FCC TEST REPORT for Seal Shield Corporation

Silver Blue Wireless Bluetooth Keyboard with Backlighting in Luxury Folio Case for Ipad & Ipad2

Model No.: S75BWGC

Prepared for : Seal Shield Corporation

Address : 3105 Riverside Avenue Jacksonville, FL32205

Prepared By : Anbotek Compliance Laboratory Limited

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

Nanshan District, Shenzhen, 518054, China

Tel: (86) 755-26014771 Fax: (86) 755-26014772

Report Number : 201112712F

Date of Test : Dec. 14~19, 2011

Date of Report : Dec. 20, 2011

TABLE OF CONTENTS

Description

Page

Test Report

1. GENERAL INFORMATION	·•••• '
1.1. Description of Device (EUT)	
1.2. Auxiliary Equipment Used during Test	
1.3. Description of Test Facility	
1.4. Measurement Uncertainty	
2. MEASURING DEVICE AND TEST EQUIPMENT	
3. TEST PROCEDURE	
4. CONDUCTED LIMITS	
4.1. Block Diagram of Test Setup	
4.2. Fower Line Conducted Emission Measurement Limits (13.207)	
· ·	
4.4. Operating Condition of EUT	
4.6. Power Line Conducted Emission Measurement Results	
5. RADIATION INTERFERENCE	
5.1. Requirements (15.249, 15.209):	1
5.2 Test Procedure	1
5.3 Test Results	1
6. OCCUPIED BANDWIDTH	1
6.1. Requirements (15.249):	
6.2. Test Procedure	
6.3. Test Configuration:	
6.4. Test Results.	
7. PHOTOGRAPH	
7.1. Photo of Power Line Conducted Emission Measurement	
7.2 Photo of Radiation Emission Test	1

APPENDIX I (Photos of EUT) (3 Pages)

TEST REPORT

Applicant : Seal Shield Corporation

Manufacturer : Shenzhen Paoluy Silicone Technology Co., Ltd.

EUT : Silver Blue Wireless Bluetooth Keyboard with Backlighting in

Luxury Folio Case for Ipad & Ipad2

Model No. : S75BWGC

Serial No. : N/A

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

Trade Mark : Seal Shield, LLC

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:	Dec. 14~19, 2011
Prepared by :	Andy chen
	(Engineer / Andy Chen)
Reviewer :	Cow. Kiang
	(Project Manager / Coco Xiang)
Approved & Authorized Signer:	Henry. Jung.
Approved & Authorized Signer.	(Manager / Henry Yang)
	(11111111901 / 110111 / 1 11119)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Silver Blue Wireless Bluetooth Keyboard with Backlighting in

Luxury Folio Case for Ipad & Ipad2

Model Number : S75BWGC

Test Power Supply: DC 3.7V

Frequency: 2402~2480MHz

Antenna : Printed Antenna:1.87dBi

Specification

Applicant : Seal Shield Corporation

Address : 3105 Riverside Avenue Jacksonville, FL32205

Manufacturer : Shenzhen Paoluy Silicone Technology Co., Ltd.

Address : No.31, Furong Road, Gushu Village, Xixiang Town, Bao'an District,

Shenzhen

Date of receiver : Dec. 13, 2011

Date of Test : Dec. 14~19, 2011

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

	G DE VICE III	12 1201	2 C 2 2 1 1 1 1		
Equipment	Manufacturer	Model #	Serial #	Data of Cal.	Due Data
EMI Test Receiver	Rohde & Schwarz	ESCI	100119	Mar.03, 2011	Mar.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
Double-ridged Waveguide horn	ETS-LINDGREN	3117	00035926	Nov.30, 2011	Nov.29, 2012
Double-ridged Waveguide horn	ETS-LINDGREN	3117	00041545	Nov.30, 2011	Nov.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 Semi-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.

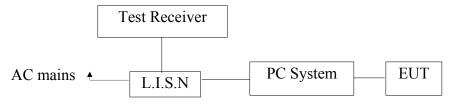
Example:

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: Silver Blue Wireless Bluetooth Keyboard with Backlighting in Luxury Folio Case for Ipad & Ipad2)

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 : Silver Blue Wireless Bluetooth Keyboard with Backlighting

in Luxury Folio Case for Ipad & Ipad2

Model Number : S75BWGC

Applicant : Seal Shield Corporation

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: Silver Blue Wireless Bluetooth Keyboard with Backlighting in

Luxury Folio Case for Ipad & Ipad2 M/N: S75BWGC

Operating Condition: Charging

Test Site: 1# Shielded Room

Operator: Andy Chen

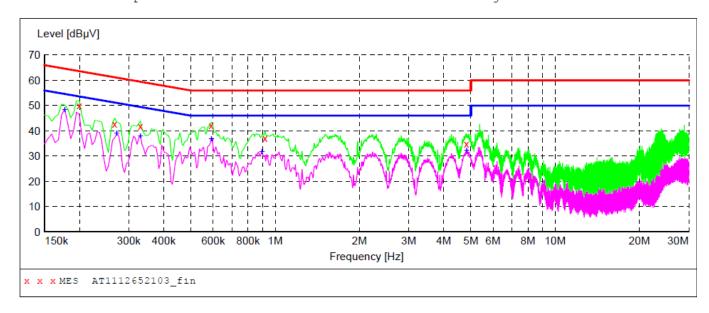
Test Specification: AC 120V/60Hz for PC

Live Line Comment:

Tem:25°C Hum:50%

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

150K-30M Disturbance Voltages



MEASUREMENT RESULT: "AT1112652103 fin"

12/14/2011 1 Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.199500 0.267000 0.330000 0.591000 0.919500 4.820500	50.00 42.80 41.80 42.30 37.10 34.90	10.1 10.1 10.1 10.1 10.1 10.5	64 61 60 56 56	13.6 18.4 17.7 13.7 18.9 21.1	QP QP QP QP QP QP	L1 L1 L1 L1 L1	GND GND GND GND GND GND

MEASUREMENT RESULT: "AT1112652103 fin2"

12/14/2011 Frequency MHz	y Level	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.177000 0.271500 0.330000 0.591000 0.897000	39.00 37.90 36.80	10.1 10.1 10.1 10.1 10.1	55 51 50 46 46	6.1 12.1 11.6 9.2 14.2	AV AV AV	L1 L1 L1 L1 L1	GND GND GND GND GND
4.834000	32.30	10.5	46	13.7	AV	L1	GND

CONDUCTED EMISSION TEST DATA

EUT: Silver Blue Wireless Bluetooth Keyboard with Backlighting in

Luxury Folio Case for Ipad & Ipad2 M/N: S75BWGC

Operating Condition: Charging

Test Site: 1# Shielded Room

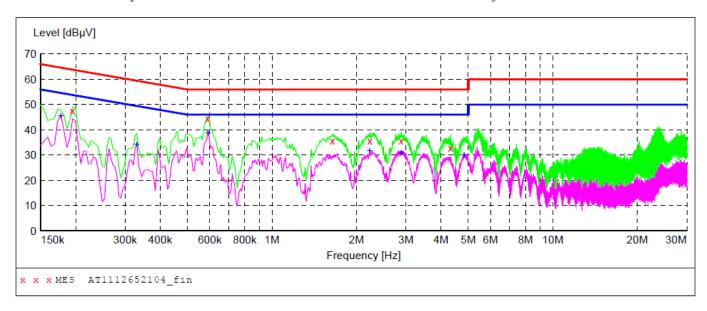
Operator: Andy Chen

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: "AT1112652104 fin"

12/14/2011 11 Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.195000	47.60	10.1	64	16.2	QP	N	GND
0.591000	44.40	10.1	56	11.6	QP	N	GND
1.643500	35.60	10.3	56	20.4	QP	N	GND
2.233000	35.80	10.3	56	20.2	QP	N	GND
2.885500	35.70	10.4	56	20.3	QP	N	GND
4.325500	32.90	10.5	56	23.1	QP	N	GND

MEASUREMENT RESULT: "AT1112652104 fin2"

12/14/2011 11:09 Frequency I MHz	Level Transd dBµV dB	Limit dBµV	Margin dB	Detector	Line	PE
0.330000 0.591000 2.228500	45.60 10.1 34.40 10.1 38.90 10.1 31.70 10.3 31.00 10.4	55 50 46 46 46	15.1 7.1	AV AV AV AV	N N N N	GND GND GND GND 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	57.26	33.44	46.00	-12.56	QP
2402.00	2.17	31.21	35.30	86.45	84.53	114.0	-29.47	Peak
2402.00	2.17	31.21	35.30	84.51	82.59	94.0	-11.41	AV
4804.10	2.56	34.01	34.71	39.95	41.81	74.0	-32.19	Peak
4804.10	2.56	34.01	34.71	38.13	39.99	54.0	-14.01	AV
7207.97	2.98	36.16	35.15	38.23	42.22	74.0	-31.78	Peak
7207.97	2.98	36.16	35.15	35.34	39.33	54.0	-14.67	AV
9608.00								
12010.00								
14412.00								
16814.00								
19216.00								
21618.00								
24020.00								

•

CH Midd	lle(2441M	IHz)						
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	56.21	32.51	46.00	-13.49	QP
2441.00	2.19	31.22	34.60	85.26	84.07	114.0	-29.93	Peak
2441.00	2.19	31.22	34.60	83.34	82.15	94.0	-11.85	AV
4882.08	2.57	35.00	34.58	39.51	42.50	74.0	-31.50	Peak
4882.08	2.57	35.00	34.58	37.37	40.36	54.0	-13.64	AV
7323.05	3.00	36.17	35.14	38.68	42.71	74.0	-31.29	Peak
7323.05	3.00	36.17	35.14	35.89	39.92	54.0	-14.08	AV
9764.00								
12205.00								
14646.00								
17087.00								
19528.00								
21969.00								
24410.00								

CH High(2480MHz)

Frequency	Cable	Ant	Preamp	Read	Level	Limit	Over	Remark
rioquono	Loss	Factor	Factor	Level	20,01		Limit	1141114111
MHz	dB	dB/m	dB	$\mathrm{dB}\mu\mathrm{V}$	$dB\mu V/m$	dBμV/m	dB	
312.18	1.60	13.52	38.82	54.00	30.30	46.00	-15.70	QP
2480.00	2.20	31.65	36.00	92.57	90.42	114.0	-23.58	Peak
2480.00	2.20	31.65	36.00	89.41	87.26	94.0	-6.74	AV
4960.05	2.58	35.06	34.79	41.75	44.60	74.0	-29.40	Peak
4960.05	2.58	35.06	34.79	39.08	41.93	54.0	-12.07	AV
7439.97	3.02	36.19	34.90	39.31	43.62	74.0	-30.38	Peak
7439.97	3.02	36.20	35.20	37.28	41.30	54.0	-12.70	AV
9920.00								
12400.00								
14880.00								
17360.00								
19840.00								
22320.00								
24800.00								

Vertical CH Low(2402MHz)

CH LOW(Z40ZIVID2	<u>L)</u>						
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	
30.42	1.43	12.13	38.45	53.40	28.51	40.00	-11.49	QP
								~
2402.00	2.17	31.21	35.30	84.02	82.10	114.0	-31.90	Peak
2402.00	2.17	31.21	35.30	81.74	79.82	94.0	-14.18	AV
4804.10	2.56	34.01	34.71	40.85	42.71	74.0	-31.29	Peak
4804.10	2.56	34.01	34.71	38.40	40.26	54.0	-13.74	AV
7207.93	2.98	36.16	35.15	37.34	41.33	74.0	-32.67	Peak
7207.93	2.98	36.16	35.15	34.40	38.39	54.0	-15.61	AV
9608.00								
12010.00								
14412.00								
16814.00								
19216.00								
21618.00								
24020.00								

•

CH Midd	lle(2441M	IHz)						
Frequency	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
MII					1D 37/	1D 37/		
MHz	dB	dB/m	dB	dΒμV	$dB\mu V/m$	$dB\mu V/m$	dB	
143.82	1.50	13.40	38.89	53.71	29.72	43.50	-13.78	QP
2441.01	2.19	31.22	34.60	82.32	81.13	114.0	-32.87	Peak
2441.01	2.19	31.22	34.60	80.86	79.67	94.0	-14.33	AV
4882.11	2.57	35.00	34.58	40.04	43.03	74.0	-30.97	Peak
4882.11	2.57	35.00	34.58	37.66	40.65	54.0	-13.35	AV
7323.05	3.00	36.17	35.14	38.52	42.55	74.0	-31.45	Peak
7323.05	3.00	36.17	35.14	35.87	39.90	54.0	-14.10	AV
9764.00								
12205.00								
14646.00								
17087.00								
19528.00								
21969.00								
24410.00								

CH High(24 Frequency MHz	480MHz) Cable Loss dB	Ant Factor dB/m	Preamp Factor dB	Read Level dBµV	Level dBμV/m	Limit dBµV/m	Over Limit dB	Remark
408.80	1.62	13.54	38.45	51.03	27.74	46.00	-18.26	QP
2480.00	2.20	31.65	36.00	83.31	81.16	114.0	-32.84	Peak
2480.00	2.20	31.65	36.00	81.90	79.75	94.0	-14.25	AV
4960.10	2.58	35.06	34.79	39.98	42.83	74.0	-31.17	Peak
4960.10	2.58	35.06	34.79	38.00	40.85	54.0	-13.15	AV
7439.97	3.02	36.19	34.90	38.46	42.77	74.0	-31.23	Peak
7439.97	3.02	36.20	35.20	36.22	40.24	54.0	-13.76	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

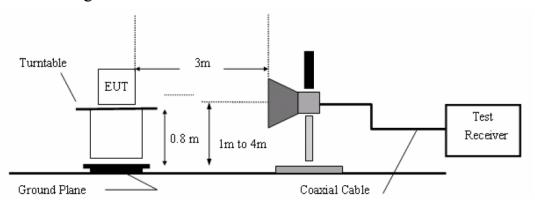
6.1. Requirements (15.249):

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:

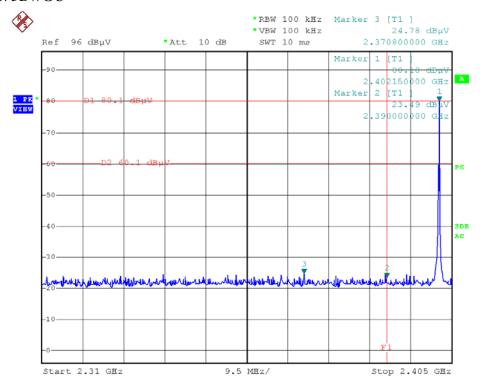


6.4. Test Results

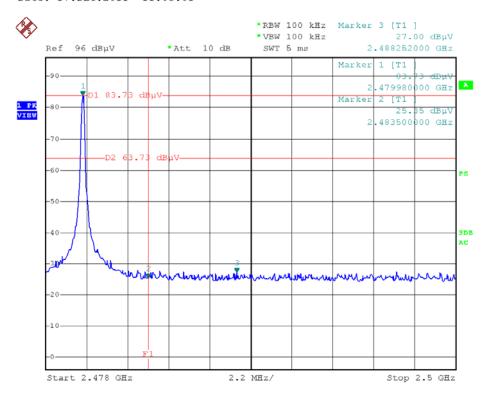
Pass.

Please refer the following plot.

(Note: Marker 3 means the highest value in 2.31GHz~2.39GHz or 2.4835~2.5GHz)







Н

Date: 17.DEC.2011 10:55:10