

Certificate of Test

September 2008

Sunrex Technology Corp

Product Type : Bluetooth Keyboard

Model Number : WKB-4000BT-FD

Test Report Number : 0807037R-01

Date of Test : July 14, 2008 - August 14, 2008

This Product was tested to the following standards at the laboratory of Global EMC Standard Tech. Corp., and found Compliance.

Standards:

FCC Part 15 Subpart C Paragraph 15.247

ANSI C63.4: 2003

[http : //www.gestek.com.tw](http://www.gestek.com.tw)



Sharon Chang, President

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Date: September 08, 2008



NVLAP LAB CODE 200085-0





**Test Report
Application for
Certification
On Behalf Of**

Sunrex Technology Corp

EUT:

Bluetooth Keyboard

Model Number:

WKB-4000BT-FD

FCC ID:

J75RT415A

Prepared for:

Sunrex Technology Corp

No. 188-1, Chung Cheng road., Ta Ya Shiang, Taichung Hsien, Taiwan, R.O.C.

Report By :Global EMC Standard Tech. Corp.

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1. CERTIFICATION

Applicant : Sunrex Technology Corp

Applicant Address : No. 188-1, Chung Cheng road., Ta Ya Shiang, Taichung Hsien, Taiwan, R.O.C.

EUT Description : Bluetooth Keyboard

Model Number : WKB-4000BT-FD

Serial Number : N/A

Brade Name : Sunrex

FCC ID : J75RT415A

Tested Power Supply : DC 6V

Manufacturer : Sunrex Technology (Jiang Su) CO., LTD

Manufacturer Address : Fenhu Economic Development Zone Wujiang Jiangsu China

MEASUREMENT PROCEDURES USED:

- ☒ **CFR 47, Part 15** Radio Frequency Device Subpart C Intentional Radiators :2007
- ☒ **ANSI C63.4** Methods of Measurements of Radio-Noise Emissions from Low- Voltage Electrical and Electronic Equipment in the range of 9kHz To 40GHz. 2003

THE MEASUREMENT SHOWN IN THE ATTACHMENT WAS MADE IN ACCORDANCE WITH THE PROCEDURES INDICATED, AND THE MAXIMUM ENERGY EMITTED BY THE EQUIPMENT WAS FOUND TO BE WITHIN THE ABOVE LIMITS APPLICABLE.



Sample Received Date : July 10, 2008

Date of Test : July 14, 2008 – August 14, 2008

NVLAP LAB CODE 200085-0

In order to ensure the quality and accuracy of this document, the contents have been thoroughly reviewed by the following qualified personnel from GesTek Lab.

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Tony Tsai / eng. Dept. Manager

This test data shown below is traceable to National or international standard such as NIST/USA, etc. The laboratory's NVLAP accreditation in no way constitutes or implies product certification, approval, or endorsement by NVLAP or the United States government.

2. GENERAL INFORMATION

2.1 PRODUCTION DESCRIPTION

Product Name	: Bluetooth Keyboard
Model Number	: WKB-4000BT-FD
Serial Number	: N/A
Brade Name	: Sunrex
FCC ID	: J75RT415A
Modulation Type	: FHSS
Antenna Gain	: 0dBi
Antenna Type	: Printed on PCB
Frequencg Range	: 2402MHz to 2480MHz
Channel Number	: 79 Channel
Channel Control	: Control by Software
Working Voltage	: DC 6V

Frequency of Each Channel:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

Note:

1. This device is a Bluetooth Keyboard include Bluetooth function and this report is for transmitter.
2. Test of channel was included the lowest 、middle and highest frequency in highest data rate and to perform the test, then record on this report.
3. The device is a transceiver equipment to accordance with Part 15 regulations. The function receiving was under Declaration of Conformity and record of measurment in test report that the report number is 0807037F-01.
4. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.

2.2 OPERATIONAL DESCRIPTION

The device is wireless keyboard have Bluetooth function and can link with Bluetooth dongle for control PC.

Another information please refer to users manual.

2.3 TEST MODES & EUT COMPONENTS DESCRIPTION

EUT: Bluetooth Keyboard,

M/N: WKB-4000BT-FD, The EUT tested with Notebook PC.

(DELL, M/N: Latitude D600 PPO5L)

Test Mode	Mode 1- Transmit
-----------	------------------

2.4 SUMMARY OF TEST PROCEDURE AND TEST RESULTS

Test Item	Applied Standard Section	Test Result
Radistion Emission	15.209,15.247(d) ANSI C63.4 Section 8,13 & Annex I	Pass (refer to section 4.7)
Peak Power Output	15.247(b), ANSI C63.4 Section 13 & Annex I	Pass (refer to section 5.4)
Band Edge	15.247(d) , ANSI C63.4 Section 13 & Annex I	Pass (refer to section 6.6)
Occupied Bandwidth	15.247(a) , ANSI C63.4 Section 13 & Annex I	Pass (refer to section 7.4)
Channel Separation	15.247(a) , ANSI C63.4 Section 13 & Annex I	Pass (refer to section 8.4)
Dwell Time	15.247(a) , ANSI C63.4 Section 13 & Annex I	Pass (refer to section 9.4)
Hopping Channel	15.247(b) , ANSI C63.4 Section 13 & Annex I	Pass (refer to section 10.4)

2.5 CONFIGURATION OF THE TESTED SYSTEM

The FCC IDs/Types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards, which have grants) are:

Device	No.	Configuration
Bluetooth Module Test Control Board	-----	Manufacturer : Silicon Wave Model Number : SIW3500Module UART
NOTEBOOK	DELL NB 1	Model Number : Latitude D600 PPO5L BSMI ID : R33002 FCC ID : E2K24CLNS Serial Number : 10826163280 C.P.U : Intel Pentium M 1.4G HZ DDR : PC2100 256MB WIRELESS LAN : Manufacturer :INTEL CARD : M/N:WM3A2100 FCC ID: E2K24CLNS H.D.D. : Manufacturer : FUJITSU 30G M/N: MHT2030AT S/N:NN15T421E09C BSMI ID:D33073 DVD-ROM : Manufacturer :DELL M/N:5W299-A01 BATTERY : Manufacturer :DELL Li-ion MODULE : M/N:6Y270 RATING:14.8V 220mAh AC ADAPTOR : Manufacturer :DELL M/N: PA-1650-05D S/N:CN-05U092-48010-39N-227C INPUT:AC 100-240V~1.5A, 50-60HZ Shielded, Undetachable, 2.5m

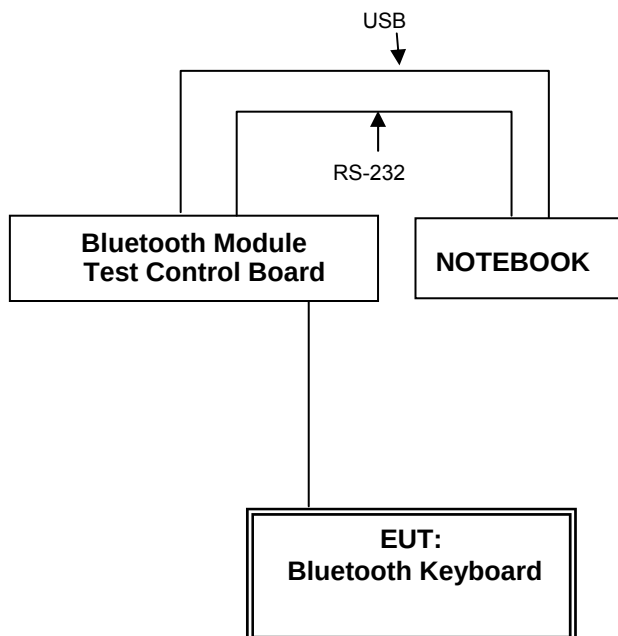
2.6 TEST FACILITY

Ambient conditions in the laboratory:

ITEMS	Requirement
TEMPERATURE (°C)	10-40
HUMIDITY (%RH)	10-90
BAROMETRIC PRESSURE (mbar)	860-1060
FCC SITE DESCRIPTION	Aug. 10, 1995 /Aug. 25, 1998 File on FCC Engineering Laboratory Federal Communication Commission 7435 Oakland Mills Road Columbia, MD 21046 Reference 31040/SIT1300F2
NVLAP LAB. CODE	200085-0 United States Department of commerce National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program Accreditation on NVLAP effective through Sep. 30, 2008 For CISPR 22, FCC Method and AS/NZS CISPR 22 Measurement.
Taiwan Accreditation Foundation (TAF)	Recognized by the Council of Taiwan Accreditation Foundation and confirmed to meet the requirements of ISO/IEC 17025. Registration No.: 1082 Registration on TAF effective through Sep. 19, 2009

2.7 TEST SETUP

BLOCK DIAGRAM OF CONNECTIONS BETWEEN EUT AND SIMULATORS



2.8 EUT OPERATING CONDITIONS

The EUT exercise program used during conducted testing was designed to exercise the EUT in a manner similar to a typical use. The exercise sequence is listed as below:

1. Setup the EUT and simulators as shown on section 2.7.
2. Turn on the power of all equipments.
3. Run test software and confirm transmit mode of EUT.
4. Choose frequency required of standard and start testing.
5. Repeat the above steps.

3. RADIATION EMISSION DATA

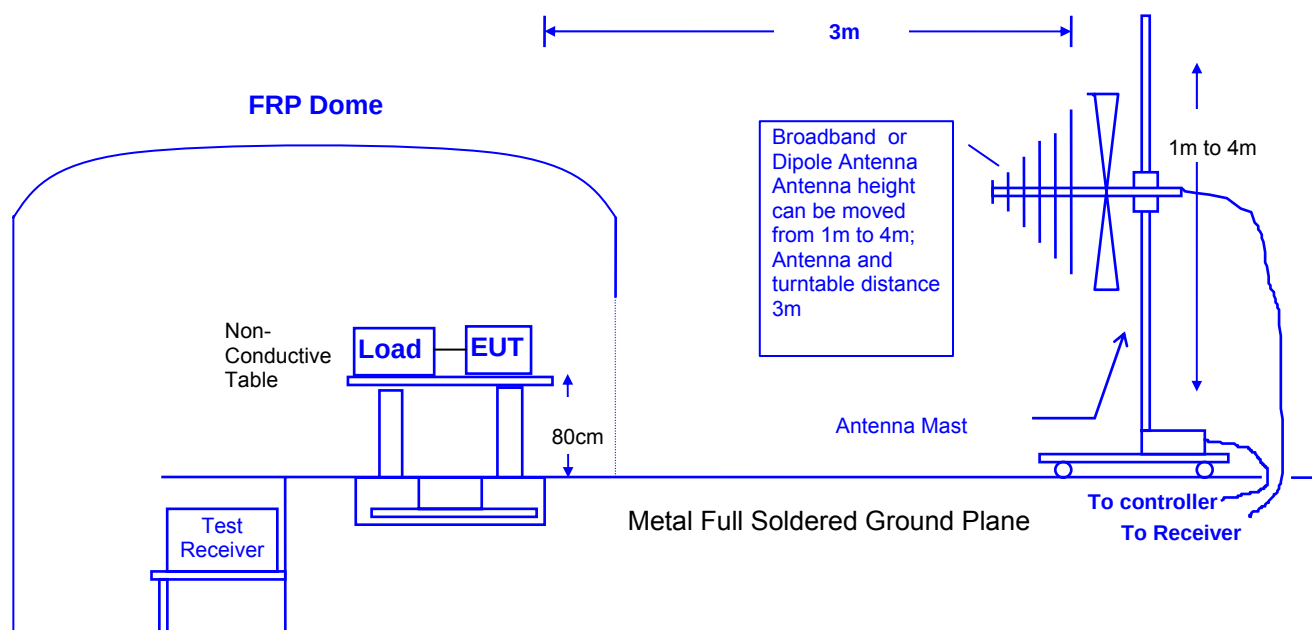
3.1 TEST EQUIPMENT

The following test equipments are used during the radiated emission tests:

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Test Receiver	R & S	ESCS30	825022/003	2009.06.01
2	Spectrum Analyzer	HP	8568B	N/A	2009.01.29
3	Spectrum Analyzer	HP	E4407B	US39240339	2008.08.06
4	Power Meter	Rohde & Schwarz	NRVS	100666	2009.03.25
5	Peak Power Sensor	Rohde & Schwarz	NRV-Z32	836019-058	2009.03.25
6	Pre-Amplifier	EMV-Technik	PA303	GTK-E-A392-01	2009.06.03
7	Pre-Amplifier	HP	8449B	3008A01263	2009.03.11
8	Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-251	2009.03.06
9	HORN ANTENNA	SCHWARZBECK	BBHA 9120	D243	2008.12.24
10	CABLE	GTK	N/A	GTK-E-A344-01	2009.04.16
11	CHAMBER	GTK	N/A	A6	2008.11.30
12	OPEN SITE	GTK	N/A	B1	2008.11.18
13	Test Program Software	GesTek	N/A	GTK-E-S001-01	N/A

Note: All measurement critical items of test instrumentation were within their calibration period of 1 year.

3.2 OPEN TEST SITE SETUP DIAGRAM



3.3 RADIATED EMISSION LIMIT

In any 100KHz bandwidth outside the frequency band in which the spread spectrum 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 100KHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209 (a) (see Section 15.205(c)).

☒ FCC 15.209 Limit

Frequency	Distance	Field Strength	
MHz	Meter	$\mu\text{V/M}$	$\text{dB}\mu\text{V/M}$
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
Above 960	3	500	54.0

Note : The frequencies above 1000MHz, as measured using instrumentation with a peak detector function was corresponding to 20dB above the maximum permitted average limit.

3.4 EUT CONFIGURATION

The equipment which is listed 4.1 are installed on Radiated Emission Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

The device under test, installed in a representative system as described in section 4.2, was placed on a non-conductive table whose total height equaled 80 cm. This table can be rotated 360 degree. The measurement antenna was mounted to a non-conductive mast capable of moving the antenna vertically. Antenna height was varied from 1 meter to 4 meters and the system under test was rotated from 0 degree through 360 degrees relative to the antenna position and polarization (Horizontal and Vertical). Also the I/O cable position was investigated to find the maximum emission condition.

3.5 OPERATING CONDITION OF EUT

Same as section 2.7.

3.6 RADIATED EMISSION DATA

The measurement range of radiated emission, which is from 30 MHz to 10th Harminics, was investigated. All readings below 1GHz are quasi-peak values with a resolution bandwidth of 120 KHz. Above 1GHz are peak and avg. values with a resolution bandwidth of 1MHz. The initial step in collecting radiated emission data is a spectrum analyzer peak scans of the measurement range for all the test modes and then use test receiver for final measurement. Then the worst modes were reported the following data pages.

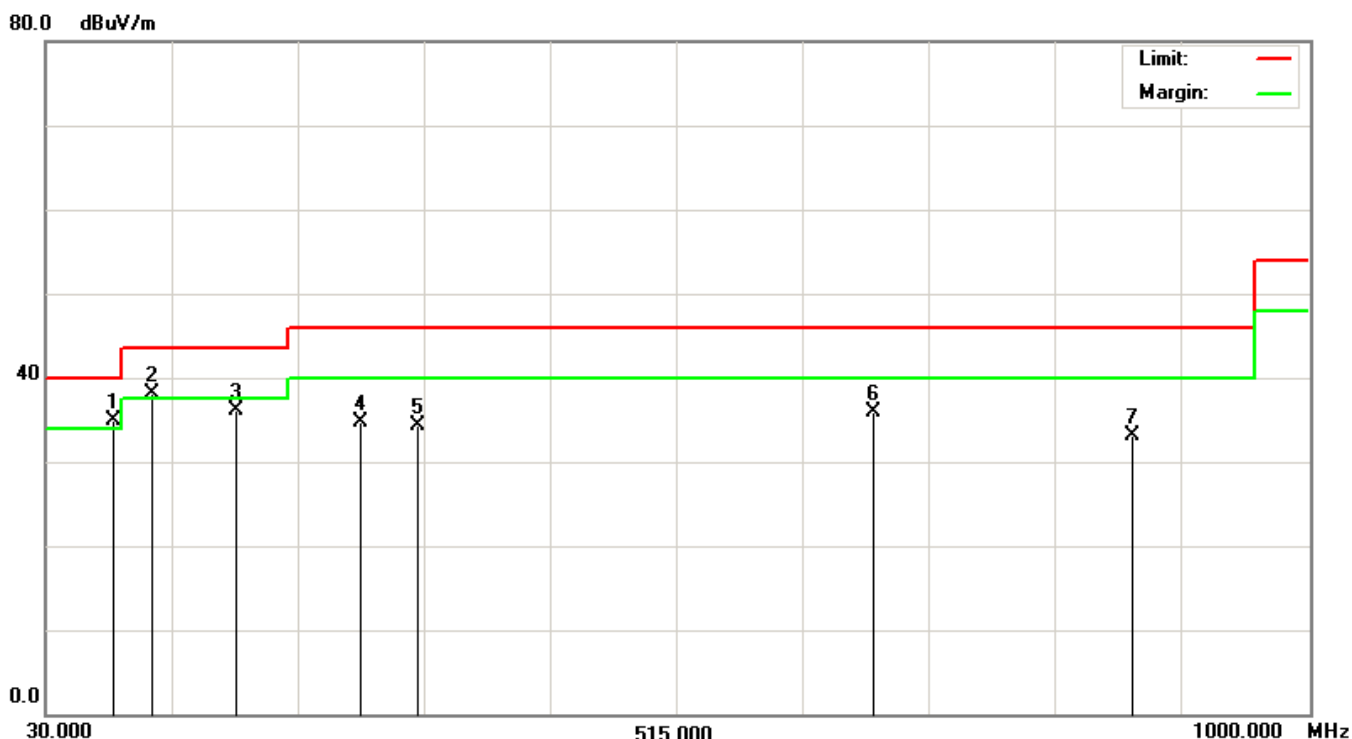
3.7 RADIATED EMISSIONS MEASUREMENT RESULTS

Date of Test	August 14, 2008	Temperature	23.5 deg/C
EUT	Bluetooth Keyboard	Humidity	59 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at Horizontal	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★82.3800	54.80	-19.91	34.89	40.00	-5.11	QP
2	111.4800	56.53	-18.33	38.20	43.50	-5.30	QP
3	176.4700	51.60	-15.59	36.01	43.50	-7.49	QP
4	272.5000	49.20	-14.57	34.63	46.00	-11.37	QP
5	316.1500	47.20	-12.81	34.39	46.00	-11.61	QP
6	667.2900	40.40	-4.53	35.87	46.00	-10.13	QP
7	866.1400	34.40	-1.34	33.06	46.00	-12.94	QP

Remarks:

1. All Readings below 1GHz are Quasi-Peak.
2. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
3. Over Limit (Margin Value)=Measurement level-Limit value.
4. Factor = antenna factor + cable loss – amplifier gain.
5. “★” means that this data is the worse case measurement level.
6. The emission level of other frequencies are very lower than the limit.



Remark: 1. The “Limit” in right-up corner in above diagram refers to Quasi-peak ; “Margin” refers to the data under 6dB.

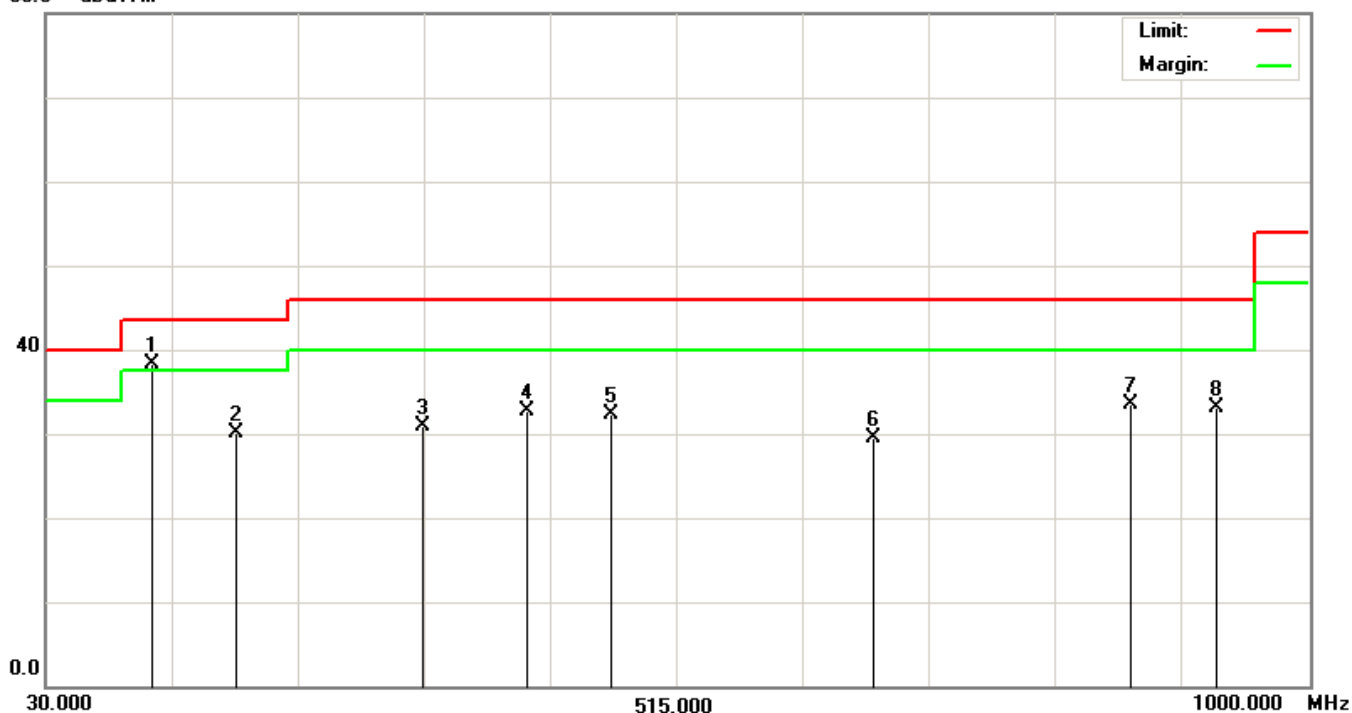
Date of Test	August 14, 2008	Temperature	23.5 deg/C
EUT	Bluetooth Keyboard	Humidity	59 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at Vertical	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★112.4500	56.40	-18.19	38.21	43.50	-5.29	QP
2	176.4700	45.60	-15.59	30.01	43.50	-13.49	QP
3	320.0300	43.60	-12.69	30.91	46.00	-15.09	QP
4	400.5400	42.80	-10.07	32.73	46.00	-13.27	QP
5	465.5300	40.80	-8.59	32.21	46.00	-13.79	QP
6	666.3200	34.00	-4.55	29.45	46.00	-16.55	QP
7	864.2000	34.80	-1.37	33.43	46.00	-12.57	QP
8	931.1300	33.60	-0.45	33.15	46.00	-12.85	QP

Remarks:

1. All Readings below 1GHz are Quasi-Peak.
2. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
3. Over Limit (Margin Value)=Measurement level-Limit value.
4. Factor = antenna factor + cable loss – amplifier gain.
5. “★” means that this data is the worse case measurement level.
6. The emission level of other frequencies are very lower than the limit.

80.0 dBuV/m



Remark: 1. The “Limit” in right-up corner in above diagram refers to Quasi-peak ; “Margin” refers to the data under 6dB.

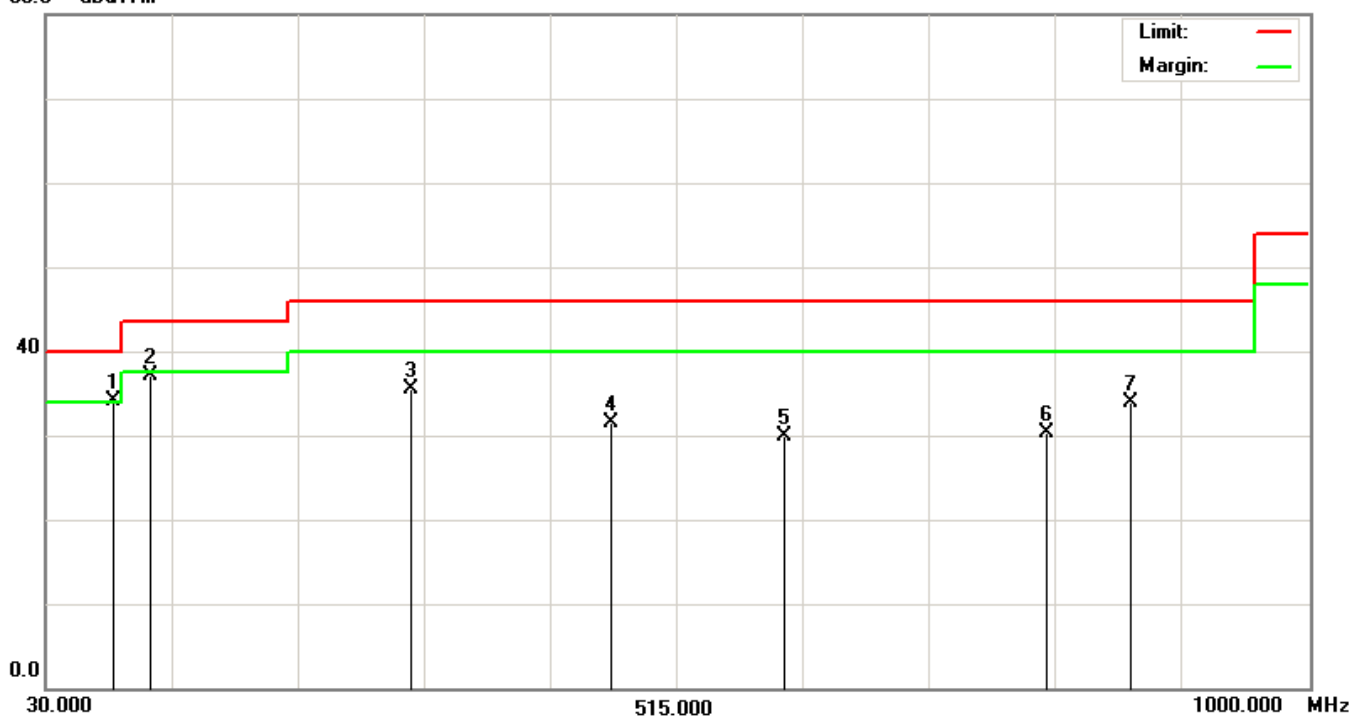
Date of Test	August 14, 2008	Temperature	23.5 deg/C
EUT	Bluetooth Keyboard	Humidity	59 %RH
Working Cond.	Mode 1-CH 39 (2441MHz)		
Antenna distance	3m at Horizontal	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★82.3800	54.00	-19.91	34.09	40.00	-5.91	QP
2	110.5100	55.60	-18.46	37.14	43.50	-6.36	QP
3	311.3000	48.40	-12.97	35.43	46.00	-10.57	QP
4	465.5300	40.00	-8.59	31.41	46.00	-14.59	QP
5	598.4200	35.60	-5.69	29.91	46.00	-16.09	QP
6	800.1800	32.80	-2.48	30.32	46.00	-15.68	QP
7	864.2000	35.20	-1.37	33.83	46.00	-12.17	QP

Remarks:

1. All Readings below 1GHz are Quasi-Peak.
2. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
3. Over Limit (Margin Value)=Measurement level-Limit value.
4. Factor = antenna factor + cable loss – amplifier gain.
5. “★” means that this data is the worse case measurement level.
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80.0 dBuV/m



Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak ; "Margin" refers to the data under 6dB.

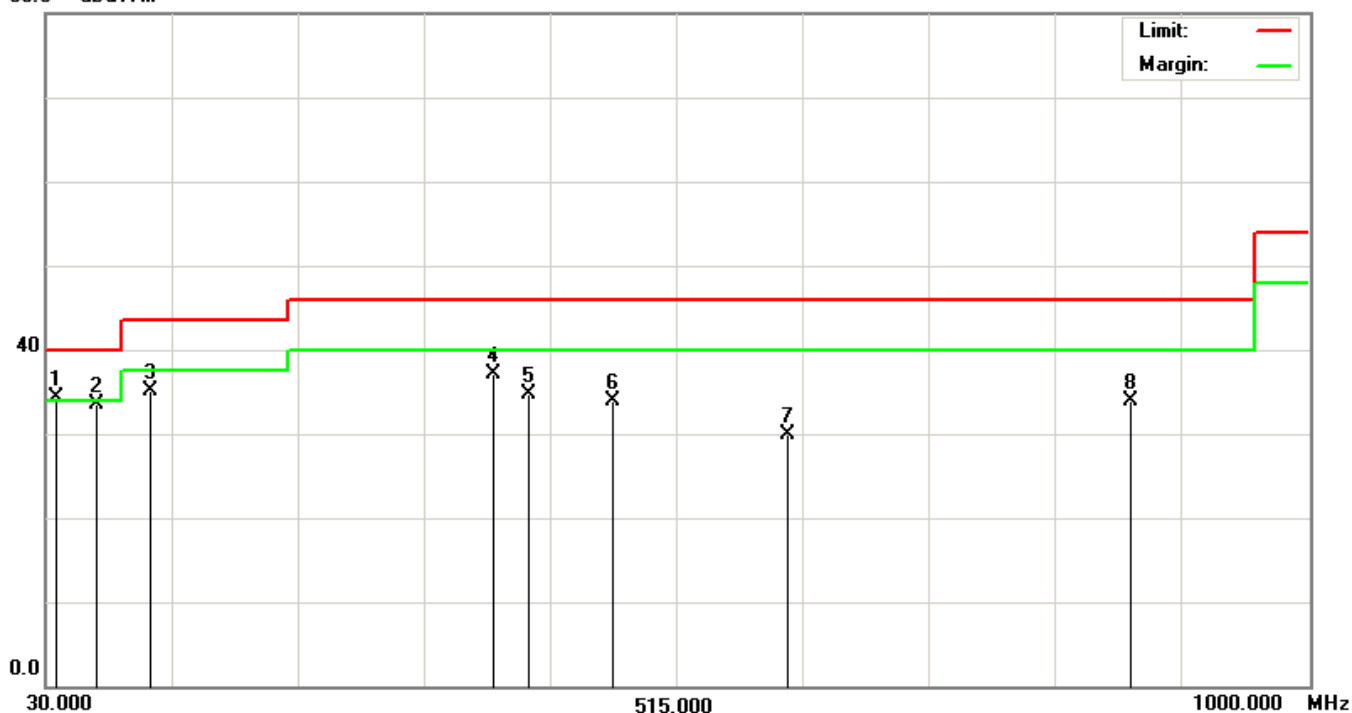
Date of Test	August 14, 2008	Temperature	23.5 deg/C
EUT	Bluetooth Keyboard	Humidity	59 %RH
Working Cond.	Mode 1-CH 39 (2441MHz)		
Antenna distance	3m at Vertical	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★37.7600	50.40	-16.02	34.38	40.00	-5.62	QP
2	68.8000	50.80	-17.39	33.41	40.00	-6.59	QP
3	110.5100	53.60	-18.46	35.14	43.50	-8.36	QP
4	374.3500	48.00	-10.92	37.08	46.00	-8.92	QP
5	401.5100	44.80	-10.05	34.75	46.00	-11.25	QP
6	466.5000	42.40	-8.57	33.83	46.00	-12.17	QP
7	600.3600	35.60	-5.65	29.95	46.00	-16.05	QP
8	865.1700	35.20	-1.35	33.85	46.00	-12.15	QP

Remarks:

1. All Readings below 1GHz are Quasi-Peak.
2. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
3. Over Limit (Margin Value)=Measurement level-Limit value.
4. Factor = antenna factor + cable loss – amplifier gain.
5. “★” means that this data is the worse case measurement level.
6. The emission level of other frequencies are very lower than the limit.

80.0 dBuV/m



Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak ; "Margin" refers to the data under 6dB.

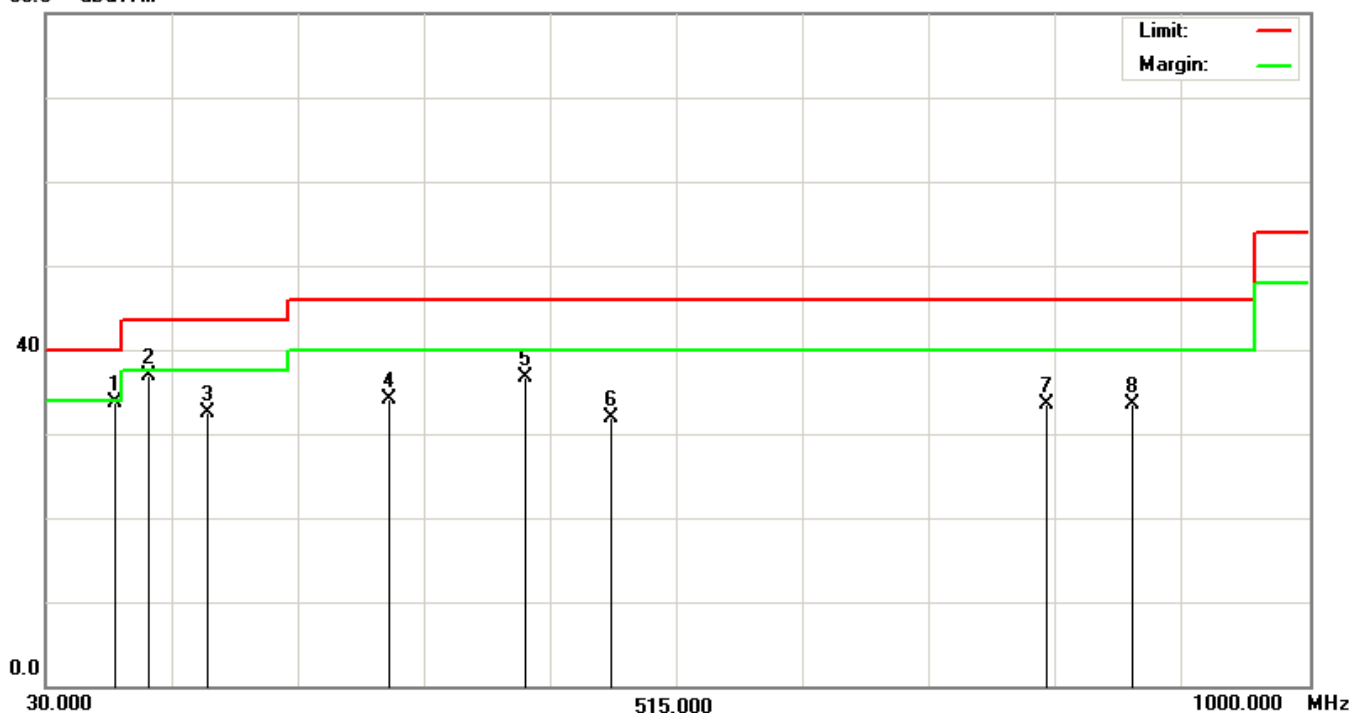
Date of Test	August 14, 2008	Temperature	23.5 deg/C
EUT	Bluetooth Keyboard	Humidity	59 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at Horizontal	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★83.3500	53.80	-20.08	33.72	40.00	-6.28	QP
2	109.5400	55.60	-18.60	37.00	43.50	-6.50	QP
3	154.1600	47.60	-15.18	32.42	43.50	-11.08	QP
4	294.8100	47.60	-13.57	34.03	46.00	-11.97	QP
5	399.5700	46.80	-10.09	36.71	46.00	-9.29	QP
6	465.5300	40.40	-8.59	31.81	46.00	-14.19	QP
7	800.1800	36.00	-2.48	33.52	46.00	-12.48	QP
8	866.1400	34.80	-1.34	33.46	46.00	-12.54	QP

Remarks:

1. All Readings below 1GHz are Quasi-Peak.
2. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
3. Over Limit (Margin Value)=Measurement level-Limit value.
4. Factor = antenna factor + cable loss – amplifier gain.
5. “★” means that this data is the worse case measurement level.
6. The emission level of other frequencies are very lower than the limit.

80.0 dBuV/m



Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak ; "Margin" refers to the data under 6dB.

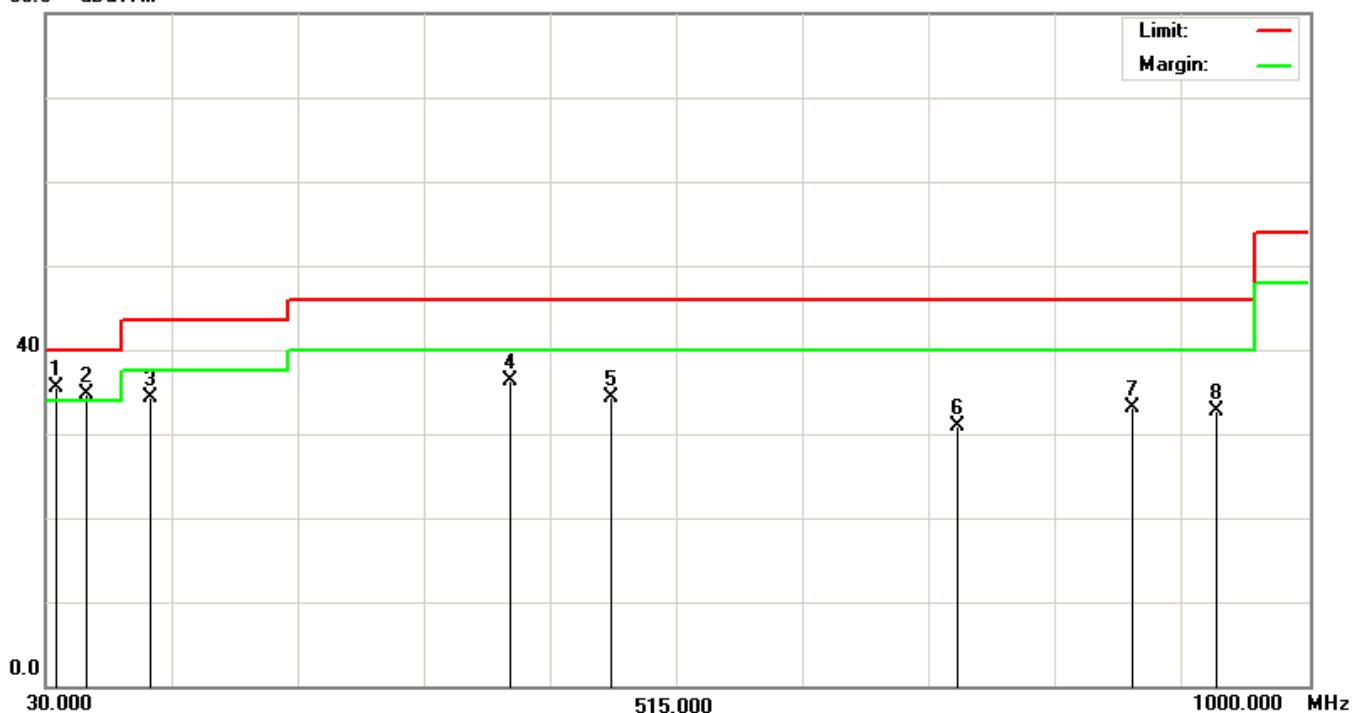
Date of Test	August 14, 2008	Temperature	23.5 deg/C
EUT	Bluetooth Keyboard	Humidity	59 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at Vertical	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★37.7600	51.60	-16.02	35.58	40.00	-4.42	QP
2	61.0400	50.40	-15.73	34.67	40.00	-5.33	QP
3	110.5100	52.80	-18.46	34.34	43.50	-9.16	QP
4	386.9600	46.80	-10.51	36.29	46.00	-9.71	QP
5	465.5300	42.80	-8.59	34.21	46.00	-11.79	QP
6	731.3100	34.40	-3.51	30.89	46.00	-15.11	QP
7	866.1400	34.40	-1.34	33.06	46.00	-12.94	QP
8	931.1300	33.20	-0.45	32.75	46.00	-13.25	QP

Remarks:

1. All Readings below 1GHz are Quasi-Peak.
2. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
3. Over Limit (Margin Value)=Measurement level-Limit value.
4. Factor = antenna factor + cable loss – amplifier gain.
5. “★” means that this data is the worse case measurement level.
6. The emission level of other frequencies are very lower than the limit.

80.0 dBuV/m



Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak ; "Margin" refers to the data under 6dB.

Date of Test	July 14, 2008	Temperature	24.4 deg/C
EUT	Bluetooth Keyboard	Humidity	61 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at Horizontal	Frequency Range	Above 1GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4804.0000	52.43	1.47	53.90	74.00	-20.10	peak
2	7206.0000	41.93	9.04	50.97	74.00	-23.03	peak
3	9608.0000	42.63	6.55	49.18	74.00	-24.82	peak
4	12010.0000	38.36	15.00	53.36	74.00	-20.64	peak
5	14412.0000	42.26	9.22	51.48	74.00	-22.52	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ, Span=20MHz.
4. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Factor = antenna factor + cable loss – amplifier gain.
6. Over Limit (Margin Value)=Measurement level-Limit value.
7. The average measurement was not performed when the peak measured data under the limit of average detection. If the average value is measured, peak measurement should also be supplied.
8. The emission level of other frequencies are very lower than the limit.

Date of Test	July 14, 2008	Temperature	24.4 deg/C
EUT	Bluetooth Keyboard	Humidity	61 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at Vertical	Frequency Range	Above 1GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4804.0000	48.25	1.45	49.70	74.00	-24.30	peak
2	7206.0000	43.26	8.73	51.99	74.00	-22.01	peak
3	9608.0000	42.56	10.18	52.74	74.00	-21.26	peak
4	12010.0000	35.71	17.45	53.16	74.00	-20.84	peak
5	14412.0000	41.77	7.84	49.61	74.00	-24.39	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ, Span=20MHz.
4. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Factor = antenna factor + cable loss – amplifier gain.
6. Over Limit (Margin Value)=Measurement level-Limit value.
7. The average measurement was not performed when the peak measured data under the limit of average detection. If the average value is measured, peak measurement should also be supplied.
8. The emission level of other frequencies are very lower than the limit.

Date of Test	July 14, 2008	Temperature	24.4 deg/C
EUT	Bluetooth Keyboard	Humidity	61 %RH
Working Cond.	Mode 1-CH 39 (2441MHz)		
Antenna distance	3m at Horizontal	Frequency Range	Above 1GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4882.0000	52.09	1.42	53.51	74.00	-20.49	peak
2	7323.0000	42.92	9.24	52.16	74.00	-21.84	peak
3	9764.0000	43.25	6.92	50.17	74.00	-23.83	peak
4	12205.0000	41.97	11.33	53.30	74.00	-20.70	peak
5	14646.0000	41.61	9.06	50.67	74.00	-23.33	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ, Span=20MHz.
4. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Factor = antenna factor + cable loss – amplifier gain.
6. Over Limit (Margin Value)=Measurement level-Limit value.
7. The average measurement was not performed when the peak measured data under the limit of average detection. If the average value is measured, peak measurement should also be supplied.
8. The emission level of other frequencies are very lower than the limit.

Date of Test	July 14, 2008	Temperature	24.4 deg/C
EUT	Bluetooth Keyboard	Humidity	61 %RH
Working Cond.	Mode 1-CH 39 (2441MHz)		
Antenna distance	3m at Vertical	Frequency Range	Above 1GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4882.0000	46.96	2.07	49.03	74.00	-24.97	peak
2	7323.0000	42.47	8.56	51.03	74.00	-22.97	peak
3	9764.0000	42.89	9.79	52.68	74.00	-21.32	peak
4	12205.0000	39.82	13.77	53.59	74.00	-20.41	peak
5	14646.0000	41.58	7.32	48.90	74.00	-25.10	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ, Span=20MHz.
4. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Factor = antenna factor + cable loss – amplifier gain.
6. Over Limit (Margin Value)=Measurement level-Limit value.
7. The average measurement was not performed when the peak measured data under the limit of average detection. If the average value is measured, peak measurement should also be supplied.
8. The emission level of other frequencies are very lower than the limit.

Date of Test	July 14, 2008	Temperature	24.4 deg/C
EUT	Bluetooth Keyboard	Humidity	61 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at Horizontal	Frequency Range	Above 1GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4960.0000	51.81	1.34	53.15	74.00	-20.85	peak
2	7440.0000	41.30	8.78	50.08	74.00	-23.92	peak
3	9920.0000	43.61	4.62	48.23	74.00	-25.77	peak
4	12400.0000	42.74	7.24	49.98	74.00	-24.02	peak
5	14880.0000	42.28	8.14	50.42	74.00	-23.58	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ, Span=20MHz.
4. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Factor = antenna factor + cable loss – amplifier gain.
6. Over Limit (Margin Value)=Measurement level-Limit value.
7. The average measurement was not performed when the peak measured data under the limit of average detection. If the average value is measured, peak measurement should also be supplied.
8. The emission level of other frequencies are very lower than the limit.

Date of Test	July 14, 2008	Temperature	24.4 deg/C
EUT	Bluetooth Keyboard	Humidity	61 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at Vertical	Frequency Range	Above 1GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4960.0000	46.66	2.64	49.30	74.00	-24.70	peak
2	7440.0000	41.69	8.36	50.05	74.00	-23.95	peak
3	9920.0000	43.00	9.78	52.78	74.00	-21.22	peak
4	12400.0000	42.29	9.96	52.25	74.00	-21.75	peak
5	14880.0000	42.48	6.60	49.08	74.00	-24.92	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ, Span=20MHz.
4. Measurement = Reading + Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Factor = antenna factor + cable loss – amplifier gain.
6. Over Limit (Margin Value)=Measurement level-Limit value.
7. The average measurement was not performed when the peak measured data under the limit of average detection. If the average value is measured, peak measurement should also be supplied.
8. The emission level of other frequencies are very lower than the limit.

4. PEAK POWER OUTPUT

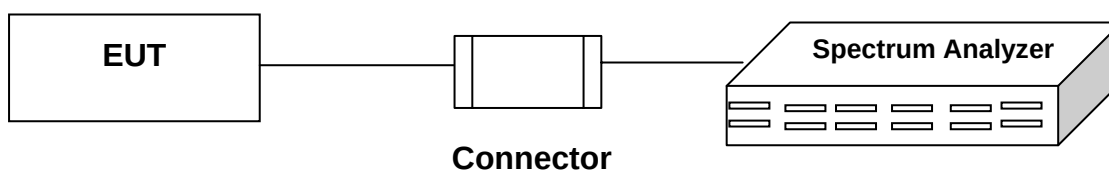
4.1 TEST EQUIPMENT

The following test equipments are used during the Conduct tests:

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Spectrum Analyzer	Rohde & Schwarz	FSP40	100061	2009.04.06
2	Spectrum Analyzer	HP	E4407B	US39240339	2008.08.06

Note: All measurement critical items of test instrumentation were within their calibration period of 1 year.

4.2 BLOCK DIAGRAM OF TEST SETUP



4.3 PEAK POWER OUTPUT LIMIT

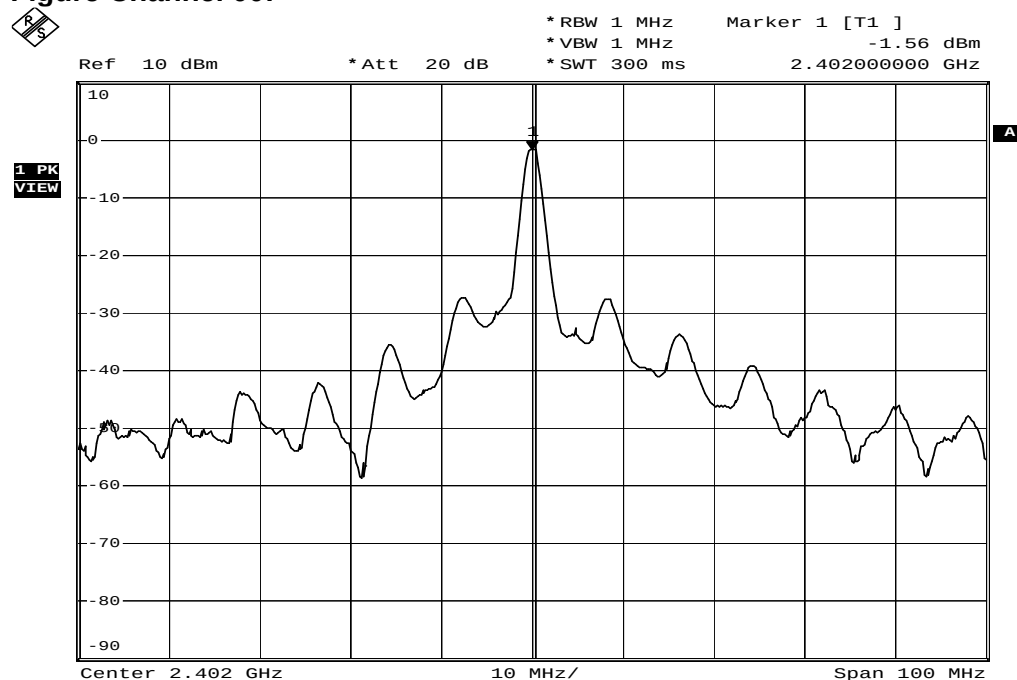
The maximum peak power shall be less 1 Watt.

4.4 TEST RESULT

Date of Test	July 31, 2008	Temperature	24.9 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Test Mode	Mode 1	Data Rate	DH5

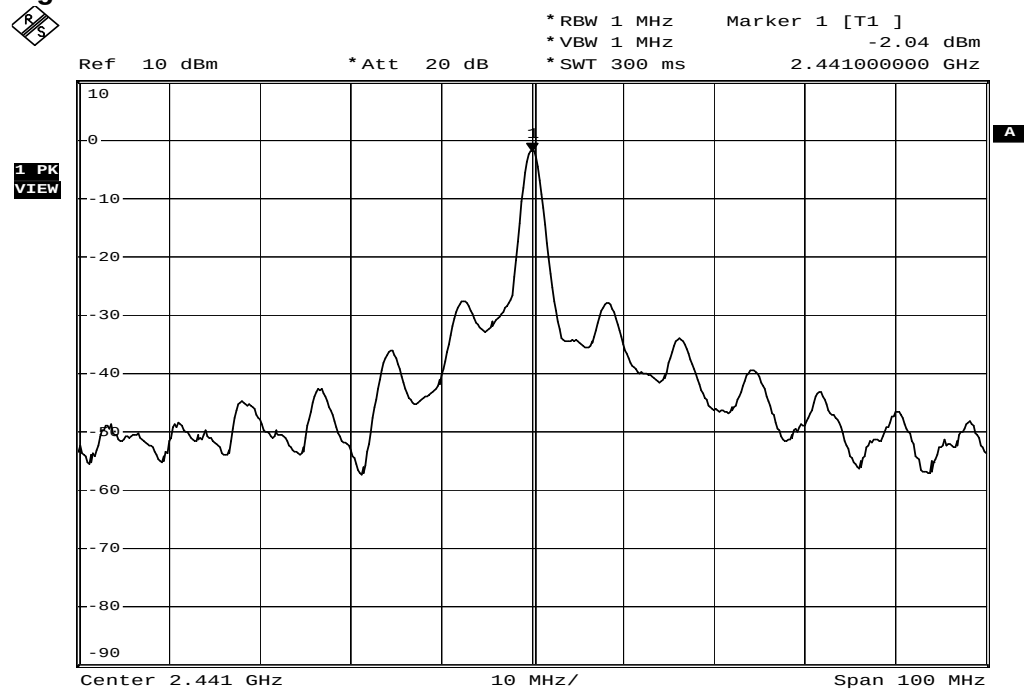
Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit	Result
00	2402	-1.56	1W(30dBm)	Pass
39	2441	-2.04	1W(30dBm)	Pass
78	2480	-2.81	1W(30dBm)	Pass

Figure Channel 00:



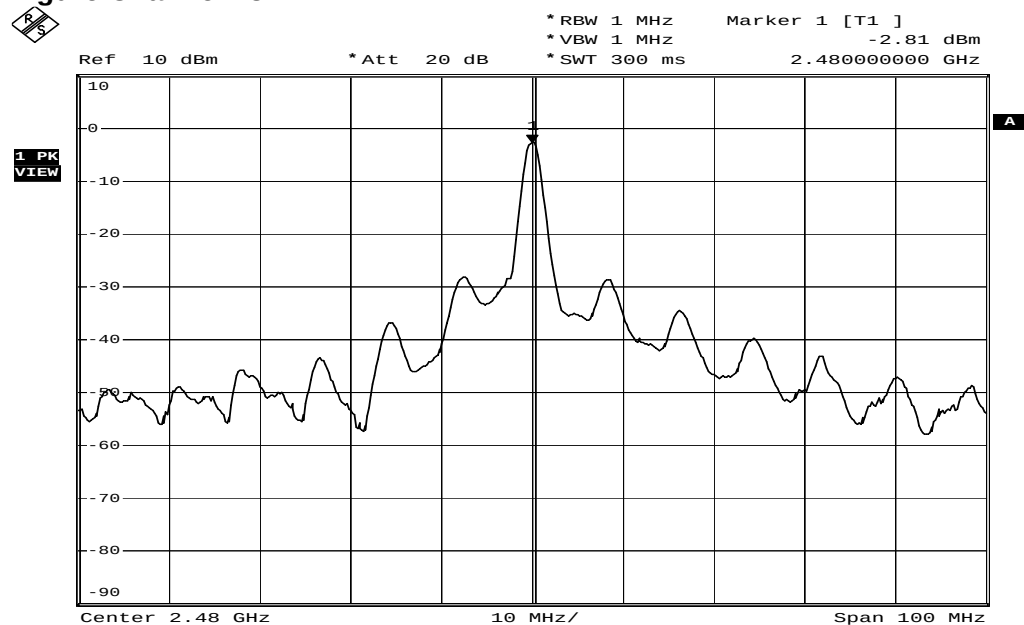
Date: 31.JUL.2008 16:13:33

Figure Channel 39:



Date: 31.JUL.2008 16:15:57

Figure Channel 78:



Date: 31.JUL.2008 16:34:48

5. BAND EDGE

5.1 TEST EQUIPMENT

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Test Receiver	R & S	ESCS30	825022/003	2009.06.01
2	Spectrum Analyzer	HP	8568B	N/A	2009.01.29
3	Power Meter	Rohde & Schwarz	NRVS	100666	2009.03.25
4	Peak Power Sensor	Rohde & Schwarz	NRV-Z32	836019-058	2009.03.25
5	Pre-Amplifier	EMV-Technik	PA303	N/A	2009.06.03
6	Pre-Amplifier	HP	8449B	3008A01263	2009.03.11
7	Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-251	2009.03.06
8	HORN ANTENNA	SCHWARZBECK	BBHA 9120	D243	2008.12.24
9	CABLE	GTK	N/A	GTK-E-A344-01	2009.04.16
10	CHAMBER	GTK	N/A	A6	2008.11.30
11	Test Program Software	GesTek	N/A	GTK-E-S001-01	N/A

Note: All measurement critical items of test instrumentation were within their calibration period of 1 year.

5.2 BLOCK DIAGRAM OF TEST SETUP

RF Radiated Measurement:

Refer to Section 4.2

RF Couductive Measurement:

Refer to Section 5.2

5.3 BAND EDGE LIMIT

In any 100KHz bandwidth outside the frequency band in which the spread spectrum 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 100KHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209 (a) (see Section 15.205(c)).

5.4 EUT CONFIGURATION

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2000 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120KHz, above 1GHz are 1MHz.

5.5 OPERATING CONDITION OF EUT

Same as section 2.7.

5.6 TEST RELULT

Date of Test	August 11, 2008	Temperature	24.8 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at Horizontal	Test Band	Lower

Radiation Emission of Fundamental Peak

Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]
2402.044	64.16	31.49	95.65

Average

Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]
2402.044	64.01	31.49	95.50

Remark:

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ
4. Emission Level= Reading + Correction Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Correction Factor= Antenna Factor + Cable Loss – Amplifier Factor

TEST Result

The band edge emission plots on next page are Peak. The plot for peak is appear (43.36)dB delta between carry power and maximum emission in restrict band (2370.0)MHz. The above tables are list of fundamental emission test result.

Besides, the compare peak power level of RBW=1MHz with RBW=100kHz in (2402)MHz is (0.31)dB. Therefore, peak field strength of (2370.0)MHz is (95.65)dBuV/m – (43.36)dB+(0.31)dB= (52.6)dBuV/m which is under 74dBuV/m.

Remark:

The average measurement was not performed when the peak measured data under the limit of average(54dBuV/m) detection.

Date of Test	August 11, 2008	Temperature	24.8 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at Vertical	Test Band	Lower

Radiation Emission of Fundamental Peak

Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]
2402.000	60.28	24.60	84.88

Average

Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]
2402.000	58.07	24.60	82.67

Remark:

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ
4. Emission Level= Reading + Correction Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Correction Factor= Antenna Factor + Cable Loss – Amplifier Factor

TEST Result

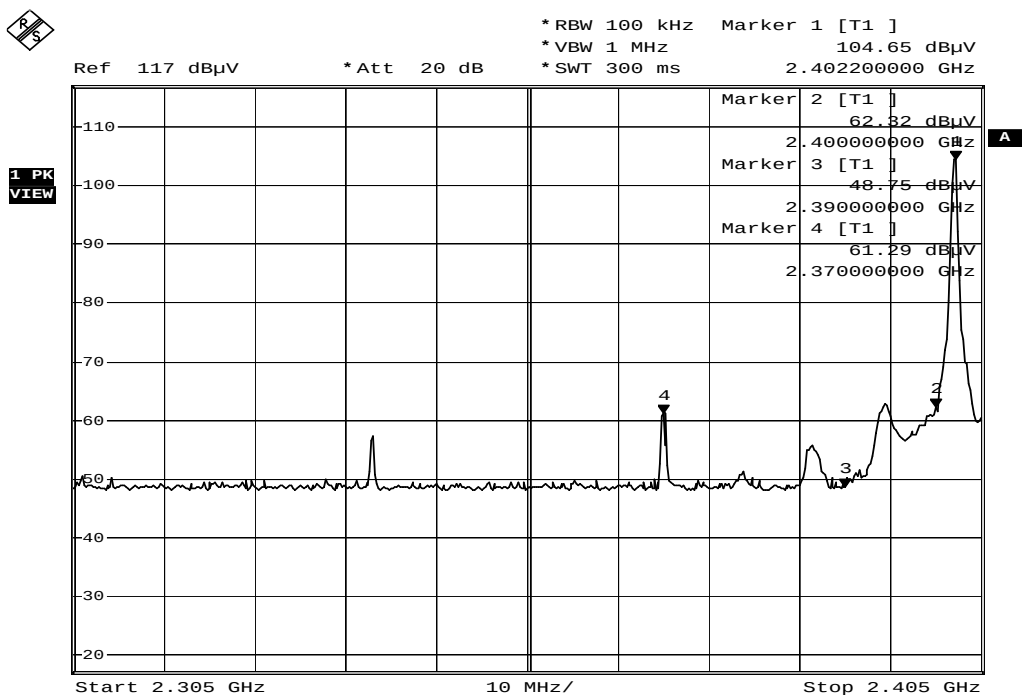
The band edge emission plots on next page are Peak. The plot for peak is appear (43.36)dB delta between carry power and maximum emission in restrict band (2370.0)MHz. The above tables are list of fundamental emission test result.

Besides, the compare peak power level of RBW=1MHz with RBW=100kHz in (2402)MHz is (0.31)dB.

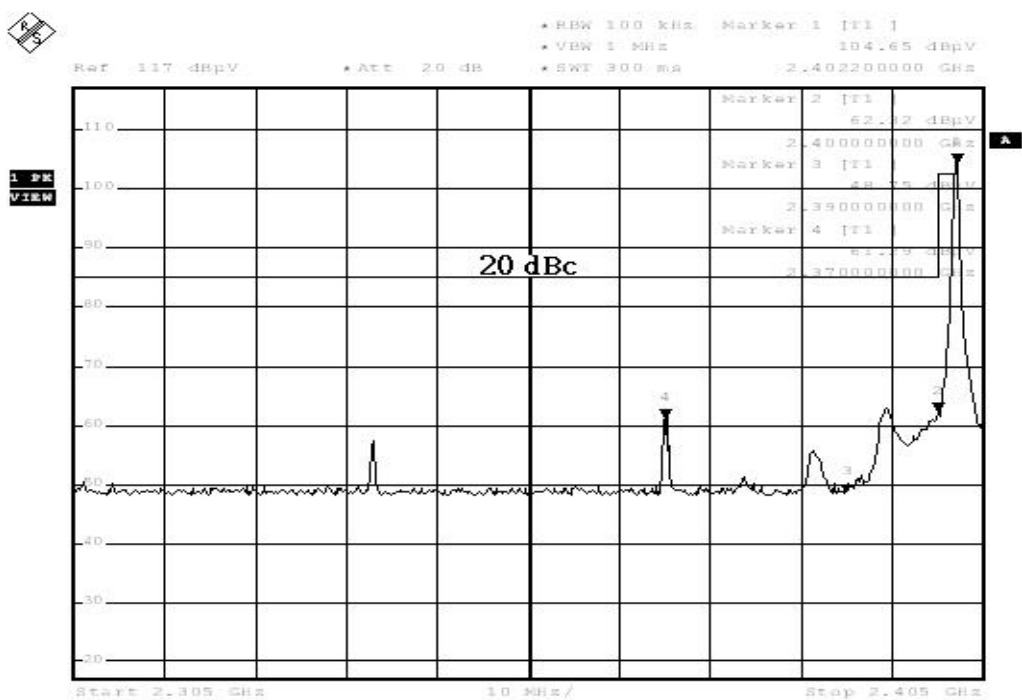
Therefore, peak field strength of (2370.0)MHz is (84.88)dBuV/m – (43.36)dB+(0.31)dB= (41.83)dBuV/m which is under 74dBuV/m.

Remark:

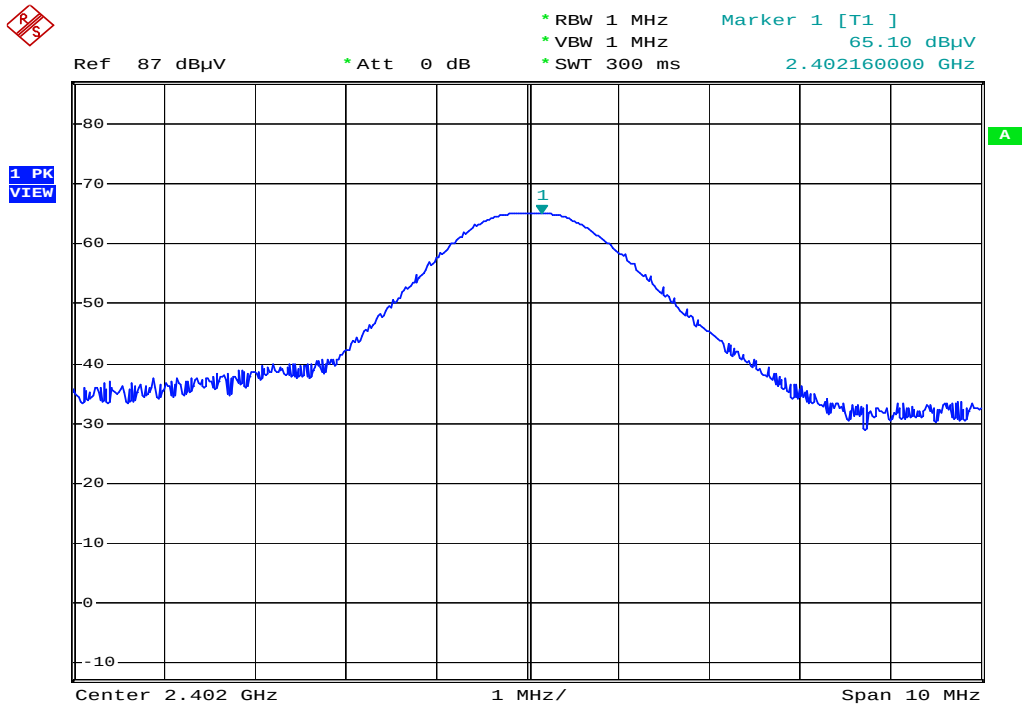
The average measurement was not performed when the peak measured data under the limit of average(54dBuV/m) detection.



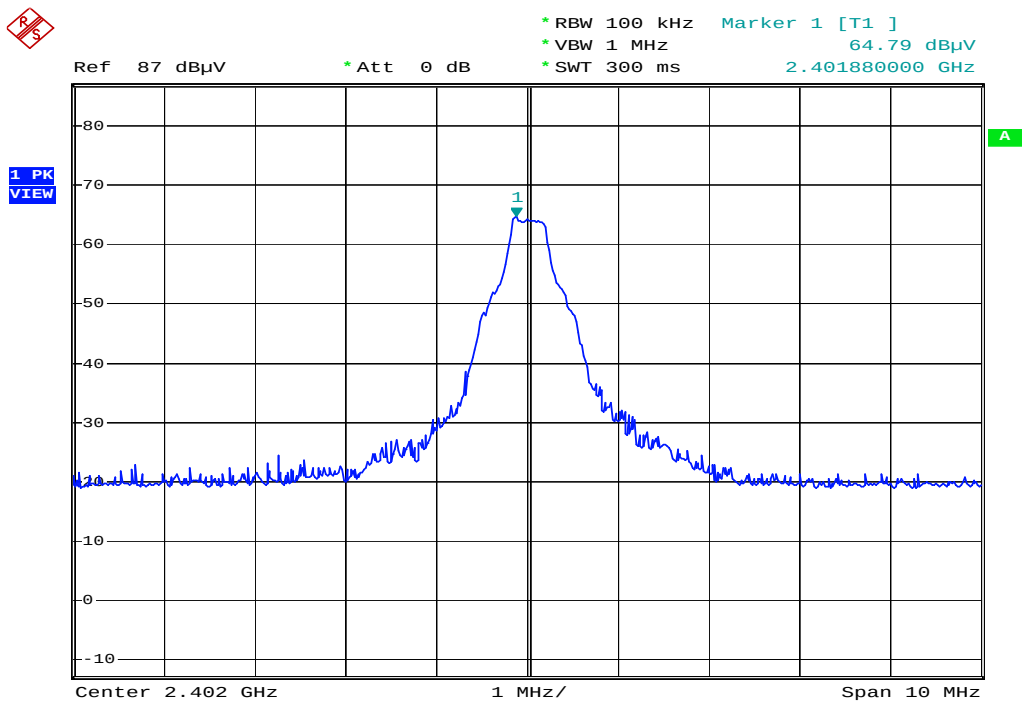
Date: 11.AUG.2008 18:04:38



Date: 11.AUG.2008 18:04:38



Date: 11.AUG.2008 18:46:22



Date: 11.AUG.2008 18:48:48

Date of Test	August 11, 2008	Temperature	24.8 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at Horizontal	Test Band	Higher

Radiation Emission of Fundamental Peak

Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]
2480.080	62.74	31.32	94.06

Average

Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]
2480.040	61.84	31.32	93.16

Remark:

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ
4. Emission Level= Reading + Correction Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Correction Factor= Antenna Factor + Cable Loss – Amplifier Factor

TEST Result

The band edge emission plots on next page are Peak. The plot for peak is appear (42.19)dB delta between carry power and maximum emission in restrict band (2488.2)MHz. The above tables are list of fundamental emission test result.

Besides, the compare peak power level of RBW=1MHz with RBW=100kHz in (2480)MHz is (0.43)dB.

Therefore, peak field strength of (2488.2)MHz is (94.06)dBuV/m – (42.19)dB+(0.43)dB= (52.30)dBuV/m which is under 74dBuV/m.

Remark:

The average measurement was not performed when the peak measured data under the limit of average(54dBuV/m) detection.

Date of Test	August 11, 2008	Temperature	24.8 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at Vertical	Test Band	Higher

Radiation Emission of Fundamental Peak

Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]
2480.080	59.48	23.33	82.81

Average

Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]
2480.000	57.65	23.33	80.98

Remark:

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analyzer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ.
3. Spectrum Analyzer Setting(AVG Detector): RBW=1MHz, VBW=10HZ
4. Emission Level= Reading + Correction Factor (Could have ± 0.01 tolerance due to computer automatically round off calculation).
5. Correction Factor= Antenna Factor + Cable Loss – Amplifier Factor

TEST Result

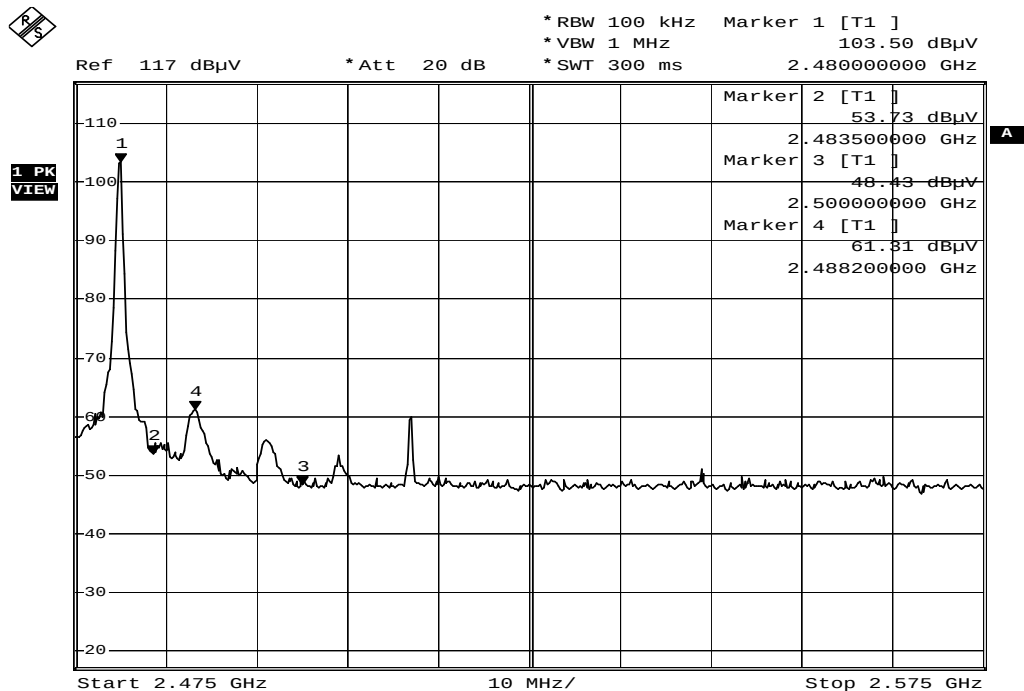
The band edge emission plots on next page are Peak. The plot for peak is appear (42.19)dB delta between carry power and maximum emission in restrict band (2488.2)MHz. The above tables are list of fundamental emission test result.

Besides, the compare peak power level of RBW=1MHz with RBW=100kHz in (2480)MHz is (0.43)dB.

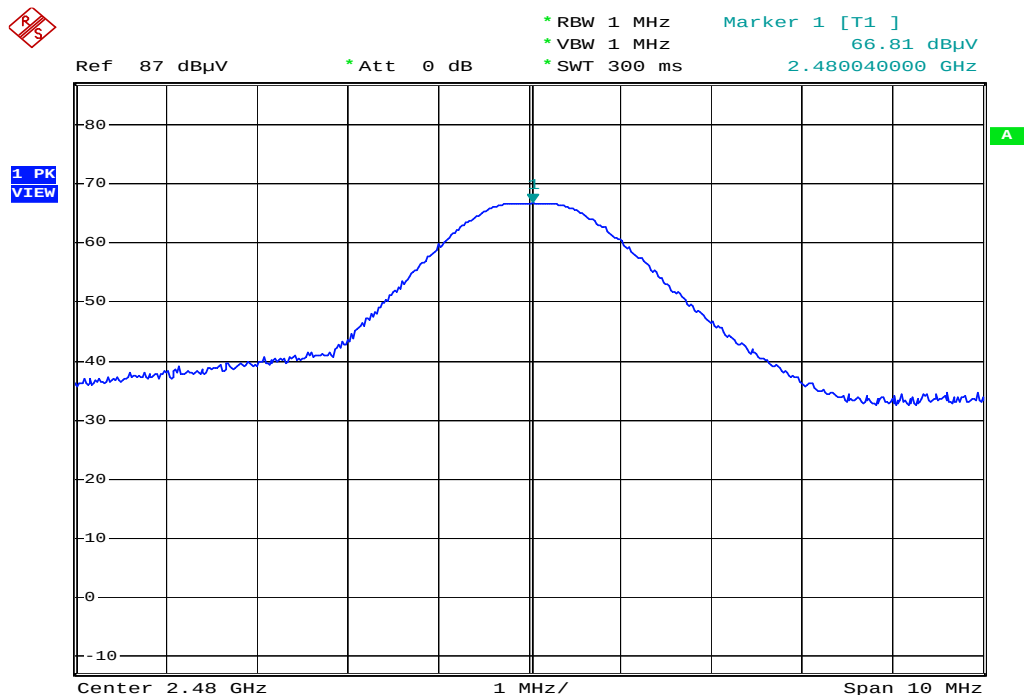
Therefore, peak field strength of (2488.2)MHz is (82.81)dBuV/m – (42.19)dB+(0.43)dB= (41.05)dBuV/m which is under 74dBuV/m.

Remark:

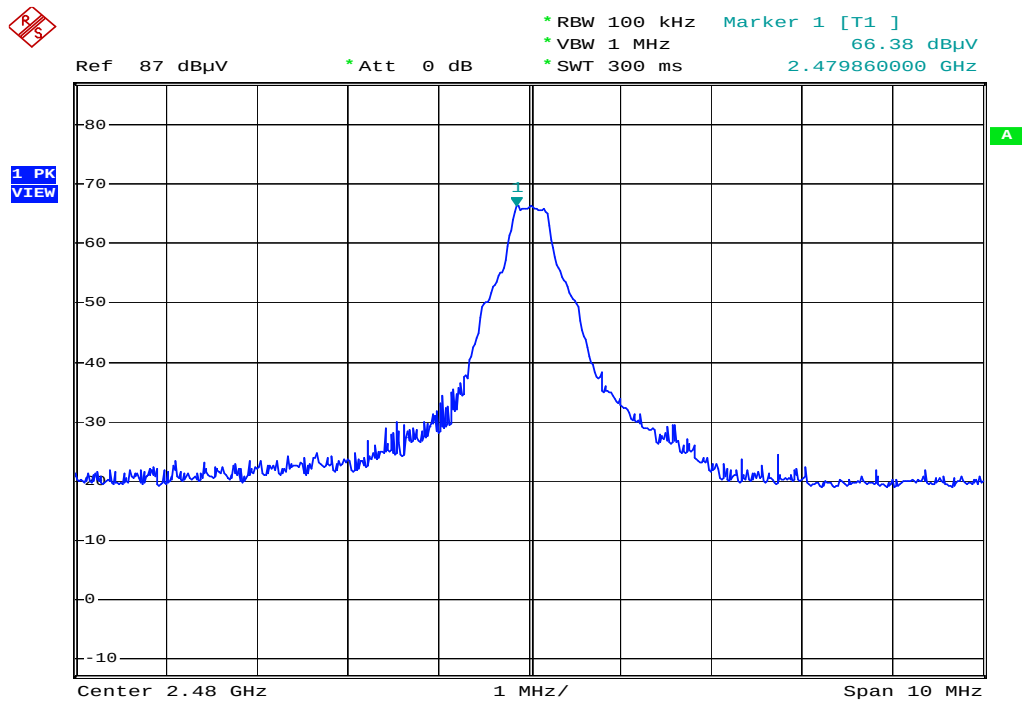
The average measurement was not performed when the peak measured data under the limit of average(54dBuV/m) detection.



Date: 11.AUG.2008 18:18:36



Date: 11.AUG.2008 20:20:30



Date: 11.AUG.2008 20:17:38

6. OCCUPIED BANDWIDTH

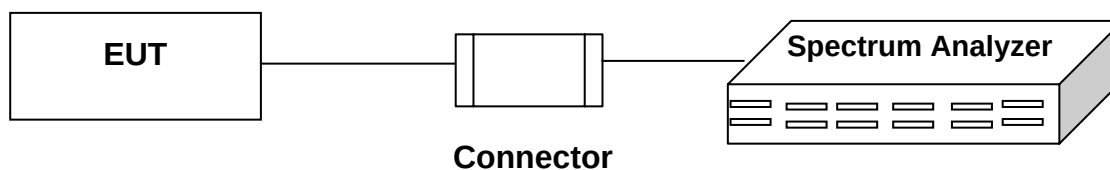
6.1 TEST EQUIPMENT

The following test equipments are used during the radiated emission tests:

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Spectrum Analyzer	Rohde & Schwarz	FSP40	100061	2009.04.06
2	Spectrum Analyzer	HP	E4407B	US39240339	2008.08.06

Note: All measurement critical items of test instrumentation were within their calibration period of 1 year.

6.2 BLOCK DIAGRAM OF TEST SETUP



6.3 LIMIT

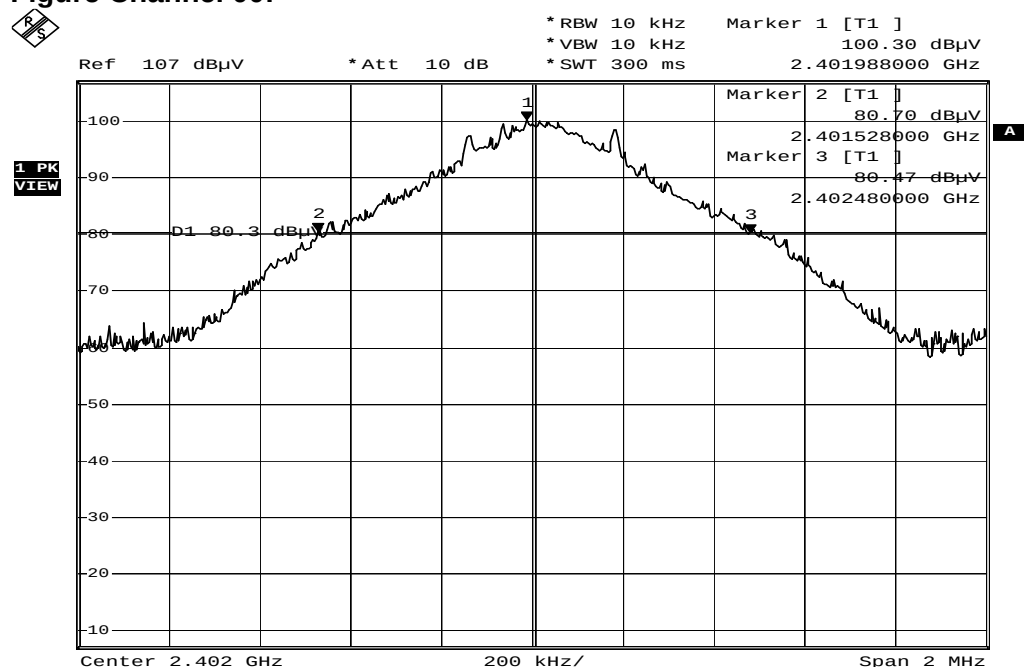
The maximum 20 dB bandwidth shall be measurement.

6.4 TEST RESULT

Date of Test	August 05, 2008	Temperature	25.3 deg/C
EUT	Bluetooth Keyboard	Humidity	52 %RH
Working Cond.	Mode 1		

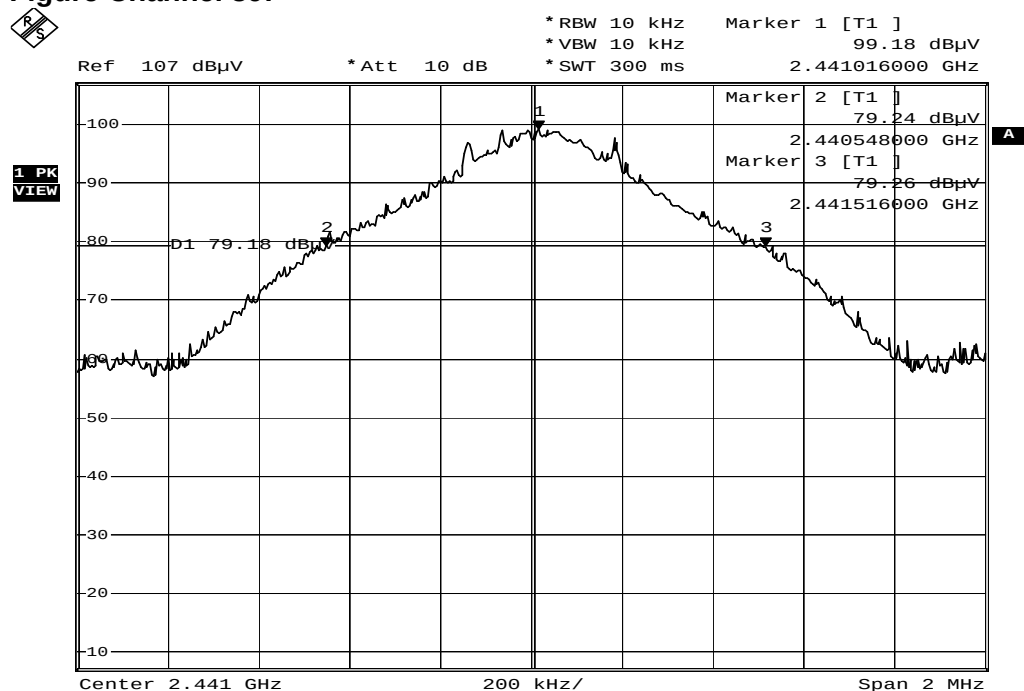
Channel No.	Frequency (MHz)	20dB Bandwidth (MHz)
00	2402	0.952
39	2441	0.968
78	2480	0.964

Figure Channel 00:



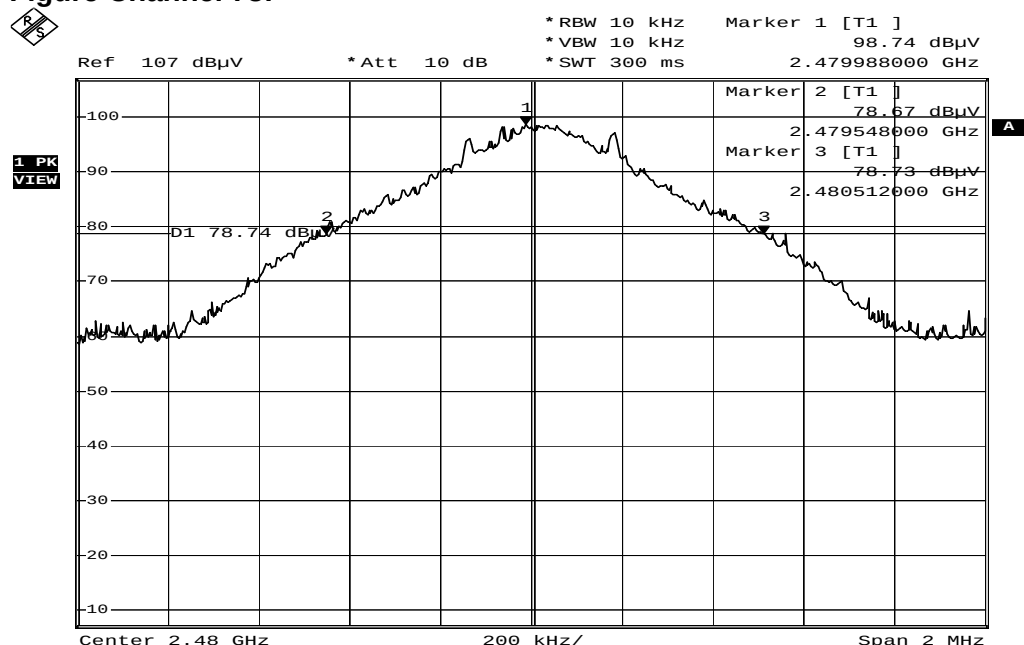
Date: 5.AUG.2008 11:49:02

Figure Channel 39:



Date: 5.AUG.2008 11:54:48

Figure Channel 78:



Date: 5.AUG.2008 12:00:19

7. CHANNEL SEPARATION

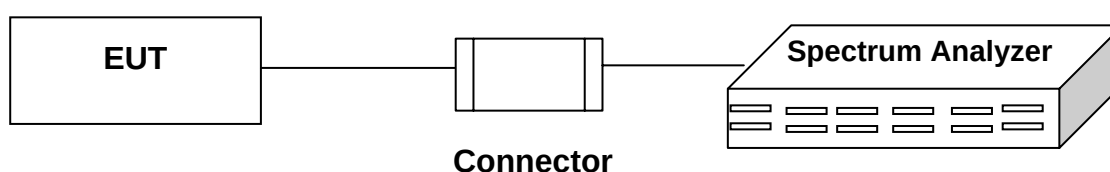
7.1 TEST EQUIPMENT

The following test equipments are used during the radiated emission tests:

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Spectrum Analyzer	Rohde & Schwarz	FSP40	100061	2009.04.06
2	Spectrum Analyzer	HP	E4407B	39240339	2008.08.06

Note: All measurement critical items of test instrumentation were within their calibration period of 1 year.

7.2 BLOCK DIAGRAM OF TEST SETUP



7.3 LIMIT

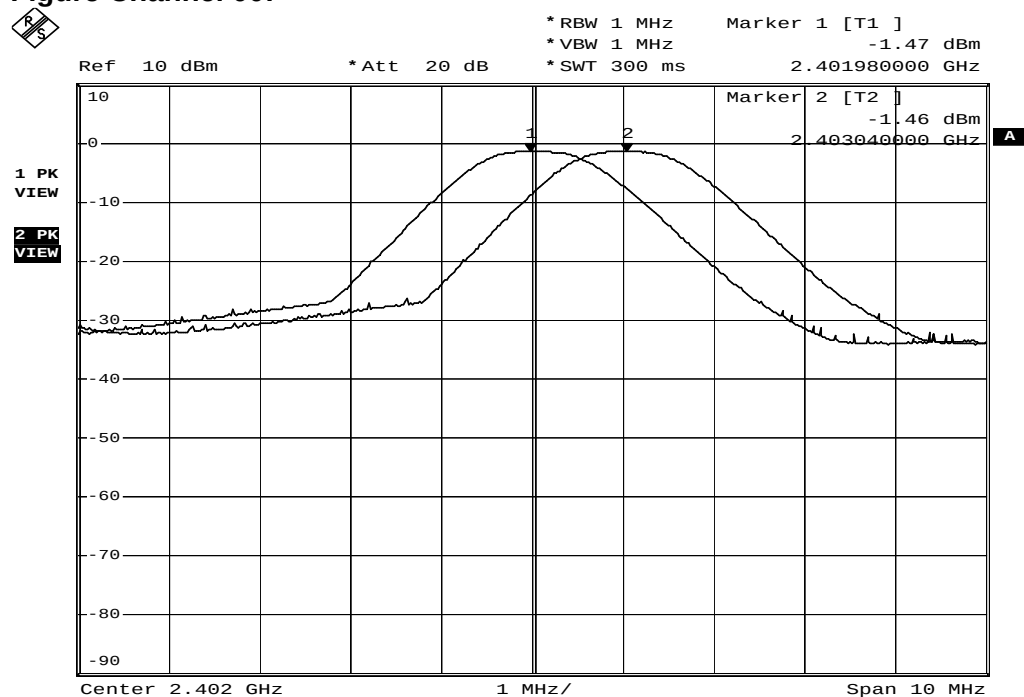
Frequency hopping systems shall have hopping channel carrier frequencies separated by minimum of 25kHz or the 20dB bandwidth of hopping channel, whichever is grester.

7.4 TEST RESULT

Date of Test	July 31, 2008	Temperature	24.9 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1		

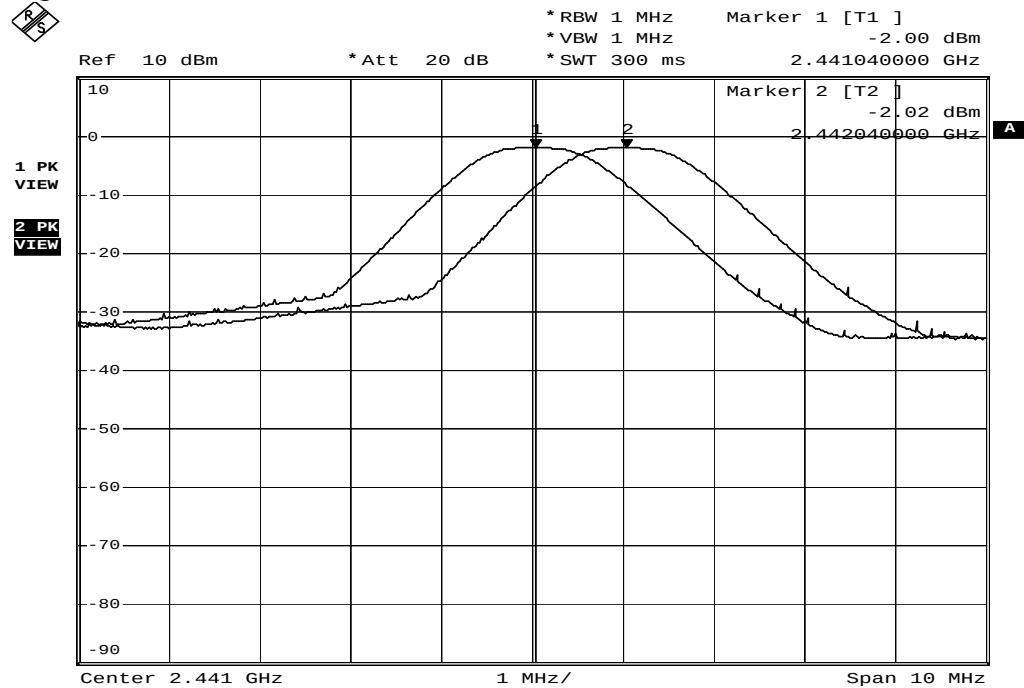
Test Channel No.	Channel Separated (kHz)	Limit (kHz)	Limit of 20dB Bandwidth (kHz)	Result
00	1060	> 25	> 952	Pass
39	1000	> 25	> 968	Pass
78	1000	> 25	> 964	Pass

Figure Channel 00:



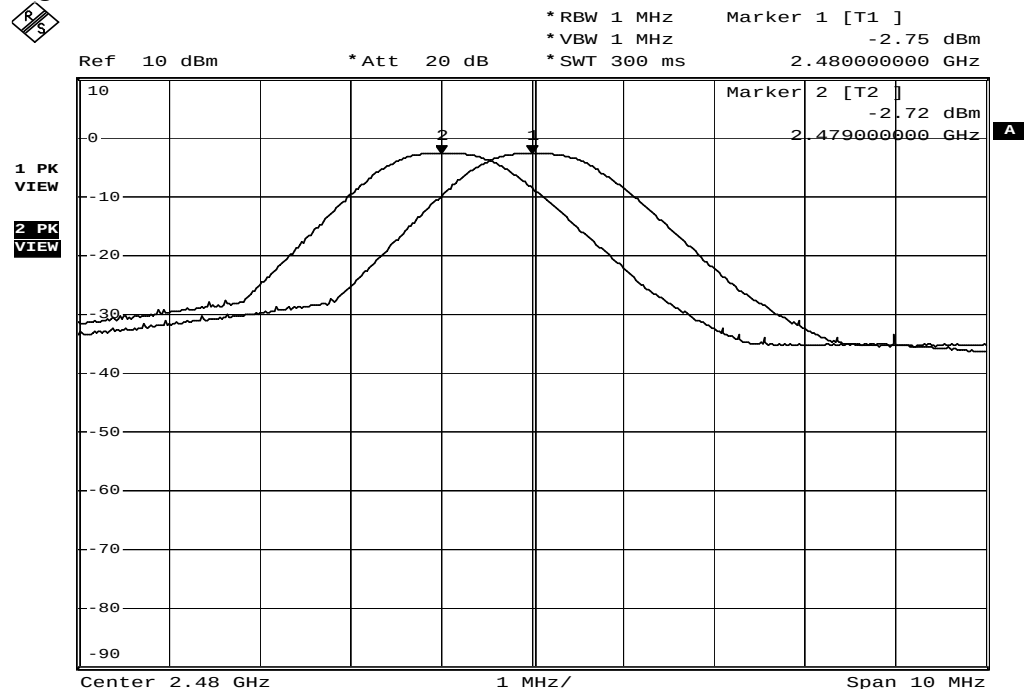
Date: 31.JUL.2008 17:33:25

Figure Channel 39:



Date: 31.JUL.2008 17:47:23

Figure Channel 78:



Date: 31.JUL.2008 18:05:14

8. DWELL TIME

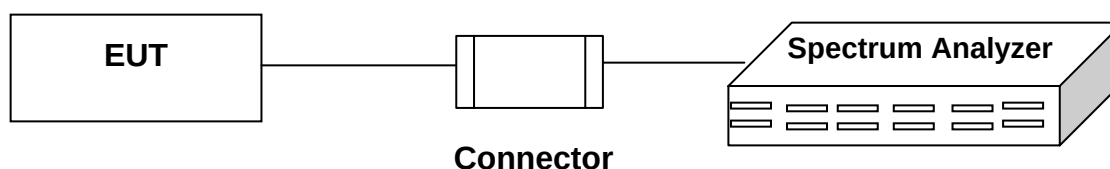
8.1 TEST EQUIPMENT

The following test equipments are used during the radiated emission tests:

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Spectrum Analyzer	Rohde & Schwarz	FSP40	100061	2009.04.06
2	Spectrum Analyzer	HP	E4407B	39240339	2008.08.06

Note: All measurement critical items of test instrumentation were within their calibration period of 1 year.

8.2 BLOCK DIAGRAM OF TEST SETUP



8.3 LIMIT

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 number of hopping channels employed.

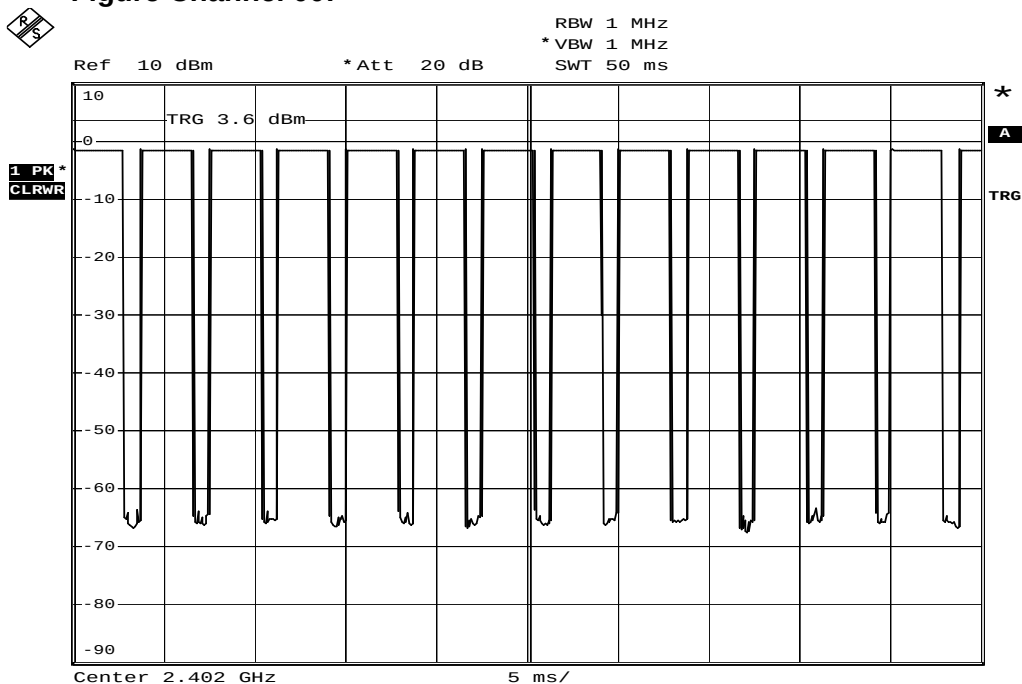
8.4 TEST RESULT

Date of Test	July 31, 2008	Temperature	24.9 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		

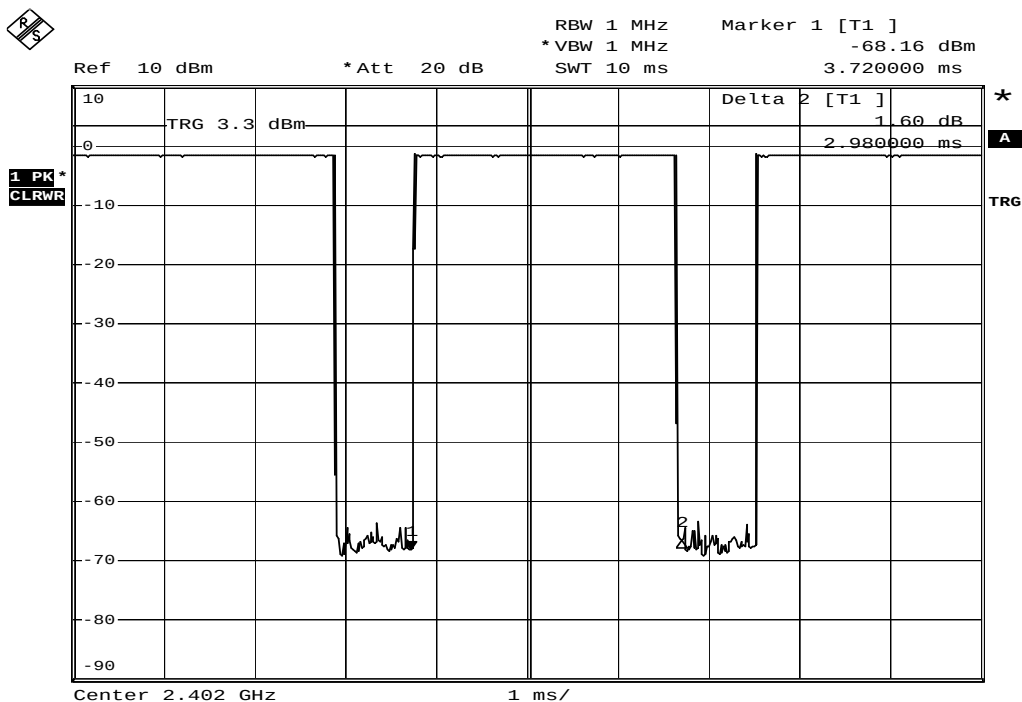
Measurement Level (sec)	Required Limit (sec)	Result
Period = $0.4 \text{ (sec)} * 79 \text{ (number of channel)}$ = 31.6 (sec) Hop rate = $14 / 50 \text{ (ms)} = 0.28 / \text{sec}$ Time slot length = $2980 \text{ (}\mu\text{s)} = 0.0298 \text{ (sec)}$	< 0.4	Pass
※ Dwell Time = $0.0298 * (0.28 / 79) * 31.6$ = 0.00333 (sec)		

Note: Dwell time = time slot length * hop rate / number of hopping channels * period

Figure Channel 00:



Date: 31.JUL.2008 16:44:12



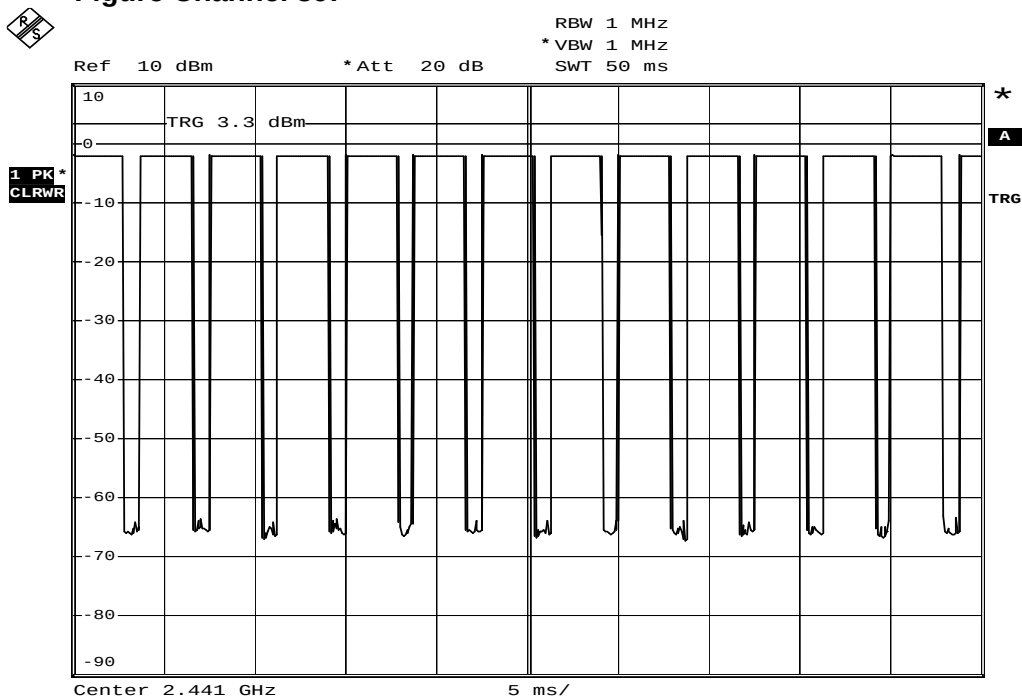
Date: 31.JUL.2008 16:45:41

Date of Test	July 31, 2008	Temperature	24.9 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1-CH 39 (2441MHz)		

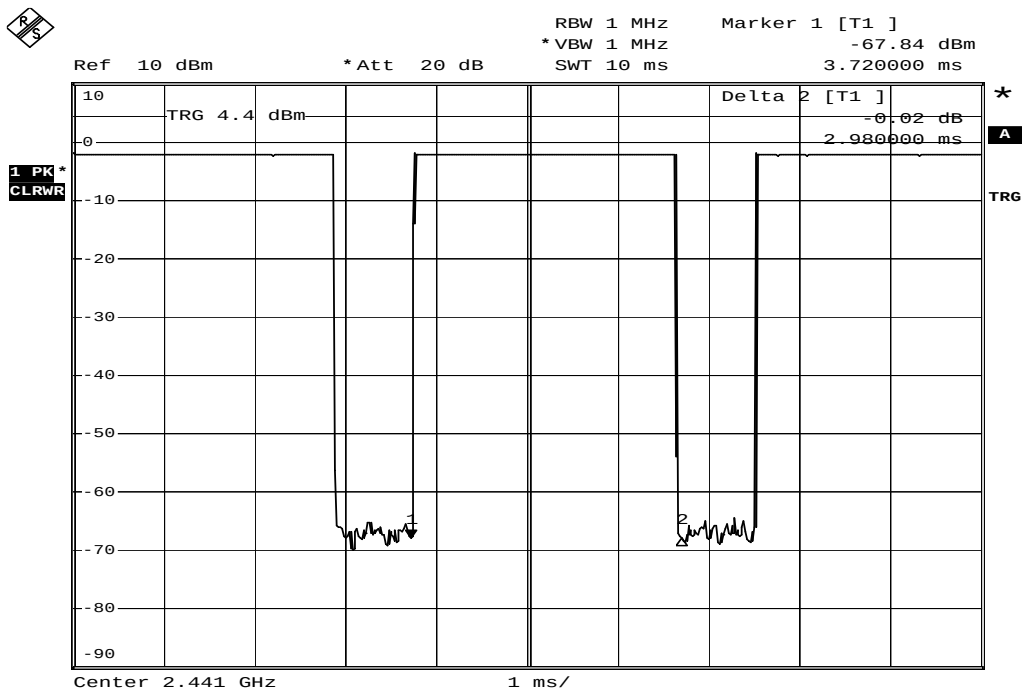
Measurement Level (sec)	Required Limit (sec)	Result
Period = $0.4 \text{ (sec)} * 79 \text{ (number of channel)}$ = 31.6 (sec) Hop rate = $14 / 50 \text{ (ms)} = 0.28 / \text{sec}$ Time slot length = $2980 \text{ (}\mu\text{s)} = 0.0298 \text{ (sec)}$	< 0.4	Pass
※ Dwell Time = $0.0298 * (0.28 / 79) * 31.6$ = 0.00333 (sec)		

Note: Dwell time = time slot length * hop rate / number of hopping channels * period

Figure Channel 39:



Date: 31.JUL.2008 16:43:03



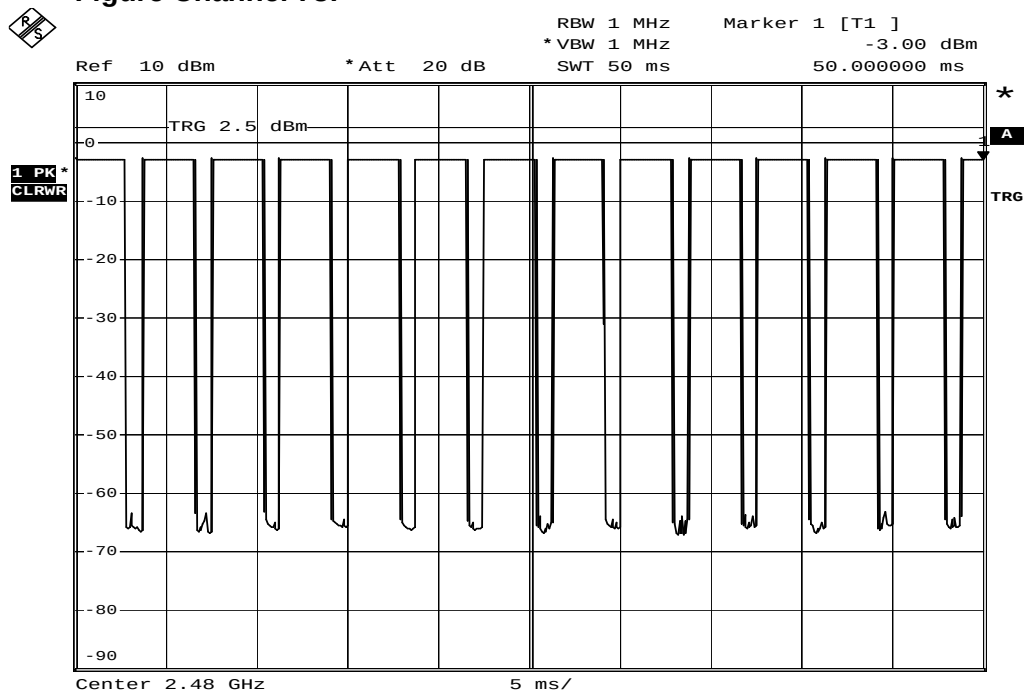
Date: 31.JUL.2008 16:41:44

Date of Test	July 31, 2008	Temperature	24.9 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		

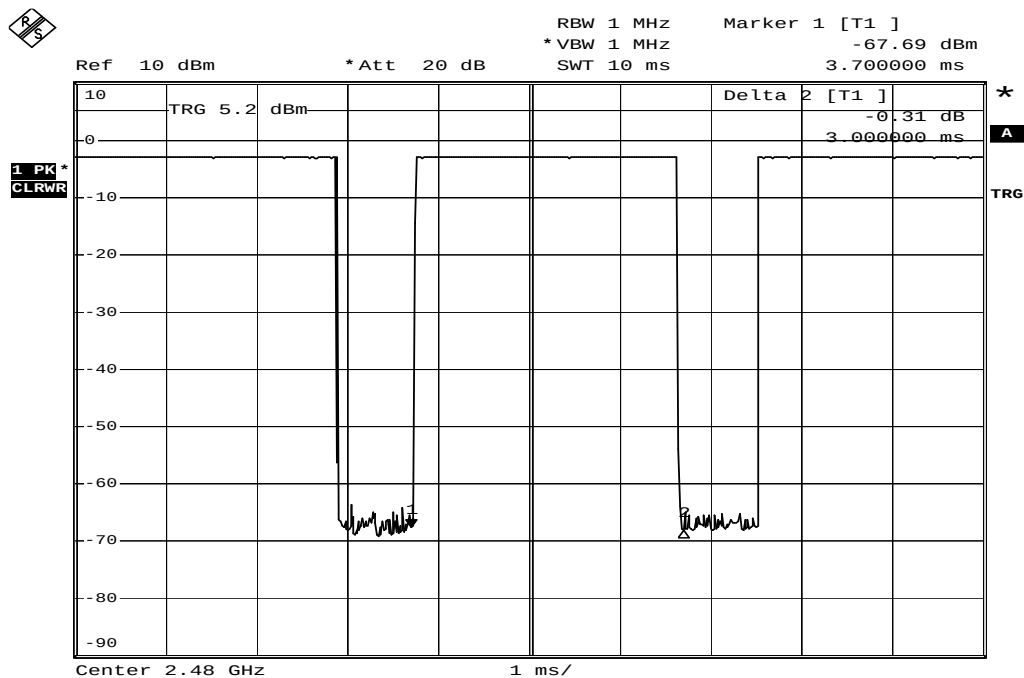
Measurement Level (sec)	Required Limit (sec)	Result
Period = $0.4 \text{ (sec)} * 79 \text{ (number of channel)}$ = 31.6 (sec) Hop rate = $14 / 50 \text{ (ms)} = 0.28 / \text{sec}$ Time slot length = $3000 \text{ (}\mu\text{s)} = 0.0300 \text{ (sec)}$	< 0.4	Pass
※ Dwell Time = $0.0300 * (0.28 / 79) * 31.6$ = 0.00335 (sec)		

Note: Dwell time = time slot length * hop rate / number of hopping channels * period

Figure Channel 78:



Date: 31.JUL.2008 16:37:13



Date: 31.JUL.2008 16:38:58

9. HOPPING CHANNEL

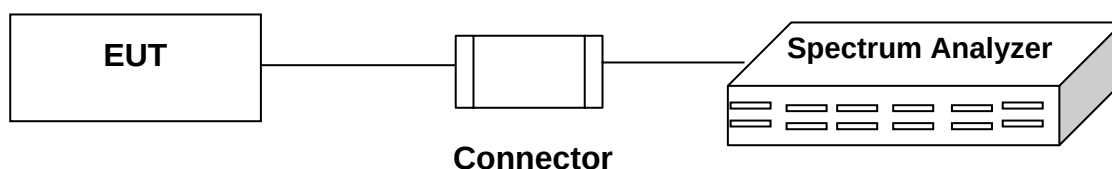
9.1 TEST EQUIPMENT

The following test equipments are used during the radiated emission tests:

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Spectrum Analyzer	Rohde & Schwarz	FSP40	100061	2009.04.06
2	Spectrum Analyzer	HP	E4407B	39240339	2008.08.06

Note: All measurement critical items of test instrumentation were within their calibration period of 1 year.

9.2 BLOCK DIAGRAM OF TEST SETUP



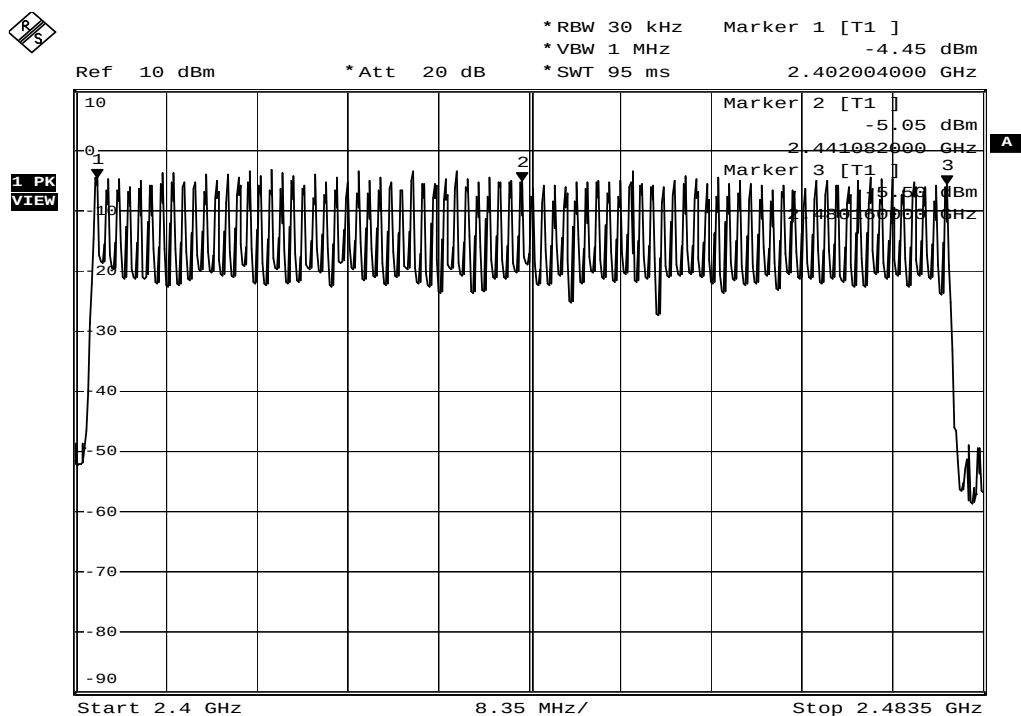
9.3 LIMIT

Frequency hopping systems operating in the 2400-2483.5 MHz bands shall use at least 75 non-overlapping hopping channels.

9.4 TEST RESULT

Date of Test	July 31, 2008	Temperature	24.9 deg/C
EUT	Bluetooth Keyboard	Humidity	47 %RH
Working Cond.	Mode 1		

Frequency Range (MHz)	Measurement (Hopping Channel)	Limit (Hopping Channel)	Result
2402 - 2480	79	>75	Pass



Date: 31.JUL.2008 17:42:23

10. PHOTOGRAPHS FOR TEST

10.1 TEST PHOTOGRAPHS FOR RADIATION

30-1000MHz



Above 1GHz

11. PHOTOGRAPHS FOR PRODUCT

- 1.
2. Label Here



3.
4.

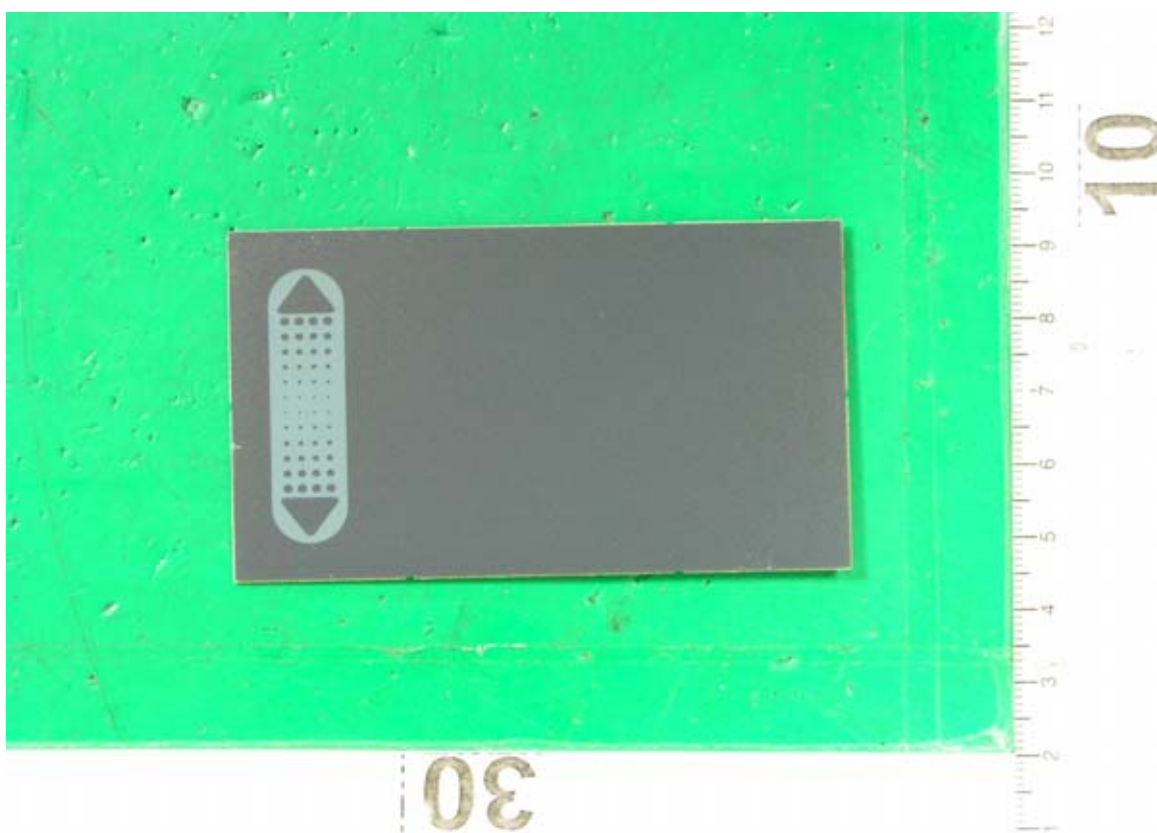


5.
6.

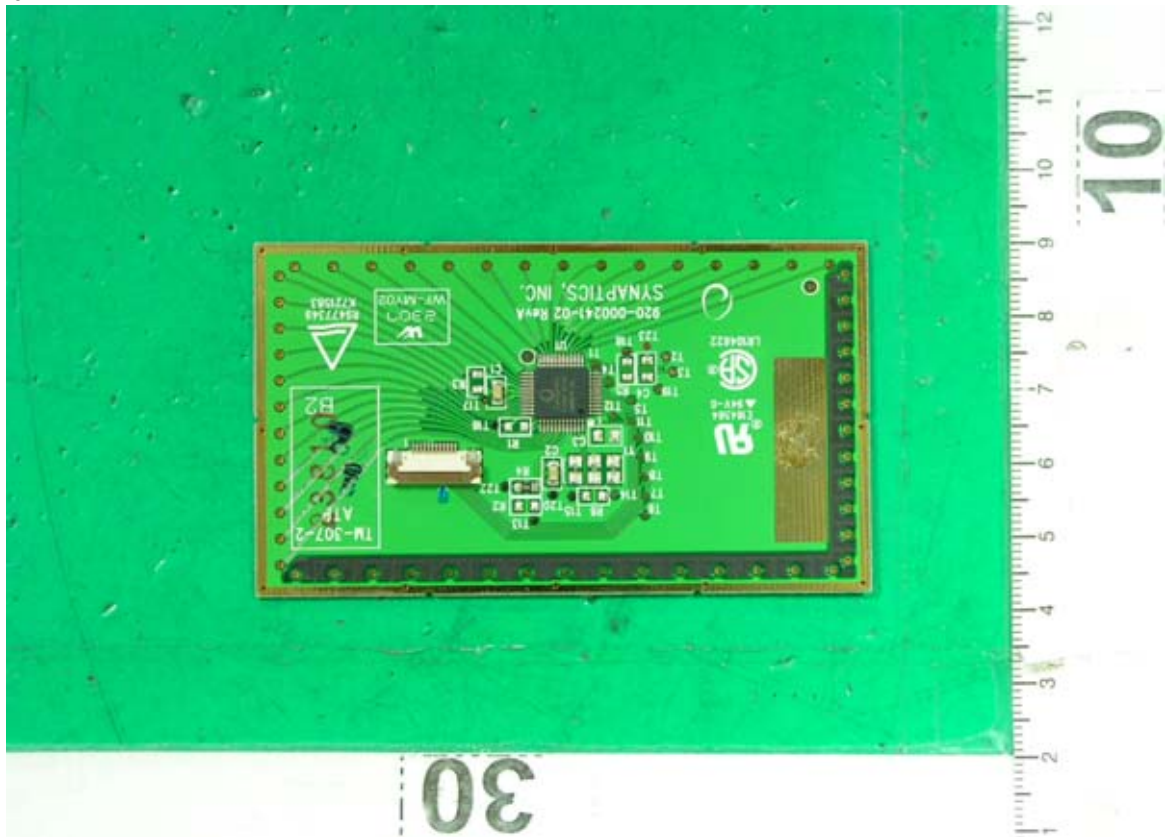


7.

8. Touch Pad Control Board+



9. Touch Pad Control Board-
- 10.



11.
12.

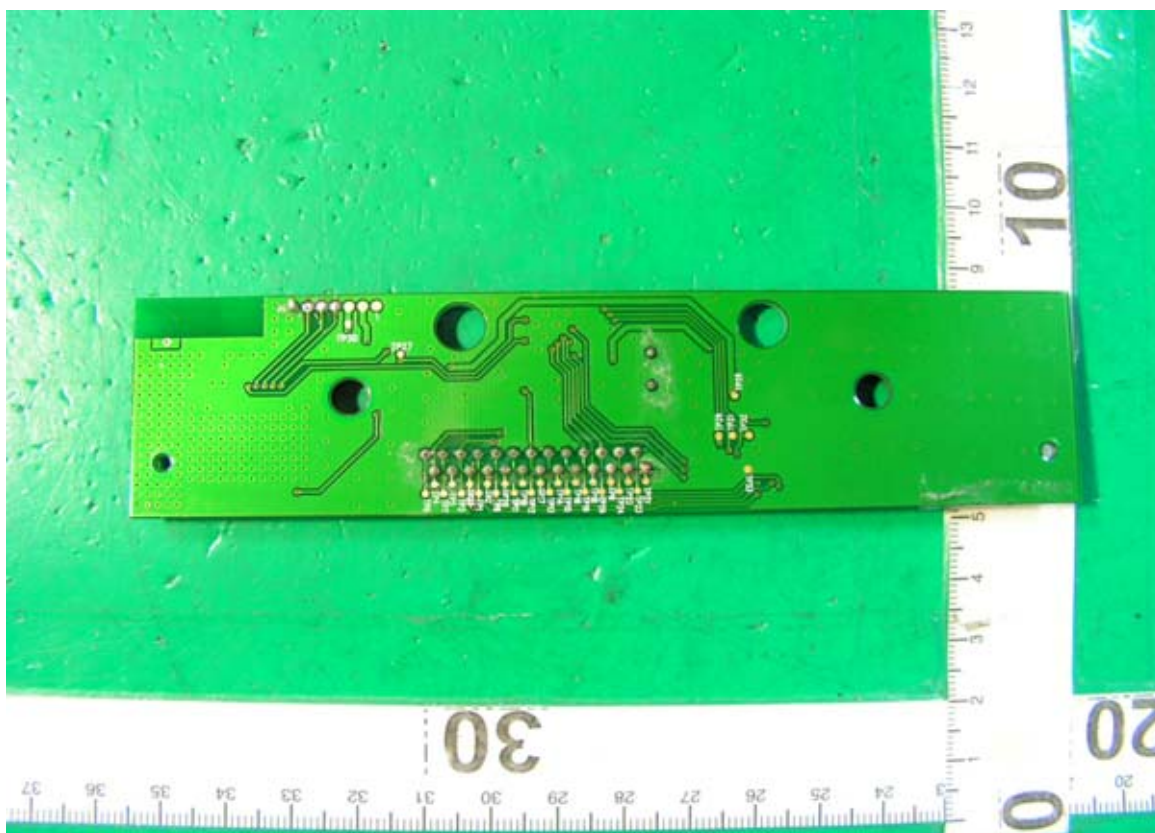
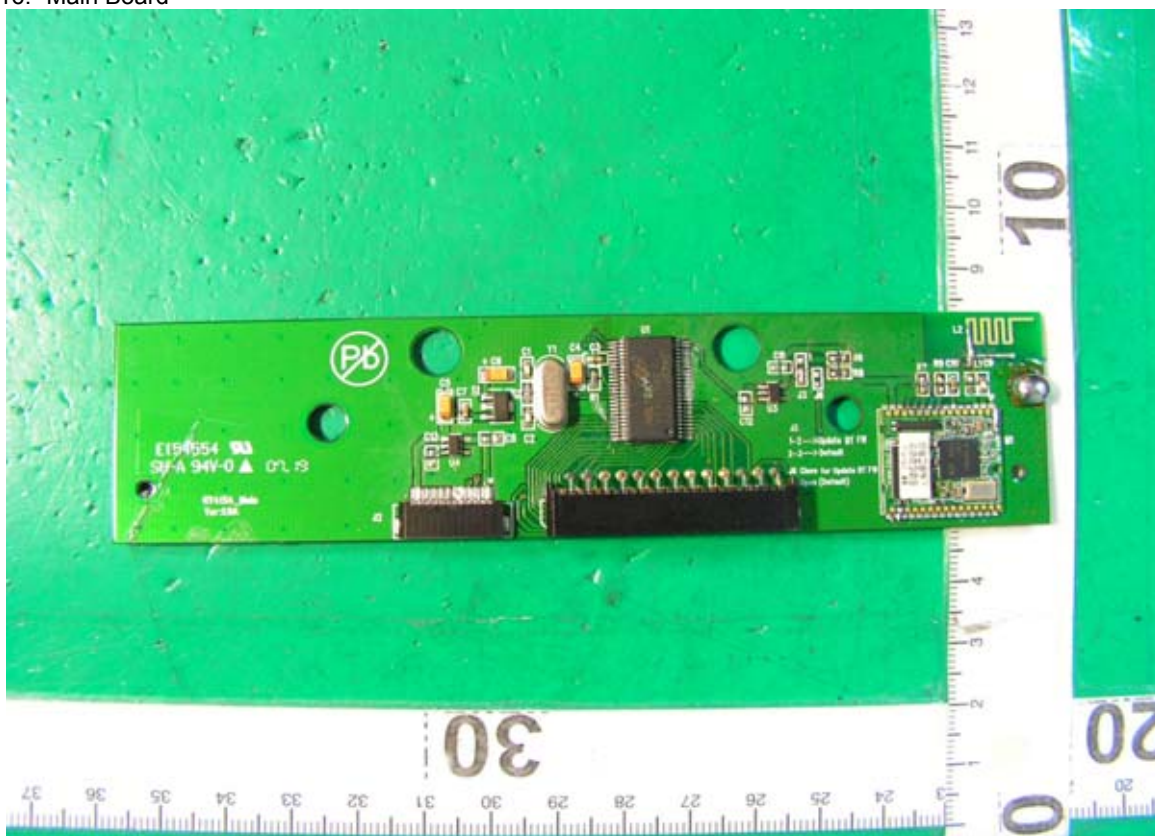


13. Keyboard Module+

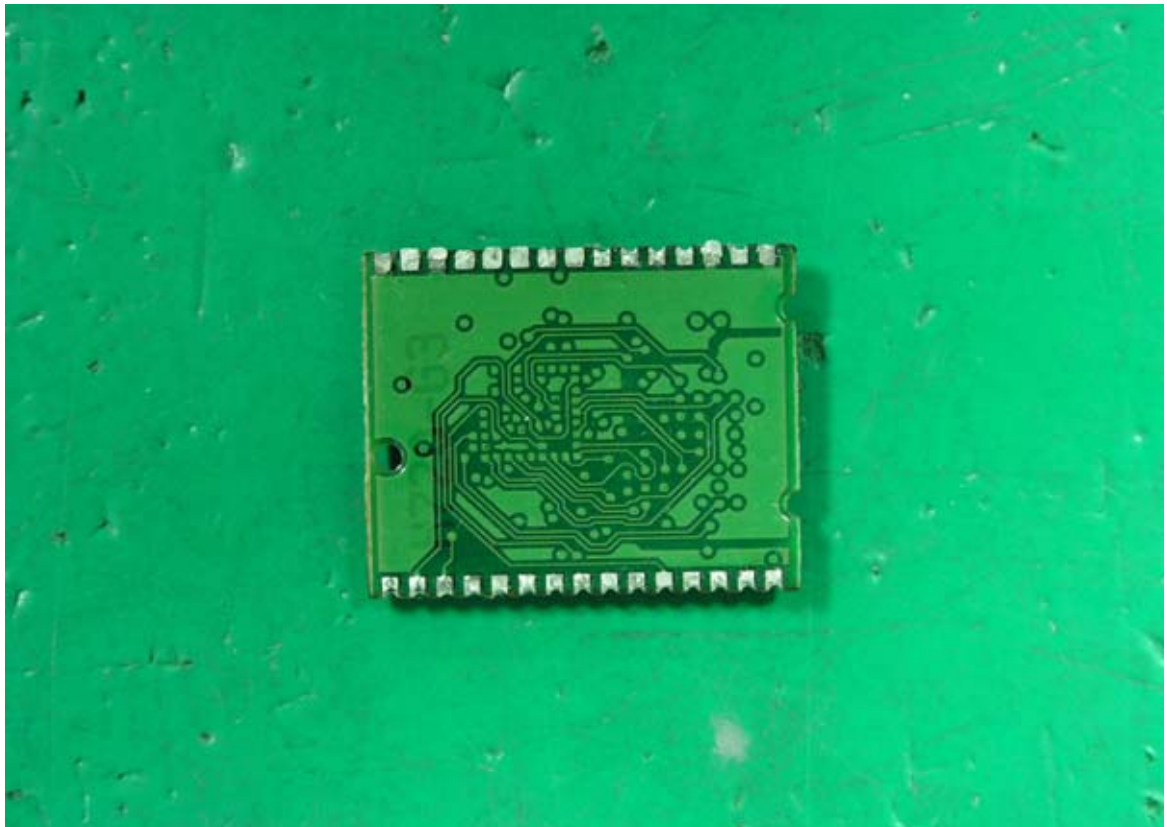
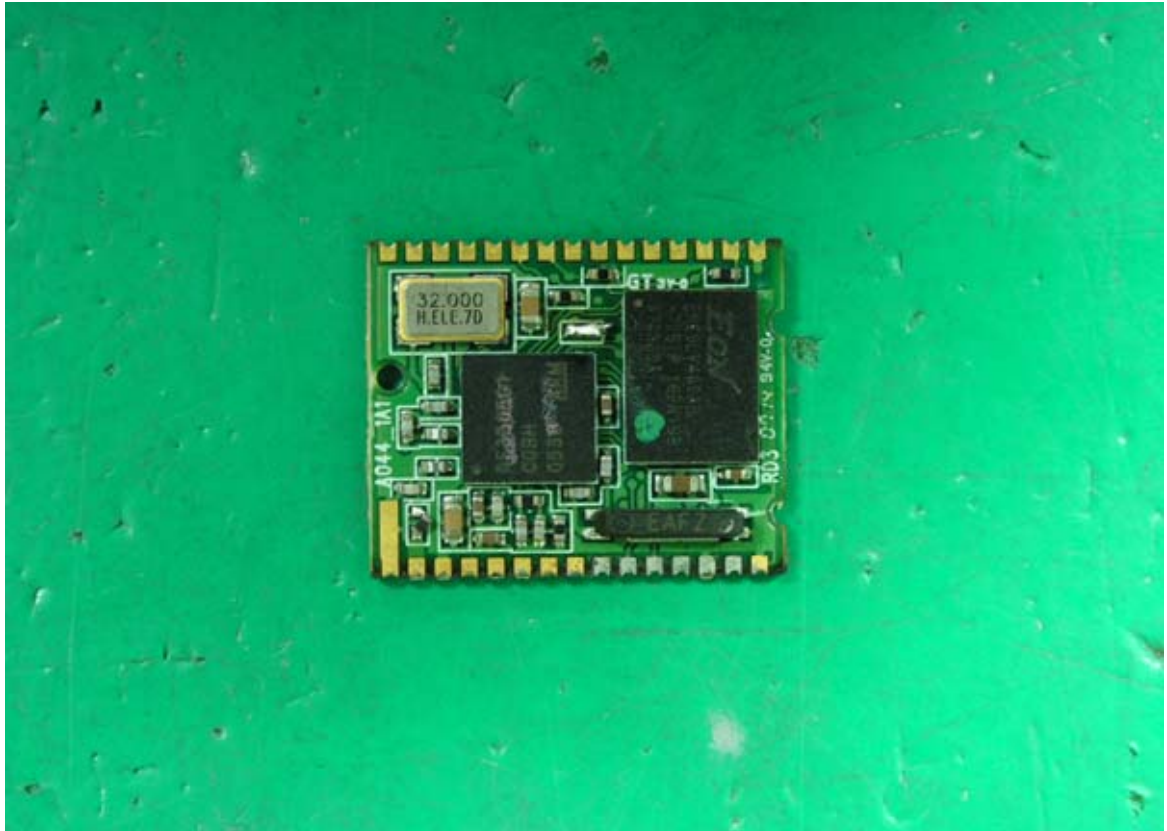
14. Keyboard Module-



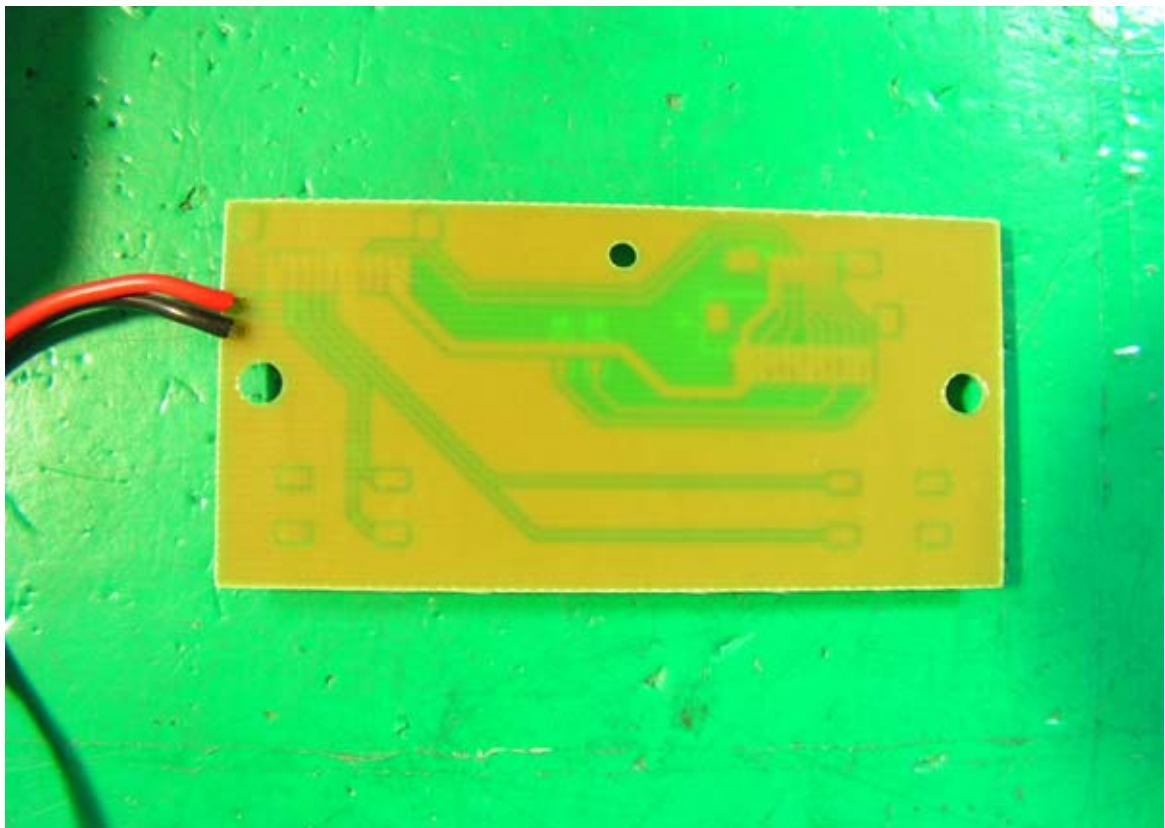
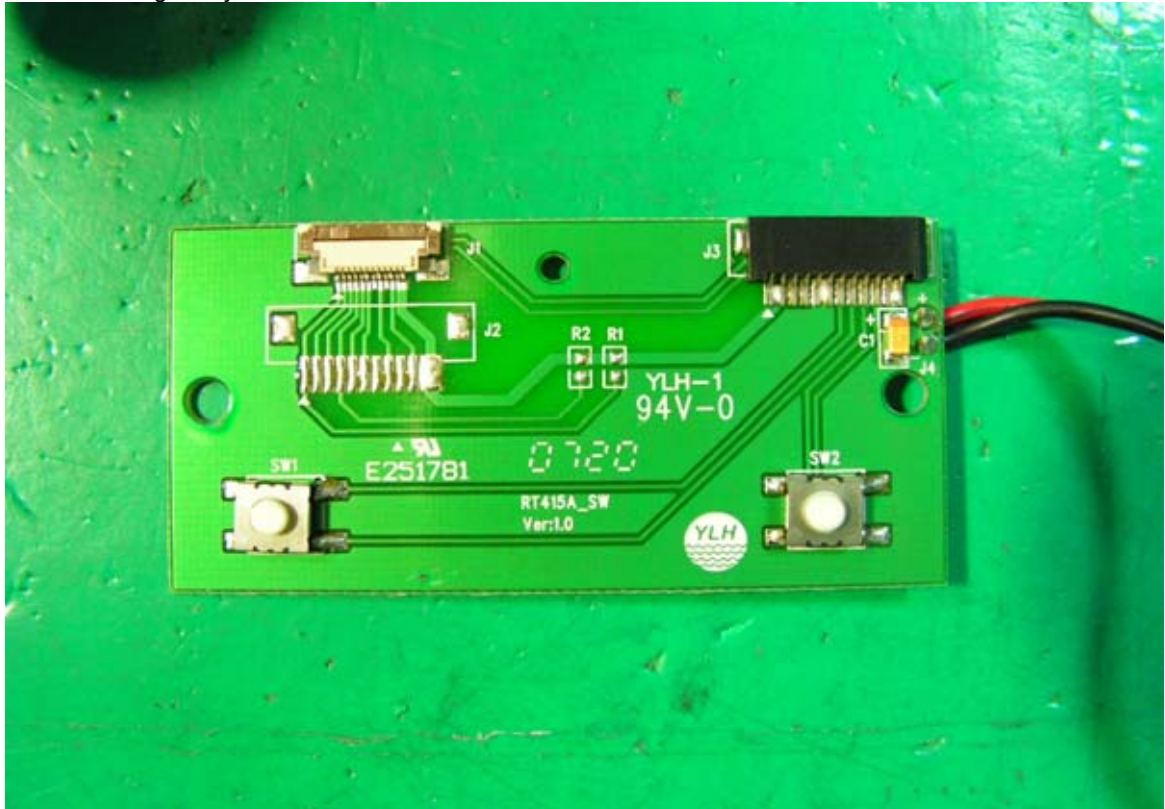
15. Main Board+
16. Main Board-



- 17. RF Module+
- 18. RF Module-



19. Left and Right Key Control Board+
20. Left and Right Key Control Board-



12. EMI REDUCTION METHOD DURING COMPLIANCE TESTING

No modification was made during testing.

Appendix A

Circuit (Block) Diagram

(Shall be added by Applicant)

Appendix B

User Manual

(Shall be added by Applicant)