



Partial FCC RF Test Report

APPLICANT : Huawei Technologies Co.,Ltd.
EQUIPMENT : Smart Phone
BRAND NAME : honor
MODEL NAME : JAT-L41
FCC ID : QISJAT-L41
STANDARD : 47 CFR Part 2, 22(H), 24(E)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

This is a partial report. The product was received on Jan. 14, 2019 and completely tested on Jan. 24, 2019. We, Sporton International (Shenzhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Shenzhen) Inc., the test report shall not be reproduced except in full.

Eric Shih



Approved by: Eric Shih / Manager

Sporton International (Shenzhen) Inc.

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Guangdong Province 518055, China**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG911406A	Rev. 01	Initial issue of report	Jan. 31, 2019



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiation	$< 43 + 10 \log_{10}(P[\text{Watts}])$	PASS	Under limit 40.66 dB at 1672.80 MHz



1 General Description

1.1 Applicant

Huawei Technologies Co.,Ltd.

Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.2 Manufacturer

Huawei Technologies Co.,Ltd.

Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart Phone
Brand Name	honor
Model Name	JAT-L41
FCC ID	QISJAT-L41
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+/DC-HSDPA/LTE WLAN 2.4GHz 802.11b/g/n (HT20/HT40) Bluetooth BR/EDR/LE
IMEI Code	Radiated Emission: N/A
HW Version	HL1JATM
SW Version	9.0.1.108(C900E70R1P8)
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	GSM/GPRS/EDGE: 850: 824.2 MHz ~ 848.8 MHz 1900: 1850.2 MHz ~ 1909.8MHz WCDMA: Band V: 826.4 MHz ~ 846.6 MHz Band II: 1852.4 MHz ~ 1907.6 MHz
Rx Frequency	GSM/GPRS/EDGE: 850: 869.2 MHz ~ 893.8 MHz 1900: 1930.2 MHz ~ 1989.8 MHz WCDMA: Band V: 871.4 MHz ~ 891.6 MHz Band II: 1932.4 MHz ~ 1987.6 MHz
Antenna Type	Fixed Internal Antenna
Antenna Gain	Cellular Band: -2.10 dBi PCS Band: 1.10 dBi
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK WCDMA : BPSK (Uplink) HSDPA/DC-HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+ : 16QAM DC-HSDPA : 64QAM

1.5 Modification of EUT

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

1.6 Accessories List

Specification of Accessory				
AC Adapter 1	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100B01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	Dongguan Phitek Electronics Co., Ltd		
AC Adapter 2	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100B01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	HUIZHOU BYD ELECTRONIC CO., LTD		
AC Adapter 3	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100B01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	SHENZHEN HUNTKEY ELECTRIC CO., LTD.		
AC Adapter 4	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100E01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	Dongguan Phitek Electronics Co., Ltd.		
AC Adapter 5	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100E01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	HUIZHOU BYD ELECTRONIC CO., LTD		
AC Adapter 6	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100E01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	SHENZHEN HUNTKEY ELECTRIC CO., LTD.		
AC Adapter 7	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100A01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	Dongguan Phitek Electronics Co., Ltd.		
AC Adapter 8	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100A01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	HUIZHOU BYD ELECTRONIC CO., LTD		
AC Adapter 9	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100A01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	SHENZHEN HUNTKEY ELECTRIC CO., LTD.		
AC Adapter 10	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100U01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	Dongguan Phitek Electronics Co., Ltd.		
AC Adapter 11	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100U01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	HUIZHOU BYD ELECTRONIC CO., LTD		
AC Adapter 12	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HW-050100U01
	Power Rating	I/P: 100 - 240 Vac; O/P: 5Vdc, 1.0A		
	Manufacturer	SHENZHEN HUNTKEY ELECTRIC CO., LTD.		

Battery 1	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HB405979ECW
	Power Rating	3.82Vdc, 2920mAh	Manufacturer	Sunwoda
Battery 2	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HB405979ECW
	Power Rating	3.82Vdc, 2920mAh	Manufacturer	SCUD
Battery 3	Brand Name	Huawei Technologies Co., Ltd.	Model Name	HB405979ECW
	Power Rating	3.82Vdc, 2920mAh	Manufacturer	Desay
USB Cable 1	Brand Name	Huawei Technologies Co., Ltd.	Model Name	L99U2013-CS-H
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 2	Brand Name	Huawei Technologies Co., Ltd.	Model Name	203-0786-0
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 3	Brand Name	Huawei Technologies Co., Ltd.	Model Name	130-26654
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 4	Brand Name	Huawei Technologies Co., Ltd.	Model Name	WA0007
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 5	Brand Name	Huawei Technologies Co., Ltd.	Model Name	L99U2017-CS-H
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 6	Brand Name	Huawei Technologies Co., Ltd.	Model Name	203-1583-0
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 7	Brand Name	Huawei Technologies Co., Ltd.	Model Name	130-26669
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 8	Brand Name	Huawei Technologies Co., Ltd.	Model Name	WA0001
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		
USB Cable 9	Brand Name	Huawei Technologies Co., Ltd.	Model Name	CUBB01M-HC304-DH
	Signal Line	1.0 meter, non-shielded cable, without ferrite core		

1.7 Testing Location

Sporton Lab is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600156-0).

Test Site	Sporton International (Shenzhen) Inc.		
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan District, Shenzhen City, Guangdong Province 518055, China TEL: +86-755- 3320-2398		
Test Site No.	Sporton Site No.	FCC designation No.	FCC Test Firm Registration No.
	03CH01-SZ	CN5019	577730

1.8 Applicable Standards

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

- ♦ 47 CFR Part 2, 22(H), 24(E)
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP 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.

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.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

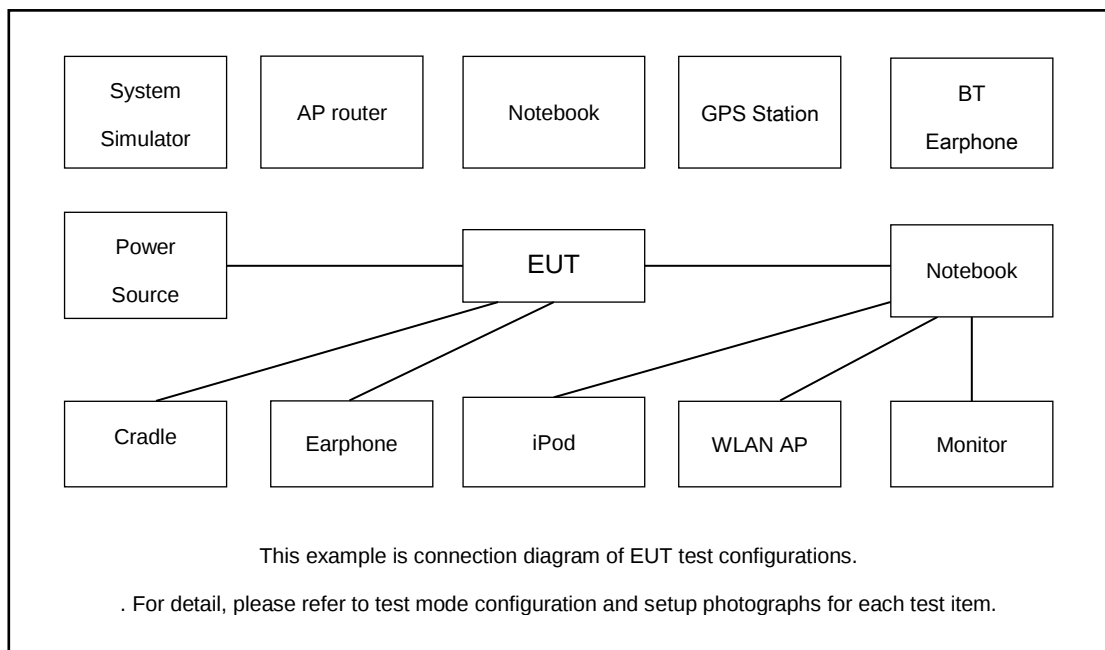
1. 30 MHz to 10th harmonic for GSM850 and WCDMA Band V.
2. 30 MHz to 10th harmonic for GSM1900 and WCDMA Band II.

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
GSM 850	■ GSM Link ■ EDGE class 8 Link
GSM 1900	■ GSM Link ■ EDGE class 8 Link
WCDMA Band V	■ RMC 12.2Kbps Link
WCDMA Band II	■ RMC 12.2Kbps Link

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Trade 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.	DC Power Supply	Topward	3303DR	N/A	N/A	Unshielded, 1.8m
3.	Earphone	Apple	MC690ZP/A	N/A	Shielded, 1.0m	Earphone

2.4 Frequency List of Low/Middle/High Channels

Frequency List				
Band	Channel/Frequency(MHz)	Lowest	Middle	Highest
GSM850	Channel	128	189	251
	Frequency	824.2	836.4	848.8
WCDMA Band V	Channel	4132	4182	4233
	Frequency	826.4	836.4	846.6
GSM1900	Channel	512	661	810
	Frequency	1850.2	1880.0	1909.8
WCDMA Band II	Channel	9262	9400	9538
	Frequency	1852.4	1880.0	1907.6

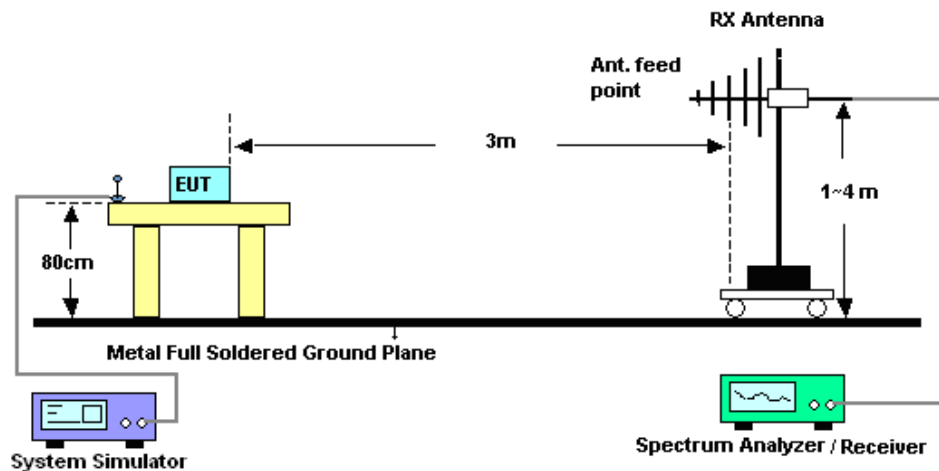
3 Radiated Test Items

3.1 Measuring Instruments

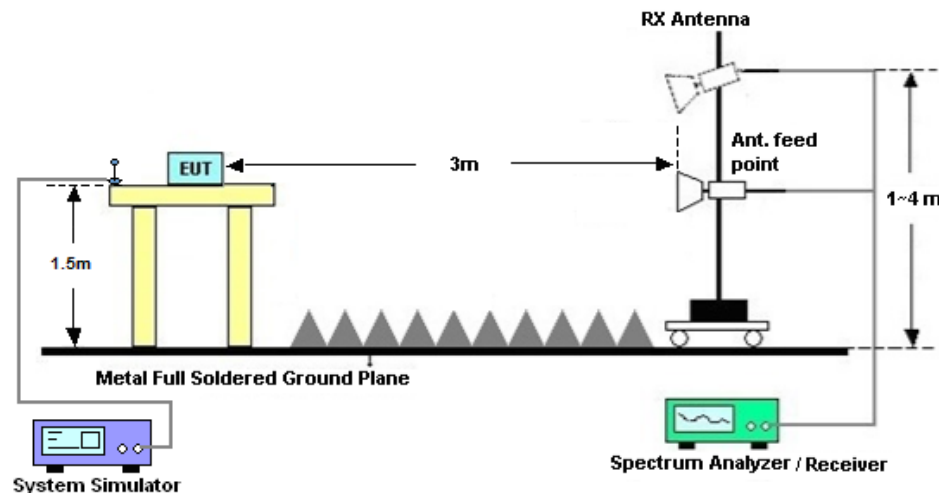
See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 For radiated test from 30MHz to 1GHz



3.2.2 For radiated test above 1GHz



3.3 Test Result of Radiated Test

Please refer to Appendix A.

3.4 Field Strength of Spurious Radiation Measurement

3.4.1 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.

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. 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.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. 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.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
12. $ERP \text{ (dBm)} = EIRP - 2.15$
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Aug. 30, 2018	Jan. 24, 2019	Aug. 29, 2019	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jun. 05, 2018	Jan. 24, 2019	Jun. 04, 2019	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	119436	1GHz~18GHz	Jun. 28, 2018	Jan. 24, 2019	Jun. 27, 2019	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Mar. 30, 2018	Jan. 24, 2019	Mar. 29, 2019	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 20, 2018	Jan. 24, 2019	Apr. 19, 2019	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1707137	1GHz~18GHz	Oct. 19, 2018	Jan. 24, 2019	Oct. 18, 2019	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270104	0.5GHz~26.5Ghz	Dec. 26, 2018	Jan. 24, 2019	Dec. 25, 2019	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 17, 2018	Jan. 24, 2019	Jul. 16, 2019	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Jan. 24, 2019	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 24, 2019	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 24, 2019	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.5dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.5dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.0dB
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Appendix A. Test Results of Radiated Test

Radiated Spurious Emission

GSM850 (GSM)									
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)
Middle	1672.8	-54.26	-13	-41.26	-65.20	-58.67	2.84	9.40	H
	2509.2	-54.08	-13	-41.08	-72.68	-58.83	3.7	10.60	H
	3345.6	-58.25	-13	-45.25	-78.86	-64.33	4.37	12.60	H
	1672.8	-58.34	-13	-45.34	-69.99	-62.75	2.84	9.40	V
	2509.2	-57.33	-13	-44.33	-76.14	-62.08	3.70	10.60	V
	3345.6	-57.37	-13	-44.37	-78.28	-63.45	4.37	12.60	V

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

GSM850 (EDGE class 8)									
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)
Middle	1672.8	-53.66	-13	-40.66	-64.60	-58.07	2.84	9.40	H
	2509.2	-54.63	-13	-41.63	-73.23	-59.38	3.7	10.60	H
	3345.6	-58.13	-13	-45.13	-78.74	-64.21	4.37	12.60	H
	1672.8	-59.08	-13	-46.08	-70.73	-63.49	2.84	9.40	V
	2509.2	-57.95	-13	-44.95	-76.76	-62.70	3.70	10.60	V
	3345.6	-57.86	-13	-44.86	-78.77	-63.94	4.37	12.60	V

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



GSM1900 (GSM)									
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)
Middle	3760	-57.82	-13	-44.82	-79.76	-65.57	4.85	12.60	H
	5640	-57.27	-13	-44.27	-80.89	-64.79	5.58	13.10	H
	7520	-55.40	-13	-42.40	-81.28	-60.14	6.56	11.30	H
	3760	-55.27	-13	-42.27	-80.37	-63.02	4.85	12.60	V
	5640	-56.96	-13	-43.96	-80.73	-64.48	5.58	13.10	V
	7520	-55.32	-13	-42.32	-81.18	-60.06	6.56	11.30	V

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

GSM1900 (EDGE class 8)									
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)
Middle	3760	-57.92	-13	-44.92	-79.86	-65.67	4.85	12.60	H
	5640	-57.60	-13	-44.60	-81.22	-65.12	5.58	13.10	H
	7520	-55.21	-13	-42.21	-81.09	-59.95	6.56	11.30	H
	3760	-55.25	-13	-42.25	-80.35	-63.00	4.85	12.60	V
	5640	-57.33	-13	-44.33	-81.1	-64.85	5.58	13.10	V
	7520	-55.32	-13	-42.32	-81.18	-60.06	6.56	11.30	V

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



WCDMA Band V(RMC 12.2Kbps)									
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)
Middle	1672.8	-65.40	-13	-52.40	-76.34	-69.81	2.84	9.40	H
	2509.2	-59.07	-13	-46.07	-77.67	-63.82	3.7	10.60	H
	3345.6	-58.24	-13	-45.24	-78.85	-64.32	4.37	12.60	H
	1672.8	-64.54	-13	-51.54	-76.19	-68.95	2.84	9.40	V
	2509.2	-58.78	-13	-45.78	-77.59	-63.53	3.70	10.60	V
	3345.6	-57.99	-13	-44.99	-78.90	-64.07	4.37	12.60	V

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

WCDMA Band II(RMC 12.2Kbps)									
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)
Middle	3760	-57.87	-13	-44.87	-79.81	-65.62	4.85	12.60	H
	5640	-57.40	-13	-44.40	-81.02	-64.92	5.58	13.10	H
	7520	-55.35	-13	-42.35	-81.23	-60.09	6.56	11.30	H
	3760	-55.36	-13	-42.36	-80.46	-63.11	4.85	12.60	V
	5640	-57.21	-13	-44.21	-80.98	-64.73	5.58	13.10	V
	7520	-55.46	-13	-42.46	-81.32	-60.20	6.56	11.30	V

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