ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 24 SUBPART E AND INDUSTRY CANADA RSS-132 and RSS-133 REQUIREMENT

OF

Product Name:	**Notebook Device**
Brand Name:	**N/A**
Model No.:	**PCG-11311L**
Model Different:	**N/A**
FCC ID:	**AK8PCG11311L**
IC:	**409B-PCG11311L**
Report No.:	**EF/2011/70023**
Issue Date:	**Jul. 25, 2011**
FCC Rule Part:	**2 , 22H & 24E**
IC Rule Part:	**RSS 132, Issue 2 and RSS 133, Issue 5**
Prepared for:	**SONY Corporation** **5432 Toyoshina Azumino-shi, Nagano 399-8282 Japan**
Prepared by:	**SGS Taiwan Ltd.** **Electronics & Communication Laboratory** **No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan.**

VERIFICATION OF COMPLIANCE

Applicant:	SONY Corporation 5432 Toyoshina Azumino-shi, Nagano 399-8282 Japan
Product Name:	Notebook Device
Brand Name:	N/A
FCC ID:	AK8PCG11311L
IC:	409B-PCG11311L
Model No.:	PCG-11311L
Model Difference:	N/A
File Number:	EF/2011/70023
Date of Test:	Jul. 18, 2011 ~ Jul. 25, 2011
Date of EUT Received:	Jul. 18, 2011

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-C-2004, Issue 3 of RSS-Gen and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rule PART 22 subpart H, PART 24 subpart E and IC standards Issue 2 of RSS-132, Issue 5 of RSS-133.

The test results of this report relate only to the tested sample identified in this report.

Test By:	Jazz Huang	***Date:***	Jul. 25, 2011
	Jazz Huang / Engineer		
Prepared By:	Cherry Chen	***Date:***	Jul. 25, 2011
	Cherry Chen / Clerk		
Approved By	Jim Chang	***Date:***	Jul. 25, 2011
	Jim Chang / Supervisor		

Version

Version No.	Date	Description
00	Jul. 25, 2011	Initial creation of document

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1. GENERAL PRODUCT INFORMATION

General:

Product Name	Notebook Device	
Brand Name	N/A	
Model No.	PCG-11311L	
Model Difference	N/A	
Power Supply	7.4Vdc from Li-ion battery or 10.5Vdc by AC/DC power adapter	
	Adapter:	Model: VGP-AC10V4, Supplier: SONY
	Battery:	Model: VGP-BPL19, Supplier: SONY

CDMA 2000:

	Operating Frequency		Rated Power
Cellular Phone Standards Frequency Range and Power	CDMA 2000 Cellular	824.7MHz – 848.31MHz	24 dBm
	CDMA 2000 PCS	1851.25MHz– 1908.75MHz	24 dBm
	CDMA 2000 Cellular / EVDO Cellular	824.7MHz – 848.31MHz	24 dBm
	CDMA 2000 PCS / EVDO PCS	1851.25MHz– 1908.75MHz	24 dBm

GSM / WCDMA

FCC Modular Report	Supplier: QUALCOMM Incorporated Model: GOBI3000 Report Number: 80-N2162-203 Rev B		
FCC &IC Modular Report	Supplier: COMPLIANCE CERTIFICATION SERVICES Model: GOBI3000 Report Number: 10U13266-1		
Cellular Phone Standards Frequency Range and Power:	Operating Frequency		Rated Power
	GSM/GPRS 850, Class 10	824.2 MHz– 848.8 MHz	33 dBm
	GSM/GPRS 1900, Class 10	1850.2MHz – 1909.8MHz	30 dBm
	EDGE 850, Class 10	824.2 MHz– 848.8 MHz	27 dBm
	EDGE 1900, Class 10	1850.2MHz – 1909.8MHz	26 dBm
	WCDMA/HSUPA/HSDPA Band II	1852.4MHz – 1907.6MHz	24 dBm
	WCDMA/HSUPA/HSDPA Band V	826.4MHz – 846.6MHz	24dBm
Type of Emission:	GPRS850: 243KGXW, GPRS1900: 242KGXW EDGE 850: 247KG7W, EDGE 1900: 244KG7W CDMA 850: 1M27F9W, CDMA 1900: 1M28F9W EVDO 850: 1M27F9W, EVDO 1900: 1M27F9W WCDMA Band II: 4M16F9W, HSUPA Band II: 4M15F9W WCDMA Band V: 4M14F9W, HSUPD Band V: 4M14F9W		
Hardware Version:	DVT2		
Software Version:	google released image is 15.0.837.0 (Platform 823.0-11.07.29)		
IMEI:	86754800001011600		

Final Amplifier Voltage and Current Information:

Test mode	DC voltage (V)	DC current (mA)
GPRS 850	7.4 Vdc	530
GPRS 1900	7.4 Vdc	520
EDGE 850	7.4 Vdc	560
EDGE 1900	7.4 Vdc	550
WCDMA B2	7.4 Vdc	620
WCDMA B5	7.4 Vdc	630
HSUPA B2	7.4 Vdc	650
HUSPA B5	7.4 Vdc	640
HSDPA B2	7.4 Vdc	640
HUDPA B5	7.4 Vdc	650
CDMA 850	7.4 Vdc	640
CDMA 1900	7.4 Vdc	650
EVDO 850	7.4 Vdc	590
EVDO 1900	7.4 Vdc	600

This test report applies for GSM/GPRS/EDGE 850/1900, CDMA 2000 and EVDO and WCDMA/HSDPA/HSUPA Bands II, Band V.

1.1. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: AK8PCG11311L** filing to comply with Section Part 22 subpart H, Part 24 subpart E of the FCC CFR 47 Rules and IC: **409B-PCG11311L** filing to comply with Issue 2 of RSS-132, Issue 5 of RSS-133

1.2. Test Methodology

Both conducted and radiated testing were performed according to the procedures document on chapter 13 of TIA/EIA 603C and FCC 47 CFR 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, issue 2 of RSS-132 and issue 3 of RSS-133.

1.3. Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-4

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 &10 meters) and FCC Registration Number: 94644.

All equipment is calibrated externally and traceable to SI (International System of Unit).

1.4. Special Accessories

Not available for this EUT intended for grant.

1.5. Equipment Modifications

Not available for this EUT intended for grant.

2. SYSTEM TEST CONFIGURATION

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency which was for the purpose of the measurements.

2.3. Test Procedure

2.3.1 AC Power Line Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in TIA/EIA 603C. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz us- ing CISPR Quasi-Peak and Average detector mode.

2.3.2 Conducted Measurement at Antenna Port:

According to measurement procured TIA/EIA 603C and RSS-Gen Issue 3, the EUT is placed on a turn table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

2.3.3 Radiated Emissions (ERP/EIRP):

According to measurement procured TIA/EIA 603C and RSS-Gen Issue 3, The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the po- larization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the an- tenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 8 and 13 of ANSI C63.4:2003.

2.4. Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	R&S	ESCS30	828985/004	09/23/2010	09/22/2012
LISN	Rolf-Heine	NNB-2/16Z	99012	03/31/2011	03/30/2012
LISN	FCC	FCC-LISN-50/250-25-2-01	04034	03/31/2011	03/30/2012
Coaxial Cables	N/A	WK CE Cable	N/A	11/28/2010	11/27/2011

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2010	04/18/2012
Spectrum Analyzer	Agilent	E4440A	US41160416	01/25/2011	01/24/2012
Radio Communication Analyzer	R&S	CMU200	111787	12/07/2011	12/06/2013
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2011	01/04/2012
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2011	01/04/2012
Temperature Chamber	TERCHY	MHG-120LF	911009	04/30/2010	04/29/2012
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2010	02/04/2012
DC Block	Agilent	BLK-18	155452	01/05/2011	01/04/2012
Attenuator	Mini-Circuit	BW-S20W5	N/A	01/05/2011	01/04/2012
Attenuator	Mini-Circuit	BW-S10W5	N/A	01/05/2011	01/04/2012
Attenuator	Mini-Circuit	BW-S6W5	N/A	01/05/2011	01/04/2012
Splitter	Agilent	11636B	N/A	01/05/2011	01/04/2012
DC Power Supply	Chroma	41901	777188	04/15/2010	04/14/2012
Power Meter	Anritsu	ML2495A	1005007	02/17/2010	02/16/2012

ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	R&S	FSP 40	100034	03/30/2011	03/29/2012
Bilog Antenna	SCHWAZBECK	VULB9160	3136	11/19/2010	11/18/2011
Dipole Antenna	SCHWAZBECK	VHAP	908/909	07/17/2010	07/16/2012
Dipole Antenna	SCHWAZBECK	UHAP	891/892	07/17/2010	07/16/2012
Horn antenna	SCHWAZBECK	BBHA 9120D	309/320	01/22/2010	01/21/2012
Signal Generator	R&S	SMR40	100210	02/10/2010	02/09/2012
Signal Generator	Agilent	E4438C	MY45093613	07/08/2011	07/07/2013
Pre-Amplifier	Agilent	8447D	1937A02834	11/28/2010	11/27/2011
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2011	01/04/2012
Attenuator	Mini-Circuit	BW-S20W5	001	01/05/2011	01/04/2012
Attenuator	Mini-Circuit	BW-S10W5	001	01/05/2011	01/04/2012
Attenuator	Mini-Circuit	BW-S6W5	001	01/05/2011	01/04/2012
Radio Communication Analyzer	R&S	CMU200	102189	08/12/2010	08/13/2012
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2011	01/04/2012
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2011	01/04/2012
3m Site	SGS	966 chamber	N/A	09/06/2010	09/05/2011

2.5. Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel)

Fig. 2-1 Configuration Used in Tested System

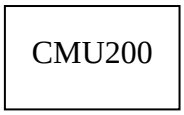


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	Universal Radio Communication Tester	R&S	CMU200	102189	N/A	Un-shielded

3. SUMMARY OF TEST RESULTS

FCC Rules	IC Rules	Description Of Test	Result
§2.1046(a)	N/A	RF Power Output	Compliant
§2.1046(a) §22.913(a)(2) §24.232(c)	§4.8 (RSS-Gen Issue 3) §4.4 (RSS-132) §6.4 (RSS-133)	ERP/ EIRP measurement	Compliant
§2.1049(h)	§4.6.1 (RSS-Gen Issue 3) §2.3 (RSS-133)	99% Occupied Bandwidth	Compliant
§2.1051 §22.917(a) §24.238(a)	§4.9 (RSS-Gen Issue 3) §4.5 (RSS-132) §6.5 (RSS-133)	Out of Band Emissions at Antenna Terminals and Band Edge	Compliant
§2.1053 §22.917(a) §24.238(a)	§4.9 (RSS-Gen Issue 3) §4.5 (RSS-132) §6.5 (RSS-133)	Field Strength of Spurious Radiation	Compliant
§2.1055(a)(1) §22.355 §24.235	§4.7 (RSS-Gen Issue 3) §4.3 (RSS-132) §6.3 (RSS-133)	Frequency Stability vs. Temperature	Compliant
§2.1055(d)(2) §22.355 §24.235	§4.7 (RSS-Gen Issue 3) §4.3 (RSS-132) §6.3 (RSS-133)	Frequency Stability vs. Voltage	Compliant
N/A	§4.10 (RSS-Gen Issue 3) §4.6 (RSS-132) §6.6 (RSS-133)	Receiver Spurious Emissions	Compliant

Max ERP/EIRP measurement result:

	dBm	dB	W
GPRS 850 Band	30.85	ERP	1.216
GPRS 1900 Band	27.34	EIRP	0.542
EDGE 850 Band	30.50	ERP	1.122
EDGE 1900 Band	25.58	EIRP	0.361
WCDMA Band II	23.04	EIRP	0.201
WCDMA Band V	22.46	ERP	0.176
HSDPA Band II	22.35	EIRP	0.172
HSDPA Band V	23.33	ERP	0.215
HSUPA Band II	22.83	EIRP	0.192
HSUPA Band V	23.15	ERP	0.207
CDMA 2000 Cellular	26.62	ERP	0.459
CDMA 2000 PCS	21.93	EIRP	0.156
CDMA 2000 EVDO	20.17	ERP	0.104
CDMA 2000 EVDO PCS	21.44	EIRP	0.139

4. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

EUT was staying in continuous transmitting mode. Channel Low, Mid and High for each band with rated data rate were chosen for full testing.

The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) for GPRS/EDGE, CDMA2000/CDMA EVDO and WCDMA/HSDPA/HSUPA Band II and V with power adaptor.

5. MEASUREMENT UNCERTAINTY FOR FIELD STRENGTH OF SPURIOUS RADIATION

Measurement uncertainty (Polarization : **Vertical**)	30MHz - 180MHz: 3.37dB
	180MHz -417MHz: 3.19dB
	0.417GHz-1GHz: 3.19dB
	1GHz - 18GHz: 4.04dB
	18GHz - 40GHz: 4.04dB

Measurement uncertainty (Polarization : **Horizontal**)	30MHz - 167MHz: 4.22dB
	167MHz -500MHz: 3.44dB
	0.5GHz-1GHz: 3.39dB
	1GHz - 18GHz: 4.08dB
	18GHz - 40GHz: 4.08dB

6. RF POWER OUTPUT MEASUREMENT

6.1. Standard Applicable:

According to FCC §2.1046.

FCC 22.913(a) Mobile station are limited to 7W.

FCC 24.232(C) Peak Power Measurement to 2W.

3GPP Power limitation for HSDPA and HSUPA

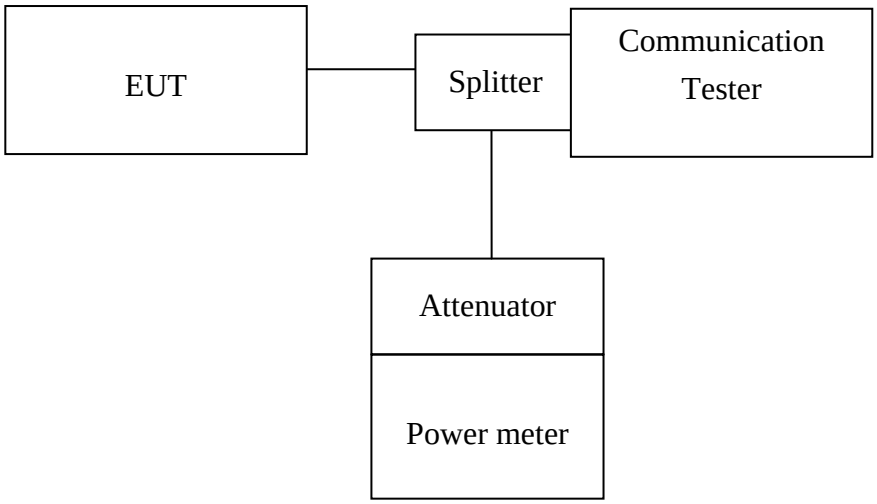
Maximum Output Powers for HSDPA

Sub-test in table C.10.1.4	Power Class 3		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
1	+24	+1.7/-3.7	+21	+2.7/-2.7
2	+24	+1.7/-3.7	+21	+2.7/-2.7
3	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7
4	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7

Maximum Output Powers for HSUPA

Sub-test in table C.11.1.3	Power Class 3		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
1	+24	+1.7/-6.7	+21	+2.7/-5.7
2	+22	+3.7/-5.2	+19	+4.7/-4.2
3	+23	+2.7/-5.2	+20	+3.7/-4.2
4	+22	+3.7/-5.2	+19	+4.7/-4.2
5	+24	+1.7/-6.7	+21	+2.7/-5.7

6.2. Test Set-up:



Note: *Measurement setup for testing on Antenna connector*

6.3. Measurement Procedure:

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading. The Procedure of KDB941225 KDB941125 (SAR Measurement Procedures for 3G devices, WCDMA/HSDPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing

6.4. Measurement Equipment Used:

Refer to section 2.4 in this report

6.5. Measurement Result:

6.5.1. RF Conducted Output Power

6.5.1.1.: GPRS, EDGE mode

EUT Mode	Frequency (MHz)	CH	Peak Power (1DN 1UP) (dBm)	Avg. Power (1DN 1UP) (dBm)	Peak Power (1DN 2UP) (dBm)	Avg. Power (1DN 2UP) (dBm)
GPRS 850 (Class 10)	824.2	128	33.00	32.40	32.90	32.30
	836.6	190	33.10	32.50	33.00	32.40
	848.8	251	33.20	32.90	33.10	32.50

EUT Mode	Frequency (MHz)	CH	Peak Power (1DN 1UP) (dBm)	Avg. Power (1DN 1UP) (dBm)	Peak Power (1DN 2UP) (dBm)	Avg. Power (1DN 2UP) (dBm)
GPRS 1900 (Class 10)	1850.2	512	30.30	30.10	29.10	28.90
	1880.0	661	30.10	30.00	29.50	29.30
	1909.8	810	30.20	30.10	29.40	29.10

EUT Mode	Frequency (MHz)	CH	Peak Power (1DN 1UP) (dBm)	Avg. Power (1DN 1UP) (dBm)	Peak Power (1DN 2UP) (dBm)	Avg. Power (1DN 2UP) (dBm)
EDGE 850 (Class 10)	824.2	128	30.30	27.10	30.20	27.00
	836.6	190	30.30	27.00	30.20	27.00
	848.8	251	30.30	27.00	30.20	27.00

EUT Mode	Frequency (MHz)	CH	Peak Power (1DN 1UP) (dBm)	Avg. Power (1DN 1UP) (dBm)	Peak Power (1DN 2UP) (dBm)	Avg. Power (1DN 2UP) (dBm)
EDGE 1900 (Class 10)	1850.2	512	28.60	26.20	28.60	25.10
	1880.0	661	28.80	27.00	28.60	25.20
	1909.8	810	28.60	27.20	28.50	25.30

6.5.1.2.: WCDMA mode

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V8.4.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

Results:

EUT Mode	Frequency (MHz)	CH	Peak Power (dBm)	Avg. Power (dBm)
WCDMA Band II	1852.4	9262	26.88	23.07
	1880.0	9400	27.55	24.13
	1907.6	9538	27.52	24.24

EUT Mode	Frequency (MHz)	CH	Peak Power (dBm)	Avg. Power (dBm)
WCDMA Band V	826.4	4132	27.52	24.25
	836.6	4183	27.55	24.10
	846.6	4233	27.50	24.24

Note: The results above reflect max power with all up bits.

6.5.1.3.: CDMA 2000 mode

Result:

EUT Mode	Frequency (MHz)	CH	Peak Power (dBm)	Avg. Power (dBm)
CDMA 2000 Cellular	824.70	1013	24.40	24.37
	836.52	384	24.61	24.55
	848.31	777	24.51	24.48

EUT Mode	Frequency (MHz)	CH	Peak Power (dBm)	Avg. Power (dBm)
CDMA 2000 PCS	1851.25	25	24.53	24.49
	1880	600	24.41	24.36
	1908.75	1175	24.39	24.33

EUT Mode	Frequency (MHz)	CH	Peak Power (dBm)	Avg. Power (dBm)
CDMA 2000 EVDO Cellular	824.70	1013	24.36	23.30
	836.52	384	24.53	24.48
	848.31	777	24.45	24.41

EUT Mode	Frequency (MHz)	CH	Peak Power (dBm)	Avg. Power (dBm)
CDMA 2000 EVDO PCS	1851.25	25	24.48	24.43
	1880	600	24.36	24.30
	1908.75	1175	24.31	24.25

offset: 0.5dB(for 800MHz)

offset: 0.5dB(for 1900MHz)

6.5.1.4.:HSDPA Release 6 mode

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

HSDPA SUB-TEST Setting

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)

Sub-test	β_c	β_d	β_d ***(SF)***	β_c/β_d	β_{HS} (*Note1, Note 2*)	**CM (dB)** *(Note 3)*	**MPR (dB)** *(Note 3)*	**RMC (Kbps)**
1	2/15	15/15	64	2/15	4/15	0.0	0.0	12.2
2	12/15 *(Note 4)*	15/15 *(Note 4)*	64	12/15 *(Note 4)*	24/15	1.0	0.0	12.2
3	15/15	8/15	64	15/8	30/15	1.5	0.5	12.2
4	15/15	4/15	64	15/4	30/15	1.5	0.5	12.2

Note: The recommended HSDPA MPRs are implemented as per following sub-tests.

Results: Please refer to module report: QUALCOMM, report no.:80-N2162-203 Rev B.

6.5.1.5.: HSPA (HSDPA & HSUPA) Release 6 mode

The following 5 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

HSPA SUB-TEST Setting

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS}	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (Codes)	CM (dB)	MPR (dB)	AG Index	E-TFCI	RMC (Kbps)
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75	12.2
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67	12.2
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 4	2	2.0	1.0	15	92	12.2
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71	12.2
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81	12.2

Note: The recommended HSUPA MPRs are implemented as per following sub-tests.

Results: Results: Please refer to module report: QUALCOMM, report no.:80-N2162-203 Rev B

6.5.2. Minimum Communications Power Measurement

PCS 1900 band

PCL	0	1	2	3	4	5	6	7	8
Output power (dBm)	30.1	30.1	30.1	30.1	28	25.8	23.6	21.6	19.4

PCL	9	10	11	12	13	14	15	16	17	18
Output power (dBm)	17.3	15.1	13.1	11.1	10	8.7	6.4	4.1	2	-0.1

Note: The EUT output power was controlled by simulator. Set Communication Tester CMU200 PCL as above, and get the mobile phone output power reading.

WCDMA/HSDPA/HSUPA band II

The EUT output power was controlled by simulator. Set Communication Tester CMU200 function key “UE Power Control” and enter max rated power 24dBm. The EUT is going to be set to max output power to 24dBm. then record the read(see page 15 for measurement data) . The min. power was measures by a function key “minimum power” then record the read. It is -52.3dBm. The power variation can be 0.1dB step by setting.

7. ERP, EIRP MEASUREMENT

7.1. Standard Applicable:

According to FCC §2.1046

FCC 22.913(a) Mobile station are limited to 7W ERP.

FCC 24.232(c) Mobile station are limited to 2W EIRP.

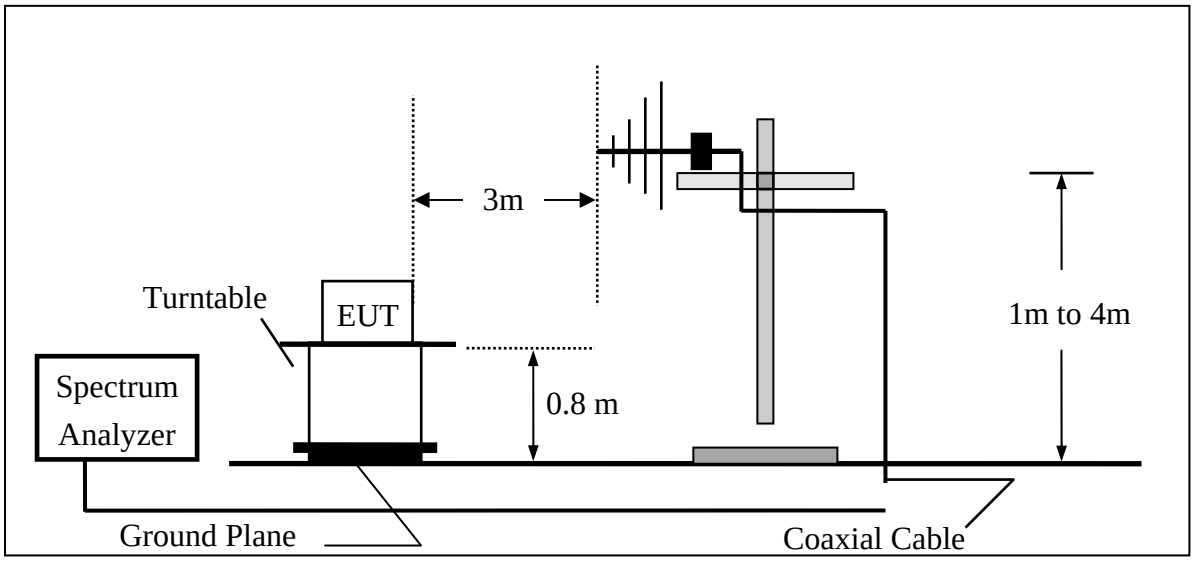
According to IC RSS-133 §6.4

The peak e.i.r.p. for transmitters operating in the band 1850-1910 MHz shall not exceed the limits 2W which given in SRSP-510.

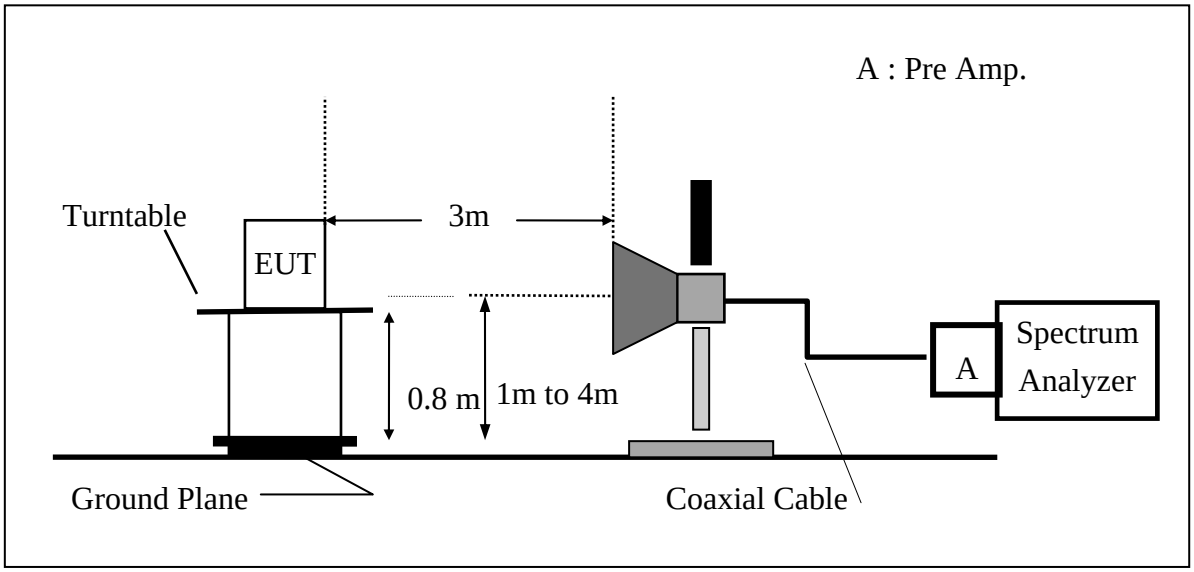
According to issue 2 of RSS 132, section 4.4. The transmitter output power shall not exceed the limits given in SRSP-503.

7.2. Test SET-UP (Block Diagram of Configuration):

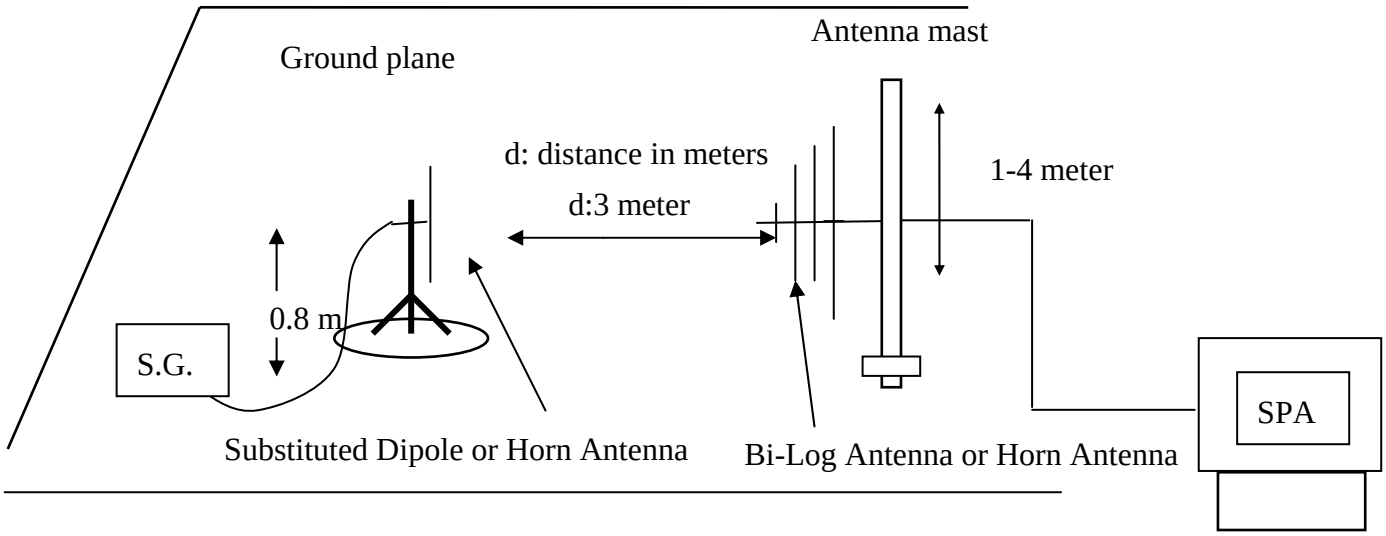
(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



7.3. Measurement Procedure:

The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824.2 –848.80MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:

EIRP in frequency band 1710-1755MHz and 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by a horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

7.4. Measurement Equipment Used:

Refer to section 2.4 in this report

7.5. Measurement Result:

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
GPRS 850	824.20	128	H	V	126.77	40.38	-7.87	3.62	28.88	38.45
				H	126.04	39.77	-7.87	3.62	28.27	38.45
	836.60	190	H	V	127.22	40.97	-7.88	3.65	29.44	38.45
				H	127.19	40.96	-7.88	3.65	29.43	38.45
	848.80	251	H	V	128.33	42.21	-7.88	3.68	30.65	38.45
				H	128.60	42.41	-7.88	3.68	**30.85**	38.45

Remark：

(1) The RBW,VBW of SPA for frequency

RBW=300 KHz, VBW=1MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
GPRS 1900	1850.20	512	H	V	124.91	20.52	9.90	5.56	24.86	33.00
				H	126.96	22.78	9.90	5.56	27.12	33.00
	1880.00	661	H	V	125.34	20.98	9.99	5.61	25.36	33.00
				H	127.11	22.97	9.99	5.61	**27.34**	33.00
	1909.80	810	H	V	120.91	16.58	10.08	5.66	21.00	33.00
				H	123.95	19.84	10.08	5.66	24.26	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW=300K, VBW=1MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
EDGE 850	824.20	128	H	V	124.04	37.65	-7.87	3.62	26.15	38.45
				H	125.08	38.81	-7.87	3.62	27.31	38.45
	836.60	190	H	V	126.79	40.54	-7.88	3.65	29.01	38.45
				H	126.81	40.58	-7.88	3.65	29.05	38.45
	848.80	251	H	V	128.06	41.94	-7.88	3.68	30.38	38.45
				H	128.25	42.06	-7.88	3.68	**30.50**	38.45

Remark：

(1) The RBW,VBW of SPA for frequency

RBW=300 KHz, VBW=1MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
EDGE 1900	1850.20	512	H	V	122.69	18.30	9.90	5.56	22.64	33.00
				H	124.67	20.49	9.90	5.56	24.83	33.00
	1880.00	661	H	V	123.49	19.13	9.99	5.61	23.51	33.00
				H	125.35	21.21	9.99	5.61	**25.58**	33.00
	1909.80	810	H	V	120.08	15.75	10.08	5.66	20.17	33.00
				H	122.55	18.44	10.08	5.66	22.86	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW=300K, VBW=1MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
WCDMA II	1852.40	9262	H	V	121.04	16.66	9.90	5.56	20.99	33.00
				H	122.88	18.70	9.90	5.56	**23.04**	33.00
	1880.00	9400	H	V	117.47	13.11	9.99	5.61	17.49	33.00
				H	119.87	15.73	9.99	5.61	20.10	33.00
	1907.60	9538	H	V	114.88	10.55	10.07	5.66	14.96	33.00
				H	118.34	14.23	10.07	5.66	18.64	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
WCDMA Band V	826.40	4132	H	V	119.73	33.37	-7.88	3.63	21.86	38.45
				H	119.68	33.42	-7.88	3.63	21.92	38.45
	836.60	4183	H	V	119.89	33.63	-7.88	3.65	22.10	38.45
				H	119.96	33.73	-7.88	3.65	22.20	38.45
	846.60	4233	H	V	120.09	33.94	-7.88	3.67	22.39	38.45
				H	120.21	34.01	-7.88	3.67	**22.46**	38.45

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
HSDPA Band II	1852.40	9262	H	V	119.54	15.16	9.90	5.56	19.49	33.00
				H	121.81	17.63	9.90	5.56	21.97	33.00
	1880.00	9400	H	V	119.02	14.66	9.99	5.61	19.04	33.00
				H	122.12	17.98	9.99	5.61	**22.35**	33.00
	1908.75	9538	H	V	116.17	11.84	10.07	5.66	16.25	33.00
				H	119.40	15.29	10.07	5.66	19.70	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
HSDPA Band V	826.40	4132	H	V	120.84	34.48	-7.88	3.63	22.97	38.45
				H	120.57	34.31	-7.88	3.63	22.81	38.45
	836.60	4183	H	V	120.73	34.48	-7.88	3.65	22.95	38.45
				H	120.85	34.62	-7.88	3.65	23.09	38.45
	846.60	4233	H	V	120.81	34.66	-7.88	3.67	23.11	38.45
				H	121.08	34.88	-7.88	3.67	**23.33**	38.45

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
HSUPA Band II	1852.40	9262	H	V	120.06	15.68	9.90	5.56	20.01	33.00
				H	122.67	18.49	9.90	5.56	**22.83**	33.00
	1880.00	9400	H	V	119.62	15.26	9.99	5.61	19.64	33.00
				H	122.35	18.21	9.99	5.61	22.58	33.00
	1907.60	9538	H	V	116.21	11.88	10.07	5.66	16.29	33.00
				H	119.61	15.50	10.07	5.66	19.91	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
HSUPA Band V	826.40	4132	H	V	120.67	34.31	-7.88	3.63	22.80	38.45
				H	120.52	34.26	-7.88	3.63	22.76	38.45
	836.60	4183	H	V	120.64	34.38	-7.88	3.65	22.85	38.45
				H	120.79	34.56	-7.88	3.65	23.03	38.45
	946.60	4233	H	V	120.78	34.63	-7.88	3.67	23.08	38.45
				H	120.90	34.70	-7.88	3.67	**23.15**	38.45

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz , VBW= 5MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
CDMA 2000 Cellular	824.70	1013	H	V	124.49	38.13	-7.88	3.63	**26.62**	38.45
				H	122.97	36.71	-7.88	3.63	25.21	38.45
	836.52	384	H	V	122.70	36.44	-7.88	3.65	24.91	38.45
				H	122.24	36.01	-7.88	3.65	24.48	38.45
	848.31	777	H	V	122.26	36.11	-7.88	3.67	24.56	38.45
				H	122.17	35.97	-7.88	3.67	24.42	38.45

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 2MHz , VBW= 6MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
CDMA 2000 PCS	1851.25	25	H	V	118.68	14.30	9.90	5.56	18.63	33.00
				H	121.70	17.52	9.90	5.56	21.86	33.00
	1880.00	600	H	V	119.06	14.70	9.99	5.61	19.08	33.00
				H	121.70	17.56	9.99	5.61	**21.93**	33.00
	1908.75	1175	H	V	115.51	11.18	10.07	5.66	15.59	33.00
				H	119.21	15.10	10.07	5.66	19.51	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 2MHz , VBW= 6MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
CDMA 2000 EVDO Cellular	824.70	1013	H	V	113.95	27.59	-7.88	3.63	16.08	38.45
				H	113.63	27.37	-7.88	3.63	15.87	38.45
	836.52	384	H	V	115.39	29.13	-7.88	3.65	17.60	38.45
				H	114.89	28.66	-7.88	3.65	17.13	38.45
	848.31	777	H	V	117.51	31.36	-7.88	3.67	19.81	38.45
				H	117.92	31.72	-7.88	3.67	**20.17**	38.45

(1) The RBW,VBW of SPA for frequency

RBW= 2MHz , VBW= 6MHz

Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
CDMA 2000 EVDO PCS	1851.25	25	H	V	117.09	12.71	9.90	5.56	17.04	33.00
				H	120.47	16.29	9.90	5.56	20.63	33.00
	1880.00	600	H	V	119.67	15.31	9.99	5.61	19.69	33.00
				H	121.21	17.07	9.99	5.61	**21.44**	33.00
	1908.75	1175	H	V	116.54	12.21	10.07	5.66	16.62	33.00
				H	119.31	15.20	10.07	5.66	19.61	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW= 2MHz , VBW= 6MHz

8. 99% OCCUPIED BANDWIDTH MEASUREMENT

8.1. Standard Applicable:

According to §FCC 2.1049.

According to IC RSS-Gen Issue 3 §4.6.1

According to IC RSS-133 §2.3

8.2. Test Set-up:

Refer to section 5.2 in this report

8.3. Measurement Procedure:

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% of emission BW, VBW= 3 times RBW (10/30KHz) for GSM/EDGE; VBW= 3 times RBW (47/150KHz) for WCDMA/HSUPA, -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

8.4. Measurement Equipment Used:

Refer to section 2.4 in this report

8.5. Measurement Result: Please refer to Modular Report, report no.: 80-N2162-203 Rev B

9. OUT OF BAND EMISSION AT ANTENNA TERMINALS

9.1. Standard Applicable:

According to FCC §2.1051.

FCC §22.917(a), §24.238(a) the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

According to RSS-132 §4.5

4.5.1 Out-of-block Emissions

Mobile and base station equipment with emission bandwidth less than or equal to 4 MHz shall comply with 4.5.1.1. Mobile station equipment with emission bandwidth greater than 4 MHz shall comply with 4.5.1.2. Base station equipment with emission bandwidth greater than 4 MHz shall comply with either 4.5.1.2 or 4.5.1.3.

4.5.1.1 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 100 kHz bandwidth.

4.5.1.2 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 1 MHz bandwidth

According to RSS-133 §6.5

6.5.1 Out-of-Block Emissions

a. Mobile stations must comply with subsection i. below.

In the first 1.0MHz band immediately outside and adjacent to the licensee's frequency block. the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P) dB.

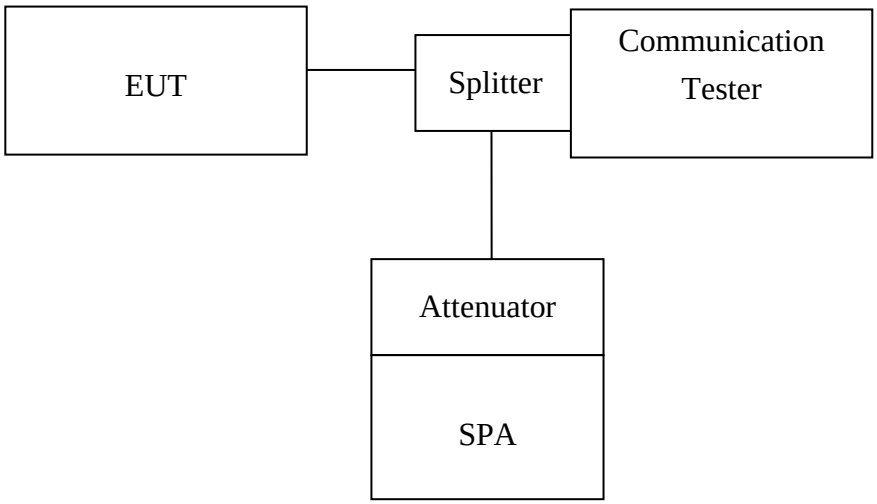
b. After the first 1.0 MHz (for equipment that complies with a.i. of this subsection) or 1.5 MHz (for equipment that complies with all of this subsection), the power of emissions shall be attenuated below the transmitter output power by at least 43 + 10 log (P), dB, per any MHz of bandwidth.

(Note: If the test result using 1% of the emission bandwidth is used, then power integration over 1.0 MHz is required; alternatively, the spectrum analyzer resolution and video bandwidths can be increased to 1.0 MHz for this measurement).

6.5.2 Out-of-Sub-band Emissions

Outside the sub-bands 1850-1910 MHz and 1930-1990 MHz, the attenuation shall be equal to or greater than the out-of-block emission limits in Section 6.5.1.

9.2. Test SET-UP:



Note: *Measurement setup for testing on Antenna connector*

9.3. Measurement Procedure:

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

For the out of band: Set the RBW, VBW = 1MHz, Start=30MHz, Stop= 10 th harmonic. Limit = -13dBm

Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. Limit, -13dBm.

9.4. Measurement Equipment Used:

Refer to section 2.4 in this report

9.5. Measurement Result: Please refer to Modular Report, report no.: 80-N2162-203 Rev B

10. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT (TX)

10.1. Standard Applicable:

According to FCC §2.1053,

FCC §22.917(a), §24.238(a) the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

According to RSS-132 §4.5

4.5.1 Out-of-block Emissions

Mobile and base station equipment with emission bandwidth less than or equal to 4 MHz shall comply with 4.5.1.1. Mobile station equipment with emission bandwidth greater than 4 MHz shall comply with 4.5.1.2. Base station equipment with emission bandwidth greater than 4 MHz shall comply with either 4.5.1.2 or 4.5.1.3.

4.5.1.1 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 100 kHz bandwidth.

4.5.1.2 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 1 MHz bandwidth

According to RSS-133 §6.5

6.5.1 Out-of-Block Emissions

a. Mobile stations must comply with subsection i. below.

In the first 1.0MHz band immediately outside and adjacent to the licensee's frequency block. the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P) dB.

b. After the first 1.0 MHz (for equipment that complies with a.i. of this subsection) or 1.5 MHz (for equipment that complies with all of this subsection), the power of emissions shall be attenuated below the transmitter output power by at least 43 + 10 log (P), dB, per any MHz of bandwidth.

(Note: If the test result using 1% of the emission bandwidth is used, then power integration over 1.0 MHz is required; alternatively, the spectrum analyzer resolution and video bandwidths can be increased to 1.0 MHz for this measurement).

6.5.2 Out-of-Sub-band Emissions

Outside the sub-bands 1850-1910 MHz and 1930-1990 MHz, the attenuation shall be equal to or greater than the out-of-block emission limits in Section 6.5.1.

10.2. EUT Setup (Block Diagram of Configuration):

Refer to section 6.2 in this report

10.3. Measurement Procedure:

The EUT was placed on a non-conductive, The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP= S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain(dBi) – Cable Loss (dB)

10.4. Measurement Equipment Used:

Refer to section 2.4 in this report

10.5. Measurement Result:

Refer to attach tabular data sheets.

Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode	: TX CH Low Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 824.20 MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Ver
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
70.74	52.73	V	-59.03	-1.18	1.16	-61.38	-13.00	-48.38
289.96	40.76	V	-57.82	-7.91	2.13	-67.87	-13.00	-54.87
481.05	41.69	V	-52.37	-7.71	2.75	-62.83	-13.00	-49.83
529.55	43.38	V	-49.78	-7.74	2.89	-60.42	-13.00	-47.42
575.14	42.49	V	-48.53	-7.78	3.00	-59.30	-13.00	-46.30
623.64	49.01	V	-40.25	-7.80	3.09	-51.14	-13.00	-38.14
1648.40	---	V		9.29	5.23		-13.00	
2472.60	52.71	V	-48.30	10.08	6.53	-44.75	-13.00	-31.75
3296.80	41.33	V	-57.54	12.17	7.71	-53.09	-13.00	-40.09
4121.00	---	V		12.61	8.86		-13.00	
4945.20	---	V		12.65	9.74		-13.00	
5769.40	---	V		13.55	10.54		-13.00	
6593.60	---	V		12.05	11.30		-13.00	
7417.80	---	V		11.49	12.10		-13.00	
8242.00	---	V		11.48	12.71		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode	: TX CH Low Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 824.20 MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Hor
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
86.26	56.32	H	-47.36	-7.75	0.79	-55.90	-13.00	-42.90
212.36	42.01	H	-59.04	-7.85	1.78	-68.67	-13.00	-55.67
289.96	39.27	H	-58.70	-7.91	2.13	-68.75	-13.00	-55.75
529.55	38.72	H	-53.71	-7.74	2.89	-64.35	-13.00	-51.35
575.14	42.63	H	-48.58	-7.78	3.00	-59.35	-13.00	-46.35
623.64	46.84	H	-43.40	-7.80	3.09	-54.29	-13.00	-41.29
1648.40	---	H		9.29	5.23		-13.00	
2472.60	51.91	H	-49.00	10.08	6.53	-45.45	-13.00	-32.45
3296.80	39.59	H	-59.51	12.17	7.71	-55.05	-13.00	-42.05
4121.00	---	H		12.61	8.86		-13.00	
4945.20	---	H		12.65	9.74		-13.00	
5769.40	---	H		13.55	10.54		-13.00	
6593.60	---	H		12.05	11.30		-13.00	
7417.80	---	H		11.49	12.10		-13.00	
8242.00	---	H		11.48	12.71		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 836.60 MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
238.55	38.16	V	-62.16	-7.88	1.93	-71.97	-13.00	-58.97
289.96	41.53	V	-57.05	-7.91	2.13	-67.10	-13.00	-54.10
481.05	42.30	V	-51.76	-7.71	2.75	-62.22	-13.00	-49.22
529.55	43.10	V	-50.06	-7.74	2.89	-60.70	-13.00	-47.70
575.14	42.88	V	-48.14	-7.78	3.00	-58.91	-13.00	-45.91
623.64	49.78	V	-39.48	-7.80	3.09	-50.37	-13.00	-37.37
1673.20	46.15	V	-58.41	9.36	5.27	-54.31	-13.00	-41.31
2509.80	59.96	V	-40.82	10.09	6.58	-37.32	-13.00	-24.32
3346.40	42.74	V	-56.12	12.28	7.79	-51.64	-13.00	-38.64
4183.00	---	V		12.62	8.93		-13.00	
5019.60	---	V		12.67	9.81		-13.00	
5856.20	---	V		13.68	10.62		-13.00	
6692.80	---	V		11.95	11.39		-13.00	
7529.40	---	V		11.45	12.20		-13.00	
8366.00	---	V		11.59	12.81		-13.00	

Remark:

1 The emission behaviors belongs to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 836.60 MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
209.45	46.44	H	-54.75	-7.85	1.76	-64.36	-13.00	-51.36
289.96	38.93	H	-59.04	-7.91	2.13	-69.09	-13.00	-56.09
481.05	39.26	H	-54.36	-7.71	2.75	-64.82	-13.00	-51.82
529.55	37.92	H	-54.51	-7.74	2.89	-65.15	-13.00	-52.15
575.14	42.36	H	-48.85	-7.78	3.00	-59.62	-13.00	-46.62
623.64	46.80	H	-43.44	-7.80	3.09	-54.33	-13.00	-41.33
1673.20	45.74	H	-58.64	9.36	5.27	-54.54	-13.00	-41.54
2509.80	60.26	H	-40.44	10.09	6.58	-36.94	-13.00	-23.94
3346.40	43.31	H	-55.75	12.28	7.79	-51.27	-13.00	-38.27
4183.00	---	H		12.62	8.93		-13.00	
5019.60	---	H		12.67	9.81		-13.00	
5856.20	---	H		13.68	10.62		-13.00	
6692.80	---	H		11.95	11.39		-13.00	
7529.40	---	H		11.45	12.20		-13.00	
8366.00	---	H		11.59	12.81		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH High Mode
Fundamental Frequency : 848.80 MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
196.84	41.35	V	-60.15	-7.84	1.70	-69.69	-13.00	-56.69
231.76	41.58	V	-59.00	-7.87	1.89	-68.76	-13.00	-55.76
289.96	41.49	V	-57.09	-7.91	2.13	-67.14	-13.00	-54.14
529.55	43.30	V	-49.86	-7.74	2.89	-60.50	-13.00	-47.50
575.14	43.15	V	-47.87	-7.78	3.00	-58.64	-13.00	-45.64
623.64	49.06	V	-40.20	-7.80	3.09	-51.09	-13.00	-38.09
1697.60	54.26	V	-50.28	9.44	5.31	-46.15	-13.00	-33.15
2546.40	55.11	V	-45.53	10.20	6.63	-41.97	-13.00	-28.97
3395.20	49.09	V	-49.76	12.38	7.87	-45.25	-13.00	-32.25
4244.00	---	V		12.63	9.00		-13.00	
5092.80	---	V		12.74	9.88		-13.00	
5941.60	---	V		13.81	10.70		-13.00	
6790.40	---	V		11.86	11.48		-13.00	
7639.20	---	V		11.40	12.27		-13.00	
8488.00	---	V		11.70	12.91		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH High Mode
Fundamental Frequency : 848.80 MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
185.20	37.95	H	-62.55	-7.83	1.67	-72.05	-13.00	-59.05
216.24	45.77	H	-55.09	-7.86	1.80	-64.75	-13.00	-51.75
309.36	40.24	H	-57.33	-7.87	2.21	-67.41	-13.00	-54.41
481.05	38.16	H	-55.46	-7.71	2.75	-65.92	-13.00	-52.92
575.14	42.28	H	-48.93	-7.78	3.00	-59.70	-13.00	-46.70
623.64	47.54	H	-42.70	-7.80	3.09	-53.59	-13.00	-40.59
1697.60	55.40	H	-48.95	9.44	5.31	-44.82	-13.00	-31.82
2546.40	57.07	H	-43.53	10.20	6.63	-39.97	-13.00	-26.97
3395.20	50.45	H	-48.58	12.38	7.87	-44.06	-13.00	-31.06
4244.00	---	H		12.63	9.00		-13.00	
5092.80	---	H		12.74	9.88		-13.00	
5941.60	---	H		13.81	10.70		-13.00	
6790.40	---	H		11.86	11.48		-13.00	
7639.20	---	H		11.40	12.27		-13.00	
8488.00	---	H		11.70	12.91		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 1850.20MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
196.84	39.95	V	-61.55	-7.84	1.70	-71.09	-13.00	-58.09
289.96	40.78	V	-57.80	-7.91	2.13	-67.85	-13.00	-54.85
481.05	42.04	V	-52.02	-7.71	2.75	-62.48	-13.00	-49.48
529.55	43.52	V	-49.64	-7.74	2.89	-60.28	-13.00	-47.28
575.14	44.04	V	-46.98	-7.78	3.00	-57.75	-13.00	-44.75
623.64	49.08	V	-40.18	-7.80	3.09	-51.07	-13.00	-38.07
3700.40	60.93	V	-37.00	12.61	8.31	-32.70	-13.00	-19.70
5550.60	58.99	V	-31.85	13.23	10.33	-28.95	-13.00	-15.95
7400.80	---	V		11.50	12.08		-13.00	
9251.00	---	V		11.92	13.50		-13.00	
11101.20	---	V		11.66	15.11		-13.00	
12951.40	---	V		13.63	16.60		-13.00	
14801.60	---	V		12.76	17.95		-13.00	
16651.80	---	V		15.92	19.14		-13.00	
18502.00	---	V		18.75	10.40		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 1850.20MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
105.66	48.31	H	-54.10	-7.76	1.39	-63.25	-13.00	-50.25
209.45	45.93	H	-55.26	-7.85	1.76	-64.87	-13.00	-51.87
303.54	45.30	H	-52.33	-7.90	2.18	-62.41	-13.00	-49.41
481.05	39.27	H	-54.35	-7.71	2.75	-64.81	-13.00	-51.81
575.14	43.15	H	-48.06	-7.78	3.00	-58.83	-13.00	-45.83
623.64	48.44	H	-41.80	-7.80	3.09	-52.69	-13.00	-39.69
3700.40	61.41	H	-36.63	12.61	8.31	-32.33	-13.00	-19.33
5550.60	57.43	H	-33.62	13.23	10.33	-30.72	-13.00	-17.72
7400.80	---	H		11.50	12.08		-13.00	
9251.00	---	H		11.92	13.50		-13.00	
11101.20	---	H		11.66	15.11		-13.00	
12951.40	---	H		13.63	16.60		-13.00	
14801.60	---	H		12.76	17.95		-13.00	
16651.80	---	H		15.92	19.14		-13.00	
18502.00	---	H		18.75	10.40		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode	: TX CH Mid Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 1880MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Ver
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
190.05	37.34	V	-63.55	-7.83	1.69	-73.06	-13.00	-60.06
289.96	40.98	V	-57.60	-7.91	2.13	-67.65	-13.00	-54.65
481.05	43.23	V	-50.83	-7.71	2.75	-61.29	-13.00	-48.29
529.55	43.35	V	-49.81	-7.74	2.89	-60.45	-13.00	-47.45
575.14	44.36	V	-46.66	-7.78	3.00	-57.43	-13.00	-44.43
623.64	49.51	V	-39.75	-7.80	3.09	-50.64	-13.00	-37.64
3760.00	62.07	V	-35.59	12.60	8.39	-31.37	-13.00	-18.37
5640.00	52.84	V	-37.74	13.36	10.41	-34.79	-13.00	-21.79
7520.00	---	V		11.45	12.19		-13.00	
9400.00	---	V		11.93	13.61		-13.00	
11280.00	---	V		11.92	15.27		-13.00	
13160.00	---	V		13.33	16.71		-13.00	
15040.00	---	V		13.76	18.15		-13.00	
16920.00	---	V		15.27	19.32		-13.00	
18800.00	---	V		18.68	16.58		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode	: TX CH Mid Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 1880MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Hor
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
212.36	44.90	H	-56.15	-7.85	1.78	-65.78	-13.00	-52.78
289.96	40.36	H	-57.61	-7.91	2.13	-67.66	-13.00	-54.66
481.05	39.34	H	-54.28	-7.71	2.75	-64.74	-13.00	-51.74
529.55	37.92	H	-54.51	-7.74	2.89	-65.15	-13.00	-52.15
575.14	42.44	H	-48.77	-7.78	3.00	-59.54	-13.00	-46.54
623.64	47.44	H	-42.80	-7.80	3.09	-53.69	-13.00	-40.69
3760.00	59.93	H	-37.84	12.60	8.39	-33.63	-13.00	-20.63
5640.00	59.13	H	-31.62	13.36	10.41	-28.67	-13.00	-15.67
7520.00	---	H		11.45	12.19		-13.00	
9400.00	---	H		11.93	13.61		-13.00	
11280.00	---	H		11.92	15.27		-13.00	
13160.00	---	H		13.33	16.71		-13.00	
15040.00	---	H		13.76	18.15		-13.00	
16920.00	---	H		15.27	19.32		-13.00	
18800.00	---	H		18.68	16.58		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 1909.8 MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Ver
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
199.75	42.64	V	-59.12	-7.84	1.71	-68.67	-13.00	-55.67
289.96	41.25	V	-57.33	-7.91	2.13	-67.38	-13.00	-54.38
481.05	41.84	V	-52.22	-7.71	2.75	-62.68	-13.00	-49.68
529.55	43.93	V	-49.23	-7.74	2.89	-59.87	-13.00	-46.87
575.14	44.00	V	-47.02	-7.78	3.00	-57.79	-13.00	-44.79
623.64	49.72	V	-39.54	-7.80	3.09	-50.43	-13.00	-37.43
3819.60	59.22	V	-38.17	12.60	8.47	-34.04	-13.00	-21.04
5729.40	44.49	V	-45.83	13.49	10.50	-42.83	-13.00	-29.83
7639.20	---	V		11.40	12.27		-13.00	
9549.00	---	V		11.95	13.74		-13.00	
11458.80	---	V		12.17	15.43		-13.00	
13368.60	---	V		12.97	16.82		-13.00	
15278.40	---	V		15.00	18.29		-13.00	
17188.20	---	V		14.47	19.52		-13.00	
19098.00	---	V		18.66	20.78		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 1909.8 MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Hor
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
212.36	42.17	H	-58.88	-7.85	1.78	-68.51	-13.00	-55.51
289.96	38.81	H	-59.16	-7.91	2.13	-69.21	-13.00	-56.21
481.05	39.14	H	-54.48	-7.71	2.75	-64.94	-13.00	-51.94
529.55	38.02	H	-54.41	-7.74	2.89	-65.05	-13.00	-52.05
575.14	42.24	H	-48.97	-7.78	3.00	-59.74	-13.00	-46.74
623.64	47.20	H	-43.04	-7.80	3.09	-53.93	-13.00	-40.93
3819.60	62.90	H	-34.61	12.60	8.47	-30.47	-13.00	-17.47
5729.40	43.91	H	-46.54	13.49	10.50	-43.55	-13.00	-30.55
7639.20	---	H		11.40	12.27		-13.00	
9549.00	---	H		11.95	13.74		-13.00	
11458.80	---	H		12.17	15.43		-13.00	
13368.60	---	H		12.97	16.82		-13.00	
15278.40	---	H		15.00	18.29		-13.00	
17188.20	---	H		14.47	19.52		-13.00	
19098.00	---	H		18.66	20.78		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: WCDMA II Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 1852.4MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
238.55	39.10	V	-61.22	-7.88	1.93	-71.03	-13.00	-58.03
289.96	40.81	V	-57.77	-7.91	2.13	-67.82	-13.00	-54.82
481.05	42.46	V	-51.60	-7.71	2.75	-62.06	-13.00	-49.06
529.55	43.47	V	-49.69	-7.74	2.89	-60.33	-13.00	-47.33
575.14	43.24	V	-47.78	-7.78	3.00	-58.55	-13.00	-45.55
623.64	50.20	V	-39.06	-7.80	3.09	-49.95	-13.00	-36.95
3704.80	46.23	V	-51.68	12.61	8.31	-47.39	-13.00	-34.39
5557.20	35.38	V	-55.44	13.24	10.33	-52.54	-13.00	-39.54
7409.60	---	V		11.49	12.09		-13.00	
9262.00	---	V		11.92	13.51		-13.00	
11114.40	---	V		11.68	15.12		-13.00	
12966.80	---	V		13.62	16.61		-13.00	
14819.20	---	V		12.83	17.96		-13.00	
16671.60	---	V		15.87	19.15		-13.00	
18524.00	---	V		18.74	10.86		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: WCDMA Band II Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 1852.4MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
209.45	47.23	H	-53.96	-7.85	1.76	-63.57	-13.00	-50.57
289.96	39.07	H	-58.90	-7.91	2.13	-68.95	-13.00	-55.95
481.05	39.39	H	-54.23	-7.71	2.75	-64.69	-13.00	-51.69
529.55	38.45	H	-53.98	-7.74	2.89	-64.62	-13.00	-51.62
575.14	43.32	H	-47.89	-7.78	3.00	-58.66	-13.00	-45.66
623.64	47.54	H	-42.70	-7.80	3.09	-53.59	-13.00	-40.59
3704.80	52.92	H	-45.10	12.61	8.31	-40.81	-13.00	-27.81
5557.20	37.35	H	-53.68	13.24	10.33	-50.78	-13.00	-37.78
7409.60	---	H		11.49	12.09		-13.00	
9262.00	---	H		11.92	13.51		-13.00	
11114.40	---	H		11.68	15.12		-13.00	
12966.80	---	H		13.62	16.61		-13.00	
14819.20	---	H		12.83	17.96		-13.00	
16671.60	---	H		15.87	19.15		-13.00	
18524.00	---	H		18.74	10.86		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: WCDMA Band II Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 1880MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
194.90	40.83	V	-60.49	-7.84	1.70	-70.03	-13.00	-57.03
231.76	46.05	V	-54.53	-7.87	1.89	-64.29	-13.00	-51.29
289.96	41.23	V	-57.35	-7.91	2.13	-67.40	-13.00	-54.40
529.55	43.07	V	-50.09	-7.74	2.89	-60.73	-13.00	-47.73
575.14	43.26	V	-47.76	-7.78	3.00	-58.53	-13.00	-45.53
623.64	49.62	V	-39.64	-7.80	3.09	-50.53	-13.00	-37.53
3760.00	46.67	V	-50.99	12.60	8.39	-46.77	-13.00	-33.77
5640.00	36.87	V	-53.71	13.36	10.41	-50.76	-13.00	-37.76
7520.00		V		11.45	12.19		-13.00	
9400.00	---	V		11.93	13.61		-13.00	
11280.00	---	V		11.92	15.27		-13.00	
13160.00	---	V		13.33	16.71		-13.00	
15040.00	---	V		13.76	18.15		-13.00	
16920.00	---	V		15.27	19.32		-13.00	
18800.00	---	V		18.68	16.58		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: WCDMA Band II Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 1880MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
105.66	47.51	H	-54.90	-7.76	1.39	-64.05	-13.00	-51.05
216.24	45.65	H	-55.21	-7.86	1.80	-64.87	-13.00	-51.87
338.46	38.3	H	-59.01	-7.70	2.32	-69.03	-13.00	-56.03
481.05	39.46	H	-54.16	-7.71	2.75	-64.62	-13.00	-51.62
575.14	42.42	H	-48.79	-7.78	3.00	-59.56	-13.00	-46.56
623.64	47.9	H	-42.34	-7.80	3.09	-53.23	-13.00	-40.23
3760.00	48.97	H	-48.80	12.60	8.39	-44.59	-13.00	-31.59
5640.00	39.22	H	-51.53	13.36	10.41	-48.58	-13.00	-35.58
7520.00	---	H		11.45	12.19		-13.00	
9400.00	---	H		11.93	13.61		-13.00	
11280.00	---	H		11.92	15.27		-13.00	
13160.00	---	H		13.33	16.71		-13.00	
15040.00	---	H		13.76	18.15		-13.00	
16920.00	---	H		15.27	19.32		-13.00	
18800.00	---	H		18.68	16.58		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: WCDMA Band II Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 1907.6MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Ver
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
196.84	43.82	V	-57.68	-7.84	1.70	-67.22	-13.00	-54.22
289.96	41.01	V	-57.57	-7.91	2.13	-67.62	-13.00	-54.62
481.05	43.82	V	-50.24	-7.71	2.75	-60.70	-13.00	-47.70
529.55	43.95	V	-49.21	-7.74	2.89	-59.85	-13.00	-46.85
575.14	43.15	V	-47.87	-7.78	3.00	-58.64	-13.00	-45.64
623.64	49.28	V	-39.98	-7.80	3.09	-50.87	-13.00	-37.87
3815.20	46.96	V	-50.45	12.60	8.46	-46.31	-13.00	-33.31
5722.80	39.28	V	-51.05	13.48	10.49	-48.06	-13.00	-35.06
7630.40	---	V		11.41	12.27		-13.00	
9538.00	---	V		11.95	13.73		-13.00	
11445.60	---	V		12.15	15.42		-13.00	
13353.20	---	V		13.00	16.81		-13.00	
15260.80	---	V		14.91	18.28		-13.00	
17168.40	---	V		14.53	19.50		-13.00	
19076.00	---	V		18.65	20.76		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: WCDMA Band II Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 1907.6MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Hor
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
167.74	43.08	H	-56.07	-7.81	1.63	-65.51	-13.00	-52.51
212.36	40.90	H	-60.15	-7.85	1.78	-69.78	-13.00	-56.78
289.96	39.35	H	-58.62	-7.91	2.13	-68.67	-13.00	-55.67
481.05	39.10	H	-54.52	-7.71	2.75	-64.98	-13.00	-51.98
575.14	42.84	H	-48.37	-7.78	3.00	-59.14	-13.00	-46.14
523.64	47.90	H	-44.73	-7.74	2.88	-55.35	-13.00	-42.35
3815.20	50.01	H	-47.52	12.60	8.46	-43.38	-13.00	-30.38
5722.80	---	H		13.48	10.49		-13.00	
7630.40	---	H		11.41	12.27		-13.00	
9538.00	---	H		11.95	13.73		-13.00	
11445.60	---	H		12.15	15.42		-13.00	
13353.20	---	H		13.00	16.81		-13.00	
15260.80	---	H		14.91	18.28		-13.00	
17168.40	---	H		14.53	19.50		-13.00	
19076.00	---	H		18.65	20.76		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: HSDPA Band V Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 826.4MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
224.00	41.27	V	-59.60	-7.86	1.84	-69.31	-13.00	-56.31
289.96	41.65	V	-56.93	-7.91	2.13	-66.98	-13.00	-53.98
481.05	44.40	V	-49.66	-7.71	2.75	-60.12	-13.00	-47.12
529.55	44.22	V	-48.94	-7.74	2.89	-59.58	-13.00	-46.58
575.14	44.50	V	-46.52	-7.78	3.00	-57.29	-13.00	-44.29
623.64	50.59	V	-38.67	-7.80	3.09	-49.56	-13.00	-36.56
1652.80	---	V		9.30	5.23		-13.00	
2479.20	---	V		10.07	6.54		-13.00	
3305.60	39.91	V	-58.96	12.19	7.73	-54.50	-13.00	-41.50
4132.00	---	V		12.62	8.87		-13.00	
4958.40	---	V		12.65	9.75		-13.00	
5784.80	---	V		13.58	10.55		-13.00	
6611.20	---	V		12.03	11.31		-13.00	
7437.60	---	V		11.48	12.12		-13.00	
8264.00	---	V		11.50	12.73		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: HSDPA Band V Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 826.4MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
209.45	47.77	H	-53.42	-7.85	1.76	-63.03	-13.00	-50.03
289.96	39.59	H	-58.38	-7.91	2.13	-68.43	-13.00	-55.43
481.05	39.15	H	-54.47	-7.71	2.75	-64.93	-13.00	-51.93
529.55	37.73	H	-54.70	-7.74	2.89	-65.34	-13.00	-52.34
575.14	43.95	H	-47.26	-7.78	3.00	-58.03	-13.00	-45.03
623.64	48.32	H	-41.92	-7.80	3.09	-52.81	-13.00	-39.81
1652.80	---	H		9.30	5.23		-13.00	
2479.20	---	H		10.07	6.54		-13.00	
3305.60	36.36	H	-62.73	12.19	7.73	-58.27	-13.00	-45.27
4132.00	---	H		12.62	8.87		-13.00	
4958.40	---	H		12.65	9.75		-13.00	
5784.80	---	H		13.58	10.55		-13.00	
6611.20	---	H		12.03	11.31		-13.00	
7437.60	---	H		11.48	12.12		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: HSDPA Band V Mode

Operation Mode	: TX CH Mid Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 836.6MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Ver
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
192.96	44.76	V	-56.39	-7.83	1.69	-65.92	-13.00	-52.92
243.40	40.73	V	-59.41	-7.88	1.95	-69.25	-13.00	-56.25
289.96	41.34	V	-57.24	-7.91	2.13	-67.29	-13.00	-54.29
529.55	44.09	V	-49.07	-7.74	2.89	-59.71	-13.00	-46.71
575.14	43.98	V	-47.04	-7.78	3.00	-57.81	-13.00	-44.81
623.64	50.82	V	-38.44	-7.80	3.09	-49.33	-13.00	-36.33
1673.20	---	V		9.36	5.27		-13.00	
2509.80	---	V		10.09	6.58		-13.00	
3346.40	37.26	V	-61.60	12.28	7.79	-57.12	-13.00	-44.12
4183.00	---	V		12.62	8.93		-13.00	
5019.60	---	V		12.67	9.81		-13.00	
5856.20	---	V		13.68	10.62		-13.00	
6692.80	---	V		11.95	11.39		-13.00	
7529.40	---	V		11.45	12.20		-13.00	
8366.00	---	V		11.59	12.81		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: HSDPA Band V Mode

Operation Mode	: TX CH Mid Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 836.6MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Hor
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
88.20	49.39	H	-54.32	-7.75	1.04	-63.11	-13.00	-50.11
212.36	47.16	H	-53.89	-7.85	1.78	-63.52	-13.00	-50.52
289.96	39.21	H	-58.76	-7.91	2.13	-68.81	-13.00	-55.81
481.05	39.00	H	-54.62	-7.71	2.75	-65.08	-13.00	-52.08
575.14	43.89	H	-47.32	-7.78	3.00	-58.09	-13.00	-45.09
623.64	48.37	H	-41.87	-7.80	3.09	-52.76	-13.00	-39.76
1673.20	---	H		9.36	5.27		-13.00	
2509.80	---	H		10.09	6.58		-13.00	
3346.40	34.95	H	-64.11	12.28	7.79	-59.63	-13.00	-46.63
4183.00	---	H		12.62	8.93		-13.00	
5019.60	---	H		12.67	9.81		-13.00	
5856.20	---	H		13.68	10.62		-13.00	
6692.80	---	H		11.95	11.39		-13.00	
7529.40	---	H		11.45	12.20		-13.00	
8366.00	---	H		11.59	12.81		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: HSDPA Band V Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 846.6MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Ver
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
80.44	55.55	V	-47.91	-7.75	0.04	-55.70	-13.00	-42.70
245.34	44.72	V	-55.35	-7.89	1.96	-65.20	-13.00	-52.20
289.96	41.19	V	-57.39	-7.91	2.13	-67.44	-13.00	-54.44
529.55	43.56	V	-49.60	-7.74	2.89	-60.24	-13.00	-47.24
575.14	44.04	V	-46.98	-7.78	3.00	-57.75	-13.00	-44.75
623.64	49.93	V	-39.33	-7.80	3.09	-50.22	-13.00	-37.22
1693.20	---	V		9.42	5.30		-13.00	
2539.80	---	V		10.18	6.62		-13.00	
3386.40	37.75	V	-61.10	12.36	7.85	-56.59	-13.00	-43.59
4233.00	---	V		12.63	8.99		-13.00	
5079.60	---	V		12.73	9.87		-13.00	
5926.20	---	V		13.79	10.69		-13.00	
6772.80	---	V		11.87	11.47		-13.00	
7619.40	---	V		11.41	12.26		-13.00	
8466.00	---	V		11.68	12.89		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: HSDPA Band V Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 846.6MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Hor
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
170.65	41.22	H	-58.15	-7.82	1.64	-67.61	-13.00	-54.61
214.30	44.01	H	-56.95	-7.85	1.79	-66.59	-13.00	-53.59
241.46	41.55	H	-58.09	-7.88	1.94	-67.91	-13.00	-54.91
481.05	39.36	H	-54.26	-7.71	2.75	-64.72	-13.00	-51.72
575.14	43.32	H	-47.89	-7.78	3.00	-58.66	-13.00	-45.66
623.64	48.18	H	-42.06	-7.80	3.09	-52.95	-13.00	-39.95
1693.20	---	H		9.42	5.30		-13.00	
2539.80	---	H		10.18	6.62		-13.00	
3386.40	35.50	H	-63.53	12.36	7.85	-59.02	-13.00	-46.02
4233.00	---	H		12.63	8.99		-13.00	
5079.60	---	H		12.73	9.87		-13.00	
5926.20	---	H		13.79	10.69		-13.00	
6772.80	---	H		11.87	11.47		-13.00	
7619.40	---	H		11.41	12.26		-13.00	
8466.00	---	H		11.68	12.89		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark “---” means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 Cellular Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 824.70MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
214.30	41.85	V	-59.39	-7.85	1.79	-69.03	-13.00	-56.03
289.96	40.85	V	-57.73	-7.91	2.13	-67.78	-13.00	-54.78
481.05	41.39	V	-52.67	-7.71	2.75	-63.13	-13.00	-50.13
529.55	43.53	V	-49.63	-7.74	2.89	-60.27	-13.00	-47.27
575.14	42.39	V	-48.63	-7.78	3.00	-59.40	-13.00	-46.40
623.64	50.15	V	-39.11	-7.80	3.09	-50.00	-13.00	-37.00
1649.40	---	V		9.29	5.23		-13.00	
2474.10	---	V		10.08	6.53		-13.00	
3298.80	41.76	V	-57.11	12.17	7.72	-52.65	-13.00	-39.65
4123.50	---	V		12.61	8.86		-13.00	
4948.20	---	V		12.65	9.74		-13.00	
5772.90	---	V		13.56	10.54		-13.00	
6597.60	---	V		12.04	11.30		-13.00	
7422.30	---	V		11.49	12.10		-13.00	
8247.00	---	V		11.48	12.72		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 Cellular Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 824.70MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
206.54	45.49	H	-55.84	-7.85	1.75	-65.44	-13.00	-52.44
289.96	38.63	H	-59.34	-7.91	2.13	-69.39	-13.00	-56.39
481.05	37.94	H	-55.68	-7.71	2.75	-66.14	-13.00	-53.14
529.55	37.39	H	-55.04	-7.74	2.89	-65.68	-13.00	-52.68
575.14	42.57	H	-48.64	-7.78	3.00	-59.41	-13.00	-46.41
623.64	48.57	H	-41.67	-7.80	3.09	-52.56	-13.00	-39.56
1649.40	---	H		9.29	5.23		-13.00	
2474.10	---	H		10.08	6.53		-13.00	
3298.80	37.85	H	-61.24	12.17	7.72	-56.79	-13.00	-43.79
4123.50	---	H		12.61	8.86		-13.00	
4948.20	---	H		12.65	9.74		-13.00	
5772.90	---	H		13.56	10.54		-13.00	
6597.60	---	H		12.04	11.30		-13.00	
7422.30	---	H		11.49	12.10		-13.00	
8247.00	---	H		11.48	12.72		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 Cellular Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 836.52MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
224.00	40.24	V	-60.63	-7.86	1.84	-70.34	-13.00	-57.34
289.96	40.71	V	-57.87	-7.91	2.13	-67.92	-13.00	-54.92
481.05	41.00	V	-53.06	-7.71	2.75	-63.52	-13.00	-50.52
529.55	43.46	V	-49.70	-7.74	2.89	-60.34	-13.00	-47.34
575.14	41.59	V	-49.43	-7.78	3.00	-60.20	-13.00	-47.20
623.64	50.15	V	-39.11	-7.80	3.09	-50.00	-13.00	-37.00
1673.04	---	V		9.36	5.27		-13.00	
2509.56	---	V		10.09	6.58		-13.00	
3346.08	38.09	V	-60.77	12.27	7.79	-56.29	-13.00	-43.29
4182.60	---	V		12.62	8.93		-13.00	
5019.12	---	V		12.67	9.81		-13.00	
5855.64	---	V		13.68	10.62		-13.00	
6692.16	---	V		11.95	11.39		-13.00	
7528.68	---	V		11.45	12.20		-13.00	
8365.20	---	V		11.59	12.81		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 Cellular Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 836.52MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
214.30	45.71	H	-55.25	-7.85	1.79	-64.89	-13.00	-51.89
289.96	38.53	H	-59.44	-7.91	2.13	-69.49	-13.00	-56.49
481.05	38.21	H	-55.41	-7.71	2.75	-65.87	-13.00	-52.87
529.55	37.13	H	-55.30	-7.74	2.89	-65.94	-13.00	-52.94
575.14	43.55	H	-47.66	-7.78	3.00	-58.43	-13.00	-45.43
623.64	47.92	H	-42.32	-7.80	3.09	-53.21	-13.00	-40.21
1673.04	---	H		9.36	5.27		-13.00	
2509.56	---	H		10.09	6.58		-13.00	
3346.08	35.94	H	-63.12	12.27	7.79	-58.64	-13.00	-45.64
4182.60	---	H		12.62	8.93		-13.00	
5019.12	---	H		12.67	9.81		-13.00	
5855.64	---	H		13.68	10.62		-13.00	
6692.16	---	H		11.95	11.39		-13.00	
7528.68	---	H		11.45	12.20		-13.00	
8365.20	---	H		11.59	12.81		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 Cellular Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 848.31MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Ver
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
185.20	43.03	V	-57.42	-7.83	1.67	-66.92	-13.00	-53.92
248.25	40.07	V	-59.89	-7.89	1.98	-69.75	-13.00	-56.75
289.96	41.15	V	-57.43	-7.91	2.13	-67.48	-13.00	-54.48
529.55	43.15	V	-50.01	-7.74	2.89	-60.65	-13.00	-47.65
575.14	42.09	V	-48.93	-7.78	3.00	-59.70	-13.00	-46.70
623.64	50.30	V	-38.96	-7.80	3.09	-49.85	-13.00	-36.85
1696.62	---	V		9.43	5.31		-13.00	
2544.93	---	V		10.19	6.63		-13.00	
3393.24	39.12	V	-59.73	12.38	7.86	-55.22	-13.00	-42.22
4241.55	38.90	V	-56.77	12.63	9.00	-53.14	-13.00	-40.14
5089.86	---	V		12.74	9.88		-13.00	
5938.17	---	V		13.81	10.70		-13.00	
6786.48	---	V		11.86	11.48		-13.00	
7634.79	---	V		11.41	12.27		-13.00	
8483.10	---	V		11.69	12.91		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 Cellular Mode

Operation Mode : TX CH High Mode
Fundamental Frequency : 848.31MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Safe Margin (dBm)
219.15	39.69	H	-61.03	-7.86	1.82	-70.71	-13.00	-57.71
289.96	39.14	H	-58.83	-7.91	2.13	-68.88	-13.00	-55.88
481.05	37.88	H	-55.74	-7.71	2.75	-66.20	-13.00	-53.20
529.55	37.49	H	-54.94	-7.74	2.89	-65.58	-13.00	-52.58
575.14	43.66	H	-47.55	-7.78	3.00	-58.32	-13.00	-45.32
623.64	48.31	H	-41.93	-7.80	3.09	-52.82	-13.00	-39.82
1696.62	---	H		9.43	5.31		-13.00	
2544.93	---	H		10.19	6.63		-13.00	
3393.24	39.56	H	-59.47	12.38	7.86	-54.95	-13.00	-41.95
4241.55	37.47	H	-58.35	12.63	9.00	-54.72	-13.00	-41.72
5089.86	---	H		12.74	9.88		-13.00	
5938.17	---	H		13.81	10.70		-13.00	
6786.48	---	H		11.86	11.48		-13.00	
7634.79	---	H		11.41	12.27		-13.00	
8483.10	---	H		11.69	12.91		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 PCS Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 1851.25MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
196.84	42.20	V	-59.30	-7.84	1.70	-68.84	-13.00	-55.84
289.96	41.00	V	-57.58	-7.91	2.13	-67.63	-13.00	-54.63
481.05	41.63	V	-52.43	-7.71	2.75	-62.89	-13.00	-49.89
529.55	43.31	V	-49.85	-7.74	2.89	-60.49	-13.00	-47.49
575.14	42.02	V	-49.00	-7.78	3.00	-59.77	-13.00	-46.77
623.64	50.73	V	-38.53	-7.80	3.09	-49.42	-13.00	-36.42
3702.50	50.87	V	-47.05	12.61	8.31	-42.75	-13.00	-29.75
5553.75	43.50	V	-47.33	13.23	10.33	-44.43	-13.00	-31.43
7405.00	---	V		11.50	12.09		-13.00	
9256.25	---	V		11.92	13.50		-13.00	
11107.50	---	V		11.67	15.12		-13.00	
12958.75	---	V		13.62	16.61		-13.00	
14810.00	---	V		12.79	17.96		-13.00	
16661.25	---	V		15.89	19.14		-13.00	
18512.50	---	V		18.75	10.62		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 PCS Mode

Operation Mode : TX CH Low Mode
Fundamental Frequency : 1851.25MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
289.96	39.45	H	-58.52	-7.91	2.13	-68.57	-13.00	-55.57
384.05	36.30	H	-60.38	-7.65	2.46	-70.49	-13.00	-57.49
481.05	37.47	H	-56.15	-7.71	2.75	-66.61	-13.00	-53.61
529.55	37.03	H	-55.40	-7.74	2.89	-66.04	-13.00	-53.04
575.14	43.47	H	-47.74	-7.78	3.00	-58.51	-13.00	-45.51
623.64	48.17	H	-42.07	-7.80	3.09	-52.96	-13.00	-39.96
3702.50	55.57	H	-42.46	12.61	8.31	-38.17	-13.00	-25.17
5553.75	45.12	H	-45.92	13.23	10.33	-43.02	-13.00	-30.02
7405.00	---	H		11.50	12.09		-13.00	
9256.25	---	H		11.92	13.50		-13.00	
11107.50	---	H		11.67	15.12		-13.00	
12958.75	---	H		13.62	16.61		-13.00	
14810.00	---	H		12.79	17.96		-13.00	
16661.25	---	H		15.89	19.14		-13.00	
18512.50	---	H		18.75	10.62		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 PCS Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 1880MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
177.44	39.54	V	-60.21	-7.82	1.66	-69.69	-13.00	-56.69
289.96	40.69	V	-57.89	-7.91	2.13	-67.94	-13.00	-54.94
481.05	41.91	V	-52.15	-7.71	2.75	-62.61	-13.00	-49.61
529.55	43.41	V	-49.75	-7.74	2.89	-60.39	-13.00	-47.39
575.14	41.92	V	-49.10	-7.78	3.00	-59.87	-13.00	-46.87
623.64	50.45	V	-38.81	-7.80	3.09	-49.70	-13.00	-36.70
3760.00	50.13	V	-47.53	12.60	8.39	-43.31	-13.00	-30.31
5640.00	40.18	V	-50.40	13.36	10.41	-47.45	-13.00	-34.45
7520.00	---	V		11.45	12.19		-13.00	
9400.00	---	V		11.93	13.61		-13.00	
11280.00	---	V		11.92	15.27		-13.00	
13160.00	---	V		13.33	16.71		-13.00	
15040.00	---	V		13.76	18.15		-13.00	
16920.00	---	V		15.27	19.32		-13.00	
18800.00	---	V		18.68	16.58		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 PCS Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 1880MHz
Temperature : 27℃
Humidity : 66%

Test Date: Jul. 20, 2011
Test By: Jazz
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
163.86	35.41	H	-63.44	-7.81	1.62	-72.87	-13.00	-59.87
222.06	41.20	H	-59.38	-7.86	1.83	-69.07	-13.00	-56.07
284.14	39.14	H	-59.01	-7.91	2.11	-69.04	-13.00	-56.04
481.05	37.38	H	-56.24	-7.71	2.75	-66.70	-13.00	-53.70
575.14	43.31	H	-47.90	-7.78	3.00	-58.67	-13.00	-45.67
623.64	48.50	H	-41.74	-7.80	3.09	-52.63	-13.00	-39.63
3760.00	52.34	H	-45.43	12.60	8.39	-41.22	-13.00	-28.22
5640.00	41.81	H	-48.94	13.36	10.41	-45.99	-13.00	-32.99
7520.00	---	H		11.45	12.19		-13.00	
9400.00	---	H		11.93	13.61		-13.00	
11280.00	---	H		11.92	15.27		-13.00	
13160.00	---	H		13.33	16.71		-13.00	
15040.00	---	H		13.76	18.15		-13.00	
16920.00	---	H		15.27	19.32		-13.00	
18800.00	---	H		18.68	16.58		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 PCS Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 1908.75MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Ver
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
196.84	39.79	V	-61.71	-7.84	1.70	-71.25	-13.00	-58.25
289.96	41.09	V	-57.49	-7.91	2.13	-67.54	-13.00	-54.54
481.05	41.00	V	-53.06	-7.71	2.75	-63.52	-13.00	-50.52
529.55	42.52	V	-50.64	-7.74	2.89	-61.28	-13.00	-48.28
575.14	42.69	V	-48.33	-7.78	3.00	-59.10	-13.00	-46.10
623.64	50.48	V	-38.78	-7.80	3.09	-49.67	-13.00	-36.67
3817.50	51.85	V	-45.55	12.60	8.47	-41.42	-13.00	-28.42
5726.25	37.46	V	-52.86	13.49	10.50	-49.87	-13.00	-36.87
7635.00	---	V		11.41	12.27		-13.00	
9543.75	---	V		11.95	13.73		-13.00	
11452.50	---	V		12.16	15.43		-13.00	
13361.25	---	V		12.99	16.82		-13.00	
15270.00	---	V		14.95	18.28		-13.00	
17178.75	---	V		14.50	19.51		-13.00	
19087.50	---	V		18.65	20.77		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: CDMA 2000 PCS Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 20, 2011
Fundamental Frequency	: 1908.75MHz	Test By:	Jazz
Temperature	: 27℃	Pol:	Hor
Humidity	: 66%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
196.84	40.69	H	-60.71	-7.84	1.70	-70.25	-13.00	-57.25
214.30	43.25	H	-57.71	-7.85	1.79	-67.35	-13.00	-54.35
289.96	38.85	H	-59.12	-7.91	2.13	-69.17	-13.00	-56.17
529.55	37.77	H	-54.66	-7.74	2.89	-65.30	-13.00	-52.30
575.14	43.09	H	-48.12	-7.78	3.00	-58.89	-13.00	-45.89
623.64	48.39	H	-41.85	-7.80	3.09	-52.74	-13.00	-39.74
3817.50	57.04	H	-40.47	12.60	8.47	-36.34	-13.00	-23.34
5726.25	36.39	H	-54.07	13.49	10.50	-51.08	-13.00	-38.08
5498.00	---	H		13.15	10.28		-13.00	
7635.00	---	H		11.41	12.27		-13.00	
9543.75	---	H		11.95	13.73		-13.00	
11452.50	---	H		12.16	15.43		-13.00	
13361.25	---	H		12.99	16.82		-13.00	
15270.00	---	H		14.95	18.28		-13.00	
17178.75	---	H		14.50	19.51		-13.00	
19087.50	---	H		18.65	20.77		-13.00	

Remark:

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

11. FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

11.1. Standard Applicable:

According to FCC §2.1055(a) (1)

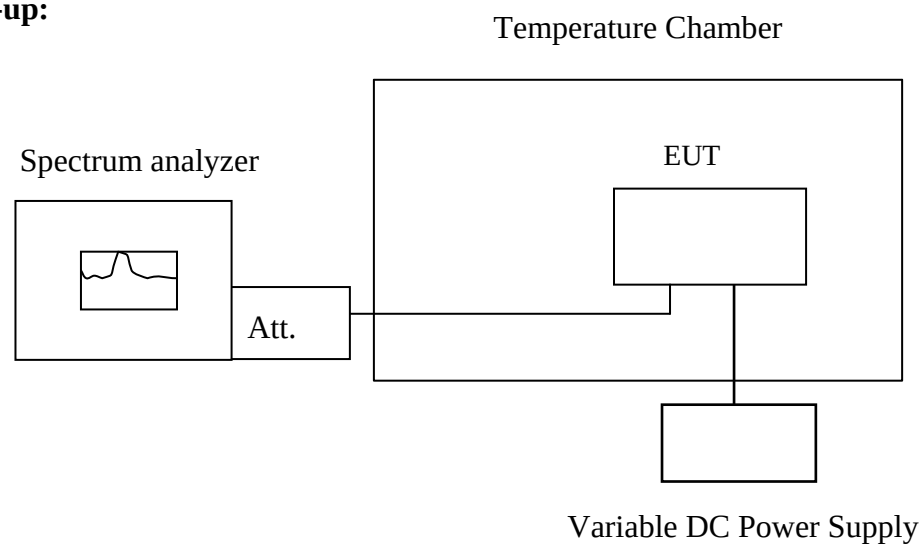
Frequency Tolerance: +/-2.5ppm for 850MHz band

+/-2.5ppm for 1900MHz band

According to RSS-133 §6.3, RSS-132 §4.3

The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations

11.2. Test Set-up:



Note : Measurement setup for testing on Antenna connector

11.3. Measurement Procedure:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to –30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

11.4. Measurement Equipment Used:

Refer to section 2.4 in this report

11.5. Measurement Result:

Please refer to Modular Report, report no.: 80-N2162-203 Rev B

12. FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

12.1. Standard Applicable:

According to FCC §2.1055(a) (1)

Frequency Tolerance: +/-2.5ppm for 850MHz band

+/-2.5ppm for 1900MHz band

According to RSS-133 §6.3, RSS-132 §4.3

The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

12.2. Test Set-up:

Refer to section 10.2 in this report

12.3. Measurement Procedure:

Set chamber temperature to 27℃. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.

12.4. Measurement Equipment Used:

Refer to section 2.4 in this report

12.5. Measurement Result:

Please refer to Modular Report, report no.: 80-N2162-203 Rev B

13. SPURIOUS RADIATED EMISSION TEST (RX)

13.1. Standard Applicable

According to RSS 132 §4.6, all spurious emissions shall comply with the limits of Table 2. The resolution bandwidth of the spectrum analyzer shall be 100 kHz for spurious emissions measurements below 1.0 GHz, and 1.0 MHz for measurements above 1.0 GHz.

Frequency (MHz)	Field strength μV/m	Distance (m)	Field strength at 3m dBμV/m
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

According to RSS 133 §6.6, Receiver spurious emissions shall comply with the limits specified in RSS-Gen Issue 3.

13.2. EUT Setup

1. The radiated emission tests were performed in the 3 meter open-test site, using the setup in accordance with the ANSI C63.4-2003.
2. The EUT was put in the front of the test table. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The spacing between the peripherals was 10 centimeters.
4. External I/O cables were draped along the edge of the test table and bundle when necessary.
5. The host was connected with 120Vac/60Hz power source.

13.3. Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Repeat above procedures until all frequency measured were complete.

13.4. Test SET-UP (Block Diagram of Configuration)

Refer to section 6.2 in this report

13.5. Measurement Equipment Used:

Refer to section 2.4 in this report

13.6. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

13.7. Measurement Result

Refer to attach tabular data sheets.

Radiated Spurious Emission Measurement Result (below 1GHz) (worst case)

Operation Mode	GPRS 850 CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	824.2 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
107.60	V	Peak	46.63	-17.62	29.01	43.50	-14.49
260.86	V	Peak	39.00	-16.87	22.13	46.00	-23.87
289.96	V	Peak	41.38	-15.56	25.82	46.00	-20.18
384.05	V	Peak	36.55	-14.37	22.18	46.00	-23.82
481.05	V	Peak	41.50	-13.74	27.76	46.00	-18.24
529.55	V	Peak	43.21	-1.04	42.17	46.00	-3.83
173.56	H	Peak	38.74	-17.62	21.12	43.50	-22.38
214.30	H	Peak	42.32	-17.16	25.16	43.50	-18.34
289.96	H	Peak	39.59	-13.69	25.90	46.00	-20.10
371.44	H	Peak	36.36	-13.23	23.13	46.00	-22.87
481.05	H	Peak	38.58	-12.16	26.42	46.00	-19.58
529.55	H	Peak	36.84	-1.04	35.80	46.00	-10.20

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz.

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	GPRS 850 CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	836.6 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
107.60	V	Peak	46.61	-14.36	32.25	43.50	-11.25
194.90	V	Peak	44.78	-17.62	27.16	43.50	-16.34
289.96	V	Peak	41.29	-13.74	27.55	46.00	-18.45
451.95	V	Peak	37.92	-11.82	26.10	46.00	-19.90
481.05	V	Peak	42.10	-9.82	32.28	46.00	-13.72
93.05	H	Peak	43.74	-14.36	29.38	43.50	-14.12
199.75	H	Peak	41.16	-13.40	27.76	43.50	-15.74
289.96	H	Peak	39.30	-13.74	25.56	46.00	-20.44
432.55	H	Peak	34.69	-12.36	22.33	46.00	-23.67
481.05	H	Peak	39.24	-9.46	29.78	46.00	-16.22
529.55	H	Peak	37.13	-2.28	34.85	46.00	-11.15

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	GPRS 850 CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	848.8 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
107.60	V	Peak	45.99	-14.36	31.63	43.50	-11.87
196.84	V	Peak	43.73	-17.16	26.57	43.50	-16.93
231.76	V	Peak	45.35	-13.74	31.61	46.00	-14.39
289.96	V	Peak	41.75	-12.36	29.39	46.00	-16.61
432.55	V	Peak	35.49	-9.46	26.03	46.00	-19.97
600.36	V	Peak	35.89	-2.70	33.19	46.00	-12.81
165.80	H	Peak	36.06	-14.36	21.70	43.50	-21.80
289.96	H	Peak	39.17	-13.40	25.77	46.00	-20.23
309.36	H	Peak	39.27	-13.74	25.53	46.00	-20.47
432.55	H	Peak	34.00	-11.82	22.18	46.00	-23.82
481.05	H	Peak	38.34	-8.61	29.73	46.00	-16.27
529.55	H	Peak	36.98	-2.65	34.33	46.00	-11.67

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	GPRS 1900 CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1850.2 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
107.60	V	Peak	46.58	-14.36	32.22	43.50	-11.28
202.66	V	Peak	43.54	-17.16	26.38	43.50	-17.12
289.96	V	Peak	41.39	-13.74	27.65	46.00	-18.35
384.05	V	Peak	35.93	-11.82	24.11	46.00	-21.89
432.55	V	Peak	36.06	-8.61	27.45	46.00	-18.55
600.36	V	Peak	37.09	-2.61	34.48	46.00	-11.52
117.30	H	Peak	39.50	-14.36	25.14	43.50	-18.36
209.45	H	Peak	43.83	-13.74	30.09	43.50	-13.41
264.74	H	Peak	39.31	-12.36	26.95	46.00	-19.05
296.75	H	Peak	39.53	-11.82	27.71	46.00	-18.29
481.05	H	Peak	38.62	-8.61	30.01	46.00	-15.99
529.55	H	Peak	36.89	-2.65	34.24	46.00	-11.76

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz.

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	GPRS 1900 CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1880 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
107.60	V	Peak	44.19	-14.36	29.83	43.50	-13.67
196.84	V	Peak	40.83	-17.16	23.67	43.50	-19.83
289.96	V	Peak	40.80	-13.74	27.06	46.00	-18.94
384.05	V	Peak	35.93	-11.82	24.11	46.00	-21.89
432.55	V	Peak	37.36	-8.61	28.75	46.00	-17.25
600.36	V	Peak	36.63	-2.65	33.98	46.00	-12.02
93.05	H	Peak	43.52	-14.36	29.16	43.50	-14.34
167.74	H	Peak	36.28	-13.74	22.54	43.50	-20.96
289.96	H	Peak	39.98	-11.82	28.16	46.00	-17.84
418.00	H	Peak	38.10	-9.82	28.28	46.00	-17.72
481.05	H	Peak	38.91	-8.61	30.30	46.00	-15.70
529.55	H	Peak	37.39	-2.28	35.11	46.00	-10.89

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	GPRS 1900 CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1909.8 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
115.36	V	Peak	42.75	-17.62	25.13	43.50	-18.37
199.75	V	Peak	42.63	-16.87	25.76	43.50	-17.74
267.65	V	Peak	39.84	-15.56	24.28	46.00	-21.72
289.96	V	Peak	40.95	-14.22	26.73	46.00	-19.27
384.05	V	Peak	36.70	-12.93	23.77	46.00	-22.23
461.65	V	Peak	35.51	-1.49	34.02	46.00	-11.98
107.60	H	Peak	45.25	-17.62	27.63	43.50	-15.87
301.60	H	Peak	41.17	-17.01	24.16	46.00	-21.84
371.44	H	Peak	34.94	-13.67	21.27	46.00	-24.73
481.05	H	Peak	38.16	-13.57	24.59	46.00	-21.41
529.55	H	Peak	37.44	-13.28	24.16	46.00	-21.84
548.95	H	Peak	35.18	-1.11	34.07	46.00	-11.93

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (worst case)

Operation Mode	WCDMA Band II CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1852.4 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
128.94	V	Peak	41.18	-13.00	28.18	43.50	-15.32
260.86	V	Peak	38.05	-10.69	27.36	46.00	-18.64
289.96	V	Peak	41.64	-8.55	33.09	46.00	-12.91
384.05	V	Peak	35.88	-5.37	30.51	46.00	-15.49
432.55	V	Peak	36.52	-4.48	32.04	46.00	-13.96
600.36	V	Peak	35.96	-4.48	31.48	46.00	-14.52
167.74	H	Peak	34.48	-13.69	20.79	43.50	-22.71
196.84	H	Peak	41.84	-14.06	27.78	43.50	-15.72
289.96	H	Peak	39.44	-8.80	30.64	46.00	-15.36
384.05	H	Peak	34.63	-6.71	27.92	46.00	-18.08
481.05	H	Peak	38.43	-4.97	33.46	46.00	-12.54
529.55	H	Peak	36.16	-4.97	31.19	46.00	-14.81

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz.

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	WCDMA Band II CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1880 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
128.94	V	Peak	39.17	-13.00	26.17	43.50	-17.33
175.50	V	Peak	36.29	-12.59	23.70	43.50	-19.80
257.95	V	Peak	37.54	-9.86	27.68	46.00	-18.32
384.05	V	Peak	35.56	-5.10	30.46	46.00	-15.54
432.55	V	Peak	36.84	-3.30	33.54	46.00	-12.46
600.36	V	Peak	36.67	-3.30	33.37	46.00	-12.63
154.16	H	Peak	34.71	-13.00	21.71	43.50	-21.79
264.74	H	Peak	36.60	-12.36	24.24	46.00	-21.76
289.96	H	Peak	39.50	-8.55	30.95	46.00	-15.05
384.05	H	Peak	34.09	-5.79	28.30	46.00	-17.70
481.05	H	Peak	38.57	-3.37	35.20	46.00	-10.80
529.55	H	Peak	37.30	-3.37	33.93	46.00	-12.07

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	WCDMA Band II CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1907.6 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
185.20	V	Peak	35.11	-13.00	22.11	43.50	-21.39
222.06	V	Peak	40.65	-11.17	29.48	46.00	-16.52
289.96	V	Peak	41.28	-8.61	32.67	46.00	-13.33
384.05	V	Peak	35.91	-5.64	30.27	46.00	-15.73
466.50	V	Peak	35.95	-2.79	33.16	46.00	-12.84
600.36	V	Peak	35.94	-2.79	33.15	46.00	-12.85
170.65	H	Peak	35.77	-14.38	21.39	43.50	-22.11
253.00	H	Peak	37.77	-12.36	25.41	46.00	-20.59
289.96	H	Peak	39.44	-8.70	30.74	46.00	-15.26
384.05	H	Peak	34.12	-5.14	28.98	46.00	-17.02
481.05	H	Peak	38.50	-3.58	34.92	46.00	-11.08
529.55	H	Peak	36.64	-3.58	33.06	46.00	-12.94

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (worst case)

Operation Mode	HSDPA Band V CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	826.40 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
228.85	V	Peak	37.79	-13.00	24.79	46.00	-21.21
260.86	V	Peak	38.77	-12.70	26.07	46.00	-19.93
348.16	V	Peak	36.95	-8.54	28.41	46.00	-17.59
384.05	V	Peak	37.55	-6.18	31.37	46.00	-14.63
432.55	V	Peak	35.41	-3.75	31.66	46.00	-14.34
600.36	V	Peak	36.65	-3.75	32.90	46.00	-13.10
163.86	H	Peak	37.64	-13.00	24.64	43.50	-18.86
289.96	H	Peak	39.02	-11.33	27.69	46.00	-18.31
328.76	H	Peak	37.33	-7.74	29.59	46.00	-16.41
384.05	H	Peak	34.25	-4.95	29.30	46.00	-16.70
529.55	H	Peak	36.50	-3.37	33.13	46.00	-12.87
600.36	H	Peak	36.01	-3.37	32.64	46.00	-13.36

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz.

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	HSDPA Band V CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	836.60 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
112.45	V	Peak	41.07	-18.09	22.98	43.50	-20.52
199.75	V	Peak	39.91	-10.72	29.19	43.50	-14.31
361.74	V	Peak	34.62	-8.75	25.87	46.00	-20.13
384.05	V	Peak	35.68	-8.75	26.93	46.00	-19.07
432.55	V	Peak	35.24	-8.75	26.49	46.00	-19.51
600.36	V	Peak	36.18	-8.75	27.43	46.00	-18.57
138.64	H	Peak	35.14	-13.00	22.14	43.50	-21.36
228.85	H	Peak	39.47	-12.70	26.77	46.00	-19.23
289.96	H	Peak	39.25	-10.15	29.10	46.00	-16.90
371.44	H	Peak	34.91	-6.12	28.79	46.00	-17.21
481.05	H	Peak	38.12	-2.43	35.69	46.00	-10.31
529.55	H	Peak	36.45	-2.43	34.02	46.00	-11.98

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	HSDPA Band V CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	846.60 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
115.36	V	Peak	41.35	-18.50	22.85	43.50	-20.65
170.65	V	Peak	36.35	-7.81	28.54	43.50	-14.96
348.16	V	Peak	35.00	-7.81	27.19	46.00	-18.81
384.05	V	Peak	35.32	-7.81	27.51	46.00	-18.49
432.55	V	Peak	36.68	-7.81	28.87	46.00	-17.13
600.36	V	Peak	36.33	-7.81	28.52	46.00	-17.48
144.46	H	Peak	39.29	-13.00	26.29	43.50	-17.21
202.66	H	Peak	41.16	-12.93	28.23	43.50	-15.27
289.96	H	Peak	39.25	-9.46	29.79	46.00	-16.21
481.05	H	Peak	38.72	-5.70	33.02	46.00	-12.98
529.55	H	Peak	36.46	-1.58	34.88	46.00	-11.12
555.74	H	Peak	39.06	-1.58	37.48	46.00	-8.52

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (worst case)

Operation Mode	CDMA 2000 Cellular CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	824.70MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
105.66	V	Peak	43.18	-13.00	30.18	43.50	-13.32
204.60	V	Peak	41.28	-12.70	28.58	43.50	-14.92
289.96	V	Peak	41.23	-8.54	32.69	46.00	-13.31
384.05	V	Peak	35.89	-6.18	29.71	46.00	-16.29
432.55	V	Peak	36.39	-3.75	32.64	46.00	-13.36
600.36	V	Peak	35.97	-3.75	32.22	46.00	-13.78
105.66	H	Peak	42.65	-13.00	29.65	43.50	-13.85
212.36	H	Peak	39.84	-11.33	28.51	43.50	-14.99
289.96	H	Peak	39.36	-7.74	31.62	46.00	-14.38
322.94	H	Peak	40.41	-4.95	35.46	46.00	-10.54
371.44	H	Peak	35.20	-3.37	31.83	46.00	-14.17
481.05	H	Peak	39.39	-3.37	36.02	46.00	-9.98

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz.

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	CDMA 2000 Cellular CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	836.52MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
105.66	V	Peak	41.98	-18.09	23.89	43.50	-19.61
262.80	V	Peak	38.80	-10.72	28.08	46.00	-17.92
289.96	V	Peak	41.05	-8.75	32.30	46.00	-13.70
352.04	V	Peak	35.26	-8.75	26.51	46.00	-19.49
432.55	V	Peak	36.32	-8.75	27.57	46.00	-18.43
600.36	V	Peak	36.95	-8.75	28.20	46.00	-17.80
105.66	H	Peak	42.60	-13.00	29.60	43.50	-13.90
163.86	H	Peak	36.01	-12.70	23.31	43.50	-20.19
289.96	H	Peak	39.22	-10.15	29.07	46.00	-16.93
384.05	H	Peak	34.63	-6.12	28.51	46.00	-17.49
481.05	H	Peak	38.92	-2.43	36.49	46.00	-9.51
529.55	H	Peak	36.56	-2.43	34.13	46.00	-11.87

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	CDMA 2000 Cellular CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	848.31MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
170.65	V	Peak	37.43	-18.50	18.93	43.50	-24.57
187.14	V	Peak	41.64	-7.81	33.83	43.50	-9.67
332.64	V	Peak	36.28	-7.81	28.47	46.00	-17.53
384.05	V	Peak	36.75	-7.81	28.94	46.00	-17.06
432.55	V	Peak	35.95	-7.81	28.14	46.00	-17.86
600.36	V	Peak	35.42	-7.81	27.61	46.00	-18.39
105.66	H	Peak	42.76	-13.00	29.76	43.50	-13.74
148.34	H	Peak	35.28	-12.93	22.35	43.50	-21.15
274.44	H	Peak	36.10	-9.46	26.64	46.00	-19.36
384.05	H	Peak	34.57	-5.70	28.87	46.00	-17.13
432.55	H	Peak	33.32	-1.58	31.74	46.00	-14.26
481.05	H	Peak	39.22	-1.58	37.64	46.00	-8.36

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (worst case)

Operation Mode	CDMA 2000 PCS CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1851.25MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
141.55	V	Peak	34.97	-13.00	21.97	43.50	-21.53
196.84	V	Peak	37.96	-12.70	25.26	43.50	-18.24
214.30	V	Peak	40.04	-8.54	31.50	43.50	-12.00
352.04	V	Peak	33.98	-6.18	27.80	46.00	-18.20
384.05	V	Peak	36.39	-3.75	32.64	46.00	-13.36
432.55	V	Peak	36.19	-3.75	32.44	46.00	-13.56
192.96	H	Peak	36.66	-13.00	23.66	43.50	-19.84
238.55	H	Peak	37.04	-11.33	25.71	46.00	-20.29
274.44	H	Peak	36.50	-7.74	28.76	46.00	-17.24
289.96	H	Peak	39.29	-4.95	34.34	46.00	-11.66
384.05	H	Peak	34.71	-3.37	31.34	46.00	-14.66
456.80	H	Peak	35.89	-3.37	32.52	46.00	-13.48

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz.

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	CDMA 2000 PCS CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1880MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
105.66	V	Peak	43.53	-18.09	25.44	43.50	-18.06
255.04	V	Peak	33.97	-10.72	23.25	46.00	-22.75
384.05	V	Peak	36.68	-8.75	27.93	46.00	-18.07
432.55	V	Peak	35.66	-8.75	26.91	46.00	-19.09
600.36	V	Peak	36.74	-8.75	27.99	46.00	-18.01
648.86	V	Peak	33.84	-8.75	25.09	46.00	-20.91
148.34	H	Peak	33.37	-13.00	20.37	43.50	-23.13
272.50	H	Peak	37.38	-12.70	24.68	46.00	-21.32
371.44	H	Peak	35.54	-10.15	25.39	46.00	-20.61
432.55	H	Peak	34.47	-6.12	28.35	46.00	-17.65
600.36	H	Peak	34.49	-2.43	32.06	46.00	-13.94
749.74	H	Peak	33.18	-2.43	30.75	46.00	-15.25

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	CDMA 2000 PCS CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1908.75MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
138.64	V	Peak	33.90	-18.50	15.40	43.50	-28.10
194.90	V	Peak	40.09	-7.81	32.28	43.50	-11.22
306.45	V	Peak	35.76	-7.81	27.95	46.00	-18.05
384.05	V	Peak	36.59	-7.81	28.78	46.00	-17.22
432.55	V	Peak	37.22	-7.81	29.41	46.00	-16.59
600.36	V	Peak	35.89	-7.81	28.08	46.00	-17.92
243.40	H	Peak	34.52	-13.00	21.52	46.00	-24.48
277.35	H	Peak	35.53	-12.93	22.60	46.00	-23.40
289.96	H	Peak	39.60	-9.46	30.14	46.00	-15.86
384.05	H	Peak	35.00	-5.70	29.30	46.00	-16.70
442.25	H	Peak	34.27	-1.58	32.69	46.00	-13.31
600.36	H	Peak	35.20	-1.58	33.62	46.00	-12.38

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (above 1GHz) (worst case)

Operation Mode	GPRS 850 CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	824.2 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1648.4	V	--	--			--	74.00	54.00	
2472.6	V	--	--			--	74.00	54.00	
3296.8	V	--	--			--	74.00	54.00	
4121.0	V	--	--			--	74.00	54.00	
4887.0	V	33.97	--	6.23	40.20	--	74.00	54.00	-13.80
4945.2	V	--	--			--	74.00	54.00	
1648.4	H	--	--			--	74.00	54.00	
2472.6	H	--	--			--	74.00	54.00	
3296.8	H	--	--			--	74.00	54.00	
4121.0	H	--	--			--	74.00	54.00	
4653.0	H	33.98	--	5.67	39.65	--	74.00	54.00	-14.35
4945.2	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GPRS 850 CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	836.6 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1673.2	V	--	--			--	74.00	54.00	
2509.8	V	--	--			--	74.00	54.00	
3346.4	V	--	--			--	74.00	54.00	
4183.0	V	--	--			--	74.00	54.00	
4887.0	V	33.53	--	6.23	39.76	--	74.00	54.00	-14.24
5019.6	V	--	--			--	74.00	54.00	
1673.2	H	--	--			--	74.00	54.00	
2509.8	H	--	--			--	74.00	54.00	
3346.4	H	--	--			--	74.00	54.00	
4183.0	H	--	--			--	74.00	54.00	
4802.5	H	33.86	--	6.02	39.88	--	74.00	54.00	-14.12
5019.6	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GPRS 850 CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	848.8 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1697.6	V	--	--			--	74.00	54.00	
2546.4	V	--	--			--	74.00	54.00	
3395.2	V	--	--			--	74.00	54.00	
4244.0	V	--	--			--	74.00	54.00	
4978.0	V	33.28	--	6.39	39.67	--	74.00	54.00	-14.33
5092.8	V	--	--			--	74.00	54.00	
1697.6	H	--	--			--	74.00	54.00	
2546.4	H	--	--			--	74.00	54.00	
3395.2	H	--	--			--	74.00	54.00	
4244.0	H	--	--			--	74.00	54.00	
4997.5	H	33.24	--	6.44	39.68	--	74.00	54.00	-14.32
5092.8	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (worst case)

Operation Mode	GPRS 1900 CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1850.2 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3700.4	V	--	--			--	74.00	54.00	
4900.0	V	33.67	--	6.21	39.88	--	74.00	54.00	-14.12
5550.6	V	--	--			--	74.00	54.00	
7400.8	V	--	--			--	74.00	54.00	
9251.0	V	--	--			--	74.00	54.00	
11101.2	V	--	--			--	74.00	54.00	
3700.4	H	--	--			--	74.00	54.00	
4978.0	H	33.52	--	6.39	39.91	--	74.00	54.00	-14.09
5550.6	H	--	--			--	74.00	54.00	
7400.8	H	--	--			--	74.00	54.00	
9251.0	H	--	--			--	74.00	54.00	
11101.2	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GPRS 1900 CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1880 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3760.0	V	--	--			--	74.00	54.00	
4757.0	V	33.63	--	5.92	39.55	--	74.00	54.00	-14.45
5640.0	V	--	--			--	74.00	54.00	
7520.0	V	--	--			--	74.00	54.00	
9400.0	V	--	--			--	74.00	54.00	
11280.0	V	--	--			--	74.00	54.00	
3760.0	H	--	--			--	74.00	54.00	
4997.5	H	33.38	--	6.44	39.82	--	74.00	54.00	-14.18
5640.0	H	--	--			--	74.00	54.00	
7520.0	H	--	--			--	74.00	54.00	
9400.0	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GPRS 1900 CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1909.8 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3819.6	V	--	--			--	74.00	54.00	
4978.0	V	33.07	--	6.39	39.46	--	74.00	54.00	-14.54
5729.4	V	--	--			--	74.00	54.00	
7639.2	V	--	--			--	74.00	54.00	
9549.0	V	--	--			--	74.00	54.00	
11458.8	V	--	--			--	74.00	54.00	
3819.6	H	--	--			--	74.00	54.00	
4575.0	H	35.21	--	5.49	40.70	--	74.00	54.00	-13.30
5729.4	H	--	--			--	74.00	54.00	
7639.2	H	--	--			--	74.00	54.00	
9549.0	H	--	--			--	74.00	54.00	
11458.8	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (worst case)

Operation Mode	WCDMA Band II CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1852.4 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3704.8	V	--	--			--	74.00	54.00	
4978.0	V	33.77	--	6.39	40.16	--	74.00	54.00	-13.84
5557.2	V	--	--			--	74.00	54.00	
7409.6	V	--	--			--	74.00	54.00	
9262.0	V	--	--			--	74.00	54.00	
11114.4	V	--	--			--	74.00	54.00	
3704.8	H	--	--			--	74.00	54.00	
4822.0	H	34.10	--	6.05	40.15	--	74.00	54.00	-13.85
5557.2	H	--	--			--	74.00	54.00	
7409.6	H	--	--			--	74.00	54.00	
9262.0	H	--	--			--	74.00	54.00	
11114.4	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	WCDMA Band II CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1880 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3760.0	V	--	--			--	74.00	54.00	
4412.5	V	34.63	--	5.05	39.68	--	74.00	54.00	-14.32
5640.0	V	--	--			--	74.00	54.00	
7520.0	V	--	--			--	74.00	54.00	
9400.0	V	--	--			--	74.00	54.00	
11280.0	V	--	--			--	74.00	54.00	
3760.0	H	--	--			--	74.00	54.00	
4887.0	H	34.07	--	6.23	40.30	--	74.00	54.00	-13.70
5640.0	H	--	--			--	74.00	54.00	
7520.0	H	--	--			--	74.00	54.00	
9400.0	H	--	--			--	74.00	54.00	
11280.0	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	WCDMA Band II CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1907.6 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3815.2	V	--	--			--	74.00	54.00	
4510.0	V	34.57	--	5.31	39.88	--	74.00	54.00	-14.12
5722.8	V	--	--			--	74.00	54.00	
7630.4	V	--	--			--	74.00	54.00	
9538.0	V	--	--			--	74.00	54.00	
11445.6	V	--	--			--	74.00	54.00	
3815.2	H	--	--			--	74.00	54.00	
4783.0	H	33.79	--	6.00	39.79	--	74.00	54.00	-14.21
5722.8	H	--	--			--	74.00	54.00	
7630.4	H	--	--			--	74.00	54.00	
9538.0	H	--	--			--	74.00	54.00	
11445.6	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (worst case)

Operation Mode	HSDPA Band V CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	826.40 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1652.8	V	--	--			--	74.00	54.00	
2479.2	V	--	--			--	74.00	54.00	
3305.6	V	--	--			--	74.00	54.00	
4132.0	V	--	--			--	74.00	54.00	
4958.4	V	--	--			--	74.00	54.00	
4978.0	V	33.90	--	6.39	40.29	--	74.00	54.00	-13.71
1652.8	H	--	--			--	74.00	54.00	
2479.2	H	--	--			--	74.00	54.00	
3305.6	H	--	--			--	74.00	54.00	
4132.0	H	--	--			--	74.00	54.00	
4958.4	H	--	--			--	74.00	54.00	
4997.5	H	33.13	--	6.44	39.57	--	74.00	54.00	-14.43

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	HSDPA Band V CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	836.60 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1673.2	V	--	--			--	74.00	54.00	
2509.8	V	--	--			--	74.00	54.00	
3346.4	V	--	--			--	74.00	54.00	
4183.0	V	--	--			--	74.00	54.00	
4997.5	V	33.99	--	6.44	40.43	--	74.00	54.00	-13.57
5019.6	V	--	--			--	74.00	54.00	
1673.2	H	--	--			--	74.00	54.00	
2509.8	H	--	--			--	74.00	54.00	
3346.4	H	--	--			--	74.00	54.00	
4183.0	H	--	--			--	74.00	54.00	
4770.0	H	34.68	--	5.93	40.61	--	74.00	54.00	-13.39
5019.6	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	HSDPA Band V CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	846.60 MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1693.2	V	--	--			--	74.00	54.00	
2539.8	V	--	--			--	74.00	54.00	
3386.4	V	--	--			--	74.00	54.00	
4233.0	V	--	--			--	74.00	54.00	
4802.5	V	33.46	--	6.02	39.48	--	74.00	54.00	-14.52
5079.6	V	--	--			--	74.00	54.00	
1693.2	H	--	--			--	74.00	54.00	
2539.8	H	--	--			--	74.00	54.00	
3386.4	H	--	--			--	74.00	54.00	
4233.0	H	--	--			--	74.00	54.00	
4315.0	H	35.37	--	4.72	40.09	--	74.00	54.00	-13.91
5079.6	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (worst case)

Operation Mode	CDMA 2000 Cellular CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	824.70MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1649.4	V	--	--			--	74.00	54.00	
2474.1	V	--	--			--	74.00	54.00	
3298.8	V	--	--			--	74.00	54.00	
4123.5	V	--	--			--	74.00	54.00	
4913.0	V	34.75	--	6.26	41.01	--	74.00	54.00	-12.99
4948.2	V	--	--			--	74.00	54.00	
1649.4	H	--	--			--	74.00	54.00	
2474.1	H	--	--			--	74.00	54.00	
3298.8	H	--	--			--	74.00	54.00	
4123.5	H	--	--			--	74.00	54.00	
4867.5	H	33.26	--	6.17	39.43	--	74.00	54.00	-14.57
4948.2	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	CDMA 2000 Cellular CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	836.52MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1673.2	V	--	--			--	74.00	54.00	
2509.8	V	--	--			--	74.00	54.00	
3346.4	V	--	--			--	74.00	54.00	
3353.0	V	38.09	--	1.59	39.68	--	74.00	54.00	-14.32
4183.0	V	--	--			--	74.00	54.00	
5019.6	V	--	--			--	74.00	54.00	
1673.2	H	--	--			--	74.00	54.00	
2509.8	H	--	--			--	74.00	54.00	
3346.4	H					--	74.00	54.00	
3353.0	H	35.94	--	1.59	37.53	--	74.00	54.00	-16.47
4183.0	H	--	--			--	74.00	54.00	
5019.6	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	CDMA 2000 Cellular CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	848.31MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
1893.2	V	--	--			--	74.00	54.00	
2839.8	V	--	--			--	74.00	54.00	
3392.0	V	39.12	--	1.73	40.85	--	74.00	54.00	-13.15
3786.4	V	--	--			--	74.00	54.00	
4237.0	V	38.90	--	4.45	43.35	--	74.00	54.00	-10.65
4733.0	V	--	--			--	74.00	54.00	
5679.6	V	--	--			--	74.00	54.00	
1893.2	H	--	--			--	74.00	54.00	
2839.8	H	--	--			--	74.00	54.00	
3392.0	H	39.56	--	1.73	41.29	--	74.00	54.00	-12.71
3786.4	H	--	--			--	74.00	54.00	
4237.0	H	37.47	--	4.45	41.92	--	74.00	54.00	-12.08

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (worst case)

Operation Mode	CDMA 2000 PCS CH Low Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1851.25MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3702.5	V	--	--			--	74.00	54.00	
4900.0	V	34.03	--	6.21	40.24	--	74.00	54.00	-13.76
5553.8	V	--	--			--	74.00	54.00	
7405.0	V	--	--			--	74.00	54.00	
9256.3	V	--	--			--	74.00	54.00	
11107.5	V	--	--			--	74.00	54.00	
3702.5	H	--	--			--	74.00	54.00	
4887.0	H	33.51	--	6.23	39.74	--	74.00	54.00	-14.26
5553.8	H	--	--			--	74.00	54.00	
7405.0	H	--	--			--	74.00	54.00	
9256.3	H	--	--			--	74.00	54.00	
11107.5	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	CDMA 2000 PCS CH Mid Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1880MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3760.0	V	--	--			--	74.00	54.00	
4997.5	V	33.76	--	6.44	40.20	--	74.00	54.00	-13.80
5640.0	V	--	--			--	74.00	54.00	
7520.0	V	--	--			--	74.00	54.00	
9400.0	V	--	--			--	74.00	54.00	
11280.0	V	--	--			--	74.00	54.00	
3760.0	H	--	--			--	74.00	54.00	
4990.0	H	34.07	--	6.21	40.28	--	74.00	54.00	-13.72
5640.0	H	--	--			--	74.00	54.00	
7520.0	H	--	--			--	74.00	54.00	
9400.0	H	--	--			--	74.00	54.00	
11280.0	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	CDMA 2000 PCS CH High Mode	Test Date	Jul. 20, 2011
Fundamental Frequency	1908.75MHz	Test By	Jazz
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)
3817.5	V	--	--			--	74.00	54.00	
4978.0	V	33.53	--	6.39	39.92	--	74.00	54.00	-14.08
5726.3	V	--	--			--	74.00	54.00	
7635.0	V	--	--			--	74.00	54.00	
9543.8	V	--	--			--	74.00	54.00	
11452.5	V	--	--			--	74.00	54.00	
3817.5	H	--	--			--	74.00	54.00	
4848.0	H	34.28	--	6.10	40.38	--	74.00	54.00	-13.62
5726.3	H	--	--			--	74.00	54.00	
7635.0	H	--	--			--	74.00	54.00	
9543.8	H	--	--			--	74.00	54.00	
11452.5	H	--	--			--	74.00	54.00	

Remark:

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

~ End of Report ~