



ELECTROMAGNETIC EMISSION
COMPLIANCE REPORT
FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : W153R-D022

AGR No. : A152A-137

**Applicant** : BLUEBIRD INC.

Address : (Dogok-dong, SEI Tower13,14)39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea

Manufacturer : BLUEBIRD INC.

Address : (Dogok-dong, SEI Tower13,14)39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea

Type of Equipment : Premium Enterprise Tablet

FCC ID. : SS4ET100

Model Name : ET100

Serial number : N/A

Total page of Report : 123 pages (including this page)

Date of Incoming : February 12, 2015

Date of issue : March 30, 2015

## **SUMMARY**

The equipment complies with the regulation; FCC PART 15 SUBPART C Section 15.247

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:

Jae-Ho, Lee / Chief Engineer ONETECH Corp. Approved by:

Sung-Ik, Han/ Managing Director ONETECH Corp.

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# **Revision History**

Issued Report No.	Issued Date	Revisions	Effect Section
W153R-D022	March 30, 2015	Initial Issue	All

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## 1. VERIFICATION OF COMPLIANCE

-. APPLICANT : BLUEBIRD INC.

-. ADDRESS : (Dogok-dong, SEI Tower 13,14) 39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea

-. CONTACT PERSON : Jaeho, Lee / Research Engineer

-. TELEPHONE NO : +82-70-7730-8210

-. FCC ID : SS4ET100 -. MODEL NO/NAME : ET100 -. SERIAL NUMBER : N/A

-. DATE : March 30, 2015

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM	
E.U.T. DESCRIPTION	Premium Enterprise Tablet	
THIS REPORT CONCERNS	Original Grant	
MEASUREMENT PROCEDURES	ANSI C63.10: 2013	
TYPE OF EQUIPMENT TESTED	Pre-Production, Modular Approval	
KIND OF EQUIPMENT		
AUTHORIZATION REQUESTED	Certification	
EQUIPMENT WILL BE OPERATED	FCC DART 15 CURDART C C. wine 15 247	
UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247	
Modifications on the Equipment to Achieve	Na	
Compliance	None	
Final Test was Conducted On	3 m, Semi Anechoic Chamber	

<sup>-.</sup> The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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### 2. TEST SUMMARY

## 2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.247 (d)	Radiated Emission which fall in the Restricted Band	Met the Limit / PASS
15.209	Radiated Emission Limits	Met the Limit / PASS
15.207	Conducted Limits	Met the Limit / PASS
15.203	Antenna Requirement	Met requirement / PASS

## 2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

### 2.3 Related Submittal(s) / Grant(s)

Original submittal only

#### 2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART C Section 15.247.

### 2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2009. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

## 2.6 Test Facility

The open area test site is located at 307-51 Daessangryung-ri, Chowol-eup, Gwangju-si, Gyeonggi-do and 10 m Semi Anechoic Chamber (SAC) and conducted measurement facilities are located at 301-14, Daessangryung-ri, Chowol-eup, Gwangju-si, Gyeonggi-do, 464-862, Korea. The Onetech Corp. has been accredited as a Conformity Assessment Body (CAB) with designation number KR0013 under APEC TEL MAR between the RRA and the FCC.

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## 3. GENERAL INFORMATION

## 3.1 Product Description

The BLUEBIRD INC. Model ET100 (referred to as the EUT in this report) is a Premium Enterprise Tablet. Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Premium Enterprise Tablet		
LIST OF EACH OSC. or CRY. FREQ.(FREQ. >= 1 MHz)	27.12 MHz, 26 M, 25 MHz , 12 MHz, 8 MHz		
	WLAN(2.4 GHz band) : 802.11b/g/n(HT20)/n(HT40)		
EMISSION DESIGNATOR	WLAN(5 GHz	band): 802.11a/n(HT20)/ac(VHT20)/n(HT40)/	
EWISSION DESIGNATOR		ac(VHT40)/ac(VHT80)	
	BT : LE		
	WLAN	802.11b/g/n(HT20) : 2 412 MHz ~ 2 472 MHz	
	(2.4 GHz band)	802.11n(HT40) : 2 422 MHz ~ 2 462 MHz	
ODED ATING EDEOUENCY	WLAN (5 GHz band)	802.11a/n(HT20)/ac(VHT20) : 5 745 MHz ~ 5 825 MHz	
OPERATING FREQUENCY		802.11n(HT40)/ac(VHT40) : 5 755 MHz ~ 5 795 MHz	
		802.11ac(VHT80) : 5 775 MHz	
	ВТ	LE : 2 402 MHz ~ 2 480 MHz	
	WWAN, WLA	N : PiFA	
ANTENNA TYPE	BT : Chip anter	nna	
	NFC : PCB antenna		
	Output: DC 12 V, 4.17 A		
USED AC/DC ADAPTER	Model No: KPL-050F		
	Ningbo ISO Electronic Co., Ltd.		
EXTERNAL CONNECTOR	DC IN, Micro SD slot, USIM slot, USB port, AUX port		

## 3.2 Alternative type(s)/model(s); also covered by this test report.

-. None

## 4. EUT MODIFICATIONS

-. None

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## 5. SYSTEM TEST CONFIGURATION

## 5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Mother board	N/A	PCB-BP80S-MAIN-REV.0.2	N/A
LCD panel	Innolux Display	EJ101IA-01G	N/A
Card slot board	N/A	FPCB-BP80S-SD-SIMSAM-REV.0.1	N/A
Flash LED board	N/A	PCB-BP80S-FLASH-LED-REV.0.1	N/A
Battery	XIAMEN POWERLONG INDUSTRY JOINT-STOCK CO., LTD.	PL8046135/3.7V	N/A
Light sensor board	N/A	LIGHT-SENSOR-REV.0.1	N/A
Camera module	N/A	HU106-B	N/A
SSD	N/A	MS-0460SSN	N/A
Touch sensor board	N/A	BP80_REV05	N/A
GPS antenna	N/A	PE8G4006GB1_Rev1.0	N/A
Value sub board	N/A	PCB-BP80S-VALUE-SUB-REV01	N/A
Wireless module	CINTERION	PHS8-P	QIPPHS8-P
WLAN module	INTEL	7265NGW	PD97265NG
WWAN antenna	DONGNAM	BP80S (MAIN)	N/A
WLAN antenna	DONGNAM	BP80S (WiFi)	N/A
NFC antenna	N/A	N/A	N/A
Adaptor	Ningbo Electronic Co., Ltd.	KPL-050F	N/A

## 5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	Description	Connected to
ET100	Bluebird Inc.	Premium Enterprise Tablet (EUT)	Adaptor
KPL-050F	Ningbo Electronic Co., Ltd.	Adaptor	EUT

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## 5.3 Mode of operation during the test

- For the testing, software used to control the EUT for staying in continuous transmitting mode is programmed.
- Test should proceed in the worst of conditions.

## **Maximum Output Power**

WLAN(2.4 GHz band)

3.5.1.1.1		OUTPUT PO	WER(dBm)
Modulation	Frequency	Ant 0	Ant 1
	Low frequency	16.12	16.33
802.11 b	Middle frequency	17.21	17.31
	High frequency	16.55	16.20
	Low frequency	13.91	14.37
802.11g	Middle frequency	17.19	17.60
	High frequency	12.13	12.64
	Low frequency	13.76	14.65
802.11n(HT 20)	Middle frequency	17.18	17.84
	High frequency	12.15	12.18
	Low frequency	13.27	13.54
802.11n(HT 40)	Middle frequency	17.25	17.34
	High frequency	12.29	11.28
Modulation	Frequency	OUTPUT POV	WER (dBm)
000 11 (777 00)	Low frequency	14.8	34
802.11n(HT 20)	Middle frequency	20.18	
(MIMO)	High frequency	14.99	
000 11 (UT) (0)	Low frequency	12.54	
802.11n(HT 40)	Middle frequency	16.50	
(MIMO)	High frequency	12.3	38



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### WLAN(5 GHz band)

W. 11 c		OUTPUT POWER(dBm)		
Modulation	Frequency	Ant 0	Ant 1	
	Low frequency	15.27	15.02	
802.11a	Middle frequency	15.67	14.70	
	High frequency	15.42	15.35	
	Low frequency	15.49	15.13	
802.11n(HT20)	Middle frequency	15.26	14.88	
	High frequency	15.36	14.89	
900 11 (JIT40)	Low frequency	16.29	16.21	
802.11n(HT40)	High frequency	16.29	16.15	
802.11ac(VHT80)	Low frequency	16.42	16.63	
Modulation	Frequency	OUTPUT POV	WER (dBm)	
000 11 (17770)	Low frequency	16.3	35	
802.11n(HT20)	Middle frequency	uency 16.20		
(MIMO)	High frequency	16.56		
802.11n(HT40)	Low frequency	19.52		
(MIMO)	High frequency	19.46		
802.11n(VHT80) (MIMO)	Low frequency	19.54		

## Bluetooth

Modulation	Frequency	OUTPUT POWER(dBm)
	Low frequency	3.29
LE	Middle frequency	3.51
	High frequency	3.44

## -2.4 GHz Band(WLAN)

The worse case data rate for each modulation is determined Middle channel for all conditions.



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## 5.4 Configuration of Test System

**Line Conducted Test:** The EUT was connected to USB and the power of USB was connected to Notebook PC.

All supporting equipments were connected to another LISN. Preliminary Power line

Conducted Emission test was performed by using the procedure in ANSI C63.10: 2009

7.3.3 to determine the worse operating conditions.

**Radiated Emission Test:** Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10:

2013 to determine the worse operating conditions. Final radiated emission tests were

conducted at 3 meter open area test site.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both

vertical and horizontal polarization.

## 5.5 Antenna Requirement

For intentional device, according to section 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.

#### **Antenna Construction:**

The transmitter antenna of the EUT is a PIFA antenna, so no consideration of replacement by the user.

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## 6. PRELIMINARY TEST

## **6.1 AC Power line Conducted Emissions Tests**

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X
Receiving Mode	-

### **6.2 General Radiated Emissions Tests**

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X
Receiving Mode	-

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## 7. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

## 7.1 Operating environment

Temperature 20 °C Relative humidity 45 % R.H.

## 7.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution and video bandwidth is set to 100 kHz, and peak detection was used.



## 7.3 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3 m, open-field test site. The EUT was placed on a nonconductive turntable above the ground plane.

The frequency spectrum from 30 MHz to 40 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

## 7.4 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
□ -	ESCI	Rohde & Schwarz	EMI Test Receiver	101012	Nov. 03, 2014(1Y)
■ -	ESU	Rohde & Schwarz	EMI Test Receiver	100261	Apr. 29, 2014(1Y)
□ -	8564E	HP	Spectrum Analyzer	3650A00756	Apr. 28, 2014(1Y)
□ -	FSP	Rohde & Schwarz	Spectrum Analyzer	100017	Oct. 08, 2014(1Y)
■ -	310N	Sonoma Instrument	AMPLIFIER	312544	Apr. 28, 2014(1Y)
■ -	FSV30	Rohde & Schwarz	Signal Analyzer	101372	Apr. 28, 2014(1Y)
■ -	SCU-18	Rohde & Schwarz	PRE-AMPLIFIER	102209	Jun. 12, 2014(1Y)
■ -	MA240	HD GmbH	Antenna Master	N/A	N/A
■ -	HD100	HD GmbH	Position Controller	N/A	N/A
■ -	DS420S	HD GmbH	Turn Table	N/A	N/A
■ -	HFH2-Z2	Rohde & Schwarz	Loop Antenna	879 285/26	Dec. 09, 2014(2Y)
■ -	VULB9163	Schwarzbeck	TRILOG Broadband Antenna	9163-255	May 02, 2014(2Y)
<b>-</b>	BBHA9120D	Schwarzbeck	Horn Antenna	BBHA9120D295	Sep. 05, 2013(2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	N/A
<b>-</b>	83051A	Agilent	Microwave System Preamplifer	3950M00201	Apr. 30, 2014(1Y)

All test equipment used is calibrated on a regular basis.

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### 7.5 Test data for radiated emission

### 7.5.1 Radiated Emission which fall in the Restricted Band

#### 7.5.1.1 Test data for 802.11b WLAN Mode

#### 7.5.1.1.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	61.13	Peak	Н				52.63	74.00	21.37
2 387.54	48.22	Average	Н				39.72	54.00	14.28
	57.74	Peak	V	27.10	7.50	43.00	49.24	74.00	24.76
2 387.45	45.15	Average	V				36.65	54.00	17.35
			Test I	Oata for Hi	igh Chann	el			
	60.6	Peak	Н				52.7	74.00	21.30
2 499.71	46.98	Average	Н			43.00	39.08	54.00	14.92
2 499.71	57.24	Peak	V	27.40	7.70		49.34	74.00	24.66
	44.77	Average	V				36.87	54.00	17.13

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

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#### 7.5.1.1.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test 1	Data for L	ow Channe	el			
	58.73	Peak	Н				50.23	74.00	23.77
2 386.01	47.34	Average	Н				38.84	54.00	15.16
	56.80	Peak	V	27.10	7.50	43.00	48.30	74.00	25.70
2 386.01	44.62	Average	V				36.12	54.00	17.88
			Test I	Data for Hi	igh Channo	el			
	59.26	Peak	Н				51.36	74.00	22.64
2 483.67	45.91	Average	Н				38.01	54.00	15.99
	56.60	Peak	V	27.40	7.70	43.00	48.70	74.00	25.30
	43.50	Average	V				35.60	54.00	18.40

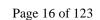
Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer





### 7.5.1.2 Test data for 802.11g WLAN Mode

## 7.5.1.2.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
	Test Data for Low Channel								
	67.62	Peak	Н				59.12	74.00	14.88
2389.95	56.15	Average	Н				47.65	54.00	6.35
2280.05	63.07	Peak	V	27.00	7.50	43.00	54.57	74.00	19.43
2389.95	51.31	Average	V				42.81	54.00	11.19
			Test I	Oata for Hi	gh Chann	el			
	61.31	Peak	Н				53.41	74.00	20.59
2483.54	47.55	Average	Н				39.65	54.00	14.35
	58.25	Peak	V	27.40	7.70	43.00	50.35	74.00	23.65
2483.54	44.74	Average	V				36.84	54.00	17.16

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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#### 7.5.1.2.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
	Test Data for Low Channel								
	68.48	Peak	Н				59.98	74.00	14.02
2 389.91	54.01	Average	Н				45.51	54.00	8.49
2 389.91	62.60	Peak	V	27.00	7.50	43.00	54.10	74.00	19.90
	50.17	Average	V				41.67	54.00	12.33
			Test I	Data for Hi	igh Chann	el			
	60.47	Peak	Н				52.57	74.00	21.43
2 483.59	47.47	Average	Н				39.57	54.00	14.43
2 402 50	57.27	Peak	V	27.40	7.70	43.00	49.37	74.00	24.63
2 483.59	44.72	Average	V				36.82	54.00	17.18

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain





#### 7.5.1.3 Test data for 802.11n HT20 WLAN Mode

#### 7.5.1.3.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
	Test Data for Low Channel								
	70.83	Peak	Н				62.33	74.00	11.67
2 389.85	57.75	Average	Н				49.25	54.00	4.75
2 389.85	65.44	Peak	V	27.00	7.50	43.00	56.94	74.00	17.06
	53.58	Average	V				45.08	54.00	8.92
			Test	Data for Hi	gh Channel				
	64.93	Peak	Н				57.03	74.00	16.97
2 483.62	49.80	Average	Н				41.90	54.00	12.10
	62.77	Peak	V	27.40	7.70	43.00	54.87	74.00	19.13
2 483.62	46.37	Average	V		,		38.47	54.00	15.53

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

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#### 7.5.1.3.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test 1	Data for L	ow Channe	el			
	69.52	Peak	Н				61.02	74.00	12.98
2 389.97	56.15	Average	Н				47.65	54.00	6.35
	65.28	Peak	V	27.00	7.50	43.00	56.78	74.00	17.22
2 389.97	52.77	Average	V				44.27	54.00	9.73
			Test I	Data for Hi	igh Channo	el			
	64.60	Peak	Н				56.70	74.00	17.30
2 483.56	50.99	Average	Н				43.09	54.00	10.91
	61.25	Peak	V	27.40	7.70	43.00	53.35	74.00	20.65
	48.12	Average	V				40.22	54.00	13.78

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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## 7.5.1.3.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	74.07	Peak	Н				65.57	74.00	8.43
2 389.93	59.37	Average	Н				50.87	54.00	3.13
	66.98	Peak	V	27.00	7.50	43.00	58.48	74.00	15.52
2 389.93	56.19	Average	V				47.69	54.00	6.31
			Test I	Data for Hi	gh Channo	el			
	72.26	Peak	Н				64.36	74.00	9.64
2 483.53	57.68	Average	Н			43.00	49.78	54.00	4.22
	65.86	Peak	V	27.40	7.70		57.96	74.00	16.04
	55.08	Average	V				47.18	54.00	6.82

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain





#### 7.5.1.4 Test data for 802.11n HT40 WLAN Mode

#### 7.5.1.4.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
	Test Data for Low Channel								
	68.55	Peak	Н				60.05	74.00	13.95
2 389.97	57.81	Average	Н				49.31	54.00	4.69
2 290 07	65.05	Peak	V	27.00	7.50	43.00	56.55	74.00	17.45
2 389.97	54.28	Average	V				45.78	54.00	8.22
			Test I	Data for Hi	igh Channe	el			
	67.28	Peak	Н				59.38	74.00	14.62
2 483.57	52.26	Average	Н				44.36	54.00	9.64
	62.44	Peak	V	27.40	7.70	43.00	54.54	74.00	19.46
2 483.57	51.08	Average	V				43.18	54.00	10.82

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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#### 7.5.1.4.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)	
			Test l	Data for L	ow Channe	el				
	72.27	Peak	Н				63.77	74.00	10.23	
2 389.93	61.34	Average	Н				52.84	54.00	1.16	
	68.59	Peak	V	27.00	7.50	43.00	60.09	74.00	13.91	
2 389.93	58.62	Average	V				50.12	54.00	3.88	
			Test I	Data for Hi	gh Channel					
	67.17	Peak	Н				59.27	74.00	14.73	
2 483.59	54.00	Average	Н				46.10	54.00	7.90	
2 483.59	62.10	Peak	V	27.40	7.70	43.00	54.20	74.00	19.80	
	50.88	Average	V				42.98	54.00	11.02	

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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## 7.5.1.4.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 26.5 GHz

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	71.09	Peak	Н				62.59	74.00	11.41
2 389.77	59.28	Average	Н				50.78	54.00	3.22
	66.14	Peak	V	27.00	7.50	43.00	57.64	74.00	16.36
2 389.77	54.83	Average	V				46.33	54.00	7.67
			Test I	Data for Hi	gh Chann	el			
	67.90	Peak	Н				60.00	74.00	14.00
2 483.55	54.61	Average	Н				46.71	54.00	7.29
	63.71	Peak	V	27.40	7.70	43.00	55.81	74.00	18.19
	50.86	Average	V				42.96	54.00	11.04

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain





#### 7.5.1.5 Test data for 802.11a RLAN Mode

#### 7.5.1.5.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	43.35	Peak	Н				45.15	74.00	28.85
5 725.00	35.45	Average	Н				37.25	54.00	16.75
	43.88	Peak	V	31.9	12.1	42.2	45.68	74.00	28.32
5 725.00	35.63	Average	V				37.43	54.00	16.57
			Test I	Data for Hi	igh Channo	el			
	43.34	Peak	Н				45.44	74.00	28.56
5 850.00	35.55	Average	Н				37.65	54.00	16.35
	43.63	Peak	V	32.1	12.2	42.2	45.73	74.00	28.27
5 850.00	35.72	Average	V				37.82	54.00	16.18

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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#### 7.5.1.5.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	43.32	Peak	Н				45.12	74.00	28.88
5 725.00	35.48	Average	Н				37.28	54.00	16.72
	43.77	Peak	V	31.9	12.1	42.2	45.57	74.00	28.43
5 725.00	35.84	Average	V				37.64	54.00	16.36
			Test I	Data for Hi	igh Channo	el			
	43.88	Peak	Н				45.98	74.00	28.02
5 850.00	35.36	Average	Н				37.46	54.00	16.54
	43.17	Peak	V	32.1	12.2	42.2	45.27	74.00	28.73
5 850.00	35.29	Average	V				37.39	54.00	16.61

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain





#### 7.5.1.6 Test data for 802.11n\_HT20 RLAN Mode

#### 7.5.1.6.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	43.99	Peak	Н				45.79	74.00	28.21
5 725.00	36.18	Average	Н				37.98	54.00	16.02
	44.01	Peak	V	31.9	12.1	42.2	45.81	74.00	28.19
5 725.00	35.85	Average	V				37.65	54.00	16.35
			Test I	Data for Hi	igh Channo	el			
	43.53	Peak	Н				45.63	74.00	28.37
5 850.00	35.21	Average	Н				37.31	54.00	16.69
	43.66	Peak	V	32.1	12.2	42.2	45.76	74.00	28.24
5 850.00	35.40	Average	V				37.50	54.00	16.50

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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#### 7.5.1.6.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for Lo	ow Channe	el			
	43.58	Peak	Н				45.38	74.00	28.62
5 725.00	35.63	Average	Н				37.43	54.00	16.57
	43.77	Peak	V	31.9	12.1	42.2	45.57	74.00	28.43
5 725.00	35.65	Average	V				37.45	54.00	16.55
			Test I	Data for Hi	gh Channo	el			
	43.64	Peak	Н				45.74	74.00	28.26
5 850.00	35.15	Average	Н				37.25	54.00	16.75
<b>7</b> 0 <b>7</b> 0 0 0	43.82	Peak	V	32.1	12.2	42.2	45.92	74.00	28.08
5 850.00	35.93	Average	V				38.03	54.00	15.97

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

 $Total\ Level = Reading + Antenna\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 



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## 7.5.1.6.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

: 30 MHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	43.55	Peak	Н				45.35	74.00	28.65
5 725.00	35.76	Average	Н				37.56	54.00	16.44
	43.48	Peak	V	31.9	12.1	42.2	45.28	74.00	28.72
5 725.00	36.20	Average	V				38.00	54.00	16.00
			Test I	Data for Hi	igh Channo	el			
	43.35	Peak	Н				45.45	74.00	28.55
5 850.00	35.59	Average	Н				37.69	54.00	16.31
- 00	43.90	Peak	V	32.1	12.2	42.2	46.00	74.00	28.00
5 850.00	35.82	Average	V				37.92	54.00	16.08

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain





#### 7.5.1.7 Test data for 802.11n HT40 RLAN Mode

#### 7.5.1.7.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for Lo	ow Channe	el			
	44.04	Peak	Н				45.84	74.00	28.16
5 725.00	36.18	Average	Н				37.98	54.00	16.02
	43.46	Peak	V	31.9	12.1	42.2	45.26	74.00	28.74
5 725.00	35.64	Average	V				37.44	54.00	16.56
			Test I	Data for Hi	gh Channo	el			
	43.61	Peak	Н				45.71	74.00	28.29
5 850.00	35.90	Average	Н				38.00	54.00	16.00
	43.78	Peak	V	32.1	12.2	42.2	45.88	74.00	28.12
5 850.00	35.39	Average	V				37.49	54.00	16.51

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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#### 7.5.1.7.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

: 30 MHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for Lo	ow Channe	el			
	43.39	Peak	Н				45.19	74.00	28.81
5 725.00	35.89	Average	Н				37.69	54.00	16.31
	44.07	Peak	V	31.90	12.10	42.20	45.87	74.00	28.13
5 725.00	36.06	Average	V				37.86	54.00	16.14
			Test I	Data for Hi	igh Channo	el			
	43.18	Peak	Н				45.28	74.00	28.72
5 850.00	35.55	Average	Н				37.65	54.00	16.35
	43.74	Peak	V	32.10	12.20	42.20	45.84	74.00	28.16
5 850.00	35.88	Average	V				37.98	54.00	16.02

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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## 7.5.1.7.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

: 30 MHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	43.59	Peak	Н				45.39	74.00	28.61
5 725.00	35.53	Average	Н				37.33	54.00	16.67
	43.78	Peak	V	31.90	12.10	42.20	45.58	74.00	28.42
5 725.00	36.01	Average	V				37.81	54.00	16.19
			Test I	Data for Hi	igh Channo	el			
	43.47	Peak	Н				45.57	74.00	28.43
5 850.00	35.52	Average	Н				37.62	54.00	16.38
	43.79	Peak	V	32.10	12.20	42.20	45.89	74.00	28.11
5 850.00	35.72	Average	V				37.82	54.00	16.18

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain





#### 7.5.1.8 Test data for 802.11ac VHT80 RLAN Mode

### 7.5.1.8.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for Lo	ow Channe	el			
	43.93	Peak	Н				45.73	74.00	28.27
5 725.00	36.04	Average	Н				37.84	54.00	16.16
	43.51	Peak	V	31.90	12.10	42.20	45.31	74.00	28.69
5 725.00	35.51	Average	V				37.31	54.00	16.69
			Test I	Oata for Hi	gh Chann	el			
	42.95	Peak	Н				45.05	74.00	28.95
5 850.00	35.25	Average	Н				37.35	54.00	16.65
	43.74	Peak	V	32.10	12.20	42.20	45.84	74.00	28.16
5 850.00	35.46	Average	V				37.56	54.00	16.44

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



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#### 7.5.1.8.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 30 MHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	43.82	Peak	Н				45.62	74.00	28.38
5 725.00	36.04	Average	Н				37.84	54.00	16.16
	44.03	Peak	V	31.90	12.10	42.20	45.83	74.00	28.17
5 725.00	36.25	Average	V				38.05	54.00	15.95
			Test I	Data for Hi	igh Channo	el			
	43.87	Peak	Н				45.97	74.00	28.03
5 850.00	35.19	Average	Н				37.29	54.00	16.71
	44.02	Peak	V	32.10	12.20	42.20	46.12	74.00	27.88
5 850.00	35.48	Average	V				37.58	54.00	16.42

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

 $Total\ Level = Reading + Antenna\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 



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## 7.5.1.8.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

: 30 MHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test 1	Data for L	ow Channe	el			
	43.88	Peak	Н				45.68	74.00	28.32
5 725.00	35.91	Average	Н				37.71	54.00	16.29
	43.53	Peak	V	31.90	12.10	42.20	45.33	74.00	28.67
5 725.00	36.05	Average	V				37.85	54.00	16.15
			Test I	Data for Hi	igh Channo	el			
	43.56	Peak	Н				45.66	74.00	28.34
5 850.00	35.32	Average	Н				37.42	54.00	16.58
	43.74	Peak	V	32.10	12.20	42.20	45.84	74.00	28.16
5 850.00	35.97	Average	V				38.07	54.00	15.93

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain



FCC ID. : **SS4ET100** Page 35 of 123 Report No.: W153R-D022

#### 7.5.1.9 Test data for Bluetooth LE Mode

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

: 30 MHz ~ 12.75 GHz -. Frequency range

-. Measurement distance : 3 m -. Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test l	Data for L	ow Channe	el			
	54.83	Peak	Н				46.33	74.00	27.67
2362.00	46.14	Average	Н				37.64	54.00	16.36
	52.76	Peak	V	31.90	12.10	42.20	44.26	74.00	29.74
2362.00	45.87	Average	V				37.37	54.00	16.63
			Test I	Data for Hi	igh Channo	el			
	59.37	Peak	Н				51.47	74.00	22.53
2484.90	47.68	Average	Н				39.78	54.00	14.22
• 40 4 00	56.16	Peak	V	32.10	12.20	42.20	48.26	74.00	25.74
2484.90	45.69	Average	V				37.79	54.00	16.21

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain





## 7.5.2 Spurious & Harmonic Radiated Emission

### 7.5.2.1 Test data for 802.11b WLAN Mode

### 7.5.2.1.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

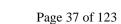
-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
Test Data for Low Channel									
2 412.00	107.88	Peak	Н	27.20	7.50	42.80	99.78	113.98	14.20
	95.36	Average	Н				87.26	93.98	6.72
	108.51	Peak	V				100.41	113.98	13.57
	96.75	Average	V				88.65	93.98	5.33
7 236.00	40.67	Peak	Н	35.1	11.1	41.8	45.07	73.98	28.91
	37.48	Average	Н				41.88	53.98	12.10
	41.72	Peak	V				46.12	73.98	27.86
	38.25	Average	V				42.65	53.98	11.33
Test Data for Middle Channel									
2 437.00	108.18	Peak	Н	27.30	7.60	42.90	100.18	113.98	13.80
	95.67	Average	Н				87.67	93.98	6.31
	109.35	Peak	V				101.35	113.98	12.63
	96.97	Average	V				88.97	93.98	5.01
7 311.00	41.44	Peak	Н	35.1	11.2	41.8	45.94	73.98	28.04
	36.27	Average	Н				40.77	53.98	13.21
	42.85	Peak	V				47.35	73.98	26.63
	38.37	Average	V				42.87	53.98	11.11

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EMC-003 (Rev.2)



**Test Data for High Channel** 106.64 Peak Η 98.84 113.98 15.14 94.34 Η 86.54 93.98 7.44 Average 2 462.00 27.40 7.70 42.90 108.77 V 100.97 113.98 13.01 Peak 95.15 V 93.98 Average 87.35 6.63 73.98 29.3 39.58 Peak Η 44.68 35.24 40.34 53.98 Average Η 13.64 7 386.00 35.1 11.8 41.8 V 43.52 Peak 48.62 73.98 25.36 V 43.49 53.98 38.39 10.49 Average

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 38 of 123 Report No.: W153R-D022

## 7.5.2.1.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 26.5 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
(GIIZ)	(αΒμν)	Mode	1 1	Data for I			(αΒμ ν/ιιι)	(ασμ ν/ιιι)	(ub)
	105.61	Peak	Н				97.51	113.98	16.47
	93.06	Average	Н				84.96	93.98	9.02
2 412.00	106.53	Peak	V	27.20	7.50	42.80	98.43	113.98	15.55
	93.37	Average	V				85.27	93.98	8.71
	45.57	Peak	Н				44.87	73.98	29.11
4 824.00	41.35	Average	Н	30.70	11.10	42.50	40.65	53.98	13.33
	48.32	Peak	V				47.62	73.98	26.36
	43.57	Average	V				42.87	53.98	11.11
			Test I	Oata for M	iddle Chai	nnel	<u> </u>	1	
	108.65	Peak	Н				100.65	113.98	13.33
	96.15	Average	Н		0	4. 00	88.15	93.98	5.83
2 437.00	109.12	Peak	V	27.30	7.60	42.90	101.12	113.98	12.86
	96.97	Average	V				88.97	93.98	5.01
	42.85	Peak	Н				42.35	73.98	31.63
	40.05	Average	Н				39.55	53.98	14.43
4 874.00	44.8	Peak	V	30.70	11.20	42.40	44.3	73.98	29.68
	40.86	Average	V				40.36	53.98	13.62



**Test Data for High Channel** 107.65 Peak Η 99.85 113.98 14.13 93.98 94.86 Η 87.06 6.92 Average 2 462.00 27.40 7.70 42.90 108.15 V 100.35 113.98 13.63 Peak 95.97 V 88.17 93.98 5.81 Average 52.44 52.74 Peak Η 73.98 21.24 51.08 51.38 53.98 2.60 Average Η 4 924.00 30.80 11.80 42.30 V 53.29 Peak 53.59 73.98 20.39 V 52.47 53.98 52.17 1.51

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Average

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 40 of 123 Report No.: W153R-D022

# 7.5.2.2 Test data for 802.11g WLAN Mode

# 7.5.2.2.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

: PASSED -. Result

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
	•		Test	Data for I	ow Chani	nel			
	106.39	Peak	Н				98.29	113.98	15.69
2 442 00	95.55	Average	Н	27.20	<b>5.</b> 50	42.00	87.45	93.98	6.53
2 412.00	107.45	Peak	V	27.20	7.50	42.80	99.35	113.98	14.63
	96.79	Average	V				88.69	93.98	5.29
	38.80	Peak	Н				38.10	73.98	35.88
4.024.00	37.99	Average	Н	20.70	44.40	42.50	37.29	53.98	16.69
4 824.00	40.95	Peak	V	30.70	11.10	42.50	40.25	73.98	33.73
	38.18	Average	V				37.48	53.98	16.50
			Test I	Oata for M	iddle Chai	nnel			
	106.13	Peak	Н				98.13	113.98	15.85
	94.35	Average	Н				86.35	93.98	7.63
2 437.00	108.37	Peak	V	27.30	7.60	42.90	100.37	113.98	13.61
	95.68	Average	V				87.68	93.98	6.30
	44.44	Peak	Н				43.94	73.98	30.04
	43.22	Average	Н				42.72	53.98	11.26
4 874.00	46.88	Peak	V	30.70	11.20	42.50	46.38	73.98	27.60
	43.62	Average	V				43.12	53.98	10.86

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EMC-003 (Rev.2)



**Test Data for High Channel** 105.45 Peak Η 97.65 113.98 16.33 93.82 Η 86.02 93.98 7.96 Average 2 462.00 27.40 7.70 42.90 107.25 V 99.45 113.98 14.53 Peak 94.70 V 86.90 93.98 7.08 Average 42.21 47.31 73.98 Peak Η 26.67 40.07 53.98 8.81 Average Η 45.17 7 386.00 35.1 11.8 41.8 V 43.90 Peak 49.00 73.98 24.98 41.24 Average V 46.34 53.98 7.64

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

 $Total\ Level = Reading + Antenna\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 42 of 123 Report No.: W153R-D022

## 7.5.2.2.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 26.5 GHz -. Frequency range

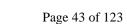
-. Measurement distance : 3 m

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
(- )	<u> </u>		1 1	Data for I	l .		<u> </u>	<u> </u>	("
	106.54	Peak	Н				98.44	113.98	15.54
	95.55	Average	Н			4.00	87.45	93.98	6.53
2 412.00	108.67	Peak	V	27.20	7.50	42.80	100.57	113.98	13.41
	97.05	Average	V				88.95	93.98	5.03
	55.97	Peak	Н				55.27	73.98	18.71
	44.03	Average	Н				43.33	53.98	10.65
4 824.00	59.16	Peak	V	30.70	11.10	42.50	58.46	73.98	15.52
	46.67	Average	V				45.97	53.98	8.01
			Test I	Oata for M	iddle Chai	nnel			
	107.06	Peak	Н				99.06	113.98	14.92
	95.75	Average	Н				87.75	93.98	6.23
2 437.00	109.13	Peak	V	27.30	7.60	42.90	101.13	113.98	12.85
	97.32	Average	V				89.32	93.98	4.66
	56.85	Peak	Н				56.35	73.98	17.63
	49.71	Average	Н	30.70			49.21	53.98	4.77
4 874.00	60.37	Peak	V		11.20	42.50	59.87	73.98	14.11
	50.62	Average	V				50.12	53.98	3.86

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EMC-003 (Rev.2)



**Test Data for High Channel** 106.43 Peak Η 98.63 113.98 15.35 93.98 94.81 Η 87.01 6.97 Average 2 462.00 27.40 7.70 42.90 108.02 V 100.22 113.98 13.76 Peak 96.58 V 88.78 93.98 5.20 Average 26.42 47.26 47.56 Peak Η 73.98 41.84 42.14 53.98 11.84 Average Η 4 924.00 30.80 11.80 42.50 V 49.02 48.72 Peak 73.98 24.96 45.57 V 45.87 53.98 8.11 Average

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

 $Total\ Level = Reading + Antenna\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 

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FCC ID. : **SS4ET100**Report No.: W153R-D022

## 7.5.2.3 Test data for 802.11n HT20 WLAN Mode

# 7.5.2.3.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
	•	•	Test	Data for I	ow Chani	nel			,
	104.64	Peak	Н				96.54	113.98	17.44
2 442 00	94.67	Average	Н	27.20	<b>5.</b> 50	42.00	86.57	93.98	7.41
2 412.00	106.45	Peak	V	27.20	7.50	42.80	98.35	113.98	15.63
	94.90	Average	V				86.80	93.98	7.18
	41.02	Peak	Н				40.32	73.98	33.66
	38.06	Average	Н				37.36	53.98	16.62
4 824.00	41.43	Peak	V	30.70	11.10	42.50	40.73	73.98	33.25
	38.21	Average	V				37.51	53.98	16.47
			Test I	Oata for M	iddle Chai	nnel			
	105.02	Peak	Н				97.02	113.98	16.96
	94.83	Average	Н				86.83	93.98	7.15
2 437.00	108.05	Peak	V	27.30	7.60	42.90	100.05	113.98	13.93
	95.34	Average	V				87.34	93.98	6.64
	43.31	Peak	Н				42.81	73.98	31.17
	39.07	Average	Н			1. 1.5	38.57	53.98	15.41
4 874.00	47.18	Peak	V	30.70	11.20	42.40	46.68	73.98	27.30
	42.37	Average	V				41.87	53.98	12.11

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EMC-003 (Rev.2)



**Test Data for High Channel** 104.34 Peak Η 96.54 113.98 17.44 85.68 93.98 93.48 Η 8.30 Average 2 462.00 27.40 7.70 42.90 107.01 V 99.21 113.98 14.77 Peak 93.91 V 93.98 7.87 Average 86.11 40.87 Peak Η 41.17 73.98 32.81 37.57 37.87 53.98 16.11 Average Η 4 924.00 30.80 11.80 42.30 V 40.68 Peak 40.98 73.98 33.00 V 38.23 53.98 15.75 37.93 Average

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 46 of 123 Report No.: W153R-D022

## 7.5.2.3.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 26.5 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test	Data for I	ow Chani	nel			
	103.70	Peak	Н				95.60	113.98	18.38
2 412 00	92.57	Average	Н	27.20	7.50	42.00	84.47	93.98	9.51
2 412.00	106.55	Peak	V	27.20	7.50	42.80	98.45	113.98	15.53
	94.55	Average	V				86.45	93.98	7.53
	41.57	Peak	Н				40.87	73.98	33.11
	38.09	Average	Н				37.39	53.98	16.59
4 824.00	42.28	Peak	V	30.70	11.10	42.50	41.58	73.98	32.40
	37.96	Average	V				37.26	53.98	16.72
			Test I	Oata for M	iddle Chai	nnel			
	103.79	Peak	Н				95.79	113.98	18.19
	92.68	Average	Н				84.68	93.98	9.30
2 437.00	108.02	Peak	V	27.30	7.60	42.90	100.02	113.98	13.96
	97.36	Average	V				89.36	93.98	4.62
	58.95	Peak	Н				58.45	73.98	15.53
	53.11	Average	Н				52.61	53.98	1.37
4 874.00	59.98	Peak	V	30.70	11.20	42.40	59.48	73.98	14.50
	50.63	Average	V				50.13	53.98	3.85

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EMC-003 (Rev.2)





	Test Data for High Channel											
	103.45	Peak	Н				95.65	113.98	18.33			
2.452.00	92.83	Average	Н	27.40	<b>7.7</b> 0	42.00	85.03	93.98	8.95			
2 462.00	107.04	Peak	V	27.40	7.70	42.90	99.24	113.98	14.74			
	96.18	Average	V				88.38	93.98	5.60			
	41.08	Peak	Н				41.38	73.98	32.60			
	37.82	Average	Н				38.12	53.98	15.86			
4 924.00	42.03	Peak	V	30.80	11.80	42.30	42.33	73.98	31.65			
	38.51	Average	V				38.81	53.98	15.17			

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

 $Total\ Level = Reading + Antenna\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 48 of 123 Report No.: W153R-D022

# 7.5.2.3.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 26.5 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test	Data for I	ow Chani	nel			
	104.29	Peak	Н				96.19	113.98	17.79
2 442 00	93.47	Average	Н	27.20	<b>5.</b> 50	42.00	85.37	93.98	8.61
2 412.00	107.31	Peak	V	27.20	7.50	42.80	99.21	113.98	14.77
	95.51	Average	V				87.41	93.98	6.57
	41.05	Peak	Н				40.35	73.98	33.63
	37.92	Average	Н				37.22	53.98	16.76
4 824.00	41.27	Peak	V	30.70	11.10	42.50	40.57	73.98	33.41
	38.67	Average	V				37.97	53.98	16.01
			Test I	Oata for M	iddle Chai	nnel			
	104.27	Peak	Н				96.27	113.98	17.71
	93.60	Average	Н				85.60	93.98	8.38
2 437.00	107.85	Peak	V	27.30	7.60	42.90	99.85	113.98	14.13
	95.69	Average	V				87.69	93.98	6.29
	53.37	Peak	Н				52.87	73.98	21.11
	40.85	Average	Н				40.35	53.98	13.63
4 874.00	56.51	Peak	V	30.70	11.20	42.40	56.01	73.98	17.97
	45.25	Average	V				44.75	53.98	9.23

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EMC-003 (Rev.2)



**Test Data for High Channel** 103.99 Peak Η 96.19 113.98 17.79 92.79 93.98 8.99 Η 84.99 Average 2 462.00 27.40 7.70 42.90 107.15 V 99.35 113.98 14.63 Peak 95.88 V 88.08 93.98 5.90 Average 42.96 43.26 30.72 Peak Η 73.98 38.54 38.84 53.98 15.14 Average Η 4 924.00 30.80 11.80 42.30 V 43.90 Peak 44.2073.98 29.78 V 41.97 53.98 41.67 12.01 Average

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 50 of 123 Report No.: W153R-D022

## 7.5.2.4 Test data for 802.11n HT40 WLAN Mode

# 7.5.2.4.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

: PASSED -. Result

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
	•	•	Test	Data for I	ow Chani	nel		,	,
	101.31	Peak	Н				93.21	113.98	20.77
2 422 00	90.59	Average	Н	27.20	<b>5.</b> 50	42.00	82.49	93.98	11.49
2 422.00	103.78	Peak	V	27.20	7.50	42.80	95.68	113.98	18.30
	93.15	Average	V				85.05	93.98	8.93
	41.17	Peak	Н				41.57	73.98	32.41
	37.56	Average	Н				37.96	53.98	16.02
4 844.00	41.09	Peak	V	31.10	11.80	42.50	41.49	73.98	32.49
	38.21	Average	V				38.61	53.98	15.37
			Test I	Oata for M	iddle Chai	nnel			
	101.54	Peak	Н				93.54	113.98	20.44
	90.97	Average	Н				82.97	93.98	11.01
2 437.00	104.77	Peak	V	27.30	7.60	42.90	96.77	113.98	17.21
	93.84	Average	V				85.84	93.98	8.14
	36.31	Peak	Н				41.31	73.98	32.67
<b>7.211.0</b> 6	32.28	Average	Н	0.5.4	44.5	44.0	37.28	53.98	16.70
7 311.00	37.15	Peak	V	35.1	11.7	41.8	42.15	73.98	31.83
	33.28	Average	V				38.28	53.98	15.7

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EMC-003 (Rev.2)



**Test Data for High Channel** 100.79 Peak Η 92.99 113.98 20.99 93.98 89.76 Η 81.96 12.02 Average 2 452.00 27.4 7.7 42.9 103.92 V 96.12 113.98 17.86 Peak 93.35 V 85.55 93.98 8.43 Average 32.69 41.29 40.69 Peak Η 73.98 36.97 37.57 53.98 Average Η 16.41 4 904.00 31.3 11.8 42.5 V 41.05 Peak 41.65 73.98 32.33 V 37.98 53.98 37.38 Average 16.00

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

 $Total\ Level = Reading + Antenna\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 52 of 123 Report No.: W153R-D022

## 7.5.2.4.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 26.5 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
				Data for I	l .				, ,
	101.39	Peak	Н				93.29	113.98	20.69
2 442 00	91.01	Average	Н	27.20	<b>5.5</b> 0	42.00	82.91	93.98	11.07
2 412.00	104.68	Peak	V	27.20	7.50	42.80	96.58	113.98	17.40
	93.24	Average	V				85.14	93.98	8.84
	41.04	Peak	Н				41.44	73.98	32.54
	37.17	Average	Н				37.57	53.98	16.41
4 824.00	41.42	Peak	V	31.10	11.80	42.50	41.82	73.98	32.16
	37.54	Average	V				37.94	53.98	16.04
			Test I	Data for M	iddle Chai	nnel			
	101.68	Peak	Н				93.68	113.98	20.30
	90.67	Average	Н				82.67	93.98	11.31
2 372.00	104.72	Peak	V	27.30	7.60	42.90	96.72	113.98	17.26
	93.18	Average	V				85.18	93.98	8.80
	51.14	Peak	Н				51.54	73.98	22.44
	43.90	Average	Н				44.30	53.98	9.68
4 874.00	54.53	Peak	V	31.20	11.70	42.50	54.93	73.98	19.05
	45.27	Average	V				45.67	53.98	8.31

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EMC-003 (Rev.2)



**Test Data for High Channel** 100.88 Peak Η 93.08 113.98 20.90 93.98 100.17 Η 92.37 1.61 Average 2 462.00 27.40 7.70 42.90 104.05 V 96.25 113.98 17.73 Peak 93.26 V 93.98 Average 85.46 8.52 41.09 40.49 Peak Η 73.98 32.89 36.40 37.00 53.98 16.98 Average Η 4 924.00 31.30 11.80 42.50 V 40.98 Peak 41.5873.98 32.40 V 37.65 53.98 16.33 37.05 Average

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 54 of 123 Report No.: W153R-D022

# 7.5.2.4.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 26.5 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
(GIIZ)	(αΒμν)	Nioue	1 1	Data for I			(αΒμ ν/ιιι)	(αΒμ ν/ΙΙΙ)	(ub)
	102.09	Peak	Н		ow cham		05.00	112.00	18.10
	103.98						95.88	113.98	
2 412.00	93.49	Average	Н	27.20	7.50	42.80	85.39	93.98	8.59
2 .12.00	105.82	Peak	V	27.20	7.00	.2.00	97.72	113.98	16.26
	93.22	Average	V				85.12	93.98	8.86
	41.44	Peak	Н				41.84	73.98	32.14
4.024.00	37.59	Average	Н	24.40	11.00	42.50	37.99	53.98	15.99
4 824.00	42.24	Peak	V	31.10	11.80	42.50	42.64	73.98	31.34
	39.61	Average	V				40.01	53.98	13.97
			Test I	Oata for M	iddle Chai	nnel			
	104.84	Peak	Н				96.84	113.98	17.14
	93.79	Average	Н				85.79	93.98	8.19
2 437.00	106.05	Peak	V	27.30	7.60	42.90	98.05	113.98	15.93
	95.81	Average	V				87.81	93.98	6.17
	51.72	Peak	Н				52.12	73.98	21.86
4.054.06	48.28	Average	Н	H V 31.20	44.70	40.50	48.68	53.98	5.30
4 874.00	44.58	Peak	V		11.70	42.50	44.98	73.98	29.00
	40.25	Average	V				40.65	53.98	13.33



**Test Data for High Channel** 103.75 Peak Η 95.95 113.98 18.03 93.98 92.10 Η 84.30 9.68 Average 2 462.00 27.40 7.70 42.90 105.35 V 97.55 113.98 16.43 Peak 93.93 V 93.98 7.85 Average 86.13 41.22 32.76 40.62 Peak Η 73.98 37.13 37.73 53.98 16.25 Average Η 4 924.00 31.30 11.80 42.50 V 41.46 Peak 42.06 73.98 31.92 V 39.58 53.98 14.4 38.98 Average

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

 $Total\ Level = Reading + Antenna\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 56 of 123 Report No.: W153R-D022

## 7.5.2.5 Test data for 802.11a RLAN Mode

## 7.5.2.5.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

: PASSED -. Result

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
	•		Test	Data for I	ow Chanr	ıel			
	84.83	Peak	Н				86.93	113.98	27.05
	73.35	Average	Н	22.10	12.20	42.20	75.45	93.98	18.53
5 745.00	89.82	Peak	V	32.10	12.20	42.20	91.92	113.98	22.06
	79.33	Average	V				81.43	93.98	12.55
	42.44	Peak	Н				60.24	73.98	13.74
11 100 00	27.52	Average	Н	44.40	45.50	40.00	45.32	53.98	8.66
11 490.00	48.32	Peak	V	41.10	17.50	40.80	66.12	73.98	7.86
	32.55	Average	V				50.35	53.98	3.63
			Test I	Oata for M	iddle Char	nnel			
	85.43	Peak	Н				87.53	113.98	26.45
	74.03	Average	Н	10			76.13	93.98	17.85
5 785.00	90.35	Peak	V	32.10	12.20	42.20	92.45	113.98	21.53
	79.23	Average	V				81.33	93.98	12.65
	42.62	Peak	Н				60.12	73.98	13.86
44 550 00	26.86	Average	Н	44.00	45.50	44.00	44.36	53.98	9.62
11 570.00	47.57	Peak	V	41.20	17.50	41.20	65.07	73.98	8.91
	32.02	Average	V				49.52	53.98	4.46

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EMC-003 (Rev.2)



**Test Data for High Channel** 85.11 Peak Η 87.21 113.98 26.77 93.98 72.56 74.66 19.32 Average Η 5 825.00 32.10 12.20 42.20 89.22 V 91.32 113.98 22.66 Peak 78.35 V 80.45 93.98 Average 13.53 46.24 60.54 73.98 Peak Η 13.44 30.87 53.98 8.81 Average Η 45.17 11 650.00 42.70 39.50 17.50 V 51.48 Peak 65.78 73.98 8.20 V 53.98 3.82 35.86 50.16 Average

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 58 of 123 Report No.: W153R-D022

## 7.5.2.5.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test	Data for L	ow Chanr	nel			
	84.44	Peak	Н				86.54	113.98	27.44
5.745.00	72.23	Average	Н	22.10	12.20	42.20	74.33	93.98	19.65
5 745.00	90.45	Peak	V	32.10	12.20	42.20	92.55	113.98	21.43
	79.33	Average	V				81.43	93.98	12.55
	41.77	Peak	Н				59.57	73.98	14.41
44 400 00	26.92	Average	Н		.= -0	40.00	44.72	53.98	9.26
11 490.00	46.36	Peak	V	41.10	17.50	40.80	64.16	73.98	9.82
	33.41	Average	V				51.21	53.98	2.77
			Test I	Oata for Mi	iddle Chai	nnel			
	86.13	Peak	Н				88.23	113.98	25.75
	76.23	Average	Н				78.33	93.98	15.65
5 785.00	93.23	Peak	V	32.10	12.20	42.20	95.33	113.98	18.65
	81.46	Average	V				83.56	93.98	10.42
	44.15	Peak	Н				58.45	73.98	15.53
	29.97	Average	Н				44.27	53.98	9.71
11 570.00	48.77	Peak	V	39.50	17.50	42.70	63.07	73.98	10.91
	36.03	Average	V				50.33	53.98	3.65

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EMC-003 (Rev.2)



**Test Data for High Channel** 86.46 Peak Η 88.56 113.98 25.42 73.34 Η 75.44 93.98 18.54 Average 5 825.00 32.10 12.20 42.20 92.56 V 94.66 113.98 19.32 Peak 80.03 V 82.13 93.98 Average 11.85 44.56 Peak Η 58.86 73.98 15.12 30.20 44.50 53.98 9.48 Average Η 11 650.00 42.70 39.50 17.50 V 48.95 Peak 63.25 73.98 10.73 36.39 V 50.69 53.98 3.29 Average

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

 $Total\ Level = Reading + Antenna\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



## 7.5.2.6 Test data for 802.11n\_HT20 RLAN Mode

# 7.5.2.6.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
(GIL)	(42)	111040		Data for I			(uDp (in)	(uzp (iii)	(uD)
	81.34	Peak	Н				83.44	113.98	30.54
	69.56	Average	Н				71.66	93.98	22.32
5 745.00	87.55	Peak	V	32.10	12.20	42.20	89.65	113.98	24.33
	76.55	Average	V				78.65	93.98	15.33
	43.44	Peak	Н				61.24	73.98	12.74
	29.78	Average	Н				47.58	53.98	6.40
11 490.00	46.53	Peak	V	41.10	17.50	40.80	64.33	73.98	9.65
	33.52	Average	V				51.32	53.98	2.66
			Test I	Data for M	iddle Chai	nnel			
	83.26	Peak	Н				85.36	113.98	28.62
	71.16	Average	Н				73.26	93.98	20.72
5 785.00	89.35	Peak	V	32.10	12.20	42.20	91.45	113.98	22.53
	78.12	Average	V				80.22	93.98	13.76
	43.83	Peak	Н				61.33	73.98	12.65
	29.19	Average	Н	41.20			46.69	53.98	7.29
11 570.00	48.21	Peak	V		17.50	41.20	65.71	73.98	8.27
	34.18	Average	V				51.68	53.98	2.30

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EMC-003 (Rev.2)

FCC ID. : **SS4ET100** 

Report No.: W153R-D022



**Test Data for High Channel** 82.23 Peak Η 84.33 113.98 29.65 93.98 21.29 70.59 Η 72.69 Average 5 825.00 32.10 12.20 42.20 88.56 V 90.66 113.98 23.32 Peak 76.34 V 78.44 93.98 15.54 Average 73.98 43.11 Peak Η 60.31 13.67 28.57 45.77 53.98 8.21 Average Η 11 650.00 41.30 17.50 41.60 V 46.85 Peak 64.05 73.98 9.93 33.77 V 50.97 53.98 3.01

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Average

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 62 of 123 Report No.: W153R-D022

## 7.5.2.6.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency	Reading	Detector Mode	Ant. Pol.	Ant.	Cable	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
(GHz)	(dBµV)	Mode	(H/V)	Factor	Loss		<u> (аъµ v/III)</u>	(иБµ V/III)	(UD)
		1	Test	Data for I	ow Chani	nel	T	1	
	81.59	Peak	Н	32.10 12.20 4	12.00		83.69	113.98	30.29
5 745.00	70.00	Average	Н			42.20	72.10	93.98	21.88
3 /43.00	86.34	Peak	V		12.20	42.20	88.44	113.98	25.54
	76.23	Average	V			78.33	93.98	15.65	
	41.17	Peak	Н				58.37	73.98	15.61
11 100 00	27.06	Average	Н	44.40	15.50	44.40	44.26	53.98	9.72
11 490.00	46.33	Peak	V	41.10	17.50	41.40	63.53	73.98	10.45
	33.84	Average	V				51.04	53.98	2.94
			Test I	Oata for M	iddle Chai	nnel			
	86.50	Peak	Н				88.60	113.98	25.38
	74.13	Average	Н				76.23	93.98	17.75
5 785.00	92.01	Peak	V	32.10	12.20	42.20	94.11	113.98	19.87
	78.46	Average	V				80.56	93.98	13.42
	43.34	Peak	Н				60.24	73.98	13.74
44.550.00	29.68	Average	Н		45.50	44.06	46.58	53.98	7.40
11 570.00	47.86	Peak	V	41.20	17.50	41.80	64.76	73.98	9.22
	34.45	Average	V				51.35	53.98	2.63



**Test Data for High Channel** 84.45 Peak Η 86.55 113.98 27.43 93.98 72.23 74.33 19.65 Average Η 5 825.00 32.10 12.20 42.20 89.55 V 91.65 113.98 22.33 Peak 78.13 V 80.23 93.98 Average 13.75 38.81 Peak Η 53.11 73.98 20.87 28.56 42.86 53.98 11.12 Average Η 11 650.00 42.70 39.50 17.50 V 42.30 Peak 56.60 73.98 17.38 32.23 V 46.53 53.98 7.45

Remark: "H": Horizontal, "V": Vertical

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Average

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** Page 64 of 123 Report No.: W153R-D022

# 7.5.2.6.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m

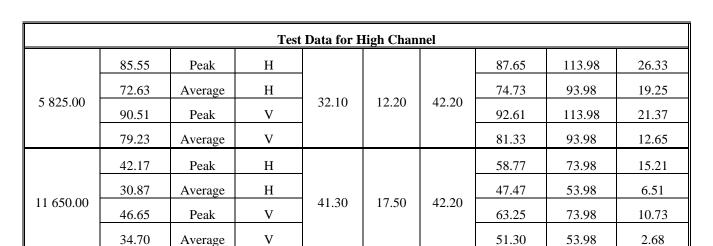
-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test	Data for I	ow Chanr	nel			
	83.23	Peak	Н				85.33	113.98	28.65
5.745.00	70.56	Average	Н	22.10		42.20	72.66	93.98	21.32
5 745.00	88.43	Peak	V	32.10	12.20	42.20	90.53	113.98	23.45
	77.24	Average	V				79.34	93.98	14.64
	39.93	Peak	Н				57.13	73.98	16.85
	25.87	Average	Н				43.07	53.98	10.91
11 490.00	46.22	Peak	V	41.10	17.50	41.40	63.42	73.98	10.56
	31.15	Average	V				48.35	53.98	5.63
			Test I	Oata for M	iddle Chai	nnel			
	86.03	Peak	Н				88.13	113.98	25.85
	74.47	Average	Н	10			76.57	93.98	17.41
5 785.00	92.55	Peak	V	32.10	12.20	42.20	94.65	113.98	19.33
	80.50	Average	V				82.60	93.98	11.38
	43.46	Peak	Н				60.36	73.98	13.62
11 570.00	28.08	Average	Н		.=		44.98	53.98	9.00
	47.97	Peak	V	41.20	17.50	41.80	64.87	73.98	9.11
	31.29	Average	V				48.19	53.98	5.79

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Remark: "H": Horizontal, "V": Vertical

34.70

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Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Average

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jvun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 

Report No.: W153R-D022

2.68





FCC ID. : **SS4ET100** Report No.: W153R-D022

# 7.5.2.7 Test data for 802.11n\_HT40 RLAN Mode

## 7.5.2.7.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)				
	Test Data for Low Channel												
	83.26	Peak	Н				85.36	113.98	28.62				
5.755.00	70.03	Average	Н	22.10	12.20	42.20	72.13	93.98	21.85				
5 755.00	90.00	Peak	V	32.10	12.20	42.20	92.10	113.98	21.88				
	77.23	Average	V				79.33	93.98	14.65				
	37.06	Peak	Н				54.26	73.98	19.72				
	23.15	Average	Н				40.35	53.98	13.63				
11 510.00	44.58	Peak	V	41.10	17.50	41.40	61.78	73.98	12.20				
	33.36	Average	V				50.56	53.98	3.42				
			Test	Data for H	ligh Chan	nel							
	82.00	Peak	Н				84.10	113.98	29.88				
	68.13	Average	Н				70.23	93.98	23.75				
5 795.00	89.35	Peak	V	32.10	12.20	42.20	91.45	113.98	22.53				
	76.13	Average	V				78.23	93.98	15.75				
	37.80	Peak	Н				54.70	73.98	19.28				
	23.42	Average	Н				40.32	53.98	13.66				
11 590.00	45.53	Peak	V	41.20	17.50	41.80	62.43	73.98	11.55				
	34.38	Average	V				51.28	53.98	2.70				

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

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EMC-003 (Rev.2)



DUETECH

FCC ID. : **SS4ET100** Report No.: W153R-D022

## 7.5.2.7.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)				
	Test Data for Low Channel												
	83.35	Peak	Н				85.45	113.98	28.53				
	70.01	Average	Н	22.10	12.20	42.20	72.11	93.98	21.87				
5 755.00	90.55	Peak	V	32.10	12.20	42.20	92.65	113.98	21.33				
	77.46	Average	V			79.56	93.98	14.42					
	39.68	Peak	Н				56.88	73.98	17.10				
	27.09	Average	Н				44.29	53.98	9.69				
11 510.00	43.01	Peak	V	41.10	17.50	41.40	60.21	73.98	13.77				
	31.69	Average	V				48.89	53.98	5.09				
			Test	Data for H	igh Chan	nel							
	82.55	Peak	Н				84.65	113.98	29.33				
	68.55	Average	Н				70.65	93.98	23.33				
5 795.00	90.03	Peak	V	32.10	12.20	42.20	92.13	113.98	21.85				
	77.58	Average	V				79.68	93.98	14.30				
	39.02	Peak	Н				55.92	73.98	18.06				
	28.97	Average	Н	41.20			45.87	53.98	8.11				
11 590.00	43.78	Peak	V		17.50	41.80	60.68	73.98	13.30				
	32.02	Average	V				48.92	53.98	5.06				

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

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EMC-003 (Rev.2)





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# 7.5.2.7.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m -. Result : PASSED

Frequency	Reading	Detector	Ant. Pol.	Ant.	Cable	Amp	Total	Limits	Margin
(GHz)	(dBµV)	Mode	(H/V)	Factor	Loss	Gain	(dBµV/m)	(dBµV/m)	(dB)
		1	Test	Data for I	ow Cham	nel	T	<del></del>	
	84.20	Peak	Н				86.30	113.98	27.68
5.755.00	71.57	Average	Н	22.10	12.20	42.20	73.67	93.98	20.31
5 755.00	90.06	Peak	V	32.10			92.16	113.98	21.82
	77.58	Average	V				79.68	93.98	14.30
	40.64	Peak	Н				57.84	73.98	16.14
11.510.00	28.29	Average	Н	41.10	17.50	41.40	45.49	53.98	8.49
11 510.00	44.58	Peak	V	41.10	17.50	41.40	61.78	73.98	12.20
	32.88	Average	V				50.08	53.98	3.90
			Test	Data for H	ligh Chan	nel			
	83.24	Peak	Н				85.34	113.98	28.64
5.705.00	68.55	Average	Н	22.10	12.20	12.20	70.65	93.98	23.33
5 795.00	90.55	Peak	V	32.10	12.20	42.20	92.65	113.98	21.33
	80.46	Average	V				82.56	93.98	11.42
	42.81	Peak	Н				59.71	73.98	14.27
11 500 00	30.13	Average	Н		17.50	41.00	47.03	53.98	6.95
11 590.00	46.68	Peak	V	41.20	17.50	41.80	63.58	73.98	10.40
	34.52	Average	V				51.42	53.98	2.56

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 

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EMC-003 (Rev.2)



# 7.5.2.8 Test data for 802.11ac\_VHT80 RLAN Mode

## 7.5.2.8.1 Test data for Antenna 0

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range  $: 1 \text{ GHz} \sim 40 \text{ GHz}$ 

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
	Test Data for Low Channel								
	84.12	Peak	Н				86.22	113.98	27.76
	69.13	Average	Н	10			71.23	93.98	22.75
5775.00	88.03	Peak	V	32.10	12.20	42.20	90.13	113.98	23.85
	76.23	Average	V				78.33	93.98	15.65
	41.97	Peak	Н				58.87	73.98	15.11
	31.80	Average	Н				48.70	53.98	5.28
11 550.00	45.60	Peak	V	41.20	17.50	41.80	62.50	73.98	11.48
	33.08	Average	V				49.98	53.98	4.00

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100**Page 70 of 123 Report No.: W153R-D022

## 7.5.2.8.2 Test data for Antenna 1

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Result : <u>PASSED</u>

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
			Test	Data for I	ow Chani	nel			
	81.56	Peak	Н				83.66	113.98	30.32
	68.70	Average	Н	10			70.80	93.98	23.18
5775.00	89.69	Peak	V	32.10	12.20	42.20	91.79	113.98	22.19
	76.55	Average	V				78.65	93.98	15.33
	43.44	Peak	Н				60.34	73.98	13.64
	30.35	Average	Н				47.25	53.98	6.73
11 550.00	45.71	Peak	V	41.20	17.50	41.80	62.61	73.98	11.37
	33.05	Average	V				49.95	53.98	4.03

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer



FCC ID. : **SS4ET100** Page 71 of 123 Report No.: W153R-D022

# 7.5.2.8.3 Test data for Multiple transmit

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m

: PASSED -. Result

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBµV/m)	Margin (dB)
Test Data for Low Channel									
	81.29	Peak	Н				83.39	113.98	30.59
5775.00	68.50	Average	Н	22.10	12.20	42.20	70.60	93.98	23.38
5775.00	89.56	Peak	V	32.10			91.66	113.98	22.32
	76.25	Average	V				78.35	93.98	15.63
	41.81	Peak	Н				58.71	73.98	15.27
	30.42	Average	Н				47.32	53.98	6.66
11 550.00	45.10	Peak	V	41.20	17.50	41.80	62.00	73.98	11.98
	33.36	Average	V				50.26	53.98	3.72

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

Tested by: Jun-Hui, Lee/ Senior Engineer



FCC ID. : **SS4ET100** Page 72 of 123 Report No.: W153R-D022

## 7.5.2.9 Test data for Bluetooth LE Mode

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,

100 kHz for Peak Mode for the emissions outside restricted band

: 1 MHz for Peak Mode, 10 Hz for Average Mode -. Video bandwidth

: 1 GHz ~ 40 GHz -. Frequency range

-. Measurement distance : 3 m

-. Result : PASSED

Frequency (GHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
		<u> </u>		Data for I		<u> </u>			
	95.74	Peak	Н				87.64	113.98	26.34
2 402 00	88.22	Average	Н	27.20	7.50	42.00	80.12	93.98	13.86
2 402.00	97.23	Peak	V	27.20		42.80	89.13	113.98	24.85
	90.73	Average	V			82.63	93.98	11.35	
	42.64	Peak	Н				41.94	73.98	32.04
	40.76	Average	Н				40.06	53.98	13.92
4 804.00	43.54	Peak	V	30.70	11.10	42.50	42.84	73.98	31.14
	42.01	Average	V				41.31	53.98	12.67
			Test	Data for H	Iigh Chan	nel			
	95.12	Peak	Н				87.12	113.98	26.86
	87.9	Average	Н		0		79.9	93.98	14.08
2 440.00	97.02	Peak	V	27.30	7.60	42.90	89.02	113.98	24.96
	90.68	Average	V				82.68	93.98	11.30
	40.98	Peak	Н				40.48	73.98	33.50
4.000.00	39.11	Average	Н	]	11.20	10.10	38.61	53.98	15.37
4 880.00	42.26	Peak	V	30.70	11.20	42.40	41.76	73.98	32.22
	40.54	Average	V				40.04	53.98	13.94

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EMC-003 (Rev.2)



**Test Data for High Channel** 94.48 Peak Η 86.68 113.98 27.30 93.98 87.05 Η 79.25 14.73 Average 2 480.00 27.40 7.70 42.90 96.43 V 88.63 113.98 25.35 Peak 89.23 V 93.98 Average 81.43 12.55 39.96 73.98 34.02 39.66 Peak Η 37.11 37.41 53.98 16.57 Average Η 4 960.00 30.80 11.80 42.30 V 40.57 Peak 40.87 73.98 33.11

Remark: "H": Horizontal, "V": Vertical

39.37

ONETECH

Margin (dB) = Limits (dB $\mu$ V/m) - Total Level (dB $\mu$ V/m)

Average

Total Level = Reading + Antenna Factor + Cable Loss - Pre-Amplifier Gain

V

Tested by: Jun-Hui, Lee/ Senior Engineer

39.67

FCC ID. : **SS4ET100** 

53.98

14.31

Report No.: W153R-D022



FCC ID. : **SS4ET100** Page 74 of 123 Report No.: W153R-D022

# 8. RADIATED EMISSION TEST

### **8.1 Operating environment**

20 °C Temperature Relative humidity 45 % R.H. :

### 8.2 Test set-up

The radiated emissions measurements were on the 3 m, open-field test site. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30 MHz to 26.5 GHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

### 8.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
□ -	ESCI	Rohde & Schwarz	EMI Test Receiver	101012	Nov. 03, 2014(1Y)
■ -	ESU	Rohde & Schwarz	EMI Test Receiver	100261	Apr. 29, 2014(1Y)
□ -	8564E	HP	Spectrum Analyzer	3650A00756	Apr. 28, 2014(1Y)
□ -	FSP	Rohde & Schwarz	Spectrum Analyzer	100017	Nov. 05, 2013(1Y)
■ -	310N	Sonoma Instrument	AMPLIFIER	312544	Apr. 28, 2014(1Y)
■ -	FSV30	Rohde & Schwarz	Signal Analyzer	101372	Apr. 28, 2014(1Y)
<b>-</b>	SCU-18	Rohde & Schwarz	Signal Conditioning Unit	102209	Jun. 12, 2014(1Y)
■ -	MA240	HD GmbH	Antenna Master	N/A	N/A
■ -	HD100	HD GmbH	Position Controller	N/A	N/A
■ -	DS420S	HD GmbH	Turn Table	N/A	N/A
■ -	HFH2-Z2	Rohde & Schwarz	Loop Antenna	879 285/26	Dec. 09, 2014(2Y)
■ -	VULB9163	Schwarzbeck	TRILOG Broadband Antenna	9163-255	May 02, 2014(2Y)
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	BBHA9120D295	Sep. 05, 2013(2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	N/A
<b>-</b>	83051A	Agilent	Microwave System Preamplifer	3950M00201	Apr. 30, 2014(1Y)

All test equipment used is calibrated on a regular basis.



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# 8.4 Test data for 802.11b WLAN Mode

**Humidity Level** : 44 % R.H. Temperature: 21.1 °C

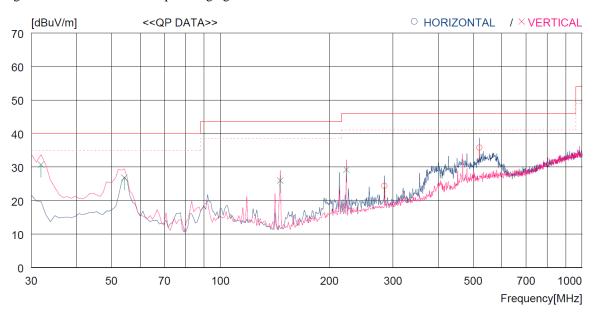
: FCC CFR 47, PART 15, SUBPART C, SECTION 15.247 Limits apply to

Result : PASSED

**EUT** : Premium Enterprise Tablet Date: March 27, 2015

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

Operating condition : Tablet pc Charging Mode



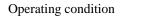
No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
Ho	orizontal -									
1 2	284.140 519.850		14.4 18.8	9.4 10.7	33.0 33.1	24.4 35.8	46.0 46.0	21.6 10.2	100 200	12 65
Ve	ertical									
3 4 5 6	31.940 54.250 146.400 223.030		13.1 14.7 9.2 12.9	7.0 7.4 8.4 9.0	33.2 33.2 33.1 33.0	30.7 26.8 26.0 29.2	40.0 40.0 43.5 46.0	9.3 13.2 17.5 16.8	200 138 300 138	214 0 307 0

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

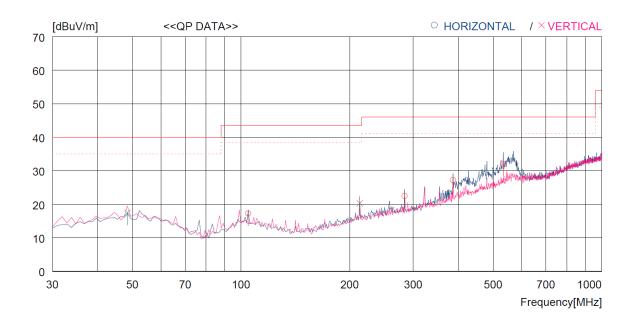






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: Tablet pc Portable Portable Mode



No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
H	orizontal -									
1 2 3 4	104.690 284.140 386.960 533.430	31.7 33.6	13.1 14.4 16.6 19.1	8.0 9.4 10.0 10.8	33.1 33.0 33.0 33.2	17.3 22.5 27.2 32.1	43.5 46.0 46.0 46.0	26.2 23.5 18.8 13.9	400 200 300 200	60 0 359 59
Ve	ertical									
5 6	48.430 213.330	28.1 31.8	15.2 12.6	7.4 8.9	33.2 33.0	17.5 20.3	40.0 43.5	22.5 23.2	200 100	81 341

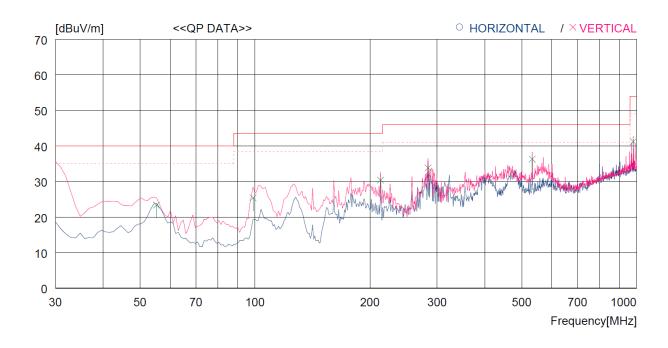
Remark: "H": Horizontal, "V": Vertical

Tested by: Jun-Hui, Lee/ Senior Engineer





Operating condition : Tablet pc Cradle Charging Mode



No.	FREQ	READING QP F	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
Ve	ertical									
1 2 3 4 5 6	55.220 98.870 213.330 284.140 532.460 979.617	43.2	13.5 11.7 11.2 13.2 17.9 22.6	7.3 8.2 9.7 10.3 12.7 15.6	33.1 33.1 32.9 32.9 33.2 31.8	23.4 25.4 30.4 33.8 36.3 41.2	40.0 43.5 43.5 46.0 46.0 54.0	16.6 18.1 13.1 12.2 9.7 12.8	100 100 100 200 100 100	235 123 0 355 59 0

Remark: "H": Horizontal, "V": Vertical



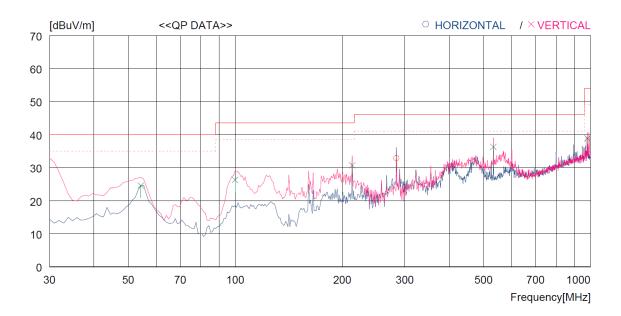
Tested by: Jun-Hui, Lee/ Senior Engineer





Operating condition : Tablet pc IO

: Tablet pc IC Card Reader Charging Mode



No.	FREQ	READING QP I	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
H	orizontal -									
1	284.140	42.3	13.2	10.3	32.9	32.9	46.0	13.1	100	223
V	ertical									
2 3 4 5	54.250 99.840 213.330 532.460		13.5 11.9 11.2 17.9	7.3 8.2 9.7 12.7	33.0 33.1 32.9 33.2	24.6 26.3 30.7 36.3	40.0 43.5 43.5 46.0	15.4 17.2 12.8 9.7	111 100 100 100	0 131 358 74
6	979.617	32.5	22.6	15.6	31.8	38.9	54.0	15.1	100	152

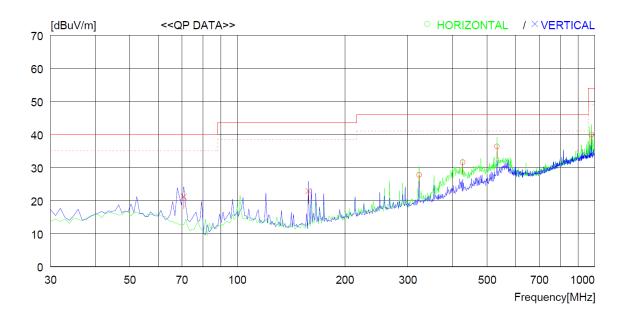
Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)





Operating condition : Tablet pc IC Card Reader Portable Mode



No.	FREQ	READING QP I	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
Н	orizontal ·									
1 2 3 4	322.940 426.731 532.460 979.617	36.7 38.9	14.1 16.3 17.9 22.6	10.8 11.7 12.7 15.6	32.9 33.1 33.2 31.8	27.8 31.6 36.3 40.0	46.0 46.0 46.0 54.0	18.2 14.4 9.7 14.0	100 100 200 100	$172 \\ 0 \\ 201 \\ 250$
Ve	ertical									
$\frac{5}{6}$	70.740 158.040	$\frac{36.9}{38.3}$	9.6 8.6	7.7 9.0	33.0 33.0	$\frac{21.2}{22.9}$	$\frac{40.0}{43.5}$	$\frac{18.8}{20.6}$	$\frac{100}{200}$	$\frac{152}{145}$

Remark: "H": Horizontal, "V": Vertical

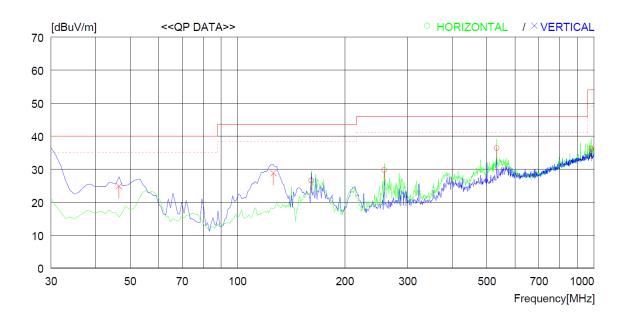
Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)





Operating condition

: Tablet pc Barcord Reader Charging Mode



No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
Н	orizontal ·									
1 2 3 4	160.950 257.950 532.460 980.586	39.7 38.9	8.7 12.6 17.9 22.6	9.0 10.3 12.7 15.6	33.0 32.9 33.2 31.8	26.5 29.7 36.3 36.1	43.5 46.0 46.0 54.0	17.0 16.3 9.7 17.9	200 100 200 100	$0 \\ 359 \\ 0 \\ 152$
Ve	ertical									
5 6	46.490 126.030	$\frac{36.7}{43.5}$	13.9 9.6	7.2 8.7	33.0 33.0	$24.8 \\ 28.8$	$40.0 \\ 43.5$	$15.2 \\ 14.7$	100 100	53 60

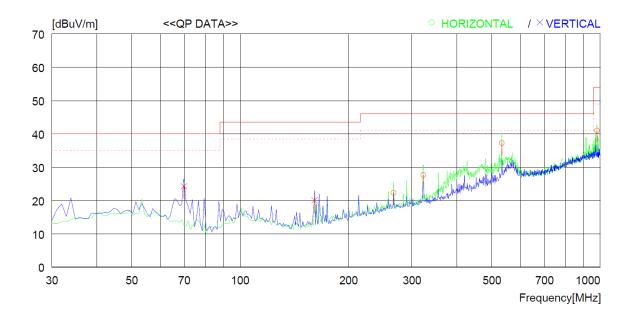
Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)





Operating condition : Tablet pc Barcord Reader Portable Mode



No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
Н	orizontal ·									
1	266.680	32.1	12.8	10.3	32.9	22.3	46.0	23.7	100	150
$^2$	322.940	35.7	14.1	10.8	32.9	27.7	46.0	18.3	100	192
3	532.460	39.8	17.9	12.7	33.2	37.2	46.0	8.8	200	359
4	979.617	34.5	22.6	15.6	31.8	40.9	54.0	13.1	100	200
Ve	ertical									
5	69.770	39.8	9.8	7.7	33.0	24.3	40.0	15.7	100	359
6	160.950	35.3	8.7	9.0	33.0	20.0	43.5	23.5	100	160

Remark: "H": Horizontal, "V": Vertical

Tested by: Jun-Hui, Lee/ Senior Engineer



FCC ID. : **SS4ET100** Page 82 of 123 Report No.: W153R-D022

#### 8.4.1.2 Test data for Below 30 MHz

-. Test Date : March 27, 2015

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

: 9 kHz ~ 30 MHz -. Frequency range

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency	Reading	Ant. Pol.	Ant. Factor	Cable	Amp	Emission	Limits	Margin
(MHz)	$(dB\mu V)$	(H/V)	(dB/m)	Loss	Gain	Level(dBµV/m)	$(dB\mu V/m)$	(dB)

It was not observed any emissions from the EUT.

### 8.4.1.3 Test data for above 1 GHz

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency	Reading	Ant. Pol.	Ant. Factor	Cable	Amp	Emission	Limits	Margin
(MHz)	(dBµV)	(H/V)	(dB/m)	Loss	Gain	Level(dBµV/m)	(dBµV/m)	(dB)

It was not observed any emissions from the EUT.



FCC ID. : **SS4ET100** Page 83 of 123 Report No.: W153R-D022

# 8.5 Test data for 802.11a WLAN Mode

**Humidity Level** : 44 % R.H. Temperature: 21.1 °C

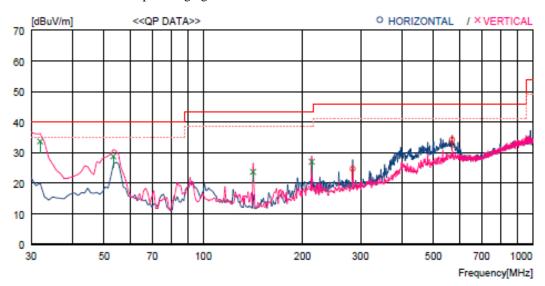
: FCC CFR 47, PART 15, SUBPART C, SECTION 15.247 Limits apply to

Result : PASSED

**EUT** : Premium Enterprise Tablet Date: March 27, 2015

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

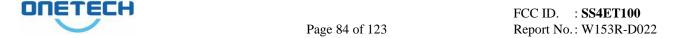
Operating condition : Tablet pc Charging Mode



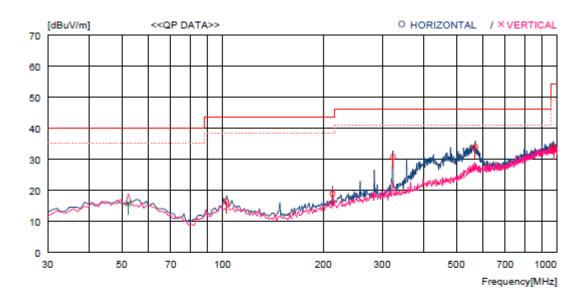
No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
Но	orizontal -									
1 2	284.140 569.319	33.9 36.7	14.4 19.8	9.4 10.9	33.0 33.2	24.7 34.2	46.0 46.0	21.3 11.8	100 200	7 306
Ve	ertical									
3 4 5 6	31.940 53.280 141.550 213.330	46.8 39.8 39.3 38.5	13.1 14.8 9.2 12.6	7.0 7.4 8.3 8.9	33.2 33.1 33.0	33.7 28.8 23.7 27.0	40.0 40.0 43.5 43.5	6.3 11.2 19.8 16.5	100 100 100 100	0 157 0 0

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)



Operating condition : Tablet pc Portable Portable Mode



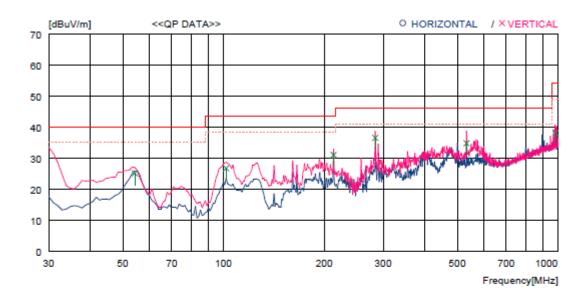
No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
H	orizontal -									
1	102.750	27.9	13.4	8.0	33.1	16.2	43.5	27.3	400	326
2	213,330	30.3	12.6	8.9	33.0	18.8	43.5	24.7	100	359
3	322.940	38.8	15.3	9.6	33.0	30.7	46.0	15.3	100	359
4	569.319	36.4	19.8	10.9	33.2	33.9	46.0	12.1	200	31
5	975.737	28.9	23.9	12.7	31.8	33.7	54.0	20.3	200	151
V	ertical									
6	52.310	26.7	14.9	7.4	33.2	15.8	40.0	24.2	400	273

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)



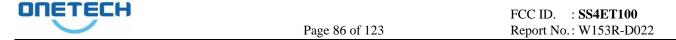
Operating condition : Tablet pc Cradle Charging Mode



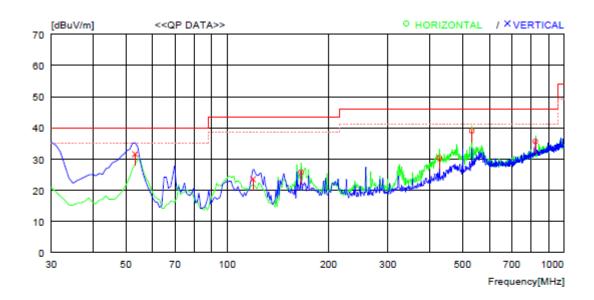
No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
V	ertical									
1	54.250	36.2	14.7	7.4	33.2	25.1	40.0	14.9	100	0
2	101.780	38.3	13.5	8.0	33.1	26.7	43.5	16.8	100	81
3	213.330	42.5	12.6	8.9	33.0	31.0	43.5	12.5	100	0
4	284.140	45.7	14.4	9.4	33.0	36.5	46.0	9.5	200	152
5	532.460	38.1	19.1	10.8	33.2	34.8	46.0	11.2	100	0
6	982.526	33.2	24.0	12.7	31.8	38.1	54.0	15.9	100	0

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)



Operating condition : Tablet pc IC Card Reader Charging Mode



No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[aBuV]	[aB]	[aB]	[aB]	[dBuV/m]	[dBuV/m]	[aB]	[cm]	[DEG]
H	orizontal -									
1 2 3 4	165.800 426.731 532.460 823.451	35.3	8.9 16.3 17.9 21.2	9.1 11.7 12.7 14.8	33.0 33.1 33.2 32.9	25.6 30.2 38.9 35.5	43.5 46.0 46.0 46.0	17.9 15.8 7.1 10.5	200 100 200 300	0 359 144 222
V	ortical									
5 6	53.280 119.240	43.5 37.5	13.6 10.3	7.3 8.7	33.0 33.1	31.4 23.4	40.0 43.5	8.6 20.1	100 100	0 151

Remark: "H": Horizontal, "V": Vertical

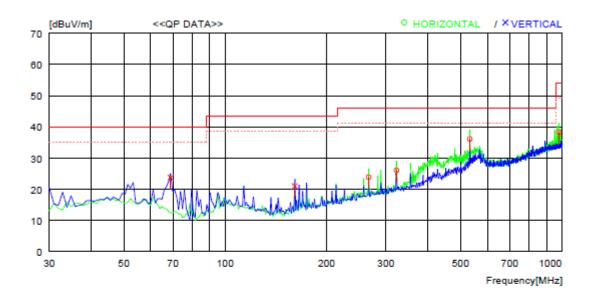
Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)





Operating condition

: Tablet pc IC Card Reader Portable Mode



No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[aBuV]	[aB]	[aB]	[aB]	[aBuV/m]	[dBuV/m]	[aB]	[cm]	[DEG]
H	orizontal -									
1 2 3 4	266.680 322.940 532.460 979.617	33.9	12.8 14.1 17.9 22.6	10.3 10.8 12.7 15.6	32.9 32.9 33.2 31.8	23.7 25.9 36.0 38.2	46.0 46.0 46.0 54.0	22.3 20.1 10.0 15.8	100 100 200 100	0 0 194 60
V	ertical									
5 6	68.800 160.950	38.7 36.1	10.2 8.7	7.7 9.0	33.0 33.0	23.6 20.8	40.0 43.5	16.4 22.7	100 100	359 359

Remark: "H": Horizontal, "V": Vertical

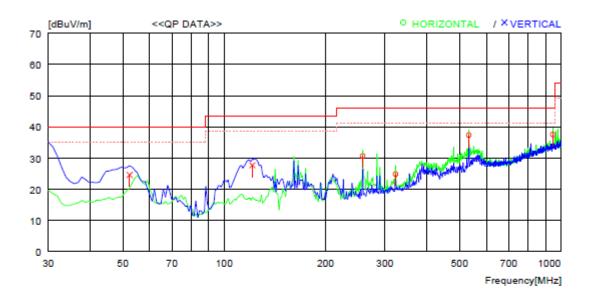
Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)





Operating condition

: Tablet pc Barcord Reader Charging Mode



No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[aBuV]	[aB]	[aB]	[aB]	[dBuV/m]	[aBuV/m]	[aB]	[cm]	[DEG]
H	orizontal -									
1 2 3 4	257.950 322.940 532.460 947.607	32.7	12.6 14.1 17.9 22.5	10.3 10.8 12.7 15.4	32.9 32.9 33.2 32.0	30.5 24.7 37.2 37.4	46.0 46.0 46.0 46.0	15.5 21.3 8.8 8.6	100 100 200 100	181 181 87 359
V	ortical									
5 6	52.310 121.180	36.5 41.8	13.6 10.1	7.3 8.7	33.0 33.1	24.4 27.5	40.0 43.5	15.6 16.0	100 100	0

Remark: "H": Horizontal, "V": Vertical

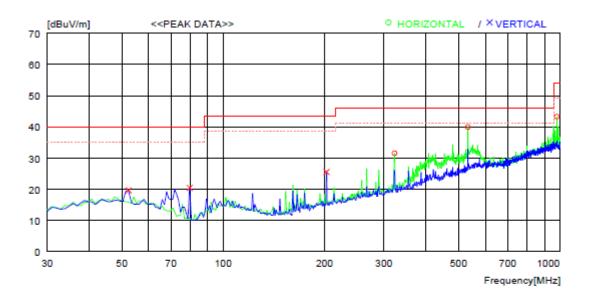
Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)





Operating condition

: Tablet pc Barcord Reader Portable Mode



No.	FREQ	READING PEAK	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[aBuV]	[aB]	[aB]	[aB]	[dBuV/m]	[dBuV/m]	[aB]	[cm]	[DEG]
H	orizontal -									
1 2 3	322.940 532.460 979.617		14.1 17.9 22.6	10.8 12.7 15.6	32.9 33.2 31.8	31.4 39.8 43.1	46.0 46.0 54.0	14.6 6.2 10.9	100 200 100	193 359 0
V	ertical									
4 5 6	52.310 79.470 202.660	31.6 38.0 37.9	13.6 7.6 10.8	7.3 7.8 9.6	33.0 33.1 32.9	19.5 20.3 25.4	40.0 40.0 43.5	20.5 19.7 18.1	300 200 400	359 18 130

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)



FCC ID. : **SS4ET100** Page 90 of 123 Report No.: W153R-D022

#### 8.4.1.2 Test data for Below 30 MHz

-. Test Date : March 27, 2015

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

: 9 kHz ~ 30 MHz -. Frequency range

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency	Reading	Ant. Pol.	Ant. Factor	Cable	Amp	Emission	Limits	Margin
(MHz)	$(dB\mu V)$	(H/V)	(dB/m)	Loss	Gain	Level(dBµV/m)	$(dB\mu V/m)$	(dB)

It was not observed any emissions from the EUT.

### 8.4.1.3 Test data for above 1 GHz

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency	Reading	Ant. Pol. Ant. Factor		Cable	Amp	Emission	Limits	Margin
(MHz)	$(dB\mu V)$	(H/V)	(dB/m)	Loss	Gain	Level(dBµV/m)	$(dB\mu V/m)$	(dB)

It was not observed any emissions from the EUT.



FCC ID. : **SS4ET100** Page 91 of 123 Report No.: W153R-D022

# 8.6 Test data for Bluetooth LE Mode

**Humidity Level** : 44 % R.H. Temperature: 21.1 °C

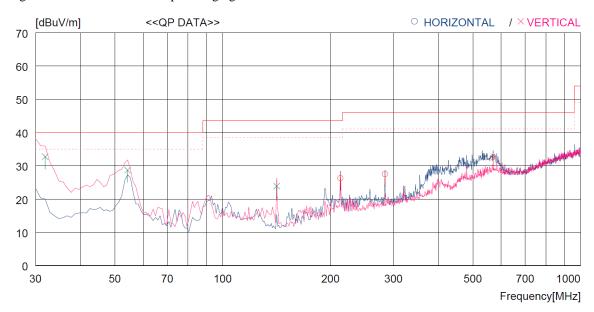
: FCC CFR 47, PART 15, SUBPART C, SECTION 15.247 Limits apply to

Result : PASSED

**EUT** : Premium Enterprise Tablet Date: March 27, 2015

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

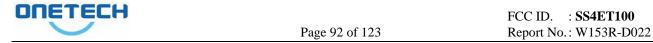
Operating condition : Tablet pc Charging Mode



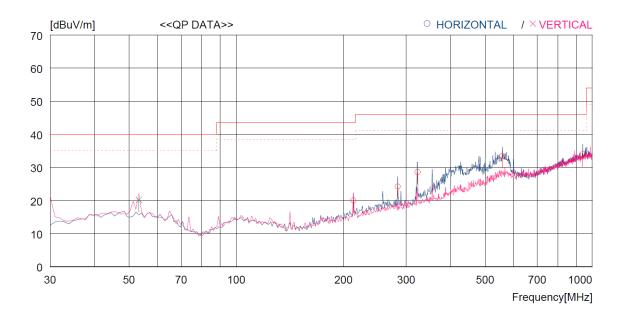
No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
H	orizontal -									
1 2 3	213.330 284.140 569.319	36.7	12.6 14.4 19.8	8.9 9.4 10.9	33.0 33.0 33.2	26.3 27.5 32.6	43.5 46.0 46.0	17.2 18.5 13.4	200 200 200	271 18 46
V	ertical									
4 5 6	31.940 54.250 141.550	45.8 39.8 39.5	13.1 14.7 9.2	7.0 7.4 8.3	33.2 33.2 33.1	32.7 28.7 23.9	40.0 40.0 43.5	7.3 11.3 19.6	100 100 100	2 272 359

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)



Operating condition : Tablet pc Portable Portable Mode



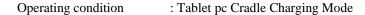
	No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
		[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
-	Н	orizontal -									
	1 2 3 4 5	213.330 284.140 322.940 558.649 939.848	33.4 36.7 36.3	12.6 14.4 15.3 19.5 23.7	8.9 9.4 9.6 10.9 12.6	33.0 33.0 33.0 33.2 32.1	20.0 24.2 28.6 33.5 34.0	43.5 46.0 46.0 46.0 46.0	23.5 21.8 17.4 12.5 12.0	200 100 100 200 100	0 359 173 0 359
-	Ve	ertical									
	6	53.280	31.2	14.8	7.4	33.2	20.2	40.0	19.8	290	0

Remark: "H": Horizontal, "V": Vertical

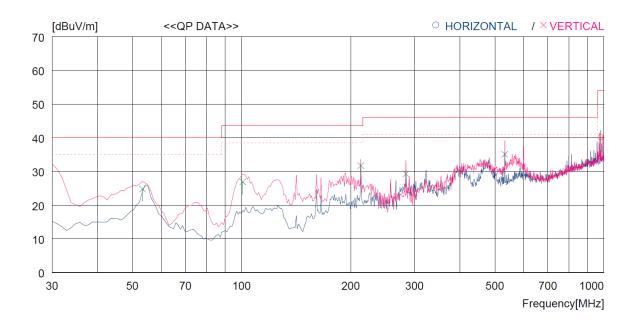
Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)







ONETECH



No.	FREQ	READING QP F	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
H	orizontal -									
1	979.617	35.3	24.0	12.7	31.8	40.2	54.0	13.8	111	0
V	ertical									
2	53.280	35.8	14.8	7.4	33.2	24.8	40.0	15.2	100	265
3	100.810	38.4	13.6	8.0	33.1	26.9	43.5	16.6	100	124
4	213.330	43.2	12.6	8.9	33.0	31.7	43.5	11.8	100	357
5	284.140	38.5	14.4	9.4	33.0	29.3	46.0	16.7	111	359
6	532.460	38.4	19.1	10.8	33.2	35.1	46.0	10.9	100	89

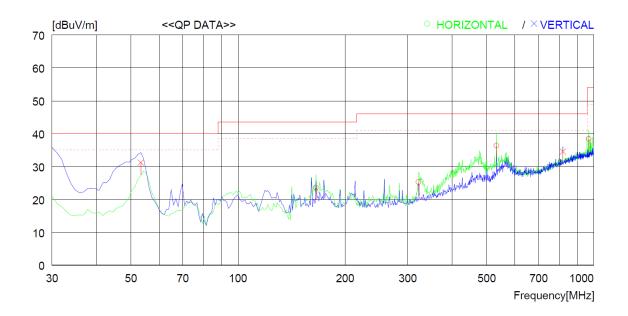
Remark: "H": Horizontal, "V": Vertical

Tested by: Jun-Hui, Lee/ Senior Engineer





Operating condition : Tablet pc IC Card Reader Charging Mode



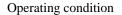
No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
Не	orizontal ·									
1 2 3 4	165.800 321.970 532.460 967.977	33.3 38.9	8.9 14.1 17.9 22.5	9.1 10.8 12.7 15.5	33.0 32.9 33.2 31.9	23.5 25.3 36.3 38.4	43.5 46.0 46.0 54.0	20.0 20.7 9.7 15.6	200 100 200 100	359 0 359 0
Ve	ertical									
5 6	53.280 819.571	$43.3 \\ 31.5$	$\frac{13.6}{21.1}$	7.3 14.8	33.0 32.9	$\frac{31.2}{34.5}$	$\frac{40.0}{46.0}$	8.8 11.5	100 400	$\frac{359}{0}$

Remark: "H": Horizontal, "V": Vertical

Tested by: Jun-Hui, Lee/ Senior Engineer

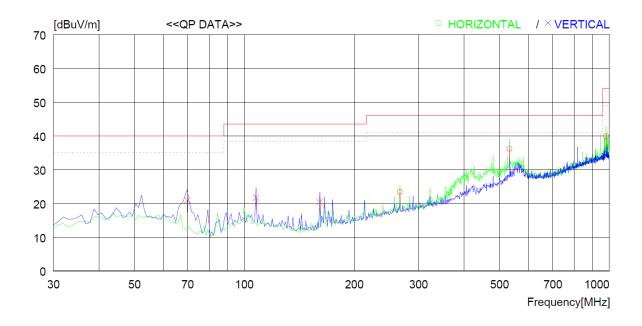






ONETECH

: Tablet pc IC Card Reader Portable Mode



No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	$[\mathrm{dBuV/m}]$	[dB]	[cm]	[DEG]
Н	orizontal ·									
$\begin{array}{c} 1 \\ 2 \\ 3 \end{array}$	266.680 532.460 979.617	38.8	12.8 17.9 22.6	10.3 12.7 15.6	32.9 33.2 31.8	23.4 36.2 40.0	46.0 46.0 54.0	22.6 9.8 14.0	100 200 100	$\begin{smallmatrix}0\\201\\0\end{smallmatrix}$
Ve	ertical									
4 5 6	69.770 107.600 160.950		9.8 11.3 8.7	7.7 8.4 9.0	33.0 33.1 33.0	$\begin{array}{c} 21.0 \\ 21.7 \\ 20.4 \end{array}$	40.0 43.5 43.5	19.0 21.8 23.1	200 100 100	102 131 90

Remark: "H": Horizontal, "V": Vertical

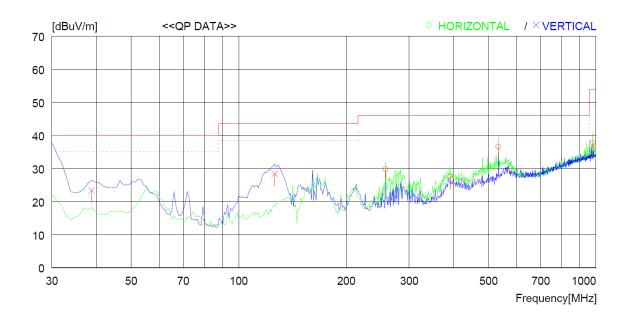
Tested by: Jun-Hui, Lee/ Senior Engineer





Operating condition

: Tablet pc Barcord Reader Charging Mode



No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	$[\mathrm{dBuV/m}]$	[dB]	[cm]	[DEG]
Н	orizontal									
1 2 3 4	257.950 390.840 532.460 979.617	33.5 39.2	12.6 15.7 17.9 22.6	10.3 11.3 12.7 15.6	32.9 33.0 33.2 31.8	29.8 27.5 36.6 37.7	46.0 46.0 46.0 54.0	16.2 18.5 9.4 16.3	100 100 200 100	188 359 116 359
Ve	ertical									
5 6	38.730 126.030	36.3 43.1	13.0 9.6	$7.1 \\ 8.7$	33.0 33.0	$23.4 \\ 28.4$	$\frac{40.0}{43.5}$	$16.6 \\ 15.1$	100 100	$     \begin{array}{c}       243 \\       0     \end{array} $

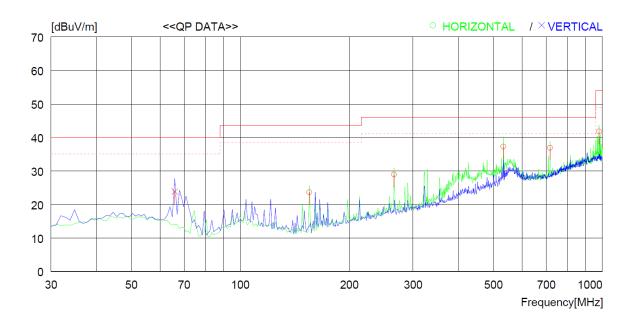
Remark: "H": Horizontal, "V": Vertical

Tested by: Jun-Hui, Lee/ Senior Engineer



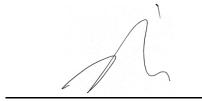


Operating condition : Tablet pc Barcord Reader Portable Mode



No.	FREQ	READING QP F	ANT ACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
Н	orizontal									
1 2 3 4 5	155.130 265.710 532.460 716.754 979.617	38.7 39.8 36.3 35.3	8.5 12.8 17.9 19.9 22.6	9.0 10.3 12.7 13.9 15.6	33.0 32.9 33.2 33.2 31.8	23.6 28.9 37.2 36.9 41.7	43.5 46.0 46.0 46.0 54.0	19.9 17.1 8.8 9.1 12.3	200 200 200 200 200 100	116 116 0 109 359
Ve	ertical									
6	65.890	38.1	11.2	7.5	33.0	23.8	40.0	16.2	100	39

Remark: "H": Horizontal, "V": Vertical



Tested by: Jun-Hui, Lee/ Senior Engineer



FCC ID. : **SS4ET100** Page 98 of 123 Report No.: W153R-D022

#### 8.5.1.2 Test data for Below 30 MHz

-. Test Date : March 27, 2015

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

: 9 kHz ~ 30 MHz -. Frequency range

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency	Reading	Ant. Pol.	Ant. Factor	Cable	Amp	Emission	Limits	Margin
(MHz)	$(dB\mu V)$	(H/V)	(dB/m)	Loss	Gain	Level(dBµV/m)	$(dB\mu V/m)$	(dB)

It was not observed any emissions from the EUT.

### 8.5.1.3 Test data for above 1 GHz

-. Test Date : March 27, 2015

-. Resolution bandwidth : 1 MHz for Peak and Average Mode

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 26.5 GHz

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency	Reading	Ant. Pol.	Ant. Factor	Cable	Amp	Emission	Limits	Margin
(MHz)	$(dB\mu V)$	(H/V)	(dB/m)	Loss	Gain	Level(dBµV/m)	$(dB\mu V/m)$	(dB)

It was not observed any emissions from the EUT.



FCC ID. : **SS4ET100** Page 99 of 123 Report No.: W153R-D022

# 9. CONDUCTED EMISSION TEST

# 9.1 Operating environment

27 °C Temperature

Relative humidity 46 % R.H.

# 9.2 Test set-up

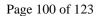
The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50  $\Omega$  / 50  $\mu$ H +  $5 \Omega$  Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

# 9.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ -	ESCI	Rohde & Schwarz	EMI Test Receiver	101012	Nov. 03, 2014 (1Y)
■ -	NSLK 8128	Schwarzbeck	LISN	8128-216	Apr. 11, 2014 (1Y)
□ -	3825/2	EMCO	LISN	9109-1867	Apr. 29, 2014 (1Y)

All test equipment used is calibrated on a regular basis.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599) EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)





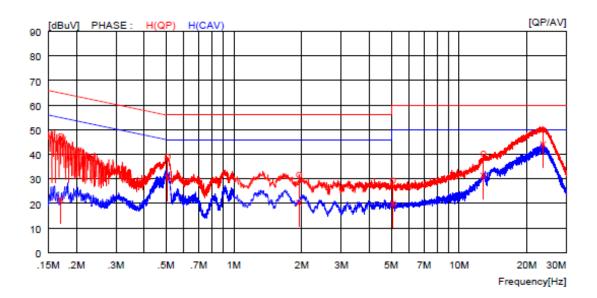
# 9.4 Test data for 802.11b WLAN Mode

-. Test Date : March 27, 2015

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz-. Operating condition : Tablet pc Charging Mode

-. Tested Line : HOT LINE



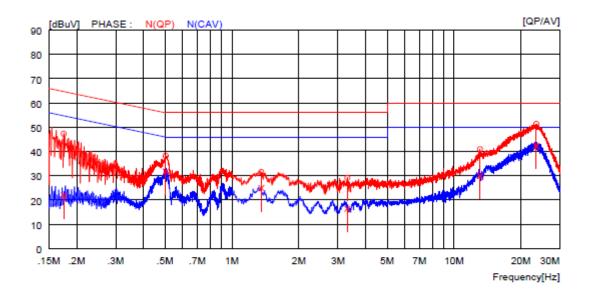
	NO	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE	
			QP	AV		QP	AV	QP	AV	QP	AV		
		[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
_													_
	1	0.17000	37.4		9.9	47.3		65.0		17.7		H(QP)	
	2	0.50800	28.9		10.0	38.9		56.0		17.1		H(QP)	
	3	1.94800	21.6		10.0	31.6		56.0		24.4		H(QP)	
	4	5.09000	19.2		10.0	29.2		60.0		30.8		H(QP)	
	5	12.83000	30.0		10.2	40.2		60.0		19.8		H(QP)	
	6	23.62000	39.7		10.2	49.9		60.0		10.1		H(QP)	
	7	0.17000		11.7	9.9		21.6		55.0		33.4	H(CAV)	
	8	0.50800		20.5	10.0		30.5		46.0		15.5	H(CAV)	
	9	1.94800		10.2	10.0		20.2		46.0		25.8	H(CAV)	
	10	5.09000		9.8	10.0		19.8		50.0		30.2	H(CAV)	
	11	12.83000		21.1	10.2		31.3		50.0		18.7	H(CAV)	
	12	23.62000		33.8	10.2		44.0		50.0		6.0	H(CAV)	





Report No.: W153R-D022

-. Tested Line : NEUTRAL LINE



NO	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM		MAR	GIN	PHASE	
		QP	AV		QP	AV	QP	AV	QP	AV		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
1	0.17500	37.4		9.9	47.3		64.7		17.4		N(OP)	
2	0.50300			10.0	38.2		56.0		17.8		N(QP)	
3	1.35600	21.5		10.0	31.5		56.0		24.5		N(QP)	
4	3.30800	19.1		10.0	29.1		56.0		26.9		N(QP)	
5	13.09000	30.7		10.2	40.9		60.0		19.1		N(QP)	
6	23.48000	41.1		10.2	51.3		60.0		8.7		N(QP)	
7	0.17500		12.0	9.9		21.9		54.7		32.8	N(CAV)	
8	0.50300		21.7	10.0		31.7		46.0		14.3	N(CAV)	
9	1.35600		14.9	10.0		24.9		46.0		21.1	N(CAV)	
10	3.30800		6.4	10.0		16.4		46.0		29.6	N(CAV)	
11	13.09000		19.7	10.2		29.9		50.0		20.1	N(CAV)	
12	23.48000		32.1	10.2		42.3		50.0		7.7	N(CAV)	

Remark: Margin (dB) = Limit - Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer

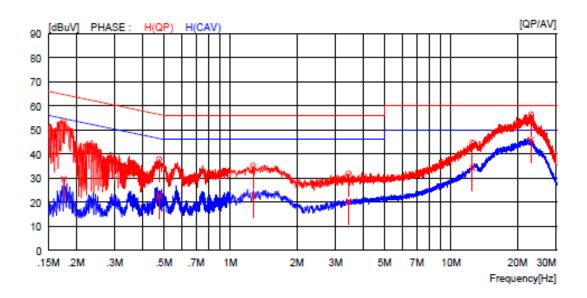
FCC ID. : **SS4ET100** 





-. Operating condition : Tablet pc Cradle Charging Mode

-. Tested Line : HOT LINE



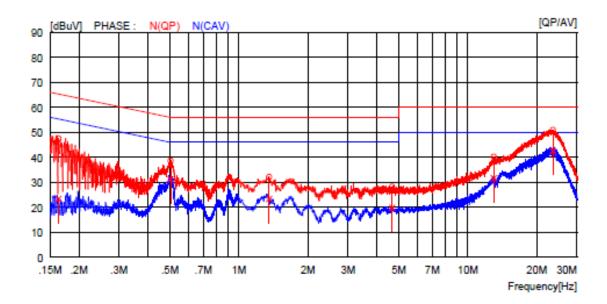
NO	FREQ	READ		C.FACTOR	REST		LIM		MAR		PHASE
	[MHz]	QP [dBuV]	AV [dBuV]	[dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.17600	43.7		9.9	53.6		64.7		11.1		H(QP)
2	0.47600	27.8		10.0	37.8		56.4		18.6		H(QP)
3	1.26800	25.1		10.0	35.1		56.0		20.9		H (QP)
4	3.42800	21.9		10.0	31.9		56.0		24.1		H(QP)
5	12.48000	34.5		10.2	44.7		60.0		15.3		H(QP)
6	23.04000	46.2		10.2	56.4		60.0		3.6		H (QP)
7	0.17600		19.8	9.9		29.7		54.7		25.0	H (CAV)
8	0.47600		12.7	10.0		22.7		46.4		23.7	H(CAV)
9	1.26800		12.9	10.0		22.9		46.0		23.1	H (CAV)
10	3.42800		10.4	10.0		20.4		46.0		25.6	H(CAV)
11	12.48000		23.9	10.2		34.1		50.0		15.9	H(CAV)
12	23.04000		35.7	10.2		45.9		50.0		4.1	H (CAV)





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#### -. Tested Line : NEUTRAL LINE



NO	FREQ	READ		C.FACTOR	RES		LIM			GIN	PHASE
	[MHz]	QP [dBuV]	AV [dBuV]	[dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	l .
1	0.16300	37.6		9.9	47.5		65.3		17.8		N(QP)
2	0.50300	28.6		10.0	38.6		56.0		17.4		N(QP)
3	1.35600	22.1		10.0	32.1		56.0		23.9		N(QP)
4	4.66800	18.2		10.0	28.2		56.0		27.8		N(QP)
5	12.97000	30.0		10.2	40.2		60.0		19.8		N(QP)
6	23.55000	40.7		10.2	50.9		60.0		9.1		N(QP)
7	0.16300		13.4	9.9		23.3		55.3		32.0	N (CAV)
8	0.50300		21.2	10.0		31.2		46.0		14.8	N (CAV)
9	1.35600		13.3	10.0		23.3		46.0		22.7	N (CAV)
10	4.66800		9.8	10.0		19.8		46.0		26.2	N (CAV)
11	12.97000		21.4	10.2		31.6		50.0		18.4	N (CAV)
12	23.55000		32.3	10.2		42.5		50.0		7.5	N (CAV)

Remark: Margin (dB) = Limit - Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer

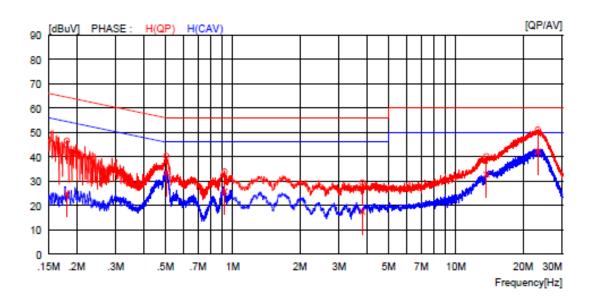
FCC ID. : **SS4ET100** 





-. Operating condition : Tablet pc IC Card Reader Charging Mode

-. Tested Line : HOT LINE

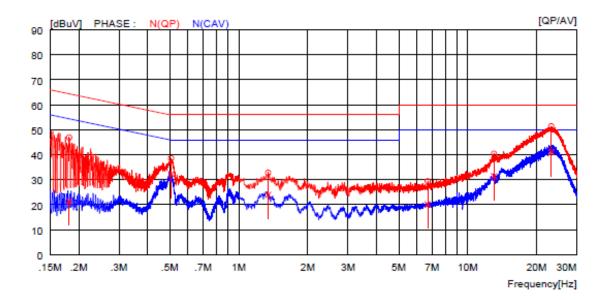


NO	PREQ	READ QP	ING AV	C.FACTOR	RESI QP	JLT AV	LIM QP	IT AV	MAR QP	GIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.18100	36.7		9.9	46.6		64.4		17.8		H(QP)
2	0.50500	30.3		10.0	40.3		56.0		15.7		H(QP)
3	0.92100	23.9		10.0	33.9		56.0		22.1		H(QP)
4	3.80800	19.4		10.0	29.4		56.0		26.6		H(QP)
5	13.69000	30.0		10.2	40.2		60.0		19.8		H(QP)
6	23.27000	40.9		10.2	51.1		60.0		8.9		H(QP)
7	0.18100		15.0	9.9		24.9		54.4		29.5	H (CAV)
8	0.50500		23.4	10.0		33.4		46.0		12.6	H (CAV)
9	0.92100		15.7	10.0		25.7		46.0		20.3	H(CAV)
10	3.80800		7.5	10.0		17.5		46.0		28.5	H(CAV)
11	13.69000		22.5	10.2		32.7		50.0		17.3	H(CAV)
12	23.27000		32.0	10.2		42.2		50.0		7.8	H(CAV)





#### -. Tested Line : NEUTRAL LINE



NO	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM	IIT	MAR	GIN	PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
	0 10000	27.0		0.0	46.0						w/on)
1	0.18200			9.9	46.9		64.4		17.5		N(QP)
2	0.50700	28.5		10.0	38.5		56.0		17.5		N(QP)
3	1.34400	22.8		10.0	32.8		56.0		23.2		N(QP)
4	6.68500	19.4		10.0	29.4		60.0		30.6		N(QP)
5	13.03000	30.2		10.2	40.4		60.0		19.6		N(QP)
6	23.20000	41.2		10.2	51.4		60.0		8.6		N(QP)
7	0.18200		11.4	9.9		21.3		54.4		33.1	N(CAV)
8	0.50700		22.2	10.0		32.2		46.0		13.8	N(CAV)
9	1.34400		13.9	10.0		23.9		46.0		22.1	N(CAV)
10	6.68500		10.1	10.0		20.1		50.0		29.9	N(CAV)
11	13.03000		21.2	10.2		31.4		50.0		18.6	N(CAV)
12	23,20000		30.8	10.2		41.0		50.0		9.0	N(CAV)

Remark: Margin (dB) = Limit - Level (Result)

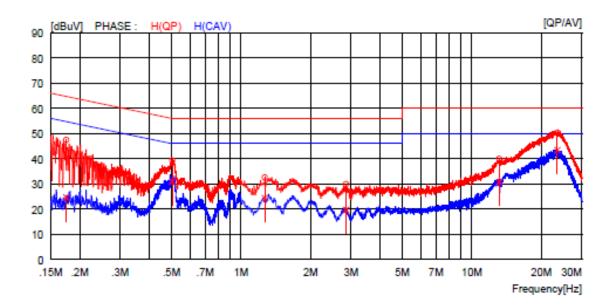
The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.



FCC ID. : **SS4ET100** Page 106 of 123 Report No.: W153R-D022

-. Operating condition : Tablet pc Barcord Reader Charging Mode

-. Tested Line : HOT LINE

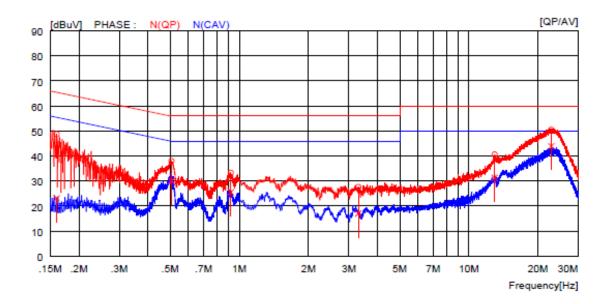


NO	FREQ	READ		C.FACTOR	RES		LIM		MAR		PHASE	
	[MHz]	QP [dBuV]	AV [dBuV]	[dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]		
1	0.17500	37.5		9.9	47.4		64.7		17.3		H(QP)	
2	0.50400	29.2		10.0	39.2		56.0		16.8		H(QP)	
3	1.26800	22.5		10.0	32.5		56.0		23.5		H(QP)	
4	2.84800	19.9		10.0	29.9		56.0		26.1		H(QP)	
5	13.14000	29.7		10.2	39.9		60.0		20.1		H(QP)	
6	23.47000	40.1		10.2	50.3		60.0		9.7		H(QP)	
7	0.17500		14.7	9.9		24.6		54.7		30.1	H (CAV)	
8	0.50400		20.9	10.0		30.9		46.0		15.1	H(CAV)	
9	1.26800		14.4	10.0		24.4		46.0		21.6	H(CAV)	
10	2.84800		9.6	10.0		19.6		46.0		26.4	H(CAV)	
11	13.14000		20.6	10.2		30.8		50.0		19.2	H(CAV)	
12	23.47000		33.2	10.2		43.4		50.0		6.6	H(CAV)	





#### -. Tested Line : NEUTRAL LINE

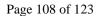


	NO	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE	
		[MHz]	QP [dBuV]	AV [dBuV]	[dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]		
_	1	0.16000	38.8		9.9	48.7		65.5		16.8		N(QP)	
	2	0.50600	27.9		10.0	37.9		56.0		18.1		N(QP)	
	3	0.91800	23.3		10.0	33.3		56.0		22.7		N(QP)	
	4	3.30000	17.6		10.0	27.6		56.0		28.4		N(QP)	
	5	12.96000	30.4		10.2	40.6		60.0		19.4		N(QP)	
	6	22.88000	40.3		10.2	50.5		60.0		9.5		N(QP)	
	7	0.16000		13.2	9.9		23.1		55.5		32.4	N(CAV)	
	8	0.50600		20.0	10.0		30.0		46.0		16.0	N(CAV)	
	9	0.91800		15.5	10.0		25.5		46.0		20.5	N(CAV)	
	10	3.30000		7.0	10.0		17.0		46.0		29.0	N(CAV)	
	11	12.96000		21.1	10.2		31.3		50.0		18.7	N(CAV)	
	12	22.88000		33.7	10.2		43.9		50.0		6.1	N(CAV)	

Remark: Margin (dB) = Limit - Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer





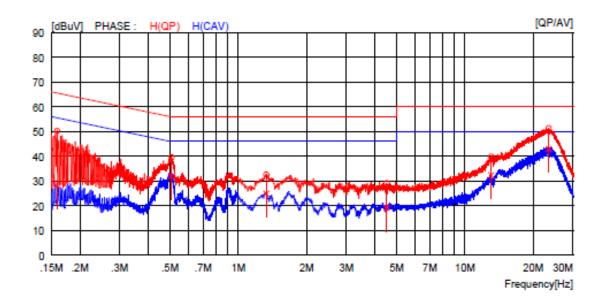
# 9.5 Test data for 802.11a WLAN Mode

-. Test Date : March 27, 2015

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz-. Operating condition : Tablet pc Charging Mode

-. Tested Line : HOT LINE

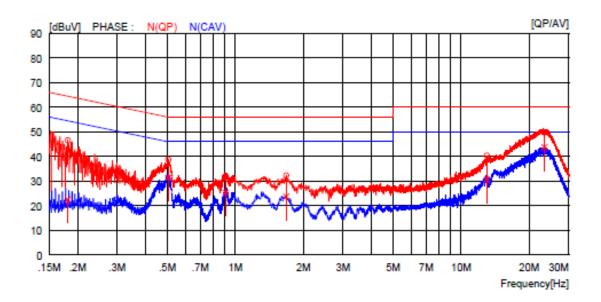


N	O FREQ	READ		C.FACTOR	RES		LIM			GIN	PHASE
	[MHz]	QP [dBuV]	AV [dBuV]	[dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15900	40.3		9.9	50.2		65.5		15.3		H(QP)
2	0.50800	29.5		10.0	39.5		56.0		16.5		H(QP)
3	1.32800	22.6		10.0	32.6		56.0		23.4		H(QP)
4	4.51200	19.1		10.0	29.1		56.0		26.9		H(QP)
5	13.04000	29.6		10.2	39.8		60.0		20.2		H(QP)
6	23.39000	41.1		10.2	51.3		60.0		8.7		H(QP)
7	0.15900		18.3	9.9		28.2		55.5		27.3	H (CAV)
8	0.50800		21.8	10.0		31.8		46.0		14.2	H(CAV)
9	1.32800		14.8	10.0		24.8		46.0		21.2	H (CAV)
10	4.51200		9.1	10.0		19.1		46.0		26.9	H(CAV)
11	13.04000		22.1	10.2		32.3		50.0		17.7	H (CAV)
12	23.39000		32.7	10.2		42.9		50.0		7.1	H (CAV)





-. Tested Line : NEUTRAL LINE



NO	FREQ	READ	ING	C.FACTOR	RESU	JLT	LIM	IT	MAR	GIN	PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
	0.18100	76.6		9.9	46.5		64.4		17.9		N(QP)
5	0.50500	28.7			38.7		56.0				- 20
-				10.0							N (QP)
3	0.90700	21.8		10.0	31.8		56.0		24.2		N(QP)
4	1.68000	22.2		10.0	32.2		56.0		23.8		N(QP)
5	12.99000	30.1		10.2	40.3		60.0		19.7		N(QP)
6	23.36000	39.5		10.2	49.7		60.0		10.3		N (QP)
7	0.18100		12.6	9.9		22.5		54.4		31.9	N (CAV)
8	0.50500		21.4	10.0		31.4		46.0		14.6	N (CAV)
9	0.90700		15.3	10.0		25.3		46.0		20.7	N (CAV)
10	1.68000		13.7	10.0		23.7		46.0		22.3	N (CAV)
11	12.99000		20.4	10.2		30.6		50.0		19.4	N (CAV)
12	23.36000		33.5	10.2		43.7		50.0		6.3	N (CAV)

Remark: Margin (dB) = Limit - Level (Result)

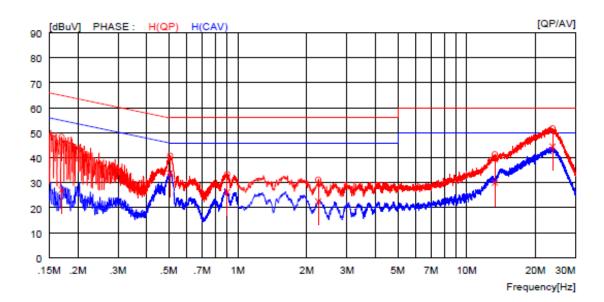
The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.





-. Operating condition : Tablet pc Cradle Charging Mode

-. Tested Line : HOT LINE



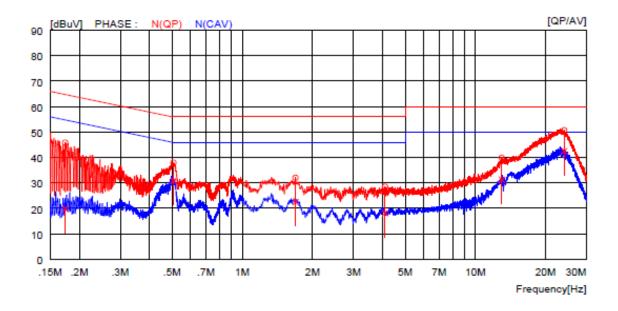
NO	FREQ	READ		C.FACTOR	RES		LIM			GIN	PHASE
	Farra - 3	QP	AV	f-2m3	QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.17000	38.4		9.9	48.3		65.0		16.7		H(QP)
2	0.50600	30.8		10.0	40.8		56.0		15.2		H(QP)
3	0.89900	23.4		10.0	33.4		56.0		22.6		H(QP)
4	2.24800	21.2		10.0	31.2		56.0		24.8		H(QP)
5	13.28000	31.2		10.2	41.4		60.0		18.6		H(QP)
6	23.72000	41.6		10.2	51.8		60.0		8.2		H(QP)
7	0.17000		17.2	9.9		27.1		55.0		27.9	H(CAV)
8	0.50600		23.7	10.0		33.7		46.0		12.3	H(CAV)
9	0.89900		16.3	10.0		26.3		46.0		19.7	H(CAV)
10	2.24800		12.5	10.0		22.5		46.0		23.5	H(CAV)
11	13.28000		19.8	10.2		30.0		50.0		20.0	H(CAV)
12	23.72000		34.3	10.2		44.5		50.0		5.5	H(CAV)





FCC ID. : **SS4ET100** Page 111 of 123 Report No.: W153R-D022

# -. Tested Line : NEUTRAL LINE



NO	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.17400	35.9		9.9	45.8		64.8		19.0		N(QP)
2	0.50700	27.9		10.0	37.9		56.0		18.1		N(QP)
3	1.69200	22.0		10.0	32.0		56.0		24.0		N(QP)
4	4.10000	18.5		10.0	28.5		56.0		27.5		N(QP)
5	12.98000	29.7		10.2	39.9		60.0		20.1		N(QP)
6	24.06000	40.5		10.2	50.7		60.0		9.3		N(QP)
7	0.17400		9.8	9.9		19.7		54.8		35.1	N(CAV)
8	0.50700		20.8	10.0		30.8		46.0		15.2	N(CAV)
9	1.69200		12.4	10.0		22.4		46.0		23.6	N(CAV)
10	4.10000		8.1	10.0		18.1		46.0		27.9	N(CAV)
11	12.98000		21.0	10.2		31.2		50.0		18.8	N(CAV)
12	24.06000		32.3	10.2		42.5		50.0		7.5	N(CAV)

Remark: Margin (dB) = Limit - Level (Result)

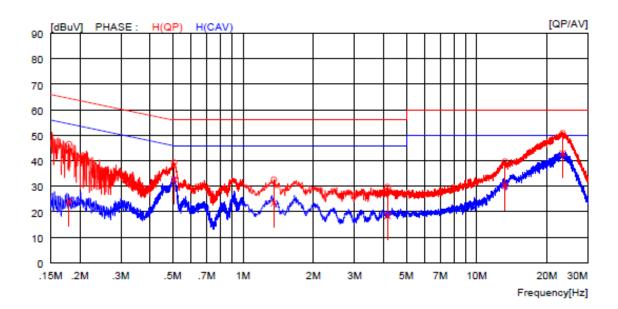
The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.





-. Operating condition : Tablet pc IC Card Reader Charging Mode

: HOT LINE -. Tested Line

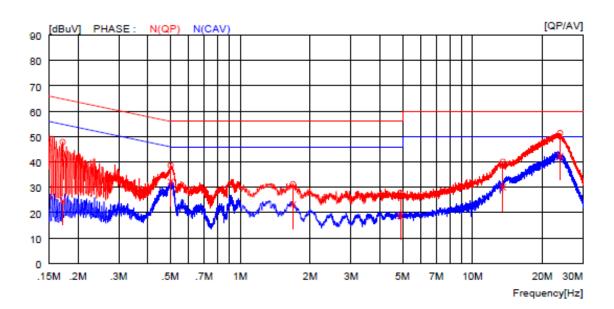


NO	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE	
		QP	AV		QP	AV	QP	AV	QP	AV		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
	0.18000	36.6		9.9	46.5		64.5		18.0		H(OP)	_
2	0.50700	29.3		10.0	39.3		56.0		16.7		H(QP)	
3	1.35600	22.6		10.0	32.6		56.0		23.4		H(QP)	
4	4.15200	19.7		10.0	29.7		56.0		26.3		H(QP)	
5	13.23000	29.5		10.2	39.7		60.0		20.3		H(QP)	
6	23.37000	40.6		10.2	50.8		60.0		9.2		H(QP)	
7	0.18000		14.1	9.9		24.0		54.5		30.5	H(CAV)	
8	0.50700		22.7	10.0		32.7		46.0		13.3	H(CAV)	
9	1.35600		13.4	10.0		23.4		46.0		22.6	H(CAV)	
10	4.15200		8.4	10.0		18.4		46.0		27.6	H(CAV)	
11	13.23000		20.0	10.2		30.2		50.0		19.8	H(CAV)	
12	23.37000		32.8	10.2		43.0		50.0		7.0	H(CAV)	





-. Tested Line : NEUTRAL LINE



NO	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE
	[MITer]	QP	AV	(dn)	QP	AV	QP	AV	QP [dBuV]	AV	
	[MHz]	[GRUA]	[dBuV]	[dB]	[GRAA]	[dBuV]	[GBUA]	[dBuV]	[GRUA]	[GBUA]	
1	0.17200	37.9		9.9	47.8		64.9		17.1		N(QP)
2	0.50200	28.6		10.0	38.6		56.0		17.4		N(QP)
3	1.68800	21.2		10.0	31.2		56.0		24.8		N(QP)
4	4.89600	17.8		10.0	27.8		56.0		28.2		N(QP)
5	13.52000	29.8		10.2	40.0		60.0		20.0		N(QP)
6	23.87000	41.2		10.2	51.4		60.0		8.6		N(QP)
7	0.17200		14.7	9.9		24.6		54.9		30.3	N(CAV)
8	0.50200		22.2	10.0		32.2		46.0		13.8	N(CAV)
9	1.68800		13.2	10.0		23.2		46.0		22.8	N(CAV)
10	4.89600		8.7	10.0		18.7		46.0		27.3	N(CAV)
11	13.52000		19.8	10.2		30.0		50.0		20.0	N(CAV)
12	23.87000		32.1	10.2		42.3		50.0		7.7	N (CAV)

Remark: Margin (dB) = Limit - Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 

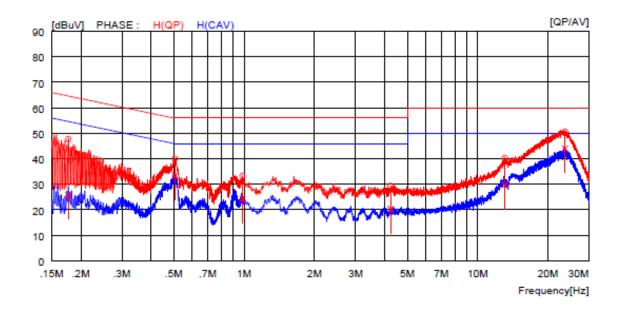
Report No.: W153R-D022



FCC ID. : **SS4ET100** Page 114 of 123 Report No.: W153R-D022

-. Operating condition : Tablet pc Barcord Reader Charging Mode

-. Tested Line : HOT LINE

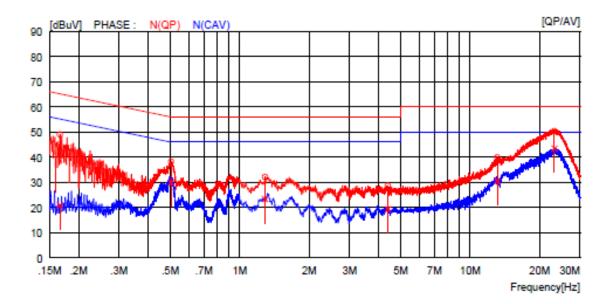


NO	FREQ	READ:	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE	
		QP	AV		QP	AV	QP	AV	QP	AV		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
	0.17700	37.8		9.9	47.7		64.6		16.9		II (OD)	
											H(QP)	
2	0.50500	30.0		10.0	40.0		56.0		16.0		H(QP)	
3	0.98400	23.3		10.0	33.3		56.0		22.7		H(QP)	
4	4.24000	19.3		10.0	29.3		56.0		26.7		H(QP)	
5	13.11000	30.1		10.2	40.3		60.0		19.7		H(QP)	
6	23.67000	40.4		10.2	50.6		60.0		9.4		H(QP)	
7	0.17700		15.8	9.9		25.7		54.6		28.9	H(CAV)	
8	0.50500		23.4	10.0		33.4		46.0		12.6	H(CAV)	
9	0.98400		14.2	10.0		24.2		46.0		21.8	H (CAV)	
10	4.24000		10.3	10.0		20.3		46.0		25.7	H (CAV)	
11	13.11000		19.6	10.2		29.8		50.0		20.2	H(CAV)	
12	23.67000		33.8	10.2		44.0		50.0		6.0	H (CAV)	



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-. Tested Line : NEUTRAL LINE



NC	FREQ	READ		C.FACTOR	RES		LIM		MAR		PHASE
	[MHz]	QP [dBuV]	AV [dBuV]	[dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.16600	39.1		9.9	49.0		65.2		16.2		N(QP)
2	0.50400	28.2		10.0	38.2		56.0		17.8		N(QP)
3	1.28800	22.1		10.0	32.1		56.0		23.9		N (QP)
4	4.39200	18.6		10.0	28.6		56.0		27.4		N(QP)
5	13.10000	29.7		10.2	39.9		60.0		20.1		N(QP)
6	23.18000	40.1		10.2	50.3		60.0		9.7		N (QP)
7	0.16600		11.0	9.9		20.9		55.2		34.3	N (CAV)
8	0.50400		19.9	10.0		29.9		46.0		16.1	N (CAV)
9	1.28800		13.3	10.0		23.3		46.0		22.7	N (CAV)
10	4.39200		9.2	10.0		19.2		46.0		26.8	N (CAV)
11	13.10000		20.2	10.2		30.4		50.0		19.6	N (CAV)
12	23.18000		33.2	10.2		43.4		50.0		6.6	N (CAV)

Remark: Margin (dB) = Limit - Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer

FCC ID. : **SS4ET100** 



FCC ID. : **SS4ET100** 



Report No.: W153R-D022

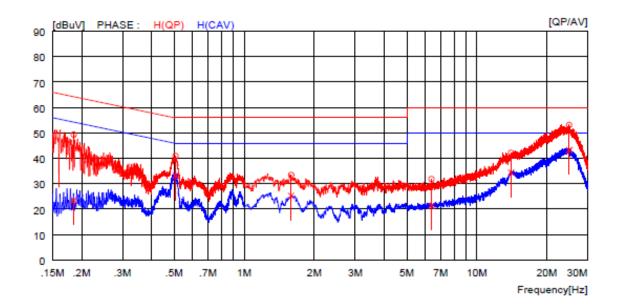
# 9.6 Test data for BlueTooth LE Mode

: March 27, 2015 -. Test Date

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz -. Operating condition : Tablet pc Charging Mode

-. Tested Line : HOT LINE



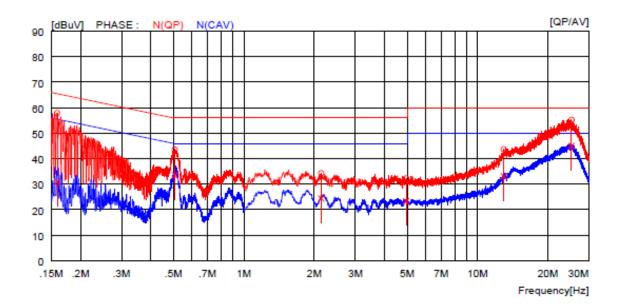
NO	FREQ	READ		C.FACTOR	REST		LIM		MAR		PHASE
	[ner-]	QP	AV	f-2m3	QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[GRIIA]	[dB]	[dBuV]	[annv]	[anna]	[dBuV]	[dBuV]	[GRAN]	
1	0.18500	39.3		10.0	49.3		64.3		15.0		H(QP)
2	0.50700	30.9		10.0	40.9		56.0		15.1		H(QP)
3	1.59200	23.4		10.0	33.4		56.0		22.6		H(QP)
4	6.38000	21.7		10.1	31.8		60.0		28.2		H(QP)
5	14.03000	31.9		10.2	42.1		60.0		17.9		H(QP)
6	24.94000	42.9		10.2	53.1		60.0		6.9		H(QP)
7	0.18500		13.5	10.0		23.5		54.3		30.8	H(CAV)
8	0.50700		23.1	10.0		33.1		46.0		12.9	H(CAV)
9	1.59200		15.2	10.0		25.2		46.0		20.8	H(CAV)
10	6.38000		11.2	10.1		21.3		50.0		28.7	H(CAV)
11	14.03000		24.2	10.2		34.4		50.0		15.6	H(CAV)
12	24.94000		33.0	10.2		43.2		50.0		6.8	H (CAV)





Report No.: W153R-D022

# -. Tested Line : NEUTRAL LINE



N	O FREQ	READI	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.15900	47.9		10.0	57.9		65.5		7.6		N(OP)
2				10.0	43.5		56.0		12.5		N(QP)
3	2.14400	24.3		10.0	34.3		56.0		21.7		N(QP)
4	4.95200	22.1		10.1	32.2		56.0		23.8		N(QP)
5	12.93000	33.5		10.2	43.7		60.0		16.3		N(QP)
6	25.22000	45.0		10.2	55.2		60.0		4.8		N(QP)
7	0.15900		21.0	10.0		31.0		55.5		24.5	N(CAV)
8	0.50700		23.5	10.0		33.5		46.0		12.5	N(CAV)
9	2.14400		14.4	10.0		24.4		46.0		21.6	N(CAV)
10	4.95200		13.2	10.1		23.3		46.0		22.7	N(CAV)
11	12.93000		22.9	10.2		33.1		50.0		16.9	N(CAV)
12	25.22000		34.8	10.2		45.0		50.0		5.0	N(CAV)

Remark: Margin (dB) = Limit - Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer

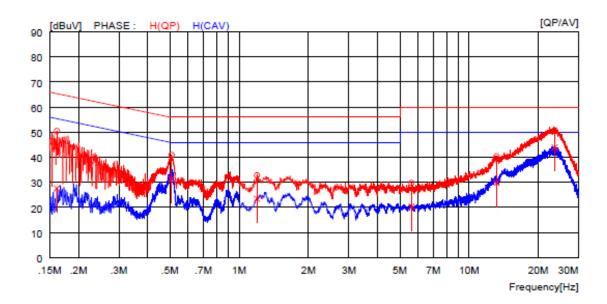
FCC ID. : **SS4ET100** 





-. Operating condition : Tablet pc Cradle Charging Mode

-. Tested Line : HOT LINE

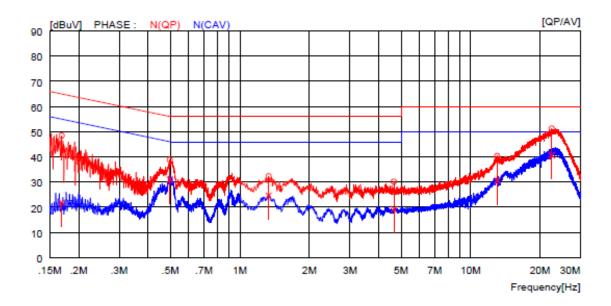


NO	FREQ	READ		C.FACTOR	RES		LIM			GIN	PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
	0.16100	40 6		9.9	E0 E		65.4		14.9		II (OD)
-											H(QP)
2	0.50800	30.9		10.0	40.9		56.0		15.1		H(QP)
3	1.19600	22.8		10.0	32.8		56.0		23.2		H(QP)
4	5.62500	19.8		10.0	29.8		60.0		30.2		H(QP)
5	13.18000	30.2		10.2	40.4		60.0		19.6		H(QP)
6	23.60000	40.6		10.2	50.8		60.0		9.2		H(QP)
7	0.16100		17.7	9.9		27.6		55.4		27.8	H(CAV)
8	0.50800		21.3	10.0		31.3		46.0		14.7	H(CAV)
9	1.19600		13.4	10.0		23.4		46.0		22.6	H(CAV)
10	5.62500		10.3	10.0		20.3		50.0		29.7	H(CAV)
11	13.18000		19.6	10.2		29.8		50.0		20.2	H (CAV)
12	23.60000		33.7	10.2		43.9		50.0		6.1	H(CAV)





# -. Tested Line : NEUTRAL LINE



NC	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE	
		QP	AV		QP	AV	QP	AV	QP	AV		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
												_
1	0.16900	38.5		9.9	48.4		65.0		16.6		N(QP)	
2	0.49700	28.8		10.0	38.8		56.0		17.2		N(QP)	
3	1.33200	22.3		10.0	32.3		56.0		23.7		N(QP)	
4	4.65200	20.1		10.0	30.1		56.0		25.9		N(QP)	
5	13.05000	30.1		10.2	40.3		60.0		19.7		N(QP)	
6	22.47000	41.0		10.2	51.2		60.0		8.8		N(QP)	
7	0.16900		11.9	9.9		21.8		55.0		33.2	N(CAV)	
8	0.49700		21.0	10.0		31.0		46.0		15.0	N(CAV)	
9	1.33200		14.6	10.0		24.6		46.0		21.4	N(CAV)	
10	4.65200		9.2	10.0		19.2		46.0		26.8	N(CAV)	
11	13.05000		20.5	10.2		30.7		50.0		19.3	N(CAV)	
12	22.47000		30.4	10.2		40.6		50.0		9.4	N(CAV)	

Remark: Margin (dB) = Limit - Level (Result)

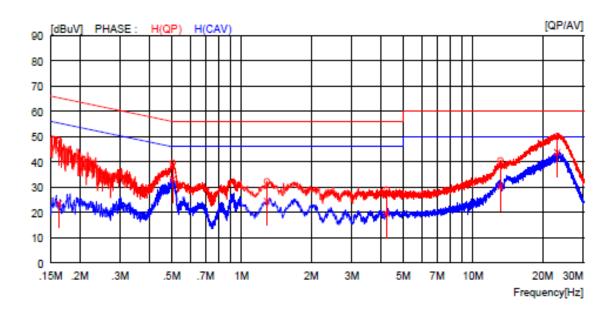
The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.





-. Operating condition : Tablet pc IC Card Reader Charging Mode

-. Tested Line : HOT LINE



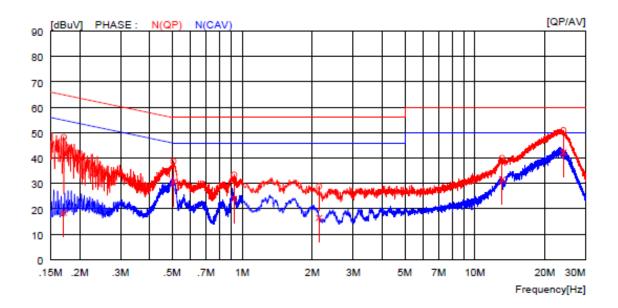
NO	PREQ	READ:	ING	C.FACTOR	RES	JLT	LIM	IT	MAR	GIN	PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
	0.16300	38.5		9.9	48.4		65.3		16.9		H(QP)
-											
2	0.50500	29.6		10.0	39.6		56.0		16.4		H(QP)
3	1.28800	22.3		10.0	32.3		56.0		23.7		H(QP)
4	4.22800	19.0		10.0	29.0		56.0		27.0		H(QP)
5	13.12000	30.4		10.2	40.6		60.0		19.4		H(QP)
6	23.11000	40.0		10.2	50.2		60.0		9.8		H(QP)
7	0.16300		13.7	9.9		23.6		55.3		31.7	H (CAV)
8	0.50500		23.1	10.0		33.1		46.0		12.9	H (CAV)
9	1.28800		14.5	10.0		24.5		46.0		21.5	H (CAV)
10	4.22800		9.5	10.0		19.5		46.0		26.5	H (CAV)
11	13.12000		19.9	10.2		30.1		50.0		19.9	H(CAV)
12	23.11000		33.5	10.2		43.7		50.0		6.3	H(CAV)





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# -. Tested Line : NEUTRAL LINE



N	Ю	FREQ	READ	ING	C.FACTOR	RES	ULT	LIM	IT	MAR	GIN	PHASE	
		[MHz]	QP [dBuV]	AV [dBuV]	[dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]		
-	1 (	0.17100	38.3		9.9	48.2		64.9		16.7		N(QP)	
- 2	2 (	0.50600	28.7		10.0	38.7		56.0		17.3		N(QP)	
2	3 (	0.92300	23.4		10.0	33.4		56.0		22.6		N(QP)	
4	. 2	2.14000	18.8		10.0	28.8		56.0		27.2		N(QP)	
	1.3	3.11000	29.8		10.2	40.0		60.0		20.0		N(QP)	
6	24	4.06000	40.7		10.2	50.9		60.0		9.1		N(QP)	
7	7 (	0.17100		8.6	9.9		18.5		54.9		36.4	N(CAV)	
8	3 (	0.50600		20.6	10.0		30.6		46.0		15.4	N(CAV)	
9	9 (	0.92300		13.9	10.0		23.9		46.0		22.1	N (CAV)	
10	) 2	2.14000		6.4	10.0		16.4		46.0		29.6	N (CAV)	
11	1.3	3.11000		21.3	10.2		31.5		50.0		18.5	N (CAV)	
12	24	4.06000		32.0	10.2		42.2		50.0		7.8	N (CAV)	

Remark: Margin (dB) = Limit - Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer

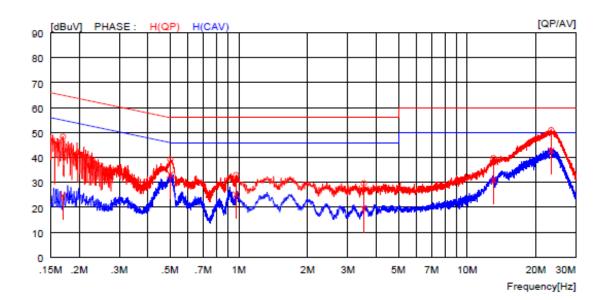
FCC ID. : **SS4ET100** 



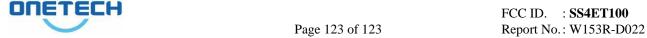
FCC ID. : **SS4ET100** Page 122 of 123 Report No.: W153R-D022

-. Operating condition : Tablet pc Barcord Reader Charging Mode

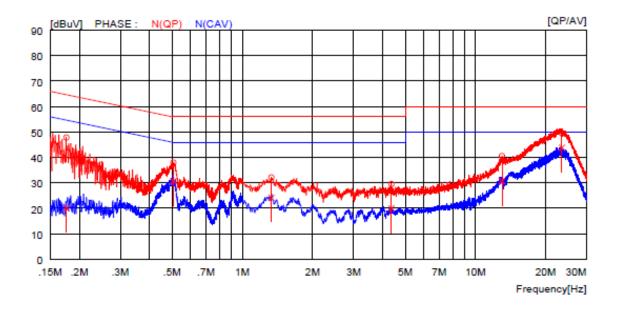
-. Tested Line : HOT LINE



NO	FREQ	READ		C.FACTOR			LIM		MAR		PHASE	
		QP	AV		QP	AV	QP	AV	QP	AV		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
	0.17000	38.4		9.9	48.2		65.0		16.7		H(OP)	
-	0.50100											
2		29.2		10.0	39.2		56.0		16.8		H(QP)	
3	0.97200	22.9		10.0	32.9		56.0		23.1		H(QP)	
4	3.52800	19.6		10.0	29.6		56.0		26.4		H(QP)	
5	13.06000	29.5		10.2	39.7		60.0		20.3		H(QP)	
6	23.32000	40.7		10.2	50.9		60.0		9.1		H(QP)	
7	0.17000		14.7	9.9		24.6		55.0		30.4	H(CAV)	
8	0.50100		23.1	10.0		33.1		46.0		12.9	H(CAV)	
9	0.97200		15.1	10.0		25.1		46.0		20.9	H(CAV)	
10	3.52800		9.3	10.0		19.3		46.0		26.7	H(CAV)	
11	13.06000		20.6	10.2		30.8		50.0		19.2	H(CAV)	
12	23.32000		32.5	10.2		42.7		50.0		7.3	H(CAV)	



-. Tested Line : NEUTRAL LINE



NO	FREQ	READING		C.FACTOR	RESULT		LIMIT		MARGIN		PHASE	
		QP	AV		QP	AV	QP	AV	QP	AV		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]		
-	0.17600	27.9		9.9	47.8		64.7		16.9		N(QP)	
	0.50600				37.9							
- 4		27.9		10.0	37.9		56.0		18.1		N(QP)	
3	1.33200	22.1		10.0	32.1		56.0		23.9		N(QP)	
4	4.35600	19.5		10.0	29.5		56.0		26.5		N(QP)	
5	12.99000	30.3		10.2	40.5		60.0		19.5		N(QP)	
6	23.48000	39.3		10.2	49.5		60.0		10.5		N(QP)	
7	0.17600		10.1	9.9		20.0		54.7		34.7	N(CAV)	
8	0.50600		20.6	10.0		30.6		46.0		15.4	N(CAV)	
9	1.33200		14.1	10.0		24.1		46.0		21.9	N(CAV)	
10	4.35600		9.9	10.0		19.9		46.0		26.1	N(CAV)	
11	12.99000		20.5	10.2		30.7		50.0		19.3	N(CAV)	
12	23.48000		33.6	10.2		43.8		50.0		6.2	N(CAV)	

Remark: Margin (dB) = Limit - Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.