




RF TEST REPORT



Report No.: 14021149-FCC-R4

Supersede Report No.: N/A

Applicant	Beneworld International (HK) Co., Limited		
Product Name	7inch Tablet PC		
Main Model	BW9		
Test Standard	FCC Part 15.247: 2014, ANSI C63.10: 2009		
Test Date	November 11 to November 12, 2014		
Issue Date	November 14, 2014		
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"/>		
			
Deon Dai Test Engineer		Alex Liu 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 (Nanjing-China) Laboratories
2-1 Longcang Avenue Yuhua Economic and
Technology Development Park, Nanjing, China
Tel: +86(25)86730128/86730129 Fax: +86(25)86730127 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.	14021149-FCC-R4
Page	3 of 43

This page has been left blank intentionally.

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	7
6. MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	8
6.1 RF EXPOSURE	8
6.2 ANTENNA REQUIREMENT	9
6.3 DTS (6 DB&20 DB) CHANNEL BANDWIDTH	10
6.4 MAXIMUM OUTPUT POWER.....	13
6.5 POWER SPECTRAL DENSITY	15
6.6 BAND-EDGE & UNWANTED EMISSIONS INTO NON-RESTRICTED FREQUENCY BANDS	17
6.7 AC POWER LINE CONDUCTED EMISSIONS.....	19
6.8 RADIATED SPURIOUS EMISSIONS	22
ANNEX A. TEST INSTRUMENT	26
ANNEX B. EUT AND TEST SETUP PHOTOGRAPHS.....	27
ANNEX C. TEST SETUP AND SUPPORTING EQUIPMENT	39
ANNEX D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PARTLIST	42
ANNEX E. DECLARATION OF SIMILARITY.....	43

Test Report No.	14021149-FCC-R4
Page	5 of 43

1. Report Revision History

Report No.	Report Version	Description	Issue Date
14021149-FCC-R4	NONE	Original	November 14, 2014

2. Customer information

Applicant Name	Beneworld International (HK) Co., Limited
Applicant Add	Unit 04, 7/F, Bright Way Tower, No. 33 Mong Kok Road, Kowloon, Hong Kong
Manufacturer	Shenzhen Beneworld Technology Co. Ltd.
Manufacturer Add	Building 3, Huangtian Industrial Park, Xixiang, Baoan District, Shenzhen, Guangdong, China

3. Test site information

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	Labview of SIEMIC version 1.0

4. Equipment under Test (EUT) Information

Description of EUT:	7inch Tablet PC
Main Model:	BW9
Serial Model:	BW7D9, BW7D19, BW7D29, BW7D61, BW7D62, BW7D66, BW7D68, BW7D69, BW7D70, BW7D71
Date EUT received:	November 03, 2014
Test Date(s):	November 11 to November 12, 2014
Output AV power	-2.94 dBm
Antenna Gain:	GSM850: -0.46 dBi PCS1900: 1.19 dBi UMTS-FDD Band II: 1.3 dBi Bluetooth/ WIFI&BLE: 1.56 dBi
Type of Modulation:	GSM / GPRS: GMSK UMTS-FDD: QPSK 802.11b/g/n: DSSS/OFDM Bluetooth: GFSK& π /4DQPSK&8DPSK BLE: GFSK
RF Operating Frequency (ies):	GSM850 TX : 824.2 ~ 848.8 MHz; RX : 869.2 ~ 893.8 MHz PCS1900 TX : 1850.2 ~ 1909.8 MHz; RX : 1930.2 ~ 1989.8 MHz UMTS-FDD Band II TX : 1852.4 ~ 1907.6 MHz; RX : 1932.4 ~ 1987.6 MHz 802.11b/g/n(20M): 2412-2462 MHz(TX/RX) 802.11n(40M): 2422-2452 MHz (TX/RX) Bluetooth&BLE: 2402-2480 MHz(TX/RX)
Number of Channels:	299CH (PCS1900) and 124CH (GSM850) UMTS-FDD Band II : 277CH 802.11b/g/n(20M): 11CH 802.11n(40M): 7CH Bluetooth: 79CH BLE: 40CH
Port:	USB Port, Earphone Port
Input Power:	Adapter: Model: XHY050200UUCH Input: AC 100-240V 50/60Hz 0.5A MAX Output: DC 5V 2.0A BATTERY: 3.7V 5200mAh
Trade Name :	N/A
FCC ID:	2AANC-BENEWORLD-BW9
Note: the difference between these models please refer to Annex E. DECLARATION OF SIMILARITY.	

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
§15.247 (i), §2.1093	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.247 (a)(2)	DTS (6 dB&20 dB) CHANNEL BANDWIDTH	Compliance
§15.247(b)(3)	Conducted Maximum Output Power	Compliance
§15.247(e)	Power Spectral Density	Compliance
§15.247(d)	Band-Edge & Unwanted Emissions into Non-Restricted Frequency Bands	Compliance
§15.207 (a),	AC Power Line Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d)	Radiated Spurious Emissions & Unwanted Emissions into Restricted Frequency Bands	Compliance

Measurement Uncertainty

Test Item	Description	Uncertainty
Radiated 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)	3.952dB

6. Measurements, Examination And Derived Results

6.1 RF Exposure

The EUT is a portable device, thus requires RF exposure evaluation;
Please refer to SIEMIC RF Exposure Report: 14021149-FCC-H2.

6.2 Antenna Requirement

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules.

§15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has 2 antennas:

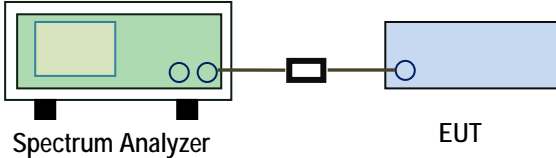
A PIFA antenna for Bluetooth/BLE/WIFI, the gain is 1.56 dBi for Bluetooth/BLE/WIFI.

A PIFA antenna for GSM and UMTS, the gain is -0.46 dBi for GSM850, the gain is 1.19 dBi for PCS1900, 1.3 dBi for UMTS-FDD Band II.

Result: Compliance.

6.3 DTS (6 dB&20 dB) Channel Bandwidth

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	November 12, 2014
Tested By :	Deon Dai

Spec	Item	Requirement	Applicable
§ 15.247(a)(2) RSSGen (4.6.1)	a)	6dB BW≥500kHz;	<input checked="" type="checkbox"/>
	b)	20dB BW: For FCC reference only; required by IC.	<input checked="" type="checkbox"/>
Test Setup	 <p style="text-align: center;">Spectrum Analyzer EUT</p>		
Test Procedure	<p>558074 D01 DTS Meas Guidance v03r02, 8.1 DTS bandwidth</p> <p><u>6dB Emission bandwidth measurement procedure</u></p> <ul style="list-style-type: none"> - Set RBW = 100 kHz. - Set the video bandwidth (VBW) ≥ 3 x RBW. - Detector = Peak. - Trace mode = max hold. - Sweep = auto couple. - Allow the trace to stabilize. <p>Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.</p> <p><u>20dB bandwidth</u></p> <p>C63.10 Occupied Bandwidth (OBW=20dB bandwidth)</p> <ul style="list-style-type: none"> - Set RBW = 1%-5% OBW. - Set the video bandwidth (VBW) ≥ 3 x RBW. - Set the span range between 2 times and 5 times of the OBW. - Sweep time=Auto, Detector=PK, Trace=Max hold. - Once reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e., the widest) bandwidth. Unless otherwise specified for an unlicensed wireless device, measure the bandwidth at the 20 dB level with respect to the reference level. 		
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		
Test Data	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A		
Test Plot	<input checked="" type="checkbox"/> Yes (See below) <input type="checkbox"/> N/A		

Type	Test mode	CH	Freq (MHz)	Result (MHz)	Limit (MHz)	Result
6dB BW	BLE	Low	2402	0.708	≥0.5	Pass
		Mid	2440	0.702	≥0.5	Pass
		High	2480	0.702	≥0.5	Pass

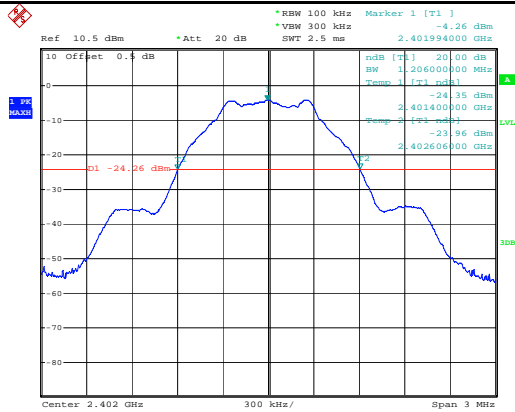
Type	Test mode	CH	Freq (MHz)	Result (MHz)	Limit (MHz)	Result
20dB BW	BLE	Low	2402	1.206	≥0.5	Pass
		Mid	2440	1.206	≥0.5	Pass
		High	2480	1.206	≥0.5	Pass

The figure displays four spectral plots arranged in a 2x2 grid, showing the 6dB bandwidth for three different channels: Low CH 2402, Mid CH 2440, and High CH 2480. Each plot includes a blue trace, a red reference line at -10 dBm, and a green 3dB line. The plots show a peak around 2.4 GHz with a bandwidth of approximately 300 kHz.

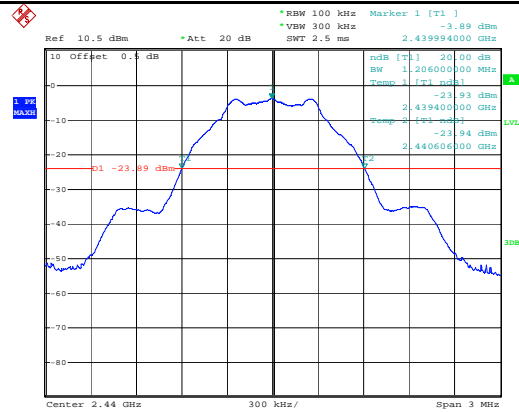
Top Left Plot: 6dB Bandwidth - Low CH 2402

- Ref: 10.5 dBm
- *Att: 20 dB
- SWT: 2.5 ms
- 2.401994000 GHz
- Offset: 0.4 dB
- Marker 1 [T1]: -4.27 dBm
- Marker 2 [T2]: -10.26 dBm
- Marker 3 [T3]: -10.27 dBm
- Marker 4 [T4]: -10.27 dBm
- Marker 5 [T5]: -10.27 dBm
- Marker 6 [T6]: -10.27 dBm
- Marker 7 [T7]: -10.27 dBm
- Marker 8 [T8]: -10.27 dBm
- Marker 9 [T9]: -10.27 dBm
- Marker 10 [T10]: -10.27 dBm
- Marker 11 [T11]: -10.27 dBm
- Marker 12 [T12]: -10.27 dBm
- Marker 13 [T13]: -10.27 dBm
- Marker 14 [T14]: -10.27 dBm
- Marker 15 [T15]: -10.27 dBm
- Marker 16 [T16]: -10.27 dBm
- Marker 17 [T17]: -10.27 dBm
- Marker 18 [T18]: -10.27 dBm
- Marker 19 [T19]: -10.27 dBm
- Marker 20 [T20]: -10.27 dBm
- Marker 21 [T21]: -10.27 dBm
- Marker 22 [T22]: -10.27 dBm
- Marker 23 [T23]: -10.27 dBm
- Marker 24 [T24]: -10.27 dBm
- Marker 25 [T25]: -10.27 dBm
- Marker 26 [T26]: -10.27 dBm
- Marker 27 [T27]: -10.27 dBm
- Marker 28 [T28]: -10.27 dBm
- Marker 29 [T29]: -10.27 dBm
- Marker 30 [T30]: -10.27 dBm
- Marker 31 [T31]: -10.27 dBm
- Marker 32 [T32]: -10.27 dBm
- Marker 33 [T33]: -10.27 dBm
- Marker 34 [T34]: -10.27 dBm
- Marker 35 [T35]: -10.27 dBm
- Marker 36 [T36]: -10.27 dBm
- Marker 37 [T37]: -10.27 dBm
- Marker 38 [T38]: -10.27 dBm
- Marker 39 [T39]: -10.27 dBm
- Marker 40 [T40]: -10.27 dBm
- Marker 41 [T41]: -10.27 dBm
- Marker 42 [T42]: -10.27 dBm
- Marker 43 [T43]: -10.27 dBm
- Marker 44 [T44]: -10.27 dBm
- Marker 45 [T45]: -10.27 dBm
- Marker 46 [T46]: -10.27 dBm
- Marker 47 [T47]: -10.27 dBm
- Marker 48 [T48]: -10.27 dBm
- Marker 49 [T49]: -10.27 dBm
- Marker 50 [T50]: -10.27 dBm
- Marker 51 [T51]: -10.27 dBm
- Marker 52 [T52]: -10.27 dBm
- Marker 53 [T53]: -10.27 dBm
- Marker 54 [T54]: -10.27 dBm
- Marker 55 [T55]: -10.27 dBm
- Marker 56 [T56]: -10.27 dBm
- Marker 57 [T57]: -10.27 dBm
- Marker 58 [T58]: -10.27 dBm
- Marker 59 [T59]: -10.27 dBm
- Marker 60 [T60]: -10.27 dBm
- Marker 61 [T61]: -10.27 dBm
- Marker 62 [T62]: -10.27 dBm
- Marker 63 [T63]: -10.27 dBm
- Marker 64 [T64]: -10.27 dBm
- Marker 65 [T65]: -10.27 dBm
- Marker 66 [T66]: -10.27 dBm
- Marker 67 [T67]: -10.27 dBm
- Marker 68 [T68]: -10.27 dBm
- Marker 69 [T69]: -10.27 dBm
- Marker 70 [T70]: -10.27 dBm
- Marker 71 [T71]: -10.27 dBm
- Marker 72 [T72]: -10.27 dBm
- Marker 73 [T73]: -10.27 dBm
- Marker 74 [T74]: -10.27 dBm
- Marker 75 [T75]: -10.27 dBm
- Marker 76 [T76]: -10.27 dBm
- Marker 77 [T77]: -10.27 dBm
- Marker 78 [T78]: -10.27 dBm
- Marker 79 [T79]: -10.27 dBm
- Marker 80 [T80]: -10.27 dBm
- Marker 81 [T81]: -10.27 dBm
- Marker 82 [T82]: -10.27 dBm
- Marker 83 [T83]: -10.27 dBm
- Marker 84 [T84]: -10.27 dBm
- Marker 85 [T85]: -10.27 dBm
- Marker 86 [T86]: -10.27 dBm
- Marker 87 [T87]: -10.27 dBm
- Marker 88 [T88]: -10.27 dBm
- Marker 89 [T89]: -10.27 dBm
- Marker 90 [T90]: -10.27 dBm
- Marker 91 [T91]: -10.27 dBm
- Marker 92 [T92]: -10.27 dBm
- Marker 93 [T93]: -10.27 dBm
- Marker 94 [T94]: -10.27 dBm
- Marker 95 [T95]: -10.27 dBm
- Marker 96 [T96]: -10.27 dBm
- Marker 97 [T97]: -10.27 dBm
- Marker 98 [T98]: -10.27 dBm
- Marker 99 [T99]: -10.27 dBm
- Marker 100 [T100]: -10.27 dBm
- Marker 101 [T101]: -10.27 dBm
- Marker 102 [T102]: -10.27 dBm
- Marker 103 [T103]: -10.27 dBm
- Marker 104 [T104]: -10.27 dBm
- Marker 105 [T105]: -10.27 dBm
- Marker 106 [T106]: -10.27 dBm
- Marker 107 [T107]: -10.27 dBm
- Marker 108 [T108]: -10.27 dBm
- Marker 109 [T109]: -10.27 dBm
- Marker 110 [T110]: -10.27 dBm
- Marker 111 [T111]: -10.27 dBm
- Marker 112 [T112]: -10.27 dBm
- Marker 113 [T113]: -10.27 dBm
- Marker 114 [T114]: -10.27 dBm
- Marker 115 [T115]: -10.27 dBm
- Marker 116 [T116]: -10.27 dBm
- Marker 117 [T117]: -10.27 dBm
- Marker 118 [T118]: -10.27 dBm
- Marker 119 [T119]: -10.27 dBm
- Marker 120 [T120]: -10.27 dBm
- Marker 121 [T121]: -10.27 dBm
- Marker 122 [T122]: -10.27 dBm
- Marker 123 [T123]: -10.27 dBm
- Marker 124 [T124]: -10.27 dBm
- Marker 125 [T125]: -10.27 dBm
- Marker 126 [T126]: -10.27 dBm
- Marker 127 [T127]: -10.27 dBm
- Marker 128 [T128]: -10.27 dBm
- Marker 129 [T129]: -10.27 dBm
- Marker 130 [T130]: -10.27 dBm
- Marker 131 [T131]: -10.27 dBm
- Marker 132 [T132]: -10.27 dBm
- Marker 133 [T133]: -10.27 dBm
- Marker 134 [T134]: -10.27 dBm
- Marker 135 [T135]: -10.27 dBm
- Marker 136 [T136]: -10.27 dBm
- Marker 137 [T137]: -10.27 dBm
- Marker 138 [T138]: -10.27 dBm
- Marker 139 [T139]: -10.27 dBm
- Marker 140 [T140]: -10.27 dBm
- Marker 141 [T141]: -10.27 dBm
- Marker 142 [T142]: -10.27 dBm
- Marker 143 [T143]: -10.27 dBm
- Marker 144 [T144]: -10.27 dBm
- Marker 145 [T145]: -10.27 dBm
- Marker 146 [T146]: -10.27 dBm
- Marker 147 [T147]: -10.27 dBm
- Marker 148 [T148]: -10.27 dBm
- Marker 149 [T149]: -10.27 dBm
- Marker 150 [T150]: -10.27 dBm
- Marker 151 [T151]: -10.27 dBm
- Marker 152 [T152]: -10.27 dBm
- Marker 153 [T153]: -10.27 dBm
- Marker 154 [T154]: -10.27 dBm
- Marker 155 [T155]: -10.27 dBm
- Marker 156 [T156]: -10.27 dBm
- Marker 157 [T157]: -10.27 dBm
- Marker 158 [T158]: -10.27 dBm
- Marker 159 [T159]: -10.27 dBm
- Marker 160 [T160]: -10.27 dB

20dB Bandwidth measurement result

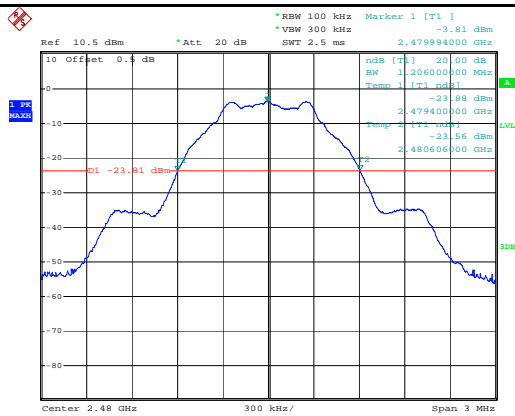


Date: 12.NOV.2014 17:10:49



Date: 12.NOV.2014 17:12:12

20dB Bandwidth - Low CH 2402



Date: 12.NOV.2014 17:13:24

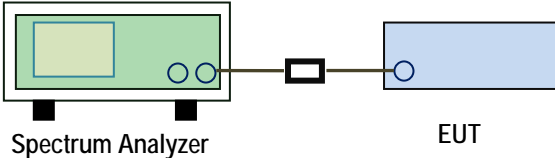
20dB Bandwidth - Mid CH 2440

20dB Bandwidth - High CH 2480

6.4 Maximum Output Power

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	November 12, 2014
Tested By :	Deon Dai

Requirement(s):

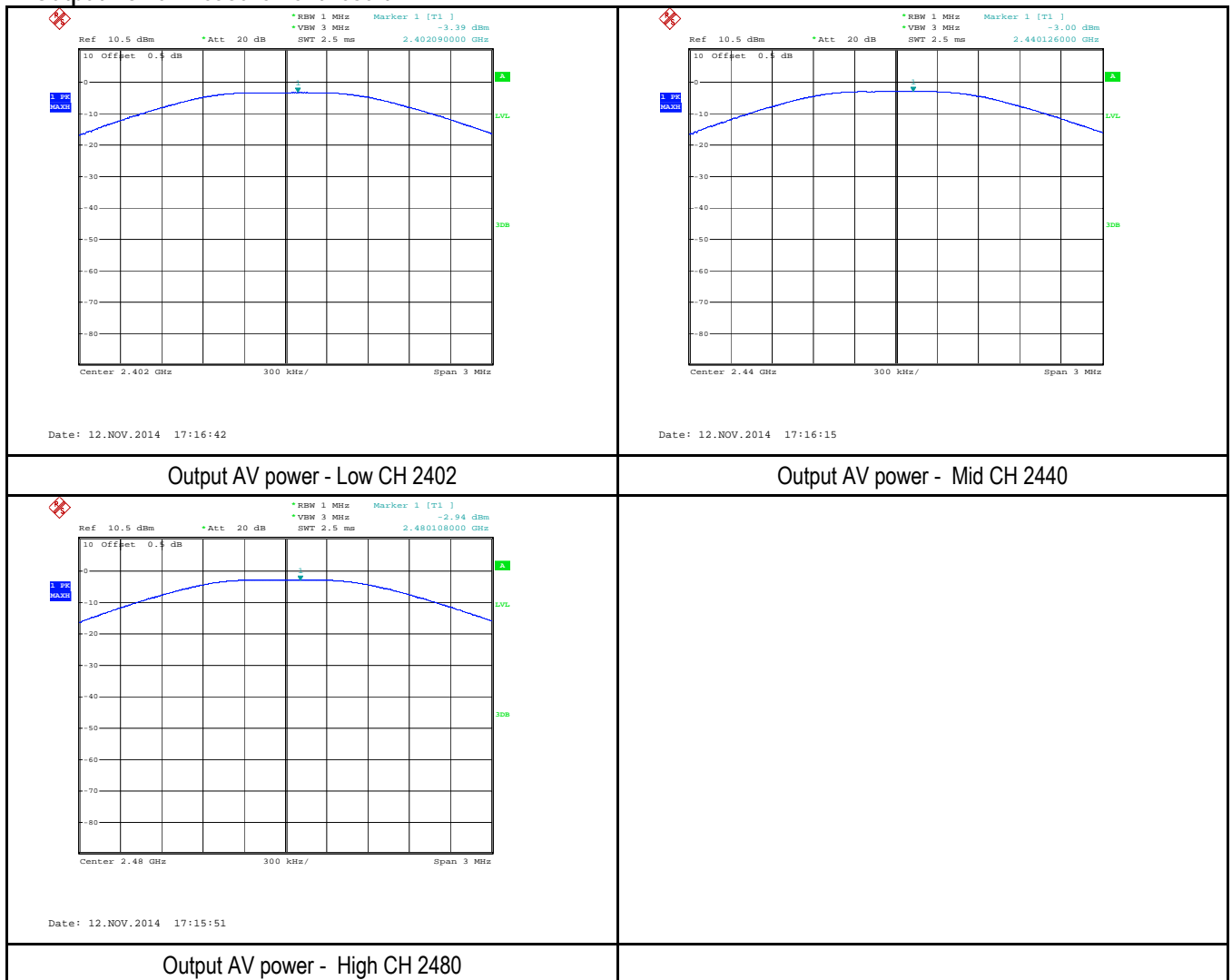
Spec	Item	Requirement	Applicable
§15.247(b) (2),RSS210 (A8.4)	a)	FHSS in 2400-2483.5MHz with ≥ 75 channels: ≤ 1 Watt	<input type="checkbox"/>
	b)	FHSS in 5725-5850MHz: ≤ 1 Watt	<input type="checkbox"/>
	c)	For all other FHSS in the 2400-2483.5MHz band: ≤ 0.125 Watt.	<input type="checkbox"/>
	d)	FHSS in 902-928MHz with ≥ 50 channels: ≤ 1 Watt	<input type="checkbox"/>
	e)	FHSS in 902-928MHz with ≥ 25 & < 50 channels: ≤ 0.25 Watt	<input type="checkbox"/>
	f)	DSSS in 902-928MHz, 2400-2483.5MHz, 5725-5850MHz: ≤ 1 Watt	<input checked="" type="checkbox"/>
Test Setup	 <p style="text-align: center;">Spectrum Analyzer EUT</p>		
Test Procedure	558074 D01 DTS Meas Guidance v03r02, 9.1.2 Integrated band power method Maximum output power measurement procedure a) Set the RBW \geq DTS bandwidth. b) Set VBW $\geq 3 \times$ RBW. c) Set span $\geq 3 \times$ RBW d) Sweep time = auto couple. e) Detector = peak. f) Trace mode = max hold. g) Allow trace to fully stabilize. h) Use peak marker function to determine the peak amplitude level.		
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		
Test Data	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A		
Test Plot	<input checked="" type="checkbox"/> Yes (See below) <input type="checkbox"/> N/A		

Output Power measurement result

Type	Test mode	CH	Freq (MHz)	Conducted AV Power (dBm)	Limit (dBm)	Result
Output power	BLE	Low	2402	-3.39	30	Pass
		Mid	2440	-3.00	30	Pass
		High	2480	-2.94	30	Pass

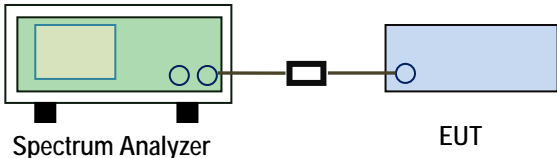
Test Plots

Output Power measurement result



6.5 Power Spectral Density

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	November 12, 2014
Tested By :	Deon Dai

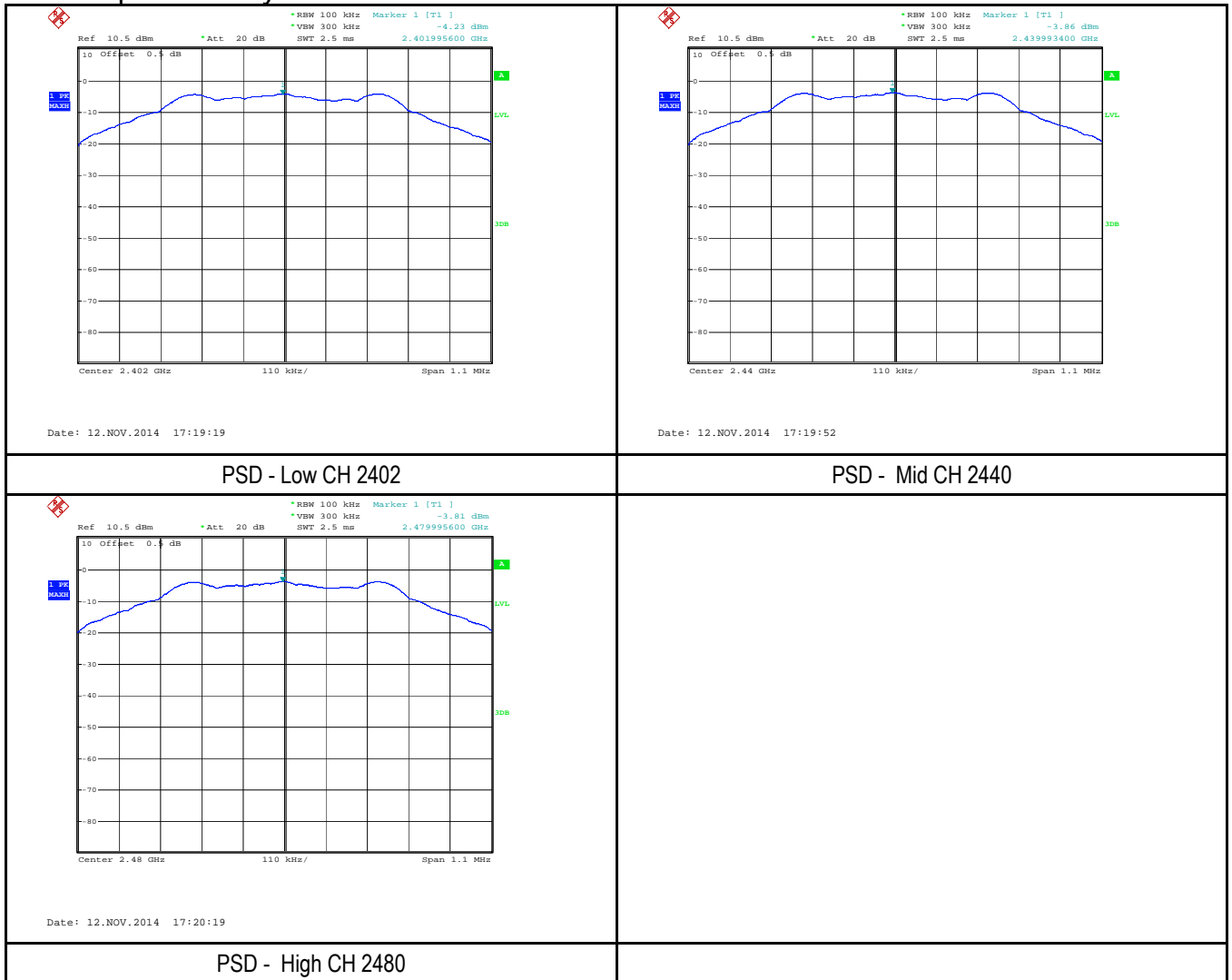
Spec	Item	Requirement	Applicable
§15.247(e)	a)	The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.	<input checked="" type="checkbox"/>
Test Setup	 <p style="text-align: center;">Spectrum Analyzer EUT</p>		
Test Procedure	<p>558074 D01 DTS MEAS Guidance v03r02, 10.2 power spectral density method power spectral density measurement procedure</p> <p>a) Set analyzer center frequency to DTS channel center frequency.</p> <p>b) Set the span to 1.5 times the DTS bandwidth.</p> <p>c) Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.</p> <p>d) Set the VBW $\geq 3 \times \text{RBW}$.</p> <p>e) Detector = peak.</p> <p>f) Sweep time = auto couple.</p> <p>g) Trace mode = max hold.</p> <p>h) Allow trace to fully stabilize.</p> <p>i) Use the peak marker function to determine the maximum amplitude level within the RBW.</p> <p>j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.</p>		
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		
Test Data	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A		

Power Spectral Density measurement result

Type	Test mode	CH	Freq (MHz)	PSD (dBm)	Limit (dBm)	Result
PSD	BLE	Low	2402	-4.23	8	Pass
		Mid	2440	-3.86	8	Pass
		High	2480	-3.81	8	Pass

Test Plots

Power Spectral Density measurement result



6.6 Band-Edge & Unwanted Emissions into Non-Restricted Frequency Bands

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	November 12, 2014
Tested By :	Deon Dai

Requirement(s):

Spec	Item	Requirement	Applicable
§15.247(d)	a)	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 below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.	<input checked="" type="checkbox"/>

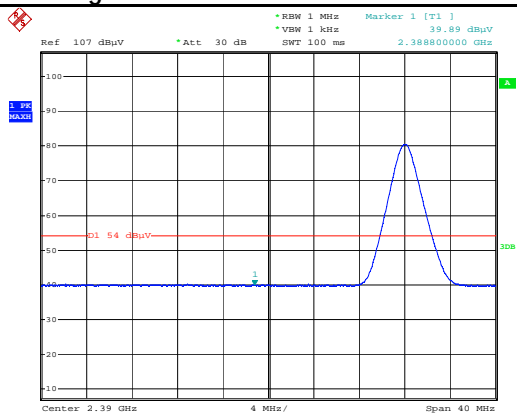
Test Setup	
------------	--

Test Procedure	<p>Radiated Method Only</p> <ul style="list-style-type: none"> 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator. 2. Position the EUT without connection to measurement instrument. Put it on the Rotated table and turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range. 3. First, set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge, check the emission of EUT, if pass then set Spectrum Analyzer as below: <ul style="list-style-type: none"> a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi Peak detection at frequency below 1GHz. b. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz. c. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth for Average detection (AV) as below at frequency above 1GHz. <ul style="list-style-type: none"> ■ 1/T kHz (Duty cycle < 98%) □ 10 Hz (Duty cycle > 98%) 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency. 5. Repeat above procedures until all measured frequencies were complete.
----------------	---

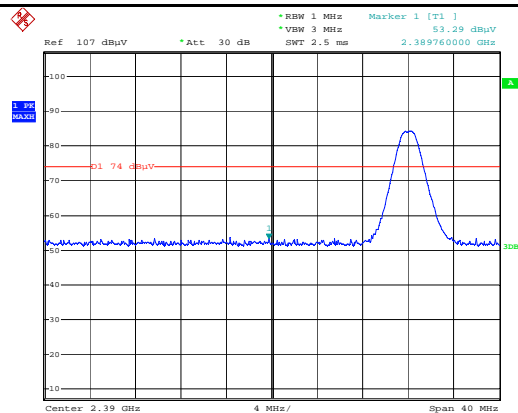
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
Test Data	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A
Test Plot	<input checked="" type="checkbox"/> Yes (See below) <input type="checkbox"/> N/A

Test Plots

Band Edge measurement result

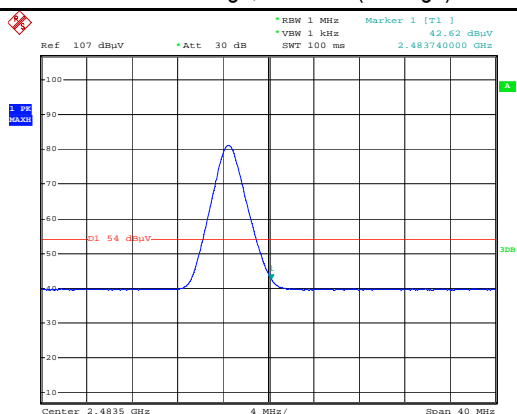


Date: 12.NOV.2014 23:08:34



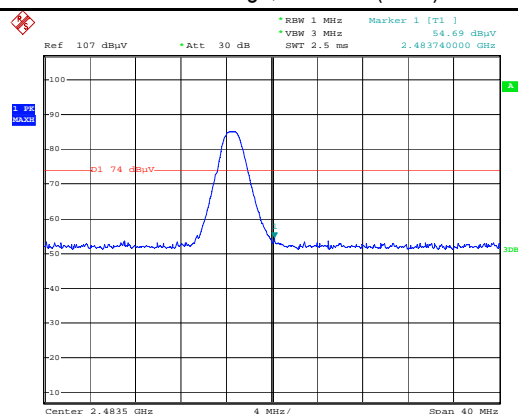
Date: 12.NOV.2014 23:05:49

Band Edge, Left Side (Average)



Date: 12.NOV.2014 23:14:58

Band Edge, Left Side (Peak)



Date: 12.NOV.2014 23:11:26

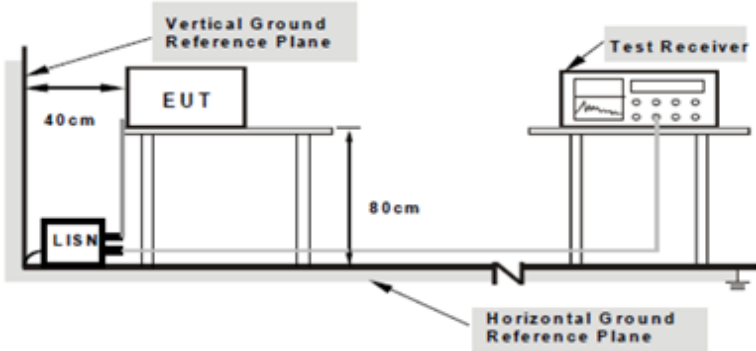
Band Edge, Right Side (Average)

Band Edge, Right Side (Peak)

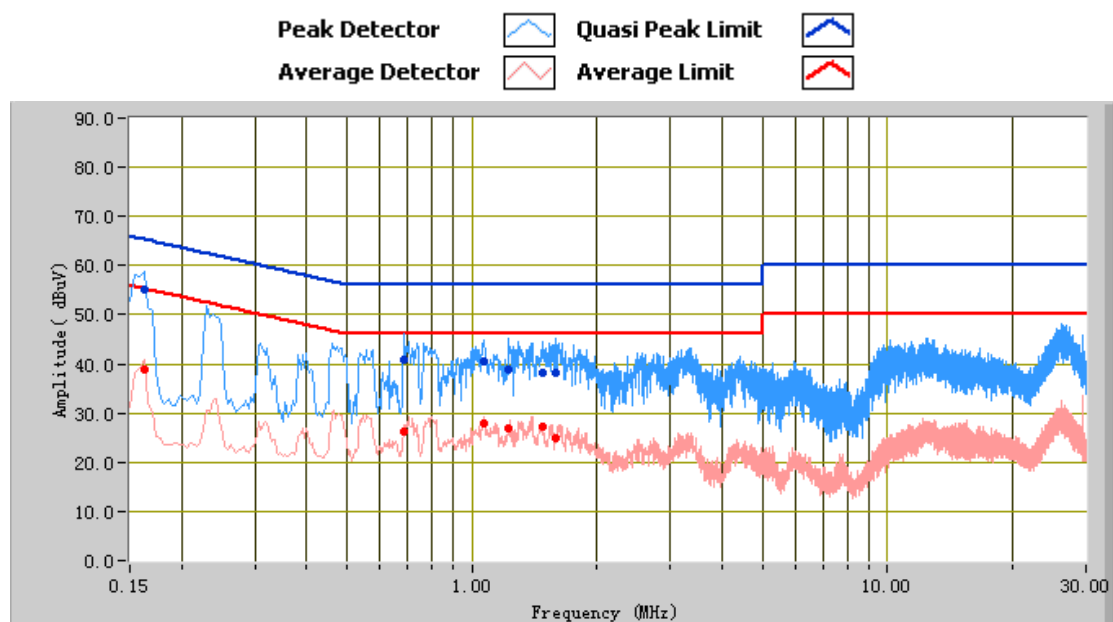
6.7 AC Power Line Conducted Emissions

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	November 11, 2014
Tested By :	Deon Dai

Requirement(s):

Spec	Item	Requirement	Applicable														
47CFR§15.207, RSS210 (A8.1)	a)	For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 [mu]H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequencies ranges.	<div><input checked="" type="checkbox"/></div>														
		<table><tr><th rowspan="2">Frequency ranges (MHz)</th><th colspan="2">Limit (dBµV)</th></tr><tr><th>QP</th><th>Average</th></tr><tr><td>0.15 ~ 0.5</td><td>66 – 56</td><td>56 – 46</td></tr><tr><td>0.5 ~ 5</td><td>56</td><td>46</td></tr><tr><td>5 ~ 30</td><td>60</td><td>50</td></tr></table>		Frequency ranges (MHz)	Limit (dBµV)		QP	Average	0.15 ~ 0.5	66 – 56	56 – 46	0.5 ~ 5	56	46	5 ~ 30	60	50
		Frequency ranges (MHz)			Limit (dBµV)												
				QP	Average												
		0.15 ~ 0.5		66 – 56	56 – 46												
0.5 ~ 5	56	46															
5 ~ 30	60	50															
Test Setup	<div><p>Note: 1.Support units were connected to second LISN. 2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.</p></div>																
		Procedure	<div><ol style="list-style-type: none">The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.The power supply for the EUT was fed through a 50W/50mH EUT LISN, connected to filtered mains.The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.All other supporting equipment were powered separately from another main supply.The EUT was switched on and allowed to warm up to its normal operating condition.A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver.High peaks, relative to the limit line, The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 kHz.Step 7 was then repeated for the LIVE line (for AC mains) or DC line (for DC power).</div>														
				Remark													
Result	<div><input checked="" type="checkbox"/> Pass<input type="checkbox"/> Fail</div>																
Test Data	<div><input checked="" type="checkbox"/> Yes<input type="checkbox"/> N/A</div>																
Test Plot	<div><input checked="" type="checkbox"/> Yes (See below)<input type="checkbox"/> N/A</div>																

Test Mode: Transmitting Mode

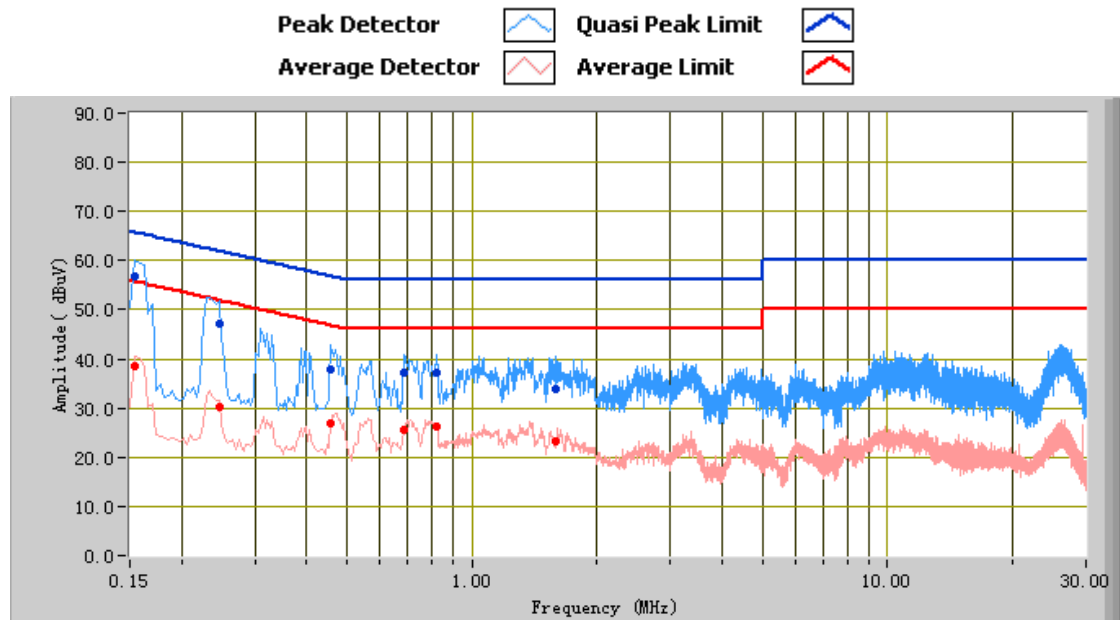


Test Data

Phase Line Plot at 120Vac, 60Hz

Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Factors (dB)
0.16	55.22	65.36	-10.15	39.01	55.36	-16.35	12.05
0.69	40.85	56.00	-15.15	26.15	46.00	-19.85	10.94
1.58	38.30	56.00	-17.70	24.74	46.00	-21.26	10.80
1.22	38.93	56.00	-17.07	26.80	46.00	-19.20	10.72
1.07	40.47	56.00	-15.53	27.87	46.00	-18.13	10.69
1.48	38.33	56.00	-17.67	27.23	46.00	-18.77	10.78

Test Mode: Transmitting Mode



Test Data

Phase Neutral Plot at 120Vac, 60Hz

Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Factors (dB)
0.15	56.68	65.78	-9.10	38.66	55.78	-17.12	12.15
0.25	47.05	61.89	-14.84	30.26	51.89	-21.63	11.46
0.46	37.85	56.73	-18.88	26.85	46.73	-19.88	11.12
0.82	37.14	56.00	-18.86	26.25	46.00	-19.75	10.83
0.69	37.15	56.00	-18.85	25.56	46.00	-20.44	10.93
1.59	33.92	56.00	-22.08	23.27	46.00	-22.73	10.83

6.8 Radiated Spurious Emissions

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	November 11, 2014
Tested By :	Deon Dai

Requirement(s):

Spec	Item	Requirement	Applicable										
47CFR§15.24 7(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.
-----------	--

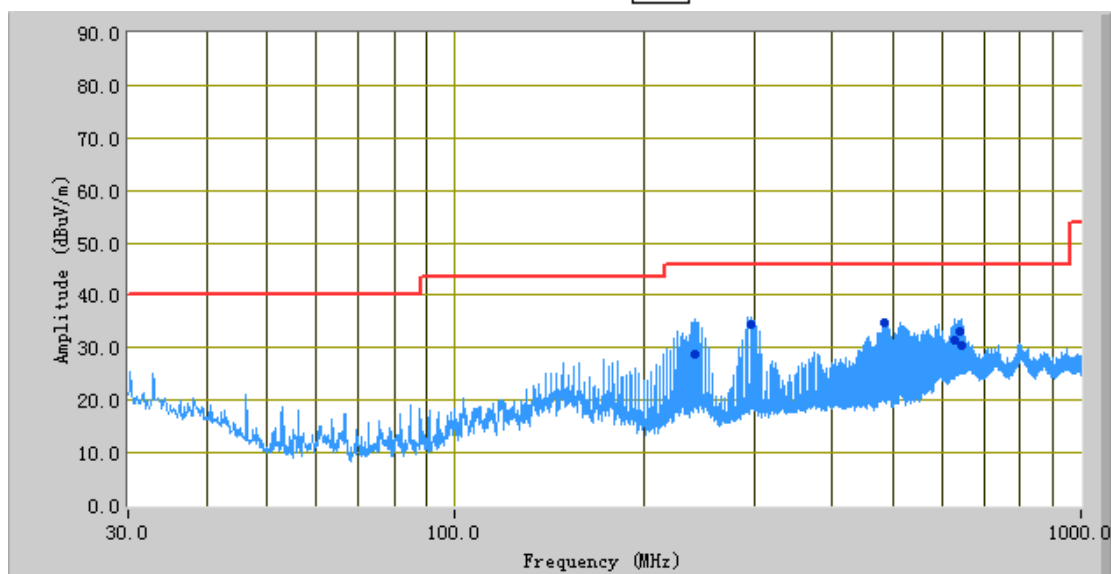
Test Report No.	14021149-FCC-R4
Page	23 of 43

	<p>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 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth with Peak detection for Average Measurement as below at frequency above 1GHz. ■ 1/T kHz (Duty cycle < 98%) □ 10 Hz (Duty cycle > 98%)</p> <p>5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</p>
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
Test Data	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A
Test Plot	<input checked="" type="checkbox"/> Yes (See below) <input type="checkbox"/> N/A

Test Mode: Transmitting Mode

(Below 1GHz)

Peak Detector 
Quasi Peak Limit 





Test Data

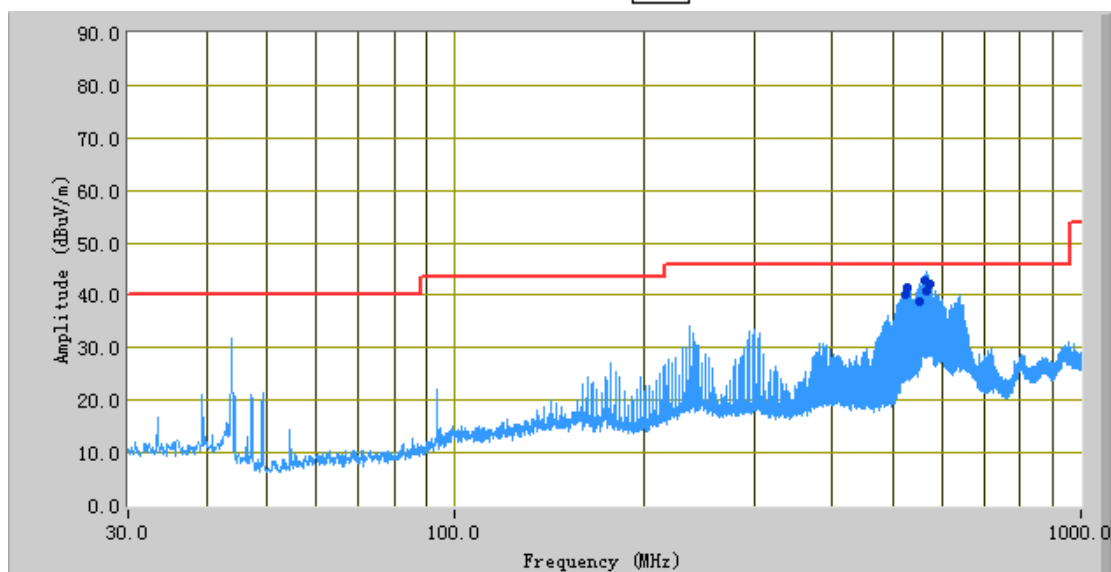
Vertical Polarity Plot @3m

Frequency (MHz)	Quasi Peak (dBμV/m)	Azimuth	Polarity (H/V)	Height (cm)	Factors (dB)	Limit (dBμV/m)	Margin (dB)
296.80	34.60	352.00	V	135.00	-29.64	46.00	-11.40
645.39	30.59	259.00	V	105.00	-21.25	46.00	-15.41
484.68	34.77	277.00	V	148.00	-28.61	46.00	-11.23
242.31	28.72	350.00	V	105.00	-29.89	46.00	-17.28
630.17	31.61	259.00	V	101.00	-21.83	46.00	-14.39
639.27	33.23	270.00	V	107.00	-21.43	46.00	-12.77

Test Mode: Transmitting Mode

(Below 1GHz)

Peak Detector 
Quasi Peak Limit 



Test Data

Horizontal Polarity Plot @3m

Frequency (MHz)	Quasi Peak (dBμV/m)	Azimuth	Polarity (H/V)	Height (cm)	Factors (dB)	Limit (dBμV/m)	Margin (dB)
567.56	40.94	214.00	H	176.00	-23.03	46.00	-5.06
561.50	42.90	210.00	H	194.00	-23.45	46.00	-3.10
573.17	42.19	204.00	H	168.00	-22.62	46.00	-3.81
552.76	38.90	33.00	H	212.00	-24.07	46.00	-7.10
526.01	41.36	30.00	H	101.00	-26.41	46.00	-4.64
523.02	40.19	30.00	H	101.00	-26.72	46.00	-5.81

Test Report No.	14021149-FCC-R4
Page	25 of 43

Test Mode:	Transmitting Mode
------------	-------------------

Low Channel (2402 MHz)

Frequency (MHz)	Substituted level (dBμV/m)	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)
4804.00	32.52	AV	V	33.83	4.87	24	47.22	54	-6.78
4804.00	34.24	AV	H	33.83	4.87	24	48.94	54	-5.06
4804.00	43.97	PK	V	33.83	4.87	24	58.67	74	-15.33
4804.00	46.27	PK	H	33.83	4.87	24	60.97	74	-13.03

Middle Channel (2440 MHz)

Frequency (MHz)	Substituted level (dBμV/m)	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)
4880.00	31.23	AV	V	33.83	4.87	24	45.93	54	-8.07
4880.00	32.23	AV	H	34.83	4.87	24	47.93	54	-6.07
4880.00	44.55	PK	V	35.83	4.87	24	61.25	74	-12.75
4880.00	44.28	PK	H	36.83	4.87	24	61.98	74	-12.02

High Channel (2480 MHz)

Frequency (MHz)	Substituted level (dBμV/m)	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)
4960.00	32.79	AV	V	33.9	4.87	24	47.56	54	-6.44
4960.00	33.36	AV	H	33.9	4.87	24	48.13	54	-5.87
4960.00	43.21	PK	V	33.9	4.87	24	57.98	74	-16.02
4960.00	44.58	PK	H	33.9	4.87	24	59.35	74	-14.65

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted Emissions					
R&S EMI Test Receiver	ESPI3	101216	09/27/2014	09/26/2015	<input checked="" type="checkbox"/>
V-LISN	ESH3-Z5	838979/005	09/27/2014	09/26/2015	<input checked="" type="checkbox"/>
INFOMW Antenna (1 ~18GHz)	JXTXLB-10180	J2031081120092	10/09/2014	10/08/2015	<input checked="" type="checkbox"/>
SIEMIC Labview Conducted Emissions software	V1.0	N/A	N/A	N/A	<input checked="" type="checkbox"/>
RF conducted test					
R&S EMI Receiver	ESPI3	101216	09/27/2014	09/26/2015	<input checked="" type="checkbox"/>
Power Splitter	1#	1#	02/02/2014	02/01/2015	<input checked="" type="checkbox"/>
Hp Spectrum Analyzer	8563E	3821A09023	09/27/2014	09/26/2015	<input checked="" type="checkbox"/>
Temperature/Humidity Chamber	1007H	N/A	01/07/2014	01/06/2015	<input checked="" type="checkbox"/>
Radiated Emissions					
Hp Spectrum Analyzer	8563E	3821A09023	09/27/2014	09/26/2015	<input checked="" type="checkbox"/>
R&S EMI Receiver	ESPI3	101216	09/27/2014	09/26/2015	<input checked="" type="checkbox"/>
Antenna (30MHz~6GHz)	JB6	A121411	04/15/2014	04/14/2015	<input checked="" type="checkbox"/>
EMCO Horn Antenna (1 ~18GHz)	3115	N/A	10/09/2014	10/08/2015	<input checked="" type="checkbox"/>
INFOMW Antenna (1 ~18GHz)	JXTXLB-10180	J2031081120092	10/09/2014	10/08/2015	<input checked="" type="checkbox"/>
Horn Antenna (18~40GHz)	AH-840	101013	04/22/2014	04/22/2015	<input checked="" type="checkbox"/>
Microwave Pre-Amp (18~40GHz)	PA-840	181250	05/29/2014	05/28/2015	<input checked="" type="checkbox"/>
Hp Agilent Pre-Amplifier	8447F	1937A01160	10/27/2014	10/26/2015	<input checked="" type="checkbox"/>
MITEQ Pre-Amplifier (0.1 ~ 18GHz)	AMF-7D-00101800-	1451709	10/27/2014	10/26/2015	<input checked="" type="checkbox"/>
SIEMIC Labview Radiated Emissions software	V1.0	N/A	N/A	N/A	<input checked="" type="checkbox"/>

Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph EUT Internal Photo



All Packages – Front View

Test Report No.	14021149-FCC-R4
Page	28 of 43



Front View of EUT



Rear View of EUT

Test Report No.	14021149-FCC-R4
Page	29 of 43

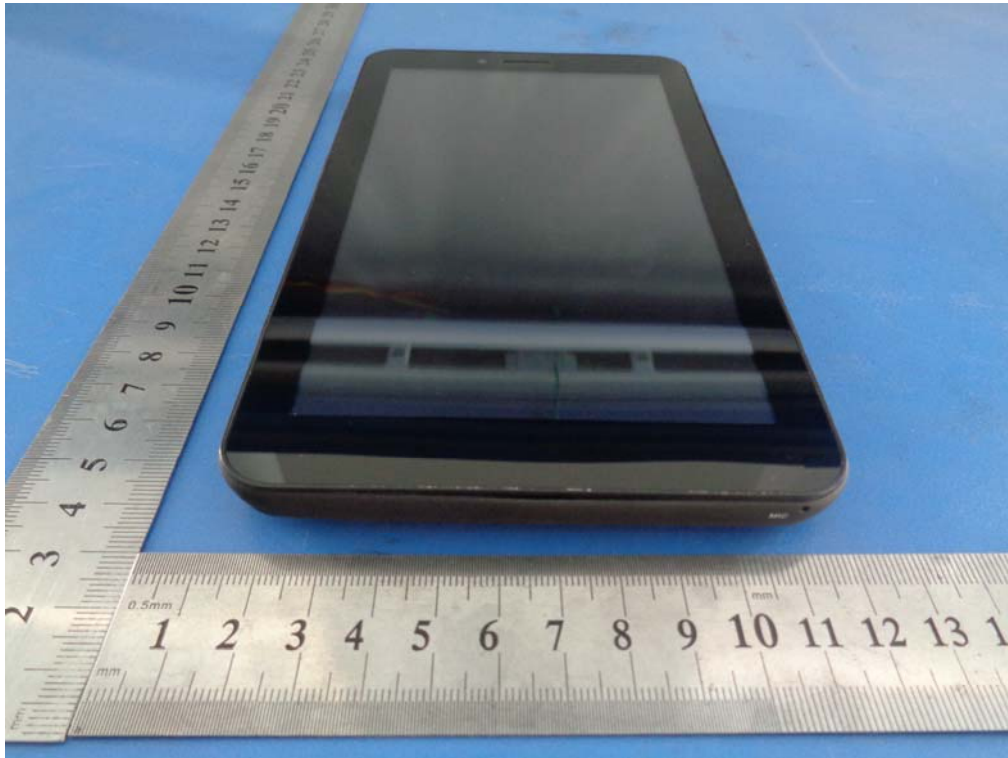


Top View of EUT



Bottom View of EUT

Test Report No.	14021149-FCC-R4
Page	30 of 43



Left View of EUT

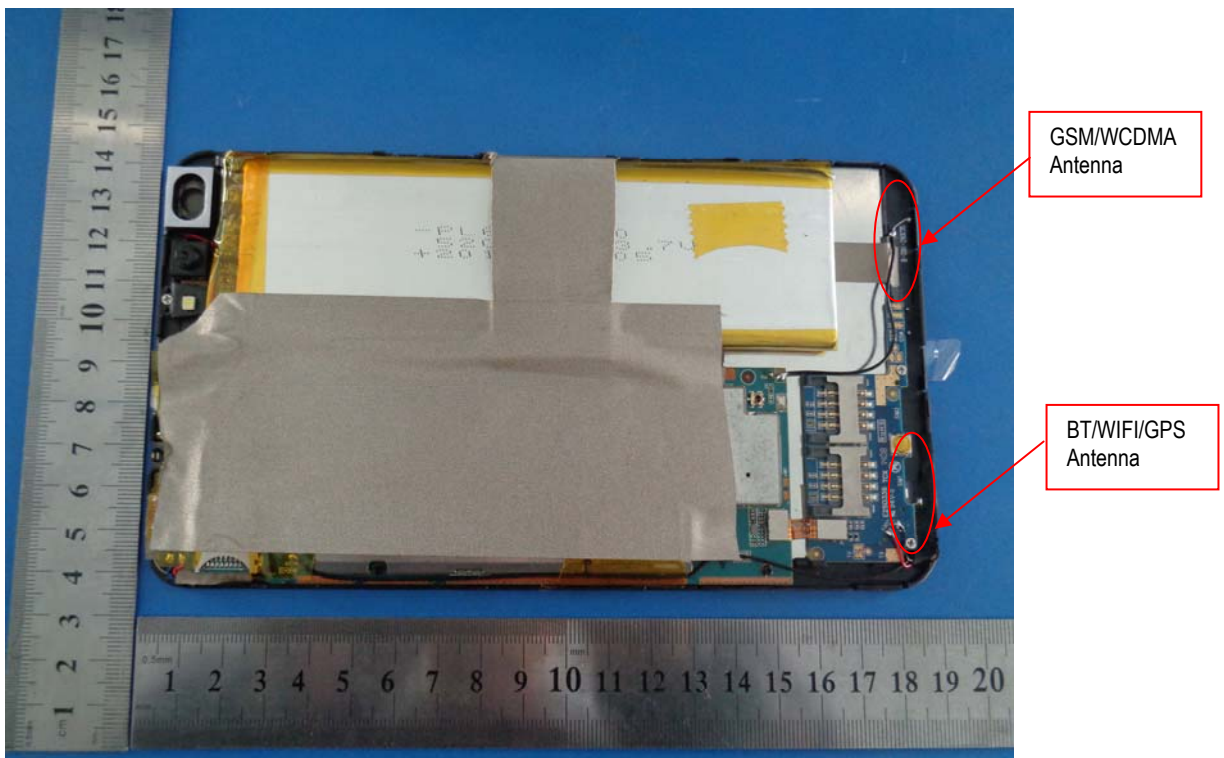


Right View of EUT

Annex B.ii. Photograph EUT Internal Photo

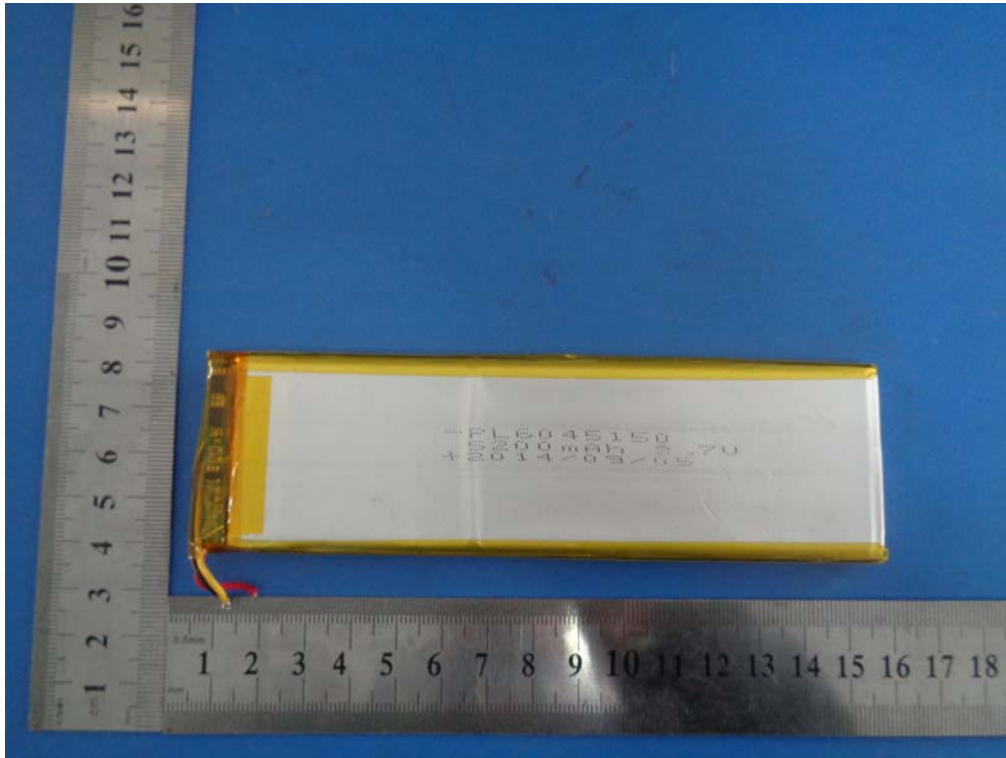


Uncover- Front View 1

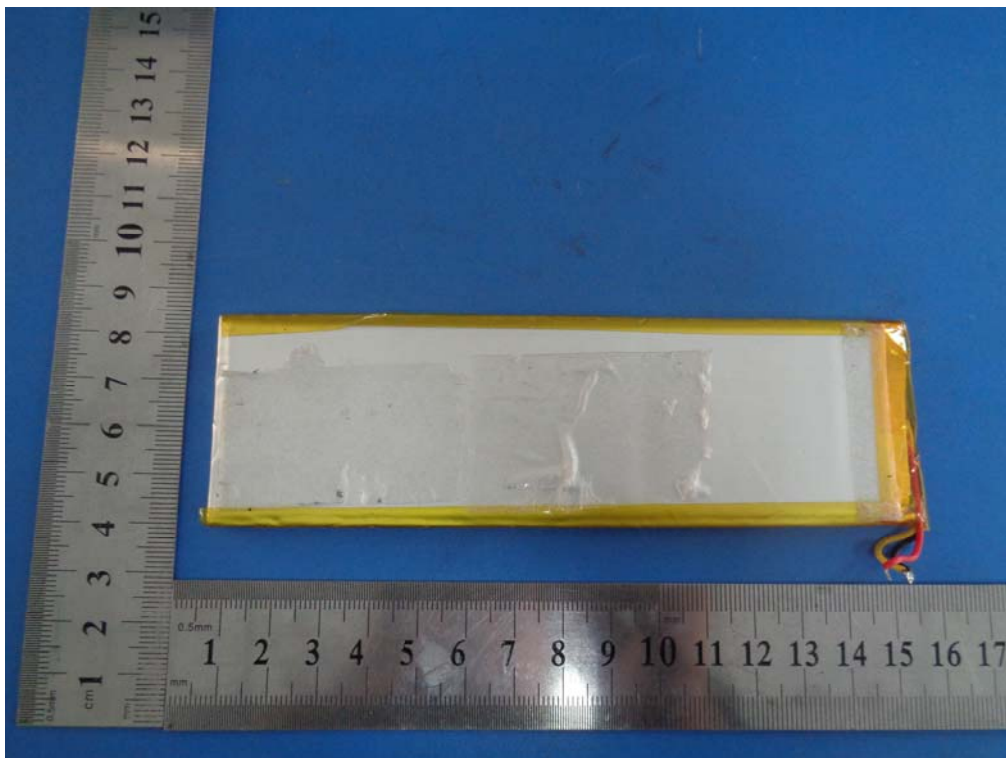


Uncover- Front View 2

Test Report No.	14021149-FCC-R4
Page	32 of 43

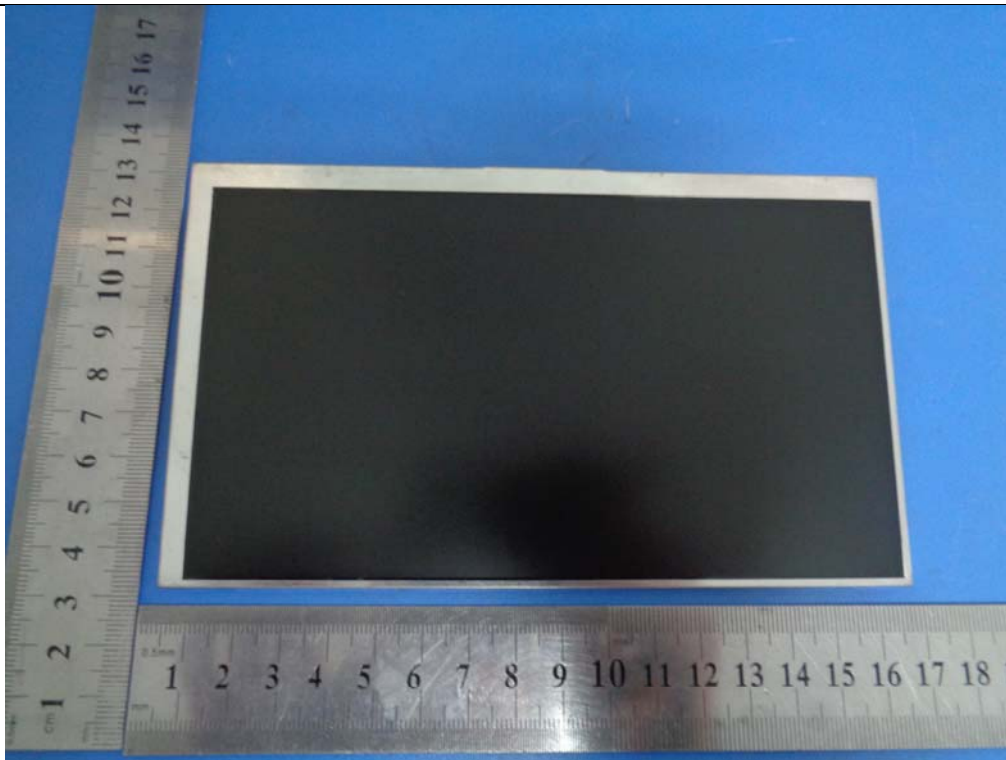


Battery- Front View

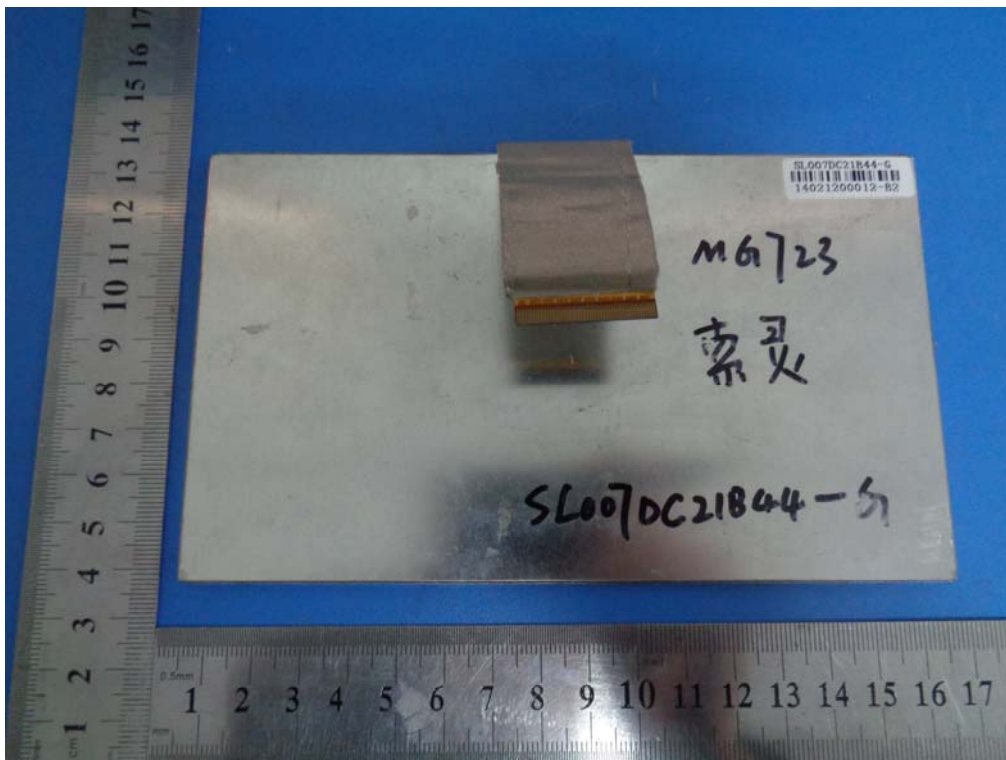


Battery- Rear View

Test Report No.	14021149-FCC-R4
Page	33 of 43

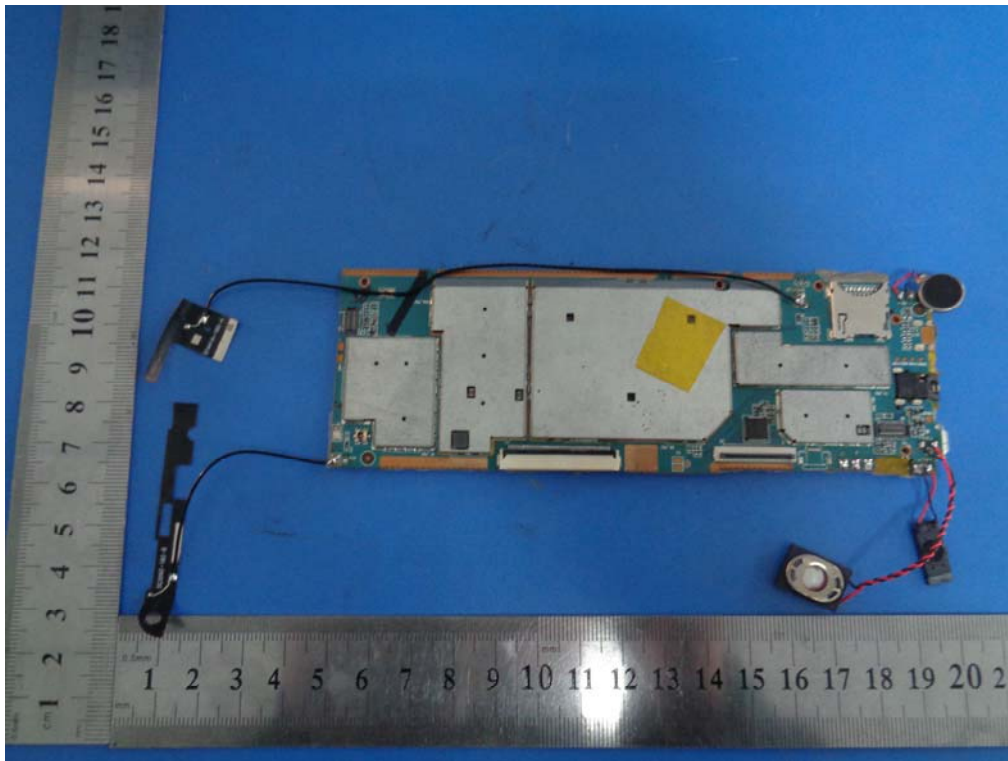


LCD – Front View

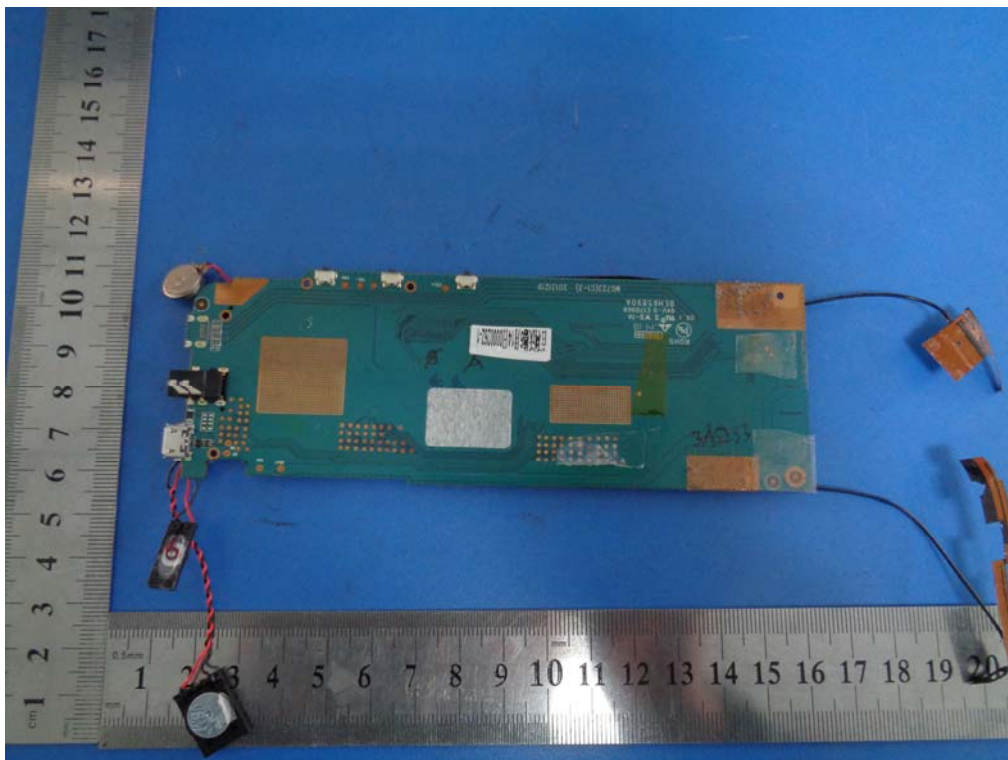


LCD – Rear View

Test Report No.	14021149-FCC-R4
Page	34 of 43

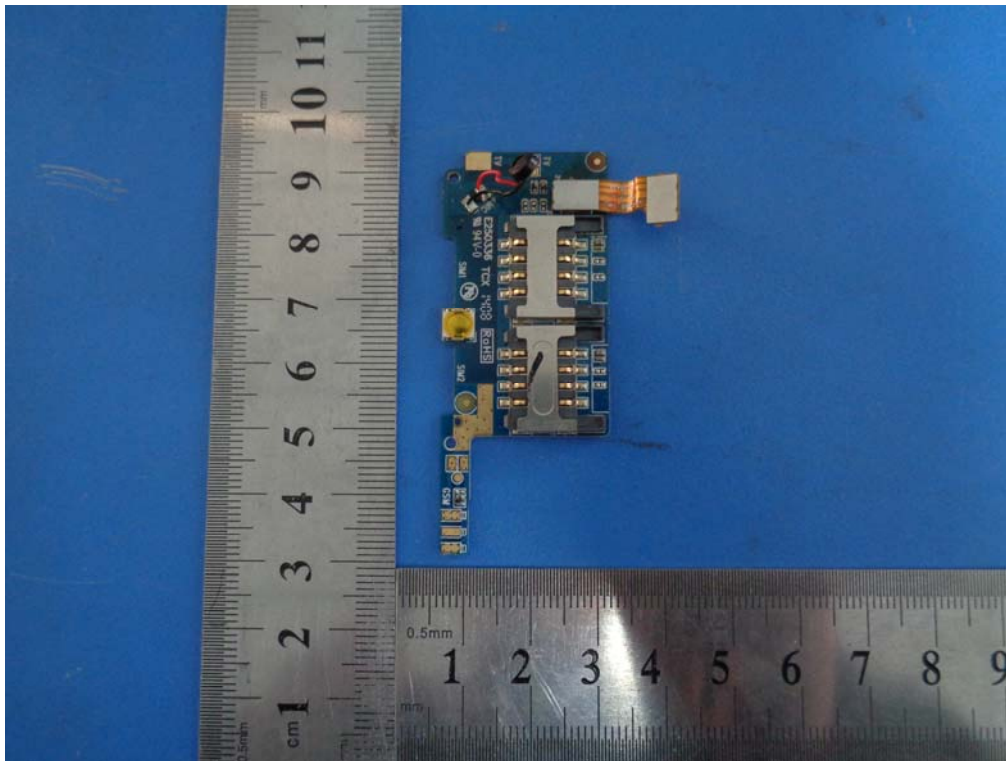


EUT PCB 1 – Front View

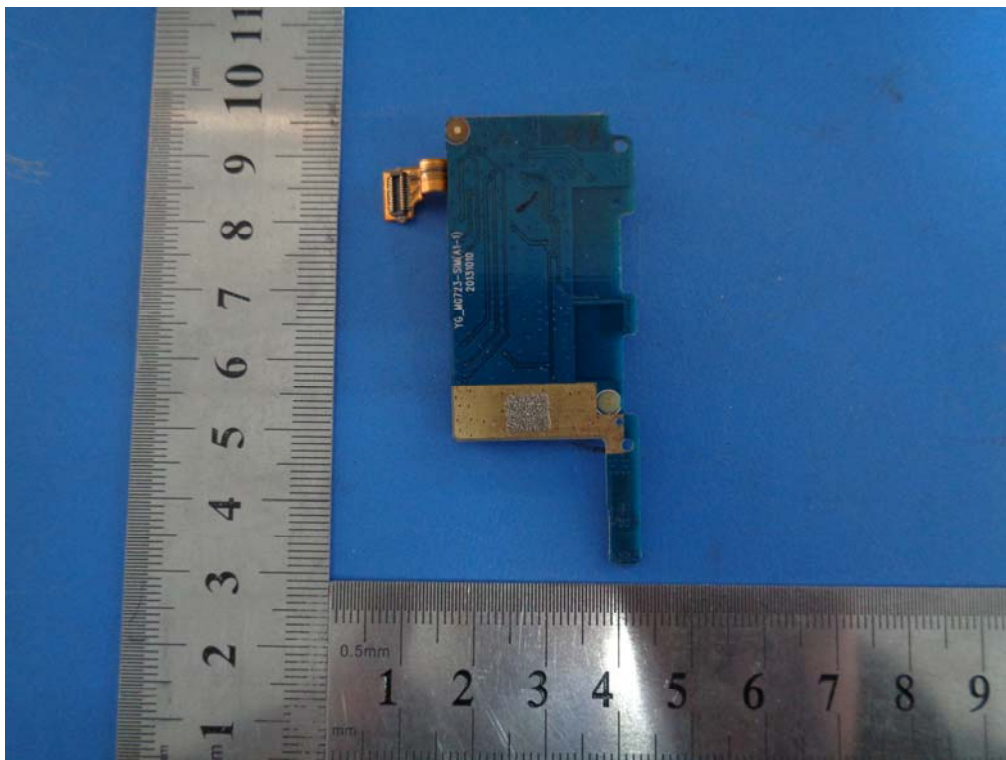


EUT PCB 1 – Rear View

Test Report No.	14021149-FCC-R4
Page	35 of 43

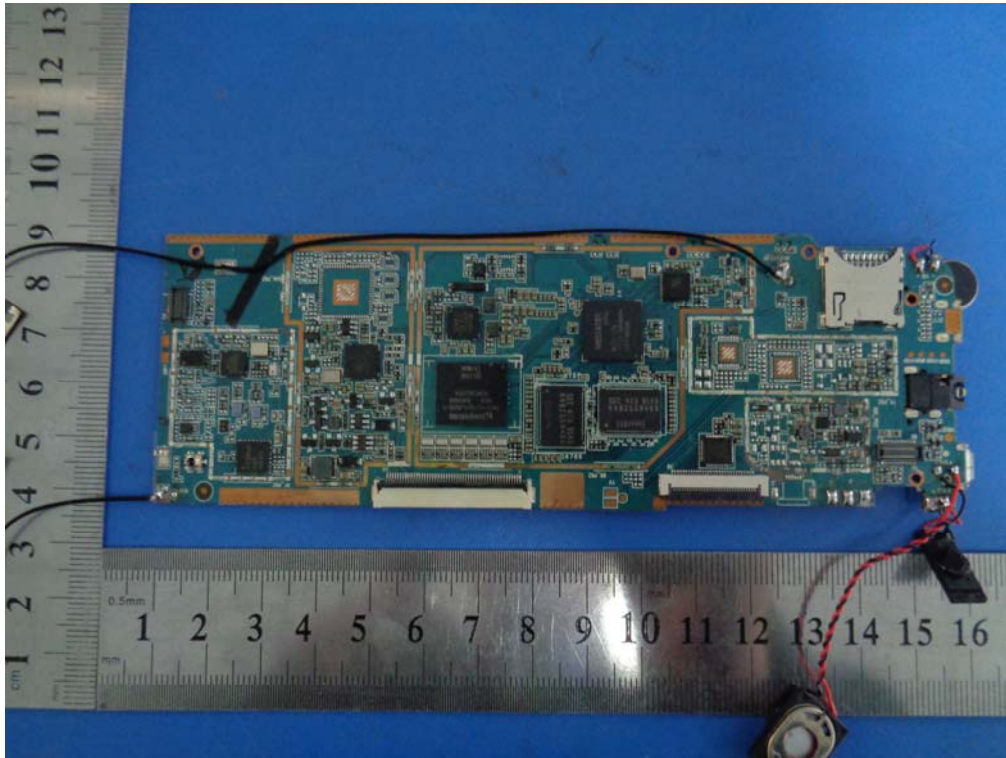


EUT PCB 2 – Front View



EUT PCB 2 – Rear View

Test Report No.	14021149-FCC-R4
Page	36 of 43



EUT PCB 1 – Without Shielding Front View

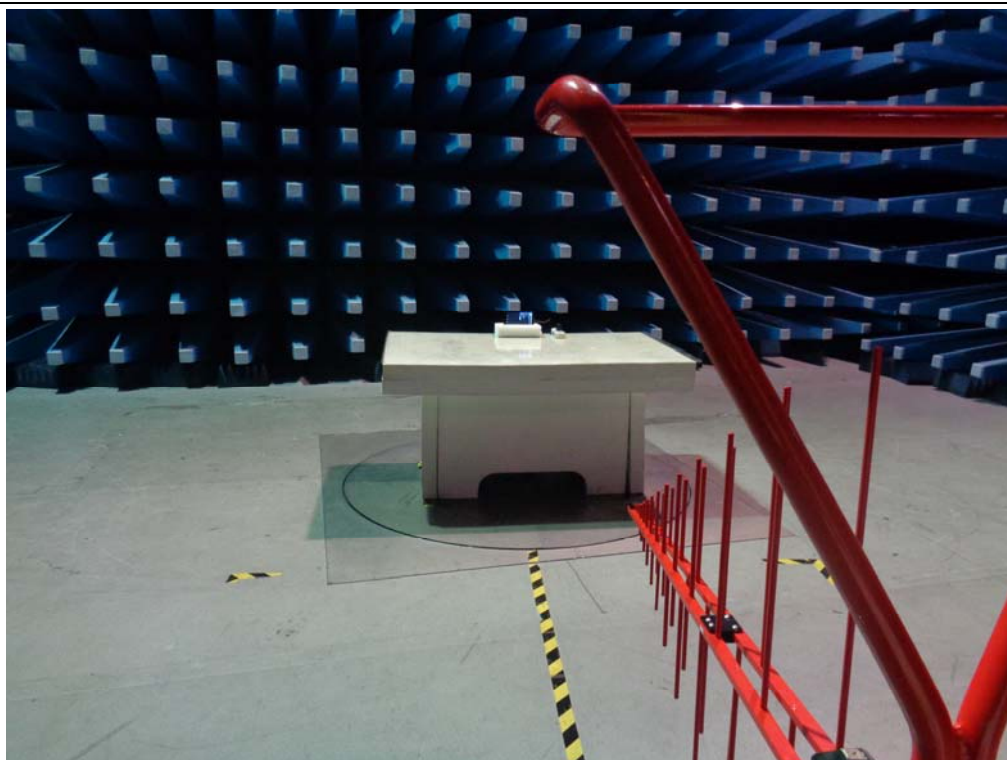
Annex B.iii. Photograph: Test Setup Photo



Conducted Emissions Test Setup – Front View



Conducted Emissions Test Setup – Side View



Radiated Spurious Emissions Test Setup Below 1GHz

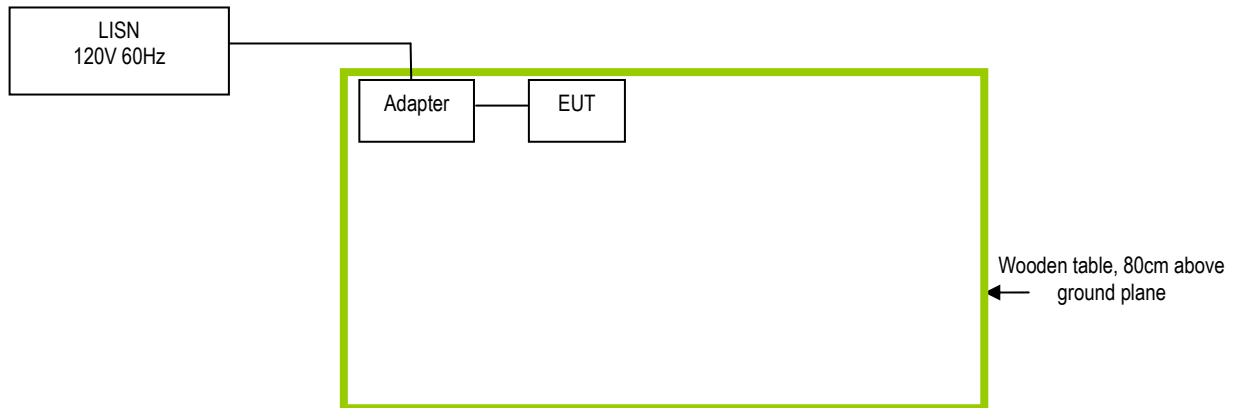


Radiated Spurious Emissions Test Setup Below 1GHz

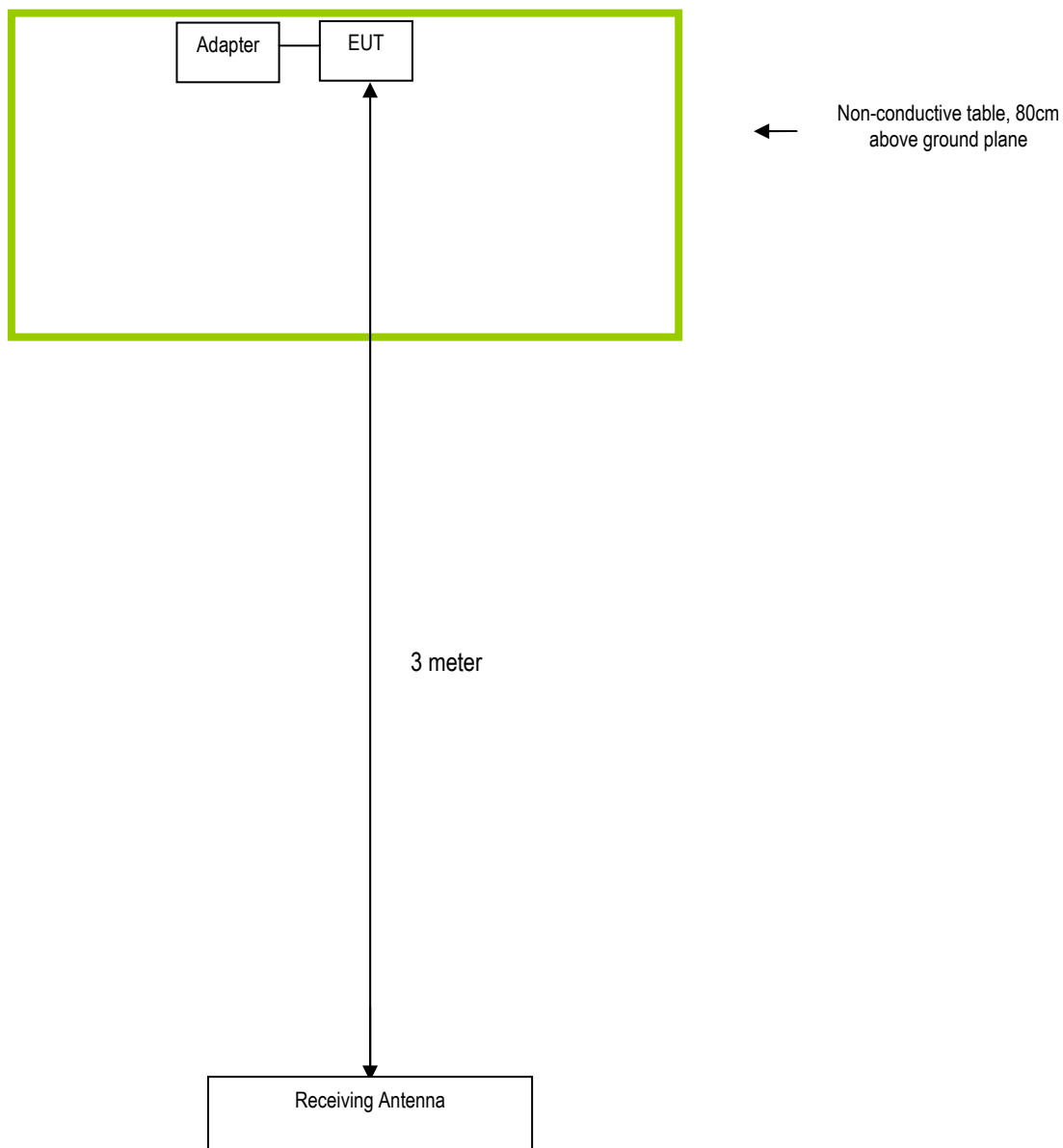
Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

Annex C.i. TEST SET UP BLOCK

Block Configuration Diagram for AC Line Conducted Emissions



Block Configuration Diagram for Radiated Emissions



Test Report No.	14021149-FCC-R4
Page	41 of 43

Annex C. ii. SUPPORTING EQUIPMENT DESCRIPTION

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

Manufacturer	Equipment Description	Model	Calibration Date	Calibration Due Date
N/A	N/A	N/A	N/A	N/A

Test Report No.	14021149-FCC-R4
Page	42 of 43

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

Please see attachment

Test Report No.	14021149-FCC-R4
Page	43 of 43

Annex E. DECLARATION OF SIMILARITY

Beneworld International(HK) Co., Limited

HK: Unit 04, 7/F, Bright Way Tower, No. 33 Mong Kok Road, Kowloon, Hong Kong

TEL: +852-69172443/ 30772819 FAX: +852-30772819

Statement

To whom it may concern

Date: November 18, 2014

We hereby state that the 7inch Tablet PC of our model number BW9 and serial numbers BW7D9, BW7D19, BW7D29, BW7D61, BW7D62, BW7D66, BW7D68, BW7D69, BW7D70, BW7D71 have the same constructions, circuit diagram and PCB layout. Only model name are different.

Sincerely,

Stephen Tang