Test Report
Application for
Certification
On Behalf Of

National Chiao Tung University

EUT:

Bluetooth UART module
Model Number:

HL-MD08R-C2

FCC ID:

A2QHLMD08RC2

Prepared for:
National Chiao Tung University
1001 University Road, Hsinchu 300, Taiwan

Report By :Global EMC Standard Tech. Corp.
No.3 Pau-Tou-Tsuo Valley, Chia-Pau
Tsuen, Lin Kou Hsiang, Taipei County,
Taiwan, R.O.C.
Tel : 886-2-2603-5321
Fax : 886-2-2603-5325

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1. CERTIFICATION

Applicant : **National Chiao Tung University**

Applicant Address	:	1001 University Road, Hsinchu 300, Taiwan
EUT Description	:	Bluetooth UART module
Model Number	:	HL-MD08R-C2
Serial Number	:	N/A
Brade Name	:	MINDO
FCC ID	:	A2QHLMD08RC2
Tested Power Supply	:	DC 3V
Manufacturer	:	National Chiao Tung University
Manufacturer Address	:	1001 University Road, Hsinchu 300, Taiwan

MEASUREMENT PROCEDURES USED:

☑ **CFR 47, Part 15**   Radio Frequency Device Subpart C Intentional Radiators :2011

☑ **ANSI C63.4**   Methods of Measurements of Radio-Noise Emissions from Low- Voltage Electrical and Electronic Equipment in the range of 9kHz To 40GHz. 2009

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 : September 19, 2011
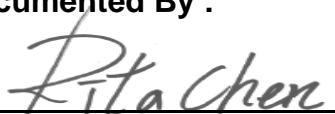
Date of Test : September 22, 2011 – February 22, 2012

Issue Date : June 18, 2012

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.
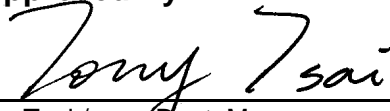
Documented By :

Rita Chen / Report Author

Tested By :

Albert Tzeng / Eng. Dept. Engineer

Approved By :

Tony Tsai / eng. Dept. Manager

Authorized Lab. of TAF, NEMKO, NVLAP
Listed Lab. of Commerce, FCC, VCCI.

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2.   GENERAL INFORMATION

PRODUCTION DESCRIPTION

Product Name	:	Bluetooth UART module
Model Number	:	HL-MD08R-C2
Serial Number	:	N/A
Brade Name	:	MINDO
FCC ID	:	A2QHLMD08RC2
Modulation Type	:	GFSK for 1Mbps; π/4-DQPSK for 2Mbps; 8-DPSK 3Mbps
Antenna Gain	:	-2dBi
Antenna Type	:	Printed on PCB
Frequencg Range	:	2402MHz to 2480MHz
Channel Number	:	79 Channel
Channel Control	:	Control by Software
Working Voltage	:	DC 3V

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 UART module 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 measurement in test report that the report number is 1109007F-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.

OPERATIONAL DESCRIPTION

The device is Bluetooth UART module have Bluetooth function and can link with Bluetooth dongle for control PC.

Another information please refer to users manual.

TEST MODES & EUT COMPONENTS DESCRIPTION

EUT: Bluetooth UART module, M/N: HL-MD08R-C2, The EUT tested with Notebook PC.	
Test Mode	**Mode 1- GFSK for 1Mbps**
	Mode 2- π/4-DQPSK for 2Mbps
	Mode 3- 8- DPSK for 3Mbps

SUMMARY OF TEST PROCEDURE AND TEST RESULTS

Test Item	Applied Standard Section	Test Resut
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)

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:

Item	Device	No.	Configuration	
1	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 CARD	: Manufacturer :INTEL 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 MODULE	: Manufacturer :DELL Li-ion 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 100-240 V~1.5A 50-60HZ Shielded, Undetachable, 2.5m
2	USB Keyboard	K01-140	Manufacturer	: DELL
			Model Number	: SK-8175
			BSMI ID	: T3A002
			FCC ID	: N/A
3	Headset & Earphone	E01-073	Manufacturer	: TOKYO
			Model Number	: SX-M1
			Serial Number	: N/A
			Power Cord	: N/A
4	USB Mouse	M02-421	Manufacturer	: DELL
			Model Number	: MOC5UO
			Serial Number	: H0F021CH
			BSMI ID	: R41108
			FCC ID	: N/A

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N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

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 Stated Department of commerce National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program Accreditation on NVLAP effective through Sep. 30, 2012 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, 2012

TEST SETUP

BLOCK DIAGRAM OF CONNECTIONS BETWEEN EUT AND SIMULATORS
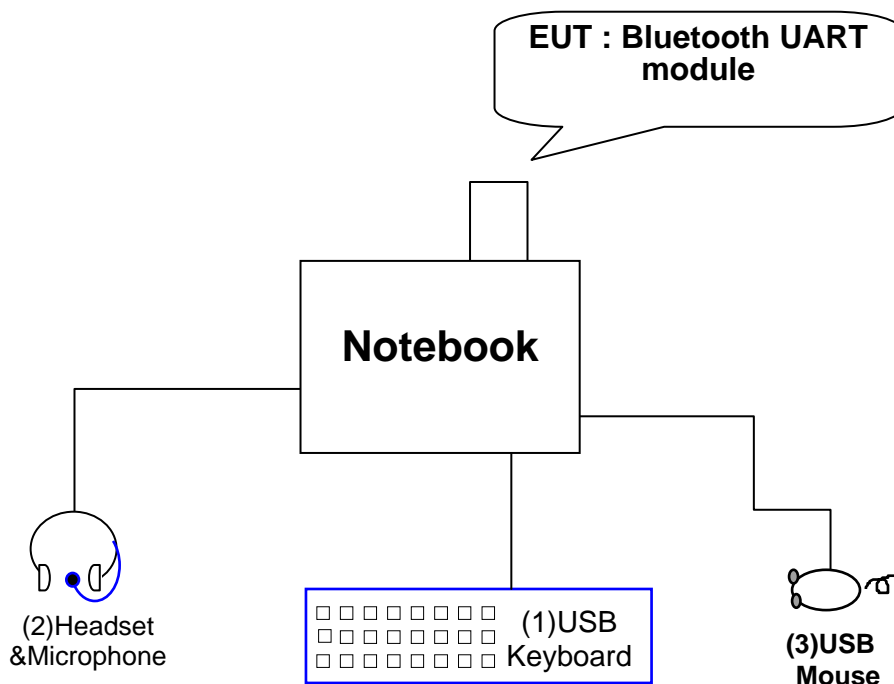
EUT OPERATING CONDITIONS

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 softwave and confirm transmit mode of EUT.
4. Choose frequency required of standard and start testing.
5. Repeat the above steps.

GESTEK _Lab_
N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Report No: 1109007R-01

3.   RADIATION EMISSION DATA

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	RS	FSU26	200882	2012.09.19
2	Spectrum Analyzer	RS	FSU26	200882	2012.09.19
3	Pre-Amplifier	EMV-Technik	PA303	GTK-E-A339-01	2012.04.14
4	Pre-Amplifier	HP	8449B	3008A01263	2012.03.22
5	BILOG ANTENNA	SCHWARZBECK	VULB 9168	9168-253	2012.03.02
6	HORN ANTENNA	SCHWARZBECK	BBHA 9120	D243	2012.01.19
7	BOARD-BAND ANTENNA	SCHWARZBECK	BBHA 9170	BBHA9170164	2012.01.18
8	CABLE	INSULATED WIRE INC.	SPS-2801-394-NPS	02222010	2012.02.21
9	CABLE	INSULATED WIRE INC.	SPS-2801-3940-NPS	02222010	2012.02.21
10	CHAMBER	GTK	N/A	A6(NSA)	2011.11.25
11	CHAMBER	GTK	N/A	A6(VSWR)	2012.07.21
12	Test Program Software	Hotlife	CSR BC4	N/A	N/A

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

OPEN TEST SITE SETUP DIAGRAM
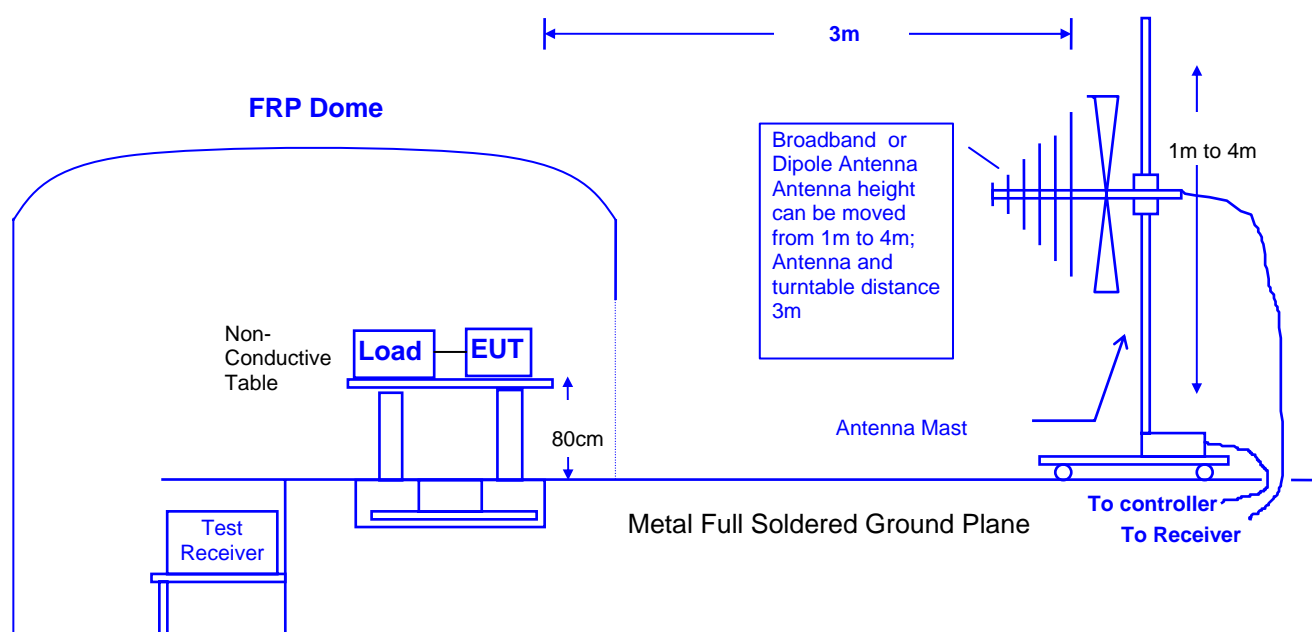
RADIATED EMISSION LIMIT

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	μV/M	dBμV/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.

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.

OPERATING CONDITION OF EUT

Same as section 2.7.

RADIATED EMISSION DATA

The measurement range of radiated emission, which is from **30 MHz to 10th Harmonics,** 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.

RADIATED EMISSIONS MEASUREMENT RESULTS

Date of Test	September 24, 2011	Temperature	26 deg/C
EUT	Bluetooth UART module	Humidity	60 %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/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★270.9455	50.22	-14.47	35.75	46.00	-10.25	QP
2	339.3429	45.32	-12.28	33.04	46.00	-12.96	QP
3	544.5353	39.18	-7.14	32.04	46.00	-13.96	QP
4	597.3878	36.93	-5.87	31.06	46.00	-14.94	QP
5	679.7756	37.65	-4.87	32.78	46.00	-13.22	QP
6	799.4712	34.74	-2.75	31.99	46.00	-14.01	QP
7	948.7019	34.67	-0.66	34.01	46.00	-11.99	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.

GESTEK Lab

Report No: 1109007R-01

N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Date of Test	September 24, 2011	Temperature	26 deg/C
EUT	Bluetooth UART module	Humidity	60 %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/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	143.4776	43.17	-15.12	28.05	43.50	-15.45	QP
2	228.9744	44.96	-16.05	28.91	46.00	-17.09	QP
3	294.2628	40.35	-13.57	26.78	46.00	-19.22	QP
4	★801.0256	35.35	-2.73	32.62	46.00	-13.38	QP
5	900.5128	30.74	-1.41	29.33	46.00	-16.67	QP
6	947.1474	32.42	-0.68	31.74	46.00	-14.26	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 6.6dB.

GESTEK Lab
N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Report No: 1109007R-01

Date of Test	September 24, 2011	Temperature	26 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 1-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	357.9968	36.85	-11.77	25.08	46.00	-20.92	QP
2	427.9487	38.10	-9.95	28.15	46.00	-17.85	QP
3	630.0321	34.44	-5.46	28.98	46.00	-17.02	QP
4	★679.7756	36.62	-4.87	31.75	46.00	-14.25	QP
5	762.1635	31.75	-3.46	28.29	46.00	-17.71	QP
6	860.0962	31.43	-1.95	29.48	46.00	-16.52	QP
7	917.6122	31.78	-1.15	30.63	46.00	-15.37	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).

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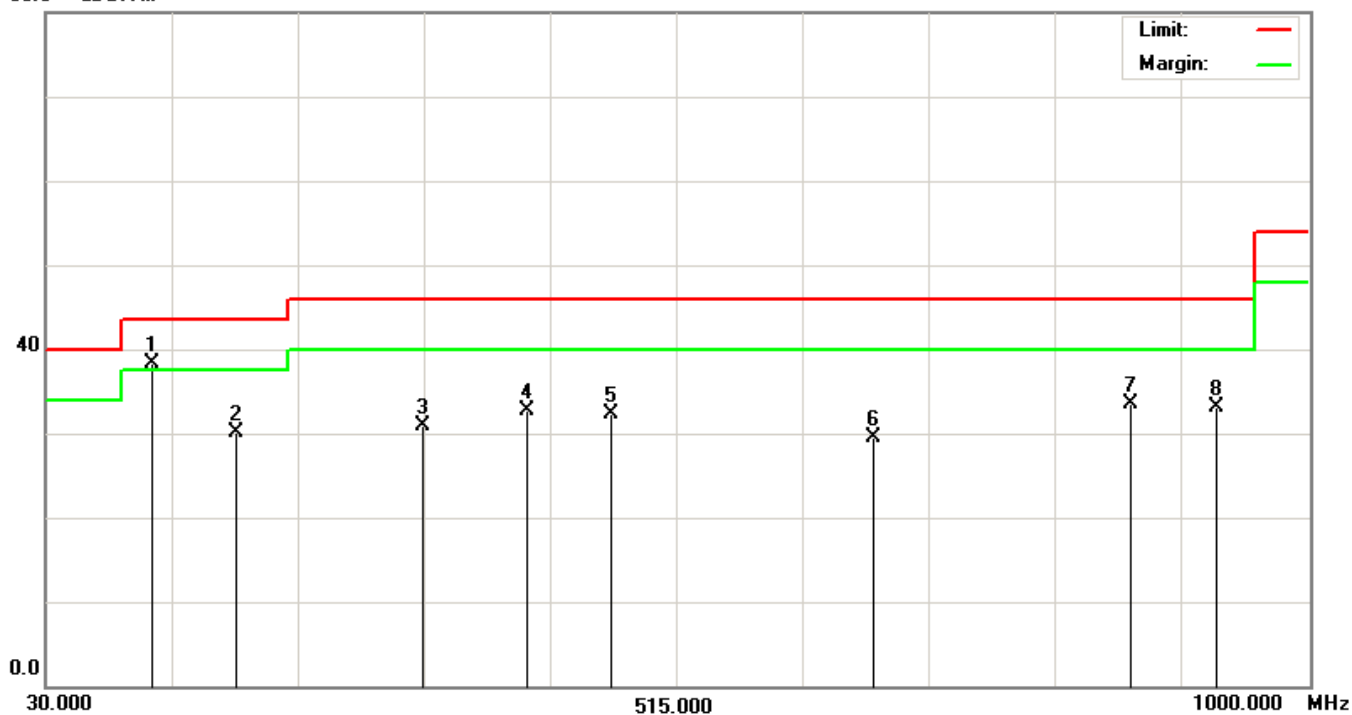
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Date of Test	September 24, 2011	Temperature	26 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 1-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	256.9551	43.80	-15.01	28.79	46.00	-17.21	QP
2	331.5705	35.92	-12.49	23.43	46.00	-22.57	QP
3	412.4038	32.76	-10.33	22.43	46.00	-23.57	QP
4	★449.7115	39.09	-9.42	29.67	46.00	-16.33	QP
5	659.5673	30.84	-5.11	25.73	46.00	-20.27	QP
6	734.1827	31.75	-3.98	27.77	46.00	-18.23	QP
7	861.6506	30.81	-1.93	28.88	46.00	-17.12	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.

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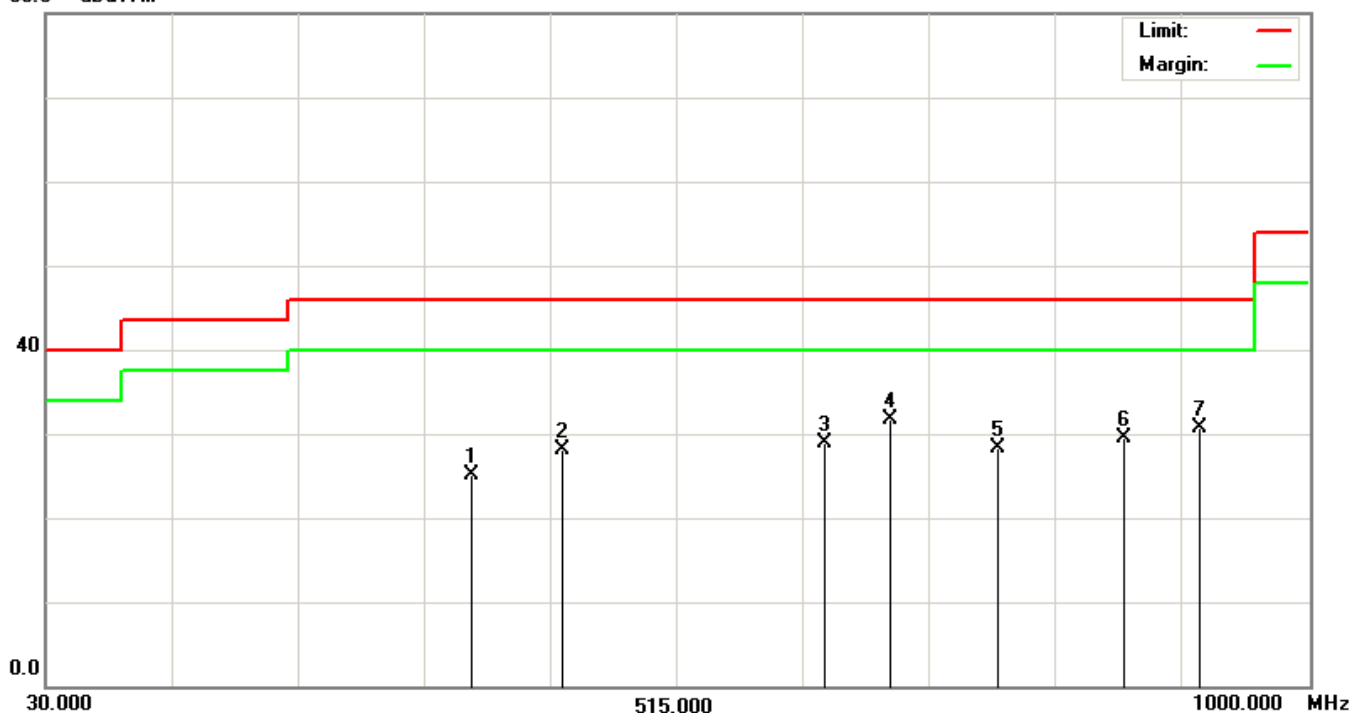
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N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Date of Test	September 24, 2011	Temperature	26 deg/C
EUT	Bluetooth UART module	Humidity	60 %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/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	185.4487	41.99	-16.33	25.66	43.50	-17.84	QP
2	398.4135	34.16	-10.67	23.49	46.00	-22.51	QP
3	443.4936	35.25	-9.57	25.68	46.00	-20.32	QP
4	631.5865	31.08	-5.44	25.64	46.00	-20.36	QP
5	752.8365	32.32	-3.63	28.69	46.00	-17.31	QP
6	874.0865	30.08	-1.76	28.32	46.00	-17.68	QP
7	★916.0577	30.57	-1.17	29.40	46.00	-16.60	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).

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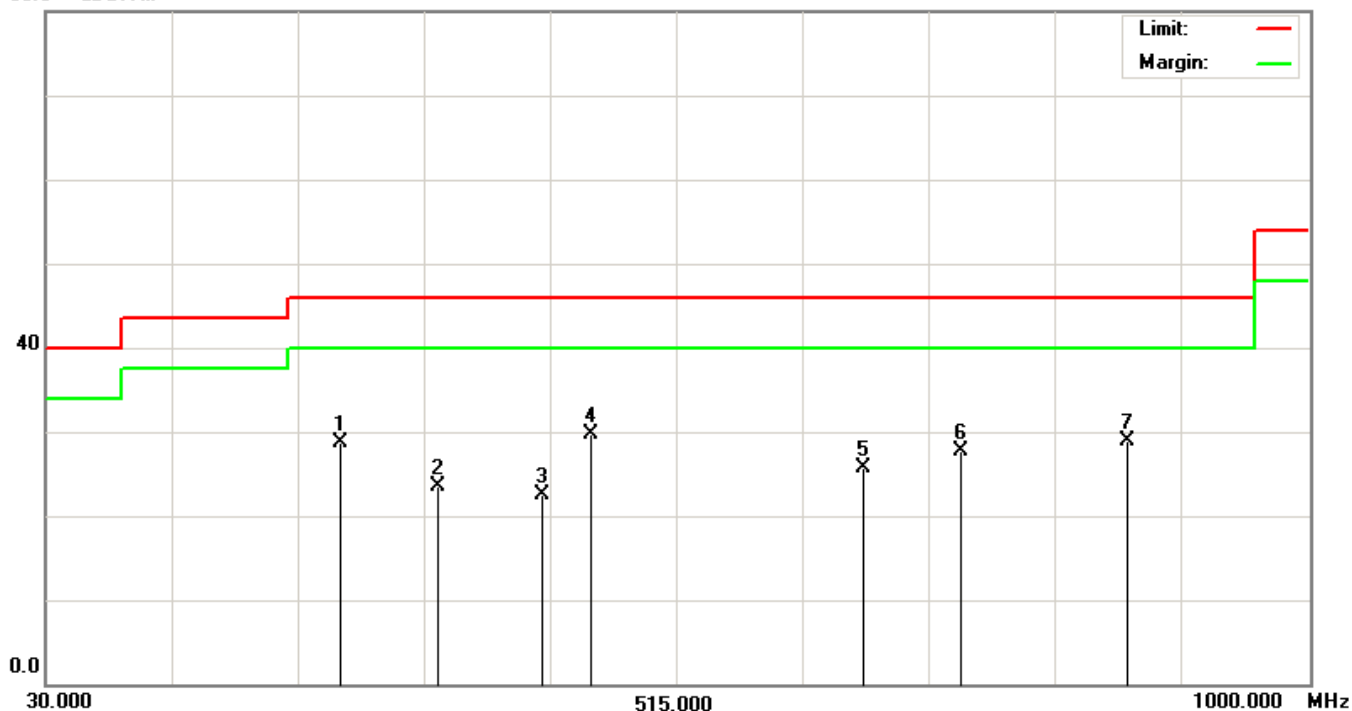| Date of Test	September 24, 2011	Temperature	26 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	120.1603	43.23	-17.41	25.82	43.50	-17.68	QP
2	375.0962	33.93	-11.31	22.62	46.00	-23.38	QP
3	473.0288	36.64	-8.86	27.78	46.00	-18.22	QP
4	581.8429	31.81	-6.24	25.57	46.00	-20.43	QP
5	664.2308	31.28	-5.05	26.23	46.00	-19.77	QP
6	861.6506	32.22	-1.93	30.29	46.00	-15.71	QP
7	★928.4936	32.61	-0.98	31.63	46.00	-14.37	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.
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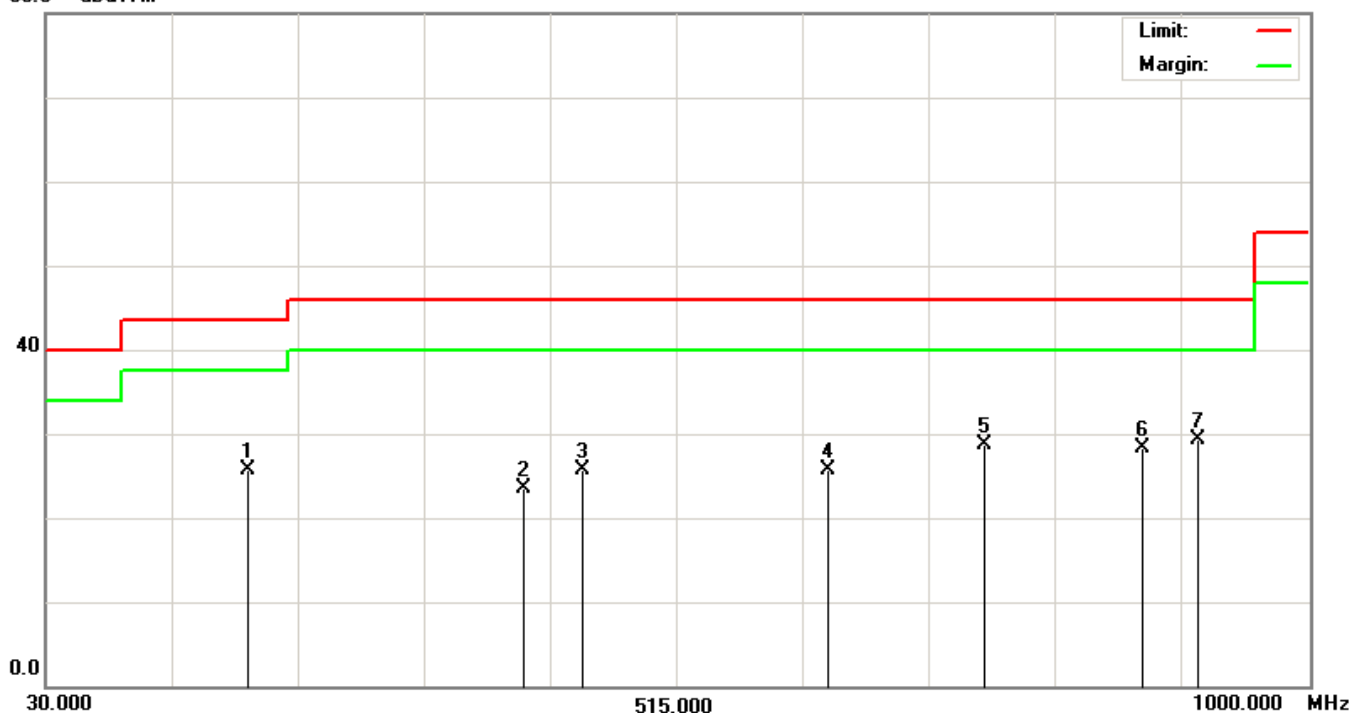| Date of Test	March 15, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 2-CH 00 (2402MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	275.6090	37.93	-14.29	23.64	46.00	-22.36	QP
2	350.2244	35.48	-11.98	23.50	46.00	-22.50	QP
3	★522.7724	34.29	-7.66	26.63	46.00	-19.37	QP
4	577.1795	30.16	-6.36	23.80	46.00	-22.20	QP
5	675.1122	27.92	-4.92	23.00	46.00	-23.00	QP
6	780.8173	27.64	-3.10	24.54	46.00	-21.46	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.
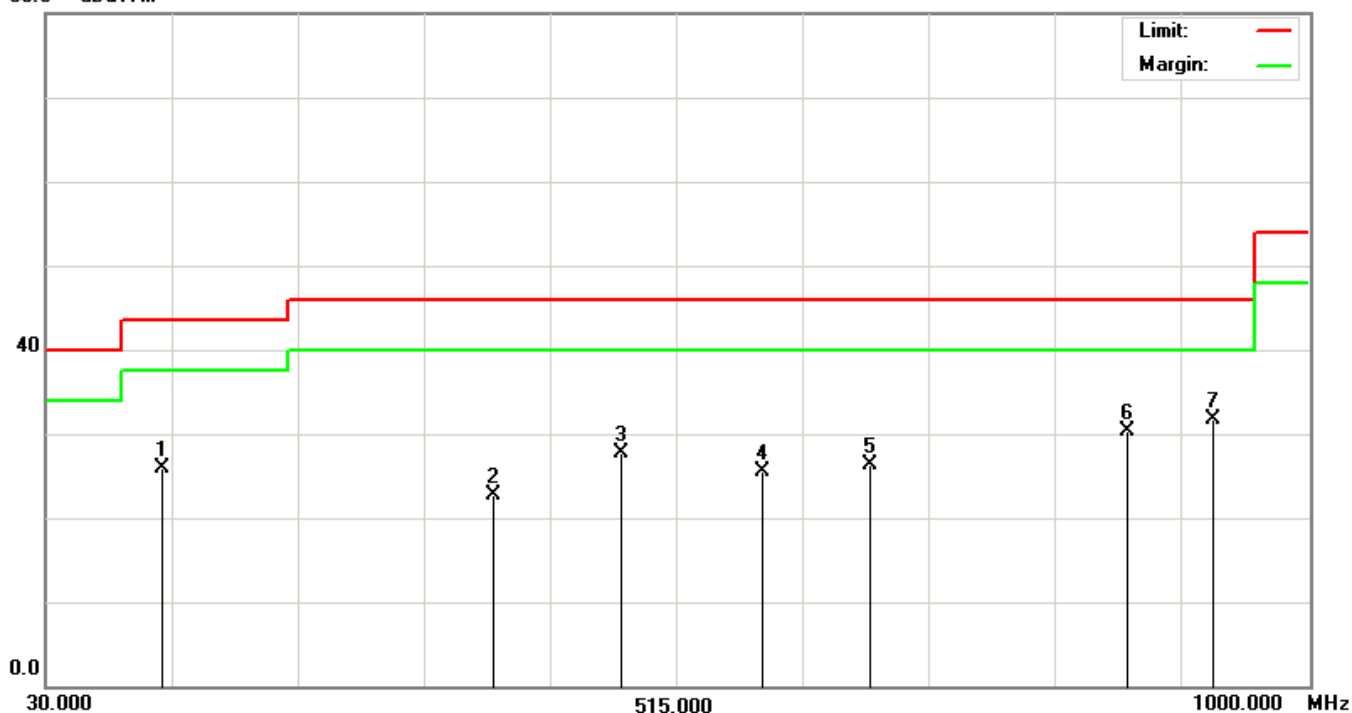
GESTEK _{Lab}   Report No: 1109007R-01

N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Date of Test	March 15, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 2-CH 00 (2402MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	146.5865	37.39	-14.99	22.40	43.50	-21.10	QP
2	323.7981	30.68	-12.70	17.98	46.00	-28.02	QP
3	390.6410	29.38	-10.88	18.50	46.00	-27.50	QP
4	437.2756	33.77	-9.72	24.05	46.00	-21.95	QP
5	737.2917	27.31	-3.93	23.38	46.00	-22.62	QP
6	★861.6506	27.63	-1.93	25.70	46.00	-20.30	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 6.6dB.

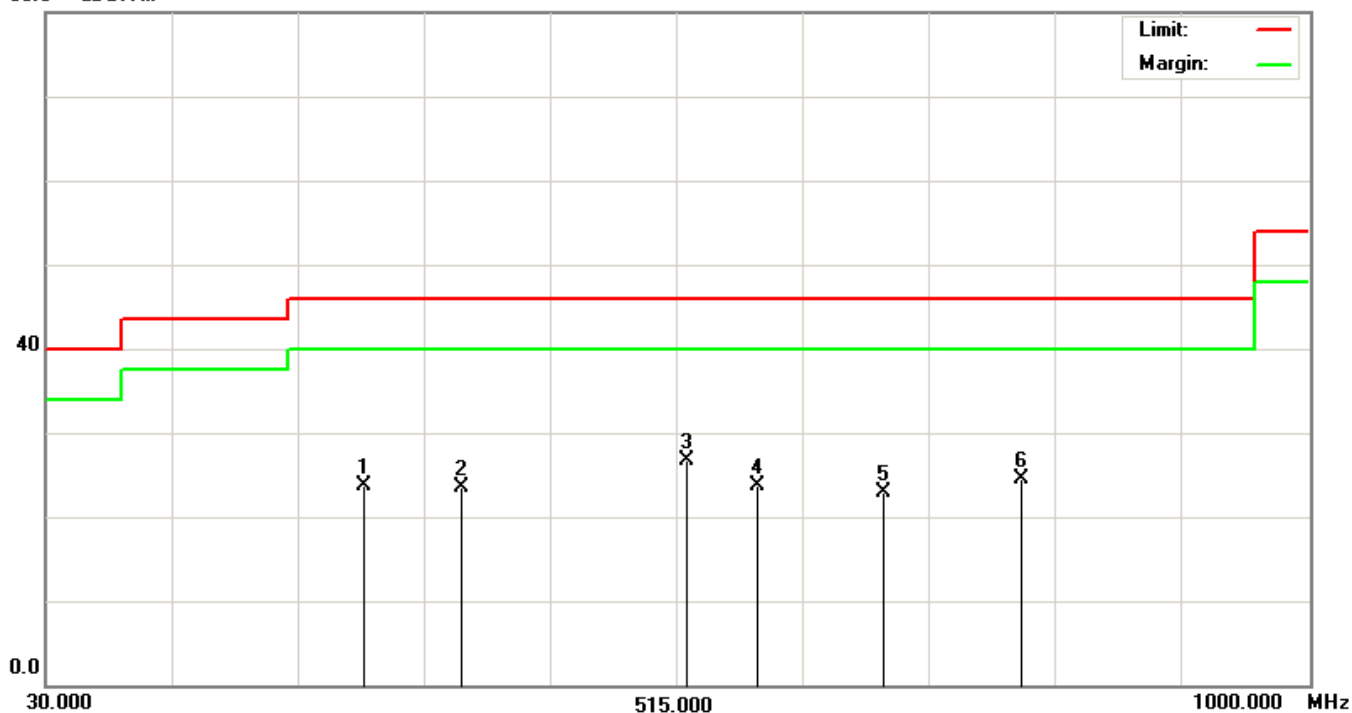**GESTEK Lab**   Report No: 1109007R-01

N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Date of Test	March 15, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 2-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★191.6667	40.35	-16.67	23.68	43.50	-19.82	QP
2	455.9295	31.16	-9.27	21.89	46.00	-24.11	QP
3	673.5577	28.95	-4.94	24.01	46.00	-21.99	QP
4	731.0737	28.31	-4.04	24.27	46.00	-21.73	QP
5	773.0449	27.41	-3.25	24.16	46.00	-21.84	QP
6	863.2051	27.99	-1.91	26.08	46.00	-19.92	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 6.6dB.

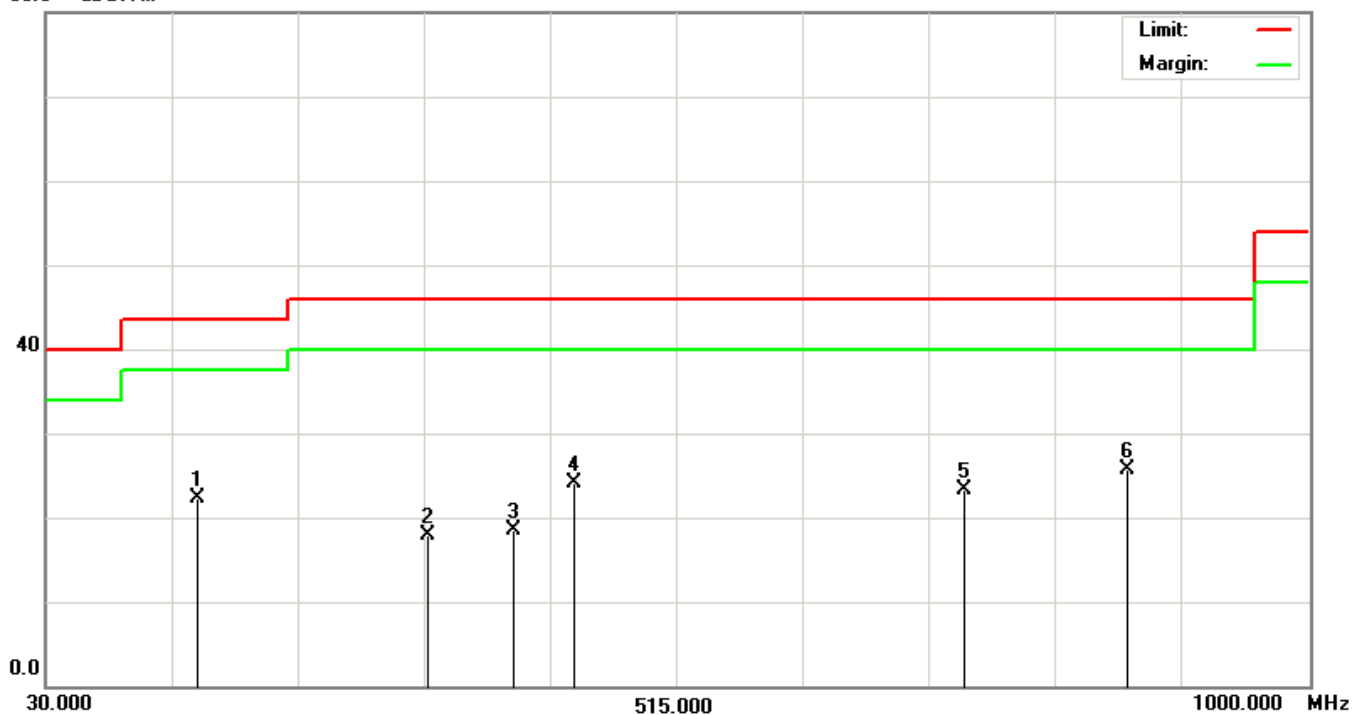| Date of Test	March 15, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 2-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	387.5321	28.99	-10.97	18.02	46.00	-27.98	QP
2	451.2660	29.43	-9.38	20.05	46.00	-25.95	QP
3	653.3494	28.24	-5.18	23.06	46.00	-22.94	QP
4	779.2628	28.08	-3.13	24.95	46.00	-21.05	QP
5	★864.7596	27.67	-1.89	25.78	46.00	-20.22	QP
6	970.4647	26.85	-0.32	26.53	54.00	-27.47	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 6.6dB.
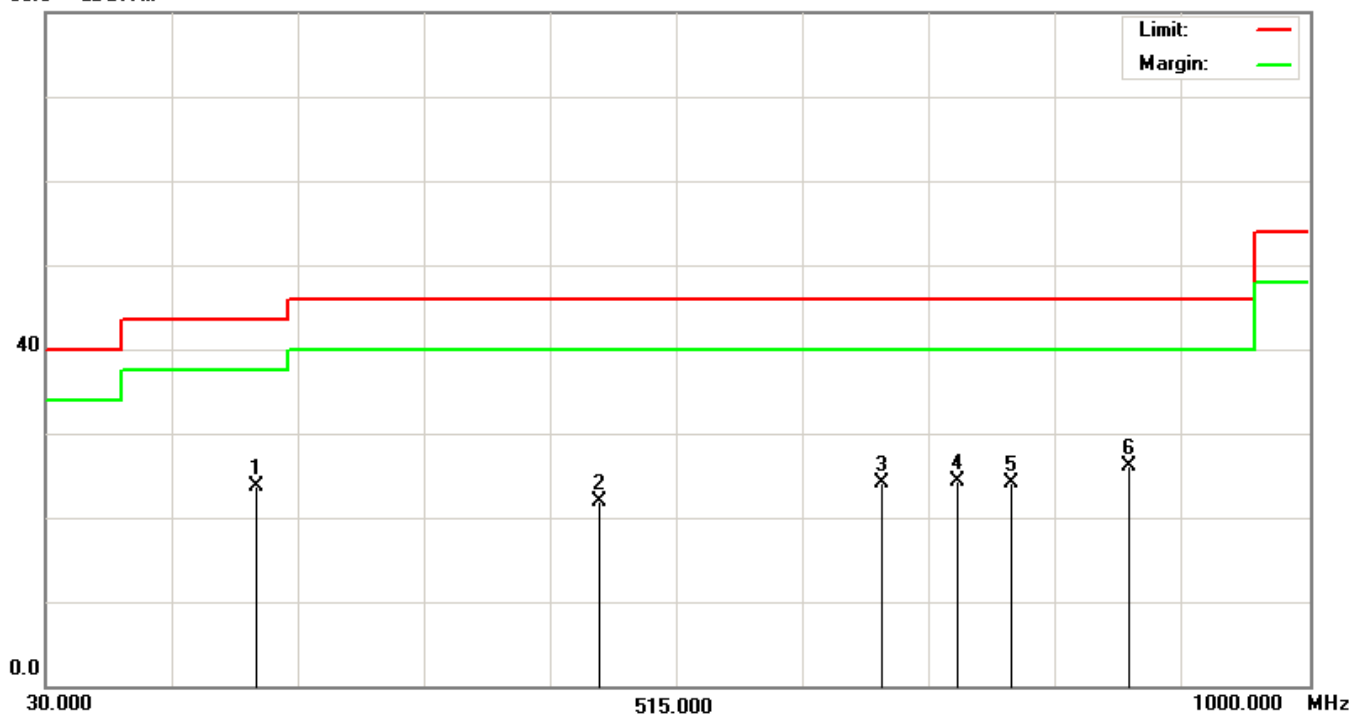
Date of Test	March 15, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 2-CH 78 (2480MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★143.4776	40.46	-15.12	25.34	43.50	-18.16	QP
2	455.9295	31.16	-9.27	21.89	46.00	-24.11	QP
3	732.6282	28.13	-4.01	24.12	46.00	-21.88	QP
4	779.2628	28.35	-3.13	25.22	46.00	-20.78	QP
5	869.4231	27.94	-1.82	26.12	46.00	-19.88	QP
6	908.2853	27.43	-1.29	26.14	46.00	-19.86	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.
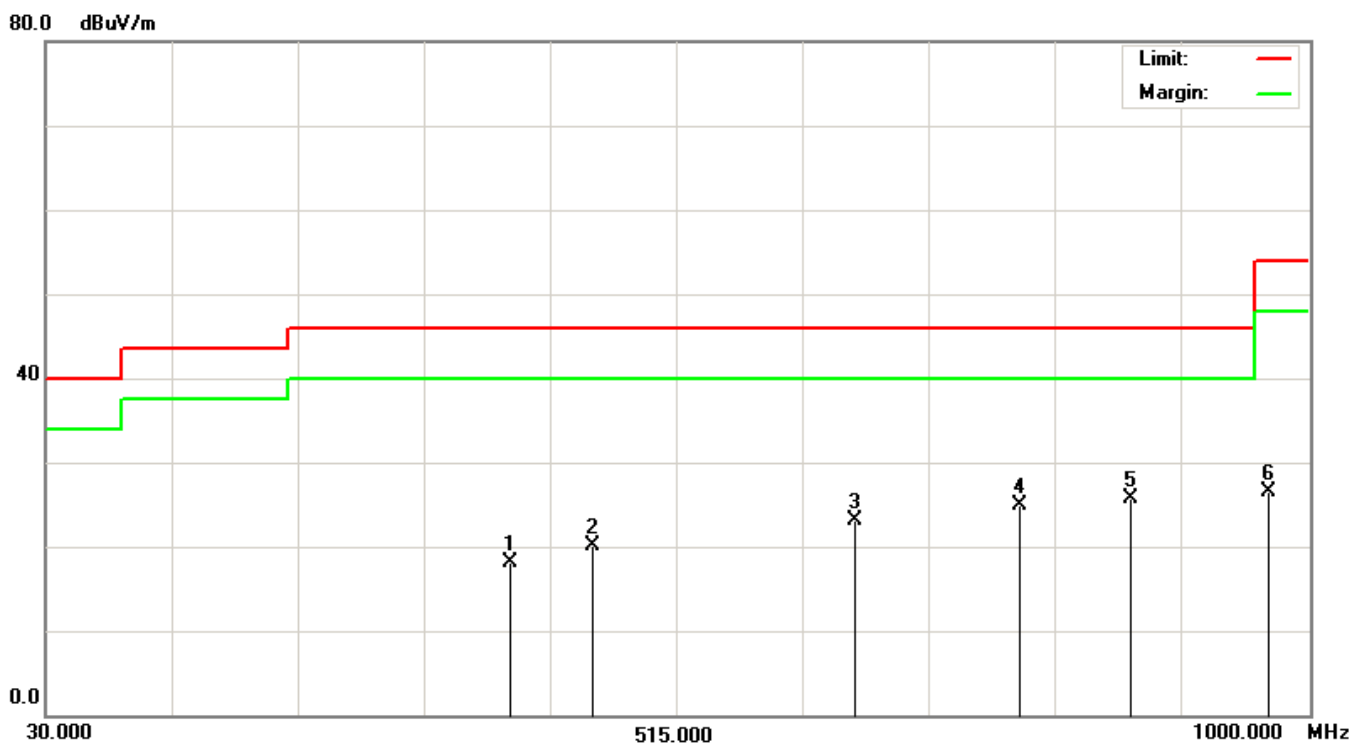

Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak ; "Margin" refers to the data under 6.6dB.

Date of Test	March 15, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 2-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	280.2724	35.94	-14.11	21.83	46.00	-24.17	QP
2	399.9679	30.41	-10.63	19.78	46.00	-26.22	QP
3	★518.1090	33.42	-7.77	25.65	46.00	-20.35	QP
4	650.2404	28.95	-5.22	23.73	46.00	-22.27	QP
5	727.9647	28.73	-4.10	24.63	46.00	-21.37	QP
6	779.2628	28.08	-3.13	24.95	46.00	-21.05	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 6.6dB.
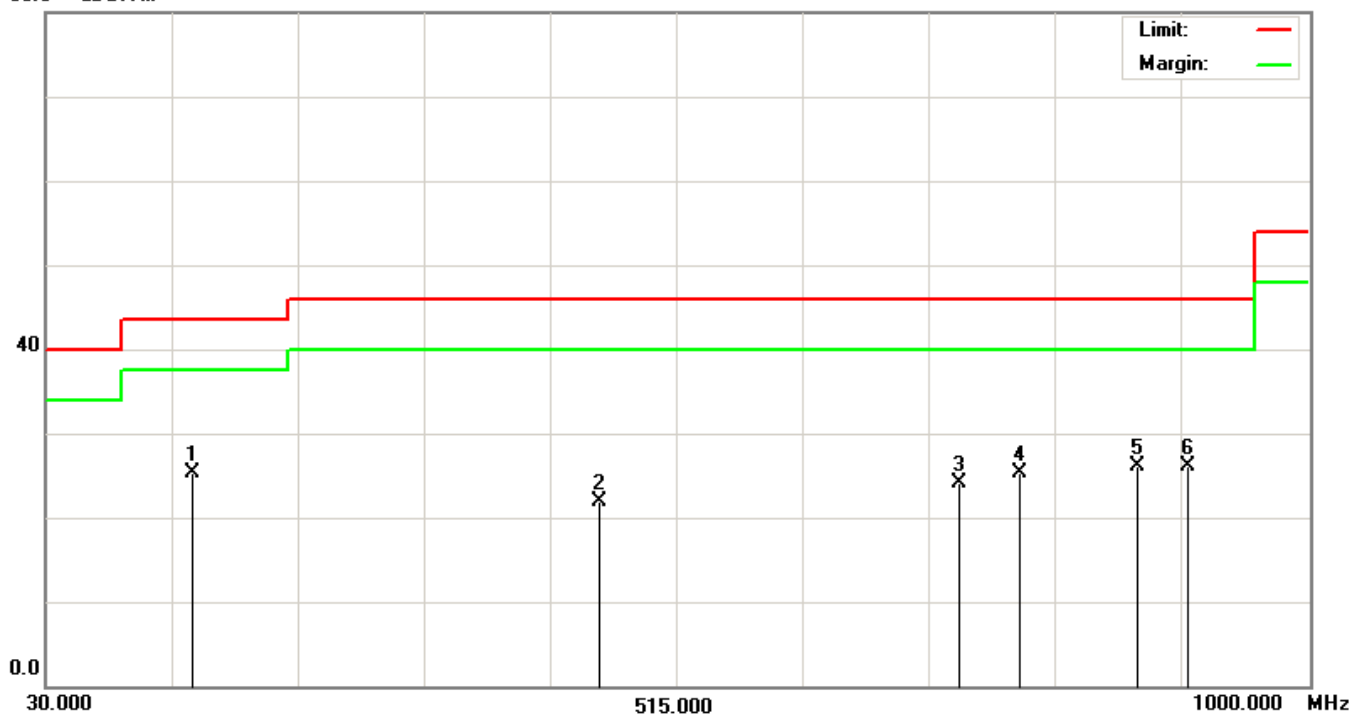
GESTEK *Lab*   Report No: 1109007R-01

N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Date of Test	February 22, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 3-CH 00 (2402MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	★260.0641	40.45	-14.89	25.56	46.00	-20.44	QP
2	353.3333	35.66	-11.90	23.76	46.00	-22.24	QP
3	448.1571	32.98	-9.46	23.52	46.00	-22.48	QP
4	614.4872	29.25	-5.64	23.61	46.00	-22.39	QP
5	670.4487	29.06	-4.98	24.08	46.00	-21.92	QP
6	774.5994	28.27	-3.22	25.05	46.00	-20.95	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.

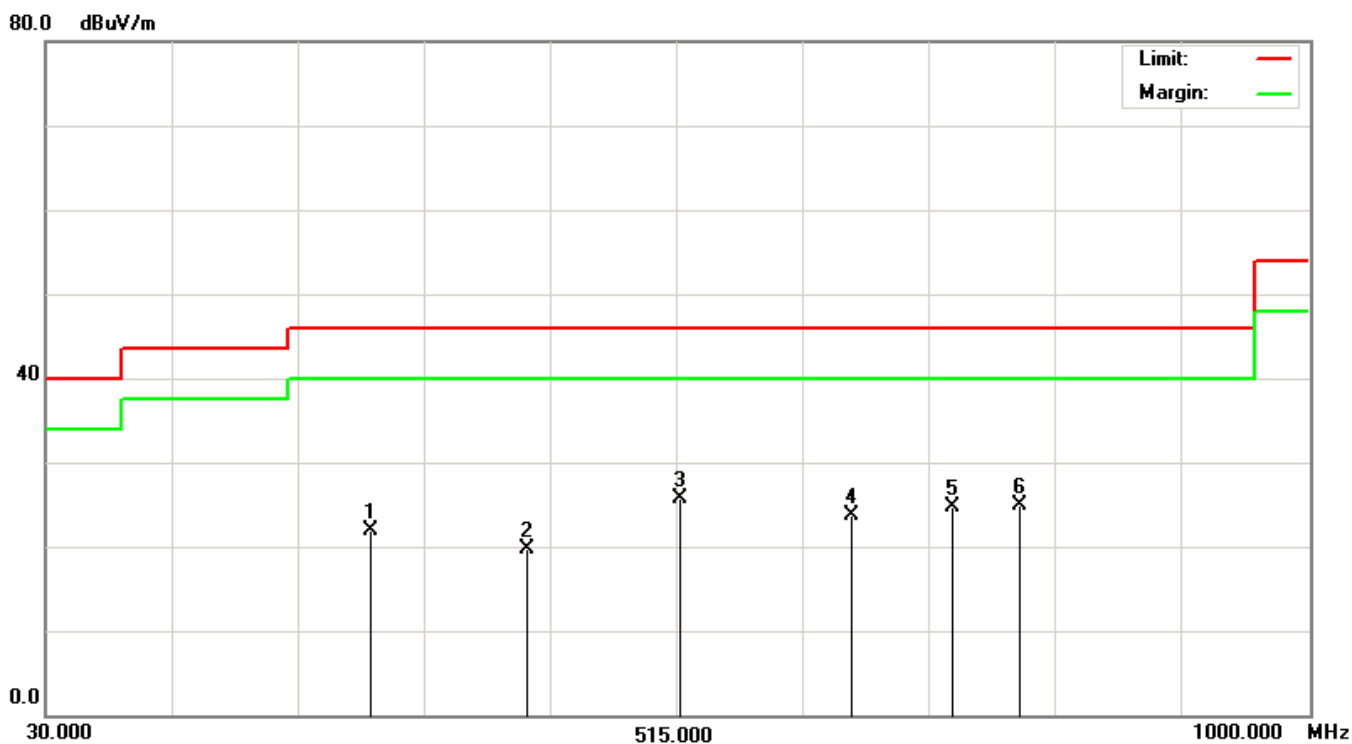6. The emission level of other frequencies are very lower than the limit.

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

GESTEK _{Lab}   Report No: 1109007R-01

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Date of Test	February 22, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 3-CH 00 (2402MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	325.3526	29.25	-12.66	16.59	46.00	-29.41	QP
2	399.9679	30.41	-10.63	19.78	46.00	-26.22	QP
3	608.2692	28.93	-5.71	23.22	46.00	-22.78	QP
4	662.6763	29.22	-5.07	24.15	46.00	-21.85	QP
5	777.7083	27.72	-3.16	24.56	46.00	-21.44	QP
6	★872.5321	27.72	-1.78	25.94	46.00	-20.06	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 6.6dB.
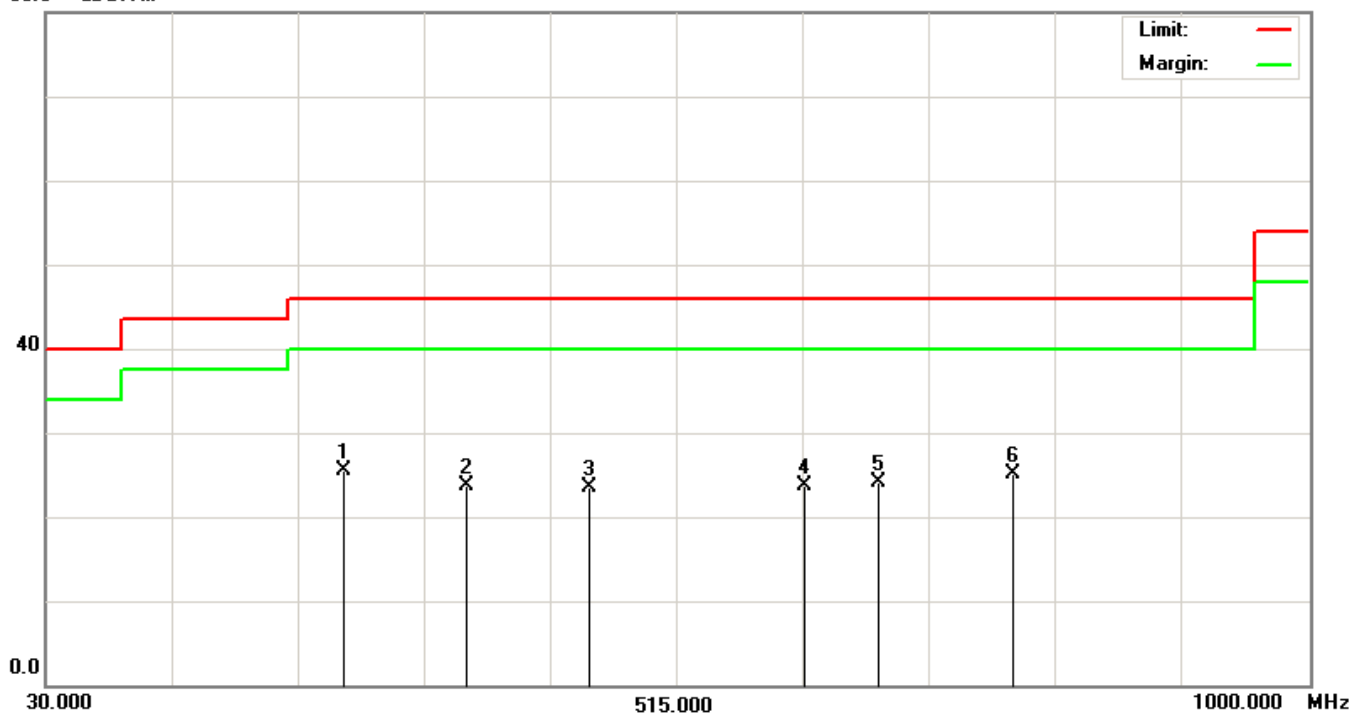
Date of Test	February 22, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 3-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	322.2436	36.67	-12.74	23.93	46.00	-22.07	QP
2	390.6410	30.22	-10.88	19.34	46.00	-26.66	QP
3	521.2179	30.48	-7.69	22.79	46.00	-23.21	QP
4	670.4487	29.06	-4.98	24.08	46.00	-21.92	QP
5	771.4904	28.78	-3.28	25.50	46.00	-20.50	QP
6	★861.6506	28.15	-1.93	26.22	46.00	-19.78	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 6.6dB.
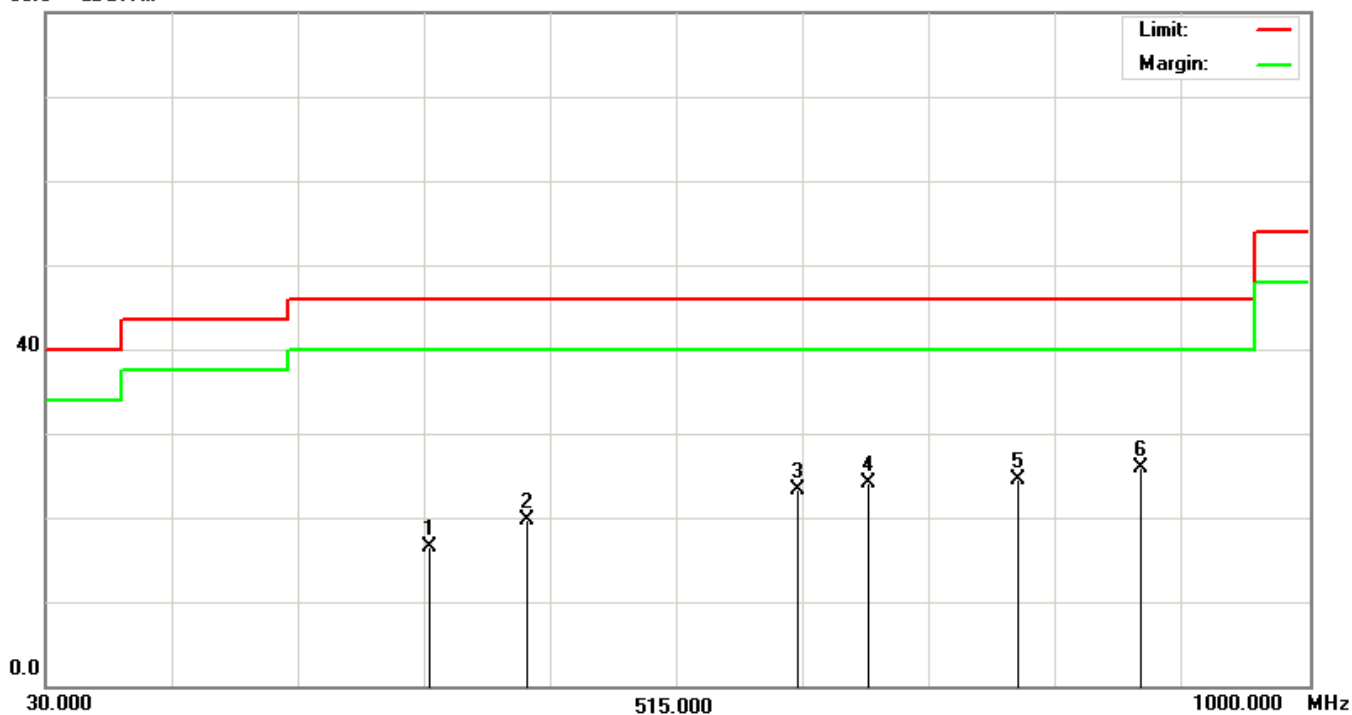
GESTEK _{Lab}   Report No: 1109007R-01

N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Date of Test	February 22, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 3-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	191.6667	35.54	-16.67	18.87	43.50	-24.63	QP
2	407.7404	33.05	-10.44	22.61	46.00	-23.39	QP
3	645.5769	27.98	-5.27	22.71	46.00	-23.29	QP
4	675.1122	28.30	-4.92	23.38	46.00	-22.62	QP
5	732.6282	29.07	-4.01	25.06	46.00	-20.94	QP
6	★852.3237	27.80	-2.05	25.75	46.00	-20.25	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.

Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak ; "Margin" refers to the data under 6.6dB.
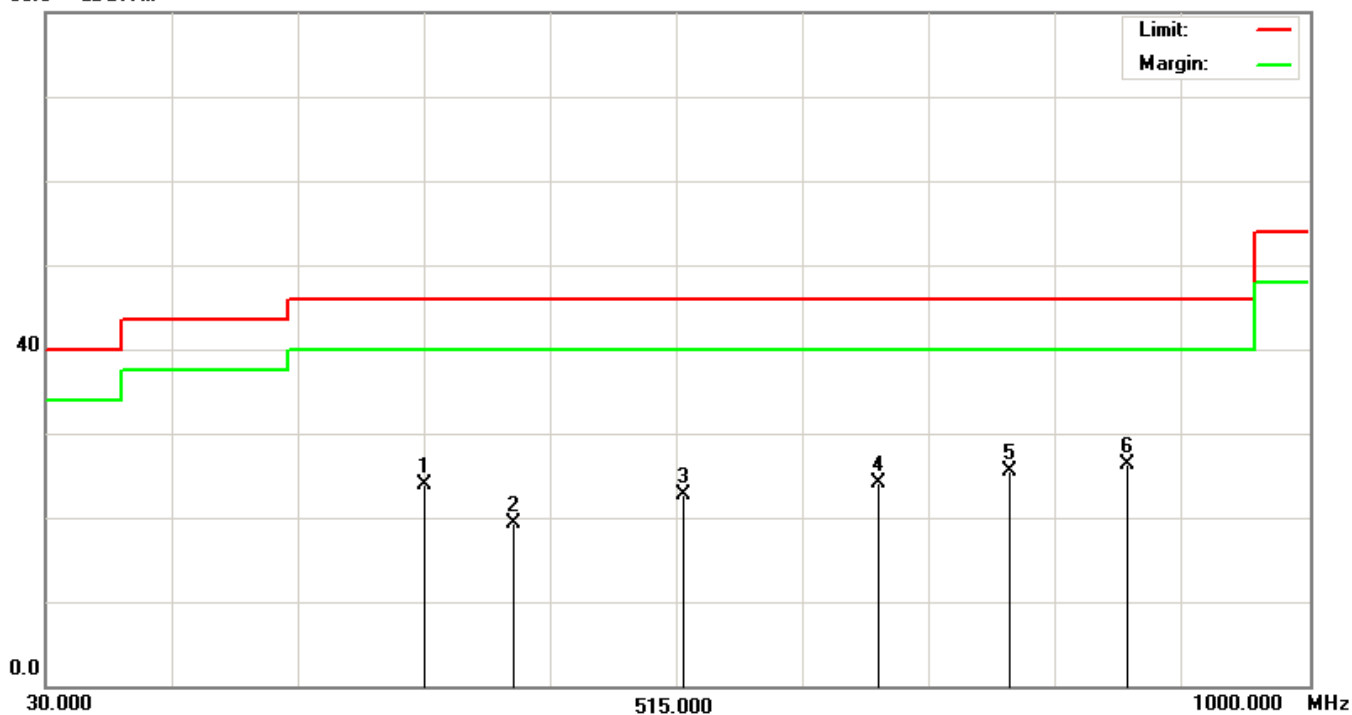
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Date of Test	February 22, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 3-CH 78 (2480MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	185.4487	39.81	-16.33	23.48	43.50	-20.02	QP
2	★261.6186	43.03	-14.83	28.20	46.00	-17.80	QP
3	454.3750	30.72	-9.31	21.41	46.00	-24.59	QP
4	731.0737	28.31	-4.04	24.27	46.00	-21.73	QP
5	864.7596	28.25	-1.89	26.36	46.00	-19.64	QP
6	909.8397	27.40	-1.27	26.13	46.00	-19.87	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 6.6dB.
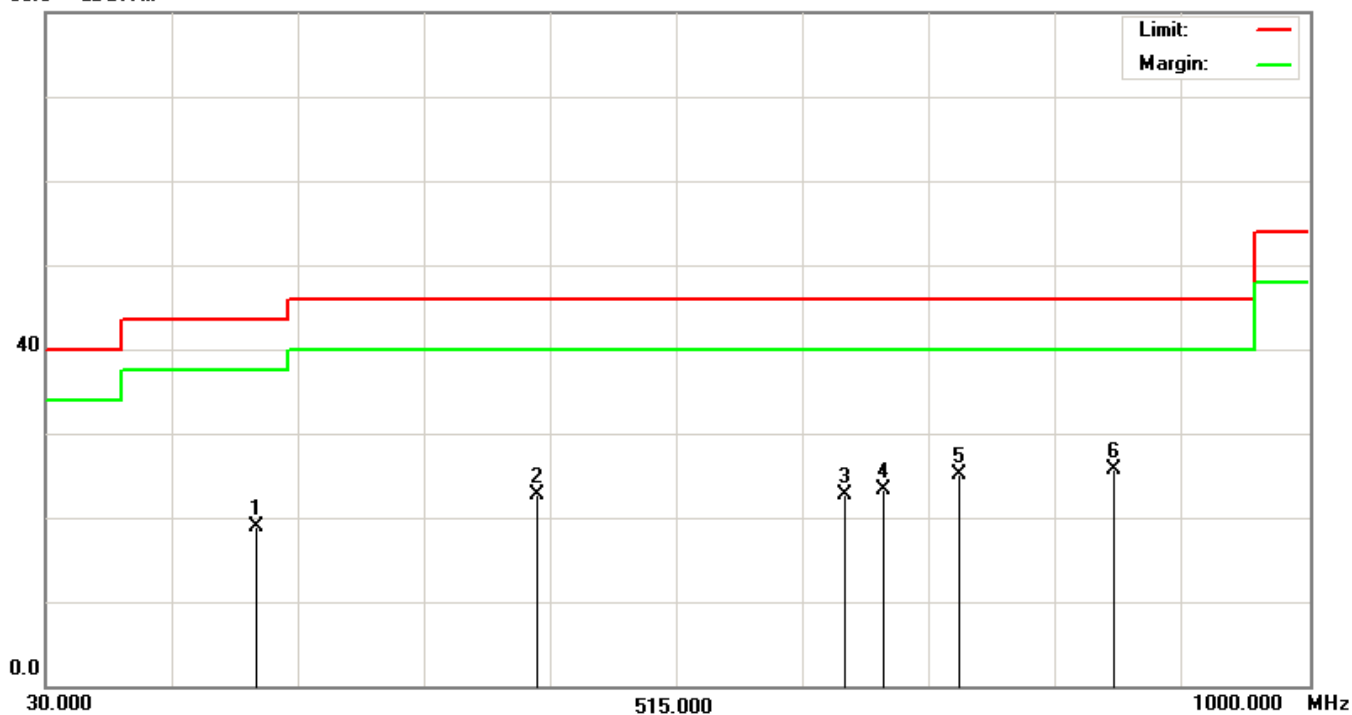
Date of Test	February 22, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	60 %RH
Working Cond.	Mode 3-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	30-1000MHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	191.6667	35.54	-16.67	18.87	43.50	-24.63	QP
2	390.6410	29.38	-10.88	18.50	46.00	-27.50	QP
3	455.9295	30.36	-9.27	21.09	46.00	-24.91	QP
4	647.1314	27.32	-5.25	22.07	46.00	-23.93	QP
5	731.0737	27.21	-4.04	23.17	46.00	-22.83	QP
6	★905.1763	26.92	-1.34	25.58	46.00	-20.42	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 6.6dB.

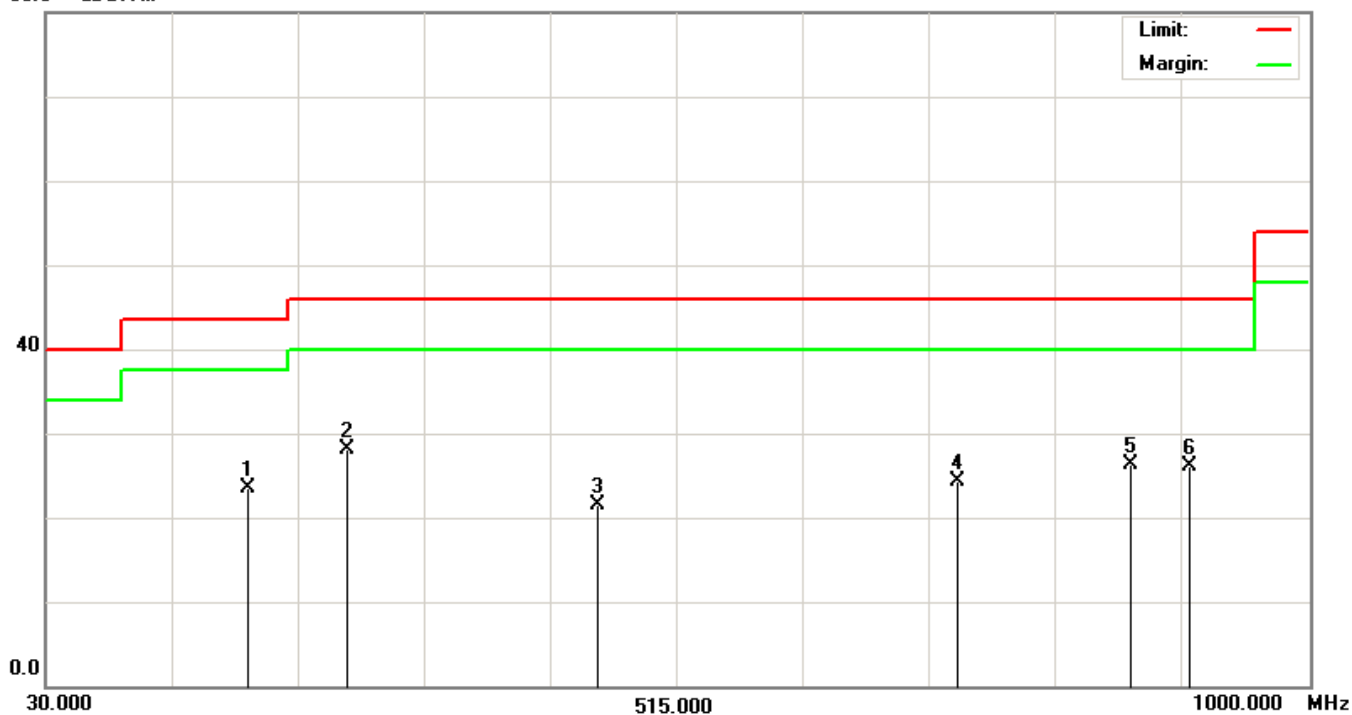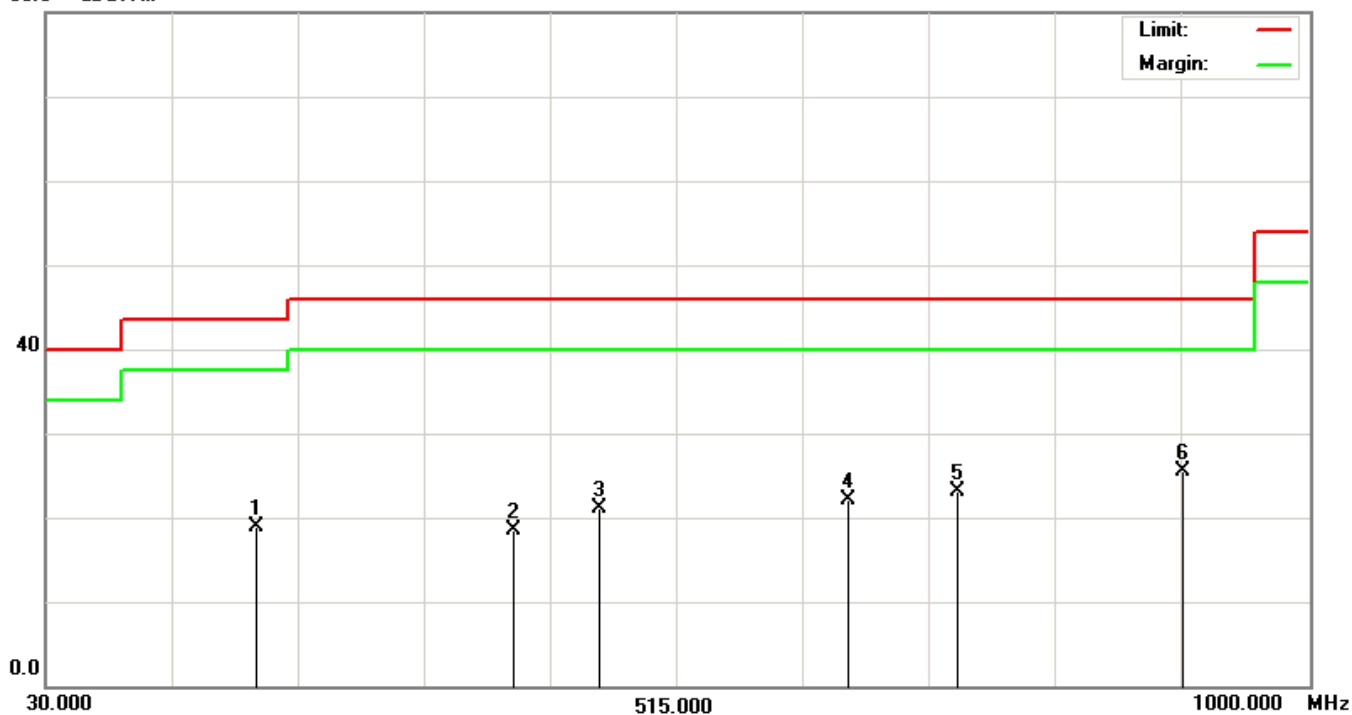**GESTEK** *Lab*   Report No: 1109007R-01

N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Date of Test	September 22, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4804.0000	50.95	1.46	52.41	74.00	-21.59	peak
2	7206.0000	42.04	9.04	51.08	74.00	-22.92	peak
3	9608.0000	42.65	6.55	49.20	74.00	-24.80	peak
4	12010.0000	40.75	11.54	52.29	74.00	-21.71	peak
5	14412.0000	42.28	9.22	51.50	74.00	-22.50	peak
6	16814.0000	42.39	5.32	47.71	74.00	-26.29	peak
7	19216.0000	42.96	-13.89	29.07	74.00	-44.93	peak
8	21618.0000	46.21	-14.73	31.48	74.00	-42.52	peak
9	24020.0000	46.65	-14.77	31.88	74.00	-42.12	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	September 22, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4804.0000	52.88	-1.33	51.55	74.00	-22.45	peak
2	7206.0000	43.46	6.19	49.65	74.00	-24.35	peak
3	9608.0000	42.33	7.83	50.16	74.00	-23.84	peak
4	12010.0000	42.12	10.40	52.52	74.00	-21.48	peak
5	14412.0000	42.74	6.42	49.16	74.00	-24.84	peak
6	16814.0000	43.72	4.09	47.81	74.00	-26.19	peak
7	19216.0000	42.27	-12.89	29.38	74.00	-44.62	peak
8	21618.0000	45.37	-13.73	31.64	74.00	-42.36	peak
9	24020.0000	45.83	-13.77	32.06	74.00	-41.94	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

GESTEK Lab   Report No: 1109007R-01

N0 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.   Tel:886-2-2603-5321 Fax:886-2-2603-5325

Date of Test	September 22, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4884.0000	49.84	1.41	51.25	74.00	-22.75	peak
2	7326.0000	42.82	9.23	52.05	74.00	-21.95	peak
3	9768.0000	42.52	6.85	49.37	74.00	-24.63	peak
4	12210.0000	40.74	10.65	51.39	74.00	-22.61	peak
5	14652.0000	42.88	9.08	51.96	74.00	-22.04	peak
6	17094.0000	43.41	7.22	50.63	74.00	-23.37	peak
7	19536.0000	44.22	-14.14	30.08	74.00	-43.92	peak
8	21978.0000	44.81	-14.75	30.06	74.00	-43.94	peak
9	24420.0000	46.68	-14.97	31.71	74.00	-42.29	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

GESTEK Lab   Report No: 1109007R-01

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Date of Test	September 22, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4884.0000	50.12	2.08	52.20	74.00	-21.80	peak
2	7326.0000	43.85	8.55	52.40	74.00	-21.60	peak
3	9768.0000	43.49	9.79	53.28	74.00	-20.72	peak
4	12210.0000	39.88	12.87	52.75	74.00	-21.25	peak
5	14652.0000	43.02	7.33	50.35	74.00	-23.65	peak
6	17094.0000	43.30	7.44	50.74	74.00	-23.26	peak
7	19536.0000	43.96	-13.14	30.82	74.00	-43.18	peak
8	21978.0000	45.00	-13.75	31.25	74.00	-42.75	peak
9	24420.3370	46.76	-13.97	32.79	74.00	-41.21	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

GESTEK Lab
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Report No: 1109007R-01

Date of Test	September 22, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4960.0000	49.27	1.34	50.61	74.00	-23.39	peak
2	7440.0000	42.49	8.78	51.27	74.00	-22.73	peak
3	9920.0000	43.02	4.61	47.63	74.00	-26.37	peak
4	12400.0000	43.26	7.24	50.50	74.00	-23.50	peak
5	14480.0000	43.19	8.70	51.89	74.00	-22.11	peak
6	17360.0000	43.44	7.92	51.36	74.00	-22.64	peak
7	19840.0000	44.31	-14.17	30.14	74.00	-43.86	peak
8	22320.0000	45.38	-14.85	30.53	74.00	-43.47	peak
9	24800.0000	45.73	-14.50	31.23	74.00	-42.77	peak

Remark
1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	September 22, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4960.0000	49.49	2.64	52.13	74.00	-21.87	peak
2	7440.0000	43.16	8.36	51.52	74.00	-22.48	peak
3	9920.0000	42.05	9.78	51.83	74.00	-22.17	peak
4	12400.0000	41.48	9.96	51.44	74.00	-22.56	peak
5	14480.0000	43.49	7.07	50.56	74.00	-23.44	peak
6	17360.0000	39.12	11.02	50.14	74.00	-23.86	peak
7	19840.0000	43.95	-13.17	30.78	74.00	-43.22	peak
8	22320.0000	46.06	-13.85	32.21	74.00	-41.79	peak
9	24800.0000	46.25	-13.50	32.75	74.00	-41.25	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	March 14, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 00 (2402MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4804.0000	48.70	1.46	50.16	74.00	-23.84	peak
2	7206.0000	40.62	9.04	49.66	74.00	-24.34	peak
3	9608.0000	40.89	6.55	47.44	74.00	-26.56	peak
4	12010.0000	40.72	11.54	52.26	74.00	-21.74	peak
5	14412.0000	41.26	9.22	50.48	74.00	-23.52	peak
6	16814.0000	40.63	5.32	45.95	74.00	-28.05	peak
7	19216.0000	41.58	-13.89	27.69	74.00	-46.31	peak
8	21618.0000	44.64	-14.73	29.91	74.00	-44.09	peak
9	24020.0000	44.38	-14.77	29.61	74.00	-44.39	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	March 14, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 00 (2402MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4804.0000	50.82	-1.33	49.49	74.00	-24.51	peak
2	7206.0000	41.65	6.19	47.84	74.00	-26.16	peak
3	9608.0000	40.81	7.83	48.64	74.00	-25.36	peak
4	12010.0000	41.37	10.40	51.77	74.00	-22.23	peak
5	14412.0000	42.52	6.42	48.94	74.00	-25.06	peak
6	16814.0000	42.74	4.09	46.83	74.00	-27.17	peak
7	19216.0000	40.38	-12.89	27.49	74.00	-46.51	peak
8	21618.0000	43.22	-13.73	29.49	74.00	-44.51	peak
9	24020.0000	45.11	-13.77	31.34	74.00	-42.66	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

GESTEK _Lab_   Report No: 1109007R-01

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Date of Test	March 14, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4884.0000	48.53	1.41	49.94	74.00	-24.06	peak
2	7326.0000	40.59	9.23	49.82	74.00	-24.18	peak
3	9768.0000	40.85	6.85	47.70	74.00	-26.30	peak
4	12210.0000	41.12	10.65	51.77	74.00	-22.23	peak
5	14652.0000	41.26	9.08	50.34	74.00	-23.66	peak
6	17094.0000	42.18	7.22	49.40	74.00	-24.60	peak
7	19536.0000	46.59	-14.14	32.45	74.00	-41.55	peak
8	21978.0000	44.82	-14.75	30.07	74.00	-43.93	peak
9	24420.0000	45.91	-14.97	30.94	74.00	-43.06	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	March 14, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4884.0000	48.92	2.08	51.00	74.00	-23.00	peak
2	7326.0000	42.51	8.55	51.06	74.00	-22.94	peak
3	9768.0000	42.66	9.79	52.45	74.00	-21.55	peak
4	12210.0000	39.19	12.87	52.06	74.00	-21.94	peak
5	14652.0000	41.63	7.33	48.96	74.00	-25.04	peak
6	17094.0000	41.73	7.44	49.17	74.00	-24.83	peak
7	19536.0000	45.58	-13.14	32.44	74.00	-41.56	peak
8	21978.0000	46.34	-13.75	32.59	74.00	-41.41	peak
9	24420.3370	46.92	-13.97	32.95	74.00	-41.05	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	March 14, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 78 (2480MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4960.0000	48.15	1.34	49.49	74.00	-24.51	peak
2	7440.0000	41.66	8.78	50.44	74.00	-23.56	peak
3	9920.0000	42.73	4.61	47.34	74.00	-26.66	peak
4	12400.0000	43.22	7.24	50.46	74.00	-23.54	peak
5	14480.0000	42.81	8.70	51.51	74.00	-22.49	peak
6	17360.0000	41.75	7.92	49.67	74.00	-24.33	peak
7	19840.0000	45.83	-14.17	31.66	74.00	-42.34	peak
8	22320.0000	46.17	-14.85	31.32	74.00	-42.68	peak
9	24800.0000	45.29	-14.50	30.79	74.00	-43.21	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	March 14, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4960.0000	47.66	2.64	50.30	74.00	-23.70	peak
2	7440.0000	42.28	8.36	50.64	74.00	-23.36	peak
3	9920.0000	40.17	9.78	49.95	74.00	-24.05	peak
4	12400.0000	41.55	9.96	51.51	74.00	-22.49	peak
5	14480.0000	42.08	7.07	49.15	74.00	-24.85	peak
6	17360.0000	38.76	11.02	49.78	74.00	-24.22	peak
7	19840.0000	43.68	-13.17	30.51	74.00	-43.49	peak
8	22320.0000	46.55	-13.85	32.70	74.00	-41.30	peak
9	24800.0000	46.35	-13.50	32.85	74.00	-41.15	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	February 21, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 00 (2402MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4804.0000	49.66	1.46	51.12	74.00	-22.88	peak
2	7206.0000	41.74	9.04	50.78	74.00	-23.22	peak
3	9608.0000	41.38	6.55	47.93	74.00	-26.07	peak
4	12010.0000	40.49	11.54	52.03	74.00	-21.97	peak
5	14412.0000	41.71	9.22	50.93	74.00	-23.07	peak
6	16814.0000	41.46	5.32	46.78	74.00	-27.22	peak
7	19216.0000	40.58	-13.89	26.69	74.00	-47.31	peak
8	21618.0000	45.60	-14.73	30.87	74.00	-43.13	peak
9	24020.0000	45.37	-14.77	30.60	74.00	-43.40	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	February 21, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 00 (2402MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4804.0000	51.97	-1.33	50.64	74.00	-23.36	peak
2	7206.0000	42.55	6.19	48.74	74.00	-25.26	peak
3	9608.0000	41.62	7.83	49.45	74.00	-24.55	peak
4	12010.0000	41.28	10.40	51.68	74.00	-22.32	peak
5	14412.0000	42.13	6.42	48.55	74.00	-25.45	peak
6	16814.0000	42.51	4.09	46.60	74.00	-27.40	peak
7	19216.0000	41.35	-12.89	28.46	74.00	-45.54	peak
8	21618.0000	44.87	-13.73	31.14	74.00	-42.86	peak
9	24020.0000	44.74	-13.77	30.97	74.00	-43.03	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	February 21, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4884.0000	48.82	1.41	50.23	74.00	-23.77	peak
2	7326.0000	41.46	9.23	50.69	74.00	-23.31	peak
3	9768.0000	41.39	6.85	48.24	74.00	-25.76	peak
4	12210.0000	40.33	10.65	50.98	74.00	-23.02	peak
5	14652.0000	41.72	9.08	50.80	74.00	-23.20	peak
6	17094.0000	42.65	7.22	49.87	74.00	-24.13	peak
7	19536.0000	45.18	-14.14	31.04	74.00	-42.96	peak
8	21978.0000	43.76	-14.75	29.01	74.00	-44.99	peak
9	24420.0000	46.22	-14.97	31.25	74.00	-42.75	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	February 21, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4884.0000	49.42	2.08	51.50	74.00	-22.50	peak
2	7326.0000	42.66	8.55	51.21	74.00	-22.79	peak
3	9768.0000	42.76	9.79	52.55	74.00	-21.45	peak
4	12210.0000	39.61	12.87	52.48	74.00	-21.52	peak
5	14652.0000	42.69	7.33	50.02	74.00	-23.98	peak
6	17094.0000	42.53	7.44	49.97	74.00	-24.03	peak
7	19536.0000	44.64	-13.14	31.50	74.00	-42.50	peak
8	21978.0000	46.29	-13.75	32.54	74.00	-41.46	peak
9	24420.3370	47.83	-13.97	33.86	74.00	-40.14	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	February 21, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 78 (2480MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4960.0000	48.77	1.34	50.11	74.00	-23.89	peak
2	7440.0000	41.89	8.78	50.67	74.00	-23.33	peak
3	9920.0000	43.35	4.61	47.96	74.00	-26.04	peak
4	12400.0000	43.56	7.24	50.80	74.00	-23.20	peak
5	14480.0000	42.69	8.70	51.39	74.00	-22.61	peak
6	17360.0000	42.18	7.92	50.10	74.00	-23.90	peak
7	19840.0000	45.24	-14.17	31.07	74.00	-42.93	peak
8	22320.0000	46.21	-14.85	31.36	74.00	-42.64	peak
9	24800.0000	46.83	-14.50	32.33	74.00	-41.67	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	February 21, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	1GHz~25GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	4960.0000	48.53	2.64	51.17	74.00	-22.83	peak
2	7440.0000	42.69	8.36	51.05	74.00	-22.95	peak
3	9920.0000	41.78	9.78	51.56	74.00	-22.44	peak
4	12400.0000	41.24	9.96	51.20	74.00	-22.80	peak
5	14480.0000	42.56	7.07	49.63	74.00	-24.37	peak
6	17360.0000	38.67	11.02	49.69	74.00	-24.31	peak
7	19840.0000	42.81	-13.17	29.64	74.00	-44.36	peak
8	22320.0000	47.23	-13.85	33.38	74.00	-40.62	peak
9	24800.0000	45.59	-13.50	32.09	74.00	-41.91	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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

TEST EQUIPMENT

The following test equipments are used during the Conduct tests:

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Spectrum Analyzer	RS	FSL6	100517	2012.07.28

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

BLOCK DIAGRAM OF TEST SETUP
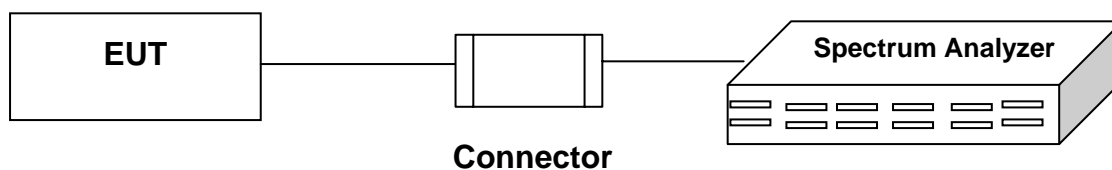
PEAK POWER OUTPUT LIMIT

The maximum peak power shall be less 125 mW.

TEST RESULT

Date of Test	September 28, 2011	Temperature	25.9 deg/C
EUT	Bluetooth UART module	Humidity	66 %RH
Test Mode	Mode 1		

Channel No.	Frequency (MHz)	Reading Level (dBm)	Antenna Gain (dBi)	Cable loss (dB)	Measurement (dBm)	Required Limit	Result
0	2402.00	-9.82	-2	0.59	-11.23	1W(30dBm)	Pass
40	2441.96	-9.89	-2	0.69	-11.20	1W(30dBm)	Pass
78	2480.00	-9.24	-2	0.73	-10.51	1W(30dBm)	Pass

Note :
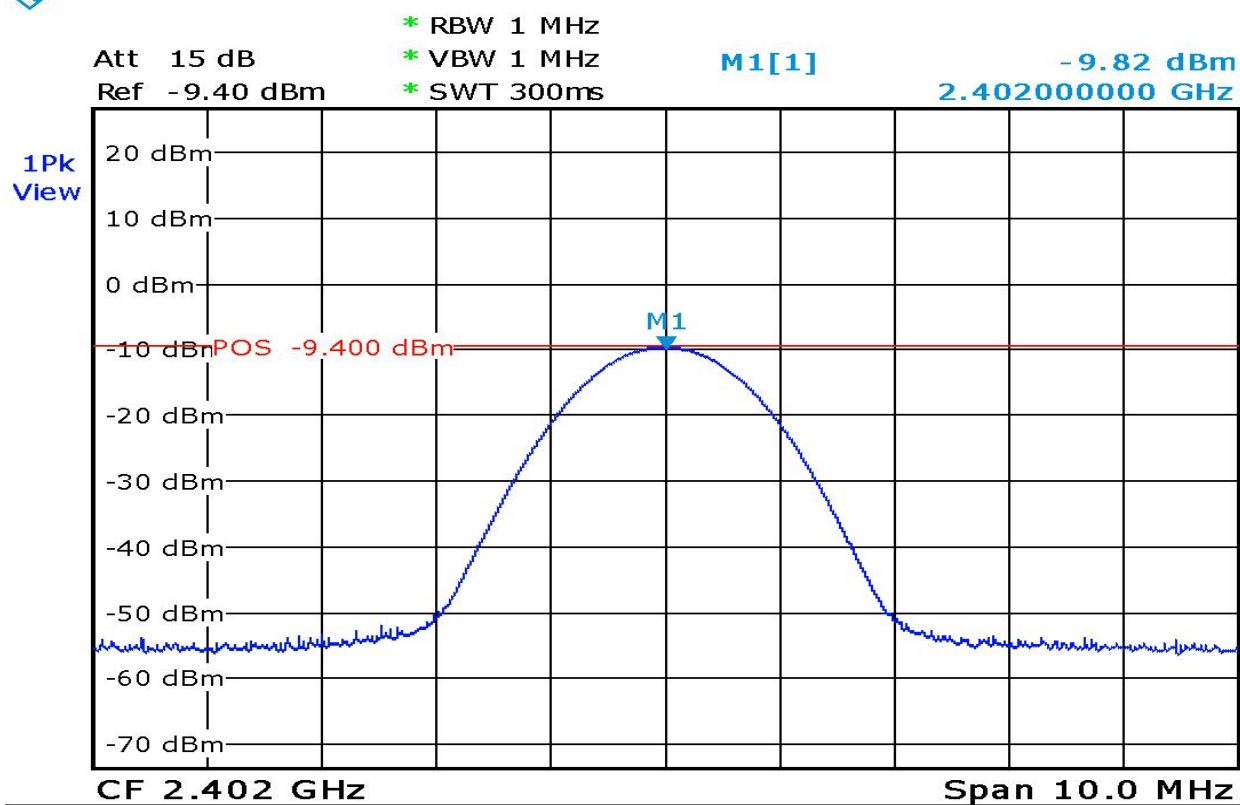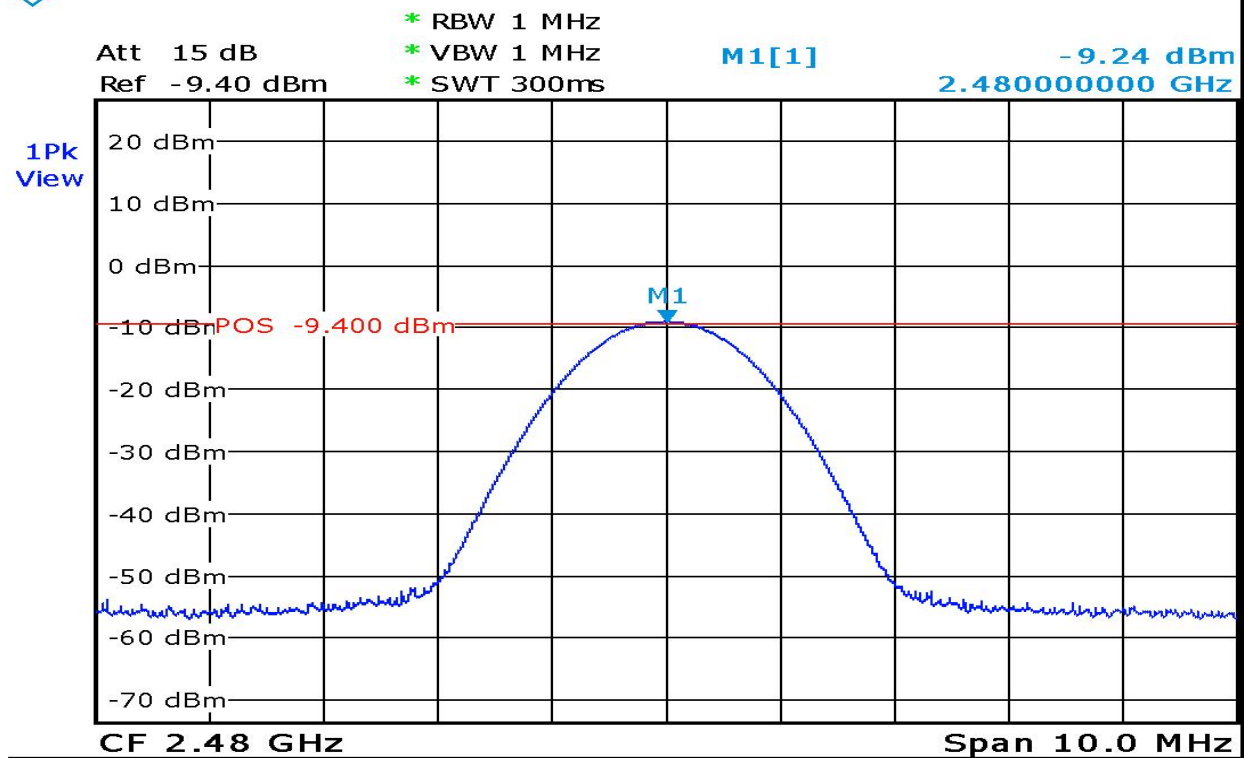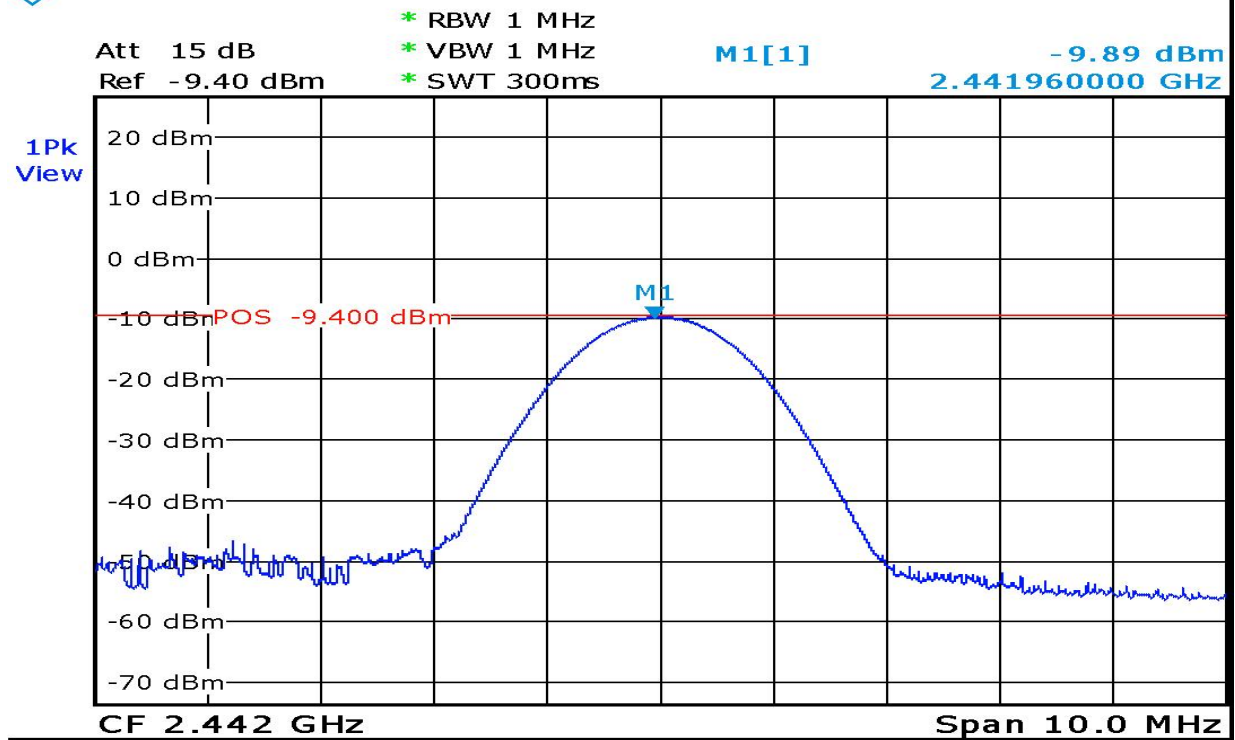
Measurement = Reading Level+Antenna Gain+Cable loss

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Date of Test	March 14, 2012	Temperature	24.1 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Test Mode	Mode 2		

Channel No.	Frequency (MHz)	Reading Level (dBm)	Antenna Gain (dBi)	Cable loss (dB)	Measurement (dBm)	Required Limit	Result
0	2402.00	-10.39	-2	0.59	-11.80	1W(30dBm)	Pass
40	2442.00	-10.94	-2	0.69	-12.25	1W(30dBm)	Pass
78	2480.00	-10.82	-2	0.73	-8.09	1W(30dBm)	Pass

Note :

Measurement = Reading Level+Antenna Gain+Cable loss

GESTEK Lab

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Date of Test	February 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Test Mode	Mode 3		

Channel No.	Frequency (MHz)	Reading Level (dBm)	Antenna Gain (dBi)	Cable loss (dB)	Measurement (dBm)	Required Limit	Result
0	2402.00	-12.25	-2	0.59	-13.66	125mw (20dBm)	Pass
40	2441.90	-12.95	-2	0.69	-14.26	125mw (20dBm)	Pass
78	2480.00	-12.26	-2	0.73	-13.53	125mw (20dBm)	Pass

Note :

Measurement = Reading Level+Antenna Gain+Cable loss

GESTEK *Lab*

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* Att   20 dB
Ref 8.00 dBm

* RBW 3 MHz
* VBW 3 MHz
* SWT 300ms

M1[1]   -12.95 dBm
2.441900000 GHz

1Pk View

0 dBm
-10 dBm   M1
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
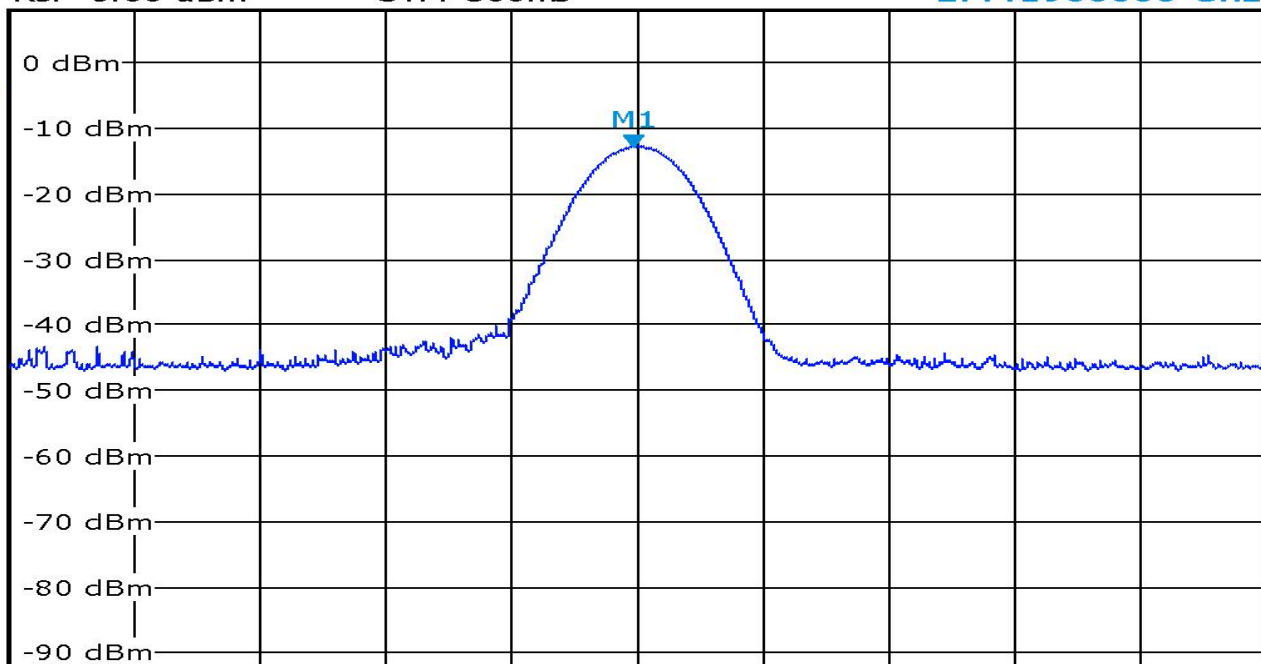
CF 2.442 GHz   Span 50.0 MHz

* Att   20 dB
Ref 8.00 dBm

* RBW 3 MHz
* VBW 3 MHz
* SWT 300ms

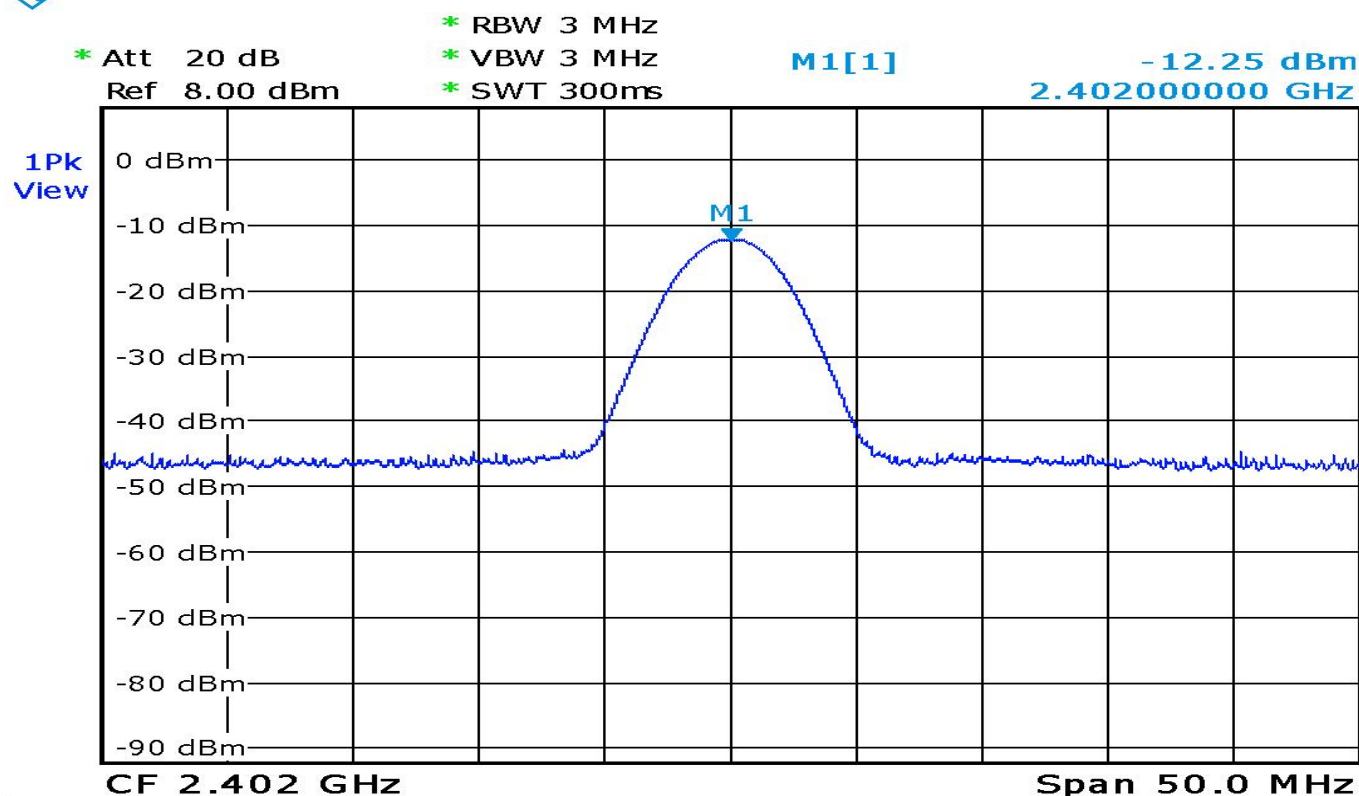M1[1]   -12.66 dBm
2.480000000 GHz

1Pk View

0 dBm
-10 dBm
-20 dBm   M1
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
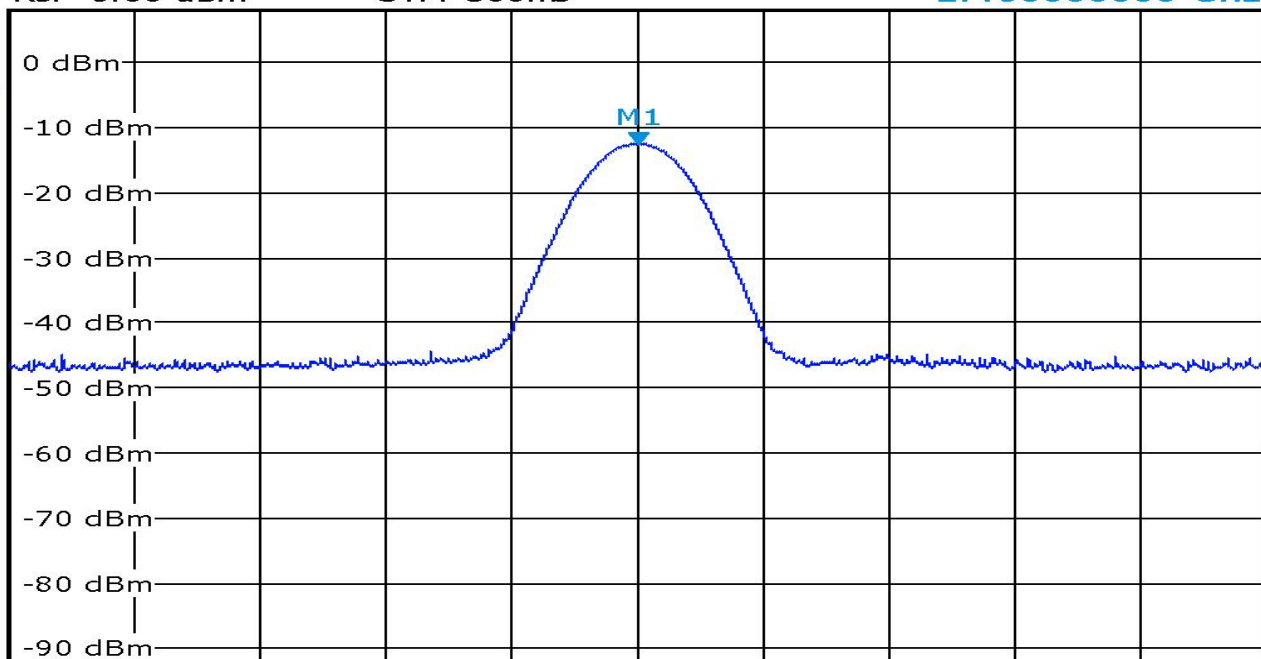
CF 2.48 GHz   Span 50.0 MHz

5.   BAND EDGE

TEST EQUIPMENT

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Spectrum Analyzer	RS	FSL6	100517	2012.07.28

BLOCK DIAGRAM OF TEST SETUP

RF Radiated Measurement:

Refer to Section 4.2

RF Couductive Measurement:

Refer to Section 5.2

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)).

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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.

OPERATING CONDITION OF EUT

Same as section 2.7.

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Report No: 1109007R-01

TEST RELULT

Date of Test	August 11, 2008	Temperature	24.8 deg/C
EUT	Bluetooth UART module	Humidity	47 %RH
Working Cond.	Mode 1 (2402~2480MHz)		

High Band

Low Band

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Date of Test	November 17, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	33.99	9.46	43.45	74.00	-30.55	peak
2	2483.5000	33.26	9.50	42.76	74.00	-31.24	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	November 17, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 00 (2402MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	32.15	7.87	40.02	74.00	-33.98	peak
2	2483.5000	31.56	7.89	39.45	74.00	-34.55	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	November 17, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	36.68	9.46	46.14	74.00	-27.86	peak
2	2483.5000	34.03	9.50	43.53	74.00	-30.47	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	November 17, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	35.23	7.87	43.10	74.00	-30.90	peak
2	2483.5000	33.96	7.89	41.85	74.00	-32.15	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	November 17, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	36.58	9.46	46.04	74.00	-27.96	peak
2	2483.5000	34.10	9.50	43.60	74.00	-30.40	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	November 17, 2011	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 1-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	31.96	7.87	39.83	74.00	-34.17	peak
2	2483.5000	34.21	7.89	42.10	74.00	-31.90	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	March 20, 2012	**Temperature**	19.2 deg/C
EUT	Bluetooth UART module	**Humidity**	61 %RH
Working Cond.	Mode 2 (2402~2480MHz)		

High Band
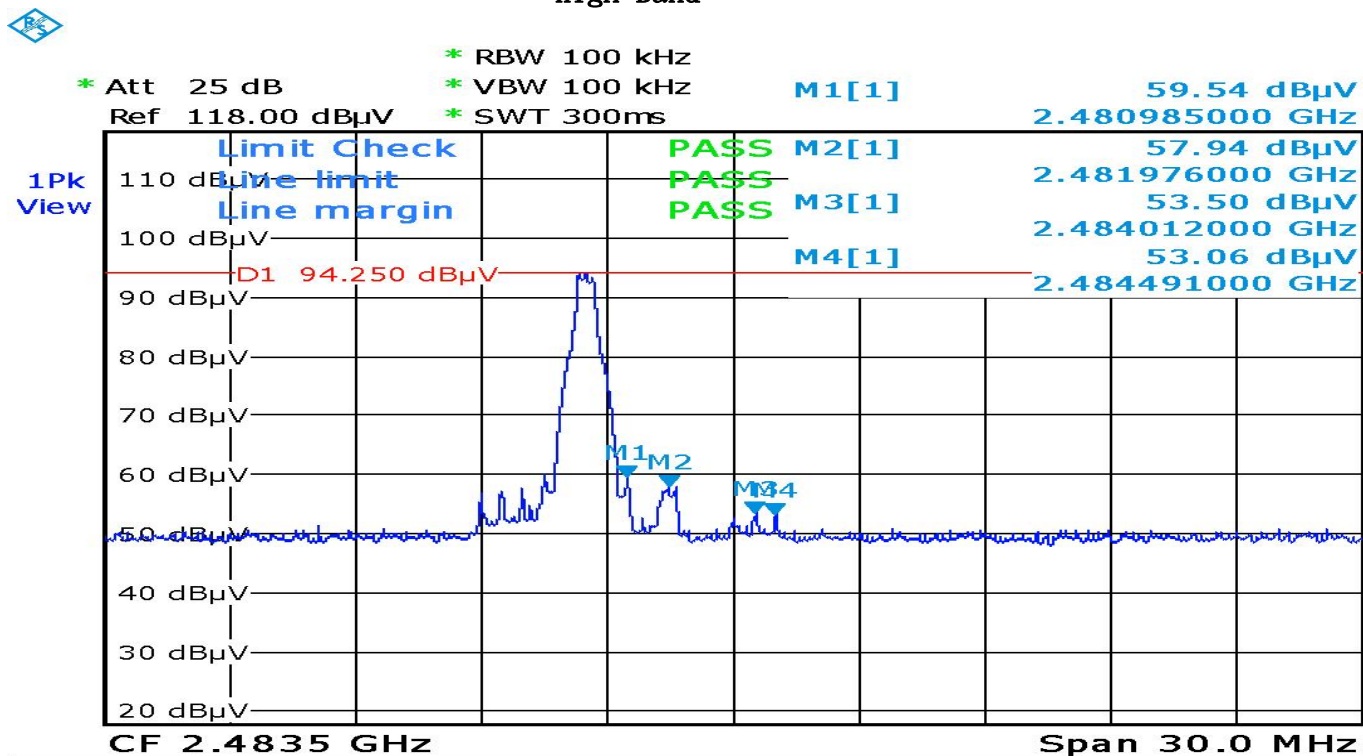
Low Band

Date of Test	March 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 00 (2402MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

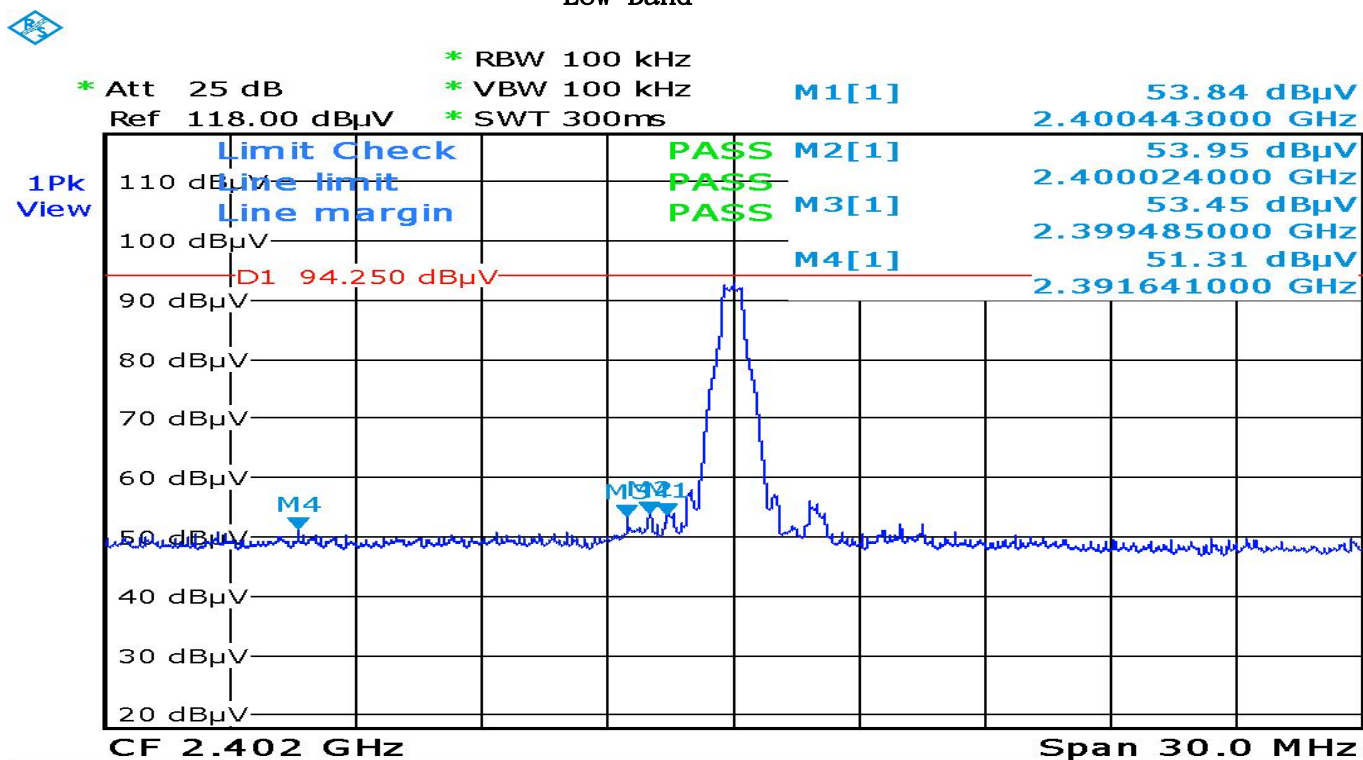| No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	34.18	9.46	43.64	74.00	-30.36	peak
2	2483.5000	32.83	9.50	42.33	74.00	-31.67	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	March 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 00 (2402MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	33.48	7.87	41.35	74.00	-32.65	peak
2	2483.5000	33.62	7.89	41.51	74.00	-32.49	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	March 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	36.49	9.46	45.95	74.00	-28.05	peak
2	2483.5000	35.27	9.50	44.77	74.00	-29.23	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	March 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	34.84	7.87	42.71	74.00	-31.29	peak
2	2483.5000	35.61	7.89	43.50	74.00	-30.50	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	March 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 78 (2480MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	36.57	9.46	46.03	74.00	-27.97	peak
2	2483.5000	34.23	9.50	43.73	74.00	-30.27	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	March 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 2-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	34.16	7.87	42.03	74.00	-31.97	peak
2	2483.5000	33.55	7.89	41.44	74.00	-32.56	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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	February 20, 2012	**Temperature**	19.2 deg/C
EUT	Bluetooth UART module	**Humidity**	61 %RH
Working Cond.	Mode 3 (2402~2480MHz)		

High Band

Low Band

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Date of Test	February 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 00 (2402MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

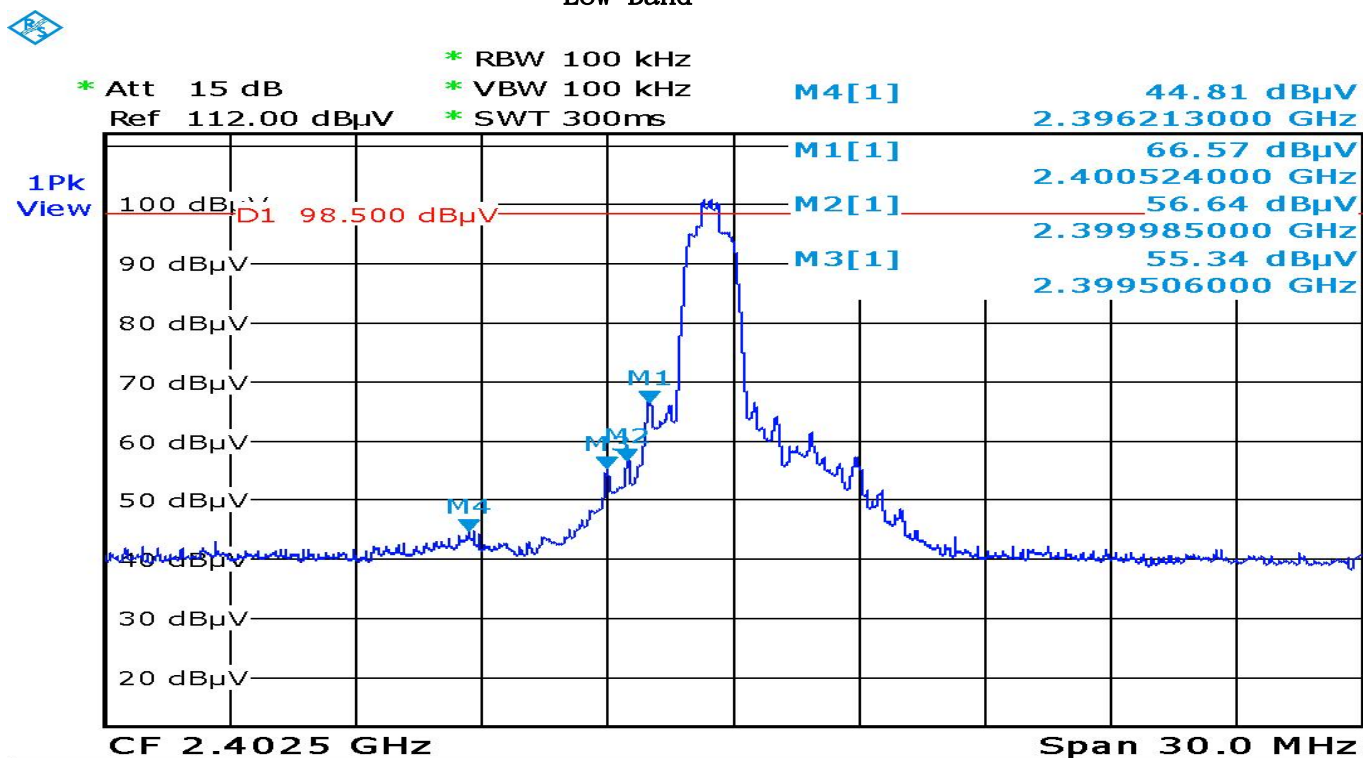| No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	34.43	9.46	43.89	74.00	-30.11	peak
2	2483.5000	33.82	9.50	43.32	74.00	-30.68	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	February 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 00 (2402MHz)		
Antenna distance	3m at Vertical	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	32.67	7.87	40.54	74.00	-33.46	peak
2	2483.5000	32.11	7.89	40.00	74.00	-34.00	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	February 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 40 (2442MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	37.26	9.46	46.72	74.00	-27.28	peak
2	2483.5000	34.69	9.50	44.19	74.00	-29.81	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.

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Date of Test	February 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 40 (2442MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	35.73	7.87	43.60	74.00	-30.40	peak
2	2483.5000	34.65	7.89	42.54	74.00	-31.46	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer 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.
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Date of Test	February 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 78 (2480MHz)		
Antenna distance	3m at **Horizontal**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	37.13	9.46	46.59	74.00	-27.41	peak
2	2483.5000	34.89	9.50	44.39	74.00	-29.61	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer Setting(AVG Detector): RBW=1MHz, VBW=10HZ, Span=20MHz.
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Date of Test	February 20, 2012	Temperature	19.2 deg/C
EUT	Bluetooth UART module	Humidity	61 %RH
Working Cond.	Mode 3-CH 78 (2480MHz)		
Antenna distance	3m at **Vertical**	Frequency Range	2.3GHz~2.5GHz

No.	Frequency MHz	Reading Level dBuV	Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Over Limit dB	Detector
1	2390.0000	32.49	7.87	40.36	74.00	-33.64	peak
2	2483.5000	35.17	7.89	43.06	74.00	-30.94	peak

Remark

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak or average.
2. Spectrum Analizyer Setting(Peak Detector): RBW=1MHz, VBW=1MHZ, Span=100MHz.
3. Spectrum Analizyer Setting(AVG Detector): RBW=1MHz, VBW=10HZ, Span=20MHz.
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