6110, ZT6111, ZT6112, ZT6113, ZT6114, ZT6115, ZT6116, ZT6117, ZT6118, ZT6119, ZT6120, ZT7101, ZT7102, ZT7103, ZT7104, ZT7105, ZT7106, ZT7107, ZT7108, ZT7109, ZT7110, ZT8101, ZT8102, ZT8103, ZT8104, ZT8105, ZT9101, ZT9102, ZT9103, ZT9104, ZT9105

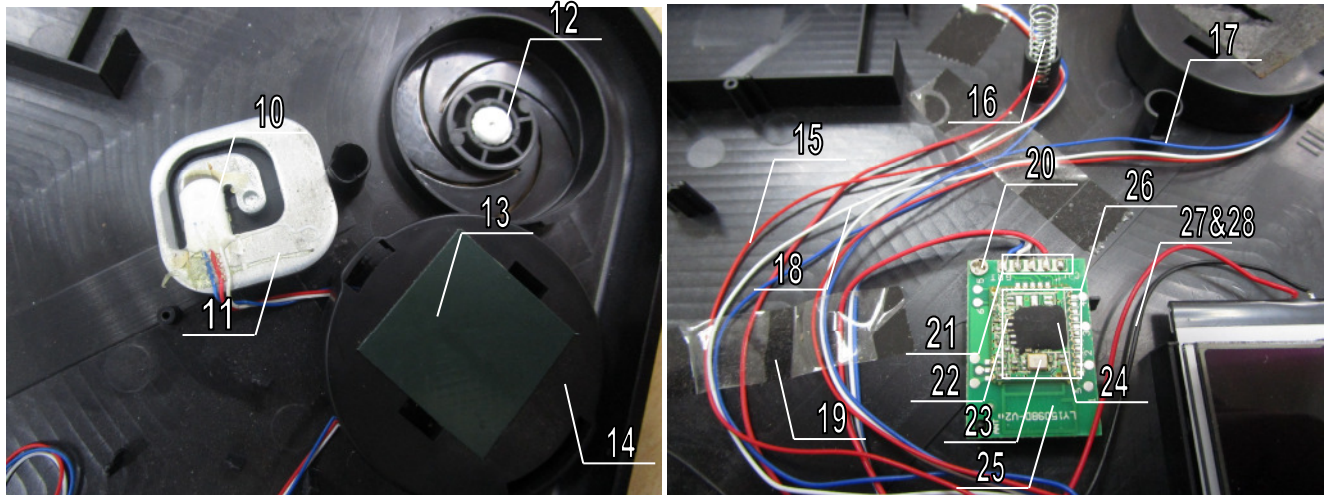
**1. Reference to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU**
**A. Screening Test by XRF Spectroscopy**

 Test Method: Cadmium, Lead, Mercury, Chromium, Bromine  
 - With reference to IEC 62321-3-1:2013

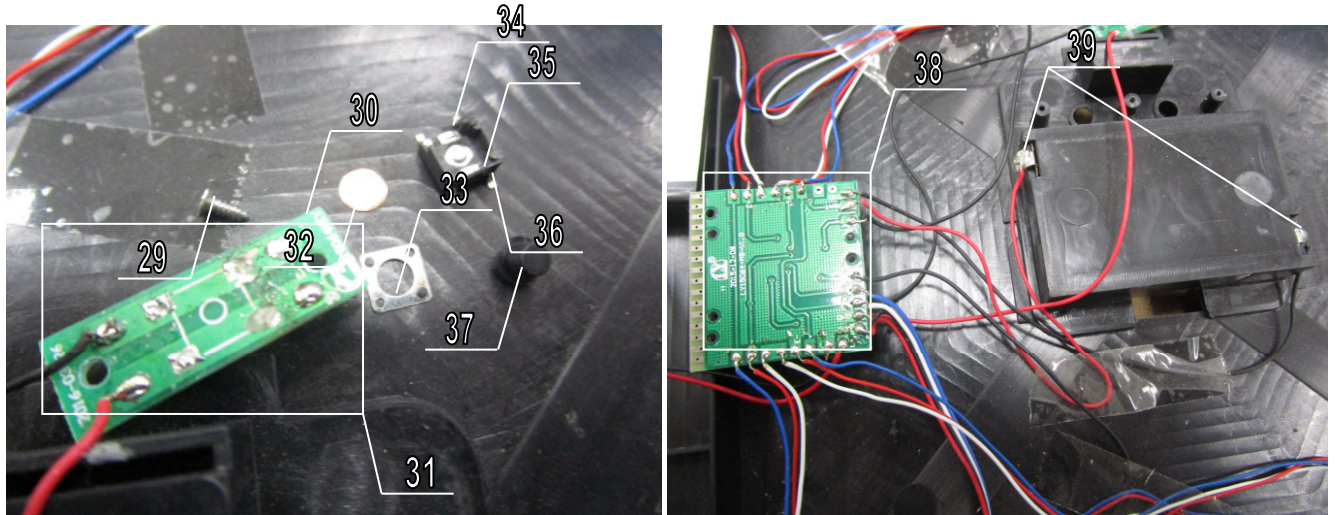
Testing Period: 2017-12-12 – 2017-12-20



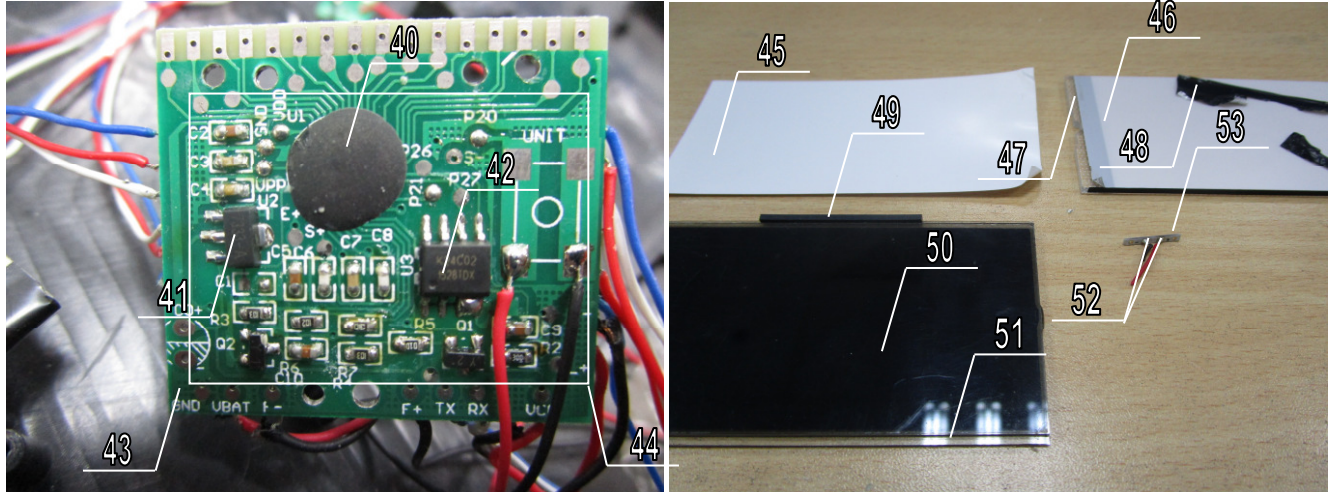
Material No.	Result (mg/kg)				
	Cd	Pb	Cr	Hg	Br
	Limit(mg/kg)				
	100	1000	Cr(VI): 1000	1000	PBB:1000 PBDE:1000
1(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
2(coating)	n.d.	n.d.	n.d.	n.d.	n.d.
3(metal)	n.d.	n.d.	d(*2)	n.d.	N.A.
4(glass)	n.d.	n.d.	n.d.	n.d.	N.A.
5(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
6(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
7(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
8(metal)	n.d.	d(*1)	n.d.	n.d.	N.A.
9(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.



Material No.	Result (mg/kg)				
	Cd	Pb	Cr	Hg	Br
	Limit(mg/kg)				
	100	1000	Cr(VI): 1000	1000	PBB:1000 PBDE:1000
10(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
11(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
12(metal)	n.d.	n.d.	d(*2)	n.d.	N.A.
13(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
14(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
15(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
16(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
17(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
18(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
19(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
20(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
21(solder)	n.d.	n.d.	n.d.	n.d.	N.A.
22(PCB)	n.d.	n.d.	n.d.	n.d.	d(*1)
23(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
24(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
25(PCB)	n.d.	n.d.	n.d.	n.d.	d(*1)
26(solder)	n.d.	n.d.	n.d.	n.d.	N.A.
27(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
28(inside metal)	n.d.	n.d.	n.d.	n.d.	N.A.



Material No.	Result (mg/kg)				
	Cd	Pb	Cr	Hg	Br
	Limit(mg/kg)				
	100	1000	Cr(VI): 1000	1000	PBB:1000 PBDE:1000
29(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
30(PCB)	n.d.	n.d.	n.d.	n.d.	d(*1)
31(solder)	*	*	*	*	*
32(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
33(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
34(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
35(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
36(metal)	n.d.	n.d.	n.d.	n.d.	N.A.
37(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
38(solder)	*	*	*	*	*
39(solder)	*	*	*	*	*



Material No.	Result (mg/kg)				
	Cd	Pb	Cr	Hg	Br
	Limit(mg/kg)				
	100	1000	Cr(VI): 1000	1000	PBB:1000 PBDE:1000
40(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
41(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
42(plastic)	n.d.	n.d.	n.d.	n.d.	d(*1)
43(PCB)	n.d.	n.d.	n.d.	n.d.	d(*1)
44(solder)	*	*	*	*	*
45(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
46(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
47(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
48(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
49(plastic)	n.d.	n.d.	n.d.	n.d.	n.d.
50(glass)	n.d.	n.d.	n.d.	n.d.	N.A.
51(glass)	n.d.	n.d.	n.d.	n.d.	N.A.
52(solder)	n.d.	n.d.	n.d.	n.d.	N.A.
53(PCB)	n.d.	n.d.	n.d.	n.d.	d(*1)

\* Confirmed in Section B

**Remark:**

- (^1) The screening result was found in the inconclusive region (X), thus the further wet chemistry tests are suggested.
- (^2) The Chromium (VI) content in surface layer has been confirmed with reference to IEC 62321-7-1:2015 Annex.
- (\*) Component(s)/ materials(s) with an area of less than 2mm x2 mm will not be selected for testing according to RoHS Directive 2011/65/EU due to technical reason.

For the test sample does not have detail materials information provided by client, visually identical materials (e.g. wire insulation, solder points, etc.) will be considered as the same material.

Solder points on a printing circuit board will be examined several times based on optical anomalies or discoloration of the solder point(s) unless the solder point(s) is obviously generated automatically during production.

All other materials will be sampled and tested at one test point representatively.

**Abbreviation:**

Pb	denotes Lead
Cd	denotes Cadmium
Hg	denotes Mercury
Cr	denotes Chromium
Cr(VI)	denotes Chromium(VI)
Br	denotes Bromine
PBBs	denotes Total Polybrominated Biphenyls
PBDEs	denotes Total Polybrominated Diphenyl Ethers
<	denotes less than
N.A.	denotes Not Applicable
n.d.	denotes Not Detected
d	denotes Detected

**XRF Screening limits for different materials:**

Materials	Concentration (mg/kg)				
	Cd	Cr	Pb	Hg	Br
<b>Metallic material</b>	P≤ 50 < X ≤150 < F	P≤ 630 < X	P≤ 690 < X≤1360 < F	P≤ 520 < X≤1560 < F	NA
<b>Polymeric material</b>	P≤ 50 < X ≤150 < F	P≤ 630 < X	P≤ 690 < X≤1360 < F	P≤ 520 < X≤1560 < F	P≤ 300 < X
<b>Electronic material</b>	P≤ 50 < X ≤180 < F	P≤ 500 < X	P≤ 550 < X≤1640 < F	P≤410 < X≤1870 < F	P≤ 240 < X

**B. Confirmation Test by Wet Chemistry**

Test method: Total Cadmium, Lead, Mercury, Chromium  
 - Ref. to IEC 62321-4:2013 and IEC 62321-5:2013

Chromium (VI)  
 - For Metal material - Ref. to IEC 62321-7-1:2015  
 - For Plastic or Electronic material – Ref. to IEC 62321:2008 Annex C  
 - For Leather material - Ref. to ISO 17075:2007

PBBs, PBDEs – Ref. to IEC 62321-6:2015

Testing Period: 2017-12-12 – 2017-12-20

Material list:

Material No.	Material	Color	Test Plan
			A=Test HM only B=Test FR only C=Test HM+FR
3	Metal	Silvery	A
8	Metal	Silvery	A
12	Metal	Silvery	A
22	PCB	Green	B
25	PCB	Green	B
30	PCB	Green	B
31	Solder	Silvery	A
38	Solder	Silvery	A
39	Solder	Silvery	A
42	Plastic	Black	B
43	PCB	Green	B
44	Solder	Silvery	A
53	PCB	Beige	B



## Test result:

	Cd	Pb	Cr (VI)	Hg	PBBs (*)	PBDEs (*)
Maximum Permissible Limit ppm (mg/kg)	100	1000	1000	1000	1000	1000

Material No.	(mg/kg)					
	Cd	Pb	Cr <sup>^</sup>	Hg	PBBs (*)	PBDEs (*)
	RL (mg/kg)					
	10	10	10	10	5	5
8	N.A.	410	N.A.	N.A.	N.A.	N.A.
22	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
25	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
30	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
31	N.D.	87	N.D.	N.D.	N.A.	N.A.
38	N.D.	390	N.D.	N.D.	N.A.	N.A.
39	N.D.	532	N.D.	N.D.	N.A.	N.A.
42	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
43	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
44	N.D.	108	N.D.	N.D.	N.A.	N.A.
53	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.

Material no.	Hexavalent Chromium Content ( $\mu\text{g}/\text{cm}^2$ ) <sup>(*)</sup>
	RL: 0.10 $\mu\text{g}/\text{cm}^2$
3	Negative
12	Negative

Abbreviation:	Pb	= Lead
	Cd	= Cadmium
	Hg	= Mercury
	Cr	= Chromium
	Cr (VI)	= Chromium
	PBBs	= Total Polybrominated Biphenyls
	PBDEs	= Total Polybrominated Diphenyl Ethers
	n.d.	= Not Detected (< Reporting Limit)
	RL	= Reporting Limit
	N.A.	= Not Applicable
	^	= The total Chromium have been determined.
	mg/kg	= milligram per kilogram

**Remark:**

- (\*1) The total chromium content in Metal sample was found to be exceeded the maximum permissible limit (1000mg/kg). Thus, the Chromium (VI) content in surface layer have been confirmed with reference to IEC 62321-7-1:2015 Annex.

	Chromium (VI) concentration	Qualitative result
Negative	<0.1µg/cm <sup>2</sup>	The sample is negative (-ve) for Cr(VI). The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
Inconclusive	≥0.1µg/cm <sup>2</sup> and ≤0.13 µg/cm <sup>2</sup>	The result is considered to be inconclusive. Unavoidable coating variations may influence the determination. Recommendation: if additional samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trails for the final determination.
Positive	>0.13 µg/cm <sup>2</sup>	The sample is positive (+ve) for Cr(VI). Concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

- (\* ) The reporting limit for each individual PBBs and individual PBDEs are :

Reporting Limit (mg/kg)		
<b>PBBs</b>	Bromobiphenyl	5
	Dibromobiphenyl	5
	Tribromobiphenyl	5
	Tetrabromobiphenyl	5
	Pentabromobiphenyl	5
	Hexabromobiphenyl	5
	Heptabromobiphenyl	5
	Octabromobiphenyl	5
	Nonabromobiphenyl	5
	Decabromobiphenyl	5
<b>PBDEs</b>	Bromodiphenylether	5
	Dibromodiphenyl ether	5
	Tribromodiphenyl ether	5
	Tetrabromodiphenyl ether	5
	Pentabromodiphenyl ether	5
	Hexabromodiphenyl ether	5
	Heptabromodiphenyl ether	5
	Octabromodiphenyl ether	5
	Nonabromodiphenyl ether	5
	Decabromodiphenyl ether	5

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**Sample photo:**



**ZT5104**

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