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Applicant : Shenzhen LANTU Technology Co.,Ltd.

Address : Room 602, Building 17, No. A3, Fourth Industrial Zone, Heshuikou Community,

Matian Street, Guangming District, Shenzhen.Guangdong, china.

Sample Name : Motherboard

Style/Item No. : YY3568 YY3568-BASE YY3568-CORE

Manufacturer : Shenzhen SmartFLY Tech Co.,Ltd.

Address : Room 601, Building 17, No. A3, Fourth Industrial Zone, Heshuikou Community,

Matian Street, Guangming District, Shenzhen, china.

Received Date : May. 04, 2023, May. 19, 2023

Test Period : May. 04, 2023 ~ May. 26, 2023

Revise Date : May. 30, 2023

Test Requested: As requested by the client, to evaluate the compliance of the submitted sample with

EU RoHS Directive 2011/65/EU Annex II and its amendment (EU) 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic

equipment.

Test Method : 1. Review was performed for the sample and the related Bill of Materials submitted

by the Applicant.

2. a) Refer to the standard IEC 62321-3-1:2013: Screening by XRF Spectroscopy.

b) Wet chemical test

1) Refer to IEC 62321-5:2013, determine the Cadmium, Lead content by

ICF-UES

2) Refer to IEC 62321-4:2013+A1:2017, determine the Mercury content by

ICP-OES;

3) Refer to IEC 62321-7-1:2015 & IEC 62321-7-2:2017, determine the

Hexavalent Chromium content by UV-VIS.

4) Refer to IEC 62321-6:2015, determine the Polybrominated Biphenyls and

Polybrominated Diphenyl Ethers by GC-MS.

5) Refer to IEC 62321-8:2017, determine the Dibutyl phthalate(DBP), Benzylbutyl phthalate(BBP), Di-2-ethylhexyl phthalate(DEHP) and

Diisobutyl phthalate(DIBP) by GC-MS.

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





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Conclusion:

Basing on the test results obtained from the homogenous materials, the submitted sample COMPLIES with the EU RoHS Directive 2011/65/EU Annex II and its amendment (EU) 2015/863.



Signed for and on behalf of

EMTEK(Dongguan) Co., Ltd

Prepared by:

Report Engineer

Reviewed by:

Zeng Xingji, Cindy Supervisor

Approved by:

Li Wei, Lisa Authorized signatory May. 30, 2023





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Test Results:

1. Pb, Cd, Hg, Cr⁶⁺, PBBs, PBDEs Test Results:

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			No comment
		Cd	Cd	BL			
1	Black PCB	Hg	Hg	BL	NA	Pass	
'	DIACK PCD	Cr ⁶⁺	Cr	BL	NA	F 455	No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
2	Blue hard	Hg	Hg	BL	NA	Pass	No comment
2	plastic	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL			No comment
	Silver metal	Cd	Cd	BL		Pass	
3		Hg	Hg	BL	NA		
3		Cr ⁶⁺	Cr	BL		Fa55	
		PBBs	Br	NA			
		PBDEs	DI	INA			
		Pb	Pb	OL			
		Cd	Cd	BL			
4	Copper metal	Hg	Hg	BL	Pb:33599	Pass	See remark (3)
7	Copper metal	Cr ⁶⁺	Cr	BL	1 0.00000	1 433	Occ remark (5)
		PBBs	Br	NA			
		PBDEs	Di	INA			
		Pb	Pb	BL			
		Cd	Cd	BL			
5	Beige hard	Hg	Hg	BL	NA	Pass	No comment
	plastic	Cr ⁶⁺	Cr	BL	13/3	Pass	No comment
		PBBs	Br	BL			
		PBDEs		<i>D</i> L			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			No comment
_	Cibrar mastal	Hg	Hg	BL	NΙΔ	Dana	
6	Silver metal	Cr ⁶⁺	Cr	BL	NA	Pass	
		PBBs	De	NIA			
		PBDEs	Br	NA			
		Pb	Pb	OL			
	7 Silver metal	Cd	Cd	BL			
_		Hg	Hg	BL	DI 00007	D	0
/		Cr ⁶⁺	Cr	BL	Pb:30037	Pass	See remark (3)
		PBBs PBDEs	Br	NA			
		Pb	Pb	BL	NA		No comment
		Cd	Cd	BL			
	White hard plastic	Hg	Hg	BL		Daga	
8		Cr ⁶⁺	Cr	BL		Pass	No comment
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
9	Silver metal	Hg	Hg	BL	NA	Pass	No comment
9	Silver metal	Cr ⁶⁺	Cr	BL	INA	F a 5 5	No comment
		PBBs	Br	NA			
		PBDEs	ы	INA			
		Pb	Pb	BL			
		Cd	Cd	BL			
10	Yellow hard	Hg	Hg	BL	NA	Page	No commont
10	plastic	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs	Br	BL			
		PBDEs	וט	DL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
11	Silver metal	Hg	Hg	BL	NA	Pass	No comment
''	Silver metal	Cr ⁶⁺	Cr	BL	IVA	Pass	
		PBBs	Br	NA			
		PBDEs	Ы	INA			
		Pb	Pb	BL			
	Beige hard	Cd	Cd	BL			
12		Hg	Hg	BL	NA	Door	No comment
12	plastic	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	OL	Pb:		
		Cd	Cd	BL			
40	Cilvor motal	Hg	Hg	BL		_	See remark (3)&
13	Silver metal	Cr ⁶⁺	Cr	BL		Pass	See remark (4)
		PBBs	D.	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
14	Black hard	Hg	Hg	BL	NA	Pass	No comment
14	plastic	Cr ⁶⁺	Cr	BL	INA	Fa55	No comment
		PBBs	D.	BL			
		PBDEs	Br	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
15	Silver metal	Hg	Hg	BL	Cr6+:Nogotive	Pass	No comment
15	Silver Metal	Cr ⁶⁺	Cr	Х	Cr ⁶⁺ :Negative	rdSS	NO COMMENT
		PBBs	Dr.	NA			
		PBDEs	Br	INA			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
16	Dark grey hard	Hg	Hg	BL	NA	Door	No comment
10	plastic	Cr ⁶⁺	Cr	BL	INA	Pass	
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
	17 Silver metal	Cd	Cd	BL			
17		Hg	Hg	BL	NA	Door	No comment
17		Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs PBDEs	Br	NA			
		Pb	Pb	BL	NA		No comment
		Cd	Cd	BL		Pass	
40	0.1	Hg	Hg	BL			
18	Silver metal	Cr ⁶⁺	Cr	BL			No comment
		PBBs	D	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL	NA		
19	Black hard	Hg	Hg	BL	I INA	Pass	No comment
19	plastic	Cr ⁶⁺	Cr	BL		Fa55	No comment
		PBBs	Br	X	ND		
		PBDEs	ы	^	ND		
		Pb	Pb	BL			
		Cd	Cd	BL			
20	Green translucent hard	Hg	Hg	BL	NA	Pass	No comment
20	plastic	Cr ⁶⁺	Cr	BL	INA	F d 5 5	No comment
		PBBs	Br	BL			
		PBDEs	ום	DL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
24	Yellow translucent hard	Hg	Hg	BL	NA	Door	
21	plastic	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
	·	PBBs	Dr	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
	22 Silver metal	Cd	Cd	BL			
00		Hg	Hg	BL	212	D	No
22		Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs PBDEs	Br	NA			
		Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
00	Black hard plastic	Hg	Hg	BL			
23		Cr ⁶⁺	Cr	BL		Pass	No comment
		PBBs	2	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
24	Silver metal	Hg	Hg	BL	NA	Pass	No comment
24	Silver metal	Cr ⁶⁺	Cr	BL	INA	F455	No comment
		PBBs	D.	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
25	Cilvor atal	Hg	Hg	BL	NIA	Dass	No comment
25	Silver metal	Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs	D.	NΙΔ			
		PBDEs	Br	NA			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
26	Black hard	Hg	Hg	BL	NA	Pass	No comment
20	plastic	Cr ⁶⁺	Cr	BL	INA	Pass	
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
	7 Silver metal	Cd	Cd	BL			
27		Hg	Hg	BL	NA	Door	No comment
21	Silver metai	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs PBDEs	Br	NA			
		Pb	Pb	BL	NA		No comment
		Cd	Cd	BL			
00	Cilver etal	Hg	Hg	BL		_	
28	Silver metal	Cr ⁶⁺	Cr	BL		Pass	No comment
		PBBs	D	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
29	White hard	Hg	Hg	BL	NA	Pass	No comment
29	plastic	Cr ⁶⁺	Cr	BL	INA	F a 5 5	NO Comment
		PBBs	Br	BL			
		PBDEs	Ы	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
30	Silver metal	Hg	Hg	BL	NA	Page	No comment
30	Silver Illetai	Cr ⁶⁺	Cr	BL	INA	Pass	INO COMMINENT
		PBBs	Br	NA			
		PBDEs	וט	INA			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
31	Silver metal	Hg	Hg	BL	NA	Door	No comment
31	Silver metar	Cr ⁶⁺	Cr	BL	IVA	Pass	
		PBBs	Br	NA			
		PBDEs	ы	INA			
		Pb	Pb	BL			
	32 Blue hard plastic	Cd	Cd	BL	NIA		
20		Hg	Hg	BL	NA	Door	No somment
32		Cr ⁶⁺	Cr	BL		Pass	No comment
		PBBs	D.	V	ND		
		PBDEs	Br	X	ND		
		Pb	Pb	BL	NA		No comment
		Cd	Cd	BL		Pass	
20	Cilver metal	Hg	Hg	BL			
33	Silver metal	Cr ⁶⁺	Cr	BL			No comment
		PBBs	D	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
34	Connor motal	Hg	Hg	BL	NA	Pass	No comment
34	Copper metal	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs	D.	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
25	Black hard	Hg	Hg	BL	NIA	Door	No commont
35	plastic	Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs	D	DI			
		PBDEs	Br	BL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			No comment
200	Cibrar mantal	Hg	Hg	BL	NΙΔ	Pass	
36	Silver metal	Cr ⁶⁺	Cr	BL	NA	Pass	
		PBBs	De	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
	37 Black hard plastic	Cd	Cd	BL			
0.7		Hg	Hg	BL	212	D	No
37		Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL			No comment
		Cd	Cd	BL			
20	Touch spot- silver metal	Hg	Hg	BL	NA	Door	
38		Cr ⁶⁺	Cr	BL		Pass	No comment
		PBBs	Br	NA			
		PBDEs	ы	IVA			
		Pb	Pb	BL			
		Cd	Cd	BL			
39	SMD capacitor	Hg	Hg	BL	NA	Pass	No comment
39	SIVID Capacitor	Cr ⁶⁺	Cr	BL	INA	F 455	No comment
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
40	SMD resister	Hg	Hg	BL	NA	Page	No comment
40	SIMID TESISTED	Cr ⁶⁺	Cr	BL	INA	Pass	NO COMMENT
		PBBs	D _r	DI			
		PBDEs	Br	BL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
44	CMD consoiter	Hg	Hg	BL	NA	Pass	No comment
41	SMD capacitor	Cr ⁶⁺	Cr	BL	NA		
		PBBs	Dr	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
	12 Black solid	Cd	Cd	BL			
40		Hg	Hg	BL	110	D	N
42	42 Black solid	Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL	NA		No comment
		Cd	Cd	BL			
40	SMD capacitor	Hg	Hg	BL		D	
43		Cr ⁶⁺	Cr	BL		Pass	No comment
		PBBs	2	DI			
		PBDEs	Br	BL			
		Pb	Pb	OL			
		Cd	Cd	BL			
44	SMD diode	Hg	Hg	BL	Pb:32392	Pass	Soo romark (2)
44	SIVID diode	Cr ⁶⁺	Cr	BL	PD.32392	Fa55	See remark (3)
		PBBs	D.	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
45	Connormatal	Hg	Hg	BL	NIA	Desa	No comment
45	Copper metal	Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs	D.	NΙΛ			
		PBDEs	Br	NA			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
46	Black hard	Hg	Hg	BL	NA	Pass	No commont
40	plastic	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs	Dr	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
17	Silver metal	Hg	Hg	BL	NA	Door	No comment
47	Sliver metal	Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs PBDEs	Br	NA			
		Pb	Pb	BL	NA		No comment
		Cd	Cd	BL			
40	Black hard	Hg	Hg	BL			
48	plastic	Cr ⁶⁺	Cr	BL		Pass	
		PBBs	D.	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
49	White hard	Hg	Hg	BL	NA	Pass	No comment
49	plastic	Cr ⁶⁺	Cr	BL	INA	F 455	NO Comment
		PBBs	Br	BL			
		PBDEs	DI	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
50	Silver metal	Hg	Hg	BL	NΙΛ	Poos	No comment
50	Silver Metal	Cr ⁶⁺	Cr	BL	NA	Pass	NO COMMENT
		PBBs	D _r	NA			
		PBDEs	Br	INA			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			No comment
F4	Doub man and a	Hg	Hg	BL	NΙΔ	Pass	
51	Dark grey solid	Cr ⁶⁺	Cr	BL	NA		
		PBBs	De	D			
		PBDEs	Br	BL			
		Pb	Pb	BL			
	52 Copper metal	Cd	Cd	BL			
50		Hg	Hg	BL	212	D	Name
52		Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs PBDEs	Br	NA			
		Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
50	Silver metal	Hg	Hg	BL			
53		Cr ⁶⁺	Cr	BL		Pass	No comment
		PBBs	2	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
54	Black hard	Hg	Hg	BL	NA	Pass	No comment
34	plastic	Cr ⁶⁺	Cr	BL	INA	F455	No comment
		PBBs	D.,	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
EF	Cilvor stal	Hg	Hg	BL	NIA	Dass	No comment
55	Silver metal	Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs	D.	NA			
		PBDEs	Br	INA			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
56	Spring-silver	Hg	Hg	BL	NA	Door	No comment
36	metal	Cr ⁶⁺	Cr	BL		Pass	
		PBBs	Br	NA			
		PBDEs	ы	INA			
	57 SMD IC	Pb	Pb	BL			
		Cd	Cd	BL			
57		Hg	Hg	BL	NA	Door	No comment
57		Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL	NA NA		No comment
		Cd	Cd	BL			
50	D'a a'l a sasatal	Hg	Hg	BL		Pass	
58	Pin-silver metal	Cr ⁶⁺	Cr	BL			No comment
		PBBs	D.	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
59	SMD IC	Hg	Hg	BL	NA	Pass	No comment
59	SIVID IC	Cr ⁶⁺	Cr	BL	INA	F488	No comment
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
60	Black solid	Hg	Hg	BL	NA	Pass	No comment
00	DIACK SUIIU	Cr ⁶⁺	Cr	BL	INA	F d 3 3	INO COMMINENT
		PBBs	Br	BL			
		PBDEs	וט	DL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
61	SMD IC	Hg	Hg	BL	NA	Poss	No comment
01	SIVID IC	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs	Br	BL			
		PBDEs	ы	DL			
	62 SMD capacitor	Pb	Pb	BL			
		Cd	Cd	BL		Pass	
62		Hg	Hg	BL	NA		No comment
62		Cr ⁶⁺	Cr	BL	INA		No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
	District P. I.	Hg	Hg	BL			
63	Black solid	Cr ⁶⁺	Cr	BL	- NA	Pass	No comment
		PBBs	7				
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
64	Black solid	Hg	Hg	BL	NA	Door	No comment
64	Black Solid	Cr ⁶⁺	Cr	BL	I INA	Pass	No comment
		PBBs	D	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
65	Black solid	Hg	Hg	BL	1	Pass	No comment
00	DIACK SUIIU	Cr ⁶⁺	Cr	BL	NA		No comment
		PBBs	Dr.	DI			
		PBDEs	Br	r BL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
66	SMD diode	Hg	Hg	BL	NA	Door	No comment
66	SIVID diode	Cr ⁶⁺	Cr	BL	INA	Pass	
		PBBs	Dr	D.			
		PBDEs	Br	BL			
		Pb	Pb	OL			
		Cd	Cd	BL		Pass	
67	Dioak aalid	Hg	Hg	BL	Db:20227		Coormonals (2)
67	67 Black solid	Cr ⁶⁺	Cr	BL	Pb:29337		See remark (3)
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
C0	Black solid	Hg	Hg	BL	NA	Daga	No some mont
68	Black Solid	Cr ⁶⁺	Cr	BL	NA.	Pass	No comment
		PBBs	Br	BL			
		PBDEs	DI	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
69	SMD capacitor	Hg	Hg	BL	NA	Pass	No comment
09	SIVID Capacitor	Cr ⁶⁺	Cr	BL	IVA	rass	NO COMMENT
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
70	Silver solid	Hg	Hg	BL	Cr ⁶⁺ :ND	Page	No comment
/0	Sliver Solid	Cr ⁶⁺	Cr	Х	(เ∼∵เทบ	Pass	No comment
		PBBs	D _r	DI			
		PBDEs	Br	BL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
71	Brown translucent	Hg	Hg	BL	NA	Door	No comment
'	plastic film	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
	·	PBBs	De	DI			
		PBDEs	Br	BL			
	72 Beige hard plastic	Pb	Pb	BL			
		Cd	Cd	BL		Pass	
70		Hg	Hg	BL	N/A		Name
/2		Cr ⁶⁺	Cr	BL	NA		No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
70	Black hard	Hg	Hg	BL	NA	Door	No comment
73	plastic	Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
74	Silver metal	Hg	Hg	BL	NA	Pass	No comment
74	Silver metal	Cr ⁶⁺	Cr	BL	IVA	rass	NO COMMENT
		PBBs	Br	NA			
		PBDEs	ы	INA			
		Pb	Pb	BL			
		Cd	Cd	BL			
75	Black solid	Hg	Hg	BL	NA	Pass	No comment
/3	DIACK SUIIU	Cr ⁶⁺	Cr	BL			No comment
		PBBs	Br	BL			
		PBDEs	וט	DL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
76	SMD triode	Hg	Hg	BL	NA	Door	No comment
76	SIVID thode	Cr ⁶⁺	Cr	BL	INA	Pass	
		PBBs	Br	BL			
		PBDEs	ы	DL			
	77 Silver metal	Pb	Pb	BL			
		Cd	Cd	BL		Pass	
77		Hg	Hg	BL	NA		No commont
//		Cr ⁶⁺	Cr	BL	INA		No comment
		PBBs PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
70	ONE COL	Hg	Hg	BL	- NA	_	
78	SMD triode	Cr ⁶⁺	Cr	BL		Pass	No comment
		PBBs		DI.			
		PBDEs	Br	BL			
		Pb	Pb	OL			
		Cd	Cd	BL			
79	SMD diode	Hg	Hg	BL	Pb:30041	Pass	Soo romark (2)
79	SIVID diode	Cr ⁶⁺	Cr	BL	PD.30041	Fa55	See remark (3)
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
80	SMD triode	Hg	Hg	BL	N/A	Pass	No commont
00	SIVID LIIUUE	Cr ⁶⁺	Cr	BL	NA		No comment
		PBBs	Br	BL			
		PBDEs	וט	DL			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
81	Solder-silver	Hg	Hg	BL	NA	Pass	See remark (4)
01	metal	Cr ⁶⁺	Cr	BL	INA	Pass	
		PBBs	Dr	NIA			
		PBDEs	Br	NA			
	82 Label	Pb	Pb	BL			
		Cd	Cd	BL		Pass	
00		Hg	Hg	BL	NA NA		No some mant
82		Cr ⁶⁺	Cr	BL	NA		No comment
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
		Hg	Hg	BL		_	
83	Silver metal	Cr ⁶⁺	Cr	BL	NA NA	Pass	No comment
		PBBs	7				
		PBDEs	Br	NA			
		Pb	Pb	BL			
		Cd	Cd	BL			
84	Black hard	Hg	Hg	BL	NA	Door	No comment
84	plastic	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs	D.,	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
0.5	Silver metal	Hg	Hg	BL		Door	No comment
85	Sliver metal	Cr ⁶⁺	Cr	BL	NA	Pass	ino comment
		PBBs	D.	NI A			
		PBDEs	Br	NA			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
86	Spring-silver	Hg	Hg	BL	NA	Pass	No comment
00	metal	Cr ⁶⁺	Cr	BL	INA	rass	
		PBBs	Dr	NIA			
		PBDEs	Br	NA			
		Pb	Pb	BL	- NA		
		Cd	Cd	BL			
0.7	87 Black PCB	Hg	Hg	BL		Davis	No comment
87	Black PCB	Cr ⁶⁺	Cr	BL		Pass	
		PBBs	D.	V	ND		
		PBDEs	Br	X	ND		
		Pb	Pb	BL			
		Cd	Cd	BL			
00	Label	Hg	Hg	BL	NA	Door	No comment
88		Cr ⁶⁺	Cr	BL	- NA	Pass	No comment
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	BL			
		Cd	Cd	BL			
89	Black solid	Hg	Hg	BL	NA	Pass	No comment
09	DIACK SUIIU	Cr ⁶⁺	Cr	BL	INA	Pass	No comment
		PBBs	D.,	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
00	Black solid	Hg	Hg	BL		Doos	No commont
90	DIACK SOIIO	Cr ⁶⁺	Cr	BL	NA	Pass	No comment
		PBBs	D.	DI			
		PBDEs	Br	BL			





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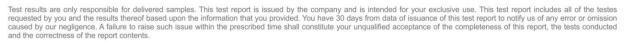
No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL			
		Cd	Cd	BL			
91	Brown solid	Hg	Hg	BL	Cr ⁶⁺ :ND	Door	No comment
91	Brown Solid	Cr ⁶⁺	Cr	Х	CI°1.ND	Pass	
		PBBs	Dr	DI			
		PBDEs	Br	BL			
		Pb	Pb	BL		Pass	
		Cd	Cd	BL			
00	Dioak oolid	Hg	Hg	BL	NA		No comment
92	Black solid	Cr ⁶⁺	Cr	BL	INA		
		PBBs PBDEs	Br	BL			
		Pb	Pb	BL			
		Cd	Cd	BL			
93	Brown solid	Hg	Hg	BL	Cr ⁶⁺ :ND	Door	No comment
93	Brown Solid	Cr ⁶⁺	Cr	Х	GI .ND	Pass	No comment
		PBBs	Br	BL			
		PBDEs	ы	DL			
		Pb	Pb	OL			
		Cd	Cd	BL			
94	Copper metal	Hg	Hg	BL	Pb:27071	Pass	See remark (3)
34	Соррег петаг	Cr ⁶⁺	Cr	BL	F D.2707 1	rass	See remark (S)
		PBBs	Br	NA			
		PBDEs	ы	INA			
		Pb	Pb	OL			
		Cd	Cd	BL			
95	Copper metal	Hg	Hg	BL	Db.00407	Page	Soo romark (2)
30	Copper metal	Cr ⁶⁺	Cr	BL	Pb:28107	Pass	See remark (3)
		PBBs	Br	NA			
		PBDEs	וט	INA			





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No.	Sample description	Restricted substances	Analytical element	Results of EDXRF ⁽¹⁾	Results of Chemical Testing ⁽²⁾ (mg/kg)	Conclusion	Remark
		Pb	Pb	BL	Cr ⁶⁺ :Negative	Pass	No comment
		Cd	Cd	BL			
96	Silver metal	Hg	Hg	BL			
90	Silver metal	Cr ⁶⁺	Cr	X			
		PBBs	Br	NA			
		PBDEs	ы				







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Test Results:

2. Phthalates (DBP, BBP, DEHP, DIBP) Test Results:

Test Item	Te	est Result (mg/k	g)	MDL (mg/kg)	Requirement	
rest item	1+2+5	8+10+12	14+16+19	MDE (mg/kg)	Limit (mg/kg)	
Dibutyl phthalate(DBP)	ND	ND	ND	30	1000	
Benzylbutyl phthalate(BBP)	ND	ND	ND	30	1000	
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	30	1000	
Diisobutyl phthalate(DIBP)	ND	ND	ND	30	1000	
Conclusion	Pass	Pass	Pass			

Test Item	Te	est Result (mg/k	g)	MDL (mg/kg)	Requirement	
Test item	20+21+23	26+29+32	35+37+39	MDE (mg/kg)	Limit (mg/kg)	
Dibutyl phthalate(DBP)	ND	ND	ND	30	1000	
Benzylbutyl phthalate(BBP)	ND	ND	ND	30	1000	
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	30	1000	
Diisobutyl phthalate(DIBP)	ND	ND	ND	30	1000	
Conclusion	Pass	Pass	Pass			

Test Item	Te	est Result (mg/k	MDL (mg/kg)	Requirement	
rest item	40+41+42	43+44+46	48+49+51	MDE (mg/kg)	Limit (mg/kg)
Dibutyl phthalate(DBP)	ND	ND	ND	30	1000
Benzylbutyl phthalate(BBP)	ND	ND	ND	30	1000
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	30	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	30	1000
Conclusion	Pass	Pass	Pass		

Test Item	Te	est Result (mg/k	g)	MDL (mg/kg)	Requirement	
Test item	54+57+59	60+61+62	63+64+65	MDE (mg/kg)	Limit (mg/kg)	
Dibutyl phthalate(DBP)	ND	ND	ND	30	1000	
Benzylbutyl phthalate(BBP)	ND	ND	ND	30	1000	
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	30	1000	
Diisobutyl phthalate(DIBP)	ND	ND	ND	30	1000	
Conclusion	Pass	Pass	Pass			





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Test Results:

2. Phthalates (DBP, BBP, DEHP, DIBP) Test Results:

Test Item	Test Result (mg/kg)			MDL (mg/kg)	Requirement	
rest item	66+67+68	69+70+71	72+73+75	MDE (mg/kg)	Limit (mg/kg)	
Dibutyl phthalate(DBP)	ND	ND	ND	30	1000	
Benzylbutyl phthalate(BBP)	ND	ND	ND	30	1000	
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	30	1000	
Diisobutyl phthalate(DIBP)	ND	ND	ND	30	1000	
Conclusion	Pass	Pass	Pass			

Test Item	Test Result (mg/kg)			MDL (mg/kg)	Requirement	
Test item	76+78+79	80+82+84	87+88+89	WDL (IIIg/kg)	Limit (mg/kg)	
Dibutyl phthalate(DBP)	ND	ND	ND	30	1000	
Benzylbutyl phthalate(BBP)	ND	ND	ND	30	1000	
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	30	1000	
Diisobutyl phthalate(DIBP)	ND	ND	ND	30	1000	
Conclusion	Pass	Pass	Pass			

Test Item	Test Resu	MDL (ma/ka)	Requirement		
Test item	90+91	92+93	MDL (mg/kg)	Limit (mg/kg)	
Dibutyl phthalate(DBP)	ND	ND	30	1000	
Benzylbutyl phthalate(BBP)	ND	ND	30	1000	
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	30	1000	
Diisobutyl phthalate(DIBP)	ND	ND	30	1000	
Conclusion	Pass	Pass			

Note: mg/kg = parts per million = ppm ND = Not Detected (less than MDL) MDL = Method Detection Limit





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Test Materials List:

Item No.	Description			
1	Black PCB			
2	Blue hard plastic			
5	Beige hard plastic			
8	White hard plastic			
10	Yellow hard plastic			
12	Beige hard plastic			
14	Black hard plastic			
16	Dark grey hard plastic			
19	Black hard plastic			
20	Green translucent hard plastic			
21	Yellow translucent hard plastic			
23	Black hard plastic			
26	Black hard plastic			
29	White hard plastic			
32	Blue hard plastic			
35	Black hard plastic			
37	Black hard plastic			
39	SMD capacitor			
40	SMD resister			
41	SMD capacitor			
42	Black solid			
43	SMD capacitor			
44	SMD diode			
46	Black hard plastic			
48	Black hard plastic			
49	White hard plastic			
51	Dark grey solid			
54	Black hard plastic			
57	SMD IC			





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Item No.	Description
59	SMD IC
60	Black solid
61	SMD IC
62	SMD capacitor
63	Black solid
64	Black solid
65	Black solid
66	SMD diode
67	Black solid
68	Black solid
69	SMD capacitor
70	Silver solid
71	Brown translucent plastic film
72	Beige hard plastic
73	Black hard plastic
75	Black solid
76	SMD triode
78	SMD triode
79	SMD diode
80	SMD triode
82	Label
84	Black hard plastic
87	Black PCB
88	Label
89	Black solid
90	Black solid
91	Brown solid
92	Black solid
93	Brown solid

Note: As specified by the client, the samples were subjected to mixed testing.

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the testes requested by you and the results thereof based upon the information that you provided. You have 30 days from data of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Industrial Development Zone, Dongguan, Guangdong, China Http://www.emtek.com.cn E-mail: project@emtek.com.cn





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- Remark: (1) ① Results are obtained by XRF for primary screening, and further wet chemical testing by ICP-OES / AAS (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if an inconclusive result was found (as "X" in below table) (unit: mg/kg).
 - ② OL = Over Limit, BL = Below Limit, X = Inconclusive, NA= Not Applicable.
 - ③ XRF screening test for RoHS elements The test result may be different from the actual content in the non-uniformity composition sample.

Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (70\text{-}3\sigma) < X < (130\text{+}3\sigma) \\ \leq OL$	BL ≤(70-3 σ)< X <(130+3 σ) ≤ OL	LOD < X <(150+3 σ)≤ OL
Pb	BL ≤(700-3 σ)< X <(1300+3 σ)≤ OL	BL \leq (700-3 σ) < X < (1300+3 σ) \leq OL	BL ≤(500-3 σ)< X <(1500+3 σ)≤ OL
Hg	BL \leq (700-3 σ) < X < (1300+3 σ) \leq OL	BL ≤(700-3 σ)< X <(1300+3 σ)≤ OL	BL ≤(500-3 σ)< X <(1500+3 σ)≤ OL
Br	BL ≤ (300-3 <i>σ</i>)< X	NA	BL ≤ (250-3 <i>σ</i>)< X
Cr	BL ≤ (700-3 <i>σ</i>)< X	BL ≤ (700-3 <i>σ</i>)< X	BL ≤ (500-3 <i>σ</i>)< X

- (2) ① mg/kg = ppm = 0.0001%, ND = Not Detected (less than MDL), MDL = Method Detection Limit.
 - 2 Unit, Method Detection Limit (MDL) and Requirement limit in wet chemical test.

Test items	Pb	Cd	Hg	Cr ⁶⁺ (Non-metal)	Cr6+(metal)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL	2	2	2	8		5	5
Requirement Limit	1000	100	1000	1000	Negative	1000	1000

- 3 According to IEC 62321-7-1:2015, result on Cr⁶⁺ for metal sample shall be shown as Positive/Negative.
 - a) The Cr(VI) concentration is more than 0.13 $\mu g/cm^2$, the sample is positive for Cr(VI), the coating is considered to contain Cr(VI).
 - b) The Cr(VI) concentration is less than 0.10 μg/cm², the sample is negative for Cr(VI), the coating is considered a non-Cr(VI) based coating.
 - Storage condition and production date of the tested sample are unavailable and thus results of Cr⁶⁺ represent status of the sample at the time of testing.
- According to IEC 62321-3-1:2013, this column represents the results of wet chem test. And "NA" means no need to perform wet chem test, when the XRF screening results are acceptable.
- (3) As declared by the client, No.4,7,13,94,95 the materials should be exempted for lead content requirement according to Annex clause 6(c); No.44,67,79 the materials should be exempted for lead content requirement according to Annex clause 7(c)-I.





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(4) No.13,81 the XRF screening results for Pb, Cd, Hg, Cr and Br were obtained for the resubmitted sample on May. 19, 2023.

Declaration: Report EDG2304280232C00301R was repealed and replaced by Report EDG2304280232C00301RM1.







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Sample Photo

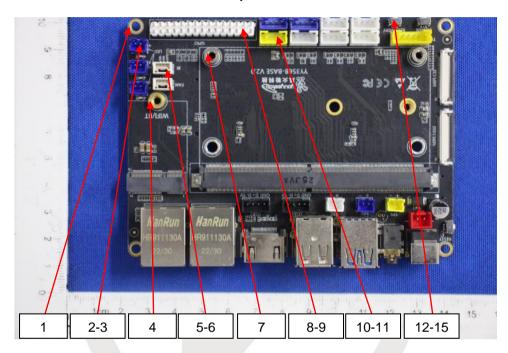


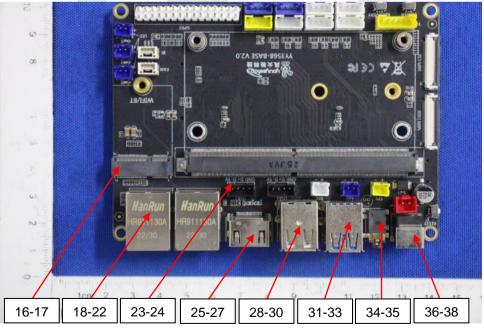




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Sample Photo



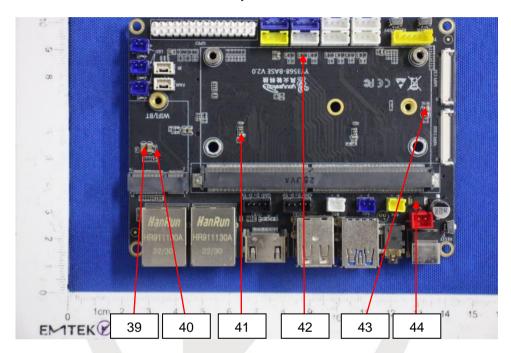


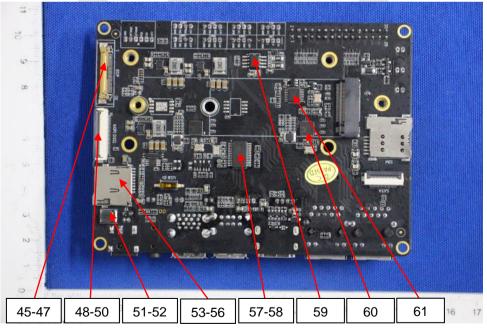




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Sample Photo



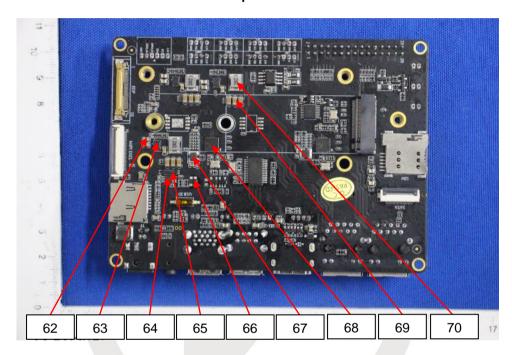


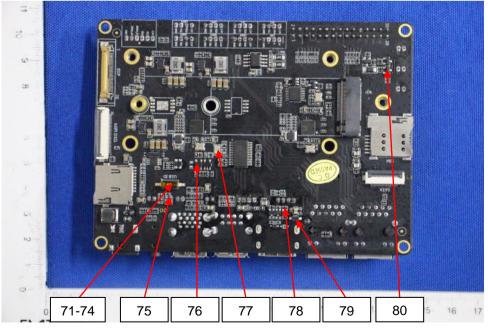




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Sample Photo



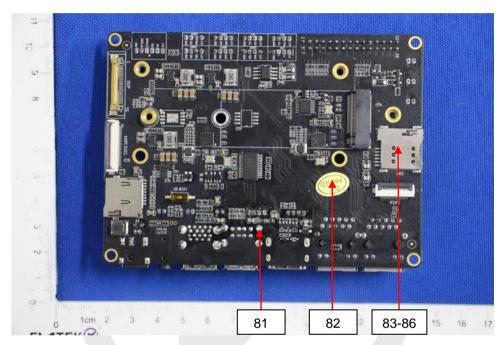


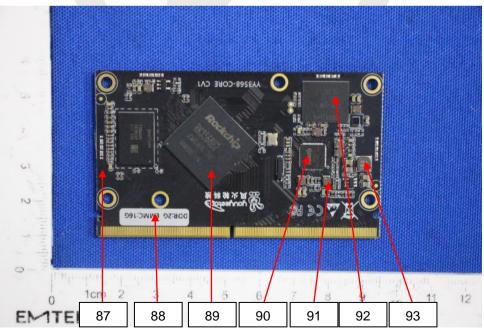




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Sample Photo



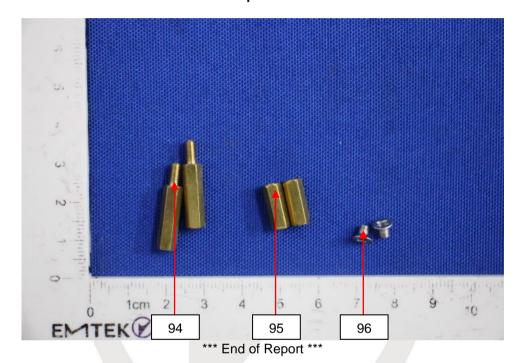






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Sample Photo







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ANNEX

EXEMPTION LIST

- Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):
- For general lighting purposes < 30W: 5mg (expires on 31 December 2011; 3.5mg may be used per burner after 31 December 2011 until 1(a) 31 December 2012; 2.5mg shall be used per burner after 31 December 2012)
- 1(b) For general lighting purposes ≥ 30W and <50W: 5mg (expires on 31 December 2011; 3.5mg may be used per burner after 31
- For general lighting purposes ≥ 50W and <150W: 5mg 1(c)
- For general lighting purposes ≥ 150W: 15mg 1(d)
- 1(e) For general lighting purposes with circular or square structural shape and tube diameter ≤17mm (no limitation of use until 31 December 2011; 7mg may be used per burner after 31 December 2011)
- 1(f) For special purposes: 5mg
- For general lighting purposes < 30 W with a lifetime equal or above 20 000 h: 3,5 mg (Expires on 31 December 2017) 1(g)
- Mercury in double-capped linear fluorescent lamps for general lighting purples not exceeding (per lamp): 2(a)
- Tri-band phosphor with normal lifetime and a tube diameter < 9mm (e.g. T2): 5mg (expires on 31 December 2011; 4mg may be used 2(a)(1) per lamp after 31 December 2011)
- Tri-band phosphor with normal lifetime and a tube diameter ≥ 9mm and ≤ 17mm (e.g. T5): 5mg (expires on 31 December 2011; 3mg 2(a)(2) may be used per lamp after 31 December 2011)
- Tri-band phosphor with normal lifetime and a tube diameter > 17mm and ≤ 28mm (e.g. T8): 5mg (expires on 31 December 2011; 3.5mg 2(a)(3)may be used per lamp after 31 December 2011)
- 2(a)(4) Tri-band phosphor with normal lifetime and a tube diameter > 28mm (e.g. T12): 5mg (expires on 31 December 2012; 3.5mg may be used per lamp after 31 December 2012)
- Tri-band phosphor with long lifetime (≥ 25000h): 8mg (expires on 31 December 2011; 5mg may be used per lamp after 31 December 2(a)(5)
- 2(b) Mercury in other fluorescent lamps not exceeding (per lamp):
- Non-linear halophosphate lamps (all diameters): 15mg (expires on 13 April 2016) 2(b)(2)
- 2(b)(3)Non-linear tri-band phosphor lamps with tube diameter > 17mm (e.g. T9) (no limitation of use until 31 December 2011; 15mg may be used per lamp after 31 December 2011)
- Lamps for other general lighting and special purposes (e.g. induction lamps) (no limitation of use until 31 December 2011; 15mg may 2(b)(4)be used per lamp after 31 December 2011)
- 3 Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):
- Short length (≤ 500mm) (No limitation of use until 31 December 2011; 3.5mg may be used per lamp after 31 December 2011) 3(a)
- 3(b) Medium length (> 500m and ≤ 1500mm) (No limitation of use until 31 December 2011; 5mg may be used per lamp after 31 December
- Long length (> 1500mm) (No limitation of use until 31 December 2011; 13mg may be used per lamp after 31 December 2011) 3(c)
- Mercury in other low pressure discharge lamps (per lamp) (no limitation of use until 31 December 2011; 15mg may be used per lamp 4(a) after 31 December 2011)
- 4(b) Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60:
- 4(b)-I P ≤ 155W (no limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011)
- 155W < P ≤ 405W (no limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011) 4(b)-II
- 4(b)-III P > 405W (no limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011)
- Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner): 4(c)
- 4(c)-l P≤ 155W (no limitation of use until 31 December 2011; 25mg may be used per burner after 31 December 2011)
- 155W < P ≤405W (no limitation of use until 31 December 2011; 30mg may be used per burner after 31 December 2011) 4(c)-II
- 4(c)-III P > 405W (no limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011)
- Mercury in High Pressure Mercury (vapour) lamps (HPMV) (expires on 13 April 2015) 4(d)
- Mercury in metal halide lamps (MH) 4(e)
- Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex 4(f)
- 4(g) Mercury in hand crafted luminous discharge tubes used for signs, decorative or architectural and specialist lighting and light-artwork, where the mercury content shall be limited as follows: (Expires on 31 December 2018)
 - 20 mg per electrode pair + 0.3 mg per tube length in cm, but not more than 80 mg, for outdoor applications and indoor applications exposed to temperatures below 20 °C;
 - 15 mg per electrode pair + 0,24 mg per tube length in cm, but not more than 80 mg, for all other indoor applications.





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ANNEX

EXEMPTION LIST

Continued

5(a)	Lead in glass of cathode ray tubes	
5(h)	Lead in class of fluorescent tubes not exceeding 0.2% by w	ےi

- 6(a) Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight
- Lead as an alloying element in aluminium containing up to 0.4% lead by weight 6(b)
- 6(c) Copper alloy containing up to 4% lead by weight.
- Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead) 7(a)
- 7(b) Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications
- 7(c)-I Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound
- Lead in dielectric ceramic in capacitors for a rated voltage of 125V AC or 250V DC or higher 7(c)-II
- 7(c)-III Lead in dielectric ceramic in capacitors for a rated voltage of less than 125V AC or 250V DC (expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013).
- 7(c)-IV Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors
- 8(a) Cadmium and its compounds in one shot pellet type thermal cut-offs (expires on 1 January 2012 and after that date may be used in spare parts for EEE placed on the market before 1 January 2012)
- 8(b) Cadmium and its compounds in electrical contacts
 - Applies to categories 8, 9 and 11 and expires on:
 - 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments;
 - 21 July 2023 for category 8 in vitro diagnostic medical devices;
 - 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11
- Cadmium and its compounds in electrical contacts used in: 8(b)-I
 - Applies to categories 1 to 7 and 10 and expires on 21 July 2021.
 - circuit breakers,
 - thermal sensing controls,
 - thermal motor protectors (excluding hermetic thermal motor protectors),
 - AC switches rated at:— 6 A and more at 250 V AC and more, or
 - 12 A and more at 125 V AC and more,
 - DC switches rated at 20 A and more at 18 V DC and more, and
 - switches for use at voltage supply frequency ≥ 200 Hz.
- Hexavalent chromium as an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75% by weight in 9 the cooling solution
- Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration 9(b) (HVACR) applications
- Lead used in other than C-press compliant pin connector systems (expires on 1 January 2013 and after that date may be used in spare 11(b) parts for EEE placed on the market before 1 January 2013)
- Lead in white glasses used for optical applications 13(a)
- 13(b) Cadmium and lead in filter glasses and glasses used for reflectance standards
- Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a 14 lead content of more than 80% and less than 85% by weight (expires on 1 January 2011 and after that date may be used in spare parts for EEE placed on the market before 1 January 2011)
- Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip 15 packages
- Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications
- Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing 18(b) phosphors such as BSP (BaSi₂O₅:Pb)
- 21 Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glass
- Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors 24
- Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring 25
- Lead bound in crystal glass as defined in Annex 1 (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC 29
- Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more





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ANNEX

EXEMPTION LIST

Continued

- 31 Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial
- 32 Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes
- 33 Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers
- 34 Lead in cermet-based trimmer potentiometer elements
- 37 Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body
- 38 Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide
- Cadmium in colour converting II-VI LEDs (< 10 µg Cd per mm2 of light- emitting area) for use in solid state illumination or display systems (expires on 1 July 2014)
- Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition 41 modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:2, SH:3 of Directive 97/68/EC of the European Parliament and of the Council (2)) (Expires on 31 December 2018)
- 43 Bis(2-ethylhexyl) phthalate in rubber components in engine systems, designed for use in equipment that is not intended solely for consumer use and provided that no plasticised material comes into contact with human mucous membranes or into prolonged contact with human skin and concentration value of bis(2-ethylhexyl) phthalate does not exceed:
 - 30% by weight of the rubber for
 - gasket coatings;
 - solid-rubber gaskets; or
 - (iii) rubber components included in assemblies of at least three components using electrical, mechanical or hydraulic energy to do work, and attached to the engine.
 - 10% by weight of the rubber for rubber-containing components not referred to in point (a).
 - For the purposes of this entry, "prolonged contact with human skin" means continuous contact of more than 10 minutes duration or intermittent contact over a period of 30 minutes, per day.
- 44 Lead in solder of sensors, actuators, and engine control units of combustion engines within the scope of Regulation (EU) 2016/1628 of the European Parliament and of the Council, installed in equipment used at fixed positions while in operation which is designed for professionals, but also used by non-professional users.





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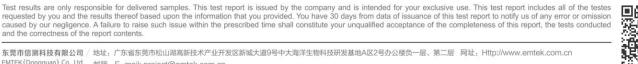
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