FCC Test Report

APPLICANT	:	Fujitsu Toshiba Mobile Communications Ltd.
EQUIPMENT	:	CDMA FJI12 (GSM900/1800/1900,CDMA2000,Bluetooth and Wi-Fi)
BRAND NAME	:	Fujitsu Toshiba Mobile Communications Ltd.
MODEL NAME	:	FJI12
FCC ID	:	YUW-FJI12
STANDARD	:	FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION	:	Declaration of Conformity

The product was received on Sep. 03, 2011 and completely tested on Oct. 30, 2011. 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:

Jones Tsai

Jones Tsai / Manager

Testing Laboratory 1190

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
FD190327	Rev. 01	Initial issue of report	Nov. 07, 2011
FD190327	Rev. 02	Update report of revising list of measuring equipment	Nov. 08, 2011

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	7.2.4	AC Conducted Emission	< 15.107 limits < RSS-Gen table 2 limits	PASS	Under limit 9.80 dB at 1.61 MHz
3.2	15.109	7.2.3.2	Radiated Emission	< 15.109 limits or < RSS-Gen table 1 limits (Section 6)	PASS	Under limit 5.38 dB at 35.13 MHz

1. General Description

1.1. Applicant

Fujitsu Toshiba Mobile Communications Ltd.
1-1, Kamikodanaka 4-chome, Nakahara-ku Kawasaki 211-8588, Japan

1.2. Manufacturer

Fujitsu Toshiba Mobile Communications Ltd.
1-1, Kamikodanaka 4-chome, Nakahara-ku Kawasaki 211-8588, Japan

1.3. Feature of Equipment Under Test

Product Feature & Specification	
Equipment	CDMA FJI12 (GSM900/1800/1900,CDMA2000,Bluetooth and Wi-Fi)
Brand Name	Fujitsu Toshiba Mobile Communications Ltd.
Model Name	FJI12
FCC ID	YUW-FJI12
Tx Frequency Range	GSM1900 : 1850 MHz ~ 1910 MHz CDMA2000 BC0 : 824 MHz ~ 849 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz WLAN : 2400 MHz ~ 2483.5 MHz
Rx Frequency Range	GSM1900 : 1930 MHz ~ 1990 MHz CDMA2000 BC0 : 869 ~ 894 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz WLAN : 2400 MHz ~ 2483.5 MHz GPS : 1.57542 GHz
Antenna Type	WWAN : Fixed Internal Antenna Bluetooth : Chip Antenna WLAN : Chip Antenna
HW Version	CS1
SW Version	CS1
Type of Modulation	GSM: GMSK GPRS: GMSK CDMA2000 : QPSK Bluetooth (1Mbps) : GFSK Bluetooth EDR (2Mbps) : π/4-DQPSK Bluetooth EDR (3Mbps) : 8-DPSK 802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) GPS : BPSK
EUT Stage	Identical Prototype

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

1.4. Test Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	CO05-HY	03CH06-HY	722060/4086B-1

1.5. Applied Standards

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

- FCC 47 CFR FCC Part 15 Subpart B
- ANSI C63.4-2003
- IC RSS-Gen Issue 3

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

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.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
5.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	N/A	N/A
6.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
7.	Notebook	DELL	P20G	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	LCD Monitor	Lenovo	6135-AB1	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
9.	iPod	Apple	A1199	FCC DoC	Unshielded, 1.2 m	N/A
10.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
11.	AC Adapter	KDDI	0204PTA	FCC DoC	N/A	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: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

Item	EUT Configuration	Test Condition		
		EMI AC	EMI RE<1G	EMI RE≥1G
1.	Charging Mode (EUT with adapter)	☒	☒	Note 1
2.	Charging Mode (EUT with notebook)	☒	☒	Note 1
3.	Data application transferred mode (EUT with notebook)	☒	☒	☒

Abbreviations:

- EMI AC: AC conducted emissions
- EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz
- EMI RE < 1G: EUT radiated emissions < 1GHz

Note 1: Testing for this mode is not required or not the worst case.

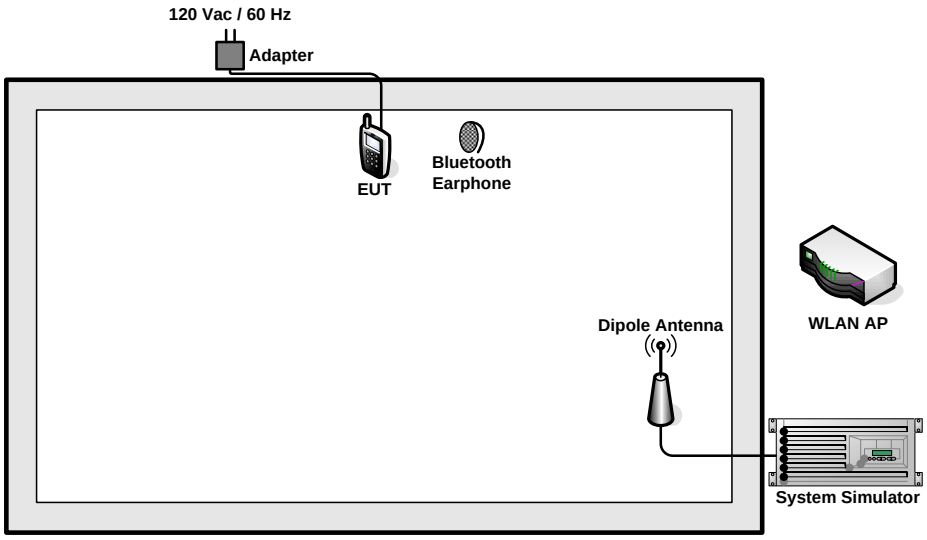
Test Items	EUT Configure Mode	Function Type
AC Conducted Emission	1/2/3	Mode 1 : GSM1900 Idle + Bluetooth Idle + WLAN Idle + MPEG4 + USB Cable 2 (Charging from Adapter) Mode 2 : CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + Camera + USB Cable 2 (Charging from Adapter) Mode 3 : GSM1900 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + USB Cable 1 (Charging from Notebook) Mode 4 : CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + USB Cable 1 (Data Link with Notebook)
Radiated Emissions < 1GHz	1/2/3	Mode 1 : GSM1900 Idle + Bluetooth Idle + WLAN Idle + MPEG4 + USB Cable 2 (Charging from Adapter) Mode 2 : CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + Camera + USB Cable 2 (Charging from Adapter) Mode 3 : GSM1900 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + USB Cable 1 (Charging from Notebook) Mode 4 : CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + USB Cable 1 (Data Link with Notebook)
Radiated Emissions ≥ 1GHz	3	Mode 1 : CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + USB Cable 1 (Data Link with Notebook)

Remark:

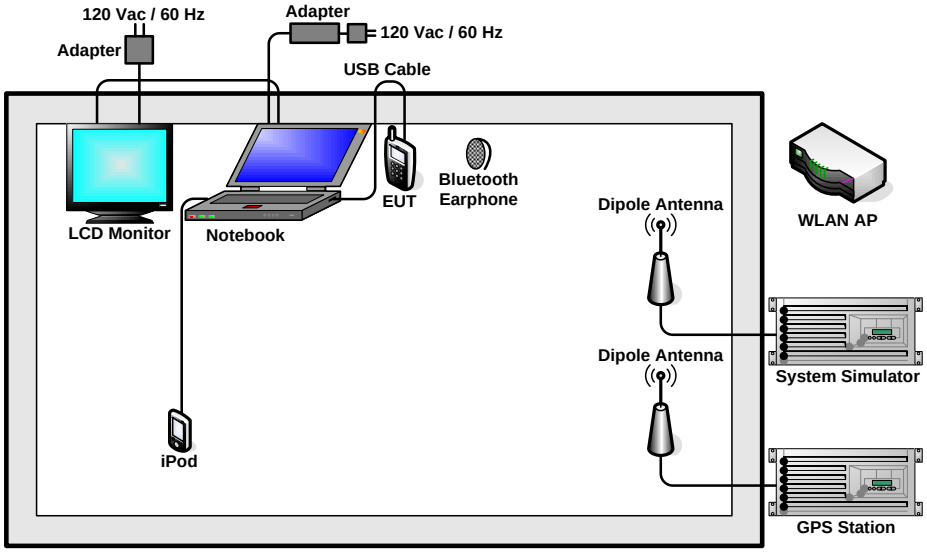
1. The worst case of AC is mode 4; only the test data of this mode was reported.
2. The worst case of RE < 1G is mode 4; only the test data of this mode was reported.
3. Link with Notebook means data application transferred mode between DUT and Notebook.
4. USB Cable 2 only for the tested.

2.2. Connection Diagram of Test System

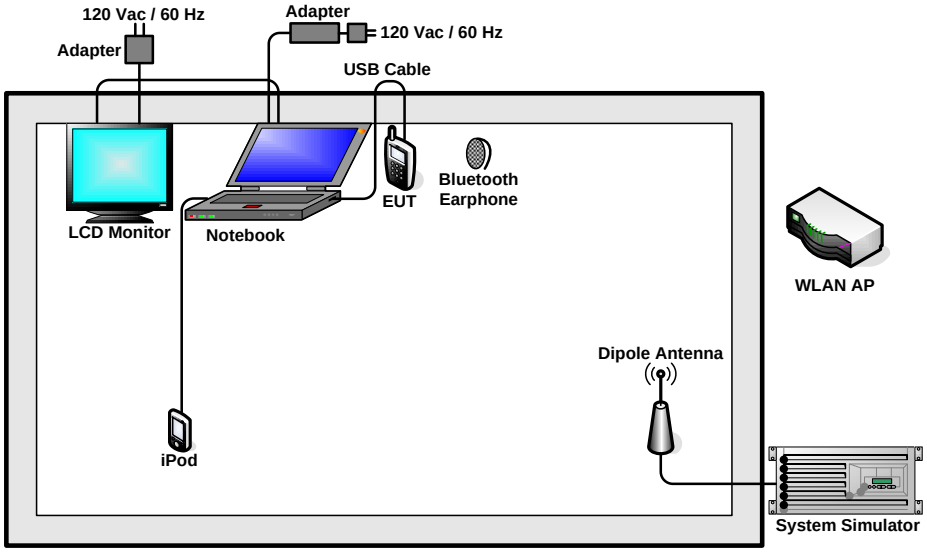
<EUT with Adapter Mode>



<EUT with USB Cable (Charging from Notebook) Mode>



<EUT with USB Cable (Data Link with Notebook) Mode>



2.3. Test Software

The EUT was in GSM or CDMA2000 idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Execute the program, "Winthrax", installed in notebook for active sync files transfer with EUT via USB cable.
2. Execute "GPS Test" to make the EUT search signals from GPS station.
3. Execute "Video Player" to play MPEG4 files.
4. Turn on camera to capture images.

3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1 Limits 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.

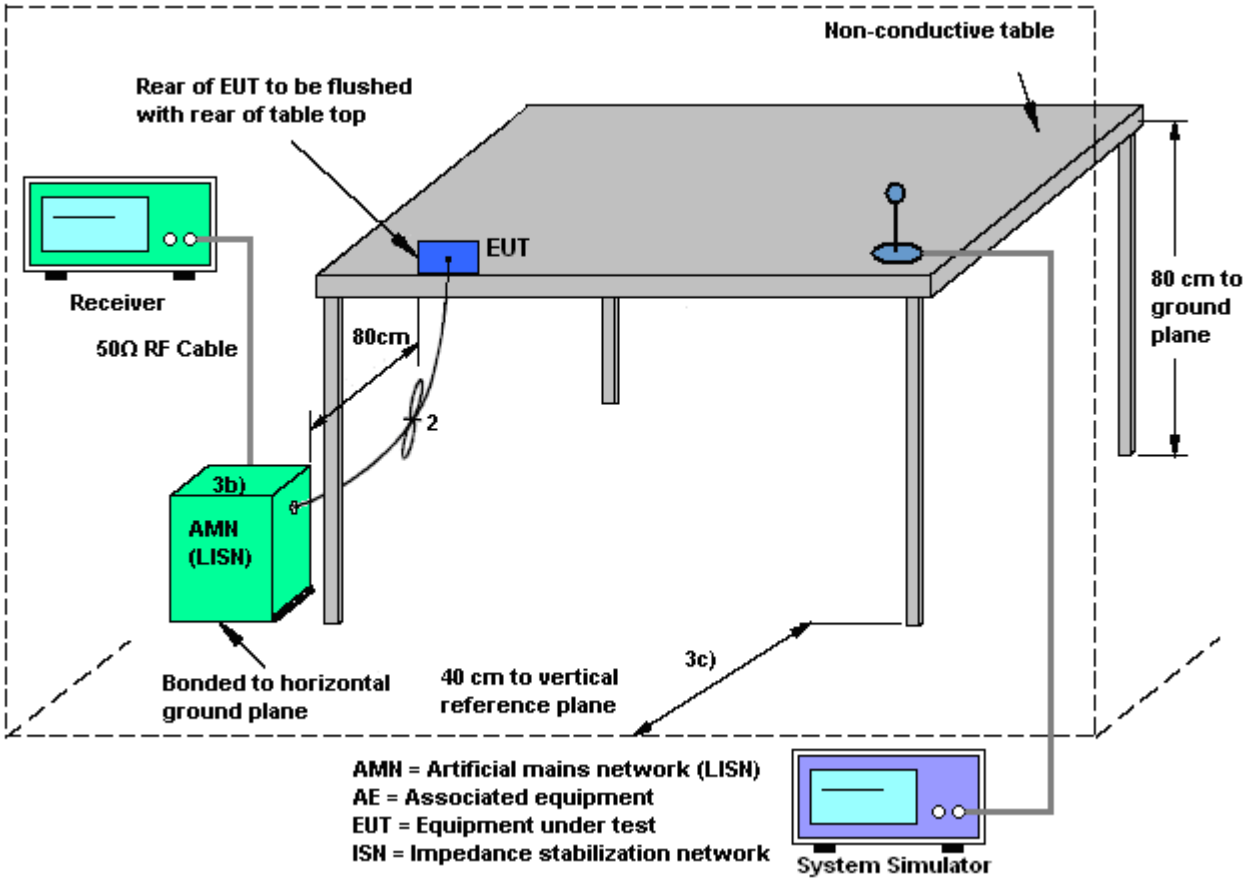
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedure

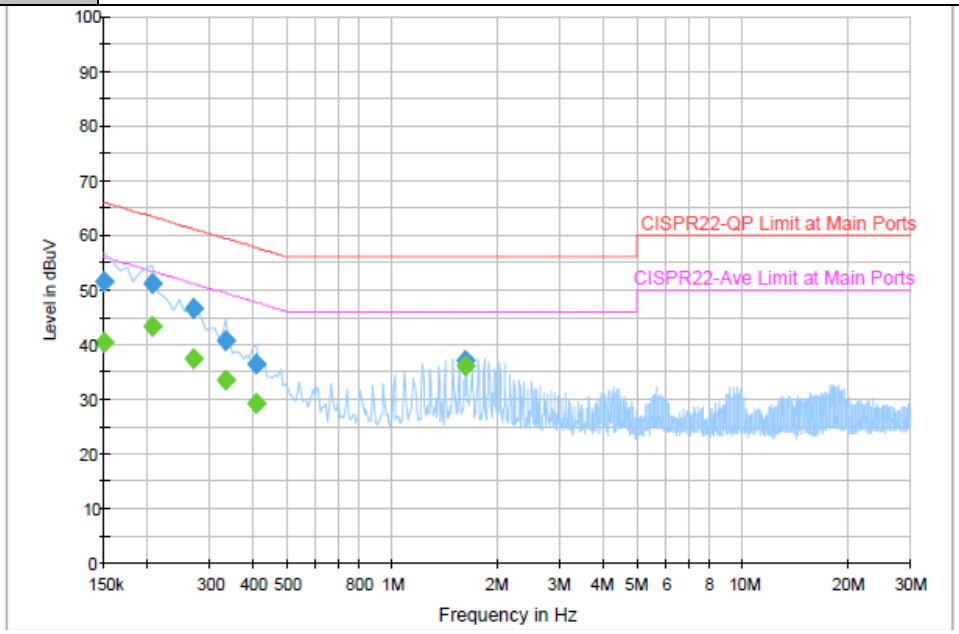
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

3.1.4 Test Setup



3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 4	**Temperature :**	20~22℃
Test Engineer :	Kai-Chun Chu	**Relative Humidity :**	40~42%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + USB Cable 1 (Data Link with Notebook)		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



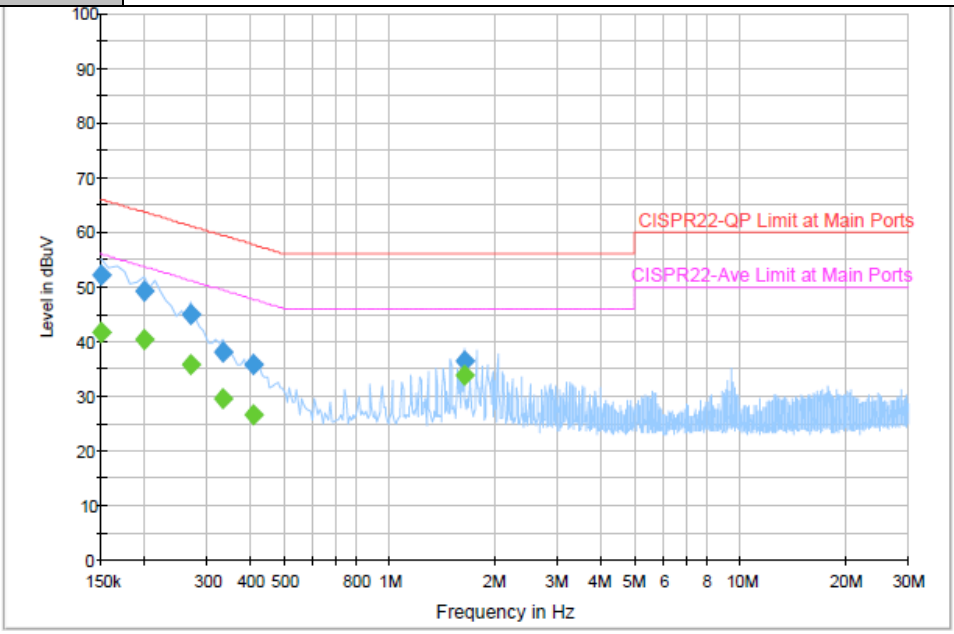
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	51.4	Off	L1	19.4	14.6	66.0
0.206000	51.3	Off	L1	19.4	12.1	63.4
0.270000	46.6	Off	L1	19.4	14.5	61.1
0.334000	40.8	Off	L1	19.4	18.6	59.4
0.406000	36.3	Off	L1	19.5	21.4	57.7
1.614000	37.2	Off	L1	19.4	18.8	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	40.4	Off	L1	19.4	15.6	56.0
0.206000	43.2	Off	L1	19.4	10.2	53.4
0.270000	37.5	Off	L1	19.4	13.6	51.1
0.334000	33.5	Off	L1	19.4	15.9	49.4
0.406000	29.1	Off	L1	19.5	18.6	47.7
1.614000	36.2	Off	L1	19.4	9.8	46.0

Test Mode :	Mode 4	Temperature :	20~22℃
Test Engineer :	Kai-Chun Chu	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + USB Cable 1 (Data Link with Notebook)		
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	52.1	Off	N	19.4	13.9	66.0
0.198000	49.3	Off	N	19.4	14.4	63.7
0.270000	44.8	Off	N	19.4	16.3	61.1
0.334000	38.1	Off	N	19.4	21.3	59.4
0.406000	35.6	Off	N	19.5	22.1	57.7
1.622000	36.4	Off	N	19.5	19.6	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	41.6	Off	N	19.4	14.4	56.0
0.198000	40.4	Off	N	19.4	13.3	53.7
0.270000	35.7	Off	N	19.4	15.4	51.1
0.334000	29.5	Off	N	19.4	19.9	49.4
0.406000	26.5	Off	N	19.5	21.2	47.7
1.622000	33.7	Off	N	19.5	12.3	46.0

3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

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

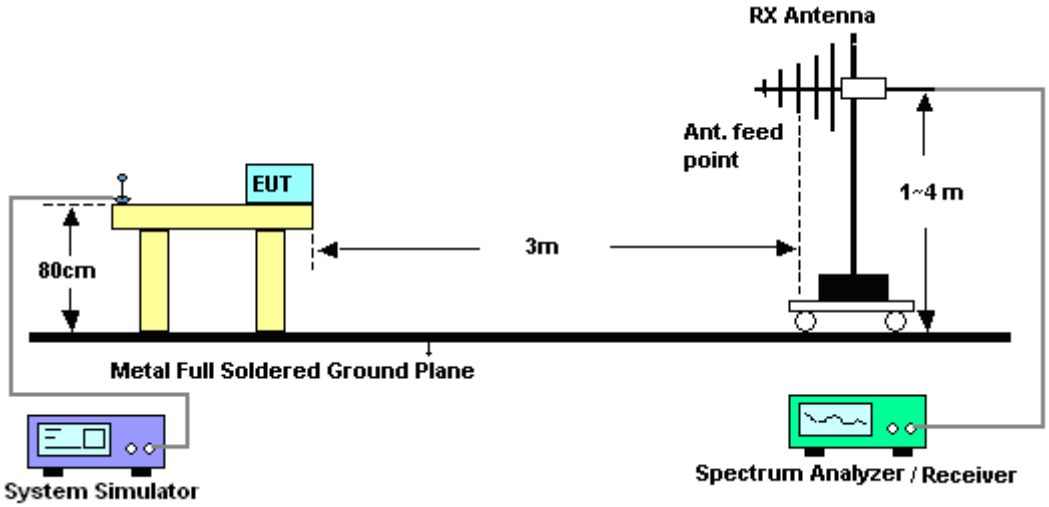
3.2.2. Measuring Instruments

See list of measuring instruments of this test report.

3.2.3. Test Procedures

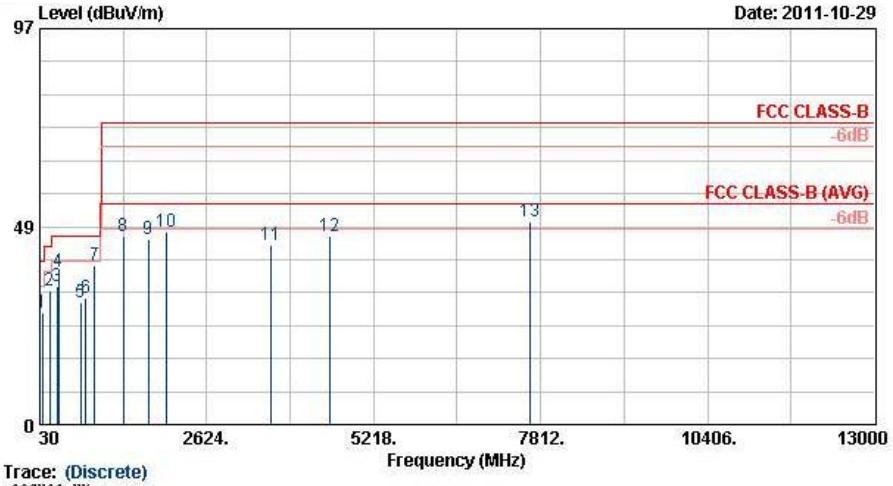
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log 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.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. 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
8. Emission level (dBuV/m) = 20 log Emission level (uV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

3.2.4. Test Setup of Radiated Emission



3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 4	Temperature :	24~25°C
Test Engineer :	Luke Chang	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + USB Cable 1 (Data Link with Notebook)		
Remark :	#7 is System Simulator Signal which can be ignored.		

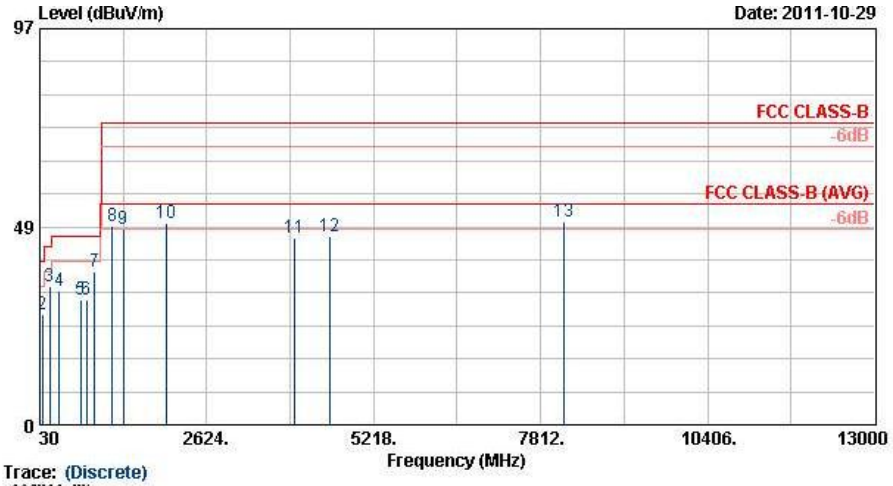


Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B HF-ANT_110802 HORIZONTAL
Power : From System
Project : FD 190327
Memo : Mode 4

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	72.93	27.32	-12.68	40.00	51.46	6.49	1.06	31.69	---	---	Peak
2 @	189.03	32.86	-10.64	43.50	53.52	9.40	1.60	31.66	---	---	Peak
3 @	299.73	33.80	-12.20	46.00	49.95	13.46	2.06	31.67	---	---	Peak
4 @	316.80	37.61	-8.39	46.00	53.25	13.86	2.12	31.62	100	213	Peak
5 @	663.30	30.01	-15.99	46.00	39.57	19.31	3.11	31.98	---	---	Peak
6 @	747.30	31.01	-14.99	46.00	39.74	20.03	3.35	32.10	---	---	Peak
7 @	882.40	39.09			45.63	21.48	3.68	31.71	---	---	Peak
8	1326.00	46.12	-27.88	74.00	68.49	27.80	3.87	54.03	---	---	Peak
9	1718.00	45.41	-28.59	74.00	65.68	29.40	4.47	54.14	---	---	Peak
10	1996.00	47.34	-26.66	74.00	65.16	31.50	4.93	54.25	---	---	Peak
11	3620.00	43.99	-30.01	74.00	59.19	32.80	6.85	54.85	---	---	Peak
12	4540.00	46.29	-27.71	74.00	59.61	34.58	7.79	55.69	---	---	Peak
13	7644.00	49.88	-24.12	74.00	59.37	35.53	11.14	56.15	100	203	Peak

Test Mode :	Mode 4	Temperature :	24~25°C
Test Engineer :	Luke Chang	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Vertical
Function Type :	CDMA2000 BC0 Idle + Bluetooth Idle + WLAN Idle + USB Cable 1 (Data Link with Notebook)		
Remark :	#7 is System Simulator Signal which can be ignored.		



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B HF-ANT_110602 VERTICAL
Power : From System
Project : FD 190327
Memo : Mode 4

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	35.13	34.62	-5.38	40.00	50.65	14.93	0.74	31.70	100	3	Peak
2 @	71.58	27.07	-12.93	40.00	51.29	6.42	1.06	31.70	---	---	Peak
3 @	189.03	33.95	-9.55	43.50	54.62	9.40	1.60	31.66	---	---	Peak
4 @	332.90	32.70	-13.30	46.00	47.89	14.22	2.17	31.58	---	---	Peak
5 @	663.30	30.54	-15.46	46.00	40.10	19.31	3.11	31.98	---	---	Peak
6 @	756.40	30.61	-15.39	46.00	39.19	20.17	3.35	32.09	---	---	Peak
7 @	880.30	37.52			44.10	21.46	3.68	31.72	---	---	Peak
8	1158.00	48.76	-25.24	74.00	71.35	27.80	3.62	54.02	---	---	Peak
9	1326.00	47.80	-26.20	74.00	70.16	27.80	3.87	54.03	---	---	Peak
10	1996.00	49.25	-24.75	74.00	67.07	31.50	4.93	54.25	---	---	Peak
11	3990.00	45.76	-28.24	74.00	60.48	33.10	7.35	55.17	---	---	Peak
12	4540.00	46.02	-27.98	74.00	59.34	34.58	7.79	55.69	---	---	Peak
13	8182.00	49.90	-24.10	74.00	59.94	35.57	10.37	55.98	100	34	Peak

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receive	R&S	ESCI 7	100724	9kHz~7GHz	Aug. 22, 2011	Oct. 26, 2011 ~ Oct. 30, 2011	Aug. 21, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz – 30MHz	Dec. 03, 2010	Oct. 26, 2011 ~ Oct. 30, 2011	Dec. 02, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz – 30MHz	Dec. 01, 2010	Oct. 26, 2011 ~ Oct. 30, 2011	Nov. 30, 2011	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Oct. 26, 2011 ~ Oct. 30, 2011	N/A	Conduction (CO05-HY)
GPS Station	Pendulum	GSG-54	N/A	N/A	N/A	Oct. 26, 2011 ~ Oct. 30, 2011	N/A	Conduction (CO05-HY)
Spectrum Analyzer	R&S	FSP40	100057	9KHz-40GHz	Oct. 27, 2011	Oct. 28, 2011 ~ Oct. 29, 2011	Oct. 26, 2012	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/003	20MHz-1000MHz	May 10, 2011	Oct. 28, 2011 ~ Oct. 29, 2011	May 09, 2012	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Oct. 31, 2010	Oct. 28, 2011 ~ Oct. 29, 2011	Oct. 30, 2011	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz~18GHz	Aug. 01, 2011	Oct. 28, 2011 ~ Oct. 29, 2011	Jul. 31, 2012	Radiation (03CH06-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 21, 2011	Oct. 28, 2011 ~ Oct. 29, 2011	Oct. 20, 2012	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1GHz- 26.5GHz	Apr. 14, 2011	Oct. 28, 2011 ~ Oct. 29, 2011	Apr. 13, 2012	Radiation (03CH06-HY)
Amplifier	Agilent	310N	186713	9KHz~1GHz	Apr. 14, 2011	Oct. 28, 2011 ~ Oct. 29, 2011	Apr. 13, 2012	Radiation (03CH06-HY)
GPS Station	T&E	GS-50	N/A	N/A	N/A	Oct. 28, 2011 ~ Oct. 29, 2011	N/A	Radiation (03CH06-HY)
System Simulator	R&S	CMU200	112403	N/A	Feb. 22, 2011	Oct. 26, 2011 ~ Oct. 30, 2011	Feb. 21, 2012	-

5. Uncertainty of Evaluation

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

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

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

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

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

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

Appendix A. Photographs of EUT

Please refer to Sporton report number EP190327 as below.