FCC TEST REPORT

for

Shenzhen Paoluy Silicone Technology Co., Ltd.

Bluetooth Keyboard Model No.: BL-84M

Prepared for

: Shenzhen Paoluy Silicone Technology Co., Ltd.

Address

: Ath Building, 5th Floor, Forzen Industrial Park, Fuyuan 2nd

Road, Heping Village, Fuyong Town, Baoan District, Shenzhen,

China

Prepared By Address

: Anbotek Compliance Laboratory Limited

: 1/F, 1 /Building, SEC Industrial Park, No. 4 Qianhai Road,

Nanshan District, Shenzhen, 518054, China

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Report Number : 201203781F

Date of Test : Mar. 20~26, 2012 Date of Report : Mar. 27, 2012

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TEST REPORT

Applicant : Shenzhen Paoluy Silicone Technology Co., Ltd.

Manufacturer : Shenzhen Paoluy Silicone Technology Co., Ltd.

EUT : Bluetooth Keyboard

Model No. : BL-84M

Serial No. : N/A

Rating : DC 3.7-4.2V, 5-7mA

Trade Mark : N/A

Measurement Procedure Used:

FCC Part15 Subpart C, Paragraph 15.207, 15.249 & 15.209

The device described above is tested by Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Anbotek Compliance Laboratory Limited

Date of Test:	Feb. 20~26, 2012
Prepared by :	Andy chen
	(Tested Engineer / Andy Chen)
Reviewer :	Jery Du
	(Project Manager / Jerry Du)
	Henry. Jung.
Approved & Authorized Signer:	
	(Manager / Henry Yang)

Ath B

Hepin

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Bluetooth Keyboard

Model Number : BL-84M

Test Power Supply: DC 3.7V

Frequency : 2402~2480MHz

Antenna : Printed Antenna:1.87dBi

Specification

Applicant : Shenzhen Paoluy Silicone Technology Co., Ltd.

Address : Ath Building, 5th Floor, Forzen Industrial Park, Fuyuan 2nd Road,

Heping Village, Fuyong Town, Baoan District, Shenzhen, China

Manufacturer : Shenzhen Paoluy Silicone Technology Co., Ltd.

Address : Ath Building, 5th Floor, Forzen Industrial Park, Fuyuan 2nd Road,

Heping Village, Fuyong Town, Baoan District, Shenzhen, China

Date of receiver : Feb. 20, 2012 Date of Test : Feb. 20~26, 2012

1.2. Auxiliary Equipment Used during Test

PC : Manufacturer: DELL

M/N: OPTIPLEX 380

S/N: 1J63X2X CE, FCC: DOC

MONITOR : Manufacturer: DELL

M/N: E170Sc

S/N: CN-00V539-64180-055-0UPS

CE, FCC: DOC

MOUSE : Manufacturer: DELL

M/N: M-UARDEL7

S/N: N/A

CE, FCC: DOC

Cable: 1m, unshielded

Printer : Manufacturer:Brother

M/N: MFC-3360C

S/N: N/A

CE, FCC:DOC

Power Line : Non-Shielded, 1.5m

VGA Cable : Non-Shielded, 1.5m

USB Cable : Non-Shielded, 0.5m

1.3. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS - LAB Code: L3503

Anbotek Compliance Laboratory Limited., Laboratory has been assessed and in compliance with CNAS/CL01: 2006 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

FCC-Registration No.: 752021

Anbotek Compliance Laboratory Limited, EMC Laboratory has been registed and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 752021, August 20, 2010.

IC-Registration No.: 8058A-1

Anbotek Compliance Laboratory Limited., EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration 8058A-1, August 30, 2010.

Test Location

All Emissions tests were performed at

Anbotek Compliance Laboratory Limited. at 1/F, 1 /Building, SEC Industrial Park, No. 4 Qianhai Road, Nanshan District, Shenzhen, 518054, China

1.4. Measurement Uncertainty

Radiation Uncertainty : Ur = 4.3 dB

Conduction Uncertainty : Uc = 3.4dB

2. MEASURING DEVICE AND TEST EQUIPMENT

The following test equipments were used during test:

	test equipments "		8		
Equipment	Manufacturer	Model #	Serial #	Data of Cal.	Due Data
EMI Test Receiver	Rohde & Schwarz	ESCI	100119	May.03, 2011	May.02, 2012
EMI Test Receiver	Rohde & Schwarz	ESIB26	100249	Sep.22, 2011	Sep.21, 2012
EMI Test Software	SHURPLE	ESK1	N/A	N/A	N/A
Spectrum Analyzer	Agilent	E7405A	MY45114970	Jun.21, 2011	Jun.20, 2012
Signal Generator	Rohde & Schwarz	SMR27	100124	Jul.06, 2011	Jul.05, 2012
Signal Generator	Rohde & Schwarz	SML03	102319	Aug.01, 2011	Aug.01, 2012
AC Power Source	Sepcial power system	YF650	N/A	N/A	N/A
Absorbing Clamp	Rohde & Schwarz	MDS21	100218	Apr.30, 2011	Apr.29, 2012
Power Meter	Rohde & Schwarz	NRVD	101287	Jul.19, 2011	Jul.18, 2012
Coaxial Cable	N/A	N/A	N/A	May.31, 2011	May.30, 2012
Coaxial Cable	N/A	N/A	N/A	May.31, 2011	May.30, 2012
Coaxial Cable	N/A	N/A	N/A	May.31, 2011	May.30, 2012
Universal radio Communication tester	Rohde & Schwarz	CMU200	101724	Sep.08, 2011	Sep.07, 2012
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	N/A	N/A	N/A
BiConilog Antenna	ETS-LINDGREN	3142C	00042670	Mar.03, 2011	Mar.02, 2012
BiConilog Antenna	ETS-LINDGREN	3142C	00042673	Mar.03, 2011	Mar.02, 2012
Loop Antenna	ETS-LINGREN	6502	00071730	Mar.03, 2011	Mar.02, 2012
Double-ridged Waveguide horn	ETS-LINDGREN	3117	00035926	Dec.30, 2011	Dec.29, 2012
Double-ridged Waveguide horn	ETS-LINDGREN	3117	00041545	Dec.30, 2011	Dec.29, 2012
Pre-amplifier	CD	PAM0203	804203	Jun.21, 2011	Jun.20, 2012
RF Switch	CD	RSU-M3	706543	Jun.21, 2011	Jun.20, 2012
Thermo-/Hygrometer	N/A	TH01	N/A	May.03, 2011	May.02, 2012
Shielding Room	Zhong Yu Electronic	N/A	N/A	N/A	N/A
3m Anechoic Chamber	Zhong Yu Electronic	N/A	N/A	Apr.28, 2011	Apr.27, 2012

3. Test Procedure

GENERAL: This report shall NOT be reproduced except in full without the written approval of Anbotek Compliance Laboratory Limited. The EUT was transmitting a test signal during the testing.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2009 using a spectrum analyzer with a pre-selector. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100KHz and the video bandwidth was 300KHz up to 1.0GHz and 1.0MHz with a video BW of 3.0MHz above 1.0GHz. The ambient temperature of the EUT was 74.3oF with a humidity of 69%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Preselector was accounted for in the Spectrum Analyzer Meter Reading.

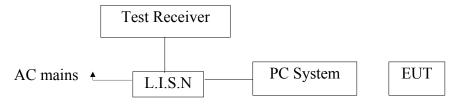
Example:

ANSI STANDARD C63.4-2009 10.1.7 MEASUREMENT PROCEDURES: The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The EUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation. When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

4. Conducted Limits

4.1. Block Diagram of Test Setup

4.1.1. Block diagram of connection between the EUT and simulators



(EUT: Bluetooth Keyboard)

4.2. Power Line Conducted Emission Measurement Limits (15.207)

Frequency	Limits dB(μV)			
MHz	Quasi-peak Level	Average Level		
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*		
0.50 ~ 5.00	56	46		
5.00 ~ 30.00	60	50		

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

4.3. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

EUT : Bluetooth Keyboard

Model Number : BL-84M

Applicant : Shenzhen Paoluy Silicone Technology Co., Ltd.

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 4.1.

4.4.2. Turn on the power of all equipment.

4.4.3. Let the EUT work in test mode (Charging) and measure it.

4.5. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-2003 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9KHz.

The frequency range from 150KHz to 30MHz is checked.

The test results are reported on Section 4.6.

4.6. Power Line Conducted Emission Measurement Results **PASS.**

The frequency range from 150KHz to 30 MHz is investigated.

Please refer the following pages.

CONDUCTED EMISSION TEST DATA

EUT: Bluetooth Keyboard M/N: BL-84M

Operating Condition: Charging

1# Shielded Room Test Site:

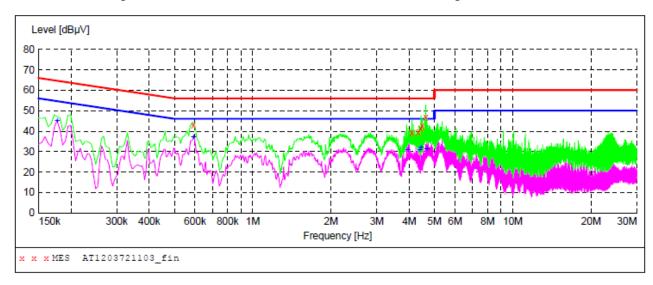
Operator: Andy Chen

Test Specification: AC 120V/60Hz for PC

Comment: Live Line

Tem:25℃ Hum:50%

SCAN TABLE: "Voltage (150K~30M) FIN"
Short Description: 150K-30M Disturbance Voltages



MEASUREMENT RESULT: "AT1203721103_fin"

3,	/21/2012 9:5	55AM						
	Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.591000	43.10	10.1	56	12.9	QP	L1	GND
	4.096000	39.20	10.5	56	16.8	QP	L1	GND
	4.339000	39.70	10.5	56	16.3	QP	L1	GND
	4.438000	41.40	10.5	56	14.6	QP	L1	GND
	4.487500	42.70	10.5	56	13.3	QP	L1	GND
	4.627000	46.80	10.5	56	9.2	OP	ь1	GND

MEASUREMENT RESULT: "AT1203721103 fin2"

3	/21/2012 9:5	5AM						
	Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.177000	45.20	10.1	55	9.4	AV	L1	GND
	0.591000	37.00	10.1	46	9.0	AV	L1	GND
	3.952000	30.60	10.4	46	15.4	AV	L1	GND
	4.388500	30.90	10.5	46	15.1	AV	L1	GND
	4.433500	32.20	10.5	46	13.8	AV	L1	GND
	4.676500	31.10	10.5	46	14.9	AV	L1	GND

CONDUCTED EMISSION TEST DATA

EUT: Bluetooth Keyboard M/N: BL-84M

Operating Condition: Charging

Test Site: 1# Shielded Room

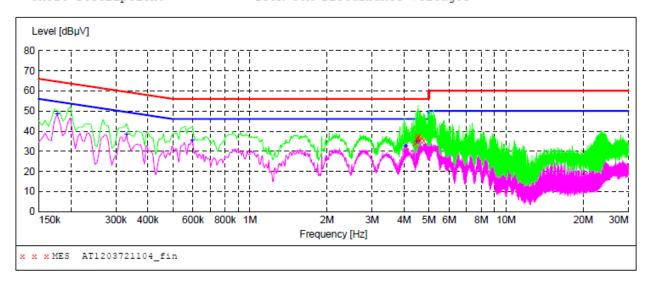
Operator: Andy Chen

Test Specification: AC 120V/60Hz for PC

Comment: **Neutral Line**

Tem:25°C Hum:50%

SCAN TABLE: "Voltage(150K~30M) FIN"
Short Description: 150K-30M Disturbance Voltages



MEASUREMENT RESULT: "AT1203721104 fin"

3	/21/2012 9:5	MA88						
	Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	4.433500	33.90	10.5	56	22.1	QP	N	GND
	4.483000	36.20	10.5	56	19.8	QP	N	GND
	4.532500	37.20	10.5	56	18.8	QP	N	GND
	4.582000	37.50	10.5	56	18.5	QP	N	GND
	4.631500	35.60	10.5	56	20.4	QP	N	GND
	4.771000	35.40	10.5	56	20.6	QP	N	GND

MEASUREMENT RESULT: "AT1203721104_fin2"

3/21/2012	9:58AM						
Frequenc M	cy Level Hz dBµV		Limit dBµV	Margin dB	Detector	Line	PE
0.1770	00 48.30	10.1	55	6.3	AV	N	GND
0.3300	00 38.20	10.1	50	11.3	AV	N	GND
0.5955	00 35.20	10.1	46	10.8	AV	N	GND
4.0510	00 32.50	10.5	46	13.5	AV	N	GND
4.4830	00 34.50	10.5	46	11.5	AV	N	GND
4.5325	00 34.90	10.5	46	11.1	AV	N	GND

5. Radiation Interference

5.1. Requirements (15.249, 15.209):

FIELD STRENGTH	FIELD STRENGTH	S15.209	
of Fundamental:	of Harmonics	30 - 88 MHz	40 dBuV/m @3M
902-928 MHZ		88 - 216 MHz	43.5
2.4-2.4835 GHz		216 - 960 MHz	46
94 dBμV/m @3m	54 dBμV/m @3m	ABOVE 960 MHz	54dBuV/m

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation.

5.2 Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

All readings from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. All reading are above 1GHz, peak & average values with a resolution bandwidth of 1MHz. The EUT is tested in 9*6*6 Chamber.

The test results are listed in Section 5.3.

5.3 Test Results

PASS.

Please refer the following pages.

Data:

Horizontal	
CH Low(2402MHz)	

Frequency MHz	Cable Loss dB	Ant Factor dB/m	Preamp Factor dB	Read Level dBµV	Level dBµV/m	Limit dBµV/m	Over Limit dB	Remark
239.98	1.58	13.50	38.90	57.45	33.65	46.00	-12.35	QP
2402.00	2.17	31.21	35.30	86.65	84.73	114.0	-29.27	Peak
2402.00	2.17	31.21	35.30	84.71	82.79	94.0	-11.21	AV
4804.10	2.56	34.01	34.71	41.05	42.91	74.0	-31.09	Peak
4804.10	2.56	34.01	34.71	38.25	40.11	54.0	-13.89	AV
7207.97	2.98	36.16	35.15	38.33	42.32	74.0	-31.68	Peak
7207.97	2.98	36.16	35.15	35.55	39.54	54.0	-14.46	AV
9608.00								
12010.00								
14412.00								
16814.00								
19216.00								
21618.00								
24020.00								

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CH Middle(244	4 I	M	H2	()
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C11 Wildu	110(24411)	1112)						
Frequency	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
MHz	dB	dB/m	dB	$dB\mu V$	$dB\mu V/m \\$	$dB\mu V/m \\$	dB	
312.18	1.60	13.52	38.82	56.40	32.70	46.00	-13.30	QP
2441.00	2.19	31.22	34.60	85.35	84.16	114.0	-29.84	Peak
2441.00	2.19	31.22	34.60	83.55	82.36	94.0	-11.64	AV
4882.08	2.57	35.00	34.58	39.62	42.61	74.0	-31.39	Peak
4882.08	2.57	35.00	34.58	37.47	40.46	54.0	-13.54	AV
7323.05	3.00	36.17	35.14	38.80	42.83	74.0	-31.17	Peak
7323.05	3.00	36.17	35.14	36.08	40.11	54.0	-13.89	AV
9764.00								
12205.00								
14646.00								
17087.00								
19528.00								
21969.00								
24410.00								

Frequency	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
MHz	dB	dB/m	dB	dΒμV	$dB\mu V/m$	$dB\mu V/m$	dB	
312.18	1.60	13.52	38.82	54.21	30.51	46.00	-15.49	QP
2480.00	2.20	31.65	36.00	92.78	90.63	114.0	-23.37	Peak
2480.00	2.20	31.65	36.00	89.51	87.36	94.0	-6.64	AV
4960.05	2.58	35.06	34.79	41.76	44.61	74.0	-29.39	Peak
4960.05	2.58	35.06	34.79	39.28	42.13	54.0	-11.87	AV
7439.97	3.02	36.19	34.90	39.53	43.84	74.0	-30.16	Peak
7439.97	3.02	36.20	35.20	37.40	41.42	54.0	-12.58	AV
9920.00								
12400.00								
14880.00								
17360.00								
19840.00								
22320.00								
24800.00								

Vertical CH Low(2402MHz)

CH Low(_{2402MHz}	Z)						
Frequency	Cable	Ant	Preamp	Read	Level	Limit	Over	Remark
ricquency	Loss	Factor	Factor	Level	EC (CI	Ziiiiv	Limit	1101114111
MHz	dB	dB/m	dB	$dB\mu V$	$dB\mu V/m$	$dB\mu V/m$	dB	
30.42	1.43	12.13	38.45	53.50	28.61	40.00	-11.39	QP
2402.00	2.17	31.21	35.30	84.23	82.31	114.0	-31.69	Peak
2402.00	2.17	31.21	35.30	81.85	79.93	94.0	-14.07	AV
4804.10	2.56	34.01	34.71	41.05	42.91	74.0	-31.09	Peak
4804.10	2.56	34.01	34.71	38.60	40.46	54.0	-13.54	AV
7207.93	2.98	36.16	35.15	37.46	41.45	74.0	-32.55	Peak
7207.93	2.98	36.16	35.15	34.50	38.49	54.0	-15.51	AV
9608.00								
12010.00								
14412.00								
16814.00								
19216.00								
21618.00								
24020.00								

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FCC ID: X9PBL-84M

CH Mid	ldle(2441M	· · · · · · · · · · · · · · · · · · ·	_					
Frequency	Cable	Ant	Preamp	Read	Level	Limit	Over	Remark
1 7	Loss	Factor	Factor	Level			Limit	
MHz	dB	dB/m	dB	dΒμV	dBμV/m	$dB\mu V/m$	dB	
143.82	1.50	13.40	38.89	53.90	29.91	43.50	-13.59	QP
2441.01	2.19	31.22	34.60	82.35	81.16	114.0	-32.84	Peak
2441.01	2.19	31.22	34.60	81.01	79.82	94.0	-14.18	AV
4882.11	2.57	35.00	34.58	40.15	43.14	74.0	-30.86	Peak
4882.11	2.57	35.00	34.58	37.86	40.85	54.0	-13.15	AV
7323.05	3.00	36.17	35.14	38.70	42.73	74.0	-31.27	Peak
7323.05	3.00	36.17	35.14	36.00	40.03	54.0	-13.81	AV
9764.00								
12205.00								
14646.00								
17087.00								
19528.00								
21969.00								
24410.00								

CH High(24	480MHz)							
Frequency	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
MHz	dB	dB/m	dB	dBμV	$dB\mu V/m$	$dB\mu V/m$	dB	
408.80	1.62	13.54	38.45	51.16	27.87	46.00	-18.13	QP
2480.00	2.20	31.65	36.00	83.52	81.37	114.0	-32.63	Peak
2480.00	2.20	31.65	36.00	82.02	79.87	94.0	-14.13	AV
4960.10	2.58	35.06	34.79	40.08	42.93	74.0	-31.07	Peak
4960.10	2.58	35.06	34.79	38.10	40.95	54.0	-13.05	AV
7439.97	3.02	36.19	34.90	38.58	42.89	74.0	-31.11	Peak
7439.97	3.02	36.20	35.20	36.34	40.36	54.0	-13.64	AV
9920.00								
12400.00								
14880.00								
17360.00								
19840.00								
22320.00								
24800.00								

NOTE: " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

6. Occupied Bandwidth

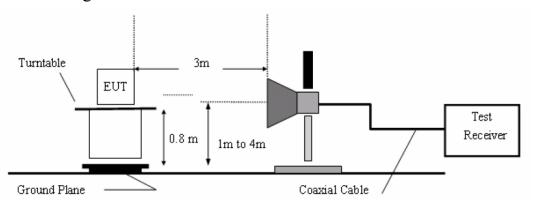
6.1. Requirements (15.249):

The field strength of any emissions appearing outside the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 50 dB below the level of the carrier or to the general limits of 15.249.

6.2. Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

6.3. Test Configuration:

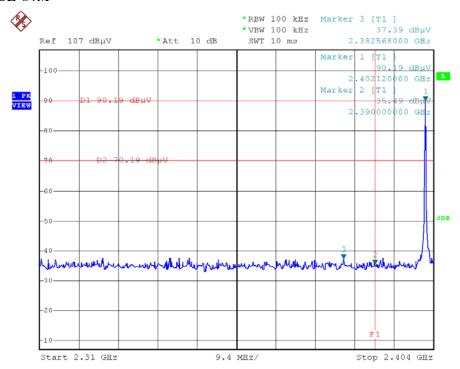


6.4. Test Results

Pass.

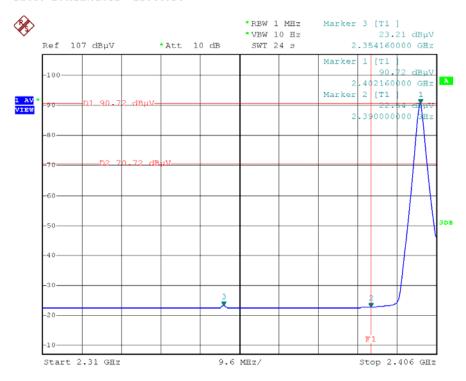
Please refer the following plot.

(Note: Marker 3 means the highest value in 2.39GHz~2.4GHz or 2.4835~2.5GHz)



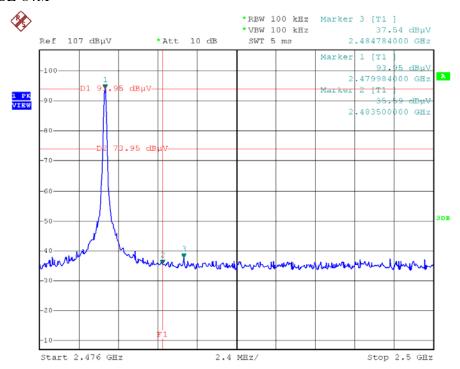
Bandedges-L

Date: 26.MAR.2012 21:44:14



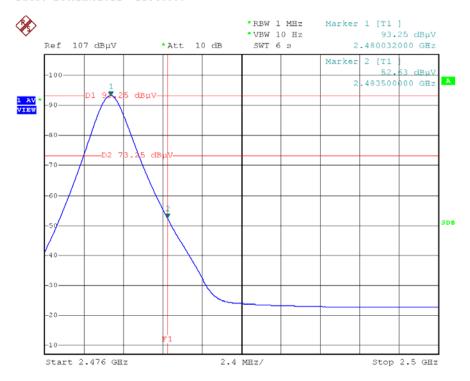
Band edges-L-AV

Date: 26.MAR.2012 21:27:55



Bandedges-H

Date: 26.MAR.2012 21:46:00



Band edges-H-AV

Date: 26.MAR.2012 21:29:49