

VTech Telecommunications Ltd.

Application For Permissive Change Class II

Unlicensed Personal Communication Service Devices (Base Unit)

FCC ID: EW780-6044-01

Test Report Number: 07238151

Issue Date: November 7, 2007

TL/ ac

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MEASUREMENT/TECHNICAL REPORT

VTech Telecommunications Ltd. - Model: IP8301

FCC ID: EW780-6044-01

| Original Grant | _ Class II Change <u>X</u> |
|-------------------|--|
| llicensed PCS Ba | ase Station |
| 0.457(d)(1)(ii)? | Yes NoX |
| | If yes, defer until: |
| | Date |
| Commission by: | Date |
| nt of the product | so that the grant can be |
| Yes | s No <u>X</u> |
| | Personal Communication rovision. |
| Leung Wai Le | ung, Tommy |
| Intertek Testin | g Services Hong Kong Ltd. |
| • | • |
| Kowloon, Hon | • |
| Phone: 852 | 5 5 |
| | O.457(d)(1)(ii)? Commission by: Int of the product Yes for Unlicensed -04-07 Edition] P Leung Wai Leu Intertek Testing 2/F., Garment 576 Castle Pe |

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| Exhibit Type | File Description | Filename |
|------------------|--|----------------------|
| Cover Letter | Purpose of Change | product change.pdf |
| Test Report | Test Report | report.pdf |
| Test Report | Emission Bandwidth and Test Frequency Plots | 26bw.pdf |
| Test Report | Peak Transmit Power Plots | peaktp.pdf |
| Test Report | Unwanted Emission Inside Sub-Band Plots | inband.pdf |
| Test Report | AC Lines Conducted Emission Data | conduct.pdf |
| Test Setup Photo | Radiated Emission Test Configuration | config photos dos |
| Test Setup Photo | AC Lines Conducted Emission Test Configuration | config photos.doc |
| RF Exposure Info | RF Safety | RF exposure info.pdf |
| External Photos | External Photo | external photos.doc |
| Internal Photos | Internal Photo | internal photos.doc |

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EXHIBIT 1 SUMMARY OF TEST RESULTS

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1.0 **Summary of Test Results**

VTech Telecommunications Ltd. - Model: IP8301

FCC ID: EW780-6044-01

| Technical Requirements | | | | | |
|--|------------------------|--|---------|---------------------------|--|
| Test Items | FCC Part 15 Section | Test Procedure ANSI C63.17 / ANSI C63.4 | Results | Details see section | |
| Emission Bandwidth | 15.323(a) | 6.1.3 | Pass | 4.1 | |
| Peak Transmit Power | 15.319(c) | 6.1.2 | Pass | 4.2 | |
| Unwanted Emission Inside the Sub-Band | 15.323(d) | 6.1.6.1 | Pass | 4.3 | |
| Emissions Outside the Sub-Band | 15.323(d) | 6.1.6.2 | Pass | 4.4 | |
| AC Power Lines Conducted Emissions from Transmitter Portion of EUT | 15.315 | 7 * | Pass | 4.5 | |
| Radiated Emissions from Computing Device Peripheral Portion of EUT | 15.109(a) | 8 * | NA | 4.6 | |
| AC Power Lines Conducted Emissions from Computing Device Peripheral Portion of EUT | 15.107(a) | 7 * | NA | 4.7 | |
| Radio Frequency Radiation Exposure | 15.319(i) | | Pass | 4.8 | |

Test Engineer:

Ken Sit Supervisor

November 7, 2007

Date: _

Approved By:

Leung Wai Leung, Tommy

Senior Manager

Date:____November 7, 2007

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EXHIBIT 2 GENERAL DESCRIPTION

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2.0 **General Description**

2.1 Product Description

The IP8301 is 1.9GHz Digital Modulation Cordless Phone with Caller ID and VoIP - Base Unit. It operates at frequency range of 1921.536MHz to 1928.448MHz with 5 channels. It contains a LAN (Local Area Network) port which is capable of connecting to the broadband router to provide VoIP function. Also, the unit is capable of either tone or pulse dialing when dialing through the telephone network. The internal power supply's isolation is accomplished through a power transformer having an adequate dielectric rating. The circuit wiring is consistent under the requirement of part 68.

The handset unit consists of a keypad with twelve standard keys (0,...9,*,#), six function keys (Left soft key, Right soft key, HOME, Speaker, Redial/Remove, Navigation key). A Talk key and an OFF key is provided to control pick and release telephone line in a toggle base.

The base unit has a page key, which is used to communicate with handset unit.

The antennas used in base unit and handset are integral, and the test sample is a prototype.

2.2 Purpose of Application

The purpose of change is saved as filename: product change.pdf

For the base unit of model: IP8301, the RF module, antenna, algorithm, enclosure, and PCB layout are the same as the previously granted Model: IP8301. Only change is AC adaptor for base from linear to switching.

This is an application for Certification of a PUB - Part 15 Unlicensed PCS Base Station. The FCC ID of the associated handset is EW780-6044-00 and has been granted. A verification report has been prepared for the digital portion. The device is also subject to Part 68 Registration.

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2.3 Test Methodology

The radiated emission measurements for unintentional radiator and AC power line-conducted emission measurements were performed according to the test procedures specified in ANSI C63.4 (2003). The radiated emission measurements for intentional radiator contained in UPCS device, antenna conducted measurements were performed according to the test procedures specified in Revision Draft ANSI C63.17 (2006). All radiated measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "Justification Section" of this Application. All other measurements were made in accordance with the procedures in 47 CFR Part 2.

2.4 Test Facility

The open area test site and conducted measurement facility used to collect the emission data is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC.

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EXHIBIT 3 SYSTEM TEST CONFIGURATION

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3.0 **System Test Configuration**

3.1 Justification

For emissions testing, the equipment under test (EUT) was setup to transmit continuously in burst mode with pseudo-random data to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst-case emissions. The handset was powered by a fully charged battery.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the base unit attached to peripherals, they were connected and operational (as typical as possible).

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Detector function was in peak mode. Radiated emissions are taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

The spectrum analyzer resolution bandwidth was approximately 1% of the EUT emission bandwidth, unless otherwise specified.

Radiated emission measurements were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

As the base unit has 2 antennas, both have been checked. While conducting the test on one of antennas, another one was being disable its transmission. The data in this report represented the worst-case.

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3.2 Conducted Emission Test Configuration

The setup and equipment setting were made in accordance with ANSI C63.17. The antenna of EUT transmitter was replaced by a coaxial cable. The impendence matching of connection, cable loss and external RF attenuator are taken into account. The EUT was arranged to communicate via a fixed carrier frequency between its transmitter and a companion device. The transmission was configured in burst mode with pseudo-random data as typical as normal operation.

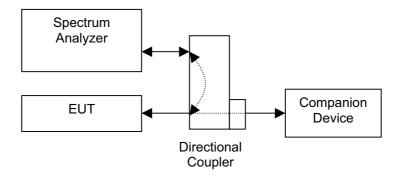


Figure 3.2.1

3.3 Conducted Monitoring and Operational Test Configuration

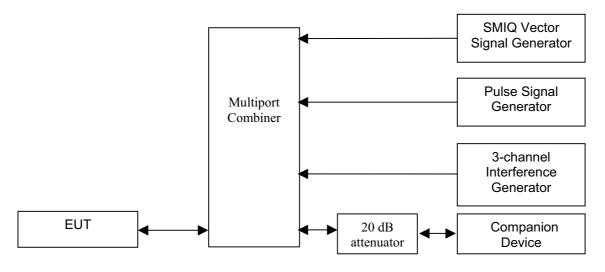


Figure 3.3.1

3.4 EUT Exercising Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

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3.5 Details of EUT and Description of Peripherals

Details of EUT:

An AC adaptor and a battery (provided with the unit) were used to power the device. Their description are listed below.

- (1) Base Unit: A Switching AC adaptor (100-240VAC to 6VDC 600mA, Model: S008CU0600060)
- (2) Handset: A "Ni-MH" Type Rechargeable Battery (2.4V 600mAh)

Description of Peripherals:

- (1) Telecommunication cable with RJ11C connectors (1m, unshielded), terminated
- (2) CAT5 LAN unshielded cable with 2 meter long
- (3) Handset, Model: IP8301, FCC ID: EW780-6044-00 (Supplied by Client)
- (4) HP Compaq Notebook, Model: NX6320, S/N: CNU6370FWN, FCC ID: DoC Product

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3.6 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty test has been considered.

3.7 Equipment Modification

Any modifications installed previous to testing by VTech Telecommunications Ltd. will be incorporated in each production model sold/leased in the United States.

No modifications were installed by ETL Division, Intertek Testing Services Hong Kong Ltd.

All the items listed under section 3.0 of this report are confirmed by:

Confirmed by:

Leung Wai Leung, Tommy Senior Manager Intertek Testing Services Hong Kong Ltd. Agent for VTech Telecommunications Ltd.

_Signature

November 7, 2007

Date

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EXHIBIT 4 MEASUREMENT RESULTS

Test Report Number: 07238151 Page 15 of 34 FCC ID: EW780-6044-01

Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.0 Measurement Results

4.1 Emission Bandwidth, FCC Rule 15.323(a):

Operation shall be contained within the 1920 – 1930 MHz band. The emission bandwidth (*B*) shall be less than 2.5 MHz and greater than 50 kHz.

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.3. Test setup is shown in section 3.2 Figure 3.2.1.

Test Results:

I. Traffic Carrier

| Channel | Channel Frequency | Measuring | Measured Emission | Results |
|---------|-------------------|--------------|-------------------|---------|
| | (MHz) | Signal Level | Bandwidth (MHz) | |
| Lowest | 1921.536 | 26 dB down | 2.38 | Pass |
| Highest | 1928.448 | 26 dB down | 2.37 | Pass |

II. Dummy Carrier

| Channel | Channel Frequency | Measuring | Measured Emission | Results |
|---------|-------------------|--------------|-------------------|---------|
| | (MHz) | Signal Level | Bandwidth (MHz) | |
| Lowest | 1921.536 | 26 dB down | 2.38 | Pass |
| Highest | 1928.448 | 26 dB down | 2.40 | Pass |

Please refer to the attached plots for more details:

Plot 1A: Lowest Channel 26dB Emission Bandwidth (Traffic Carrier)
Plot 1D: Highest Channel 26dB Emission Bandwidth (Traffic Carrier)
Plot 1G: Lowest Channel 26dB Emission Bandwidth (Dummy Carrier)
Plot 1J: Highest Channel 26dB Emission Bandwidth (Dummy Carrier)

The plots of emission bandwidth and test frequency are saved as filename: 26bw.pdf

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.2 Peak Transmit Power, FCC Rule 15.319(c):

The peak transmit power (P_{EUT}) shall not exceed 100 μ W multiplied by the square root of the emission bandwidth (B) in Hz or 5 log₁₀ B – 10 dBm. The peak transmit power shall be reduced by the amount in dB that the maximum directional gain of the antenna exceeds 3 dBi.

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.2. Test setup is shown in section 3.2 Figure 3.2.1. The cable loss and/or external attenuation are included in OFFSET function of spectrum analyzer.

Calculation of Peak Transmit Power Limit (P_{max}):

[\times] $P_{\text{max}} = 5 \log_{10} B - 10 \text{ dBm}$ when $G_A \le 3 \text{dBi}$

[] $P_{\text{max}} = 5 \log_{10} B - 10 \text{ dBm} - (G_A - 3 \text{dBi})$ when $G_A > 3 \text{dBi}$

Where G_A = EUT Antenna Gain: $\underline{0}$ dBi

B = Measured Emission Bandwidth: (26dB down BW) in Hz

Test Results:

I. Traffic Carrier

| Channel | Channel Frequency | Measured Peak Transmit | Limit | Results |
|---------|-------------------|------------------------|-------|---------|
| | (MHz) | Power (dBm) | (dBm) | |
| Lowest | 1921.536 | 20.23 | 21.88 | Pass |
| Highest | 1928.448 | 20.26 | 21.87 | Pass |

II. Dummy Carrier

| Channel | Channel Frequency | Measured Peak Transmit | Limit | Results |
|---------|-------------------|------------------------|-------|---------|
| | (MHz) | Power (dBm) | (dBm) | |
| Lowest | 1921.536 | 20.23 | 21.88 | Pass |
| Highest | 1928.448 | 20.23 | 21.90 | Pass |

Please refer to the attached plots for more details:

Plot 2A: Lowest Channel Peak Transmit Power (Traffic Carrier) Plot 2B: Highest Channel Peak Transmit Power (Traffic Carrier) Plot 2C: Lowest Channel Peak Transmit Power (Dummy Carrier) Plot 2D: Highest Channel Peak Transmit Power (Dummy Carrier)

The plots of peak transmit power are saved as filename: peaktp.pdf

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.3 Unwanted Emission Inside the Sub-Band, FCC Rule 15.323(d):

Emissions inside the sub-band must comply with the following emission mask:

- 1. In the bands between 1B and 2B measured from the center of the emission bandwidth, emission shall be at least 30 dB below the permitted peak transmit power; i.e.-9.5 dBm
- 2. In the bands between 2B and 3B measured from the center of the emission bandwidth, emission shall be at least 50 dB below the permitted peak transmit power; i.e. -29.5 dBm
- 3. In the bands between 3B and the band edge, emission shall be at least 60 dB below the permitted peak transmit power. i.e. -39.5 dBm

Where B = emission bandwidth in Hz

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.6.1. Test setup is shown in section 3.2 Figure 3.2.1.

Test Results:

I. Traffic Carrier

| Channel | Channel Frequency (MHz) | Results |
|---------|-------------------------|---------|
| Lowest | 1921.536 | Pass |
| Highest | 1928.448 | Pass |

II. Dummy Carrier

| Channel | Channel Frequency (MHz) | Results |
|---------|-------------------------|---------|
| Lowest | 1921.536 | Pass |
| Highest | 1928.448 | Pass |

Please refer to the attached plots for more details:

Plot 4A: Lowest Channel Unwanted Emission Inside the Sub-Band (Traffic Carrier)

Plot 4B: Highest Channel Unwanted Emission Inside the Sub-Band (Traffic Carrier)

Plot 4C: Lowest Channel Unwanted Emission Inside the Sub-Band (Dummy Carrier) Plot 4D: Highest Channel Unwanted Emission Inside the Sub-Band (Dummy Carrier)

The plots of the unwanted emission inside the sub-band are saved as filename: inband.pdf

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.4 Emissions Outside the Sub-Band, FCC Rule 15.323(d):

Emissions outside the sub-band shall be attenuated below a reference power of 112 mW (20.5 dBm) as follows:

- 1. 30 dB between the band edge and 1.25 MHz above or below the band;
- 2. 50 dB between 1.25 and 2.5 MHz above or below the band; and
- 3. 60 dB at 2.5 MHz or greater above or below the band, or shall meet the requirement of FCC Rule 15.319(g) which shall not exceed the limits of FCC Rule 15.209.

Example: Calculation of Limit for emissions between the band edge and 1.25 MHz (1920.000 – 1918.750 MHz)

The emissions shall not exceed the Limit: 20.5 dBm - 30 dB = -9.5 dBm

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.6.2. As EUT has non-detachable antenna(s), radiated emissions test method is used for out-of-band emissions tests. Emissions that are directly caused by digital circuits in the transmit path and transmitter portion are measured. Test setup and procedures are described in section 3.2 Figure 3.2.1.

Test Results:

| Channel | Carrier Frequency (MHz) | Measured Band (MHz) | Limit (dBm) | Results |
|---------|----------------------------|--|----------------|---------|
| | 1920.000 - 1918.750 | -9.5 | Pass | |
| Lowest | Lowest 1921.536 | 1918.750 - 1917.500 | -29.5 | Pass |
| | | 0.009 - 1917.500 & 1932.500 - 19300.000 | -39.5 | Pass |
| | ghest 1928.448 | 1930.000 - 1931.250 | -9.5 | Pass |
| Highest | | 1931.250 - 1932.500 | -29.5 | Pass |
| | | 0.009 - 1917.500 & 1932.500 - 19300.000 | -39.5 | Pass |

Please refer to the section 4.4.1 to 4.4.4 for more details.

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301 Mode: Transmission

4.4.1 Radiated Emissions Configuration Photographs:

Worst Case Radiated Emission at

3843.072 MHz

The worst case radiated emission configuration photographs are saved as filename: config photos.doc.

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301 Mode: Transmission

4.4.2 Radiated Emissions Data:

Data are included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included. All measurements were performed with peak detection unless otherwise specified.

The data in table 1, 2 and 3 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Passed by 9.9 dB margin

TEST ENGINEER:

Signature

Ken Sit, Supervisor

Typed/Printed Name

November 7, 2007

Date

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301 Mode: Transmission

Table 1

Radiated Emissions Data Pursuant To FCC Part 15 Section 15.323 (d) Emissions Requirements

Lowest Channel:

| Polari | Frequency | Emission Level | Limit | Margin |
|---------|-----------|----------------|-------|--------|
| -zation | | at 3m | | |
| | (MHz) | (dBm) | (dBm) | (dB) |
| V | 1919.854 | -47.7 | -9.5 | -38.2 |
| V | 1918.020 | -51.3 | -29.5 | -21.8 |
| V | 1917.100 | -55.0 | -39.5 | -15.5 |
| V | 3843.072 | -49.4 | -39.5 | -9.9 |
| V | 5764.608 | -50.3 | -39.5 | -10.8 |
| V | 7686.144 | -50.4 | -39.5 | -10.9 |
| V | 9607.680 | -52.0 | -39.5 | -12.5 |

NOTES:

- 1. Peak detector is used for the emission measurement.
- 2. All measurements were made at 3 meters. Emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301 Mode: Transmission

Table 2

Radiated Emissions Data Pursuant To FCC Part 15 Section 15.323 (d) Emissions Requirements

Highest Channel:

| Polari | Frequency | Emission Level | Limit | Margin | |
|---------|-----------|----------------|-------|--------|--|
| -zation | | at 3m | | | |
| | (MHz) | (dBm) | (dBm) | (dB) | |
| V | 1930.015 | -47.8 | -9.5 | -38.3 | |
| V | 1931.659 | -52.0 | -29.5 | -22.5 | |
| V | 1933.459 | -54.3 | -39.5 | -14.8 | |
| V | 3856.896 | -49.6 | -39.5 | -10.1 | |
| V | 5785.344 | -50.9 | -39.5 | -11.4 | |
| V | 7713.792 | -52.0 | -39.5 | -12.5 | |
| V | 9642.240 | -52.2 | -39.5 | -12.7 | |

NOTES:

- 1. Peak detector is used for the emission measurement.
- 2. All measurements were made at 3 meters. Emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301 Mode: Talk

Table 3

Radiated Emissions Data

Pursuant To FCC Part 15 Section 15.323 (d) Emissions Requirements

| Polari | Frequency | Emission Level | Limit | Margin |
|---------|-----------|----------------|-------|--------|
| -zation | | at 3m | | |
| | (MHz) | (dBm) | (dBm) | (dB) |
| V | 75.002 | -66.8 | -39.5 | -27.3 |
| Н | 125.003 | -66.5 | -39.5 | -27.0 |
| Н | 165.009 | -60.6 | -39.5 | -21.1 |
| Н | 225.013 | -63.6 | -39.5 | -24.1 |
| Н | 235.016 | -63.2 | -39.5 | -23.7 |
| Н | 250.001 | -58.0 | -39.5 | -18.5 |
| Н | 290.001 | -59.3 | -39.5 | -19.8 |
| Н | 375.000 | -60.2 | -39.5 | -20.7 |
| Н | 399.985 | -57.3 | -39.5 | -17.8 |
| Н | 500.001 | -55.0 | -39.5 | -15.5 |
| Н | 625.006 | -56.5 | -39.5 | -17.0 |
| Н | 750.000 | -58.8 | -39.5 | -19.3 |
| Н | 775.000 | -62.0 | -39.5 | -22.5 |

NOTES:

- 1. Peak detector is used for the emission measurement.
- 2. All measurements were made at 3 meters. Emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.4.3 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

Where FS = Field Strength in $dB\mu V/m$

RA = Receiver Amplitude (including preamplifier) in $dB\mu V$

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB AG = Amplifier Gain in dB

PD = Pulse Desensitization in dB

AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

Example

Assume a receiver reading of 62.0 dB $_{\mu}$ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29.0 dB is subtracted. The pulse desensitization factor of the spectrum analyzer is 0.0 dB, and the resultant average factor is -10.0 dB. The net field strength for comparison to the appropriate emission limit is 32.0 dB $_{\mu}$ V/m. This value in dB $_{\mu}$ V/m is converted to its corresponding level in $_{\mu}$ V/m.

 $RA = 62.0 dB\mu V$

AF = 7.4 dB

CF = 1.6 dB

AG = 29.0 dB

PD = 0.0 dB

AV = -10 dB

 $FS = 62.0 + 7.4 + 1.6 - 29.0 + 0.0 + (-10.0) = 32.0 \text{ dB}\mu\text{V/m}$

Level in mV/m = Common Antilogarithm [(32.0 dB μ V/m)/20] = 39.8 μ V/m

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.4.4 Average Factor Calculation and Transmitter ON Time Measurements, FCC Rule 15.35(b, c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SPAN function on the analyzer was set to ZERO. The transmitter ON time was determined from the resultant time-amplitude display:

[] Please refer to the attached plots for more details:

Plot 5A: Transmitter ON Time Measurements (Traffic Carrier)

Plot 5B: Transmitter ON Time Measurements (Dummy Carrier)

The plots of Transmitter ON Time Measurements are saved as filename: txon.pdf

- Please refer to the technical description that are provided by Applicant.
- $[\times]$ Not applicable No average factor is required.

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.5 AC Power Lines Conducted Emissions from Transmitter portion of EUT, FCC Rule 15.315:

The AC power lines conducted emission shall not exceed the limits of FCC Rule 15.207.

Measurements are made in accordance with ANSI C63.4 sub-clause 7. Emissions that are directly caused by digital circuits in the transmit path and transmitter portion are measured.

Not applicable – EUT is only powered by battery for operation.

[x] EUT connects to AC power lines. Emission Data are listed in following pages. Please refer to the section 4.5.1 to 4.5.2 for more details.

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301 Mode: Talk

4.5.1 AC Power Lines Conducted Emissions Configuration Photographs:

Worst Case AC Power Line Conducted Emission at

0.400 MHz

The worst case AC power Line conducted emission configuration photographs are saved as filename: config photos.doc

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301 Mode: Talk

4.5.2 AC Power Line Conducted Emissions Data:

The data on the following pages list the significant emission frequencies, the limit, and the margin of compliance.

Judgment: Passed by 5.6 dB margin

The worst case AC power line conducted emission data are saved as filename: conduct.pdf

TEST ENGINEER:

Signature

Ken Sit, Supervisor
Typed/Printed Name

November 7, 2007

Date

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.6 Radiated Emissions from Computing Device Peripheral Portion of EUT, FCC Rule 15.109(a):

EUT includes computing device peripheral circuitry and is subject to the requirements of FCC Part 15 Subpart B. The radiated emission shall not exceed the limits of FCC Rule 15.109(a).

Measurements are made in accordance with ANSI C63.4 sub-clause 8 and section 3.1. Radiated emissions shall be measured with EUT operating in typical operation modes. The spectrum analyzer resolution bandwidth was 100 kHz or greater for frequencies below 1000 MHz.

| [; | ×] | Not applicable – No computing device peripheral |
|-----|----|--|
| [|] | The computing device peripheral portion of EUT is subject to FCC Part 15 Subpart B, Certification. Please refer to the section 4.9.1 for more details. |
| Γ |] | The computing device peripheral portion of EUT is subject to FCC Part 15 |

Subpart B, DoC. Emission Data are included in the separated DoC report.

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007 Model: IP8301

4.7 AC Power Lines Conducted Emissions from Computing Device Peripheral Portion of EUT, FCC Rule 15.107(a):

EUT includes computing device peripheral and is subject to the requirements of FCC Part 15 Subpart B. The AC power lines conducted emission shall not exceed the limits of FCC Rule 15.107(a).

Measurements are made in accordance with ANSI C63.4 sub-clause 7. Conducted emissions shall be measured with EUT operating in typical operation modes.

| [× | (] | Not applicable – No computing device peripheral |
|-----|-----|---|
| [|] | The computing device peripheral portion of EUT is subject to FCC Part 15 Subpart B, Certification. Please refer to the section 4.10.1 for more details. |
| [|] | The computing device peripheral portion of EUT is subject to FCC Part 15 Subpart B, DoC. Emission Data are included in the separated DoC report. |

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Company: VTech Telecommunications Ltd. Date of Test: October 6-12, 2007

Model: IP8301

4.8 Radio Frequency Radiation Exposure, FCC Rule 15.319(i):

EUT is subject to the radio frequency exposure requirements specified in FCC Rule §§ 1.1307(b), 2.1091 and 2.1093. It shall be considered to operate in a "general population / uncontrolled" environment.

- [] EUT was evaluated for Specific Absorption Rate (SAR) evaluation compliance according to OET Bulletin 65, Supplement C (Edition 01-01). It is in compliance with the SAR evaluation requirements. The caution statement is specified in the user manual. A SAR test report was submitted at same time and saved as SAR report 1 of 2.pdf and SAR report 2 of 2.pdf
- [x] EUT was evaluated for Maximum Permissible Exposure (MPE) evaluation compliance according to OET Bulletin 65, Supplement C (Edition 01-01). The evaluation calculation results are saved as filename: RF exposure info.pdf

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EXHIBIT 5 EQUIPMENT PHOTOGRAPHS

Page 33 of 34 Test Report Number: 07238151 FCC ID: EW780-6044-01

5.0 **Equipment Photographs**

The photographs are saved as filename: external photos.doc & internal photos.doc

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