

Partial FCC Test Report

APPLICANT : Getac Technology Corporation
EQUIPMENT : Notebook PC
BRAND NAME : Getac
MODEL NAME : S400
FCC ID : QYLS400G
STANDARD : FCC Part 15 Subpart E
CLASSIFICATION : Unlicensed National Information Infrastructure (UNII)

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 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 / Deputy Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



TABLE OF CONTENTS

REVISION HISTORY	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Feature of Equipment Under Test	5
1.4 Testing Site	6
1.5 Applied Standards	6
1.6 Ancillary Equipment List	7
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	8
2.1 Carrier Frequency Channel	8
2.2 RF Power	9
2.3 Test Mode	10
2.4 Connection Diagram of Test System	11
2.5 RF Utility	11
3 TEST RESULT	12
3.1 Band Edges Measurement	12
3.2 AC Conducted Emission Measurement	20
3.3 Radiated Emission Measurement	24
3.4 Antenna Requirements	52
4 LIST OF MEASURING EQUIPMENTS	53
5 UNCERTAINTY OF EVALUATION	54
APPENDIX A. PHOTOGRAPHS OF EUT	
APPENDIX B. SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR081715-01C	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	15.407(b)	A9.3	Frequency Band Edges	$\leq -17, -27$ dBm (depend on band)&15.209(a)	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	15.407(b)	A9.3	Transmitter Radiated Emission	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	Under limit 5.21 dB at 106.14 MHz
3.4	15.203 & 15.407(a)	A9.2	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	5150 MHz ~ 5250 MHz 5250 MHz ~ 5350 MHz 5470 MHz ~ 5725 MHz
Maximum Output Power to Antenna	<5150 MHz ~ 5250 MHz> 802.11a : 15.84 dBm / 0.038 W 802.11n (BW 20MHz) : 16.06 dBm / 0.040 W 802.11n (BW 40MHz) : 16.11 dBm / 0.041 W <5250 MHz ~ 5350 MHz> 802.11a : 15.93 dBm / 0.039 W 802.11n (BW 20MHz) : 15.92 dBm / 0.039 W 802.11n (BW 40MHz) : 15.95 dBm / 0.039 W <5470 MHz ~ 5725 MHz> 802.11a : 16.08 dBm / 0.041 W 802.11n (BW 20MHz) : 16.09 dBm / 0.041 W 802.11n (BW 40MHz) : 16.17 dBm / 0.041 W
Antenna Type	PIFA Antenna with gain -4 dBi
Type of Antenna Connector	N/A
HW Version	R0B
SW Version	R005J
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Identical Prototype

Remark:

- For other wireless features of this EUT, test report will be issued separately.
- This test report recorded only product characteristics and test results of Unlicensed National Information Infrastructure (UNII).
- 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 1 st 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	03CH05-HY	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 E
- FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
- ANSI C63.4-2003
- IC RSS-210 Issued 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	detroit	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 Carrier Frequency Channel

802.11a Carrier Frequency Channel							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
36	5180	40	5200	44	5220	48	5240
52	5260	56	5280	60	5300	64	5320
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700	-	-

802.11n (BW 20MHz) Carrier Frequency Channel							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
36	5180	40	5200	44	5220	48	5240
52	5260	56	5280	60	5300	64	5320
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700	-	-

802.11n (BW 40MHz) Carrier Frequency Channel							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
38	5190	46	5230	54	5270	62	5310
102	5510	110	5550	118	5590	126	5630
134	5670	-	-	-	-	-	-

2.2 RF Power

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

Channel	Frequency (MHz)	802.11a RF Power (dBm)	
		Data Rate: 6Mbps	
		Chain A	Chain B
CH 36	5180 MHz	15.58	15.84
CH 48	5240 MHz	15.60	15.53
CH 52	5260 MHz	15.82	15.54
CH 64	5320 MHz	15.93	15.87
CH 100	5500 MHz	15.93	16.08
CH 120	5600 MHz	15.96	15.83
CH 140	5700 MHz	15.35	15.61

Channel	Frequency (MHz)	802.11n (BW 20MHz) RF Power (dBm)		
		Data Rate: HT0		Data Rate: HT0
		SISO		2Tx
		Chain A	Chain B	Chain A+B
CH 36	5180 MHz	15.49	16.06	15.61
CH 48	5240 MHz	15.48	16.05	15.91
CH 52	5260 MHz	15.44	15.72	15.71
CH 64	5320 MHz	15.64	15.65	15.92
CH 100	5500 MHz	15.86	16.02	15.84
CH 120	5600 MHz	15.70	15.47	15.70
CH 140	5700 MHz	16.03	16.01	16.09

Channel	Frequency (MHz)	802.11n (BW 40MHz) RF Power (dBm)		
		Data Rate: HT0		Data Rate: HT0
		SISO		2Tx
		Chain A	Chain B	Chain A+B
CH 38	5190 MHz	15.43	16.11	15.73
CH 46	5230 MHz	15.53	15.89	15.55
CH 54	5270 MHz	15.65	15.55	15.72
CH 62	5310 MHz	15.95	15.76	15.69
CH 102	5510 MHz	16.07	16.17	15.93
CH 118	5590 MHz	16.01	15.82	15.62
CH 134	5670 MHz	16.02	15.52	15.49

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.

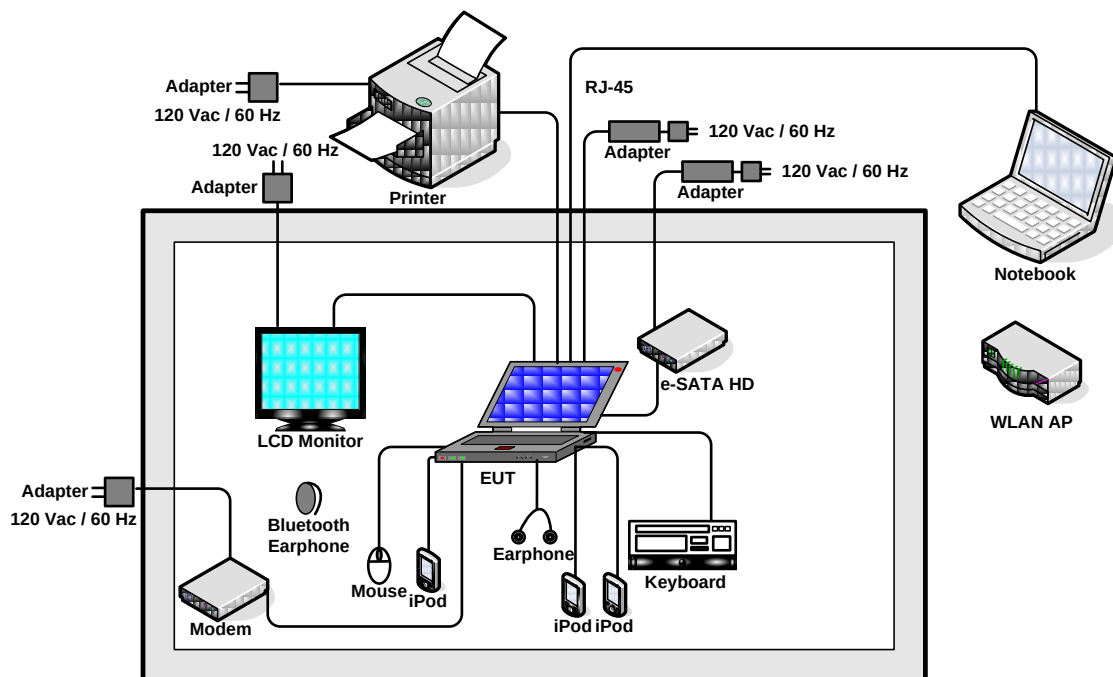
2.3 Test Mode

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: conduction (150 kHz to 30 MHz), radiation (9 kHz 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	802.11a/n (Modulation : OFDM)
Radiated TCs	■ Mode 1: 802.11a_CH36_5180 MHz ■ Mode 2: 802.11a_CH52_5260 MHz ■ Mode 3: 802.11a_CH64_5320 MHz ■ Mode 4: 802.11a_CH100_5500 MHz ■ Mode 5: 802.11a_CH120_5600 MHz ■ Mode 6: 802.11a_CH140_5700 MHz ■ Mode 7: 802.11n_CH36_5180 MHz (BW 20M) ■ Mode 8: 802.11n_CH52_5260 MHz (BW 20M) ■ Mode 9: 802.11n_CH64_5320 MHz (BW 20M) ■ Mode 10: 802.11n_CH100_5500 MHz (BW 20M) ■ Mode 11: 802.11n_CH120_5600 MHz (BW 20M) ■ Mode 12: 802.11n_CH140_5700 MHz (BW 20M) ■ Mode 13: 802.11n_CH38_5190 MHz (BW 40M) ■ Mode 14: 802.11n_CH54_5270 MHz (BW 40M) ■ Mode 15: 802.11n_CH62_5310 MHz (BW 40M) ■ Mode 16: 802.11n_CH102_5510 MHz (BW 40M) ■ Mode 17: 802.11n_CH118_5590 MHz (BW 40M) ■ Mode 18: 802.11n_CH134_5670 MHz (BW 40M)
AC Conducted Emission	GSM850 (GPRS 8) Idle + WLAN Link + Bluetooth Link + TC + Adapter
Remark: - TC stands for Test Configuration, and consists of monitor, printer, HD, iPod, modem, mouse, earphone, keyboard, RJ-45 and GPS Rx. - Mode 1~12 of radiated emission only verify bandedge. - Only the radiated emission and conducted emission tests were performed in this report and the conducted test cases can be referred to the WLAN module (Brand name: Intel / Model name: 622ANHMW, FCC ID: PD9622ANH, AEGIS Report Number: INTEL-090602F) report.	

2.4 Connection Diagram of Test System



2.5 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

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. Devices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all applicable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of –27 dBm/MHz in the 5.15–5.25 GHz band. For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- (2) The provisions of Section 15.205 Restricted bands of operation of this part apply to intentional radiators operating under this section.

3.1.2 Measuring Instruments

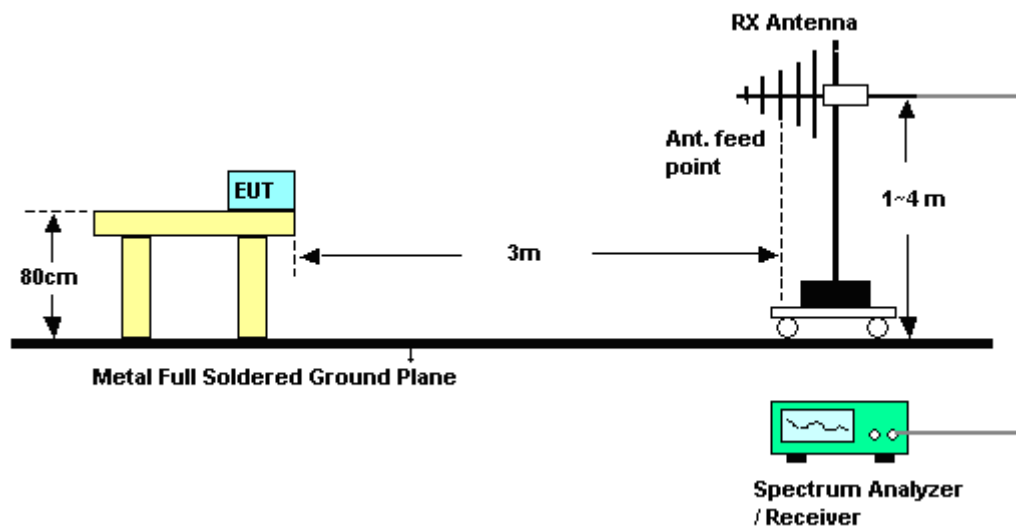
See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. Set both RBW and VBW of spectrum analyzer to 1MHz with convenient frequency span including 1MHz bandwidth from band edge.
2. The band edges was measured and recorded.

3.1.4 Test Setup

<Radiated>



3.1.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	43~44%
Test Channel :	36	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
5150	50.43	-23.57	74	43.14	33.92	6.7	33.33	100	317	Peak
5150	38.71	-15.29	54	31.42	33.92	6.7	33.33	100	317	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
5150	49.77	-24.23	74	42.48	33.92	6.7	33.33	101	352	Peak
5150	38.07	-15.93	54	30.78	33.92	6.7	33.33	101	352	Average

Test Mode :	Mode 3	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	43~44%
Test Channel :	64	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
5350	49.64	-24.36	74	42	34.08	6.8	33.24	100	300	Peak
5350	37.99	-16.01	54	30.35	34.08	6.8	33.24	100	300	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
5350	49.11	-24.89	74	41.47	34.08	6.8	33.24	100	33	Peak
5350	38.01	-15.99	54	30.37	34.08	6.8	33.24	100	33	Average



Test Mode :	Mode 4	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	43~44%
Test Channel :	100	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
5470	49.88	-24.12	74	42.03	34.17	6.87	33.19	100	351	Peak
5470	38.08	-15.92	54	30.23	34.17	6.87	33.19	100	351	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
5470	49.55	-24.45	74	41.7	34.17	6.87	33.19	115	340	Peak
5470	38.15	-15.85	54	30.3	34.17	6.87	33.19	115	340	Average

Test Mode :	Mode 6	Temperature :	26~27°C
Test Band :	802.11a	Relative Humidity :	43~44%
Test Channel :	140	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	50.52	-23.48	74	42.19	34.51	7.01	33.19	100	316	Peak
5725	38.85	-15.15	54	30.52	34.51	7.01	33.19	100	316	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
5725	50.08	-23.92	74	41.75	34.51	7.01	33.19	100	334	Peak
5725	39.08	-14.92	54	30.75	34.51	7.01	33.19	100	334	Average



Test Mode :	Mode 7	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	43~44%
Test Channel :	36	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
5150	51.84	-22.16	74	44.55	33.92	6.7	33.33	100	316	Peak
5150	39.63	-14.37	54	32.34	33.92	6.7	33.33	100	316	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
5150	53.47	-20.53	74	46.18	33.92	6.7	33.33	185	164	Peak
5150	40.56	-13.44	54	33.27	33.92	6.7	33.33	185	164	Average

Test Mode :	Mode 9	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	43~44%
Test Channel :	64	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
5350	50.91	-23.09	74	43.27	34.08	6.8	33.24	100	302	Peak
5350	38.25	-15.75	54	30.61	34.08	6.8	33.24	100	302	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
5350	49.57	-24.43	74	41.93	34.08	6.8	33.24	100	33	Peak
5350	38.33	-15.67	54	30.69	34.08	6.8	33.24	100	33	Average



Test Mode :	Mode 10	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	43~44%
Test Channel :	100	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
5470	48.86	-25.14	74	41.01	34.17	6.87	33.19	100	298	Peak
5470	38.21	-15.79	54	30.36	34.17	6.87	33.19	100	298	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
5470	48.79	-25.21	74	40.94	34.17	6.87	33.19	171	161	Peak
5470	38.66	-15.34	54	30.81	34.17	6.87	33.19	171	161	Average

Test Mode :	Mode 12	Temperature :	26~27°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	43~44%
Test Channel :	140	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	52.5	-21.5	74	44.17	34.51	7.01	33.19	100	65	Peak
5725	39.87	-14.13	54	31.54	34.51	7.01	33.19	100	65	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
5725	54.11	-19.89	74	45.78	34.51	7.01	33.19	100	3	Peak
5725	41.26	-12.74	54	32.93	34.51	7.01	33.19	100	3	Average



Test Mode :	Mode 13	Temperature :	26~27°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	43~44%
Test Channel :	38	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
5150	51.35	-22.65	74	44.06	33.92	6.7	33.33	100	315	Peak
5150	39.28	-14.72	54	31.99	33.92	6.7	33.33	100	315	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
5150	51.31	-22.69	74	44.02	33.92	6.7	33.33	101	10	Peak
5150	39.25	-14.75	54	31.96	33.92	6.7	33.33	101	10	Average

Test Mode :	Mode 15	Temperature :	26~27°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	43~44%
Test Channel :	62	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
5350	50.35	-23.65	74	42.71	34.08	6.8	33.24	100	302	Peak
5350	39.79	-14.21	54	32.15	34.08	6.8	33.24	100	302	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
5350	49.29	-24.71	74	41.65	34.08	6.8	33.24	100	32	Peak
5350	38.42	-15.58	54	30.78	34.08	6.8	33.24	100	32	Average



Test Mode :	Mode 16	Temperature :	26~27°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	43~44%
Test Channel :	102	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
5470	50.33	-23.67	74	42.48	34.17	6.87	33.19	100	351	Peak
5470	38.71	-15.29	54	30.86	34.17	6.87	33.19	100	351	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
5470	50.22	-23.78	74	42.37	34.17	6.87	33.19	113	342	Peak

Test Mode :	Mode 18	Temperature :	26~27°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	43~44%
Test Channel :	134	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	50.64	-23.36	74	42.31	34.51	7.01	33.19	101	312	Peak
5725	39.2	-14.8	54	30.87	34.51	7.01	33.19	101	312	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
5725	49.9	-24.1	74	41.57	34.51	7.01	33.19	100	332	Peak
5725	39.28	-14.72	54	30.95	34.51	7.01	33.19	100	332	Average

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.

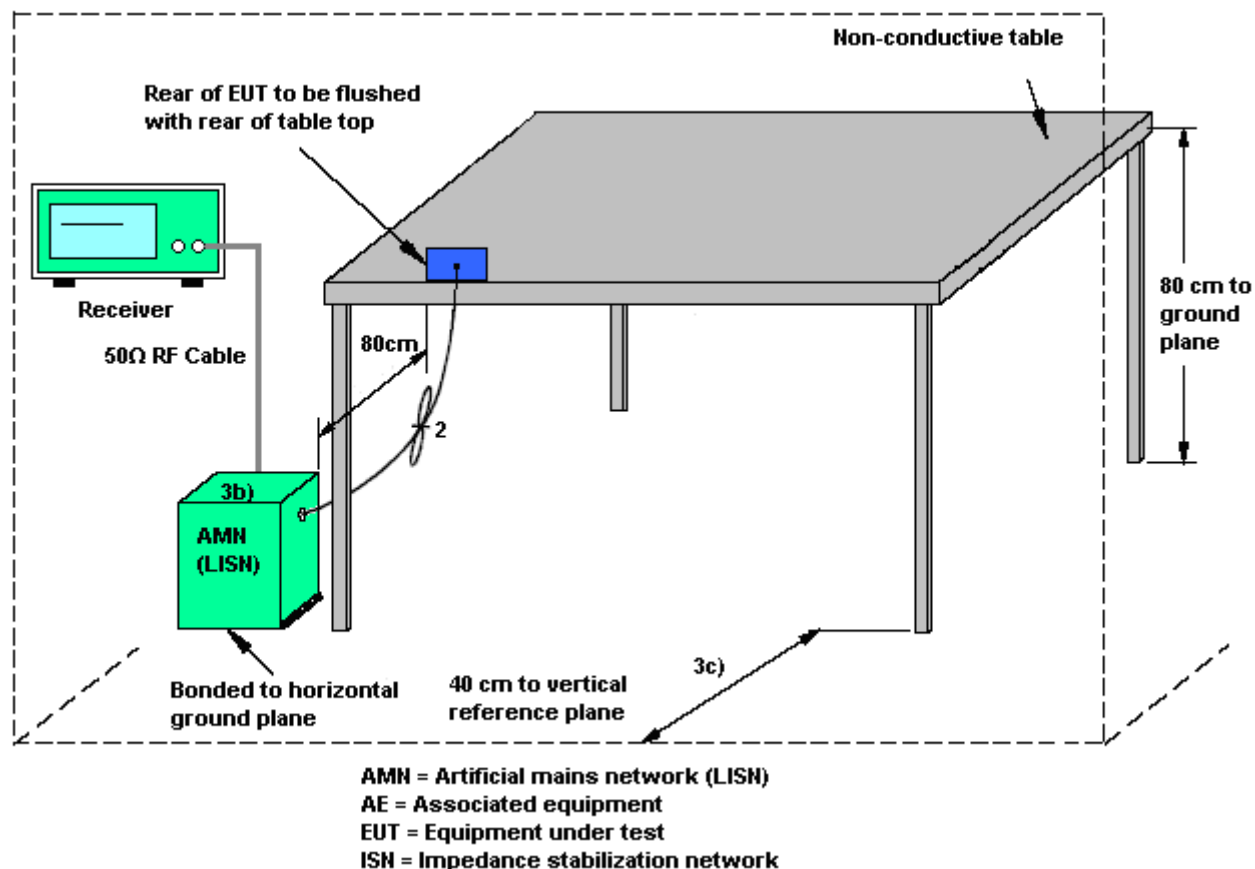
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

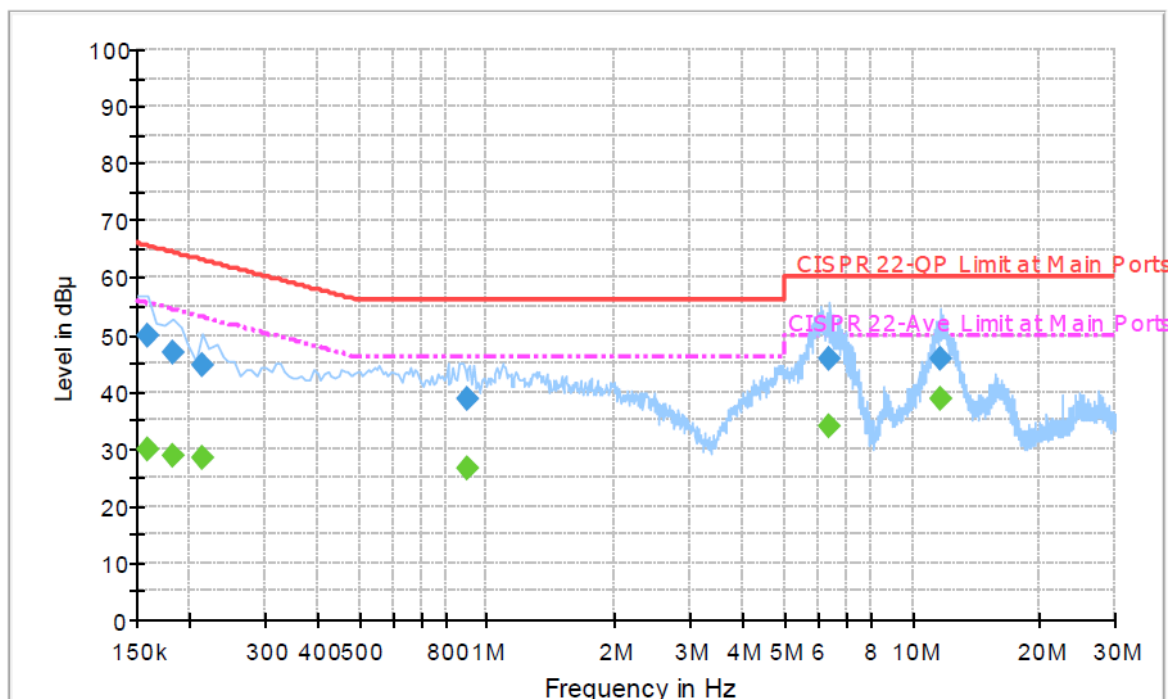
1. Please follow the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All 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.		



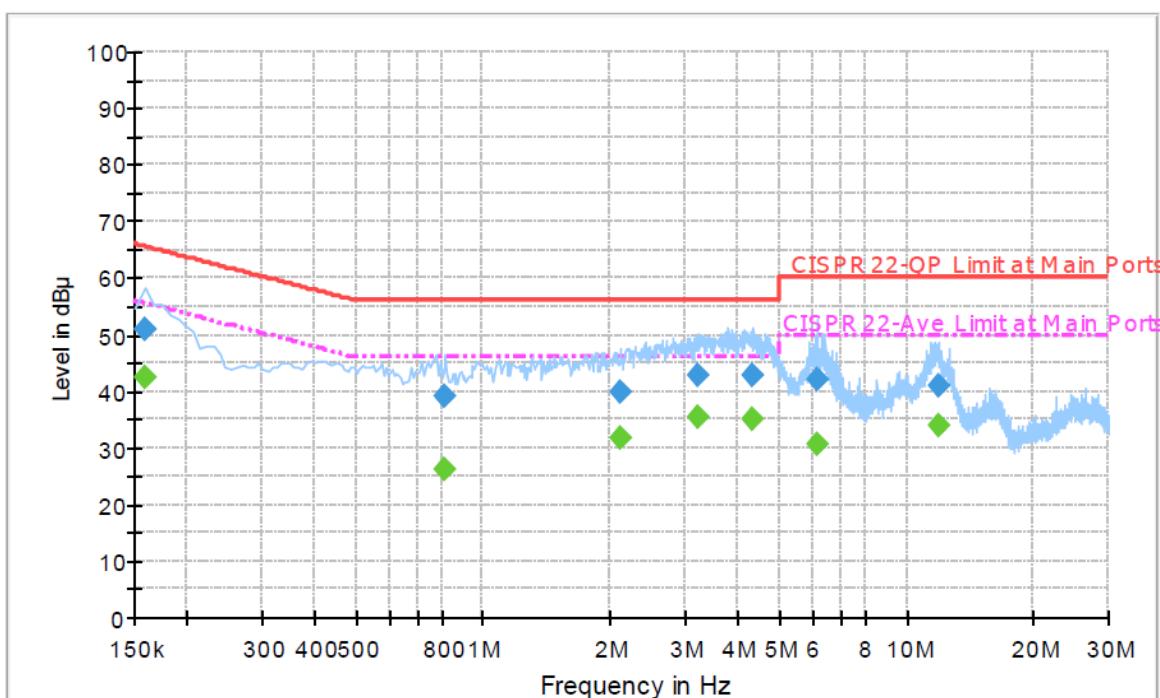
Final Result 1

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°C
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

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

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

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. Devices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all applicable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of –27 dBm/MHz in the 5.15–5.25 GHz band.
- (3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- (4) The provisions of Section 15.205 Restricted bands of operation of this part apply to intentional radiators operating under this section.

3.3.2 Measuring Instruments

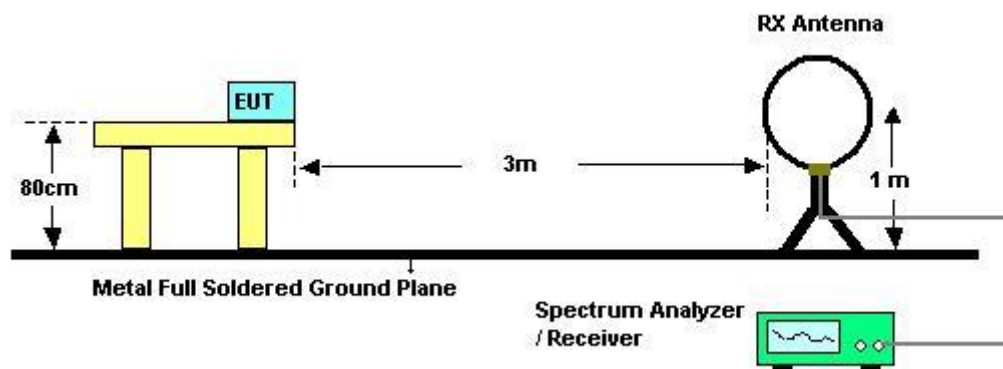
See list of measuring instruments of this test report.

3.3.3 Test Procedures

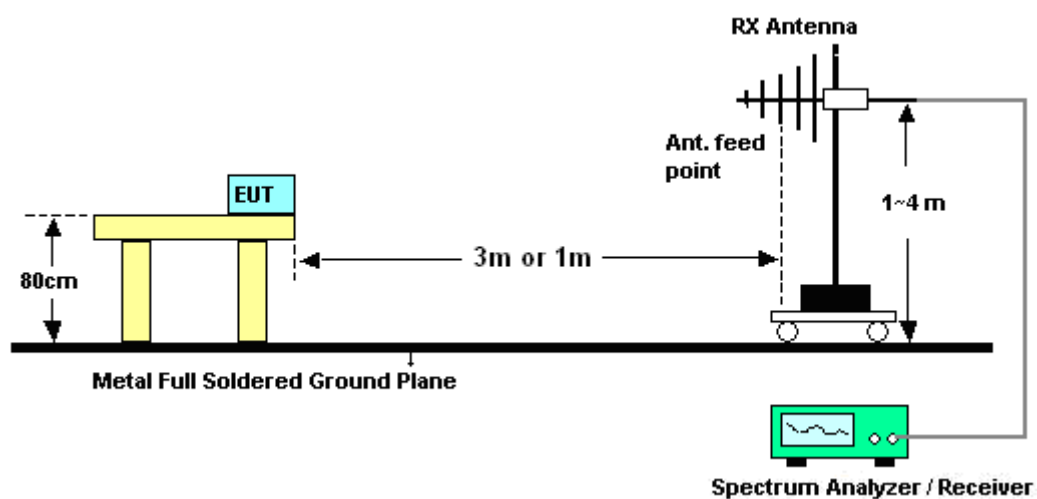
1. The testing follows the guidelines in FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest radiation.
5. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
6. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
7. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
8. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
9. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

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)

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

Freq. (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 = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

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

3.3.6 Test Result of Radiated Emission (30MHz ~ 25GHz)

Test Mode :	Mode 1	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5180 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
5150	38.71	-15.29	54	31.42	33.92	6.7	33.33	100	317	Average
5150	50.43	-23.57	74	43.14	33.92	6.7	33.33	100	317	Peak
5180	83.26	-	-	75.92	33.95	6.71	33.32	100	317	Average
5180	92.81	-	-	85.47	33.95	6.71	33.32	100	317	Peak
5350	37.91	-16.09	54	30.27	34.08	6.8	33.24	100	317	Average
5350	49.79	-24.21	74	42.15	34.08	6.8	33.24	100	317	Peak

Test Mode :	Mode 1	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5180 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
5150	38.07	-15.93	54	30.78	33.92	6.7	33.33	101	352	Average
5150	49.77	-24.23	74	42.48	33.92	6.7	33.33	101	352	Peak
5180	82.1	-	-	74.76	33.95	6.71	33.32	101	352	Average
5180	91.66	-	-	84.34	33.93	6.71	33.32	101	352	Peak
5350	37.85	-16.15	54	30.21	34.08	6.8	33.24	101	352	Average
5350	49.32	-24.68	74	41.68	34.08	6.8	33.24	101	352	Peak

Test Mode :	Mode 2	Temperature :	26~27°C
Test Channel :	52	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5260 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
5150	38.61	-15.39	54	31.32	33.92	6.7	33.33	100	21	Average
5150	49.77	-24.23	74	42.48	33.92	6.7	33.33	100	21	Peak
5260	81.6	-	-	74.11	34.01	6.75	33.27	100	21	Average
5260	91.24	-	-	83.75	34.01	6.75	33.27	100	21	Peak
5350	37.91	-16.09	54	30.27	34.08	6.8	33.24	100	21	Average
5350	49.18	-24.82	74	41.54	34.08	6.8	33.24	100	21	Peak

Test Mode :	Mode 2	Temperature :	26~27°C
Test Channel :	52	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5260 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
5150	38.6	-15.4	54	31.31	33.92	6.7	33.33	100	12	Average
5150	50.67	-23.33	74	43.38	33.92	6.7	33.33	100	12	Peak
5260	81.46	-	-	73.97	34.01	6.75	33.27	100	12	Average
5260	91.05	-	-	83.56	34.01	6.75	33.27	100	12	Peak
5350	37.92	-16.08	54	30.28	34.08	6.8	33.24	100	12	Average
5350	49.23	-24.77	74	41.59	34.08	6.8	33.24	100	12	Peak

Test Mode :	Mode 3	Temperature :	26~27°C
Test Channel :	64	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5320 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
5150	38.6	-15.4	54	31.31	33.92	6.7	33.33	100	300	Average
5150	50.82	-23.18	74	43.53	33.92	6.7	33.33	100	300	Peak
5320	82.23	-	-	74.64	34.05	6.79	33.25	100	300	Average
5320	91.8	-	-	84.21	34.05	6.79	33.25	100	300	Peak
5350	37.99	-16.01	54	30.35	34.08	6.8	33.24	100	300	Average
5350	49.64	-24.36	74	42	34.08	6.8	33.24	100	300	Peak

Test Mode :	Mode 3	Temperature :	26~27°C
Test Channel :	64	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5320 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
5150	38.55	-15.45	54	31.26	33.92	6.7	33.33	100	33	Average
5150	50.11	-23.89	74	42.82	33.92	6.7	33.33	100	33	Peak
5320	82.23	-	-	74.64	34.05	6.79	33.25	100	33	Average
5320	91.88	-	-	84.29	34.05	6.79	33.25	100	33	Peak
5350	38.01	-15.99	54	30.37	34.08	6.8	33.24	100	33	Average
5350	49.11	-24.89	74	41.47	34.08	6.8	33.24	100	33	Peak

Test Mode :	Mode 4	Temperature :	26~27°C
Test Channel :	100	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5500 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
5470	38.08	-15.92	54	30.23	34.17	6.87	33.19	100	351	Average
5470	49.88	-24.12	74	42.03	34.17	6.87	33.19	100	351	Peak
5500	80.49	-	-	72.58	34.2	6.88	33.17	100	351	Average
5500	89.84	-	-	81.93	34.2	6.88	33.17	100	351	Peak
5725	38.77	-15.23	54	30.44	34.51	7.01	33.19	100	351	Average
5725	49.99	-24.01	74	41.66	34.51	7.01	33.19	100	351	Peak

Test Mode :	Mode 4	Temperature :	26~27°C
Test Channel :	100	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5500 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
5470	38.15	-15.85	54	30.3	34.17	6.87	33.19	115	340	Average
5470	49.55	-24.45	74	41.7	34.17	6.87	33.19	115	340	Peak
5500	79.75	-	-	71.84	34.2	6.88	33.17	115	340	Average
5500	89.35	-	-	81.44	34.2	6.88	33.17	115	340	Peak
5725	38.8	-15.2	54	30.47	34.51	7.01	33.19	115	340	Average
5725	49.57	-24.43	74	41.24	34.51	7.01	33.19	115	340	Peak

Test Mode :	Mode 5	Temperature :	26~27°C
Test Channel :	120	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5600 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
5470	38.02	-15.98	54	30.17	34.17	6.87	33.19	100	314	Average
5470	49.08	-24.92	74	41.23	34.17	6.87	33.19	100	314	Peak
5600	78.18	-	-	70.08	34.34	6.94	33.18	100	314	Average
5600	87.67	-	-	79.59	34.32	6.94	33.18	100	314	Peak
5725	38.76	-15.24	54	30.43	34.51	7.01	33.19	100	314	Average
5725	50.02	-23.98	74	41.69	34.51	7.01	33.19	100	314	Peak

Test Mode :	Mode 5	Temperature :	26~27°C
Test Channel :	120	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5600 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
5470	38.09	-15.91	54	30.24	34.17	6.87	33.19	112	343	Average
5470	49.03	-24.97	74	41.18	34.17	6.87	33.19	112	343	Peak
5600	81.02	-	-	72.92	34.34	6.94	33.18	112	343	Average
5600	90.34	-	-	82.24	34.34	6.94	33.18	112	343	Peak
5725	38.82	-15.18	54	30.49	34.51	7.01	33.19	112	343	Average
5725	49.25	-24.75	74	40.92	34.51	7.01	33.19	112	343	Peak

Test Mode :	Mode 6	Temperature :	26~27°C
Test Channel :	140	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5700 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
5470	37.98	-16.02	54	30.13	34.17	6.87	33.19	100	316	Average
5470	50.13	-23.87	74	42.28	34.17	6.87	33.19	100	316	Peak
5700	80.79	-	-	72.51	34.47	7	33.19	100	316	Average
5700	90.38	-	-	82.1	34.47	7	33.19	100	316	Peak
5725	38.85	-15.15	54	30.52	34.51	7.01	33.19	100	316	Average
5725	50.52	-23.48	74	42.19	34.51	7.01	33.19	100	316	Peak

Test Mode :	Mode 6	Temperature :	26~27°C
Test Channel :	140	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5700 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
5470	38.01	-15.99	54	30.16	34.17	6.87	33.19	100	334	Average
5470	49.1	-24.9	74	41.25	34.17	6.87	33.19	100	334	Peak
5700	85.57	-	-	77.29	34.47	7	33.19	100	334	Average
5700	95.07	-	-	86.77	34.49	7	33.19	100	334	Peak
5725	39.08	-14.92	54	30.75	34.51	7.01	33.19	100	334	Average
5725	50.08	-23.92	74	41.75	34.51	7.01	33.19	100	334	Peak

Test Mode :	Mode 7	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5180 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
5150	39.63	-14.37	54	32.34	33.92	6.7	33.33	100	316	Average
5150	51.84	-22.16	74	44.55	33.92	6.7	33.33	100	316	Peak
5180	88.59	-	-	81.25	33.95	6.71	33.32	100	316	Average
5180	98.46	-	-	91.12	33.95	6.71	33.32	100	316	Peak
5350	37.87	-16.13	54	30.23	34.08	6.8	33.24	100	316	Average
5350	49.01	-24.99	74	41.37	34.08	6.8	33.24	100	316	Peak

Test Mode :	Mode 7	Temperature :	26~27°C
Test Channel :	36	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5180 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
5150	40.56	-13.44	54	33.27	33.92	6.7	33.33	185	164	Average
5150	53.47	-20.53	74	46.18	33.92	6.7	33.33	185	164	Peak
5180	88.37	-	-	81.03	33.95	6.71	33.32	185	164	Average
5180	100.06	-	-	92.72	33.95	6.71	33.32	185	164	Peak
5350	37.93	-16.07	54	30.29	34.08	6.8	33.24	185	164	Average
5350	48.67	-25.33	74	41.03	34.08	6.8	33.24	185	164	Peak

Test Mode :	Mode 8	Temperature :	26~27°C
Test Channel :	52	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5260 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
5150	38.52	-15.48	54	31.23	33.92	6.7	33.33	100	318	Average
5150	49.79	-24.21	74	42.5	33.92	6.7	33.33	100	318	Peak
5260	86.29	-	-	78.8	34.01	6.75	33.27	100	318	Average
5260	97.76	-	-	90.26	34.01	6.76	33.27	100	318	Peak
5350	38.67	-15.33	54	31.03	34.08	6.8	33.24	100	318	Average
5350	50.19	-23.81	74	42.55	34.08	6.8	33.24	100	318	Peak

Test Mode :	Mode 8	Temperature :	26~27°C
Test Channel :	52	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5260 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
5150	38.54	-15.46	54	31.25	33.92	6.7	33.33	100	14	Average
5150	49.46	-24.54	74	42.17	33.92	6.7	33.33	100	14	Peak
5260	87.87	-	-	80.38	34.01	6.75	33.27	100	14	Average
5260	98.39	-	-	90.89	34.01	6.76	33.27	100	14	Peak
5350	38.86	-15.14	54	31.22	34.08	6.8	33.24	100	14	Average
5350	49.41	-24.59	74	41.77	34.08	6.8	33.24	100	14	Peak



Test Mode :	Mode 9	Temperature :	26~27°C
Test Channel :	64	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5320 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
5150	38.57	-15.43	54	31.28	33.92	6.7	33.33	100	302	Average
5150	49.84	-24.16	74	42.55	33.92	6.7	33.33	100	302	Peak
5320	87.03	-	-	79.44	34.05	6.79	33.25	100	302	Average
5320	98.27	-	-	90.68	34.05	6.79	33.25	100	302	Peak
5350	38.25	-15.75	54	30.61	34.08	6.8	33.24	100	302	Average
5350	50.91	-23.09	74	43.27	34.08	6.8	33.24	100	302	Peak

Test Mode :	Mode 9	Temperature :	26~27°C
Test Channel :	64	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5320 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
5150	38.49	-15.51	54	31.2	33.92	6.7	33.33	100	33	Average
5150	49.47	-24.53	74	42.27	33.88	6.67	33.35	100	33	Peak
5320	99.31	-	-	91.72	34.05	6.79	33.25	100	33	Peak
5320	88.89	-	-	81.3	34.05	6.79	33.25	100	33	Average
5350	38.33	-15.67	54	30.69	34.08	6.8	33.24	100	33	Average
5350	49.57	-24.43	74	41.93	34.08	6.8	33.24	100	33	Peak

Test Mode :	Mode 10	Temperature :	26~27°C
Test Channel :	100	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5500 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
5470	38.21	-15.79	54	30.36	34.17	6.87	33.19	100	298	Average
5470	48.86	-25.14	74	41.01	34.17	6.87	33.19	100	298	Peak
5500	80.25	-	-	72.34	34.2	6.88	33.17	100	298	Average
5500	91.43	-	-	83.54	34.19	6.88	33.18	100	298	Peak
5725	38.76	-15.24	54	30.43	34.51	7.01	33.19	100	298	Average
5725	49.72	-24.28	74	41.39	34.51	7.01	33.19	100	298	Peak

Test Mode :	Mode 10	Temperature :	26~27°C
Test Channel :	100	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5500 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
5470	38.66	-15.34	54	30.81	34.17	6.87	33.19	171	161	Average
5470	48.79	-25.21	74	40.94	34.17	6.87	33.19	171	161	Peak
5500	85.57	-	-	77.66	34.2	6.88	33.17	171	161	Average
5500	96.98	-	-	89.07	34.2	6.88	33.17	171	161	Peak
5725	38.85	-15.15	54	30.52	34.51	7.01	33.19	171	161	Average
5725	48.56	-25.44	74	40.23	34.51	7.01	33.19	171	161	Peak

Test Mode :	Mode 11	Temperature :	26~27°C
Test Channel :	120	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5600 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
5470	38.05	-15.95	54	30.2	34.17	6.87	33.19	100	62	Average
5470	49.39	-24.61	74	41.54	34.17	6.87	33.19	100	62	Peak
5600	80.26	-	-	72.16	34.34	6.94	33.18	100	62	Average
5600	91.97	-	-	83.87	34.34	6.94	33.18	100	62	Peak
5725	38.82	-15.18	54	30.49	34.51	7.01	33.19	100	62	Average
5725	50.36	-23.64	74	42.03	34.51	7.01	33.19	100	62	Peak

Test Mode :	Mode 11	Temperature :	26~27°C
Test Channel :	120	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5600 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
5470	38.13	-15.87	54	30.28	34.17	6.87	33.19	128	188	Average
5470	48.69	-25.31	74	40.84	34.17	6.87	33.19	128	188	Peak
5600	86.73	-	-	78.63	34.34	6.94	33.18	128	188	Average
5600	98.79	-	-	90.71	34.32	6.94	33.18	128	188	Peak
5725	38.8	-15.2	54	30.47	34.51	7.01	33.19	128	188	Average
5725	49.24	-24.76	74	40.91	34.51	7.01	33.19	128	188	Peak

Test Mode :	Mode 12	Temperature :	26~27°C
Test Channel :	140	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5700 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
5470	37.97	-16.03	54	30.12	34.17	6.87	33.19	100	65	Average
5470	49.62	-24.38	74	41.77	34.17	6.87	33.19	100	65	Peak
5700	83.13	-	-	74.85	34.47	7	33.19	100	65	Average
5700	95.47	-	-	87.17	34.49	7	33.19	100	65	Peak
5725	39.87	-14.13	54	31.54	34.51	7.01	33.19	100	65	Average
5725	52.5	-21.5	74	44.17	34.51	7.01	33.19	100	65	Peak

Test Mode :	Mode 12	Temperature :	26~27°C
Test Channel :	140	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5700 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
5470	38.02	-15.98	54	30.17	34.17	6.87	33.19	100	3	Average
5470	49.98	-24.02	74	42.13	34.17	6.87	33.19	100	3	Peak
5700	89.72	-	-	81.44	34.47	7	33.19	100	3	Average
5700	100.53	-	-	92.23	34.49	7	33.19	100	3	Peak
5725	41.26	-12.74	54	32.93	34.51	7.01	33.19	100	3	Average
5725	54.11	-19.89	74	45.78	34.51	7.01	33.19	100	3	Peak



Test Mode :	Mode 13	Temperature :	26~27°C
Test Channel :	38	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5190 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
119.1	21.56	-21.94	43.5	39.38	12.63	1.07	31.52	-	-	Peak
192	26.78	-16.72	43.5	47.73	9.29	1.23	31.47	-	-	Peak
240.06	29.8	-16.2	46	48.29	11.68	1.34	31.51	100	137	Peak
435.1	28.8	-17.2	46	41.06	17.03	1.87	31.16	-	-	Peak
531	26.95	-19.05	46	37	18.85	2.1	31	-	-	Peak
902	24.68	-21.32	46	31.42	21.04	2.7	30.48	-	-	Peak
5150	39.28	-14.72	54	31.99	33.92	6.7	33.33	100	315	Average
5150	51.35	-22.65	74	44.06	33.92	6.7	33.33	100	315	Peak
5190	81.45	-	-	74.09	33.95	6.72	33.31	100	315	Average
5190	91.4	-	-	84.06	33.95	6.71	33.32	100	315	Peak
5350	37.74	-16.26	54	30.1	34.08	6.8	33.24	100	315	Average
5350	48.61	-25.39	74	40.97	34.08	6.8	33.24	100	315	Peak



Test Mode :	Mode 13	Temperature :	26~27°C
Test Channel :	38	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5190 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	30.55	-9.45	40	43.05	18.48	0.58	31.56	-	-	Peak
105.87	38.1	-5.4	43.5	56.77	11.92	0.95	31.54	100	221	Peak
190.38	27.51	-15.99	43.5	48.52	9.24	1.23	31.48	-	-	Peak
386.1	29.71	-16.29	46	43.18	15.98	1.77	31.22	-	-	Peak
531	28.76	-17.24	46	38.81	18.85	2.1	31	-	-	Peak
907.6	23.68	-22.32	46	30.37	21.08	2.7	30.47	-	-	Peak
5150	39.25	-14.75	54	31.96	33.92	6.7	33.33	101	10	Average
5150	51.31	-22.69	74	44.02	33.92	6.7	33.33	101	10	Peak
5190	80.56	-	-	73.2	33.95	6.72	33.31	101	10	Average
5190	90.67	-	-	83.3	33.96	6.72	33.31	101	10	Peak
5350	37.79	-16.21	54	30.15	34.08	6.8	33.24	101	10	Average
5350	49.46	-24.54	74	41.82	34.08	6.8	33.24	101	10	Peak



Test Mode :	Mode 14	Temperature :	26~27°C
Test Channel :	54	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5270 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
118.29	21.21	-22.29	43.5	39.05	12.61	1.07	31.52	-	-	Peak
192	27.38	-16.12	43.5	48.33	9.29	1.23	31.47	-	-	Peak
240.06	30.23	-15.77	46	48.72	11.68	1.34	31.51	100	85	Peak
416.9	28.58	-17.42	46	40.77	17.16	1.82	31.17	-	-	Peak
531	26.1	-19.9	46	36.15	18.85	2.1	31	-	-	Peak
900.6	24.93	-21.07	46	31.67	21.04	2.7	30.48	-	-	Peak
5150	38.56	-15.44	54	31.27	33.92	6.7	33.33	100	303	Average
5150	49.97	-24.03	74	42.68	33.92	6.7	33.33	100	303	Peak
5270	79.47	-	-	71.97	34.01	6.76	33.27	100	303	Average
5270	89.41	-	-	81.91	34.01	6.76	33.27	100	303	Peak
5350	37.86	-16.14	54	30.22	34.08	6.8	33.24	100	303	Average
5350	48.92	-25.08	74	41.28	34.08	6.8	33.24	100	303	Peak



Test Mode :	Mode 14	Temperature :	26~27°C
Test Channel :	54	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5270 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	31.23	-8.77	40	43.73	18.48	0.58	31.56	-	-	Peak
106.68	38.08	-5.42	43.5	56.63	12.04	0.95	31.54	100	79	Peak
192	28.65	-14.85	43.5	49.6	9.29	1.23	31.47	-	-	Peak
433	31.72	-14.28	46	43.93	17.08	1.87	31.16	-	-	Peak
533.1	28.52	-17.48	46	38.51	18.9	2.1	30.99	-	-	Peak
941.2	27.07	-18.93	46	33.42	21.28	2.78	30.41	-	-	Peak
5150	38.52	-15.48	54	31.23	33.92	6.7	33.33	100	13	Average
5150	49.62	-24.38	74	42.33	33.92	6.7	33.33	100	13	Peak
5270	81.63	-	-	74.13	34.01	6.76	33.27	100	13	Average
5270	91.61	-	-	84.11	34.01	6.76	33.27	100	13	Peak
5350	37.85	-16.15	54	30.21	34.08	6.8	33.24	100	13	Average
5350	49.39	-24.61	74	41.75	34.08	6.8	33.24	100	13	Peak



Test Mode :	Mode 15	Temperature :	26~27°C
Test Channel :	62	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5310 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
113.43	21.26	-22.24	43.5	39.34	12.49	0.95	31.52	-	-	Peak
192	27.28	-16.22	43.5	48.23	9.29	1.23	31.47	-	-	Peak
240.06	30.23	-15.77	46	48.72	11.68	1.34	31.51	100	220	Peak
435.8	27.88	-18.12	46	40.14	17.03	1.87	31.16	-	-	Peak
533.1	27.6	-18.4	46	37.59	18.9	2.1	30.99	-	-	Peak
899.9	25.74	-20.26	46	32.49	21.03	2.7	30.48	-	-	Peak
5150	38.61	-15.39	54	31.32	33.92	6.7	33.33	100	302	Average
5150	49.9	-24.1	74	42.61	33.92	6.7	33.33	100	302	Peak
5310	79.13	-	-	71.55	34.05	6.78	33.25	100	302	Average
5310	89.74	-	-	82.17	34.04	6.78	33.25	100	302	Peak
5350	39.79	-14.21	54	32.15	34.08	6.8	33.24	100	302	Average
5350	50.35	-23.65	74	42.71	34.08	6.8	33.24	100	302	Peak



Test Mode :	Mode 15	Temperature :	26~27°C
Test Channel :	62	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5310 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	30.53	-9.47	40	43.03	18.48	0.58	31.56	-	-	Peak
106.14	38.29	-5.21	43.5	56.96	11.92	0.95	31.54	100	330	Peak
192	29.56	-13.94	43.5	50.51	9.29	1.23	31.47	-	-	Peak
402.9	30.92	-15.08	46	43.68	16.6	1.82	31.18	-	-	Peak
533.1	29.95	-16.05	46	39.94	18.9	2.1	30.99	-	-	Peak
761.3	24.51	-21.49	46	31.81	20.73	2.51	30.54	-	-	Peak
5150	38.52	-15.48	54	31.23	33.92	6.7	33.33	100	32	Average
5150	50.32	-23.68	74	43.03	33.92	6.7	33.33	100	32	Peak
5310	80.99	-	-	73.41	34.05	6.78	33.25	100	32	Average
5310	91.29	-	-	83.73	34.04	6.78	33.26	100	32	Peak
5350	38.42	-15.58	54	30.78	34.08	6.8	33.24	100	32	Average
5350	49.29	-24.71	74	41.65	34.08	6.8	33.24	100	32	Peak



Test Mode :	Mode 16	Temperature :	26~27°C
Test Channel :	102	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5510 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	21.72	-21.78	43.5	39.84	12.45	0.95	31.52	-	-	Peak
192	26.65	-16.85	43.5	47.6	9.29	1.23	31.47	-	-	Peak
240.06	30.29	-15.71	46	48.78	11.68	1.34	31.51	100	38	Peak
367.2	29.75	-16.25	46	43.8	15.44	1.77	31.26	-	-	Peak
433	28.64	-17.36	46	40.85	17.08	1.87	31.16	-	-	Peak
533.1	26.54	-19.46	46	36.53	18.9	2.1	30.99	-	-	Peak
5470	38.71	-15.29	54	30.86	34.17	6.87	33.19	100	351	Average
5470	50.33	-23.67	74	42.48	34.17	6.87	33.19	100	351	Peak
5510	75.52	-	-	67.61	34.2	6.88	33.17	100	351	Average
5510	85.49	-	-	77.55	34.22	6.89	33.17	100	351	Peak
5725	38.58	-15.42	54	30.25	34.51	7.01	33.19	100	351	Average
5725	50.76	-23.24	74	42.43	34.51	7.01	33.19	100	351	Peak



Test Mode :	Mode 16	Temperature :	26~27°C
Test Channel :	102	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5510 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	30.96	-9.04	40	43.46	18.48	0.58	31.56	-	-	Peak
106.95	38.2	-5.3	43.5	56.75	12.04	0.95	31.54	100	99	Peak
240.06	30.51	-15.49	46	49	11.68	1.34	31.51	-	-	Peak
392.4	29.15	-16.85	46	42.32	16.21	1.82	31.2	-	-	Peak
469.4	28.72	-17.28	46	40.27	17.59	1.98	31.12	-	-	Peak
531	28.62	-17.38	46	38.67	18.85	2.1	31	-	-	Peak
5470	50.22	-23.78	74	42.37	34.17	6.87	33.19	113	342	Peak
5510	79.31	-	-	71.4	34.2	6.88	33.17	113	342	Average
5510	89.48	-	-	81.58	34.2	6.88	33.18	113	342	Peak
5725	39.3	-14.7	54	30.97	34.51	7.01	33.19	113	342	Average
5725	39.32	-14.68	54	30.99	34.51	7.01	33.19	113	342	Average
5725	50.1	-23.9	74	41.77	34.51	7.01	33.19	113	342	Peak



Test Mode :	Mode 17	Temperature :	26~27°C
Test Channel :	118	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5590 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
30.54	21.69	-18.31	40	34.77	17.89	0.58	31.55	-	-	Peak
192	26.33	-17.17	43.5	47.28	9.29	1.23	31.47	-	-	Peak
240.06	31.33	-14.67	46	49.82	11.68	1.34	31.51	100	37	Peak
367.9	29.64	-16.36	46	43.67	15.46	1.77	31.26	-	-	Peak
438.6	28.88	-17.12	46	41.19	16.98	1.87	31.16	-	-	Peak
533.1	27.41	-18.59	46	37.4	18.9	2.1	30.99	-	-	Peak
5470	38.56	-15.44	54	30.71	34.17	6.87	33.19	100	314	Average
5470	50.07	-23.93	74	42.22	34.17	6.87	33.19	100	314	Peak
5590	77.33	-	-	69.25	34.32	6.94	33.18	100	314	Average
5590	87.23	-	-	79.13	34.34	6.94	33.18	100	314	Peak
5725	39.25	-14.75	54	30.92	34.51	7.01	33.19	100	314	Average
5725	50.6	-23.4	74	42.27	34.51	7.01	33.19	100	314	Peak



Test Mode :	Mode 17	Temperature :	26~27°C
Test Channel :	118	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5590 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	30	-10	40	42.5	18.48	0.58	31.56	-	-	Peak
105.6	38.28	-5.22	43.5	56.95	11.92	0.95	31.54	100	285	Peak
192	30.99	-12.51	43.5	51.94	9.29	1.23	31.47	-	-	Peak
438.6	30.13	-15.87	46	42.44	16.98	1.87	31.16	-	-	Peak
532.4	29.56	-16.44	46	39.58	18.88	2.1	31	-	-	Peak
921.6	24.42	-21.58	46	30.93	21.16	2.78	30.45	-	-	Peak
5470	38.74	-15.26	54	30.89	34.17	6.87	33.19	100	343	Average
5470	50.19	-23.81	74	42.34	34.17	6.87	33.19	100	343	Peak
5590	79.78	-	-	71.7	34.32	6.94	33.18	100	343	Average
5590	89.82	-	-	81.74	34.32	6.94	33.18	100	343	Peak
5725	39.39	-14.61	54	31.06	34.51	7.01	33.19	100	343	Average
5725	50.95	-23.05	74	42.62	34.51	7.01	33.19	100	343	Peak



Test Mode :	Mode 18	Temperature :	26~27°C
Test Channel :	134	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	5670 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
40.8	21.92	-18.08	40	40.69	12.17	0.58	31.52	-	-	Peak
192	26.26	-17.24	43.5	47.21	9.29	1.23	31.47	-	-	Peak
240.06	30.76	-15.24	46	49.25	11.68	1.34	31.51	100	314	Peak
367.2	29.29	-16.71	46	43.34	15.44	1.77	31.26	-	-	Peak
433	27.52	-18.48	46	39.73	17.08	1.87	31.16	-	-	Peak
533.1	27.58	-18.42	46	37.57	18.9	2.1	30.99	-	-	Peak
5470	38.58	-15.42	54	30.73	34.17	6.87	33.19	101	312	Average
5470	49.96	-24.04	74	42.11	34.17	6.87	33.19	101	312	Peak
5670	81.61	-	-	73.36	34.44	6.99	33.18	101	312	Average
5670	91.62	-	-	83.41	34.42	6.97	33.18	101	312	Peak
5725	39.2	-14.8	54	30.87	34.51	7.01	33.19	101	312	Average
5725	50.64	-23.36	74	42.31	34.51	7.01	33.19	101	312	Peak



Test Mode :	Mode 18	Temperature :	26~27°C
Test Channel :	134	Relative Humidity :	43~44%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	5670 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	30.38	-9.62	40	42.88	18.48	0.58	31.56	-	-	Peak
106.14	38.09	-5.41	43.5	56.76	11.92	0.95	31.54	100	21	Peak
192	28.48	-15.02	43.5	49.43	9.29	1.23	31.47	-	-	Peak
381.9	29.73	-16.27	46	43.34	15.85	1.77	31.23	-	-	Peak
479.9	31.38	-14.62	46	42.58	17.93	1.98	31.11	-	-	Peak
902.7	24.42	-21.58	46	31.15	21.05	2.7	30.48	-	-	Peak
5470	38.57	-15.43	54	30.72	34.17	6.87	33.19	100	332	Average
5470	50.28	-23.72	74	42.43	34.17	6.87	33.19	100	332	Peak
5670	85.29	-	-	77.04	34.44	6.99	33.18	100	332	Average
5670	95.73	-	-	87.5	34.42	6.99	33.18	100	332	Peak
5725	39.28	-14.72	54	30.95	34.51	7.01	33.19	100	332	Average
5725	49.9	-24.1	74	41.57	34.51	7.01	33.19	100	332	Peak

3.4 Antenna Requirements

3.4.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2), if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.4.2 Antenna Connected Construction

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

3.4.3 Antenna Gain

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

4 List of Measuring Equipments

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 $U_c(y)$	1.13		
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	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 $U_c(y)$	1.27		
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	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 $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20\text{Log}(1-\Gamma_1*\Gamma_2)$	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty $U_c(y)$	2.36				
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.72				



Appendix A. Photographs of EUT

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