Partial FCC RF Test Report

APPLICANT	:	Ericsson AB
EQUIPMENT	:	PCIe wireless WAN card
BRAND NAME	:	Ericsson AB
MODEL NAME	:	C5621
FCC ID	:	VV7-MBMC5621-D1
STANDARD	:	FCC 47 CFR Part 2, 22(H), 24(E)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)

This is a partial report which is included the Radiated Emission, Conducted Output Power and ERP/EIRP Measurement tests item. The product was received on Sep. 11, 2012 and completely tested on Sep. 26, 2012. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 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:

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
FG291115	Rev. 01	Initial issue of report	Oct. 05, 2012

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§2.1046	N/A	Conducted Output Power	N/A	PASS	-
3.1	§22.913(a)(2)	RSS-132(4.4) SRSP-503(5.1.3)	Effective Radiated Power	< 7 Watts	PASS	-
3.1	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.2	§2.1053 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Field Strength of Spurious Radiation	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 3.11 dB at 5640.000 MHz

1 General Description

1.1 Applicant

Ericsson AB
Lindholmspiren 11 SE-417 56 Gothenburg Sweden

1.2 Manufacturer

Dell Inc.
One Dell Way, Round Rock, TX 78682 U.S.A.

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	PCIe wireless WAN card
Brand Name	Ericsson AB
Model Name	C5621
Host Tablet PC	Brand Name : Dell Model Name : Latitude 10 - ST2
FCC ID	VV7-MBMC5621-D1
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA
HW Version	R1
SW Version	R3C11
EUT Stage	Production Unit

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

Product Specification subjective to this standard	
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz
Maximum Output Power to Antenna	GSM850 : 32.66 dBm GSM1900 : 29.98 dBm WCDMA Band V : 22.66 dBm WCDMA Band II : 22.14 dBm
Antenna Type	Fixed Internal Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE: 8PSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink)

1.4 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22	GSM850 GPRS 8	GMSK	1.483
Part 22	GSM850 EDGE 8	8PSK	0.387
Part 22	WCDMA Band V RMC 12.2Kbps	QPSK	0.148
Part 24	GSM1900 GPRS 8	GMSK	1.641
Part 24	GSM1900 EDGE 8	8PSK	0.716
Part 24	WCDMA Band II RMC 12.2Kbps	QPSK	0.254

1.5 Testing Site

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	**Sporton Site No.**	**FCC/IC Registration No.**
	03CH05-HY	722060/4086B-1

1.6 Applied Standards

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

- Preliminary Guidance for Receiving Applications for Certification of 3G Device. May 9, 2006.
- FCC 47 CFR Part 2, 22(H), 24(E)
- FCC KDB 971168 D01 Power Meas. License Digital Systems v01
- FCC KDB 412172 D01 Determining ERP and EIRP v01
- IC RSS-132 Issue 2
- IC RSS-133 Issue 5

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, recorded in a separate test report.

1.7 Ancillary Equipment List

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m

2 Test Configuration of Equipment Under Test

2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission is as follows:

1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V.
2. 30 MHz to 19000 MHz for GSM1900 and WCDMA Band II.

Test Modes	
Band	**Radiated TCs**
GSM 850	■ GPRS 8 Link ■ EDGE 8 Link
GSM 1900	■ GPRS 8 Link ■ EDGE 8 Link
WCDMA Band V	■ RMC 12.2Kbps Link
WCDMA Band II	■ RMC 12.2Kbps Link

Note:

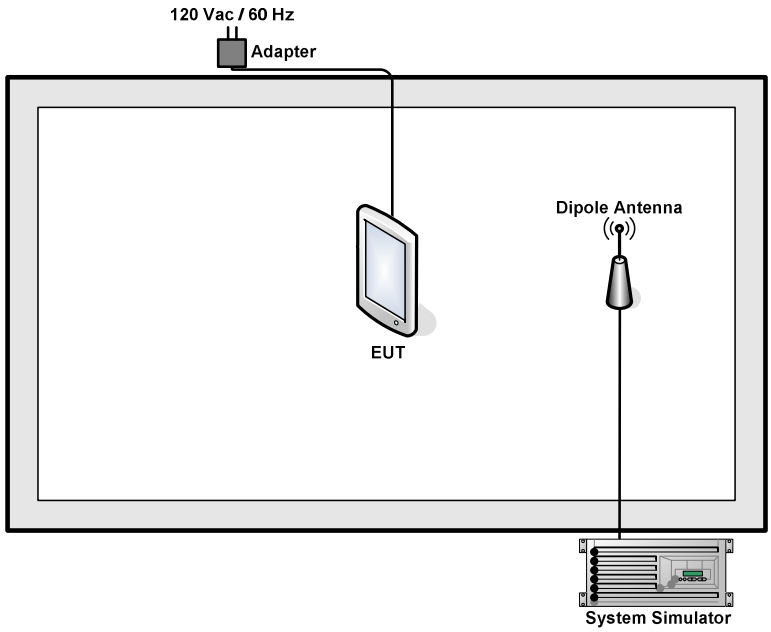
1. The maximum power levels are GPRS multi-slot class 8 mode for GMSK link, EDGE multi-slot class 8 mode for 8PSK link, RMC 12.2Kbps mode for WCDMA band V, and RMC 12.2Kbps mode for WCDMA band II, only these modes were used for all tests.

The conducted power tables are as follows:

Conducted Power (*Unit: dBm)						
Band	**GSM850**			**GSM1900**		
Channel	**128**	**189**	**251**	**512**	**661**	**810**
Frequency	**824.2**	**836.4**	**848.8**	**1850.2**	**1880.0**	**1909.8**
GPRS 8	**32.66**	32.64	32.38	**29.98**	29.94	29.36
GPRS 10	29.63	29.61	29.39	29.50	29.40	28.91
EGPRS 8	**26.83**	26.82	26.58	**26.64**	26.53	26.04
EGPRS 10	26.79	26.79	26.56	26.61	26.51	26.03

Conducted Power (*Unit: dBm)						
Band	WCDMA Band V			WCDMA Band II		
Channel	4132	4182	4233	9262	9400	9538
Frequency	826.4	836.4	846.6	1852.4	1880.0	1907.6
RMC 12.2K	22.56	22.66	22.46	22.14	22.12	22.08
HSDPA Subtest-1	22.39	22.53	22.36	21.15	21.13	21.08
HSDPA Subtest-2	22.35	22.50	22.35	21.13	21.09	21.05
HSDPA Subtest-3	21.89	22.03	21.84	20.68	20.64	20.59
HSDPA Subtest-4	21.88	22.02	21.83	20.67	20.65	20.60
HSUPA Subtest-1	22.37	22.46	22.35	21.18	21.16	21.12
HSUPA Subtest-2	20.39	20.50	20.38	19.26	19.23	19.21
HSUPA Subtest-3	21.35	21.45	21.33	20.22	20.19	20.17
HSUPA Subtest-4	20.34	20.45	20.32	19.29	19.22	19.18
HSUPA Subtest-5	22.30	22.40	22.29	21.17	21.15	21.11

2.2 Connection Diagram of Test System



3 Test Result

3.1 Conducted Output Power and ERP/EIRP Measurement

3.1.1 Description of the Conducted Output Power and ERP/EIRP Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts. According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T – L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

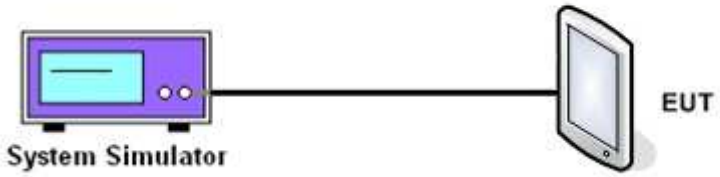
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The transmitter output port was connected to base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

Cellular Band (G_T - L_C = 1.2 dBi)									
Modes	GSM850 (GPRS 8)			GSM850 (EDGE 8)			WCDMA Band V (RMC 12.2Kbps)		
Channel	128 (Low)	189 (Mid)	251 (High)	128 (Low)	189 (Mid)	251 (High)	4132 (Low)	4182 (Mid)	4233 (High)
Frequency (MHz)	824.2	836.4	848.8	824.2	836.4	848.8	826.4	836.4	846.6
Conducted Power (dBm)	32.66	32.64	32.38	26.83	26.82	26.58	22.56	22.66	22.46
Conducted Power (Watts)	1.85	1.84	1.73	0.48	0.48	0.45	0.18	0.18	0.18
ERP(dBm)	31.71	31.69	31.43	25.88	25.87	25.63	21.61	21.71	21.51
ERP(Watts)	1.483	1.476	1.390	0.387	0.386	0.366	0.145	0.148	0.142

PCS Band (G_T - L_C = 1.91 dBi)									
Modes	GSM1900 (GPRS 8)			GSM1900 (EDGE 8)			WCDMA Band II (RMC 12.2Kbps)		
Channel	512 (Low)	661 (Mid)	810 (High)	512 (Low)	661 (Mid)	810 (High)	9262 (Low)	9400 (Mid)	9538 (High)
Frequency (MHz)	1850.2	1880	1909.8	1850.2	1880	1909.8	1852.4	1880	1907.6
Conducted Power (dBm)	29.98	29.94	29.36	26.64	26.53	26.04	22.14	22.12	22.08
Conducted Power (Watts)	1.00	0.99	0.86	0.46	0.45	0.40	0.16	0.16	0.16
EIRP(dBm)	32.15	31.85	31.27	28.55	28.44	27.95	24.05	24.03	23.99
EIRP(Watts)	1.641	1.531	1.340	0.716	0.698	0.624	0.254	0.253	0.251

Note: maximum burst average power for GSM, and maximum average power for WCDMA.

EIRP = $P_T + G_T - L_C$, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.2 Field Strength of Spurious Radiation Measurement

3.2.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.2.2 Measuring Instruments

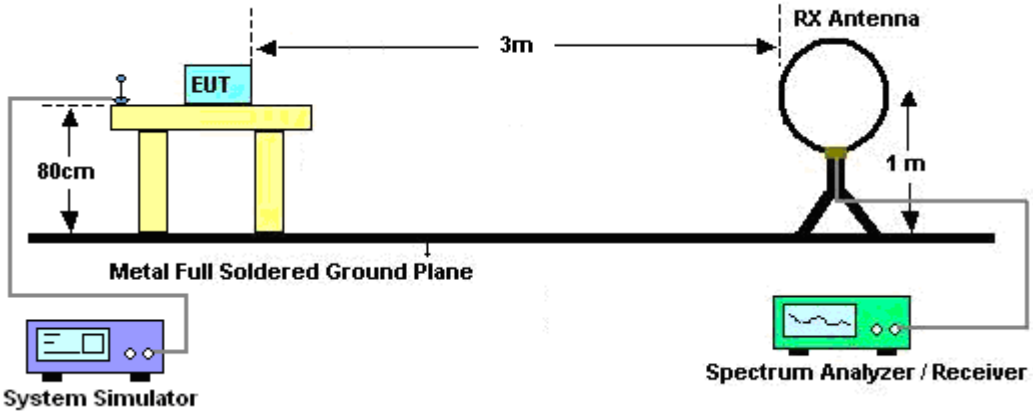
See list of measuring instruments of this test report.

3.2.3 Test Procedures

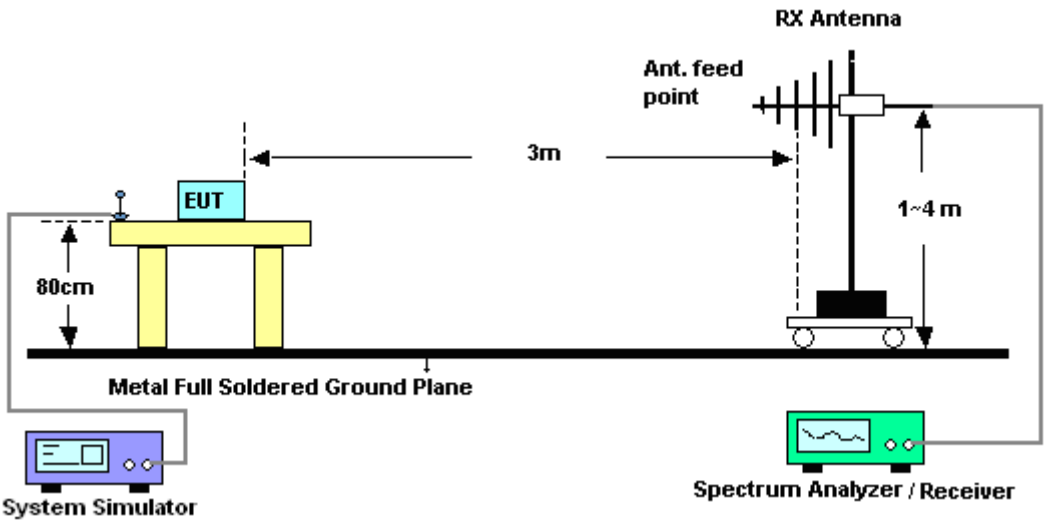
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15

3.2.4 Test Setup

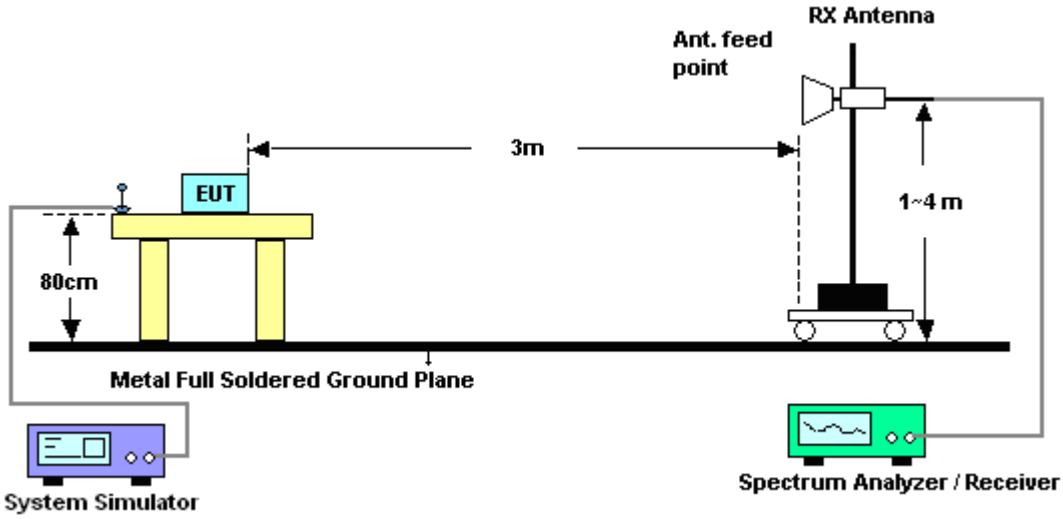
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

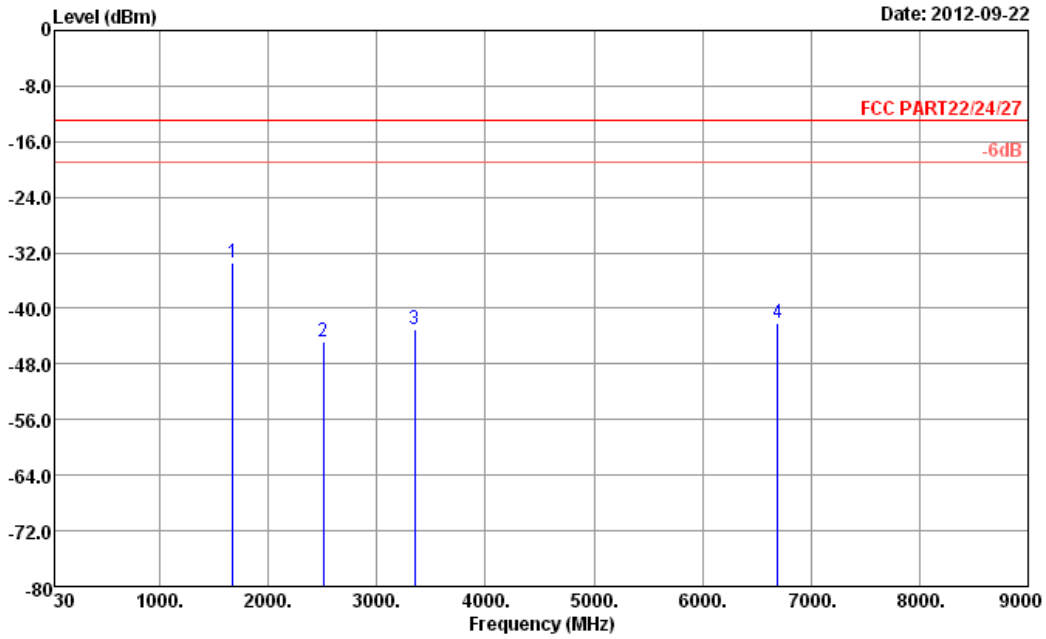


3.2.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.2.6 Test Result of Field Strength of Spurious Radiated

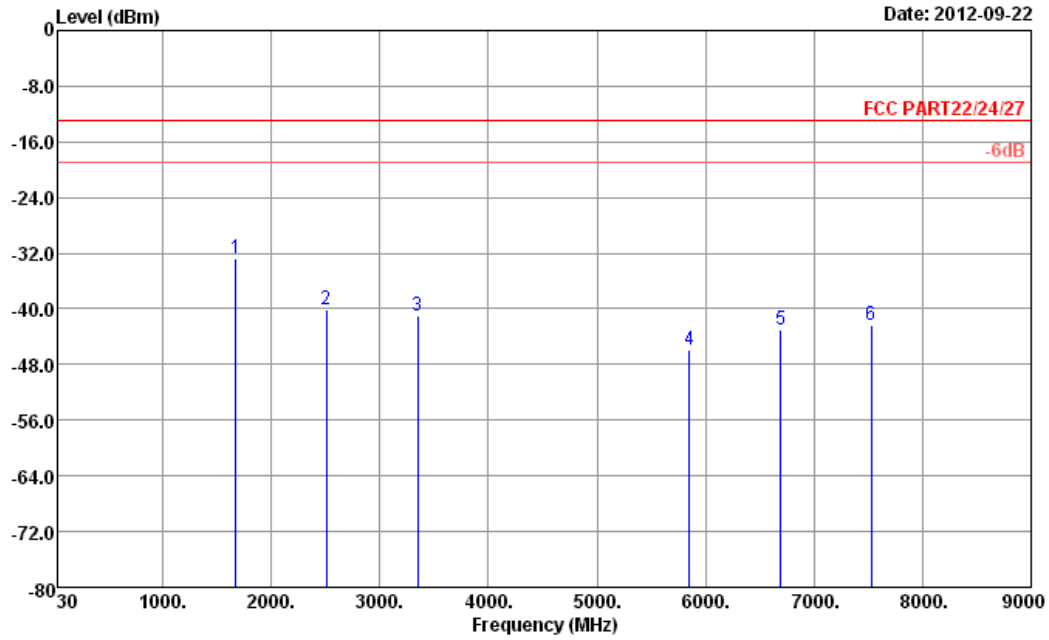
Band :	GSM850	**Temperature :**	20~22℃
Test Mode :	GPRS 8 Link	**Relative Humidity :**	40~42%
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 HORIZONTAL
Project : FG 291115

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-33.48	-13	-20.48	-40.25	-35.24	1.35	5.25	H	Pass
2509	-44.85	-13	-31.85	-54.32	-47.23	1.58	6.11	H	Pass
3346	-43.10	-13	-30.10	-54.64	-46.95	1.94	7.94	H	Pass
6690	-42.02	-13	-29.02	-63.8	-48.71	2.33	11.17	H	Pass

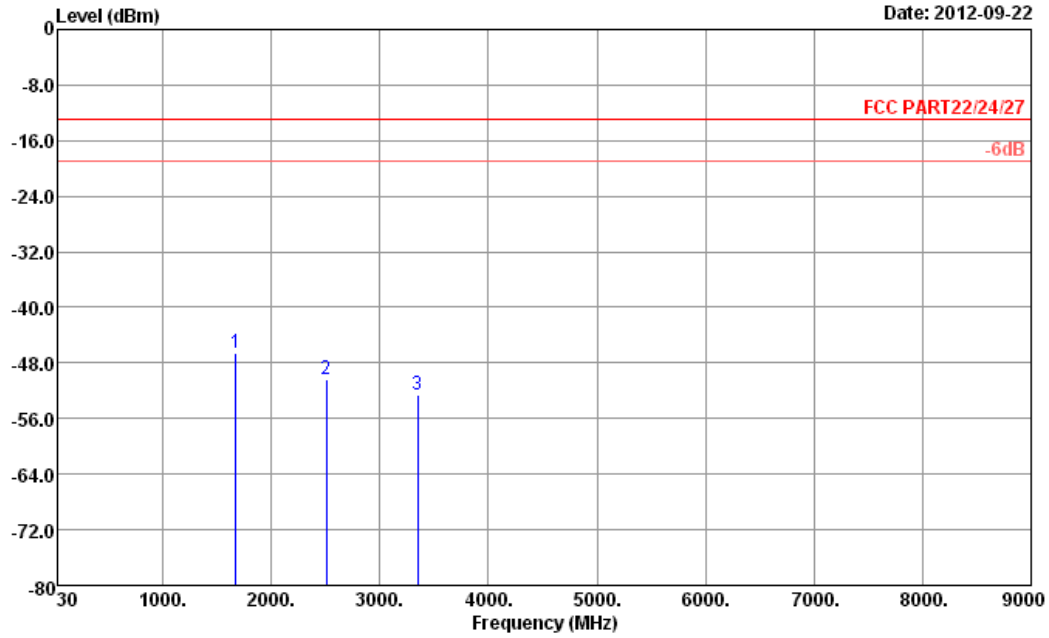
Band :	GSM850	Temperature :	20~22℃
Test Mode :	GPRS 8 Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 VERTICAL
Project : FG 291115

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-32.85	-13	-19.85	-39.66	-34.61	1.35	5.25	V	Pass
2509	-40.17	-13	-27.17	-49.77	-42.55	1.58	6.11	V	Pass
3346	-41.05	-13	-28.05	-53.27	-44.9	1.94	7.94	V	Pass
5855	-45.86	-13	-32.86	-64.39	-52.27	2.17	10.73	V	Pass
6690	-42.99	-13	-29.99	-64.07	-49.68	2.33	11.17	V	Pass
7530	-42.34	-13	-29.34	-64.71	-49.73	2.68	12.22	V	Pass

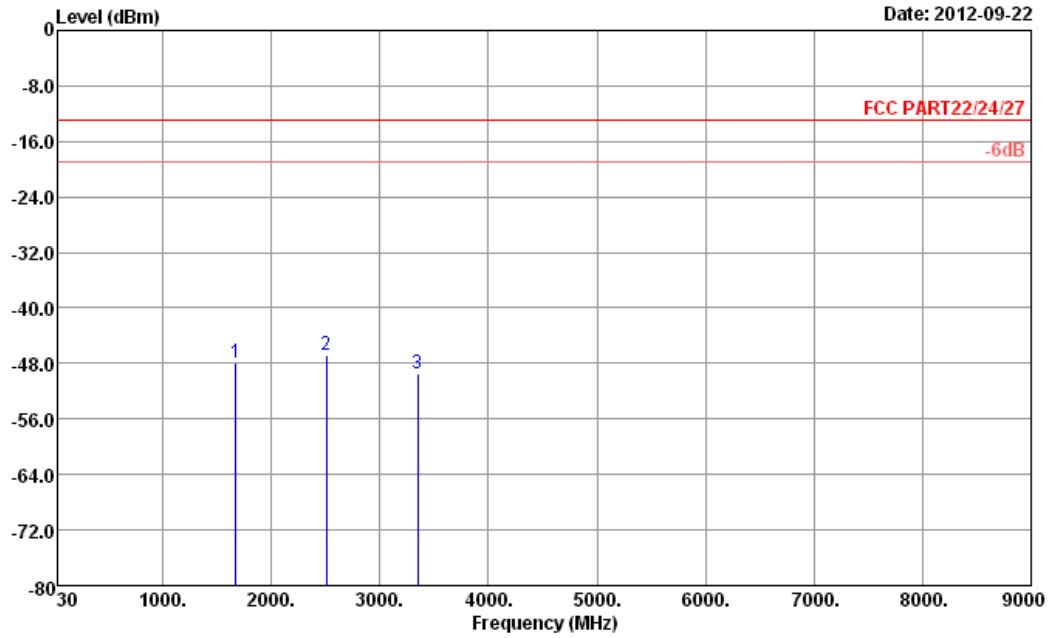
Band :	GSM850	Temperature :	20~22℃
Test Mode :	EDGE 8 Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 HORIZONTAL
Project : FG 291115

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-46.47	-13	-33.47	-53.61	-48.23	1.35	5.25	H	Pass
2509	-50.38	-13	-37.38	-60.72	-52.76	1.58	6.11	H	Pass
3346	-52.66	-13	-39.66	-64.62	-56.51	1.94	7.94	H	Pass

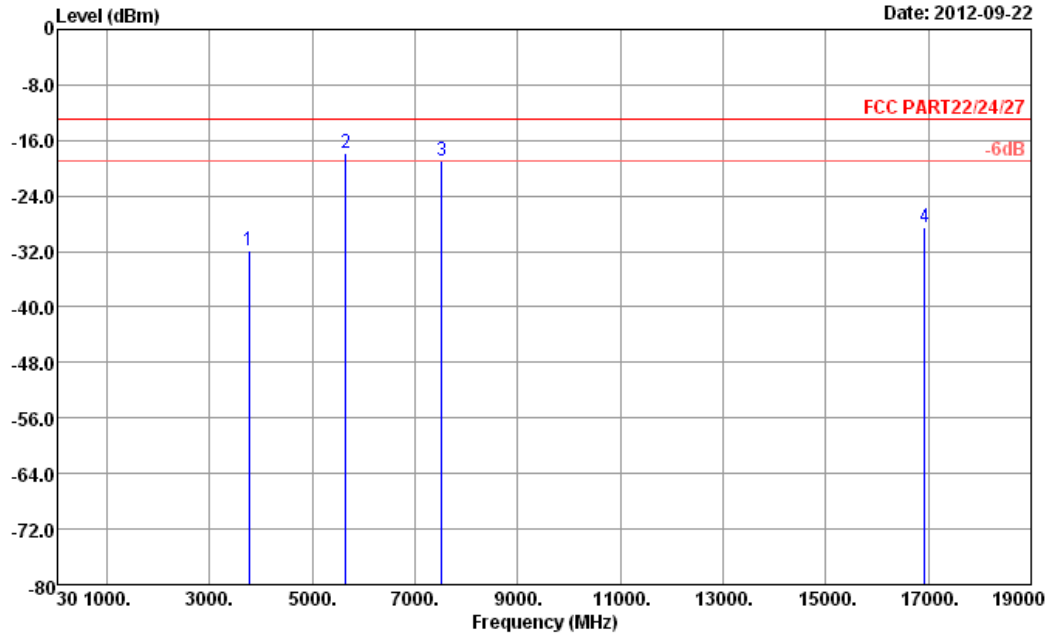
Band :	GSM850	Temperature :	20~22℃
Test Mode :	EDGE 8 Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 VERTICAL
Project : FG 291115

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-47.97	-13	-34.97	-55.2	-49.73	1.35	5.25	V	Pass
2509	-46.84	-13	-33.84	-57.09	-49.22	1.58	6.11	V	Pass
3346	-49.51	-13	-36.51	-62.03	-53.36	1.94	7.94	V	Pass

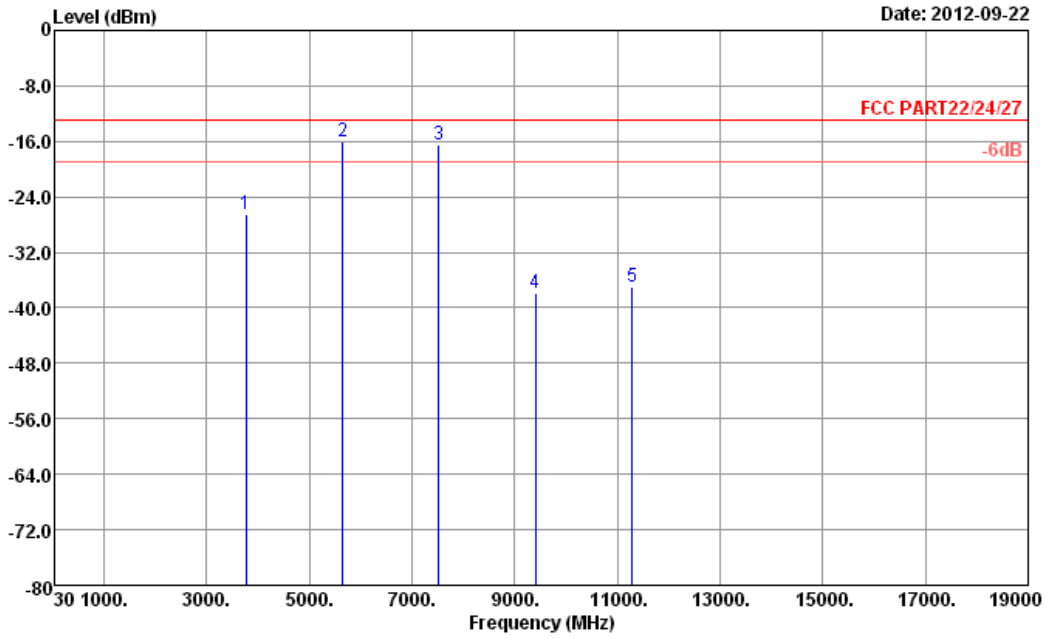
Band :	GSM1900	Temperature :	20~22℃
Test Mode :	GPRS 8 Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 HORIZONTAL
Project : FG 291115

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-31.82	-13	-18.82	-44.58	-38.53	2.00	8.71	H	Pass
5640	-17.73	-13	-4.73	-36.59	-26.37	2.13	10.77	H	Pass
7520	-18.92	-13	-5.92	-40.32	-28.46	2.68	12.22	H	Pass
16920	-28.52	-13	-15.52	-64.68	-38.14	3.82	13.45	H	Pass

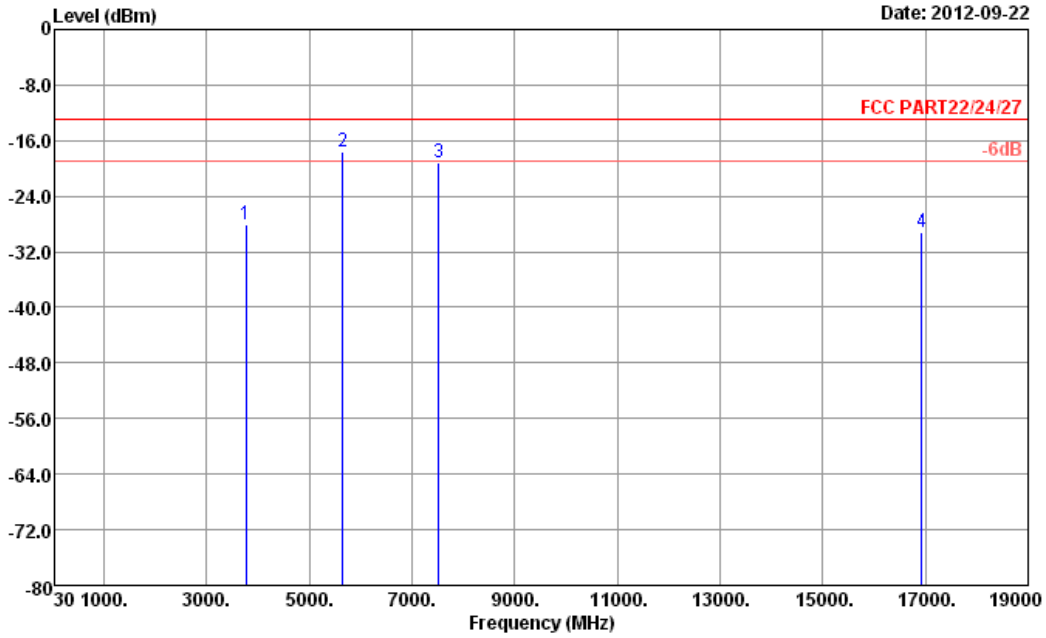
Band :	GSM1900	Temperature :	20~22℃
Test Mode :	GPRS 8 Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 VERTICAL
Project : FG 291115

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-26.57	-13	-13.57	-39.92	-33.28	2.00	8.71	V	Pass
5640	-16.11	-13	-3.11	-33.05	-24.75	2.13	10.77	V	Pass
7520	-16.42	-13	-3.42	-37.94	-25.96	2.68	12.22	V	Pass
9400	-37.78	-13	-24.78	-61.56	-48.29	2.87	13.38	V	Pass
11280	-36.99	-13	-23.99	-64.21	-47.71	2.64	13.36	V	Pass

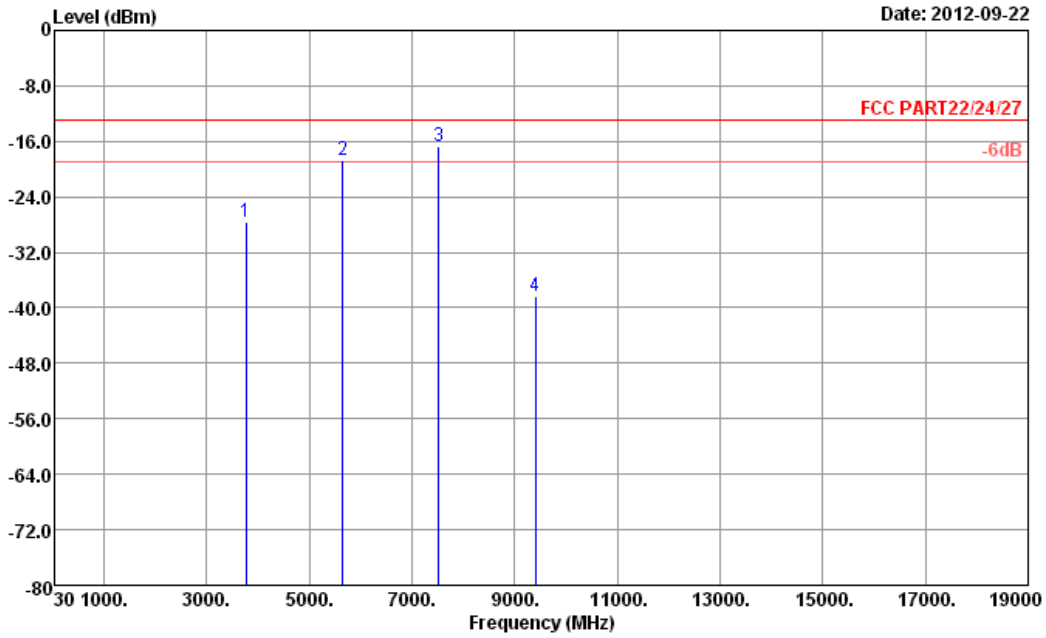
Band :	GSM1900	Temperature :	20~22℃
Test Mode :	EDGE 8 Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 HORIZONTAL
Project : FG 291115

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-28.05	-13	-15.05	-41.6	-34.76	2.00	8.71	H	Pass
5640	-17.69	-13	-4.69	-36.5	-26.33	2.13	10.77	H	Pass
7520	-19.11	-13	-6.11	-40.75	-28.65	2.68	12.22	H	Pass
16920	-29.17	-13	-16.17	-65.65	-38.79	3.82	13.45	H	Pass

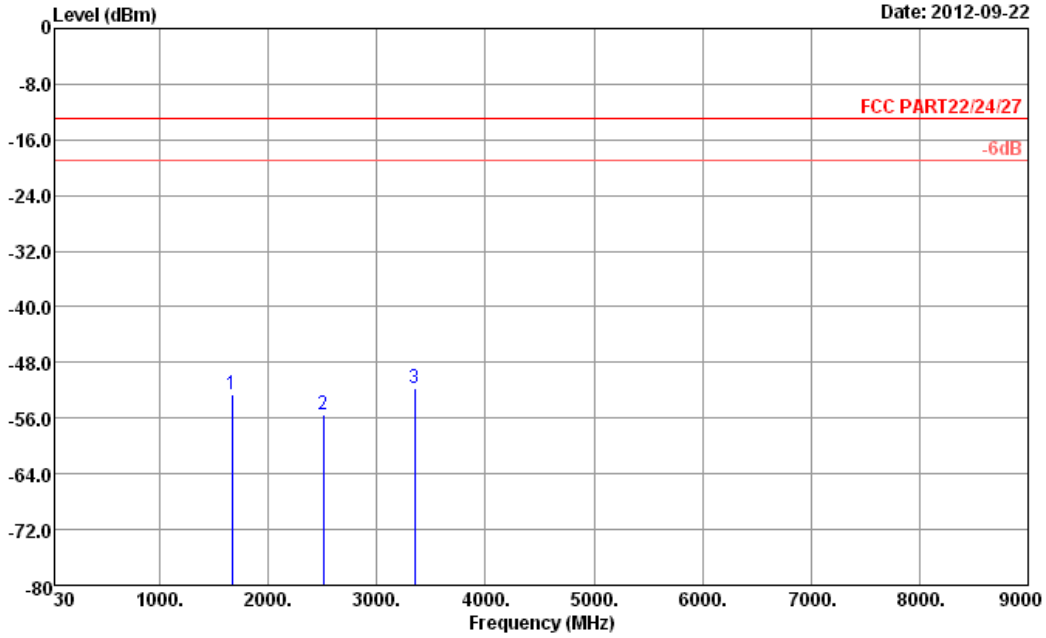
Band :	GSM1900	Temperature :	20~22℃
Test Mode :	EDGE 8 Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 VERTICAL
Project : FG 291115

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-27.73	-13	-14.73	-40.41	-34.44	2.00	8.71	V	Pass
5640	-18.72	-13	-5.72	-37.27	-27.36	2.13	10.77	V	Pass
7520	-16.77	-13	-3.77	-38.15	-26.31	2.68	12.22	V	Pass
9400	-38.36	-13	-25.36	-62.1	-48.87	2.87	13.38	V	Pass

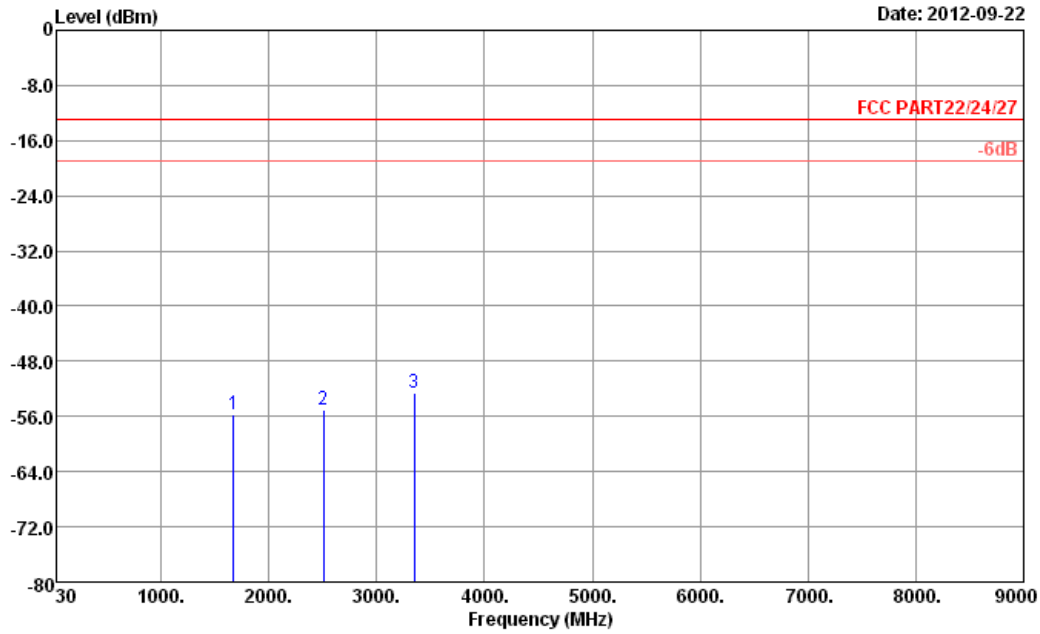
Band :	WCDMA Band V	Temperature :	20~22℃
Test Mode :	RMC 12.2Kbps Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 HORIZONTAL
Project : FG 291115

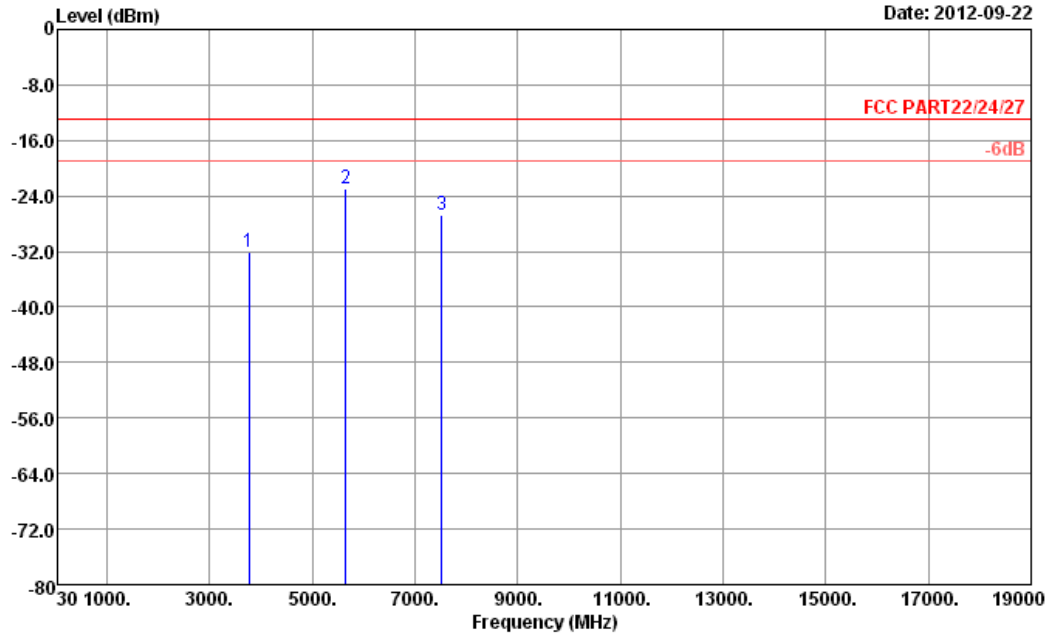
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1669	-52.56	-13	-39.56	-59.76	-54.32	1.35	5.25	H	Pass
2509	-55.41	-13	-42.41	-64.75	-57.79	1.58	6.11	H	Pass
3346	-51.61	-13	-38.61	-64.05	-55.46	1.94	7.94	H	Pass

Band :	WCDMA Band V	Temperature :	20~22℃
Test Mode :	RMC 12.2Kbps Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-55.60	-13	-42.60	-62.1	-57.36	1.35	5.25	V	Pass
2509	-55.03	-13	-42.03	-64.64	-57.41	1.58	6.11	V	Pass
3346	-52.67	-13	-39.67	-64.64	-56.52	1.94	7.94	V	Pass

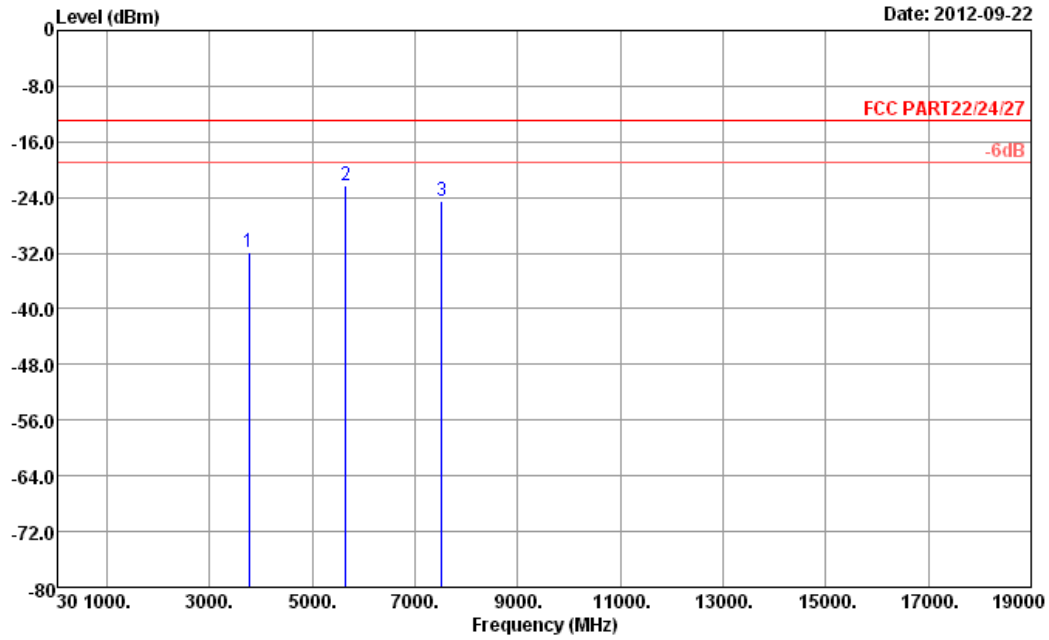
Band :	WCDMA Band II	Temperature :	20~22℃
Test Mode :	RMC 12.2Kbps Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 HORIZONTAL
Project : FG 291115

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-32.04	-13	-19.04	-46.09	-38.75	2.00	8.71	H	Pass
5644	-22.89	-13	-9.89	-41.32	-31.53	2.13	10.77	H	Pass
7524	-26.84	-13	-13.84	-48.3	-36.38	2.68	12.22	H	Pass

Band :	WCDMA Band II	Temperature :	20~22℃
Test Mode :	RMC 12.2Kbps Link	Relative Humidity :	40~42%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22/24/27 HF_EIRP_101221 VERTICAL
Project : FG 291115

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-31.91	-13	-18.91	-45.37	-38.62	2.00	8.71	V	Pass
5644	-22.23	-13	-9.23	-40.89	-30.87	2.13	10.77	V	Pass
7524	-24.41	-13	-11.41	-47.22	-33.95	2.68	12.22	V	Pass

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 06, 2012	Sep. 26, 2012	Jun. 05, 2013	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Sep. 26, 2012	Sep. 07, 2013	Conducted (TH02-HY)
Spectrum Analyzer	R&S	ESU26	100390	20Hz ~ 26.5GHz	Dec. 22, 2011	Sep. 22, 2012	Dec. 21, 2012	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2725	30MHz ~ 2GHz	Oct. 22, 2011	Sep. 22, 2012	Oct. 21, 2012	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 ~ 360 degree	N/A	Sep. 22, 2012	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	MA 240	240/666	1 m ~ 4 m	N/A	Sep. 22, 2012	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	66584	1GHz~18GHz	Aug. 10, 2012	Sep. 22, 2012	Aug. 09, 2013	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A02665	1GHz~26.5GHz	Aug. 28, 2012	Sep. 22, 2012	Aug. 27, 2013	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Oct. 21, 2011	Sep. 22, 2012	Oct. 20, 2012	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	100315	9KHz ~ 30MHz	May 14, 2012	Sep. 22, 2012	May 13, 2013	Radiation (03CH05-HY)
EMI TEST RECEIVER	R&S	ESCI 7	100724	9kHz~7GHz	Sep. 03, 2012	Sep. 22, 2012	Sep. 02, 2013	Radiation (03CH05-HY)
Spectrum Analyzer	R&S	FSP30	101067	9KHz ~ 30GHz	Dec. 06, 2011	Sep. 22, 2012	Dec. 05, 2012	Radiation (03CH05-HY)
System Simulator	R&S	CMU200	117995	N/A	Jul. 28, 2011	Sep. 22, 2012~ Sep. 26, 2012	Jul. 27, 2013	-

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**

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

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 EP291115 as below.