



FCC RADIO TEST REPORT

FCC ID : QYLEM7511F6
Equipment : WWAN Module
Brand Name : Getac
Model Name : EM7511
Applicant : Getac Technology Corporation.
5F., Building A, No. 209, Sec.1, Nangang Rd., Nangang
Dist., Taipei City 11568, Taiwan, R.O.C.
Standard : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)

The product was received on Jan. 13, 2021 and testing was started from Mar. 08, 2021 and completed on Mar. 23, 2021. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FG111323A	01	Initial issue of report	Apr. 01, 2021



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Pass	-
	§22.913 (a)(2)	Effective Radiated Power (WCDMA Band V)		
	§24.232 (c)	Equivalent Isotropic Radiated Power (WCDMA Band II)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (WCDMA Band IV)		
-	§24.232 (d)	Peak-to-Average Ratio	-	See Note
-	§2.1049 §22.917 (b) §24.238 (b) §27.53 (g)	Occupied Bandwidth (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	-	See Note
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Band Edge Measurement (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	-	See Note
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Conducted Emission (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	-	See Note
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	-	See Note
4.4	§2.1053 §22.917 (a) §24.238 (a) §27.53 (h)	Field Strength of Spurious Radiation (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	Pass	-

Note: The module (Model: EM7511) makes no difference after verifying output power, this report reuses test data from the module report.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Celery Wei



1 General Description

1.1 Product Feature of Equipment Under Test

WCDMA/LTE and GNSS.

Product Specification subjective to this standard	
Sample 1	EUT with Host 1
Sample 2	EUT with Host 2
Antenna Type	WWAN: <Main> PIFA Antenna <Aux.> PIFA Antenna GPS / Glonass : PATCH Antenna
Antenna Gain	Cellular Band: -0.21 dBi PCS Band: 0.41 dBi AWS Band: -0.19 dBi

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

The product was installed into Tablet (Brand Name: Getac, Model Name: F110, F110G6, F110-Ex, F110-621) during test, and the host information was recorded in the following table.

Host Information	
Host 1	Host with SKU B
Host 2	Host with SKU C

SKU	SKU B	SKU C
CPU	i5-1135G7 (Non Vpro)	i7-1165G7 (Vpro)
DDR	Kingston DDR4-3200 16GB	Kingston DDR4-3200 32GB
SSD	512GB	1TB
PANEL	Full HD AUO	Full HD AUO
DIGITIZER	N/A	EMRight Digitizer
OPTION BAY	2D Barcode Reader	RS232 + LAN
Expansion Bay	Smart Card	Smart Card
Right side option	NXP RFID(PN7462)	Finger Print
WLAN/BT	Intel AX201	Intel AX201
WWAN(4G)	EM7511	EM7511
GPS/GNS	EM7511	EM7511
Rear 8M Camera	Support	Support
Webcam FHD	Not Support	Not Support
IR Webcam	Support	Support
USB3.2 Gen2 x 1 Type-A	Support	Support
Type-C (thunder bolt)	Support	Support
Audio/MIC	Support	Support



1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	TH05-HY
Test Engineer	Bryant Liu
Temperature	20.3~23.6°C
Relative Humidity	43.3~54.3%

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
	03CH12-HY (TAF Code: 3786)
Test Engineer	Jack Cheng, Lance Chiang, Chuan Chu
Temperature	22.3~26.1°C
Relative Humidity	55~63%
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW0007



1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27(L)
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane for Cellular Band, Y Plane for AWS Band and Z Plane for PCS Band) were recorded in this report.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 9000 MHz for WCDMA Band V
2. 30 MHz to 18000 MHz for WCDMA Band IV
3. 30 MHz to 19100 MHz for WCDMA Band II

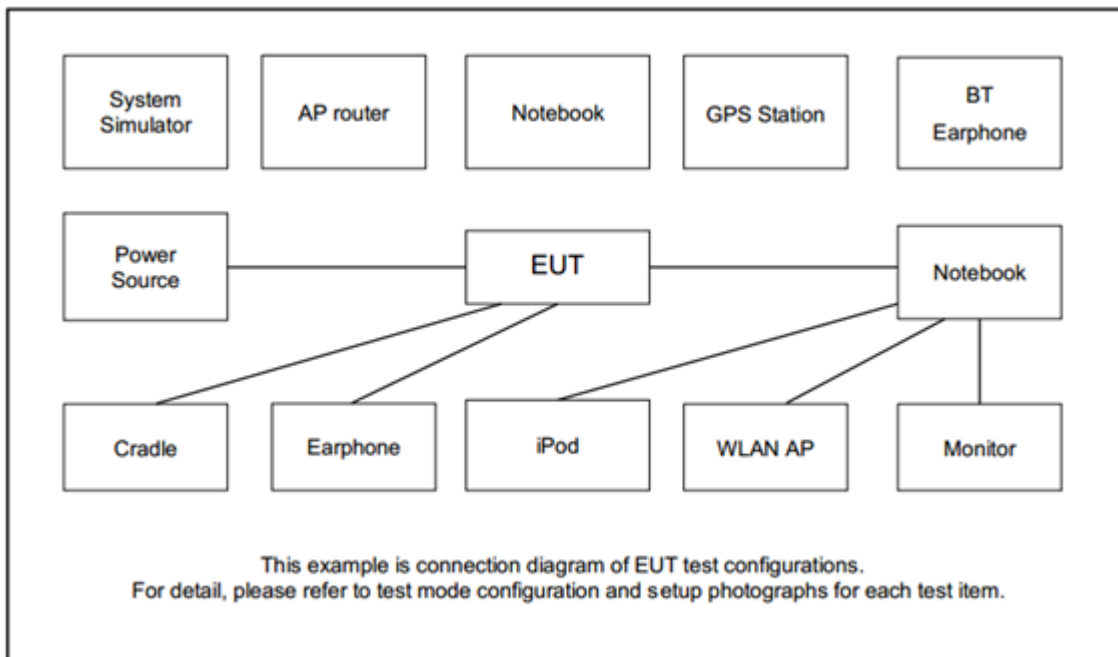
All modes, data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

Test Modes	
Band	Radiated TCs
WCDMA Band V	RMC 12.2Kbps Link
WCDMA Band II	RMC 12.2Kbps Link
WCDMA Band IV	RMC 12.2Kbps Link

Remark: All the radiated test cases were performed with Adapter 1, Battery 2 and Sample 2.

2.2 Connection Diagram of Test System





2.3 Support Unit used in test configuration

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

2.4 Frequency List of Low/Middle/High Channels

Frequency List				
Band	Channel/Frequency(MHz)	Lowest	Middle	Highest
WCDMA Band V	Channel	4132	4182	4233
	Frequency	826.4	836.4	846.6
WCDMA Band II	Channel	9262	9400	9538
	Frequency	1852.4	1880.0	1907.6
WCDMA Band IV	Channel	1312	1413	1513
	Frequency	1712.4	1732.6	1752.6

3 Conducted Test Result

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power and ERP/EIRP

3.2.1 Description of the Conducted Output Power and ERP/EIRP

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

The ERP of mobile transmitters must not exceed 7 Watts for WCDMA Band V

The EIRP of mobile transmitters must not exceed 2 Watts for WCDMA Band II

The EIRP of mobile transmitters must not exceed 1 Watts for WCDMA Band IV

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.2.2 Test Procedures

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

4 Radiated Test Items

4.1 Measuring Instruments

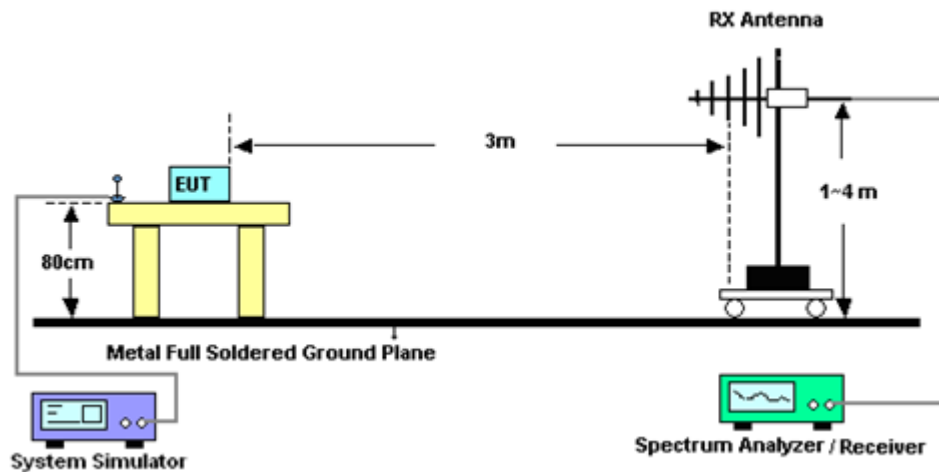
See list of measuring instruments of this test report.

4.2 Test Setup

For radiated test below 30MHz



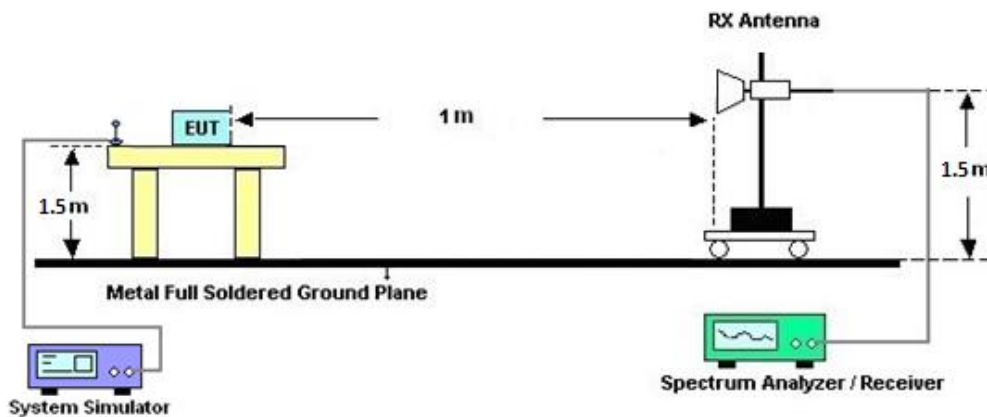
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

Note:

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



4.4 Field Strength of Spurious Radiation Measurement

4.4.1 Description of Field Strength of Spurious Radiated Measurement

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

4.4.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a rotatable wooden table 0.8 meters for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz above the ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1 MHz, VBW = 3 MHz, taking record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Take the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. $EIRP (dBm) = S.G. Power - Tx Cable Loss + Tx Antenna Gain$
11. $ERP (dBm) = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jul. 14, 2020	Mar. 08, 2021~ Mar. 12, 2021	Jul. 13, 2021	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	40103 & 07	30MHz~1GHz	Apr. 29, 2020	Mar. 08, 2021~ Mar. 12, 2021	Apr. 28, 2021	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Nov. 23, 2020	Mar. 08, 2021~ Mar. 12, 2021	Nov. 22, 2021	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120D	9120D-1241	1GHz ~ 18GHz	Jul. 15, 2020	Mar. 08, 2021~ Mar. 12, 2021	Jul. 14, 2021	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA917058 4	18GHz~40GHz	Dec. 11, 2020	Mar. 08, 2021~ Mar. 12, 2021	Dec. 10, 2021	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA917057 6	18GHz ~ 40GHz	May 22, 2020	Mar. 08, 2021~ Mar. 12, 2021	May 21, 2021	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 25, 2020	Mar. 08, 2021~ Mar. 12, 2021	Mar. 24, 2021	Radiation (03CH12-HY)
Preamplifier	Keysight	83017A	MY57280120	1GHz~26.5GHz	Jul. 20, 2020	Mar. 08, 2021~ Mar. 12, 2021	Jul. 19, 2021	Radiation (03CH12-HY)
Preamplifier	E-INSTRUME NT TECH LTD.	ERA-100M-18 G-56-01-A70	EC1900249	1GHz~18GHz	Dec. 05, 2020	Mar. 08, 2021~ Mar. 12, 2021	Dec. 04, 2021	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 11, 2020	Mar. 08, 2021~ Mar. 12, 2021	Dec. 10, 2021	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 15, 2021	Mar. 11, 2021~ Mar. 12, 2021	Jan. 14, 2022	Radiation (03CH12-HY)
Signal Generator	Anritsu	MG3694C	163401	0.1Hz~40GHz	Jan. 31, 2021	Mar. 08, 2021~ Mar. 12, 2021	Jan. 30, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 12, 2020	Mar. 08, 2021~ Mar. 10, 2021	Mar. 11, 2021	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	Mar. 11, 2021~ Mar. 12, 2021	Mar. 10, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 11, 2020	Mar. 08, 2021~ Mar. 12, 2021	Dec. 10, 2021	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 22, 2021	Mar. 08, 2021~ Mar. 12, 2021	Feb. 21, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz~40GHz	Feb. 22, 2021	Mar. 08, 2021~ Mar. 12, 2021	Feb. 21, 2022	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Oct. 02, 2020	Mar. 08, 2021~ Mar. 12, 2021	Oct. 01, 2021	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Mar. 08, 2021~ Mar. 12, 2021	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Mar. 08, 2021~ Mar. 12, 2021	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Mar. 08, 2021~ Mar. 12, 2021	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Mar. 08, 2021~ Mar. 12, 2021	N/A	Radiation (03CH12-HY)
Radio Communicatio n Analyzer	Anritsu	MT8821C	6261849015	LTE	Sep. 18, 2020	Mar. 22, 2021~ Mar. 23, 2021	Sep. 17, 2021	Conducted (TH05-HY)
Base Station (Measure)	Anritsu	MT8821C	6262002534 1	N/A	Oct. 06, 2020	Mar. 22, 2021~ Mar. 23, 2021	Oct. 05, 2021	Conducted (TH05-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.07
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.21
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.80
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) & ERP / EIRP

WCDMA Band V Maximum Average Power [dBm] (GT - LC = -0.21 dB)					
Channel	4132	4182	4233	ERP (dBm)	ERP (W)
Frequency	826.4	836.4	846.6		
RMC 12.2K	23.86	23.99	23.89	21.63	0.1455
HSDPA Subtest-1	22.42	22.53	22.30		
HSDPA Subtest-2	22.43	22.51	22.33		
HSDPA Subtest-3	21.94	22.06	21.83		
HSDPA Subtest-4	21.92	21.95	21.84		
HSUPA Subtest-1	22.43	22.50	22.29		
HSUPA Subtest-2	20.43	20.49	20.29		
HSUPA Subtest-3	21.42	21.48	21.29		
HSUPA Subtest-4	20.48	20.48	20.28		
HSUPA Subtest-5	22.40	22.50	22.30		
Limit	ERP < 7W				

WCDMA Band II Maximum Average Power [dBm] (GT - LC = 0.41 dB)					
Channel	9262	9400	9538	EIRP (dBm)	EIRP (W)
Frequency	1852.4	1880	1907.6		
RMC 12.2K	23.65	23.78	23.73	24.19	0.2624
HSDPA Subtest-1	22.34	22.42	22.47		
HSDPA Subtest-2	22.38	22.46	22.42		
HSDPA Subtest-3	21.89	21.94	21.99		
HSDPA Subtest-4	21.81	21.95	22.01		
HSUPA Subtest-1	22.37	22.43	22.48		
HSUPA Subtest-2	20.29	20.43	20.47		
HSUPA Subtest-3	21.29	21.42	21.47		
HSUPA Subtest-4	20.25	20.45	20.49		
HSUPA Subtest-5	22.30	22.40	22.50		
Limit	EIRP < 2W				

WCDMA Band II Maximum Average Power [dBm] (GT - LC = -0.19 dB)					
Channel	1312	1413	1513	EIRP (dBm)	EIRP (W)
Frequency	1712.4	1732.6	1752.6		
RMC 12.2K	23.46	23.56	23.61	24.02	0.2523
HSDPA Subtest-1	22.39	22.56	22.47		
HSDPA Subtest-2	22.39	22.54	22.45		
HSDPA Subtest-3	21.88	22.05	21.96		
HSDPA Subtest-4	21.88	22.05	21.94		
HSUPA Subtest-1	22.36	22.56	22.45		
HSUPA Subtest-2	20.38	20.50	20.41		
HSUPA Subtest-3	21.37	21.58	21.46		
HSUPA Subtest-4	20.39	20.52	20.42		
HSUPA Subtest-5	22.40	22.60	22.40		
Limit	EIRP < 1W				



Appendix B. Test Results of Radiated Test

WCDMA 850

WCDMA 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-53.27	-13	-40.27	-61.72	-58.86	0.92	8.66	H
	2480	-39.38	-13	-26.38	-52.91	-46.76	1.15	10.67	H
	3304	-57.48	-13	-44.48	-72.79	-66.03	1.32	12.03	H
									H
									H
									H
	1648	-59.72	-13	-46.72	-67.67	-65.31	0.92	8.66	V
	2480	-42.92	-13	-29.92	-56.62	-50.30	1.15	10.67	V
	3304	-57.03	-13	-44.03	-72.81	-65.58	1.32	12.03	V
									V
									V
									V
Middle	1672	-56.10	-13	-43.10	-64.62	-61.78	0.93	8.75	H
	2509	-44.53	-13	-31.53	-58.1	-51.94	1.15	10.71	H
	3345	-57.46	-13	-44.46	-72.66	-66.11	1.33	12.13	H
									H
									H
									H
	1672	-61.66	-13	-48.66	-69.55	-67.34	0.93	8.75	V
	2509	-46.24	-13	-33.24	-60.02	-53.65	1.15	10.71	V
	3345	-57.13	-13	-44.13	-72.78	-65.78	1.33	12.13	V
									V
									V
									V



Highest	1696	-61.45	-13	-48.45	-70.04	-67.21	0.94	8.84	H
	2544	-45.73	-13	-32.73	-59.31	-53.17	1.16	10.75	H
	3384	-57.42	-13	-44.42	-72.51	-66.15	1.34	12.22	H
									H
									H
									H
	1696	-62.66	-13	-49.66	-70.54	-68.42	0.94	8.84	V
	2544	-47.14	-13	-34.14	-60.83	-54.58	1.16	10.75	V
	3384	-57.12	-13	-44.12	-72.65	-65.85	1.34	12.22	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



WCDMA 1700

WCDMA 1700									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3424	-56.06	-13	-43.06	-72.02	-67.03	1.35	12.32	H
	5137	-52.29	-13	-39.29	-74.24	-63.44	1.65	12.79	H
	6849	-49.08	-13	-36.08	-74.48	-59.45	1.74	12.11	H
									H
									H
									H
	3424	-56.44	-13	-43.44	-72.82	-67.41	1.35	12.32	V
	5137	-52.59	-13	-39.59	-74.29	-63.74	1.65	12.79	V
	6849	-49.29	-13	-36.29	-74.29	-59.66	1.74	12.11	V
									V
									V
									V
Middle	3465	-54.32	-13	-41.32	-70.68	-65.38	1.35	12.42	H
	5197	-52.32	-13	-39.32	-74.25	-63.53	1.66	12.88	H
	6930	-48.10	-13	-35.10	-73.91	-58.37	1.73	12.00	H
									H
									H
									H
	3465	-55.55	-13	-42.55	-72.3	-66.61	1.35	12.42	V
	5197	-52.86	-13	-39.86	-74.62	-64.07	1.66	12.88	V
	6930	-48.76	-13	-35.76	-74.12	-59.03	1.73	12.00	V
									V
									V
									V



Highest	3505	-54.99	-13	-41.99	-71.72	-66.13	1.36	12.50	H
	5257	-52.46	-13	-39.46	-74.6	-63.74	1.68	12.96	H
	7010	-47.53	-13	-34.53	-73.73	-57.69	1.73	11.88	H
									H
									H
									H
	3505	-55.53	-13	-42.53	-72.6	-66.67	1.36	12.50	V
	5257	-52.63	-13	-39.63	-74.54	-63.91	1.68	12.96	V
	7010	-47.98	-13	-34.98	-73.7	-58.14	1.73	11.88	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



WCDMA 1900

WCDMA 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3704	-54.76	-13	-41.76	-72.71	-65.97	1.41	12.62	H
	5557	-50.36	-13	-37.36	-73.51	-61.92	1.74	13.30	H
	7409	-47.15	-13	-34.15	-73.94	-56.45	1.94	11.25	H
									H
									H
									H
	3704	-54.54	-13	-41.54	-72.64	-65.75	1.41	12.62	V
	5557	-51.00	-13	-38.00	-73.7	-62.56	1.74	13.30	V
	7409	-47.23	-13	-34.23	-73.87	-56.53	1.94	11.25	V
									V
									V
									V
Middle	3760	-54.42	-13	-41.42	-72.61	-65.65	1.43	12.66	H
	5640	-50.61	-13	-37.61	-73.83	-62.18	1.73	13.30	H
	7520	-47.86	-13	-34.86	-74.13	-56.97	1.99	11.10	H
									H
									H
									H
	3760	-53.86	-13	-40.86	-72.27	-65.09	1.43	12.66	V
	5640	-51.33	-13	-38.33	-74.14	-62.90	1.73	13.30	V
	7520	-47.50	-13	-34.50	-73.73	-56.61	1.99	11.10	V
									V
									V
									V



Highest	3815	-54.18	-13	-41.18	-72.58	-65.43	1.44	12.69	H
	5722	-50.32	-13	-37.32	-73.96	-61.89	1.73	13.30	H
	7630	-48.00	-13	-35.00	-73.85	-57.12	2.01	11.13	H
									H
									H
									H
	3815	-53.80	-13	-40.80	-72.44	-65.05	1.44	12.69	V
	5722	-51.40	-13	-38.40	-74.42	-62.97	1.73	13.30	V
	7630	-47.89	-13	-34.89	-73.66	-57.01	2.01	11.13	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.