TEST REPORT

Reference No.	:	WTS16S0961008E
FCC ID	:	2AJVK-SP5014
Applicant	:	Foto Electric Supply Co., INC.
Address	:	1 Rewe St. Brooklyn, New York, 11211, USA
Manufacturer	:	Foto Electric Supply Co., INC.
Address	:	1 Rewe St. Brooklyn, New York, 11211, USA
Product Name	:	Smart Phone
Model No.	:	SP5014, CBP4105
Brand	:	SLIDE, COBY
Standards	:	FCC PART15 SUBPART B: 2015
Date of Receipt sample	:	Sep. 19, 2016
Date of Test	:	Sep. 20 – Nov. 17, 2016
Date of Issue	:	Nov. 18, 2016
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Compiled by:

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Approved by:

Philo Zhong / Manager

2 Laboratories Introduction

Waltek Services Test Group Ltd is a professional third-party testing and certification organization with multi-year product testing and certification experience, established strictly in accordance with ISO/IEC 17025 requirements, and accredited by CNAS (China National Accreditation Service for Conformity Assessment) AQSIQ, CMA and IECEE for CBTL. Meanwhile, Waltek has got recognition as registration and accreditation laboratory from EMSD (Electrical and Mechanical Services Department), and American Energy star, FCC(The Federal Communications Commission), CPSC(Consumer Product Safety Commission), CEC(California energy efficiency), IC(Industry Canada) and ELI(Efficient Lighting Initiative). It's the strategic partner and data recognition laboratory of international authoritative organizations, such as UL, Intertek(ETL-SEMKO), CSA, TÜV Rheinland, TÜV SÜD, etc.

Waltek Services Test Group Ltd. is one of the largest and the most comprehensive third party testing organizations in China, our headquarter located in Shenzhen and have branches in Foshan, Dongguan, Zhongshan, Suzhou,Ningbo and Hong Kong, Our test capability covered four large fields: safety test. ElectroMagnetic Compatibility(EMC), reliablity and energy performance, Chemical test. As a professional, comprehensive, justice international test organization, we still keep the scientific and rigorous work attitude to help each client satisfy the international standards and assist their product enter into globe market smoothly.

3 Contents

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4 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTS16S0961008E	Sep. 19, 2016	Sep.20 –Nov. 17, 2016	Nov. 18, 2016	original	-	Valid

5 General Information

5.1 General Description of E.U.T.

Product Name:	Smart Phone
Model No.:	SP5014, CBP4105
Model Description:	Only the model names and brand names are different.
GSM Band(s):	GSM 850/900/1800/1900MHz
GPRS/EGPRS Class:	12
WCDMA Band(s):	FDD Band II/V
LTE Bnad(s):	FDD Band 2/4/5/7/17
Wi-Fi Specification:	2.4G-802.11b/g/n HT20/n HT40
Bluetooth Version:	Bluetooth v4.0 with BLE
GPS:	Support
NFC:	N/A
Hardware Version:	AL_X5S_MB_V11
Software Version:	1471835842
Storage Location:	Internal Storage
Note:	This EUT has two SIM card slots, and use same one RF module. We found that RF parameters are the same, when we insert the card 1 and card 2. So we usually performed the test under main card slot 1.

5.2 Details of E.U.T.

Technical Data:	Battery DC 3.7V, 2000mAh DC 5V, 1.0A, charging from adapter (Adapter Input: 100-240V~50/60Hz 0.2A
Adapter:	Manufacture: XINYU EAGLETRON ELECTRONIC CO.LTD. Model No.: SWN006S050100U1

5.3 Standards Applicable for Testing

The tests were performed according to following standards:

FCC PART 15, SUBPART B: Electronic Code of Federal Regulations- Unintentional Radiators 2015

5.4 Test Facility

The test facility has a test site registered with the following organizations:

- **IC – Registration No.: 7760A-1**

  Waltek Services (Shenzhen) Co., Ltd. has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration 7760A-1, October 15, 2015.

- **FCC Test Site 1#– Registration No.: 880581**

  Waltek Services(Shenzhen) Co., Ltd. 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 880581, April 29, 2014.

- **FCC Test Site 2#– Registration No.: 328995**

  Waltek Services(Shenzhen) Co., Ltd. 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 328995, December 3, 2014.

5.5 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

5.6 Abnormalities from Standard Conditions

None.

6 Test Summary

Test Item	Test Requirement	Class	Test Method	Test Result
Power Line Conducted Emission (150kHz to 30MHz)	FCC PART 15, SUBPART B: 2015	Class B	ANSI C63.4: 2014	Pass
Radiated Emission 30MHz to 1GHz)	FCC PART 15, SUBPART B: 2015	Class B	ANSI C63.4: 2014	Pass
Radiated Emission (Above 1GHz)	FCC PART 15, SUBPART B: 2015	Class B	ANSI C63.4: 2014	Pass

Remark:

Pass	Test item meets the requirement
Fail	Test item does not meet the requirement
N/A	Test case does not apply to the test object

7 Equipment Used during Test

7.1 Equipment List

Conducted Emissions Test Site 1#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	100947	Sep.12,2016	Sep.11,2017
2.	LISN	R&S	ENV216	101215	Sep.12,2016	Sep.11,2017
3.	Cable	Top	TYPE16(3.5M)	-	Sep.12,2016	Sep.11,2017
4	Universal Radio Communication Tester	R&S	CMU 200	112461	Apr.13,2016	Apr.12,2017
Conducted Emissions Test Site 2#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	101155	Sep.12,2016	Sep.11,2017
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	Sep.12,2016	Sep.11,2017
3.	Limiter	York	MTS-IMP-136	261115-001-0024	Sep.12,2016	Sep.11,2017
4.	Cable	LARGE	RF300	-	Sep.12,2016	Sep.11,2017
5	Universal Radio Communication Tester	R&S	CMU 200	112461	Apr.13,2016	Apr.12,2017
3m Semi-anechoic Chamber for Radiation Emissions Test site 1#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1	Spectrum Analyzer	R&S	FSP	100091	Apr.29, 2016	Apr.28, 2017
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	Apr.09,2016	Apr.08,2017
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	Apr.09,2016	Apr.08,2017
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	Sep.12,2016	Sep.11,2017
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	Apr.09,2016	Apr.08,2017
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	Apr.09,2016	Apr.08,2017
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	Apr.13,2016	Apr.12,2017
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	EW02014-7	Apr.13,2016	Apr.12,2017
9	Universal Radio Communication Tester	R&S	CMU 200	112461	Apr.13,2016	Apr.12,2017
10	Signal Generator	R&S	SMR20	100046	Sep.12,2016	Sep.11,2017

11	Smart Antenna	SCHWARZBECK	HA08	-	Apr.09,2016	Apr.08,2017
12.	Universal Radio Communication Tester	R&S	CMW 500	127818	Apr.13,2016	Apr.12,2017
3m Semi-anechoic Chamber for Radiation Emissions Test site 2#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No**	**Last Calibration Date**	**Calibration Due Date**
1	Test Receiver	R&S	ESCI	101296	Apr.13,2016	Apr.12,2017
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	Apr.09,2016	Apr.08,2017
3	Amplifier	Compliance pirection systems inc	PAP-0203	22024	Apr.13,2016	Apr.12,2017
4	Cable	HUBER+SUHNER	CBL2	525178	Apr.13,2016	Apr.12,2017

7.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
MacBook Air	APPLE	A1465	C17KTQDNF5N7
Power Supply	LPS DELTA ELECTRNICS UIANG CO,.LTD	ADP-45GD	-

7.3 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz	±3.64dB	(1)
Radiation Emission	30MHz~1000MHz	±5.03dB	(1)
	1GHz~18GHz	±5.47dB	(1)
Confidence interval：95%. Confidence factor:k=2			

8 Emission Test Results

8.1 Power Line Conducted Emission, 150kHz to 30MHz

Test Requirement ..... : FCC PART 15, SUBPART B

Test Method ..... : ANSI C63.4 2014

Test Result ..... : Pass

Frequency Range ..... : 150kHz to 30MHz

Class ..... : Class B

Limit ..... :

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	60
5 to 30	60	50

8.1.1 E.U.T. Operation

Operating Environment:

Temperature ..... : 23°C

Humidity ..... : 53.6%RH

Atmospheric Pressure ..... : 101kPa

EUT Operation:

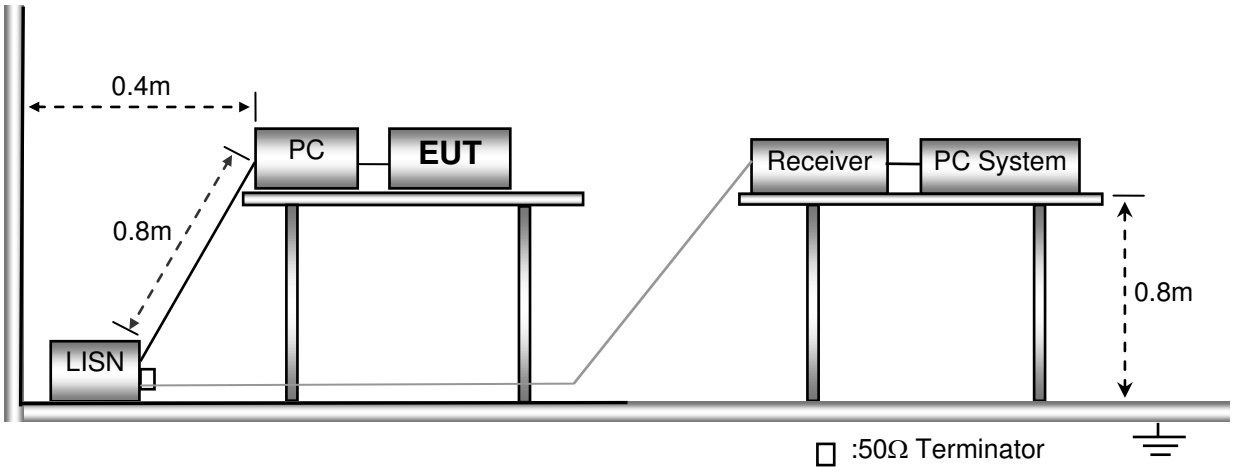
Input Voltage ..... : DC 5V by PC

Operating Mode ..... : Data transmitting mode, Earphone mode, Adapter mode

Remark ..... : The worse case Data transmitting mode is under the condition of AC 120V/60Hz adapter input and the data is shown as follow.

8.1.2 Block Diagram of Test Setup

The Mains Terminals Disturbance Voltage tests were performed in accordance with the ANSI C63.4.

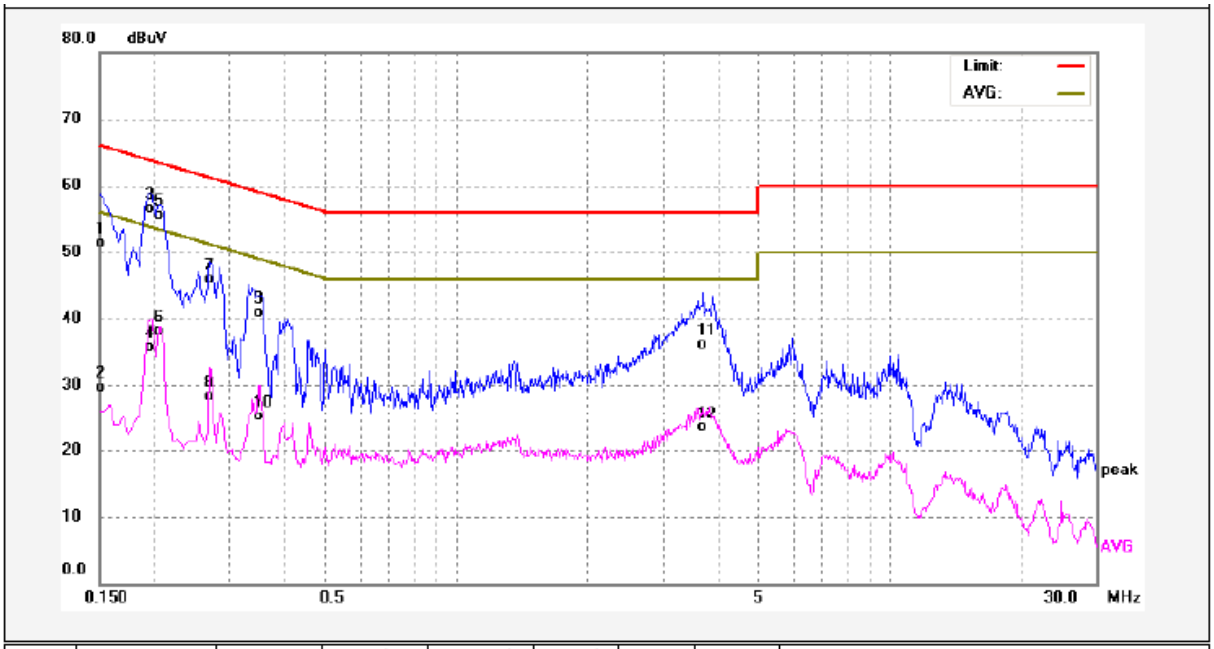


8.1.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line. According to the data in below section 6.1.4, the EUT complied with the FCC PART 15, SUBPART B standards.

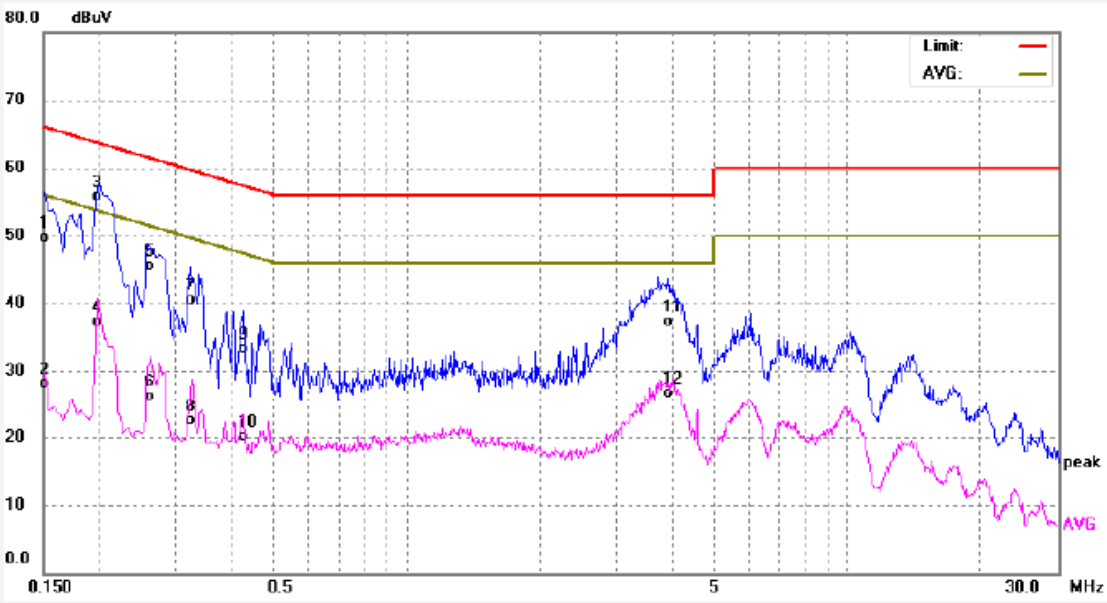
8.1.4 Power Line Conducted Emission Test Data

Live Line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	40.95	10.29	51.24	65.99	-14.75	QP	
2	0.1500	19.33	10.29	29.62	55.99	-26.37	AVG	
3	0.1940	46.25	10.26	56.51	63.86	-7.35	QP	
4	0.1940	25.42	10.26	35.68	53.86	-18.18	AVG	
5	0.2060	45.16	10.26	55.42	63.36	-7.94	QP	
6	0.2060	27.78	10.26	38.04	53.36	-15.32	AVG	
7	0.2700	35.66	10.27	45.93	61.12	-15.19	QP	
8	0.2700	18.02	10.27	28.29	51.12	-22.83	AVG	
9	0.3500	30.57	10.29	40.86	58.96	-18.10	QP	
10	0.3500	14.95	10.29	25.24	48.96	-23.72	AVG	
11	3.7100	25.60	10.51	36.11	56.00	-19.89	QP	
12	3.7100	12.98	10.51	23.49	46.00	-22.51	AVG	

Neutral Line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	39.38	10.29	49.67	65.99	-16.32	QP	
2	0.1500	17.77	10.29	28.06	55.99	-27.93	AVG	
3	0.1980	45.36	10.26	55.62	63.69	-8.07	QP	
4	0.1980	27.08	10.26	37.34	53.69	-16.35	AVG	
5	0.2580	35.23	10.26	45.49	61.49	-16.00	QP	
6	0.2580	16.01	10.26	26.27	51.49	-25.22	AVG	
7	0.3220	30.19	10.28	40.47	59.65	-19.18	QP	
8	0.3220	12.29	10.28	22.57	49.65	-27.08	AVG	
9	0.4260	23.11	10.26	33.37	57.33	-23.96	QP	
10	0.4260	9.88	10.26	20.14	47.33	-27.19	AVG	
11	3.9020	26.84	10.51	37.35	56.00	-18.65	QP	
12	3.9020	16.12	10.51	26.63	46.00	-19.37	AVG	

8.2 Radiation Emission, 30MHz to 1000MHz

Test Requirement ..... : FCC PART 15, SUBPART B

Test Method ..... : ANSI C63.4 2014

Test Result ..... : Pass

Frequency Range ..... : 30MHz to 1000MHz

Class. : Class B

Limit..... :

Frequency (MHz)	Distance (Meter)	Limit (dBμV/m)
		Quas -peak
30 to 88	3	40
88 to 216	3	43.5
216 to 960	3	46
960 to 1000	3	54

8.2.1 E.U.T. Operation

Operating Environment:

Temperature ..... : 22.5°C

Humidity ..... : 52.6%RH

Atmospheric Pressure ..... : 101.2kPa

EUT Operation:

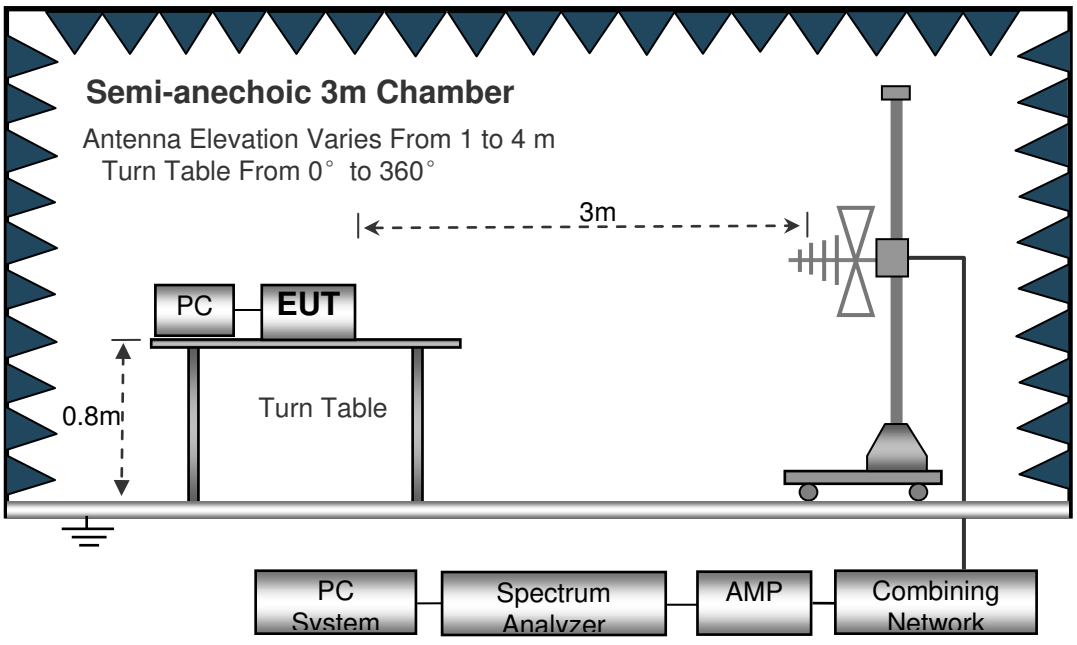
Input Voltage..... : DC 5V by PC

Operating Mode ..... : Data transmitting with PC mode, Earphone mode, Adapter mode

Remark ..... : The worse case Data transmitting with PC mode is under the condition of AC 120V/60Hz adapter input and the data is shown as follow.

8.2.2 Block Diagram of Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

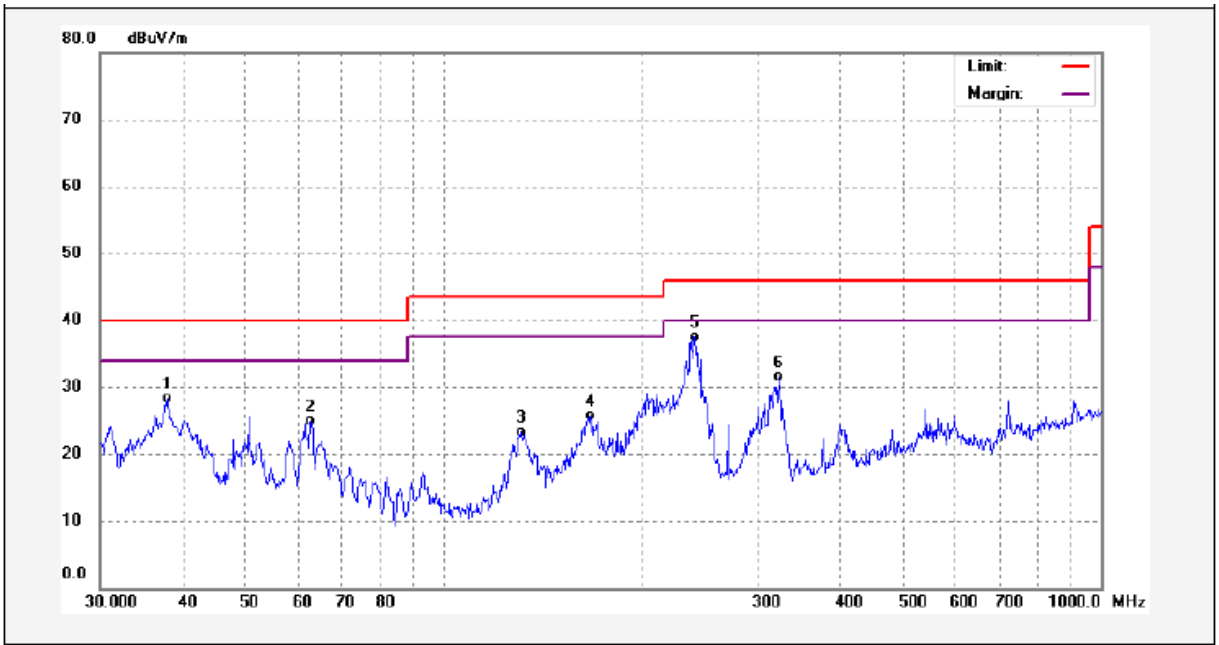


8.2.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Antenna Vertical Polarization and Antenna Horizontal Polarization. Quasi-peak measurements were performed if peak emissions were within 6dB of the Quasi-peak limit line.

8.2.4 Radiated Emission Test Data, 30MHz to 1000MHz

Antenna Polarization: Vertical

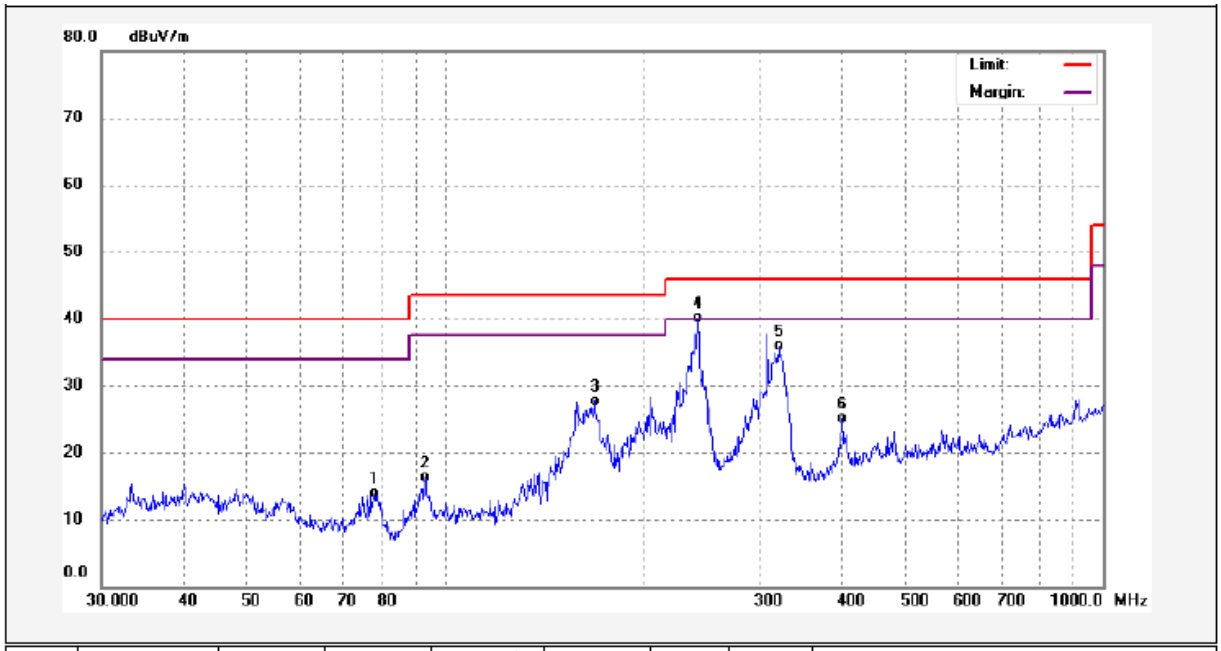


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	37.9450	43.58	-15.35	28.23	40.00	-11.77	QP	
2	62.6507	44.19	-19.26	24.93	40.00	-15.07	QP	
3	131.2965	41.81	-18.52	23.29	43.50	-20.21	QP	
4	167.2368	44.50	-18.79	25.71	43.50	-17.79	QP	
5	240.8304	53.63	-16.17	37.46	46.00	-8.54	QP	
6	323.3204	46.46	-14.92	31.54	46.00	-14.46	QP	

Factor= antenna factor + cable loss - preamplifier factor

Result = Reading + Factor

Antenna Polarization: Horizontal



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	78.1389	34.95	-21.02	13.93	40.00	-26.07	QP	
2	93.1132	34.57	-18.17	16.40	43.50	-27.10	QP	
3	168.4138	46.45	-18.76	27.69	43.50	-15.81	QP	
4	241.6763	56.18	-16.17	40.01	46.00	-5.99	QP	
5	321.0608	50.89	-15.05	35.84	46.00	-10.16	QP	
6	400.4319	37.12	-12.11	25.01	46.00	-20.99	QP	

Factor= antenna factor + cable loss - preamplifier factor

Result = Reading + Factor

8.3 Radiation Emission, Above 1000MHz

Test Requirement ..... : FCC PART 15, SUBPART B

Test Method ..... : ANSI C63.4 2014

Test Result ..... : Pass

Frequency Range ..... : 1GHz~18GHz

Class. : Class B

Limit. ..... :

Frequency Range (MHz)	Distance (Meter)	Average Limit dB(uV/m)	Peak Limit (dBuV/m)
Above 1GHz	3	54	74

8.3.1 E.U.T. Operation

Operating Environment:

Temperature..... : 22.4°C

Humidity ..... : 52.3%RH

Atmospheric Pressure..... : 101.3kPa

EUT Operation:

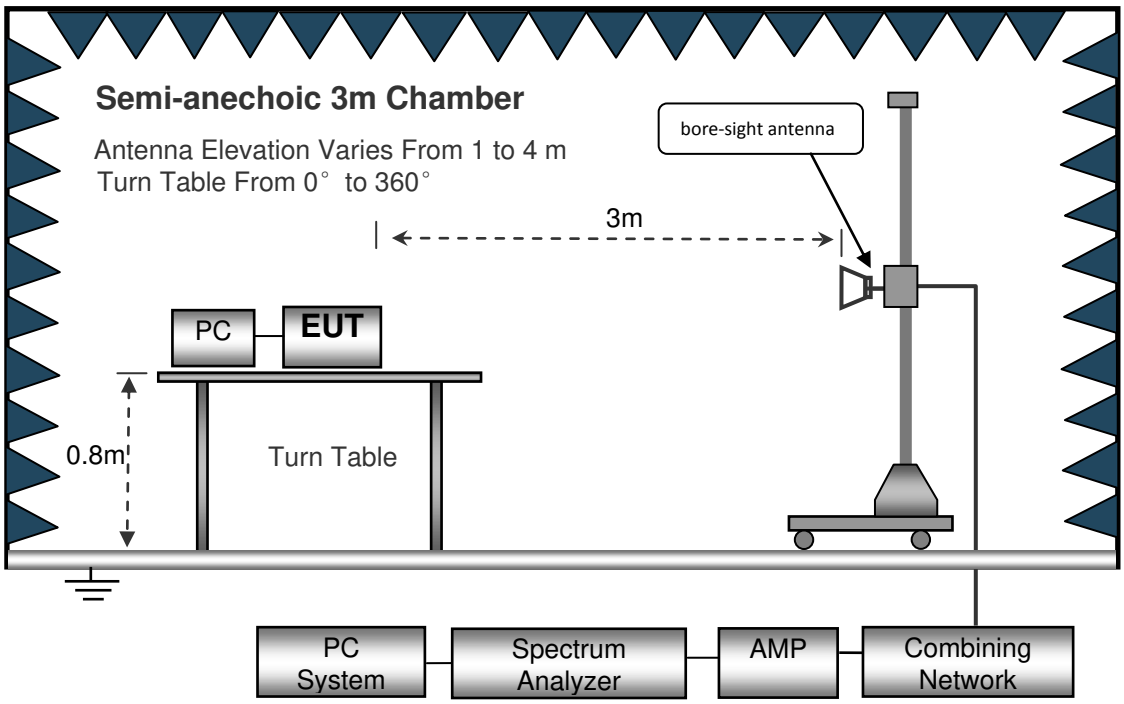
Input Voltage ..... : DC 5V by PC

Operating Mode ..... : Data transmitting with PC mode, Earphone mode, Adapter mode

Remark..... : The worse case Data transmitting mode is under the condition of AC 120V/60Hz adapter input and the data is shown as follow.

8.3.2 Block Diagram of Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

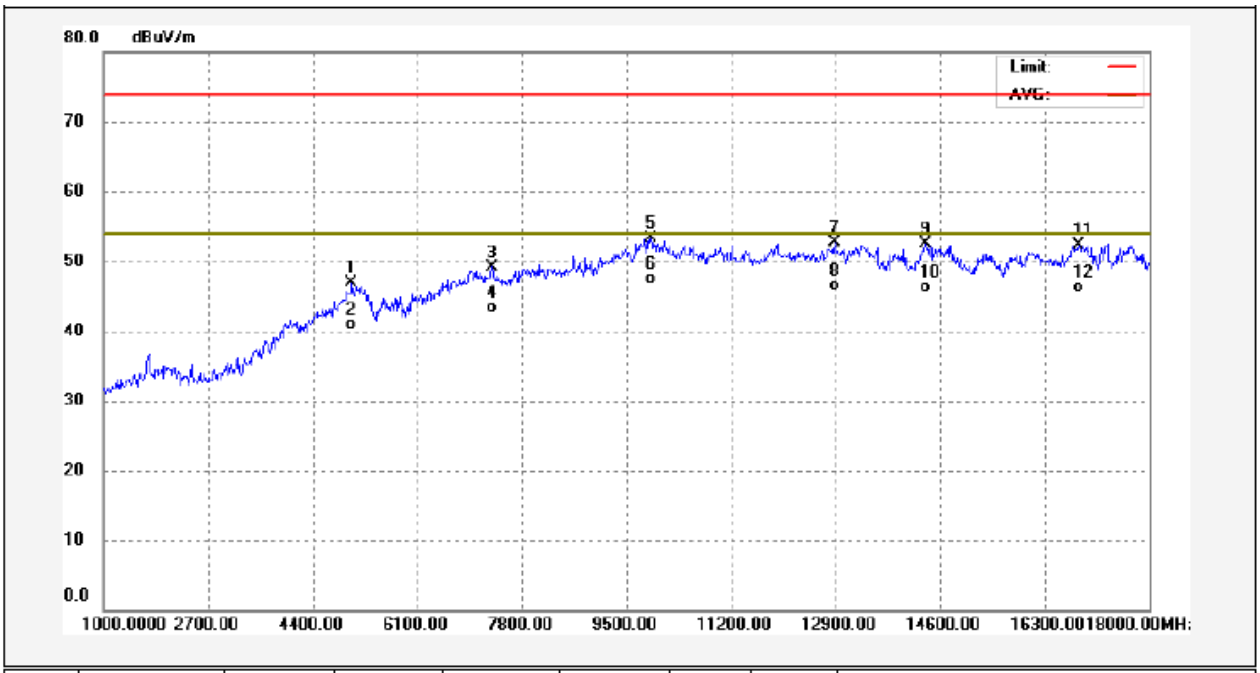


8.3.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Antenna Vertical Polarization and Antenna Horizontal Polarization. Average measurements were performed if peak emissions were within 6dB of the average limit line

8.3.4 Radiated Emission Test Data, Above 1000MHz

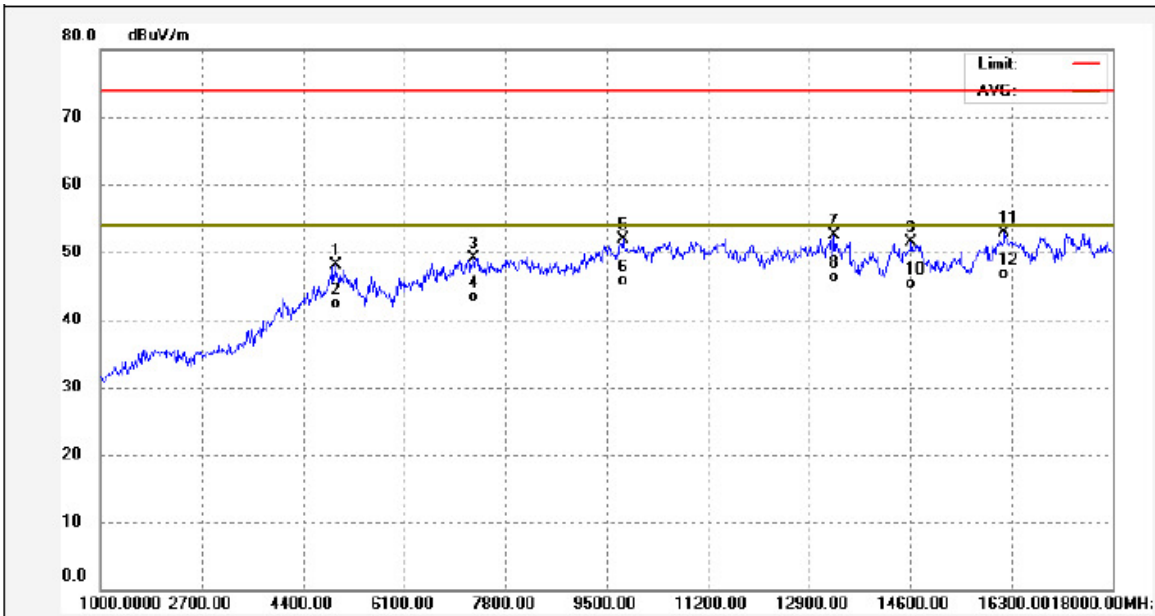
Antenna Polarization: Vertical



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	5029.000	47.60	-0.76	46.84	74.00	-27.16	peak	
2	5029.000	41.74	-0.76	40.98	54.00	-13.02	AVG	
3	7307.000	47.63	1.57	49.20	74.00	-24.80	peak	
4	7307.000	41.79	1.57	43.36	54.00	-10.64	AVG	
5	9891.000	49.95	3.39	53.34	74.00	-20.66	peak	
6	9891.000	44.12	3.39	47.51	54.00	-6.49	AVG	
7	12883.000	45.88	6.74	52.62	74.00	-21.38	peak	
8	12883.000	39.73	6.74	46.47	54.00	-7.53	AVG	
9	14362.000	43.24	9.18	52.42	74.00	-21.58	peak	
10	14362.000	37.10	9.18	46.28	54.00	-7.72	AVG	
11	16861.000	41.25	11.11	52.36	74.00	-21.64	peak	
12	16861.000	35.11	11.11	46.22	54.00	-7.78	AVG	

Factor= antenna factor + cable loss - preamplifier factor
Result = Reading + Factor

Antenna Polarization: Horizontal

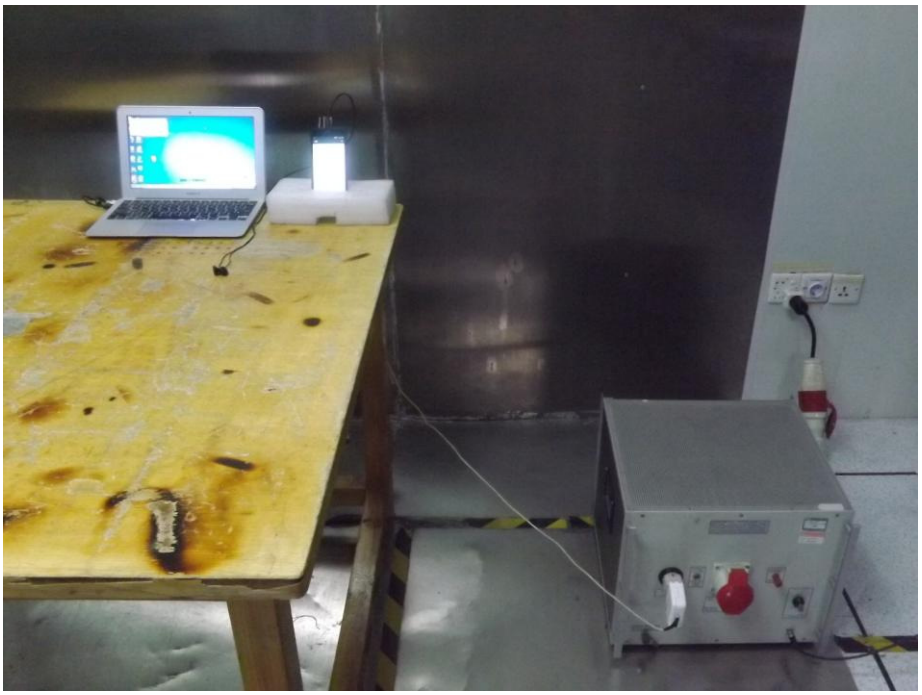


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	4944.000	49.19	-1.07	48.12	74.00	-25.88	peak	
2	4944.000	43.33	-1.07	42.26	54.00	-11.74	AVG	
3	7273.000	47.54	1.61	49.15	74.00	-24.85	peak	
4	7273.000	41.71	1.61	43.32	54.00	-10.68	AVG	
5	9772.000	48.52	3.30	51.82	74.00	-22.18	peak	
6	9772.000	42.38	3.30	45.68	54.00	-8.32	AVG	
7	13325.000	44.79	7.74	52.53	74.00	-21.47	peak	
8	13325.000	38.63	7.74	46.37	54.00	-7.63	AVG	
9	14617.000	41.96	9.48	51.44	74.00	-22.56	peak	
10	14617.000	35.80	9.48	45.28	54.00	-8.72	AVG	
11	16181.000	43.75	9.08	52.83	74.00	-21.17	peak	
12	16181.000	37.61	9.08	46.69	54.00	-7.31	AVG	

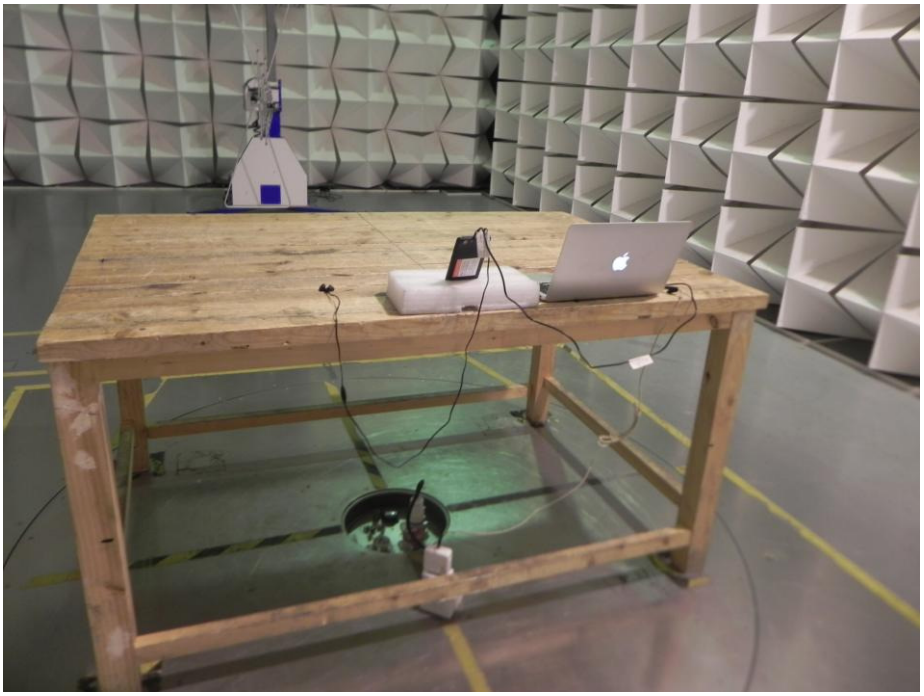
Factor= antenna factor + cable loss - preamplifier factor
Result = Reading + Factor

9 Photographs – Test Setup FCC ID 2AJVK-SP5014

9.1 Photograph –Power Line Conducted Emission Test Setup at Test Site 1#



9.2 Photograph – Radiated Emission Test Setup for 30~1000MHz at Test Site 2#



9.3 Photograph – Radiated Emission Test Setup for Above 1GHz at Test Site 1#

======End of Report======