

FCC TEST REPORT

for

Dongguan Lingjie Electronics & Technology Co., Ltd.

Wireless Keyboard

Model Number: IK6630

FCC ID: 2ANBUK6630

Prepared for : Dongguan Lingjie Electronics & Technology Co., Ltd.
Address : Building A(Floor 1-4) and B(Floor 1-5), No. 16 Zhenxing
North Road, Taiyuan, Dongguan, Guangdong Province
523590, China.

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Report No. : TR17080185-E-001
Date of Test : Jul.3 ~Jul. 10, 2017
Date of Report : Jul. 10, 2017

Guangdong Keyway Testing Technology Co., Ltd.

Applicant:	Dongguan Lingjie Electronics & Technology Co., Ltd.		
Address:	Building A(Floor 1-4) and B(Floor 1-5), No. 16 Zhenxing North Road, Taiyuan, Dongguan, Guangdong Province, 523590, China.		
Manufacturer:	Dongguan Lingjie Electronics & Technology Co., Ltd.		
Address:	Building A(Floor 1-4) and B(Floor 1-5), No. 16 Zhenxing North Road, Taiyuan, Dongguan, Guangdong Province, 523590, China.		
E.U.T:	Wireless Keyboard		
Model Number:	IK6630		
Trade Name:	-----	Serial No.:	-----
Date of Receipt:	Jul. 3, 2017	Date of Test:	Jul. 3~Jul. 10, 2017
Test Specification:	FCC Part15.249 01, Oct. 2015 ANSI C63.10-2013		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied.		
Issue Date: Jul. 10, 2017			
Tested by:	Reviewed by:	Approved by:	
 	 	 	
Jo Shi / Engineer	Moore Cai / Supervisor	Andy Gao / Supervisor	
Other Aspects:			
None.			
Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Guangdong Keyway Testing Technology Co., Ltd.			

TABLE OF CONTENTS

Test Report Declaration	Page
1. TEST SUMMARY	4
2. GENERAL PRODUCT INFORMATION	5
2.1. Product Function.....	5
2.2. Description of Device (EUT)	5
2.3. Independent Operation Modes	5
2.4. Channel List.....	5
2.5. Product Version	5
2.6. Test Sites.....	6
2.7. List of Test and Measurement Instruments	7
3. TEST SET-UP AND TESTING ENVIRONMENT.....	8
3.1. Principle of Configuration Selection.....	8
3.2. Block Diagram of Test Set-up.....	8
3.3. Special Accessories and Auxiliary Equipment.....	8
3.4. Test Environment:	8
4. EMISSION TEST RESULTS.....	9
4.1. Conducted Emission at the Mains Terminals Test.....	9
4.2. Radiated Emission Test.....	10
5. OCCUPIED BANDWIDTH TEST	19
5.1. Test Requirement	19
5.2. Test Method.....	19
5.3. Test setup	19
5.4. Test Result.....	20
6. BAND EDGE COMPLIANCE TEST.....	21
6.1. Test Requirement	21
6.2. Test setup	21
7. ANTENNA REQUIREMENTS.....	26
7.1. Test Requirement	26
7.2. Result	26
8. PHOTOGRAPHS OF TEST SET-UP	27
9. PHOTOGRAPHS OF THE EUT	28

1. TEST SUMMARY

Test Items	Test Requirement	Result
Field Strength of Fundamental	FCC PART 15 C section 15.249 (a)	N/A
Field Strength of Unwanted Emissions	FCC PART 15 C section 15.249 (a) section 15.249 (d)	PASS
Band Edges	FCC PART 15 C section 15.249 (d)	PASS
Occupied Bandwidth	FCC PART 15 C section 15.215(c)	PASS
Conducted Emissions at Mains Terminals	FCC PART 15 C section 15.207	PASS

Remark:

EUT: In this whole report EUT means Equipment Under Test.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radio Frequency.

ANSI C63.10: the detail version is ANSI C63.10:2009 in the whole report.

2. GENERAL PRODUCT INFORMATION

2.1. Product Function

Refer to Technical Construction Form and User Manual.

2.2. Description of Device (EUT)

Product Name:	Wireless Keyboard
Model No.:	IK6630
Operation Frequency:	2402MHz-2480MHz
Channel numbers:	16
Modulation technology:	GFSK
Data speed (IEEE 802.11b):	1Mbps
Antenna Type:	PCB Antenna
Antenna gain:	1.8dBi
Power supply:	DC 1.5V (1.5V AA battery)

2.3. Independent Operation Modes

The basic operation modes are:

Test Mode	Frequency
Mode 1	2402MHz
Mode 2	2441MHz
Mode 3	2480MHz

2.4. Channel List

Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	10	2445MHz		
2	2407MHz	11	2453MHz		
3	2414MHz	12	2459MHz		
4	2419MHz	13	2463MHz		
5	2422MHz	14	2466MHz		
6	2426MHz	15	2473MHz		
7	2436MHz	16	2480MHz		
8	2439MHz				
9	2441MHz				

2.5. Product Version

SW Version:	ZM6.1
HW Version:	VER3.0

2.6. Test Sites

Lab Qualifications : 944 Shielded Room built by ETS-Lindgren, USA
Date of completion: March 28, 2011

966 Chamber built by ETS-Lindgren, USA
Date of completion: March 28, 2011

Certificated by TUV Rheinland, Germany.
Registration No.: UA 50207153
Date of registration: July 13, 2011

Certificated by UL, USA
Registration No.: 100567-237
Date of registration: December 1, 2011

Certificated by Intertek
Registration No.: 2011-RTL-L1-31
Date of registration: October 11, 2011

Certificated by Industry Canada
Registration No.: 9868A
Date of registration: December 8, 2011

Certificated by FCC, USA
Registration No.: 370994
Date of registration: February 21, 2012

Certificated by CNAS China
Registration No.: CNAS L5783
Date of registration: August 8, 2012

Name of Firm : Guangdong Keyway Testing Technology Co., Ltd.

Site Location : Baishun Industrial Zone, Zhangmutou Town,
Dongguan, Guangdong, China

2.7. List of Test and Measurement Instruments

2.7.1. For conducted emission at the mains terminals test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 08,17	Apr. 08,18
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	Apr. 08,17	Apr. 08,18
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	Apr. 08,17	Apr. 08,18
RF Cable	FUJIKURA	3D-2W	944 Cable	Apr. 08,17	Apr. 08,18

2.7.2. For radiated emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 08,17	Apr. 08,18
System Simulator	Agilent	E5515C	GB43130245	Apr. 08,17	Apr. 08,18
Power Splitter	Weinschel	1506A	NW425	Apr. 08,17	Apr. 08,18
Bilog Antenna	ETS-LINDGREEN	3142D	135452	Apr. 08,17	Apr. 08,18
Spectrum Analyzer	Agilent	E4411B	MY4511304	Apr. 08,17	Apr. 08,18
Spectrum Analyzer	R&S	FSV40	132.1.3008K39-100967	Apr. 08,17	Apr. 08,18
3m Semi-anechoic Chamber	ETS-LINDGREEN	966	KW01	Apr. 08,17	Apr. 08,18
Signal Amplifier	SONOMA	310	187016	Apr. 08,17	Apr. 08,18
Signal Amplifier	Agilent	8449B	3008A00251	Apr. 08,17	Apr. 08,18
RF Cable	IMRO	IMRO-400	966 Cable 1#	N/A	N/A
MULTI-DEVICE Controller	ETS-LINDGREEN	2090	126913	N/A	N/A
Horn Antenna	DAZE	ZN30701	11003	Apr. 08,17	Apr. 08,18
Horn Antenna	SCHWARZBECK	BBHA9170	9170-068	Apr. 08,17	Apr. 08,18
Spectrum Analyzer	Agilent	8593E	3911A04271	Apr. 08,17	Apr. 08,18
Spectrum Analyzer	Agilent	E4408B	MY44211125	Apr. 08,17	Apr. 08,18
Signal Amplifier	DAZE	ZN3380C	11001	Apr. 08,17	Apr. 08,18
High Pass filter	Micro	HPM50111	324216	Apr. 08,17	Apr. 08,18
Filter	COM-MW	ZBSF-C836.5-25-X	KW032	Apr. 08,17	Apr. 08,18
Filter	COM-MW	ZBSF-C1747.5-75-X2	KW035	Apr. 08,17	Apr. 08,18
Filter	COM-MW	ZBSF-C1880-60-X2	KW037	Apr. 08,17	Apr. 08,18
DC Power Supply	LongWei	PS-305D	010964729	Apr. 08,17	Apr. 08,18
Constant temperature and humidity box	GF	GTH-800-40-1P	MAA9906-005	Apr. 08,17	Apr. 08,18
Universal radio communication tester	Rohde&Schwarz	CMU200	3215420	Apr. 08,17	Apr. 08,18
Splitter	Agilent	11636B	0025164	Apr. 08,17	Apr. 08,18
Loop Antenna	ARA	PLA-1030/B	1029	Apr. 08,17	Apr. 08,18

3. TEST SET-UP AND TESTING ENVIRONMENT

3.1. Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

3.2. Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators



(EUT: Wireless Keyboard)

3.3. Special Accessories and Auxiliary Equipment

None.

3.4. Test Environment:

Ambient conditions in the test laboratory:

Items	Actual
Temperature (°C)	22~26
Humidity (%RH)	45~60

4. EMISSION TEST RESULTS

4.1. Conducted Emission at the Mains Terminals Test

4.1.1. Limit

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

4.1.2. Test Setup

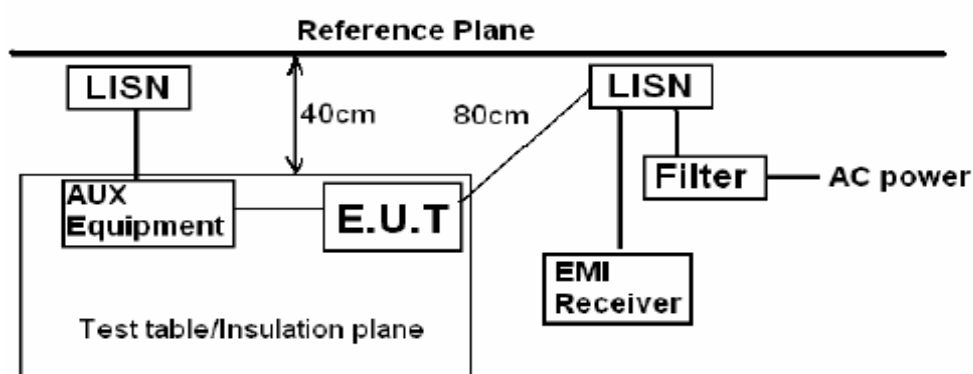
The EUT was put on a wooden table which was 0.8 m high above the ground and connected to the AC mains through the Artificial Mains Network (AMN). Where the mains cable supplied by the manufacture was longer than 0.8 m, the excess was folded back and forth parallel to the cable at the centre so as to form a bundle no longer than 0.4 m.

The EUT was kept 0.4 m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during the conducted emission test.

The frequency range from 150 kHz to 30 MHz was investigated.

The bandwidth of the test receiver was set at 9 kHz.

Pretest for all mode, The test data of the worst case condition(s) was reported on the following page.



Remark:

E.U.T: Equipment Under Test

LISN: Line Impedance Stabilization Network

Test table height=0.8m

Note: There is no need for conduction emissions test, because the power supply of the EUT is dry battery.

4.2. Radiated Emission Test

4.2.1. Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

4.2.2. Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

4.2.3. Test Setup

The EUT was placed on a turn table which was 0.8 m (above 1GHz, the table was 1.5m) above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

The EUT was tested in the Chamber Site. It was pre-scanned with a Peak detector from the spectrum, and all the final readings from the test receiver were measured with the Quasi-Peak detector.

The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz.

The frequency range from 30MHz to 10th harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

Notes: 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading-Preamp Factor.

2. Measurement Uncertainty: ± 3.2 dB at a level of confidence of 95%.

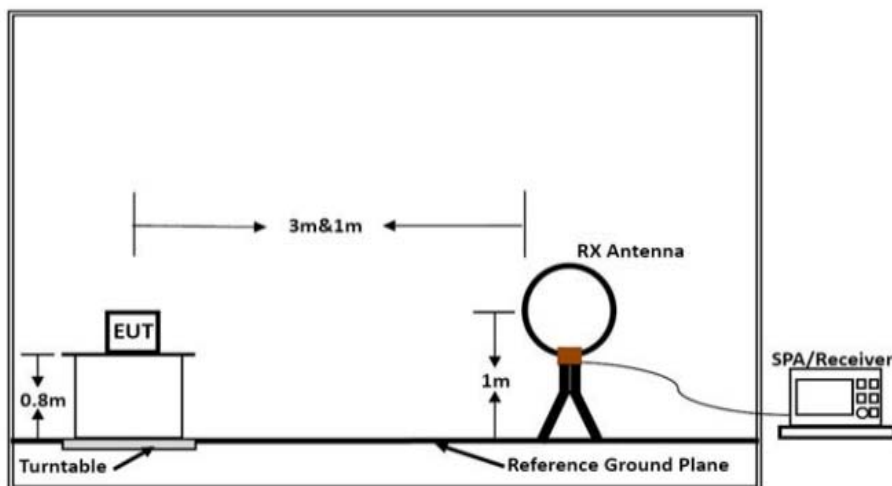
3. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

4. For emissions below 1GHz, pretest for all mode, The test data of the worst case condition(s) was reported on the following pages.

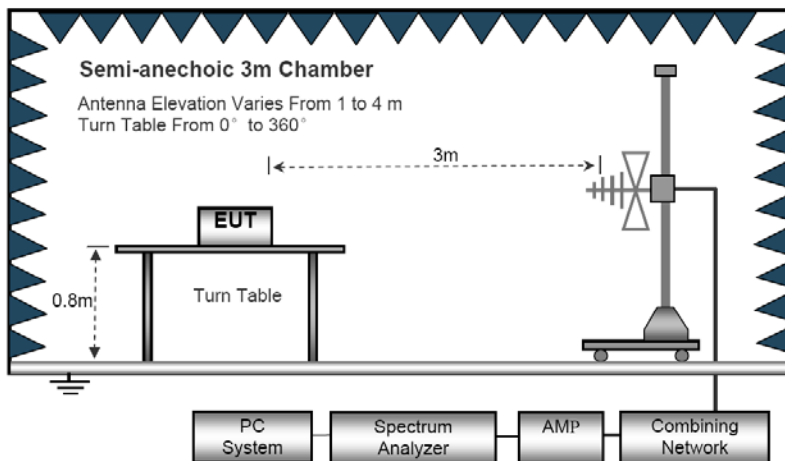
5. EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report (Z orientation).

Radiated Emission Test-Up

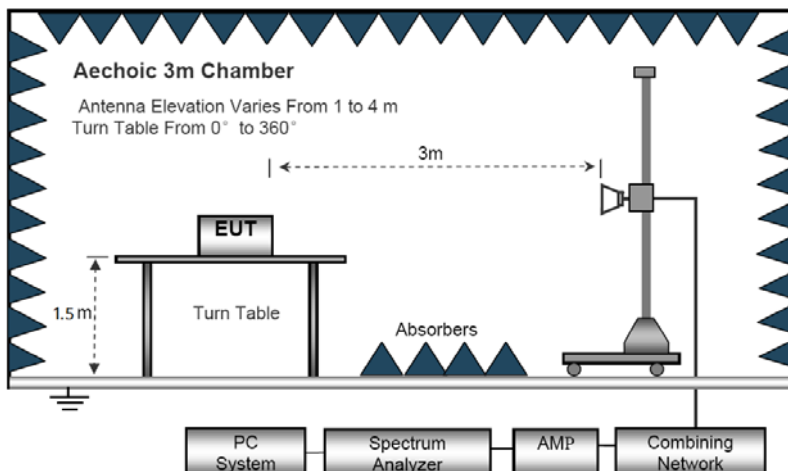
Below 30MHz



30MHz-1GHz



Above 1GHz



Below 30MHz

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	P
--	--	--	--	P

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (dB);

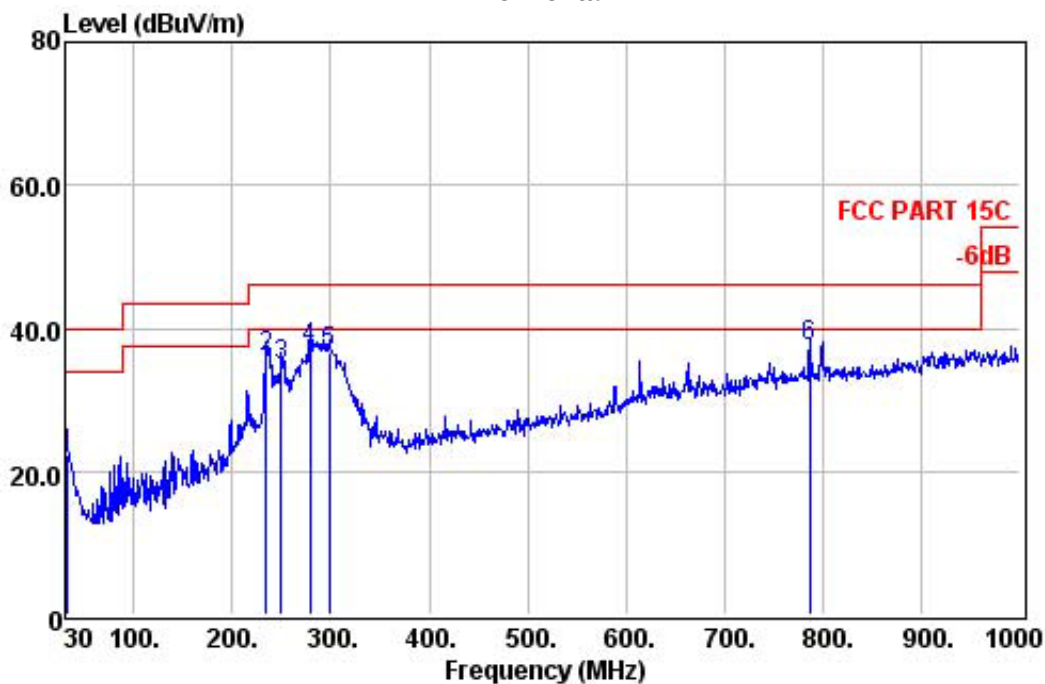
Limit line = specific limits(dBuv) + distance extrapolation factor.

4.2.4. Test Result

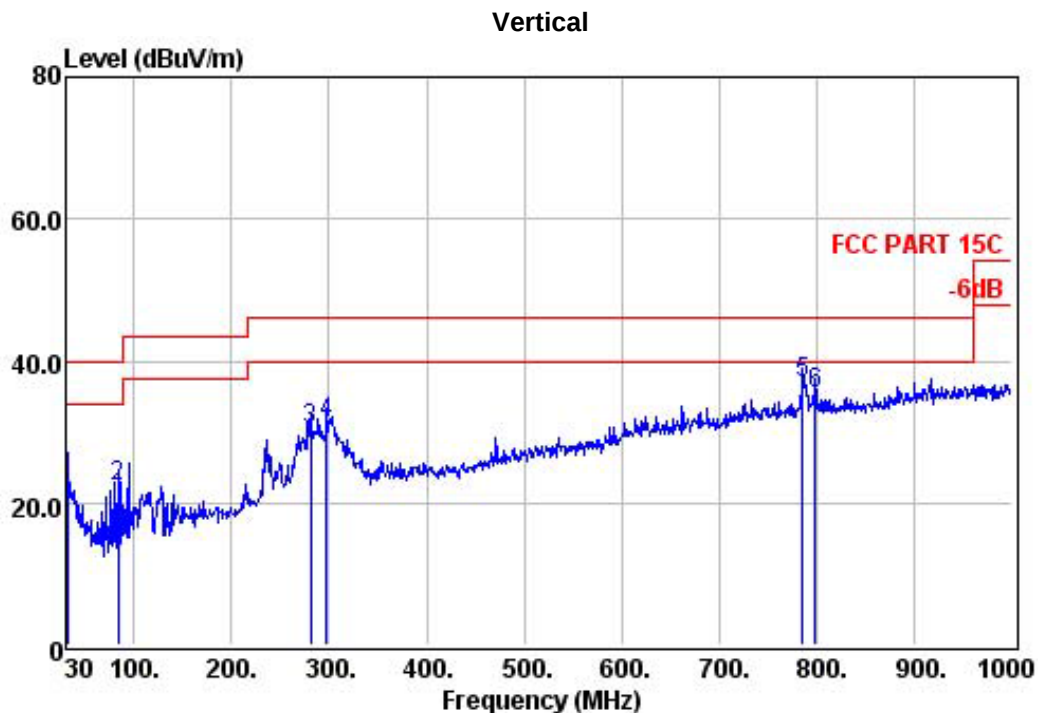
EUT:	Wireless Keyboard	Model Name :	IK6630
Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Test Voltage:	DC 1.5V
Test Mode :	TX		

Below 1GHz

Horizontal



	Freq	Read Level	Cable Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	32.91	3.91	1.23	17.08	22.22	40.00	-17.78	QP
2	234.67	20.93	2.73	12.47	36.13	46.00	-9.87	QP
3	250.19	18.99	2.82	12.90	34.71	46.00	-11.29	QP
4	279.29	21.16	2.92	13.14	37.22	46.00	-8.78	QP
5	298.69	19.72	2.98	13.76	36.46	46.00	-9.54	QP
6	786.60	8.35	6.17	22.84	37.36	46.00	-8.64	QP



	Freq	Read Level	CableAntenna Loss	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	32.91	5.14	1.23	17.08	23.45	40.00	-16.55	QP
2	83.35	11.99	1.95	8.37	22.31	40.00	-17.69	QP
3	281.23	14.22	2.93	13.20	30.35	46.00	-15.65	QP
4	297.72	14.64	2.98	13.73	31.35	46.00	-14.65	QP
5	785.63	7.87	6.14	22.83	36.84	46.00	-9.16	QP
6	798.24	6.17	6.29	22.98	35.44	46.00	-10.56	QP

NOTE:

Absolute Level= ReadingLevel+Antenna Factor+Cable Loss

Over Limit= Absolute Level – Limit

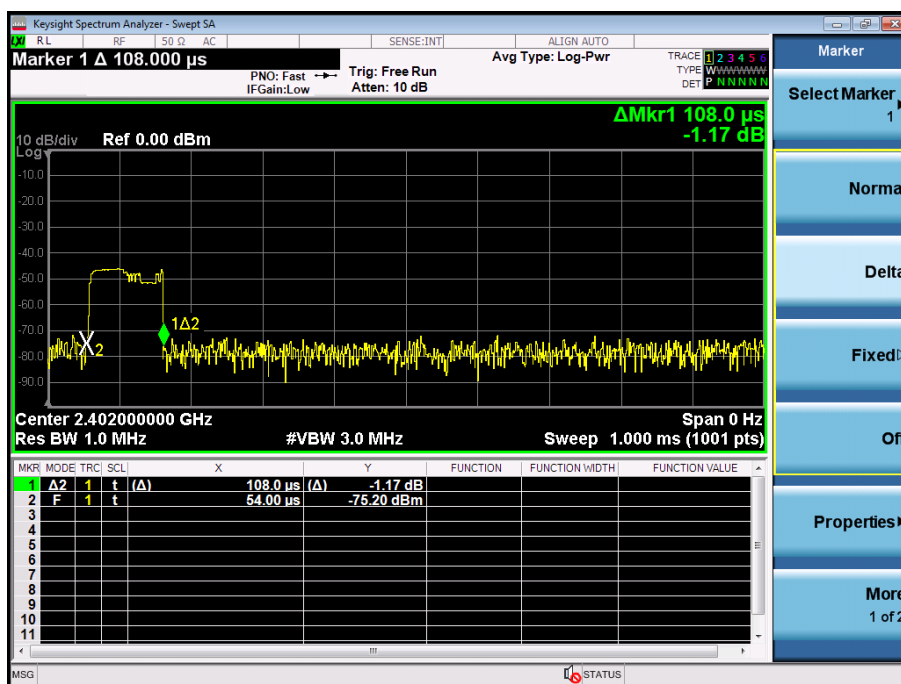
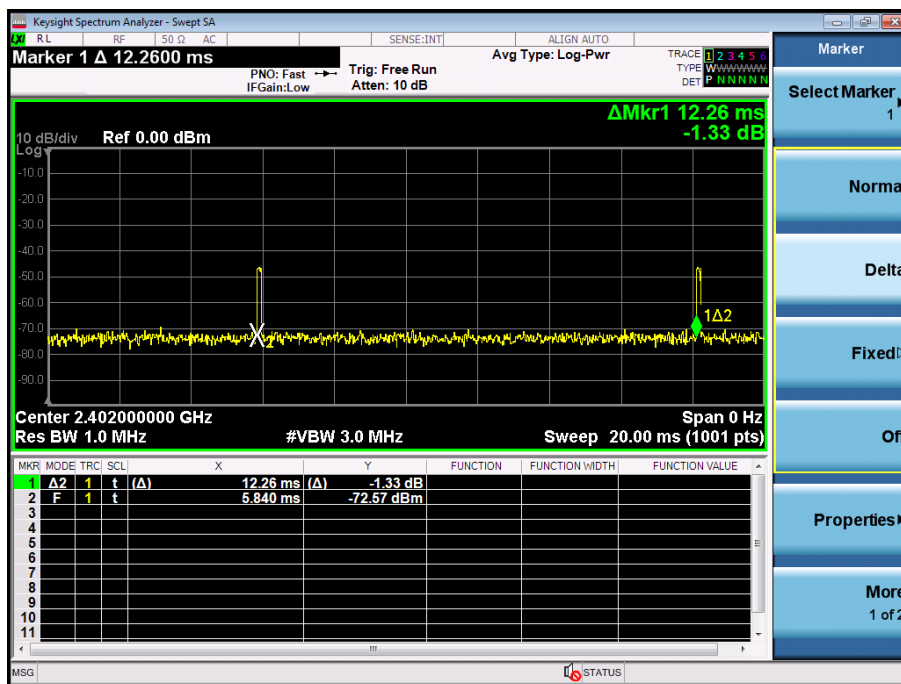
The average correction factor is computed by analyzing the on time in 100ms over one complete pulse train. Analysis of the remote transmitter on time in one complete pulse train, therefore the average value of fundamental frequency is: Average = Peak value + PDCF, where the PDCF is calculated from following formula:

$$\text{PDCF} = 20\log(\text{Duty cycle}) = 20\log(0.108/12.26) = 20\log(0.02467105) = -41.1\text{dB}$$

PDCF means pulse desensitization correction factor.

Please refer to below plots for more details.

Because PDCF is less than -20dB, so average value is determined by -20dB PDCF.



Above 1GHz

2402MHz

Peak Measurement:						
Frequency (MHz)	Reading Level (dB μ V/m)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Antenna polarization
2402	81.82	9.7	91.52	114.00	-22.48	V
4804	39.45	17.39	56.84	74.00	-17.16	V
7206	36.97	15.38	52.35	74.00	-21.65	V
2402	84.11	9.7	93.81	114.00	-20.19	H
4804	40.92	17.39	58.31	74.00	-15.69	H
7206	37.97	15.38	53.35	74.00	-20.65	H
Average Measurement:						
Frequency (MHz)	PDCF (dB)	Peak Level (dB μ V/m)	Average Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna polarization
2402	-20	91.52	71.52	94.00	-22.48	V
4804		56.84	36.84	54.00	-17.16	V
7206		52.35	32.35	54.00	-21.65	V
2402		93.81	73.81	94.00	-20.19	H
4804		58.31	38.31	54.00	-15.69	H
7206		53.35	33.35	54.00	-20.65	H

2441MHz

Peak Measurement:						
Frequency (MHz)	Reading Level (dB μ V/m)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Antenna polarization
2441	82.63	9.7	92.33	114.00	-21.67	V
4882	40.32	17.39	57.71	74.00	-16.29	V
7323	37.15	15.38	52.53	74.00	-21.47	V
2441	84.56	9.7	94.26	114.00	-19.74	H
4882	41.46	17.39	58.85	74.00	-15.15	H
7323	38.32	15.38	53.7	74.00	-20.3	H
Average Measurement:						
Frequency (MHz)	PDCF (dB)	Peak Level (dB μ V/m)	Average Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna polarization
2441	-20	92.33	72.33	94.00	-21.67	V
4882		57.71	37.71	54.00	-16.29	V
7323		52.53	32.53	54.00	-21.47	V
2441		94.26	74.26	94.00	-19.74	H
4882		58.85	38.85	54.00	-15.15	H
7323		53.7	33.7	54.00	-20.3	H

2480MHz

Peak Measurement:						
Frequency (MHz)	Reading Level (dB μ V/m)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Antenna polarization
2480	82.15	9.67	91.82	114.00	-22.18	V
4960	39.52	16.05	55.57	74.00	-18.43	V
7440	36.78	14.55	51.33	74.00	-22.67	V
2480	83.24	9.67	92.91	114.00	-21.09	H
4960	40.76	16.05	56.81	74.00	-17.19	H
7440	38.39	14.55	52.94	74.00	-21.06	H
Average Measurement:						
Frequency (MHz)	PDCF (dB)	Peak Level (dB μ V/m)	Average Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna polarization
2480	-20	91.82	71.82	94.00	-22.18	V
4960		55.57	35.57	54.00	-18.43	V
7440		51.33	31.33	54.00	-22.67	V
2480		92.91	72.91	94.00	-21.09	H
4960		56.81	36.81	54.00	-17.19	H
7440		52.94	32.94	54.00	-21.06	H

NOTE:1.Absolute Level= ReadingLevel+Antenna Factor+Cable Loss-Preamp Factor.

2.Over Limit= Absolute Level – Limit.

3.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.

4.EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report (Z orientation)

5. OCCUPIED BANDWIDTH TEST

5.1. Test Requirement

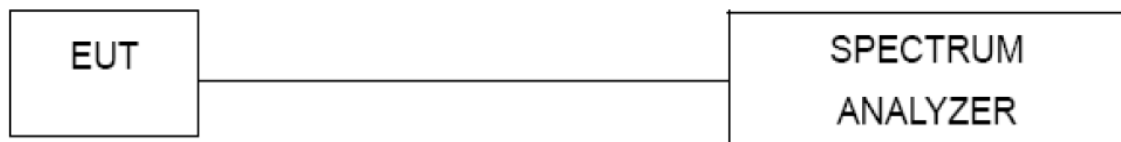
FCC Part 15 C section 15.215

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

5.2. Test Method

ANSI C63.10: Clause 6.9.1

5.3. Test setup



5.4. Test Result

EUT:	Wireless Keyboard	Model Name :	IK6630
Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Test Voltage:	DC 1.5V
Test Mode :	TX		

CHANNEL FREQUENCY (MHz)	Measured Frequencies		Limit	PASS /FAIL
	FL (MHz)	FH (MHz)		
2402	2400.975	---	>2400MHz	PASS
2480	---	2481.030	<2483.5MHz	PASS

Test plot as follows:

2402MHz



2480MHz



6. BAND EDGE COMPLIANCE TEST

6.1. Test Requirement

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

6.2. Test setup

The EUT was placed on a turn table which was 1.5 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

Set to span from the lowest frequency generated in the device up to and including the tenth harmonic of the highest fundamental frequency

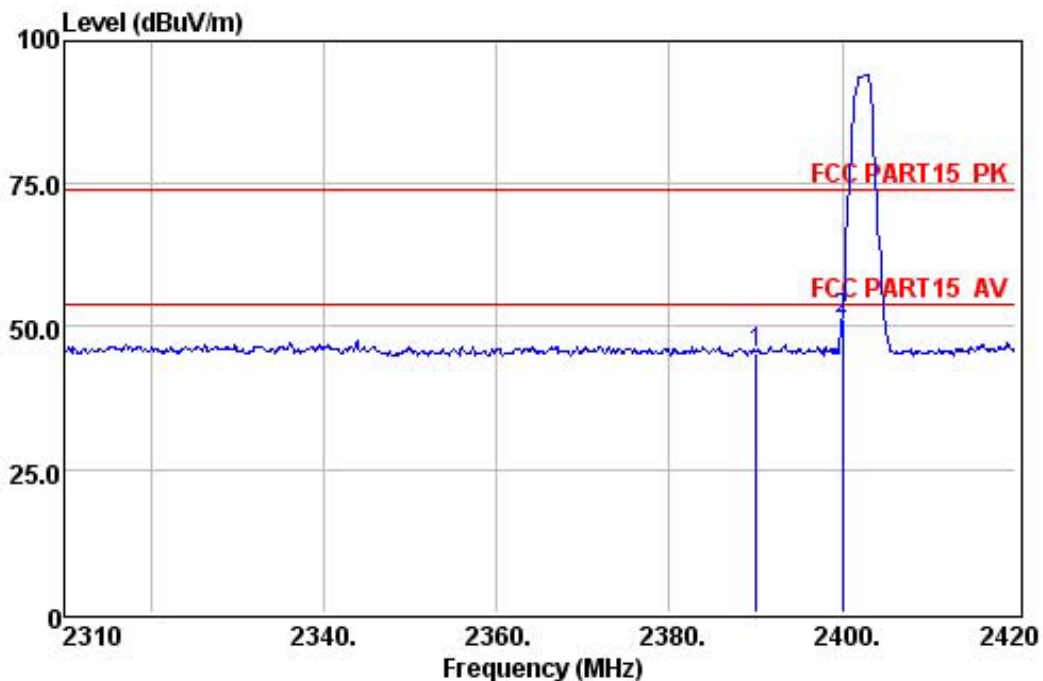
The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure. For all test, used peak detector.

Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

For radiated test as follows:

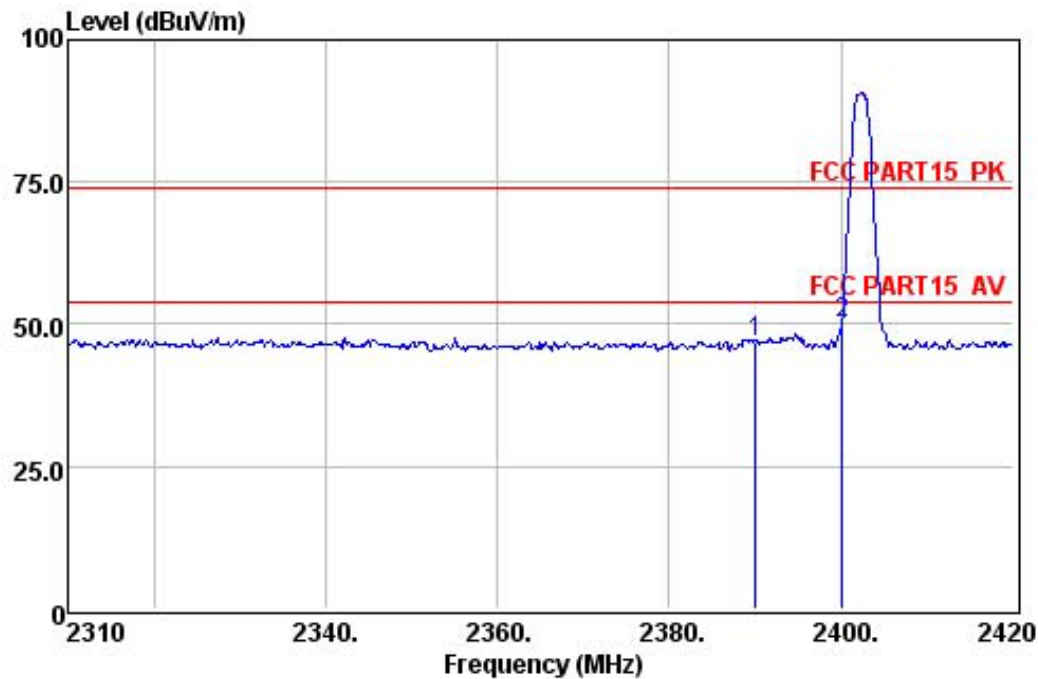
EUT:	Wireless Keyboard	Model Name :	IK6630
Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Test Voltage:	DC 1.5V
Test Mode :	TX		

Horizontal -Low



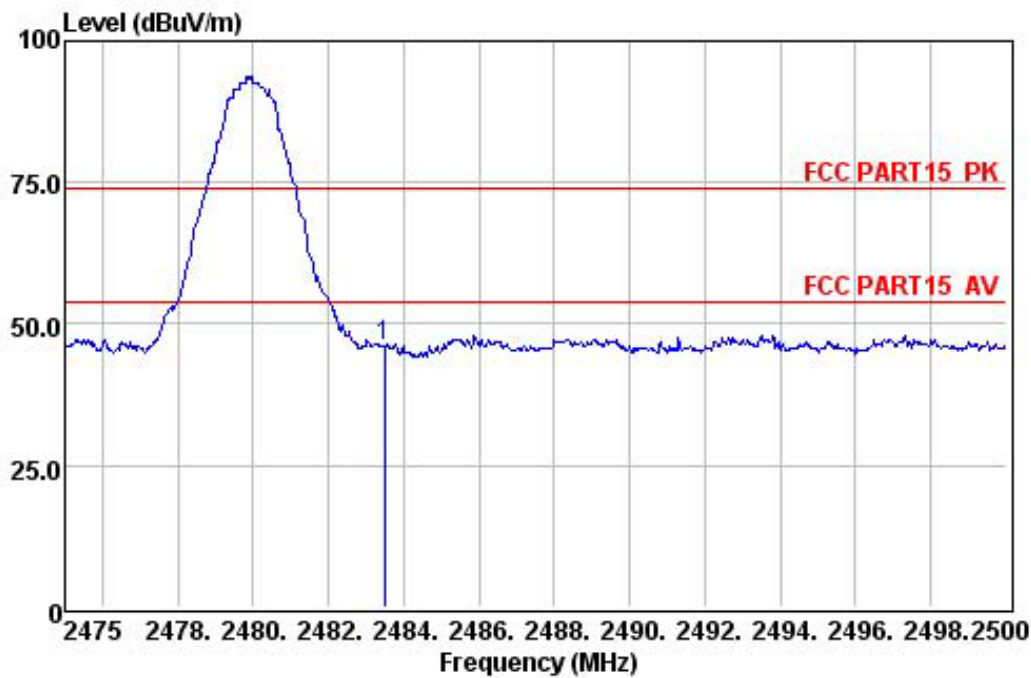
	Freq	Read Level	Preamp Factor	CableAntenna Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2390.00	39.63	26.32	3.36	28.72	45.39	74.00	-28.61	Peak
2	2400.00	45.49	26.32	3.38	28.72	51.27	74.00	-22.73	Peak

Vertical -Low



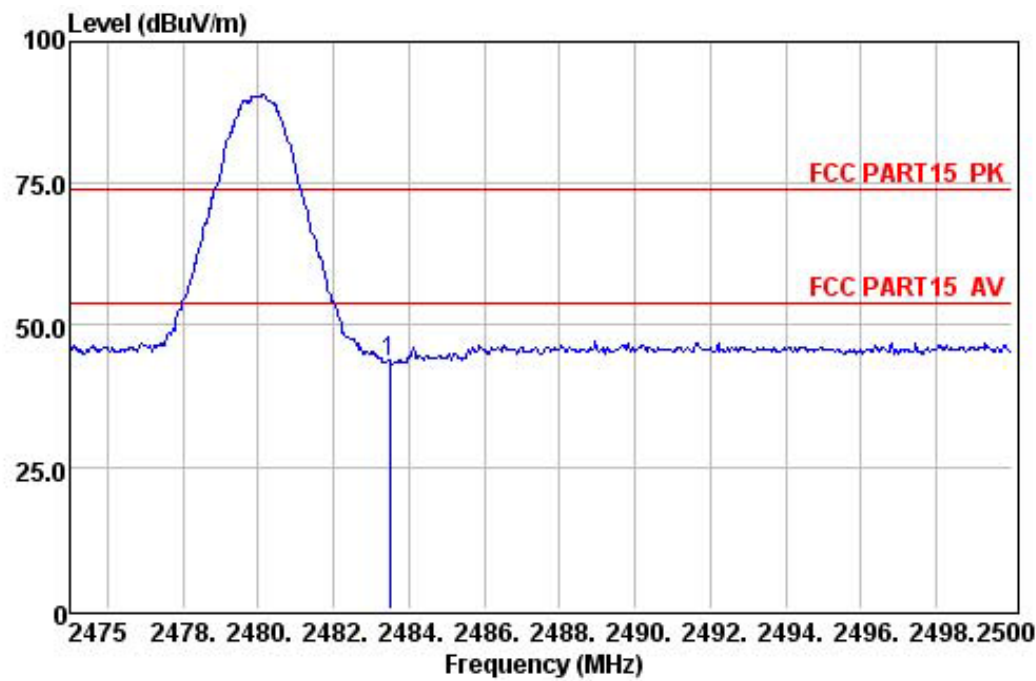
	Freq	Read Level	Preamplifier Factor	Cable/Antenna Loss	Antenna Factor	Level	Limit	Over Limit	Remark
	MHz	dBuV	dB	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2390.00	41.05	26.32	3.36	28.72	46.81	74.00	-27.19	Peak
2	2400.09	44.41	26.32	3.38	28.72	50.19	74.00	-23.81	Peak

Horizontal -High



	Freq	Read Level	Preamplifier Factor	Cable Loss	Antenna Factor	Level	Limit	Over Limit	Remark
	MHz	dBuV	dB	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2483.50	40.31	26.34	3.48	28.79	46.24	74.00	-27.76	Peak

Vertical -High



	Freq	Read Level	Preamplifier Factor	Cable Loss	Antenna Factor	Level	Limit	Over Limit	Remark
	MHz	dBuV	dB	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2483.50	37.66	26.34	3.48	28.79	43.59	74.00	-30.41	Peak

If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

7. ANTENNA REQUIREMENTS

7.1. Test Requirement

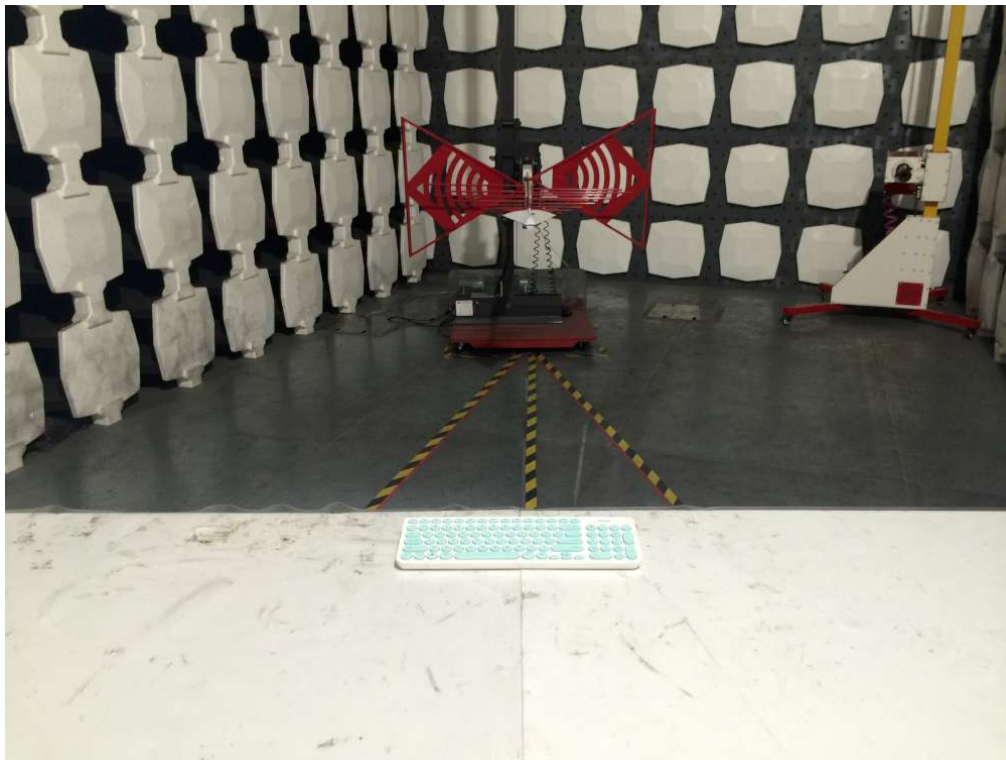
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

7.2. Result

The antenna used for this product is PCB antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 1.8dBi.

8. PHOTOGRAPHS OF TEST SET-UP

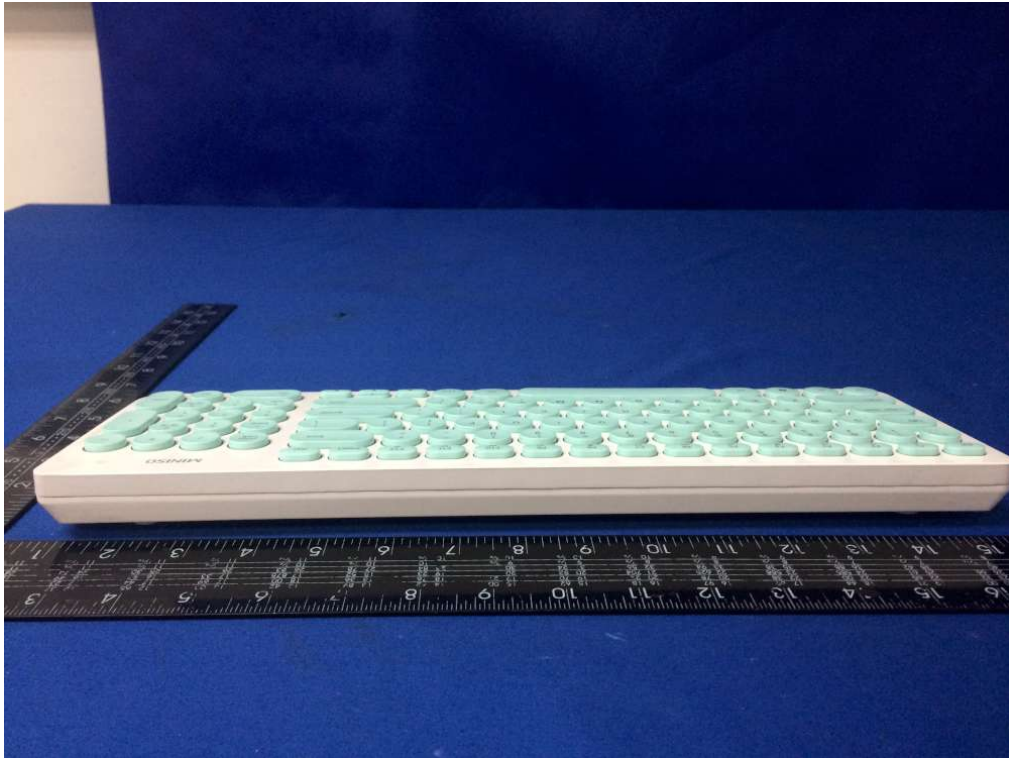
Radiated Emission Test

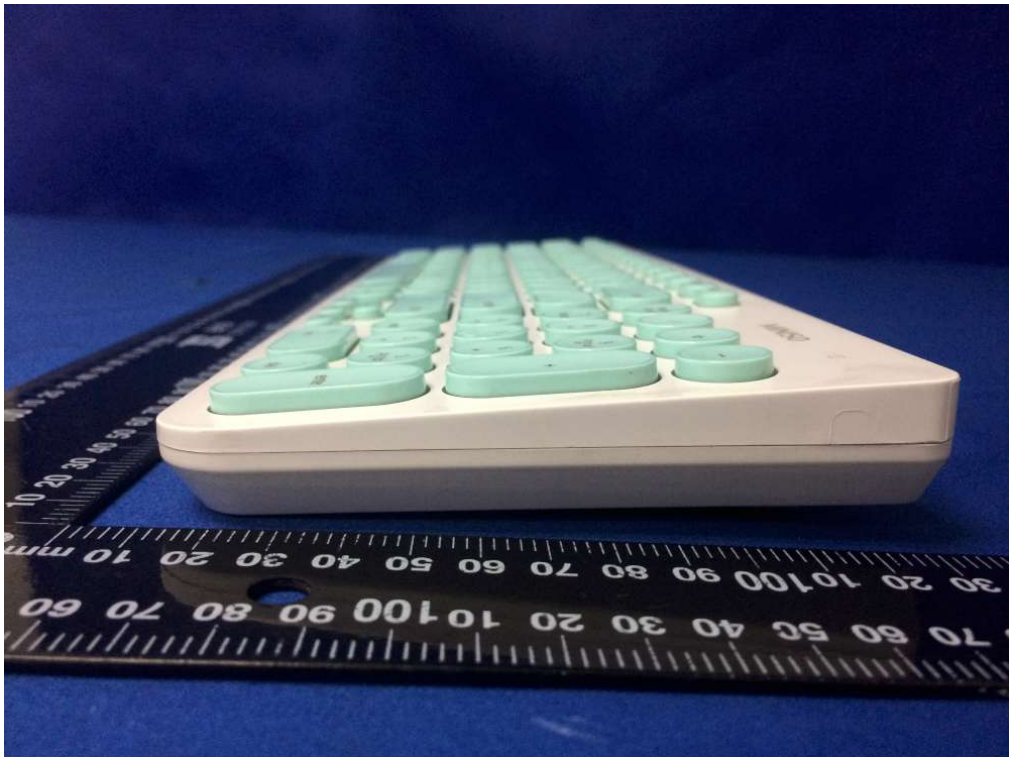
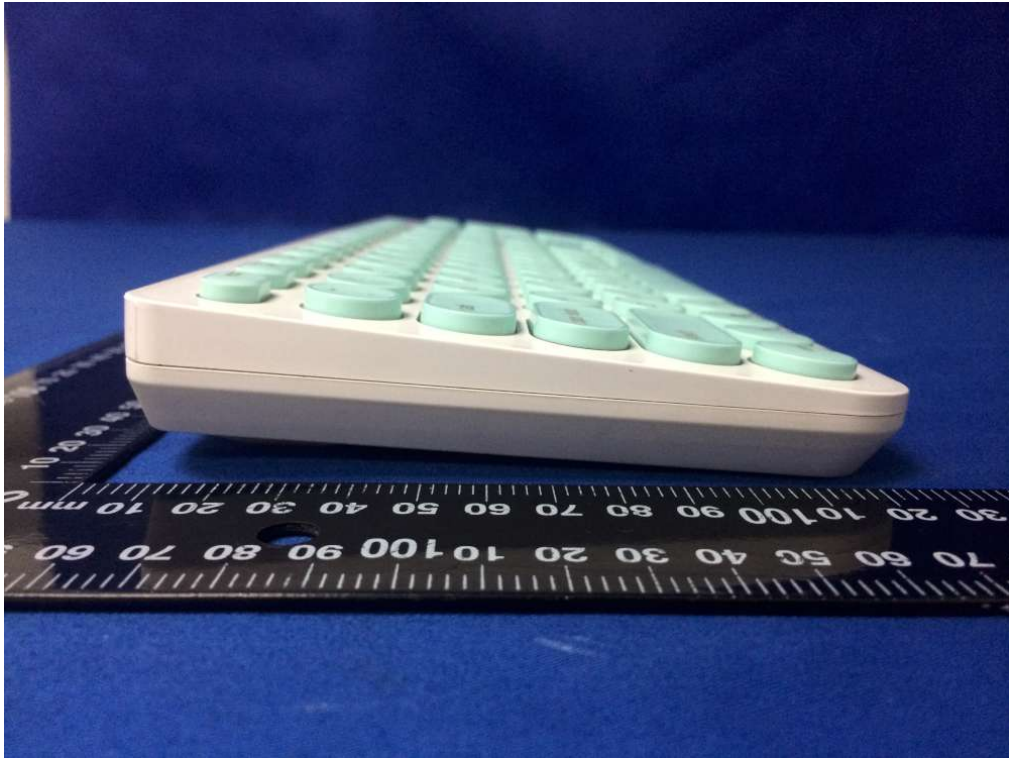


9. PHOTOGRAPHS OF THE EUT

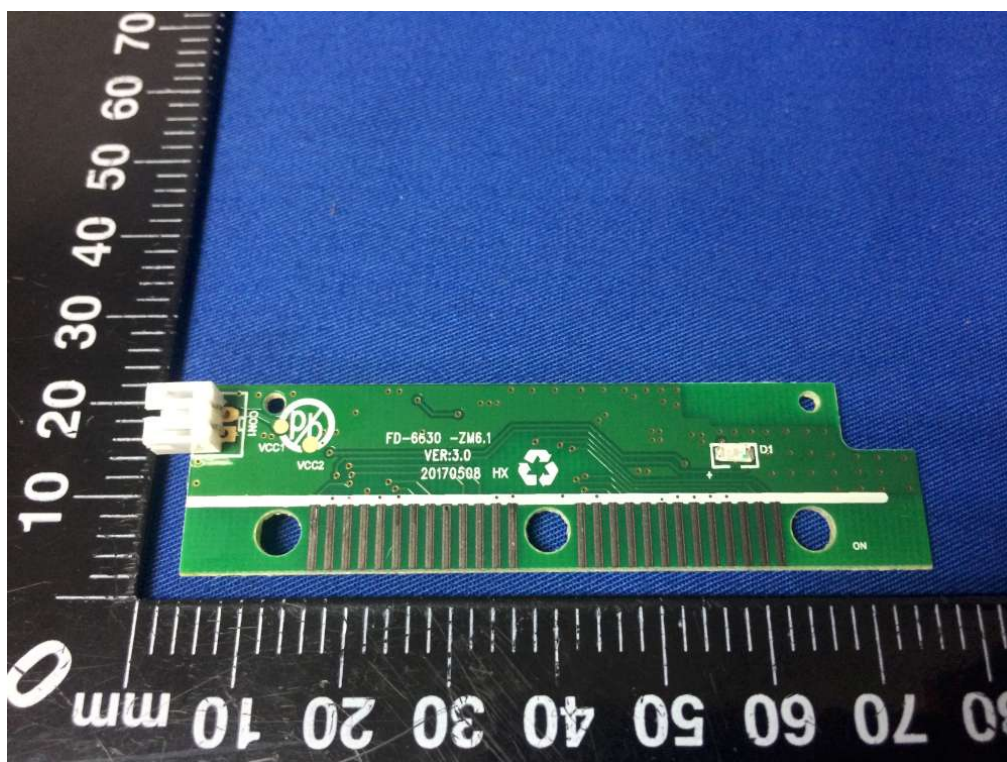
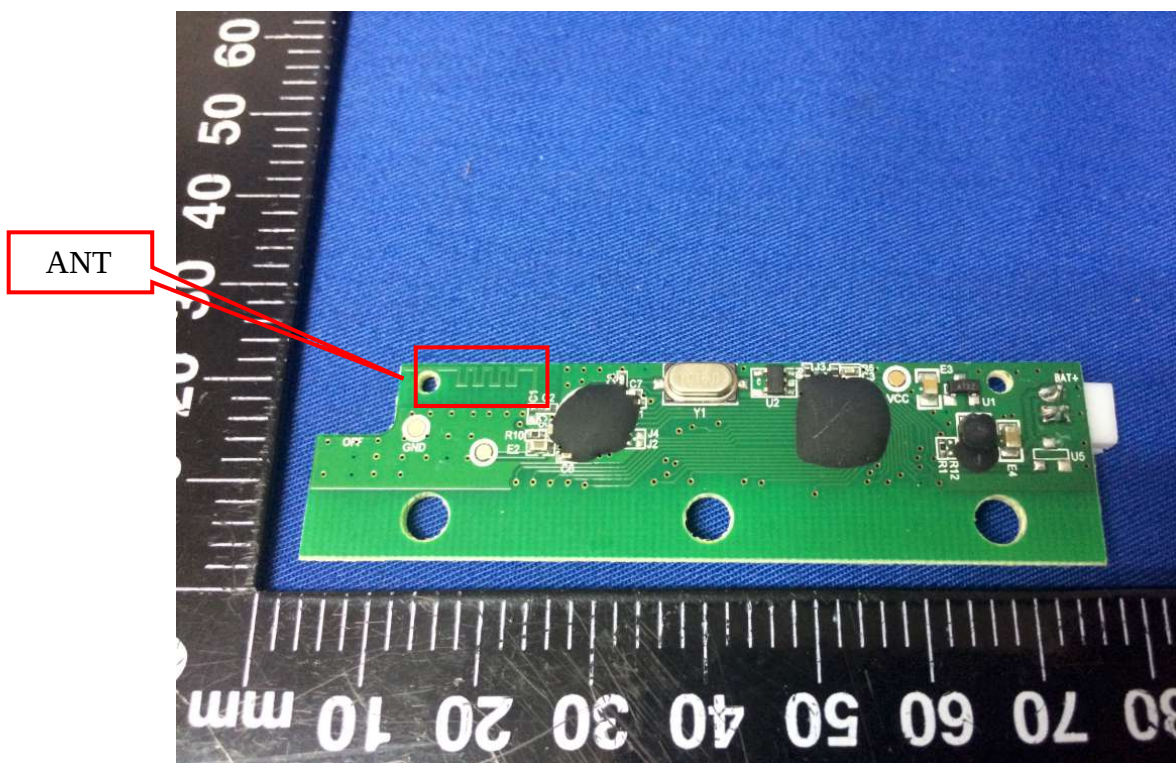












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