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Report No.: 1710WSU00401 Report Version: V01 Issue Date: 01-15-2018

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 : Com Cruo

(Kevin Guo)

Approved By : Marlinchen

(Marlin Chen)





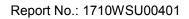
Page Number: 1 of 24

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.

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FCC ID: 2AK4SLBC4-5US





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.



Report No.: 1710WSU00401



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 | GPRS 850: 32.60dBm |
| Antenna | 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.

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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.

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3. DESCRIPTION OF TEST

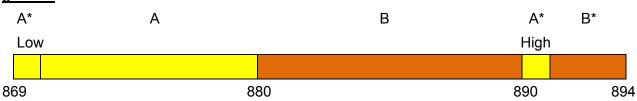
3.1. Evaluation Procedure

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



Block 1: 869 – 880 MHz (A* Low + A)

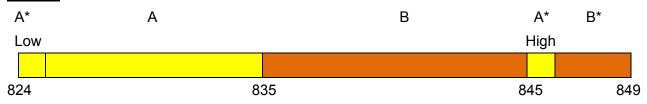
Block 3: 890 – 891.5 MHz (A* High)

Block 2: 880 - 890 MHz (B)

Block 4: 891.5 – 894 MHz (B*)

3.3. Cellular – Mobile Frequency Blocks

§22.905



Block 1: 824 – 835 MHz (A* Low + A)

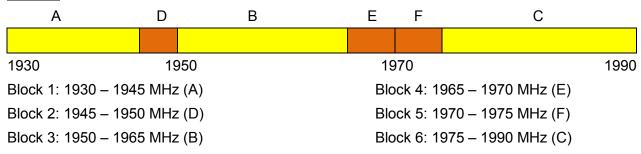
Block 3: 845 – 846.5 MHz (A* High)

Block 2: 835 – 845 MHz (B)

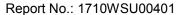
Block 4: 846.5 – 849 MHz (B*)

3.4. PCS – Base Frequency Blocks

§24.229

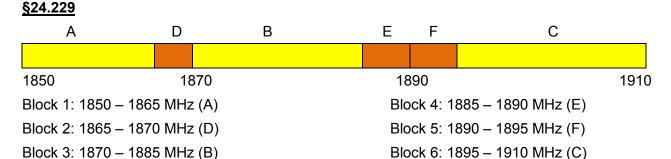


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3.5. PCS - Mobile Frequency Blocks



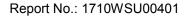
3.6. Radiated Power and Radiated Spurious Emissions

§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:





Pd [dBm] = Pg [dBm] - cable loss [dB] + antenna gain [dBd/dBi]

Where, Pd is the dipole equivalent power, Pg 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 Pg [dBm] – cable loss [dB].

The calculated Pd levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of 43 + 10*log10(Power [Watts]) specified in 22.917(a) and 24.238(a).

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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 | |

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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

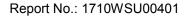
9 = Composite Digital Info

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 25.50dBm – (-24.80) = 50.3dBc.





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=2Uc(y)):

9kHz ~ 1GHz: ± 4.18dB 1GHz ~ 40GHz: ± 4.76Db

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7. TEST RESULT

7.1. Summary

Company Name: <u>MOBIKE (HONGKONG) LIMITED</u>

FCC ID: <u>2AK4SLBC4-5US</u>

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 | Undesirable Emissions | | Radiated | Pass | Section 7.2 |
| 22.917(a) | | | | | |
| 24.238(a) | | out-of-band emissions | | | |

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.

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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 + 10log(P) dB.

7.2.2.Test Procedure Used

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

7.2.3.Test Setting

- The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
- 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.
- The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
- 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

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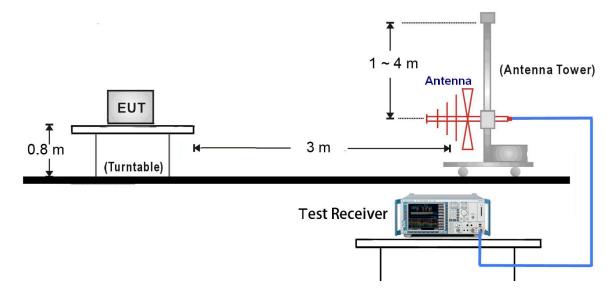
a maximum signal level is detected by the measuring receiver.

- 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.

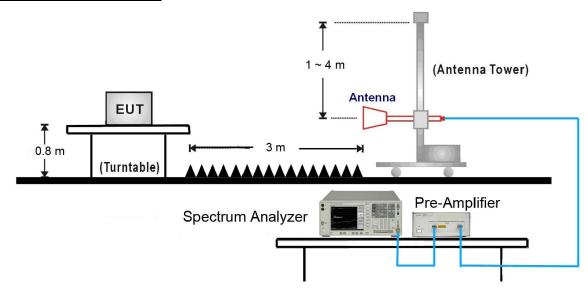


7.2.4. Test Setup

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 (824-2 | 0MHz) | | Calli (dbd) | | | |
| | , | , | 0.00 | 0.70 | 54.40 | 40 | 44.40 |
| 1646.0 | Н | -45.04 | 0.62 | 9.76 | -54.18 | -13 | -41.18 |
| 2470.5 | Н | -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 Chann | el 189 (836 | 6.40MHz) | | | | | |
| 1671.5 | Н | -65.11 | 0.63 | 9.93 | -55.80 | -13 | -42.80 |
| 6049.0 | Н | -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 (848.8 | 30MHz) | | | | | |
| 2547.0 | Н | -64.97 | 0.78 | 10.68 | -55.06 | -13 | -42.06 |
| 5114.0 | Н | -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 |

- 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 | Low Channel 512 (1850.20MHz) | | | | | | | | |
| 4459.5 | Н | -65.57 | 1.05 | 12.68 | -53.93 | -13 | -40.93 | | |
| 9423.5 | Н | -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 Chann | el 661 (188 | 30.00MHz) | | | | | | | |
| 5105.5 | Н | -65.44 | 1.12 | 12.76 | -53.81 | -13 | -40.81 | | |
| 10724.0 | Н | -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 | Н | -58.11 | 1.10 | 12.58 | -46.63 | -13 | -33.63 | | |
| 7213.5 | Н | -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 | | |

- 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 (dBd)



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 (824.2 | OMHz) | | , | | | |
| 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 | Н | -60.89 | 0.93 | 13.10 | -48.72 | -13 | -35.72 |
| 8242.0 | Н | -58.07 | 1.18 | 11.86 | -47.39 | -13 | -34.39 |
| Middle Chann | el 189 (836 | 6.40MHz) | | | | | |
| 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 | Н | -67.79 | 0.69 | 12.82 | -55.66 | -13 | -42.66 |
| 8364.0 | Н | -57.88 | 1.15 | 11.98 | -47.05 | -13 | -34.05 |
| High Channel | 251 (848.8 | 30MHz) | | | | | |
| 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 | Н | -61.51 | 0.61 | 10.68 | -51.44 | -13 | -38.44 |
| 5088.5 | Н | -64.4 | 0.88 | 12.74 | -52.54 | -13 | -39.54 |

- 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 | 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 | Н | -66.17 | 0.90 | 13.15 | -53.92 | -13 | -40.92 | |
| 9251.0 | Н | -54.78 | 1.24 | 11.70 | -44.32 | -13 | -31.32 | |
| Middle Chann | el 661 (188 | 30.00MHz) | | | | | | |
| 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 | Н | -65.61 | 0.91 | 13.14 | -53.38 | -13 | -40.38 | |
| 9400.0 | Н | -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 | Н | -58.63 | 1.06 | 10.98 | -48.71 | -13 | -35.71 | |
| 11458.8 | Н | -52.32 | 1.38 | 12.17 | -41.53 | -13 | -28.53 | |

- 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 (dBd)



WCDMA Band II

| Frequency (MHz) | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Substitute Antenna | ERP (dBm) | Limit (dBm) | Margin (dB) | | | | |
|----------------------------------|--------------------|------------------|--------------------|-----------------------|--------------|----------------|----------------|--|--|--|--|
| | | | | Gain (dBd) | | | | | | | |
| Low Channel 9262 (1852.40MHz) | | | | | | | | | | | |
| 2402.5 | Н | -58.90 | 0.75 | 10.21 | -49.44 | -13 | -36.44 | | | | |
| 3703.0 | Н | -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 | Н | -64.80 | 0.95 | 12.73 | -53.03 | -13 | -40.03 | | | | |
| 9423.5 | Н | -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 | Н | -50.76 | 0.96 | 12.74 | -38.98 | -13 | -25.98 | | | | |
| 7528.0 | Н | -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 | | | | |

- 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 | Н | -64.98 | 0.77 | 10.52 | -55.23 | -13 | -42.23 | | | | |
| 3303.5 | Н | -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 | Н | -66.33 | 0.77 | 10.52 | -56.58 | -13 | -43.58 | | | | |
| 3354.5 | Н | -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 | Н | -64.88 | 0.92 | 12.92 | -52.88 | -13 | -39.88 | | | | |
| 5071.5 | Н | -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 | | | | |

- 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.

______ The End _____