



MEASUREMENT REPORT

FCC PART 22&24 Test Report

FCC ID 2AK4SLBC4-5US

APPLICANT MOBIKE (HONGKONG) LIMITED

Application Type Certification

Product Mobike Lock

Model No. LC4-8

Brand Name Mobike

FCC Classification PCS Licensed Transmitter (PCB)

FCC Rule Part(s) Part2, Part22 Subpart H, Part24 Subpart E

Test Procedure(s) ANSI/TIA-603-E-2016, KDB 971168 D01v03

Test Date October 25, 2017 ~ January 15, 2018

Reviewed By : Kevin Guo
(Kevin Guo)

Approved By : Marlin Chen
(Marlin Chen)



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1710WSU00401	Rev. 01	Initial report	01-15-2018	Valid

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§2.1033 General Information

Applicant:	MOBIKE (HONGKONG) LIMITED
Applicant Address:	10/F HONGKONG OFFSHORE CENTRE NO.28 AUSTIN AVENUE TSIM SHA TSUI KL
Manufacturer:	MOBIKE (HONGKONG) LIMITED
Manufacturer Address:	10/F HONGKONG OFFSHORE CENTRE NO.28 AUSTIN AVENUE TSIM SHA TSUI KL
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT Registration No.:	893164
FCC Rule Part(s):	Part2, Part22 Subpart H, Part24 Subpart E
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	PCS Licensed Transmitter (PCB)

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.



1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	Mobike Lock
Model No.	LC4-8
Brand Name	mobike
FCC ID	2AK4SLBC4-5US
Support RF Specification	GPRS/EDGE/WCDMA /HSUPA/HSDPA/HSPA+ Bluetooth v4.0 (BLE)
Rated Voltage	DC 3.7V

2.2. Product Specification Subjective to this Report

Operational Band	GPRS/EDGE 850 / 1900, WCDMA Band II / V
Tx Frequency	GPRS/EDGE: 850: 824.2MHz ~ 848.8MHz 1900: 1850.2MHz ~ 1909.8MHz WCDMA: Band V: 826.4MHz ~ 846.6MHz Band II: 1852.4MHz ~ 1907.6MHz
Rx Frequency	GPRS/EDGE: 850: 869.2MHz ~ 893.8MHz 1900: 1930.2MHz ~ 1989.8MHz WCDMA: Band V: 871.4MHz ~ 891.6MHz Band II: 1932.4MHz ~ 1987.6MHz
Maximum Output Power to Antenna	GPRS 850: 32.60dBm GPRS 1900: 26.29dBm WCDMA Band II: 23.80dBm WCDMA Band V: 23.81dBm
Antenna Type	PIFA Antenna
Antenna Gain	1.23 dBi
Type of Modulation	GPRS: GMSK; EDGE: 8PSK WCDMA/HSDPA/HSUPA/HSPA+: BPSK, QPSK, 16-QAM

Note: For other features of this EUT, test report will be issued separately.

2.3. Device Capabilities

This device contains the following capabilities:

850 / 1900 GPRS / EDGE, 850 / 1900 WCDMA / HSDPA / HSUPA/HSPA+/ Bluetooth v4.0 (BLE)

2.4. Test Configuration

The **Mobile Lock** was tested per the guidance of ANSI/TIA-603-E-2016 and KDB 971168 D01v03. See section 3.0 of this report for a description of the radiated and antenna port conducted emissions tests.

2.5. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

3. DESCRIPTION OF TEST

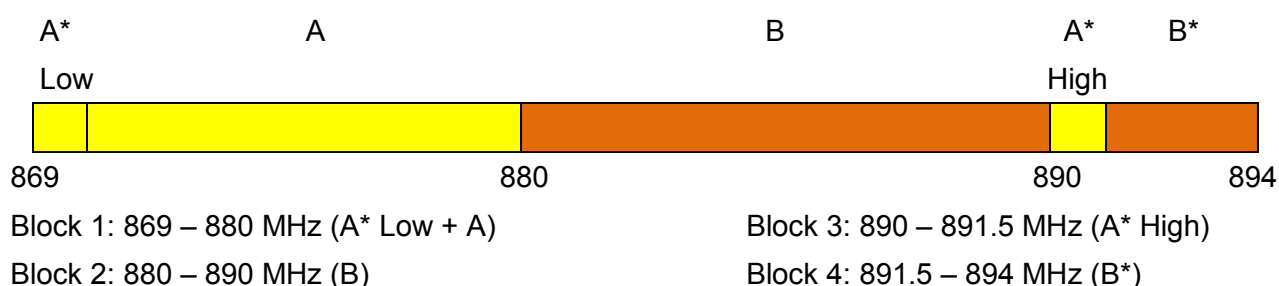
3.1. Evaluation Procedure

The measurement procedures described in the “Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards” (ANSI/TIA-603-E-2016) and “Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems” (KDB 971168) were used in the measurement of the **Mobile Lock**.

Deviation from measurement procedure.....None

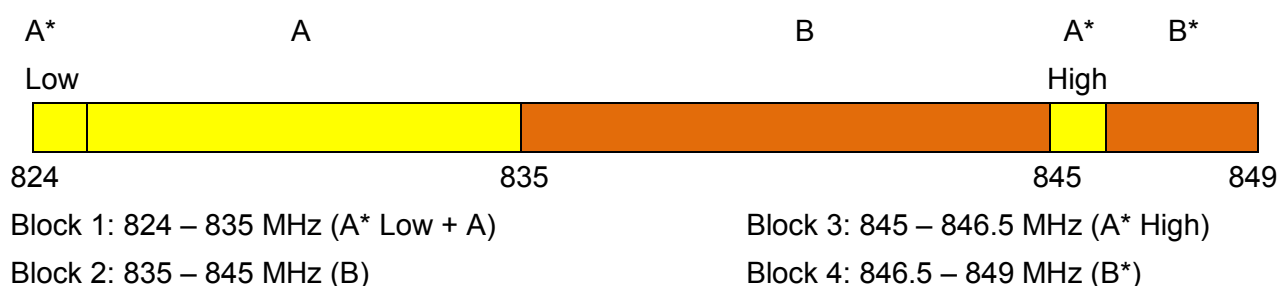
3.2. Cellular – Base Frequency Blocks

§22.905



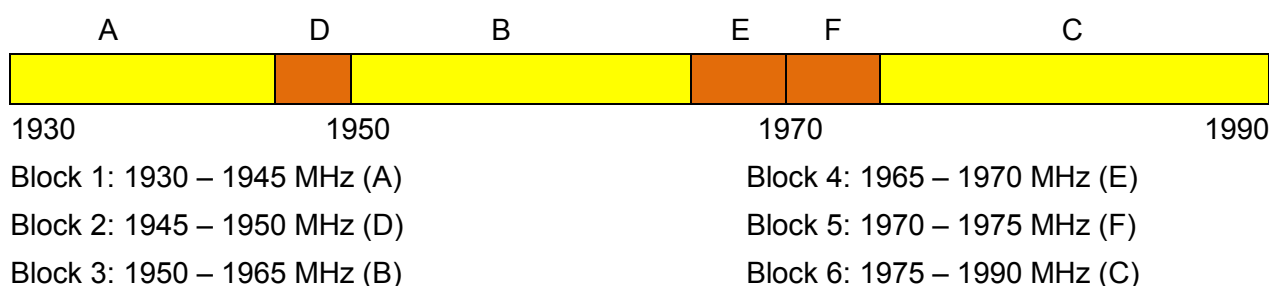
3.3. Cellular – Mobile Frequency Blocks

§22.905



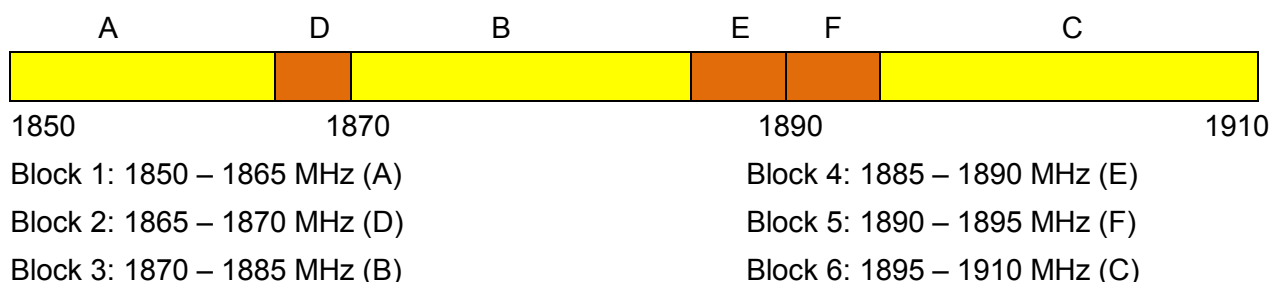
3.4. PCS – Base Frequency Blocks

§24.229



3.5. PCS – Mobile Frequency Blocks

§24.229



3.6. Radiated Power and Radiated Spurious Emissions

§2.1053 §22.913(a.2) §22.917(a) §24.232(c) §24.238(a)

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurement and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. A 80cm high PVC support structure is placed on top of the turntable.

The equipment under test was transmitting while connected to its integral antenna and is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Radiated power levels are also investigated with the receive antenna horizontally and vertically polarized. The maximized power level is recorded using the spectrum analyzer “Channel Power” function with the integration band set to the emissions’ occupied bandwidth, a RMS detector, RBW = 100kHz, VBW = 300kHz, and a 1 second sweep time over a minimum of 10 sweeps, per the guidelines of KDB 971168.

Per the guidance of ANSI/TIA-603-E-2016, a half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_d [\text{dBm}] = P_g [\text{dBm}] - \text{cable loss} [\text{dB}] + \text{antenna gain} [\text{dBd/dBi}]$$

Where, P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_g [\text{dBm}] - \text{cable loss} [\text{dB}]$.

The calculated P_d levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of $43 + 10 \cdot \log_{10}(\text{Power} [\text{Watts}])$ specified in 22.917(a) and 24.238(a).

4. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
PXA Signal Analyzer	Keysight	9030B	MRTSUE06395	1 year	2018/09/13
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2018/08/18
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2018/11/17
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2018/11/20
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2018/04/25
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2018/11/17
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2018/11/18
Broad Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2018/10/21
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2018/12/14
Amplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2018/06/14
Hygrothermograph	Testo	608-H1	MRTSUE06403	1 year	2018/08/14
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2018/05/10

Software	Version	Function
e3	V8.3.5	EMI Test Software

5. SAMPLE CALCULATIONS

GSM Emission Designator

Emission Designator = 250KGXW

GPRS BW = 250 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 250KG7W

GPRS BW = 250 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M16F9W

WCDMA BW = 4.16 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data) (Measured at the 99.75% power bandwidth)

Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

The receive spectrum analyzer reading at 3 meters with the EUT on the turntable was -81.0dBm.

The gain of the substituted antenna is 8.1dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3700.40MHz. So 6.1 dB is added to the signal generator reading of -30.9dBm yielding -24.80dBm. The fundamental EIRP was 25.50dBm so this harmonic was $25.50\text{dBm} - (-24.80) = 50.3\text{dBc}$.

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Radiated Emission Measurement - AC1
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz ~ 1GHz: $\pm 4.18\text{dB}$ 1GHz ~ 40GHz: $\pm 4.76\text{Db}$

7. TEST RESULT

7.1. Summary

Company Name: MOBIKE (HONGKONG) LIMITED
FCC ID: 2AK4SLBC4-5US
FCC Classification: PCS Licensed Transmitter (PCB)
Mode(s): GPRS / EDGE / WCDMA

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1053 22.917(a) 24.238(a)	Undesirable Emissions	$> 43 + \log_{10} (P[\text{Watts}])$ for all out-of-band emissions	Radiated	Pass	Section 7.2

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots shown in Section 4.0 were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.

7.2. Conducted & Radiated Power and Radiated Spurious Emissions

7.2.1. Test Limit

Radiated Power

For FCC Part 22.913(a)(2):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(b):

The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

Radiated Spurious Emissions

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

7.2.2. Test Procedure Used

KDB 971168 D01v03 - Section 7.0 & ANSI/TIA-603-E-2016

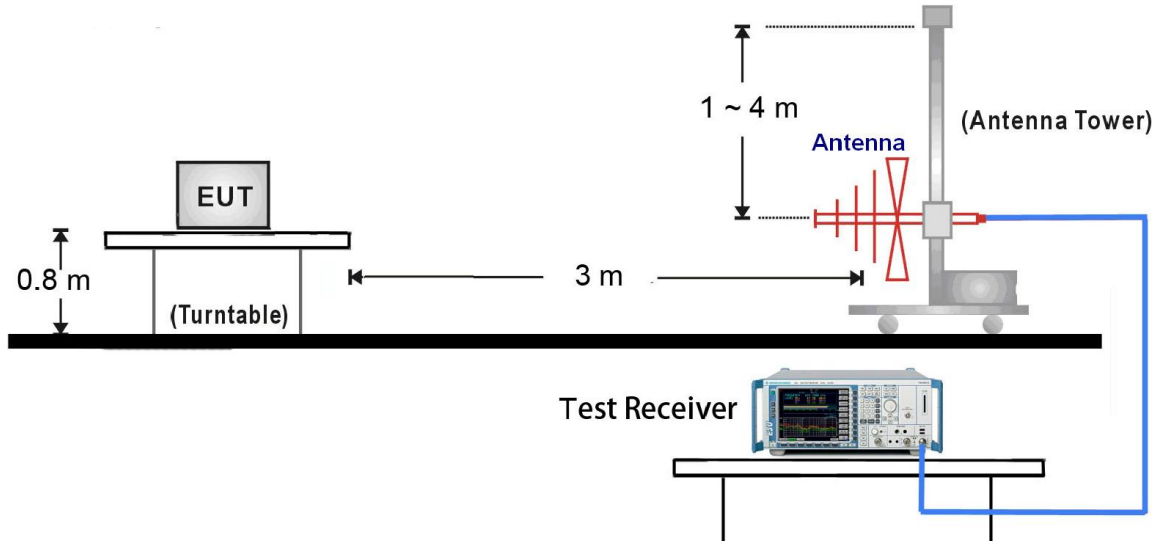
7.2.3. Test Setting

1. The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter
3. The output of the test antenna shall be connected to the measuring receiver.
4. The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
5. The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
6. The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7. The test antenna shall be raised and lowered again through the specified range of height until

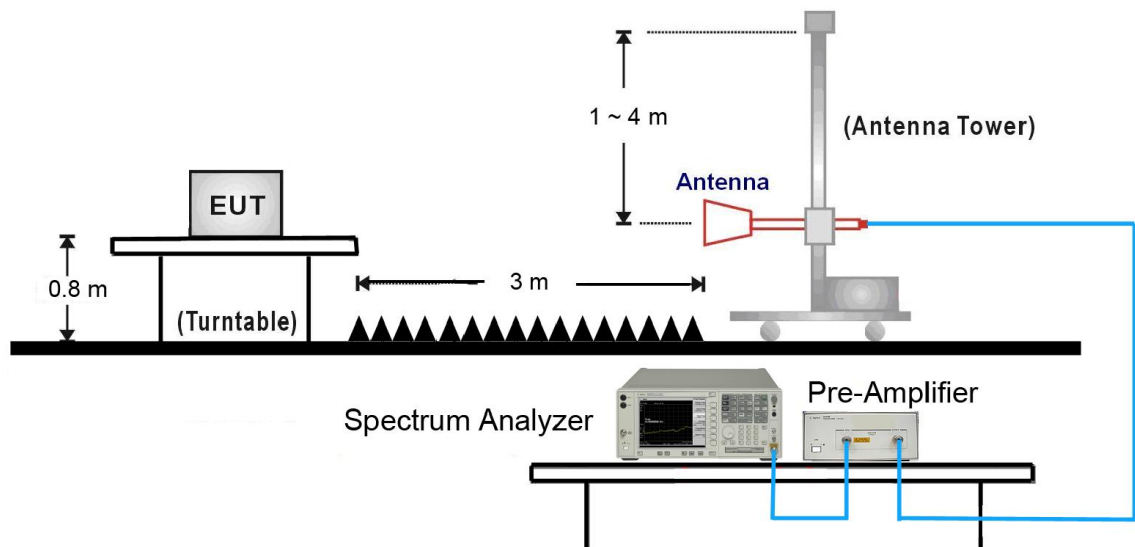
- a maximum signal level is detected by the measuring receiver.
8. The maximum signal level detected by the measuring receiver shall be noted.
 9. The transmitter shall be replaced by a substitution antenna.
 10. The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
 11. The substitution antenna shall be connected to a calibrated signal generator.
 12. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
 13. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
 14. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
 15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
 16. The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
 17. Test site anechoic chamber refer to ANSI C63.4: 2014.

7.2.4. Test Setup

30MHz ~ 1GHz Test Setup:



1GHz ~ 20GHz Test Setup:



7.2.5. Test Result

GPRS850

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 128 (824.20MHz)							
1646.0	H	-45.04	0.62	9.76	-54.18	-13	-41.18
2470.5	H	-41.70	0.76	10.48	-51.42	-13	-38.42
1646.0	V	-46.15	0.62	9.76	-55.29	-13	-42.29
2470.5	V	-46.35	0.76	10.48	-56.07	-13	-43.07
Middle Channel 189 (836.40MHz)							
1671.5	H	-65.11	0.63	9.93	-55.80	-13	-42.80
6049.0	H	-64.23	1.23	12.96	-52.50	-13	-39.50
1357.0	V	-65.36	0.56	7.77	-58.14	-13	-45.14
4434.0	V	-65.32	1.04	12.69	-53.67	-13	-40.67
High Channel 251 (848.80MHz)							
2547.0	H	-64.97	0.78	10.68	-55.06	-13	-42.06
5114.0	H	-64.44	1.12	12.77	-52.79	-13	-39.79
2547.0	V	-65.30	0.78	10.68	-55.39	-13	-42.39
4850.5	V	-64.36	1.09	12.60	-52.86	-13	-39.86

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $ERP\ (dBm) = SG\ Reading\ (dBm) - Cable\ Loss\ (dB) + Substitute\ Antenna\ Gain\ (dBd)$

GPRS1900

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 512 (1850.20MHz)							
4459.5	H	-65.57	1.05	12.68	-53.93	-13	-40.93
9423.5	H	-52.93	1.55	11.63	-42.85	-13	-29.85
5088.5	V	-64.53	1.13	12.74	-52.91	-13	-39.91
10800.5	V	-50.79	1.68	11.58	-40.90	-13	-27.90
Middle Channel 661 (1880.00MHz)							
5105.5	H	-65.44	1.12	12.76	-53.81	-13	-40.81
10724.0	H	-51.81	1.74	11.60	-41.95	-13	-28.95
5173.5	V	-64.29	1.13	12.83	-52.58	-13	-39.58
7222.0	V	-56.92	1.35	10.86	-47.41	-13	-34.41
High Channel 810 (1909.80MHz)							
4808.0	H	-58.11	1.10	12.58	-46.63	-13	-33.63
7213.5	H	-57.05	1.35	10.85	-47.55	-13	-34.55
7145.5	V	-58.17	1.34	11.06	-48.44	-13	-35.44
10851.5	V	-51.17	1.68	11.56	-41.29	-13	-28.29

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $EIRP (dBm) = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBi)}$

EDGE850

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 128 (824.20MHz)							
3295.0	V	-53.71	0.68	12.75	-41.64	-13	-28.64
8242.0	V	-56.28	1.18	11.86	-45.60	-13	-32.60
5768.5	H	-60.89	0.93	13.10	-48.72	-13	-35.72
8242.0	H	-58.07	1.18	11.86	-47.39	-13	-34.39
Middle Channel 189 (836.40MHz)							
2513.0	V	-62.73	0.60	10.62	-52.71	-13	-39.71
6695.0	V	-59.71	1.00	12.23	-48.48	-13	-35.48
3320.5	H	-67.79	0.69	12.82	-55.66	-13	-42.66
8364.0	H	-57.88	1.15	11.98	-47.05	-13	-34.05
High Channel 251 (848.80MHz)							
4247.0	V	-62.45	0.79	12.71	-50.53	-13	-37.53
12730.0	V	-49.41	1.51	13.74	-37.18	-13	-24.18
2547.0	H	-61.51	0.61	10.68	-51.44	-13	-38.44
5088.5	H	-64.4	0.88	12.74	-52.54	-13	-39.54

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $ERP\ (dBm) = SG\ Reading\ (dBm) - Cable\ Loss\ (dB) + Substitute\ Antenna\ Gain\ (dBd)$

EDGE1900

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 512 (1850.20MHz)							
4748.5	V	-64.51	0.84	12.57	-52.78	-13	-39.78
7440.8	V	-57.48	1.05	11.10	-47.43	-13	-34.43
5550.6	H	-66.17	0.90	13.15	-53.92	-13	-40.92
9251.0	H	-54.78	1.24	11.70	-44.32	-13	-31.32
Middle Channel 661 (1880.00MHz)							
5581.5	V	-65.06	0.92	13.15	-52.83	-13	-39.83
11280.0	V	-54.74	1.39	11.92	-44.21	-13	-31.21
5640.0	H	-65.61	0.91	13.14	-53.38	-13	-40.38
9400.0	H	-53.93	1.21	11.59	-43.55	-13	-30.55
High Channel 810 (1909.80MHz)							
5729.4	V	-65.09	0.93	13.11	-52.91	-13	-39.91
9549.0	V	-54.15	1.25	11.85	-43.55	-13	-30.55
7366.5	H	-58.63	1.06	10.98	-48.71	-13	-35.71
11458.8	H	-52.32	1.38	12.17	-41.53	-13	-28.53

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $EIRP\ (dBm) = SG\ Reading\ (dBm) - Cable\ Loss\ (dB) + Substitute\ Antenna\ Gain\ (dBi)$

WCDMA Band II

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 9262 (1852.40MHz)							
2402.5	H	-58.90	0.75	10.21	-49.44	-13	-36.44
3703.0	H	-56.71	0.95	12.69	-44.97	-13	-31.97
3703.0	V	-57.92	0.95	12.69	-46.18	-13	-33.18
7222.0	V	-57.34	1.35	10.86	-47.83	-13	-34.83
Middle Channel 9400 (1880.00MHz)							
3762.5	H	-64.80	0.95	12.73	-53.03	-13	-40.03
9423.5	H	-52.52	1.55	11.63	-42.44	-13	-29.44
3762.5	V	-64.44	0.95	12.73	-52.67	-13	-39.67
9670.0	V	-52.60	1.57	11.91	-42.26	-13	-29.26
High Channel 9538 (1907.60MHz)							
3813.5	H	-50.76	0.96	12.74	-38.98	-13	-25.98
7528.0	H	-57.09	1.37	11.30	-47.17	-13	-34.17
3813.5	V	-48.21	0.96	12.74	-36.43	-13	-23.43
7307.0	V	-57.52	1.37	10.93	-47.95	-13	-34.95

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $ERP\ (dBm) = SG\ Reading\ (dBm) - Cable\ Loss\ (dB) + Substitute\ Antenna\ Gain\ (dBd)$

WCDMA Band V

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 4132 (826.40MHz)							
2479.0	H	-64.98	0.77	10.52	-55.23	-13	-42.23
3303.5	H	-57.70	0.90	12.77	-45.83	-13	-32.83
2479.0	V	-67.33	0.77	10.52	-57.58	-13	-44.58
3303.5	V	-65.34	0.90	12.77	-53.47	-13	-40.47
Middle Channel 4182 (836.40MHz)							
2479.0	H	-66.33	0.77	10.52	-56.58	-13	-43.58
3354.5	H	-68.31	0.91	12.88	-56.34	-13	-43.34
2402.5	V	-62.78	0.75	10.21	-53.32	-13	-40.32
4748.5	V	-64.40	1.09	12.57	-52.92	-13	-39.92
High Channel 4233 (846.60MHz)							
3380.0	H	-64.88	0.92	12.92	-52.88	-13	-39.88
5071.5	H	-64.46	1.13	12.73	-52.86	-13	-39.86
3380.0	V	-67.48	0.92	12.92	-55.48	-13	-42.48
4808.0	V	-64.36	1.10	12.58	-52.88	-13	-39.88

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $ERP\ (dBm) = SG\ Reading\ (dBm) - Cable\ Loss\ (dB) + Substitute\ Antenna\ Gain\ (dBd)$

8. CONCLUSION

The data collected relate only the item(s) tested and show that the device compliance with all the requirements of Part2, Part22 Subpart H, Part24 Subpart E of the FCC Rules.