



**FCC Test Report** 

FCC EVALUATION REPORT FOR CERTIFICATION						
Project Reference No.	274749					
Product	Tablet PC					
Brand Name	XTRATECH					
Model	W850					
Alternate Model	N/A					
Tosted according to	FCC Rules and Regulations Part 15 Subpart B Class B,					
Tested according to	ANSI C63.4-2009					

Tested in period	2014-12-30						
Issued date	2014-12-31						
Name and address	Nemko						
of the Test House	•	Nemko Shanghai Ltd Shenzhen Branch. Unit CD, Floor 10, Tower 2, Kefa Road 8#, Hi-Technology Park, Nanshan District, Shenzhen, China					
	Phone: +86 755 8221 1420	Fax: +86 755 8221 1420					
Tested by	20ne Peng	2014-12-31					
	Zone Peng	date					
Verified by	Davin Low	2014-12-31					
	Daria Liu	date					

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### 1. Client Information

### 1.1 Applicant

Company Name: South Holdings Industrial Limited

Building 1, Hao'er JiaShiTai Industrial Park, FengTang Rd.,

Company Address: Tangwei, FuYong Town, Bao'an District, Shenzhen, 518103,

China

#### 1.2 Manufacturer

Company Name: South Holdings Industrial Limited

Building 1, Hao'er JiaShiTai Industrial Park, FengTang Rd.,

Company Address: Tangwei, FuYong Town, Bao'an District, Shenzhen, 518103,

China

### 1.3 Scope

•Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission under FCC part 15B.





## 2. Equipment under Test (EUT)

### 2.1 Identification of EUT

Category: Tablet PC

Model Name: W850

Alternate model: N/A

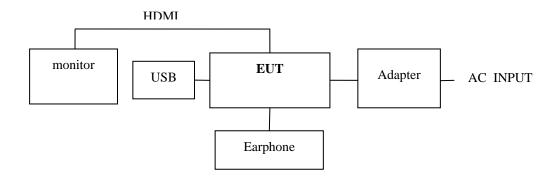
Brand name: XTRATECH

Technical data (Rating, AC/DC Adapter: *KA24-0503000US* 

etc.): Input: 100-240V~, 50/60Hz, 0.55A max.Class II

Output: 5Vdc,300mA

### 2.2 Setup drawing



### 2.3 Additional Information Related to Testing

TM 1 120V AC 60Hz USB & SD card data exchange mode

TM 2 120V AC 60Hz Camera recording mode

TM 3 120V AC 60Hz Video playing & HDMI connection mode

Remark: all modes are tested and only list worse case result in report.



#### 3. General Test Conditions

#### 3.1 Location

Global United Technology Services Co., Ltd. -- Nemko ELA 632

2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China

FCC Registration No.:600491

IC Registration No.9079A-2

Note: all test are witnessed by NEMKO engineer

### 3.2 Operating Environment

All tests and measurements were performed in a shielded enclosure or a controlled environment suitable for the tests conducted. The climatic conditions in the test area are automatically controlled and recorded continuously.

Parameters	Recording during test	Accepted deviation
Ambient temperature	20-21°C	15 − 35 °C
Relative humidity	45-50%	30 - 60%
Atmospheric pressure	101.1 kPa -101.2kPa	86-106kPa

### 3.3 Operating During Test

•AC 120V 60Hz, DC 5V from adapter.

#### 3.4 Test Equipment

The test equipments used in testing are calibrated on a regular basis. For most of the testing equipments accredited calibration is conducted once a year. For certain equipment the calibration interval is longer. Between the calibrations all test equipment are controlled and verified on a regular basis. The test equipments used are defined in each test section of this report.

#### A.E. used during testing:

- 1. HDMI cable: detachable, shielded with electric conductivity fabric and 2 magnetic core fixed at both end of the HDMI line (1m).
- 2. Earphone: detachable, un-shield with a magnetic core at the jack end (0.8m). manufacture: Aoni, model no: MP-105 (FCC VOC)
- 3. AC power cable: detachable, un-shield (1.5m)
- 3. Monitor: manufacture: AOC, model no: V22T (FCC DOC)
- 4: SD CARD: manufacture:Sony, model no: SR-32C4 (FCC DOC)
- 5: USB cable: detachable, shielded (0.2m)



# 4. Measurement Uncertainty

The Measurement Uncertainties stated were calculated in accordance with the requirements of NIST Technical Note 1297 with the confidence level of 95 %.

No.	Item	Uncertainty		Remark
1	Conducted Emission Test	0.15~30MHz	3.45dB	
2	Radiated Emission Test	30MHz~1000MHz	4.50dB	3m chamber
		1GHz-18GHz	4.70dB	



### 5. Conducted Emission (150 KHz to 30 MHz)

#### 5.1 Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network. This provided a 50-ohm coupling impedance for the EUT (Please refer to the test setup photographs). The other peripheral devices power cord connected to the power mains through another line impedance stabilization network.

Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4-2009 on conducted Emission test.

The bandwidth of test receiver is set at 9kHz. The frequency range from 150kHz to 30MHz is checked. The test result are reported as below.

#### 5.2 Measurement Equipment

	Equipment	Calibration due	Туре	Serial No.	Manufacturer
$\boxtimes$	Shielding Room	Jul. 04 2015	7.0(L)x3.0(W)x3.0(H)	GTS252	ZhongYu Electron
$\boxtimes$	EMI Test Receiver	Jul. 04 2015	ESCS30	1102.4500K30	Rohde & Schwarz
$\boxtimes$	10dB Pulse Limita	Jul. 04 2015	N/A	GTS224	Rohde & Schwarz
$\boxtimes$	LISN	Jul. 04 2015	NSLK 8127	8127549	SCHWARZBECK
$\boxtimes$	Coaxial Cable	Apr. 01 2015	N/A	N/A	GTS

#### 5.3 Test Result

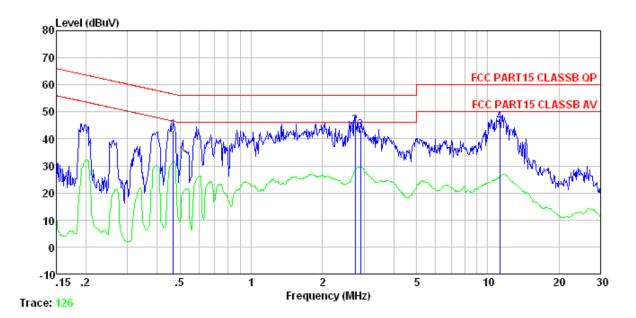
Connect mode	Power Line	Test Data	Test Result					
TN 4.4	Line	Diagram 001	Pass					
TM1	Neutral	Diagram 002	Pass					
TMO	Line	Diagram 003	Pass					
TM2	Neutral	Diagram 004	Pass					
TMO	Line	Diagram 005	Pass					
TM3	Neutral	Diagram 006	Pass					
Remark	TM1~ TM3 is pre-scan,	TM1~ TM3 is pre-scan, and only list the worse result in the report						

#### NOTES:

- 1. Measurements using CISPR quasi-peak mode & average mode.
- 2. All modes of operation were investigated and the worst -case emission are reported. See attached Plots
- 3. Emission level = LISN Factor + Cable Loss + Reading
- 4. LINE: L1 =Line, N = Neutral
- 5. The limit for Class B device is on the FCC Part section 15.107.
- 6: If PK value is lower than AV limit then no reading value listed in report .If QP value is Lower than AV limit ,then AV value don't listed in report.



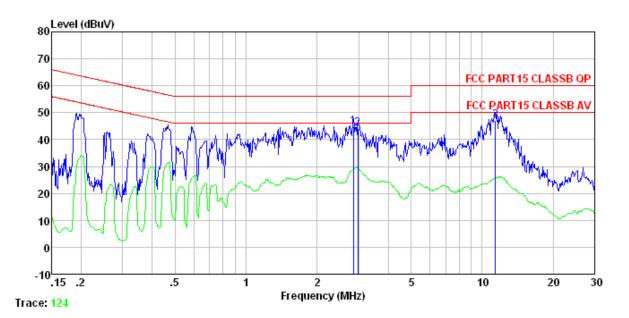
## 5.3.1 Diagram 001



	Freq		LISN Factor					Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1 2 3 4	2.750	44. 56 42. 82	0.06 0.10 0.11 0.29	0.15	44.81 43.08	56.00 56.00	-11.19 -12.92	QP QP



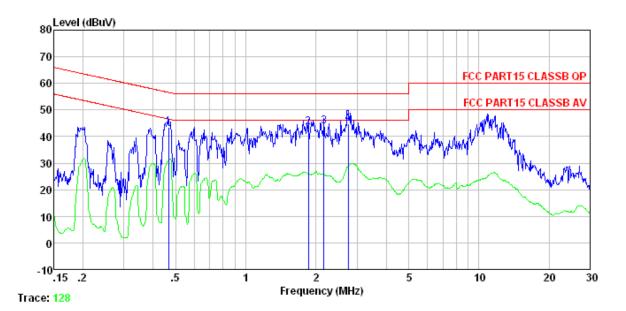
## 5.3.2 Diagram 002



	Freq		LISN Factor					Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1 2 3	2.978		0.15 0.15 0.35		44.04	56.00	-11.96	QP



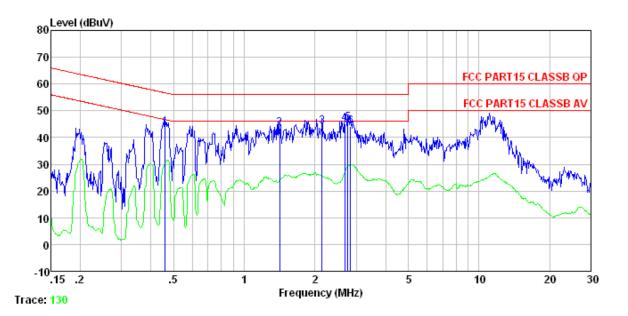
## 5.3.3 Diagram 003



	Freq		LISN Factor				Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1 2 3 4	1. 858 2. 167	43. 37 43. 08 43. 40 44. 58			43.31 43.64	56.00 56.00	-12.69 -12.36	QP QP



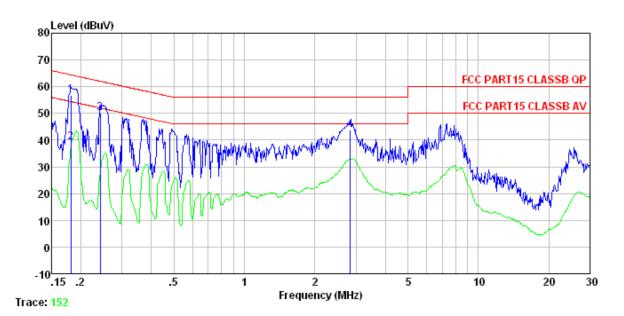
## 5.3.4 Diagram 004



	Freq		LISN Factor			Limit Line	Over Limit	Remark
	MHz	dBuV	dB	d₿	dBuV	dBu√	dB	
1 2 3 4 5 6	0. 461 1. 418 2. 144 2. 678 2. 765 2. 839	43.58 43.09 43.84 44.89 45.10 43.86	0.12 0.12 0.12 0.14 0.14 0.15	0.13 0.15 0.15 0.15	43.81 43.34 44.11 45.18 45.39 44.16	56.00 56.00 56.00 56.00	-12.66 -11.89 -10.82 -10.61	QP QP QP QP



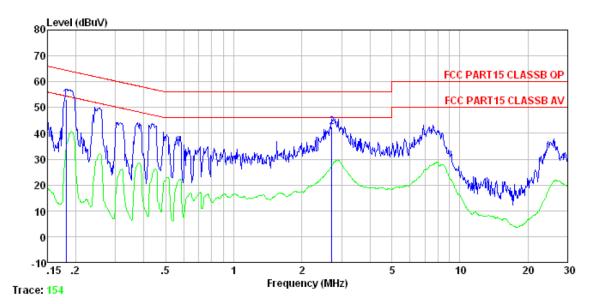
### 5.3.5 Diagram 005



	Freq	Read Level 1		Cable Loss		Limit Line	Over Limit	Remark
	MHz	dBuV	d₿	dB	dBuV	dBu√	dB	
1 2 3 4	0.182 0.182 0.242 2.839	56. 46 38. 73 49. 86 43. 35	0.14 0.12	0.13 0.12	56.73 39.00 50.10 43.65	54. 42 62. 04	-15.42 -11.94	Äverage QP



## 5.3.6 Diagram 006



	Freq		LISN Factor					Remark
	MHz	dBuV	dB	d₿	dBuV	dBu₹	dB	
1 2			0.07 0.10					-



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## 6. Radiated Electromagnetic Disturbances

#### **6.1 Test Procedure**

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m or 10m from the EUT on an adjustable mast.

The EUT were rotated 0 to 360 degree and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. The test result are reported as below.

For below 1GHz

RBW=120 kHz; VBW=300KHz. QP detector. The frequency range from 30MHz to 1000MHz is checked.

For above 1GHz, The frequency range from 1GHz to 18GHz is checked.

RBW=1MHz; VBW=1MHz,PK detector for peak emissions measurement above 1GHz RBW=1MHz; VBW=10Hz, PK detector for average emissions measure above 1GHz

### 6.2 Measurement Equipment

	Equipment	Calibration due	Туре	Serial No.	Manufacturer
$\boxtimes$	EMI Test Receiver	Jul. 04 2015	ESU26	GTS203	R&S
$\boxtimes$	BiConiLog Antenna	Feb. 26 2015	VULB9163	GTS214	SCHWARZBECK
$\boxtimes$	Horn Antenna	Feb. 25 2015	BBHA9120D	GTS215	SCHWARZBECK
$\boxtimes$	Coaxial Cable	Apr. 01 2015	N/A	GTS213	GTS
$\boxtimes$	Coaxial Cable	Apr. 01 2015	N/A	GTS211	GTS
$\boxtimes$	Coaxial Cable	Apr. 01 2015	N/A	GTS211	GTS
$\boxtimes$	Coaxial cable	Apr. 01 2015	N/A	GTS210	GTS
$\boxtimes$	Amplifier	Jul. 04 2015	8347A	GTS204	HP



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#### 6.3 Test Result

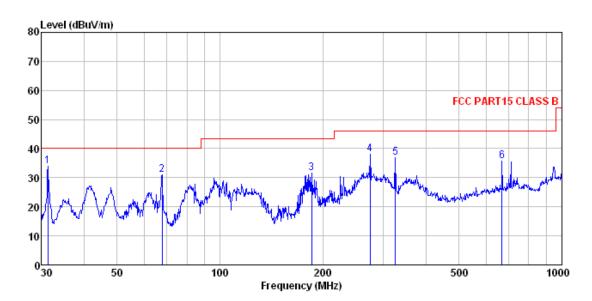
Connect mode	Antenna Polarity	Test Data	Test Result
TM1	Horizontal	Diagram 007	Pass
(below 1GHz) 3m test distance	Vertical	Diagram 008	Pass
TM2	Horizontal	Diagram 009	Pass
(below 1GHz) 3m test distance	Vertical	Diagram 010	Pass
TM3	Horizontal	Diagram 011	Pass
(below 1GHz) 3m test distance	Vertical	Diagram 012	Pass
TM1	Horizontal	Diagram 013	Pass
(above 1GHz) 3m test distance	Vertical	Diagram 014	Pass
TM2	Horizontal	Diagram 015	Pass
(above 1GHz) 3m test distance	Vertical	Diagram 016	Pass
TM3	Horizontal	Diagram 017	Pass
(above 1GHz) 3m test distance	Vertical	Diagram 018	Pass
Remark :	TM1~ TM3 is pre-scan, and only	list the worse result	t in the report

#### NOTES:

- 1.All modes were measured and the worst case emission was reported.
- 2. Measurements using CISPR quasi-peak mode for below 1GHz.
- 3. The limit for Class B device is on the FCC Part section 15.109.
- 4. For Above 1GHz, if Pk value is lower than AV limit, then AV reading is not listed in report.
- 5. For above 1GHz, The frequency range from 1GHz to 12.5GHz is checked, but not found any emission above 10GHz, so, only list 1-10GHz result in the report.



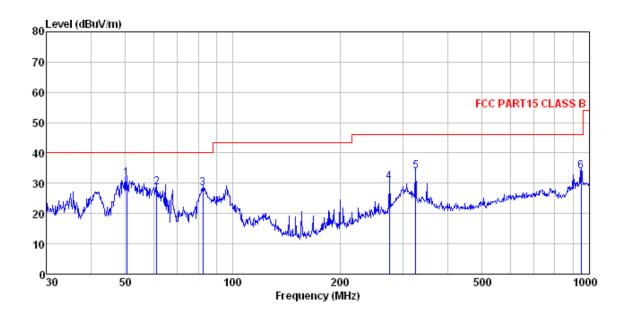
## 6.3.1 Diagram 007



	Freq				Preamp Factor			Over Limit	Remark
	MHz	dBu₹	dB/m	₫B	₫B	dBuV/m	dBuV/m	₫B	
1 2 3 4 5 6	31.399 67.675 185.138 275.157 325.596 668.142	38.90 42.46 40.08		1.77 2.25 2.49	20.50 21.39 21.28 21.16	31.44 37.98 37.00	40.00 43.50 46.00 46.00	-8.98 -12.06 -8.02 -9.00	QP QP QP QP



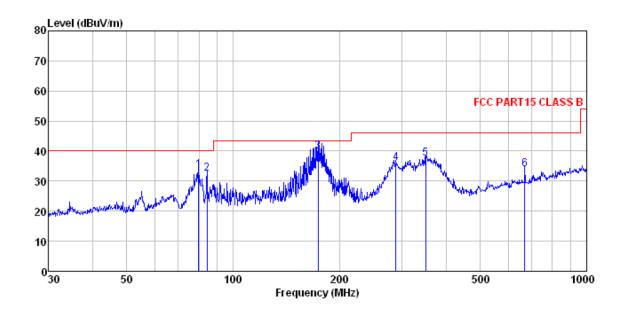
## 6.3.2 Diagram 008



	Freq	ReadAntenna Level Factor				Limit Level Line		Over Limit	Remark
	MHz	dBu∀	<u>dB</u> /m		dB	dBuV/m	$\overline{\mathtt{dBuV/m}}$	dB	
1 2 3 4 5 6	275.157 325.596	36.31	15. 24 14. 29 11. 43 14. 55 15. 59 23. 40	2.25 2.49	20.50 20.50 21.28	30.39 34.03	40.00 40.00 46.00 46.00	-11.39 -11.71 -15.61 -11.97	QP QP QP QP



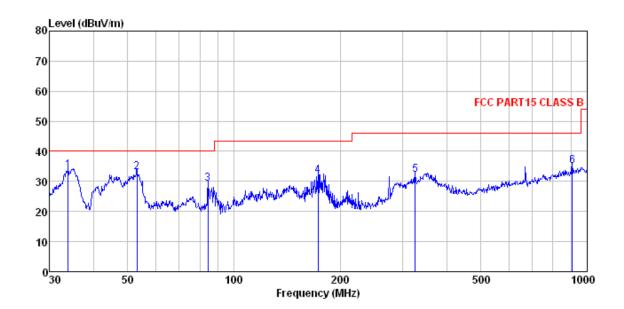
## 6.3.3 Diagram 009



	Freq	ReadAntenna Level Factor				Limit Level Line		Over Limit	Remark
	MHz	dBu₹	<u>dB</u> /m	₫B	dB	dBuV/m	dBu∜/m	dB	
1 2 3 4 5	79.800 84.405 173.814 289.002 350.477 668.142		10.54 12.16 11.23 14.84 16.27 20.69	1.07 1.71 2.31 2.62	31.74	32.33 39.87 36.03 37.46	40.00 43.50 46.00 46.00	-7.67 -3.63 -9.97 -8.54	QP QP QP QP



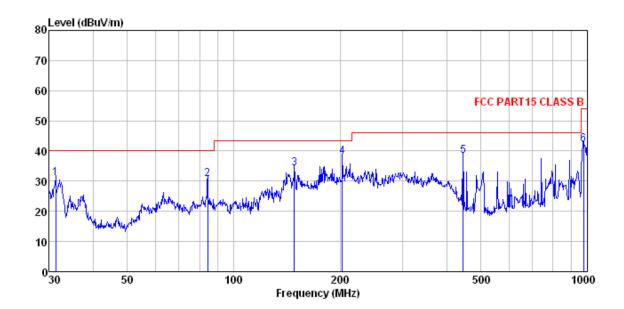
## 6.3.4 Diagram 010



	Freq				Preamp Factor			Over Limit	
	MHz	dBu∜	dB/m	dB	dB	dBuV/m	dBu∜/m	dB	
1 2 3 4 5 6	33.917 53.131 84.405 173.205 325.596 906.482	49.01 47.82 50.97 46.21	12.16 11.16 15.59	0.80 1.07 1.70 2.49	31.74 32.06 32.09	32.96 29.31 31.77 32.20	40.00 40.00 43.50 46.00	-7.04 -10.69 -11.73 -13.80	QP QP QP QP



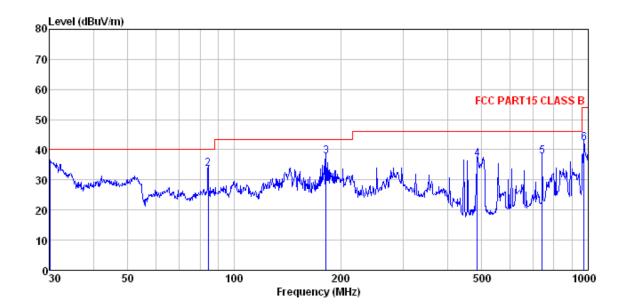
## 6.3.5 Diagram 011



	Freq				Preamp Factor			Over Limit	Remark
	MHz	dBu∜	dB/m	₫B	dB	dBuV/m	dBuV/m	₫B	
1 2 3 4 5 6	444.851	47.30 51.92 52.70	10.25 12.64 17.57	1.07 1.56 1.86 3.07	29.77 29.41 29.23	30.76 34.32 37.97 38.39	40.00 43.50 43.50 46.00	-9.24 -9.18 -5.53 -7.61	QP QP QP QP



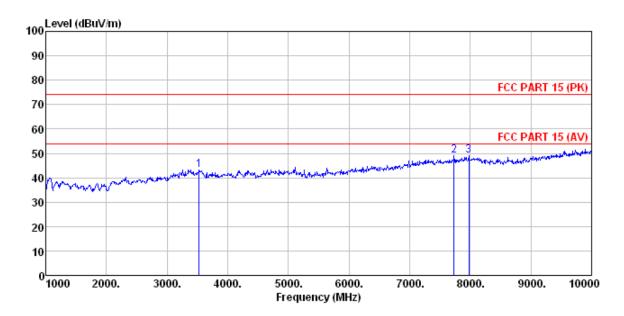
## 6.3.6 Diagram 012



	Freq	ReadAntenna Level Factor			Preamp Factor Leve			Over Limit	Remark
	MHz	dBu∀	<u>dB</u> /m	<u>dB</u>	dB	$\overline{dB} \overline{uV}/\overline{m}$	dBuV/m	<u>dB</u>	
1 2 3 4 5	181.920 485.609	44.69 41.38	11.84	3.24 4.24	29.27 29.33 29.20	33.55 37.65 36.86 37.76	40.00 43.50 46.00 46.00	-5.85 -9.14 -8.24	QP QP QP QP



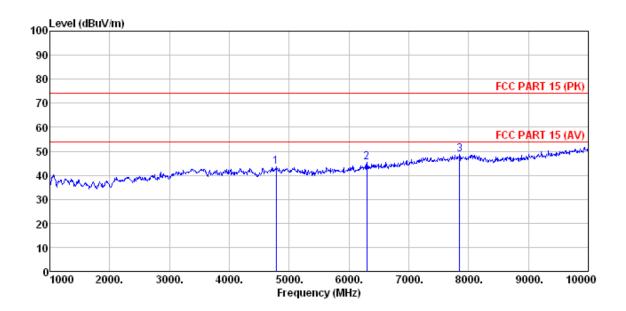
### 6.3.7 Diagram 013



	Freq		Antenna Factor						
	MHz	dBu∜	dB/m	dB	dB	$\overline{dBuV/m}$	$\overline{dBuV/m}$	dB	
2	3529.000 7732.000 7975.000	31.61	36.97	11.96	31.51	49.03	74.00	-24.97	Peak



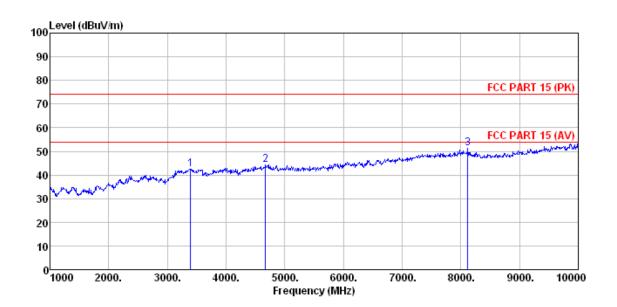
### 6.3.8 Diagram 014



	Freq		Antenna Factor						Remark	
	MHz	dBu∜	dB/m	<u>dB</u>	<u>dB</u>	$\overline{dB} \overline{uV}/\overline{m}$	dBuV/m	<u>dB</u>		-
2	4780.000 6301.000 7849.000	33.54	33.30	10.63	32.05	45.42	74.00	-28.58	Peak	



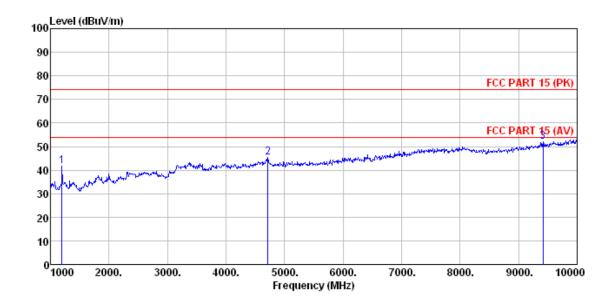
### 6.3.9 Diagram 015



	Freq		Intenna Factor						
	MHz	dBu∀	<u>dB</u> /m		dB	dBuV/m	dBuV/m	<u>dB</u>	
2	3394.000 4672.000 8119.000	36.37	31.61	8.48	32.02	44.44	74.00	-29.56	Peak



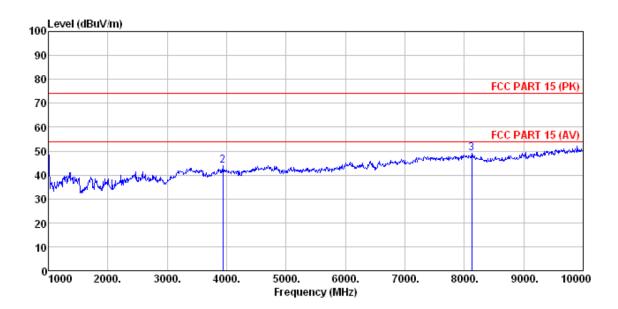
### 6.3.10 Diagram 016



	Freq			Cable Preamp Loss Factor					
	MHz	dBu∜	dB/m	dB	<u>ab</u>	dBuV/m	$\overline{dBuV/m}$	<u>dB</u>	
2	1198.000 4717.000 9415.000	37.26	31.68	8.53	32.05	45.42	74.00	-28.58	Peak



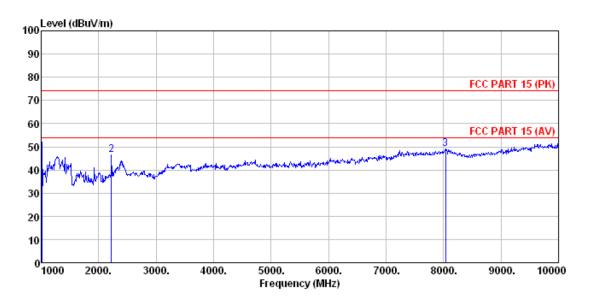
### 6.3.11 Diagram 017



	- Freq	ReadAntenna Level Factor		Cable Preamp Loss Factor					Remark
	MHz	dBu∜	<u>dB</u> /m	<u>ab</u>	<u>ab</u>	dBu∜/m	dBuV/m	<u>ab</u>	
2	1000.000 3934.000 8128.000	39.03	29.56	7.75	32.25	44.09	74.00	-29.91	Peak



### 6.3.12 Diagram 018



	Freq			Cable Preamp Loss Factor					
	MHz	dBu∜	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
2	1009.000 2224.000 8038.000	47.47	27.99	5.21	34.21	46.46	74.00	-27.54	Peak



**Appendix A Sample Label** 

### **Labelling Requirements**

The sample label shown shall be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.

\*\*\* The following paragraph specified in the label.

FCC ID:2ACEK-W850-1

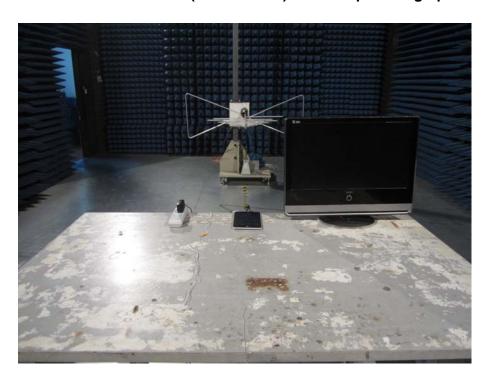


# **Appendix B Test Setup Photographs of EUT**

# **B.1 Conducted Emission Test Setup Photographs**



B.2 Radiated Emission (Below 1GHz)Test Setup Photographs





# B.3 Radiated Emission (above 1GHz)Test Setup Photographs



\*\*\*\*\*END OF REPORT\*\*\*\*\*