

TEST REPORT

Report No.: CSTR140821808

Date: August 26, 2014

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Applicant : Seeed Technology Inc.
Applicant Address : F5, Building 8, Shiling Industrial Park, Xinwei, Number32, Tongsha Road
Xili Town, Nanshan District, Shenzhen, China. P.R.C
Manufacturer : Shenzhen RDM TAG MASTER Co., Ltd
Manufacturer Address : 3H, Building A, Guanlong Village, Xili Town, Nanshan District, Shenzhen,
518055, China

The following samples were submitted by the client said to be:

Sample Name : Grove - 125KHz RFID Reader
Model No. : SEN11425P
Sample Receiving Date : August 21, 2014
Date of Test : August 21 - 26, 2014
Test Requested : As requested by the applicant, submitted sample was screened
by XRF spectroscopy and inconclusive items were confirmed by wet
chemical method in accordance with EU Directive 2011/65/EU Annex
II ; recasting 2002/95/EC.
Test Results : Details, please refer to the following pages.
Conclusion : Pass

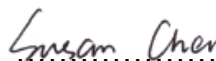
Tested by (name + signature).....:

Lena Liang



Approved by (name + signature).....:

Susan Chen



Declaration:

- (1) The test results exclusively refer to the samples examined.
- (2) This report shall not be reproduced except in full without written approval and does not authorize the use of Shenzhen Certification Technology Service Co., Ltd.
- (3) The report is invalid without signature and seal of Shenzhen Certification Technology Service Co., Ltd.

Shenzhen Certification Technology Service Co., Ltd.

Address: 2F, Building B, East Area of Nanchang Second Industrial Zone, Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
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(A) Test Result:

(1) As per IEC 62321 : 2008, screened by XRF spectroscopy.

No.	Component Description	Test Item	XRF Result
1	Plastic of wire terminal	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
2	Pin of wire terminal	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	--
3	PCB	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
4	IC	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
5	Capacitor	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
6	Capacitor	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
7	Capacitor	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P

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No.	Component Description	Test Item	XRF Result
8	Capacitor	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
9	Fuse	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
10	Resistor	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
11	Triode	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
12	Crystal	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	--
13	LED	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
14	Plastic of small wire terminal	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
15	Pin of small wire terminal	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	--

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No.	Component Description	Test Item	XRF Result
16	Black plastic of U terminal	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	P
17	Pin of U terminal	Cadmium (Cd)	P
		Lead (Pb)	P
		Mercury (Hg)	P
		Chromium (Cr)	P
		Bromine (Br)	--

Remark:

- (1) (a) There are the results on total Br while test items on restricted substances are PBBs and PBDEs. There is the result on total Cr while test item on restricted substances is Cr(VI).
- (b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC62321 (unit: mg/kg).

Element	Polymer Material	Metallic Material	Composite Material
Cadmium (Cd)	$P \leq 70 - 3\sigma < IC < 130 + 3\sigma \leq F$	$P \leq 70 - 3\sigma < IC < 130 + 3\sigma \leq F$	$P \leq 50 - 3\sigma < IC < 150 + 3\sigma \leq F$
Lead (Pb)	$P \leq 700 - 3\sigma < IC < 1300 + 3\sigma \leq F$	$P \leq 700 - 3\sigma < IC < 1300 + 3\sigma \leq F$	$P \leq 500 - 3\sigma < IC < 1500 + 3\sigma \leq F$
Mercury (Hg)	$P \leq 700 - 3\sigma < IC < 1300 + 3\sigma \leq F$	$P \leq 700 - 3\sigma < IC < 1300 + 3\sigma \leq F$	$P \leq 500 - 3\sigma < IC < 1500 + 3\sigma \leq F$
Chromium (Cr)	$P \leq 700 - 3\sigma < IC$	$P \leq 700 - 3\sigma < IC$	$P \leq 500 - 3\sigma < IC$
Bromine (Br)	$P \leq 300 - 3\sigma < IC$	--	$P \leq 250 - 3\sigma < IC$

(c) mg/kg = milligram per kilogram

(d) P=Pass, F=Fail, IC=Inconclusive, -- = Not Regulated

- (2) (a) mg/kg = 0.0001%, MDL = Method Detection Limit, N.D. = Not Detected (<MDL)

(b) Test Method for Chemical Confirmation

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Test Item	Test Method	Test Instrument	MDL (mg/kg)	EU RoHS Limit (mg/kg)
Cd	IEC 62321:2008	ICP-OES	2	100
Pb	IEC 62321:2008	ICP-OES	2	1000
Hg	IEC 62321:2008	ICP-OES	2	1000
Cr(VI)	IEC 62321:2008	UV-Vis	0.02 (50 cm ²)	1000
PBBs, PBDEs	IEC 62321:2008	GC-MS	5	1000

(c) According to IEC 62321:2008, result on Cr(VI) for metal sample is shown as Positive/Negative.

Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating.

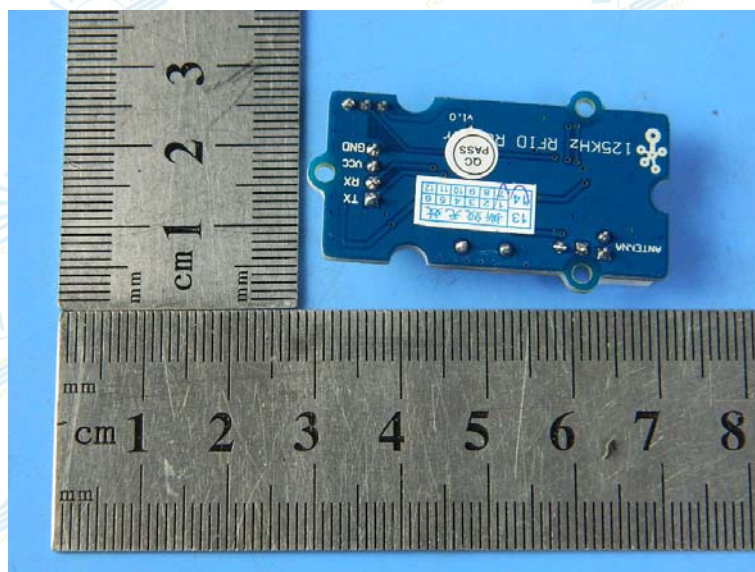
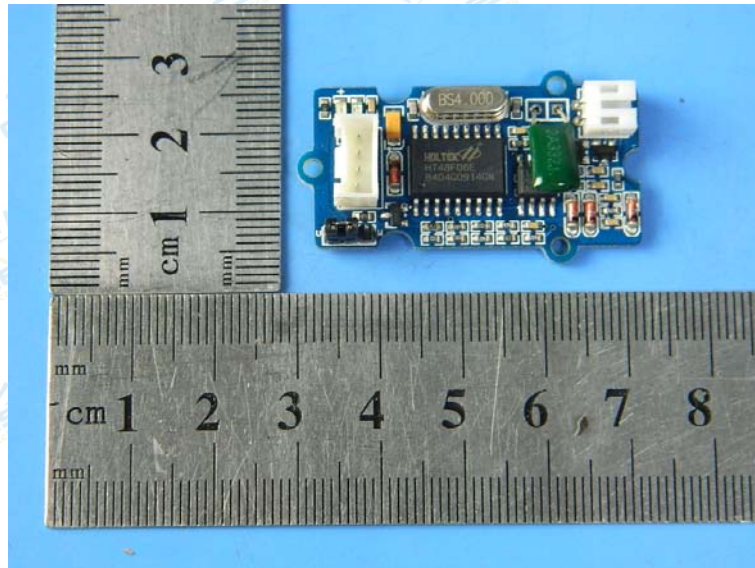
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(B) Tested sample photos:



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