FCC PART 15.247 EMI MEASUREMENT AND TEST REPORT

For

ITON TECHNOLOGY LIMITED

A/10E, Jinfeng Building, Binhe Road, Futian District, Shenzhen, China

FCC ID: VYVPA-BK02

April 21, 2008

This Report Concerns: **Equipment Type:** Original Report Bluetooth Keyboard **Test Engineer:** Kait Chen **Report No.:** WSCT08040066E **Test Date:** April 18~20, 2008 **Reviewed By:** Henry Yang World Standardization Certification & Testing Co., Ltd. **Prepared By:** 1-2/F, Dachong Science & technology Building, No.28 of Tonggu Road, Nanshan District, Shenzhen, PRC Tel: +86-755-26996142 Fax: +86-755-26996253

Note: The test report is specially limited to the above company and this particular sample only. It may not be duplicated without prior written consent of World Standardization Certification & Testing Co., Ltd. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government.

ITON TECHNOLOGY LIMITED FCC ID: VYVPA-BK02

TABLE OF CONTENTS

GENERAL INFORMATION	
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
OBJECTIVE	
RELATED SUBMITTAL(S)/GRANT(S) TEST METHODOLOGY	
TEST FACILITY	
SYSTEM TEST CONFIGURATION	
DESCRIPTION OF TEST CONFIGURATION	
EQUIPMENT MODIFICATIONS	
BLOCK DIAGRAM OF TEST SETUP	
SUMMARY OF TEST RESULTS	
§15.247i - RF EXPOSURE	
APPLICABLE STANDARD	
§15.203 - ANTENNA REQUIREMENT	
APPLICABLE STANDARD	
\$15.205, \$15.209, \$15.247 - RADIATED EMISSION	
APPLICABLE STANDARD	
MEASUREMENT UNCERTAINTY	
EUT SETUP	
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP	10
TEST EQUIPMENT LIST AND DETAILS TEST PROCEDURE	
CORRECTED AMPLITUDE & MARGIN CALCULATION	
TEST RESULTS SUMMARY	
TEST DATA	1
§15.247(a)(1)-CHANNEL SEPARATION TEST	14
APPLICABLE STANDARD	14
TEST EQUIPMENT LIST AND DETAILS	
TEST PROCEDURE	
TEST DATA	
§15.247(a)(1) –20dB BANDWIDTH TESTING	
APPLICABLE STANDARD	
TEST EQUIPMENT LIST AND DETAILS TEST PROCEDURE	
TEST DATA	
§15.247(a)(1)(iii)-QUANTITY OF HOPPING CHANNEL TEST	2′
APPLICABLE STANDARD	
TEST EQUIPMENT LIST AND DETAILS.	
TEST PROCEDURE	22
TEST DATA	23
§15.247(a)(1)(iii) -TIME OF OCCUPANCY (DWELL TIME)	24
APPLICABLE STANDARD	
TEST PROCEDURE	
TEST PROCEDURE	
§15.247(b)(1) - PEAK OUTPUT POWER MEASUREMENT	
APPLICABLE STANDARD	
TEST EQUIPMENT LIST AND DETAILS	
TEST PROCEDURE	

ITON TECHNOLOGY LIMITED FCC ID: VYVPA-BK02

Test Data	28
§15.247(d) - 100 KHZ BANDWIDTH OF BAND EDGES	32
APPLICABLE STANDARD	32
TEST EQUIPMENT LIST AND DETAILS	
TEST PROCEDURE	32
TEST DATA	33

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The ITON TECHNOLOGY LIMITED's product, model number: PA-BK02 or the "EUT" as referred to in this report is a *bluetooth transceiver*, and product name is *Bluetooth Keyboard*, which measures approximately 44.0 cm L x 18.0 cmW x 2.5 cmH, rated input voltage: Battery 3.0 V. *Note: The series products, mode PA-BK01, PA-BK02, PA-BK03, BK04, PA-BK05, PA-BK06, PA-BK07, PA-BK08, PA-BK09, PA-BK10, PA-BD01, PA-BD01, PA-BD02, PA-BD03, PA-BD04, PA-BD05, PA-BD06, PA-BD07, PA-BD08, PA-BD09, PA-BD10, PA-BD11, PA-BD12, we select PA-BK02 to test, the all model have same circuit diagram, PCB, only appearance have difference.

Objective

This Type approval report is prepared on behalf of ITON TECHNOLOGY LIMITED. in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203,15.205, 15.209 and 15.247 rules.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All measurements according to procedure of DA 00-705 to perform the measurements.

All emissions measurement was performed and World Standardization Certification & Testing Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by World Standardization Certification & Testing Co., Ltd to collect test data is located in the 1-2/F, Dachong Science & technology Building, No.28 of Tonggu Road, Nanshan District, Shenzhen, PRC

Test site at World Standardization Certification & Testing Co., Ltd has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

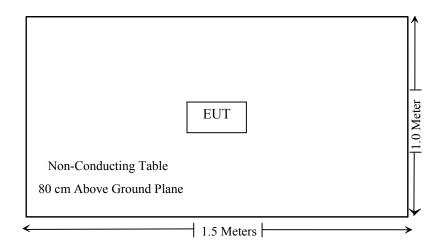
The system was configured for testing in a typical fashion (as normally used by a typical user).

Equipment Modifications

World Standardization Certification & Testing Co., Ltd has not done any modification on the EUT.

Block Diagram of Test Setup

Test mode: Transmitting



SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.247 i	RF Exposure	Compliant
§15.203	Antenna Requirement	Compliant
§15.205	Restricted Band	Compliant
§15.205, §15.209, §15.247(d)	Radiated Emission	Compliant
§15.247 (a)(1)	20 dB Bandwidth	Compliant
§15.247(a)(1)	Channel Separation	Compliant
§15.247(a)(1)(iii)	Time of occupancy (Dwell Time)	Compliant
§15.247(a)(1)(iii)	Quantity of hopping channel	Compliant
§15.247(b)(1)	Peak Output Power	Compliant
§15.247(d)	Band edge	Compliant

§15.247(i) RF Exposure

Applicable Standard

According to 1.1310 of FCC rules, the power density limit for general population/uncontroller Exposure is 1mw/cm2. As this is a mobile application the MPE shall be calculate at 20 cm to show compliance with the power density limit. the following formula was used to calculate the power density:

 $S=PG/4\prod R^2$

Where:

S=Power Density

P=Output power at Antenna Terminals

G=Gain of transmit Antenna(linear gain)

R=Distance from transmitting Antenna

For this device ,the calculation as following:

BAND	Antenna gain	Peak output power	RF exposure at R=20cm	Limit
(MHz)	(numeric)	(mw)	(mw /cm2)	(mw/cm2)
2480	2.5	0.235	0.000169	1.00

Base on the above calculation at 20cm the bluetooth keyboard is below the power density limit of $1 \text{mw}/\text{cm}^2$.

§15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to § 15.247 (b) (4), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The antenna for this device is an integral antenna with gain of maximum is 2.5 dBi.

§15.205, §15.209, §15.247 - RADIATED EMISSION

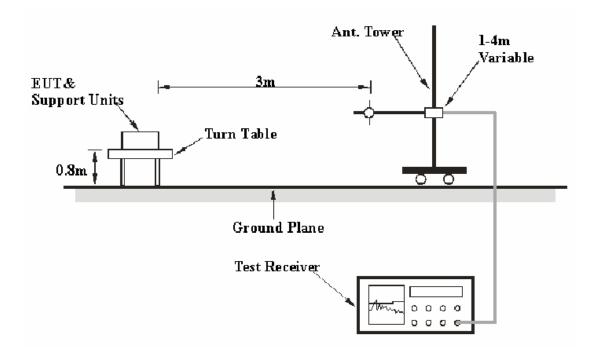
Applicable Standard

According to FCC §15.247 (d)

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

EUT Setup



The radiated emission tests were performed in the 3-meter Chamber, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209 and FCC 15.247 limits.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	
30MHz - 1000 MHz	100 k	Hz	300 kHz
1000 MHz – 25 GHz	1 MF	łz	3 MHz

Test Equipment List and Details

	966 RF CHAMBER									
NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	CALIBRATION DUE						
PSA SPECTRUM ANALYZER	Agilent	E4446A	US44300398	03/15/2009						
EMI Test Receiver	R&S	ESCI	100005	03/15/2009						
Pre Amplifier	НР	HP8447E	2945A02715	03/15/2009						
Antenna	Sunol Sciences Corporation	JB3	A021907	03/15/2009						
TURN TABLE	CCS	2081-1.21	N/A	N.C.R						
ANTENNA TOWER	CT	N/A	N/A	N.C.R						
CONTROLLER	CCS	N/A	N/A	N.C.R						
RF COMM. TEST SET	НР	8920B	US36142091	N.C.R						
SITE NSA	C&C	N/A	N/A	03/15/2009						
HORN ANTENNA	TRC	N/A	N/A	03/15/2009						
LOOP ANTENNA	ARA	PLA-1030/B	1028	03/15/2009						

^{*} Statement of Traceability: World Standardization Certification & Testing Co., Ltd attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST. All measurements according to procedure of DA 00-705 to perform the measurements.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the PK&AV detection mode.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Meter Reading + Antenna Loss + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Corr. Ampl. - Standard Limit

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209, and 15.247,

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	53%
ATM Pressure:	1009mbar

The testing was performed by Kait Chen on 2008-04-20

Above 1GHz

Above 10	112							I		I	
Frequency	Reading	Detector	Direction	Height	Polar	Antenna Loss	Cable loss	Amplifier	Correction Factor	FCC 15	.247
MHz	dBuV/m	PK/QP/AV					dB	dB	dBuV/m	Limit	Margin
					L	ow Channel					
2402	91.67	PK	20	1.2	Η	27.4	3.61	35	87. 68		
2402	90.33	AV	263	1.4	Н	27.4	3.61	35	86.34		
4804	42.50	PK	49	1.2	Η	31.3	4.64	33.4	45.04	74	28. 96
4804	29.67	AV	270	1.6	Н	31.3	4.64	33.4	32. 21	54	21. 79
2402	92.33	PK	18	1.6	>	27.4	3.61	35	88. 34		
2402	91.17	AV	45	1.0	>	27.4	3.61	35	87. 18		
4804	43.67	PK	250	1.0	٧	31.3	4.64	33.4	46. 21	74	27. 79
4804	32.83	AV	180	1.6	٧	31.3	4.64	33.4	35. 37	54	18.63
					M	id Channel					
2441	91.50	PK	197	1.6	Н	27.4	3.61	35	87. 51		
2441	90.17	AV	197	1.6	Ι	27.4	3.61	35	86. 18		
4882	44.00	PK	109	1.2	Ι	31.3	4.64	33.4	46. 54	74	27. 46
4882	30.50	AV	109	1.2	Н	31.3	4.64	33.4	33.04	54	20.96
2441	91.00	PK	182	1.2	V	27.4	3.61	35	87.01		
2441	89.83	AV	182	1.2	V	27.4	3.61	35	85.84		
4882	45.17	PK	45	1.0	V	31.3	4.64	33.4	47.71	74	26. 29
4882	31.83	AV	180	1.6	V	31.3	4.64	33.4	34. 37	54	19.63

ITON TECHNOLOGY LIMITED FCC ID: VYVPA-BK02

	High Channel										
2480	93.00	PK	197	1.6	Н	27.4	3.61	35	89. 01		
2480	92.00	AV	197	1.6	Н	27.4	3.61	35	88.01		
4960	43.50	PK	109	1.2	Н	32.0	4.64	33.4	46. 74	74	27. 26
4960	31.17	AV	109	1.2	Н	32.0	4.64	33.4	34. 41	54	19. 59
2480	89.83	PK	182	1.2	V	27.4	3.61	35	85.84		
2480	89.00	AV	182	1.2	V	27.4	3.61	35	85. 01		
4960	44.83	PK	45	1.0	V	32.0	4.64	33.4	48.07	74	25. 93
4960	34.33	AV	180	1.6	V	32.0	4.64	33.4	37. 57	54	16. 43

ITON TECHNOLOGY LIMITED FCC ID: VYVPA-BK02

Below 1GHz

	Indio	cated		Table	Aı	ntenna	Cor	rection Fa	ctor	FCC Par	t 15.209
Frequency	Meter Reading	Comments	Direction	Height	Polar	Antenna Loss	Cable Loss	Amp. Gain	Corr. Ampl.	Limit	Margin
MHz	dBμV/m		Degree	Meter	H/V	dB	dB	dB	dBμV/m	dBμV/m	dB
32.86	36.4	PK	289	1.0	Н	24.1	1.2	26.8	34.9	40.0	-5.1
37.56	41.9	PK	289	1.0	Н	17.7	1.2	26.8	34.0	40.0	-6.0
33.10	32.0	PK	45	1.0	V	24.1	1.2	26.8	30.5	40.0	-9.5
531.29	39.8	PK	45	1.0	Н	18.6	4.7	27.1	36.0	46.0	-10.0
231.85	46.7	PK	45	1.2	V	11.7	2.8	26.0	35.2	46.0	-10.8
231.85	46.1	PK	45	1.2	Н	11.7	2.8	26.0	34.6	46.0	-11.4
502.24	38.5	PK	90	1.2	V	18.0	4.6	27.1	33.9	46.0	-12.1
40.29	38.3	PK	60	1.2	V	14.3	1.3	26.8	27.1	40.0	-12.9
298.59	40.8	PK	180	1.2	Н	13.8	3.2	26.0	31.8	46.0	-14.2
72.21	42.2	PK	35	3.8	V	8.6	1.8	26.8	25.8	40.0	-14.2
166.63	37.9	PK	35	3.8	V	12.5	2.1	26.6	25.8	43.5	-17.7
125.80	34.8	PK	60	1.0	Н	14.4	2.4	26.6	25.0	43.5	-18.5

§15.247(a)(1)-CHANNEL SEPARATION TEST

Applicable Standard

Frequency hopping systems shall have hoping channel carrier frequencies separated by a minimum of 25 kHz or the 20dB Bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater provided the systems operate with an output power no greater than 125 mW.

Test Equipment List and Details

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	100005	03/15/2009

^{*} Statement of Traceability: World Standardization Certification & Testing Co., Ltd attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST. All measurements according to procedure of DA 00-705 to perform the measurements.

Test Procedure

- 1. Set the EUT in transmitting mode, spectrum Bandwidth was set at 100 kHz, maxhold the channel.
- 2. Set the adjacent channel of the EUT maxhold another truce
- 3. Measure the channel separation.

Limit

FCC Part 15, Subpart C Section 15.247(a)(1). Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB Bandwidth of the hopping channel, whichever is greater.

FREQUENCY RANGE (MHz)	Limit (kHz)
902-928	>25kHz
2400-2483.5	>25kHz
5725-5850	>25kHz

Test Data

Environmental Conditions

Temperature:	27 °C
Relative Humidity:	50 %
ATM Pressure:	1009 mbar

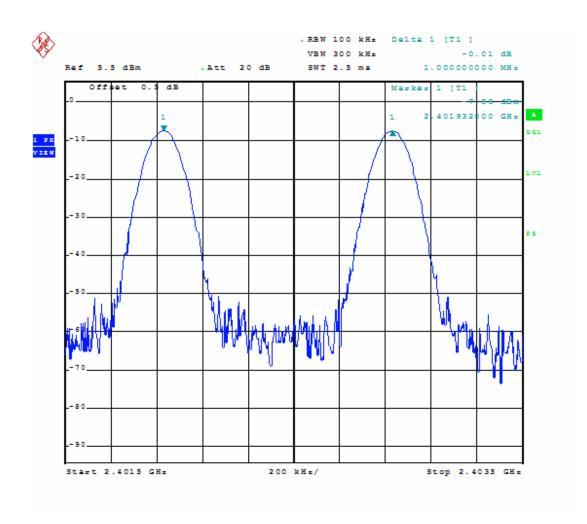
The testing was performed by Kait Chen on 2008-04-20.

Test Result: Pass

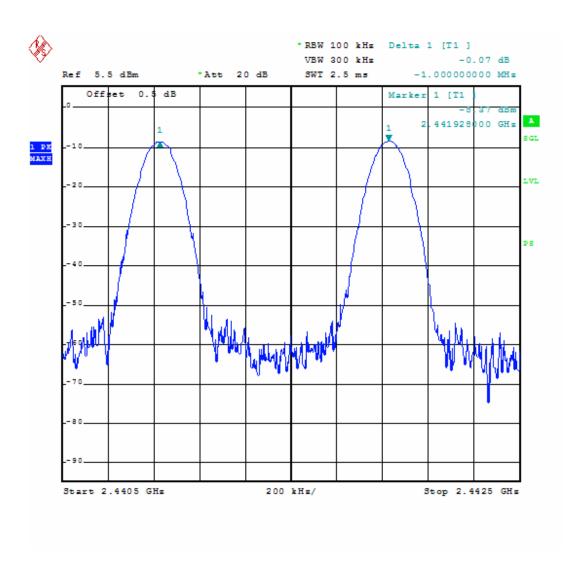
Test mode: Transmitting

Channel	Channel Frequency (MHz)	Channel Separation (KHz)	Limit (kHz)	Result
Low Channel	2402	1000	270	Pass
Adjacency Channel	2403	1000	210	Fass
Mid Channel	2441	1000	270	Pass
Adjacency Channel	2442	1000	270	F 455
High Channel	2480	1000	270	Pass
Adjacency Channel	2479	1000	270	F 455

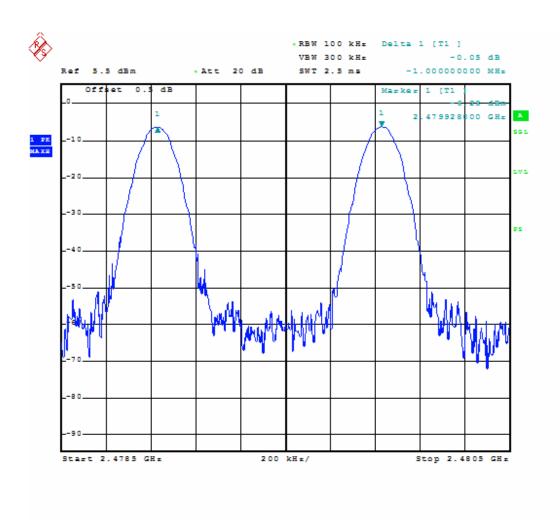
Low channel



Mid Channel



High Channel



§15.247(a)(1) –20dB BANDWIDTH TESTING

Applicable Standard

Frequency hopping systems shall have hoping channel carrier frequencies separated by a minimum of 25 kHz or the 20dB Bandwidth of the hopping channel, whichever is greater.

Test Equipment List and Details

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	100005	03/15/2009

^{*} Statement of Traceability: World Standardization Certification & Testing Co., Ltd attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST. All measurements according to procedure of DA 00-705 to perform the measurements.

Test Procedure

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- 3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
- 4. Repeat above procedures until all frequencies measured were complete.

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	53%
ATM Pressure:	1009mbar

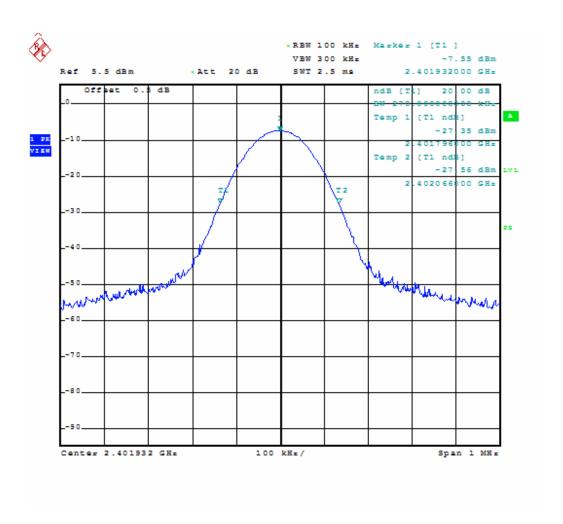
The testing was performed by Kait Chen on 2008-04-20.

Test Result: Pass

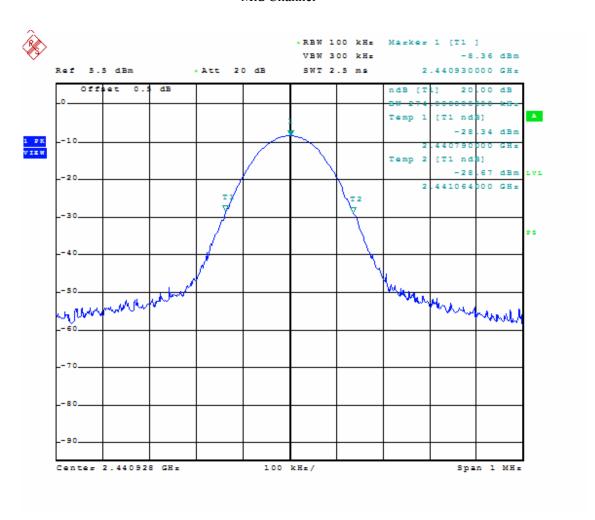
Test Mode: Transmitting

Channel	Channel frequency	20dB Bandwidth
	(MHz)	(kHz)
Low Channel	2402	270
Middle Channel	2441	274
High Channel	2480	270

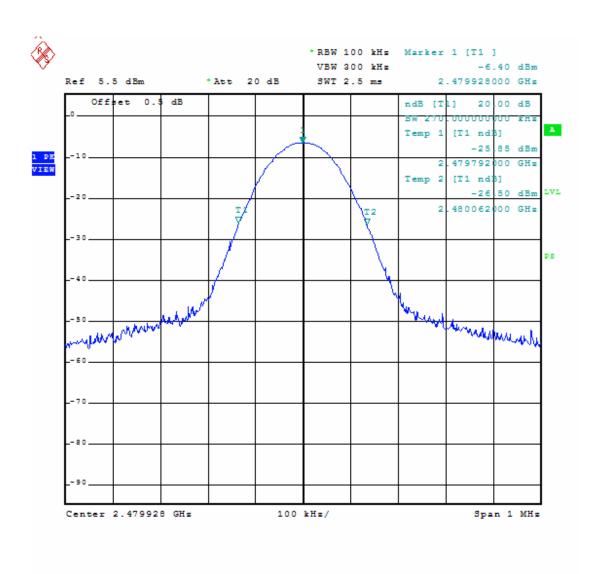
Low Channel



Mid Channel



High Channel



§15.247(a)(1)(iii)-QUANTITY OF HOPPING CHANNEL TEST

Applicable Standard

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Test Equipment List and Details

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	100005	03/15/2009

^{*} Statement of Traceability: World Standardization Certification & Testing Co., Ltd attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST. All measurements according to procedure of DA 00-705 to perform the measurements.

Test Procedure

- 1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
- 2. Set the EUT in transmitting mode from first channel to last.
- 3. By using the Max-Hold function record the Quantity of the channel.

Test Data

Environmental Conditions

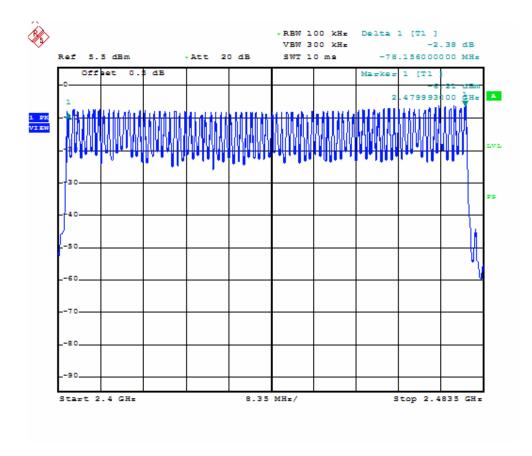
Temperature:	27 °C
Relative Humidity:	50 %
ATM Pressure:	1009 mbar

The testing was performed by Kait Chen on 2008-04-20.

Test Result: Pass *Test mode: Transmitting*

The frequency hopping systems operating in 2.402~2.480 GHz band employ 79 non-overlapping channels.

Hopping Channel Frequency	Quantity OF hopping Channel	Quantity Of Hopping channel
Range	Read Value	limit
(MHz)	(Channel)	(Channel)
2402 to 2480	79	>15



§15.247(a)(1)(iii) -TIME OF OCCUPANCY (DWELL TIME)

Applicable Standard

Frequency hopping systems in the 2400-2483.5 MHz shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Test Equipment List and Details

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	100005	03/15/2009

^{*} Statement of Traceability: World Standardization Certification & Testing Co., Ltd attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST. All measurements according to procedure of DA 00-705 to perform the measurements.

Test Procedure

The EUT was worked in channel hopping; Spectrum SPAN was set as 0. Sweep was set as 0.4 X channel no.(s), The quantity of False was get from single sweep. In addition, the time of single Pluses was tested.

Test Data

Environmental Conditions

Temperature:	27 °C
Relative Humidity:	50 %
ATM Pressure:	1009 mbar

The testing was performed by Kait Chen on 2008-04-20.

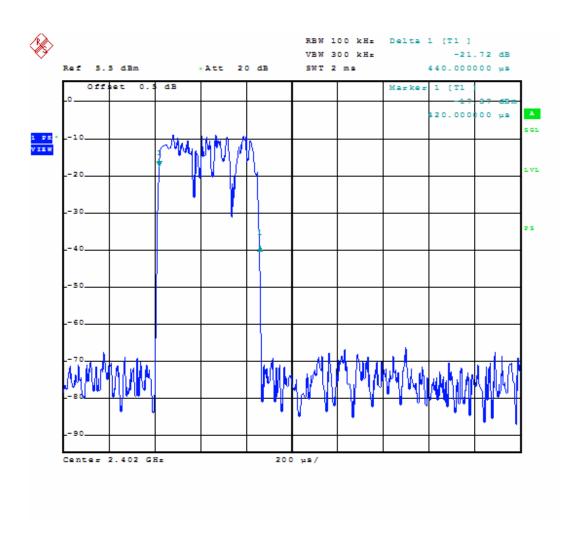
Test Result: Pass

Test mode: Transmitting

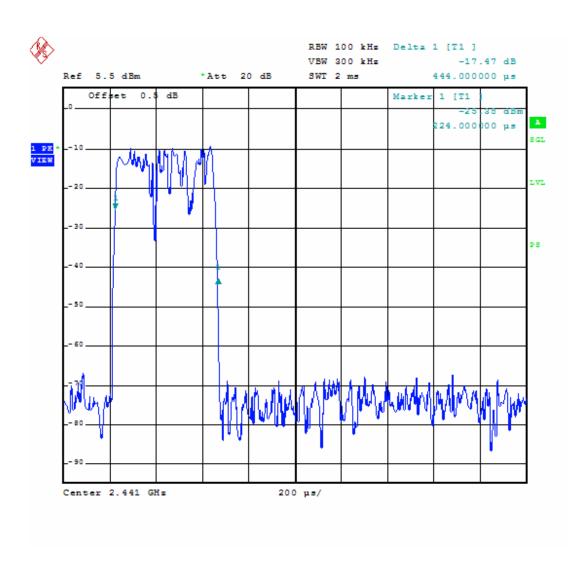
Channel	Frequency (MHz)	Pulse Wide m Sec	Dwell Time Sec	Limit Sec
Low channel	2402	0.440	0.141	0.4
Middle channel	2441	0.444	0.142	0.4
High channel	2480	0.448	0.143	0.4

Note: Dwell time=Pulse time*(1600/2/79)*31.6s

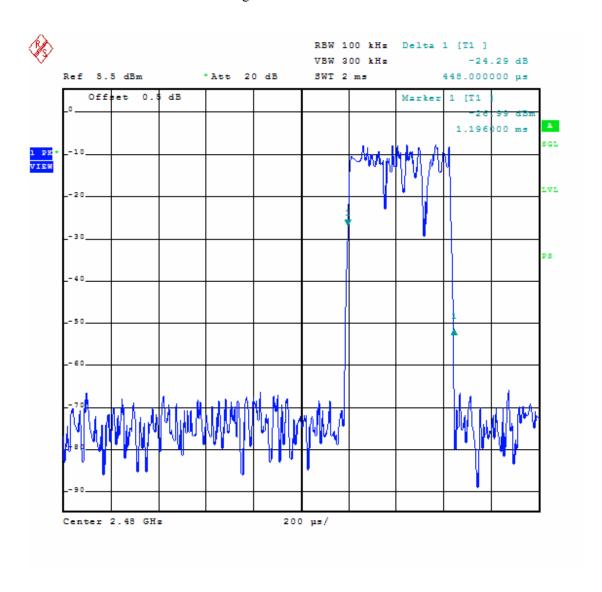
Low Channel



Mid Channel



High Channel



§15.247(b)(1) - PEAK OUTPUT POWER MEASUREMENT

Applicable Standard

According to §15.247(b) (1), for frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.

Test Equipment List and Details

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	100005	03/15/2009

^{*} Statement of Traceability: World Standardization Certification & Testing Co., Ltd attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST. All measurements according to procedure of DA 00-705 to perform the measurements.

Test Procedure

- 1. Place the EUT on a bench and set it in transmitting mode.
- 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to a EMI Test Receiver.
- 3. Add a correction factor to the display.



Test Data

Environmental Conditions

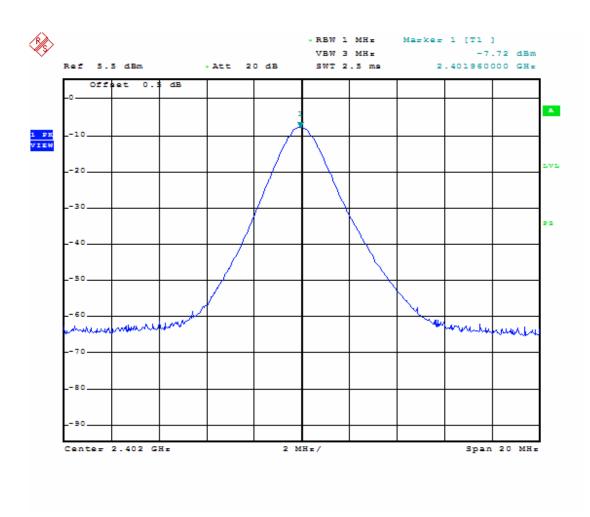
Temperature:	25 ° C
Relative Humidity:	53%
ATM Pressure:	1009mbar

The testing was performed by Kait Chen on 2008-04-20.

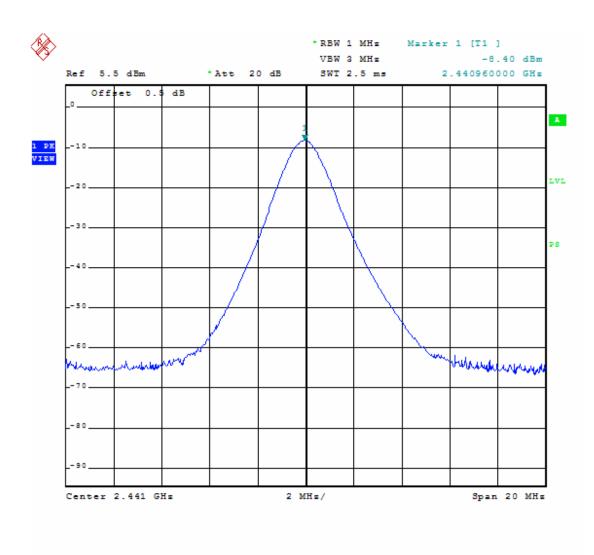
Please refer to the following plots.

Channel	Channel Frequency (MHz)	Reading Power (dBm)	Power Output (w)	Limit (w)
Low Channel	2402	-7.72	0.000169	1
Mid Channel	2441	-8.40	0.000145	1
High Channel	2480	-6.29	0.000235	1

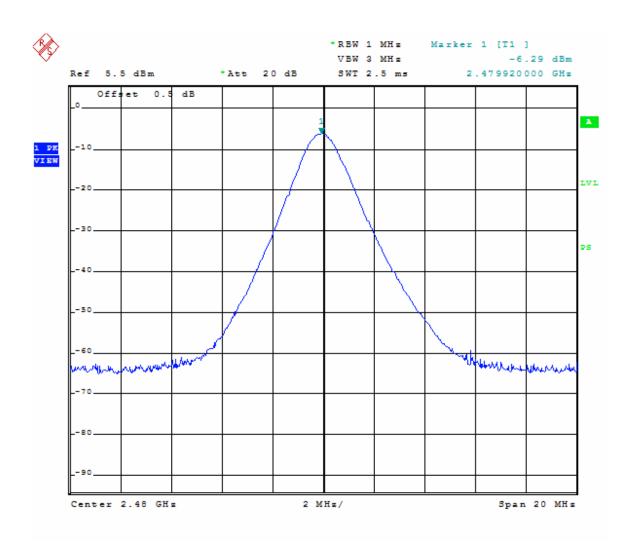
Low Channel



Mid Channel



High Channel



§15.247(d) - 100 KHZ BANDWIDTH OF BAND EDGES

Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Equipment List and Details

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	100005	03/15/2009

^{*} Statement of Traceability: World Standardization Certification & Testing Co., Ltd attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST. All measurements according to procedure of DA 00-705 to perform the measurements.

Test Procedure

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- 3. Set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge.
- 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- 5. Repeat above procedures until all measured frequencies were complete.

Test Data

Environmental Conditions

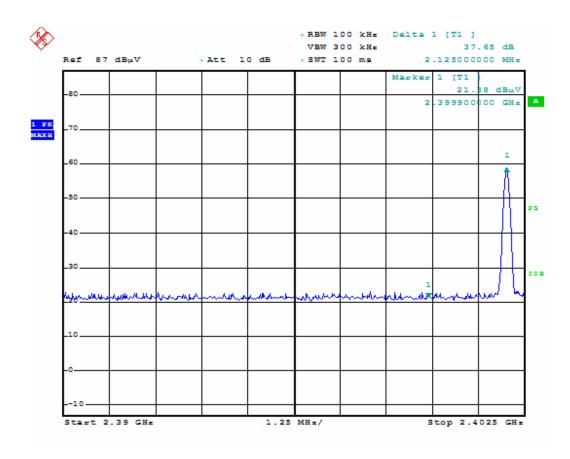
Temperature:	18 °C
Relative Humidity:	53 %
ATM Pressure:	1009mbar

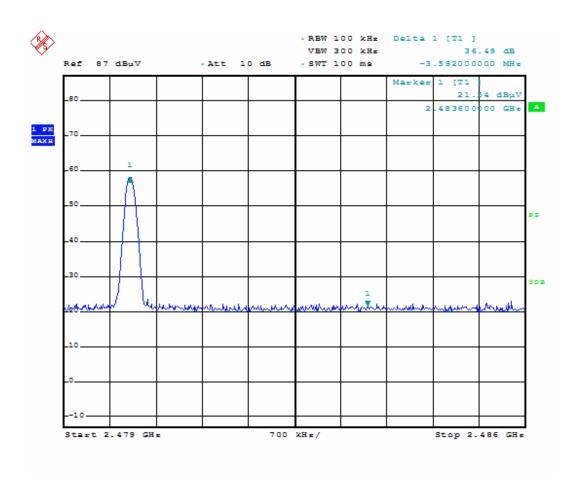
The testing was performed by Kait Chen on 2008-04-20.

Test Result: Pass

Test Mode: Transmitting

Frequency MHz	Delta of Peak to Edge Point dBc	Limit dBc
2399.9	37.65	≥20
2483.6	36.49	≥20





NOTE:

Band-edges compliance - Part 15.247 the band-edge at 2483.6MHz PK value is 21.54dBuV complies with the limit of 54dBuV/m (average) and 74~dBuV/m (peak) for the restricted band 2483.5-2500MHz.(within the restricted band 2483.6MHz is the highest)