October 21, 2011

Seeed Technology Inc.
5th Floor, 8th Building, Shiling industrial Park, NanShan dist.
Shenzhen China

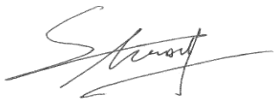
Dear Miao Albert:

Enclosed you will find your file copy of a Part 15 Certification (FCC ID: Z4T-BTSHIELD).

For your reference, TCB will normally take another 10 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,



Shawn Xing
Manager

Enclosure

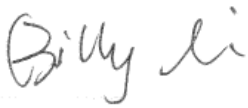
Seeed Technology Inc.

Application
For
Certification
(FCC ID: Z4T-BTSHIELD)

Accessory (Arduino Compatible)

Model: Bluetooth Shield
2.4GHz Transceiver Module

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator,
Mention 47 CFR [10-1-10]



SZ11090414-1
Billy Li
October 21, 2011

Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch
6F, D Block, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China
Tel: (86 755) 8601 6288 Fax: (86 755) 8601 6751 Website: www.china.intertek-etlsemko.com

LIST OF EXHIBITS

MEASUREMENT/TECHNICAL REPORT

Seeed Technology Inc. - Model: Bluetooth Shield

FCC ID: Z4T-BTSHIELD

October 21, 2011

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

Equipment Type: DXX - Part 15 Low Power Communication Device Transmitter

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

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.

Transition Rules Request per 15.37? Yes _____ No X

If no, assumed Part 15, Subpart C for intentional radiator – the new 47 CFR [10-1-10 Edition] provision.

Report prepared by:

Shawn Xing
Intertek Testing Services Shenzhen Ltd.
Kejiyuan Branch
6F, Block D, Huahan Building, Langshan Road,
Nanshan District, Shenzhen, P. R. China
Phone: (86 755) 8601 6288
Fax: (86 755) 8601 6751

Table of Contents

List of attached file

Exhibit type	File Description	Filename
Test Report	Test Report	report.pdf
Test Setup Photo	Radiated Emission	radiated photo.pdf
Test Setup Photo	Conducted Emission	conducted photo.pdf
Test Report	Bandedge Plot	bandedge.pdf
Test Report	20dB BW Plot	bw.pdf
External Photo	External Photo	external photo.pdf
Internal Photo	Internal Photo	internal photo.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
Operation Description	Technical Description	descri.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf
Cover Letter	Module Approval Letter	module approval letter.pdf
Cover Letter	Letter of Agency	agency.pdf
Cover Letter	Certification of Agreement	agreement.pdf

EXHIBIT 1

GENERAL DESCRIPTION

1.0 General Description

1.1 Product Description

The Equipment under Test (EUT) is an Accessory (Arduino Compatible) unit, model: Bluetooth Shield operating at 2.4GHz band. The EUT is powered by USB Port.

Antenna Type: Integral antenna

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

1.2 Related Submittal(s) Grants

This is an application for certification of a transceiver for Module Approval, and there is no corresponding unit for certification.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003) and DA 00-705. Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the 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.

1.4 Test Facility

The Semi-Anechoic chamber and shield room used to collect the radiated data and conducted data is **Interterk Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, Block D, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China. This test facility and site measurement data have been fully placed on file with the FCC.

EXHIBIT 2

SYSTEM TEST CONFIGURATION

2.0 System Test Configuration

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (2003).

The EUT was powered by USB Port through AC adapter with 120V/60Hz during the testing.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on a turn table, which enabled the Engineer to maximize emissions through its placement in the three orthogonal axes.

2.2 EUT Exercising Software

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

The parameters of test software setting:
During the test, Channel and power controlling software provided by the applicant was used to control the operating channel.

2.3 Special Accessories

N/A

2.4 Equipment Modification

Any modifications installed previous to testing by Seeed Technology Inc. will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch

2.5 Measurement Uncertainty

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

2.6 Support Equipment List and Description

Description	Manufacturer	Model No.
Bluetooth Tester	R&S	CBT32
USB Cable	N/A	Unshielded, 100cm
Adapter	N/A	Input: 100-240Vac Output: 5V, 500mA

All the items listed under section 2.0 of this report are

Confirmed by:

Shawn Xing
Manager
Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch
Agent for Seeed Technology Inc.

Signature

October 21, 2011 Date

EXHIBIT 3

EMISSION RESULTS

3.0 **Emission Results**

Data is included worst-case configuration (the configuration which resulted in the highest emission levels).

3.1 **Radiated Test Results**

A sample calculation, configuration photographs and data tables of the emissions are included.

3.1.1 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 dBµV/m
RA = Receiver Amplitude (including preamplifier) in dBµV
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:

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

Assume a receiver reading of 62.0 dBµV 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. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBµV/m. This value in dBµV/m was converted to its corresponding level in µV/m.

RA = 62.0 dBµV
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB
AV = -10 dB
FS = 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 dBµV/m

Level in µV/m = Common Antilogarithm [(32 dBµV/m)/20] = 39.8 µV/m

3.1.2 Radiated Emission Configuration Photograph

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photo. pdf.

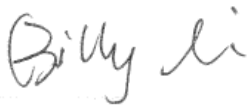
3.1.3 Radiated Emissions

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Worst Case Radiated Emission
at
31.253 MHz

Judgement: Passed by 16.9 dB

TEST PERSONNEL:



Signature

Billy Li, Team Leader
Typed/Printed Name

October 21, 2011
Date

Applicant: Seeed Technology Inc. Date of Test: October 21, 2011
Model: Bluetooth Shield
Sample: 1/1
Worst Case Operating Mode: Transmit

Table 1

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	31.253	24.8	20.0	18.3	23.1	40.0	-16.9
Horizontal	36.334	25.2	20.0	15.0	20.2	40.0	-19.8
Horizontal	42.158	25.2	20.0	11.3	16.5	40.0	-23.5
Vertical	30.279	25.3	20.0	17.6	22.9	40.0	-17.1
Vertical	44.126	28.1	20.0	11.3	19.4	40.0	-20.6
Vertical	88.574	33.0	20.0	7.6	20.6	43.5	-22.9

NOTES: 1. Quasi-Peak detector is used except for others stated.

2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances 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 harmonic 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. All emissions are below the QP limit.

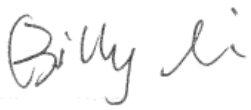
3.1.4 Transmitter Spurious Emissions (Radiated)

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Worst Case Radiated Emission
at
7440.000 MHz

Judgement: Passed by 19.2 dB

TEST PERSONNEL:



Signature

Billy Li, Team Leader
Typed/Printed Name

October 21, 2011
Date

Applicant: Seeed Technology Inc. Date of Test: October 21, 2011
Model: Bluetooth Shield
Sample: 1/1
Worst Case Operating Mode: Transmit

Table 2

Radiated Emissions

(2402MHz)

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2402.000	101.2	36.7	28.1	92.6	114.0	-21.4
Horizontal	4804.000	55.6	36.1	32.8	52.3	74.0	-21.7
Horizontal	7206.000	53.9	36.2	36.5	54.2	74.0	-19.8

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2402.000	101.2	36.7	28.1	30.1	62.5	94.0	-31.5
Horizontal	7206.000	53.9	36.2	36.5	30.1	24.1	54.0	-29.9

Notes: 1. Peak Detector Data unless otherwise stated.

2. All measurements were made at 3 meter. Harmonic 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 harmonic 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.

Test Engineer: Billy Li

Applicant: Seeed Technology Inc. Date of Test: October 21, 2011
Model: Bluetooth Shield
Sample: 1/1
Worst Case Operating Mode: Transmit

Table 3

Radiated Emissions

(2441MHz)

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2441.000	102.1	36.7	28.1	93.5	114.0	-20.5
Horizontal	4882.000	53.8	36.1	35.5	53.2	74.0	-20.8
Horizontal	7323.000	53.8	36.3	37.2	54.7	74.0	-19.3

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2441.000	102.1	36.7	28.1	30.1	63.4	94.0	-30.6
Horizontal	7323.000	53.8	36.3	37.2	30.1	24.6	54.0	-29.4

Notes: 1. Peak Detector Data unless otherwise stated.

2. All measurements were made at 3 meter. Harmonic 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 harmonic 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.

Test Engineer: Billy Li

Applicant: Seeed Technology Inc. Date of Test: October 21, 2011
Model: Bluetooth Shield
Sample: 1/1
Worst Case Operating Mode: Transmit

Table 4

Radiated Emissions

(2480MHz)

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2480.000	100.8	36.7	28.1	92.2	114.0	-21.8
Horizontal	4960.000	53.7	36.1	35.5	53.1	74.0	-20.9
Horizontal	7440.000	53.9	36.3	37.2	54.8	74.0	-19.2

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (-dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2480.000	100.8	36.7	28.1	30.1	62.1	94.0	-31.9
Horizontal	7440.000	53.9	36.3	37.2	30.1	24.7	54.0	-29.3

Notes: 1.Peak Detector Data unless otherwise stated.

2. All measurements were made at 3 meter. Harmonic 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 harmonic 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.

Test Engineer: Billy Li

3.2 **Conducted Emission at Mains Terminal**

3.2.1 Conducted Emissions Configuration Photograph

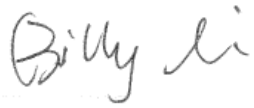
For electronic filing, the worst case conducted emission configuration photograph is saved with filename: conducted photo.pdf.

3.2.2 Conducted Emissions

Worst Case Neutral-Conducted Configuration
at
0.530 MHz

Judgement: Passed by 15.9 dB margin

TEST PERSONNEL:



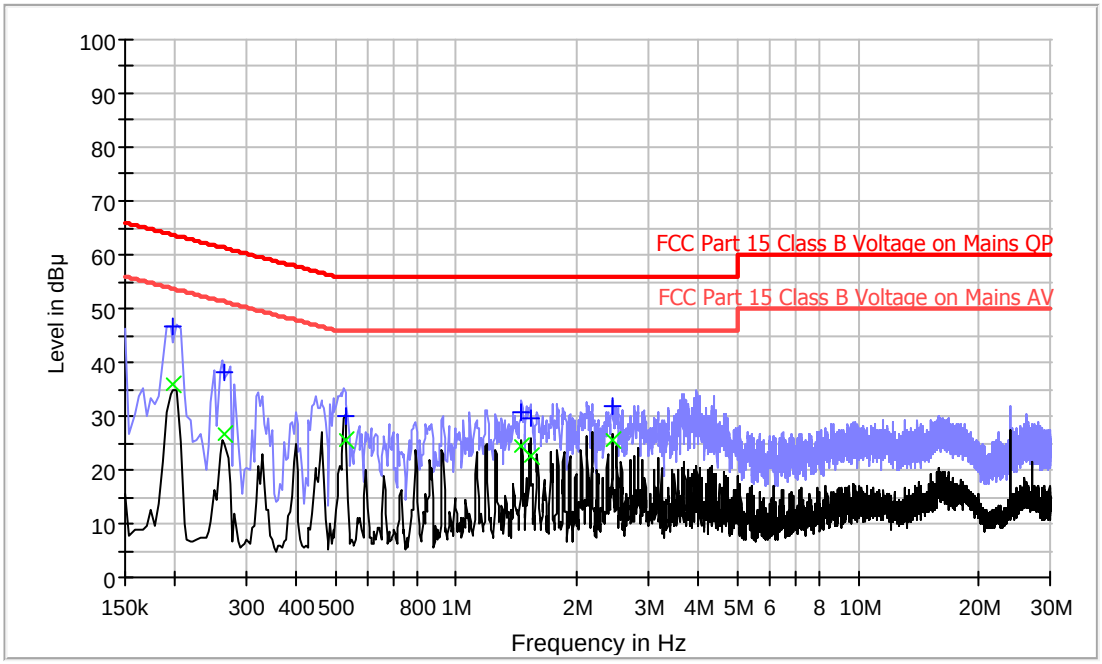
Signature

Billy Li, Team Leader
Typed/Printed Name

October 21, 2011
Date

Applicant: Seeed Technology Inc. Date of Test: October 21, 2011
Model: Bluetooth Shield
Sample: 1/1
Worst Case Operating Mode: Transmit with 2441MHz

Conducted Emission Test - FCC



Result Table-QP

Frequency (MHz)	QuasiPeak (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.198000	46.8	L1	9.6	16.9	63.7
0.266000	38.2	L1	9.6	23.0	61.2
0.534000	30.1	L1	9.6	25.9	56.0
1.450000	30.7	L1	9.8	25.3	56.0
1.526000	29.8	L1	9.8	26.2	56.0
2.442000	31.7	L1	9.8	24.3	56.0

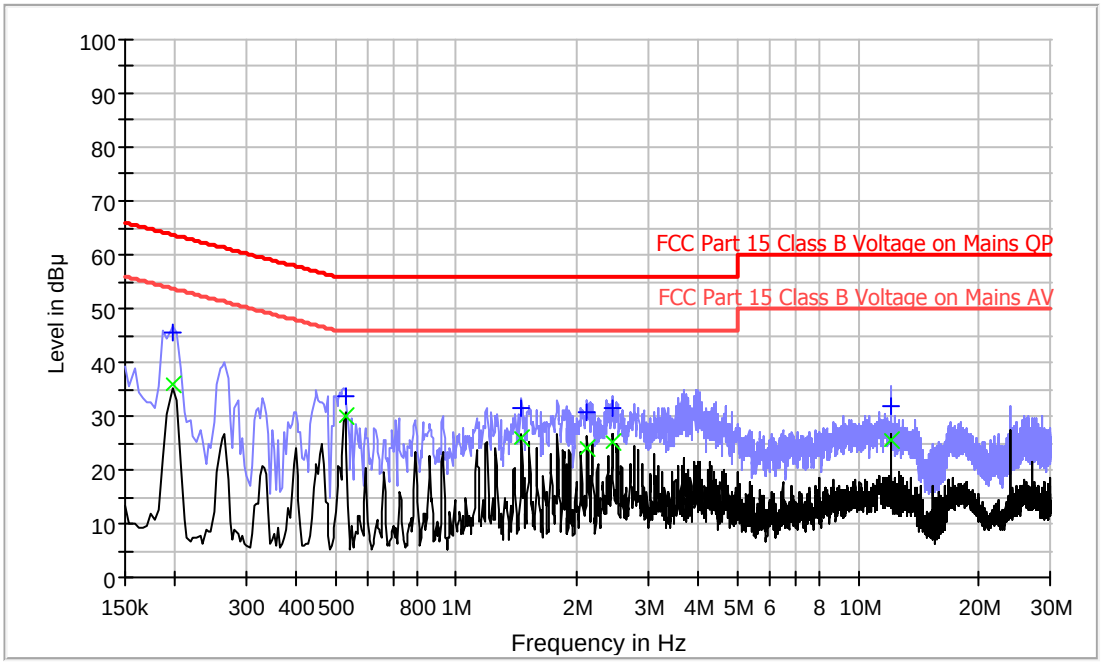
Result Table-AV

Frequency (MHz)	Average (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.198000	36.0	L1	9.6	17.7	53.7
0.266000	26.7	L1	9.6	24.5	51.2
0.534000	25.6	L1	9.6	20.4	46.0
1.450000	24.5	L1	9.8	21.5	46.0
1.526000	22.7	L1	9.8	23.3	46.0
2.442000	25.6	L1	9.8	20.4	46.0

Test Engineer: Billy Li

Applicant: Seeed Technology Inc. Date of Test: October 21, 2011
Model: Bluetooth Shield
Sample: 1/1
Worst Case Operating Mode: Transmit with 2441MHz

Conducted Emission Test - FCC



Result Table-QP

Frequency (MHz)	QuasiPeak (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.198000	45.6	N	9.6	18.1	63.7
0.530000	33.6	N	9.6	22.4	56.0
1.454000	31.5	N	9.8	24.5	56.0
2.110000	30.6	N	9.8	25.4	56.0
2.442000	31.6	N	9.8	24.4	56.0
11.998000	31.7	N	10.0	28.3	60.0

Result Table-AV

Frequency (MHz)	Average (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.198000	35.8	N	9.6	17.9	53.7
0.530000	30.1	N	9.6	15.9	46.0
1.454000	25.9	N	9.8	20.1	46.0
2.110000	24.1	N	9.8	21.9	46.0
2.442000	25.1	N	9.8	20.9	46.0
11.998000	25.5	N	10.0	24.6	50.0

Test Engineer: Billy Li

EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

4.0 Equipment Photographs

For electronic filing, the photographs of the tested EUT are saved with filename: external photo.pdf & internal photo.pdf.

EXHIBIT 5

PRODUCT LABELLING

5.0 **Product Labelling**

For electronic filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

EXHIBIT 6

TECHNICAL SPECIFICATIONS

6.0 Technical Specifications

For electronic filing, the block diagram and schematics of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

EXHIBIT 7

INSTRUCTION MANUAL

7.0 **Instruction Manual**

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

EXHIBIT 8

MISCELLANEOUS INFORMATION

8.0 Miscellaneous Information

This miscellaneous information includes details of the measured bandedge, the test procedure and calculation of factor such as pulse desensitization.

8.1 Bandedge Plot

For electronic filing, the plot shows the fundamental emission when modulated is saved with filename: be.pdf. From the plot, the field strength of any emissions outside of the specified frequency band are attenuated to the general radiated emission limits in section 15.209. It fulfils the requirement of 15.249(d).

Peak Measurement

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

(i) Lower channel 2402MHz:

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the bandedge plot

= 92.6 dBµv/m -49.7 dB
= 42.9 dBµv/m

(ii) Upper channel 2480MHz:

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the bandedge plot

= 92.2 dBµv/m -45.0 dB
= 47.2 dBµv/m

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74dBµv/m (Peak Limit) and 54dBµv/m (Average Limit).

8.1 Bandedge Plot (cont'd)

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 excepted variations in temperature and supply voltage were considered.

Figure 8.1 Bandwidth

8.2 Discussion of Pulse Desensitization

Pulse desensitivity is not applicable for this device.The effective period (T_{eff}) is approximately 386 µs for a digital "1" bit, as shown in the plots of Exhibit 8.3. With a resolution bandwidth (3 dB) of 100 kHz, the pulse desensitivity factor was 0 dB.

8.3 Calculation of Average Factor

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

Each TX and RX time slot is 625µs 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, for DH5:

Time of 1 hopset (5 TX slots + 1 RX slot) = 0.625 ms x 6 = 3.75 ms

Time of 1 cycle =3.75 ms x 79 = 296.25 ms

Average factor = 20 log (3.125 / 100) = -30.1 dB

8.4 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 - 2003.

The transmitting equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjust through all three orthogonal axes to obtain maximum emission levels. The antenna height and polarization are varied during the testing to search for maximum signal levels.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings.

The frequency range scanned is 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 40 GHz, whichever is lower.

8.4 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements are made as described in ANSI C63.4 - 2003.

The IF bandwidth used for measurement of radiated signal strength was 10 kHz for emission below 30 MHz and 120 kHz for emission from 30 MHz to 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the restricted bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, but those measurements taken at a closer distance are so marked.

EXHIBIT 9

MODULE APPROVAL LETTER

9.0 **Module Approval Letter**

For electronic filing, the module approval letter of the tested EUT is saved with filename: module approval letter.pdf.

EXHIBIT 10

TEST EQUIPMENT LIST

10.0 **Test Equipment List**

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	02-Jul-11	02-Jan-13
SZ185-01	EMI Receiver	R&S	ESCI	100547	08-Mar-11	08-Mar-12
SZ061-08	Horn Antenna	ETS	3115	00092346	15-Mar-10	15-Mar-12
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	08-Mar-11	08-Mar-12
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	08-Mar-11	08-Mar-12
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	15-Jan-11	15-Jan-12
SZ062-02	RF Cable	RADIALL	RG 213U	--	25-Mar-11	25-Mar-12
SZ062-06	RF Cable	RADIALL	0.04-26.5GHz	--	16-Sep-11	16-Sep-12
SZ062-12	RF Cable	RADIALL	0.04-26.5GHz	--	16-Sep-11	16-Sep-12
SZ067-04	Notch Filter	Micro-Tronics	BRM50702-02	--	25-Mar-11	25-Mar-12
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	12-Nov-10	12-Nov-11
SZ187-01	Two-Line V-Network	R&S	ENV216	100072	12-Nov-10	12-Nov-11
SZ187-02	Two-Line V-Network	R&S	ENV216	100073	12-Nov-10	12-Nov-11
SZ188-03	Shielding Room	ETS	RFD-100	4100	16-Sep-10	16-Sep-13