



ROHS Test Report

Report No.: AGC03V110301-2R4

TEST NAME : XRF screening test
Chemical Test

PRODUCT DESIGNATION : Chip module

BRAND NAME : Espidertech

TEST MODEL : CBMC Series

CLIENT : Espidertech Ltd

DATE OF ISSUE : March 14, 2011

STANDARD(S) : RoHS Directive 2002/95/EC

Attestation of Global Compliance Co., Ltd.

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1. GENERAL INFORMATION:

Product Description:	Chip module
Brand Name:	Espidertech
Model Name:	CBMC Series, CBMC-KM, CBMC-OKI, CBMC-RH, CBMC-LEN, CBMC-MU, CBMC-SM, CBMC-PF, CBMC-XE
Model Difference:	Espidertech Ltd
Applicant:	1808, Special Zone Stock Bldg, No. 5020 Binhe Road, Shenzhen, Guangdong, China
Address of Applicant:	Espidertech Ltd
Manufacturer:	1808, Special Zone Stock Bldg, No. 5020 Binhe Road, Shenzhen, Guangdong, China
Address of Manufacturer:	From March 7, 2011 to March 14, 2011
Testing date:	Chip module
Test Request:	EU RoHS Directive 2002/95/EC and its amendment directives
Results:	Please refer to next page(s).

Checked By

Ling zheng AGC March 14, 2011

Authorized By

King Zhang AGC March 14, 2011

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2. TEST RESULTS:

A. EU RoHS Directive 2002/95/EC and its amendment directives on XRF

Test method:

With reference to IEC 62321 Ed 1.0:2008, Screening by X-ray Fluorescence Spectroscopy (XRF)

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
1	Grey/black body(SMD Capacitor, PCB"Y10J9D16A")	BL	BL	BL	BL	BL
2	Black body(EC"S24C04", PCB"Y10J9D16A")	BL	BL	BL	BL	BL
3	Black body(EC"EC-214", PCB"Y10J9D16A")	BL	BL	BL	BL	BL
4	Black/white body(SMD Resistor, PCB"Y10J9D16A")	BL	BL	BL	BL	BL
5	Brown body(SMD Capacitor, PCB"Y10J9D16A")	BL	BL	BL	BL	BL
6	Silvery solder(PCB"Y10J9D16A")	BL	BL	BL	BL	----
7*	White printed blue fiber with coppery metal(PCB"Y10J9D16A")	BL	BL	BL	BL	X

-- = Not Conducted

* = Screening by XRF and detected by chemical method. The test results of chemical method please refer to next pages.

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	BL \leq (70-3 σ) < X	BL \leq (70-3 σ) < X	LOD \leq (70-3 σ) < X
Pb		<(130+3 σ) \leq OL	<(130+3 σ) \leq OL	<(150+3 σ) \leq OL
Hg	mg/kg	BL \leq (700-3 σ) < X	BL \leq (700-3 σ) < X	BL \leq (500-3 σ) < X
Cr		<(1300+3 σ) \leq OL	<(1300+3 σ) \leq OL	<(1500+3 σ) \leq OL
Br	mg/kg	BL \leq (700-3 σ) < X	BL \leq (700-3 σ) < X	BL \leq (500-3 σ) < X

Note:

BL = Below Limit
OL = Over Limit
X = Inconclusive

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Remark:

- i Results 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 IEC 62321 Ed 1.0:2008.
- 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 document 2005/618/EC amending RoHS directive 2002/95/EC:

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:

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.

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B. The Test Results of Chemical Method:

Test method:

With reference to IEC 62321 Ed 1.0 Annex A, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS)

1) The test results of PBBs & PBDEs

Item	Unit	MDL	Results	Limit
			7	
Polybrominated Biphenyls (PBBs)				
Monobromobiphenyl	mg/kg	5	N.D.	
Dibromobiphenyl	mg/kg	5	N.D.	
Tribromobiphenyl	mg/kg	5	N.D.	
Tetrabromobiphenyl	mg/kg	5	N.D.	
Pentabromobiphenyl	mg/kg	5	N.D.	
Hexabromobiphenyl	mg/kg	5	N.D.	
Heptabromobiphenyl	mg/kg	5	N.D.	
Octabromobiphenyl	mg/kg	5	N.D.	
Nonabromodiphenyl	mg/kg	5	N.D.	
Decabromodiphenyl	mg/kg	5	N.D.	
Total content	mg/kg	/	N.D.	1000 mg/kg
Polybrominated Diphenylethers (PBDEs)(Mon-Deca)				
Monobromodiphenyl ether	mg/kg	5	N.D.	
Dibromodiphenyl ether	mg/kg	5	N.D.	
Tribromodiphenyl ether	mg/kg	5	N.D.	
Tetrabromodiphenyl ether	mg/kg	5	N.D.	
Pentabromodiphenyl ether	mg/kg	5	N.D.	
Hexabromodiphenyl ether	mg/kg	5	N.D.	
Heptabromodiphenyl ether	mg/kg	5	N.D.	
Octabromodiphenyl ether	mg/kg	5	N.D.	
Nonabromodiphenyl ether	mg/kg	5	N.D.	
Decabromodiphenyl ether	mg/kg	5	N.D.	
Total content	mg/kg	/	N.D.	1000 mg/kg

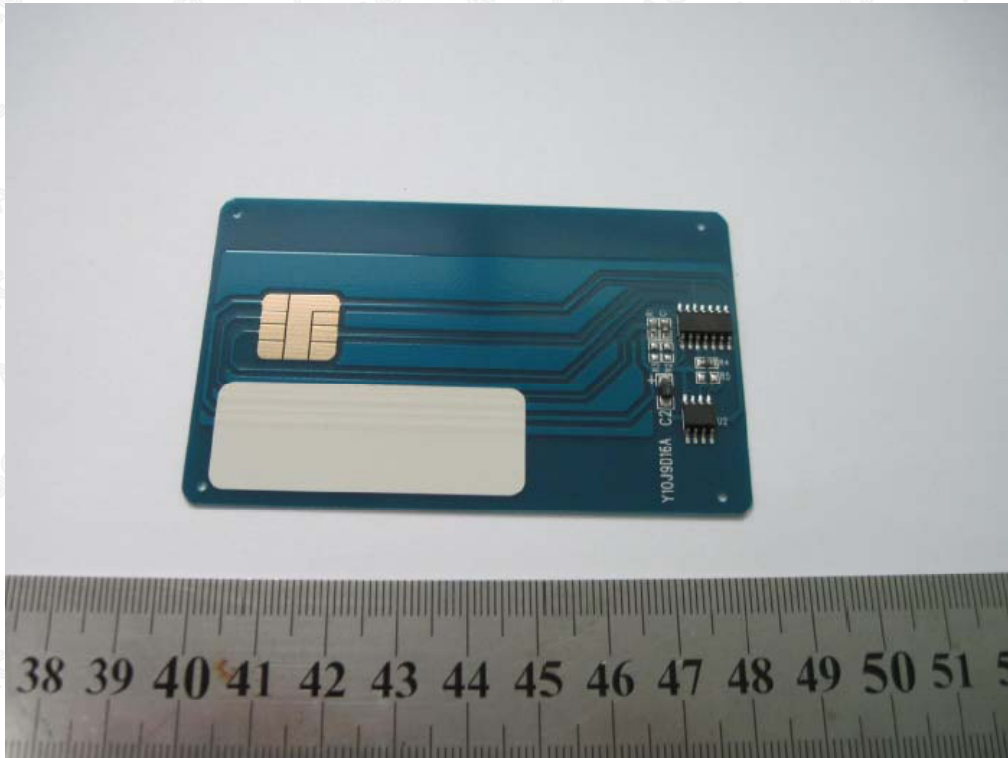
Note:

- N.D. = Not Detected or less than MDL
- mg/kg = ppm
- MDL = Method Detection Limit
- Photo appendix is included.

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APPENDIX

PHOTOGRAPH OF SAMPLE



----END OF REPORT----

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