ACCREDITED
CERTIFICATE #5473.01

Test Report No.:
FCC2021-0013-EMC

TEST REPORT

Applicant	:	Guangzhou Pinzhong Electronic Technology CO., Ltd.
Product Name	:	BEITONG iOS GAME CONTROLLER EX
Mode No.	:	BTP-iG6

CVC Testing Technology Co., Ltd.
威凯检测技术有限公司
Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, 510663, P. R. China
Telephone: +86-20-32293888 Fax : +86-20-32293889
E-mail: emc@cvc.org.cn

Applicant	**Name :** Guangzhou Pinzhong Electronic Technology CO., Ltd. **Address :** Room 611-612, Greenland Center of Financial City, No. 662, Huangpu Avenue Middle Road, Tianhe District, Guangzhou City, Guangdong Province, China
Manufacturer	**Name :** Guangzhou Pinzhong Electronic Technology CO., Ltd. **Address :** Room 611-612, Greenland Center of Financial City, No. 662, Huangpu Avenue Middle Road, Tianhe District, Guangzhou City, Guangdong Province, China
Equipment under Test	**Product Name :** BEITONG iOS GAME CONTROLLER EX **Model No. :** BTP-iG6 **Trade mark :** BEITONG **Serial no. :** — **Sampling :** 5-1

Date of Receipt.	**2021-06-08**	Date of Issue	**2021-06-08 ~ 2021-07-10**

Test Specification	**Test Result**
FCC 47 CFR Part 15	PASS

Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. **Seal of CVC** **Issue Date: 2021.07.20**

Tested by:	Reviewed by:	Approved by:
He Guanhuan	Xu Zhenfei	Chen Huawen
Name Signature	Name Signature	Name Signature

Other Aspects: NONE.

Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested

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1. General Product Information

1.1 General information

Product Name	BEITONG iOS GAME CONTROLLER EX
Model No.	BTP-iG6
Power Supply	DC5V-800mA
Highest frequency of the internal sources	Higher than108MHz
Remark:： /	

2. Test Sites

2.1 Test Facilities

The tests and measurements refer to this report were performed by EMC testing Lab. of CVC Testing Technology Co., Ltd.

Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, 510663, P. R. China

Telephone : +86-20-32293888

Fax : +86-20-32293889

The EMC testing laboratory has been recognized by CNAS, and authorized by Nemko of Norway since 1997, and accredited by DAkkS of Germany since 2007, and assessed and found eligible to participated in the TDAP of VDE testing and certification Institute since 2004, and registered by FCC since 2001.

2.2 Description of Non-standard Method and Deviations

The testing and measurement methods used in this report are applied by all standard methods. Not any non-standard method or deviation from the used standards was used.

2.3 List of Test and Measurement Instruments

Refer to **Appendix**.

3. Test Configuration

3.1 Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

4. Summary of measurement results

Summary of measurements of results	Clause in FCC rules	Class / Severity	Verdict
Conducted Emissions	FCC 47 CFR Part 15 Section 15.107	Class B	/
Radiated Emissions	FCC 47 CFR Part 15 Section 15.109	Class B	PASS

5. Measurement procedure

5.1 Conducted Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	50%~56%	101.5kPa

Method of Measurement:

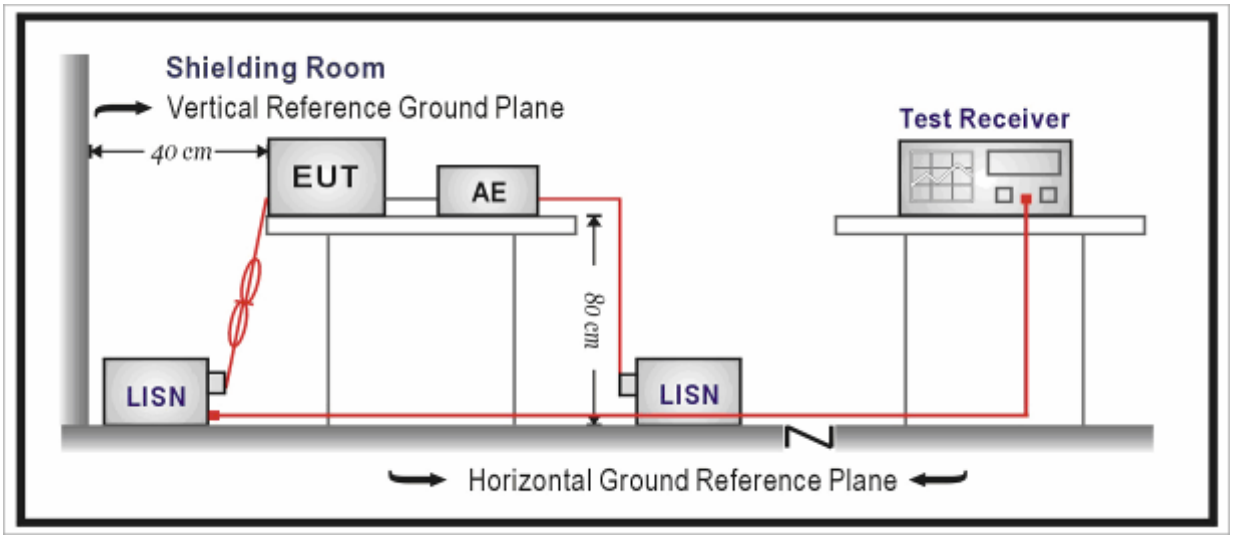
The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9 kHz, VBW is set to 30kHz.The measurement result should include both L line and N line.

The test is in SOUP mode.

Limits:

Frequency (MHz)	Conducted Limits(dBμV)			
	Class A		Class B	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*	79	66
0.5 - 5	56	46	73	60
5 - 30	60	50	73	60
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Test Setup:



Note: AC Power source is used to change the voltage 120V/60Hz.

Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96. U= 2.66 dB.

Test Results:

Power Line	L
Worst Case Operating Mode:	/

Conducted Emission					
Port: AC Power Line(Power line L)					
Freq. (MHz)	QP Limits (dBμV)	QP Level (dBμV)	Freq. (MHz)	AV Limits (dBμV)	AV Level (dBμV)
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/

/

Power Line	N
Worst Case Operating Mode:	/

Conducted Emission					
Port: AC Power Line(Power line N)					
Freq. (MHz)	QP Limits (dBμV)	QP Level (dBμV)	Freq. (MHz)	AV Limits (dBμV)	AV Level (dBμV)
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/

/

5.2 Radiated Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement:

The test set-up was made in accordance to the general provisions of ANSI C63.4-2014.The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration.

Sweep the whole frequency band through the range from 9 kHz to the 10th harmonic of the carrier, and the emissions less than 20 dB below the permissible value are reported.

During the test, below 30MHz, the center of the loop shall be 1 meters; above 30MHz, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Set the spectrum analyzer in the following:

Below 1GHz (detector: Peak and Quasi-Peak)

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz(detector: Peak):

(a)PEAK: RBW=1MHz VBW=3MHz/ Sweep=AUTO

(b)AVERAGE: RBW=1MHz / VBW=3MHz / Sweep=AUTO

The test is in SOUP mode.

Limits for class B:

Limit in restricted band(Part 15.109)

Frequency (MHz)	Measurement Distance (m)	Field strength(uV/m)	Level (dBuV/m)
30 - 88	3	100	40
88 - 216	3	150	43.5
216 - 960	3	200	46
Above 960-1000	3	500	54
Note 1: The lower limit shall apply at the transition frequency. Note 2: Distance refers to the distance in meters between the measuring instrument Antenna and the closed point of any part of the device or system. Note 3: E field strength (dBuV/m) = 20 log E field strength (uV/m)			

Limit in radiated emission measurement (Part 15.109)

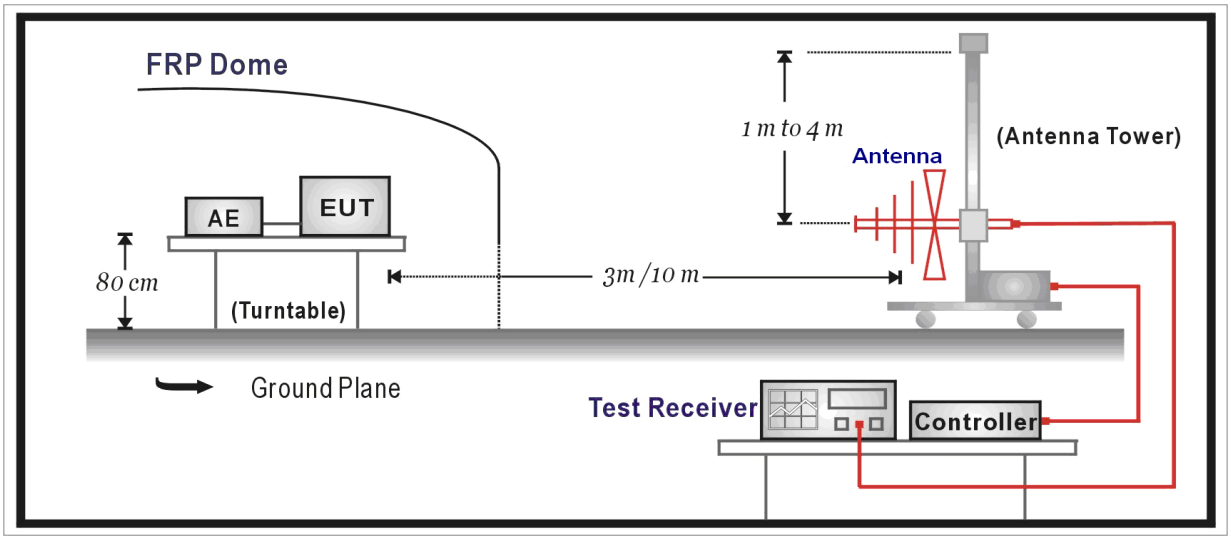
Frequency(MHz)	Field strength(dBuV/m) @3m	
Above 1000	74(peak)	54(average)

According to FCC Part 15.33(b),for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

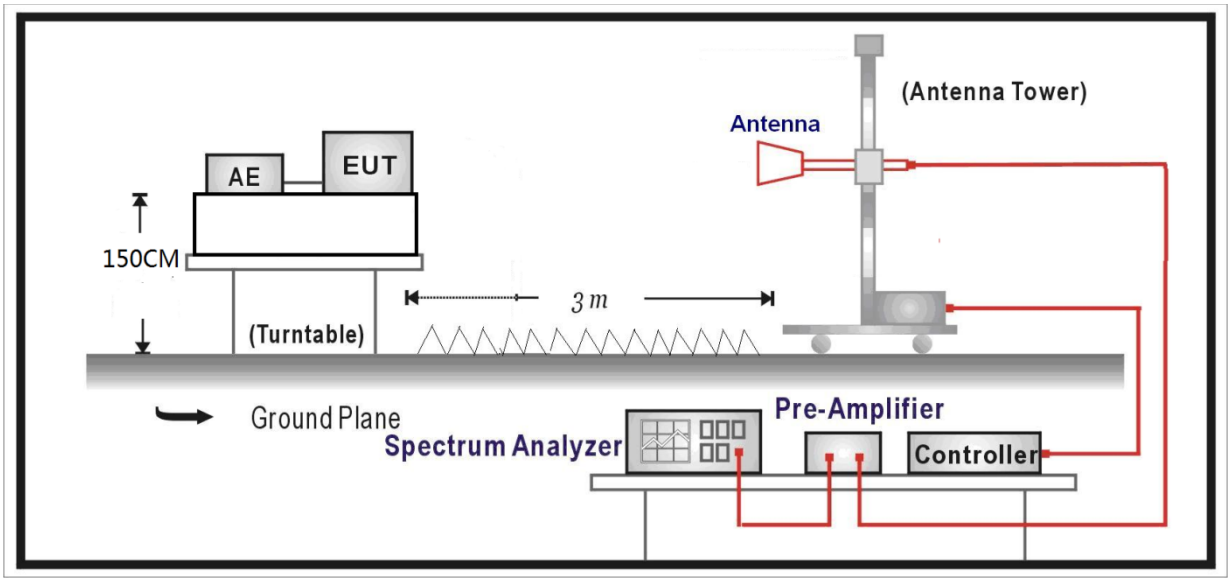
Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Above 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

Test Setup:

Below 1GHz Test Setup:



Above 1GHz Test Setup:



Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

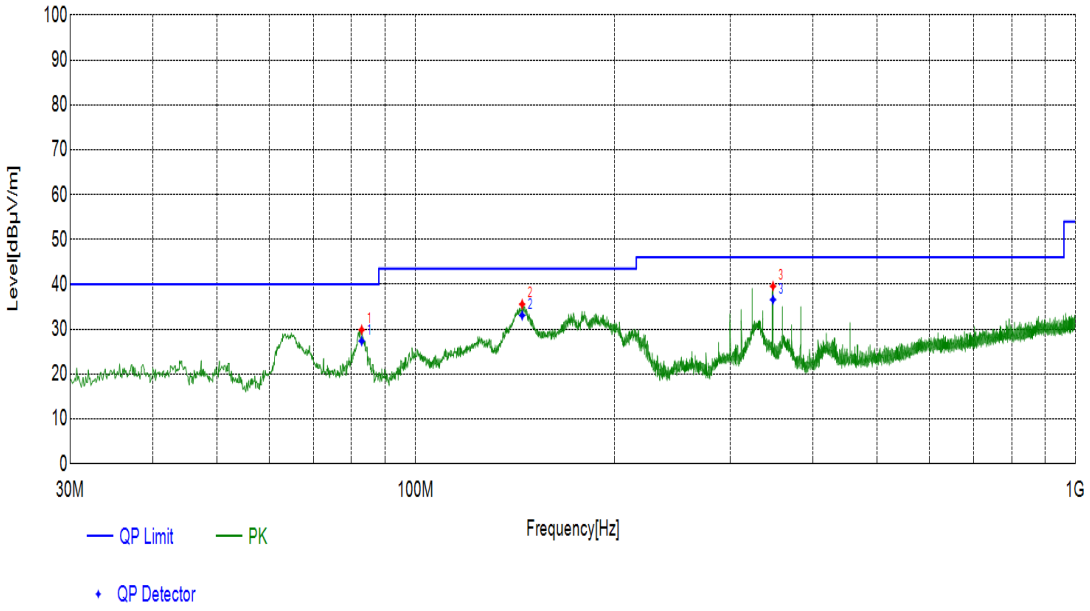
Frequency	Uncertainty
above 1G	4.84 dB
below 1G	4.10 dB

Test Results:

SPURIOUS EMISSIONS 30MHz~1GHz：

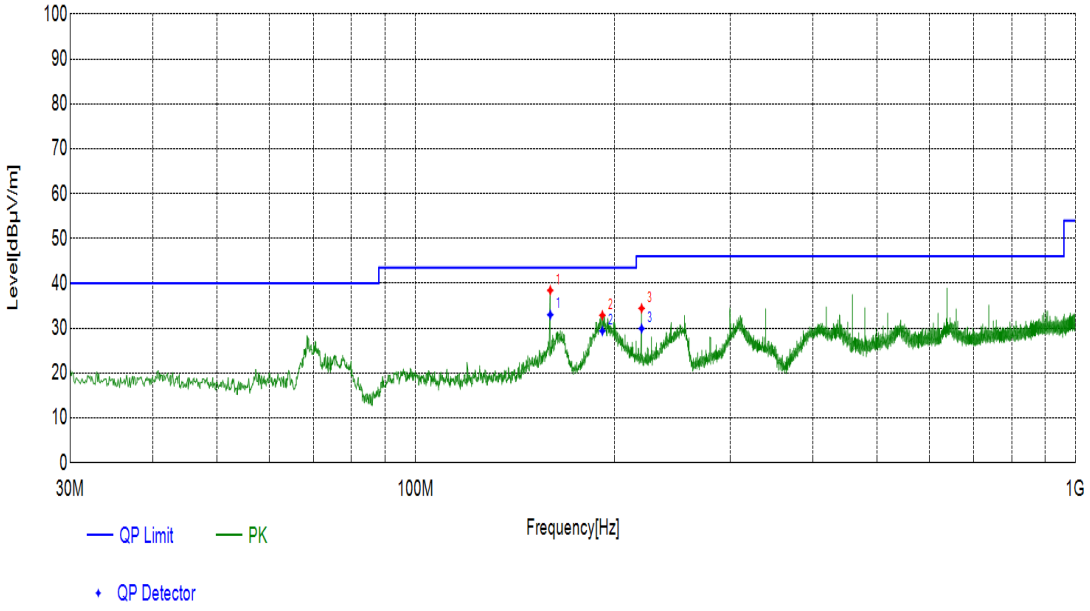
Radiated Emission	30MHz-1GHz
Polarity	Horizontal
Worst Case Operating Mode:	Typical working state

Final Data List								
Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
159.9930	Horizontal	15.95	26.43	43.52	17.09	105	146	PASS
200.0580	Horizontal	18.68	28.94	43.52	14.58	109	132	PASS
739.9170	Horizontal	29.80	37.68	46.02	8.34	105	12	PASS



Radiated Emission	30MHz-1GHz
Polarity	Vertical
Worst Case Operating Mode:	Typical working state

Final Data List								
Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
160.0231	Vertical	15.95	33.00	43.52	10.52	105	256	PASS
191.9092	Vertical	17.92	29.39	43.52	14.13	175	154	PASS
220.0420	Vertical	18.86	29.93	46.02	16.09	109	80	PASS



Note: 1. Quasi-Peak = Reading value + Correction factor

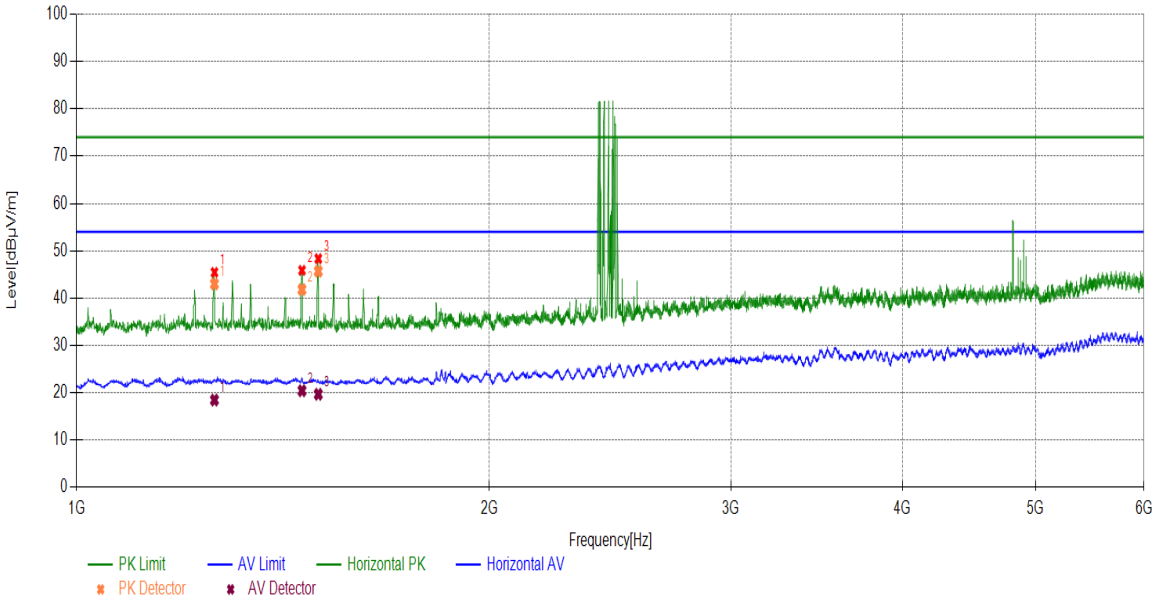
2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

Test Results:

SPURIOUS EMISSIONS 1GHz~6GHz：

Radiated Emission	1GHz-6GHz
Polarity	Horizontal
Worst Case Operating Mode:	Typical working state

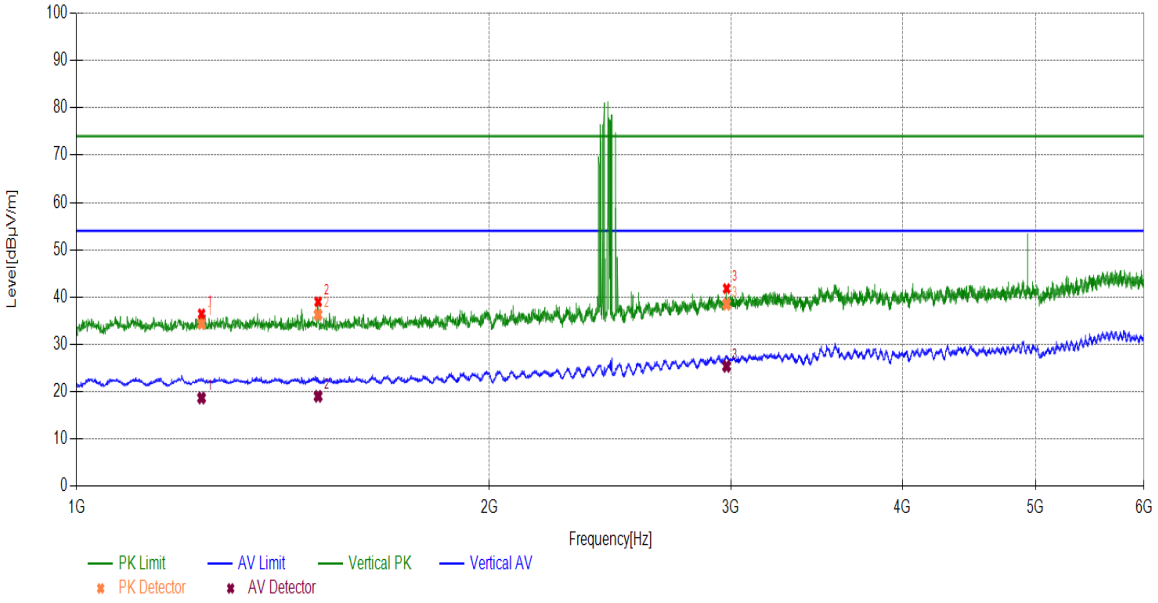
Final Data List											
Frequency [MHz]	Polarity	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Pass/ Fail
1260.5261	Horizontal	-15.12	42.98	74.00	31.02	18.42	54.00	35.58	100	179	PASS
1460.0460	Horizontal	-14.89	41.79	74.00	32.21	20.40	54.00	33.60	100	134	PASS
1500.5501	Horizontal	-14.85	45.66	74.00	28.34	19.65	54.00	34.35	100	134	PASS



Note: The frequency points exceeding the limit in the above figure are the working frequency of the device under test.

Radiated Emission	1GHz-6GHz
Polarity	Vertical
Worst Case Operating Mode:	Typical working state

Final Data List											
Frequency [MHz]	Polarity	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Pass/ Fail
1233.5234	Vertical	-15.15	34.41	74.00	39.59	18.65	54.00	35.35	100	314	PASS
1500.0500	Vertical	-14.85	36.25	74.00	37.75	19.01	54.00	34.99	100	192	PASS
2977.6978	Vertical	-9.36	38.50	74.00	35.50	25.35	54.00	28.65	100	291	PASS



Note 1: The frequency points exceeding the limit in the above figure are the working frequency of the device under test.

Note2: 1. Peak = Reading value + Correction factor

2. Average = Reading value + Correction factor

3. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

6. Test Setup Photograph

(1) Radiated spurious emission Test Setup(Below 1GHz)

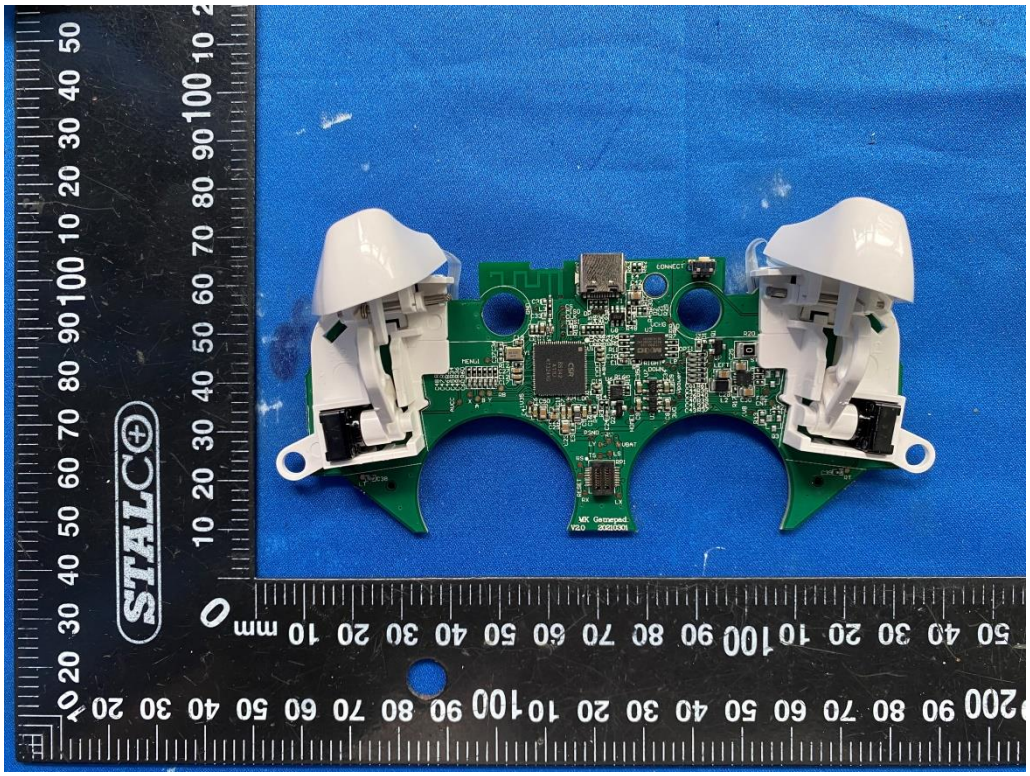
(2) Radiated spurious emission Test Setup(Above 1GHz)

7. EUT Photograph

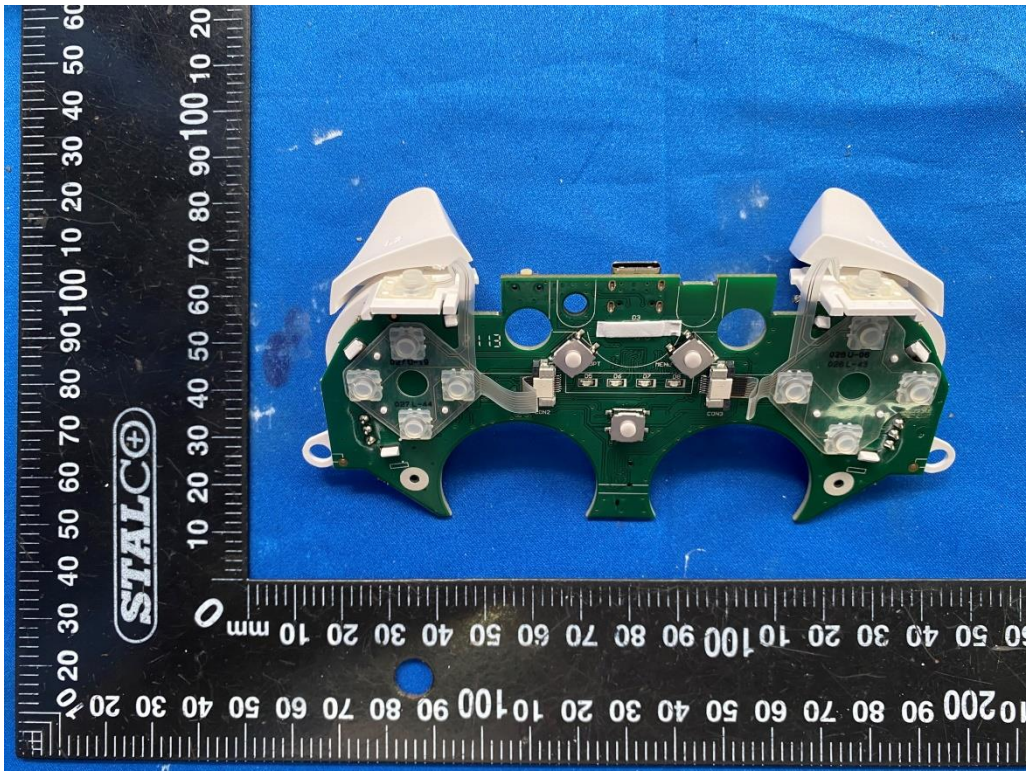
(1) EUT Photo

(2) EUT Photo

(3) EUT Photo



(4) EUT Photo



8. Measurement Equipment

Test Equipment	Type/Mode	Equipment No.	Manufacturer	Cal. Due	Used
EMI Test Receiver	N9038A-508	EM-000397	Agilent	2022-03-05	√
Broadband Antenna(3m)	VULB 9163	EM-000342	SCHWARZBECK	2022-06-26	√
Semi-Anechoic Chamber(3m)	FACT-4	WKNA-0024	ETS	2024-12-12	√
Waveguide Horn Antenna	HF906	WKNA-0024-8	R&S	2022-03-05	√
EMI Test Receiver	ESR7	VGDY-0956	R&S	2022-03-05	√
Broadband Antenna(5m)	VULB 9163	EM-000382	SCHWARZBECK	2022-05-07	√
Semi-Anechoic Chamber(5m)	SAC-5	EM-000557	COMTEST	2024-11-02	√

The End