# RF TEST REPORT



Report No.: 17070660-FCC-R1
Supersede Report No.: N/A

Applicant	AOC				
Product Name	Tablet PC	Tablet PC			
Model No.	A726				
Serial No.	N/A				
Test Standard	FCC Part 1	5.247: 2016, ANSI C63.10: 2	013		
Test Date	August 01	to 09, 2017			
Issue Date	August 10, 2017				
Test Result	Pass Fail				
Equipment compl	ied with the	specification			
Equipment did no	t comply with	n the specification			
Loven	Luo	David Huang			
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
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### **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



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## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
17070660-FCC-R1	NONE	Original	August 10, 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

#### Test Lab A:

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	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	

#### Test Lab B:

Lab performing tests	SIEMIC (Nanjing-China) Laboratories	
Lab Address	2-1 Longcang Avenue Yuhua Economic and	
	Technology Development Park, Nanjing, China	
FCC Test Site No.	986914	
IC Test Site No.	4842B-1	
Test Software	EZ_EMC(ver.lcp-03A1)	

Note: We just perform Radiated Spurious Emission above 18GHz in the test Lab. B.



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## 4. Equipment under Test (EUT) Information

Description of	EUT:	Tablet PC

Main Model: A726

Serial Model: N/A

Date EUT received: July 31, 2017

Test Date(s): August 01 to 09, 2017

Equipment Category: DSS

Antenna Gain: Bluetooth/WIFI: 2dBi

Antenna Type: PIFA antenna

Type of Modulation: 802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

WIFI: 802.11b/g/n(20M): 2412-2462 MHz

RF Operating Frequency (ies): WIFI: 802.11n(40M): 2422-2452 MHz

Bluetooth: 2402-2480 MHz

Max. Output Power: 6.939dBm

WIFI:802.11b/g/n(20M): 11CH

Number of Channels: WIFI:802.11n(40M): 7CH

Bluetooth: 79CH

Port: Earphone Port, USB Port, SD Card Port



Input Power:

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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

**Note:** The difference between the old case 16071173 and new case 17070660: The only difference is updated the LCD, the other construction is the same.

So, we have retested the Radiated Emissions data in this report.



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## 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& Restricted Band	Compliance

#### **Measurement Uncertainty**

Emissions		
Test Item	Description	Uncertainty
Band Edge and Radiated Spurious Emissions	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
-	-	-



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## 6. Measurements, Examination And Derived Results

### 6.1 Radiated Spurious Emissions & Restricted Band

Temperature	25°C
Relative Humidity	50%
Atmospheric Pressure	1008mbar
Test date :	August 08, 2017
Tested By :	Loren Luo

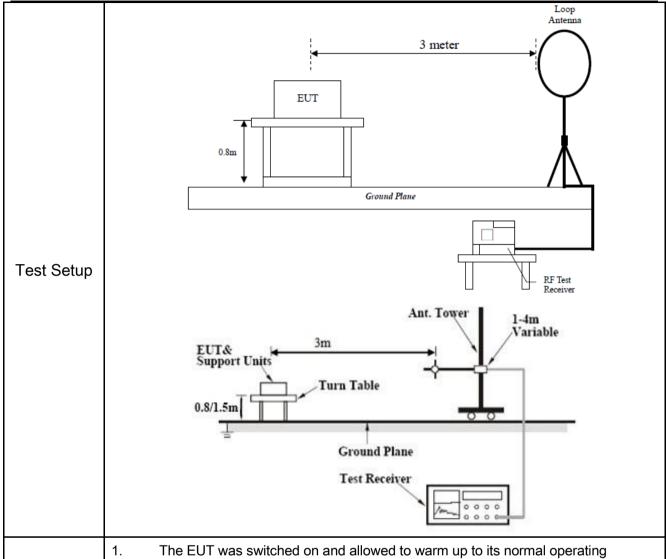
#### Requirement(s):

Spec	Item	Requirement		Applicable
47CFR§15.		Except higher limit as specified else emissions from the low-power radio exceed the field strength levels spe the level of any unwanted emission the fundamental emission. The tight edges	e-frequency devices shall not cified in the following table and s shall not exceed the level of ter limit applies at the band	
205, §15.209, §15.247(d)	a)	0.009~0.490 0.490~1.705	Field Strength (μV/m) 2400/F(KHz) 24000/F(KHz)	<b>&gt;</b>
		1.705~30.0 30 - 88 88 - 216 216 960	30 100 150 200	
		Above 960	500	



Procedure

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- 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:
  - a. Vertical or horizontal polarization (whichever gave the higher emission level over a full rotation of the EUT) was chosen.
  - b. The EUT was then rotated to the direction that gave the maximum emission.
  - c. Finally, the antenna height was adjusted to the height that gave the maximum emission.
- 3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with Peak detection for Peak measurement at frequency above



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	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.	
	5. Steps 2 and 3 were repeated for the next frequency point, until all selected	
	frequency points were measured.	
Remark		
Result	Pass Fail	
Test Data	Yes N/A	
Test Plot	Yes (See below)	



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### **Test Result:**

Test Mode: Transmitting Mode

Frequency range: 9KHz - 30MHz

Freq.	Detection	Factor	Reading	Result	Limit@3m	Margin
(MHz)	value	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)
						>20
						>20

#### Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

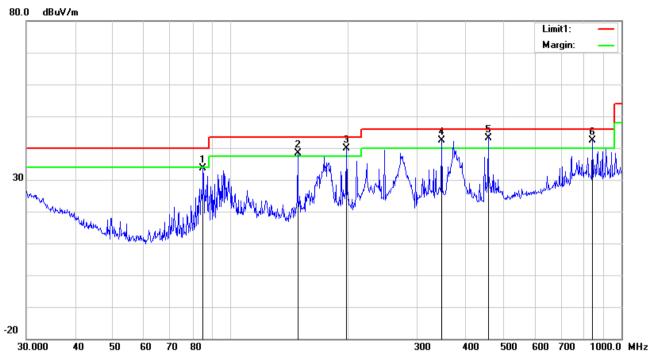
Limit line = specific limits(dBuv) + distance extrapolation factor.



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Test Mode: Bluetooth Mode

### 30MHz -1GHz



#### Test Data

### Horizontal Polarity Plot @3m

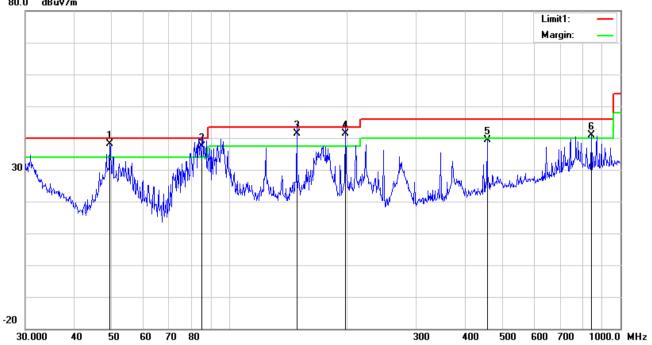
No.	P/L	Frequency	Reading	Detect	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degr
		(MHz)	(dBuV/m)	or	(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	( )
1	Н	84.9995	47.01	peak	7.80	22.37	1.07	33.51	40.00	-6.49	100	9
2	Н	148.4410	46.78	QP	12.60	22.35	1.33	38.36	43.50	-5.14	100	213
3	Н	197.8928	48.77	QP	11.98	22.37	1.54	39.92	43.50	-3.58	100	70
4	Ι	346.8092	47.88	QP	14.58	22.16	2.02	42.32	46.00	-3.68	100	309
5	Н	455.9058	46.05	QP	16.82	21.90	2.16	43.13	46.00	-2.87	100	227
6	Н	842.1296	38.65	QP	21.86	21.04	2.88	42.35	46.00	-3.65	100	270



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#### 30MHz -1GHz





#### 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)	OI .	(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	( )
1	٧	49.3594	50.98	QP	8.68	22.37	0.79	38.08	40.00	-1.92	100	348
2	V	84.9995	51.00	QP	7.80	22.37	1.07	37.50	40.00	-2.50	100	305
3	V	148.4410	49.82	QP	12.60	22.35	1.33	41.40	43.50	-2.10	100	193
4	٧	197.8928	50.15	QP	11.98	22.37	1.54	41.30	43.50	-2.20	100	224
5	٧	455.9058	42.21	peak	16.82	21.90	2.16	39.29	46.00	-6.71	100	235
6	V	842.1296	37.11	QP	21.86	21.04	2.88	40.81	46.00	-5.19	100	200



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#### Above 1GHz

Test Mode: Transmitting Mode

#### Low Channel (2402 MHz) ( GFSK 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)
4804	41.03	AV	V	33.39	7.22	48.46	33.18	54	-20.82
4804	40.22	AV	Н	33.39	7.22	48.46	32.37	54	-21.63
4804	53.16	PK	V	33.39	7.22	48.46	45.31	74	-28.69
4804	52.87	PK	Н	33.39	7.22	48.46	45.02	74	-28.98
3006	28.45	AV	V	30.23	5.62	48.45	15.85	54	-38.15
3006	26.51	AV	Н	30.23	5.62	48.45	13.91	54	-40.09
3006	43.57	PK	V	30.23	5.62	48.45	30.97	74	-43.03
3006	41.66	PK	Н	30.23	5.62	48.45	29.06	74	-44.94

#### Middle Channel (2441 MHz) ( GFSK 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)
4882	44.27	AV	V	33.62	7.53	48.36	37.06	54	-16.94
4882	43.81	AV	Н	33.62	7.53	48.36	36.6	54	-17.40
4882	56.37	PK	V	33.62	7.53	48.36	49.16	74	-24.84
4882	54.21	PK	Н	33.62	7.53	48.36	47	74	-27.00
5427	29.88	AV	V	34.17	8.99	48.36	24.68	54	-29.32
5427	26.75	AV	Н	34.17	8.99	48.36	21.55	54	-32.45
5427	54.21	PK	V	34.17	8.99	48.36	49.01	74	-24.99
5427	53.28	PK	Н	34.17	8.99	48.36	48.08	74	-25.92



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#### High Channel (2480 MHz) ( GFSK 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)
4960	43.78	AV	V	33.89	7.86	48.31	37.22	54	-16.78
4960	40.51	AV	Н	33.89	7.86	48.31	33.95	54	-20.05
4960	56.87	PK	V	33.89	7.86	48.31	50.31	74	-23.69
4960	54.11	PK	Н	33.89	7.86	48.31	47.55	74	-26.45
17932	20.56	AV	V	43.21	19.44	44.4	38.81	54	-15.19
17932	19.43	AV	Н	43.21	19.44	44.4	37.68	54	-16.32
17932	38.75	PK	V	43.21	19.44	44.4	57	74	-17.00
17932	36.52	PK	Н	43.21	19.44	44.4	54.77	74	-19.23

#### Note:

- 1, The testing has been conformed to 10\*2480MHz=24,800MHz
- 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.
- 4, The radiated spurious test above 18GHz is subcontracted to SIEMIC (Nanjing-China) Laboratories. and found 30dB below the limit at least.



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## Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
Radiated Emissions				l	
EMI test receiver	ESL6	100262	09/16/2016	09/15/2017	>
Positioning Controller	UC3000	MF780208282	11/18/2016	11/17/2017	<b>&gt;</b>
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/31/2016	08/30/2017	✓
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	<b>\</b>
Horn Antenna	BBHA9170	3145226D1	09/28/2016	09/27/2017	<b>&gt;</b>
Active Antenna (9kHz-30MHz)	AL-130	121031	10/13/2016	10/12/2017	✓
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/20/2016	09/19/2017	<u>&lt;</u>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/23/2016	09/22/2017	V
Universal Radio Communication Tester	CMU200	121393	09/24/2016	09/23/2017	V



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## Annex B. EUT And Test Setup Photographs

### Annex B.ii. Photograph: EUT External Photo

Whole Package View



Adapter - Front View





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**EUT - Front View** 



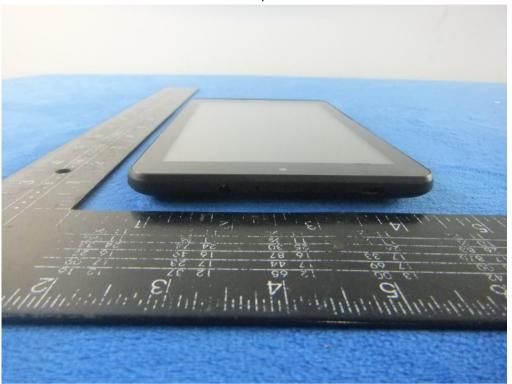
**EUT - Rear View** 



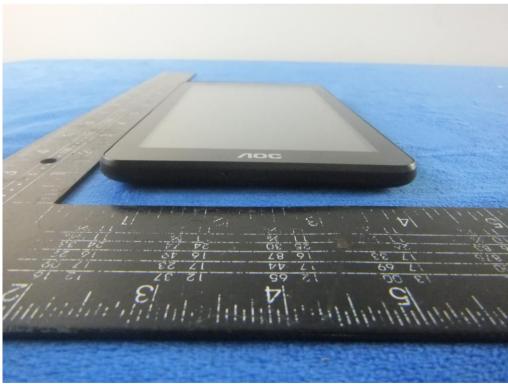


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EUT - Top View



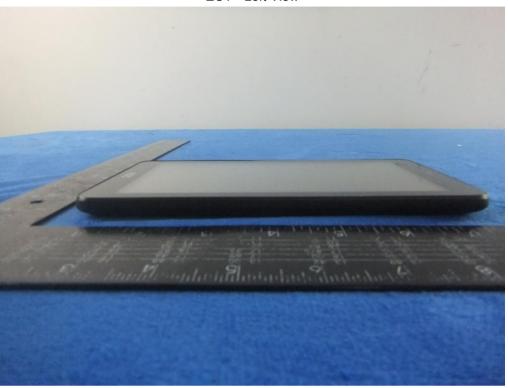
EUT - Bottom View





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EUT - Left View



EUT - Right View





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### Annex B.ii. Photograph: EUT Internal Photo

Cover Off - Top View 1



Cover Off - Top View 2





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Battery - Front View



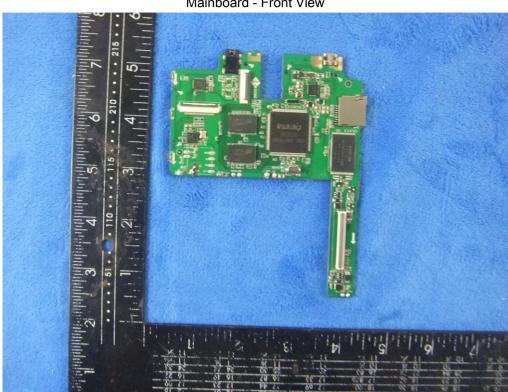
Battery - Rear View



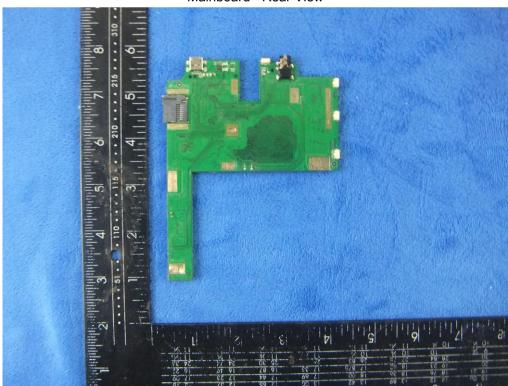


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Mainboard - Front View



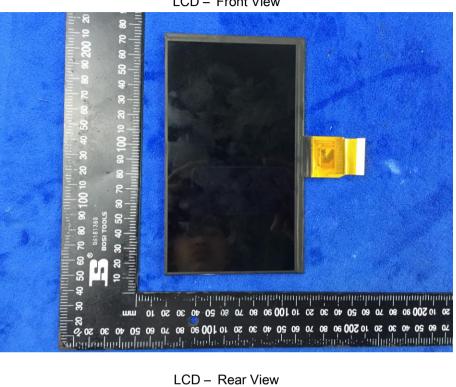
Mainboard - Rear View



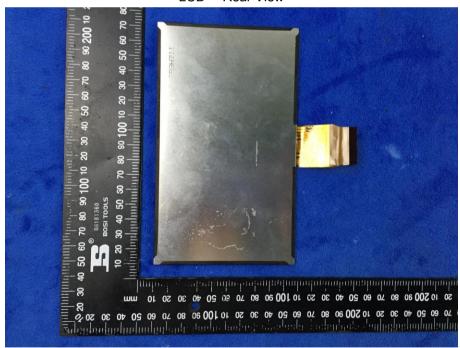


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LCD - Front View



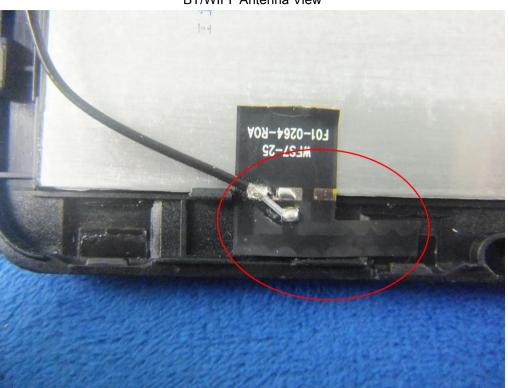
LCD - Rear View





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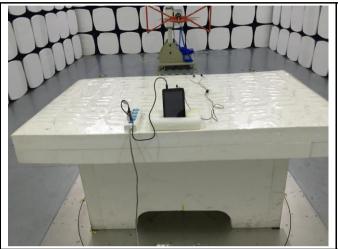
#### BT/WIFI Antenna View



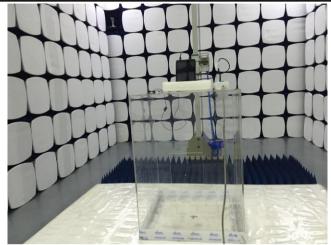


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### Annex B.iii. Photograph: Test Setup Photo



Radiated Spurious Emissions Test Setup Below 1GHz



Radiated Spurious Emissions Test Setup Above 1GHz

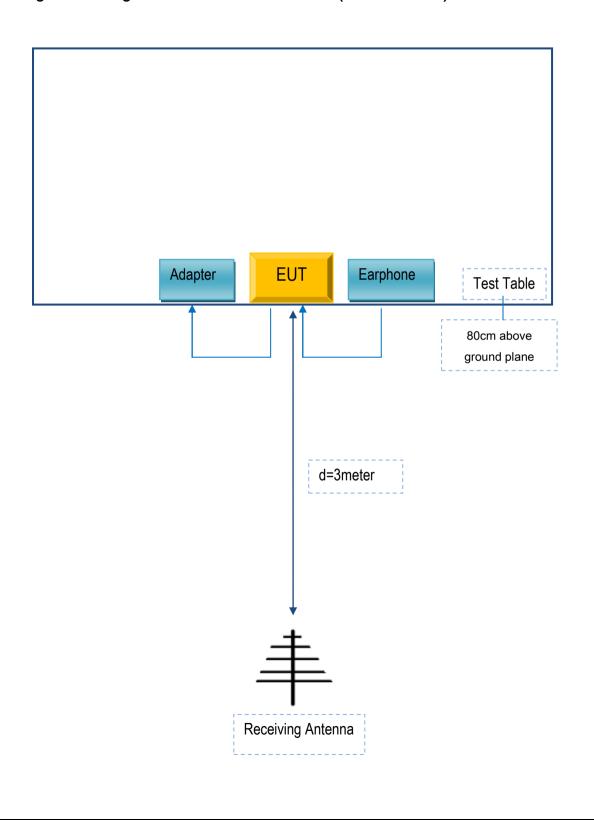


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## Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

#### Annex C.ii. TEST SET UP BLOCK

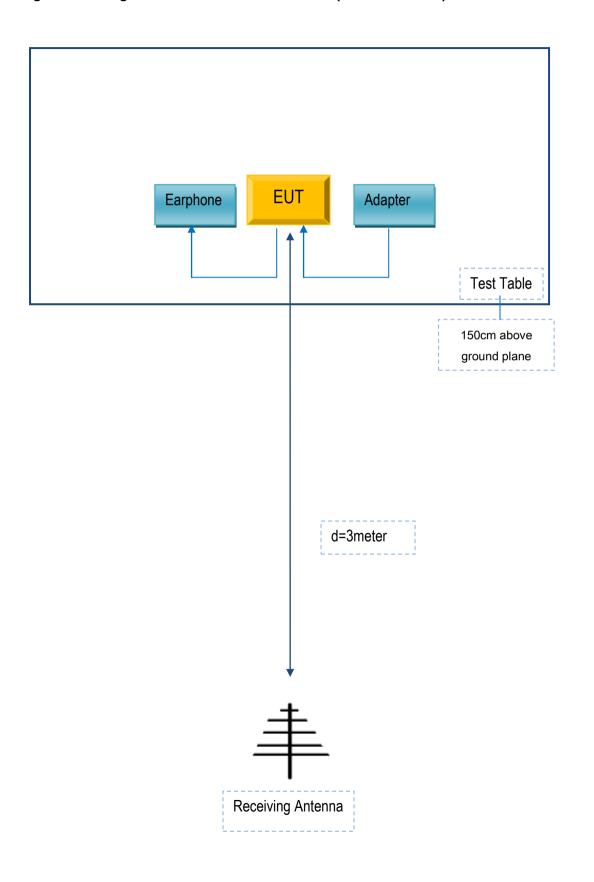
Block Configuration Diagram for Radiated Emissions (Below 1GHz).





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





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### Annex C. il. 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



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

Please see attachment



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### Annex E. DECLARATION OF SIMILARITY

**Declaration Letter** 

(Original approval holder)

(Original approval floidor)	
ompany name AOC	
Address	14F-5, NO.258, Liancheng Rd., Zhonghe Dist., New Taipei City, Taiwan

Declare that the following company:

(New approval holder)

(11011			
Company name	AOC		
Address	14F-5, NO.258, Liancheng Rd., Zhonghe Dist., New Taipei City, Taiwan		

is here to declare that PCB , $\!$ Antenna and Appearance shape , accessories are the same . The only difference is listed as below

(Difference from original approval holder's)

	Model	Difference
Original	A726	
New	A726	New screen

and apply for own approval or certificate.

#### Attestation:

Date:	Name: (this must be a person)	Function:	Signature: (or official company stamp)
2017-8-11	李尚諭 SY.Lee	Design Manager	SY. Lee &si