

No. 1 Workshop, M-10, Middle section, Science & Technology Park,

Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053 Report No.: SZEM161000916601

Fax: +86 (0) 755 2671 0594
Email: ee.shenzhen@sgs.com
Page: 1 of 23

TEST REPORT

Application No.: SZEM1610009166RG

Applicant: LG Electronics Mobile Comm USA

Address of Applicant: 1000 Sylvan Avenue Englewood Cliffs, NJ 07632

Manufacturer: Huagin Telecom Technology Co., Ltd.

Address of Manufacturer: No.1 Building, 399 Keyuan Road, Zhangjiang Hi-Tech Park, Pudong New Area,

Shanghai, China

Factory: Dong Guan Huabel Electronic Technology Co.,Ltd

Address of Factory: No.9 Industrial Northern Road, National High-Tech Industrial Development Zone,

SongShan Lake, Dong Guan

Equipment Under Test (EUT):

EUT Name: Mobile Handset

Model No.: LG-X230F, LG-X230AR, LG-X230dsF &

Please refer to section 2 of this report which indicates which model was actually

tested and which were electrically identical.

Trade Mark: LG

FCC ID: ZNFX230F

Standards: 47 CFR PART 15, Subpart B:2015

Date of Receipt: 2016-11-09

Date of Test: 2016-11-21 to 2016-11-22

Date of Issue: 2016-12-06

Test Result : Pass*



Jack Zhang EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sqs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sqs.com/en/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. 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.

^{*} In the configuration tested, the EUT complied with the standards specified above.



Report No.: SZEM161000916601

Page: 2 of 23

2 Test Summary

Item	Standard	Method	Class	Result
Conducted Disturbance at Mains Terminals (150kHz-30MHz)	47 CFR PART 15,Subpart B:2015	ANSI C63.4:2014	Class B	Pass
Radiated Disturbance (30MHz-1GHz)	47 CFR PART 15,Subpart B:2015	ANSI C63.4:2014	Class B	Pass
Radiated Disturbance (above 1GHz)	47 CFR PART 15,Subpart B:2015	ANSI C63.4:2014	Class B	Pass

Remark:

Model No.: LG-X230F, LG-X230AR, LG-X230dsF

Only the model LG-X230F was tested, since the electrical circuit design, layout, components used and internal wiring were identical for all above model only different on model name, SIM card and sales area. LG-X230dsF is Dual SIM, LG-X230AR and LG-X230F is Single SIM. After prescan, the LG-X230dsF result is similar as LG-X230F.



Report No.: SZEM161000916601

Page: 3 of 23

3 Contents

		Page
1	COVER PAGE	1
2	TEST SUMMARY	2
3	CONTENTS	3
4		
4		
	4.1 DETAILS OF E.U.T.	
	4.2 DESCRIPTION OF SUPPORT UNITS	
	4.3 STANDARDS APPLICABLE FOR TESTING	
	4.4 TEST LOCATION	
	4.5 TEST FACILITY	
	4.6 DEVIATION FROM STANDARDS	
	4.7 ABNORMALITIES FROM STANDARD CONDITIONS	
5	EQUIPMENT LIST	6
_		
6	EMISSION TEST RESULTS	8
	6.1 CONDUCTED DISTURBANCE AT MAINS TERMINALS(150kHz-30MHz)	8
	6.1.1 E.U.T. Operation	8
	6.1.2 Test Setup	
	6.1.3 Measurement Data	
	6.2 RADIATED DISTURBANCE(30MHz-1GHz)	13
	6.2.1 E.U.T. Operation	
	6.2.2 Measurement Data	
	6.3 RADIATED DISTURBANCE(ABOVE 1GHz)	
	6.3.1 E.U.T. Operation	
	6.3.2 Measurement Data	
7	PHOTOGRAPHS	23
	7.1 FUT CONSTRUCTIONAL DETAILS	23



Report No.: SZEM161000916601

Page: 4 of 23

4 General Information

4.1 Details of E.U.T.

Power Supply: Adaptor: Model:MCS-02WR2

Input: AC100-240V 50/60Hz 0.2A

Output:DC5.0V 0.85A

DC3.85V (1 x 3.85V Rechargeable battery) 2500mAh

Battery: Charge by DC 5V

Cable: USB cable:100cm shielded

earphone cable: 110cm unshielded.

Internal Source: 1100MHz

4.2 Description of Support Units

The EUT has been tested as an independent unit.

4.3 Standards Applicable for Testing

Table 1: Tests Carried Out Under 47 CFR PART 15, Subpart B:2015

Method	Item	Status
ANSI C63.4:2014	Conducted Disturbance at Mains Terminals	√
	(150kHz-30MHz)	
ANSI C63.4:2014	Radiated Disturbance(30MHz-1GHz)	√
ANSI C63.4:2014	Radiated Disturbance(above 1GHz)	√

[×] Indicates that the test is not applicable

 $[\]sqrt{}$ Indicates that the test is applicable



Report No.: SZEM161000916601

Page: 5 of 23

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong,

China 518057

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

•CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

VCCI

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

• FCC - Registration No.: 556682

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

• Industry Canada (IC)

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

4.8 Monitoring of EUT for All Immunity Test

Visual: N/A Audio: N/A



Report No.: SZEM161000916601

Page: 6 of 23

5 Equipment List

Condu	Conducted Disturbance at Mains Terminals(150kHz-30MHz)										
Item	Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date					
1	Shielding Room	ChangZhou ZhongYu	GB-88	SEM001-06	2016-05-13	2017-05-13					
2	LISN	Rohde & Schwarz	ENV216	SEM007-01	2016-10-09	2017-10-09					
3	LISN	ETS-LINDGREN	3816/2	SEM007-02	2016-04-25	2017-04-25					
4	EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2016-04-25	2017-04-25					

Radiate	Radiated Disturbance(30MHz-1GHz)										
Item	Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date					
1	10m Semi- Anechoic Chamber	SAEMC	FSAC1018	SEM001-03	2016-05-13	2017-05-13					
2	EMI Test Receiver (9kHz-7GHz)	Rohde & Schwarz	ESR	SEM004-03	2016-04-25	2017-04-25					
3	Trilog-Broadband Antenna (30M-1GHz)	Schwarzbeck	VULB9168	SEM003-18	2016-06-29	2019-06-29					
4	Pre-amplifier	Sonoma Instrument Co	310N	SEM005-03	2016-07-06	2017-07-06					

Radiate	Radiated Disturbance(above 1GHz)										
Item	Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date					
1	3m Semi- Anechoic Chamber	AUDIX	N/A	SEM001-02	2016-05-13	2017-05-13					
2	EXA Spectrum Analyzer	AgilentTechnolo gies Inc	N9010A	SEM004-09	2016-07-19	2017-07-19					
3	Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-06	2015-06-14	2018-06-14					
4	Low Noise Amplifier	Black Diamond Series	BDLNA-0118- 352810	SEM005-05	2016-10-09	2017-10-09					



Report No.: SZEM161000916601

Page: 7 of 23

Genera	General used equipment										
Item	Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date					
1	Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2016-10-12	2017-10-12					
2	Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2016-10-12	2017-10-12					
3	Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2016-10-12	2017-10-12					
4	Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2016-05-18	2017-05-18					



Report No.: SZEM161000916601

Page: 8 of 23

6 Emission Test Results

6.1 Conducted Disturbance at Mains Terminals(150kHz-30MHz)

Test Requirement: 47 CFR PART 15, Subpart B:2015

Test Method: ANSI C63.4:2014 Frequency Range: 150kHz to 30MHz

Limit:

0.15M-0.5MHz 66dB(μ V)-56dB(μ V) quasi-peak, 56dB(μ V)-46dB(μ V) average

0.5M-5MHz 56dB(μ V) quasi-peak, 46dB(μ V) average 5M-30MHz 60dB(μ V) quasi-peak, 50dB(μ V) average

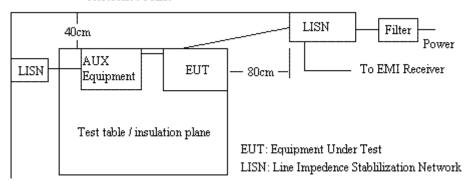
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.1.1 E.U.T. Operation

Operating Environment:										
Temperature:	22.0	°C	Humidity:	54	% RH	Atmospheric Pressure:	1015	mbar		
	a: GS	SM(Idle)+E	BT+ WLAN +	GPS	S Rx + pla	ying MP4 + earphone + batter	y + ada	oter		
Pretest these	b: WCDMA(Idle)+BT + WLAN+ GPS Rx + camera(Front) + earphone + battery + adapter									
mode to find the worst case:	c: LTE(Idle)+BT + WLAN+ GPS Rx + camera(rear) + earphone + battery + adapter									
wordt dado.	d: Transfer data between the EUT and the PC									
	e: FM mode									
The worst case for final test:	b: WCDMA(Idle)+BT + WLAN+ GPS Rx + camera(Front) + earphone + battery + adapter									
	d: Tra	d: Transfer data between the EUT and the PC								

6.1.2 Test Setup

Reference Plane



6.1.3 Measurement Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

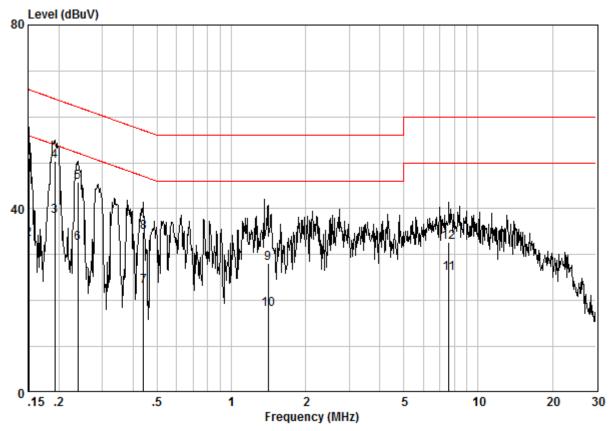
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sqs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sqs.com/en/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. 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.



Report No.: SZEM161000916601

Page: 9 of 23

Mode:b;Line:Live Line



Site : Shielding Room Condition : CE LINE Job No. : 9166RG Test Mode : b

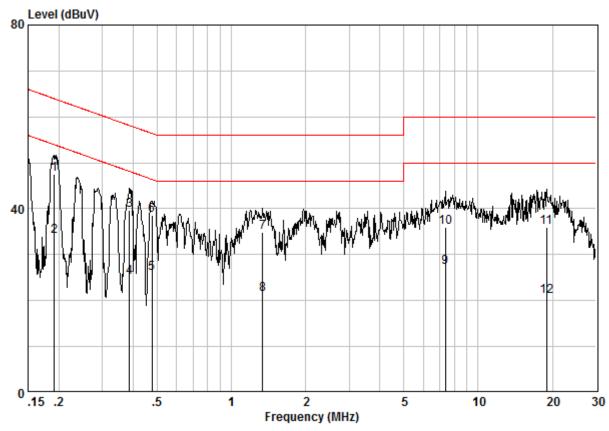
		Freq	Cable Loss	LISN Factor			Limit Line	Over Limit	Remark
		MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	@	0.15080	0.02	9.59	41.31	50.92	65.96	-15.04	QP
2		0.15080	0.02	9.59	23.80	33.41	55.96	-22.55	AVERAGE
3		0.19242	0.02	9.60	28.77	38.39	53.93	-15.54	AVERAGE
4	@	0.19242	0.02	9.60	40.84	50.46	63.93	-13.47	QP
5		0.23910	0.02	9.60	36.13	45.75	62.13	-16.38	QP
6		0.23910	0.02	9.60	22.81	32.43	52.13	-19.70	AVERAGE
7		0.43974	0.02	9.60	13.50	23.11	47.07	-23.95	AVERAGE
8		0.43974	0.02	9.60	25.36	34.97	57.07	-22.09	QP
9		1.411	0.03	9.59	18.53	28.15	56.00	-27.85	QP
10		1.411	0.03	9.59	8.54	18.15	46.00	-27.85	AVERAGE
11		7.606	0.09	9.69	16.12	25.90	50.00	-24.10	AVERAGE
12		7.606	0.09	9.69	22.93	32.71	60.00	-27.29	QP



Report No.: SZEM161000916601

Page: 10 of 23

Mode:b;Line:Neutral Line



Site : Shielding Room Condition : CE NEUTRAL Job No. : 9166RG Test Mode : b

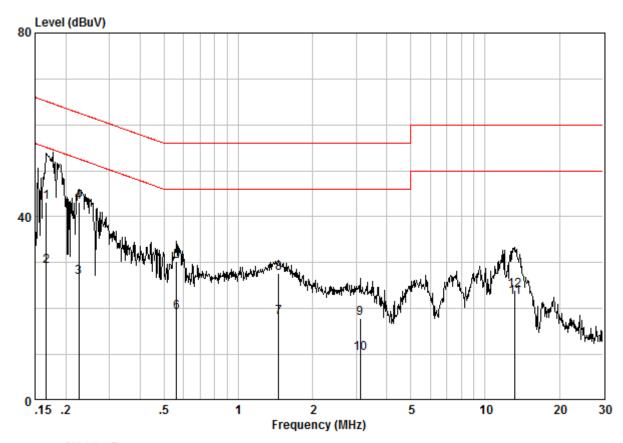
	Freq	Cable Loss	LISN Factor			Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.19140	0.02	9.62	37.90	47.53	63.98	-16.44	QP
2	0.19140	0.02	9.62	24.47	34.10	53.98	-19.87	AVERAGE
3	0.38724	0.02	9.62	30.13	39.77	58.12	-18.36	QP
4	0.38724	0.02	9.62	15.50	25.14	48.12	-22.99	AVERAGE
5	0.47612	0.02	9.63	16.31	25.95	46.41	-20.45	AVERAGE
6	0.47612	0.02	9.63	28.95	38.59	56.41	-17.81	QP
7	1.338	0.03	9.65	25.30	34.97	56.00	-21.03	QP
8	1.338	0.03	9.65	11.73	21.41	46.00	-24.59	AVERAGE
9	7.368	0.09	9.75	17.38	27.22	50.00	-22.78	AVERAGE
10	7.368	0.09	9.75	26.20	36.03	60.00	-23.97	QP
11	18.920	0.17	9.97	25.82	35.96	60.00	-24.04	QP
12	18.920	0.17	9.97	10.72	20.86	50.00	-29.14	AVERAGE



Report No.: SZEM161000916601

Page: 11 of 23

Mode:d;Line:Live Line



Site : Shielding Room Condition : CE LINE Job No. : 9166RG Test Mode : d

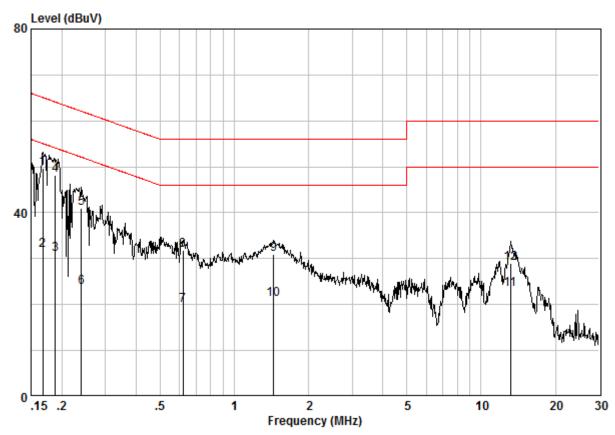
	Freq	Cable Loss	LISN Factor	Read Level		Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.16677	0.02	9.60	33.60	43.22	65.12	-21.90	QP
2	0.16677	0.02	9.60	19.57	29.18	55.12	-25.94	AVERAGE
3	0.22556	0.02	9.60	17.26	26.88	52.61	-25.73	AVERAGE
4	0.22556	0.02	9.60	33.45	43.07	62.61	-19.54	QP
5	0.56111	0.02	9.60	20.59	30.21	56.00	-25.79	QP
6	0.56111	0.02	9.60	9.53	19.16	46.00	-26.84	AVERAGE
7	1.456	0.03	9.58	8.39	18.00	46.00	-28.00	AVERAGE
8	1.456	0.03	9.58	18.12	27.74	56.00	-28.26	QP
9	3.123	0.03	9.62	8.14	17.79	56.00	-38.21	QP
10	3.123	0.03	9.62	0.66	10.30	46.00	-35.70	AVERAGE
11	13.197	0.15	9.74	12.66	22.56	50.00	-27.44	AVERAGE
12	13.197	0.15	9.74	14.17	24.07	60.00	-35.93	QP



Report No.: SZEM161000916601

Page: 12 of 23

Mode:d;Line:Neutral Line



Site : Shielding Room Condition : CE NEUTRAL Job No. : 9166RG Test Mode : d

	Freq	Cable Loss	LISN Factor	Read Level		Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1 @	0.16765	0.02	9.60	40.13	49.75	65.08	-15.33	QP
2	0.16765	0.02	9.60	22.19	31.81	55.08	-23.27	AVERAGE
3	0.18838	0.02	9.61	21.39	31.02	54.11	-23.08	AVERAGE
4	0.18838	0.02	9.61	38.53	48.17	64.11	-15.94	QP
5	0.24037	0.02	9.61	31.32	40.95	62.08	-21.13	QP
6	0.24037	0.02	9.61	14.24	23.87	52.08	-28.21	AVERAGE
7	0.62054	0.02	9.63	10.24	19.89	46.00	-26.11	AVERAGE
8	0.62054	0.02	9.63	22.07	31.72	56.00	-24.28	QP
9	1.441	0.03	9.64	21.34	31.01	56.00	-24.99	QP
10	1.441	0.03	9.64	11.54	21.21	46.00	-24.79	AVERAGE
11	13.127	0.15	9.86	13.42	23.43	50.00	-26.57	AVERAGE
12	13.127	0.15	9.86	19.02	29.04	60.00	-30.96	QP



Report No.: SZEM161000916601

Page: 13 of 23

6.2 Radiated Disturbance(30MHz-1GHz)

Test Requirement: 47 CFR PART 15, Subpart B:2015

Test Method: ANSI C63.4:2014 Frequency Range: 30MHz to 1GHz

Limit:

30 MHz - 88 MHz $29.5 (\text{dB}\mu\text{V/m}) \text{ quasi-peak}$ 88 MHz - 216 MHz $33.1 (\text{dB}\mu\text{V/m}) \text{ quasi-peak}$ 216 MHz - 960 MHz $35.6 (\text{dB}\mu\text{V/m}) \text{ quasi-peak}$ $43.5 (\text{dB}\mu\text{V/m}) \text{ quasi-peak}$

Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to1000MHz

6.2.1 E.U.T. Operation

Operating Environ	Operating Environment:								
Temperature:	24.0	°C Humidity:	54	% RH	Atmospheric Pressure:	1010	mbar		
	a: GS	SM(Idle)+BT+ WLAN +	GPS	S Rx + playin	g MP4 + earphone + batter	y + ada _l	oter		
Pretest these	b: WCDMA(Idle)+BT + WLAN+ GPS Rx + camera(Front) + earphone + battery + adapter								
mode to find the worst case:	c: LTE(Idle)+BT + WLAN+ GPS Rx + camera(rear) + earphone + battery + adapter								
Wordt dadd:	d: Transfer data between the EUT and the PC								
	e: FM mode								
The worst case for final test:	b: WCDMA(Idle)+BT + WLAN+ GPS Rx + camera(Front) + earphone + battery + adapter								
d: Transfer data between the EUT and the PC									

6.2.2 Measurement Data

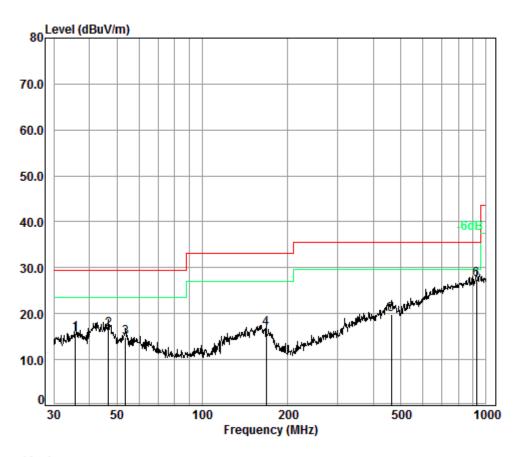
An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.



Report No.: SZEM161000916601

Page: 14 of 23

Mode:b;Polarization:Horizontal



Condition: 10m HORIZONTAL

Job No. : 9166RG

Test Mode: b

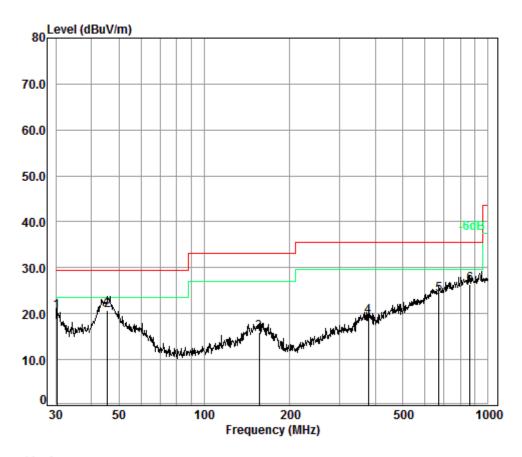
		Cable	Ant	Preamp	Read		Limit	0ver
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
-	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	35.75	6.72	12.75	32.98	29.29	15.78	29.50	-13.72
2	46.83	6.84	12.85	33.00	29.98	16.67	29.50	-12.83
3	53.69	6.97	12.48	32.98	28.28	14.75	29.50	-14.75
4	167.82	7.50	12.63	32.73	29.39	16.79	33.10	-16.31
5	463.97	8.46	16.33	32.60	27.68	19.87	35.60	-15.73
6 pp	925.76	9.51	22.57	32.50	27.92	27.50	35.60	-8.10



Report No.: SZEM161000916601

Page: 15 of 23

Mode:b;Polarization:Vertical



Condition: 10m VERTICAL

Job No. : 9166RG

Test Mode: b

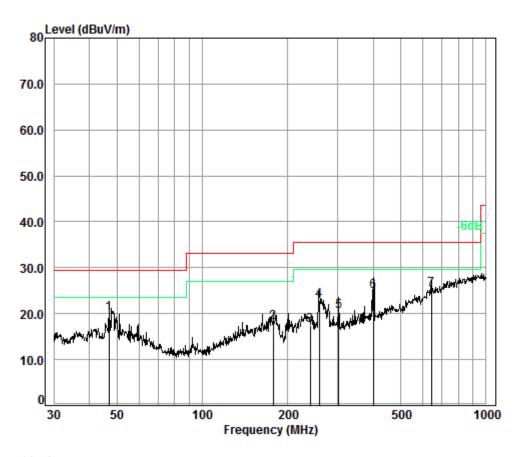
		Cable	Ant	Preamp	Read		Limit	0ver
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
_	MHz	dB	dB/m	——dB		dRuV/m	dRuV/m	——dB
	1112	ub.	GD/III	ub.	ubu*	abav/iii	abav/iii	ub.
1	30.32	6.70	12.48	32.97	34.37	20.58	29.50	-8.92
2 pp	45.53	6.81	12.89	32.99	34.08	20.79	29.50	-8.71
3	156.46	7.48	13.40	32.74	27.80	15.94	33.10	-17.16
4	378.58	8.30	14.46	32.60	29.20	19.36	35.60	-16.24
5	670.49	9.08	19.79	32.60	27.86	24.13	35.60	-11.47
6	863.06	9.42	21.75	32.54	27.79	26.42	35.60	-9.18



Report No.: SZEM161000916601

Page: 16 of 23

Mode:d;Polarization:Horizontal



Condition: 10m HORIZONTAL

Job No. : 9166RG

Test Mode: d

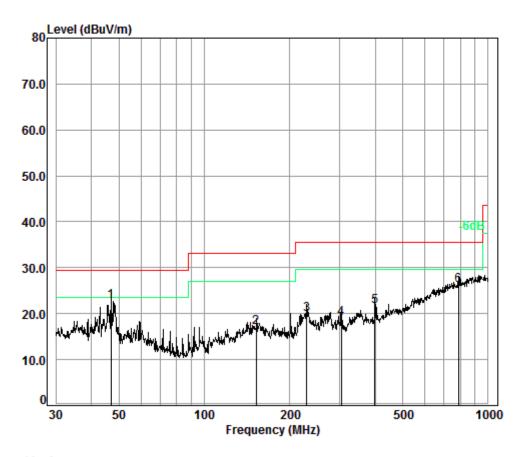
		Cable	Ant	Preamp	Read		Limit	0ver
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
_								
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	46.99	6.84	12.85	33.00	33.38	20.07	29.50	-9.43
2	178.13	7.50	11.19	32.72	32.22	18.19	33.10	-14.91
3 qp	240.00	7.80	11.07	32.66	31.20	17.41	35.60	-18.19
4	258.33	7.90	11.44	32.64	36.23	22.93	35.60	-12.67
5	302.48	8.06	12.73	32.60	32.35	20.54	35.60	-15.06
6	400.43	8.30	14.87	32.60	34.23	24.80	35.60	-10.80
7	640.61	9.00	19.42	32.60	29.55	25.37	35.60	-10.23



Report No.: SZEM161000916601

Page: 17 of 23

Mode:d;Polarization:Vertical



Condition: 10m VERTICAL

Job No. : 9166RG

Test Mode: d

		Cable	Ant	Preamp	Read		Limit	0ver
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
_	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	46.99	6.84	12.85	33.00	36.09	22.78	29.50	-6.72
2	152.66	7.46	13.40	32.74	28.95	17.07	33.10	-16.03
3	229.29	7.75	10.74	32.67	34.12	19.94	35.60	-15.66
4	303.54	8.06	12.76	32.60	30.66	18.88	35.60	-16.72
5	399.03	8.30	14.84	32.60	31.10	21.64	35.60	-13.96
6	785.09	9.26	21.13	32.60	28.31	26.10	35.60	-9.50



Report No.: SZEM161000916601

Page: 18 of 23

6.3 Radiated Disturbance(above 1GHz)

Test Requirement: 47 CFR PART 15, Subpart B:2015

Test Method: ANSI C63.4:2014 Frequency Range: Above 1GHz

Limit:

Above 1GHz 74(dBµV/m) peak, 54(dBµV/m) average

Detector: Peak for pre-scan (1000kHz resolution bandwidth) 1000M to18000MHz

6.3.1 E.U.T. Operation

Operating Environment:									
Temperature:	25.0	°C Humi	dity: 56	% RH	Atmospheric Pressure:	1015	mbar		
	a: G5	SM(Idle)+BT+ WL	AN + GP	S Rx + playin	g MP4 + earphone + batter	y + ada _l	oter		
Pretest these	adaptor						tery +		
mode to find the worst case:	1 c: LTE(Idle)+BT + WLAN+ GPS Bx + camera(rear) + earnhone + hattery	/ + adap	oter						
Wordt dado.	d: Transfer data between the EUT and the PC								
	e: FN	/I mode							
The worst case for final test:	b: WCDMA(Idle)+BT + WLAN+ GPS Rx + camera(Front) + earphone + battery + adapter								
	d: Transfer data between the EUT and the PC								

6.3.2 Measurement Data

Remark:

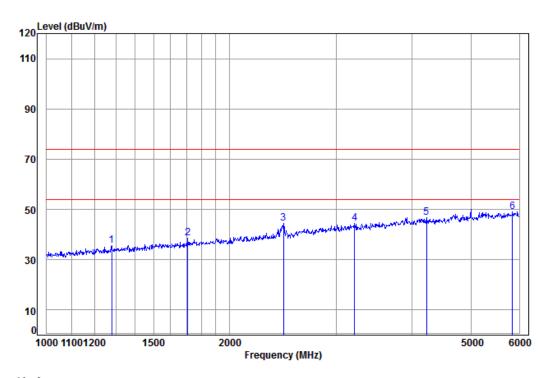
- 1. An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.
- 2. The disturbance from 6GHz to 18GHz was very low, and the below is the highest frequency could be found when testing, so only the below frequency had been displayed.



Report No.: SZEM161000916601

Page: 19 of 23

Mode:b;Polarization:Horizontal



Condition: 3m HORIZONTAL

Job No: : 9166RG

Mode: : b

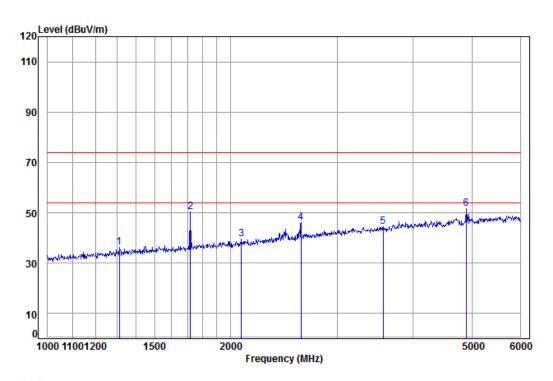
			Cable	Ant	Preamp	Read		Limit	0ver
		Freq	Loss	Factor	Factor	Level	Level	Line	Limit
		MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1		1280.516	4.19	24.86	38.04	44.64	35.65	74.00	-38.35
2		1708.706	4.71	26.71	38.08	45.39	38.73	74.00	-35.27
3		2453.883	5.39	29.27	38.15	48.08	44.59	74.00	-29.41
4		3216.286	6.10	31.71	38.32	45.05	44.54	74.00	-29.46
5		4223.122	6.97	33.60	38.80	44.97	46.74	74.00	-27.26
6	pp	5851.364	8.61	34.61	39.01	44.82	49.03	74.00	-24.97



Report No.: SZEM161000916601

Page: 20 of 23

Mode:b;Polarization:Vertical



Condition: 3m VERTICAL Job No: : 9166RG

Mode: : b

3

4

5

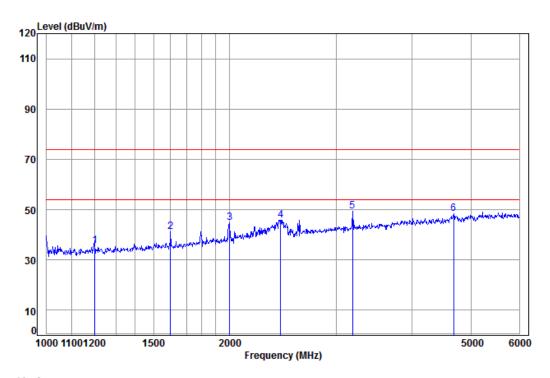
Cable Ant Preamp Read Limit 0ver Freq Loss Factor Factor Level Level Line Limit dB/m dBuV dBuV/m dBuV/m 1313.043 4.24 25.01 38.04 44.95 36.16 74.00 -37.84 1717.915 4.72 26.74 38.08 56.99 50.37 74.00 -23.63 2084.693 5.09 28.10 38.11 44.37 39.45 74.00 -34.55 2612.697 5.54 29.86 38.17 48.99 46.22 74.00 -27.78 6.36 32.40 38.50 44.14 44.40 74.00 -29.60 3568.514 6 pp 4891.500 7.85 34.31 39.06 48.40 51.50 74.00 -22.50



Report No.: SZEM161000916601

Page: 21 of 23

Mode:d;Polarization:Horizontal



Condition: 3m HORIZONTAL

Job No: : 9166RG

Mode: : d

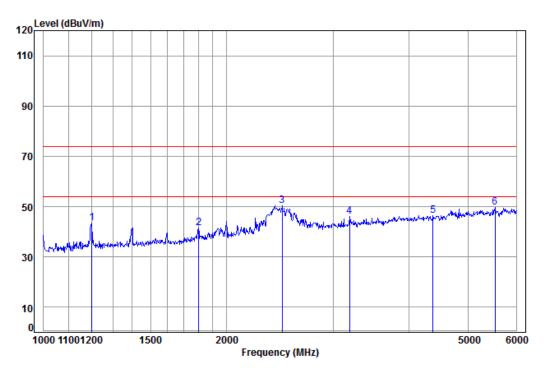
			Cable	Ant	Preamp	Read		Limit	0ver
		Freq	Loss	Factor	Factor	Level	Level	Line	Limit
		MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1		1200.526	4.08	24.48	38.03	45.04	35.57	74.00	-38.43
2		1599.100	4.59	26.24	38.07	48.30	41.06	74.00	-32.94
3		2000.528	5.01	27.80	38.10	50.08	44.79	74.00	-29.21
4		2427.643	5.37	29.19	38.15	49.51	45.92	74.00	-28.08
5	pp	3187.600	6.08	31.65	38.31	49.86	49.28	74.00	-24.72
6		4677.225	7.54	33.93	38.98	45.94	48.43	74.00	-25.57



Report No.: SZEM161000916601

Page: 22 of 23

Mode:d;Polarization:Vertical



Condition: 3m VERTICAL Job No: : 9166RG

Mode: : d

		(Cable	Ant	Preamp	Read		Limit	0ver
	F	req	Loss	Factor	Factor	Level	Level	Line	Limit
		MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	1200.	526	4.08	24.48	38.03	53.11	43.64	74.00	-30.36
2		839	4.81	27.07	38.08	47.61	41.41	74.00	-32.59
3 p	p 2471.	533	5.40	29.32	38.15	53.66	50.23	74.00	-23.77
4	3187.	500	6.08	31.65	38.31	46.72	46.14	74.00	-27.86
5	4377.	203	7.14	33.60	38.86	44.66	46.54	74.00	-27.46
6	5535.	214	8.29	34.42	39.04	46.02	49.69	74.00	-24.31



Report No.: SZEM161000916601

Page: 23 of 23

7 Photographs

7.1 EUT Constructional Details

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1610009166RG.