

RF TEST REPORT



Report No.: 17070251-FCC-R2 V1

Supersede Report No.: N/A

Applicant	AOC	
Product Name	Tablet PC	
Model No.	A726	
Serial No.	N/A	
Test Standard	FCC Part 15.247: 2016, ANSI C63.10: 2013	
Test Date	April 02 to 12, 2017	
Issue Date	April 18, 2017	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification <input checked="" type="checkbox"/>		
Equipment did not comply with the specification <input type="checkbox"/>		
		
Loren Luo Test Engineer	David Huang Checked By	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only		

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108

Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn

Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

Test Report No.	17070251-FCC-R2 V1
Page	3 of 32

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CONTENTS

1. REPORT REVISION HISTORY.....	5
2. CUSTOMER INFORMATION	5
3. TEST SITE INFORMATION	5
4. EQUIPMENT UNDER TEST (EUT) INFORMATION	6
5. TEST SUMMARY	8
6. MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	9
6.1 RADIATED EMISSIONS & RESTRICTED BAND	9
ANNEX A. TEST INSTRUMENT.....	19
ANNEX B. EUT AND TEST SETUP PHOTOGRAPHS.....	20
ANNEX C. TEST SETUP AND SUPPORTING EQUIPMENT.....	28
ANNEX D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PARTLIST.....	31
ANNEX E. DECLARATION OF SIMILARITY.....	32

1. Report Revision History

Report No.	Report Version	Description	Issue Date
17070251-FCC-R2	NONE	Original	April 13, 2017
17070251-FCC-R2 V1	V1	Change the EUT internal photos	April 18, 2017

2. Customer information

Applicant Name	AOC
Applicant Add	14F-5, NO.258, Liancheng Rd., Zhonghe Dist., New Taipei City, Taiwan
Manufacturer	China Great Wall Computer Shenzhen Co., Ltd.
Manufacturer Add	No.Great Wall Computer Industrial Park,Bao Shi East Road,Bao' an Bistrict,Shenzhen,P.R.China

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	718246
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

4. Equipment under Test (EUT) Information

Description of EUT:	Tablet PC
Main Model:	A726
Serial Model:	N/A
Date EUT received:	April 01, 2017
Test Date(s):	April 02 to 12, 2017
Equipment Category :	DTS
Antenna Gain:	Bluetooth/WIFI: 2dBi
Antenna Type:	PIFA antenna
Type of Modulation:	802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK, 8DPSK
RF Operating Frequency (ies):	WIFI: 802.11b/g/n(20M): 2412-2462 MHz WIFI: 802.11n(40M): 2422-2452 MHz Bluetooth: 2402-2480 MHz
Max. Output Power:	802.11b: 11.50dBm 802.11g: 11.72dBm 802.11n(20M): 11.97dBm 802.11n(40M): 11.58dBm
Number of Channels:	WIFI :802.11b/g/n(20M): 11CH WIFI :802.11n(40M): 7CH Bluetooth: 79CH
Port:	Earphone Port, USB Port , SD Card Port

Input Power: Adapter:
Model: SC/5WM500100-US
Input: AC 100-240V~50/60Hz;0.4A
Output: DC 5.0V,1000mA
Battery:
Spec: 3.7V,2500mAh(9.25Wh)

Trade Name : AOC

FCC ID: 2AEB5-A726

5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.205, §15.209, §15.247(d)	Radiated Emissions & Unwanted Emissions into Restricted Frequency Bands	Compliance

Measurement Uncertainty

Emissions		
Test Item	Description	Uncertainty
Radiated Emissions & Unwanted Emissions into Restricted Frequency Bands	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

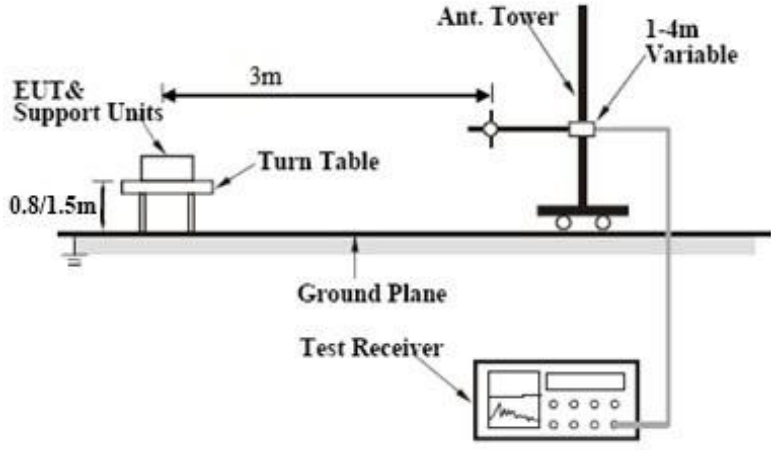
6. Measurements, Examination And Derived Results

6.1 Radiated Emissions & Restricted Band

Temperature	24°C
Relative Humidity	55%
Atmospheric Pressure	1013mbar
Test date :	April 12, 2017
Tested By :	Loren Luo

Requirement(s):

Spec	Item	Requirement	Applicable										
47CFR§15.247(d), RSS210 (A8.5)	a)	<div>Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges</div> <table><tr><th>Frequency range (MHz)</th><th>Field Strength (µV/m)</th></tr><tr><td>30 – 88</td><td>100</td></tr><tr><td>88 – 216</td><td>150</td></tr><tr><td>216 960</td><td>200</td></tr><tr><td>Above 960</td><td>500</td></tr></table>	Frequency range (MHz)	Field Strength (µV/m)	30 – 88	100	88 – 216	150	216 960	200	Above 960	500	<div><input checked="" type="checkbox"/></div>
	Frequency range (MHz)	Field Strength (µV/m)											
	30 – 88	100											
	88 – 216	150											
216 960	200												
Above 960	500												
b)	<div>For non-restricted band, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB or 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, determined by the measurement method on output power to be used. Attenuation below the general limits specified in § 15.209(a) is not required</div> <div><input checked="" type="checkbox"/> 20 dB down <input type="checkbox"/> 30 dB down</div>	<div><input checked="" type="checkbox"/></div>											
c)	<div>or restricted band, emission must also comply with the radiated emission limits specified in 15.209</div>	<div><input checked="" type="checkbox"/></div>											

Test Setup	
Procedure	<ol style="list-style-type: none"> The EUT was switched on and allowed to warm up to its normal operating condition. The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: <ol style="list-style-type: none"> Vertical or horizontal polarization (whichever gave the higher emission level over a full rotation of the EUT) was chosen. The EUT was then rotated to the direction that gave the maximum emission. Finally, the antenna height was adjusted to the height that gave the maximum emission. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi Peak detection at frequency below 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with Peak detection for Peak measurement at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz with Peak detection for Average Measurement as below at frequency above 1GHz. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.
Remark	Different RF configuration has been evaluated but not much difference was found. The data presented here is the worst case data with EUT under 802.11n – HT20-2442MHz mode.
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

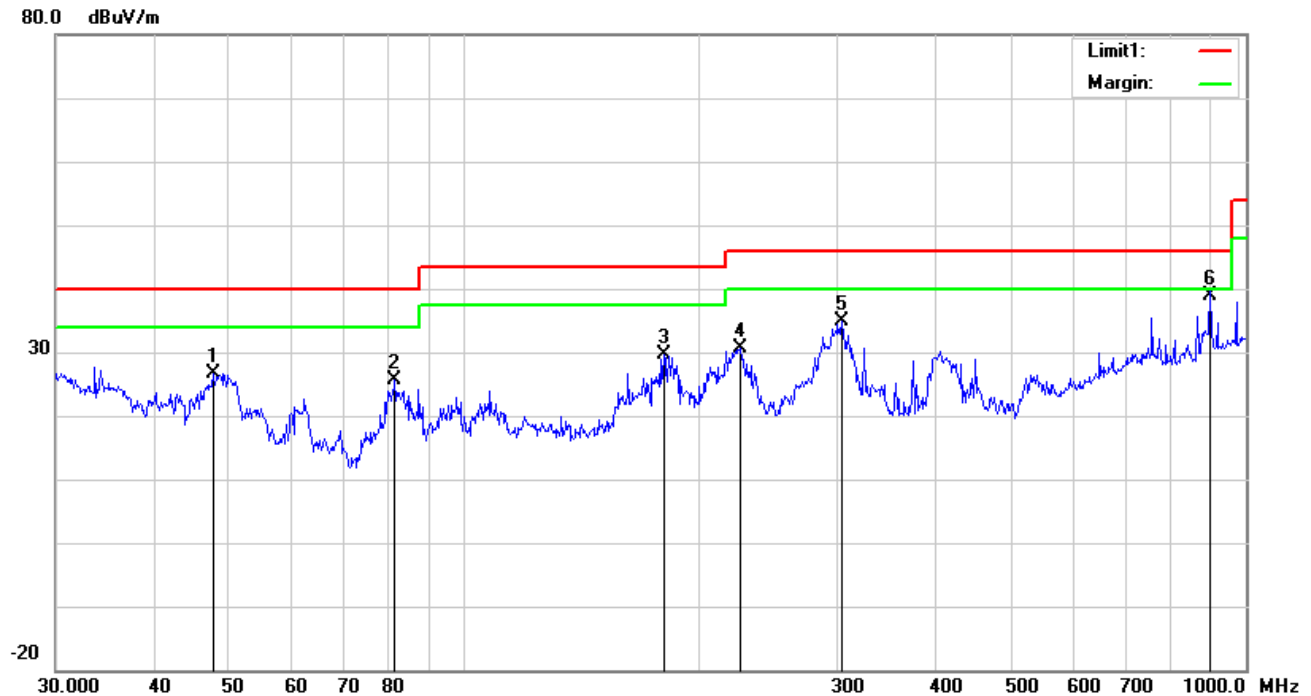
Test Data ☒ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☒ N/A

Screen 1

Test Mode:	Bluetooth Mode
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Below 1GHz



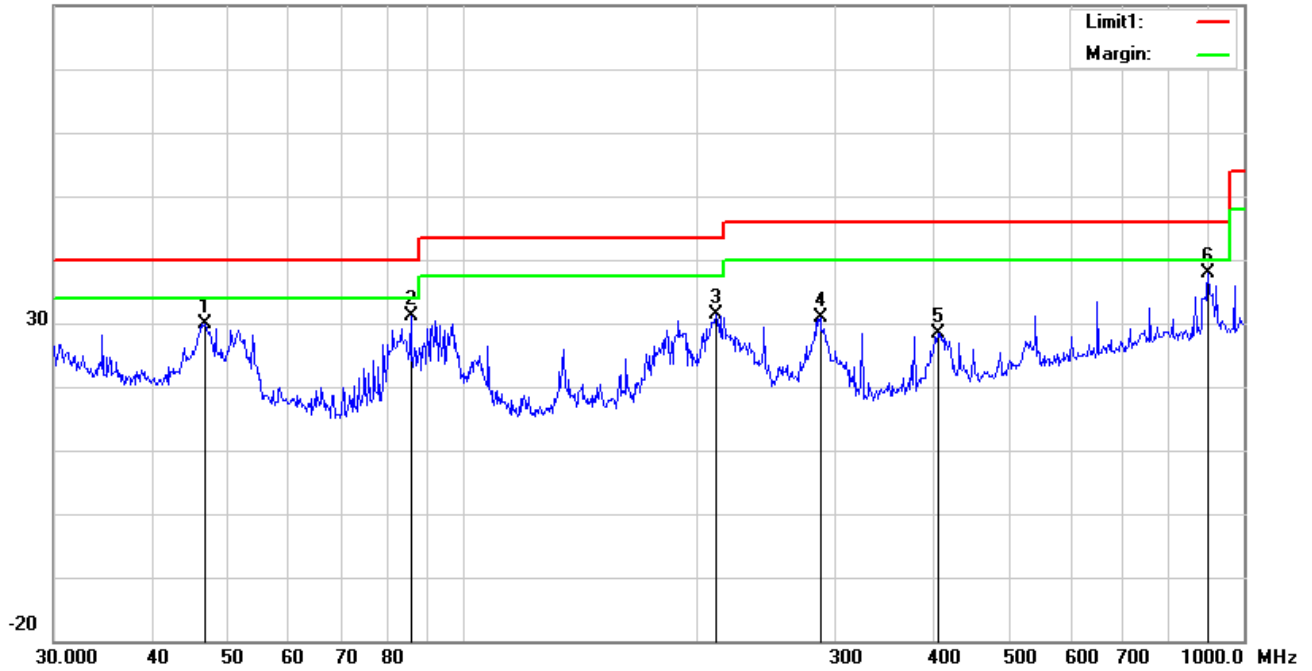
Test Data

Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Detect or	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	H	47.6586	38.70	peak	9.43	22.34	0.78	26.57	40.00	-13.43	100	183
2	H	81.4970	39.29	peak	7.66	22.41	1.06	25.60	40.00	-14.40	100	139
3	H	180.0165	39.56	peak	11.00	22.25	1.36	29.67	43.50	-13.83	100	269
4	H	225.3080	39.51	peak	11.75	22.33	1.62	30.55	46.00	-15.45	100	335
5	H	303.5437	41.60	peak	13.67	22.28	1.81	34.80	46.00	-11.20	100	172
6	H	900.1474	34.21	QP	22.50	20.88	3.07	38.90	46.00	-7.10	100	292

Below 1GHz

80.0 dBuV/m



Test Data

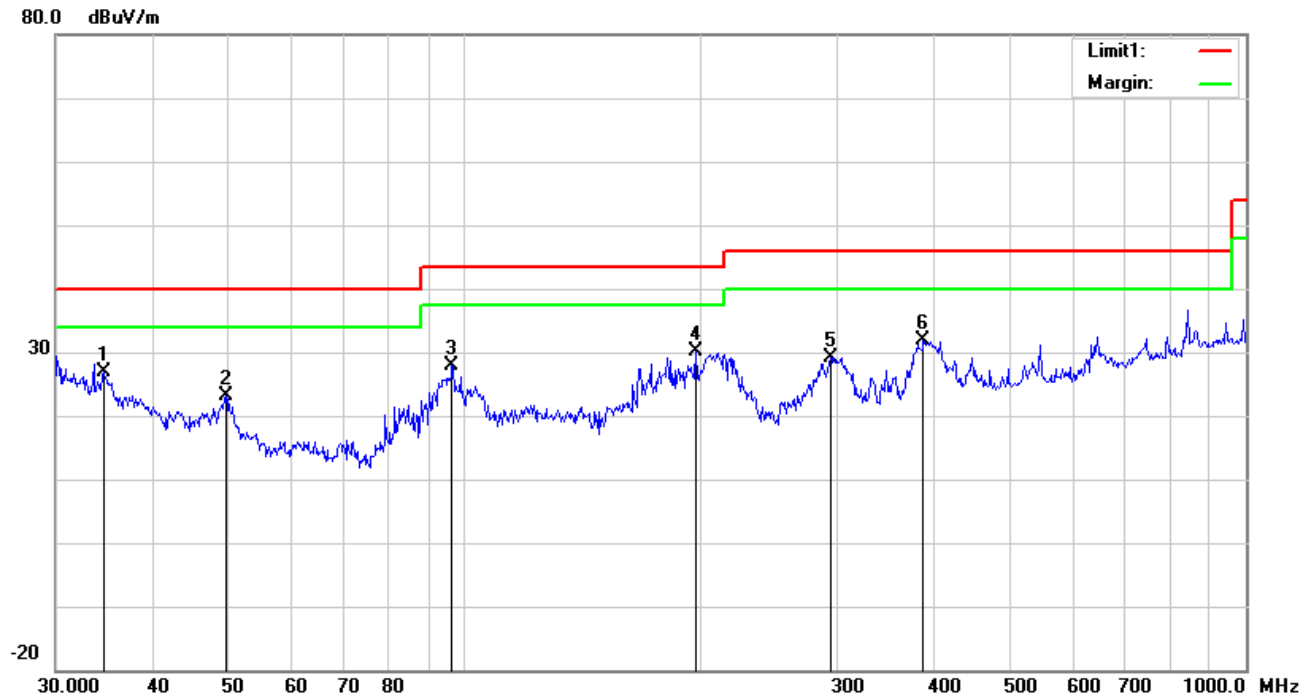
Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Detect or	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degr ee
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	()
1	V	46.8303	41.59	peak	9.79	22.32	0.77	29.83	40.00	-10.17	100	9
2	V	85.8984	44.70	peak	7.84	22.36	1.05	31.23	40.00	-8.77	100	188
3	V	210.7860	40.20	peak	11.95	22.36	1.57	31.36	43.50	-12.14	100	122
4	V	286.9823	38.47	peak	13.03	22.29	1.77	30.98	46.00	-15.02	100	71
5	V	406.0880	32.66	peak	15.82	22.00	2.02	28.50	46.00	-17.50	100	246
6	V	900.1474	33.11	peak	22.50	20.88	3.07	37.80	46.00	-8.20	100	349

Screen 2

Test Mode:	Bluetooth Mode
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Below 1GHz



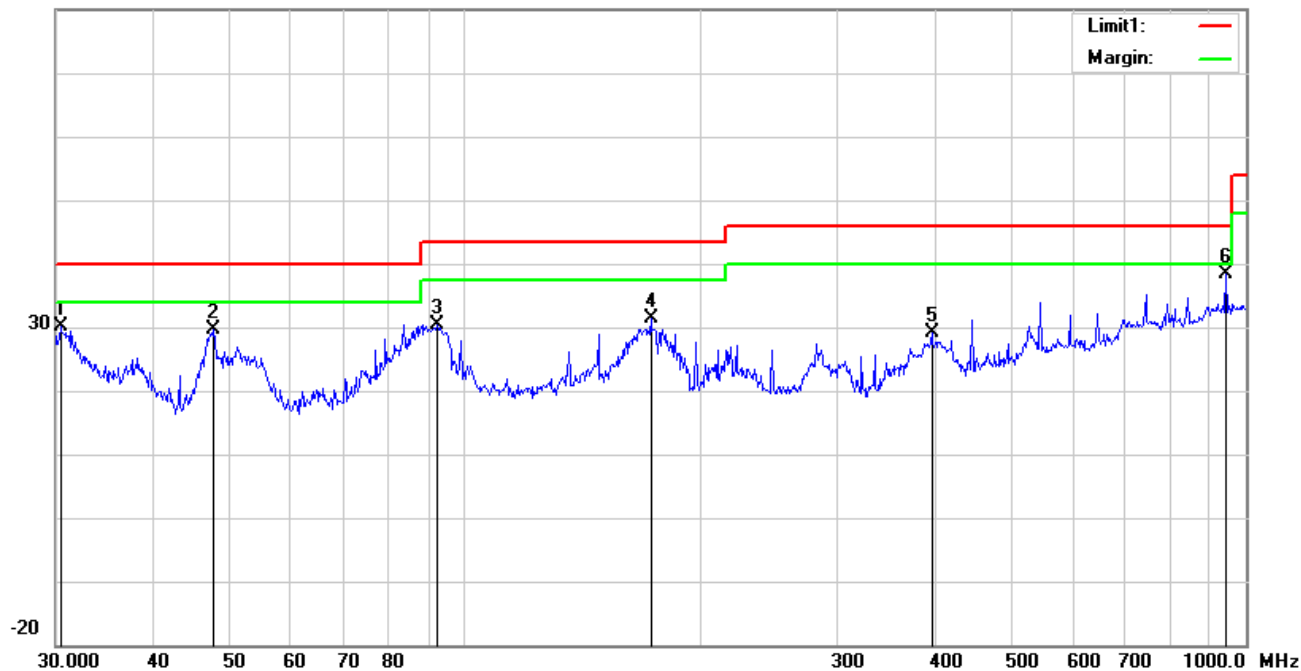
Test Data

Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Detect or	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	H	34.5173	30.49	peak	17.92	22.25	0.75	26.91	40.00	-13.09	100	197
2	H	49.5328	36.06	peak	8.61	22.37	0.80	23.10	40.00	-16.90	100	199
3	H	96.4362	39.71	peak	9.54	22.32	1.03	27.96	43.50	-15.54	100	243
4	H	197.8928	38.88	peak	11.98	22.37	1.54	30.03	43.50	-13.47	200	66
5	H	294.1137	36.36	peak	13.34	22.29	1.78	29.19	46.00	-16.81	100	356
6	H	386.6338	36.45	peak	15.42	22.05	2.02	31.84	46.00	-14.16	100	205

Below 1GHz

80.0 dBuV/m



Test Data

Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Detect or	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degr ee
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	()
1	V	30.4238	30.71	peak	21.07	22.28	0.63	30.13	40.00	-9.87	100	172
2	V	47.8260	41.95	peak	9.36	22.34	0.78	29.75	40.00	-10.25	100	319
3	V	92.4624	43.23	peak	8.59	22.32	0.97	30.47	43.50	-13.03	100	318
4	V	173.2051	40.64	peak	11.54	22.26	1.36	31.28	43.50	-12.22	100	213
5	V	396.2415	33.58	peak	15.62	22.02	2.01	29.19	46.00	-16.81	100	92
6	V	942.1305	33.38	peak	22.71	20.80	3.15	38.44	46.00	-7.56	100	223

Screen 1

Above 1GHz

Test Mode:	Transmitting Mode
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Low Channel (2412 MHz)(g mode worst case)

Frequency (MHz)	S.A. Reading (dBμV)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4824	38.98	AV	V	33.8	6.86	32.69	46.95	54	-7.05
4824	37.84	AV	H	33.8	6.86	32.69	45.81	54	-8.19
4824	48.39	PK	V	33.8	6.86	32.69	56.36	74	-17.64
4824	47.56	PK	H	33.8	6.86	32.69	55.53	74	-18.47
17898	24.25	AV	V	45.12	11.57	32.11	48.83	54	-5.17
17898	22.34	AV	H	45.12	11.57	32.11	46.92	54	-7.08
17898	40.25	PK	V	45.12	11.57	32.11	64.83	74	-9.17
17898	38.72	PK	H	45.12	11.57	32.11	63.3	74	-10.7

Middle Channel (2437 MHz) (n20 mode worst case)

Frequency (MHz)	S.A. Reading (dBμV)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874	39.01	AV	V	33.6	6.82	32.71	46.72	54	-7.28
4874	39.77	AV	H	33.6	6.82	32.71	47.48	54	-6.52
4874	48.48	PK	V	33.6	6.82	32.71	56.19	74	-17.81
4874	47.53	PK	H	33.6	6.82	32.71	55.24	74	-18.76
17932	23.44	AV	V	45.17	11.63	32.18	48.06	54	-5.94
17932	22.16	AV	H	45.17	11.63	32.18	46.78	54	-7.22
17932	40.05	PK	V	45.17	11.63	32.18	64.67	74	-9.33
17932	38.88	PK	H	45.17	11.63	32.18	63.5	74	-10.5

High Channel (2462 MHz) (n20 mode worst case)

Frequency (MHz)	S.A. Reading (dBμV)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4924	39.53	AV	V	33.83	6.95	32.79	47.52	54	-6.48
4924	38.81	AV	H	33.83	6.95	32.79	46.8	54	-7.2
4924	47.78	PK	V	33.83	6.95	32.79	55.77	74	-18.23
4924	47.97	PK	H	33.83	6.95	32.79	55.96	74	-18.04
17916	22.5	AV	V	45.19	11.61	32.24	47.06	54	-6.94
17916	23.58	AV	H	45.19	11.61	32.24	48.14	54	-5.86
17916	39.68	PK	V	45.19	11.61	32.24	64.24	74	-9.76
17916	39.65	PK	H	45.19	11.61	32.24	64.21	74	-9.79

Note:

1, The testing has been conformed to $10 \times 2472 \text{ MHz} = 24,620 \text{ MHz}$

2, All other emissions more than 30 dB below the limit

3, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.

Screen 2

Above 1GHz

Test Mode:	Transmitting Mode
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Low Channel (2412 MHz)(g mode worst case)

Frequency (MHz)	S.A. Reading (dBμV)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4824	39.25	AV	V	33.8	6.86	32.69	47.22	54	-6.78
4824	38.02	AV	H	33.8	6.86	32.69	45.99	54	-8.01
4824	48.13	PK	V	33.8	6.86	32.69	56.1	74	-17.9
4824	47.08	PK	H	33.8	6.86	32.69	55.05	74	-18.95
17897	24.34	AV	V	45.12	11.57	32.11	48.92	54	-5.08
17897	23.21	AV	H	45.12	11.57	32.11	47.79	54	-6.21
17897	39.9	PK	V	45.12	11.57	32.11	64.48	74	-9.52
17897	39.11	PK	H	45.12	11.57	32.11	63.69	74	-10.31

Middle Channel (2437 MHz) (n20 mode worst case)

Frequency (MHz)	S.A. Reading (dBμV)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874	37.88	AV	V	33.6	6.82	32.71	45.59	54	-8.41
4874	38.92	AV	H	33.6	6.82	32.71	46.63	54	-7.37
4874	48.55	PK	V	33.6	6.82	32.71	56.26	74	-17.74
4874	47.59	PK	H	33.6	6.82	32.71	55.3	74	-18.7
17926	23.42	AV	V	45.17	11.63	32.18	48.04	54	-5.96
17926	22.68	AV	H	45.17	11.63	32.18	47.3	54	-6.7
17926	39.43	PK	V	45.17	11.63	32.18	64.05	74	-9.95
17926	39.16	PK	H	45.17	11.63	32.18	63.78	74	-10.22

High Channel (2462 MHz) (n20 mode worst case)

Frequency (MHz)	S.A. Reading (dBμV)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4924	39.11	AV	V	33.83	6.95	32.79	47.1	54	-6.9
4924	38.92	AV	H	33.83	6.95	32.79	46.91	54	-7.09
4924	47.4	PK	V	33.83	6.95	32.79	55.39	74	-18.61
4924	47.44	PK	H	33.83	6.95	32.79	55.43	74	-18.57
17922	22.8	AV	V	45.19	11.61	32.24	47.36	54	-6.64
17922	23.11	AV	H	45.19	11.61	32.24	47.67	54	-6.33
17922	40.46	PK	V	45.19	11.61	32.24	65.02	74	-8.98
17922	39.73	PK	H	45.19	11.61	32.24	64.29	74	-9.71

Note:

1, The testing has been conformed to $10 \times 2472 \text{ MHz} = 24,620 \text{ MHz}$

2, All other emissions more than 30 dB below the limit

3, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
Radiated Emissions					
EMI test receiver	ESL6	100262	09/16/2016	09/15/2017	<input checked="" type="checkbox"/>
Positioning Controller	UC3000	MF780208282	11/18/2016	11/17/2017	<input checked="" type="checkbox"/>
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/31/2016	08/30/2017	<input checked="" type="checkbox"/>
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/20/2016	09/19/2017	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/23/2016	09/22/2017	<input checked="" type="checkbox"/>
Universal Radio Communication Tester	CMU200	121393	09/24/2016	09/23/2017	<input checked="" type="checkbox"/>

Annex B. EUT and Test Setup Photographs

Annex B.ii. Photograph: EUT Internal Photo

Screen 1

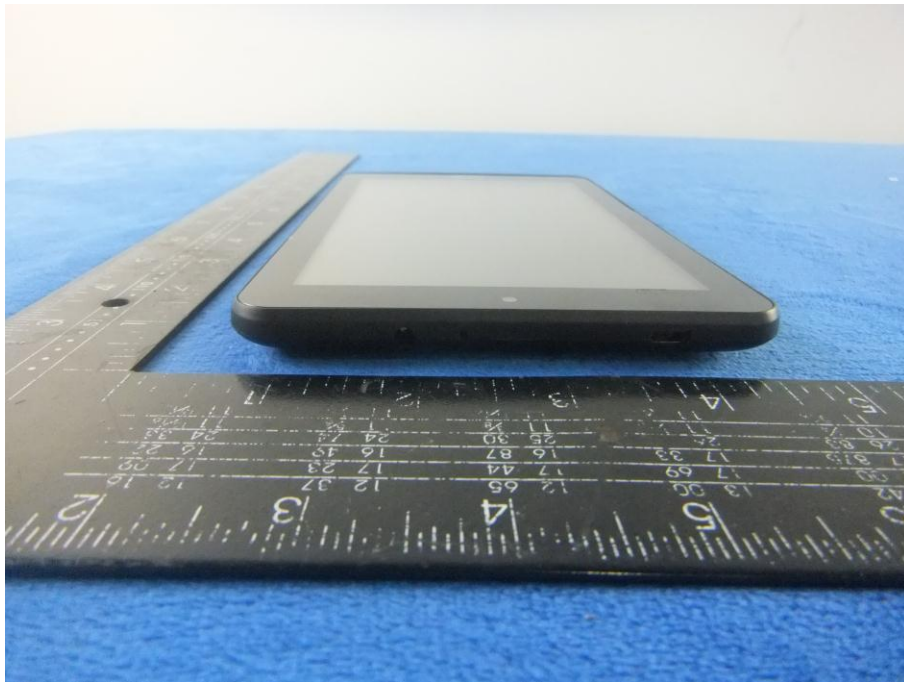
EUT - Front View



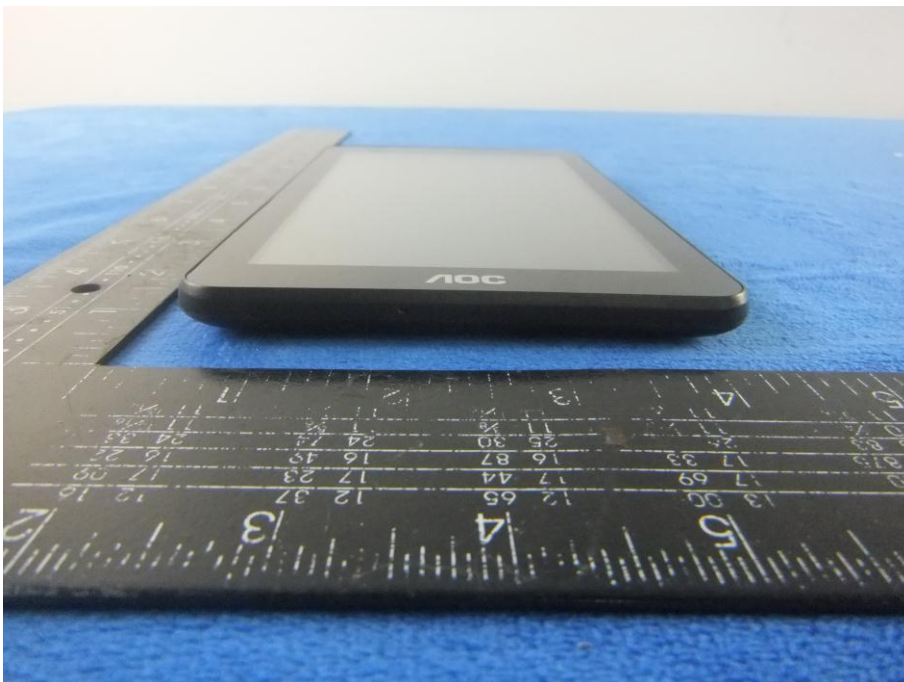
EUT - Rear View



EUT - Top View



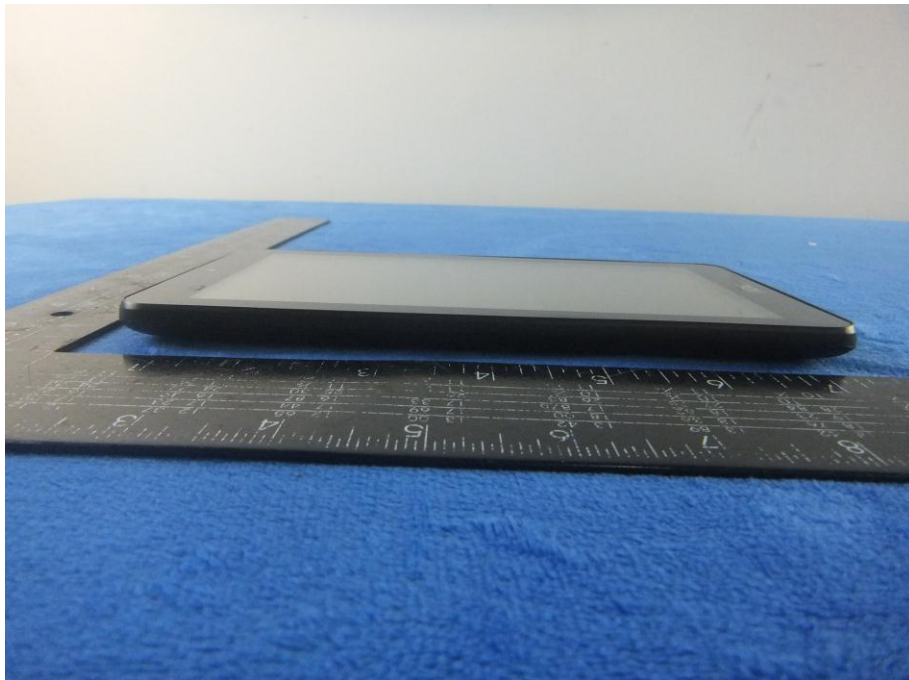
EUT - Bottom View



EUT - Left View



EUT - Right View



Screen 2

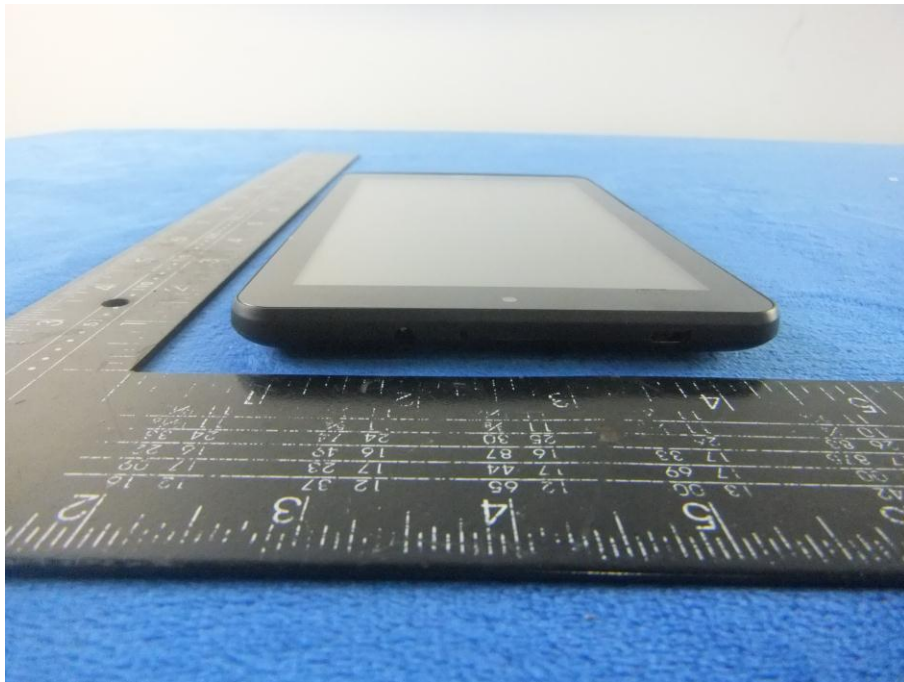
EUT - Front View



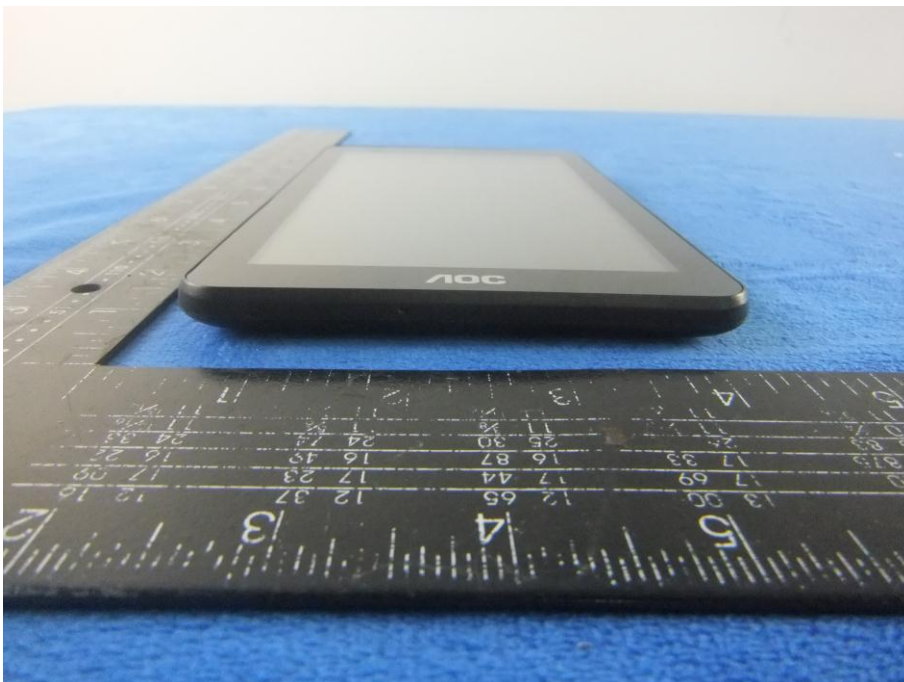
EUT - Rear View



EUT - Top View



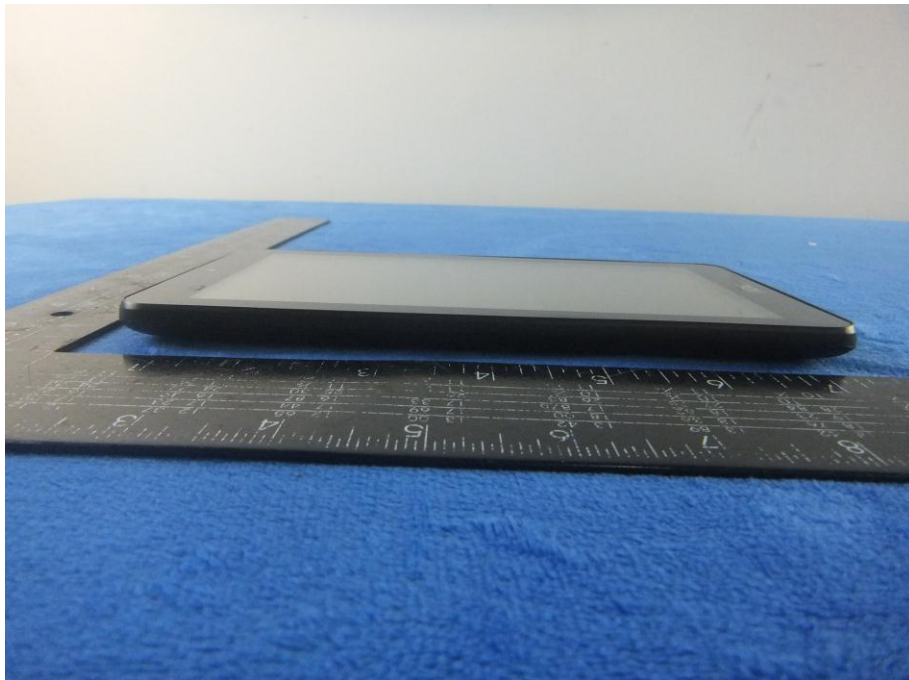
EUT - Bottom View



EUT - Left View



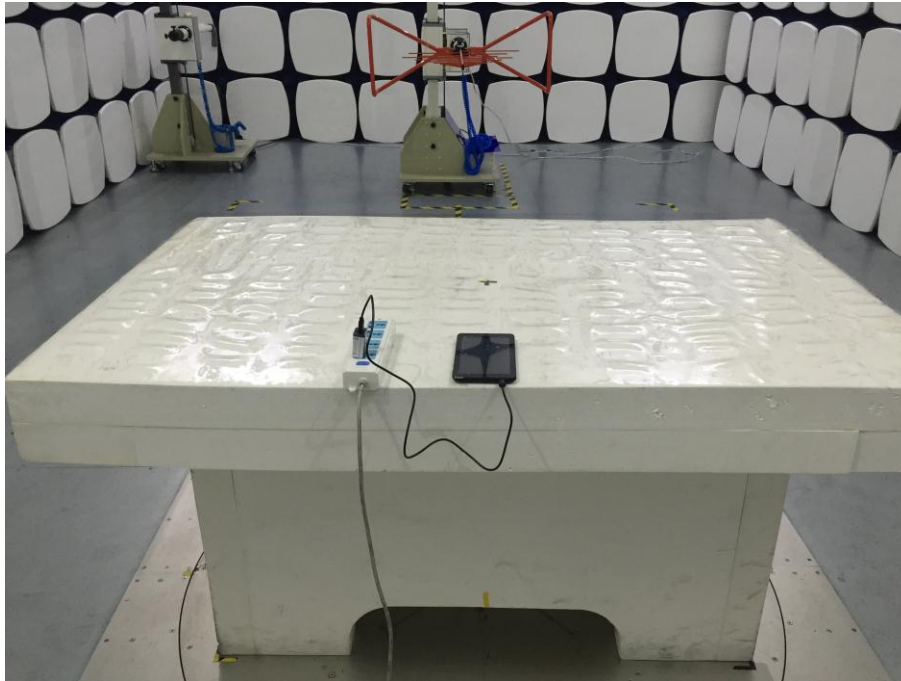
EUT - Right View



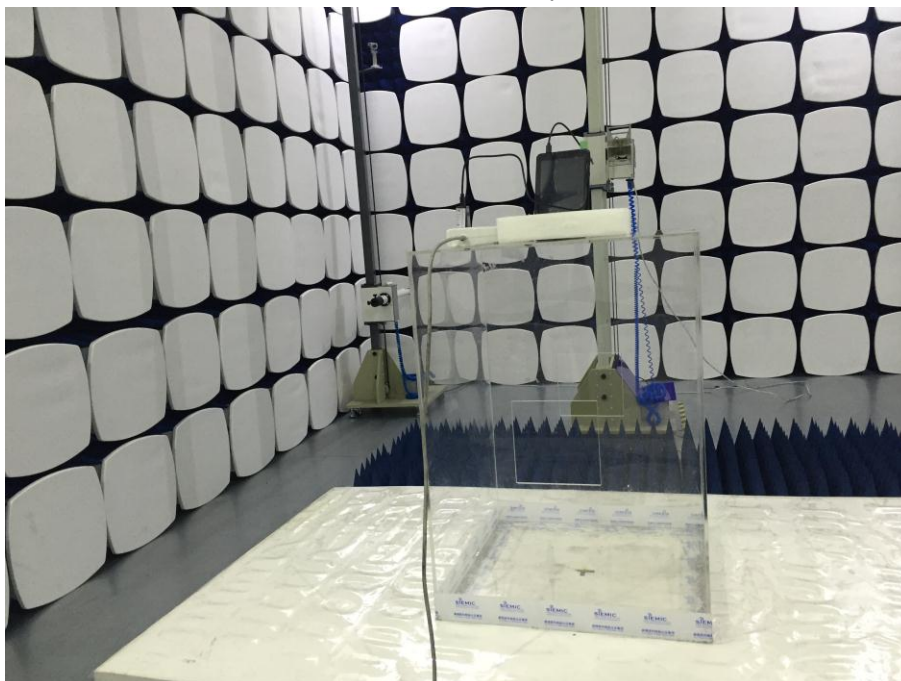
Annex B.iii. Photograph: Test Setup Photo

Screen 1

Radiated Spurious Emissions Test Setup Below 1GHz

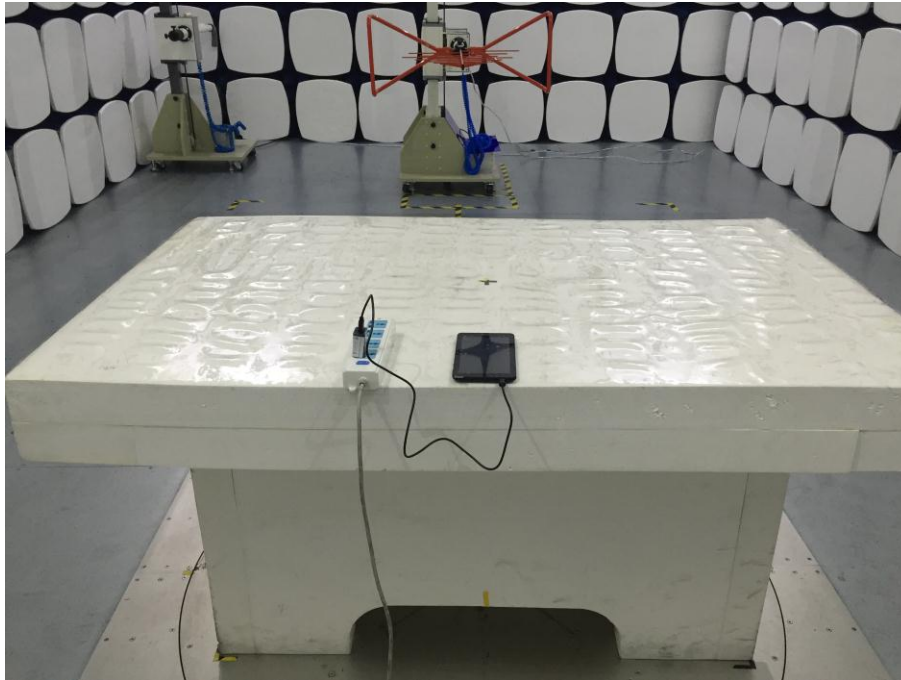


Radiated Emissions Test Setup Above 1GHz

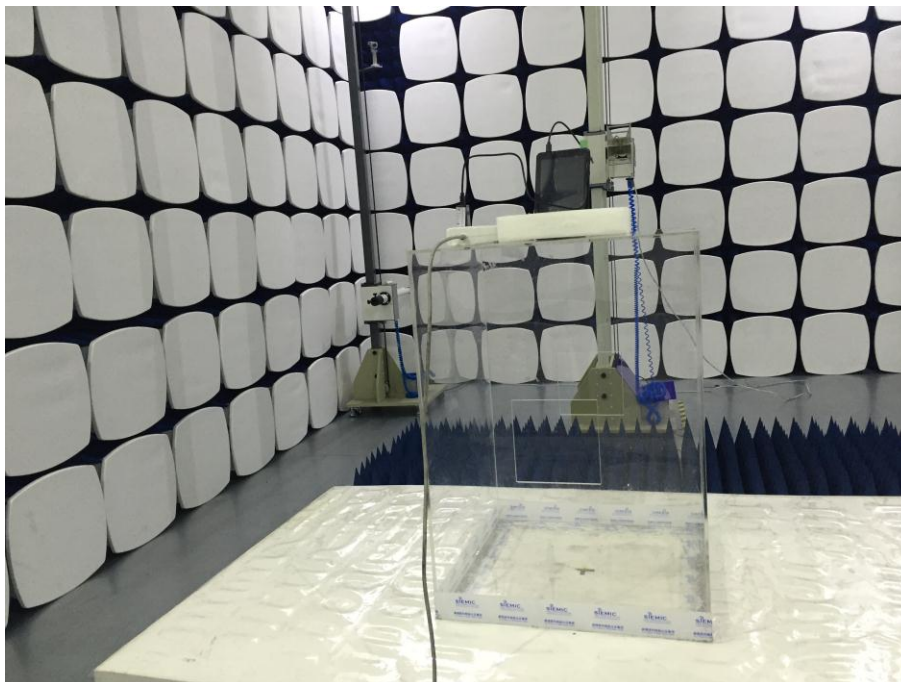


Screen 2

Radiated Spurious Emissions Test Setup Below 1GHz



Radiated Emissions Test Setup Above 1GHz

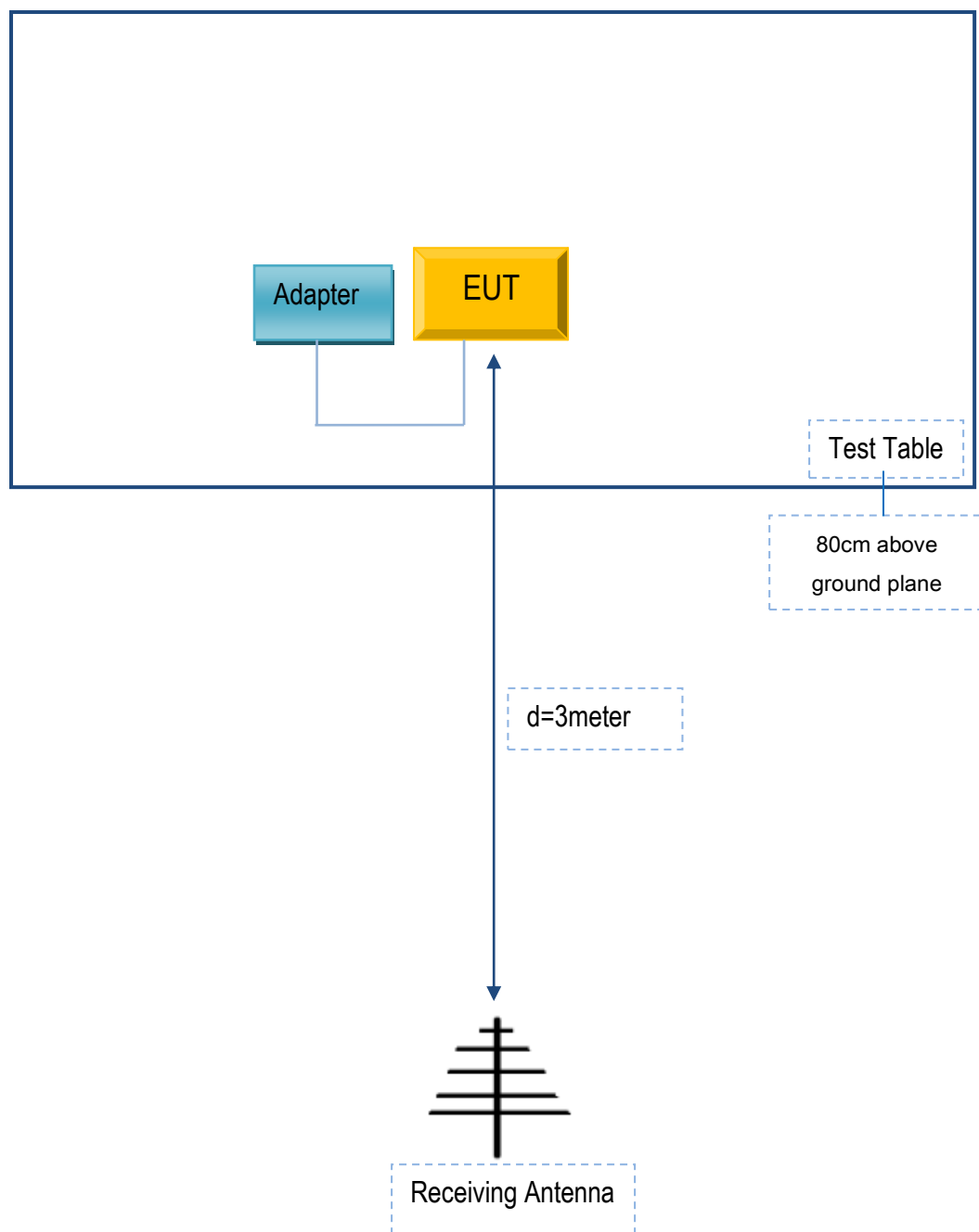


Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

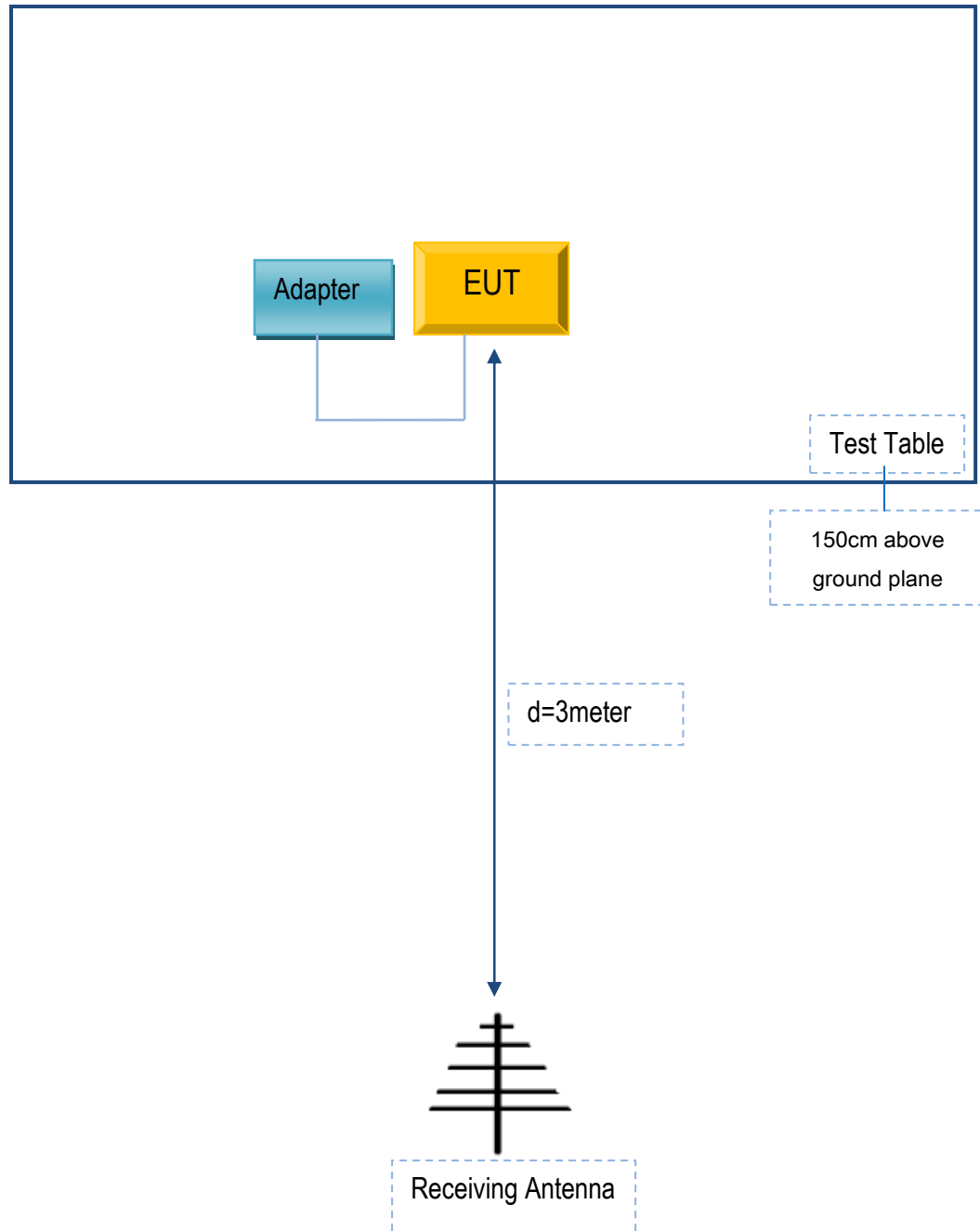
Annex C.ii. TEST SET UP BLOCK

Screen 1& Screen 2

Block Configuration Diagram for Radiated Emissions (Below 1GHz) .



Block Configuration Diagram for Radiated Emissions (Above 1GHz) .



Annex C. ii. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
AOC	Adapter	SC/5WM500100-US	A72S

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	A72S

Test Report No.	17070251-FCC-R2 V1
Page	31 of 32

Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see attachment

Annex E. DECLARATION OF SIMILARITY