



TEST REPORT

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Report Issue Date: 2024.06.14
Page 1 of 8

Test Report No. : 6192402.50QS
Project no. : 6192402

Client : SUZHOU ARMOCON TECHNOLOGY CO.,LTD
No 77 SuHong Middle Road SIP Jiangsu China

Date sample received : 2024.05.29

Product : Handheld massager

Product description : Please refer to next page(s).

Model : Liv3,Gigi3,Mia3,Sona 3,Sona 3 cruise

Test Requested : Test of RoHS conformity (2011/65/EU) and its subsequent amendments directive (EU) 2015/863.

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

Result : Please refer to next page(s).

Conclusion : Requirement passed.

Testing Period : 2024.05.29—2024.06.12

Signed for and on behalf of

DEKRA Testing and Certification (Shanghai) Ltd



Liu Nan(刘楠)
Project Manager

Sheng Jinghuan(盛景焕)
Test Engineer

Picture of the product



TEST RESULTS

sample-no.	sample designation	Pb (%)	Cd (%)	Hg (%)	Cr VI (%)	PBB (%)	PBDE (%)	DEHP* (%)	BBP* (%)	DBP* (%)	DIBP* (%)
001	golden plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
002	black rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
003	white plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
004	white rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
005	white glue	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
006	white plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
007	silvery metal	< 0.1	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
008	white plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
009	black metal	< 0.1	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
010	magnet	< 0.1	< 0.01	< 0.1	< 0.1 ¹⁾	N/A	N/A	N/A	N/A	N/A	N/A
011	silvery metal	< 0.1	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
012	golden metal	< 0.1	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
013	silvery metal	< 0.1	< 0.01	< 0.1	< 0.1 ¹⁾	N/A	N/A	N/A	N/A	N/A	N/A
014	silvery metal	< 0.1	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
015	switch	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
016	LED	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1 ²⁾	< 0.1 ²⁾	N/A	N/A	N/A	N/A
017	capacitance	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
018	audion	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
019	crystal oscillator	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
020	IC	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
021	IC	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
022	IC	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
023	capacitance	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
024	PCB	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1 ²⁾	< 0.1 ²⁾	< 0.1	< 0.1	< 0.1	< 0.1
025	soldering tin	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
026	silvery metal	0.77 ^{3)a)}	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
027	black plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
028	red plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
029	blue plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
030	yellow plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
031	IC	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
032	IC	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A
033	PCB	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1 ²⁾	< 0.1 ²⁾	< 0.1	< 0.1	< 0.1	< 0.1
034	soldering tin	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	N/A

035	silvery metal	< 0.1	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
036	white plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
037	golden metal with carbon	< 0.1	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
038	silvery metal with carbon	< 0.1	< 0.01	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
039	white rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
040	rose red rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
041	white rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
042	blue rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
043	silvery plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
044	black plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
045	black rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
046	purple rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
047	rose red rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
048	rose red plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
049	purple plastic	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
050	purple rubber	< 0.1	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

1) The analysis by X-ray fluorescence spectrometry showed a detection for Cr. The verification and quantification of Cr (VI) was performed by photometric analysis.

2) The analysis by X-ray fluorescence spectrometry showed a detection for Br. The verification and quantification of PBB/PBDE was performed by GC-MS.

3) The analysis by X-ray fluorescence spectrometry showed a detection for Pb. The verification and quantification of Pb was performed by ICP-OES.

a) The annex to directive 2011/65/EU (exemptions of RoHS-directive) contains following point:

“6(c) Copper alloy containing up to 4 % lead by weight.”

N/A: Not applicable

*=With reference to IEC62321-8:2017, Analysis was performed by GC-MS.

Description of the analysis procedure (brief version):

Test of RoHS conformity

The measurements are performed according to IEC 62321-3-1 : 2013, "Electrotechnical products - Determination of levels of six regulated substances".

The product is divided in single material samples. The materials are analysed on different parameters of the RoHS-directive to assure that the complete product is RoHS-conform or not. At first a XRF (X-ray fluorescence spectrometry) screening is performed. For every sample following statements can be made.

Table: Screening limits in mg/kg for regulated elements in various matrices

Element	Polymers	Metals	Composite Material
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$		$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

Below limit (**BL**): the tested material complies to the RoHS directive.

Inconclusive (**X**): If the level of the measurement is around the maximum allowed, or if the level for Chrome or Bromine is too high, other more accurate methods are needed to determine the exact level or the composition of Chrome and Bromine.

Over limit (**OL**): If the level of lead, mercury or cadmium is well above the maximum allowed levels (the XRF uncertainty is taken into account), the tested material does not comply with the RoHS directive.

In case of **inconclusive** XRF results, following analysis procedures are applied:

In order to examine the material samples for the heavy metals cadmium, lead and mercury they are digested in acid and the solutions are used to carry out the analysis for the heavy metals by ICP-OES or atomic-absorption spectroscopy.

Hexavalent chromium is checked by extracting the sample with water at 100 °C (determination of Cr VI in colorless and colored chromate coating on metals) respectively with alkaline extraction at 90-95 °C (determination of Cr VI in polymers and electronic components) followed by photometric analysis.

In the case of metallic components with a surface coating containing hexavalent Chromium (passivation) the concentration is expressed in mg of Chromium VI per component. In order to obtain further information about the concentration on the surface coating it is necessary to know the weight per unit area of the coating and the surface area of the component. Information about surface coatings is to be provided by the client.

The examination for bromine-based flame retardant products is carried out by gas chromatography-mass spectrometry after extraction by solvents; this involves the individual analysis and quantification of the substances specified in the RoHS. The current valid regulations relating to exceptions in respect of the analysed substances are to be taken into account by the client.

The following Polybrominated Biphenyls (PBBs) and Polybrominated Diphenyl Ethers (PBDEs) are analyzed:

2-Bromobiphenyl PBB2, Dibromobiphenyl PBB15, Tribromobiphenyl PBB30, Tetrabromobiphenyl PBB52, Pentabromobiphenyl PBB103, Hexabromobiphenyl PBB153, Heptabromobiphenyl PBB250, Octabromobiphenyl PBB250, Nonabromobiphenyl PBB250, Decabromobiphenyl PBB209, Bromodiphenylether BDE2, Dibromodiphenylether BDE15, Tribromodiphenylether BDE30, Tetrabromodiphenylether BDE62, Pentabromodiphenylether BDE99, Hexabromodiphenylether BDE153, Heptabromodiphenylether BDE183, Octabromodiphenylether BDE203, Nonabromodiphenylether BDE206, Decabromodiphenylether BDE209.

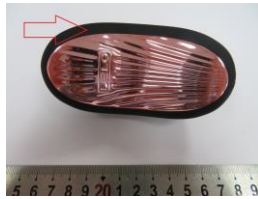
Limits according to RoHS (2011/65/EU) and its subsequent amendments directive (EU) 2015/863 / Test methods (additional chemical analysis):

Parameter	Limits according to RoHS	Test method
Cadmium	0,01 % (100 mg/kg or 0,1 g/kg)	IEC62321-5:2013
Lead	0,1 % (1000 mg/kg or 1 g/kg)	IEC62321-5:2013
Hexavalent Chromium	0,1 % (1000 mg/kg or 1 g/kg)	Metal: IEC62321-7-1:2015 Non-metal: IEC62321-7-2:2017
Mercury	0,1 % (1000 mg/kg or 1 g/kg)	IEC62321-4:2013/AMD1:2017
PBB and PBDE	0,1 % (1000 mg/kg or 1 g/kg)	IEC62321-6:2015
DEHP	0,1 % (1000 mg/kg or 1 g/kg)	IEC62321-8:2017
BBP	0,1 % (1000 mg/kg or 1 g/kg)	IEC62321-8:2017
DBP	0,1 % (1000 mg/kg or 1 g/kg)	IEC62321-8:2017
DIBP	0,1 % (1000 mg/kg or 1 g/kg)	IEC62321-8:2017

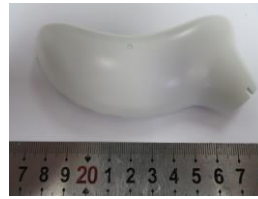
Sample Photos



Test item001



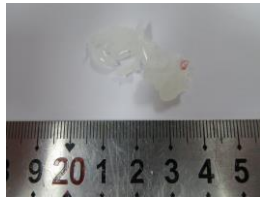
Test item002



Test item003



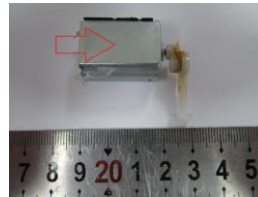
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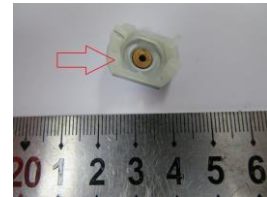
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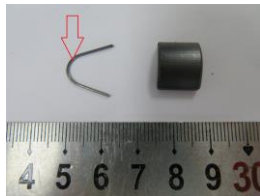
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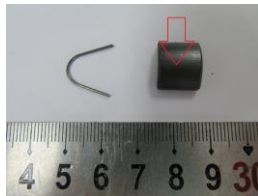
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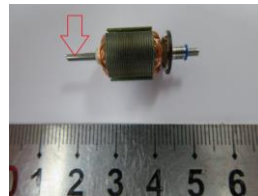
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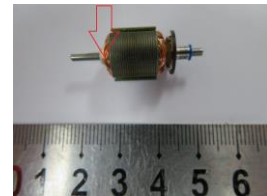
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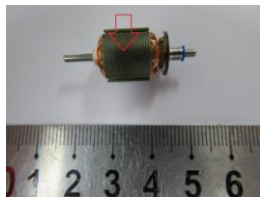
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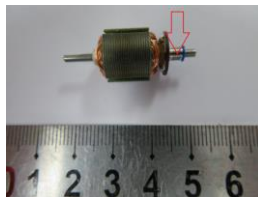
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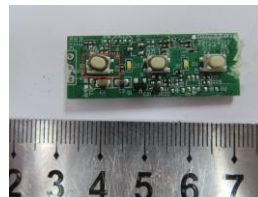
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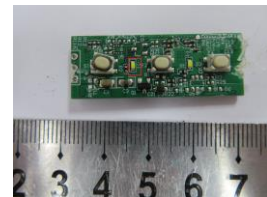
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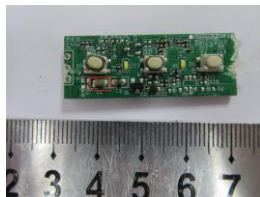
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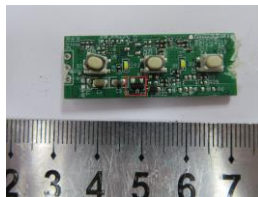
Test item015



Test item016



Test item017



Test item018



Test item019



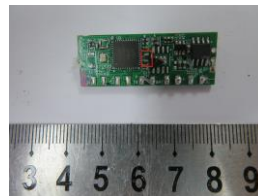
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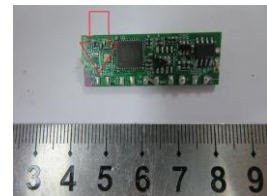
Test item021



Test item022



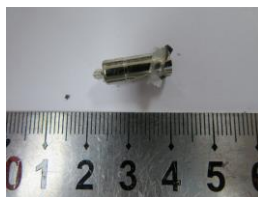
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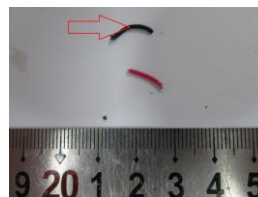
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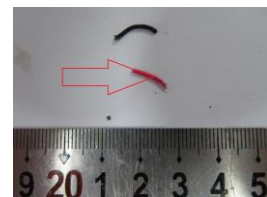
Test item025



Test item026



Test item027



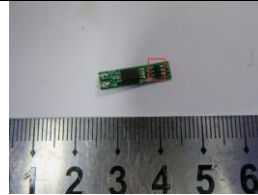
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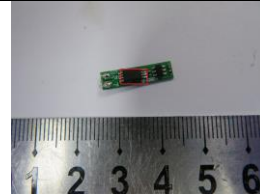
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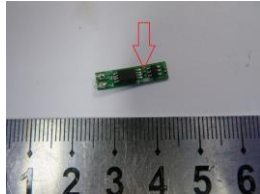
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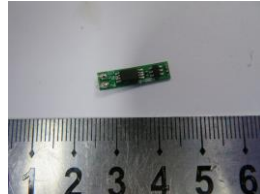
Test item031



Test item032



Test item033



Test item034



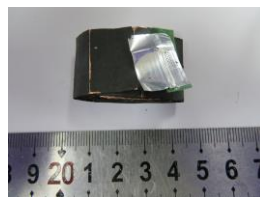
Test item035



Test item036



Test item037



Test item038



Test item039



Test item040



Test item041



Test item042



Test item043



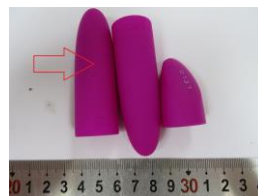
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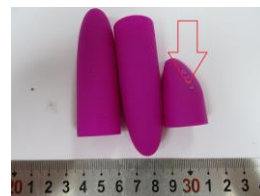
Test item045



Test item046



Test item047



Test item048



Test item049



Test item050

---End of Report---

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