TEST REPORT

Report No.: 2401Z25522E Date: November 26, 2024 Page 1 of 8

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Report on the submitted samples said to be:

Sample Description:	WIFI Module
Tested Style/Item No.:	HLK-RM08K
Additional Style/ Item No.:	HLK-RM08K-P、 HLK-RM08K-PD、HLK-RM08K-B
Remark:	As claimed by the material declaration submitted by the client, the material of Additional Style/ Item No. are the same as the tested Style/ Item No. . But the results only for the tested sample. And the applicant will undertake all differences and risk.
Sample Receiving Date:	November 15,2024
Testing Period:	November 15,2024 - November 19,2024
Result:	**Please refer to next page(s).**

Signed for and on behalf of

BACL

Checked by: Queenie Lee

Approved by: Len Xie

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Summary of Test Result:

TEST REQUEST	**CONCLUSION**
A As specified by client, selected materials (parts) in the submitted samples for RoHS Directive 2011/65/EU and amendment directives (EU) 2015/863 on Lead,Cadmium, Mercury, Hexavalent Chromium, PBBs & PBDEs, Phthalates(DBP, BBP,DEHP, DIBP) content	
A.1 XRF screening test	Pass
A.2 Wet Chemical Testing	
A.2.1 PBBs & PBDEs content	Pass
A.3 Phthalates(DBP, BBP, DEHP, DIBP)content	Pass

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A As specified by client, selected materials (parts) in the submitted samples for RoHS Directive 2011/65/EU and amendment directives (EU) 2015/863 on Lead,Cadmium, Mercury, Hexavalent Chromium, PBBs & PBDEs, Phthalates(DBP, BBP,DEHP, DIBP) content

A.1 XRF screening test

Test method: IEC 62321-3-1:2013

Seq No.	Tested Part(s)	Result				
		Pb	Cd	Hg	Cr	Br
(1)	White / black coated orange plastic with adhesive (label)	BL	BL	BL	BL	BL
(2)	Silvery metal (shield case)	BL	BL	BL	BL	---
(3)	Black body (small IC)	BL	BL	BL	BL	BL
(4)	Black body (middle IC)	BL	BL	BL	BL	BL
(5)	Black body (big IC)	BL	BL	BL	BL	BL
(6)*	White printed blue coated brown plastic with coppery metal (PCB)	BL	BL	BL	BL	X
(7)	Silvery solder (PCB)	BL	BL	BL	BL	---
(8)*	Black plastic (pin holder, PCB)	BL	BL	BL	BL	X
(9)	Silvery metal (pin, PCB)	BL	BL	BL	BL	---

Note:
--- = Not Applicable.
* = Screening by XRF and detected by chemical method. The test result of chemical method please refer to next pages.

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Remark:

i Result were obtained by XRF for primary screening, 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 below warning value according to IEC62321-3-1:2013.

Element	Unit	Polymers	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 Limit
IN/X = Inconclusive (questionable, need further chemical analysis)

ii The XRF screening 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 the 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 Screening 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 screening 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.

A.2 Wet Chemical Testing

A.2.1 PBBs & PBDEs content

Test method: IEC 62321-6:2015

Item	Unit	MDL	Result		Limit
			(6)	(8)	
Monobromobiphenyl (MonoBB)	mg/kg	50	N.D.	N.D.	-
Dibromobiphenyl(DiBB)	mg/kg	50	N.D.	N.D.	-
Tribromobiphenyl(TriBB)	mg/kg	50	N.D.	N.D.	-
Tetrabromobiphenyl(TetraBB)	mg/kg	50	N.D.	N.D.	-
Pentabromobiphenyl(PentaBB)	mg/kg	50	N.D.	N.D.	-
Hexabromobiphenyl(HexaBB)	mg/kg	50	N.D.	N.D.	-
Heptabromobiphenyl (HeptaBB)	mg/kg	50	N.D.	N.D.	-
Octabromobiphenyl(OctaBB)	mg/kg	50	N.D.	N.D.	-
Nonabromobiphenyl(NonaBB)	mg/kg	50	N.D.	N.D.	-
Decabromobiphenyl(DecaBB)	mg/kg	50	N.D.	N.D.	-
Monobromodiphenyl ether (MonoBDE)	mg/kg	50	N.D.	N.D.	-
Dibromodiphenyl ether (DiBDE)	mg/kg	50	N.D.	N.D.	-
Tribromodiphenyl ether (TriBDE)	mg/kg	50	N.D.	N.D.	-
Tetrabromodiphenyl ether (TetraBDE)	mg/kg	50	N.D.	N.D.	-
Pentabromodiphenyl ether (PentaBDE)	mg/kg	50	N.D.	N.D.	-
Hexabromodiphenyl ether (HexaBDE)	mg/kg	50	N.D.	N.D.	-
Heptabromodiphenyl ether (HeptaBDE)	mg/kg	50	N.D.	N.D.	-
Octabromodiphenyl ether (OctaBDE)	mg/kg	50	N.D.	N.D.	-
Nonabromodiphenyl ether (NonaBDE)	mg/kg	50	N.D.	N.D.	-
Decabromodiphenyl ether (DecaBDE)	mg/kg	50	N.D.	N.D.	-

Item	Unit	MDL	Result		Limit
			(6)	(8)	
sum of MonoBDE,DiBDE,TriBDE,TetraBDE,PentaBDE,HexaBDE,HeptaBDE,OctaBDE,NonaBDE,DecaBDE	mg/kg	-	/	/	1000
sum of MonoBB,DiBB,TriBB,TetraBB,PentaBB,HexaBB,HeptaBB,OctaBB,NonaBB,DecaBB	mg/kg	-	/	/	1000
Conclusion	/	/	**Pass**	**Pass**	/

A.3 Phthalates(DBP, BBP, DEHP, DIBP)content

Test method: IEC 62321-8:2017

Item	Unit	MDL	Result				Limit
			(1)	(3)+(4)+(5)	(6)	(8)	
Dibutyl Phthalate(DBP)	mg/kg	30	N.D.	N.D.	N.D.	N.D.	1000
Benzyl Butyl Phthalate(BBP)	mg/kg	30	N.D.	N.D.	N.D.	N.D.	1000
Bis-(2-ethylhexyl) Phthalate (DEHP)	mg/kg	30	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP)	mg/kg	30	N.D.	N.D.	N.D.	N.D.	1000
Conclusion	/	/	**Pass**	**Pass**	**Pass**	**Pass**	/

Note:
- N.D.= Not Detected or less than MDL
- MDL = Method Detection Limit
- "+" = Composite testing.
-The Result less than MDL are not taken into account while calculating the sum contents.

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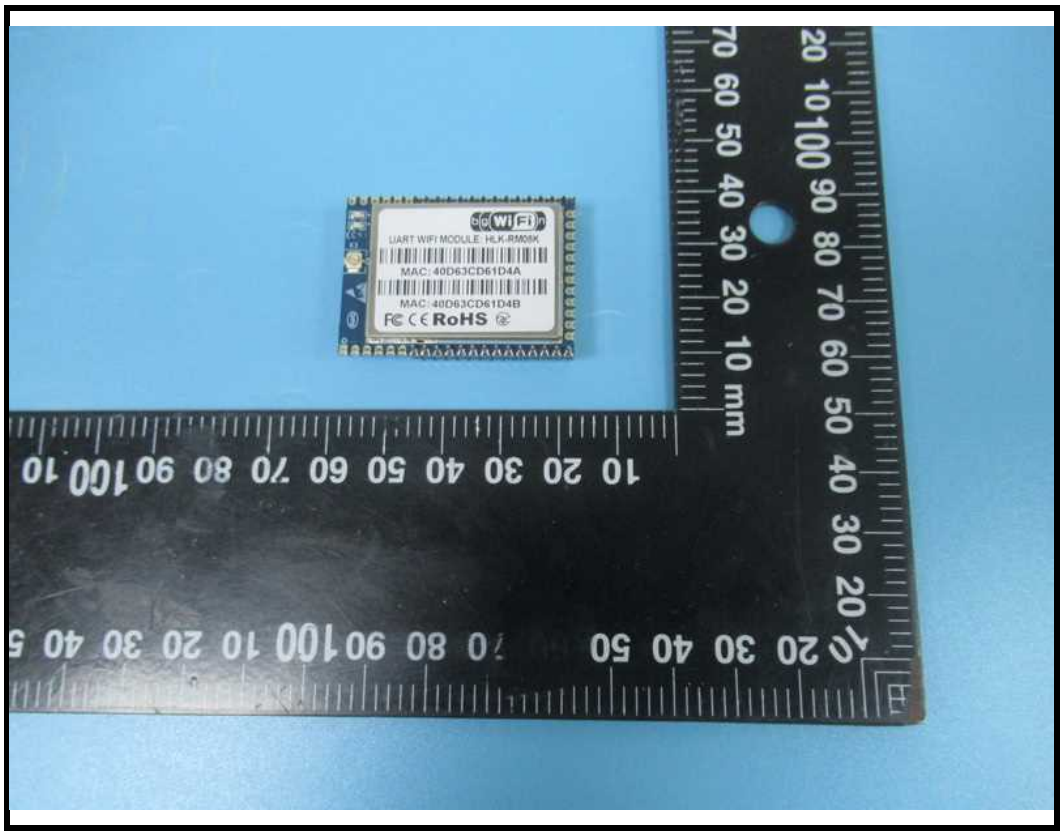
Photograph of Sample



BACL authenticate the photo on original report only

TEST REPORT

Statement:

1.This report cannot be reproduced except in full, without prior written approval of the Company.
2.Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
3.This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4.Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5.The information which provided by the applicant, such as sample description, sample name, material component, style/item No. , P.O. No. , manufacturer, age phase, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
6.The test samples were in good condition before testing.

*** End of Report ***