



EMC TEST REPORT

Report No.: 20250417G09730X-W1

Product Name: RICO2 THERMAL IMAGING SCOPE

FCC ID: 2BHFB-RICO2-00

Main Model No. : RICO2 H75R

Series Model No. : RICO2 S75R, RICO2 L42R, RICO2 H50R

Trade Name: Nocpix

Applicant: Inlumen Technologies Co., Ltd.

Address: Room 806, A1, Phase 3, Innovation Industrial Park, High-tech Zone, Hefei City, Anhui Province, China.

Received Date: 2025.04.28

Dates of Testing: 2025.04.29-2025.05.06

Issued by: CCIC Southern Testing Co., Ltd.

Lab Location: Electronic Testing Building, No.43, Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China.

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Test Report

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Applicant Address : Room 806, A1, Phase 3, Innovation Industrial Park, High-tech Zone,
Hefei City, Anhui Province, China.

Manufacturer..... : Inlumen Technologies Co., Ltd.

Manufacturer Address : Room 806, A1, Phase 3, Innovation Industrial Park, High-tech Zone,
Hefei City, Anhui Province, China.

Test Standards : 47 CFR Part 15 Subpart B

Test Result..... : PASS

Tested by : Deng Shanfei

Deng Shanfei, Test Engineer

2025.05.07

Reviewed by : Sun Jiaohui

Sun Jiaohui, Senior Engineer

2025.05.07

Approved by : Chris You

Chris You, Manager

2025.05.07



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Change History		
Issue	Date	Reason for change
1.0	2025.05.07	First edition



1. GENERAL INFORMATION

1.1 EUT Description

EUT Name	RICO2 THERMAL IMAGING SCOPE
Power supply	Battery Model No: IBP-5 Capacity: 3.6V/4.4Ah (15.84Wh) Max Charge Voltage: 4.2V Manufactory: Jinqu New Energy (Zhejiang) Co., Ltd.

Note 1: The EUT is a RICO2 THERMAL IMAGING SCOPE;

Note 2: Based on the new model difference test of the original report 20241117G25242X-W1, everything else remains unchanged.

Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart B	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.107	Conducted Emission	PASS
2	15.109	Radiated Emission	PASS

NOTE:

- (1) The EUT has been tested according to 47 CFR Part 15 Subpart B, CLASS B. The test procedure is according to ANSI C63.4:2014.



1.3 Facilities and Accreditations

1.3.1 Facilities

☐ CCIC-SET Lab 1

Address: Electronic Testing Building, No.43, Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China

FCC-Registration No.: CN1283

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until Jun. 30th, 2025.

ISED Registration: 11185A, CAB number: CN0064

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A on Aug. 04, 2016, valid time is until Jun. 30th, 2025.

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

CNAS L1659

CCIC Southern Testing Co., Ltd. CCIC is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

☒ CCIC-SET Lab 4

Address: No.125, Hongmei Section, Wangsha Road, Hongmei Town, Dongguan City, Guangdong Province, China

CNAS L1659

CCIC Southern Testing Co., Ltd. CCIC is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

1.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15°C - 35°C
Relative Humidity (%):	25% -75%



Atmospheric Pressure (kPa):	86kPa-106kPa
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1.3.3 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

Uncertainty of Conducted Emission:	Uc = 3.2 dB (k=2)
Uncertainty of Radiated Emission: (30MHz~1GHz)	Uc = 5.8 dB (k=2)
Uncertainty of Radiated Emission: (1~6GHz)	Uc = 5.1 dB (k=2)
Uncertainty of Radiated Emission: (6~18GHz)	Uc = 5.5 dB (k=2)

2. TEST CONDITIONS SETTING

2.1 Test Peripherals

The following is a listing of the EUT and peripherals utilized during the performance of EMC test:

Support Equipment:

Description	Brand name	Model	Serial No.	FCCID
Adapter	/	CD284	/	/
Notebook	Lenovo	ThinkPad E14 Gen 2	/	/

Support Cable:

Description	Shield Type	Ferrite Core	Length
/	/	/	/

2.2 Test Mode

Note 4: The EUT is a RICO2 THERMAL IMAGING SCOPE; It could support the following operating mode and frequency band: 2.4G WIFI

The EUT have the following typical setups during the test:

Setup1: 2.4G WIFI + Adapter + Charger;

Setup2: 2.4G WIFI + Battery;

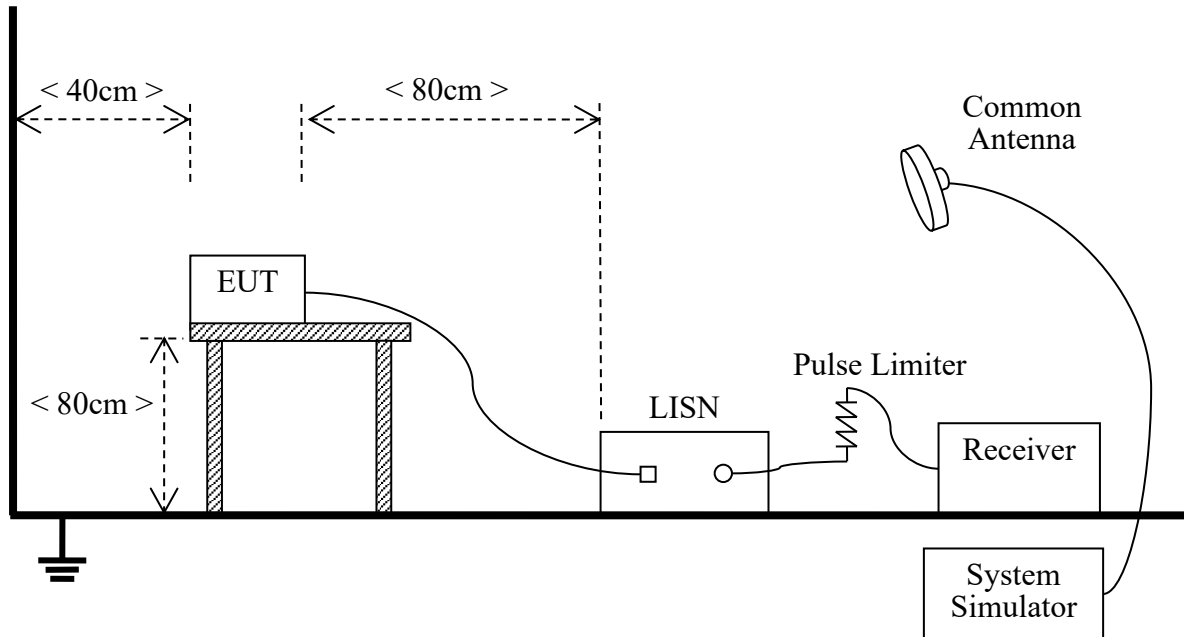
Setup3: EUT + PC Notebook + DATA;

Note 5: All the patterns are tested and the worst results are provided in the report.

2.3 Test Setup and Equipments List

2.3.1 Conducted Emission

A. Test Setup:



The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides $50\Omega/50\mu\text{H}$ of coupling impedance for the measuring instrument. The Common Antenna is used for the call between the EUT and the System Simulator (SS). A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

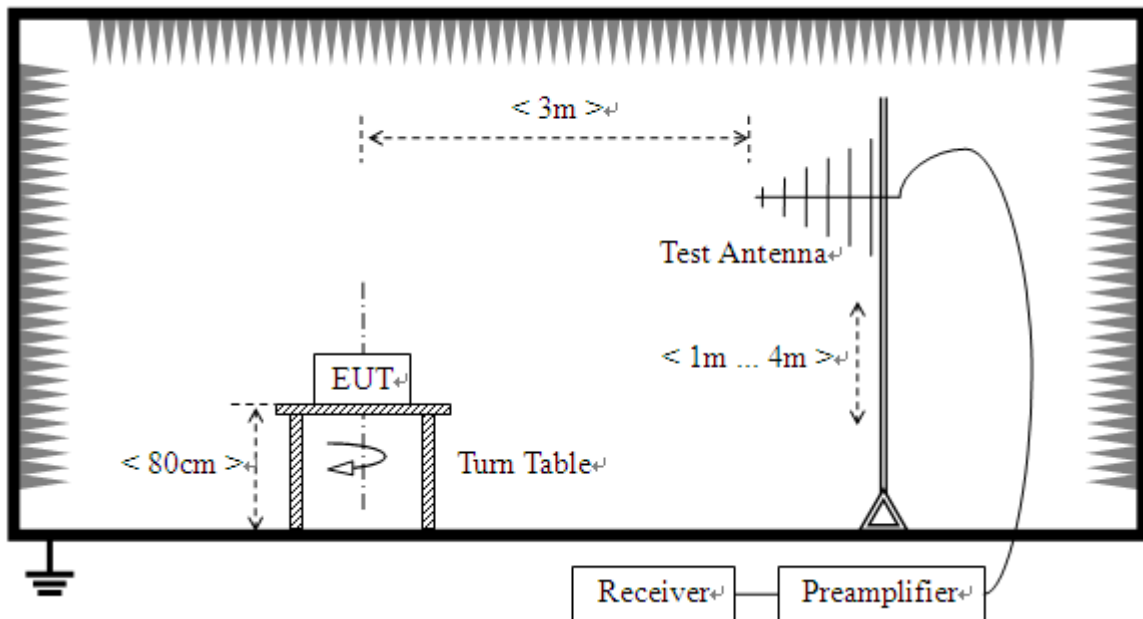
B. Equipments List:

Description	Manufacturer	Model	Serial No.	Calibration Date	Calibration Due. Date
Test Receiver	R&S	EPL1000	A240504221	2024.12.27	2025.12.26
LISN	Afj Instruments	LT32C/10	A240704441	2024.07.29	2025.07.28
Cable	MATCHING PAD	W7	/	2024.08.02	2025.08.01

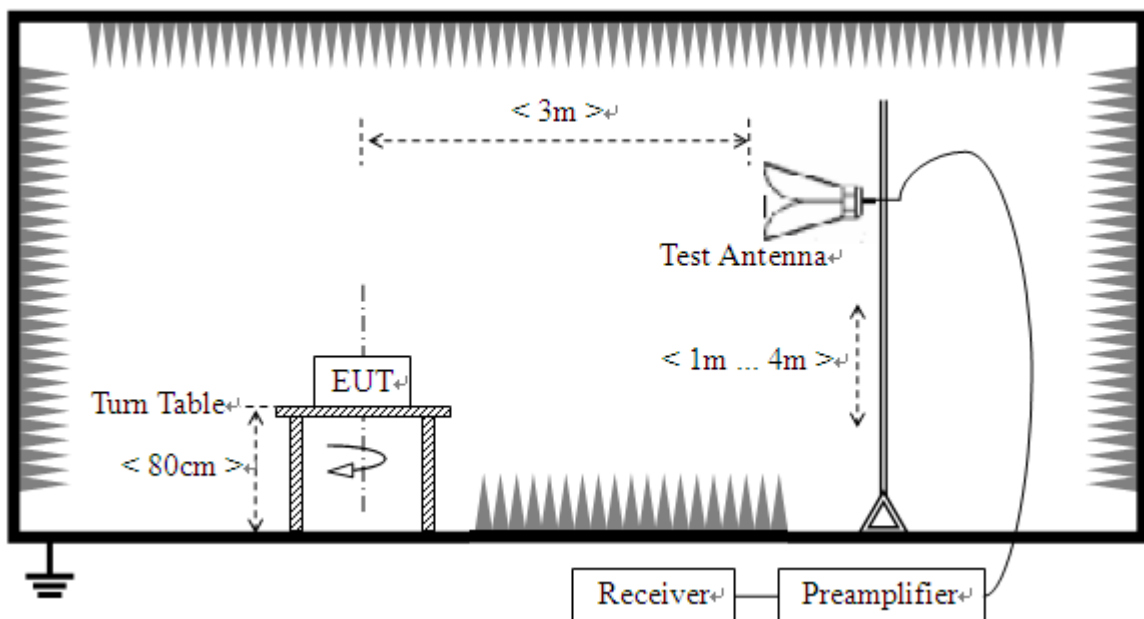
2.3.2 Radiated Emission

A. Test Setup:

- 1) For radiated emissions from 30MHz to 1GHz



- 2) For radiated emissions above 1GHz



**B. Test Procedure**

The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower.

For the test Antenna:

- 1) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

C. Equipments List:

Description	Manufacturer	Model	Serial No.	Calibration Date	Calibration Due. Date
EMI Test Receiver	ROHDE&SCHWARZ	ESR26	A240504211	2024.12.27	2025.12.26
Broadband Ant.	SCHWARZBECK	VULB 9163	A241104528	2024.12.29	2025.12.28
3M Anechoic Chamber	Bosot	SAC-966	A241204589	2024.11.16	2027.11.15
EMI Horn Ant.	SCHWARZBECK	BBHA 9120 D	A241104529	2025.01.03	2026.01.02

3. 47 CFR PART 15B REQUIREMENTS

3.1 Conducted Emission

3.1.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

Note:

- a) The limit subjects to the Class B digital device.
- b) The lower limit shall apply at the band edges.
- c) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

3.1.2 Test Description

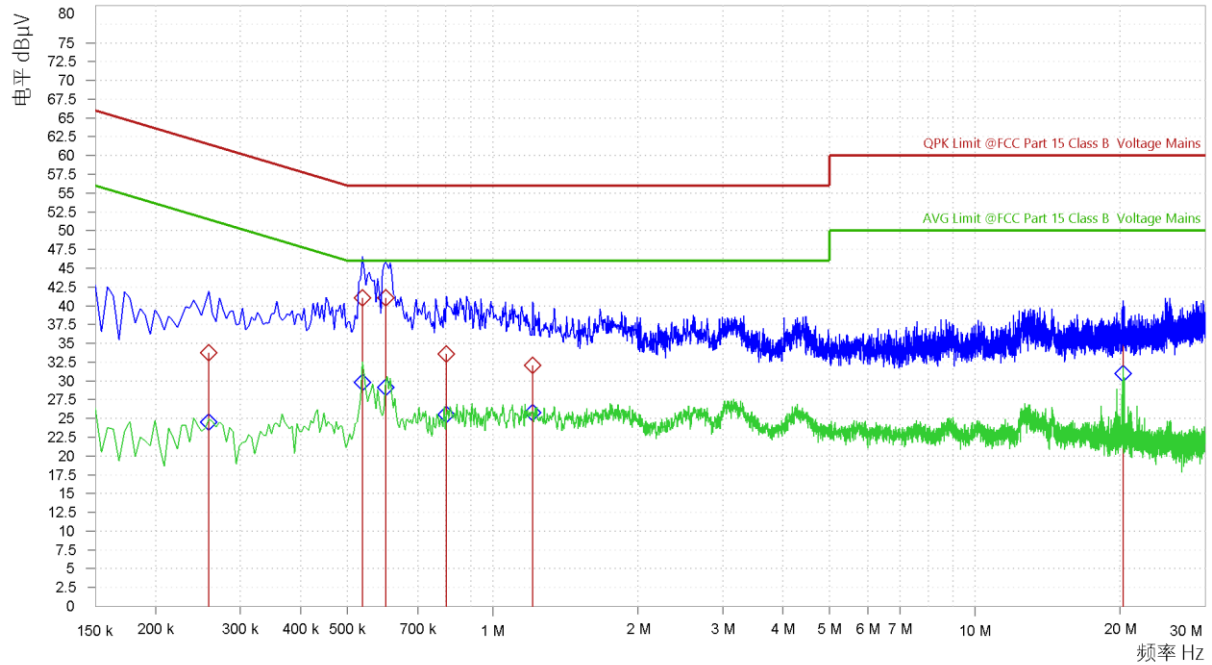
See section 2.3.1 of this report.

3.1.3 Test Result

The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

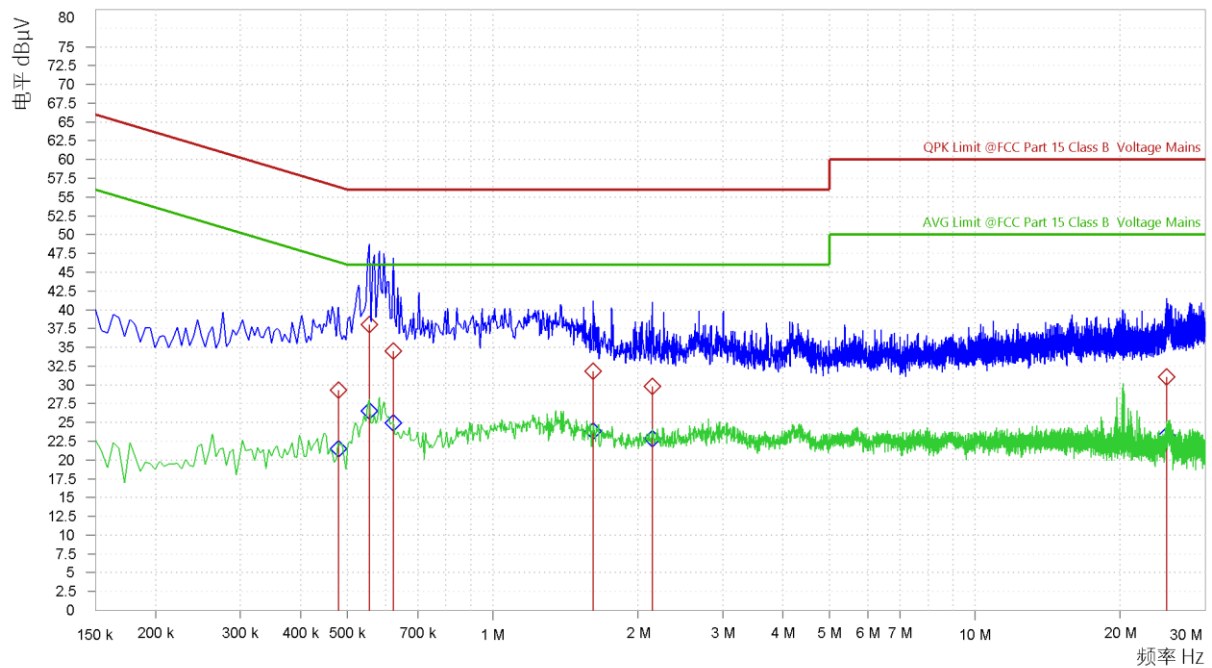
Note:

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a Nominal 120V AC, 50/60Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

**Test voltage and frequency (120V AC, 60Hz)****A. Mains terminal disturbance voltage, L phase, Setup 1, RICO2 L42R**

(Plot A: L Phase)

Frequency (MHz)	QuasiPeak (dB μ V)	Limit - QPK (dB μ V)	Margin - QPK (dB)	CAverage (dB μ V)	Limit - AV (dB μ V)	Margin - AV (dB)
0.258	33.76	61.50	27.74	24.52	51.50	26.97
0.537	41.06	56.00	14.94	29.76	46.00	16.24
0.600	41.02	56.00	14.98	29.11	46.00	16.89
0.803	33.56	56.00	22.44	25.55	46.00	20.45
1.212	32.07	56.00	23.93	25.80	46.00	20.20
20.261	35.84	60.00	24.16	30.99	50.00	19.01

**B. Mains terminal disturbance voltage, N phase, Setup 1, RICO2 L42R**

(Plot B: N Phase)

Frequency (MHz)	QuasiPeak (dB μ V)	Limit - QPK (dB μ V)	Margin - QPK (dB)	CAverage (dB μ V)	Limit - AV (dB μ V)	Margin - AV (dB)
0.479	29.31	56.37	27.05	21.47	46.37	24.90
0.555	38.03	56.00	17.97	26.54	46.00	19.46
0.623	34.50	56.00	21.50	24.93	46.00	21.07
1.617	31.79	56.00	24.21	23.87	46.00	22.13
2.144	29.78	56.00	26.22	22.84	46.00	23.16
24.972	31.10	60.00	28.90	23.29	50.00	26.71

3.2 Radiated Emission

3.2.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength		Field Strength Limitation at 3m Measurement Dist	
	$\mu\text{V/m}$	Dist	($\mu\text{V/m}$)	(dBuV/m)
30.0 - 88.0	100	3m	100	$20\log 100$
88.0 - 216.0	150	3m	150	$20\log 150$
216.0 - 960.0	200	3m	200	$20\log 200$
Above 960.0	500	3m	500	$20\log 500$

- For frequencies above 1000MHz, the field strength limits are based on average detector. When average radiated emission measurements are specified in this part, including emission measurements below 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.
- Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.
- For below 1G: QP detector RBW 120 kHz, VBW 300 kHz.

For Above 1G: PK detector RBW 1MHz, VBW 3MHz for PK value; AV detector RBW 1MHz, VBW 10Hz for AV value.

Note:

- The tighter limit shall apply at the boundary between two frequency range.
- Limitation expressed in dBuV/m is calculated by $20\log \text{Emission Level}(\mu\text{V/m})$.
- If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $L_{d1} = L_{d2} * (d_2/d_1)^2$.

Example:

F.S Limit at 30m distance is $30\mu\text{V/m}$, then F.S Limitation at 3m distance is adjusted as

$$L_{d1} = L_1 = 30\mu\text{V/m} * (10)^2 = 100 * 30\mu\text{V/m}.$$



3.2.2 Test Description

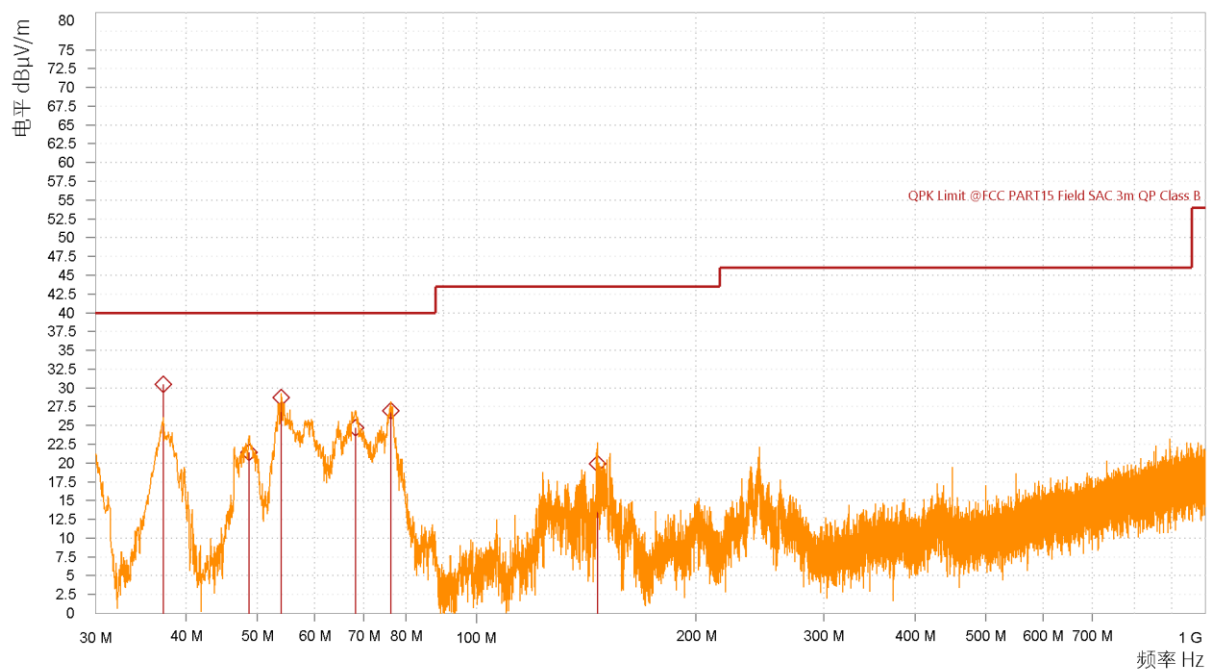
See section 2.3.2 of this report.

3.2.3 Test Result

The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

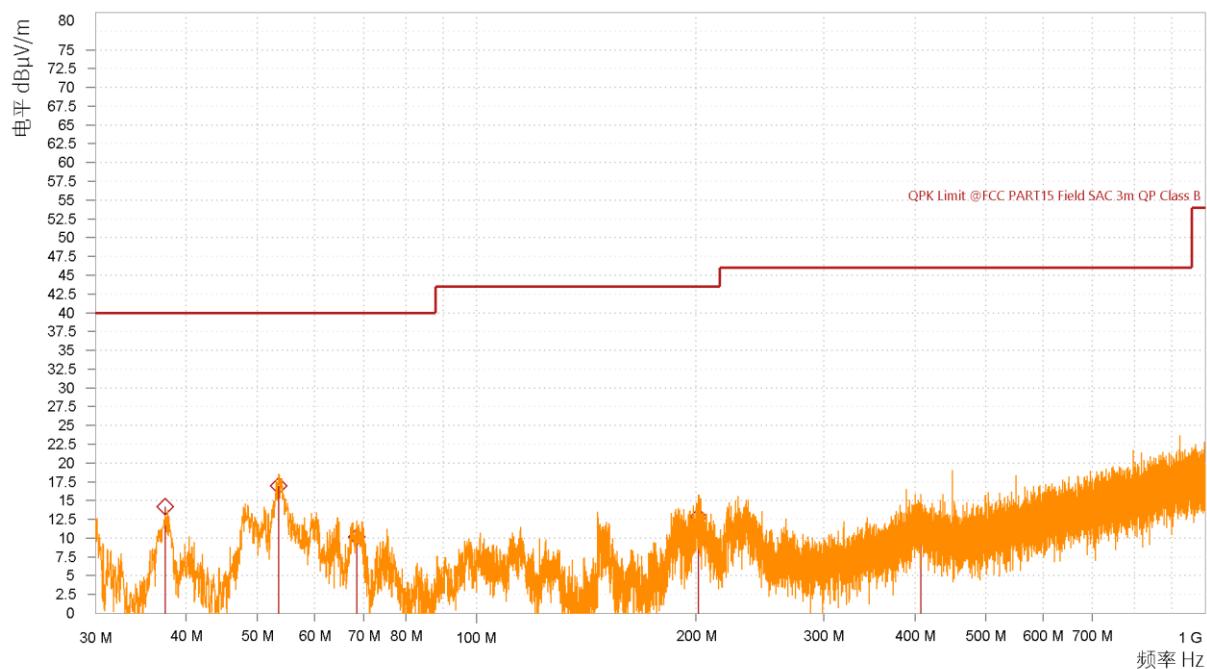
The amplitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be reported.

Note: All radiated emission tests were performed in X, Y, Z axis direction, and only the worst axis test condition was recorded in this test report.

**A. Radiation disturbances, antenna polarization: Vertical, Setup1, RICO2 L42R**

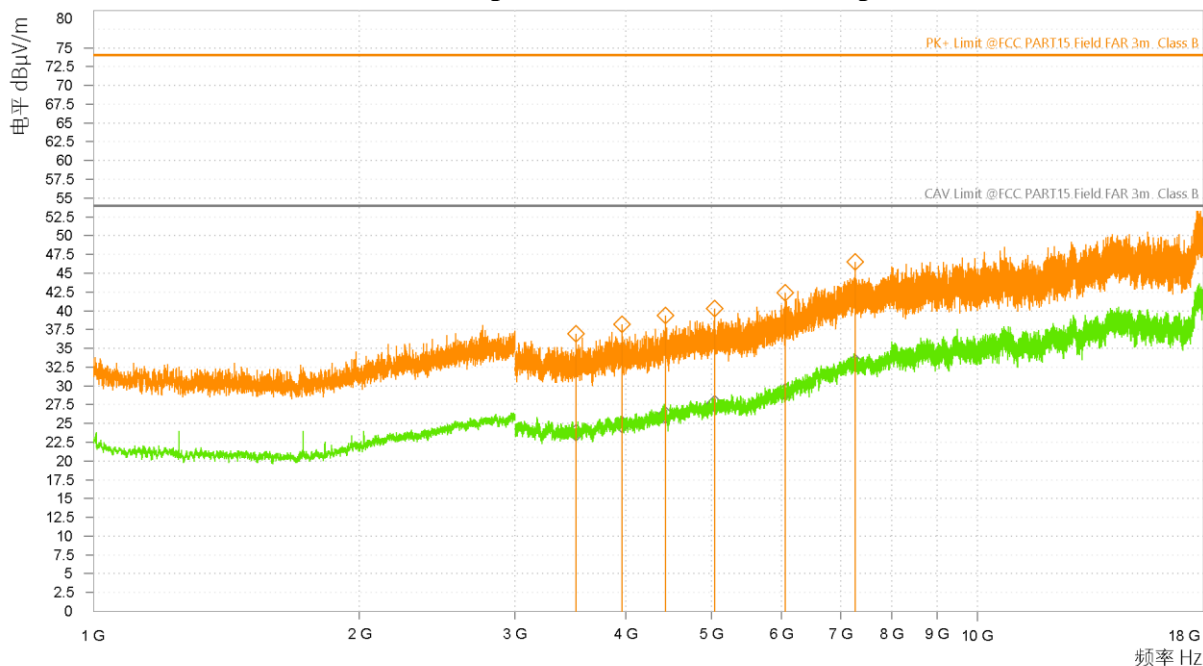
(Plot C: Test Antenna Vertical 30M - 1G)

Frequency (MHz)	QuasiPeak (dB μ V/m)	Bandwidth (kHz)	Antenna height (m)	Limit (dB μ V/m)	Margin (dB)	Antenna	Verdict
37.221	30.48	120.000	1.00	40.00	9.52	Vertical	Pass
48.807	21.40	120.000	1.00	40.00	18.60	Vertical	Pass
53.981	28.71	120.000	1.00	40.00	11.29	Vertical	Pass
68.261	24.72	120.000	1.00	40.00	15.28	Vertical	Pass
76.344	26.91	120.000	1.00	40.00	13.09	Vertical	Pass
146.669	19.88	120.000	1.00	43.50	23.62	Vertical	Pass

**B. Radiation disturbances, antenna polarization: Horizontal, Setup1, RICO2 L42R**

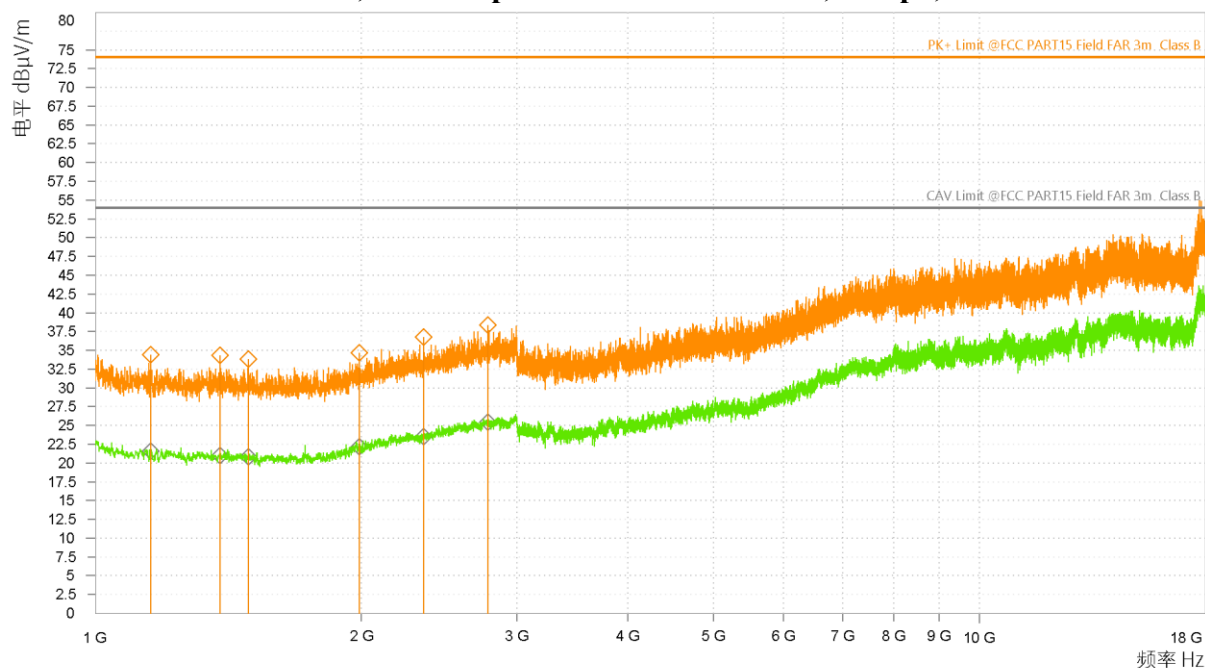
(Plot D: Test Antenna Horizontal 30M - 1G)

Frequency (MHz)	QuasiPeak (dB μ V/m)	Bandwidth (kHz)	Antenna height (m)	Limit (dB μ V/m)	Margin (dB)	Antenna	Verdict
37.437	14.16	120.000	1.00	40.00	25.84	Vertical	Pass
53.603	16.98	120.000	1.00	40.00	23.02	Vertical	Pass
68.584	10.20	120.000	1.00	40.00	29.80	Vertical	Pass
201.906	12.81	120.000	1.00	43.50	30.69	Vertical	Pass
201.906	12.83	120.000	1.00	43.50	30.67	Vertical	Pass
407.330	11.70	120.000	1.00	46.00	34.30	Vertical	Pass

**A. Radiation disturbances, antenna polarization: Vertical, Setup1, RICO2 S75R**

(Plot M: Test Antenna Vertical 1G – 18G)

NO.	Freq. [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dBμV/m]	Trace	Height [m]	Angle [°]	Polarity
1	3,513.500	36.91	74.00	37.09	PK	1.00	136	Vertical
2	3,966.500	38.21	74.00	35.79	PK	1.00	185	Vertical
3	4,440.500	39.36	74.00	34.64	PK	1.00	152	Vertical
4	5,048.000	40.31	74.00	33.69	PK	1.00	98	Vertical
5	6,064.000	42.42	74.00	31.58	PK	1.00	47	Vertical
6	7,270.500	46.54	74.00	27.46	PK	1.00	305	Vertical
NO.	Freq. [MHz]	CAV Level [dBμV/m]	CAV Limit [dBμV/m]	CAV Margin [dBμV/m]	Trace	Height [m]	Angle [°]	Polarity
7	3,513.500	23.76	54.00	30.24	AV	1.00	136	Vertical
8	3,966.500	24.85	54.00	29.15	AV	1.00	185	Vertical
9	4,440.500	26.10	54.00	27.90	AV	1.00	152	Vertical
10	5,048.000	27.61	54.00	26.39	AV	1.00	98	Vertical
11	6,064.000	29.21	54.00	24.79	AV	1.00	47	Vertical
12	7,270.500	33.05	54.00	20.95	AV	1.00	305	Vertical

**B. Radiation disturbances, antenna polarization: Horizontal, Setup1, RICO2 S75R**

(Plot N: Test Antenna Horizontal 1G – 18G)

NO.	Freq. [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dBμV/m]	Trace	Height [m]	Angle [°]	Polarity
1	1,155.500	34.42	74.00	39.58	PK	1.00	177	Horizontal
2	1,384.500	34.30	74.00	39.70	PK	1.00	185	Horizontal
3	1,489.000	33.80	74.00	40.20	PK	1.00	341	Horizontal
4	1,988.500	34.67	74.00	39.33	PK	1.00	29	Horizontal
5	2,352.500	36.76	74.00	37.24	PK	1.00	135	Horizontal
6	2,781.000	38.33	74.00	35.67	PK	1.00	22	Horizontal
NO.	Freq. [MHz]	CAV Level [dBμV/m]	CAV Limit [dBμV/m]	CAV Margin [dBμV/m]	Trace	Height [m]	Angle [°]	Polarity
7	1,155.500	21.55	54.00	32.45	AV	1.00	177	Horizontal
8	1,384.500	20.97	54.00	33.03	AV	1.00	185	Horizontal
9	1,489.000	20.80	54.00	33.20	AV	1.00	341	Horizontal
10	1,988.500	22.14	54.00	31.86	AV	1.00	29	Horizontal
11	2,352.500	23.51	54.00	30.49	AV	1.00	135	Horizontal
12	2,781.000	25.40	54.00	28.60	AV	1.00	22	Horizontal

-----End of Report-----