



Test Report No.:
FCC2025-0063-EMC

TEST REPORT

FCC ID : 2AGOFRC421H

Applicant : HCS (Suzhou) Limited

Product Name : Remote Control

Mode No. : RC4213409/01BR,RC4213802/01BR,
RC4213404/01BR,RC4213405/01BR,
RC4213406/01BR,RC4213803/01BR,
RC4213804/01BR,RC4213407/01BR,
RC4213408/01BR,RC4213410/01BR,
Babylon RCU,RC421XXXX/XXR,
RC421XXXX/XXBR ('X'=0-9,'B' means
packed with battery)

CVC Testing Technology Co., Ltd.

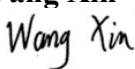
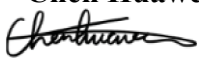
Test Report No. FCC2025-0063-EMC		Page 2 of 22			
Applicant	Name : HCS (Suzhou) Limited Address : 19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District, Suzhou, P.R.China				
Manufacturer	Name : HCS (Suzhou) Limited Address : 19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District, Suzhou, P.R.China				
Factory	Name : Himit (Yueyang) Technology Ltd. Address : Building 4, Lingang High-tech Industrial Park, Yueyang Area, China (Hunan) Free Trade Pilot Zone				
Equipment under Test	Product Name : Remote Control Model/Type : RC4213409/01BR,RC4213802/01BR, RC4213404/01BR,RC4213405/01BR, RC4213406/01BR,RC4213803/01BR, RC4213804/01BR,RC4213407/01BR, RC4213408/01BR,RC4213410/01BR, Babylon RCU,RC421XXXX/XXR,RC421XXXX/XXBR ('X'=0-9,'B' means packed with battery) Trade mark : / Serial no. : / Sampling :1-1				
Date of Receipt.	2025.08.08	Date of Testing	2025.08.12-2025.09.05		
Test Specification		Test Result			
FCC 47 CFR Part 15B		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: 2025-09-08				
Tested by: Wang Xin 	Reviewed by: Xu Zhenfei 	Approved by: Chen Huawen 			
Other Aspects: NONE.					
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested					
This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC .					

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General Product Information

1.1 General information

Product Name	Remote Control
Model No.	RC4213409/01BR,RC4213802/01BR, RC4213404/01BR,RC4213405/01BR, RC4213406/01BR,RC4213803/01BR, RC4213804/01BR,RC4213407/01BR, RC4213408/01BR,RC4213410/01BR, Babylon RCU,RC421XXXX/XXR, RC421XXXX/XXBR ('X'=0-9,'B' means packed with battery)
Power Supply	DC 3.0V
Highest frequency of the internal sources	Bluetooth-LE,ZIGB(RF4CE): 2.4GHz
Remark: 1. The information of the EUT is declared by the manufacturer. 2. The laboratory is not responsible for the product technical specification provided by the client. 3. The device under test is not connected to the AC grid,is powered by a built-in battery,Conducted emission test is not applicable. 4. EUT photo refer to report (Report NO.:FCC2025-0063-EUT). 5. The remote control product of the covered model has the same electrical and mechanical structure as the EUT of the main inspection model. There are only cosmetic differences (color/painting/printing). The basic software architecture remains the same. Full tests were performed on the model: RC4213409/01BR.The test result covers other models.	

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

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 maximum rate data transmission 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	/	N/A
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.

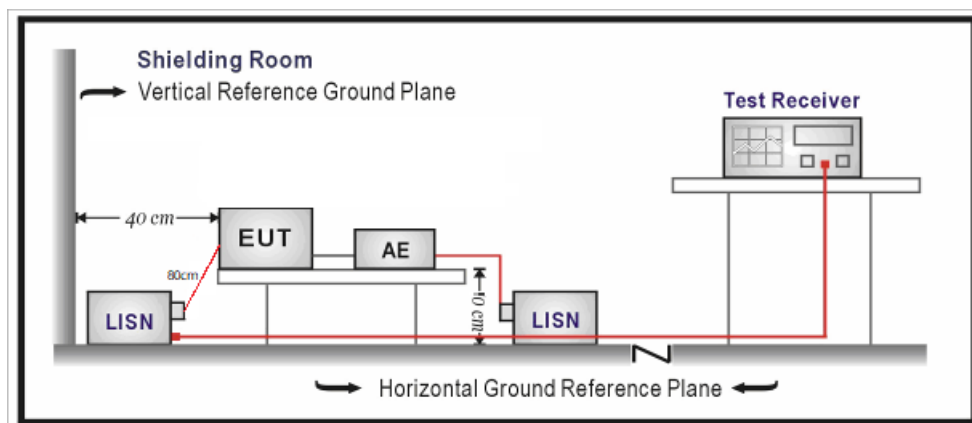
Limits:

Frequency (MHz)	Conducted Limits(dBμV)			
	Class B		Class A	
	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 110V/50Hz.

Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$. $U = 2.66$ 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)
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/

N/A

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)
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/

N/A

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

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.

Limits for class A:

Limit in restricted band(Part 15.109)

Frequency (MHz)	Measurement Distance (m)	Field strength(uV/m)	Level @10m (dBuV/m)	Level @3m (dBuV/m)
30 - 88	10	90	39	49.5
88 - 216	10	150	43.5	54
216 - 960	10	210	46.5	57
Above 960-1000	10	300	49.5	60

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)

Note 4: The method for converting field strength from 10m to 3m:

$$E_{3m} = 20 \log_{10} \left(\frac{10}{3} \right) + E_{10m}$$

Limit in radiated emission measurement (Part 15.109)

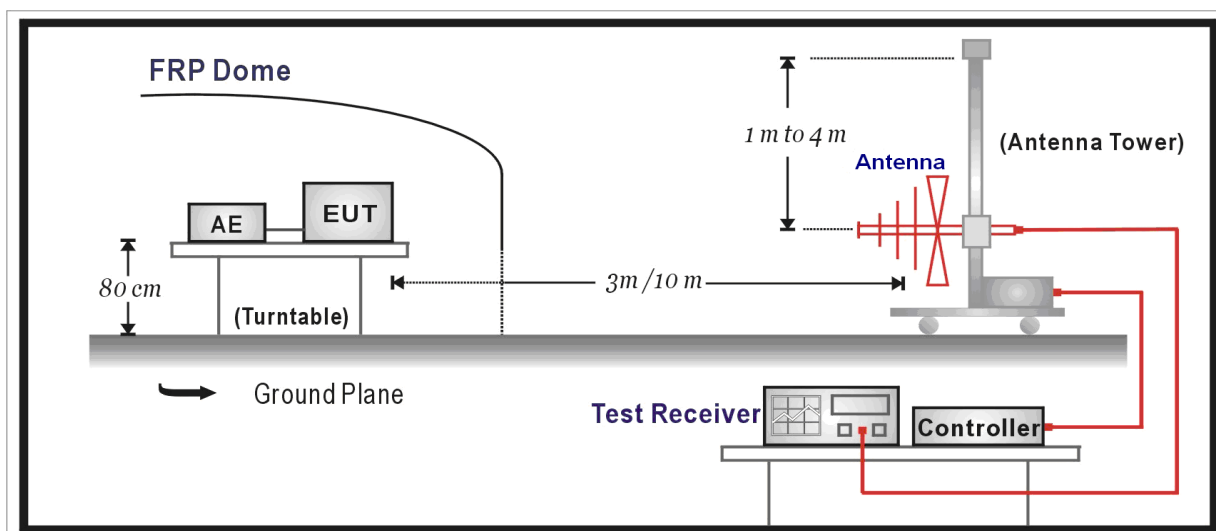
Frequency(MHz)	Field strength(dBuV/m) @3m	
Above 1000	80(peak)	60(average)

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:

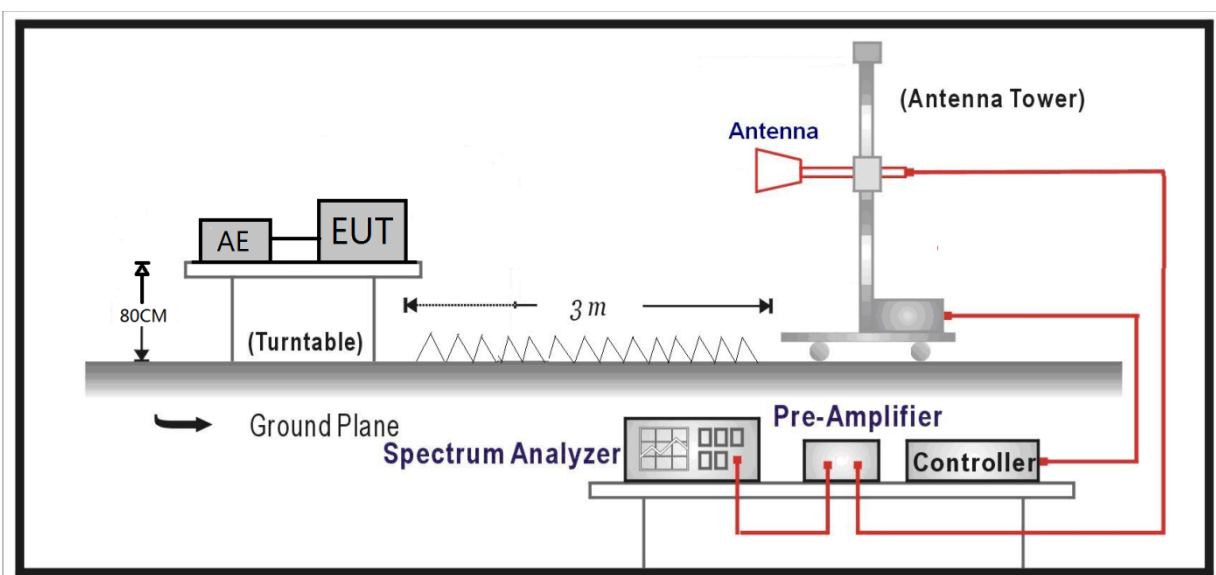
Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Above 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

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 $k = 2$.

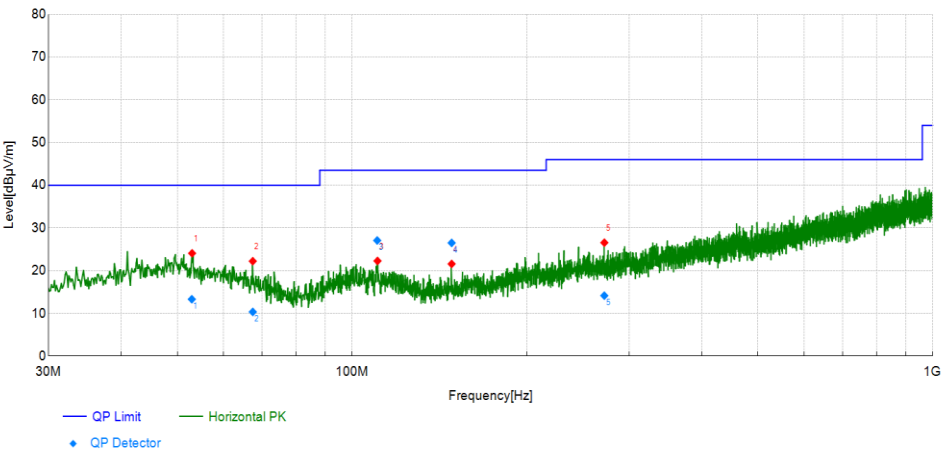
Frequency	Uncertainty
above 1G	4.84 dB
below 1G	4.10 dB

Test Results:

SPURIOUS EMISSIONS 30MHz~1GHz:

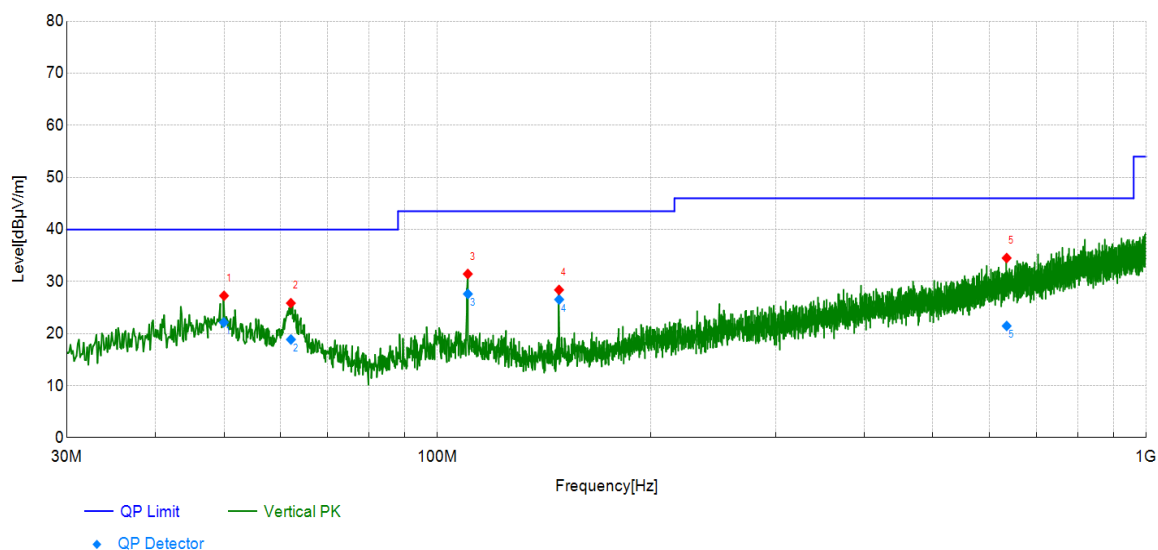
Radiated Emission	30MHz-1GHz
Polarity	Horizontal
Worst Case Operating Mode:	Working(BLE mode)

Final Data List								
Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
52.97	Horizontal	-17.48	13.33	40.00	26.67	160.3	224	PASS
67.47	Horizontal	-20.74	10.36	40.00	29.64	100.0	349	PASS
110.52	Horizontal	-19.50	27.08	43.50	16.42	400.0	39	PASS
148.48	Horizontal	-22.30	26.51	43.50	16.99	316.9	0	PASS
271.97	Horizontal	-16.87	14.16	46.00	31.84	136.4	278	PASS



Radiated Emission	30MHz-1GHz
Polarity	Vertical
Worst Case Operating Mode:	Working(BLE mode)

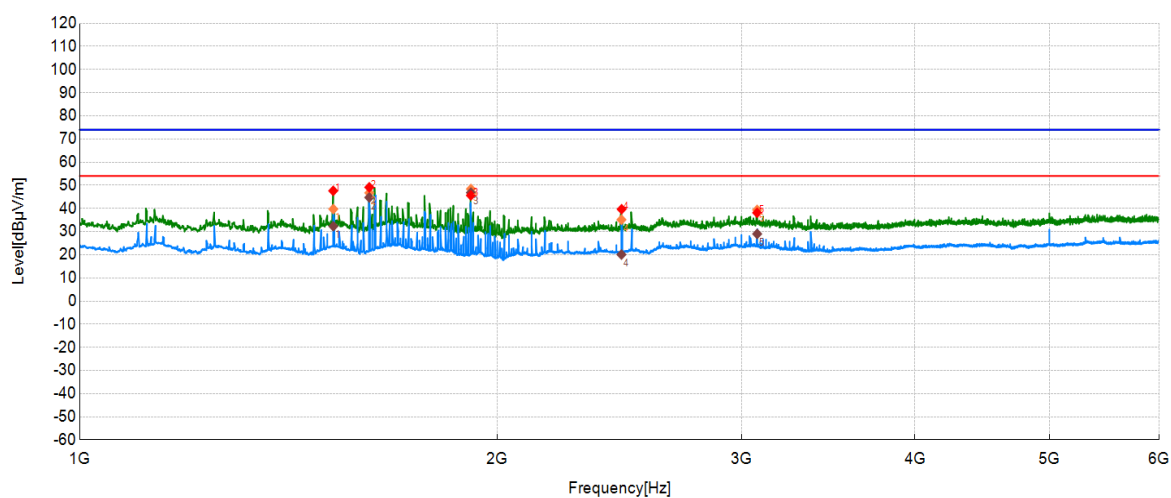
Final Data List								
Frequency [MHz]	Polarity	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
49.98	Vertical	-16.98	22.15	40.00	17.85	109.3	224	PASS
62.13	Vertical	-19.22	18.88	40.00	21.12	117.3	126	PASS
110.41	Vertical	-19.47	27.62	43.50	15.88	109.3	349	PASS
148.51	Vertical	-22.30	26.55	43.50	16.95	109.3	349	PASS
635.43	Vertical	-9.05	21.48	46.00	24.52	323.7	207	PASS



SPURIOUS EMISSIONS 1GHz~6GHz:

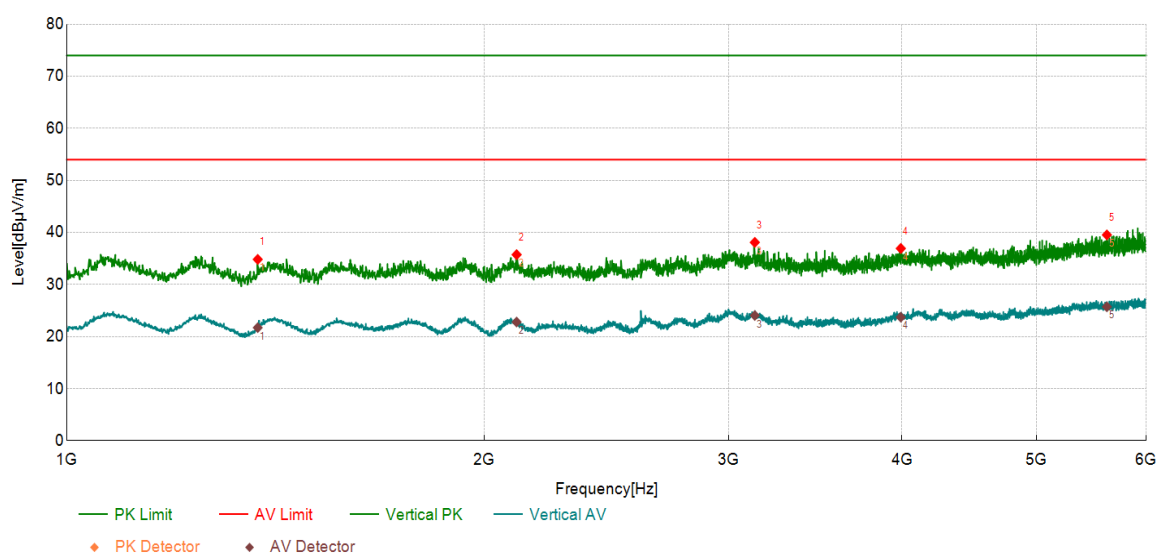
Radiated Emission	1GHz-6GHz
Polarity	Horizontal
Worst Case Operating Mode:	Working(BLE mode)

Final Data List									
Frequency [MHz]	Polarity	Factor [dB]	PK Value [dB μ V/m]	PK Limit [dB μ V/m]	AV Value [dB μ V/m]	AV Limit [dB μ V/m]	Height [cm]	Angle [°]	Pass/Fail
1523.34	Horizontal	-6.16	39.72	74.00	34.28	32.30	54.00	21.70	PASS
1617.12	Horizontal	-6.03	46.72	74.00	27.28	44.73	54.00	9.27	PASS
1914.11	Horizontal	-5.66	48.39	74.00	25.61	46.79	54.00	7.21	PASS
2457.38	Horizontal	-5.18	35.12	74.00	38.88	20.09	54.00	33.91	PASS
3078.19	Horizontal	-5.22	39.35	74.00	34.65	28.97	54.00	25.03	PASS



Radiated Emission	1GHz-6GHz
Polarity	Vertical
Worst Case Operating Mode:	Working(BLE mode)

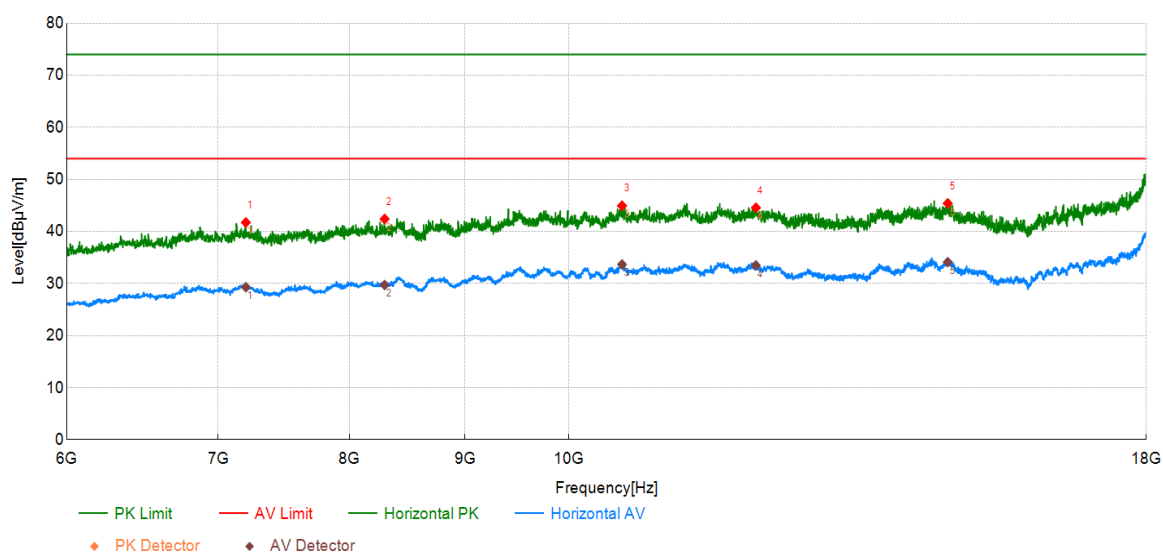
Final Data List									
Frequency [MHz]	Polarity	Factor [dB]	PK Value [dB μ V/m]	PK Limit [dB μ V/m]	AV Value [dB μ V/m]	AV Limit [dB μ V/m]	Height [cm]	Angle [°]	Pass/Fail
1373.00	Vertical	-5.95	34.84	74.00	21.73	54.00	100	122	PASS
2110.00	Vertical	-4.67	35.75	74.00	22.81	54.00	100	227	PASS
3133.00	Vertical	-4.36	38.10	74.00	24.06	54.00	100	234	PASS
3992.00	Vertical	-1.78	36.94	74.00	23.74	54.00	100	292	PASS
5620.00	Vertical	1.65	39.54	74.00	25.73	54.00	100	177	PASS



SPURIOUS EMISSIONS 6GHz~18GHz:

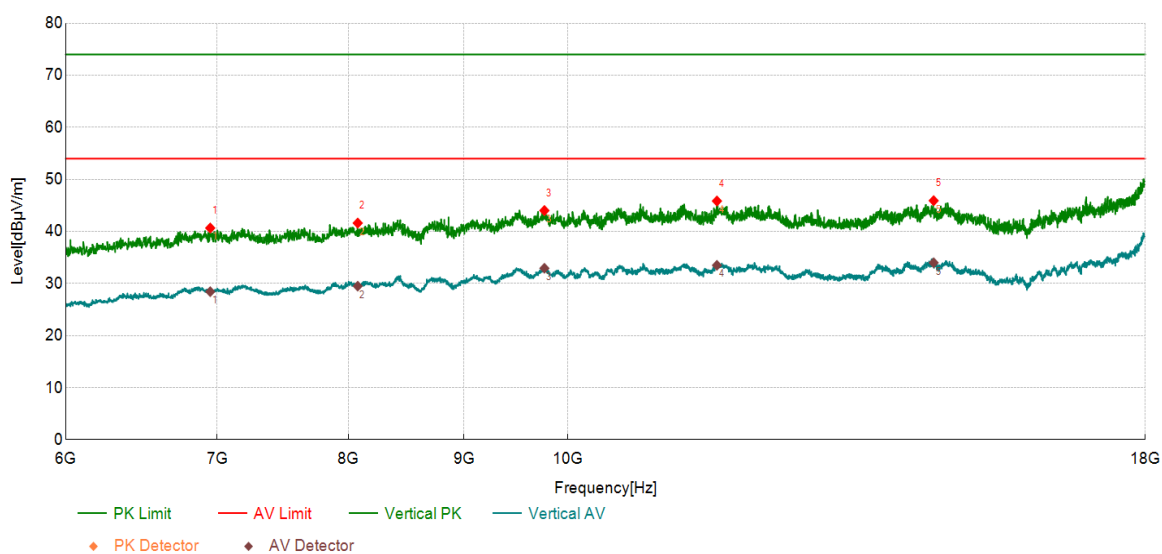
Radiated Emission	6GHz-18GHz
Polarity	Horizontal
Worst Case Operating Mode:	Working(BLE mode)

Final Data List									
Frequency [MHz]	Polarity	Factor [dB]	PK Value [dB μ V/m]	PK Limit [dB μ V/m]	AV Value [dB μ V/m]	AV Limit [dB μ V/m]	Height [cm]	Angle [°]	Pass/Fail
7200.00	Horizontal	8.51	41.74	74.00	29.31	54.00	100	82	PASS
8292.00	Horizontal	9.15	42.40	74.00	29.72	54.00	100	1	PASS
10557.60	Horizontal	13.20	44.94	74.00	33.68	54.00	100	341	PASS
12098.40	Horizontal	15.92	44.55	74.00	33.49	54.00	100	1	PASS
14707.20	Horizontal	17.53	45.40	74.00	34.12	54.00	100	296	PASS



Radiated Emission	6GHz-18GHz
Polarity	Vertical
Worst Case Operating Mode:	Working(BLE mode)

Final Data List									
Frequency [MHz]	Polarity	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	Height [cm]	Angle [°]	Pass/Fail
6950.40	Vertical	8.33	40.66	74.00	28.45	54.00	100	137	PASS
8076.00	Vertical	9.30	41.62	74.00	29.51	54.00	100	279	PASS
9765.60	Vertical	11.68	44.02	74.00	32.94	54.00	100	270	PASS
11640.00	Vertical	15.43	45.85	74.00	33.51	54.00	100	73	PASS
14512.80	Vertical	18.00	45.92	74.00	34.00	54.00	100	243	PASS



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

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

6. Measurement Equipment

Test Equipment	Type/Mode	Equipment No.	Manufacturer	Cal. Due
EMI Test Receiver	ESR3	EM-000520	R&S	2026-01-06
LISN	NSLK 8127	EM-000370	SCHWARZBECK	2026-07-03
EMI Test Receiver	ESR7	EM-000574	R&S	2026-01-06
Broadband Antenna(5m)	VULB 9163	EM-000736-1	SCHWARZBECK	2026-06-02
Waveguide Horn Antenna	HF906	EM-000093-8	R&S	2025-12-26
Semi-Anechoic Chamber(5m)	SAC-5	EM-000557	COMTEST	2027-02-01
TS+ (#2)	JS32-CE 3.0.0.1	/	/	/
TS+ (5m)	JS32-RE 5.0.0	/	/	/

_____ The End _____