

August 25, 2009

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23/F., Tai Ping Industrial Centre,  
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Hong Kong.

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Dear Samson Man:

Enclosed you will find your file copy of a Part 15 Certification (FCC ID: VLJ80-7472-01).

For your reference, TCB will normally take another 15 to 20 days for reviewing the report. Approval will then be granted when no query is sorted.

Please contact me if you have any questions regarding the enclosed material.

Sincerely,



Sit Kim Wai, Ken  
Manager

Enclosure

## List of Exhibits

Exhibit type	File Description	filename
Test Report	Test Report	report.pdf
Operational Description	Technical Description	descri.pdf
Test Setup Photos	Radiated & Conducted Emission Test Configuration	config photos.pdf
Test Report	Emission Plot	emission.pdf
Test Report	Conducted Emission Test Result	conduct.pdf
External Photos	External Photo	external photos.pdf
Internal Photos	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
ID Label/Location Info	Label Artwork and Location	label.pdf
Users Manual	User Manual	manual.pdf
Cover Letter	Letter of Agency	letter of agency.pdf
Cover Letter	Confidentiality Request	request.pdf

## **Binatone Electronics International Limited**

Application  
For  
Certification

1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone,  
Digital Answering Machine and Bluetooth - Base Unit Bluetooth Portion

(Base Unit)

**(FCC ID: VLJ80-7472-01)**

HK09071275-2  
KS/cl  
August 25, 2009

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**Intertek Testing Services Hong Kong Ltd.**

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## INTERTEK TESTING SERVICES

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### MEASUREMENT/TECHNICAL REPORT

**Binatone Electronics International Limited - Model: L502BT, L501BT,  
L503BT, L504BT, L505BT, L50XBT  
FCC ID: VLJ80-7472-01**

This report concerns (check one:)      Original Grant       Class II Change

Equipment Type : DXX - Lower Power Transmitter

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Deferred grant requested per 47 CFR 0.457(d)(1)(ii)?      Yes       No

If yes, defer until : \_\_\_\_\_  
date

Company Name agrees to notify the Commission  
by:

\_\_\_\_\_ date

of the intended date of announcement of the product so that the grant can be issued  
on that date.

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Transition Rules Request per 15.37 ?      Yes       No

If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR [10-01-08  
Edition] Provision.

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Report prepared by:

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# INTERTEK TESTING SERVICES

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**INTERTEK TESTING SERVICES**

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**EXHIBIT 1  
GENERAL DESCRIPTION**

## INTERTEK TESTING SERVICES

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### 1.0 General Description

#### 1.1 Product Description

The L502BT is a 1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone, Digital Answering Machine and Bluetooth. Only base unit has Bluetooth feature, and it operates at frequency range of 2402MHz - 2480MHz with 79 channels. It is powered by 100-120VAC to 6VDC 400mA adaptor. With Bluetooth and 1.9GHz wireless communications enabled, the base unit allows users to use a cordless handset to dial out or receive Bluetooth- equipped cellular phone calls via the cellular network, or use a corresponding Bluetooth-equipped headset instead of the cordless headset. Only one cellular phone or headset can be on a call at a time.

The antenna used in base unit is integral, and the tested sample is a prototype.

The Model: L501BT, L503BT, L504BT, L505BT and L50XBT are the same as the Model: L502BT in hardware aspect. Suffix (X) indicates different number of handset and charger.

The circuit description is saved with filename: descri.pdf

Connection between the base unit and the telephone network is accomplished through the use of USOC RJ11C in the 2-wire loop calling central office line.

#### 1.2 Related Submittal(s) Grants

This is an Application for Certification of a DXX - Part 15 Low Power Com. Device Tx. One transmitter is included in this application. On the other hand, a 1.9GHz transmitter, a composite device subject to an additional equipment authorization, has the same as this FCC ID: VLJ80-7472-01 and is in the process of being filed.

## INTERTEK TESTING SERVICES

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### 1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). Preliminary radiated scans were performed in the Open Area Test Site only to determine worst case modes. All radiated measurements were performed in Open Area Test Sites. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

### 1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data and conducted data are 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.



**INTERTEK TESTING SERVICES**

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**EXHIBIT 2  
SYSTEM TEST CONFIGURATION**

## INTERTEK TESTING SERVICES

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### 2.0 System Test Configuration

#### 2.1 Justification

For emissions testing, the equipment under test (EUT) was setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. The EUT was powered by an AC adaptor 100-120VAC to 6VDC 400mA.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. 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. Radiated emissions were 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.

Measurements of the radiated signal level of the fundamental frequency component of the emission was performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

Analyzer resolution was 100 kHz or greater for frequencies below 1000 MHz. The resolution was 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value were not reported.

Radiated emission measurement were performed 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.

Determination of pulse desensitization was made according to *Hewlett Packard Application Note 150-2, Spectrum Analysis... Pulsed RF*. The effective period ( $\tau_{\text{eff}}$ ) was 625 $\mu$ s for Bluetooth. With the resolution bandwidth 1MHz and spectrum analyzer IF bandwidth 3 dB, the pulse desensitization factor was 0 dB.

#### 2.2 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.

## INTERTEK TESTING SERVICES

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### 2.3 Details of EUT and Description of Peripherals

#### Details of EUT:

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

- (1) Base Unit: An AC adaptor (100-120VAC to 6.0VDC 400mA, Model: S005IU0600040) (Supplied by Client)

#### Description of Peripherals:

- (1) Handset: A "Ni-MH" type rechargeable battery (2.4V, 550mAh) (Supplied by Client)
- (2) Handset, Model: L502BT, FCC ID: VLJ80-7472-01 (Supplied by Client)
- (3) Nokia Mobile Phone, Model: 5300, FCC ID: PPIRM-146 (Supplied by Intertek)
- (4) 1m Telephone Line with Termination (Supplied by Intertek)

## INTERTEK TESTING SERVICES

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### 2.4 Measurement Uncertainty

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

### 2.5 Equipment Modification

Any modifications installed previous to testing by Binatone Electronics International Limited will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Commercial & Electrical Division, Intertek Testing Services Hong Kong Ltd.

All the items listed under section 2.0 of this report are confirmed by:

*Confirmed by:*

*Sit Kim Wai, Ken  
Manager  
Intertek Testing Services  
Agent for Binatone Electronics International Limited*



\_\_\_\_\_ Signature

\_\_\_\_\_ August 25, 2009 Date

**INTERTEK TESTING SERVICES**

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**EXHIBIT 3  
EMISSION RESULTS**

## INTERTEK TESTING SERVICES

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### 3.0 Emission Results

Data is 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.

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## INTERTEK TESTING SERVICES

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### 3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

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

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:-

$$FS = RR + LF$$

where            FS = Field Strength in dB $\mu$ V/m  
                    RR = RA - AG in dB $\mu$ V  
                    LF = CF + AF in dB

Assume a receiver reading of 52.0 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 dB is subtracted, giving a field strength of 32 dB $\mu$ V/m. This value in dB $\mu$ V/m was converted to its corresponding level in  $\mu$ V/m.

RA = 52.0 dB $\mu$ V  
AF = 7.4 dB  
CF = 1.6 dB  
AG = 29.0 dB  
FS = RR + LF  
FS = 23 + 9 = 32 dB $\mu$ V/m

RR = 23.0 dB $\mu$ V  
LF = 9.0 dB

Level in  $\mu$ V/m = Common Antilogarithm [(32 dB $\mu$ V/m)/20] = 39.8  $\mu$ V/m

## INTERTEK TESTING SERVICES

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### 3.2 Radiated Emission Configuration Photograph - Base Unit

Worst Case Radiated Emission

at 55.300 MHz

The worst case radiated emission configuration photographs are saved with filename: config photos.pdf

### 3.3 Radiated Emission Data - Base Unit

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

Judgement : Passed by 6.1 dB margin

\*\*\*\*\*

#### **TEST PERSONNEL:**



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*Tester Signature*

Koo Wai Ip, Engineer  
*Typed/Printed Name*

August 25, 2009  
*Date*



## INTERTEK TESTING SERVICES

Company: Binatone Electronics International Limited

Date of Test: July 28-30, 2009

Model: L502BT

Mode : Bluetooth (Tx - Channel 00)

Table 1, Base unit

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249(a) Requirements

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	2402.000	98.8	33	29.4	43.9	51.3	94.0	-42.7
H	*4804.000	51.7	33	34.9	43.9	9.7	54.0	-44.3
H	7206.000	42.7	33	37.9	43.9	3.7	54.0	-50.3
H	9608.000	36.8	33	40.4	43.9	0.3	54.0	-53.7
H	*12010.000	37.1	33	40.5	43.9	0.7	54.0	-53.3
H	14412.000	36.2	33	40.0	43.9	-0.7	54.0	-54.7

Polarization	Frequency	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	2402.000	98.8	33	29.4	95.2	114.0	-18.8
H	*4804.000	51.7	33	34.9	53.6	74.0	-20.4
H	7206.000	42.7	33	37.9	47.6	74.0	-26.4
H	9608.000	36.8	33	40.4	44.2	74.0	-29.8
H	*12010.000	37.1	33	40.5	44.6	74.0	-29.4
H	14412.000	36.2	33	40.0	43.2	74.0	-30.8

- NOTES:
1. Peak detector is used for the emission measurement.
  2. All measurements were made at 3 meters. Radiated 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 radiated 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.
  4. Horn antenna is used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of part 15.205.

Test Engineer: Koo Wai Ip

Test Report Number: HK09071275-2

FCC ID: VLJ80-7472-01

## INTERTEK TESTING SERVICES

Company: Binatone Electronics International Limited

Date of Test: July 28-30, 2009

Model: L502BT

Mode : Bluetooth (Tx - Channel 39)

Table 2, Base unit

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249(a) Requirements

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	2441.000	99.2	33	29.4	43.9	51.7	94.0	-42.3
H	*4882.000	51.3	33	34.9	43.9	9.3	54.0	-44.7
H	*7323.000	42.5	33	37.9	43.9	3.5	54.0	-50.5
H	9764.000	38.0	33	40.4	43.9	1.5	54.0	-52.5
H	*12205.000	38.1	33	40.5	43.9	1.7	54.0	-52.3
H	14646.000	38.0	33	38.4	43.9	-0.5	54.0	-54.5

Polarization	Frequency	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	2441.000	99.2	33	29.4	95.6	114.0	-18.4
H	*4882.000	51.3	33	34.9	53.2	74.0	-20.8
H	*7323.000	42.5	33	37.9	47.4	74.0	-26.6
H	9764.000	38.0	33	40.4	45.4	74.0	-28.6
H	*12205.000	38.1	33	40.5	45.6	74.0	-28.4
H	14646.000	38.0	33	38.4	43.4	74.0	-30.6

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated 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 radiated 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.

4. Horn antenna is used for the emission over 1000MHz.

\* Emission within the restricted band meets the requirement of part 15.205.

Test Engineer: Koo Wai Ip

Test Report Number: HK09071275-2

FCC ID: VLJ80-7472-01

## INTERTEK TESTING SERVICES

Company: Binatone Electronics International Limited

Date of Test: July 28-30, 2009

Model: L502BT

Mode : Bluetooth (Tx - Channel 78)

Table 3, Base unit

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249(a) Requirements

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	2480.000	99.0	33	29.4	43.9	51.5	94.0	-42.5
H	*4960.000	51.5	33	34.9	43.9	9.5	54.0	-44.5
H	*7440.000	42.9	33	37.9	43.9	3.9	54.0	-50.1
H	9920.000	40.2	33	40.4	43.9	3.7	54.0	-50.3
H	*12400.000	39.3	33	40.5	43.9	2.9	54.0	-51.1
H	14880.000	38.0	33	38.4	43.9	-0.5	54.0	-54.5

Polarization	Frequency	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	2480.000	99.0	33	29.4	95.4	114.0	-18.6
H	*4960.000	51.5	33	34.9	53.4	74.0	-20.6
H	*7440.000	42.9	33	37.9	47.8	74.0	-26.2
H	9920.000	40.2	33	40.4	47.6	74.0	-26.4
H	*12400.000	39.3	33	40.5	46.8	74.0	-27.2
H	14880.000	38.0	33	38.4	43.4	74.0	-30.6

- NOTES:
1. Peak detector is used for the emission measurement.
  2. All measurements were made at 3 meters. Radiated 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 radiated 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.
  4. Horn antenna is used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of part 15.205.

Test Engineer: Koo Wai Ip

Test Report Number: HK09071275-2

FCC ID: VLJ80-7472-01

## INTERTEK TESTING SERVICES

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Company: Binatone Electronics International Limited

Date of Test: July 28-30, 2009

Model: L502BT

Mode : Talk

Table 4, Base unit

### Radiated Emissions Pursuant to FCC Part 15 Section 15.209 Requirements

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	55.300	38.9	16	11.0	33.9	40.0	-6.1
V	*110.600	36.2	16	14.0	34.2	43.5	-9.3
V	*165.900	33.5	16	17.0	34.5	43.5	-9.0
H	221.200	32.8	16	17.0	33.8	46.0	-12.2
H	*276.500	26.4	16	22.0	32.4	46.0	-13.6
H	*331.800	24.0	16	24.0	32.0	46.0	-14.0

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated 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 radiated 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.

\* Emission within the restricted band meets the requirement of part 15.205.

Test Engineer: Koo Wai Ip

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## INTERTEK TESTING SERVICES

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### 3.4 Radiated Emission on the Bandedge - Base Unit, FCC Rule 15.249(d)

From the following plots, they show that the fundamental emissions are confined in the specified band (2400MHz to 2483.5MHz). In case of the fundamental emissions are within two standard bandwidths from the bandedge, the delta measurement technique is used for determining bandedge compliance. Standard bandwidth is the bandwidth specified by ANSI C63.4 (2003) for frequency being measured.

Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation, which meet the requirement of part 15.249(d).

Please refer emission.pdf for radiated emission on the bandedge:

Bandedge compliance is determined by applying marker-delta method, i.e.

Lowest Channel Emissions:

Peak Resultant: Resultant field strength = Fundamental emissions - delta from the plot  
= 95.2dB $\mu$ V/m - 32.31dB  
= 62.89dB $\mu$ V/m

Average Resultant: Resultant field strength = Fundamental emissions - delta from the plot  
= 51.3dB $\mu$ V/m - 32.31dB  
= 18.99dB $\mu$ V/m

Highest Channel Emissions:

Peak Resultant: Resultant field strength = Fundamental emissions - delta from the plot  
= 95.4dB $\mu$ V/m - 47.86dB  
= 47.54dB $\mu$ V/m

Average Resultant: Resultant field strength = Fundamental emissions - delta from the plot  
= 51.5dB $\mu$ V/m - 47.86dB  
= 3.64dB $\mu$ V/m

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74dB $\mu$ V/m for peak limit and also 54dB $\mu$ V/m for average limit.

Pursuant to FCC Part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over expected variations in temperature and supply voltage were considered.

## INTERTEK TESTING SERVICES

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### 3.5 Line Conducted Configuration Photograph - Base Unit

Worst Case Line-Conducted Configuration

at 1.014 MHz

The worst case line conducted configuration photographs are saved with filename: config photos.pdf

### 3.6 Line Conducted Emission Data - Base Unit

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

Judgement : Passed by 17.25 dB margin compared with quasi-peak limit

#### **TEST PERSONNEL:**



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*Tester Signature*

Koo Wai Ip, Engineer  
*Typed/Printed Name*

August 25, 2009  
*Date*

## **INTERTEK TESTING SERVICES**

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Company: Binatone Electronics International Limited  
Model: L502BT

Date of Test: July 28-30, 2009

### **Conducted Emissions Pursuant to FCC Part 15 Section 15.207 Requirements**

The conducted emission test result is saved with filename: conduct.pdf

## INTERTEK TESTING SERVICES

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### 3.7 Transmitter Duty Cycle Calculation, FCC Rule 15.35(b, c)

Based on the Bluetooth Specification Version 2.1 + EDR, transmitter ON time is independent of the packet type (DH1, DH3 and DH5) and packet length (single-slot and multi-slot). The maximum transmitter ON time for the Bluetooth is 625 $\mu$ s.

Each TX and RX time slot is 625 $\mu$ s in length. A TDD scheme is used where master and slave alternately transmit. For one period for a pseudo-random hopping through all 79 RF channels, it takes: 79 x (0.625 x 2)ms = 98.75ms.

Therefore,

$$\begin{aligned}\text{Average Factor (AF) of Bluetooth in dB} &= 20 \log_{10} (0.625/98.75) \text{ dB} \\ &= 20 \log_{10} (0.00633) \text{ dB} \\ &= -43.9\text{dB}\end{aligned}$$



**INTERTEK TESTING SERVICES**

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**EXHIBIT 4  
EQUIPMENT LIST**

## INTERTEK TESTING SERVICES

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### 4.0 Equipment List

#### 1) Radiated Emissions Test

Equipment	Biconical Antenna	Log Periodic Antenna	Double Ridged Guide Antenna	Broad-Band Horn Antenna
Registration No.	EW-0954	EW-0446	EW-1015	EW-1679
Manufacturer	EMCO	EMCO	EMCO	SCHWARZBECK
Model No.	3104C	3146	3115	BBHA9170
Calibration Date	Sep. 30, 2008	Oct. 02, 2008	Jul. 28, 2008	Feb. 10, 2009
Calibration Due Date	Mar. 30, 2010	Apr. 02, 2010	Jan. 28, 2010	Feb. 10, 2010

Equipment	RF Pre-Amplifier	EMI Test Receiver		Spectrum Analyzer
Registration No.	EW-1779a	EW-0014	EW-0016	EW-2188
Manufacturer	MITEQ	R&S	R&S	AGILENTTECH
Model No.	AMF-4D-001120-34-13P	ESVS30	ESVS30	E4407B
Calibration Date	Jul. 05, 2008	May 09, 2008	Apr. 14, 2009	Dec. 18, 2008
Calibration Due Date	Aug. 01, 2009	May 09, 2009	Apr. 14, 2010	Dec. 18, 2009

#### 2) Conducted Emissions Test

Equipment	Pulse Limiter	Artificial Mains	EMI Test Receiver
Registration No.	EW-0698	EW-0192	EW-2251
Manufacturer	R&S	R&S	R&S
Model No.	ESH3-Z2	ESH3-Z5	ESCI
Calibration Date	Feb. 03, 2009	Nov. 12, 2008	Oct. 28, 2008
Calibration Due Date	Feb. 03, 2010	Nov. 12, 2009	Oct. 28, 2009

**INTERTEK TESTING SERVICES**

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**APPENDIX  
EXHIBITS FOR APPLICATION OF CERTIFICATION**