



## RoHS TEST REPORT No.I15Z43032-SEM01

Applicant Name: Shanghai Simcom Limited  
 Applicant Address: Building A, SIM Technology Building, No.633 Jinzhong Road,  
 Changning District, Shanghai, P.R.China  
 Manufacture Name: Shanghai Simcom Limited  
 Manufacture Address: Building A, SIM Technology Building, No.633 Jinzhong Road,  
 Changning District, Shanghai, P.R.China  
 Product Name: Wireless Module  
 Product Model: SIM5320A  
 Date of Sample received: 2015-12-07  
 Date of Test Finished: 2015-12-17  
 Test Requested: With reference to RoHS Directive 2011/65/EU recasting 2002/95/EC  
 Test Method: Please refer to next page(s)  
 Test Result: Please refer to next page(s)  
 Test Conclusion: Based on the verification results of the submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyl (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Chief tester: Zhong Xiangyuan

Approved by: 上海春阳

Audited by: Hao Yu

Date: 2015-12-17

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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## Reference Method

1. With reference to IEC 62321-2:2013, review was performed for the samples disjointed from the submitted articles.
2. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in the report.
  - (1) With reference to IEC 62321-3-1:2013, screening by EDXRF Spectroscopy;
  - (2) Wet Chemical Test Method:
    - a. With reference to IEC 62321-5:2013, determination of Cadmium and Lead by ICP-OES;
    - b. With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES;
    - c. With reference to IEC 62321-7-1:2015, determination of Hexavalent Chromium by spot test, with reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis;
    - d. With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.

## Test Results

Test results (Unit: mg/kg)										
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE	
					Element	Data				
1	SIM5320 PCB V1.03	PCB SIM5320 MAIN HDI PCB V1.03 RO	Composite Materials		Pb	BL	-	-		
					Cd	BL				
					Hg	BL				
					Cr	BL				
					Br	$1.03 \times 10^5$				
					Cr <sup>6+</sup>	-				
					PBB					
					PBDE					
2	QSC-6270-0-424CSP-TR-0C-0	BB HSDPA/WCDM A+GSM/EDGE 230MHZ CSP424 RO	Composite Materials		Pb	BL	-	-		
					Cd	BL				
					Hg	BL				
					Cr	BL				
					Br	BL				
					Cr <sup>6+</sup>	-				
					PBB					
					PBDE					
3	TY890A111 411KA	MEMO 512M16NAND+ 256M16DDR 1.8V BGA130 RO	Composite Materials		Pb	BL	-	-		
					Cd	BL				
					Hg	BL				
					Cr	BL				
					Br	BL				
					Cr <sup>6+</sup>	-				
					PBB					
					PBDE					
4	FM64D1G5 6A-5BAGE	MEMO 1G16NAND+25 6M16DDR1 1.8V BGA130 RO	Composite Materials		Pb	BL	-	-		
					Cd	BL				
					Hg	BL				
					Cr	BL				
					Br	BL				
					Cr <sup>6+</sup>	-				
					PBB					
					PBDE					
5	ACPM-520 5-TR1	RF PA WCDMA850 3*3MM 10PIN RO	Composite Materials		Pb	BL	-	-		
					Cd	BL				
					Hg	BL				
					Cr	BL				
					Br	BL				
					Cr <sup>6+</sup>	-				
					PBB					
					PBDE					
6	ACPM-520 2-LR1	RF PA WCDMA1900 3*3MM 10PIN RO	Composite Materials		Pb	BL	-	-		
					Cd	BL				
					Hg	BL				
					Cr	BL				
					Br	BL				
					Cr <sup>6+</sup>	-				
					PBB					
					PBDE					
7	TQM7M502 2	PA GSM Q-BAND POLAR 5*5 RO	Composite Materials		Pb	BL	-	-		
					Cd	BL				
					Hg	BL				
					Cr	BL				
					Br	BL				
					Cr <sup>6+</sup>	-				
					PBB					
					PBDE					

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Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
8	SAYFP836 MCA0F00R 15	SAW DPX W/CDMA800 50/50/100R 2.5*2.0 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
9	LMSP2PQ K-857TEM P	ASM SP9T Q-BAND GSM/TD/UMTS* 3.2.5*2.5 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
10	SAWEN1G 84BH0F00 R15	SAW RX GSM1800/1900 50R/150R 1.8*1.35 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
11	SAFEA942 MFL0F00R 15	IC SAW GSM942.5MHZ 1.4*1.1 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
12	SAFEB1G8 8KA0F00	SAW TX CDMA1900 50/50R 1.4*1 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
13	SC-32S(9P F,20PPM)	CRY 32.768K 9PF +/-20PPM 3.2*1.5 RO	Metal		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	-			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
14	NLX1G74M UTCG	D-TYPE FLIT-FLOP UQFN8 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

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Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
15	BAT54L,31 5	DIO SCHOTTKY VR=30V IO=200MA SOD882 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
16	ESD9B5V- 2/TR	ESD 5.0V VPP=8KV 30PF 1.0X0.6MM RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
17	SAFEB1G5 7FM0F00R 15	SAW GPS1575.5MHZ 50/100R 1.35*1.05 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
18	TXB0102Y ZPR	LEVEL SHIFT 2BIT DUAL-SUPPLY BGA8 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
19	FWF132KK	GPS RECEIVER RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
20	C0201C0G 390J250NT A	CAP COG 39PF +/-5% 50V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
21	C0201C0G 330J250NT A	CAP COG 33PF +/-5% 25V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
22	F950J107M SAAQ2	CAP STA 100UF +/-20% 6.3V 321610 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
23	GRM033R6 1A104KE1 5D	CAP X5R 100NF +/-10% 10V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
24	C0201X5R 104K100NT A	CAP X5R 100NF +/-10% 10V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
25	C0201C0G 101J250NT A	CAP CM1 100PF +/-5% 25V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
26	GRM0335C 1H101JA01 D	CAP CM1 100PF +/-5% 50V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
27	CC0201JR NPO9BN10 1	CAP CM1 100PF +/-5% 50V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
28	HK0603 15NJ-T	IND_HIGH_15N H_+/-5%_CH02 01 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
29	LQP03TN1 5NH02D	IND HQ CHIP COIL 15NH +/-3% CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
30	LQP03TN3 N9B02D	IND HQ CHIP COIL 3.9NH +/-1% CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
31	RC0201FR-071KL	RES MF 1K +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
32	0201WMF1 001TCE	RES MF 1K +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
33	RM02FTN1 001	RES MF 1K +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
34	RC0201JR-071KL	RES MF 1K +/-5% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
35	RC0201FR-0718RL	RES MF 18R +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
36	RC0201JR-0718RL	RES MF 18R +/-5% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
37	RC0201FR-07330RL	RES MF 330R +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
38	0201WMF3 300TCE	RES MF 330R +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
39	RC0201JR-072K2L	RES_MF_2.2K_ +/%_1/20W_C H0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
40	0201WMJ0 222TCE	RES_MF_2.2K_ +/%_1/20W_C H0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
41	C0201C0G 120J250NT A	CAP CM1 12PF +/-5% 25V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
42	C0201C0G 220J500NT A	CAP COG 22PF +/-5% 50V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

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Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
43	CC0201JR NPO8BN22 0	CAP CM1 22PF +/-5% 25V CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
44	LQP03TN1 N0B02D	IND HQ 1NH +/-0.1NH CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
45	LQP03TN4 N7H02D	IND HQ CHIP COIL 4.7NH +/-3% CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
46	LQP03TN3 N3B02D	IND HIGH 3.3NH +/-0.1NH CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
47	LQP03TN1 0NH02D	IND HQ CHIP COIL 10NH +/-3% CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
48	RC0201JR- 070RL	RES MF 0R +/-5% 1/20W CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
49	0201WMJ0 000TCE	RES MF 0R +/-5% 1/20W CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
50	RC0201JR-0751RL	RES_MF_51R_+/-5%_1/20W_C H0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
51	0201WMJ0 510TCE	RES_MF_51R_+/-5%_1/20W_C H0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
52	CL05A105 KQ5NNNC	CAP X5R 1UF +/-10% 6.3V CH0402 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
53	LMK105 BJ105KV-F	CAP X5R 1UF +/-10% 10V CH0402 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
54	CL05A105 K05NNC	CAP X5R 1UF +/-10% 16V CH0402 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
55	C0402X5R 105K160N TB	CAP X5R 1UF +/-10% 16V CH0402 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
56	CL05A225 MQ5NSNC	CAP X5R 2.2UF +/-20% 6.3V CH0402 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
57	CL10A106 MQ8NNNC	CAP X5R 10UF +/-20% 6.3V CH0603 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
58	JMK105BB J475MV-F	CAP X5R 4.7UF +/-20% 6.3V CH0402 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
59	C0201X7R 103K100NT A	CAP X7R 10NF +/-10% 10V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
60	GRM03R7 1E271KA0 1D	CAP COG 270PF +/-10% 25V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
61	CC0201KR X7R8BB27 1	CAP COG 270PF +/-10% 25V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
62	C0201X7R 102K250NT A	CAP X7R 1NF +/-10% 25V CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
63	LQM2HPN 4R7MG0D	IND LOW 4.7UH +/-20% CH 2.5*2.0 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
64	LQP03TN2 2NH02D	IND HIGH 22NH +/-3% CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
65	HK0603 22NJ-T	IND MULTILAYER HQ 22NH +/-5% CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
66	LQP03TN3 3NJ02D	IND HQ CHIP COIL 33NH +/-5% CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
67	RC0201JR-071RL	RES MF 1R +/-5% 1/20W CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
68	CL03A333 KQ3NNNC	CAP X5R 33NF +/-10% 6.3V CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
69	RC0201FR-0710KL	RES MF 10K +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
70	0201WMF1 002TCE	RES MF 10K +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
71	RC0201JR-07100RL	RES_MF_100R _+5%_1/20W_ CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
72	0201WMJ0 101TCE	RES_MF_100R _+5%_1/20W_ CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
73	RC0201FR-072KL	RES MF 2K +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
74	BLM15HD1 02SN1D	BEAD 0.25A 10R CH0402 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
75	CM05CG2 R0C50AH	CAP COG 2PF +/-0.25PF 50V CH0402 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
76	0402WGF6 041TCE	RES_MF_6.04K _+/-1%_1/16W_ CH0402 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
77	RC0201FR-0722KL	RES MF 22K +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
78	0201WMF2 202TCE	RES MF 22K +/-1% 1/20W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
79	RC0201JR-0747KL	RES_MF_47K_ +/-5%_1/20W_C H0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
80	RM02JTN4 73	RES_MF_47K_ +/-5%_1/20W_C H0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
81	ESD9X5.0S T5G	ESD VRWM=5.0V 65PF SOD923 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
82	ESD9X5VD -2/TR	ESD 5.0V 50PF SOD923 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
83	ESD9L5.0S T5G	TVS 5V 0.5PF SOD-923 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
84	RC0201JR-0756RL	RES MF 56R +/-5% 1/16W CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
85	LQP03TN7 N5H02D	IND HQ CHIP COIL 7.5NH +/-3% CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
86	GRM155R7 1H471KA0 1D	CAP X7R 470PF +/-10% 50V CH0402 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
87	LQP03TN1 N5B02D	IND HQ 1.5NH +/-1% CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
88	SIM5320 SHIELDIN G FRM 100320 RO	SIM5320_SHIE LDING_FRM_1 00320 RO	Metal		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	-			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
89	SIM5320 SHIELDIN G COVER 100320 RO	SIM5320_SHIE LDING_COVER _100320 RO	Metal		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	9.54x10 <sup>4</sup>			
					Br	-	Negative		
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
90	D6NF1G96 0P1BT-Z	SAW DPX UMTS1900 50/100/50R 2.5*2 RO	Metal		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	-			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			
91	SDCL0603 Q5N6ST02	IND 5.6NH +/-0.3NH 0.4R 150MA CH0201 RO	Composite Materials		Pb	BL			
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>	-			
					PBB	-			
					PBDE	-			

Test results (Unit: mg/kg)									
No.	Part No.	Description	Material type	Figure	X-ray Screening		Spot-test /UV-vis	ICP-OES	GC/MS for PBB/PBDE
					Element	Data			
92	HK0603 5N6S-T	IND 5.6NH +/-0.3NH 0.4R 150MA CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>				
					PBB	-			
					PBDE				
93	C0201C0G 3R3B500N TA	CAP COG 3.3PF +/-0.1PF 50V CH0201 RO	Composite Materials		Pb	BL	-	-	
					Cd	BL			
					Hg	BL			
					Cr	BL			
					Br	BL			
					Cr <sup>6+</sup>				
					PBB	-			
					PBDE				

Note:

- (1) (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr<sup>6+</sup>.  
 (b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Pb, Cd, Hg); UV-VIS(for Cr<sup>6+</sup>) and GC-MS (for PBBs, PBDEs) is recommended to be performed.  
 (c) The XRF screening test for RoHS elements-The reading may be different to the actual content in the sample be of non-uniformity composition.  
 (d) With reference to 2006/66/EC Batteries Instruction method, Lead and Cadmium analysis are performed by AAS; Mercury analysis is performed by ICP-OES.
  
- (2) (a) mg/kg=ppm=0.0001%, BL= Below Limit, N.D.= not detected, — = not available.  
 (b) Unit and Method Detection Limit (MDL) in wet chemical test and XRF

Test Items	Pb	Cd	Hg	Cr	Br
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
XRF MDL	10.0	5.0	20.0	10.0	50.0
Wet Chemical Test MDL	1	1	1	—	—

The MDL for single compound of PBBs & PBDEs is 5 mg/kg and MDL of Cr<sup>6+</sup> for polymer & composite sample is 1 mg/kg.

(c) Spot-test:

Negative = Not Detected of Cr<sup>6+</sup> coating, Positive = Presence of Cr<sup>6+</sup> coating;

(The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed or negative)

Boiling-water-extraction:

CTTL, Telecommunication Technology Labs, Academy of Telecommunication Research, MIIT  
No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: [ctl\\_terminals@catr.cn](mailto:ctl_terminals@catr.cn), website: [www.chinattl.com](http://www.chinattl.com)

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Negative = Not Detected of Cr<sup>6+</sup> coating

Positive = Presence of Cr<sup>6+</sup> coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50cm<sup>2</sup> sample surface area used.

Storage conditions and production date of the tested sample are unavailable and thus results of Cr<sup>6+</sup> represent status of the sample at the time of testing.

Sample photo:



Photo 1 The sample of SIM5320A

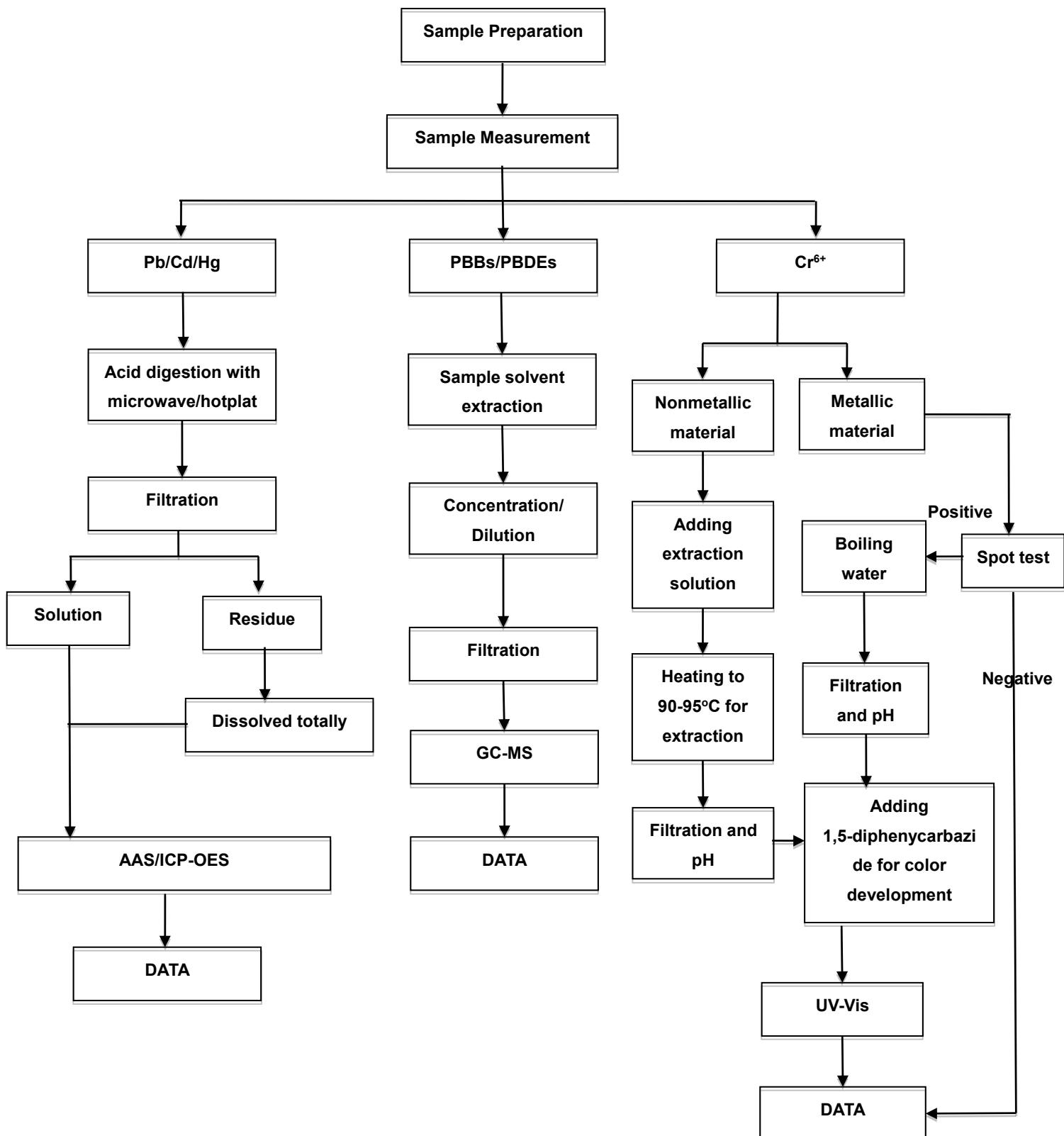


### The Main Testing Equipment list

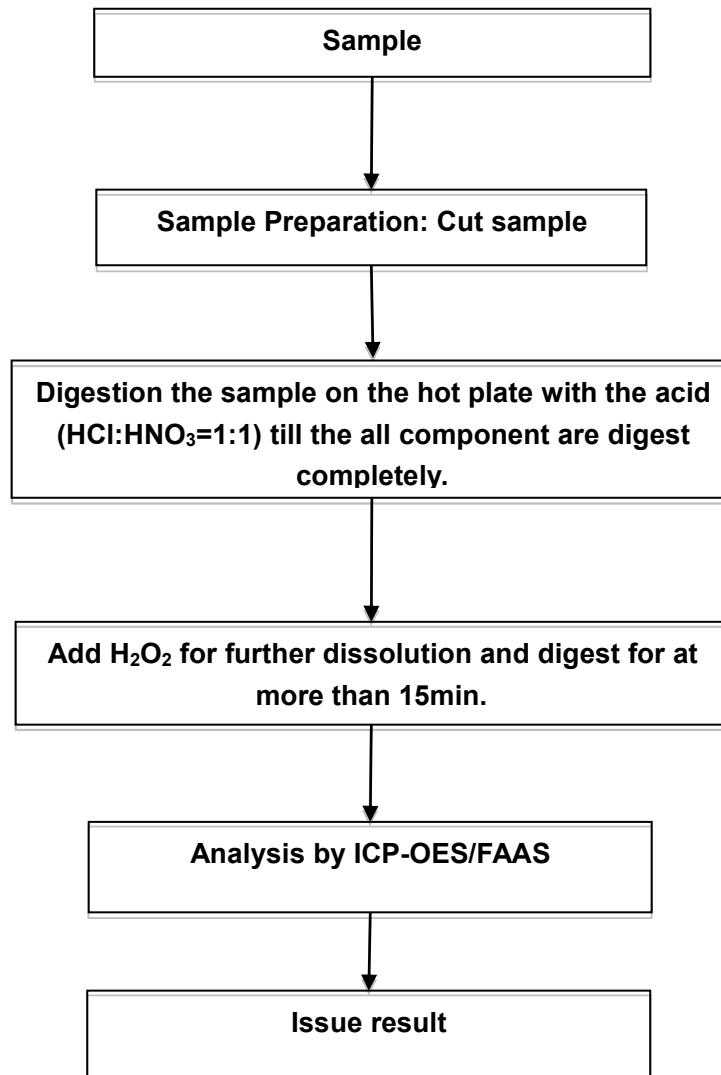
No.	Equipment Name	Model/spec	Equipment Serial Number	Calibration valid date	(√)
1.	XRF analyzer	Ux-310	F2008AA6	2016-06-30	--
2.	XRF analyzer	Ux-310	F2009521	2016-06-30	√
3.	XRF analyzer	Ux-310	F1162	2016-06-30	--
4.	XRF analyzer	XLT-797WZ	10740	2016-06-30	--
5.	XRF analyzer	SEA6000VX	106004050001	2016-07-01	√
6.	ICP-AES	5300DV	077N5072703	2016-07-08	--
7.	GC-MS	Clarus500	GC:650N5081051 MS:651N5072702	2016-07-20	√
8.	HPLC	e2695	G09SM4892A	2016-07-22	--
9.	LC-MSMS	API3200	LC:L20104611696AE MS:AA20320807	2016-11-07	--
10.	UV-VIS	Lambda 35	101N5081605	2016-10-18	--
11.	IC	ICS2000	09090780	2016-12-19	--
12.	Electronic balance	CP225D	50861713	2016-11-14	√
13.	Electronic balance	CPA225D	26192007	2016-04-03	--

# Measurement Flow-Chart of Chemical Testing

These samples were dissolved totally by pre-conditioning method according to below flow chart.



## Test Flow Chart



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