FCC RF Test Report

APPLICANT	:	PAX Technology Limited
EQUIPMENT	:	Mobile Payment Terminal
BRAND NAME	:	PAX
MODEL NAME	:	D190 3G
FCC ID	:	V5PD190WCDMA
STANDARD	:	47 CFR Part 2, 22(H), 24(E)
CLASSIFICATION	:	PCS Licensed Transmitter (PCB)

The product was installed a module during the test: UMTS/HSPA+ Module (Model Name: H330S, FCC ID: ZMOH330S) during test.

The product was received on Jun. 03, 2019 and completely tested on Jun. 13, 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.

Derreck Chen

Reviewed by: Derreck Chen / Supervisor

Eric Shih

Approved by: Eric Shih / Manager

ACCREDITED Cert #5145.01

Sporton International (ShenZhen) Inc.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG960307	Rev. 01	Initial issue of report	Jul. 30, 2019

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power	< 7 Watts	PASS	-
	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
-	§24.232(d)	Peak-to-Average Ratio	< 13 dB	PASS	1
-	§2.1049	Occupied Bandwidth	Reporting Only	PASS	1
-	§2.1051 §22.917(a) §24.238(a)	Band Edge Measurement	< 43+10log10(P[Watts])	PASS	1
-	§2.1051 §22.917(a) §24.238(a)	Conducted Emission	< 43+10log10(P[Watts])	PASS	1
-	§2.1055 §22.355	Frequency Stability for Temperature & Voltage	< 2.5 ppm for Part 22H	PASS	1
	§2.1055 §24.235		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	Under limit 26.64 dB at 2546.400 MHz
Remark 1: The conducted test items were leverage from module RF report which can refer to Report No. “RF190621W002-1 for 22H, RF190621W002-2 for 24E”.					

1 General Description

1.1 Applicant

PAX Technology Limited
Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Road, Wanchai, Hong Kong

1.2 Manufacturer

PAX Computer Technology (Shenzhen) Co., Ltd.
4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Payment Terminal
Brand Name	PAX
Model Name	D190 3G
FCC ID	V5PD190WCDMA
EUT supports Radios application	GPRS/EGPRS/WCDMA/HSPA/HSPA+ (16QAM uplink is not supported)/NFC WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth BR / EDR / LE
HW Version	D190-xxx-xxx-xxxx
SW Version	V0.0.0.1
EUT Stage	Production Unit

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	**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	**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
Maximum Output Power to Antenna	**GPRS/EDGE:** 850: 32.21 dBm 1900: 30.02 dBm **WCDMA:** Band V: 22.66 dBm Band II: 22.48 dBm
Antenna Type	FPC Antenna
Antenna Gain	Cellular Band: 0.80 dBi PCS Band: 1.00 dBi
Type of Modulation	GPRS: GMSK EDGE: GMSK / 8PSK WCDMA : BPSK (Uplink) HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+ : 16QAM (16QAM uplink is not supported)

1.5 Modification of EUT

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

1.6 Maximum ERP/EIRP Power

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22H	GSM850 GPRS class 8	GMSK	1.1803
Part 22H	GSM850 EDGE class 8	8PSK	0.3597
Part 22H	WCDMA Band V RMC 12.2Kbps	BPSK	0.1352
Part 24E	GSM1900 GPRS class 8	GMSK	1.2647
Part 24E	GSM1900 EDGE class 8	8PSK	0.4436
Part 24E	WCDMA Band II RMC 12.2Kbps	BPSK	0.2228

1.7 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH02-SZ	CN1256	421272

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:

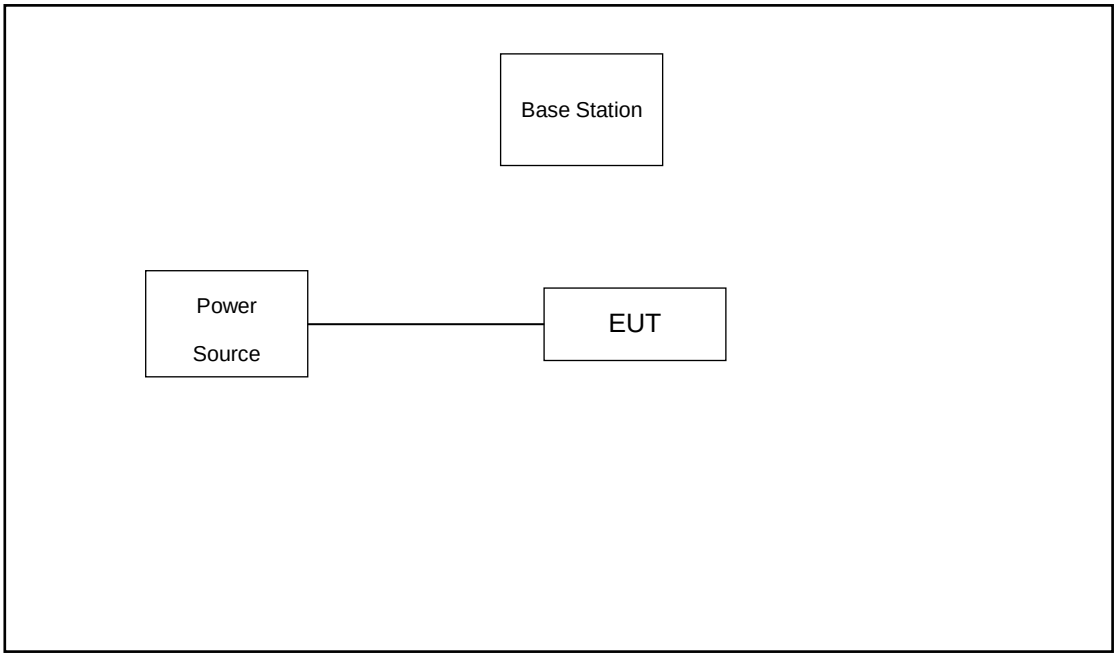
1. 30 MHz to 10th harmonic for GSM850 and WCDMA Band V.
2. 30 MHz to 10th harmonic for GSM1900 and WCDMA Band II.

All modes and data rates and positions were investigated.

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

Band	Radiated TCs
GSM 850	■ GPRS class 8 Link ■ EDGE class 8 Link
GSM 1900	■ GPRS class 8 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	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

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

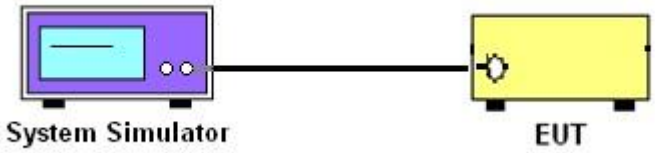
3 Conducted Test Result

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 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 GSM850 and WCDMA Band V.

The EIRP of mobile transmitters must not exceed 2 Watts for GSM1900 and WCDMA Band II.

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

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

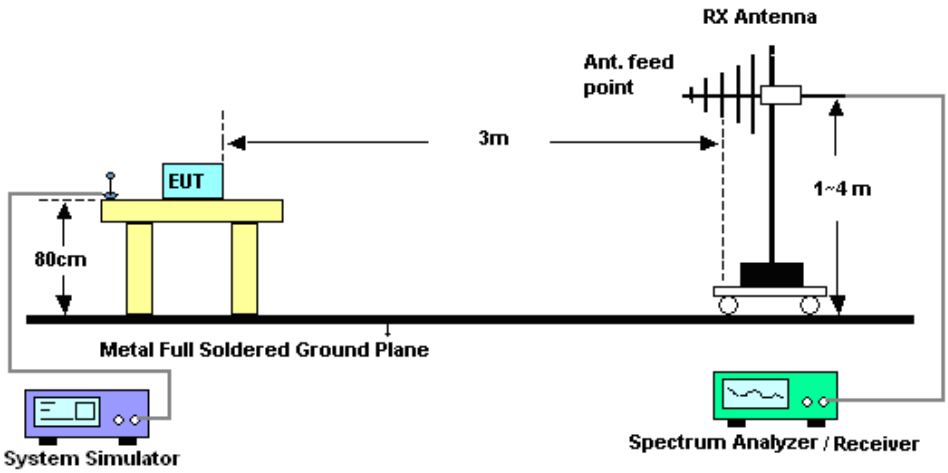
4 Radiated Test Items

4.1 Measuring Instruments

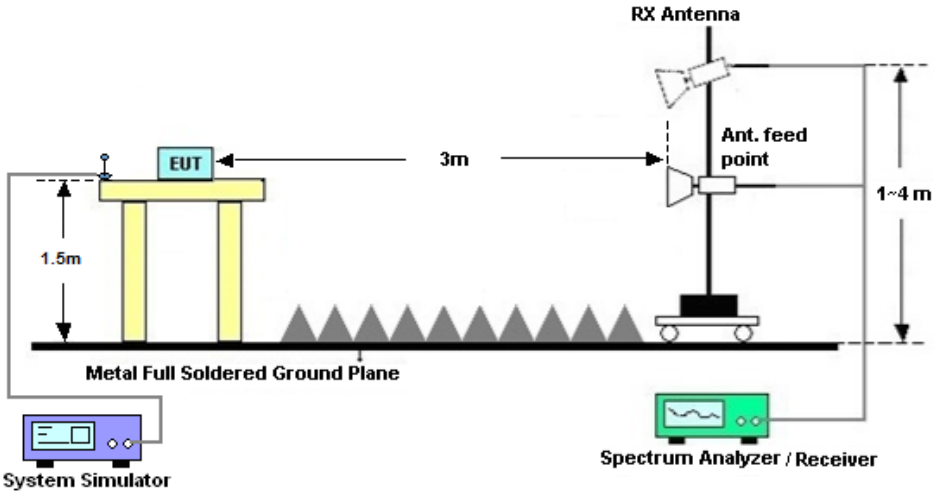
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

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

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 (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (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 + 10log(P) dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 19, 2019	Jun. 13, 2019	Apr. 18, 2020	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	Aug. 28, 2018	Jun. 13, 2019	Aug. 27, 2019	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 07, 2019	Jun. 13, 2019	Jan. 06, 2020	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 16, 2018	Jun. 13, 2019	Jul. 25, 2019	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Mar. 30, 2019	Jun. 13, 2019	Mar. 29, 2020	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18, 2018	Jun. 13, 2019	Oct. 18, 2019	Radiation (03CH02-SZ
HF Amplifier	Agilent	8449B	3008A01023	1GHz~26.5GHz	Oct. 18, 2018	Jun. 13, 2019	Oct. 17, 2019	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jun. 13, 2019	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jun. 13, 2019	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jun. 13, 2019	NCR	Radiation (03CH02-SZ)

NCR: No Calibration Required

6 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**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.3dB**

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.7dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

Conducted Power (*Unit: dBm)						
Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency	824.2	836.4	848.8	1850.2	1880.0	1909.8
GPRS class 8	32.21	32.05	32.07	29.95	30.02	30.00
GPRS class 10	29.99	29.84	29.87	27.31	27.55	27.45
GPRS class 11	28.58	28.43	28.48	25.93	26.17	26.06
GPRS class 12	27.53	27.39	27.43	24.95	25.19	25.08
EGPRS class 8	26.91	26.84	26.90	25.20	25.45	25.47
EGPRS class 10	24.18	24.11	24.08	22.77	23.10	23.13
EGPRS class 11	22.93	22.81	22.79	21.48	21.77	21.72
EGPRS class 12	22.92	22.70	22.73	21.38	21.65	21.71

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	22.66	22.55	22.51	22.08	22.48	22.24
HSDPA Subtest-1	22.57	22.49	22.46	21.98	22.47	22.11
HSDPA Subtest-2	22.33	22.23	22.20	21.79	22.28	21.92
HSDPA Subtest-3	22.07	21.98	21.95	21.58	22.06	21.70
HSDPA Subtest-4	21.82	21.72	21.70	21.28	21.75	21.47
HSUPA Subtest-1	22.55	22.51	22.43	20.67	21.08	20.82
HSUPA Subtest-2	22.54	22.50	22.40	19.84	20.42	20.11
HSUPA Subtest-3	21.99	21.99	21.93	20.79	21.37	21.01
HSUPA Subtest-4	22.53	22.49	22.41	20.19	20.74	20.39
HSUPA Subtest-5	22.29	22.25	22.18	21.90	22.45	22.10

ERP/EIRP

GSM850 (G_T - L_C= 0.80 dB)			
Channel	128	189	251
	(Low)	(Mid)	(High)
Frequency (MHz)	824.2	836.4	848.8
Conducted Power (dBm)	32.21	32.05	32.07
Conducted Power (Watts)	1.6634	1.6032	1.6106
ERP(dBm)	30.86	30.70	30.72
ERP(Watts)	1.2190	1.1749	1.1803

EDGE850 (G_T - L_C= 0.80 dB)			
Channel	128	189	251
	(Low)	(Mid)	(High)
Frequency (MHz)	824.2	836.4	848.8
Conducted Power (dBm)	26.91	26.84	26.90
Conducted Power (Watts)	0.4909	0.4831	0.4898
ERP(dBm)	25.56	25.49	25.55
ERP(Watts)	0.3597	0.3540	0.3589

GSM1900 (G_T - L_C= 1.00 dB)			
Channel	512	661	810
	(Low)	(Mid)	(High)
Frequency (MHz)	1850.2	1880	1909.8
Conducted Power (dBm)	29.95	30.02	30.00
Conducted Power (Watts)	0.9886	1.0046	1.0000
EIRP(dBm)	30.95	31.02	31.00
EIRP(Watts)	1.2445	1.2647	1.2589

EDGE1900 (G_T - L_C= 1.00 dB)			
Channel	512	661	810
	(Low)	(Mid)	(High)
Frequency (MHz)	1850.2	1880	1909.8
Conducted Power (dBm)	25.20	25.45	25.47
Conducted Power (Watts)	0.3311	0.3508	0.3524
EIRP(dBm)	26.20	26.45	26.47
EIRP(Watts)	0.4169	0.4416	0.4436

WCDMA Band V (G_T - L_C = 0.80 dB)			
Channel	4132	4182	4233
	(Low)	(Mid)	(High)
Frequency (MHz)	826.4	836.4	846.6
Conducted Power (dBm)	22.66	22.55	22.51
Conducted Power (Watts)	0.1845	0.1799	0.1782
ERP(dBm)	21.31	21.20	21.16
ERP(Watts)	0.1352	0.1318	0.1306

WCDMA Band II (G_T - L_C = 1.00 dB)			
Channel	9262	9400	9538
	(Low)	(Mid)	(High)
Frequency (MHz)	1852.4	1880	1907.6
Conducted Power (dBm)	22.08	22.48	22.24
Conducted Power (Watts)	0.1614	0.1770	0.1675
EIRP(dBm)	23.08	23.48	23.24
EIRP(Watts)	0.2032	0.2228	0.2109

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

GSM850 (GPRS 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)
Lowest	1648.4	-56.29	-13	-43.29	-65.36	-59.52	3.98	9.36	H
	2472.6	-47.24	-13	-34.24	-60.74	-50.79	4.85	10.55	H
	3296.8	-64.14	-13	-51.14	-79.72	-69.07	5.50	12.58	H
	4121	-55.98	-13	-42.98	-73.91	-60.45	5.98	12.60	H
	1648.4	-61.77	-13	-48.77	-70.47	-65.00	3.98	9.36	V
	2472.6	-43.99	-13	-30.99	-57.42	-47.54	4.85	10.55	V
	3296.8	-64.50	-13	-51.50	-80.15	-69.43	5.50	12.58	V
	4121	-59.11	-13	-46.11	-77.02	-63.58	5.98	12.60	V
Middle	1672.8	-57.77	-13	-44.77	-66.62	-61.02	4.00	9.40	H
	2509.2	-43.73	-13	-30.73	-57.21	-47.30	4.88	10.60	H
	3345.6	-64.88	-13	-51.88	-80.35	-69.81	5.52	12.60	H
	4182	-54.88	-13	-41.88	-72.86	-59.35	6.00	12.62	H
	1672.8	-55.67	-13	-42.67	-64.31	-58.92	4.00	9.40	V
	2509.2	-47.85	-13	-34.85	-61.18	-51.42	4.88	10.60	V
	3345.6	-64.74	-13	-51.74	-80.21	-69.67	5.52	12.60	V
	4182	-54.80	-13	-41.80	-72.67	-59.27	6.00	12.62	V
Highest	1697.6	-54.80	-13	-41.80	-63.78	-57.97	4.10	9.42	H
	2546.4	-40.18	-13	-27.18	-53.58	-43.76	4.90	10.63	H
	3395.2	-65.36	-13	-52.36	-80.39	-70.28	5.55	12.62	H
	4244	-54.45	-13	-41.45	-72.65	-58.93	6.02	12.65	H
	1697.6	-63.55	-13	-50.55	-72.33	-66.72	4.10	9.42	V
	2546.4	-44.00	-13	-31.00	-57.30	-47.58	4.90	10.63	V
	3395.2	-65.10	-13	-52.10	-80.16	-70.02	5.55	12.62	V
	4244	-58.00	-13	-45.00	-76.15	-62.48	6.02	12.65	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)
Lowest	1648.4	-67.67	-13	-54.67	-76.74	-70.90	3.98	9.36	H
	2472.6	-49.17	-13	-36.17	-62.67	-52.72	4.85	10.55	H
	3296.8	-64.27	-13	-51.27	-79.85	-69.20	5.50	12.58	H
	4121	-63.17	-13	-50.17	-81.10	-67.64	5.98	12.60	H
	1648.4	-68.65	-13	-55.65	-77.35	-71.88	3.98	9.36	V
	2472.6	-48.05	-13	-35.05	-61.48	-51.60	4.85	10.55	V
	3296.8	-64.43	-13	-51.43	-80.08	-69.36	5.50	12.58	V
	4121	-63.07	-13	-50.07	-80.98	-67.54	5.98	12.60	V
Middle	1672.8	-68.27	-13	-55.27	-77.12	-71.52	4.00	9.40	H
	2509.2	-42.67	-13	-29.67	-56.15	-46.24	4.88	10.60	H
	3345.6	-64.78	-13	-51.78	-80.25	-69.71	5.52	12.60	H
	4182	-59.05	-13	-46.05	-77.03	-63.52	6.00	12.62	H
	1672.8	-68.15	-13	-55.15	-76.79	-71.40	4.00	9.40	V
	2509.2	-42.55	-13	-29.55	-55.88	-46.12	4.88	10.60	V
	3345.6	-64.77	-13	-51.77	-80.24	-69.70	5.52	12.60	V
	4182	-62.28	-13	-49.28	-80.15	-66.75	6.00	12.62	V
Highest	1697.6	-67.46	-13	-54.46	-76.44	-70.63	4.10	9.42	H
	2546.4	-51.27	-13	-38.27	-64.67	-54.85	4.90	10.63	H
	3395.2	-65.41	-13	-52.41	-80.44	-70.33	5.55	12.62	H
	4244	-62.78	-13	-49.78	-80.98	-67.26	6.02	12.65	H
	1697.6	-64.72	-13	-51.72	-73.50	-67.89	4.10	9.42	V
	2546.4	-39.64	-13	-26.64	-52.94	-43.22	4.90	10.63	V
	3395.2	-65.23	-13	-52.23	-80.29	-70.15	5.55	12.62	V
	4244	-60.86	-13	-47.86	-79.01	-65.34	6.02	12.65	V

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

GSM1900 (GPRS 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)
Lowest	3700.4	-56.33	-13	-43.33	-73.25	-63.09	5.82	12.58	H
	5550.6	-58.89	-13	-45.89	-79.80	-64.61	7.28	13.00	H
	7400.8	-50.93	-13	-37.93	-77.77	-54.09	8.32	11.48	H
	3700.4	-55.77	-13	-42.77	-72.72	-62.53	5.82	12.58	V
	5550.6	-60.11	-13	-47.11	-81.22	-65.83	7.28	13.00	V
	7400.8	-53.16	-13	-40.16	-79.68	-56.32	8.32	11.48	V
Middle	3760	-56.69	-13	-43.69	-73.69	-63.44	5.85	12.60	H
	5640	-57.80	-13	-44.80	-78.47	-63.60	7.30	13.10	H
	7520	-53.69	-13	-40.69	-79.96	-56.84	8.35	11.50	H
	3760	-57.77	-13	-44.77	-74.81	-64.52	5.85	12.60	V
	5640	-59.07	-13	-46.07	-80.14	-64.87	7.30	13.10	V
	7520	-55.09	-13	-42.09	-81.17	-58.24	8.35	11.50	V
Highest	3819.6	-54.65	-13	-41.65	-71.78	-61.39	5.88	12.62	H
	5729.4	-59.16	-13	-46.16	-80.17	-64.97	7.32	13.13	H
	7639.2	-55.19	-13	-42.19	-81.21	-58.35	8.38	11.54	H
	3819.6	-57.43	-13	-44.43	-74.62	-64.17	5.88	12.62	V
	5729.4	-60.08	-13	-47.08	-81.42	-65.89	7.32	13.13	V
	7639.2	-55.28	-13	-42.28	-81.15	-58.44	8.38	11.54	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)
Lowest	3700.4	-62.39	-13	-49.39	-79.31	-69.15	5.82	12.58	H
	5550.6	-60.84	-13	-47.84	-81.75	-66.56	7.28	13.00	H
	7400.8	-54.75	-13	-41.75	-81.59	-57.91	8.32	11.48	H
	3700.4	-62.91	-13	-49.91	-79.86	-69.67	5.82	12.58	V
	5550.6	-60.63	-13	-47.63	-81.74	-66.35	7.28	13.00	V
	7400.8	-54.99	-13	-41.99	-81.51	-58.15	8.32	11.48	V
Middle	3760	-60.03	-13	-47.03	-77.03	-66.78	5.85	12.60	H
	5640	-61.17	-13	-48.17	-81.84	-66.97	7.30	13.10	H
	7520	-55.36	-13	-42.36	-81.63	-58.51	8.35	11.50	H
	3760	-62.16	-13	-49.16	-79.2	-68.91	5.85	12.60	V
	5640	-60.46	-13	-47.46	-81.53	-66.26	7.30	13.10	V
	7520	-55.29	-13	-42.29	-81.37	-58.44	8.35	11.50	V
Highest	3819.6	-60.53	-13	-47.53	-77.66	-67.27	5.88	12.62	H
	5729.4	-60.79	-13	-47.79	-81.80	-66.60	7.32	13.13	H
	7639.2	-55.53	-13	-42.53	-81.55	-58.69	8.38	11.54	H
	3819.6	-59.97	-13	-46.97	-77.16	-66.71	5.88	12.62	V
	5729.4	-60.53	-13	-47.53	-81.87	-66.34	7.32	13.13	V
	7639.2	-55.68	-13	-42.68	-81.55	-58.84	8.38	11.54	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)
Lowest	1652.8	-67.39	-13	-54.39	-76.49	-70.62	3.98	9.36	H
	2479.2	-64.45	-13	-51.45	-77.95	-68.00	4.85	10.55	H
	3305.6	-64.60	-13	-51.60	-80.14	-69.53	5.50	12.58	H
	4132	-63.04	-13	-50.04	-80.95	-67.51	5.98	12.60	H
	1652.8	-68.47	-13	-55.47	-77.20	-71.70	3.98	9.36	V
	2479.2	-64.00	-13	-51.00	-77.43	-67.55	4.85	10.55	V
	3305.6	-64.17	-13	-51.17	-79.76	-69.10	5.50	12.58	V
	4132	-62.91	-13	-49.91	-80.80	-67.38	5.98	12.60	V
Middle	1672.8	-68.22	-13	-55.22	-77.07	-71.47	4.00	9.40	H
	2509.2	-61.15	-13	-48.15	-74.63	-64.72	4.88	10.60	H
	3345.6	-64.98	-13	-51.98	-80.45	-69.91	5.52	12.60	H
	4182	-62.54	-13	-49.54	-80.52	-67.01	6.00	12.62	H
	1672.8	-68.45	-13	-55.45	-77.09	-71.70	4.00	9.40	V
	2509.2	-61.24	-13	-48.24	-74.57	-64.81	4.88	10.60	V
	3345.6	-64.86	-13	-51.86	-80.33	-69.79	5.52	12.60	V
	4182	-62.89	-13	-49.89	-80.76	-67.36	6.00	12.62	V
Highest	1693.2	-68.05	-13	-55.05	-77.03	-71.22	4.10	9.42	H
	2539.8	-60.88	-13	-47.88	-74.27	-64.46	4.90	10.63	H
	3386.4	-65.29	-13	-52.29	-80.46	-70.21	5.55	12.62	H
	4233	-63.05	-13	-50.05	-81.19	-67.53	6.02	12.65	H
	1693.2	-68.47	-13	-55.47	-77.25	-71.64	4.10	9.42	V
	2539.8	-59.62	-13	-46.62	-72.91	-63.20	4.90	10.63	V
	3386.4	-65.29	-13	-52.29	-80.49	-70.21	5.55	12.62	V
	4233	-62.98	-13	-49.98	-81.06	-67.46	6.02	12.65	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)
Lowest	3704.8	-55.72	-13	-42.72	-72.64	-62.48	5.82	12.58	H
	5557.2	-60.77	-13	-47.77	-81.68	-66.49	7.28	13.00	H
	7409.6	-54.62	-13	-41.62	-81.46	-57.78	8.32	11.48	H
	3704.8	-56.80	-13	-43.80	-73.75	-63.56	5.82	12.58	V
	5557.2	-60.73	-13	-47.73	-81.84	-66.45	7.28	13.00	V
	7409.6	-55.06	-13	-42.06	-81.58	-58.22	8.32	11.48	V
Middle	3760	-60.13	-13	-47.13	-77.13	-66.88	5.85	12.60	H
	5640	-60.57	-13	-47.57	-81.24	-66.37	7.30	13.10	H
	7520	-55.18	-13	-42.18	-81.45	-58.33	8.35	11.50	H
	3760	-61.54	-13	-48.54	-78.58	-68.29	5.85	12.60	V
	5640	-60.41	-13	-47.41	-81.48	-66.21	7.30	13.10	V
	7520	-55.57	-13	-42.57	-81.65	-58.72	8.35	11.50	V
Highest	3815.2	-58.52	-13	-45.52	-75.66	-65.26	5.88	12.62	H
	5722.8	-60.93	-13	-47.93	-81.94	-66.74	7.32	13.13	H
	7630.4	-55.76	-13	-42.76	-81.77	-58.92	8.38	11.54	H
	3815.2	-60.36	-13	-47.36	-77.56	-67.10	5.88	12.62	V
	5722.8	-60.40	-13	-47.40	-81.74	-66.21	7.32	13.13	V
	7630.4	-55.69	-13	-42.69	-81.56	-58.85	8.38	11.54	V

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