



FCC RADIO TEST REPORT

FCC ID : ACJFZS1A20A
Equipment : Radio module
Brand Name : Panasonic
Model Name : WW18A
Marketing Name : WW18A
Applicant : Panasonic Corporation of North America
Two Riverfront Plaza, 9th Floor, Newark,
NJ 07102-5490
Manufacturer : Panasonic Mobile Communications Co., Ltd.
600 Saedo-cho, Tsuzuki-ku, Yokohama-city,
Kanagawa 224-8539, Japan
Standard : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)

The product was received on Dec. 08, 2020 and testing was started from Dec. 11, 2020 and completed on Jan. 06, 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 variant 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, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FG0D1135-01A	01	Initial issue of report	Dec. 28, 2020
FG0D1135-01A	02	1. Revise Accessories Information for Host 2. Revise Antenna gain 3. Update Conducted power and ERP/EIRP	Jan. 07, 2021
FG0D1135-01A	03	Add remark in section 2.1	Jan. 13, 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	Not Required	-
-	§2.1049 §22.917 (b) §24.238 (b) §27.53 (g)	Occupied Bandwidth (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	Not Required	-
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Band Edge Measurement (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	Not Required	-
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Conducted Emission (WCDMA Band V) (WCDMA Band II) (WCDMA Band IV)	Not Required	-
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	Not Required	-
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	Under limit 22.84 dB at 7410.000 MHz

Note:

1. Not required means after assessing, test items are not necessary to carry out.
2. This is a variant report by adding External antenna for Vehicle dock. All the test cases were performed on original report which can be referred to Sporton Report Number FG0D1135A. Based on the original report, the test cases were verified.

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: Ruby Zou



1 General Description

1.1 Product Feature of Equipment Under Test

WCDMA/LTE and GNSS.

Product Specification subjective to this standard	
Host 1	FZ-S1
Host 2	FZ-S1 with 2nd USB
Host 3	FZ-S1 with BCR Landscape and 2nd USB
Host 4	FZ-S1 with BCR Portrait
Host 5	FZ-S1 with BCR Landscape
Integrated the Host	Equipment Name: Tablet Computer Brand Name: Panasonic Model Name: FZ-S1 Marketing Name: FZ-S1 FCC ID: ACJFZS1A
Antenna Type for Host	WWAN: Loop Antenna / External Antenna GNSS : PIFA Antenna / External Antenna
Antenna Gain for Host	<Loop Antenna> WCDMA Band II: 1.75 dBi WCDMA Band IV: -2.26 dBi WCDMA Band V: 1.31 dBi <External Antenna> WCDMA Band II: 4.1 dBi WCDMA Band IV: 4.1 dBi WCDMA Band V: 1.4 dBi

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.
2. The device (Model: FZ-S1) has two SKU (w connector for Vehicle dock and w/o connector), all test items were performed with SKU (w connector for Vehicle dock).

Accessories Information for Host		
AC Adapter	Brand Name	Panasonic
	Model Name	FZ-AAE184EM
Standard Battery	Brand Name	Panasonic
	Model Name	FZ-VZSUT10U
Extend Battery	Brand Name	Panasonic
	Model Name	FZ-VZSUT11U
Dual pass Antenna (External Antenna for Vehicle dock)	Brand Name	Airgain
	Model Name	AP-PAN-MMF-C-Q-BL
Vehicle dock	Brand Name	Gamber-Johnson LLC
	Model Name	7160-1314-02



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, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	TH05-HY
Test Engineer	George Chen
Temperature	21~25°C
Relative Humidity	51~54%

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
	03CH15-HY
Test Engineer	Leo Lee, Mancy Chou and Bigshow Wang
Temperature	22.7~23.2°C
Relative Humidity	49~53%

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. 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 two Ant. degrees (0 or 90). The worst cases (Degree 90) 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 and data rates and positions were investigated.

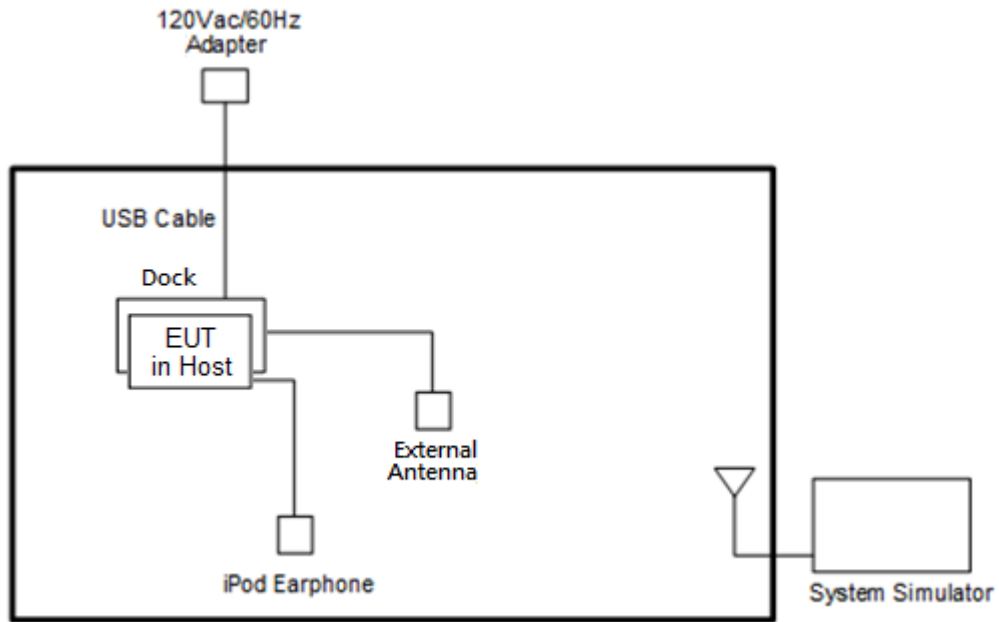
Test modes are chosen to be reported as the worst case configuration below:

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:

1. All the test cases were performed with Host 1, External Antenna and Standard Battery.
2. Output power has been confirmed to be within the tune up range and any +/-1dBm deviation from the original reported may be considered as measurement uncertainty.

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	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
3.	Type-C USB Cable	LUXSHARE PRECISION LIMITED	L2UU3001-CS-R	N/A	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

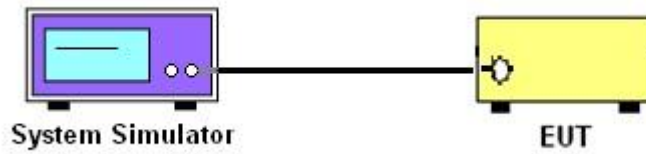
3 Conducted Test Result

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 lowest, middle, and highest channels for each band and different modulation.
4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

4 Radiated Test Items

4.1 Measuring Instruments

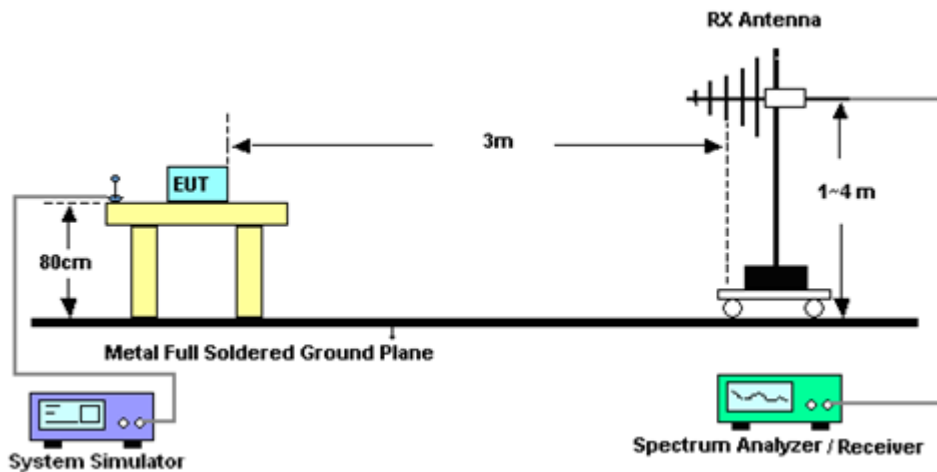
See list of measuring instruments of this test report.

4.2 Test Setup

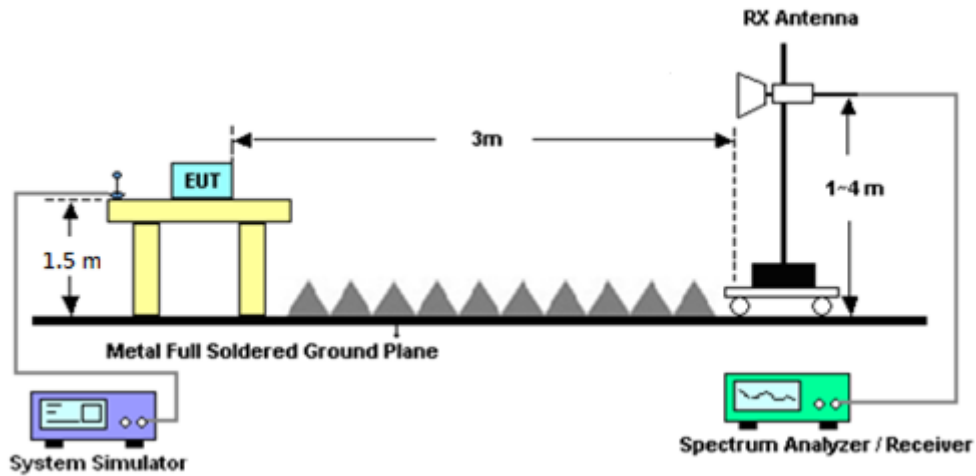
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB 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 1GHz and 1.5 meter for frequency above 1GHz 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 = 1MHz, VBW = 3MHz, 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. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. $EIRP (dBm) = S.G. Power - Tx Cable Loss + Tx Antenna Gain$
11. $ERP (dBm) = EIRP - 2.15$
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
LTE Base Station	Anritsu	MT8821C	6262116725	-	Sep. 09, 2020	Dec. 16, 2020~ Jan. 06, 2021	Sep. 08, 2021	Conducted (TH05-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	37059 & 01	30MHz~1GHz	Oct. 11, 2020	Dec. 11, 2020~ Dec. 17, 2020	Oct. 10, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&00800N1D01N-06	41912&05	30MHz to 1GHz	Feb. 09, 2020	Dec. 11, 2020~ Dec. 17, 2020	Feb. 08, 2021	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2019	Dec. 11, 2020~ Dec. 17, 2020	Dec. 26, 2020	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1-18GHz	Aug. 04, 2020	Dec. 11, 2020~ Dec. 17, 2020	Aug. 03, 2021	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz~18GHz	Nov. 03, 2020	Dec. 11, 2020~ Dec. 17, 2020	Nov. 02, 2021	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Dec. 02, 2020	Dec. 11, 2020~ Dec. 17, 2020	Dec. 01, 2021	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 22, 2020	Dec. 11, 2020~ Dec. 17, 2020	May 21, 2021	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055006	1GHz~18GHz	May 07, 2020	Dec. 11, 2020~ Dec. 17, 2020	May 06, 2021	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 21, 2020	Dec. 11, 2020~ Dec. 17, 2020	Aug. 20, 2021	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz ~ 40GHz	Jun. 15, 2020	Dec. 11, 2020~ Dec. 17, 2020	Jun. 14, 2021	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Feb. 10, 2020	Dec. 11, 2020~ Dec. 17, 2020	Feb. 09, 2021	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	May 04, 2020	Dec. 11, 2020~ Dec. 17, 2020	May 03, 2021	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Dec. 11, 2020~ Dec. 17, 2020	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Dec. 11, 2020~ Dec. 17, 2020	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k5)	RK-000451	N/A	N/A	Dec. 11, 2020~ Dec. 17, 2020	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE, 508405/2E	30MHz~18G	Nov. 16, 2020	Dec. 11, 2020~ Dec. 17, 2020	Nov. 15, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 25, 2020	Dec. 11, 2020~ Dec. 17, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz-40GHz	Feb. 25, 2020	Dec. 11, 2020~ Dec. 17, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 12, 2020	Dec. 11, 2020~ Dec. 17, 2020	Mar. 11, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN4	1.53G Low Pass	Jul. 03, 2020	Dec. 11, 2020~ Dec. 17, 2020	Jul. 02, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60ST	SN5	1.2GHz High Pass Filter	Jul. 01, 2020	Dec. 11, 2020~ Dec. 17, 2020	Jun. 30, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN4	3GHz High Pass Filter	Sep. 16, 2020	Dec. 11, 2020~ Dec. 17, 2020	Sep. 15, 2021	Radiation (03CH15-HY)
Signal Generator	Anritsu	MG3694C	163401	0.1Hz~40GHz	Feb. 15, 2020	Dec. 11, 2020~ Dec. 17, 2020	Feb. 14, 2021	Radiation (03CH15-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.98
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.31
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.92
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

Conducted Power (*Unit: dBm)						
Band	WCDMA Band V			WCDMA Band II		
Channel	4132	4182	4233	9262	9400	9538
Frequency	826.4	836.4	846.6	1852.4	1880	1907.6
RMC 12.2K	22.48	22.36	22.36	22.82	22.64	22.85
HSDPA Subtest-1	21.48	21.82	21.79	21.46	21.28	21.53
HSDPA Subtest-2	21.64	21.63	21.39	21.42	21.36	21.51
HSDPA Subtest-3	21.21	21.41	21.18	21.20	21.02	21.42
HSDPA Subtest-4	21.23	21.13	21.23	20.72	20.88	20.97
HSUPA Subtest-1	21.62	21.82	21.36	21.42	21.23	21.54
HSUPA Subtest-2	19.69	19.80	19.45	19.64	19.72	19.87
HSUPA Subtest-3	20.51	20.43	20.82	20.12	20.42	20.71
HSUPA Subtest-4	19.48	19.54	19.64	19.66	19.72	19.94
HSUPA Subtest-5	21.37	21.49	21.40	21.09	21.80	21.93

Conducted Power (*Unit: dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	22.52	22.46	22.61
HSDPA Subtest-1	21.63	21.78	21.83
HSDPA Subtest-2	21.44	21.53	21.58
HSDPA Subtest-3	21.19	21.08	21.35
HSDPA Subtest-4	21.15	21.16	21.28
HSUPA Subtest-1	21.61	21.68	21.52
HSUPA Subtest-2	19.57	19.53	19.49
HSUPA Subtest-3	20.57	20.49	20.55
HSUPA Subtest-4	19.61	19.82	19.52
HSUPA Subtest-5	21.48	21.33	21.66



Appendix B. Test Results of ERP/EIRP and Radiated Test

ERP/EIRP

Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	WCDMA Band V	22.48	0.1770	21.73	0.1489
Middle	RMC 12.2Kbps	22.36	0.1722	21.61	0.1449
Highest	(GT - LC = 1.4 dB)	22.36	0.1722	21.61	0.1449
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band II	22.82	0.1914	26.92	0.4920
Middle	RMC 12.2Kbps	22.64	0.1837	26.74	0.4721
Highest	(GT - LC = 4.1 dB)	22.85	0.1928	26.95	0.4955
Limit	EIRP < 2W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band IV	22.52	0.1786	26.62	0.4592
Middle	RMC 12.2Kbps	22.46	0.1762	26.56	0.4529
Highest	(GT - LC = 4.1 dB)	22.61	0.1824	26.71	0.4688
Limit	EIRP < 1W	Result		PASS	



Radiated Spurious Emission

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	1656	-52.49	-13	-39.49	-64.52	-57.84	1.84	9.34	H
	2480	-44.72	-13	-31.72	-61.35	-51.00	2.25	10.68	H
	3304	-47.24	-13	-34.24	-65.92	-54.80	2.63	12.33	H
									H
									H
	1656	-52.67	-13	-39.67	-65.16	-58.02	1.84	9.34	V
	2480	-44.81	-13	-31.81	-61.62	-51.09	2.25	10.68	V
	3304	-48.20	-13	-35.20	-67.28	-55.76	2.63	12.33	V
									V
									V
Middle	1672	-52.39	-13	-39.39	-64.54	-57.82	1.85	9.43	H
	2512	-44.34	-13	-31.34	-61.07	-50.72	2.27	10.80	H
	3344	-48.44	-13	-35.44	-67.03	-56.29	2.65	12.65	H
									H
									H
	1672	-51.09	-13	-38.09	-63.71	-56.52	1.85	9.43	V
	2512	-45.77	-13	-32.77	-62.62	-52.15	2.27	10.80	V
	3344	-47.41	-13	-34.41	-66.39	-55.26	2.65	12.65	V
									V
									V



Highest	1696	-52.57	-13	-39.57	-64.91	-58.14	1.86	9.58	H
	2536	-44.75	-13	-31.75	-61.39	-51.12	2.28	10.80	H
	3384	-48.68	-13	-35.68	-67.16	-56.50	2.66	12.63	H
									H
									H
	1696	-52.01	-13	-39.01	-64.83	-57.58	1.86	9.58	V
	2536	-45.75	-13	-32.75	-62.65	-52.12	2.28	10.80	V
	3384	-48.44	-13	-35.44	-67.3	-56.26	2.66	12.63	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	3427	-45.41	-13	-32.41	-64.89	-55.33	2.68	12.60	H
	5137	-43.26	-13	-30.26	-67.62	-52.39	3.32	12.45	H
	6849	-39.55	-13	-26.55	-67.63	-48.09	3.86	12.40	H
									H
									H
	3427	-47.32	-13	-34.32	-67.15	-57.24	2.68	12.60	V
	5137	-42.65	-13	-29.65	-67.56	-51.78	3.32	12.45	V
	6849	-38.72	-13	-25.72	-67.15	-47.26	3.86	12.40	V
									V
									V
Middle	3462	-46.18	-13	-33.18	-65.99	-56.03	2.70	12.55	H
	5197	-43.04	-13	-30.04	-67.62	-52.48	3.34	12.78	H
	6930	-38.05	-13	-25.05	-66.36	-46.16	3.89	12.00	H
									H
									H
	3462	-45.39	-13	-32.39	-65.59	-55.24	2.70	12.55	V
	5197	-42.06	-13	-29.06	-67.13	-51.50	3.34	12.78	V
	6930	-37.43	-13	-24.43	-65.83	-45.54	3.89	12.00	V
									V
									V



Highest	3505	-43.97	-13	-30.97	-64.14	-53.63	2.72	12.38	H
	5257	-42.74	-13	-29.74	-67.36	-52.61	3.36	13.23	H
	7010	-36.67	-13	-23.67	-65.2	-44.60	3.91	11.84	H
									H
									H
	3505	-44.48	-13	-31.48	-65.02	-54.14	2.72	12.38	V
	5257	-42.55	-13	-29.55	-67.57	-52.42	3.36	13.23	V
	7010	-37.97	-13	-24.97	-66.39	-45.90	3.91	11.84	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	3707	-44.00	-13	-31.00	-64.91	-53.64	2.77	12.41	H
	5555	-41.57	-13	-28.57	-66.59	-51.50	3.46	13.39	H
	7410	-37.04	-13	-24.04	-66.56	-44.22	3.98	11.16	H
									H
									H
	3707	-44.03	-13	-31.03	-65.34	-53.67	2.77	12.41	V
	5555	-42.33	-13	-29.33	-67.43	-52.26	3.46	13.39	V
	7410	-35.84	-13	-22.84	-65.82	-43.02	3.98	11.16	V
									V
									V
Middle	3763	-44.50	-13	-31.50	-65.6	-54.19	2.78	12.47	H
	5639	-42.40	-13	-29.40	-67.41	-52.37	3.48	13.46	H
	7522	-37.79	-13	-24.79	-67.2	-44.98	4.01	11.20	H
									H
									H
	3763	-45.24	-13	-32.24	-66.73	-54.93	2.78	12.47	V
	5639	-41.98	-13	-28.98	-67.21	-51.95	3.48	13.46	V
	7522	-37.13	-13	-24.13	-66.94	-44.32	4.01	11.20	V
									V
									V



Highest	3812	-45.00	-13	-32.00	-66.22	-54.58	2.79	12.38	H
	5723	-42.56	-13	-29.56	-68.02	-52.46	3.50	13.40	H
	7627	-37.86	-13	-24.86	-66.92	-45.27	4.05	11.45	H
									H
									H
	3812	-44.39	-13	-31.39	-66	-53.97	2.79	12.38	V
	5723	-41.91	-13	-28.91	-67.6	-51.81	3.50	13.40	V
	7627	-37.22	-13	-24.22	-66.82	-44.63	4.05	11.45	V
									V
									V

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