

Partial FCC RF Test Report

APPLICANT : Getac Technology Corporation
EQUIPMENT : Notebook PC
BRAND NAME : Getac
MODEL NAME : B300
FCC ID : QYL305
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : Digital Transmission System (DTS)

The product was integrated the WLAN Module (Brand Name: Intel / Model Name: 533AN_MMW, FCC ID: PD9533ANM) during the test.

The product was received on Mar. 18, 2010 and completely tested on Mar. 26, 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:



Roy Wu / Manager

SPORTON INTERNATIONAL INC.

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



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR980406-03A	Rev. 01	Initial issue of report	Apr. 07, 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	$\leq 20\text{dBc}$	Pass	-
3.2	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 11.3 dB at 17.414 MHz
3.3	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 6.85 dB at 79.41 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) 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	B300
FCC ID	QYL305
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
Antenna Type	802.11b/g/n : PIFA Antenna with gain -2.23 dBi 802.11a/n : PIFA Antenna with gain -2.23 dBi
HW Version	R03
SW Version	R1.16
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 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	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.	Modem	ACEEX	DM1414	IFAXDM1414	Shielded, 1.5 m	N/A
2.	Base Station	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
5.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
6.	LCD Monitor	Lenovo	6135-AB1	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
7.	Earphone	Ergotech	ET-E200	FCC DoC	Unshielded, 1.8 m	N/A
8.	(RS-232) Mouse	State	MS-303	FCC DoC	Shielded, 1.3 m	N/A
9.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	N/A	N/A
10.	Exchange	Sun Moon Star	SMS-4 PLUS	95180108	Shielded, 1.6 m	N/A
11.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A

2 Test Configuration of Equipment Under Test

2.1 Test Mode

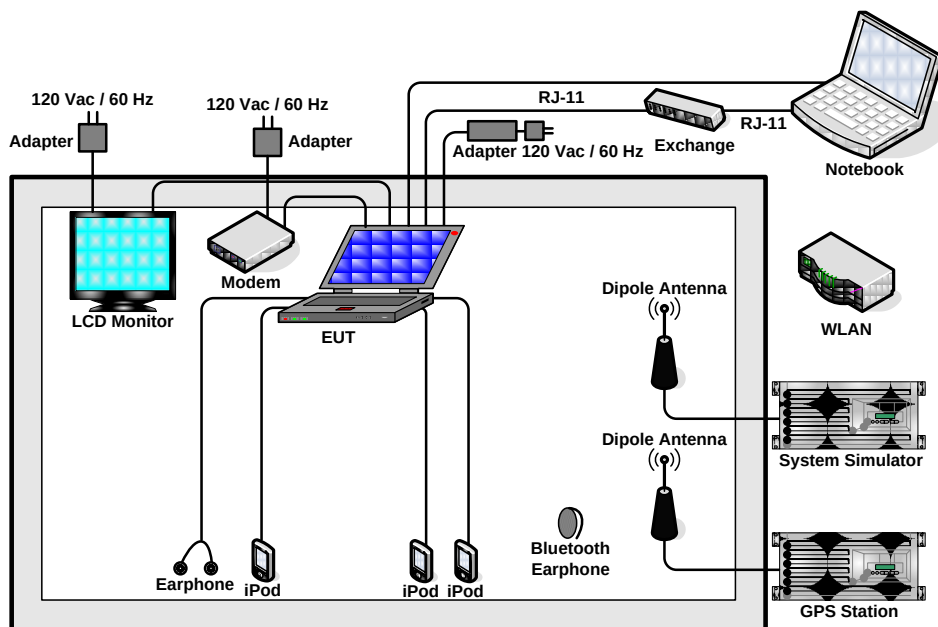
The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic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

The following table is showing the worst modes are recorded in this report only.

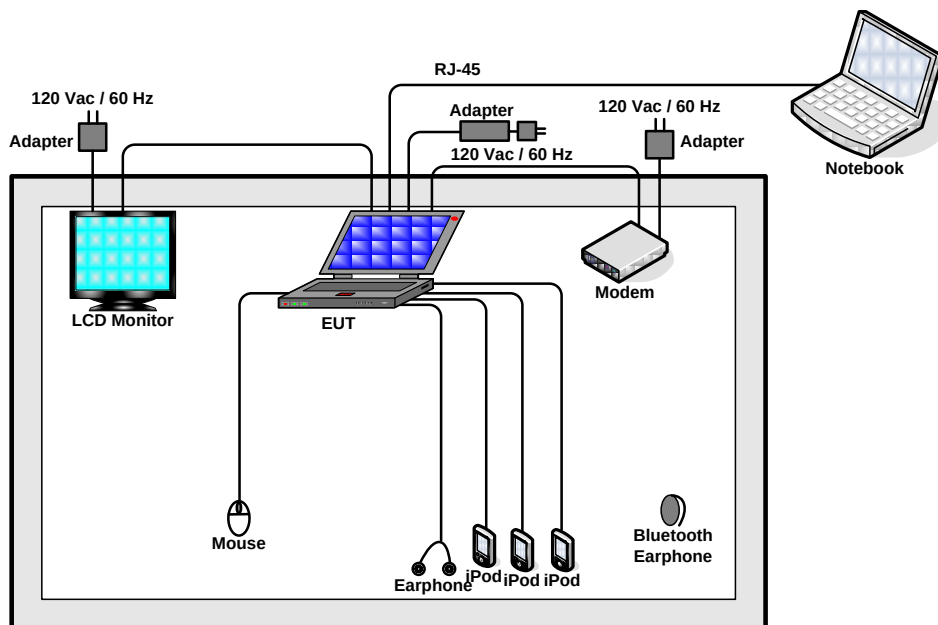
Test Cases		
Test Item	802.11b (Modulation : DSSS) 802.11g/n (Modulation : OFDM)	802.11a/n (Modulation : OFDM)
Radiated TCs	Mode 1: 802.11b_CH01_2412 MHz	Mode 13: 802.11a_CH149_5745 MHz
	Mode 2: 802.11b_CH06_2437 MHz	Mode 14: 802.11a_CH157_5785 MHz
	Mode 3: 802.11b_CH11_2462 MHz	Mode 15: 802.11a_CH165_5825 MHz
	Mode 4: 802.11g_CH01_2412 MHz	Mode 16: 802.11n_CH149_5745 MHz (BW 20M)
	Mode 5: 802.11g_CH06_2437 MHz	Mode 17: 802.11n_CH157_5785 MHz (BW 20M)
	Mode 6: 802.11g_CH11_2462 MHz	Mode 18: 802.11n_CH165_5825 MHz (BW 20M)
	Mode 7: 802.11n_CH01_2412 MHz (BW 20M)	Mode 19: 802.11n_CH151_5755 MHz (BW 40M)
	Mode 8: 802.11n_CH06_2437 MHz (BW 20M)	Mode 20: 802.11n_CH159_5795 MHz (BW 40M)
	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)	
AC Conducted Emission	Mode 1 : GSM850 Idle + WLAN Link + Bluetooth Link + TC + Adapter	
Remark: 1. TC stands for Test Configuration, and consists of iPod, monitor, modem, earphone, and RJ-45. 2. Mode 4~9 and mode 13~18 were only performed for band edges test. 3. Only the radiated emission and AC conducted emission tests of the EUT were performed in the report, the conducted test cases can be referred to the WLAN module Report (FCC ID: PD9533ANM / Elliott File Number: R71281 Rev 1)		

2.2 Connection Diagram of Test System

<Conduction Test>



<Radiation Test>





2.3 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

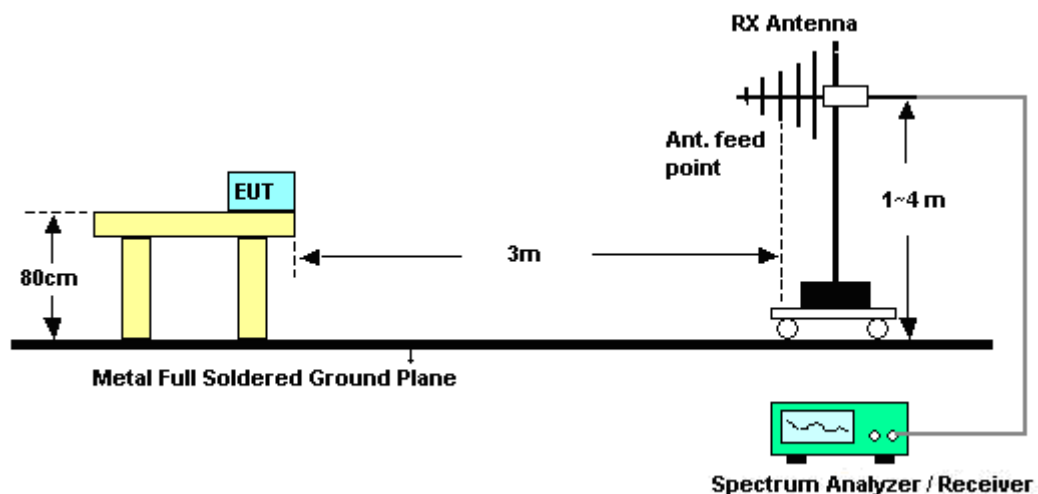
See list of measuring instruments of this test report.

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 :	24~25°C
Test Band :	802.11b	Relative Humidity :	42~43%
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
2387.14	44.67	-29.33	74	41.23	32.13	5.46	34.15	100	110	Peak
2387.14	32.9	-21.1	54	29.46	32.13	5.46	34.15	100	110	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
2389.42	46.76	-27.24	74	43.32	32.13	5.46	34.15	100	9	Peak
2389.42	35.02	-18.98	54	31.58	32.13	5.46	34.15	100	9	Average

Test Mode :	Mode 3	Temperature :	24~25°C
Test Band :	802.11b	Relative Humidity :	42~43%
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
2484.42	48.16	-25.84	74	44.7	32.27	5.38	34.19	100	143	Peak
2484.42	36.94	-17.06	54	33.48	32.27	5.38	34.19	100	143	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	50.81	-23.19	74	47.35	32.27	5.38	34.19	100	87	Peak
2483.5	40.21	-13.79	54	36.75	32.27	5.38	34.19	100	87	Average



Test Mode :	Mode 4	Temperature :	24~25°C
Test Band :	802.11g	Relative Humidity :	42~43%
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
2389.61	49.38	-24.62	74	45.94	32.13	5.46	34.15	100	158	Peak
2389.61	35.77	-18.23	54	32.33	32.13	5.46	34.15	100	158	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
2389.61	50	-24	74	46.56	32.13	5.46	34.15	100	79	Peak
2389.61	35.76	-18.24	54	32.32	32.13	5.46	34.15	100	79	Average

Test Mode :	Mode 6	Temperature :	24~25°C
Test Band :	802.11g	Relative Humidity :	42~43%
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
2490.5	47.23	-26.77	74	43.75	32.3	5.37	34.19	100	145	Peak
2490.5	33.59	-20.41	54	30.11	32.3	5.37	34.19	100	145	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
2497.53	47.82	-26.18	74	44.35	32.3	5.37	34.2	100	92	Peak
2497.53	34.47	-19.53	54	31	32.3	5.37	34.2	100	92	Average



Test Mode :	Mode 7	Temperature :	24~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~43%
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
2375.93	45.97	-28.03	74	42.54	32.11	5.47	34.15	109	230	Peak
2375.93	33.77	-20.23	54	30.34	32.11	5.47	34.15	109	230	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
2372.89	46.26	-27.74	74	42.83	32.11	5.47	34.15	100	83	Peak
2372.89	34.02	-19.98	54	30.59	32.11	5.47	34.15	100	83	Average

Test Mode :	Mode 9	Temperature :	24~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~43%
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
2483.85	45.88	-28.12	74	42.42	32.27	5.38	34.19	127	220	Peak
2483.85	33.5	-20.5	54	30.04	32.27	5.38	34.19	127	220	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
2487.65	46.26	-27.74	74	42.78	32.3	5.37	34.19	100	87	Peak
2487.65	34.38	-19.62	54	30.9	32.3	5.37	34.19	100	87	Average



Test Mode :	Mode 10	Temperature :	24~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	42~43%
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
2389.42	46.88	-27.12	74	43.44	32.13	5.46	34.15	100	113	Peak
2389.42	34.04	-19.96	54	30.6	32.13	5.46	34.15	100	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
2385.81	45.97	-28.03	74	42.53	32.13	5.46	34.15	100	91	Peak
2385.81	33.85	-20.15	54	30.41	32.13	5.46	34.15	100	91	Average

Test Mode :	Mode 12	Temperature :	24~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	42~43%
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
2483.5	44.7	-29.3	74	41.24	32.27	5.38	34.19	100	116	Peak
2483.5	33.33	-20.67	54	29.87	32.27	5.38	34.19	100	116	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
2486.7	49.82	-24.18	74	46.36	32.27	5.38	34.19	100	85	Peak
2486.7	35.56	-18.44	54	32.1	32.27	5.38	34.19	100	85	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.

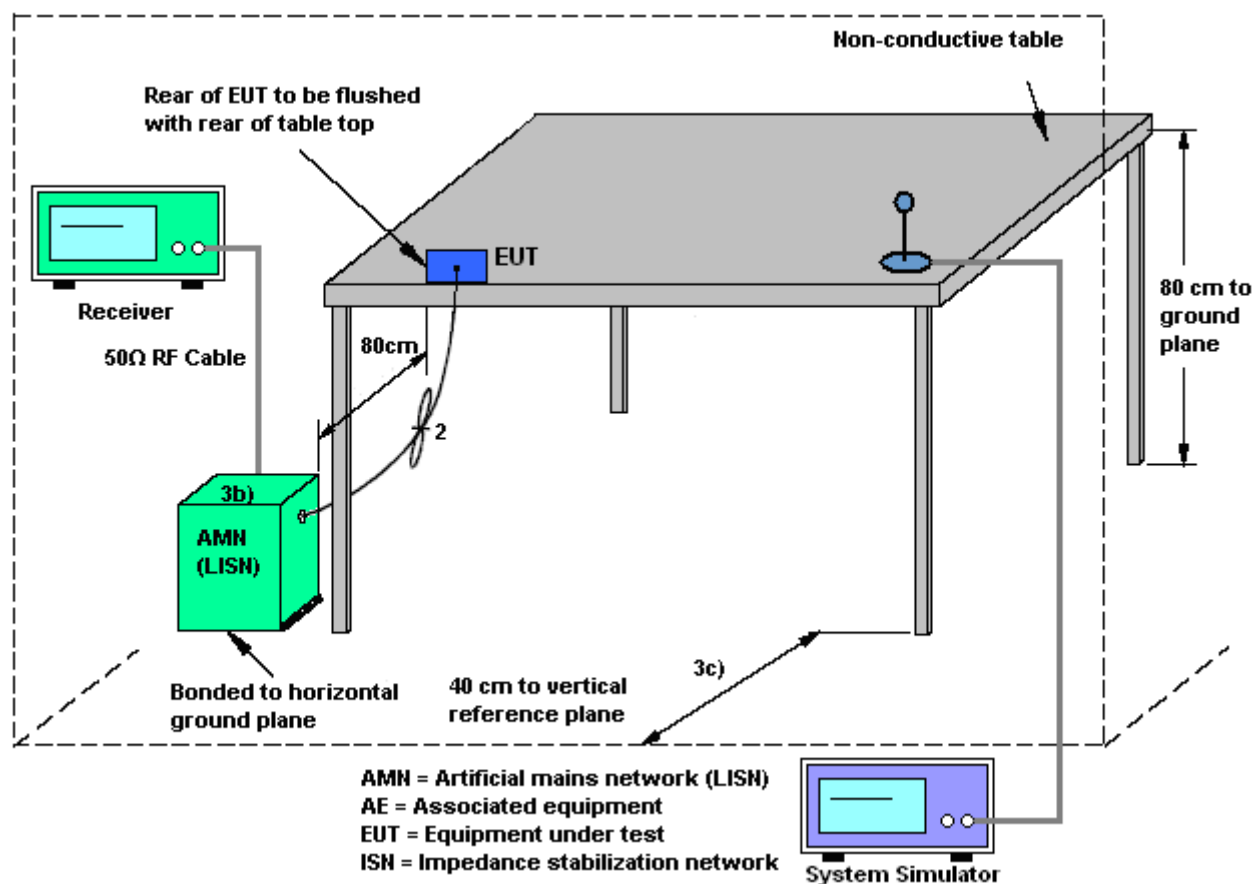
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

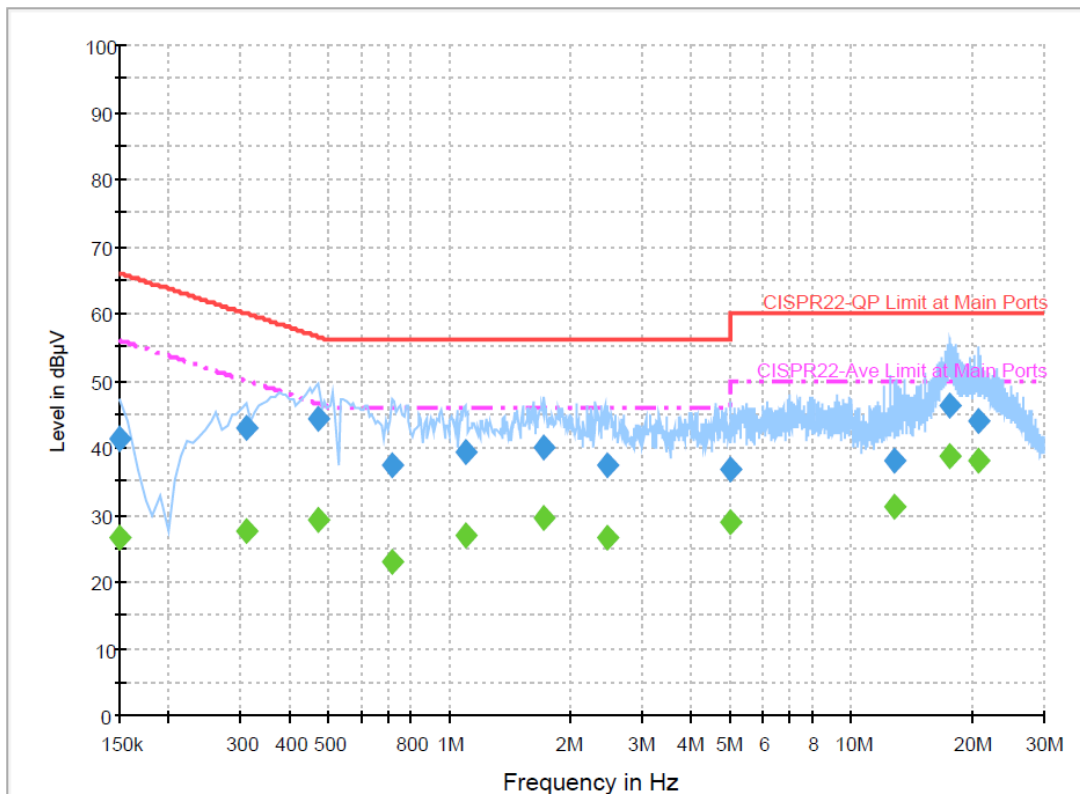
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (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 Jiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + WLAN Link + Bluetooth Link + TC + Adapter		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



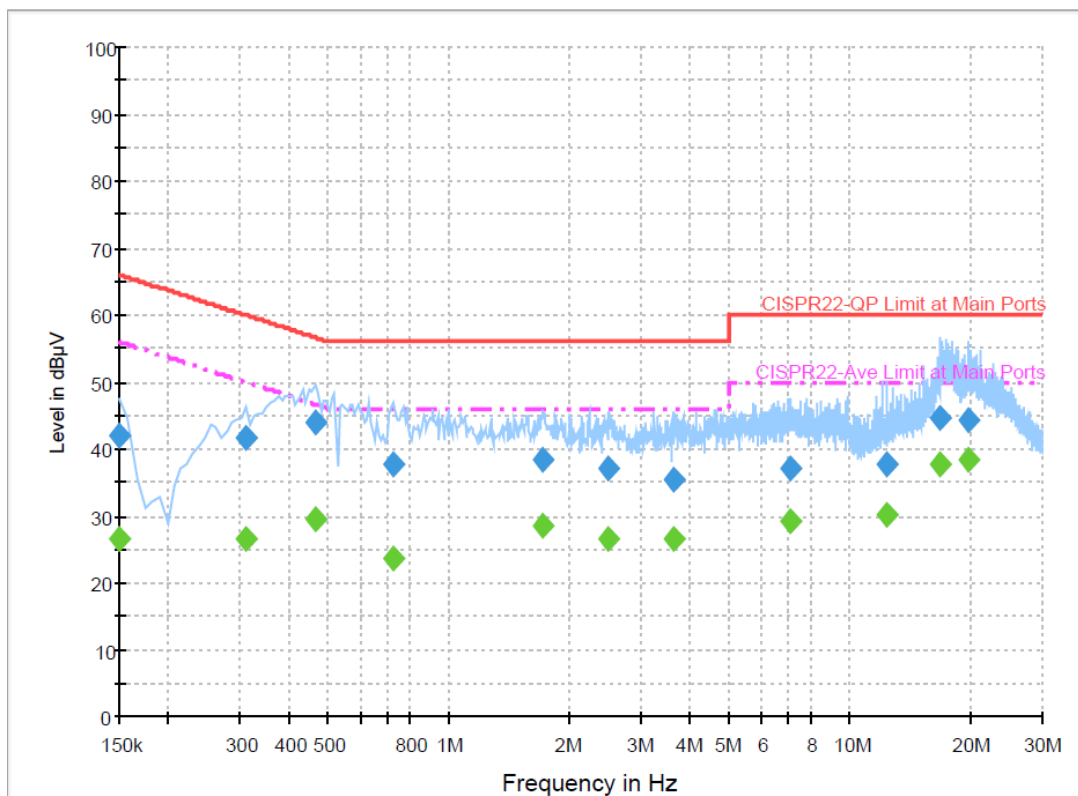
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	41.4	Off	L1	19.5	24.6	66.0
0.310000	42.9	Off	L1	19.5	17.1	60.0
0.470000	44.3	Off	L1	19.4	12.2	56.5
0.718000	37.5	Off	L1	19.5	18.5	56.0
1.086000	39.3	Off	L1	19.4	16.7	56.0
1.710000	40.1	Off	L1	19.5	15.9	56.0
2.454000	37.4	Off	L1	19.5	18.6	56.0
4.982000	36.7	Off	L1	19.6	19.3	56.0
12.742000	38.0	Off	L1	19.6	22.0	60.0
17.414000	46.2	Off	L1	19.6	13.8	60.0
20.590000	44.1	Off	L1	19.7	15.9	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	26.6	Off	L1	19.5	29.4	56.0
0.310000	27.4	Off	L1	19.5	22.6	50.0
0.470000	29.2	Off	L1	19.4	17.3	46.5
0.718000	22.9	Off	L1	19.5	23.1	46.0
1.086000	26.9	Off	L1	19.4	19.1	46.0
1.710000	29.4	Off	L1	19.5	16.6	46.0
2.454000	26.7	Off	L1	19.5	19.3	46.0
4.982000	28.7	Off	L1	19.6	17.3	46.0
12.742000	31.1	Off	L1	19.6	18.9	50.0
17.414000	38.7	Off	L1	19.6	11.3	50.0
20.590000	37.9	Off	L1	19.7	12.1	50.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Novic Jiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 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)
0.150000	42.0	Off	N	19.5	24.0	66.0
0.310000	41.7	Off	N	19.5	18.3	60.0
0.462000	44.0	Off	N	19.4	12.7	56.7
0.726000	37.6	Off	N	19.5	18.4	56.0
1.710000	38.5	Off	N	19.5	17.5	56.0
2.486000	37.0	Off	N	19.5	19.0	56.0
3.606000	35.3	Off	N	19.6	20.7	56.0
7.094000	37.1	Off	N	19.6	22.9	60.0
12.334000	37.6	Off	N	19.6	22.4	60.0
16.758000	44.6	Off	N	19.8	15.4	60.0
19.710000	44.4	Off	N	19.9	15.6	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	26.5	Off	N	19.5	29.5	56.0
0.310000	26.4	Off	N	19.5	23.6	50.0
0.462000	29.4	Off	N	19.4	17.3	46.7
0.726000	23.5	Off	N	19.5	22.5	46.0
1.710000	28.7	Off	N	19.5	17.3	46.0
2.486000	26.7	Off	N	19.5	19.3	46.0
3.606000	26.6	Off	N	19.6	19.4	46.0
7.094000	29.2	Off	N	19.6	20.8	50.0
12.334000	30.2	Off	N	19.6	19.8	50.0
16.758000	37.8	Off	N	19.8	12.2	50.0
19.710000	38.2	Off	N	19.9	11.8	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

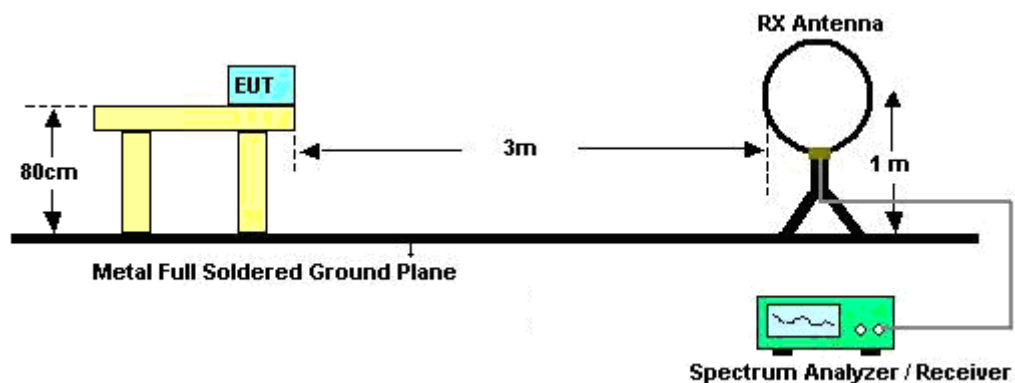
See list of measuring instruments of this test report.

3.3.3 Test Procedures

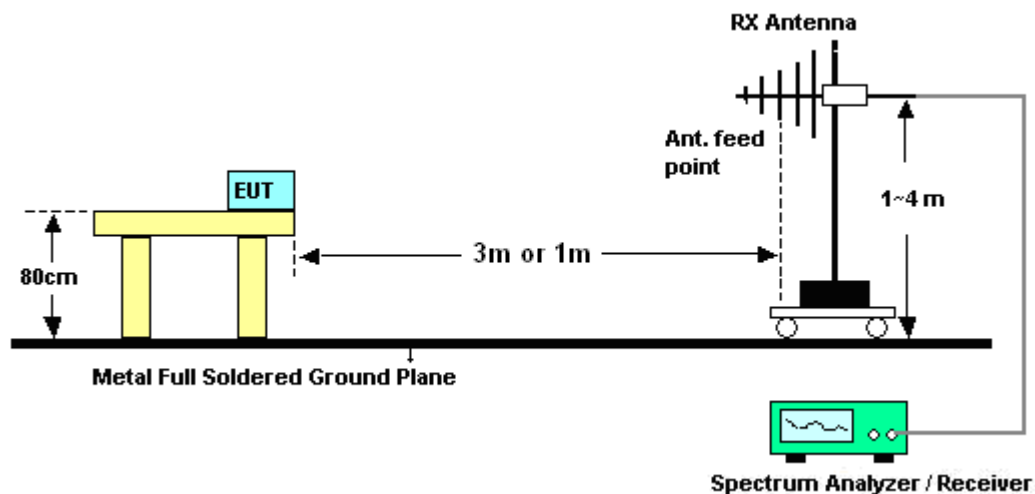
- The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
- Use the following spectrum analyzer settings:
 - Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold.
 - 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 = $20 \log (\text{specific distance [3m]} / \text{test distance [1m]})$ (dB)
- 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 :	24~25°C	
		Relative Humidity :	42~43%	

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 = $40 \log (\text{specific distance} / \text{test distance})$ (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 :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	1. 2412 MHz is Fundamental Signals which can be ignored. 2. 9648 MHz is not within a restricted band.		

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
39.45	20.4	-19.6	40	37.31	14.06	0.73	31.7	-	-	Peak
187.41	31.95	-11.55	43.5	52.95	8.96	1.65	31.61	100	74	Peak
232.77	31.03	-14.97	46	50.04	10.67	1.85	31.53	-	-	Peak
310.5	27.23	-18.77	46	42.69	13.74	2.18	31.38	-	-	Peak
651.4	27.3	-18.7	46	34.36	20.47	3.42	30.95	-	-	Peak
939.8	26.68	-19.32	46	29.32	23.78	4.24	30.66	-	-	Peak
2387.14	32.9	-21.1	54	29.46	32.13	5.46	34.15	100	110	Average
2387.14	44.67	-29.33	74	41.23	32.13	5.46	34.15	100	110	Peak
2412	93.18	-	-	89.74	32.16	5.44	34.16	100	110	Peak
2412	86.5	-	-	83.06	32.16	5.44	34.16	100	110	Average
2494	31.83	-22.17	54	28.36	32.3	5.37	34.2	100	110	Average
2494	45.03	-28.97	74	41.56	32.3	5.37	34.2	100	110	Peak
8265	54.65	-19.35	74	43.73	36	10.02	35.1	100	37	Peak
8265	40.38	-13.62	54	29.46	36	10.02	35.1	100	37	Average
9648	36.53	-36.65	73.18	71.18	-10.09	10.74	35.3	100	0	Peak

Test Mode :	Mode 1	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	1. 2412 MHz is Fundamental Signals which can be ignored. 2. 9648 MHz is not within a restricted band.		

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
32.7	28.36	-11.64	40	41.56	17.84	0.66	31.7	-	-	Peak
186.06	32.2	-11.3	43.5	53.2	8.97	1.64	31.61	100	226	Peak
233.58	29.98	-16.02	46	48.88	10.78	1.85	31.53	-	-	Peak
624.1	31.02	-14.98	46	38.42	20.25	3.33	30.98	-	-	Peak
668.2	32.36	-13.64	46	39.24	20.59	3.46	30.93	-	-	Peak
763.4	30.52	-15.48	46	35.84	21.71	3.74	30.77	-	-	Peak
2389.42	35.02	-18.98	54	31.58	32.13	5.46	34.15	100	9	Average
2389.42	46.76	-27.24	74	43.32	32.13	5.46	34.15	100	9	Peak
2412	95.84	-	-	92.4	32.16	5.44	34.16	100	9	Peak
2412	92.19	-	-	88.75	32.16	5.44	34.16	100	9	Average
2492	31.8	-22.2	54	28.33	32.3	5.37	34.2	100	9	Average
2492	45.16	-28.84	74	41.69	32.3	5.37	34.2	100	9	Peak
8394	54.72	-19.28	74	43.71	36	10.11	35.1	100	88	Peak
8394	40.12	-13.88	54	29.11	36	10.11	35.1	100	88	Average
9648	37.54	-38.3	75.84	72.19	-10.09	10.74	35.3	100	0	Peak



Test Mode :	Mode 2	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
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
30.81	21.84	-18.16	40	33.94	18.95	0.65	31.7	-	-	Peak
130.17	22.12	-21.38	43.5	40.65	11.77	1.37	31.67	-	-	Peak
185.25	31.58	-11.92	43.5	52.57	8.98	1.64	31.61	100	96	Peak
310.5	27.31	-18.69	46	42.77	13.74	2.18	31.38	-	-	Peak
665.4	28.75	-17.25	46	35.66	20.57	3.45	30.93	-	-	Peak
903.4	28.83	-17.17	46	32.14	23.22	4.17	30.7	-	-	Peak
2382	45.19	-28.81	74	41.76	32.11	5.47	34.15	198	259	Peak
2382	33.01	-20.99	54	29.58	32.11	5.47	34.15	198	259	Average
2437	90.36	-	-	86.91	32.19	5.43	34.17	198	259	Peak
2437	87.38	-	-	83.92	32.22	5.41	34.17	198	259	Average
2486	31.55	-22.45	54	28.09	32.27	5.38	34.19	198	259	Average
2486	44.24	-29.76	74	40.78	32.27	5.38	34.19	198	259	Peak
8394	54.4	-19.6	74	43.39	36	10.11	35.1	100	166	Peak
8394	40.56	-13.44	54	29.55	36	10.11	35.1	100	166	Average



Test Mode :	Mode 2	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
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
32.7	28.73	-11.27	40	41.93	17.84	0.66	31.7	100	176	Peak
189.57	32.2	-11.3	43.5	53.23	8.92	1.66	31.61	-	-	Peak
233.58	29.32	-16.68	46	48.22	10.78	1.85	31.53	-	-	Peak
623.4	30.07	-15.93	46	37.47	20.25	3.33	30.98	-	-	Peak
651.4	30.56	-15.44	46	37.62	20.47	3.42	30.95	-	-	Peak
665.4	34.41	-11.59	46	41.32	20.57	3.45	30.93	-	-	Peak
2390	45.85	-28.15	74	42.42	32.13	5.46	34.16	188	12	Peak
2390	33.52	-20.48	54	30.09	32.13	5.46	34.16	188	12	Average
2437	93.6	-	-	90.14	32.22	5.41	34.17	188	12	Peak
2437	90.57	-	-	87.11	32.22	5.41	34.17	188	12	Average
2494	32.49	-21.51	54	29.02	32.3	5.37	34.2	188	12	Average
2494	44.38	-29.62	74	40.91	32.3	5.37	34.2	188	12	Peak
8430	55.21	-18.79	74	44.18	36	10.13	35.1	100	46	Peak
8430	40.59	-13.41	54	29.56	36	10.13	35.1	100	46	Average



Test Mode :	Mode 3	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
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
48.9	21.05	-18.95	40	43	8.96	0.79	31.7	-	-	Peak
187.41	33.22	-10.28	43.5	54.22	8.96	1.65	31.61	100	87	Peak
233.58	32.1	-13.9	46	51	10.78	1.85	31.53	-	-	Peak
310.5	27.71	-18.29	46	43.17	13.74	2.18	31.38	-	-	Peak
357.4	25.47	-20.53	46	39.37	15	2.38	31.28	-	-	Peak
665.4	28.8	-17.2	46	35.71	20.57	3.45	30.93	-	-	Peak
2374	48.45	-25.55	74	45.02	32.11	5.47	34.15	100	143	Peak
2374	35.8	-18.2	54	32.37	32.11	5.47	34.15	100	143	Average
2462	102.54	-	-	99.08	32.24	5.4	34.18	100	143	Peak
2462	96.47	-	-	93.01	32.24	5.4	34.18	100	143	Average
2484.42	36.94	-17.06	54	33.48	32.27	5.38	34.19	100	143	Average
2484.42	48.16	-25.84	74	44.7	32.27	5.38	34.19	100	143	Peak
8274	54.86	-19.14	74	43.93	36	10.03	35.1	100	67	Peak
8274	40.38	-13.62	54	29.45	36	10.03	35.1	100	67	Average



Test Mode :	Mode 3	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
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
32.97	27.93	-12.07	40	41.13	17.84	0.66	31.7	-	-	Peak
184.98	32.38	-11.12	43.5	53.37	8.98	1.64	31.61	100	174	Peak
233.58	29.91	-16.09	46	48.81	10.78	1.85	31.53	-	-	Peak
315.4	26.31	-19.69	46	41.61	13.87	2.2	31.37	-	-	Peak
624.1	31.29	-14.71	46	38.69	20.25	3.33	30.98	-	-	Peak
665.4	34.83	-11.17	46	41.74	20.57	3.45	30.93	-	-	Peak
2390	47.28	-26.72	74	43.85	32.13	5.46	34.16	100	87	Peak
2390	34.75	-19.25	54	31.32	32.13	5.46	34.16	100	87	Average
2462	101.81	-	-	98.35	32.24	5.4	34.18	100	87	Peak
2462	98.48	-	-	95.02	32.24	5.4	34.18	100	87	Average
2483.5	40.21	-13.79	54	36.75	32.27	5.38	34.19	100	87	Average
2483.5	50.81	-23.19	74	47.35	32.27	5.38	34.19	100	87	Peak
8346	54.17	-19.83	74	43.2	36	10.07	35.1	100	58	Peak
8346	40.63	-13.37	54	29.66	36	10.07	35.1	100	58	Average



Test Mode :	Mode 4	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
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
2389.61	35.77	-18.23	54	32.33	32.13	5.46	34.15	100	158	Average
2389.61	49.38	-24.62	74	45.94	32.13	5.46	34.15	100	158	Peak
2412	97.83	-	-	94.39	32.16	5.44	34.16	100	158	Peak
2412	86.36	-	-	82.92	32.16	5.44	34.16	100	158	Average
2486	33.14	-20.86	54	29.68	32.27	5.38	34.19	100	158	Average
2486	47.64	-26.36	74	44.18	32.27	5.38	34.19	100	158	Peak



Test Mode :	Mode 4	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
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
2389.61	35.76	-18.24	54	32.32	32.13	5.46	34.15	100	79	Average
2389.61	50	-24	74	46.56	32.13	5.46	34.15	100	79	Peak
2412	96.41	-	-	92.97	32.16	5.44	34.16	100	79	Peak
2412	86.79	-	-	83.35	32.16	5.44	34.16	100	79	Average
2486	34.07	-19.93	54	30.61	32.27	5.38	34.19	100	79	Average
2486	46.83	-27.17	74	43.37	32.27	5.38	34.19	100	79	Peak



Test Mode :	Mode 5	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
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
2374	47.58	-26.42	74	44.15	32.11	5.47	34.15	100	144	Peak
2374	35.39	-18.61	54	31.96	32.11	5.47	34.15	100	144	Average
2437	96.57	-	-	93.11	32.22	5.41	34.17	100	144	Peak
2437	83.44	-	-	79.98	32.22	5.41	34.17	100	144	Average
2486	33.58	-20.42	54	30.12	32.27	5.38	34.19	100	144	Average
2486	47.29	-26.71	74	43.83	32.27	5.38	34.19	100	144	Peak



Test Mode :	Mode 5	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
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
2324	46.87	-27.13	74	43.47	32.02	5.51	34.13	100	81	Peak
2324	34.78	-19.22	54	31.38	32.02	5.51	34.13	100	81	Average
2437	94.39	-	-	90.94	32.22	5.41	34.18	100	81	Peak
2437	84.99	-	-	81.53	32.22	5.41	34.17	100	81	Average
2500	34.17	-19.83	54	30.7	32.3	5.37	34.2	100	81	Average
2500	47.07	-26.93	74	43.6	32.3	5.37	34.2	100	81	Peak



Test Mode :	Mode 6	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
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
2390	47.73	-26.27	74	44.3	32.13	5.46	34.16	100	145	Peak
2390	35.23	-18.77	54	31.8	32.13	5.46	34.16	100	145	Average
2462	94.24	-	-	90.79	32.24	5.4	34.19	100	145	Peak
2462	83.89	-	-	80.43	32.24	5.4	34.18	100	145	Average
2490.5	33.59	-20.41	54	30.11	32.3	5.37	34.19	100	145	Average
2490.5	47.23	-26.77	74	43.75	32.3	5.37	34.19	100	145	Peak



Test Mode :	Mode 6	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
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
2374	46.58	-27.42	74	43.15	32.11	5.47	34.15	100	92	Peak
2374	34.31	-19.69	54	30.88	32.11	5.47	34.15	100	92	Average
2462	94.21	-	-	90.75	32.24	5.4	34.18	100	92	Peak
2462	84.39	-	-	80.93	32.24	5.4	34.18	100	92	Average
2497.53	34.47	-19.53	54	31	32.3	5.37	34.2	100	92	Average
2497.53	47.82	-26.18	74	44.35	32.3	5.37	34.2	100	92	Peak



Test Mode :	Mode 7	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
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
2375.93	33.77	-20.23	54	30.34	32.11	5.47	34.15	109	230	Average
2375.93	45.97	-28.03	74	42.54	32.11	5.47	34.15	109	230	Peak
2412	92.97	-	-	89.52	32.19	5.43	34.17	109	230	Peak
2412	79.26	-	-	75.82	32.16	5.44	34.16	109	230	Average
2484	31.96	-22.04	54	28.5	32.27	5.38	34.19	109	230	Average
2484	46.12	-27.88	74	42.66	32.27	5.38	34.19	109	230	Peak



Test Mode :	Mode 7	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
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
2372.89	34.02	-19.98	54	30.59	32.11	5.47	34.15	100	83	Average
2372.89	46.26	-27.74	74	42.83	32.11	5.47	34.15	100	83	Peak
2412	93.44	-	-	90	32.16	5.44	34.16	100	83	Peak
2412	82.13	-	-	78.69	32.16	5.44	34.16	100	83	Average
2492	33.85	-20.15	54	30.38	32.3	5.37	34.2	100	83	Average
2492	45.58	-28.42	74	42.11	32.3	5.37	34.2	100	83	Peak



Test Mode :	Mode 8	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
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
2388	46.18	-27.82	74	42.74	32.13	5.46	34.15	134	226	Peak
2388	33.35	-20.65	54	29.91	32.13	5.46	34.15	134	226	Average
2437	94.44	-	-	90.98	32.22	5.41	34.17	134	226	Peak
2437	81.18	-	-	77.72	32.22	5.41	34.17	134	226	Average
2492	33.04	-20.96	54	29.57	32.3	5.37	34.2	134	226	Average
2492	45.81	-28.19	74	42.34	32.3	5.37	34.2	134	226	Peak



Test Mode :	Mode 8	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
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
2372	45.37	-28.63	74	41.94	32.11	5.47	34.15	100	79	Peak
2372	33.9	-20.1	54	30.47	32.11	5.47	34.15	100	79	Average
2437	94.81	-	-	91.35	32.22	5.41	34.17	100	79	Peak
2437	81.46	-	-	78	32.22	5.41	34.17	100	79	Average
2492	33.42	-20.58	54	29.95	32.3	5.37	34.2	100	79	Average
2492	45.08	-28.92	74	41.61	32.3	5.37	34.2	100	79	Peak



Test Mode :	Mode 9	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
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
2388	46.07	-27.93	74	42.63	32.13	5.46	34.15	127	220	Peak
2388	33.32	-20.68	54	29.88	32.13	5.46	34.15	127	220	Average
2462	94.96	-	-	91.51	32.24	5.4	34.19	127	220	Peak
2462	81.9	-	-	78.44	32.24	5.4	34.18	127	220	Average
2483.85	45.88	-28.12	74	42.42	32.27	5.38	34.19	127	220	Peak
2483.85	33.5	-20.5	54	30.04	32.27	5.38	34.19	127	220	Average



Test Mode :	Mode 9	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
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
2382	45.52	-28.48	74	42.09	32.11	5.47	34.15	100	87	Peak
2382	33.78	-20.22	54	30.35	32.11	5.47	34.15	100	87	Average
2462	94.21	-	-	90.75	32.24	5.4	34.18	100	87	Peak
2462	82.53	-	-	79.07	32.24	5.4	34.18	100	87	Average
2487.65	34.38	-19.62	54	30.9	32.3	5.37	34.19	100	87	Average
2487.65	46.26	-27.74	74	42.78	32.3	5.37	34.19	100	87	Peak

Test Mode :	Mode 10	Temperature :	24~25°C
Test Channel :	03	Relative Humidity :	42~43%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	1. 2422 MHz is Fundamental Signals which can be ignored. 2. 9688 MHz is not within a restricted band.		

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	22.59	-17.41	40	34.14	19.51	0.64	31.7	-	-	Peak
189.57	31.63	-11.87	43.5	52.66	8.92	1.66	31.61	100	58	Peak
233.58	31.72	-14.28	46	50.62	10.78	1.85	31.53	-	-	Peak
310.5	29.1	-16.9	46	44.56	13.74	2.18	31.38	-	-	Peak
668.2	27.36	-18.64	46	34.24	20.59	3.46	30.93	-	-	Peak
912.5	27.06	-18.94	46	30.19	23.37	4.19	30.69	-	-	Peak
2389.42	34.04	-19.96	54	30.6	32.13	5.46	34.15	100	113	Average
2389.42	46.88	-27.12	74	43.44	32.13	5.46	34.15	100	113	Peak
2422	90.48	-	-	87.04	32.16	5.44	34.16	100	113	Peak
2422	74.27	-	-	70.82	32.19	5.43	34.17	100	113	Average
2492	32.17	-21.83	54	28.7	32.3	5.37	34.2	100	113	Average
2492	45.53	-28.47	74	42.06	32.3	5.37	34.2	100	113	Peak
8313	54.55	-19.45	74	43.6	36	10.05	35.1	100	57	Peak
8313	40.63	-13.37	54	29.68	36	10.05	35.1	100	57	Average
9688	39.79	-30.69	70.48	74.32	-10	10.77	35.3	100	0	Peak



Test Mode :	Mode 10	Temperature :	24~25°C
Test Channel :	03	Relative Humidity :	42~43%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	1. 2422 MHz is Fundamental Signals which can be ignored. 2. 9688 MHz is not within a restricted band.		

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
32.7	28.13	-11.87	40	41.33	17.84	0.66	31.7	-	-	Peak
187.41	32.76	-10.74	43.5	53.76	8.96	1.65	31.61	100	67	Peak
233.58	30	-16	46	48.9	10.78	1.85	31.53	-	-	Peak
300	27.14	-18.86	46	42.95	13.46	2.13	31.4	-	-	Peak
624.1	31.28	-14.72	46	38.68	20.25	3.33	30.98	-	-	Peak
668.2	34.62	-11.38	46	41.5	20.59	3.46	30.93	-	-	Peak
2385.81	33.85	-20.15	54	30.41	32.13	5.46	34.15	100	91	Average
2385.81	45.97	-28.03	74	42.53	32.13	5.46	34.15	100	91	Peak
2422	89.75	-	-	86.31	32.16	5.44	34.16	100	91	Peak
2422	76	-	-	72.55	32.19	5.43	34.17	100	91	Average
2494	33.52	-20.48	54	30.05	32.3	5.37	34.2	100	91	Average
2494	45.56	-28.44	74	42.09	32.3	5.37	34.2	100	91	Peak
8298	53.67	-20.33	74	42.73	36	10.04	35.1	100	67	Peak
8298	40.4	-13.6	54	29.46	36	10.04	35.1	100	67	Average
9688	39.97	-29.78	69.75	74.5	-10	10.77	35.3	100	0	Peak

Test Mode :	Mode 11	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	1. 2437 MHz is Fundamental Signals which can be ignored. 2. 9748 MHz is not within a restricted band.		

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	22.72	-17.28	40	34.27	19.51	0.64	31.7	-	-	Peak
190.38	31.59	-11.91	43.5	52.62	8.92	1.66	31.61	100	85	Peak
233.85	31.15	-14.85	46	50.05	10.78	1.85	31.53	-	-	Peak
300	28.06	-17.94	46	43.87	13.46	2.13	31.4	-	-	Peak
391	25.45	-20.55	46	38.28	15.88	2.51	31.22	-	-	Peak
665.4	29.3	-16.7	46	36.21	20.57	3.45	30.93	-	-	Peak
2390	51.33	-22.67	74	47.9	32.13	5.46	34.16	100	112	Peak
2390	35.14	-18.86	54	31.71	32.13	5.46	34.16	100	112	Average
2437	97.52	-	-	94.07	32.22	5.41	34.18	100	112	Peak
2437	80.69	-	-	77.23	32.22	5.41	34.17	100	112	Average
2484	33.13	-20.87	54	29.67	32.27	5.38	34.19	100	112	Average
2484	49.39	-24.61	74	45.93	32.27	5.38	34.19	100	112	Peak
8214	54.26	-19.74	74	43.38	36	9.98	35.1	100	269	Peak
8214	40.65	-13.35	54	29.77	36	9.98	35.1	100	269	Average
9748	38.81	-38.71	77.52	73.17	-9.87	10.81	35.3	100	0	Peak

Test Mode :	Mode 11	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	1. 2437 MHz is Fundamental Signals which can be ignored. 2. 9748 MHz is not within a restricted band.		

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
31.89	27.83	-12.17	40	40.47	18.4	0.66	31.7	-	-	Peak
186.33	33.11	-10.39	43.5	54.11	8.97	1.64	31.61	100	69	Peak
232.77	29.62	-16.38	46	48.63	10.67	1.85	31.53	-	-	Peak
623.4	30.92	-15.08	46	38.32	20.25	3.33	30.98	-	-	Peak
665.4	34.05	-11.95	46	40.96	20.57	3.45	30.93	-	-	Peak
766.2	30.66	-15.34	46	35.93	21.75	3.75	30.77	-	-	Peak
2390	48.56	-25.44	74	45.13	32.13	5.46	34.16	100	86	Peak
2390	35.32	-18.68	54	31.89	32.13	5.46	34.16	100	86	Average
2437	97.51	-	-	94.06	32.22	5.41	34.18	100	86	Peak
2437	83.03	-	-	79.57	32.22	5.41	34.17	100	86	Average
2484	35.95	-18.05	54	32.49	32.27	5.38	34.19	100	86	Average
2484	49.11	-24.89	74	45.65	32.27	5.38	34.19	100	86	Peak
8433	54.21	-19.79	74	43.18	36	10.13	35.1	100	97	Peak
8433	40.58	-13.42	54	29.55	36	10.13	35.1	100	97	Average
9748	39.35	-38.16	77.51	73.71	-9.87	10.81	35.3	100	0	Peak

Test Mode :	Mode 12	Temperature :	24~25°C
Test Channel :	09	Relative Humidity :	42~43%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	1. 2452 MHz is Fundamental Signals which can be ignored. 2. 9808 MHz is not within a restricted band.		

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	32.24	-7.76	40	44.34	18.95	0.65	31.7	-	-	Peak
80.22	32.6	-7.4	40	55.73	7.57	1	31.7	100	96	Peak
187.14	31.71	-11.79	43.5	52.71	8.96	1.65	31.61	-	-	Peak
310.5	26.71	-19.29	46	42.17	13.74	2.18	31.38	-	-	Peak
702.5	31.51	-14.49	46	37.98	20.87	3.56	30.9	-	-	Peak
940.5	27	-19	46	29.62	23.8	4.24	30.66	-	-	Peak
2388	46.5	-27.5	74	43.06	32.13	5.46	34.15	100	116	Peak
2388	33.11	-20.89	54	29.67	32.13	5.46	34.15	100	116	Average
2452	93.6	-	-	90.15	32.24	5.4	34.19	100	116	Peak
2452	76.78	-	-	73.33	32.22	5.41	34.18	100	116	Average
2483.5	33.33	-20.67	54	29.87	32.27	5.38	34.19	100	116	Average
2483.5	44.7	-29.3	74	41.24	32.27	5.38	34.19	100	116	Peak
8418	54.24	-19.76	74	43.22	36	10.12	35.1	100	68	Peak
8418	40.69	-13.31	54	29.67	36	10.12	35.1	100	68	Average
9808	39.17	-34.43	73.6	73.35	-9.74	10.86	35.3	100	0	Peak

Test Mode :	Mode 12	Temperature :	24~25°C
Test Channel :	09	Relative Humidity :	42~43%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	1. 2452 MHz is Fundamental Signals which can be ignored. 2. 9808 MHz is not within a restricted band.		

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	29.76	-10.24	40	42.96	17.84	0.66	31.7	100	64	Peak
191.73	32.09	-11.41	43.5	53.13	8.9	1.67	31.61	-	-	Peak
233.58	29.51	-16.49	46	48.41	10.78	1.85	31.53	-	-	Peak
623.4	31.17	-14.83	46	38.57	20.25	3.33	30.98	-	-	Peak
665.4	33.23	-12.77	46	40.14	20.57	3.45	30.93	-	-	Peak
702.5	29.76	-16.24	46	36.23	20.87	3.56	30.9	-	-	Peak
2332	46.43	-27.57	74	43.03	32.02	5.51	34.13	100	85	Peak
2332	33.76	-20.24	54	30.36	32.02	5.51	34.13	100	85	Average
2452	93.25	-	-	89.8	32.24	5.4	34.19	100	85	Peak
2452	79.38	-	-	75.93	32.22	5.41	34.18	100	85	Average
2486.7	35.56	-18.44	54	32.1	32.27	5.38	34.19	100	85	Average
2486.7	49.82	-24.18	74	46.36	32.27	5.38	34.19	100	85	Peak
8397	53.87	-20.13	74	42.86	36	10.11	35.1	100	67	Peak
8397	40.7	-13.3	54	29.69	36	10.11	35.1	100	67	Average
9808	39.49	-33.76	73.25	73.67	-9.74	10.86	35.3	100	0	Peak



Test Mode :	Mode 13	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
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
5745	98.29	-	-	89.34	35.04	8.41	34.5	102	2	Peak
5745	89.74	-	-	80.79	35.04	8.41	34.5	102	2	Average



Test Mode :	Mode 13	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
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
5745	101.4	-	-	92.45	35.04	8.41	34.5	100	28	Peak
5745	92.56	-	-	83.61	35.04	8.41	34.5	100	28	Average



Test Mode :	Mode 14	Temperature :	24~25°C
Test Channel :	157	Relative Humidity :	42~43%
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
5785	98.41	-	-	89.42	35.09	8.42	34.52	101	2	Peak
5785	88.62	-	-	79.63	35.09	8.42	34.52	101	2	Average



Test Mode :	Mode 14	Temperature :	24~25°C
Test Channel :	157	Relative Humidity :	42~43%
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
5785	101.75	-	-	92.76	35.09	8.42	34.52	100	32	Peak
5785	92.17	-	-	83.18	35.09	8.42	34.52	100	32	Average



Test Mode :	Mode 15	Temperature :	24~25°C
Test Channel :	165	Relative Humidity :	42~43%
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
5825	98.04	-	-	88.98	35.16	8.43	34.53	100	289	Peak
5825	87.06	-	-	78	35.16	8.43	34.53	100	289	Average



Test Mode :	Mode 15	Temperature :	24~25°C
Test Channel :	165	Relative Humidity :	42~43%
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
5825	101.21	-	-	92.15	35.16	8.43	34.53	100	38	Peak
5825	91.13	-	-	82.07	35.16	8.43	34.53	100	38	Average



Test Mode :	Mode 16	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
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
5745	103.43	-	-	94.48	35.04	8.41	34.5	102	35	Peak
5745	92.48	-	-	83.53	35.04	8.41	34.5	102	35	Average



Test Mode :	Mode 16	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
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
5745	106.78	-	-	97.83	35.04	8.41	34.5	100	7	Peak
5745	95.65	-	-	86.7	35.04	8.41	34.5	100	7	Average



Test Mode :	Mode 17	Temperature :	24~25°C
Test Channel :	157	Relative Humidity :	42~43%
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
5785	103.58	-	-	94.59	35.09	8.42	34.52	100	310	Peak
5785	91.27	-	-	82.28	35.09	8.42	34.52	100	310	Average



Test Mode :	Mode 17	Temperature :	24~25°C
Test Channel :	157	Relative Humidity :	42~43%
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
5785	107.29	-	-	98.3	35.09	8.42	34.52	100	324	Peak
5785	94.79	-	-	85.8	35.09	8.42	34.52	100	324	Average



Test Mode :	Mode 18	Temperature :	24~25°C
Test Channel :	165	Relative Humidity :	42~43%
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
5825	103.92	-	-	94.86	35.16	8.43	34.53	101	300	Peak
5825	92.05	-	-	82.99	35.16	8.43	34.53	101	300	Average



Test Mode :	Mode 18	Temperature :	24~25°C
Test Channel :	165	Relative Humidity :	42~43%
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
5825	105.46	-	-	96.4	35.16	8.43	34.53	100	9	Peak
5825	93.2	-	-	84.14	35.16	8.43	34.53	100	9	Average



Test Mode :	Mode 19	Temperature :	24~25°C
Test Channel :	151	Relative Humidity :	42~43%
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
30.54	31.75	-8.25	40	43.85	18.95	0.65	31.7	100	285	Peak
89.13	29.54	-13.96	43.5	51.39	8.75	1.1	31.7	-	-	Peak
189.57	32.23	-11.27	43.5	53.26	8.92	1.66	31.61	-	-	Peak
355.3	25.18	-20.82	46	39.17	14.93	2.37	31.29	-	-	Peak
665.4	28.05	-17.95	46	34.96	20.57	3.45	30.93	-	-	Peak
957.3	27	-19	46	29.32	24.04	4.28	30.64	-	-	Peak
5755	99.44	-	-	90.47	35.06	8.41	34.5	112	296	Peak
5755	86.09	-	-	77.12	35.06	8.41	34.5	112	296	Average
8406	54.5	-19.5	74	43.48	36	10.12	35.1	100	49	Peak
8406	40.52	-13.48	54	29.5	36	10.12	35.1	100	49	Average



Test Mode :	Mode 19	Temperature :	24~25°C
Test Channel :	151	Relative Humidity :	42~43%
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
32.7	29.42	-10.58	40	42.62	17.84	0.66	31.7	100	67	Peak
191.73	31.71	-11.79	43.5	52.75	8.9	1.67	31.61	-	-	Peak
232.77	29.18	-16.82	46	48.19	10.67	1.85	31.53	-	-	Peak
624.1	32.01	-13.99	46	39.41	20.25	3.33	30.98	-	-	Peak
668.2	34.36	-11.64	46	41.24	20.59	3.46	30.93	-	-	Peak
940.5	27.75	-18.25	46	30.37	23.8	4.24	30.66	-	-	Peak
5755	102.46	-	-	93.49	35.06	8.41	34.5	114	11	Peak
5755	90.02	-	-	81.05	35.06	8.41	34.5	114	11	Average
8358	54	-20	74	43.01	36	10.09	35.1	100	99	Peak
8358	40.63	-13.37	54	29.64	36	10.09	35.1	100	99	Average



Test Mode :	Mode 20	Temperature :	24~25°C
Test Channel :	159	Relative Humidity :	42~43%
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
30.81	32.05	-7.95	40	44.15	18.95	0.65	31.7	-	-	Peak
79.41	33.15	-6.85	40	56.37	7.48	1	31.7	100	55	Peak
106.41	36.44	-7.06	43.5	55.96	10.97	1.2	31.69	-	-	Peak
310.5	28.41	-17.59	46	43.87	13.74	2.18	31.38	-	-	Peak
702.5	27.78	-18.22	46	34.25	20.87	3.56	30.9	-	-	Peak
912.5	27.24	-18.76	46	30.37	23.37	4.19	30.69	-	-	Peak
5795	98.89	-	-	89.88	35.11	8.42	34.52	110	298	Peak
5795	85.76	-	-	76.75	35.11	8.42	34.52	110	298	Average
8270	54.68	-19.32	74	43.75	36	10.03	35.1	100	57	Peak
8270	40.61	-13.39	54	29.68	36	10.03	35.1	100	57	Average



Test Mode :	Mode 20	Temperature :	24~25°C
Test Channel :	159	Relative Humidity :	42~43%
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
31.35	31.59	-8.41	40	43.69	18.95	0.65	31.7	100	67	Peak
185.25	31.22	-12.28	43.5	52.21	8.98	1.64	31.61	-	-	Peak
233.58	29.73	-16.27	46	48.63	10.78	1.85	31.53	-	-	Peak
624.1	29.57	-16.43	46	36.97	20.25	3.33	30.98	-	-	Peak
665.4	33.79	-12.21	46	40.7	20.57	3.45	30.93	-	-	Peak
704.6	30.3	-15.7	46	36.74	20.89	3.56	30.89	-	-	Peak
5795	101.32	-	-	92.31	35.11	8.42	34.52	100	324	Peak
5795	88.03	-	-	79.02	35.11	8.42	34.52	100	324	Average
8438	54.36	-19.64	74	43.32	36	10.14	35.1	100	67	Peak
8438	40.9	-13.1	54	29.86	36	10.14	35.1	100	67	Average

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 without connector 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	ESCS 30	100356	9KHz – 2.75GHz	Aug. 05, 2009	Aug. 04, 2010	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)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 31, 2009	Oct. 30, 2010	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP	101067	9KHz ~ 30GHz	Dec. 04, 2009	Dec. 03, 2010	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 20, 2009	Aug. 19, 2010	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 14, 2009	Oct. 13, 2010	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Dec.09,2009	Dec. 08, 2010	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32 dB.GAIN	Mar. 27, 2009	Mar. 26, 2010	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 KHz~30 MHz	May 22, 2008	May 21, 2010	Radiation (03CH07-HY)
System Simulator	R&S	CMU200	117997	N/A	May 14, 2009	May 13, 2011	-

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 EP980406-03 as below.