



# FCC TEST REPORT (15.239)

**REPORT NO.:** 091117FIA01

**MODEL NO.:** A43

**RECEIVED:** Nov. 13, 2009

**TESTED:** Nov. 25, 2009

**ISSUED:** Nov. 25, 2009

**APPLICANT:** Dongguan Wanma Electronic and Technology  
CO.,LTD

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**ISSUED BY:** ADT (Shanghai) Corporation

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## 1 CERTIFICATION

**PRODUCT:** 3IN1 GPS Navigator (Digital Entertainment Function)  
**BRAND NAME:** NA  
**MODEL NO.:** A43  
**APPLICANT:** Dongguan Wanma Electronic and Technology CO.,LTD  
**TESTED:** Nov. 25, 2009  
**TEST ITEM:** ENGINEERING SAMPLE  
**STANDARDS:** **FCC Part 15, Subpart C (Section 15.239)**  
ANSI C63.4-2003

The above equipment (Model: A43) has been tested by **ADT(Shanghai) Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY :** Ray Xue , **DATE:** Nov. 25, 2009  
(Ray Xue / Project Engineer)

**TECHNICAL ACCEPTANCE :** Joy Zhu , **DATE:** Nov. 25, 2009  
Responsible for EMI (Joy Zhu / Manager)

**APPROVED BY :** [Signature] , **DATE:** Nov. 25, 2009  
(Wallace Pan / Director)

## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.239)			
Standard Section	Test Type and Limit	Result	Remark
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -13.05dB at 0.35MHz
15.239 15.209	Radiated Emission Test	PASS	Meet the requirement of limit. Minimum passing margin is -0.14dB at 133.36MHz

### 2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2 Ed 1.0.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

This lab's measurement uncertainty  $U_{Lab}$ , is low than  $U_{Cispr}$ , Table 1 – Values of  $U_{Cispr}$  of CISPR 16-4-2 Ed. 1.0, therefore compliance is deemed to occur if no measured disturbance exceeds the disturbance limit.

Measurement	Value
Conducted emissions	2.55 dB
Radiated emissions	3.99 dB

### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>EUT</b>	3IN1 GPS Navigator (Digital Entertainment Function)
<b>MODEL NO.</b>	A43, A50, A60, A70 M43, M50, M60, M70, M/A50X
<b>FCC ID</b>	XXL-DGWM-PNDMA
<b>POWER SUPPLY</b>	5V battery
<b>MODULATION TYPE</b>	FM
<b>FREQUENCY RANGE</b>	88~108MHz
<b>NUMBER OF CHANNEL</b>	199
<b>CHANNEL SPACING</b>	100kHz
<b>ANTENNA TYPE</b>	Wire antenna with 0dBi gain
<b>DATA CABLE</b>	USB cable, AV cable
<b>I/O PORTS</b>	Refer to user's manual
<b>ACCESSORY DEVICES</b>	Power adapter, car charger, earphone

#### NOTE:

1. The EUT uses the following power adapter.

<b>BRAND</b>	--
<b>MODEL</b>	JKY36-SP0501500
<b>INPUT POWER</b>	100-240V~ 50/60Hz
<b>OUTPUT POWER</b>	5V DC 1.5A
<b>POWER LINE</b>	1.2m non-shielded power cable

2. The difference among the A43, A50, A60, A70, A50X is the different size of their LCD display, also it's the same difference among the M43, M50, M60, M70, M50X. Both AXX, A50X and MXX, M50X have the same PCB board, the difference between them is the different shape. In this report we use A43 to do the test.
3. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

#### 3.2 DESCRIPTION OF TEST MODES

The EUT was tested under the following modes:

- ◆ Mode 1: power by power adapter
- ◆ Mode 2: power by USB cable

- ◆ Mode 3: power by car charger with AV input
- ◆ Mode 4: with mini USB cable connected

The tuning range has been manually verified and the device can work only within 88~108MHz band.

Three channels were provided to this EUT.

CHANNEL	FREQUENCY(MHz)
Low channel (LOW)	88.1MHz
Middle channel (Middle)	98.0MHz
High channel (High)	107.9MHz

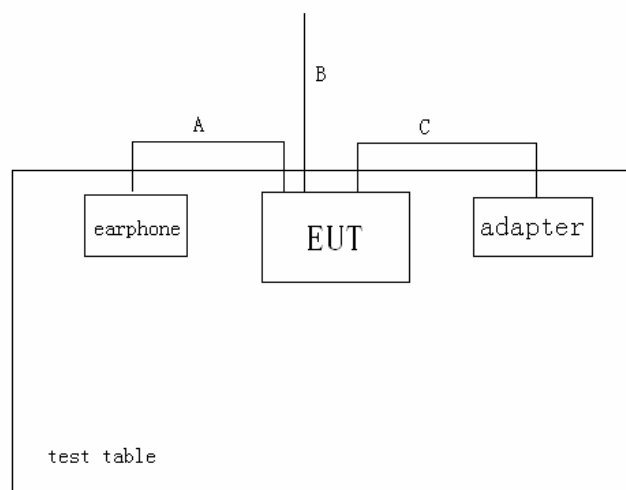
### 3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

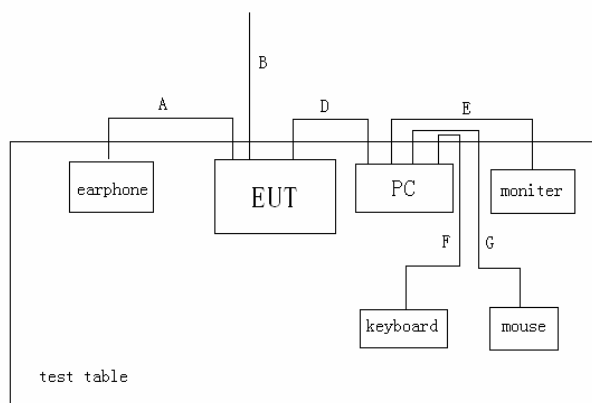
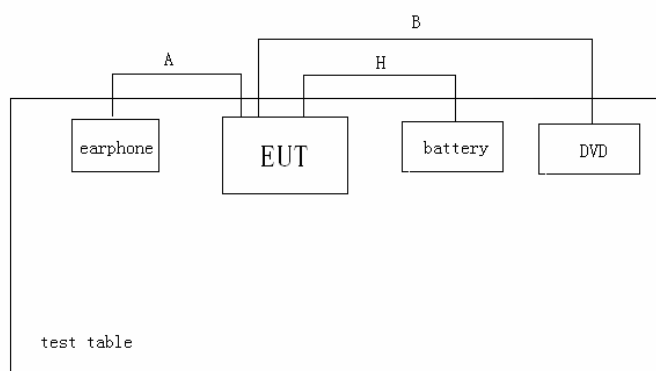
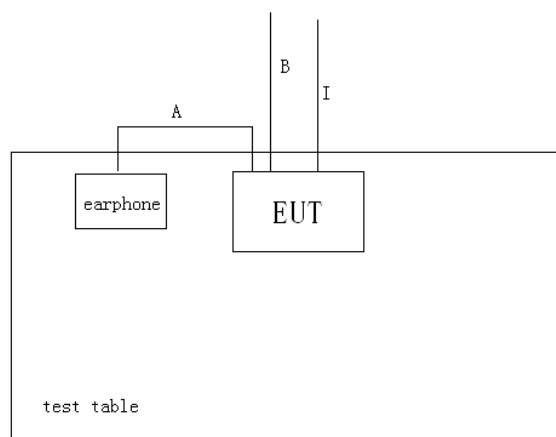
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PC	DELL	730	N/A	N/A
2	Monitor	SAMSUNG	743N	N/A	N/A
3	Keyboard	LOGITECH	Y-UR83	N/A	N/A
4	Mouse	DELL	MO58UO	N/A	N/A
5	Battery	ACDelco	78-5MF	N/A	N/A
6	DVD	SONY	DVP-NS575P	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
A	0.9m unshielded earphone cable
B	0.8 m shielded AV cable
C	1.2 m unshielded power cable
D	0.8 m shielded USB cable
E	1.5m shielded VGA cable
F	1.5m shielded USB cable
G	1.5m shielded USB cable
H	1.9m unshielded car charger power cable
I	0.3m shielded mini USB cable

TEST SETUP CHART  
MODE 1





**MODE 2****MODE 3****MODE 4**

### 3.4 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	Applicable to				Description
	PLC	RE<1G	RE>1G	EB	
1	√	√	√	√	Powered by adapter
2	√	√	Note 2	Note 2	Powered by USB cable
3	Note 1	√	Note 2	Note 2	Powered by car charger
4	Note 1	√	Note 2	Note 2	With mini USB cable connected

Where **PLC**: power line conducted emission **RE<1G**: radiated emission below 1GHz  
**EB**: emission band measurement **RE>1G**: radiated emission above 1GHz

**Note 1**: no need to concern of conducted emission due to the EUT is powered by car charger or USB cable

**Note 2**: after the pretest we detect the test result has no difference while we use the different power supply, so we choose the mode 1 test result to show in the report.

#### CONDUCTED EMISSION:

- ☒ Pre-Scan has been determine the worst-case mode from all possible combinations between available modulations and packet types.
- ☒ Following channel(s) was(were) selected for the final test as listed below.

TEST MODE	TESTED CHANNEL	MODULATION TYPE	AXIS
1, 2	LOW	FM	Y

#### RADIATED EMISSION TEST (BELOW 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

TEST MODE	TESTED CHANNEL	MODULATION TYPE	AXIS
1, 2, 3, 4	LOW, MIDDLE, HIGH	FM	Y

#### RADIATED EMISSION TEST (ABOVE 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

TEST MODE	TESTED CHANNEL	MODULATION TYPE	AXIS
1	HIGH	FM	Y

**EMISSION BAND MEASUREMENT:**

☒ Following channel(s) was(were) selected for the final test as listed below.

TEST MODE	TESTED CHANNEL	MODULATION TYPE
1	LOW, MIDDLE, HIGH	FM

**3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS**

The EUT is a GPS with a FM transmitter. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart C (Section 15.239)**

**ANSI C63.4-2003**

All test items have been performed and recorded as per the above standards.

**NOTE:** The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DOC). The report has been issued separately.

## 4 EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

##### TEST STANDARD:

FCC Part 15, Subpart B (Section: 15.107)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

- NOTES:**
1. The lower limit shall apply at the transition frequencies.
  2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
  3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver R&S	ESCS 30	E1R1002	Dec. 31, 2008	Dec. 30, 2009
LISN R&S	ENV 216	E1L1011	Apr. 02, 2009	Apr. 01, 2010

**NOTE:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



### 4.1.3 TEST PROCEDURE

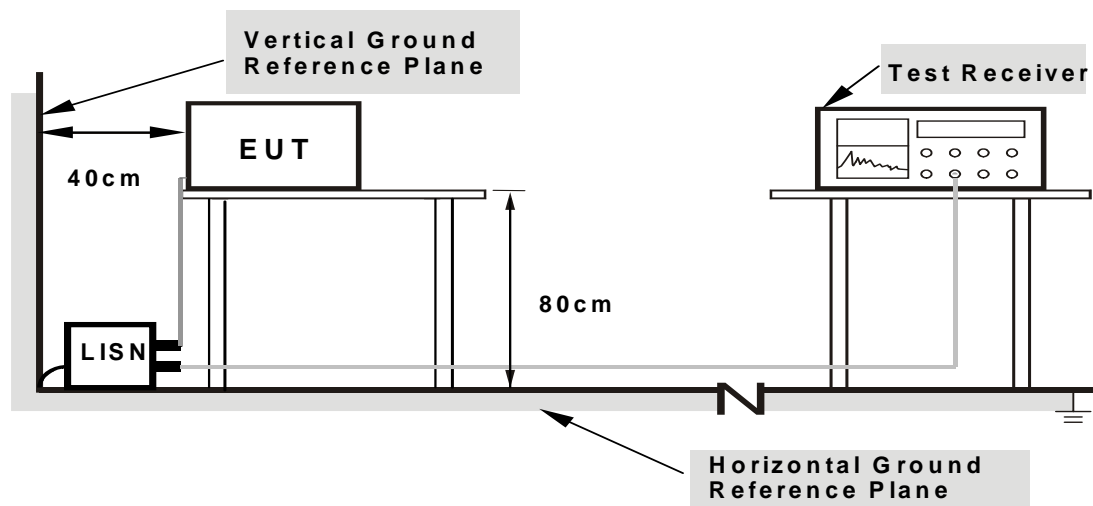
The basic test procedure was in accordance with ANSI C63.4-2003 (section 7).

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP



**Note:** 1.Support units were connected to second LISN.  
2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

#### 4.1.6 EUT OPERATING CONDITIONS

Mode 1: a, Link earphone and AV cable to the EUT and plug in a SD card.  
b, Link EUT to power adapter and plug in 120Vac power.  
c, Turn on EUT and play a mp3 song and turn the volume to the maximum.  
d, Turn on FM transmitter and it on low, middle. high channel respectively.  
e, Do the test.

Mode 2: a, Link earphone and AV cable to the EUT and plug in a SD card.  
b, setup PC as the typical configuration and link EUT to USB port.  
c, Turn on EUT and play a mp3 song and turn the volume to the maximum.  
d, Turn on FM transmitter and it on low, middle. high channel respectively.

e, Do the test.

Mode 3: a, Link earphone and AV cable to the EUT and plug in a SD card.

b, Link EUT to a battery by the car charger and turn on it.

c, Link EUT with DVD by the AV cable and turn the volume of the DVD to the maximum then play a video.

d, Turn on FM transmitter and it on low, middle. high channel respectively.

e, Do the test.

Mode 4: a, Link earphone and AV cable to the EUT and plug in a SD card.

b, Link the mini USB cable to the EUT.

c, Turn on EUT and play a mp3 song and turn the volume to the maximum.

d, Turn on FM transmitter and it on low, middle. high channel respectively.

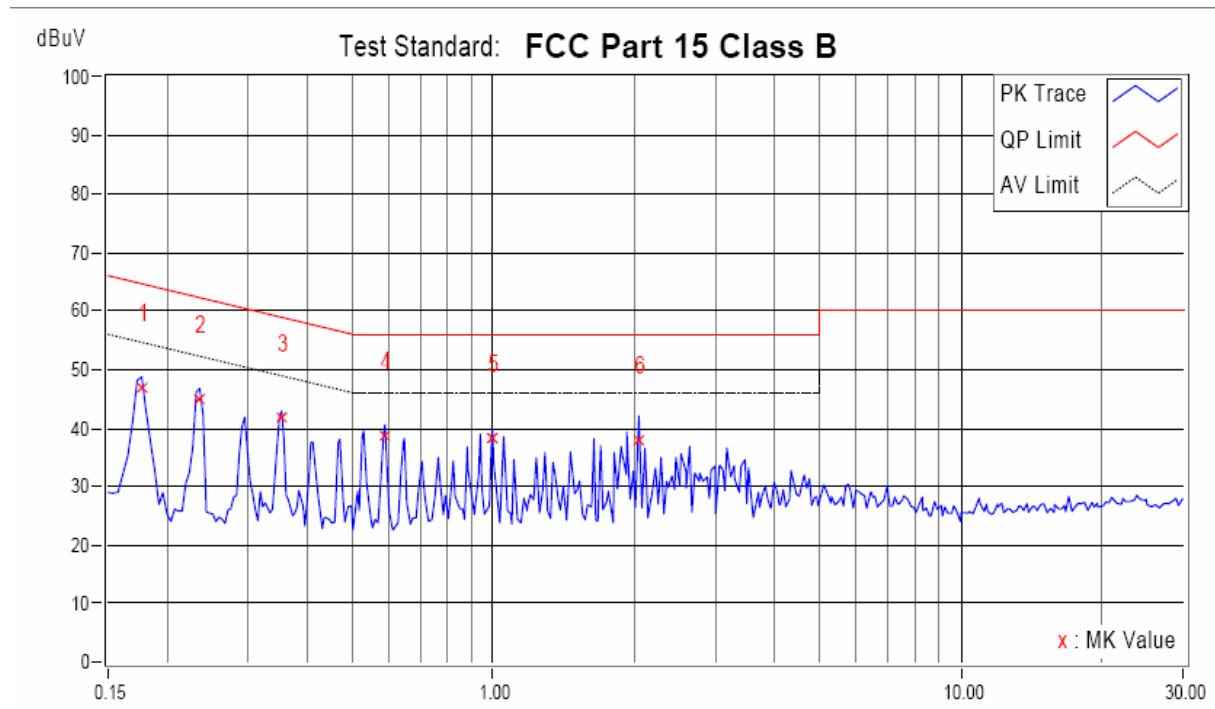
e, Do the test.

#### 4.1.7 TEST RESULTS

<b>TEST MODE</b>	1	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER</b>	120Vac, 60Hz	<b>PHASE</b>	Line 1
<b>ENVIRONMENTAL CONDITIONS</b>	21deg. C, 50% RH, 1005hPa	<b>TESTED BY:</b> Ray Xue	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18	9.75	37.06	21.88	46.81	31.63	64.61	54.61	-17.79	-22.97
2	0.24	9.70	35.05	23.31	44.75	33.01	62.24	52.24	-17.48	-19.22
3	0.35	9.72	32.00	22.05	41.72	31.77	58.88	48.88	-17.17	-17.12
4	0.59	9.71	28.78	12.54	38.49	22.25	56.00	46.00	-17.51	-23.75
5	1.00	9.72	28.37	17.64	38.09	27.36	56.00	46.00	-17.91	-18.64
6	2.05	9.76	28.21	15.98	37.97	25.74	56.00	46.00	-18.03	-20.26

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

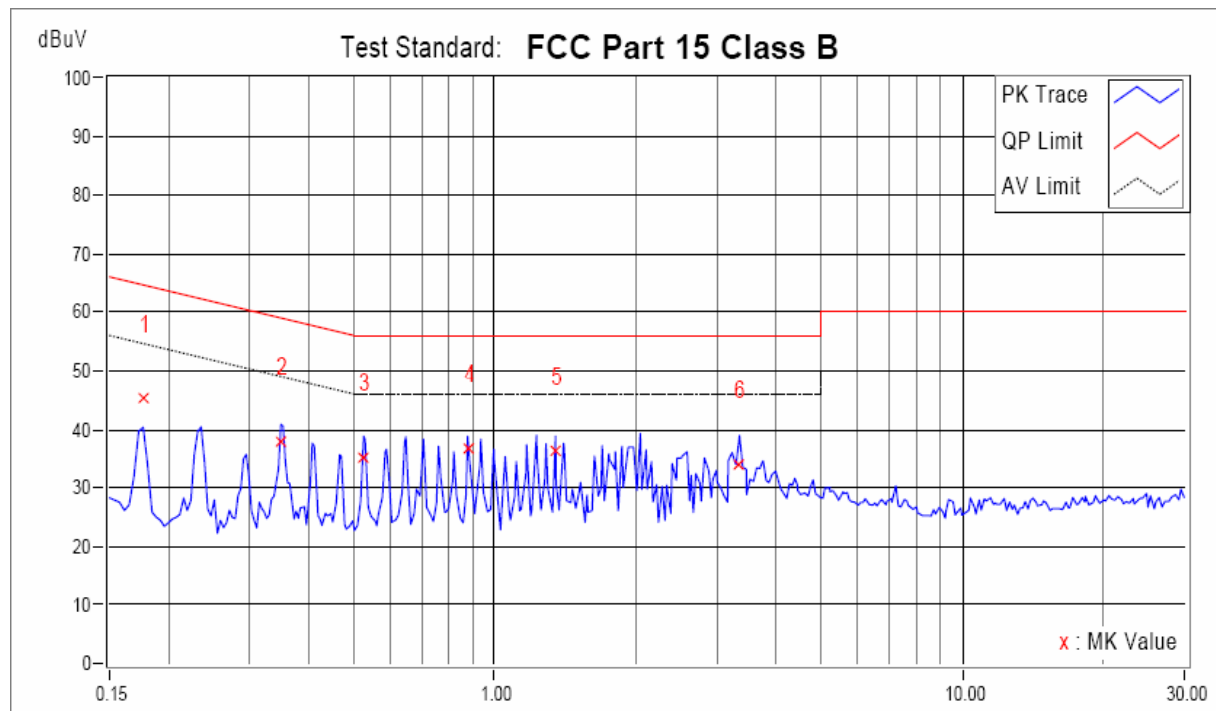




<b>TEST MODE</b>	1	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER</b>	120Vac, 60Hz	<b>PHASE</b>	Line 2
<b>ENVIRONMENTAL CONDITIONS</b>	21deg. C, 50% RH, 1005hPa	<b>TESTED BY:</b> Ray Xue	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18	9.75	35.54	24.20	45.29	33.95	64.61	54.61	-19.32	-20.66
2	0.35	9.71	28.36	26.21	38.07	35.92	58.98	48.98	-20.90	-13.05
3	0.53	9.71	25.46	22.98	35.17	32.69	56.00	46.00	-20.83	-13.31
4	0.88	9.74	26.97	21.90	36.71	31.64	56.00	46.00	-19.29	-14.36
5	1.35	9.80	26.38	21.05	36.18	30.85	56.00	46.00	-19.82	-15.15
6	3.35	9.86	23.99	15.23	33.85	25.09	56.00	46.00	-22.15	-20.91

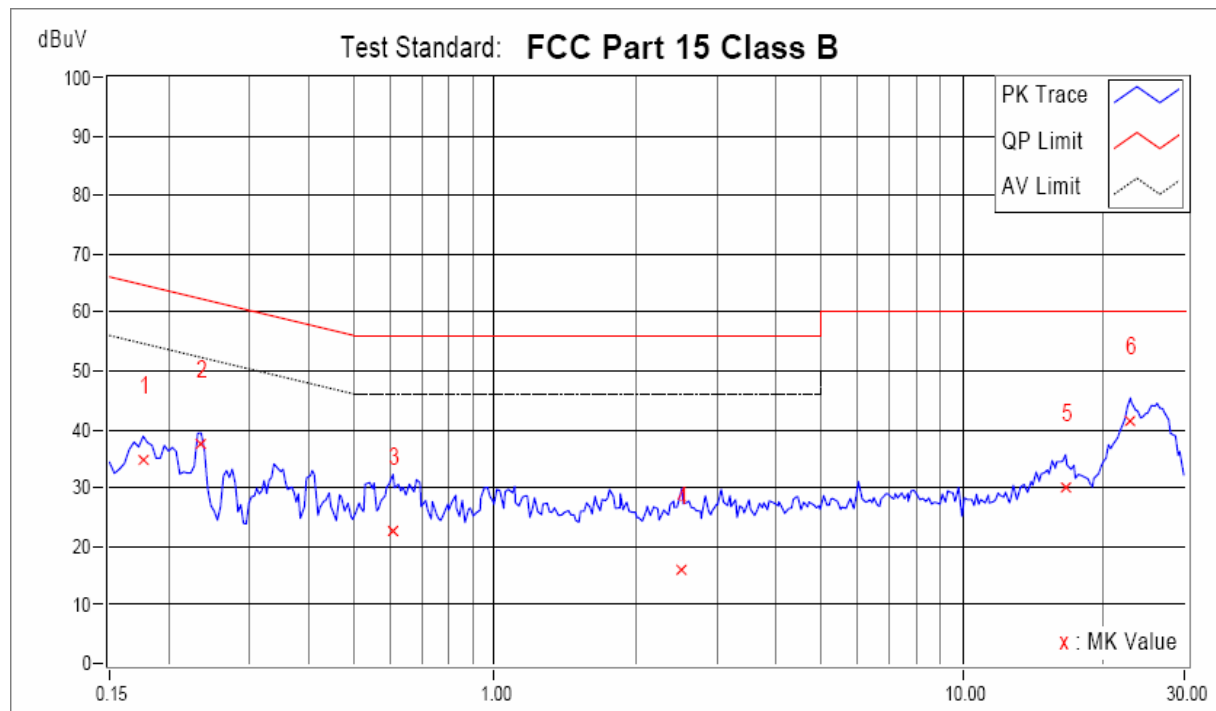
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



<b>TEST MODE</b>	2	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER</b>	120Vac, 60Hz	<b>PHASE</b>	Line 1
<b>ENVIRONMENTAL CONDITIONS</b>	21deg. C, 50% RH, 1005hPa	<b>TESTED BY:</b> Ray Xue	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18	9.75	24.99	20.60	34.74	30.35	64.61	54.61	-29.86	-24.25
2	0.24	9.70	27.63	26.29	37.33	35.99	62.24	52.24	-24.90	-16.24
3	0.61	9.71	13.07	4.73	22.78	14.44	56.00	46.00	-33.22	-31.56
4	2.52	9.78	6.24	-0.32	16.02	9.46	56.00	46.00	-39.98	-36.54
5	16.63	10.17	20.03	14.79	30.20	24.96	60.00	50.00	-29.80	-25.04
6	22.95	10.24	31.33	23.93	41.57	34.17	60.00	50.00	-18.43	-15.83

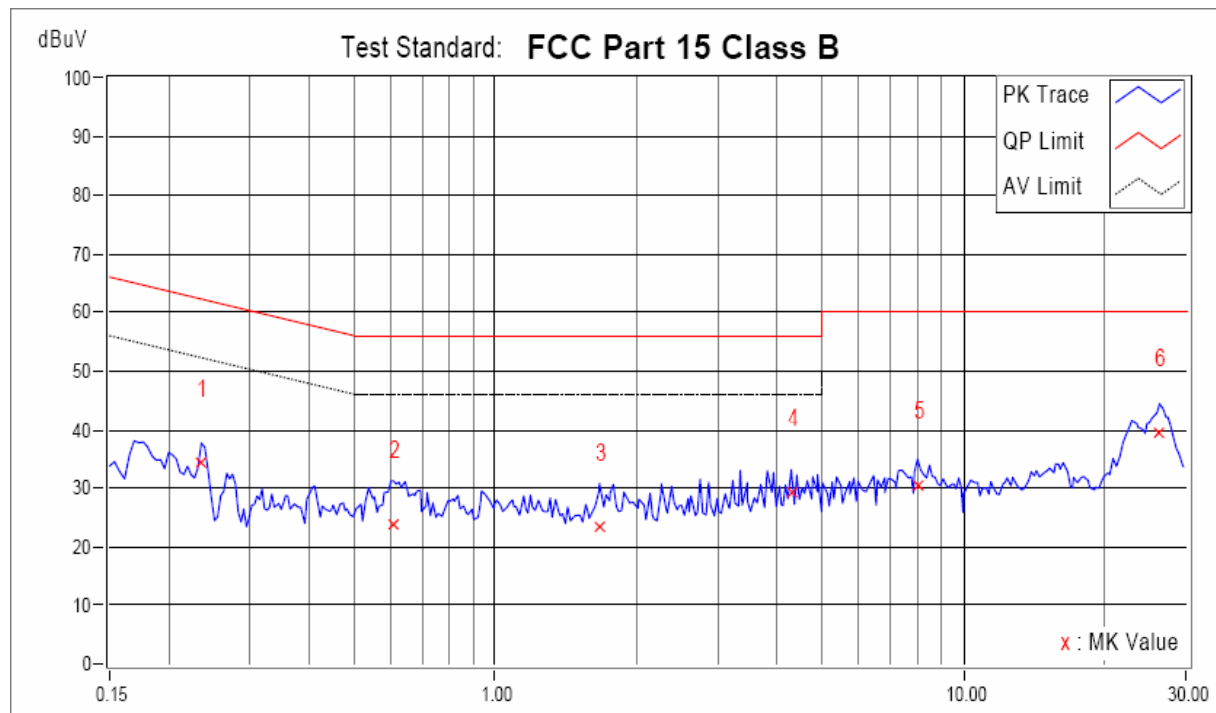
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



<b>TEST MODE</b>	2	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER</b>	120Vac, 60Hz	<b>PHASE</b>	Line 2
<b>ENVIRONMENTAL CONDITIONS</b>	21deg. C, 50% RH, 1005hPa	<b>TESTED BY:</b> Ray Xue	

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.24	9.70	24.54	22.41	34.24	32.11	62.24	52.24	-27.99	-20.12
2	0.61	9.71	14.06	5.31	23.77	15.02	56.00	46.00	-32.23	-30.98
3	1.67	9.75	13.69	12.76	23.44	22.51	56.00	46.00	-32.56	-23.49
4	4.31	9.86	19.62	19.71	29.48	29.57	56.00	46.00	-26.52	-16.43
5	8.02	9.99	20.49	20.66	30.48	30.65	60.00	50.00	-29.52	-19.35
6	26.21	10.28	29.21	23.13	39.49	33.41	60.00	50.00	-20.51	-16.59

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to 15.239 the field strength of Emissions from intentional radiators operated under these frequencies bands shall not exceed the following:

FREQUENCY (MHz)	Field strength of fundamental (dBuV/m)	
	Peak	Average
88 to 108	67.96	47.96

Field strength limits are at the distance of 3 meters, Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

### 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Signal Analyzer R&S	FSP30	E1S1002	Aug. 05, 2009	Aug. 04, 2010
Receiver R&S	ESCS30	E1R1001	Jan. 04, 2009	Jan. 03, 2010



Trilog Broadband Antenna Schwarzbeck	VULB 9168	E1A1001	Aug. 05, 2009	Aug. 04, 2010
Horn Antenna Schwarzbeck	BBHA 9120D	E1A1002	Sep. 09, 2008	Sep. 08, 2010
Preamplifier Agilent	8447D	E1A2001	Sep. 22, 2008	Sep. 21, 2010
Preamplifier Agilent	8449B	E1A2002	Sep. 09, 2008	Sep. 08, 2010
Software ADT	ADT_Radiated_V7.5	N/A	N/A	N/A

**NOTE:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 4.2.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4-2003 (section 8).

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

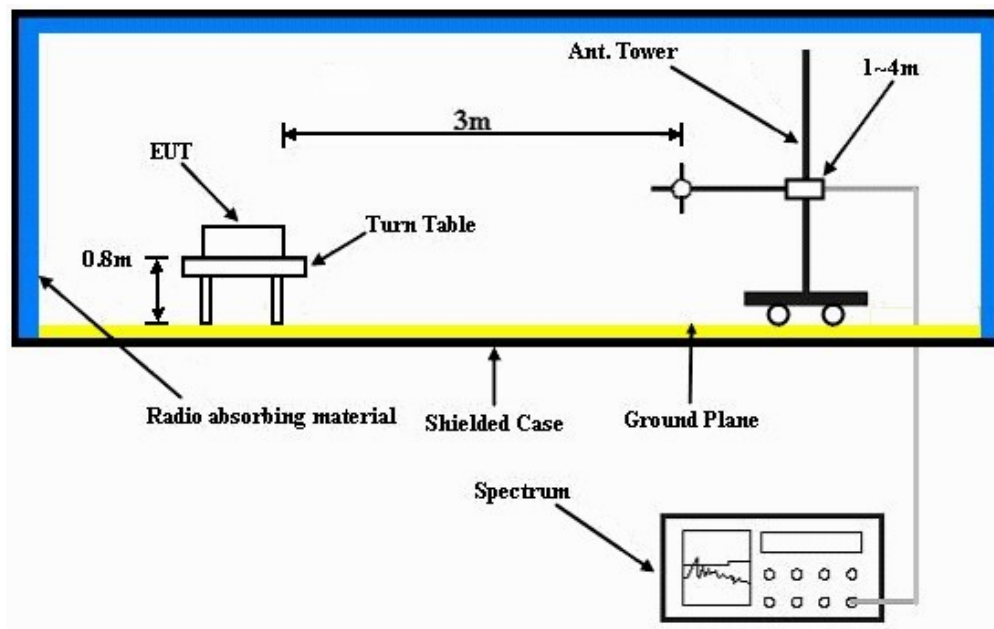
**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz

### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.2.5 TEST SETUP



For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

#### 4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

## 4.2.7 TEST RESULTS

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	LOW	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from power adapter	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	1	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	88.10	11.73	19.72	31.45 PK	67.96	-36.51	208	0
2	88.10	11.73	18.73	30.46 AV	47.96	-17.50	208	0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	88.10	11.73	26.19	37.92 PK	67.96	-30.04	161	0
2	88.10	11.73	25.06	36.79 AV	47.96	-11.17	161	0

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
 3. The other emission levels were very low against the limit.  
 4. Margin value = Emission level – Limit value.  
 5. “ \* “: Fundamental frequency.





EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	MIDDLE	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from power adapter	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	1	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	98.03	12.40	16.67	29.07 PK	67.96	-38.89	220	147
2	98.00	12.40	15.67	28.07 AV	47.96	-19.89	220	147

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	98.03	12.40	30.65	43.05 PK	67.96	-24.91	103	69
2	97.98	12.40	30.34	42.74 AV	47.96	-5.22	103	69

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
 3. The other emission levels were very low against the limit.  
 4. Margin value = Emission level – Limit value.  
 5. “ \* “: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from power adapter	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	1	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	107.90	13.35	19.00	32.35 PK	67.96	-35.61	226	155
2	107.90	13.35	17.02	30.37 AV	47.96	-17.59	226	155

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	107.90	13.35	32.87	46.22 PK	67.96	-21.74	138	90
2	107.90	13.35	31.66	45.01 AV	47.96	-2.95	138	90

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
 3. The other emission levels were very low against the limit.  
 4. Margin value = Emission level – Limit value.  
 5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	LOW	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from USB	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	2	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	88.10	11.73	24.12	35.85 PK	67.96	-32.11	222	199
2	88.10	11.73	23.37	35.10 AV	47.96	-12.86	222	199

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	88.10	11.73	18.68	30.41 PK	67.96	-37.55	141	231
2	88.10	11.73	17.53	29.26 AV	47.96	-18.70	141	231

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
3. The other emission levels were very low against the limit.  
4. Margin value = Emission level – Limit value.  
5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	MIDDLE	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from USB	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	2	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	98.00	12.40	30.85	43.25 PK	67.96	-24.71	314	237
2	98.00	12.40	30.76	43.16 AV	47.96	-4.80	314	237

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	98.00	12.40	28.00	40.40 PK	67.96	-27.56	103	327
2	98.00	12.40	26.93	39.34 AV	47.96	-8.62	103	327

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
 3. The other emission levels were very low against the limit.  
 4. Margin value = Emission level – Limit value.  
 5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from USB	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	2	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	107.90	13.35	31.58	44.93 PK	67.96	-23.03	104	246
2	107.90	13.35	32.46	45.81 AV	47.96	-2.15	104	246

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	107.90	13.35	28.43	41.78 PK	67.96	-26.18	103	313
2	107.90	13.35	27.69	41.04 AV	47.96	-6.92	103	313

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
3. The other emission levels were very low against the limit.  
4. Margin value = Emission level – Limit value.  
5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	LOW	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from car charger	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	3	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	88.10	11.73	34.17	45.90PK	67.96	-22.06	215	302
2	88.10	11.73	32.29	44.02AV	47.96	-3.94	215	302

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	88.10	11.73	32.86	44.59PK	67.96	-23.37	123	305
2	88.10	11.73	30.04	41.77AV	47.96	-6.19	123	305

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
 3. The other emission levels were very low against the limit.  
 4. Margin value = Emission level – Limit value.  
 5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	MIDDLE	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from car charger	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	3	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	98.00	12.40	24.55	36.95PK	67.96	-31.01	216	132
2	98.00	12.40	26.36	38.76AV	47.96	-9.20	216	132

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	98.00	12.40	31.69	44.09PK	67.96	-23.87	135	258
2	98.00	12.40	31.32	43.72AV	47.96	-4.24	135	258

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
 3. The other emission levels were very low against the limit.  
 4. Margin value = Emission level – Limit value.  
 5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from car charger	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	3	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	107.90	13.35	28.11	41.46PK	67.96	-26.50	120	315
2	107.90	13.35	27.56	40.91AV	47.96	-7.05	120	315

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	107.88	13.35	33.41	46.76PK	67.96	-21.20	106	291
2	107.88	13.35	32.66	46.01AV	47.96	-1.95	106	291

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
 3. The other emission levels were very low against the limit.  
 4. Margin value = Emission level – Limit value.  
 5. “ \* “: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	LOW	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from inter-battery	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	4	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	88.10	11.73	16.38	28.11 PK	67.96	-39.85	220	281
2	88.10	11.73	14.63	26.36 AV	47.96	-21.60	220	281

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	88.10	11.73	20.99	32.72 PK	67.96	-35.24	104	141
2	88.10	11.73	19.81	31.54 AV	47.96	-16.42	104	141

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
3. The other emission levels were very low against the limit.  
4. Margin value = Emission level – Limit value.  
5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	MIDDLE	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from inter-battery	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	4	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	98.00	12.40	24.28	36.68 PK	67.96	-31.28	259	160
2	98.00	12.40	23.26	35.66 AV	47.96	-12.30	259	160

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	98.00	12.40	29.01	41.41 PK	67.96	-26.55	104	296
2	98.00	12.40	28.15	40.55 AV	47.96	-7.41	104	296

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
 3. The other emission levels were very low against the limit.  
 4. Margin value = Emission level – Limit value.  
 5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER	5Vdc from inter-battery	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	4	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	107.90	13.36	30.71	44.06	67.96	-23.90	140	301
2	107.90	13.36	29.75	43.10	47.96	-4.86	140	301

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	107.90	13.36	29.35	42.71 PK	67.96	-25.25	103	218
2	107.90	13.36	28.67	42.03 AV	47.96	-5.93	103	218

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
3. The other emission levels were very low against the limit.  
4. Margin value = Emission level – Limit value.  
5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	LOW	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from power adapter	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	1	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	138.89	16.12	14.00	30.12	43.50	-13.38	125	0
2	204.60	13.03	24.56	37.59	43.50	-5.91	125	35
3	260.37	15.13	24.98	40.11	46.00	-5.89	125	55
4	388.90	18.43	18.46	36.89	46.00	-9.11	190	40
5	408.30	18.92	17.13	36.05	46.00	-9.95	153	271
6	699.30	24.57	9.69	34.26	46.00	-11.74	111	331

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	131.65	15.50	25.59	41.10	43.50	-2.40	104	0
2	160.95	16.98	18.89	35.87	43.50	-7.63	104	216
3	240.97	14.76	19.37	34.13	46.00	-11.87	104	154
4	296.75	16.38	15.46	31.83	46.00	-14.17	104	127
5	371.93	18.08	12.36	30.44	46.00	-15.56	104	11
6	575.62	22.63	10.71	33.34	46.00	-12.66	104	48

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
3. The other emission levels were very low against the limit.  
4. Margin value = Emission level – Limit value.  
5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	MIDDLE	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from power adapter	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	1	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	129.63	15.34	16.96	32.30	43.50	-11.20	220	0
2	211.87	13.26	25.50	38.76	43.50	-4.74	112	26
3	270.07	15.50	22.68	38.18	46.00	-7.82	105	157
4	296.75	16.38	21.17	37.54	46.00	-8.46	105	133
5	370.37	18.04	22.26	40.30	46.00	-5.70	108	157
6	388.90	18.43	21.69	40.12	46.00	-5.88	111	105

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	129.63	15.34	26.63	41.97	43.50	-1.53	103	0
2	157.41	17.04	20.26	37.31	43.50	-6.19	103	0
3	240.97	14.76	24.77	39.53	46.00	-6.47	103	232
4	296.75	16.38	20.35	36.73	46.00	-9.27	103	210
5	371.93	18.08	15.29	33.37	46.00	-12.63	103	181
6	556.23	22.20	9.17	31.36	46.00	-14.64	103	145

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from power adapter	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	1	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	129.63	15.34	16.33	31.67	43.50	-11.83	219	0
2	165.80	16.51	21.78	38.29	43.50	-5.21	103	182
3	240.97	14.76	23.66	38.41	46.00	-7.59	121	182
4	370.38	18.04	22.74	40.78	46.00	-5.22	110	154
5	388.90	18.43	21.24	39.67	46.00	-6.33	105	182
6	701.73	24.62	11.36	35.98	46.00	-10.02	105	182

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	129.63	15.34	25.85	41.19	43.50	-2.31	104	0
2	157.41	17.04	20.97	38.02	43.50	-5.48	103	233
3	240.74	14.75	21.40	36.16	46.00	-9.84	103	270
4	296.75	16.38	19.35	35.72	46.00	-10.28	103	270
5	371.93	18.08	17.10	35.18	46.00	-10.82	103	299
6	556.23	22.20	8.97	31.16	46.00	-14.84	103	328

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	LOW	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from USB	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	2	TESTED BY	Kimi Luo

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	127.00	15.18	17.68	32.86	43.50	-10.64	106	23
2	192.47	13.32	29.04	42.36	43.50	-1.14	197	344
3	199.75	12.96	21.05	34.01	43.50	-9.49	176	261
4	301.60	16.52	18.49	35.01	46.00	-10.99	223	60
5	333.12	17.47	16.74	34.21	46.00	-11.79	192	89
6	500.45	20.88	15.37	36.25	46.00	-9.75	231	17

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	48.00	15.49	10.97	26.45	40.00	-13.55	104	325
2	131.85	15.52	14.04	29.56	43.50	-13.94	125	315
3	192.47	13.32	20.07	33.39	43.50	-10.11	169	275
4	505.30	20.98	9.22	30.20	46.00	-15.80	125	162
5	832.67	26.29	10.21	36.50	46.00	-9.50	164	342
6	910.27	27.41	12.64	40.06	46.00	-5.94	216	86

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
3. The other emission levels were very low against the limit.  
4. Margin value = Emission level – Limit value.  
5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	MIDDLE	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from USB	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	2	TESTED BY	Kimi Luo

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	44.55	15.55	12.28	27.83	40.00	-12.17	261	228
2	124.58	15.04	19.01	34.05	43.50	-9.45	221	264
3	192.47	13.32	22.86	36.18	43.50	-7.32	108	132
4	199.75	12.96	23.62	36.58	43.50	-6.92	162	103
5	333.12	17.47	19.18	36.65	46.00	-9.35	191	292

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	46.97	15.49	18.38	33.87	40.00	-6.13	103	26
2	129.42	15.33	14.86	30.19	43.50	-13.31	193	311
3	333.12	17.47	12.61	30.08	46.00	-15.92	150	349
4	505.30	20.98	8.40	29.38	46.00	-16.62	137	134
5	665.35	24.07	6.46	30.53	46.00	-15.47	122	2

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. “ \* “: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from USB	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	2	TESTED BY	Kimi Luo

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	51.83	15.34	13.03	28.37	40.00	-11.63	152	319
2	124.58	15.04	20.11	35.15	43.50	-8.35	279	114
3	192.47	13.32	28.93	42.25	43.50	-1.25	103	261
4	333.12	17.47	15.68	33.15	46.00	-12.85	186	349
5	665.35	24.07	8.10	32.17	46.00	-13.83	210	178

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	51.83	15.34	17.11	32.45	40.00	-7.55	192	27
2	192.47	13.32	23.03	36.35	43.50	-7.15	132	351
3	333.12	17.47	11.85	29.32	46.00	-16.68	129	288
4	493.18	20.77	8.98	29.75	46.00	-16.25	104	262
5	665.35	24.07	13.85	37.92	46.00	-8.08	169	324

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	LOW	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from car charger	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	3	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	129.43	15.33	19.94	35.27	43.50	-8.23	132	0
2	166.68	16.43	16.89	33.32	43.50	-10.18	121	126
3	250.68	14.83	21.43	36.26	46.00	-9.74	183	10
4	350.10	17.47	19.91	37.38	46.00	-8.62	225	65
5	401.02	18.67	20.09	38.76	46.00	-7.24	201	25
6	500.45	20.88	11.39	32.27	46.00	-13.73	205	135

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	131.85	15.52	22.56	38.08	43.50	-5.42	138	180
2	166.68	16.43	25.24	41.67	43.50	-1.83	105	75
3	260.37	15.13	19.25	34.38	46.00	-11.62	188	35
4	301.60	16.52	13.75	30.27	46.00	-15.73	186	34
5	401.02	18.67	16.88	35.55	46.00	-10.45	196	210
6	599.87	23.13	6.92	30.05	46.00	-15.95	154	360

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	MIDDLE	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from car charger	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	3	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	136.7	15.94	23.53	39.47	43.50	-4.03	158	175
2	157.41	17.04	15.12	32.16	43.50	-11.34	178	173
3	221.57	13.96	23.94	37.9	46.00	-8.1	189	255
4	287.05	16.1	18.76	34.86	46.00	-11.14	198	63
5	371.93	18.08	17.18	35.26	46.00	-10.74	198	36
6	408.30	18.92	13.31	32.23	46.00	-13.77	201	35

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	138.89	16.12	26.83	42.95	43.50	-0.55	103	125
2	166.68	16.43	17.22	33.65	43.50	-9.85	103	109
3	260.37	15.13	24.52	39.65	46.00	-6.35	103	191
4	296.75	16.38	17.07	33.45	46.00	-12.55	103	59
5	425.27	19.49	11.89	31.38	46.00	-14.62	103	67
6	628.98	23.65	6.98	30.63	46.00	-15.37	103	36

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from car charger	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	3	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	136.7	15.94	22.16	38.1	43.50	-5.4	146	306
2	165.8	16.51	20.7	37.21	43.50	-6.29	146	360
3	260.37	15.13	23.18	38.31	46.00	-7.69	104	25
4	277.35	15.74	22.12	37.86	46.00	-8.14	104	75
5	371.93	18.08	18.25	36.33	46.00	-9.67	131	125
6	408.30	18.92	14.96	33.88	46.00	-12.12	104	0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	138.89	16.12	25.79	41.91	43.50	-1.59	103	280
2	166.68	16.43	20.28	36.71	43.50	-6.79	103	58
3	260.37	15.13	22.18	37.31	46.00	-8.69	103	135
4	277.35	15.74	20.41	36.15	46.00	-9.85	103	152
5	371.93	18.08	13.30	31.38	46.00	-14.62	103	33
6	592.60	22.98	8.78	31.76	46.00	-14.24	103	132

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	LOW	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from inter-battery	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	4	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	131.85	15.52	21.28	36.80	43.50	-6.70	104	168
2	240.97	14.76	24.45	39.20	46.00	-6.80	103	15
3	259.27	15.10	28.37	43.47	46.00	-2.53	15	185
4	296.75	16.38	22.41	38.79	46.00	-7.21	131	103
5	371.93	18.08	20.68	38.77	46.00	-7.23	15	32
6	541.67	21.84	5.66	27.50	46.00	-18.50	21	55

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	134.28	15.73	25.61	41.34	43.50	-2.16	104	21
2	240.97	14.76	16.46	31.22	46.00	-14.78	104	12
3	260.37	15.13	21.10	36.24	46.00	-9.76	104	33
4	287.05	16.10	17.89	33.99	46.00	-12.01	104	105
5	352.52	17.54	12.34	29.88	46.00	-16.12	104	167
6	592.60	22.98	6.46	29.44	46.00	-16.56	104	132

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
3. The other emission levels were very low against the limit.  
4. Margin value = Emission level – Limit value.  
5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	MIDDLE	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from inter-battery	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	4	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	131.85	15.52	19.64	35.16	43.50	-8.34	104	0
2	240.97	14.76	25.89	40.65	46.00	-5.35	103	10
3	259.26	15.10	29.17	44.27	46.00	-1.73	109	192
4	352.52	17.54	19.00	36.54	46.00	-9.46	105	189
5	371.93	18.08	19.37	37.46	46.00	-8.54	110	105
6	699.30	24.57	9.73	34.30	46.00	-11.70	104	32

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	133.36	15.65	27.71	43.36	43.50	-0.14	104	166
2	231.28	14.56	21.49	36.05	46.00	-9.95	104	150
3	260.37	15.13	24.18	39.31	46.00	-6.69	104	18
4	296.75	16.38	21.63	38.00	46.00	-8.00	104	21
5	628.98	23.65	7.44	31.09	46.00	-14.91	104	55

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. “ \* “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	88-108MHz
MODULATION TYPE	FM	DETECTOR FUNCTION	Quasi-Peak
INPUT POWER	5Vdc from inter-battery	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	4	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	132.10	15.54	26.86	42.40	43.50	-1.10	104	0
2	231.28	14.56	20.71	35.27	46.00	-10.73	103	14
3	260.37	15.13	25.39	40.52	46.00	-5.48	104	149
4	296.75	16.38	20.85	37.22	46.00	-8.78	103	126
5	352.52	17.54	15.27	32.81	46.00	-13.19	103	85
6	592.60	22.98	8.91	31.89	46.00	-14.11	103	44

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	133.43	15.65	23.20	38.85	43.50	-4.65	103	189
2	151.25	16.98	19.47	36.45	43.50	-7.05	103	98
3	260.37	15.13	25.14	40.28	46.00	-5.72	103	25
4	352.52	17.54	15.34	32.88	46.00	-13.12	103	33
5	500.45	20.88	11.63	32.51	46.00	-13.49	103	123
6	599.87	23.13	9.77	32.90	46.00	-13.10	103	21

**REMARKS:** 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).  
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).  
3. The other emission levels were very low against the limit.  
4. Margin value = Emission level – Limit value.  
5. “ \* “: Fundamental frequency.

## Radiated emission above 1GHz

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	HIGH	FREQUENCY RANGE	1G-2G
MODULATION TYPE	FM	DETECTOR FUNCTION	Peak (PK)
INPUT POWER	5Vdc from power adapter	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	1	TESTED BY	Ray Xue

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	1730.00	29.28	20.99	50.27	74.00	-23.73	140	0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	1810.00	33.03	11.27	44.29	74.00	-29.71	104	0

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
  2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
  3. The other emission levels were very low against the limit, PK value were below AV limit.
  4. Margin value = Emission level – Limit value.



### 4.3 EMISSION BAND MEASUREMENT

#### 4.3.1 LIMITS OF EMISSION BAND MEASUREMENT

Emission from the intentional radiator shall be confined within a bands 200kHz wide centered on the operation frequency. The 200kHz band shall lie wholly within the frequency range of 88 to 108MHz.

#### 4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Spectrum R&S	FSP30	E1S1002	Aug. 04, 2010

NOTE: The calibration interval of the above test instruments is 12 months.

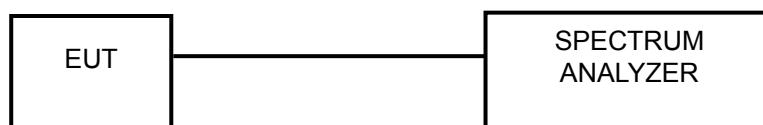
#### 4.3.3 TEST PROCEDURES

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of th fundamental frequency was measured by spectrum analyzer with 10kHz RBW and 30kHz VBW. Measured the 20dBc bandwidth and plotted the graph. Audio input was set to max during the test.

#### 4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.3.5 TEST SETUP



#### 4.3.6 EUT OPERATING CONDITIONS

Set the EUT under transmission condition continuously at specific channel frequency.

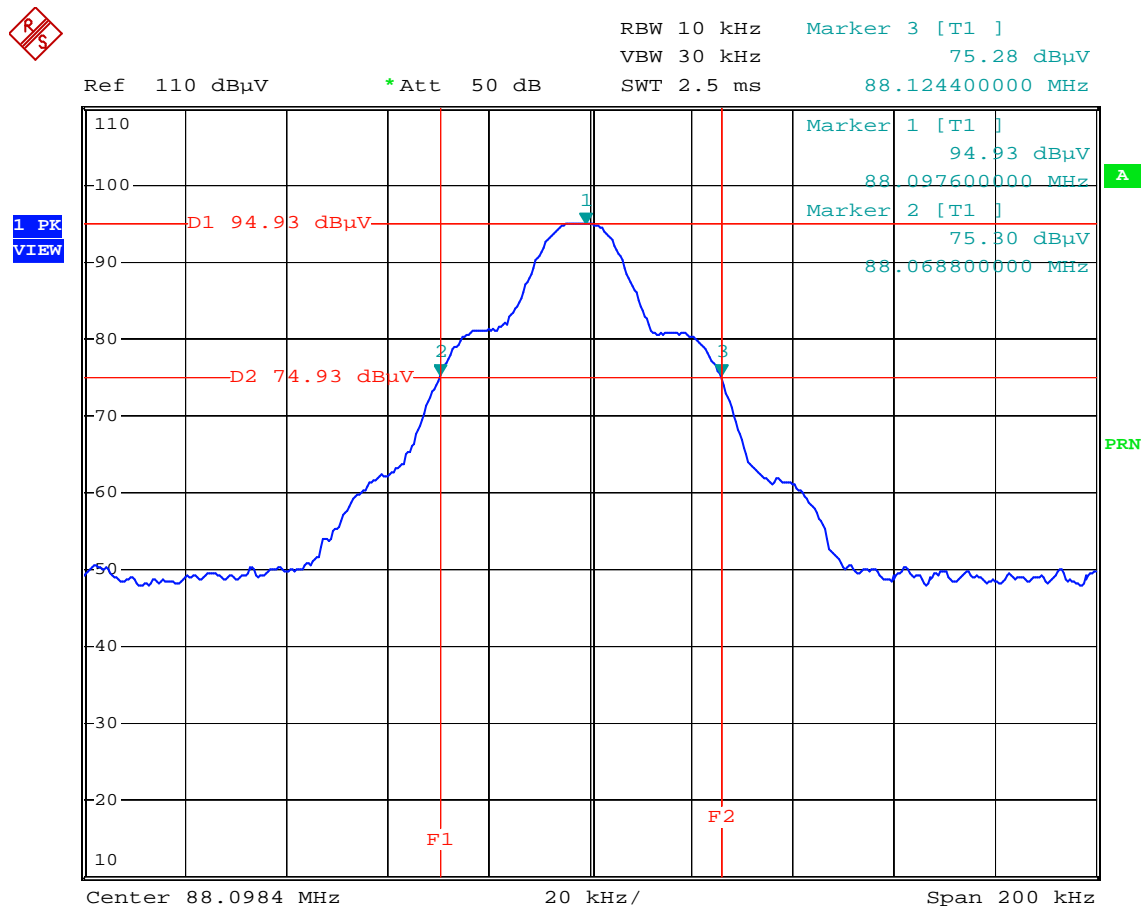


## 4.3.7 TEST RESULTS

CHANNEL	LOW, MIDDLE, HIGH	MODULATION TYPE	FM
INPUT POWER	5Vdc from power adapter	ENVIRONMENTAL CONDITIONS	20deg. C, 50%RH 1000hPa
TEST MODE	1	TESTED BY	Ray Xue

CHANNEL	CHANNEL FREQUENCY (MHz)	20 Db Bandwidth (kHz)	MAXIMUM LIMIT (kHz)	PASS/FAIL
LOW	88.10	55.6	200	PASS
MIDDLE	98.00	50.8	200	PASS
HIGH	107.9	54.4	200	PASS

## Low Channel

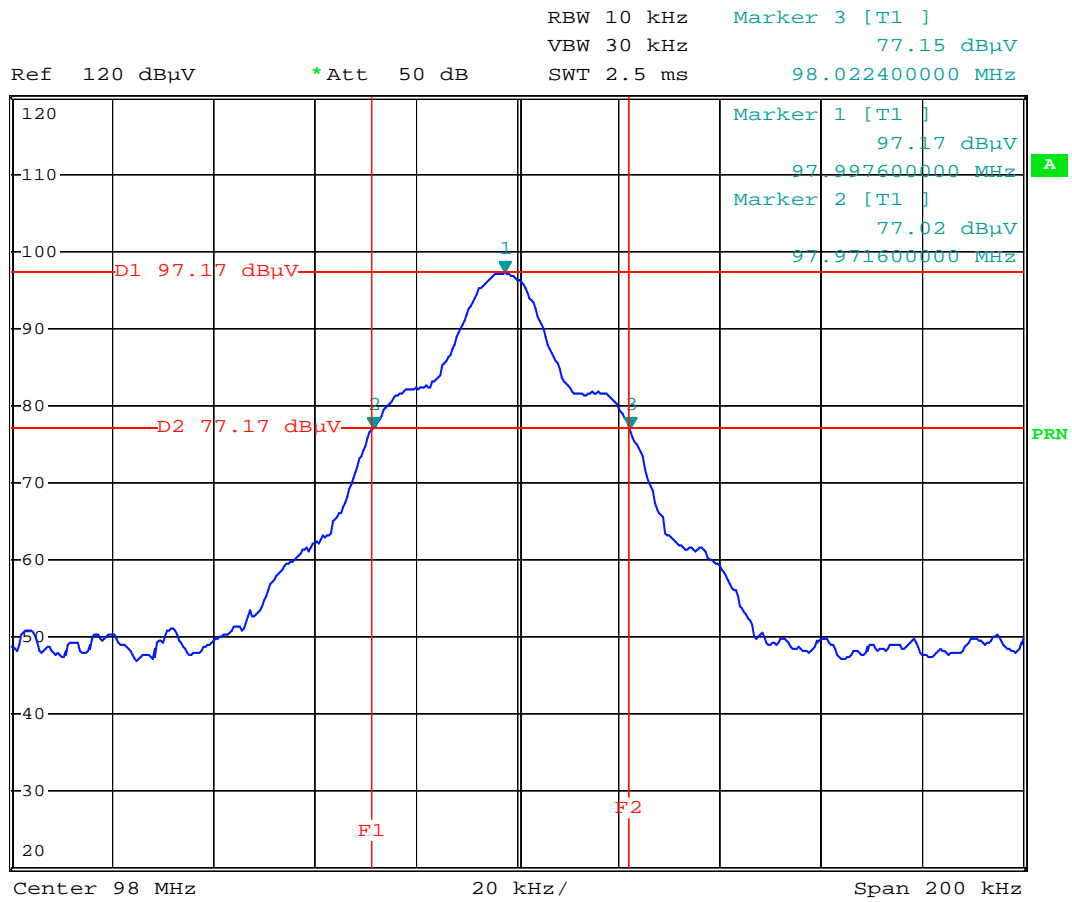


Date: 25.NOV.2009 10:24:06



A D T

## Middle Channel

1 PK  
VIEW

Date: 25.NOV.2009 10:27:44

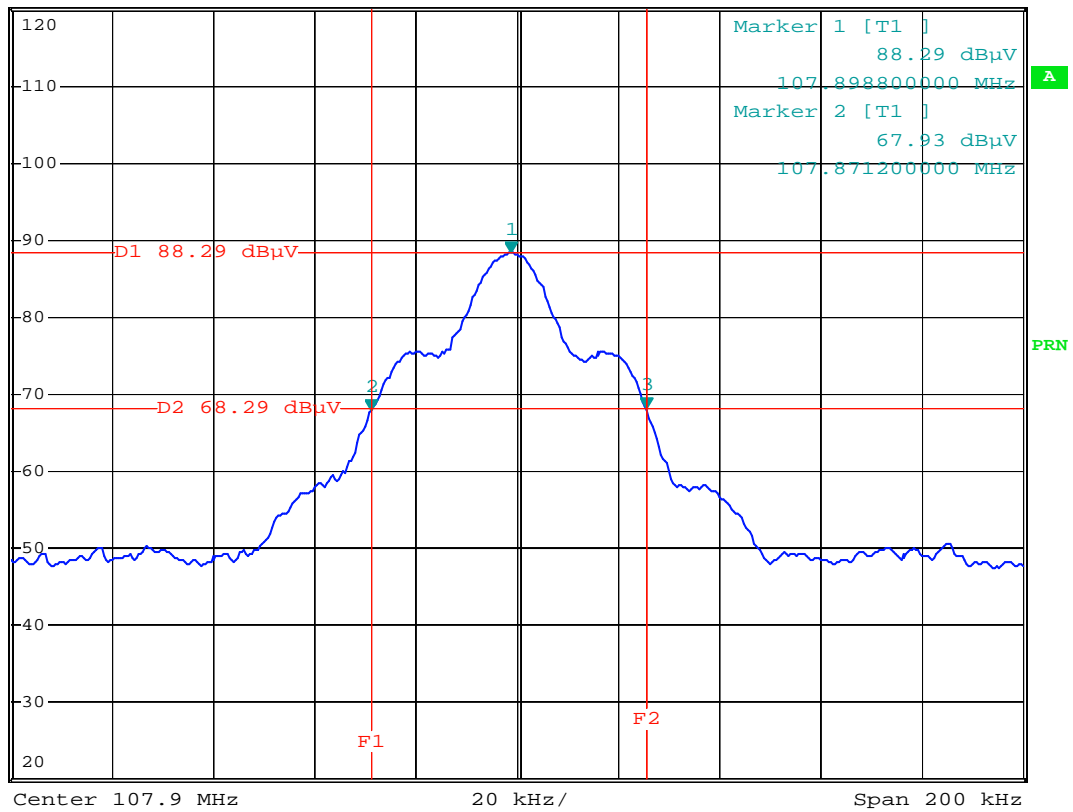


A D T

## High Channel



Ref 120 dBμV \*Att 50 dB RBW 10 kHz Marker 3 [T1 ]  
VBW 30 kHz 68.15 dBμV  
SWT 2.5 ms 107.925600000 MHz

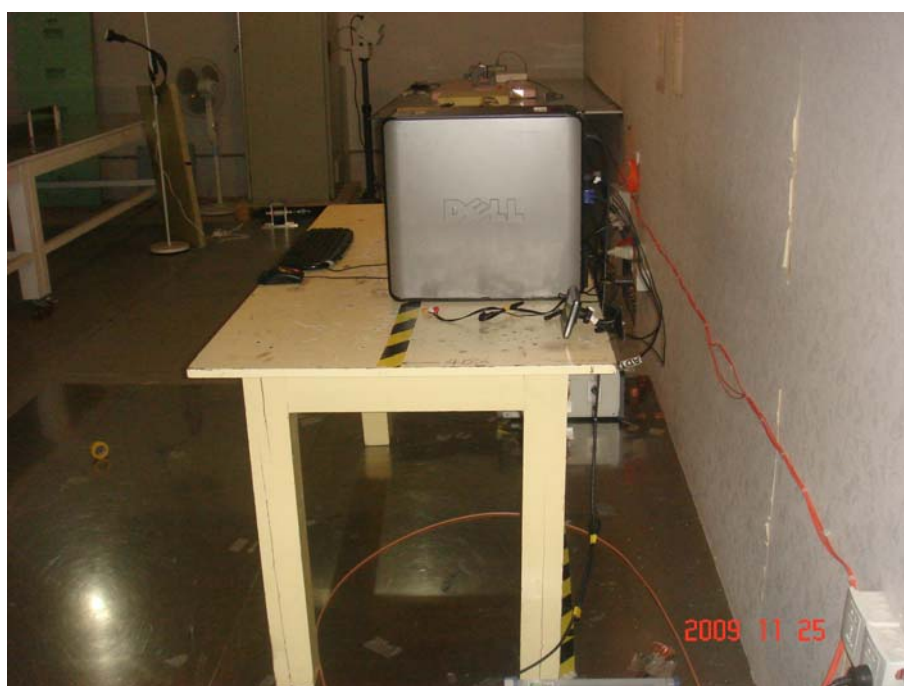
1 PK  
VIEW

Date: 25.NOV.2009 10:32:07

## 5 PHOTOGRAPHS OF THE TEST CONFIGURATION CONDUCTED EMISSION TEST MODE 1

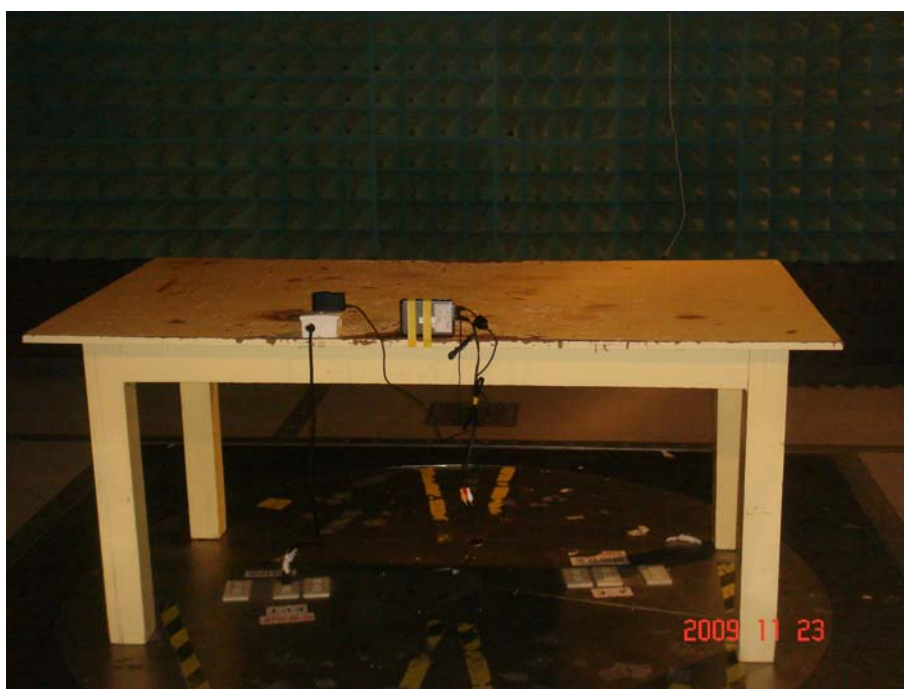


## MODE 2





## RADIATED EMISSION TEST MODE 1



## MODE 2

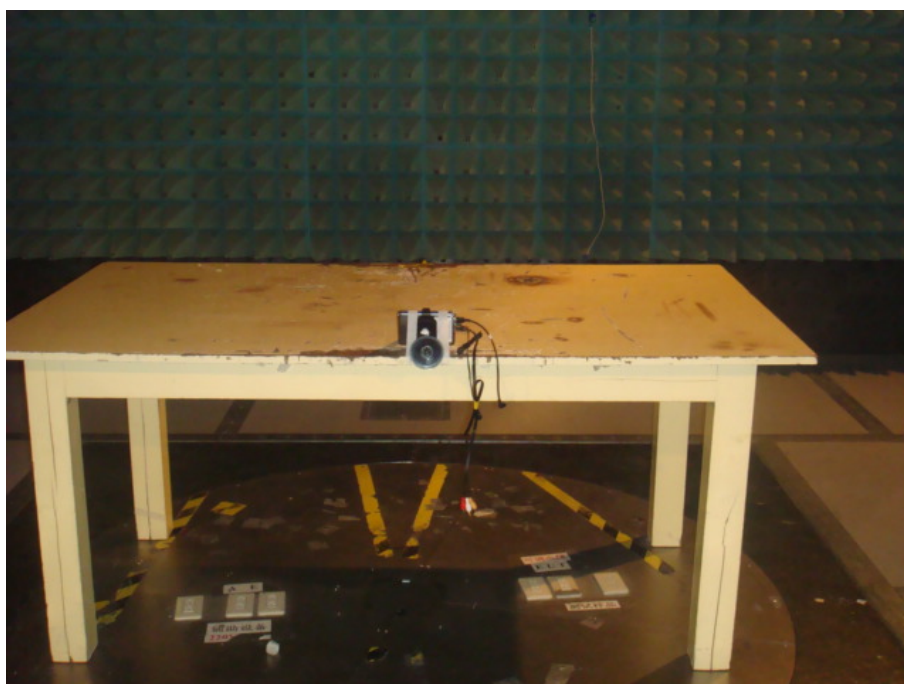




### MODE 3



## MODE 4



## 6 PHOTOGRAPHS OF THE EUT







## 7 INFORMATION ON THE TESTING LABORATORIES

We, ADT (Shanghai) Corporation, were founded in 2004 to provide our best service in EMC, Radio and Vehicle consultation. Our laboratories are accredited by the following accreditation bodies according to ISO/IEC 17025 (2005) .

<b>USA</b>	A2LA Certificate No.: 2343.01
<b>China</b>	CNAS Certificate No.: L2810

Copies of accreditation certificates could be inquired from our office. If you have any comments, please feel free to contact us at the following:

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Email: [bvadtshmail@cn.bureauveritas.com](mailto:bvadtshmail@cn.bureauveritas.com)

## **8 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No any modifications are made to the EUT by the lab during the test.

**--- END ---**