Partial FCC RF Test Report

APPLICANT	:	Getac Technology Corporation
EQUIPMENT	:	Notebook PC
BRAND NAME	:	Getac
MODEL NAME	:	S400
FCC ID	:	QYLS400G
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	Digital Transmission System (DTS)

This is a partial report which is only valid combined with the Integrated WLAN Module (Brand name: Intel / Model name: 622ANHMW, FCC ID: PD9622ANH) Report.

The product was received on Aug. 17, 2010 and completely tested on Sep. 08, 2010. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

Anderson Chiu

Anderson Chiu / Deputy Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL INC.
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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR081715-01B	Rev. 01	Initial issue of report	Sep. 14, 2010

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(d)	A8.5	Frequency Band Edges	≤ 20dBc	Pass	-
3.2	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 10.4 dB at 3.214 MHz
3.3	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.99 dB at 2488.22 MHz
3.4	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Getac Technology Corporation

5F., Building A, No. 209, Sec. 1, Nangang Rd., Nangang Dist., Taipei City 11568, Taiwan, R.O.C.

1.2 Manufacturer

GeTAC Technology(Kunshan)Co., LTD.

No. 269, 2nd Road, Export Processing Zone, Changjiang South Road, Kunshan, Jiangsu, P.R.C.

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Notebook PC
Brand Name	Getac
Model Name	S400
FCC ID	QYLS400G
Tx/Rx Frequency Range	802.11b/g/n : 2400 MHz ~ 2483.5 MHz 802.11a/n : 5725 MHz ~ 5850 MHz
Channel Spacing	802.11b/g : 5 MHz 802.11a : 20 MHz
Maximum Output Power to Antenna	**<2400 MHz ~ 2483.5 MHz>** 802.11b : 16.14 dBm (0.041 W) 802.11g : 16.11 dBm (0.041 W) 802.11n (BW 20MHz) : 16.12 dBm (0.041 W) 802.11n (BW 40MHz) : 15.97 dBm (0.040 W) **<5725 MHz ~ 5850 MHz>** 802.11a : 16.28 dBm (0.042 W) 802.11n (BW 20MHz) : 15.90 dBm (0.039 W) 802.11n (BW 40MHz) : 16.01 dBm (0.040 W)
Antenna Type	802.11b/g/n : PIFA Antenna with gain -3.8 dBi 802.11a/n : PIFA Antenna with gain -4.0 dBi
Type of Antenna Connector	N/A
HW Version	R0B
SW Version	R005J
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Identical Prototype

Remark:

1. For other wireless features of this EUT, test report will be issued separately.

2. This test report recorded only product characteristics and test results of Digital Transmission System (DTS).

3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	CO05-HY	03CH07HY	TW1022/4086B-1

1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 (Measurement Guidelines of DTS)
- ANSI C63.4-2003
- IC RSS-210 Issue 7

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	LCD Monitor	Lenovo	6135-AB1	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
6.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	N/A	N/A
7.	Earphone	Ergotech	ET-E200	FCC DoC	Unshielded, 1.8 m	N/A
8.	(USB) Mouse	LOGITECH	M-BZ96C	FCC DoC	Shielded, 1.7 m	N/A
9.	(PS2) Mouse	detrois	CM-201	FCC DoC	Shielded, 1.4 m	N/A
10.	Keyboard	Logitech	Y-S0002	FCC DoC	Shielded, 1.3 m	N/A
11.	(PS2) Keyboard	Acer	KB-2971	FCC DoC	Shielded, 1.3 m	N/A
12.	Printer	HP	Laser Jet 1300	FCC DoC	Unshielded, 1.8 m	Unshielded, 1.8 m
13.	Printer	EPSON	C61	FCC DoC	N/A	Unshielded, 1.8 m
14.	e-SATA HD	FREECOM	SSYBBA	FCC DoC	Unshielded, 1.8 m	N/A
15.	Modem	ACCEX	DM1414	IFAXDM1414	Shielded, 1.5 m	N/A
16.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A

2 Test Configuration of Equipment Under Test

2.1 RF Power

Preliminary tests were performed in different data rate and recorded the RF power output in the following table:

Channel	Frequency	802.11b RF Power (dBm)	
		Data Rate: 1Mbps	
		Chain A	Chain B
CH 01	2412 MHz	16.02	16.01
CH 06	2437 MHz	15.98	**16.14**
CH 11	2462 MHz	15.72	15.96

Channel	Frequency	802.11g RF Power (dBm)	
		Data Rate: 6Mbps	
		Chain A	Chain B
CH 01	2412 MHz	14.58	14.69
CH 06	2437 MHz	**16.11**	16.10
CH 11	2462 MHz	13.97	13.97

Channel	Frequency	802.11n (BW 20MHz) RF Power (dBm)		
		Data Rate: HT0		Data Rate: HT8
		SISO		2Tx
		Chain A	Chain B	Chain A+B
CH 01	2412 MHz	13.69	14.13	13.21
CH 06	2437 MHz	**16.12**	15.76	15.86
CH 11	2462 MHz	14.12	14.05	13.75

Channel	Frequency	802.11n (BW 40MHz) RF Power (dBm)		
		Data Rate: HT0		Data Rate: HT8
		SISO		2Tx
		Chain A	Chain B	Chain A+B
CH 03	2422 MHz	11.48	11.74	11.51
CH 06	2437 MHz	**15.97**	15.30	15.39
CH 09	2452 MHz	11.47	11.67	11.61

Channel	Frequency	802.11a RF Power (dBm)	
		Data Rate: 6Mbps	
		Chain A	Chain B
CH149	5745 MHz	15.27	15.28
CH157	5785 MHz	15.71	16.08
CH165	5825 MHz	15.77	**16.28**

Channel	Frequency	802.11n (BW 20MHz) RF Power (dBm)		
		Data Rate: HT0		Data Rate: HT8
		SISO		2Tx
		Chain A	Chain B	Chain A+B
CH149	5745 MHz	15.18	15.31	15.72
CH157	5785 MHz	15.19	15.77	15.54
CH165	5825 MHz	15.29	15.88	**15.90**

Channel	Frequency	802.11n (BW 40MHz) RF Power (dBm)		
		Data Rate: HT0		Data Rate: HT8
		SISO		2Tx
		Chain A	Chain B	Chain A+B
CH 151	5755 MHz	15.79	15.69	15.71
CH 159	5795 MHz	15.50	**16.01**	15.70

Remark:

1. The EUT is programmed to transmit signals continuously for all testing.
2. SISO stands for single input and single output. It means that only one chain transmits signals at a time.
3. 2Tx is one type of MIMO, which means that two chains transmit signals at the same time.

2.2 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following table is showing the total pre-scanned test modes, and the worst modes are recorded in this report only.

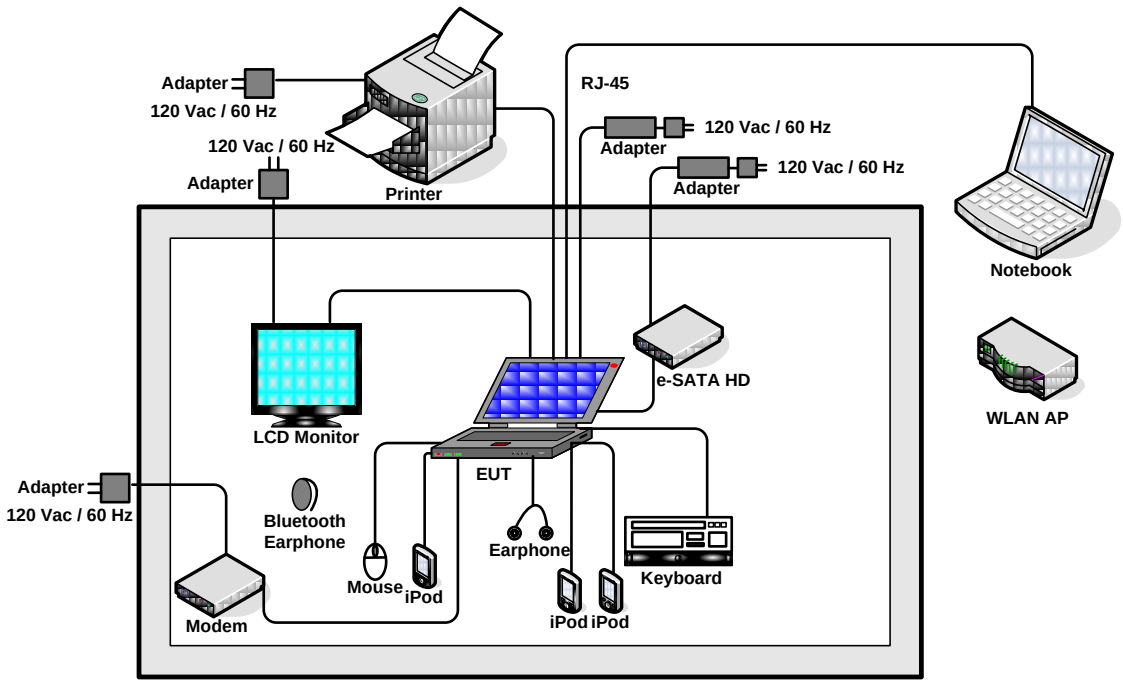
Test Cases	
Test Item	**802.11b (Modulation : DSSS)** **802.11g/n (Modulation : OFDM)** **802.11a/n (Modulation : OFDM)**
Radiated TCs	Mode 1: 802.11b_CH01_2412 MHz Mode 2: 802.11b_CH06_2437 MHz Mode 3: 802.11b_CH11_2462 MHz Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n_CH01_2412 MHz (BW 20M) Mode 8: 802.11n_CH06_2437 MHz (BW 20M) Mode 9: 802.11n_CH11_2462 MHz (BW 20M) Mode 10: 802.11n_CH03_2422 MHz (BW 40M) Mode 11: 802.11n_CH06_2437 MHz (BW 40M) Mode 12: 802.11n_CH09_2452 MHz (BW 40M) Mode 13: 802.11a_CH149_5745 MHz Mode 14: 802.11a_CH157_5785 MHz Mode 15: 802.11a_CH165_5825 MHz Mode 16: 802.11n_CH149_5745 MHz (BW 20M) Mode 17: 802.11n_CH157_5785 MHz (BW 20M) Mode 18: 802.11n_CH165_5825 MHz (BW 20M) Mode 19: 802.11n_CH151_5755 MHz (BW 40M) Mode 20: 802.11n_CH159_5795 MHz (BW 40M)

AC Conducted Emission	Mode 1 : GSM850 (GPRS 8) Idle + WLAN Link + Bluetooth Link + TC + Adapter

Remark:

1. TC stands for Test Configuration, and consists of monitor, printer, HD, iPod, modem, mouse, earphone, keyboard, RJ-45 and GPS Rx.
2. Mode 7~12, and 16~20 of radiated emission only verify bandedge.
3. Only the radiated emission and conducted emission tests were performed in this report and the conducted test cases can be referred to the WLANC module (Brand name: Intel / Model name: 622ANHMW, FCC ID: PD9622ANH, AEGIS Report Number: INTEL-090601F) report.

2.3 Connection Diagram of Test System



2.4 RF Utility

The programmed RF utility “CRTU”, is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

3 Test Result

3.1 Band Edges Measurement

3.1.1 Limit of Band Edges

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB.

3.1.2 Measuring Instruments

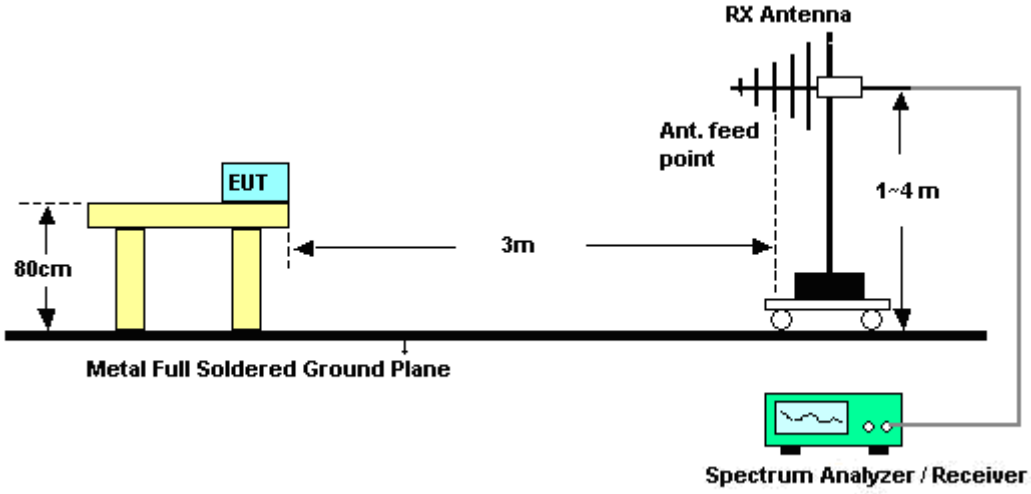
See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) > RBW. Band edge emissions must be at least 20 dB below the highest emission level within the authorized band as measured with a 100 kHz RBW. Note: If the output power of this device was measured by power meter, the attenuation under this paragraph shall be 30 dB instead of 20 dB.
3. Radiated emission test: Apply to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep=Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation as in FCC Section 15.35(b) and (c).

3.1.4 Test Setup

<Radiated Band Edges>



3.1.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	**Temperature :**	26~27°C
Test Band :	802.11b	**Relative Humidity :**	43~44%
Test Channel :	01	**Test Engineer :**	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	**Level (dBuV/m)**	**Over Limit (dB)**	**Limit Line (dBuV/m)**	**Read Level (dBuV)**	**Antenna Factor (dB)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Ant Pos (cm)**	**Table Pos (deg)**	**Remark**
2385.81	58.13	-15.87	74	56.04	31.7	4.47	34.08	134	217	Peak
2385.81	32.68	-21.32	54	30.59	31.7	4.47	34.08	134	217	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	**Level (dBuV/m)**	**Over Limit (dB)**	**Limit Line (dBuV/m)**	**Read Level (dBuV)**	**Antenna Factor (dB)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Ant Pos (cm)**	**Table Pos (deg)**	**Remark**
2385.81	56.35	-17.65	74	54.26	31.7	4.47	34.08	100	273	Peak
2385.81	49.37	-4.63	54	47.28	31.7	4.47	34.08	100	273	Average

Test Mode :	Mode 3	**Temperature :**	26~27°C
Test Band :	802.11b	**Relative Humidity :**	43~44%
Test Channel :	11	**Test Engineer :**	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	**Level (dBuV/m)**	**Over Limit (dB)**	**Limit Line (dBuV/m)**	**Read Level (dBuV)**	**Antenna Factor (dB)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Ant Pos (cm)**	**Table Pos (deg)**	**Remark**
2488.22	56.75	-17.25	74	54.44	31.8	4.59	34.08	100	112	Peak
2488.22	50.01	-3.99	54	47.7	31.8	4.59	34.08	100	112	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	**Level (dBuV/m)**	**Over Limit (dB)**	**Limit Line (dBuV/m)**	**Read Level (dBuV)**	**Antenna Factor (dB)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Ant Pos (cm)**	**Table Pos (deg)**	**Remark**
2488.22	52.85	-21.15	74	50.54	31.8	4.59	34.08	100	284	Peak
2488.22	42.29	-11.71	54	39.98	31.8	4.59	34.08	100	284	Average

Test Mode :	Mode 4	Temperature :	26~27°C
Test Band :	802.11g	Relative Humidity :	43~44%
Test Channel :	01	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.8	51.08	-22.92	74	48.96	31.7	4.5	34.08	133	219	Peak
2389.8	35.24	-18.76	54	33.12	31.7	4.5	34.08	133	219	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.8	51.78	-22.22	74	49.66	31.7	4.5	34.08	100	272	Peak
2389.8	35.86	-18.14	54	33.74	31.7	4.5	34.08	100	272	Average

Test Mode :	Mode 6	Temperature :	26~27°C
Test Band :	802.11g	Relative Humidity :	43~44%
Test Channel :	11	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	53.36	-20.64	74	51.07	31.78	4.59	34.08	101	113	Peak
2483.66	35.87	-18.13	54	33.58	31.78	4.59	34.08	101	113	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.04	52.23	-21.77	74	49.94	31.78	4.59	34.08	100	287	Peak
2484.04	34.77	-19.23	54	32.48	31.78	4.59	34.08	100	287	Average

Test Mode :	Mode 7	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	43~44%
Test Channel :	01	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	56.74	-17.26	74	54.62	31.7	4.5	34.08	102	310	Peak
2389.99	37.4	-16.6	54	35.28	31.7	4.5	34.08	102	310	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.8	51.9	-22.1	74	49.78	31.7	4.5	34.08	100	4	Peak
2389.8	34.35	-19.65	54	32.23	31.7	4.5	34.08	100	4	Average

Test Mode :	Mode 9	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	43~44%
Test Channel :	11	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	54.38	-19.62	74	52.09	31.78	4.59	34.08	100	307	Peak
2483.5	36.65	-17.35	54	34.36	31.78	4.59	34.08	100	307	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	51.25	-22.75	74	48.96	31.78	4.59	34.08	119	3	Peak
2483.5	35.04	-18.96	54	32.75	31.78	4.59	34.08	119	3	Average

Test Mode :	Mode 10	Temperature :	26~27°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	43~44%
Test Channel :	03	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.8	55.6	-18.4	74	53.48	31.7	4.5	34.08	100	308	Peak
2389.8	40.42	-13.58	54	38.3	31.7	4.5	34.08	100	308	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	49.82	-24.18	74	47.7	31.7	4.5	34.08	100	1	Peak
2389.99	35.78	-18.22	54	33.66	31.7	4.5	34.08	100	1	Average

Test Mode :	Mode 12	Temperature :	26~27°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	43~44%
Test Channel :	09	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.42	55.1	-18.9	74	52.81	31.78	4.59	34.08	100	308	Peak
2484.42	39.84	-14.16	54	37.55	31.78	4.59	34.08	100	308	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.04	52.74	-21.26	74	50.45	31.78	4.59	34.08	100	0	Peak
2484.04	35.91	-18.09	54	33.62	31.78	4.59	34.08	100	0	Average

Test Mode :	Mode 13	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	43~44%
Test Channel :	149	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	59.59	-14.14	73.73	51.26	34.51	7.01	33.19	103	52	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	64.8	-14.26	79.06	56.47	34.51	7.01	33.19	100	346	Peak

Test Mode :	Mode 15	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	43~44%
Test Channel :	165	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	52.15	-23.17	75.32	43.58	34.68	7.09	33.2	100	50	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	55.25	-24.27	79.52	46.68	34.68	7.09	33.2	100	335	Peak

Test Mode :	Mode 16	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	43~44%
Test Channel :	149	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	62.3	-10.01	72.31	53.97	34.51	7.01	33.19	100	52	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	67.02	-12.49	79.51	58.69	34.51	7.01	33.19	100	333	Peak

Test Mode :	Mode 18	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	43~44%
Test Channel :	165	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	58.72	-16.66	75.38	50.15	34.68	7.09	33.2	100	50	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	59.92	-19.68	79.6	51.35	34.68	7.09	33.2	100	336	Peak

Test Mode :	Mode 19	Temperature :	26~27°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	43~44%
Test Channel :	151	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	63.5	-9.47	72.97	55.17	34.51	7.01	33.19	102	52	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	68.52	-10.13	78.65	60.19	34.51	7.01	33.19	100	334	Peak

Test Mode :	Mode 20	Temperature :	26~27°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	43~44%
Test Channel :	159	Test Engineer :	Kay Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	50.92	-23.87	74.79	42.35	34.68	7.09	33.2	102	53	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	51.05	-29.4	80.45	42.48	34.68	7.09	33.2	100	333	Peak

3.2 AC Conducted Emission Measurement

3.2.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

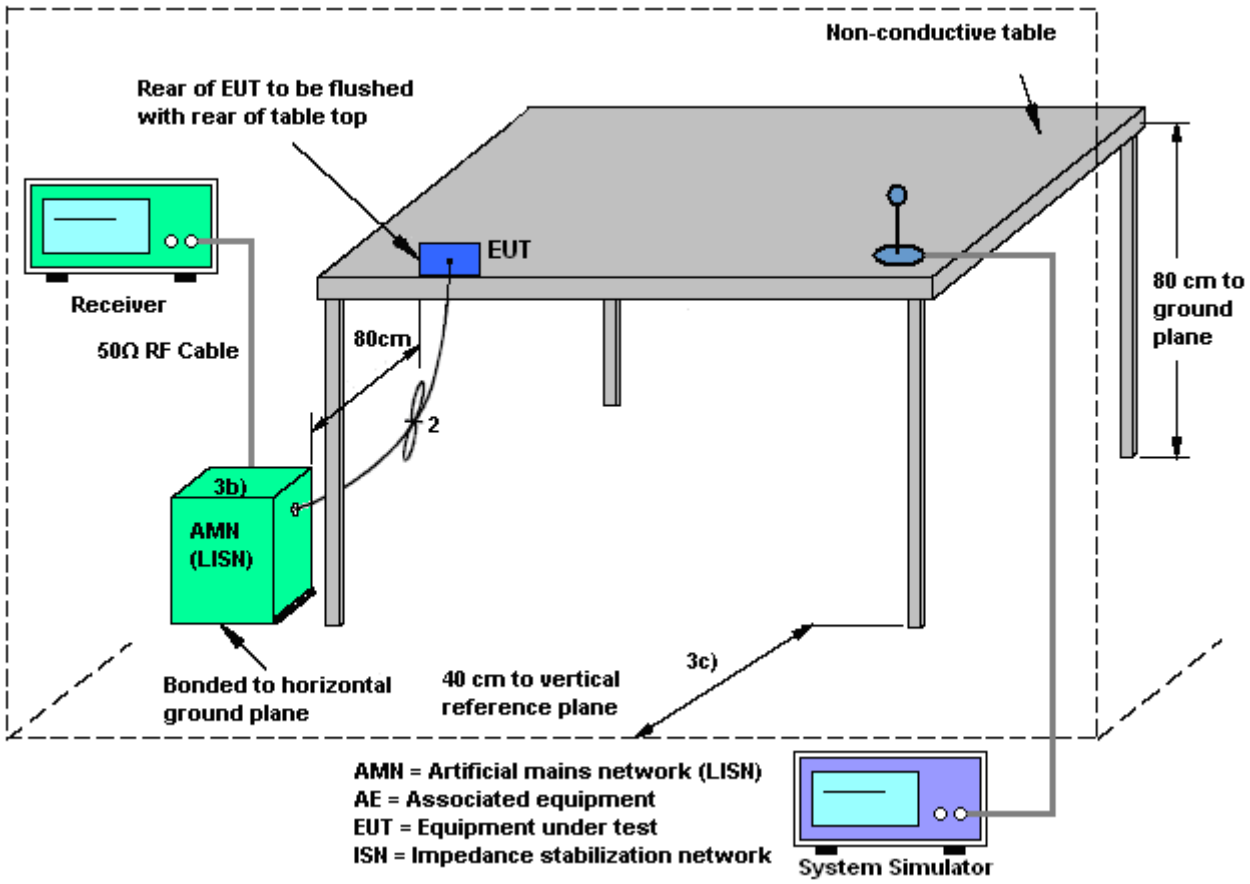
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

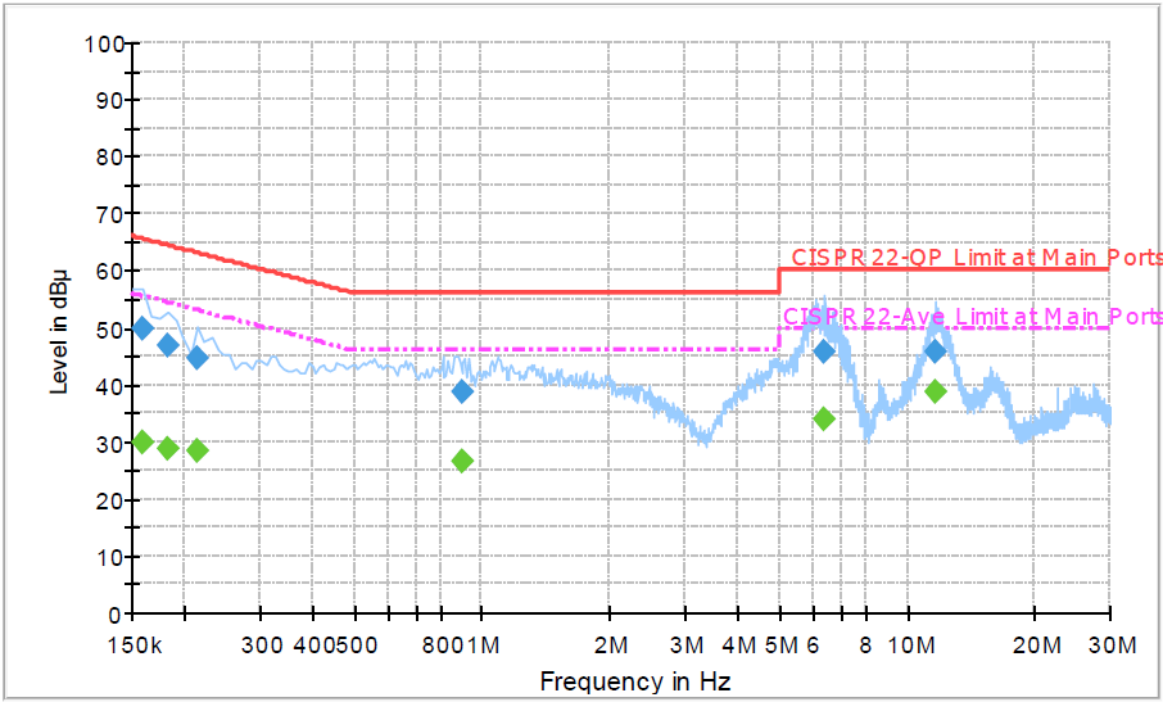
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.2.4 Test Setup



3.2.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Novic Chiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 (GPRS 8) Idle + WLAN Link + Bluetooth Link + TC + Adapter		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



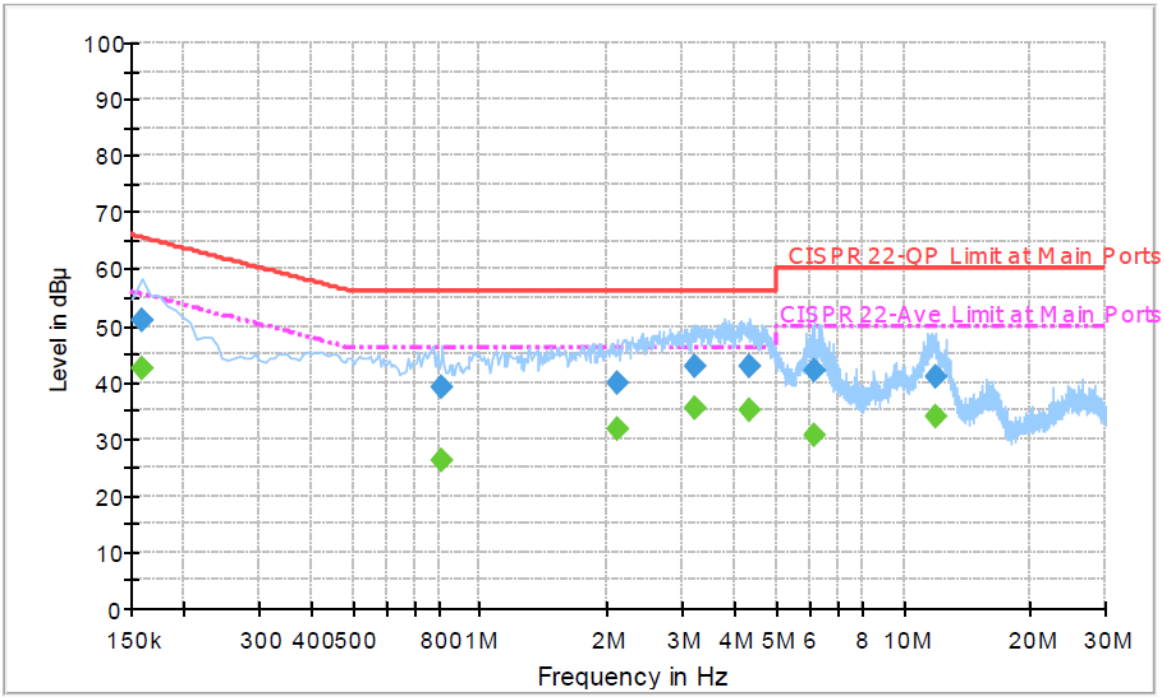
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	49.9	Off	L1	19.3	15.7	65.6
0.182000	47.0	Off	L1	19.4	17.4	64.4
0.214000	44.7	Off	L1	19.3	18.3	63.0
0.902000	38.6	Off	L1	19.4	17.4	56.0
6.342000	45.6	Off	L1	19.5	14.4	60.0
11.654000	45.7	Off	L1	19.6	14.3	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	29.8	Off	L1	19.3	25.8	55.6
0.182000	28.7	Off	L1	19.4	25.7	54.4
0.214000	28.3	Off	L1	19.3	24.7	53.0
0.902000	26.5	Off	L1	19.4	19.5	46.0
6.342000	34.1	Off	L1	19.5	15.9	50.0
11.654000	38.9	Off	L1	19.6	11.1	50.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Novic Chiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 (GPRS 8) Idle + WLAN Link + Bluetooth Link + TC + Adapter		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	51.1	Off	N	19.4	14.5	65.6
0.814000	39.2	Off	N	19.5	16.8	56.0
2.110000	39.9	Off	N	19.5	16.1	56.0
3.214000	43.0	Off	N	19.5	13.0	56.0
4.342000	42.8	Off	N	19.5	13.2	56.0
6.142000	41.9	Off	N	19.5	18.1	60.0
11.918000	40.9	Off	N	19.7	19.1	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	42.6	Off	N	19.4	13.0	55.6
0.814000	26.1	Off	N	19.5	19.9	46.0
2.110000	31.7	Off	N	19.5	14.3	46.0
3.214000	35.6	Off	N	19.5	10.4	46.0
4.342000	34.9	Off	N	19.5	11.1	46.0
6.142000	30.7	Off	N	19.5	19.3	50.0

3.3 Radiated Emission Measurement

3.3.1 Limit of Radiated Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (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

3.3.2 Measuring Instruments

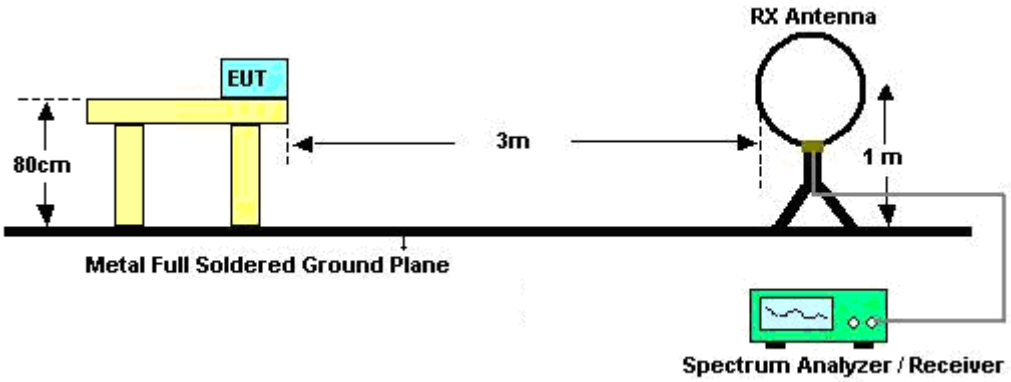
See list of measuring instruments of this test report.

3.3.3 Test Procedures

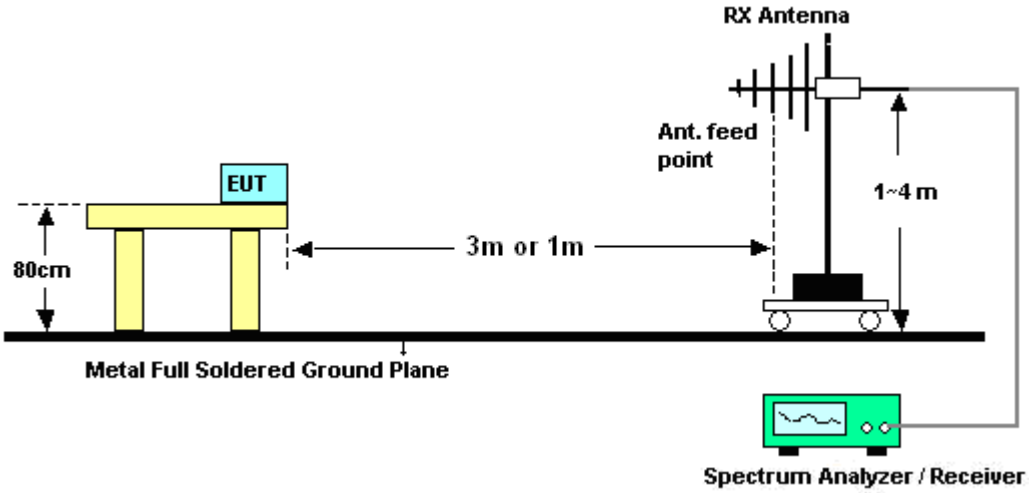
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
   (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold.
   (2) Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.
   Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB)
3. Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

3.3.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



3.3.5 Test Results of Radiated Emissions (9kHz ~ 30MHz)

Test Engineer :	Kay Wu	Temperature :	26~27°C
		Relative Humidity :	43~44%

Frequency (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

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

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

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

3.3.6 Test Result of Radiated Emission (30MHz ~ 10th Harmonic)

Test Mode :	Mode 1	**Temperature :**	26~27°C
Test Channel :	01	**Relative Humidity :**	43~44%
Test Engineer :	Kay Wu	**Polarization :**	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.58	-18.42	40	34.08	18.48	0.58	31.56	-	-	Peak
95.88	26.44	-17.06	43.5	46.52	10.52	0.95	31.55	133	342	Peak
119.91	22.78	-20.72	43.5	40.6	12.63	1.07	31.52	-	-	Peak
366.5	28.71	-17.29	46	42.86	15.41	1.71	31.27	-	-	Peak
531	28.04	-17.96	46	38.09	18.85	2.1	31	-	-	Peak
826.4	24.33	-21.67	46	31.44	20.8	2.61	30.52	-	-	Peak
2385.81	32.68	-21.32	54	30.59	31.7	4.47	34.08	134	217	Average
2385.81	58.13	-15.87	74	56.04	31.7	4.47	34.08	134	217	Peak
2412	104.1	-	-	101.97	31.71	4.5	34.08	134	217	Average
2412	108.19	-	-	106.06	31.71	4.5	34.08	134	217	Peak
2484	32.88	-21.12	54	30.59	31.78	4.59	34.08	134	217	Average
2484	44.63	-29.37	74	42.34	31.78	4.59	34.08	134	217	Peak

Test Mode :	Mode 1	Temperature :	26~27°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	29.89	-10.11	40	42.39	18.48	0.58	31.56	103	78	Peak
143.94	31.22	-12.28	43.5	50.52	11.07	1.14	31.51	-	-	Peak
240.06	26.77	-19.23	46	45.26	11.68	1.34	31.51	-	-	Peak
399.4	28.28	-17.72	46	41.19	16.45	1.82	31.18	-	-	Peak
671.7	23.98	-22.02	46	32.61	19.77	2.35	30.75	-	-	Peak
885.2	24.42	-21.58	46	31.26	20.97	2.68	30.49	-	-	Peak
2385.81	49.37	-4.63	54	47.28	31.7	4.47	34.08	100	273	Average
2385.81	56.35	-17.65	74	54.26	31.7	4.47	34.08	100	273	Peak
2412	103.84	-	-	101.71	31.71	4.5	34.08	100	273	Average
2412	107.79	-	-	105.66	31.71	4.5	34.08	100	273	Peak
2496	33.33	-20.67	54	30.99	31.8	4.62	34.08	100	273	Average
2496	44.36	-29.64	74	42.02	31.8	4.62	34.08	100	273	Peak

Test Mode :	Mode 2	Temperature :	26~27°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
53.49	31.16	-8.84	40	54.44	7.53	0.73	31.54	128	299	Peak
120.18	25.17	-18.33	43.5	43.01	12.61	1.07	31.52	-	-	Peak
233.31	27.79	-18.21	46	47.11	10.84	1.34	31.5	-	-	Peak
431.6	28.66	-17.34	46	40.86	17.09	1.87	31.16	-	-	Peak
608	21.15	-24.85	46	30.45	19.35	2.2	30.85	-	-	Peak
772.5	23.71	-22.29	46	30.98	20.73	2.54	30.54	-	-	Peak
2320	33.9	-20.1	54	31.95	31.63	4.41	34.09	102	238	Average
2320	45.39	-28.61	74	43.44	31.63	4.41	34.09	102	238	Peak
2437	102.25	-	-	100.05	31.75	4.53	34.08	102	238	Average
2437	105.95	-	-	103.77	31.73	4.53	34.08	102	238	Peak
2484	32.86	-21.14	54	30.57	31.78	4.59	34.08	102	238	Average
2484	44.6	-29.4	74	42.31	31.78	4.59	34.08	102	238	Peak

Test Mode :	Mode 2	Temperature :	26~27°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
58.62	29.59	-10.41	40	53.72	6.69	0.73	31.55	106	57	Peak
118.56	28.78	-14.72	43.5	46.62	12.61	1.07	31.52	-	-	Peak
233.31	25.68	-20.32	46	45	10.84	1.34	31.5	-	-	Peak
390.3	29.23	-16.77	46	42.52	16.15	1.77	31.21	-	-	Peak
683.6	22.98	-23.02	46	31.52	19.85	2.35	30.74	-	-	Peak
766.2	23.12	-22.88	46	30.42	20.73	2.51	30.54	-	-	Peak
2322	33.72	-20.28	54	31.77	31.63	4.41	34.09	100	275	Average
2322	46.28	-27.72	74	44.33	31.63	4.41	34.09	100	275	Peak
2437	102.5	-	-	100.3	31.75	4.53	34.08	100	275	Average
2437	106.83	-	-	104.65	31.73	4.53	34.08	100	275	Peak
2484	33.13	-20.87	54	30.84	31.78	4.59	34.08	100	275	Average
2484	45.23	-28.77	74	42.94	31.78	4.59	34.08	100	275	Peak

Test Mode :	Mode 3	Temperature :	26~27°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
32.97	30.11	-9.89	40	44.36	16.71	0.58	31.54	141	283	Peak
192.27	27.17	-16.33	43.5	48.07	9.34	1.23	31.47	-	-	Peak
258.69	25.55	-20.45	46	42.03	13.58	1.42	31.48	-	-	Peak
431.6	28.62	-17.38	46	40.82	17.09	1.87	31.16	-	-	Peak
566	22.09	-23.91	46	31.56	19.3	2.15	30.92	-	-	Peak
768.3	24.01	-21.99	46	31.28	20.73	2.54	30.54	-	-	Peak
2388	33.78	-20.22	54	31.69	31.7	4.47	34.08	100	112	Average
2388	45.32	-28.68	74	43.23	31.7	4.47	34.08	100	112	Peak
2462	99.82	-	-	97.57	31.77	4.56	34.08	100	112	Average
2462	103.42	-	-	101.17	31.77	4.56	34.08	100	112	Peak
2488.22	50.01	-3.99	54	47.7	31.8	4.59	34.08	100	112	Average
2488.22	56.75	-17.25	74	54.44	31.8	4.59	34.08	100	112	Peak

Test Mode :	Mode 3	Temperature :	26~27°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
58.62	28.9	-11.1	40	53.03	6.69	0.73	31.55	100	112	Peak
106.95	29.91	-13.59	43.5	48.46	12.04	0.95	31.54	-	-	Peak
240.06	23.12	-22.88	46	41.61	11.68	1.34	31.51	-	-	Peak
365.8	30.27	-15.73	46	44.42	15.41	1.71	31.27	-	-	Peak
568.1	25.14	-20.86	46	34.58	19.3	2.18	30.92	-	-	Peak
746.6	23.8	-22.2	46	31.18	20.66	2.51	30.55	-	-	Peak
2328	33.67	-20.33	54	31.72	31.63	4.41	34.09	100	284	Average
2328	45.62	-28.38	74	43.67	31.63	4.41	34.09	100	284	Peak
2462	99.36	-	-	97.11	31.77	4.56	34.08	100	284	Average
2462	102.82	-	-	100.54	31.77	4.59	34.08	100	284	Peak
2488.22	42.29	-11.71	54	39.98	31.8	4.59	34.08	100	284	Average
2488.22	52.85	-21.15	74	50.54	31.8	4.59	34.08	100	284	Peak

Test Mode :	Mode 4	Temperature :	26~27°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
61.59	30.08	-9.92	40	54.61	6.28	0.73	31.54	-	-	Peak
116.13	36.08	-7.42	43.5	54.11	12.54	0.95	31.52	133	294	Peak
233.31	27.3	-18.7	46	46.62	10.84	1.34	31.5	-	-	-
303.5	27.49	-18.51	46	43.48	13.73	1.55	31.27	-	-	-
433	31.81	-14.19	46	44.02	17.08	1.87	31.16	-	-	-
664	22.75	-23.25	46	31.49	19.72	2.3	30.76	-	-	-
2389.8	35.24	-18.76	54	33.12	31.7	4.5	34.08	133	219	Average
2389.8	51.08	-22.92	74	48.96	31.7	4.5	34.08	133	219	Peak
2412	92.85	-	-	90.72	31.71	4.5	34.08	133	219	Average
2412	102.87	-	-	100.74	31.71	4.5	34.08	133	219	Peak
2484	32.31	-21.69	54	30.02	31.78	4.59	34.08	133	219	Average
2484	44.55	-29.45	74	42.26	31.78	4.59	34.08	133	219	Peak

Test Mode :	Mode 4	Temperature :	26~27°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	27.99	-12.01	40	40.49	18.48	0.58	31.56	-	-	Peak
61.59	29.68	-10.32	40	54.21	6.28	0.73	31.54	-	-	Peak
143.94	36.47	-7.03	43.5	55.77	11.07	1.14	31.51	107	360	Peak
345.5	28.31	-17.69	46	43.02	14.89	1.71	31.31	-	-	Peak
498.8	29.67	-16.33	46	40.62	18.09	2.04	31.08	-	-	Peak
685.7	22.45	-23.55	46	30.96	19.87	2.35	30.73	-	-	Peak
2389.8	35.86	-18.14	54	33.74	31.7	4.5	34.08	100	272	Average
2389.8	51.78	-22.22	74	49.66	31.7	4.5	34.08	100	272	Peak
2412	94.12	-	-	91.99	31.71	4.5	34.08	100	272	Average
2412	102.99	-	-	100.86	31.71	4.5	34.08	100	272	Peak
2488	32.82	-21.18	54	30.51	31.8	4.59	34.08	100	272	Average
2488	44.86	-29.14	74	42.55	31.8	4.59	34.08	100	272	Peak

Test Mode :	Mode 5	Temperature :	26~27°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	26.4	-13.6	40	38.9	18.48	0.58	31.56			Peak
61.05	27.52	-12.48	40	52.03	6.31	0.73	31.55	125	346	Peak
240.06	29.69	-16.31	46	48.18	11.68	1.34	31.51			Peak
366.5	28.99	-17.01	46	43.14	15.41	1.71	31.27			Peak
532.4	24.83	-21.17	46	34.85	18.88	2.1	31			Peak
776	24.79	-21.21	46	32.05	20.74	2.54	30.54			Peak
2318	33.71	-20.29	54	31.76	31.63	4.41	34.09	102	241	Average
2318	45.44	-28.56	74	43.49	31.63	4.41	34.09	102	241	Peak
2437	92.33	-	-	90.13	31.75	4.53	34.08	102	241	Average
2437	101.86	-	-	99.68	31.73	4.53	34.08	102	241	Peak
2486	32.38	-21.62	54	30.09	31.78	4.59	34.08	102	241	Average
2486	43.99	-30.01	74	41.7	31.78	4.59	34.08	102	241	Peak

Test Mode :	Mode 5	Temperature :	26~27°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	28.14	-11.86	40	40.64	18.48	0.58	31.56	100	86	Peak
123.42	31.25	-12.25	43.5	49.16	12.54	1.07	31.52	-	-	Peak
279.21	28.2	-17.8	46	44.85	13.25	1.48	31.38	-	-	Peak
365.1	30.45	-15.55	46	44.63	15.38	1.71	31.27	-	-	Peak
533.1	28.45	-17.55	46	38.44	18.9	2.1	30.99	-	-	Peak
674.5	24.79	-21.21	46	33.4	19.79	2.35	30.75	-	-	Peak
2340	33.51	-20.49	54	31.52	31.64	4.44	34.09	100	277	Average
2340	45.21	-28.79	74	43.22	31.64	4.44	34.09	100	277	Peak
2437	91.45	-	-	89.25	31.75	4.53	34.08	100	277	Average
2437	101.38	-	-	99.2	31.73	4.53	34.08	100	277	Peak
2484	32.63	-21.37	54	30.34	31.78	4.59	34.08	100	277	Average
2484	44.17	-29.83	74	41.88	31.78	4.59	34.08	100	277	Peak

Test Mode :	Mode 6	Temperature :	26~27°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.72	-18.28	40	34.22	18.48	0.58	31.56	-	-	Peak
143.94	30.23	-13.27	43.5	49.53	11.07	1.14	31.51	143	229	Peak
240.06	29.62	-16.38	46	48.11	11.68	1.34	31.51	-	-	Peak
304.2	28.44	-17.56	46	44.43	13.73	1.55	31.27	-	-	Peak
431.6	29.01	-16.99	46	41.21	17.09	1.87	31.16	-	-	Peak
533.1	25.14	-20.86	46	35.13	18.9	2.1	30.99	-	-	Peak
2370	33.68	-20.32	54	31.61	31.68	4.47	34.08	101	113	Average
2370	44.96	-29.04	74	42.89	31.68	4.47	34.08	101	113	Peak
2462	89.98	-	-	87.73	31.77	4.56	34.08	101	113	Average
2462	100.19	-	-	97.94	31.77	4.56	34.08	101	113	Peak
2483.66	35.87	-18.13	54	33.58	31.78	4.59	34.08	101	113	Average
2483.66	53.36	-20.64	74	51.07	31.78	4.59	34.08	101	113	Peak

Test Mode :	Mode 6	Temperature :	26~27°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	24.72	-15.28	40	37.22	18.48	0.58	31.56	-	-	Peak
168.78	33.7	-9.8	43.5	54.24	9.78	1.23	31.55	115	120	Peak
258.69	32.8	-13.2	46	49.28	13.58	1.42	31.48	-	-	Peak
349	28.62	-17.38	46	43.26	14.96	1.71	31.31	-	-	Peak
433	31.3	-14.7	46	43.51	17.08	1.87	31.16	-	-	Peak
564.6	28.47	-17.53	46	37.95	19.3	2.15	30.93	-	-	Peak
2310	33.4	-20.6	54	31.5	31.61	4.38	34.09	100	287	Average
2310	45.36	-28.64	74	43.46	31.61	4.38	34.09	100	287	Peak
2462	90.07	-	-	87.82	31.77	4.56	34.08	100	287	Average
2462	100.25	-	-	97.97	31.77	4.59	34.08	100	287	Peak
2484.04	34.77	-19.23	54	32.48	31.78	4.59	34.08	100	287	Average
2484.04	52.23	-21.77	74	49.94	31.78	4.59	34.08	100	287	Peak

Test Mode :	Mode 7	Temperature :	26~27°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	37.4	-16.6	54	35.28	31.7	4.5	34.08	102	310	Average
2389.99	56.74	-17.26	74	54.62	31.7	4.5	34.08	102	310	Peak
2412	90.53	-	-	88.4	31.71	4.5	34.08	102	310	Average
2412	100.66	-	-	98.5	31.71	4.53	34.08	102	310	Peak
2496	32.73	-21.27	54	30.39	31.8	4.62	34.08	102	310	Average
2496	44.59	-29.41	74	42.25	31.8	4.62	34.08	102	310	Peak

Test Mode :	Mode 7	Temperature :	26~27°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.8	34.35	-19.65	54	32.23	31.7	4.5	34.08	100	4	Average
2389.8	51.9	-22.1	74	49.78	31.7	4.5	34.08	100	4	Peak
2412	86.86	-	-	84.73	31.71	4.5	34.08	100	4	Average
2412	97.04	-	-	94.88	31.71	4.53	34.08	100	4	Peak
2486	32.57	-21.43	54	30.28	31.78	4.59	34.08	100	4	Average
2486	44.68	-29.32	74	42.39	31.78	4.59	34.08	100	4	Peak

Test Mode :	Mode 8	Temperature :	26~27°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2370	34.64	-19.36	54	32.57	31.68	4.47	34.08	100	302	Average
2370	47.31	-26.69	74	45.24	31.68	4.47	34.08	100	302	Peak
2437	93.4	-	-	91.2	31.75	4.53	34.08	100	302	Average
2437	103.26	-	-	101.08	31.73	4.53	34.08	100	302	Peak
2486	32.88	-21.12	54	30.59	31.78	4.59	34.08	100	302	Average
2486	45.52	-28.48	74	43.23	31.78	4.59	34.08	100	302	Peak

Test Mode :	Mode 8	Temperature :	26~27°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2342	32.64	-21.36	54	30.65	31.64	4.44	34.09	100	8	Average
2342	44.63	-29.37	74	42.64	31.64	4.44	34.09	100	8	Peak
2437	89.97	-	-	87.77	31.75	4.53	34.08	100	8	Average
2437	100.34	-	-	98.11	31.75	4.56	34.08	100	8	Peak
2492	32.6	-21.4	54	30.26	31.8	4.62	34.08	100	8	Average
2492	45.57	-28.43	74	43.23	31.8	4.62	34.08	100	8	Peak

Test Mode :	Mode 9	Temperature :	26~27°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2352	34.61	-19.39	54	32.6	31.66	4.44	34.09	100	307	Average
2352	46.9	-27.1	74	44.89	31.66	4.44	34.09	100	307	Peak
2462	91.76	-	-	89.51	31.77	4.56	34.08	100	307	Average
2462	101.29	-	-	99.04	31.77	4.56	34.08	100	307	Peak
2483.5	36.65	-17.35	54	34.36	31.78	4.59	34.08	100	307	Average
2483.5	54.38	-19.62	74	52.09	31.78	4.59	34.08	100	307	Peak

Test Mode :	Mode 9	Temperature :	26~27°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2372	32.51	-21.49	54	30.44	31.68	4.47	34.08	119	3	Average
2372	44.43	-29.57	74	42.36	31.68	4.47	34.08	119	3	Peak
2462	90.2	-	-	87.95	31.77	4.56	34.08	119	3	Average
2462	100.63	-	-	98.38	31.77	4.56	34.08	119	3	Peak
2483.5	35.04	-18.96	54	32.75	31.78	4.59	34.08	119	3	Average
2483.5	51.25	-22.75	74	48.96	31.78	4.59	34.08	119	3	Peak

Test Mode :	Mode 10	Temperature :	26~27°C
Test Channel :	03	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2422 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.8	40.42	-13.58	54	38.3	31.7	4.5	34.08	100	308	Average
2389.8	55.6	-18.4	74	53.48	31.7	4.5	34.08	100	308	Peak
2422	86.03	-	-	83.85	31.73	4.53	34.08	100	308	Average
2422	96.4	-	-	94.22	31.73	4.53	34.08	100	308	Peak
2496	32.97	-21.03	54	30.63	31.8	4.62	34.08	100	308	Average
2496	45.49	-28.51	74	43.15	31.8	4.62	34.08	100	308	Peak

Test Mode :	Mode 10	Temperature :	26~27°C
Test Channel :	03	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2422 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	35.78	-18.22	54	33.66	31.7	4.5	34.08	100	1	Average
2389.99	49.82	-24.18	74	47.7	31.7	4.5	34.08	100	1	Peak
2422	81.57	-	-	79.39	31.73	4.53	34.08	100	1	Average
2422	91.51	-	-	89.33	31.73	4.53	34.08	100	1	Peak
2500	32.42	-21.58	54	30.08	31.8	4.62	34.08	100	1	Average
2500	44.81	-29.19	74	42.47	31.8	4.62	34.08	100	1	Peak

Test Mode :	Mode 11	Temperature :	26~27°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	36.02	-17.98	54	33.9	31.7	4.5	34.08	100	301	Average
2390	48.5	-25.5	74	46.38	31.7	4.5	34.08	100	301	Peak
2437	89.89	-	-	87.69	31.75	4.53	34.08	100	301	Average
2437	99.9	-	-	97.72	31.73	4.53	34.08	100	301	Peak
2484	35.01	-18.99	54	32.72	31.78	4.59	34.08	100	301	Average
2484	48.72	-25.28	74	46.43	31.78	4.59	34.08	100	301	Peak

Test Mode :	Mode 11	Temperature :	26~27°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2366	32.58	-21.42	54	30.53	31.66	4.47	34.08	120	0	Average
2366	44.35	-29.65	74	42.3	31.66	4.47	34.08	120	0	Peak
2437	87.63	-	-	85.43	31.75	4.53	34.08	120	0	Average
2437	97.95	-	-	95.72	31.75	4.56	34.08	120	0	Peak
2484	34.56	-19.44	54	32.27	31.78	4.59	34.08	120	0	Average
2484	47.65	-26.35	74	45.36	31.78	4.59	34.08	120	0	Peak

Test Mode :	Mode 12	Temperature :	26~27°C
Test Channel :	09	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	2452 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2356	34.41	-19.59	54	32.4	31.66	4.44	34.09	100	308	Average
2356	47.35	-26.65	74	45.34	31.66	4.44	34.09	100	308	Peak
2452	97.6	-	-	95.37	31.75	4.56	34.08	100	308	Peak
2452	86.67	-	-	84.44	31.75	4.56	34.08	100	308	Peak
2484.42	39.84	-14.16	54	37.55	31.78	4.59	34.08	100	308	Average
2484.42	55.1	-18.9	74	52.81	31.78	4.59	34.08	100	308	Peak

Test Mode :	Mode 12	Temperature :	26~27°C
Test Channel :	09	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	2452 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2352	32.32	-21.68	54	30.31	31.66	4.44	34.09	100	0	Average
2352	44.27	-29.73	74	42.26	31.66	4.44	34.09	100	0	Peak
2452	84.01	-	-	81.78	31.75	4.56	34.08	100	0	Average
2452	94.56	-	-	92.33	31.75	4.56	34.08	100	0	Peak
2484.04	35.91	-18.09	54	33.62	31.78	4.59	34.08	100	0	Average
2484.04	52.74	-21.26	74	50.45	31.78	4.59	34.08	100	0	Peak

Test Mode :	Mode 13	Temperature :	26~27°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5745 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
132.33	22.33	-21.17	43.5	40.59	12.19	1.07	31.52	-	-	Peak
192	25.56	-17.94	43.5	46.51	9.29	1.23	31.47	-	-	Peak
300	31.16	-14.84	46	47.3	13.58	1.55	31.27	-	-	Peak
370.7	34.19	-11.81	46	48.14	15.54	1.77	31.26	100	176	Peak
531	28.91	-17.09	46	38.96	18.85	2.1	31	-	-	Peak
907.6	30.23	-15.77	46	36.92	21.08	2.7	30.47	-	-	Peak
5725	59.59	-14.14	73.73	51.26	34.51	7.01	33.19	103	52	Peak
5745	84	-	-	75.62	34.54	7.03	33.19	103	52	Average
5745	93.73	-	-	85.35	34.54	7.03	33.19	103	52	Peak
5850	49.6	-24.13	73.73	41.03	34.68	7.09	33.2	103	52	Peak

Test Mode :	Mode 13	Temperature :	26~27°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5745 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
61.05	30.18	-9.82	40	54.69	6.31	0.73	31.55	100	121	Peak
121.53	29.41	-14.09	43.5	47.28	12.58	1.07	31.52	-	-	Peak
192	29.13	-14.37	43.5	50.08	9.29	1.23	31.47	-	-	Peak
370.7	33.98	-12.02	46	47.93	15.54	1.77	31.26	-	-	Peak
433	32.94	-13.06	46	45.15	17.08	1.87	31.16	-	-	Peak
900.6	24.55	-21.45	46	31.29	21.04	2.7	30.48	-	-	Peak
5725	64.8	-14.26	79.06	56.47	34.51	7.01	33.19	100	346	Peak
5745	89.31	-	-	80.93	34.54	7.03	33.19	100	346	Average
5745	99.06	-	-	90.68	34.54	7.03	33.19	100	346	Peak
5850	50.24	-28.82	79.06	41.67	34.68	7.09	33.2	100	346	Peak

Test Mode :	Mode 14	Temperature :	26~27°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5785 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
111.81	24.74	-18.76	43.5	42.86	12.45	0.95	31.52	-	-	Peak
192	24.16	-19.34	43.5	45.11	9.29	1.23	31.47	-	-	Peak
233.31	28.49	-17.51	46	47.81	10.84	1.34	31.5	-	-	Peak
366.5	35.19	-10.81	46	49.34	15.41	1.71	31.27	100	17	Peak
843.9	28.81	-17.19	46	35.83	20.83	2.65	30.5	-	-	Peak
904.1	30.99	-15.01	46	37.7	21.06	2.7	30.47	-	-	Peak
5725	49.56	-26.67	76.23	41.23	34.51	7.01	33.19	101	52	Peak
5785	85.59	-	-	77.14	34.59	7.05	33.19	101	52	Average
5785	96.23	-	-	87.78	34.59	7.05	33.19	101	52	Peak
5850	49.62	-26.61	76.23	41.05	34.68	7.09	33.2	101	52	Peak

Test Mode :	Mode 14	Temperature :	26~27°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5785 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.4	31.28	-8.72	40	55.81	6.28	0.73	31.54	-	-	Peak
106.68	37.11	-6.39	43.5	55.66	12.04	0.95	31.54	100	107	Peak
182.28	27.25	-16.25	43.5	48.46	9.06	1.23	31.5	-	-	Peak
367.2	33.69	-12.31	46	47.74	15.44	1.77	31.26	-	-	Peak
438.6	32.81	-13.19	46	45.12	16.98	1.87	31.16	-	-	Peak
767.6	28.73	-17.27	46	36	20.73	2.54	30.54	-	-	Peak
5725	49.9	-30.6	80.5	41.57	34.51	7.01	33.19	100	346	Peak
5785	90.75	-	-	82.3	34.59	7.05	33.19	100	346	Average
5785	100.5	-	-	92.02	34.61	7.06	33.19	100	346	Peak
5850	49.53	-30.97	80.5	40.96	34.68	7.09	33.2	100	346	Peak

Test Mode :	Mode 15	Temperature :	26~27°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5825 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.63	-18.37	40	34.13	18.48	0.58	31.56	-	-	Peak
192	23.75	-19.75	43.5	44.7	9.29	1.23	31.47	-	-	Peak
270.03	26.5	-19.5	46	42.98	13.47	1.48	31.43	-	-	Peak
366.5	35.76	-10.24	46	49.91	15.41	1.71	31.27	100	177	Peak
433	28.35	-17.65	46	40.56	17.08	1.87	31.16	-	-	Peak
905.5	30.86	-15.14	46	37.57	21.06	2.7	30.47	-	-	Peak
5725	50.28	-25.04	75.32	41.95	34.51	7.01	33.19	100	50	Peak
5825	85.64	-	-	77.11	34.66	7.07	33.2	100	50	Average
5825	95.32	-	-	86.79	34.66	7.07	33.2	100	50	Peak
5850	52.15	-23.17	75.32	43.58	34.68	7.09	33.2	100	50	Peak

Test Mode :	Mode 15	Temperature :	26~27°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5825 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
61.86	30.12	-9.88	40	54.65	6.28	0.73	31.54	-	-	Peak
107.76	37	-6.5	43.5	55.42	12.16	0.95	31.53	100	195	Peak
192	27.66	-15.84	43.5	48.61	9.29	1.23	31.47	-	-	Peak
370	32.91	-13.09	46	46.89	15.51	1.77	31.26	-	-	Peak
433	32.72	-13.28	46	44.93	17.08	1.87	31.16	-	-	Peak
837.6	27.36	-18.64	46	34.44	20.82	2.61	30.51	-	-	Peak
5725	49.73	-29.79	79.52	41.4	34.51	7.01	33.19	100	335	Peak
5825	90.07	-	-	81.54	34.66	7.07	33.2	100	335	Average
5825	99.52	-	-	91.02	34.63	7.07	33.2	100	335	Peak
5850	55.25	-24.27	79.52	46.68	34.68	7.09	33.2	100	335	Peak

Test Mode :	Mode 16	Temperature :	26~27°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5745 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	62.3	-10.01	72.31	53.97	34.51	7.01	33.19	100	52	Peak
5745	82.01	-	-	73.63	34.54	7.03	33.19	100	52	Average
5745	92.31	-	-	83.93	34.54	7.03	33.19	100	52	Peak
5850	50.57	-21.74	72.31	42	34.68	7.09	33.2	100	52	Peak

Test Mode :	Mode 16	Temperature :	26~27°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5745 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	67.02	-12.49	79.51	58.69	34.51	7.01	33.19	100	333	Peak
5745	88.96	-	-	80.58	34.54	7.03	33.19	100	333	Average
5745	99.51	-	-	91.13	34.54	7.03	33.19	100	333	Peak
5850	49.21	-30.3	79.51	40.64	34.68	7.09	33.2	100	333	Peak

Test Mode :	Mode 17	Temperature :	26~27°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5785 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	50.04	-25.61	75.65	41.71	34.51	7.01	33.19	100	52	Peak
5785	86.07	-	-	77.62	34.59	7.05	33.19	100	52	Average
5785	95.65	-	-	87.2	34.59	7.05	33.19	100	52	Peak
5850	50.52	-25.13	75.65	41.95	34.68	7.09	33.2	100	52	Peak

Test Mode :	Mode 17	Temperature :	26~27°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5785 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	50.64	-31.1	81.74	42.31	34.51	7.01	33.19	100	333	Peak
5785	90.95	-	-	82.5	34.59	7.05	33.19	100	333	Average
5785	101.74	-	-	93.29	34.59	7.05	33.19	100	333	Peak
5850	50.2	-31.54	81.74	41.63	34.68	7.09	33.2	100	333	Peak

Test Mode :	Mode 18	Temperature :	26~27°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5825 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	49.89	-25.49	75.38	41.56	34.51	7.01	33.19	100	50	Peak
5825	85.24	-	-	76.71	34.66	7.07	33.2	100	50	Average
5825	95.38	-	-	86.85	34.66	7.07	33.2	100	50	Peak
5850	58.72	-16.66	75.38	50.15	34.68	7.09	33.2	100	50	Peak

Test Mode :	Mode 18	Temperature :	26~27°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5825 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	49.93	-29.67	79.6	41.6	34.51	7.01	33.19	100	336	Peak
5825	88.76	-	-	80.23	34.66	7.07	33.2	100	336	Average
5825	99.6	-	-	91.1	34.63	7.07	33.2	100	336	Peak
5850	59.92	-19.68	79.6	51.35	34.68	7.09	33.2	100	336	Peak

Test Mode :	Mode 19	Temperature :	26~27°C
Test Channel :	151	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5755 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	63.5	-9.47	72.97	55.17	34.51	7.01	33.19	102	52	Peak
5755	82.69	-	-	74.29	34.56	7.03	33.19	102	52	Average
5755	92.97	-	-	84.55	34.56	7.05	33.19	102	52	Peak
5850	50.59	-22.38	72.97	42.02	34.68	7.09	33.2	102	52	Peak

Test Mode :	Mode 19	Temperature :	26~27°C
Test Channel :	151	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5755 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	68.52	-10.13	78.65	60.19	34.51	7.01	33.19	100	334	Peak
5755	87.8	-	-	79.4	34.56	7.03	33.19	100	334	Average
5755	98.65	-	-	90.25	34.56	7.03	33.19	100	334	Peak
5850	50.33	-28.32	78.65	41.76	34.68	7.09	33.2	100	334	Peak

Test Mode :	Mode 20	Temperature :	26~27°C
Test Channel :	159	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5795 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	50.12	-24.67	74.79	41.79	34.51	7.01	33.19	102	53	Peak
5795	84.6	-	-	76.12	34.61	7.06	33.19	102	53	Average
5795	94.79	-	-	86.34	34.59	7.05	33.19	102	53	Peak
5850	50.92	-23.87	74.79	42.35	34.68	7.09	33.2	102	53	Peak

Test Mode :	Mode 20	Temperature :	26~27°C
Test Channel :	159	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5795 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	49.86	-30.59	80.45	41.53	34.51	7.01	33.19	100	333	Peak
5795	90.05	-	-	81.57	34.61	7.06	33.19	100	333	Average
5795	100.45	-	-	92	34.59	7.05	33.19	100	333	Peak
5850	51.05	-29.4	80.45	42.48	34.68	7.09	33.2	100	333	Peak

3.4 Antenna Requirements

3.4.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.4.2 Antenna Connected Construction

The antennas type used in this product is PIFA Antenna and it is considered to meet antenna requirement.

3.4.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMI Test Receive	R&S	ESU	100211	9KHz – 2.75GHz	May 28, 2010	May 27, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9kHz~30MHz	Nov. 30, 2009	Nov. 29, 2010	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9kHz~30MHz	Nov. 23, 2009	Nov. 22, 2010	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Spectrum Analyzer	R&S	FSP40	100057	9KHz-40GHz	Oct. 20, 2009	Oct. 19, 2010	Radiation (03CH05-HY)
Amplifier	COM-POWER	PA-103	161069	1KHz - 1GHz	Mar. 29, 2010	Mar. 28, 2011	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 31, 2009	Oct. 30, 2010	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 14, 2009	Oct. 13, 2010	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1GHz- 26.5GHz	Nov. 11, 2009	Nov. 10, 2010	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 - 360 degree	N/A	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	MA 240	240/666	1 m - 4 m	N/A	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	00066584	1GHz ~ 18GHz	Aug. 05, 2010	Aug. 04, 2011	Radiation (03CH05-HY)
Horn Antenna	Training Research	AH-0801	95119	8GHz~18GHz	Nov. 02, 2009	Nov. 01, 2010	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jul. 28, 2011	Radiation (03CH05-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.10	Normal (k=2)	0.05
Cable Loss	0.10	Normal (k=2)	0.05
AMN Insertion Loss	2.50	Rectangular	0.63
Receiver Specification	1.50	Rectangular	0.43
Site Imperfection	1.39	Rectangular	0.80
Mismatch	+0.34 / -0.35	U-Shape	0.24
Combined Standard Uncertainty Uc(y)	**1.13**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.26**		

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
Combined Standard Uncertainty Uc(y)	**1.27**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**		

Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Contribution	Uncertainty of X_i		$u(X_i)$	C_i	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ1 = 0.197 Antenna VSWR Γ2 = 0.194 Uncertainty = 20Log(1-Γ1*Γ2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	**2.36**				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**				

Appendix A. Photographs of EUT

Please refer to Sporton report number EP081715-01 as below.