

# FCC Test Report

Report No.: AGC07102190904FE02

**FCC ID** : 2AAVD-KG9013

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION** : WIRELESS KEYBOARD

**BRAND NAME** : loshine

**MODEL NAME** : KG9013

**APPLICANT** : Shenzhen Loyal Electronics Co., Ltd.

**DATE OF ISSUE** : Sep. 29, 2019

**STANDARD(S)** : FCC Part 15.247

**REPORT VERSION** : V1.0

## Attestation of Global Compliance (Shenzhen) Co., Ltd

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**REPORT REVISE RECORD**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Sep. 29, 2019	Valid	Initial Release



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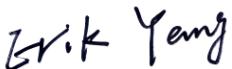
## 1. VERIFICATION OF COMPLIANCE

<b>Applicant</b>	Shenzhen Loyal Electronics Co., Ltd.
<b>Address</b>	No.5, 1ST INDUSTRIAL AREA OF SHANMEN, SONGGANG, BAOAN, SHENZHEN, CHINA
<b>Manufacturer</b>	Shenzhen Loyal Electronics Co., Ltd.
<b>Address</b>	No.5, 1ST INDUSTRIAL AREA OF SHANMEN, SONGGANG, BAOAN, SHENZHEN, CHINA
<b>Factory</b>	Shenzhen Loyal Electronics Co., Ltd.
<b>Address</b>	No.5, 1ST INDUSTRIAL AREA OF SHANMEN, SONGGANG, BAOAN, SHENZHEN, CHINA
<b>Product Designation</b>	WIRELESS KEYBOARD
<b>Brand Name</b>	Ioshine
<b>Test Model</b>	KG9013
<b>Date of test</b>	Sep. 24, 2019 to Sep. 27, 2019
<b>Deviation</b>	None
<b>Condition of Test Sample</b>	Normal
<b>Test Result</b>	Pass
<b>Report Template</b>	AGCRT-US-BLE/RF

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC part 15.247.

Tested By



Erik Yang  
(Project Engineer)

Sep. 27, 2019

Reviewed By



Max Zhang  
(Reviewer)

Sep. 29, 2019

Approved By



Forrest Lei  
(Authorized Officer)

Sep. 29, 2019



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## 2.GENERAL INFORMATION

### 2.1 PRODUCT DESCRIPTION

The EUT is designed as a "WIRELESS KEYBOARD". It is designed by way of utilizing the FSK technology to achieve the system operation.

A major technical description of EUT is described as following

<b>Operation Frequency</b>	2.408 GHz to 2.474GHz
<b>RF Output Power</b>	-15.779dBm(Max)
<b>Modulation</b>	FSK
<b>Number of channels</b>	34 Channels
<b>Antenna Designation</b>	PCB Antenna(Comply with requirements of the FCC part 15.203)
<b>Antenna Gain</b>	-0.61dBi
<b>Hardware Version</b>	V1
<b>Software Version</b>	V01
<b>Power Supply</b>	DC 3.0V by Battery

**2.2. TABLE OF CARRIER FREQUENCIES**

Channel Number	Frequency	Channel Number	Frequency
1	2408MHz	18	2442MHz
2	2410MHz	19	2444MHz
3	2412MHz	20	2446MHz
4	2414MHz	21	2448MHz
5	2416MHz	22	2450MHz
6	2418MHz	23	2452MHz
7	2420MHz	24	2454MHz
8	2422MHz	25	2456MHz
9	2424MHz	26	2458MHz
10	2426MHz	27	2460MHz
11	2428MHz	28	2462MHz
12	2430MHz	29	2464MHz
13	2432MHz	30	2466MHz
14	2434MHz	31	2468MHz
15	2436MHz	32	2470MHz
16	2438MHz	33	2472MHz
17	2440MHz	34	2474MHz



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### 2.3 RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for FCC ID: 2AAVD-KG9013 filing to comply with the FCC Part 15.247 requirements.

### 2.4 TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

### 2.5 SPECIAL ACCESSORIES

Refer to section 2.2.

### 2.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.



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### 3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in measurement" (GUM) published by CISPR and ANSI.

- Uncertainty of Conducted Emission,  $U_c = \pm 3.2 \text{ dB}$
- Uncertainty of Radiated Emission below 1GHz,  $U_c = \pm 3.9 \text{ dB}$
- Uncertainty of Radiated Emission above 1GHz,  $U_c = \pm 4.8 \text{ dB}$



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**4. DESCRIPTION OF TEST MODES**

NO.	TEST MODE DESCRIPTION
1	Low channel TX
2	Middle channel TX
3	High channel TX

Note:

1. Only the result of the worst case was recorded in the report, if no other cases.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
3. For Conducted Test method, a temporary antenna connector is provided by the manufacturer.

## 5. SYSTEM TEST CONFIGURATION

### 5.1 CONFIGURATION OF TESTED SYSTEM

Radiated Emission Configure :



### 5.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	WIRELESS KEYBOARD	KG9013	2AAVD-KG9013	EUT

### 5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
15.247 (b)(3)	Peak Output Power	Compliant
15.247 (a)(2)	6 dB Bandwidth	Compliant
15.247 (d)	Conducted Spurious Emission	Compliant
15.247 (e)	Maximum Conducted Output Power Density	Compliant
15.209	Radiated Emission	Compliant
15.207	Conducted Emission	N/A

Note: N/A stands for not applicable.



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**6. TEST FACILITY**

<b>Test Site</b>	Attestation of Global Compliance (Shenzhen) Co., Ltd
<b>Location</b>	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
<b>Designation Number</b>	CN1259
<b>FCC Test Firm Registration Number</b>	975832
<b>A2LA Cert. No.</b>	5054.02
<b>Description</b>	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA

**TEST EQUIPMENT OF RADIATED EMISSION TEST**

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Jun. 12, 2019	Jun. 11, 2020
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 20, 2018	Dec. 19, 2019
2.4GHz Fliter	EM Electronics	2400-2500	N/A	Feb. 27, 2019	Feb. 26, 2020
Attenuator	Wariors	W13	11324	Sep. 09, 2019	Sep. 08, 2020
Horn antenna	ETS-LINDGREN	3117	00154520	Oct. 21, 2018	Oct. 20, 2020
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Jun. 12, 2019	Jun. 11, 2021
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May. 17, 2019	May. 16, 2021
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Oct. 25, 2018	Oct. 24, 2019
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 09, 2019	Jan. 08, 2021

## 7. PEAK OUTPUT POWER

### 7.1. MEASUREMENT PROCEDURE

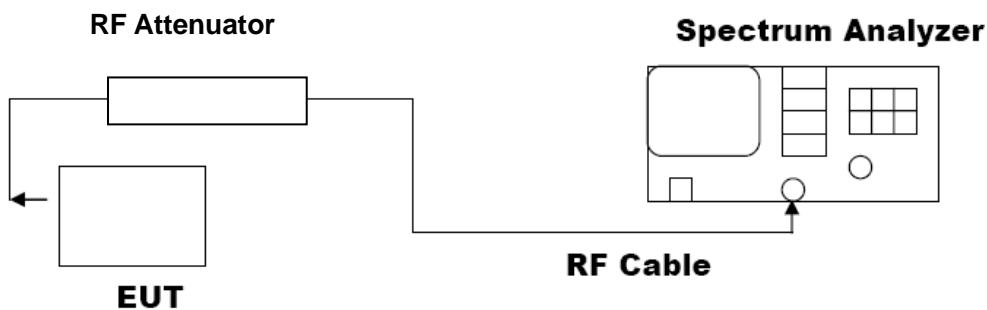
For peak power test:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2.  $RBW \geq DTS$  bandwidth
3.  $VBW \geq 3 \times RBW$ .
4.  $SPAN \geq VBW$ .
5. Sweep: Auto.
6. Detector function: Peak.
7. Trace: Max hold.

Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

### 7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

#### PEAK POWER TEST SETUP



### 7.3. LIMITS AND MEASUREMENT RESULT

PEAK OUTPUT POWER MEASUREMENT RESULT FOR FSK MOUDULATION			
Frequency (GHz)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.408	-15.779	30	Pass
2.440	-20.843	30	Pass
2.474	-15.974	30	Pass

CH1



### CH17



### CH34



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## 8. 6 DB BANDWIDTH

### 8.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW $\geqslant$ 3 $\times$ RBW.
4. Set SPA Trace 1 Max hold, then View.

**Note:** The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

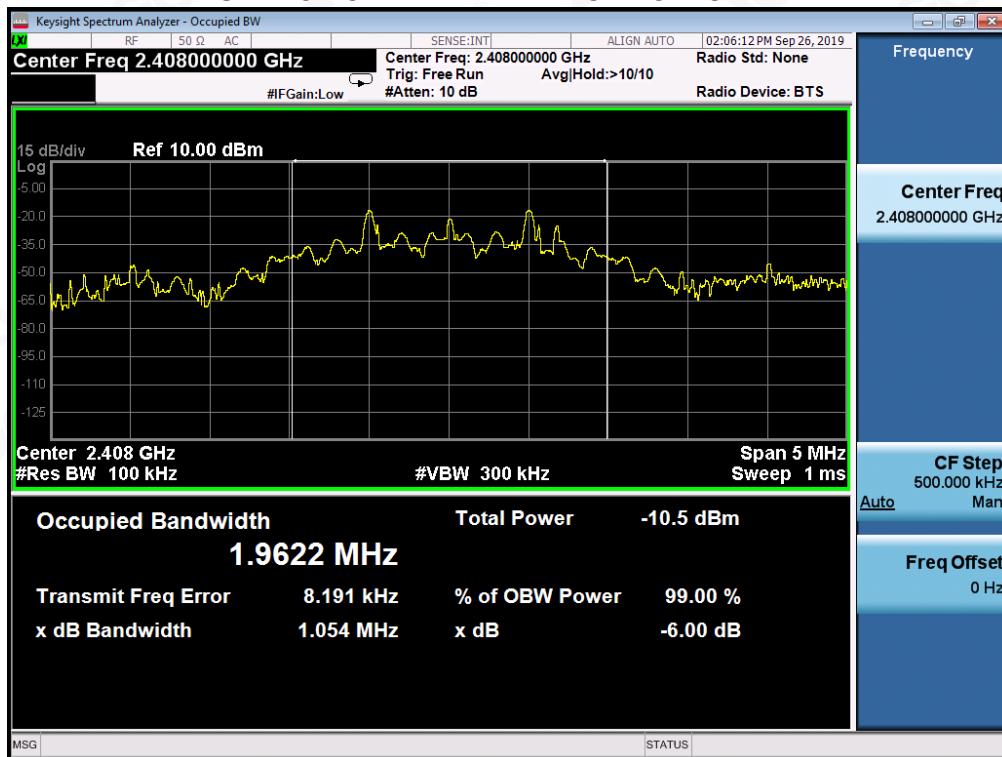
### 8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

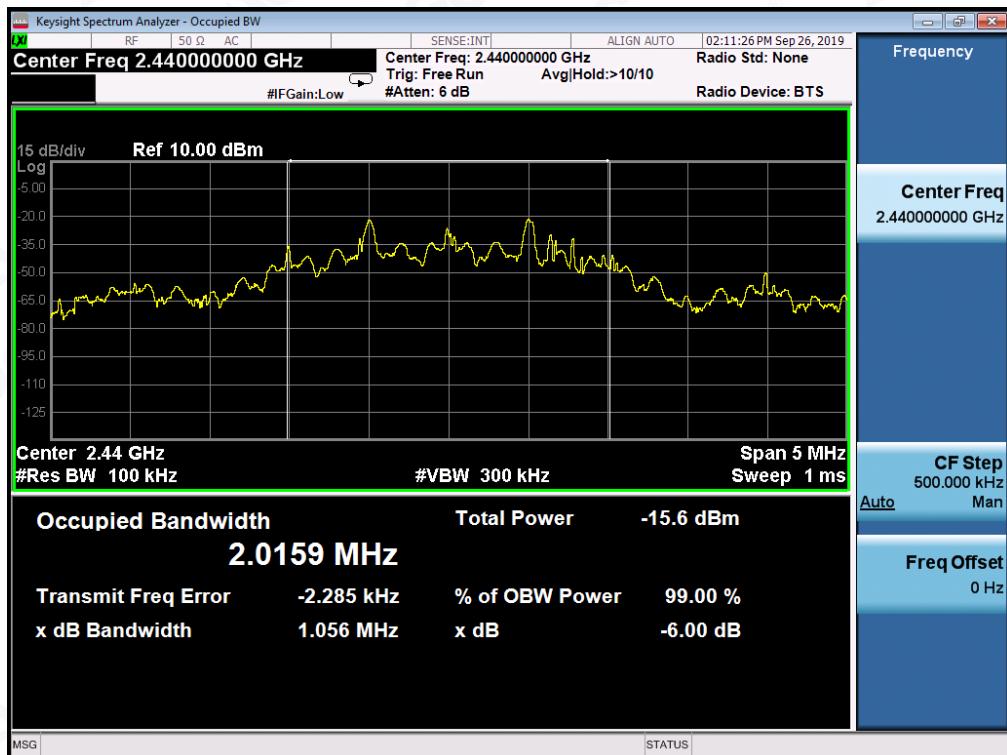
### 8.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Applicable Limits		
	Test Data (KHz)		Criteria
>500KHZ	Low Channel	1054	PASS
	Middle Channel	1056	PASS
	High Channel	1345	PASS

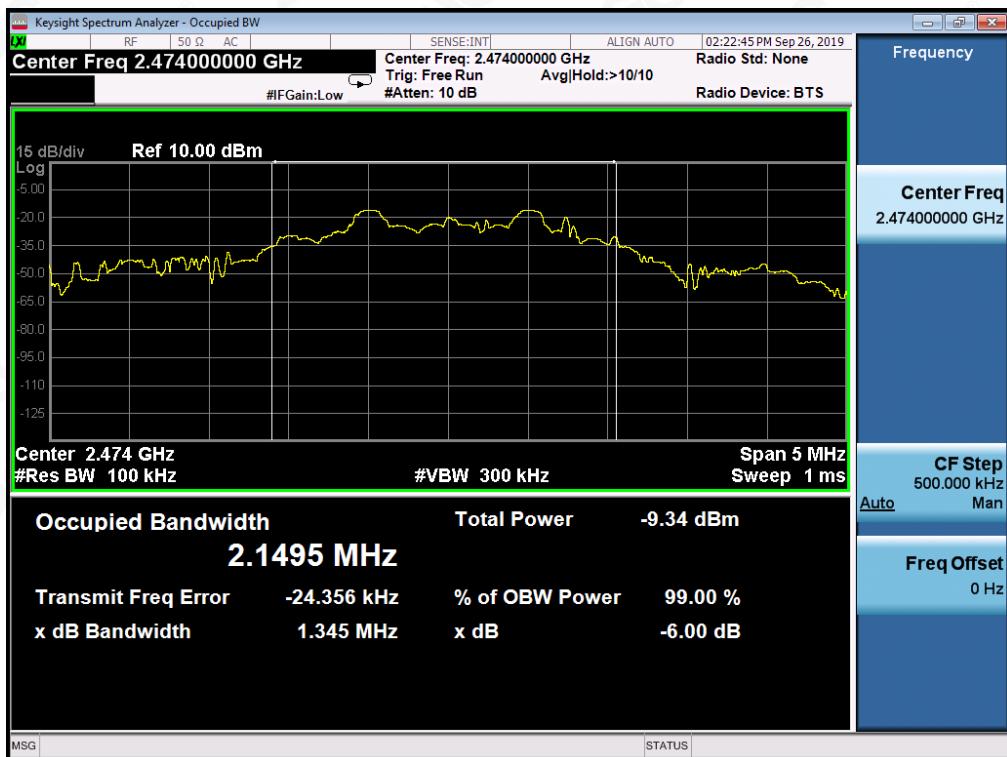
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



## TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



## TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



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## 9. CONDUCTED SPURIOUS EMISSION

### 9.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

**Note:** The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

### 9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

### 9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

### 9.4. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test Data	Criteria
In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power.	At least -20dBc than the reference level	PASS PASS

### TEST RESULT FOR ENTIRE FREQUENCY RANGE FSK MODULATION IN LOW CHANNEL



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### FSK MODULATION IN MIDDLE CHANNEL



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## FSK MODULATION IN HIGH CHANNEL



Note: The peak emissions without marker on the above plots are fundamental wave and need not to compare with the limit.



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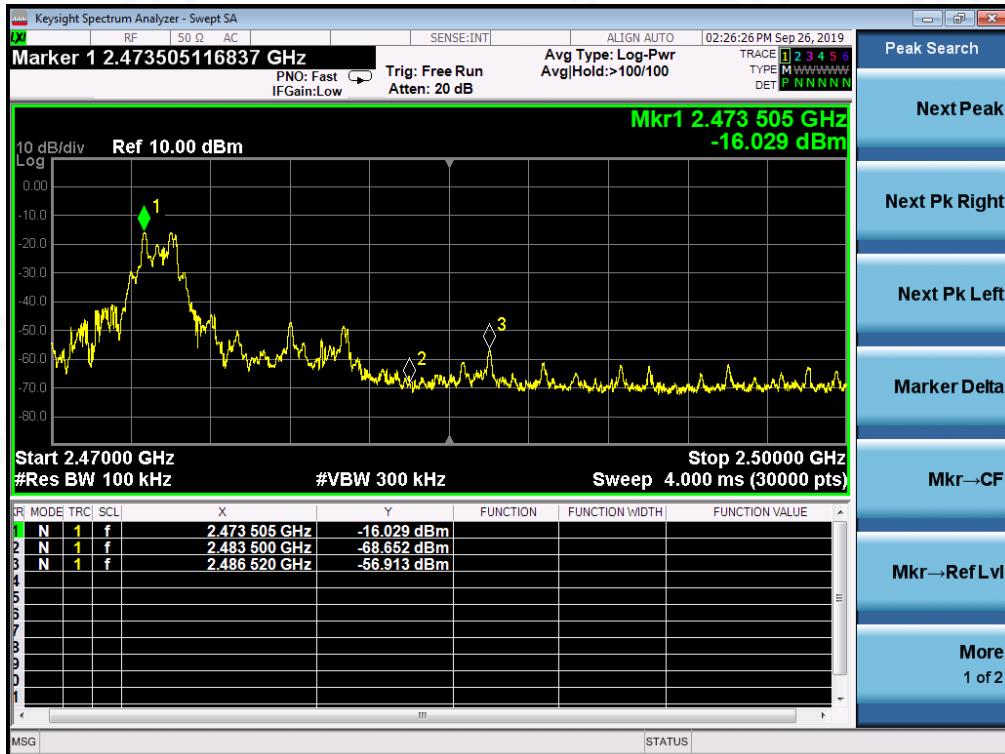
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### TEST RESULT FOR BAND EDGE FSK MODULATION IN LOW CHANNEL



### FSK MODULATION IN HIGH CHANNEL



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## 10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

### 10.1 MEASUREMENT PROCEDURE

- (1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (3). Set SPA Trace 1 Max hold, then View.

Note: The method of PKPSD in the KDB 558074 item 10.2 was used in this testing.

### 10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 7.2.

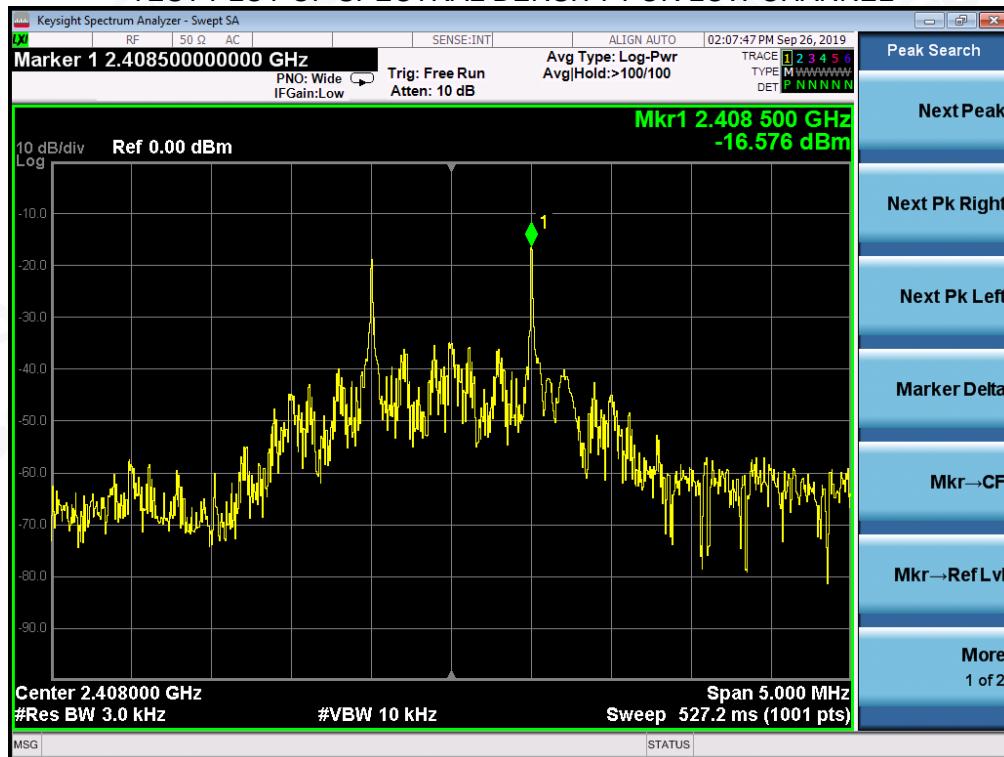
### 10.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

### 10.4 LIMITS AND MEASUREMENT RESULT

Channel No.	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	-16.576	8	Pass
Middle Channel	-16.371	8	Pass
High Channel	-16.643	8	Pass

TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL



### TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL



### TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL



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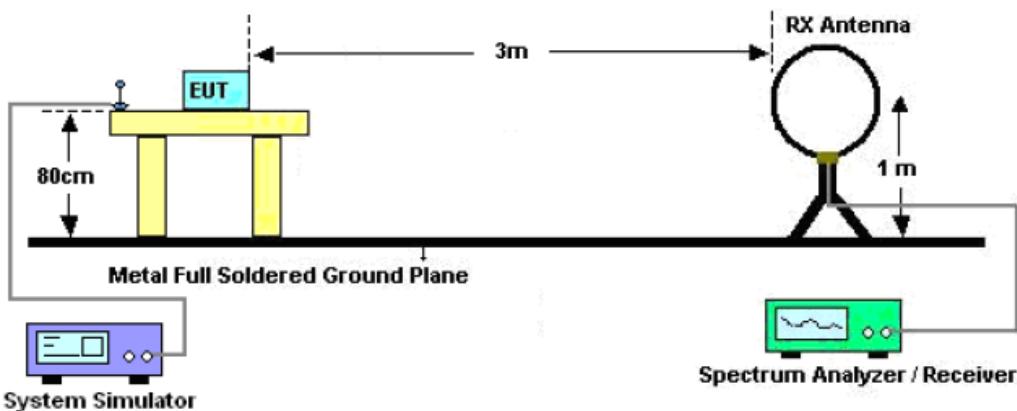
## 11. RADIATED EMISSION

### 11.1. MEASUREMENT PROCEDURE

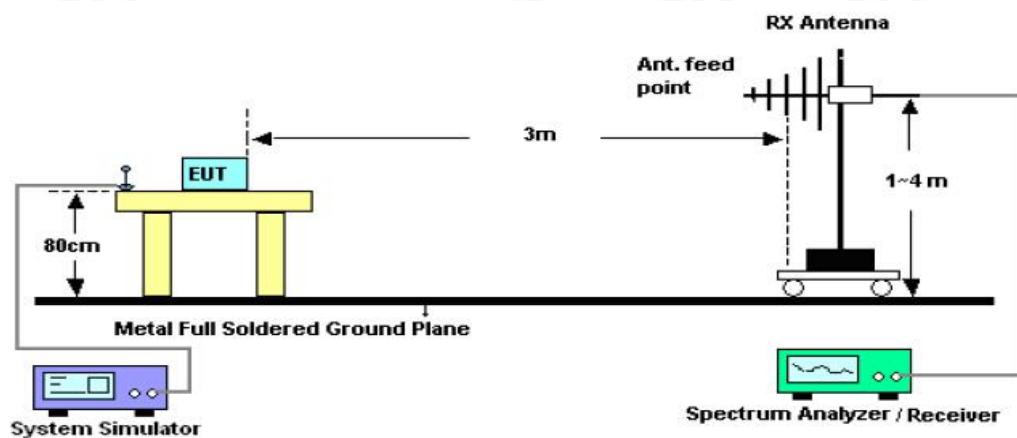
1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

## 11.2. TEST SETUP

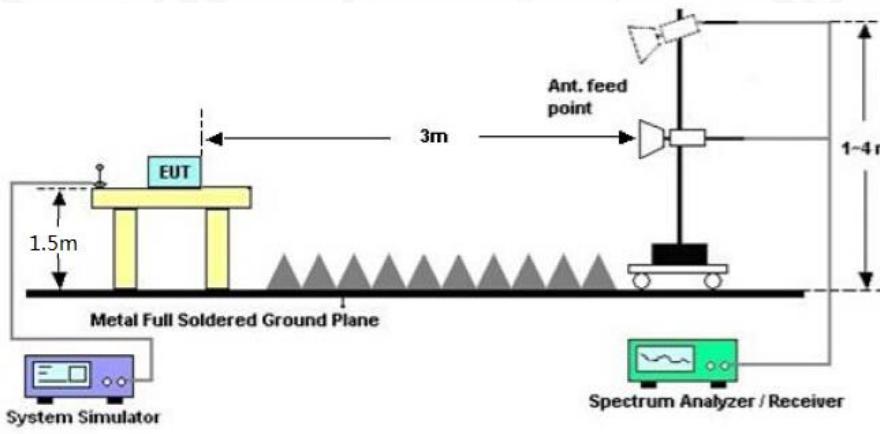
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



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**11.3. LIMITS AND MEASUREMENT RESULT**

15.209 Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested For restricted band radiated emission,  
the test records reported below are the worst result compared to other modes.

**11.4. TEST RESULT****RADIATED EMISSION BELOW 30MHZ**

No emission found between lowest internal used/generated frequencies to 30MHz.



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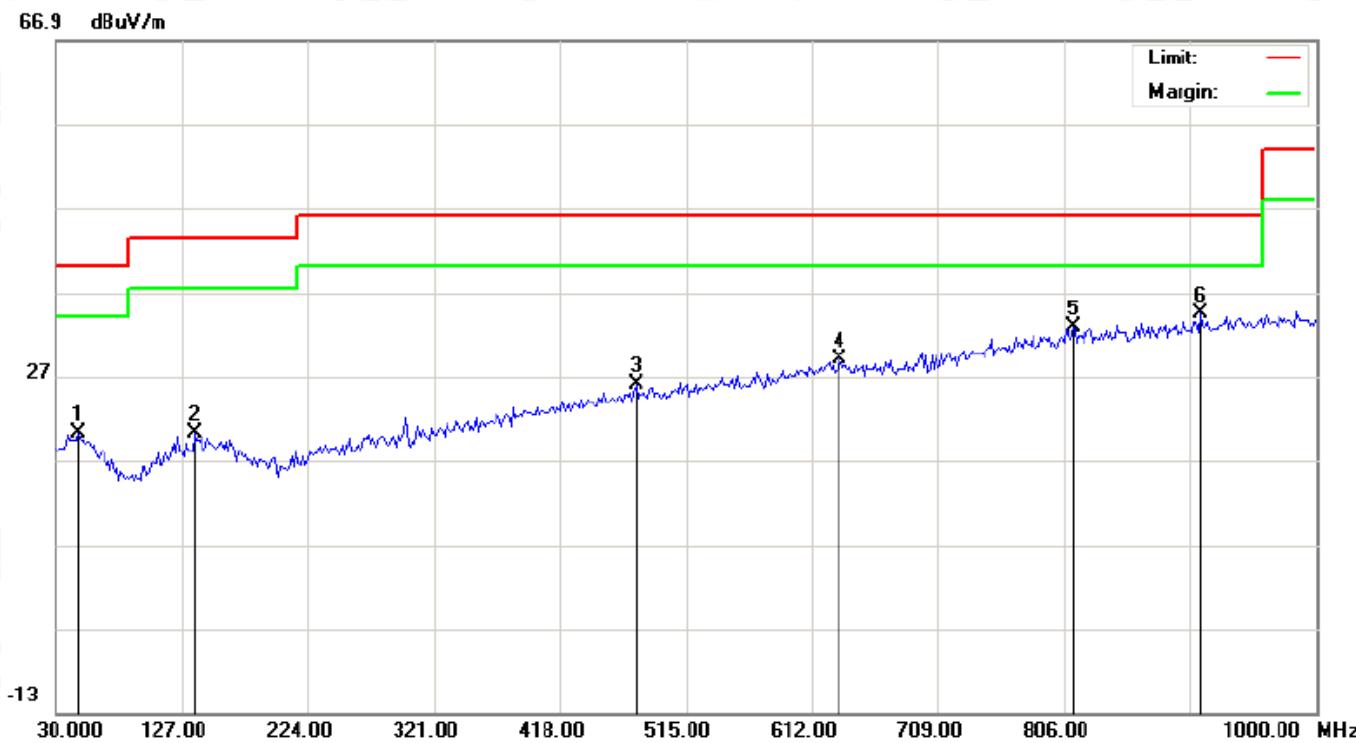
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**RADIATED EMISSION BELOW 1GHZ**

<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 1	<b>Antenna</b>	Horizontal

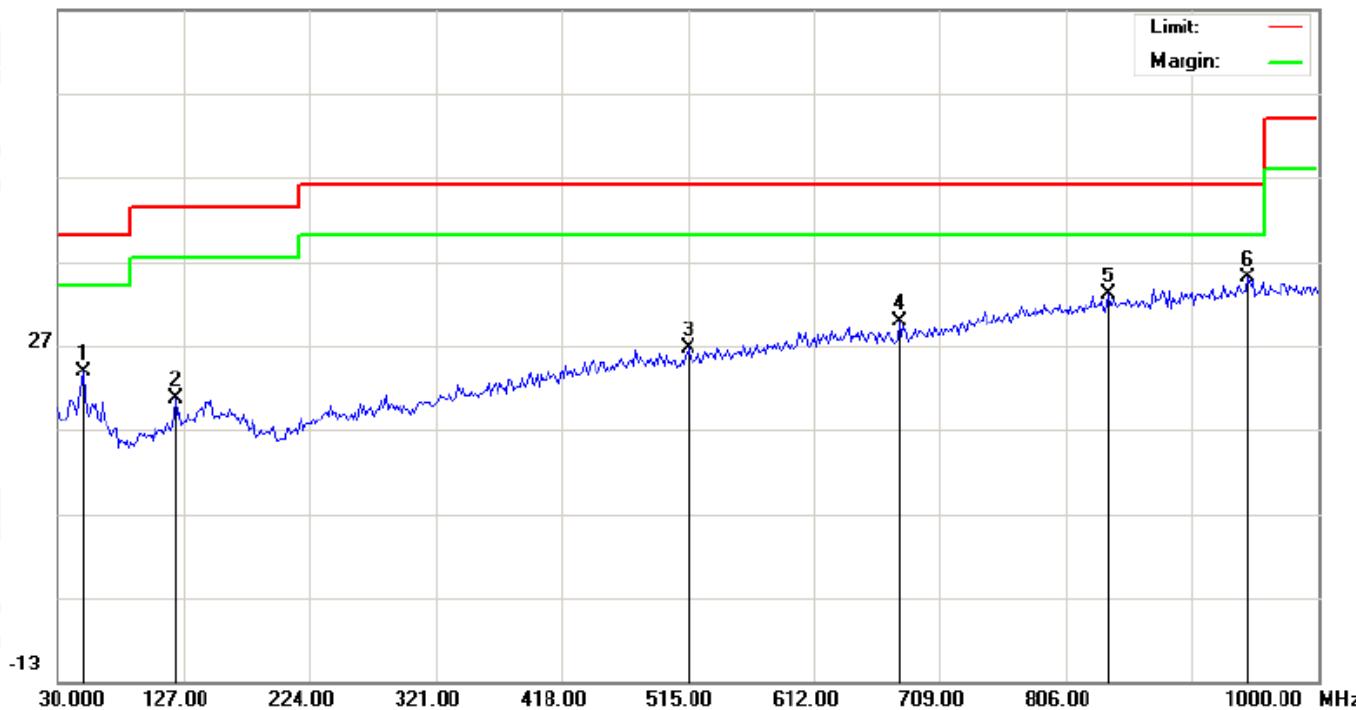


No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		47.7833	0.42	19.81	20.23	40.00	-19.77	peak			
2		136.7000	1.22	19.02	20.24	43.50	-23.26	peak			
3		476.2000	1.44	24.51	25.95	46.00	-20.05	peak			
4		633.0167	1.68	27.35	29.03	46.00	-16.97	peak			
5		812.4667	2.24	30.57	32.81	46.00	-13.19	peak			
6	*	911.0833	2.58	31.80	34.38	46.00	-11.62	peak			

**RESULT: PASS**

<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 1	<b>Antenna</b>	Vertical

66.9 dBuV/m



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		49.4000	4.13	19.75	23.88	40.00	-16.12	peak			
2		120.5333	2.64	18.00	20.64	43.50	-22.86	peak			
3		515.0000	1.32	25.28	26.60	46.00	-19.40	peak			
4		678.2833	1.96	27.89	29.85	46.00	-16.15	peak			
5		838.3333	2.06	30.90	32.96	46.00	-13.04	peak			
6	*	946.6500	2.90	32.10	35.00	46.00	-11.00	peak			

**RESULT: PASS****Note:**

- Factor=Antenna Factor + Cable loss, Margin= Limit-Level.
- All test modes had been tested. The mode 1 is the worst case and recorded in the report.

**RADIATED EMISSION ABOVE 1GHZ**

<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 1	<b>Antenna</b>	Horizontal

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4816.256	49.13	7.12	56.25	74	-17.75	peak
4816.256	40.02	7.12	47.14	54	-6.86	Avg
7224.429	47.79	9.84	57.63	74	-16.37	peak
7224.429	38.33	9.84	48.17	54	-5.83	Avg

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 1	<b>Antenna</b>	Vertical

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4816.256	47.85	7.12	54.97	74	-19.03	peak
4816.256	38.35	7.12	45.47	54	-8.53	Avg
7224.384	43.38	9.84	53.22	74	-20.78	peak
7224.384	34.72	9.84	44.56	54	-9.44	Avg

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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Service Hotline: 400 089 2118

<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 2	<b>Antenna</b>	Horizontal

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4880.206	48.05	7.12	55.17	74	-18.83	peak
4880.206	34.26	7.12	41.38	54	-12.62	AVG
7320.309	46.45	9.84	56.29	74	-17.71	peak
7320.309	32.69	9.84	42.53	54	-11.47	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 2	<b>Antenna</b>	Vertical

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4880.206	47.76	7.12	54.88	74	-19.12	peak
4880.206	32.99	7.12	40.11	54	-13.89	AVG
7320.309	43.79	9.84	53.63	74	-20.37	peak
7320.309	29.53	9.84	39.37	54	-14.63	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 3	<b>Antenna</b>	Horizontal

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4948.228	47.6	7.12	54.72	74	-19.28	peak
4948.228	29.3	7.12	36.42	54	-17.58	AVG
7422.842	45.05	9.84	54.89	74	-19.11	peak
7422.842	26.84	9.84	36.68	54	-17.32	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 3	<b>Antenna</b>	Vertical

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4948.228	46.14	7.12	53.26	74	-20.74	peak
4948.228	28.11	7.12	35.23	54	-18.77	AVG
7422.842	42.52	9.84	52.36	74	-21.64	peak
7422.842	26.71	9.84	36.55	54	-17.45	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

## RESULT: PASS

### Note:

Other emissions from 1G to 25 GHz are considered as ambient noise. No recording in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.



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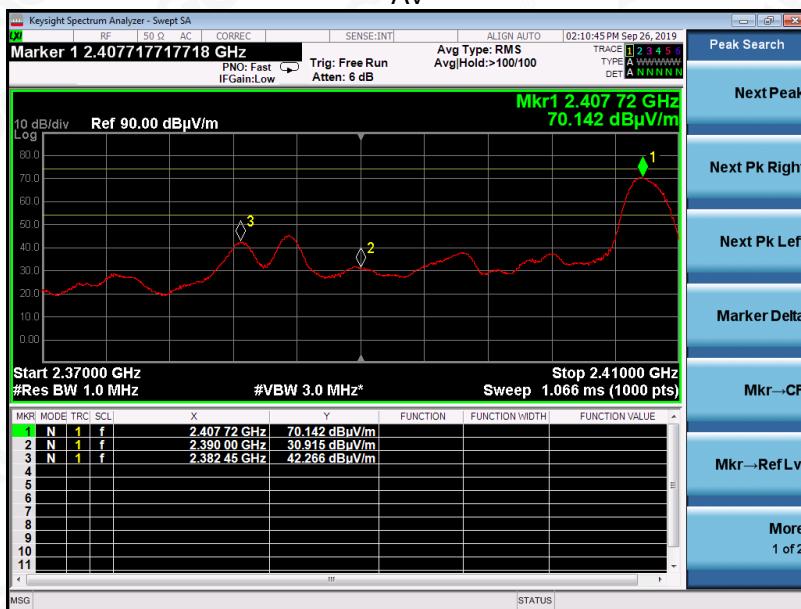
E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

**TEST RESULT FOR RESTRICTED BANDS REQUIREMENTS**

<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 1	<b>Antenna</b>	Horizontal

**PK**

**AV**

**RESULT: PASS**


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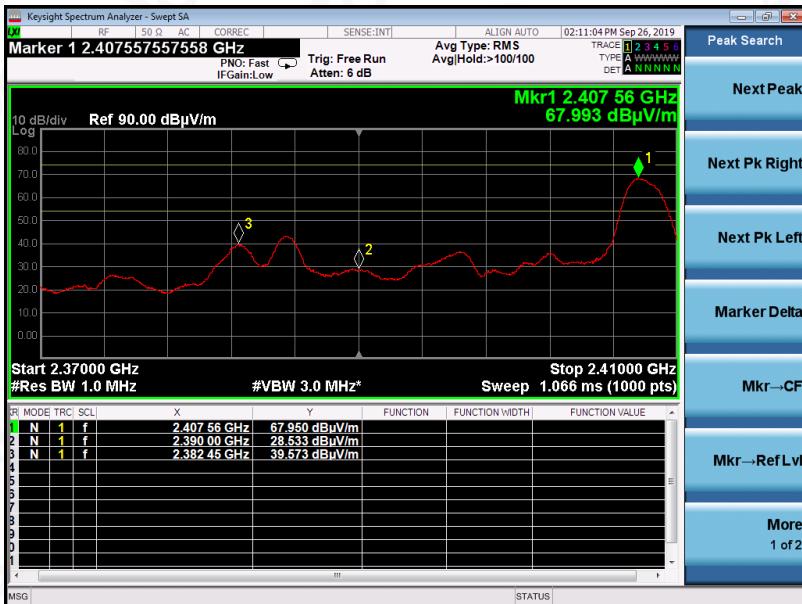
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<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 1	<b>Antenna</b>	Vertical

**PK**

**AV**

**RESULT: PASS**


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<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 3	<b>Antenna</b>	Horizontal

**PK**

**AV**

**RESULT: PASS**


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<b>EUT</b>	WIRELESS KEYBOARD	<b>Model Name</b>	KG9013
<b>Temperature</b>	25°C	<b>Relative Humidity</b>	60%
<b>Pressure</b>	960hPa	<b>Test Voltage</b>	Normal Voltage
<b>Test Mode</b>	Mode 3	<b>Antenna</b>	Vertical

PK



AV



## RESULT: PASS

**Note:** The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB( $\mu$ V) to represent the Amplitude. Use the F dB( $\mu$ V/m) to represent the Field Strength. So A=F.

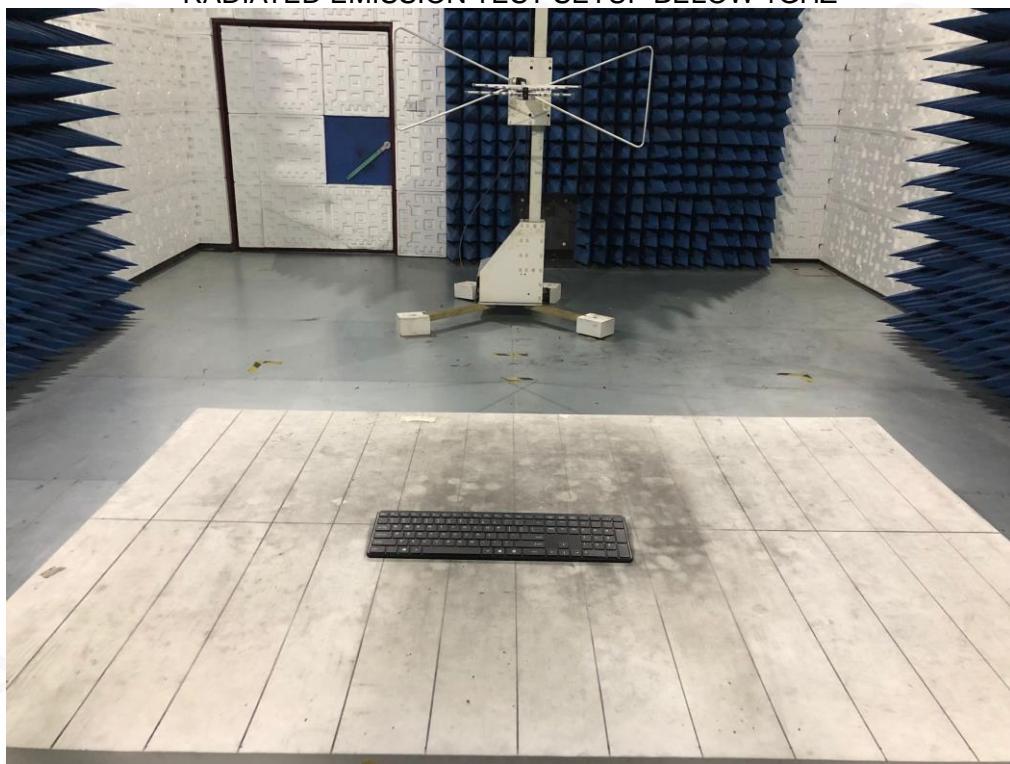


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**APPENDIX A: PHOTOGRAPHS OF TEST SETUP****RADIATED EMISSION TEST SETUP BELOW 1GHZ****RADIATED EMISSION TEST SETUP ABOVE 1GHZ****Attestation of Global Compliance**

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**APPENDIX B: PHOTOGRAPHS OF EUT****TOP VIEW OF EUT****BOTTOM VIEW OF EUT****Attestation of Global Compliance**

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## FRONT VIEW OF EUT



BACK VIEW OF EUT



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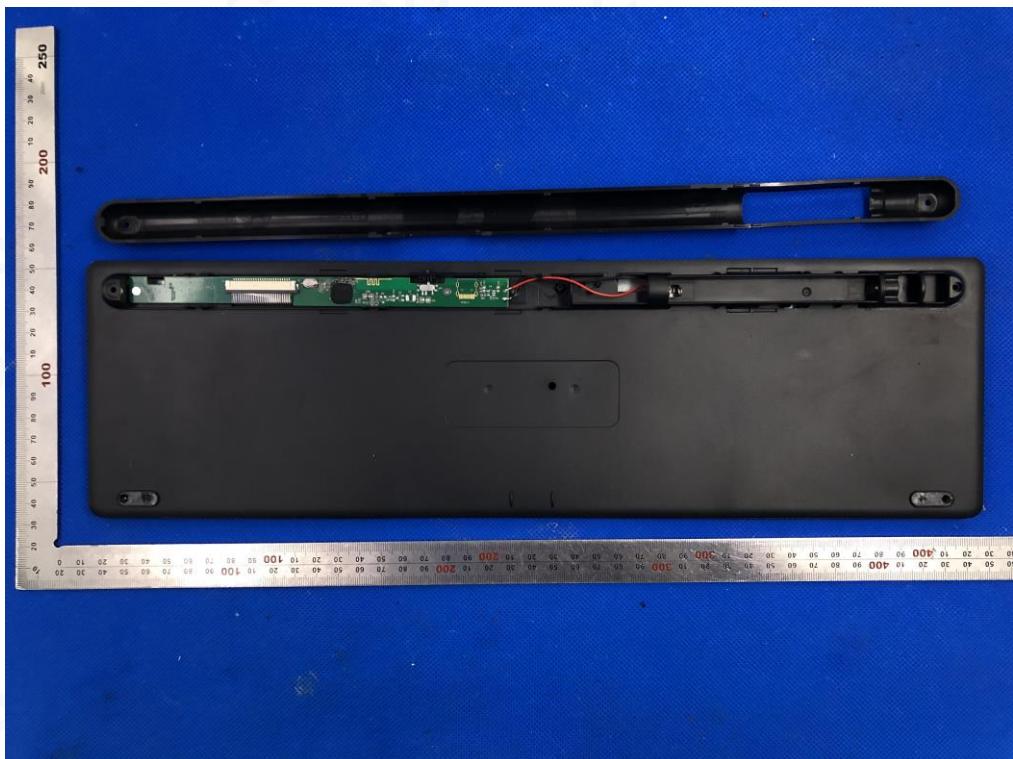
## LEFT VIEW OF EUT



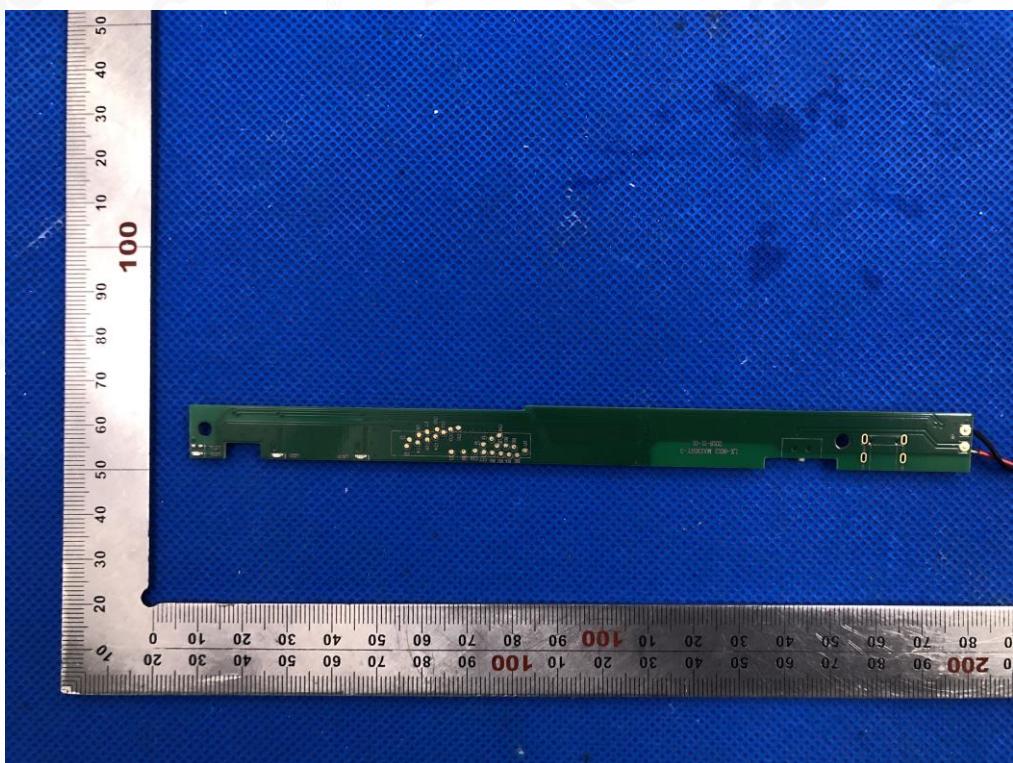
## RIGHT VIEW OF EUT



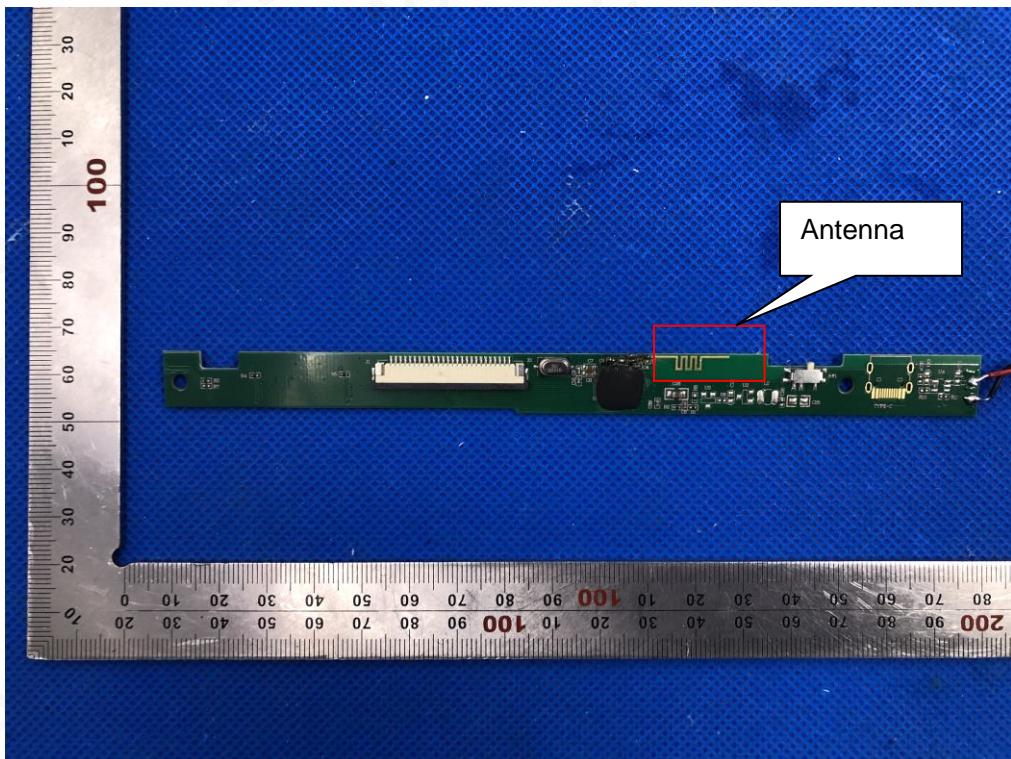
## OPEN VIEW OF EUT



## INTERNAL VIEW OF EUT-1



## INTERNAL VIEW OF EUT-2

**----END OF REPORT----****Attestation of Global Compliance**

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