

**APPLICANT** 

REPORT No.: SZ18030184R01

# Rohs Test Report

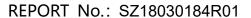
Shanghai Simcom Limited

PRODUCT NAME : SIM33EAU **MODEL NAME** N/A N/A **BRAND NAME TEST REQUEST** : Test as requested by client **TEST DATE** 2018-03-21 to 2018-03-28 **ISSUE DATE** : 2018-04-08 Based on the verification results of the submitted samples, the results CONCLUSION of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis (2-ethylhexyl) phthalate (DEHP), Dibutyl phthalate (DBP), Butyl benzyl Phthalate (BBP), Diisobutyl phthalate (DIBP)comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Tested by	:	
·		Liu Rui(Test engineer)
Approved by	:	
Approved by		Xiaoshan Ni (Supervisor)

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## 1. Technical Information

Note: Provided by applicant

## 1.1 Applicant Information

**Applicant** Shanghai Simcom Limited

Building A,SIM Technology Building,No.633,Jinzhong Road,Changning **Applicant Address** 

Disdrict, Shanghai P.R. China 200335

Manufacturer N/A **Manufacturer Address** N/A

# 2. Component Description

Part No.	Sample No.	Sample Description	Sample Material
1	А	SIM33EAU	
2	A-1	X00012100149	COMPOSITE
3	A-2	X00012100211	COMPOSITE
4	A-3	X00012100305	COMPOSITE
5	A-4	X00012100229	COMPOSITE
6	A-5	X00012100153	COMPOSITE
7	A-6	X00012020789	COMPOSITE
8	A-7	X00012100088	COMPOSITE
9	A-8	X00012100120	COMPOSITE
10	A-9	X00012020001	COMPOSITE
11	A-10	X00012100214	COMPOSITE
12	A-11	X00012100152	COMPOSITE
13	A-12	X00011000335	COMPOSITE
14	A-13	X00011000336	COMPOSITE
15	A-14	X00012020003	COMPOSITE
16	A-15	X00014100395	COMPOSITE



Part No.	Sample No.	Sample Description	Sample Material
17	A-16	X00014100232	COMPOSITE
18	A-17	X00014500002	COMPOSITE
19	A-18	X00014220054	COMPOSITE
20	A-19	X00015100030	COMPOSITE
21	A-20	X00015100036	COMPOSITE
22	A-21	X00015120214	COMPOSITE
23	A-22	X00013620517	COMPOSITE
24	A-23	X00013620035	COMPOSITE
25	A-24	X00013020113	COMPOSITE
26	A-25	X00021121401	COMPOSITE
27	A-26	X00012100426	COMPOSITE
28	A-27	X00014100431	COMPOSITE
29	A-28	X00012100454	COMPOSITE
30	A-29	X00014120028	COMPOSITE
31	A-30	X00014100432	COMPOSITE
32	A-31	X00024021201	METAL
33	A-32	X00012100003	COMPOSITE
34	A-33	X00027220595	COMPOSITE
		<del></del>	



## 3. Test Methods

## 3.1. Screening test by XRF spectroscopy

Element	Polymer	Metal	Composite Materials
Cd	P≤70-3σ <d<130+3σ≤f< td=""><td>P≤70-3σ<d<130+3σ≤f< td=""><td>P≤50-3σ<d<150+3σ≤f< td=""></d<150+3σ≤f<></td></d<130+3σ≤f<></td></d<130+3σ≤f<>	P≤70-3σ <d<130+3σ≤f< td=""><td>P≤50-3σ<d<150+3σ≤f< td=""></d<150+3σ≤f<></td></d<130+3σ≤f<>	P≤50-3σ <d<150+3σ≤f< td=""></d<150+3σ≤f<>
Pb	P≤700-3σ <d<1300+3σ≤f< td=""><td>P≤700-3σ<d<1300+3σ≤f< td=""><td>P≤500-3σ<d<1500+3σ≤f< td=""></d<1500+3σ≤f<></td></d<1300+3σ≤f<></td></d<1300+3σ≤f<>	P≤700-3σ <d<1300+3σ≤f< td=""><td>P≤500-3σ<d<1500+3σ≤f< td=""></d<1500+3σ≤f<></td></d<1300+3σ≤f<>	P≤500-3σ <d<1500+3σ≤f< td=""></d<1500+3σ≤f<>
Hg	P≤700-3σ <d<1300+3σ≤f< td=""><td>P≤700-3σ<d<1300+3σ≤f< td=""><td>P≤500-3σ<d<1500+3σ≤f< td=""></d<1500+3σ≤f<></td></d<1300+3σ≤f<></td></d<1300+3σ≤f<>	P≤700-3σ <d<1300+3σ≤f< td=""><td>P≤500-3σ<d<1500+3σ≤f< td=""></d<1500+3σ≤f<></td></d<1300+3σ≤f<>	P≤500-3σ <d<1500+3σ≤f< td=""></d<1500+3σ≤f<>
Br	P≤300-3σ <d< td=""><td></td><td>P≤250-3σ<d< td=""></d<></td></d<>		P≤250-3σ <d< td=""></d<>
Cr	P≤700-3σ <d< td=""><td>P≤700-3σ<d< td=""><td>P≤500-3σ<d< td=""></d<></td></d<></td></d<>	P≤700-3σ <d< td=""><td>P≤500-3σ<d< td=""></d<></td></d<>	P≤500-3σ <d< td=""></d<>

Note: P = PASS F = FAIL

The symbol "D" marks the region where further investigation is necessary.

XRF testing results are only used for reference.

#### 3.2. Chemical Test

Test item	Procedure	Apparatus	MDL(mg/kg)
Hg	With reference to IEC 62321-4-2013	ICP-OES	2
Cd & Pb	With reference to IEC 62321-5-2013	2321-5-2013 CV-AAS or ICP-OES	
- 64	With reference to IEC 62321-7-2:2017 (For Polymer and Electronics)	LIVAVIC	2
Cr <sup>6+</sup>	With reference to IEC 62321-7-1:2015 <sup>▲</sup> (For Plating on Metals)	UV-VIS	0.1ug/cm <sup>2</sup>
PBBs & PBDEs	With reference to IEC 62321-6:2015	GC-MS	5
Phthalates (DBP,BBP,DEHP,DIBP)	With reference to IEC 62321-8:2017	GC-MS	10



# 4. Test Results and Photographs of Sample The results of XRF screening and chemical test (Unit: mg/kg)

		creening and chemical test (Unit: mg	X-ray Screening chemical test				t
No.	Sample No.	Figure	Element	Data	UV-Vis	ICP-OES	GC-MS
			Pb	N.D.	01110	10. 020	00 1110
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
			Br	N.D.			/
			Cr <sup>6+</sup>	N.D.			
1	A-1	Author	PBBs		/	/	
			PBDEs	+			
			DBP	-			N.D.
			BBP	-			N.D.
			DEHP	+			N.D.
			DIBP	-			N.D.
			Pb	N.D.			ıv.D.
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
			Br	N.D.			/
		Also	Cr <sup>6+</sup>	IN.D.			
2	A-2	3	PBBs _	1	1	1	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP	+			N.D.
			DIBP	+			N.D.
			Pb	N.D.			N.D.
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
		=	Br	N.D.			/
		<b>发展</b>	Cr <sup>6+</sup>	N.D.	,		
3	A-3		PBBs		/	/	
		Service Control of the Control of th	PBDEs	1			
			DBP	1			N.D.
			BBP	1			N.D.
			DEHP	1			N.D.
			DIBP	1			N.D.
			Pb	N.D.			۱۹.۵.
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
		<b>.</b>	Br	N.D.			1
			Cr <sup>6+</sup>	14.0.			
4	A-4		PBBs	1	1	/	
		*	PBDEs	1			
			DBP	1			N.D.
			BBP	1			N.D.
			DEHP	†			N.D.
			DIBP	†			N.D.
L	1		וטוט		<u> </u>		14.0.



Г., Т	Sample		X-ray S	creening	C	chemical tes	
No.	No.	Figure	Element	Data	UV-Vis	ICP-OES	GC-MS
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			,
			Br	N.D.			/
5	A-5		Cr <sup>6+</sup>		,	/	
5	A-5	************************************	PBBs		/	,	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr Br	N.D. N.D.			/
		A Section of the sect	Cr <sup>6+</sup>	IN.D.			
6	A-6		PBBs		1	/	
		e se <sup>te</sup>	PBDEs				
			DBP	-			N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP	•			N.D.
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
		2 mm 2	Br	N.D.			/
		11.	Cr <sup>6+</sup>				
7	A-7		PBBs		1	/	
			PBDEs	-			
			DBP				N.D.
			BBP	-			N.D.
			DEHP	-			N.D.
			DIBP	-			N.D.
			Plb PlbP	N.D.			IN.D.
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
		** <u>*</u>	Br	N.D.			/
		and the same of th	Cr <sup>6+</sup>	-	,	,	
8	A-8		PBBs	1	/	/	
			PBDEs	1			
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.



	Sample		X-ray S	creening	C	chemical tes	t
No.	No.	Figure	Element	Data	UV-Vis	ICP-OES	GC-MS
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
			Br	N.D.			/
			Cr <sup>6+</sup>		_		
9	A-9		PBBs		/	/	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
		8	Cr	N.D.			,
		6.6	Br	N.D.			/
10	A-10		Cr <sup>6+</sup>		1	/	
10	A-10		PBBs		,	,	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			
				Cd	N.D.		
			Hg	N.D.			
			Cr	N.D.			
			Br	N.D.			/
		0.96	Cr <sup>6+</sup>				
11	A-11	and the	PBBs		1	/	
			PBDEs				
							ND
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
		2 👡	Cr	N.D.			/
			Br O:: <sup>6+</sup>	N.D.			
12	A-12		Cr <sup>6+</sup>		1	1	
	77-12	5° ° 6°	PBBs				
			PBDEs	-			ND
			DBP				N.D.
			BBP DEHP				N.D. N.D.
			DIBP				N.D.
	<u> </u>		DIDE	l .		<u> </u>	IN.D.



	Sample		X-ray S	creening	C	chemical tes	t
No.	No.	Figure	Element	Data	UV-Vis	ICP-OES	GC-MS
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
			Br	N.D.			1
			Cr <sup>6+</sup>	IV.D.			
13	A-13	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PBBs	-	1	/	
		and the second s	PBDEs	-			
			DBP	-			N.D.
			BBP	-			N.D.
			DEHP	1			N.D.
			DIBP	1			N.D.
			Pb	N.D.			IN.D.
			Cd	N.D.			
			Hg	N.D.			
			ng Cr	N.D.			
			Br	N.D.			1
		7 PM 1	Cr <sup>6+</sup>	IN.D.			
14	A-14	The state of the s	PBBs	-	/	/	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			14.5.
			Cd	N.D.	<u> </u>		
			Hg	N.D.			
			Cr	N.D.		/	1
		4 44 3	Br	N.D.			
15	A-15		Cr <sup>6+</sup>				
13	A-13		PBBs		,	,	
		**************************************	PBDEs				
			DBP	1			N.D.
			BBP	1			N.D.
			DEHP	1			N.D.
			DIBP	1			N.D.
			Pb	N.D.			11.0.
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
		444	Br	N.D.			/
		100	Cr <sup>6+</sup>	11.0.			
16	A-16	W "#	PBBs	=	1	/	
			PBDEs	-			
		***	DBP	1			N.D.
			BBP	1			N.D.
			DEHP	1			N.D.
			DIBP	1			N.D.
	I	I		1	1	l .	



No.	Sample	Eiguro	X-ray So	creening		chemical tes	<u>t</u>
INO.	No.	Figure	Element	Data	UV-Vis	ICP-OES	GC-MS
			Pb	825.5		&1.1×10 <sup>4</sup>	
			Cd	N.D.			
		5.0120	Hg	N.D.			
			Cr	N.D.			,
		200	Br	N.D.			/
17	A-17	1000	Cr <sup>6+</sup>		1		
''	Α-17		PBBs		,	/	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP	N.D.			N.D.
			Pb Cd	N.D.			
			Hg	N.D. N.D.			
			⊢ ⊓g Cr	N.D.			
			Br	N.D.			/
			Cr <sup>6+</sup>	IV.D.			
18	A-18		PBBs		1	/	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP	•			N.D.
			Pb	N.D.			
		Cd	N.D.				
			Hg	N.D.		/	,
			Cr	N.D.			1
			Br	943.4			
		ACT	Cr <sup>6+</sup>		/		
19	A-19	19	PBBs				N.D.
			PBDEs				N.D.
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			14.0.
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			,
			Br	N.D.			/
20	A 20		Cr <sup>6+</sup>		,	,	
20	A-20		PBBs		/	/	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.



No.	Sample	Eiguro	X-ray S	creening	C	chemical tes	t
INO.	No.	Figure	Element	Data	UV-Vis	ICP-OES	GC-MS
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			,
		Walter Commencer	Br	N.D.			/
21	A-21	V.A.	Cr <sup>6+</sup>		/	/	
21	A-21	See Land	PBBs		,	,	
			PBDEs				
			DBP	-			N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP Pb	N.D.			N.D.
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
			Br	N.D.			/
	4.00		Cr <sup>6+</sup>	-	,	,	
22	A-22		PBBs		/	/	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			1
			Br	N.D.			,
23	A-23	and the second	Cr <sup>6+</sup>		/	/	
25	A-25		PBBs		,	,	
		A STATE OF THE STA	PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP	]			N.D.
			DIBP	]			N.D.
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			,
			Br - 6+	N.D.			,
24	A-24		Cr <sup>6+</sup>		/	1	
			PBBs	-			
			PBDEs	-			ND
			DBP BBP	-			N.D.
			DEHP	1			N.D.
			DIBP	1			N.D.
L	<u>I</u>	<u> </u>	וטוט	l		<u> </u>	14.0.



	Sample	ample X-ray Screenin		creenina	ning chemical test		
No.	No.	Figure	Element	Data	UV-Vis	ICP-OES	GC-MS
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
		9 114 man 11	Cr	N.D.		/	/
	A-25		Br	1.4×10 <sup>3</sup>			
			Cr <sup>6+</sup>	1.4~10			
25			PBBs		/		N.D.
			PBDEs				N.D.
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			
			Cd	N.D.	-		
		and the second second	Hg	N.D.			
			Cr	N.D.			
		the works	Br	N.D.			/
	A-26		Cr <sup>6+</sup>	11.5.			
26		3 Table 1 Tabl	PBBs		/	1	
		* **	PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
	A-27		Pb	N.D.			
			Cd	N.D.			
		3-	Hg	N.D.			
			Cr	N.D.			/
			Br	N.D.			
27		-11.4	Cr <sup>6+</sup>		1	/	
			PBBs		,	,	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP	1			N.D.
			DIBP	1			N.D.
	A-28		Pb	N.D.			
			Cd	N.D.			
28		A-28	Hg	N.D.			
			Cr	N.D.			
			Br	N.D.			/
			Cr <sup>6+</sup>		<i>,</i>	,	
			PBBs	1	/	/	
			PBDEs	1			
			DBP	1			N.D.
			BBP	1			N.D.
			DEHP				N.D.
			DIBP				N.D.



No Sample			X-ray Screening		chemical test		
No.	No.	Figure	Element	Data	UV-Vis	ICP-OES	GC-MS
			Pb	N.D.			
			Cd	N.D.			
	A-29		Hg	N.D.			
			Cr	N.D.	,	/	
			Br	N.D.			1
		the state of the s	Cr <sup>6+</sup>				
29			PBBs		/		
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.			
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			,
			Br	N.D.			,
30	A-30		Cr <sup>6+</sup>		1	/	
	A-30	5 T- 445	PBBs			,	
			PBDEs				
			DBP				N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
			Pb	N.D.	İ		
			Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
			Br	1	,		
0.4	A-31		Cr <sup>6+</sup>				,
31			PBBs		1	/	1
			PBDEs	1			
			DBP				
			BBP				
			DEHP	1			
			DIBP	-			
	A-32		Pb	N.D.			
32		A-32	Cd	N.D.			
			Hg	N.D.			
			Cr	N.D.			
			Br	N.D.			1
			Cr <sup>6+</sup>				
			PBBs		/	/	
			PBDEs	1			
			DBP	1			N.D.
			BBP				N.D.
			DEHP				N.D.
			DIBP				N.D.
	l			l .			

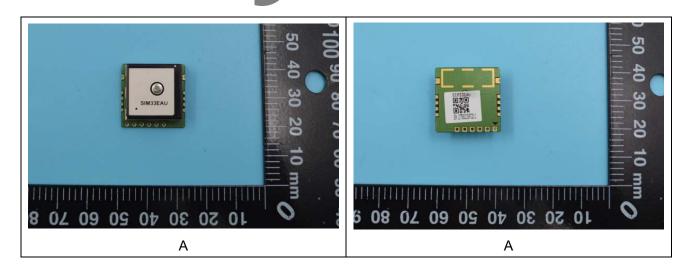


No.	Sample No.	Figure	X-ray Screening		chemical test			
			Element	Data	UV-Vis	ICP-OES	GC-MS	
			Pb	N.D.				
	A-33		Cd	N.D.	/	1		
			Hg	N.D.				
			Cr	N.D.			1	
			Br	N.D.				
00			Cr <sup>6+</sup>					
33			PBBs					
			PBDEs					
			DBP				N.D.	
			BBP				N.D.	
			DEHP				N.D.	
			DIBP				N.D.	

#### Remark:

- (1) mg/kg=ppm
- (2) N.D. = Not Detected (< MDL);
- (3)"/"= Not Conducted
- (4)MDL = Method Detection Limit
- (5)  $\triangleq$  a. The sample is negative for  $Cr^{6+}$  the  $Cr^{6+}$  concentration is below the limit 0.10ug/cm<sup>2</sup>. The coating is considered a non-Cr<sup>6+</sup> based coating.
  - b. The sample positive for Cr<sup>6+</sup> if the Cr<sup>6+</sup> concentration is greater than 0.13ug/cm<sup>2</sup>. The sample coating is considered to contain Cr<sup>6+</sup>.
  - c. The result between 0.10ug/cm<sup>2</sup> and 0.13ug/cm<sup>2</sup> is considered to be inconclusive unavoidable coating variations may influence the determination.
- (6)& = 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. The item is exempted from the requirements of the item 7(c)- I in ANNEX III, (Directive 2011/65/EU).

# Annex A Photographs of the EUT





## **Annex B General Information**

## 1.1 Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.			
Department:	Morlab Laboratory			
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong			
	Province, P. R. China			
Responsible Test Lab Manager:	Mr. Su Feng			
Telephone:	+86 755 36698555			
Facsimile:	+86 755 36698525			

# 1.2 Test Equipment Utilized

No.	Equipment Name	Serial No.	Туре	Manufacturer	Cal.Date	Cal.Due Date
1	X-Ray Fluorescence	0102	EDX-1800B	Skyray	2017.05.23	2018.05.23
	Spectroscopy(XRF)	0102				
2	gas chromatograph-mass	CN10617090	6890-59751	Agilent	2017.05.23	2018.05.23
	spectrometer (GC-MS)	CN 100 17 090				
3	ultraviolet-uisible	0153	UV-1100	Labtech	2017.05.23	2018.05.23
3	spectrophotometer(UV-Vis)	0133				2018.03.23
4	IPC-OES	842320072001	iCAP7200	Thermo	2017.05.23	2018.05.23

\*\*\*\* END OF REPORT \*\*\*\*