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Test report No:
24A319R-RF-US-P06V02

FCC TEST REPORT

Product Name	POS Terminal
Trademark	
Model and /or type reference	MF960
FCC ID	2AQRE-MF960
Applicant´s name / address	Fujian Morefun Electronic Technology Co., Ltd. 4th Floor, #15 Building, Standard plant, Fuwan, Jinshan Industry Center Area, #869 Panyu Rd, Gaishan Town, Cangshan Area, Fuzhou, Fujian, China
Test method requested, standard	47 CFR FCC Part 15 (Section 15.247) ANSI C63.10: 2013
Verdict Summary	IN COMPLIANCE
Tested by (name / position & signature)	Tim Cao / Project Manager
Approved by (name / position & signature)	Jack Zhang / Manager
Date of issue	2024-12-08
Report Version	V1.0
Report template No	Template_FCC Part 15C-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.
In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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GENERAL CONDITIONS

Test Location A	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Test Location B	No. 8213, Fanhua Avenue, Baohe District, Hefei City, Anhui Province, China
Date(receive sample)	Oct. 14, 2024
Date (start test)	Oct. 20, 2024
Date (finish test)	Oct. 30, 2024

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT : Equipment Under Test
QP : Quasi-Peak
CAV : CISPR Average
AV : Average
CDN : Coupling Decoupling Network
SAC : Semi-Anechoic Chamber
OATS : Open Area Test Site
BW : Bandwidth
AM : Amplitude Modulation
PM : Pulse Modulation
HCP : Horizontal Coupling Plane
VCP : Vertical Coupling Plane
U_N : Nominal voltage
*T*x : Transmitter
*R*x : Receiver
N/A : Not Applicable
N/M : Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
24A0319R-RF-US-P06V02	V1.0	Initial issue of report.	2024-12-08

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. This report is a limited report on the installation of a test module in a POS Terminal, and the customer declares that the RF parameters of the module installed in the host computer are exactly the same as those of the certified module. We verified the RF output power and radiated emissions of the equipment. For other test data, please refer to FCC ID: 2A9FT-Z400-H.These test results on a sample of the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 15 (Section 15.247).
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
   - Chapter 1.1 General Description of the Item(s);
   - Chapter 1.2 Antenna Information;
   - Chapter 1.3Channel List.

USED EQUIPMENT

Test Location A: Conducted Test/ TR8

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Versiom	Software version
Wireless Connectivity Tester	R&S	CMW 270	102593	2024.05.15	2025.05.14	V 4.0.60	N/A
Coaxial Cable	N/A	N/A	2477	2024.06.11	2025.06.10	N/A	N/A
Coaxial Cable	N/A	N/A	2478	2024.06.11	2025.06.10	N/A	N/A
High and low temperature and fast temperature change test box	ASTUOD	ASTD-FBT-225K	N/A	2024.04.21	2025.04.20	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-032	2024.05.17	2025.05.16	N/A	N/A
Test system							
Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Versiom	Software version
MAX Signal Analyzer	Keysight	N9010A	MY48030494	2023.11.08	2024.11.07	A.14.03	N/A
RF Control Unit	Tonscend	JS0806-2	22G8060594	2024.01.31	2025.01.30	N/A	N/A
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY61252529	2024.05.12	2025.05.11	B.01.96	N/A
Frequency extender for EXG or MXG	Keysight	N5182BX07	MY59362500	2024.05.12	2025.05.11	N/A	N/A
EXG-B MW Analog Signal Generator	Keysight	N5173B	MY61252566	2024.07.06	2025.07.05	B.01.95	N/A
Test Software	Tonscend	TS1120	JS1120-3	N/A	N/A	N/A	V3.0.22

Test Location A: AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100726	2024.07.06	2025.07.05	4.42 SP1	N/A
Two-Line V-Network	R&S	ENV 216	101044	2023.11.08	2024.11.07	N/A	N/A
Two-Line V-Network	R&S	ENV 216	101189	2024.07.06	2025.07.05	N/A	N/A
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2024.07.06	2025.07.05	N/A	N/A
Coaxial Cable	Huber+Suhner	RG 223	TR1-C1	2024.07.06	2025.07.05	N/A	N/A
Impedance Stabilization Network	Teseq GmbH	ISN T800	57318	2024.01.20	2025.01.19	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-011	2024.05.17	2025.05.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	N/A

Test Location A: Radiated Emission (9KHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Versiom	Software version
EMI Test Receiver	R&S	ESCI	100573	2024.02.06	2025.02.05	4.42 SP3	N/A
Loop Antenna	R&S	HFH2-Z2E	101149	2024.03.27	2025.03.26	N/A	N/A
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2024.03.20	2025.03.19	N/A	N/A
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2024.04.27	2025.04.26	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-021	2024.05.17	2025.05.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

Test Location B: Radiated Emission (1GHz-40GHz) / AC103

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Versiom	Software version
Signal analyzer	keysight	N9020B	MY63490118	2024.07.26	2025.07.25	A 08.54	N/A
Bilog Antenna	TESEQ	CBL6112D	64164	2023.11.03	2024.11.02	N/A	N/A
Horn Antenna	RF SPIN	DRH18-E	KV2D11A18ES	2023.11.07	2024.11.06	N/A	N/A
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	01312	2023.11.07	2024.11.06	N/A	N/A
Amplifier	ESE	LNA0118	LNA23100009	2023.10.30	2024.10.29	N/A	N/A
Amplifier	Tonscend	TAP01018048S	AP23J8060307	2023.11.10	2024.11.09	N/A	N/A
EXG-B MW Analog Signal Generator	Keysight	N5173B	MY61252566	2023.11.08	2024.11.07	N/A	N/A
Band Reject Filter Group	Tonscend	JS0806-F	23G806F0701	2023.11.20	2024.11.19	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	026	2024.09.04	2025.09.03	N/A	N/A
Test Software	Tonscend	JS36	N/A	N/A	N/A	N/A	5.0.0

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document.The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.The Uncertainties is complice with standard required as below.

Test item Test Location A	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.80dB 150kHz~30MHz: 2.40dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 3.50 dB 300MHz~1GHz: 3.60 dB Vertical: 30MHz~200MHz: 3.60 dB 300MHz~1GHz: 3.50 dB
Radiated Emission(1GHz~26.5GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB Horizontal: 18GHz~26.5GHz: 5.30 dB Vertical: 18GHz~26.5GHz: 4.90 dB
20dB Bandwidth	± 1 kHz
Carrier Frequency Separation	± 1 kHz
Number of Hopping Frequencies	± 1 kHz
Time of Occupancy (Dwell Time)	± 0.1 us
Peak OutputPower	± 1.27 dB
Emissions in non-restricted frequency bands	± 1.0 dB
Radiated Emission Band Edge	± 3.9 dB

Test item Test Location B	Uncertainty
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 4.86 dB 300MHz~1GHz: 4.86 dB Vertical: 30MHz~200MHz: 4.92 dB 300MHz~1GHz: 4.92 dB
Radiated Emission(1GHz~26.5GHz)	Horizontal: 1GHz~18GHz: 5.99 dB Vertical: 1GHz~18GHz: 5.76 dB Horizontal: 18GHz~26.5GHz: 5.99 dB Vertical: 18GHz~26.5GHz: 5.76 dB
Radiated Emission Band Edge	± 5.99 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name..... :	POS Terminal
Model No. ..... :	MF960
Trademark. ..... :	
FCC ID ..... :	2AQRE-MF960
Hardware Version ..... :	B30
Software Version..... :	V13.0.1
Manufacturer..... :	Fujian Morefun Electronic Technology Co., Ltd.
Manufacturer Address..... :	4th Floor, #15 Building, Standard plant, Fuwan, Jinshan Industry Center Area, #869 Panyu Rd, Gaishan Town, Cangshan Area, Fuzhou, Fujian, China
Factory ..... :	Fujian Morefun Electronic Technology Co., Ltd.
Factory address ..... :	4th Floor, #15 Building, Standard plant, Fuwan, Jinshan Industry Center Area, #869 Panyu Rd, Gaishan Town, Cangshan Area, Fuzhou, Fujian, China
Operating temperature ..... :	-20 ~ +60 ℃

Wireless Card ..... :	Z400-H					
Wireless specification..... :	Bluetooth (BR/EDR)					
Operating frequency range(s)..... :	2402~2480MHz					
Type of Modulation..... :	GFSK					
PHYs ..... :	☒	GFSK	☒	Pi/4 DQPSK	☒	8DPSK
Data Rate ..... :	☒	1Mbit/s	☒	2Mbit/s	☒	3Mbit/s
Number of channel..... :	79					

Rated power supply .....:	Voltage and Frequency	
	☐	AC: 220 - 240 V, 50/60 Hz
	☐	AC: 100 - 240 V, 50/60 Hz
	☒	DC: 5 Vdc
	☒	Battery: 7.20 Vdc, 2600 mAh, 18.72 Wh
	☒	Adapter:
Adapter Model .....:	DGL0502000LUS	
	Input: 100-240V ~ 50/60Hz,0.3A Max Output: 5.0V / 2000 mA	
Mounting position.....:	☐	Tabletop equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☒	Hand-held/Portable equipment
	☐	Other:

1.2 Antenna Information

Antenna model / type number..... :	MF960B30 Z400			
Antenna Delivery ..... :	☒	1TX + 1RX		
	☐	2TX + 2RX		
	☐	Others: ……		
Antenna technology..... :	☒	SISO		
	☐	MIMO	☐	CDD
			☐	Beam-forming
Antenna Type..... :	☐	External	☐	Dipole
			☐	Sectorized
	☒	Internal	☐	Ceramic Chip
			☐	PIFA
			☒	FPC
			☐	Others……..
Antenna Gain..... :	1.17 dBi			

1.3 Channel List

Bluetooth Working Frequency of Each Channel: (For FHSS)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz	03	2405 MHz
04	2406 MHz	05	2407 MHz	06	2408 MHz	07	2409 MHz
08	2410 MHz	09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz	15	2417 MHz
16	2418 MHz	17	2419 MHz	18	2420 MHz	19	2421 MHz
20	2422 MHz	21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz	27	2429 MHz
28	2430 MHz	29	2431 MHz	30	2432 MHz	31	2433 MHz
32	2434 MHz	33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz	39	2441 MHz
40	2442 MHz	41	2443 MHz	42	2444 MHz	43	2445 MHz
44	2446 MHz	45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz	51	2453 MHz
52	2454 MHz	53	2455 MHz	54	2456 MHz	55	2457 MHz
56	2458 MHz	57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz	63	2465 MHz
64	2466 MHz	65	2467 MHz	66	2468 MHz	67	2469 MHz
68	2470 MHz	69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz	75	2477 MHz
76	2478 MHz	77	2479 MHz	78	2480 MHz	N/A	N/A

Note: The general description of the Item(s), antenna information and channel list in clause 1 are provided and confirmed by the client.

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

Test Mode For Bluetooth	Mode 1: Transmitter-1Mbps(GFSK_DH5)
	Mode 2: Transmitter-2Mbps(Pi/4 DQPSK_DH5)
	Mode 3: Transmitter-3Mbps(8DPSK_DH5)
	Mode 4: Transmitter-Hopping-1Mbps(GFSK_DH5)
	Mode 5: Transmitter-Hopping-2Mbps(Pi/4 DQPSK_DH5)
	Mode 6: Transmitter-Hopping-3Mbps(8DPSK_DH5)

Note 1: Regards to the frequency band operation: the lowest, middle and highest frequency channel were selected to perform the test, then shown on this report.

Note 2: For portable device, radiated tests was verified over X, Y, Z axis, and shown the worst case on this report.

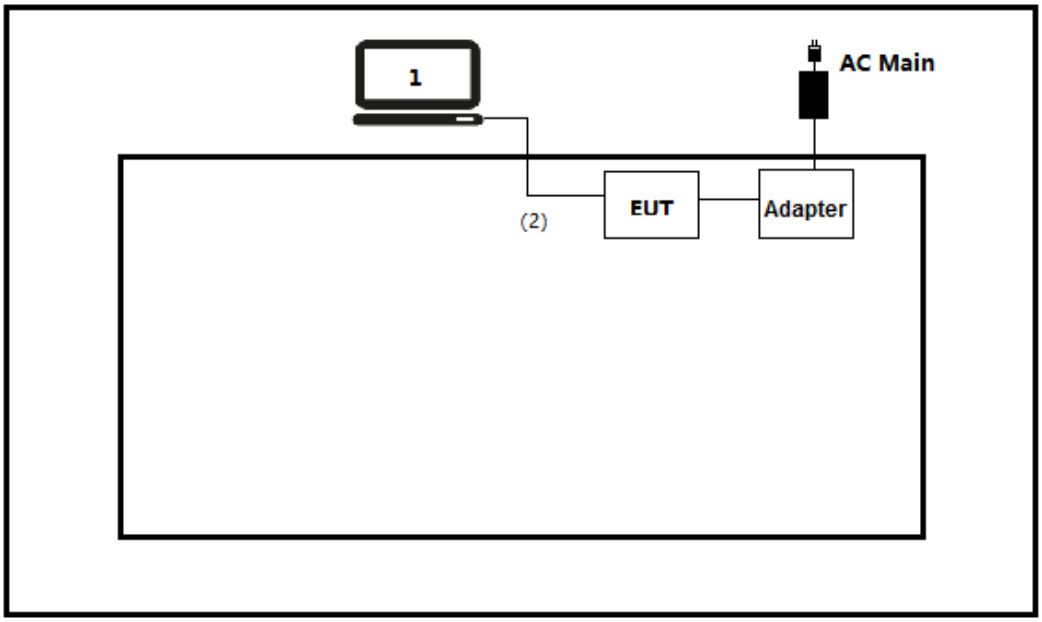
2.2 Auxiliary equipment /Accessories/Test software for the EUT

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
(1) USB Control Cable	N/A	N/A	N/A
(2) USB Control Cable	N/A	N/A	N/A
software	Type / Version	Manufacturer	Supplied by
N/A	N/A	N/A	N/A

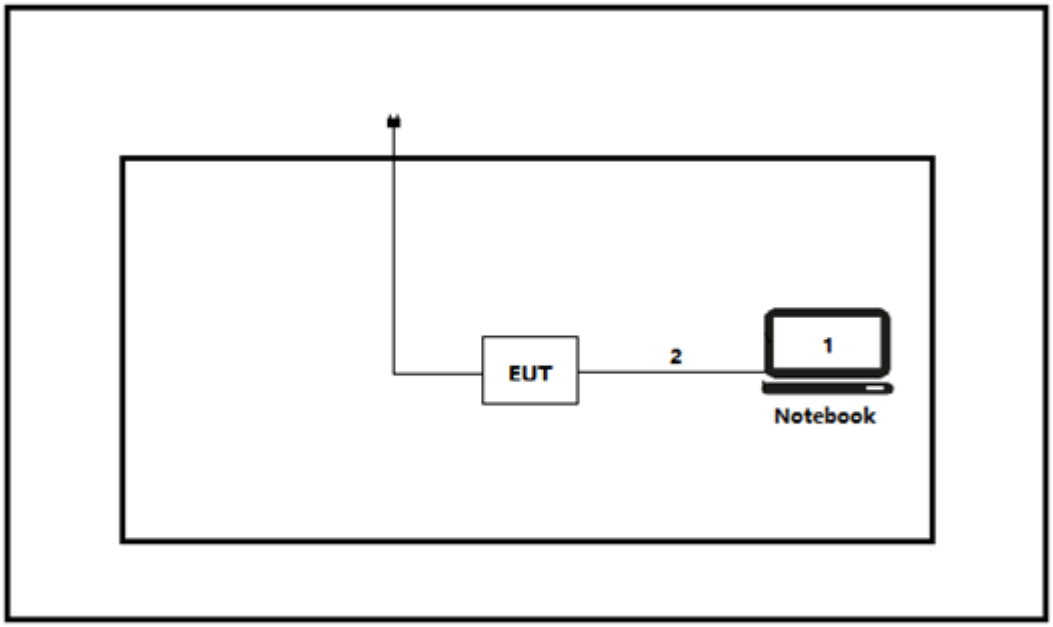
Accessories Information	Cable		
	Length used during test [m]	Attached during test	Shielded
(2)USB Control Cable	1	☒	☒
(3)USB Control Cable	8	☒	☒

2.3 Test Configuration / Block diagram used for tests

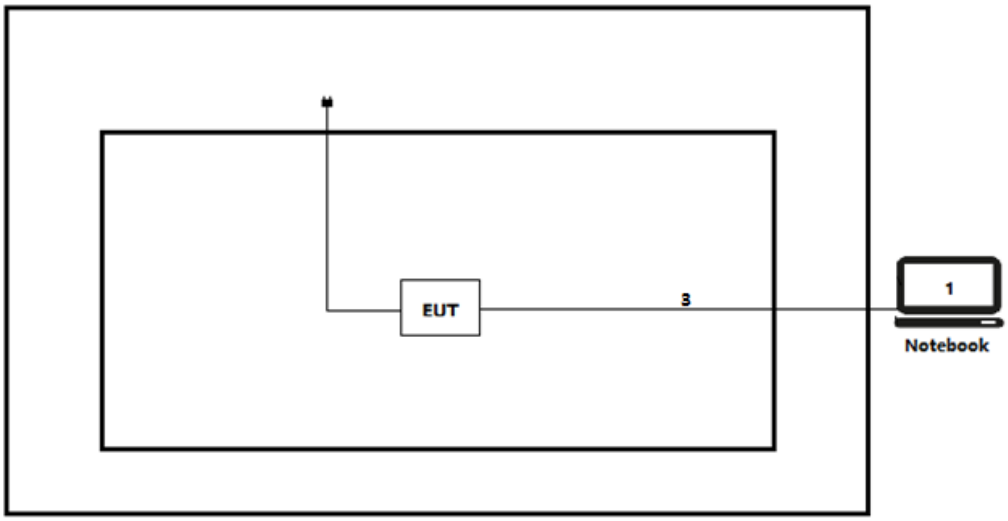
Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Conducted test



Test setup Diagram- Radiated Emission



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Enter launch execution on the dial screen.
3	Configure the test mode, the test channel, and the data rate.
4	Verify that the EUT works properly.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
CFR 47, FCC Part 15 C	2024	Operation within the bands902–928 MHz, 2400–2483.5 MHz, and5725–5850 MHz.
ANSI C63.10	2013	American National Standard ofProcedures for Compliance Testing ofUnlicensed Wireless Devices

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

Test Item	FCC Rule No.	Test Method	Result
Antenna Requirement	15.203/15.247(b)	--	**See Remark**
AC Power Line Conducted Emission	15.207	ANSI C63.10 (2013) Section 6.2	**PASS**
Conducted Peak Output Power	15.247 (b)(1)	ANSI C63.10 (2013) Section 11.9.2.3	**PASS**
20dB Emission Bandwidth & 99% Occupied Bandwidth	15.247 (a)(1)	ANSI C63.10 (2013) Section 6.9.2/6.9.3	**See Remark**
Carrier Frequencies Separation	15.247 (a)(1)	ANSI C63.10 (2013) Section 7.8.2	**See Remark**
Hopping Channel Number	15.247 (a)(1)	ANSI C63.10 (2013) Section 7.8.3	**See Remark**
Dwell Time	15.247 (a)(1)	ANSI C63.10 (2013) Section 7.8.4	**See Remark**
Band-Edge	15.247(d)	ANSI C63.10 (2013) Section 7.8.7.2	**PASS**
RF Conducted Spurious Emissions	15.247(d)	ANSI C63.10 (2013) Section 7.8.7.1	**See Remark**
Radiated Spurious emissions	15.247(d); 15.205/15.209	ANSI C63.10 (2013) Section 6.4 / 6.5 / 6.6	**PASS**
Restricted bands around fundamental frequency (Radiated Emission)	15.247(d); 15.205/15.209	ANSI C63.10 (2013) Section 7.8.8.3	**See Remark**

Remark:
Only the Effective (Isotropic) Radiated Power Output Data and Radiated Spurious Emission were fully tested. These items please refer to the BR/EDR Module report S23033100205001.

The FCC ID is 2A9FT-Z400-H has been certified, and the test report issued by Shenzhen NTEK Testing Technology Co., Ltd. on 03/05/2023.

Requirement – Test Item of FCC	Standard(s)	Verdict	Tset Location	Remark
Maximum Conducted Output Power	FCC 15.247(b)(1)	PASS	**A**	Test data please refer to **Appendix A**
Emissions in Restricted Bands	FCC 15.247(b)(3)	PASS	**B**	Test data please refer to **Appendix B**
Band edge measurements	FCC 15.247(d)	PASS	**B**	Test data please refer to **Appendix C**
AC Power Line Conducted Emission	FCC 15.207	PASS	**A**	Test data please refer to **Appendix D**

3.4 Power setting in test

Mode	Channel	Frequency (MHz)	Power Setting
Mode 1	00	2402	Default
	39	2441	Default
	78	2480	Default
Mode 2	00	2402	Default
	39	2441	Default
	78	2480	Default
Mode 3	00	2402	Default
	39	2441	Default
	78	2480	Default

3.5 Test Matrix

Test item	Model : POS Terminal	
	SN: 82240521970040	SN: 82240521970039
Maximum Conducted Output Power	☒	☐
Emissions in Restricted Bands	☐	☒
Band edge measurements	☐	☒
AC Power Line Conducted Emission	☐	☒
Note1: The only difference between sample #1 and sample #2 is whether to keep the original antenna, sample #1 is a conduction test product that removes the original antenna and is equipped with SMA wires, and sample #2 is a complete product that retains the original antenna.		

3.6 Test Facility

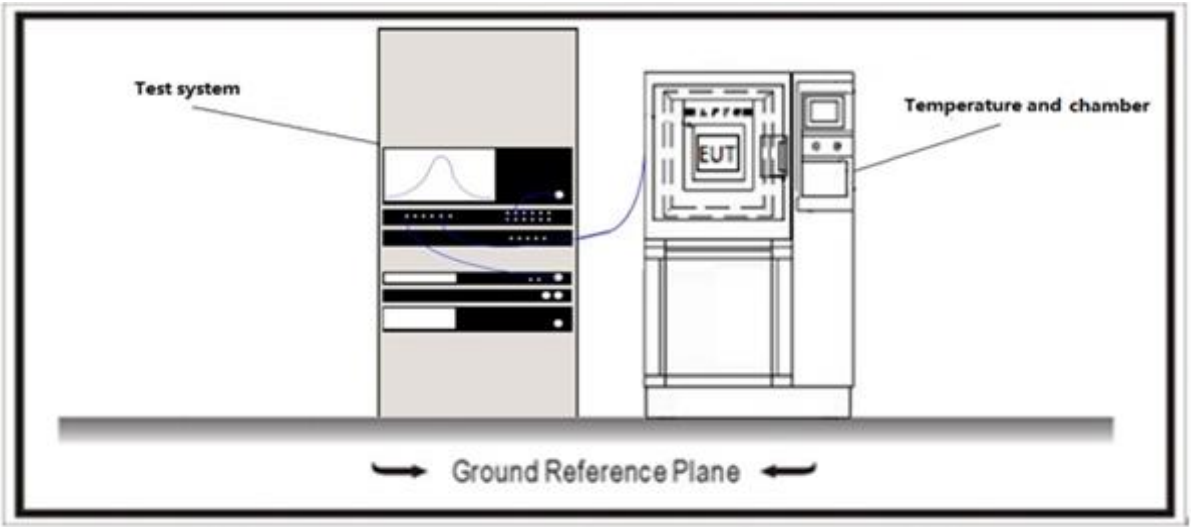
Tset Location A	**:**	**FCC Designation Number: CN1199**
Tset Location B	**:**	**FCC Designation Number: CN1321**

4 TEST ITEMS OF LIMIT/SETUP/PROCEDURE

4.1 Maximum Conducted Output Power	VERDICT: PASS

4.1.1 Limit	
Standard	FCC Part 15 Subpart C Paragraph 15.247(b)
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
☐	For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels

4.1.2 Test Setup



4.1.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		7.8	Evaluation of frequency-hopping device parameters
	☒	ANSI C63.10	7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

4.2 Emissions in Restricted Bands — VERDICT: PASS

4.2.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.205

Restricted Bands of operation

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
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
8.81425 – 8.81475	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	
13.36 – 13.41			

Restricted Band Emissions Limit

FCC Part 15 Subpart C Paragraph 15.209

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30(Note 1)
1.705 - 30	30	29.5	30(Note 1)
30 - 88	100	40	3(Note 2)
88 - 216	150	43.5	3(Note 2)
216 - 960	200	46	3(Note 2)
Above 960	500	54	3(Note 2)

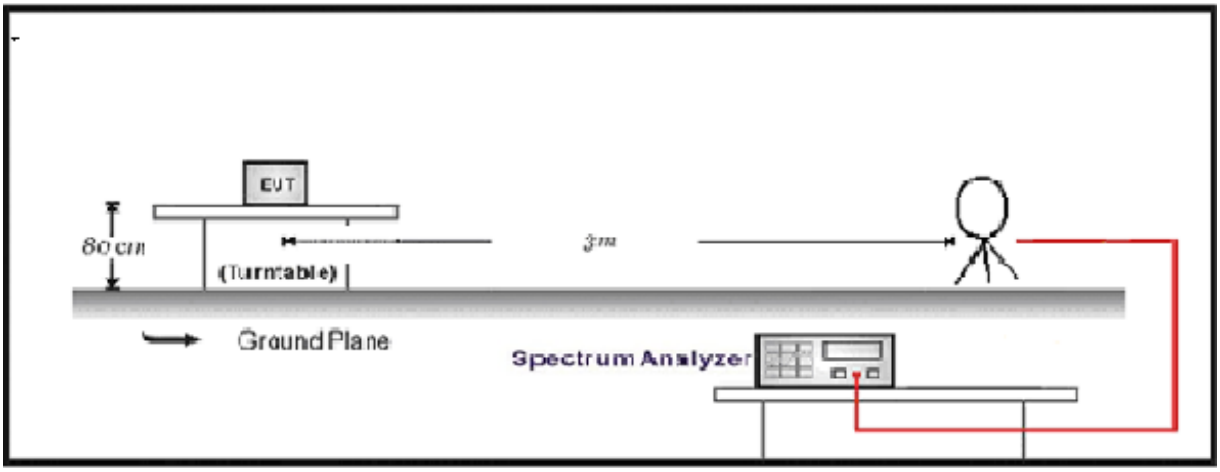
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results

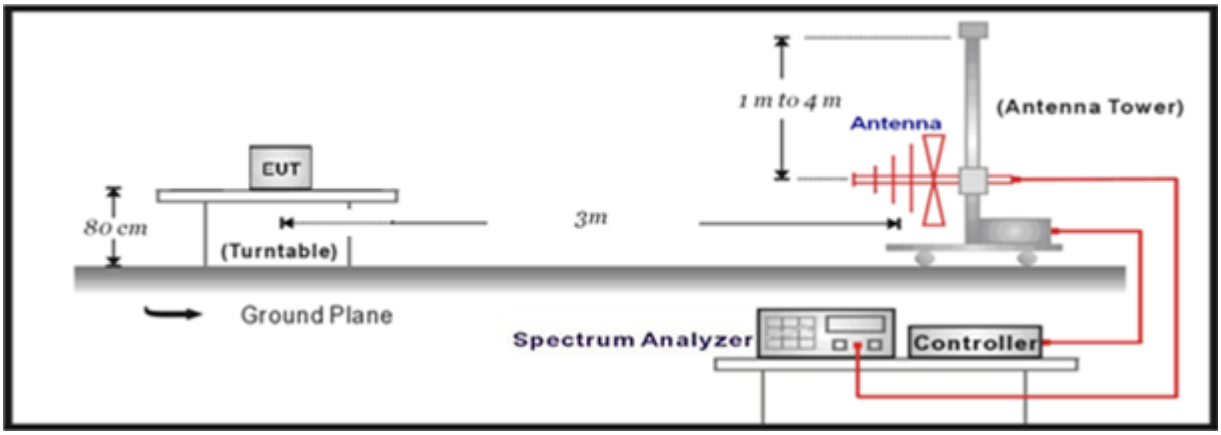
shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.2.2 Test Setup

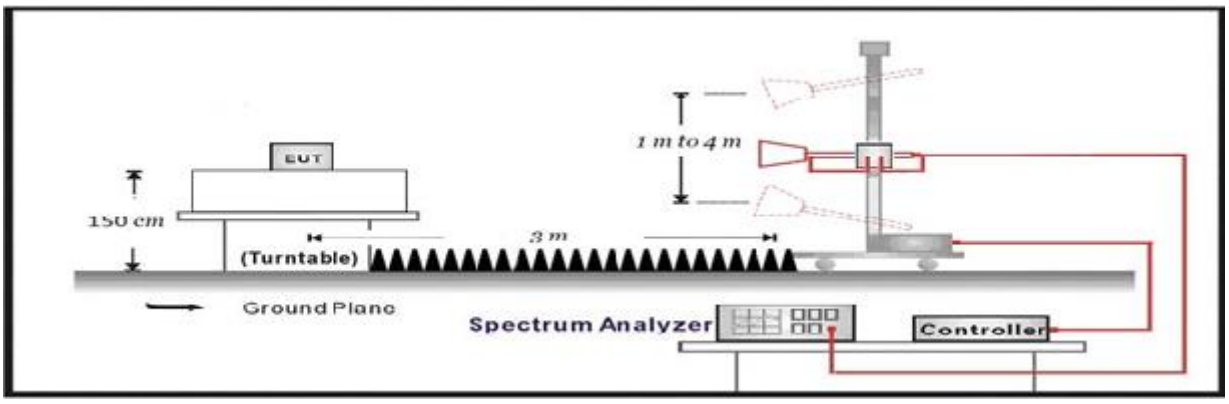
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.2.3 Test Procedure

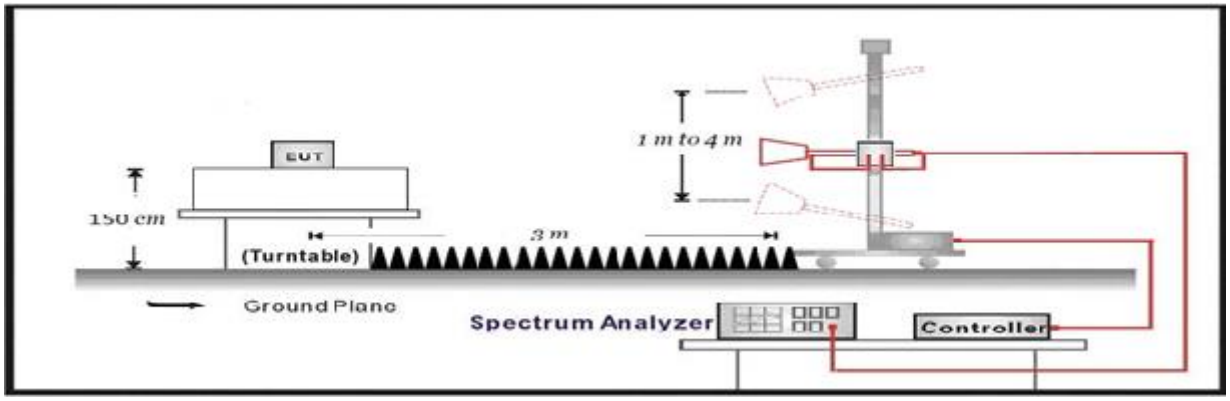
	References Rule			Chapter	Description
☒	ANSI C63.10			11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10		11.12.1	Radiated emission measurements
	☒	ANSI C63.10		11.12.2.7	Radiated spurious emission test
		☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.3 Band edge measurements	VERDICT: PASS

4.3.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(d) ,15.209			
Frequency bands (MHz)	Detector	Limit (dB μV/m)	RBW (MHz)	Distance (m)
2310-2390 2483.5-2500	PK	74	1	3
	AV	54	1	3
Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.				

4.3.2 Test Setup



4.3.3 Test Procedure

Test Method

	References Rule		Chapter	Description
☐	DA 00-705		N/A	duty cycle correction factor
☒	ANSI C63.10		6.10	Band-edge testing
	☒	ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	☐	ANSI C63.10	6.10.6	Marker-delta method
☐	ANSI C63.10		6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10		6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☐	ANSI C63.10		6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

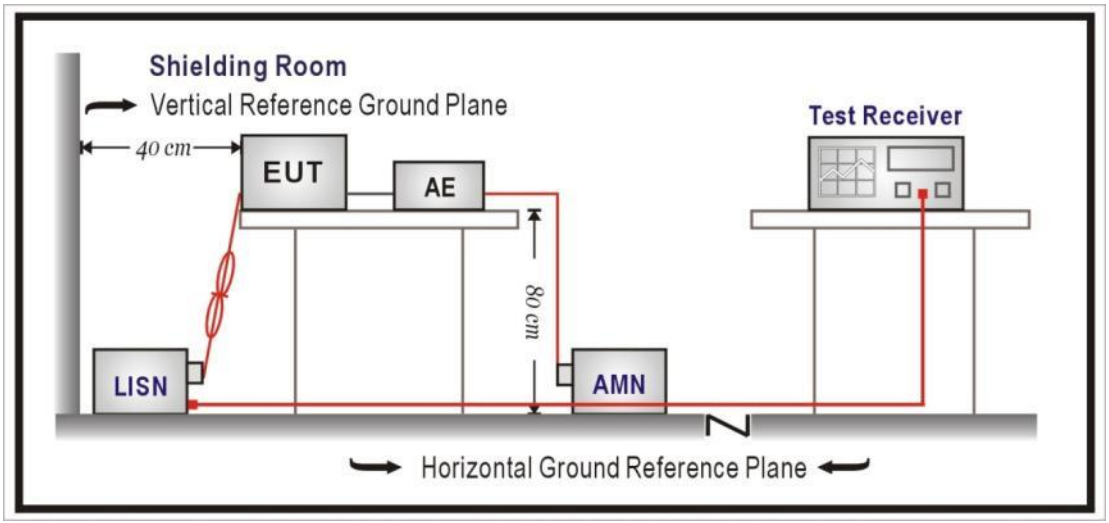
4.4 AC Power Line Conducted Emission	VERDICT: PASS

4.4.1Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207	
Frequency range [MHz]	Limit: QP [dB(μV)[1)]]	Limit: AV [dB(μV) [1)]]
0,15 - 0,50	66 – 56 [2)]	56 - 46 [2)]
0,50 - 5,0	56	46
5,0 - 30	60	50

[1)] At the transition frequency, the lower limit applies.
[2)] The limit decreases linearly with the logarithm of the frequency.
NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.
NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.4.2 Test Setup



4.4.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensedwireless devices

5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

6 TEST RESULT

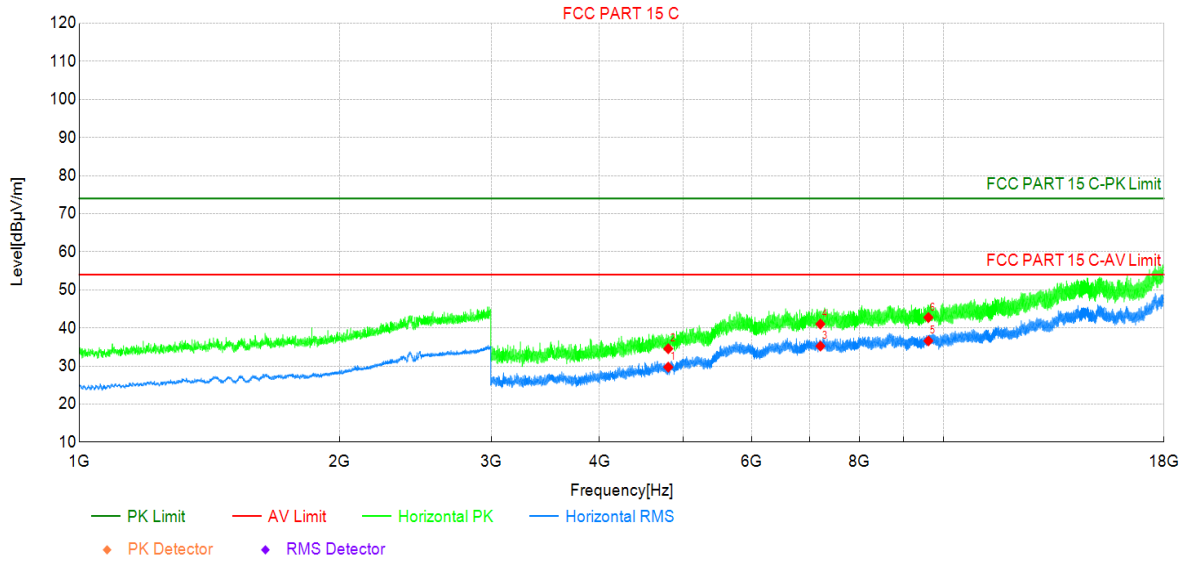
Appendix A: Maximum Conducted Output Power

Test Mode	Antenna	Frequency[MHz]	Conducted Power[dBm]	EIRP Power[dBm]	Conducted Limit[dBm]	EIRP Limit[dBm]	Verdict
Mode 1	Ant1	2402	7.66	8.83	≤20.97	≤36	PASS
		2441	7.83	9.00	≤20.97	≤36	PASS
		2480	7.77	8.94	≤20.97	≤36	PASS
Mode 2	Ant1	2402	7.64	8.81	≤20.97	≤36	PASS
		2441	7.66	8.83	≤20.97	≤36	PASS
		2480	7.67	8.84	≤20.97	≤36	PASS
Mode 3	Ant1	2402	7.82	8.99	≤20.97	≤36	PASS
		2441	7.88	9.05	≤20.97	≤36	PASS
		2480	7.66	8.83	≤20.97	≤36	PASS
Note 1: EIRP Power = Conducted Power + Antenna gain Note 2: The Antenna gain please refer to clause 1.2							

Appendix B: Emissions in Restricted Band

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2402MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph

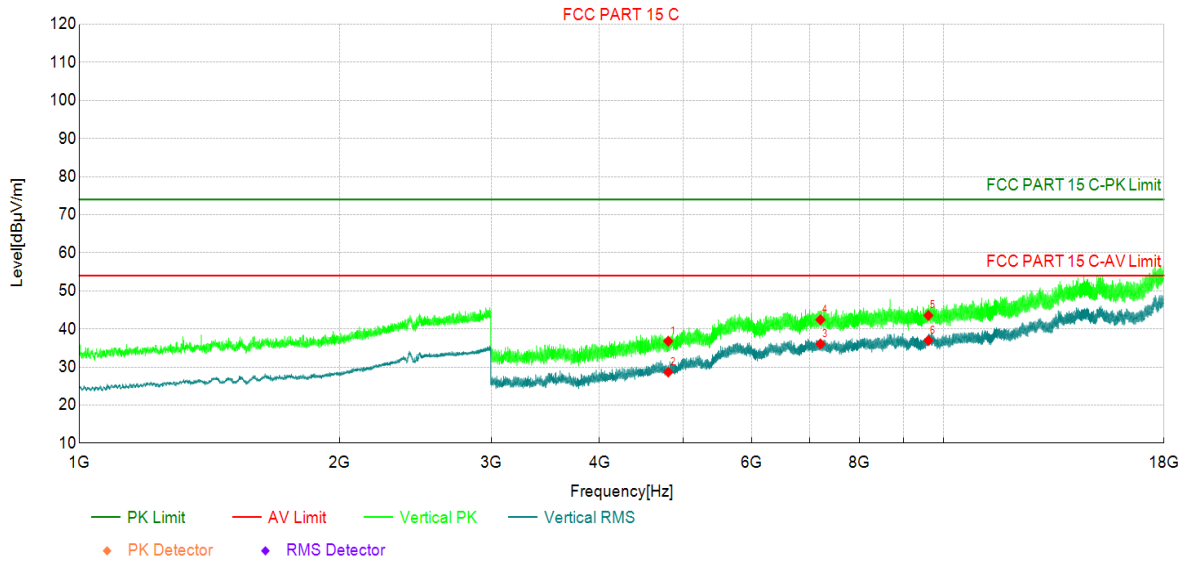


Suspected Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	4804	35.79	29.71	-6.08	54.00	24.29	RMS	Horizo	PASS
2	4804	40.63	34.55	-6.08	74.00	39.45	PK	Horizo	PASS
3	7206	32.39	35.22	2.83	54.00	18.78	RMS	Horizo	PASS
4	7206	38.20	41.03	2.83	74.00	32.97	PK	Horizo	PASS
5	9608	30.98	36.59	5.61	54.00	17.41	RMS	Horizo	PASS
6	9608	37.13	42.74	5.61	74.00	31.26	PK	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2402MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



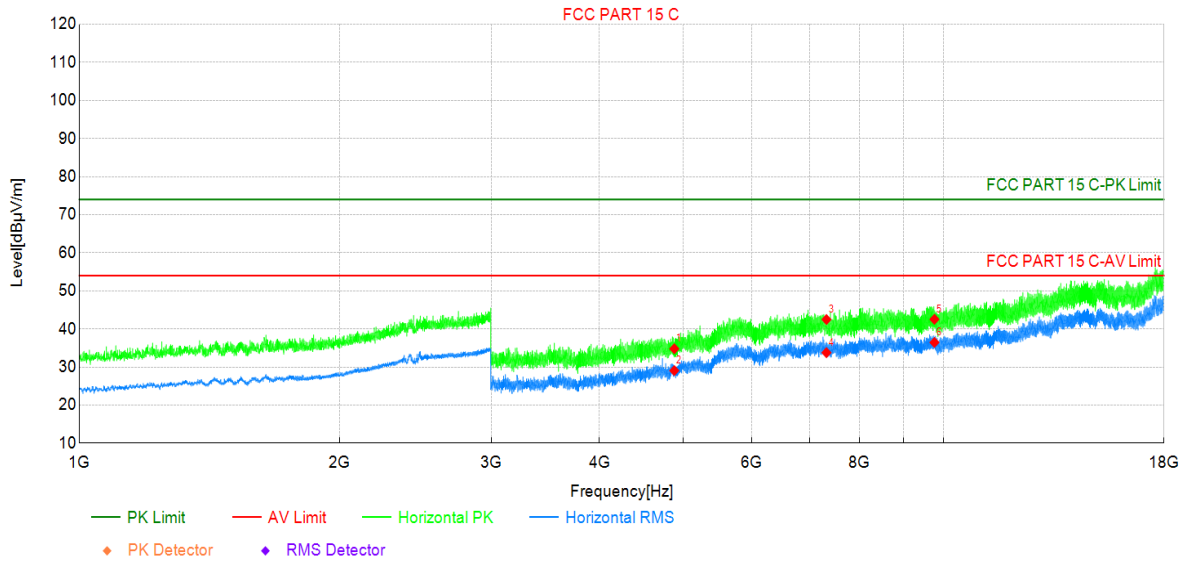
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4804	42.87	36.79	-6.08	74.00	37.21	PK	Vertic	PASS
2	4804	34.74	28.66	-6.08	54.00	25.34	RMS	Vertic	PASS
3	7206	33.24	36.07	2.83	54.00	17.93	RMS	Vertic	PASS
4	7206	39.58	42.41	2.83	74.00	31.59	PK	Vertic	PASS
5	9608	37.92	43.53	5.61	74.00	30.47	PK	Vertic	PASS
6	9608	31.39	37.00	5.61	54.00	17.00	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2441MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



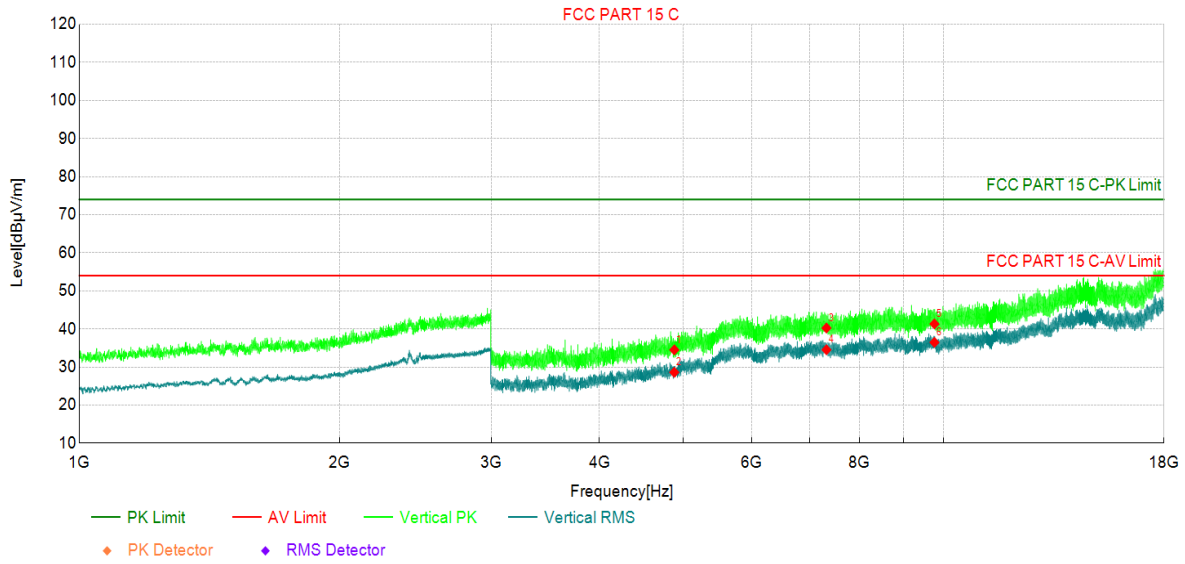
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4882	40.91	34.79	-6.12	74.00	39.21	PK	Horizo	PASS
2	4882	35.19	29.07	-6.12	54.00	24.93	RMS	Horizo	PASS
3	7323	39.85	42.48	2.63	74.00	31.52	PK	Horizo	PASS
4	7323	31.14	33.77	2.63	54.00	20.23	RMS	Horizo	PASS
5	9764	36.74	42.54	5.80	74.00	31.46	PK	Horizo	PASS
6	9764	30.66	36.46	5.80	54.00	17.54	RMS	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2441MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



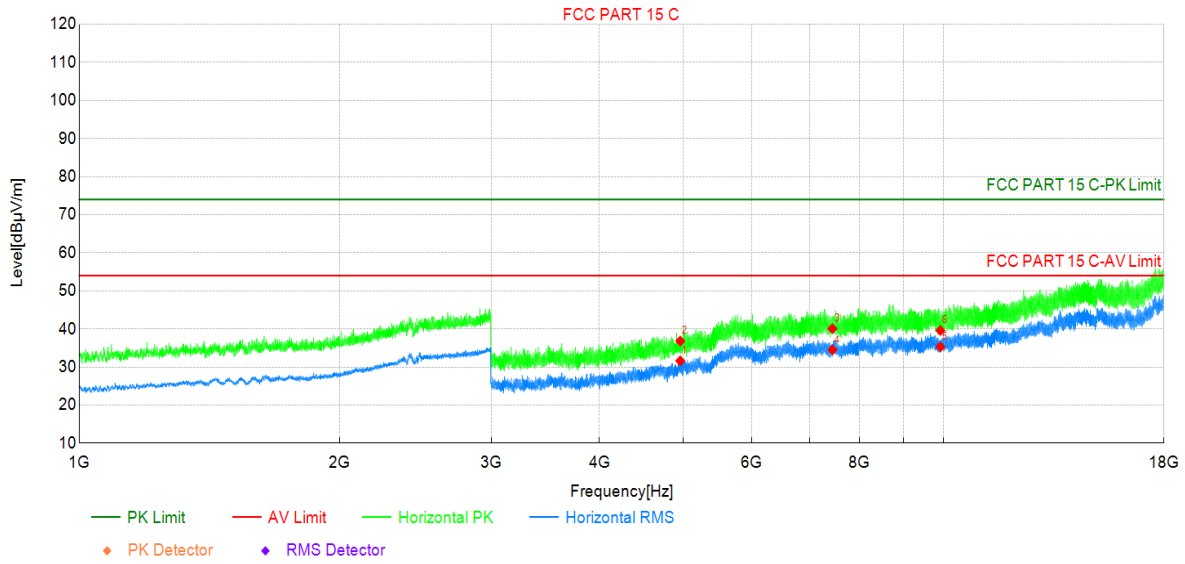
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4882	40.62	34.50	-6.12	74.00	39.50	PK	Vertic	PASS
2	4882	34.73	28.61	-6.12	54.00	25.39	RMS	Vertic	PASS
3	7323	37.61	40.24	2.63	74.00	33.76	PK	Vertic	PASS
4	7323	31.89	34.52	2.63	54.00	19.48	RMS	Vertic	PASS
5	9764	35.51	41.31	5.80	74.00	32.69	PK	Vertic	PASS
6	9764	30.67	36.47	5.80	54.00	17.53	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2480MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



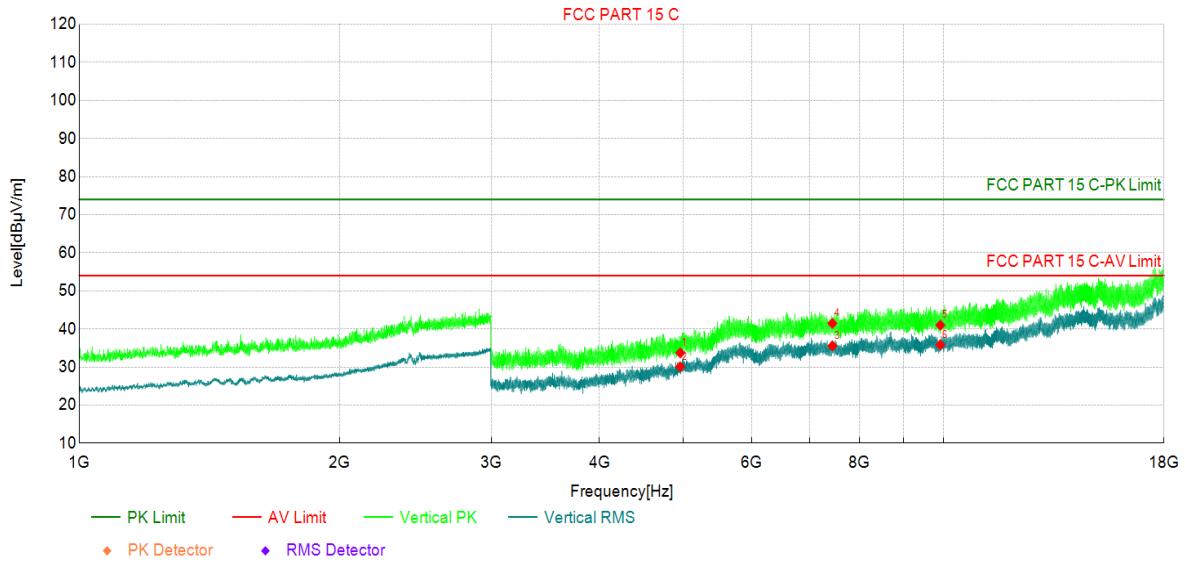
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4960	36.91	31.61	-5.30	54.00	22.39	RMS	Horizo	PASS
2	4960	42.12	36.82	-5.30	74.00	37.18	PK	Horizo	PASS
3	7440	37.67	40.06	2.39	74.00	33.94	PK	Horizo	PASS
4	7440	32.11	34.50	2.39	54.00	19.50	RMS	Horizo	PASS
5	9920	30.00	35.30	5.30	54.00	18.70	RMS	Horizo	PASS
6	9920	34.31	39.61	5.30	74.00	34.39	PK	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2480MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



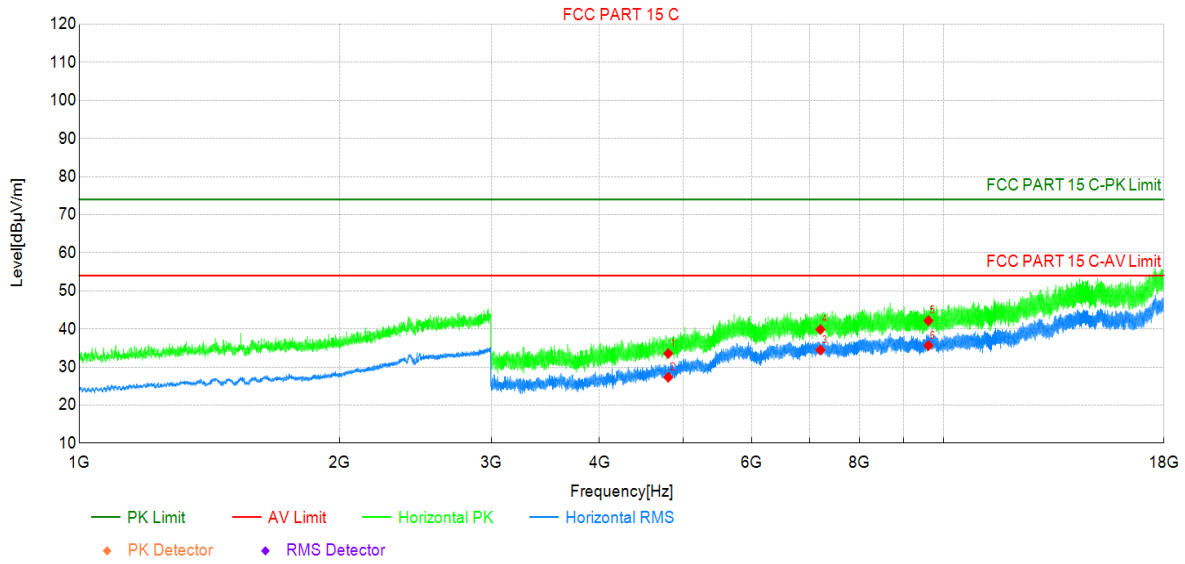
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4960	39.01	33.71	-5.30	74.00	40.29	PK	Vertic	PASS
2	4960	35.35	30.05	-5.30	54.00	23.95	RMS	Vertic	PASS
3	7440	33.17	35.56	2.39	54.00	18.44	RMS	Vertic	PASS
4	7440	39.07	41.46	2.39	74.00	32.54	PK	Vertic	PASS
5	9920	35.68	40.98	5.30	74.00	33.02	PK	Vertic	PASS
6	9920	30.54	35.84	5.30	54.00	18.16	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2402MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



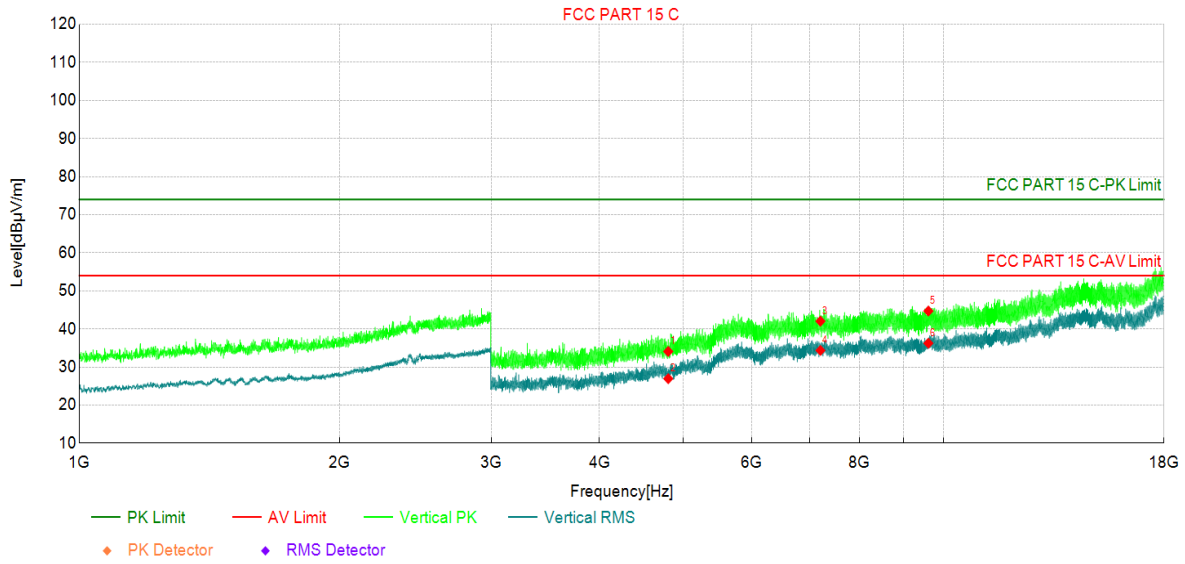
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4804	39.63	33.55	-6.08	74.00	40.45	PK	Horizo	PASS
2	4804	33.39	27.31	-6.08	54.00	26.69	RMS	Horizo	PASS
3	7206	31.65	34.48	2.83	54.00	19.52	RMS	Horizo	PASS
4	7206	37.04	39.87	2.83	74.00	34.13	PK	Horizo	PASS
5	9608	36.56	42.17	5.61	74.00	31.83	PK	Horizo	PASS
6	9608	30.04	35.65	5.61	54.00	18.35	RMS	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2402MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



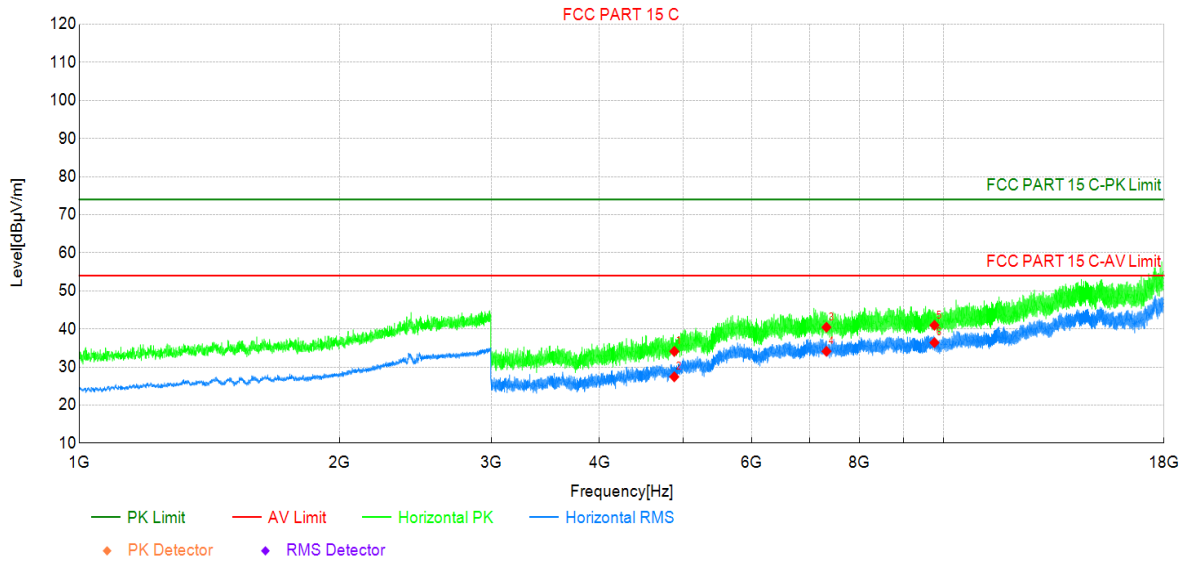
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4804	40.17	34.09	-6.08	74.00	39.91	PK	Vertic	PASS
2	4804	33.02	26.94	-6.08	54.00	27.06	RMS	Vertic	PASS
3	7206	39.21	42.04	2.83	74.00	31.96	PK	Vertic	PASS
4	7206	31.53	34.36	2.83	54.00	19.64	RMS	Vertic	PASS
5	9608	39.10	44.71	5.61	74.00	29.29	PK	Vertic	PASS
6	9608	30.64	36.25	5.61	54.00	17.75	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2441MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



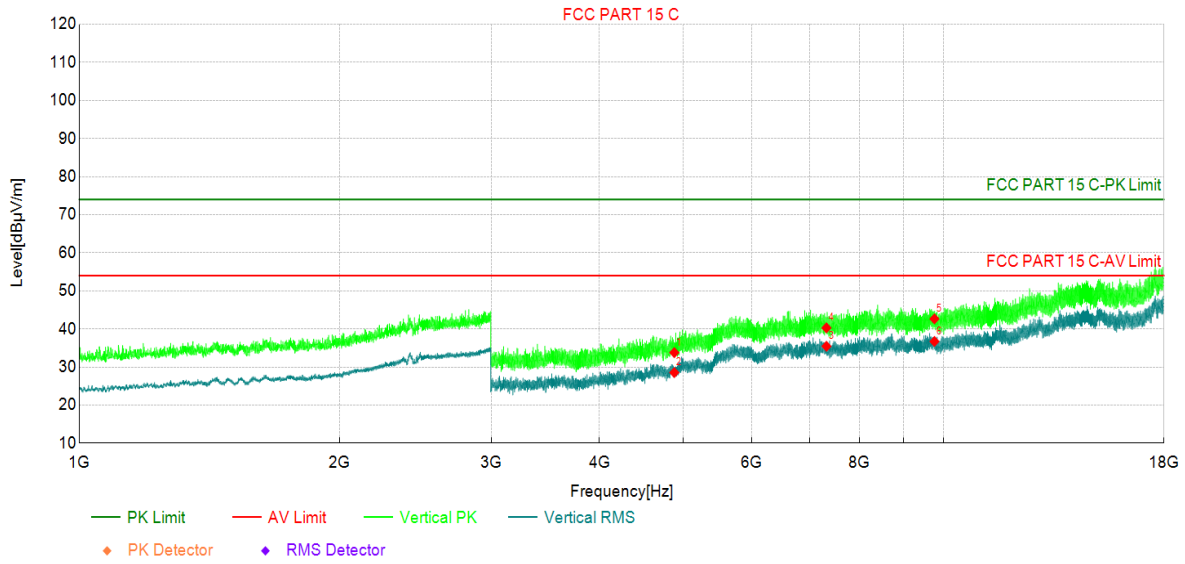
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4882	40.22	34.10	-6.12	74.00	39.90	PK	Horizo	PASS
2	4882	33.55	27.43	-6.12	54.00	26.57	RMS	Horizo	PASS
3	7323	37.82	40.45	2.63	74.00	33.55	PK	Horizo	PASS
4	7323	31.48	34.11	2.63	54.00	19.89	RMS	Horizo	PASS
5	9764	35.15	40.95	5.80	74.00	33.05	PK	Horizo	PASS
6	9764	30.60	36.40	5.80	54.00	17.60	RMS	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2441MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



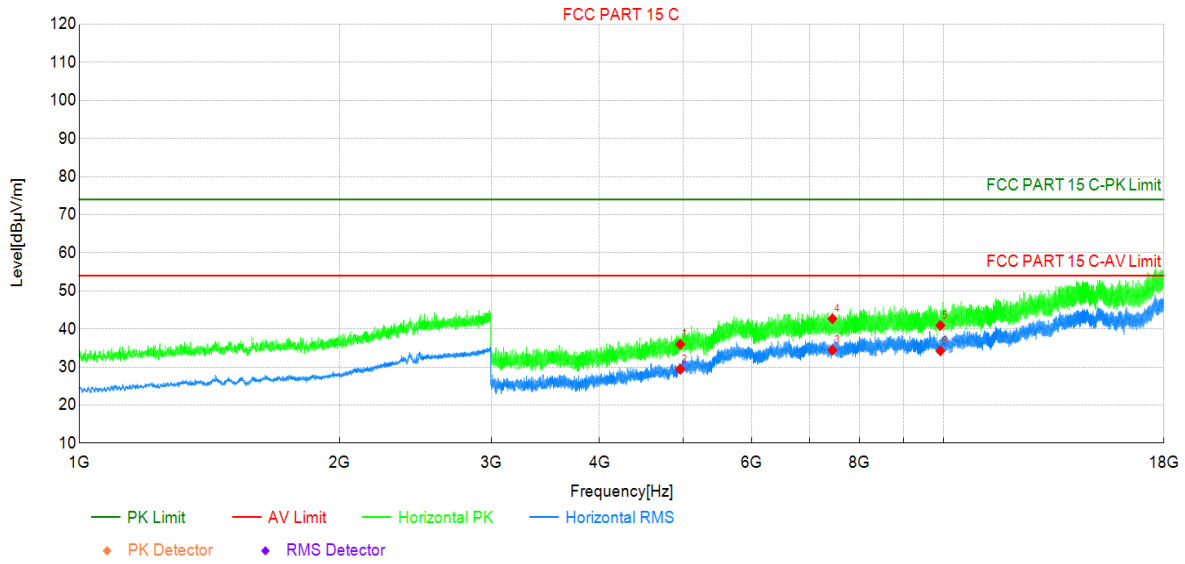
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4882	39.90	33.78	-6.12	74.00	40.22	PK	Vertic	PASS
2	4882	34.66	28.54	-6.12	54.00	25.46	RMS	Vertic	PASS
3	7323	32.82	35.45	2.63	54.00	18.55	RMS	Vertic	PASS
4	7323	37.65	40.28	2.63	74.00	33.72	PK	Vertic	PASS
5	9764	36.85	42.65	5.80	74.00	31.35	PK	Vertic	PASS
6	9764	30.91	36.71	5.80	54.00	17.29	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2480MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



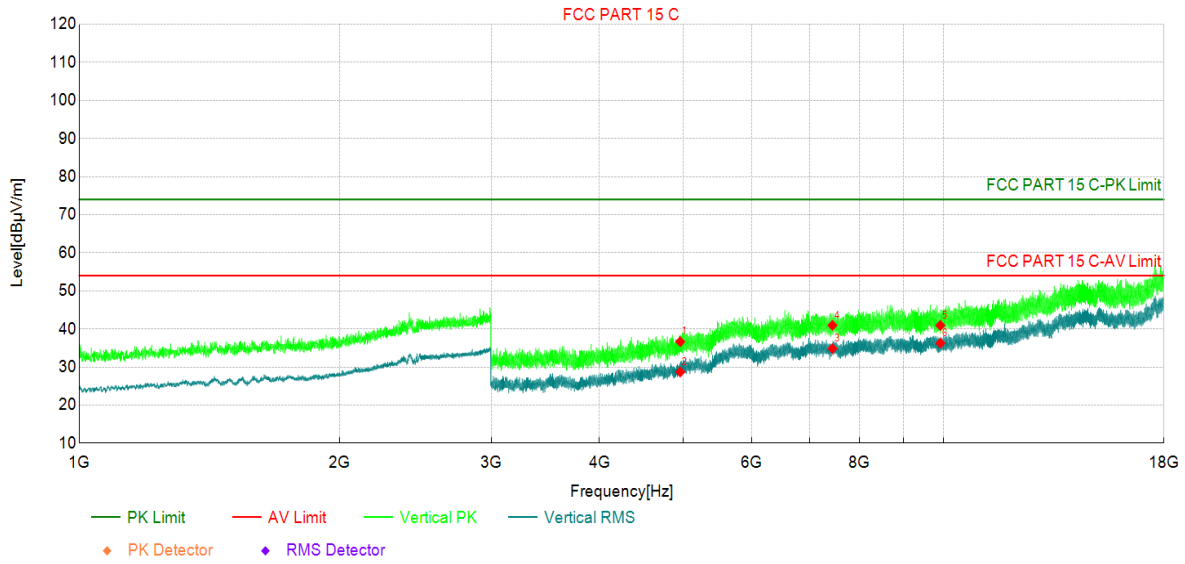
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4960	41.26	35.96	-5.30	74.00	38.04	PK	Horizo	PASS
2	4960	34.69	29.39	-5.30	54.00	24.61	RMS	Horizo	PASS
3	7440	32.06	34.45	2.39	54.00	19.55	RMS	Horizo	PASS
4	7440	40.28	42.67	2.39	74.00	31.33	PK	Horizo	PASS
5	9920	35.61	40.91	5.30	74.00	33.09	PK	Horizo	PASS
6	9920	28.95	34.25	5.30	54.00	19.75	RMS	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2480MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



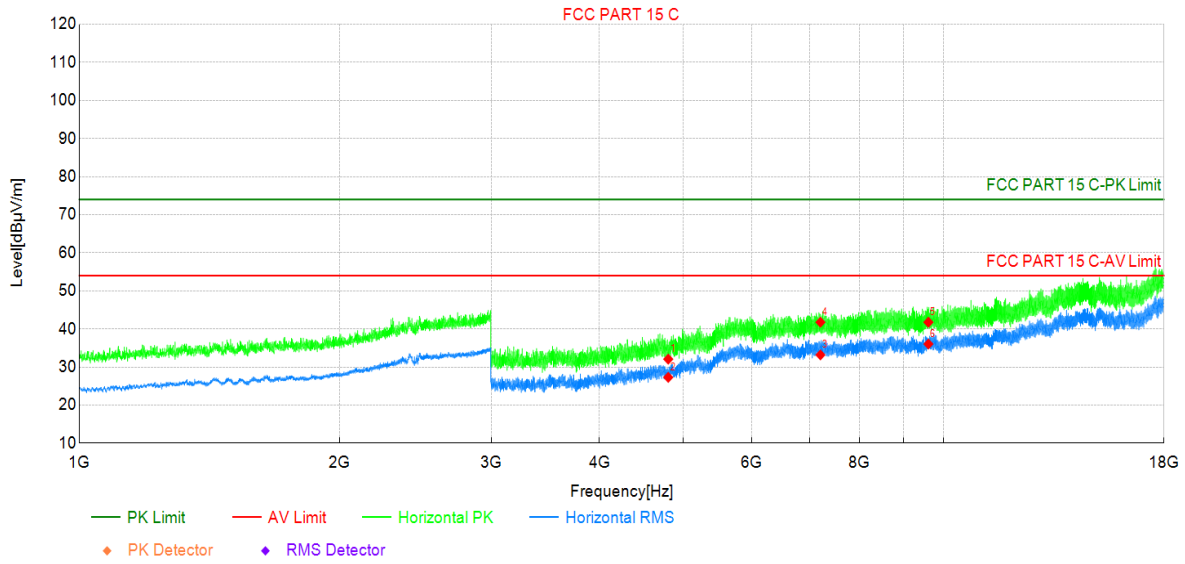
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4960	41.94	36.64	-5.30	74.00	37.36	PK	Vertic	PASS
2	4960	33.99	28.69	-5.30	54.00	25.31	RMS	Vertic	PASS
3	7440	32.44	34.83	2.39	54.00	19.17	RMS	Vertic	PASS
4	7440	38.56	40.95	2.39	74.00	33.05	PK	Vertic	PASS
5	9920	35.61	40.91	5.30	74.00	33.09	PK	Vertic	PASS
6	9920	30.96	36.26	5.30	54.00	17.74	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2402MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



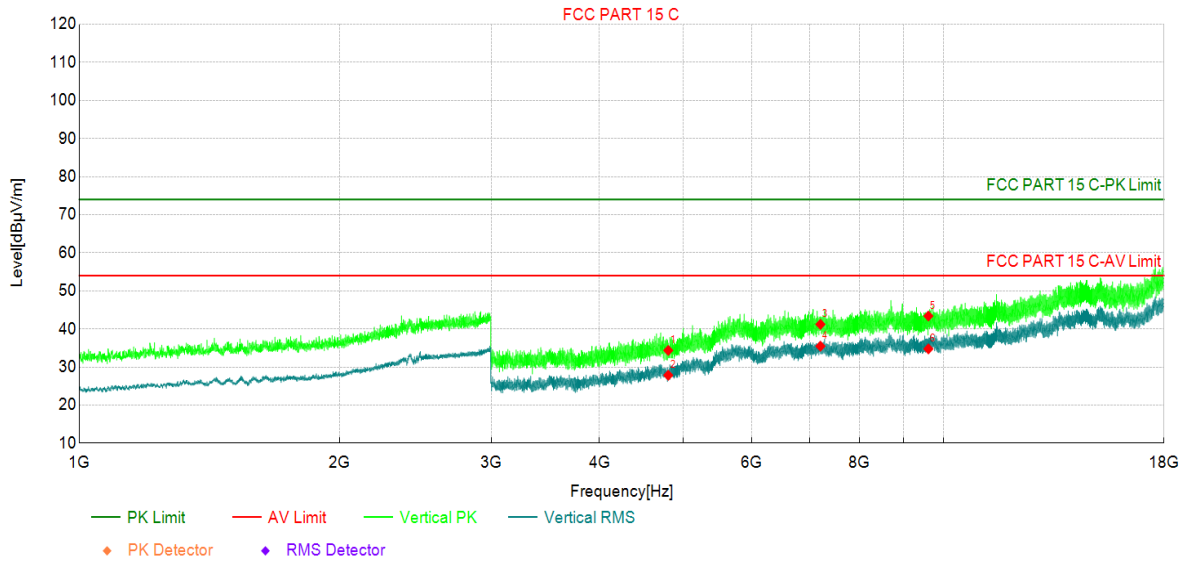
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4804	38.15	32.07	-6.08	74.00	41.93	PK	Horizo	PASS
2	4804	33.36	27.28	-6.08	54.00	26.72	RMS	Horizo	PASS
3	7206	30.35	33.18	2.83	54.00	20.82	RMS	Horizo	PASS
4	7206	38.94	41.77	2.83	74.00	32.23	PK	Horizo	PASS
5	9608	36.15	41.76	5.61	74.00	32.24	PK	Horizo	PASS
6	9608	30.43	36.04	5.61	54.00	17.96	RMS	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2402MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



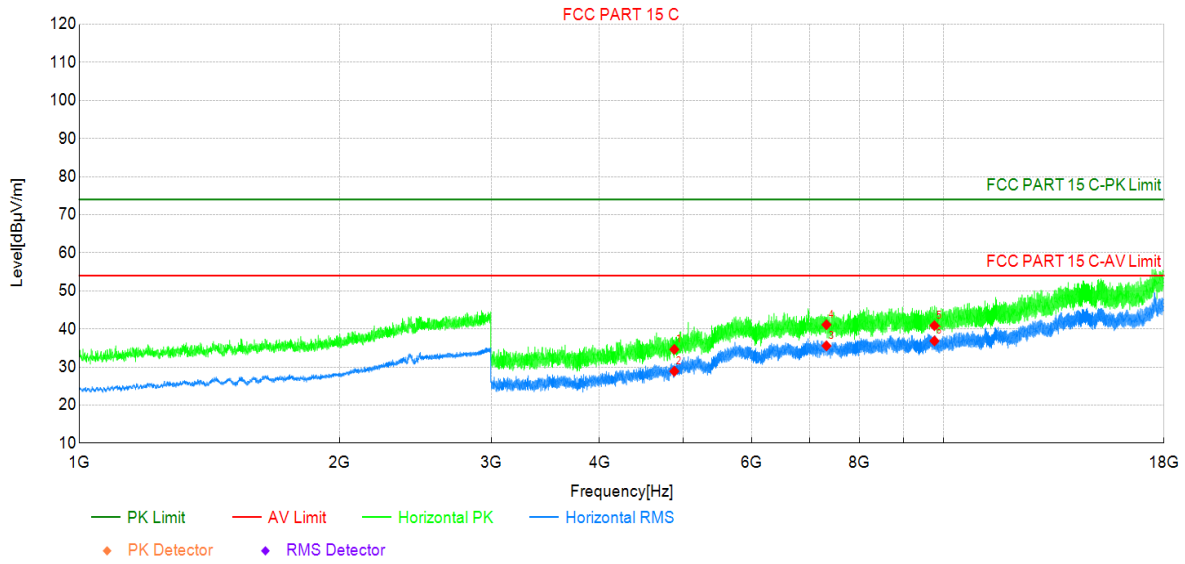
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4804	40.44	34.36	-6.08	74.00	39.64	PK	Vertic	PASS
2	4804	33.91	27.83	-6.08	54.00	26.17	RMS	Vertic	PASS
3	7206	38.37	41.20	2.83	74.00	32.80	PK	Vertic	PASS
4	7206	32.64	35.47	2.83	54.00	18.53	RMS	Vertic	PASS
5	9608	37.79	43.40	5.61	74.00	30.60	PK	Vertic	PASS
6	9608	29.15	34.76	5.61	54.00	19.24	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2441MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



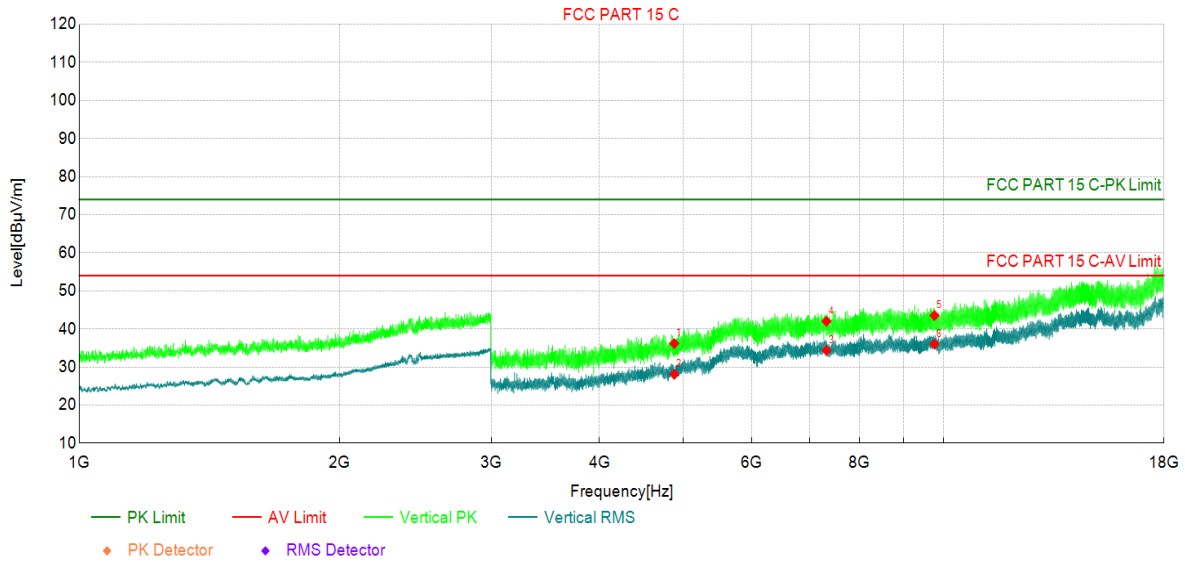
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4882	40.75	34.63	-6.12	74.00	39.37	PK	Horizo	PASS
2	4882	35.01	28.89	-6.12	54.00	25.11	RMS	Horizo	PASS
3	7323	32.93	35.56	2.63	54.00	18.44	RMS	Horizo	PASS
4	7323	38.48	41.11	2.63	74.00	32.89	PK	Horizo	PASS
5	9764	35.07	40.87	5.80	74.00	33.13	PK	Horizo	PASS
6	9764	31.05	36.85	5.80	54.00	17.15	RMS	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2441MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



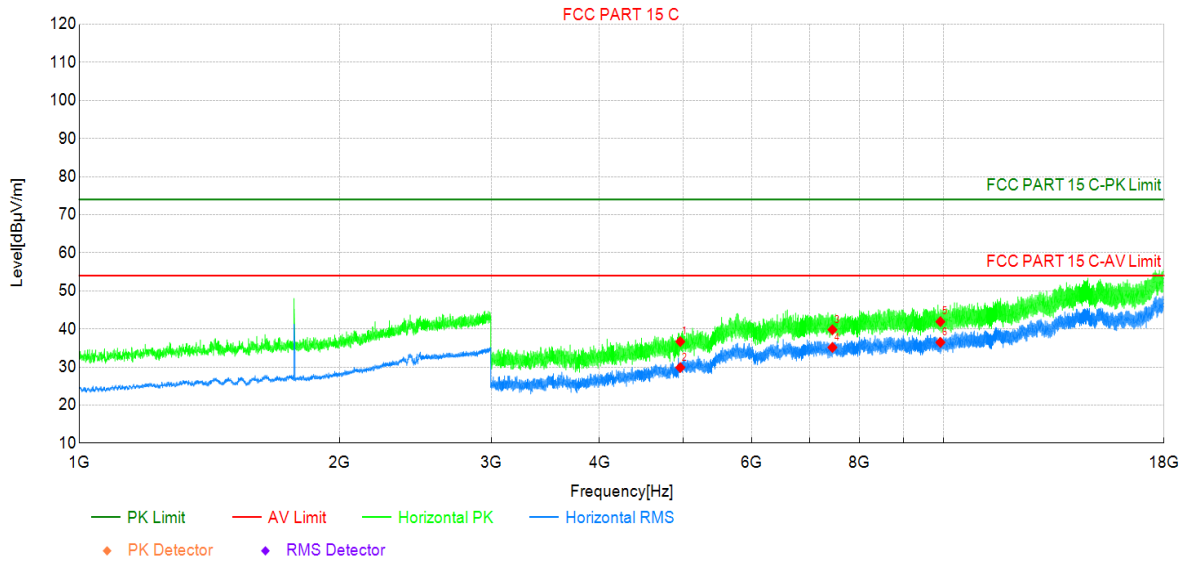
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4882	42.28	36.16	-6.12	74.00	37.84	PK	Vertic	PASS
2	4882	34.21	28.09	-6.12	54.00	25.91	RMS	Vertic	PASS
3	7323	31.72	34.35	2.63	54.00	19.65	RMS	Vertic	PASS
4	7323	39.38	42.01	2.63	74.00	31.99	PK	Vertic	PASS
5	9764	37.72	43.52	5.80	74.00	30.48	PK	Vertic	PASS
6	9764	30.24	36.04	5.80	54.00	17.96	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2480MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



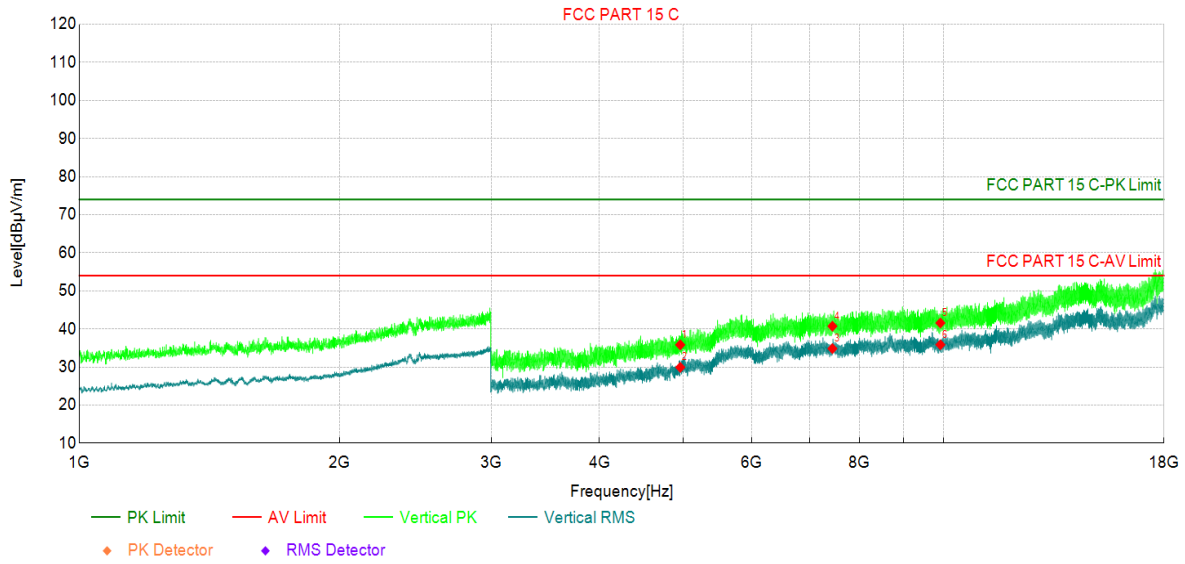
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4960	41.97	36.67	-5.30	74.00	37.33	PK	Horizo	PASS
2	4960	35.16	29.86	-5.30	54.00	24.14	RMS	Horizo	PASS
3	7440	37.40	39.79	2.39	74.00	34.21	PK	Horizo	PASS
4	7440	32.75	35.14	2.39	54.00	18.86	RMS	Horizo	PASS
5	9920	36.61	41.91	5.30	74.00	32.09	PK	Horizo	PASS
6	9920	31.18	36.48	5.30	54.00	17.52	RMS	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2480MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC PART 15 C		

Test Graph



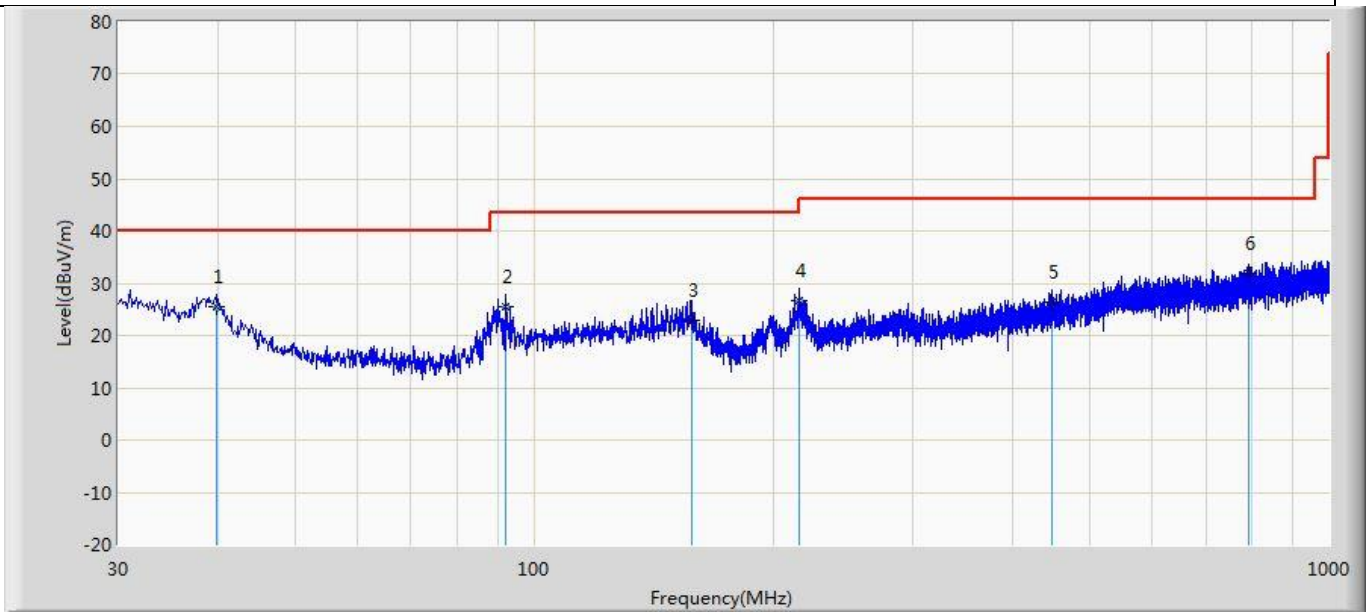
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	4960	41.13	35.83	-5.30	74.00	38.17	PK	Vertic	PASS
2	4960	35.22	29.92	-5.30	54.00	24.08	RMS	Vertic	PASS
3	7440	32.44	34.83	2.39	54.00	19.17	RMS	Vertic	PASS
4	7440	38.32	40.71	2.39	74.00	33.29	PK	Vertic	PASS
5	9920	36.26	41.56	5.30	74.00	32.44	PK	Vertic	PASS
6	9920	30.56	35.86	5.30	54.00	18.14	RMS	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

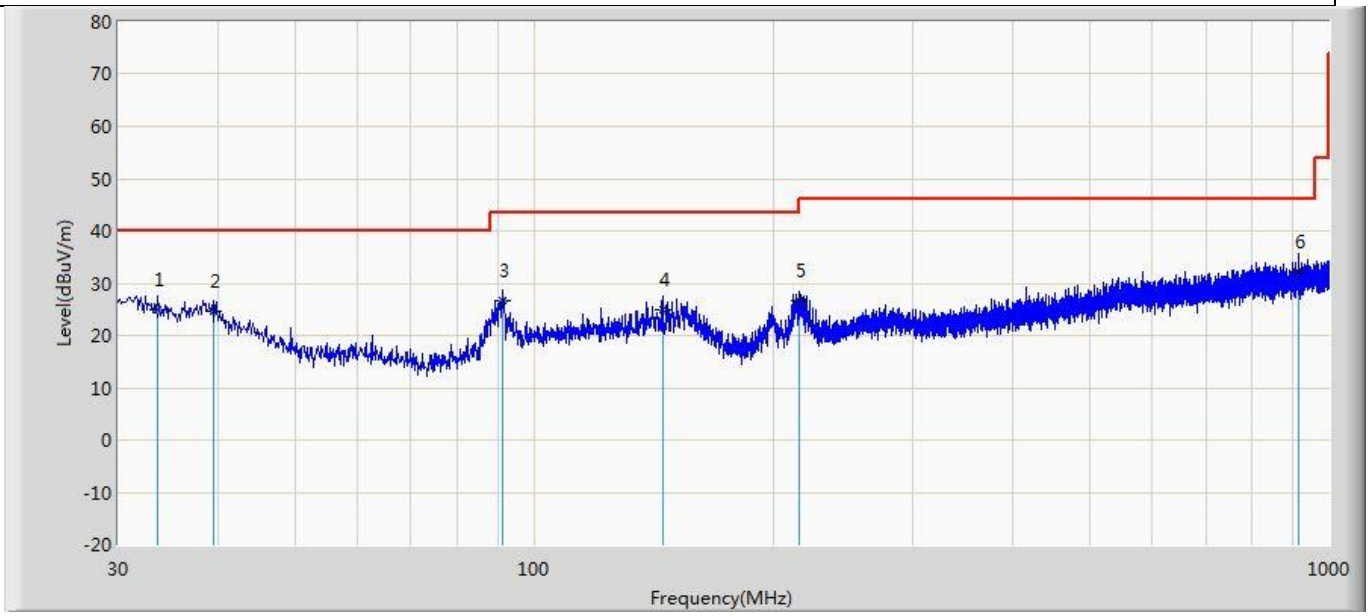
The worst case of Radiated Emission below 1GHz：

Profile: 24A0319R	Page No.: 10
Engineer: Yu Liu	
Site: AC2	Time: 2024/10/25 - 08:51
Limit: FCC_Part 15.209_RE (3m)_Class B	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Vertical
EUT: POS Terminal	Power: Battery Powered
Note: Mode 1: Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		39.943	25.594	5.987	-14.406	40.000	19.607	QP
2		92.323	25.443	9.014	-18.057	43.500	16.428	QP
3		157.798	23.009	5.933	-20.491	43.500	17.076	QP
4		215.997	26.536	10.066	-16.964	43.500	16.470	QP
5		447.585	26.274	1.687	-19.726	46.000	24.587	QP
6	*	793.390	31.845	2.552	-14.155	46.000	29.293	QP

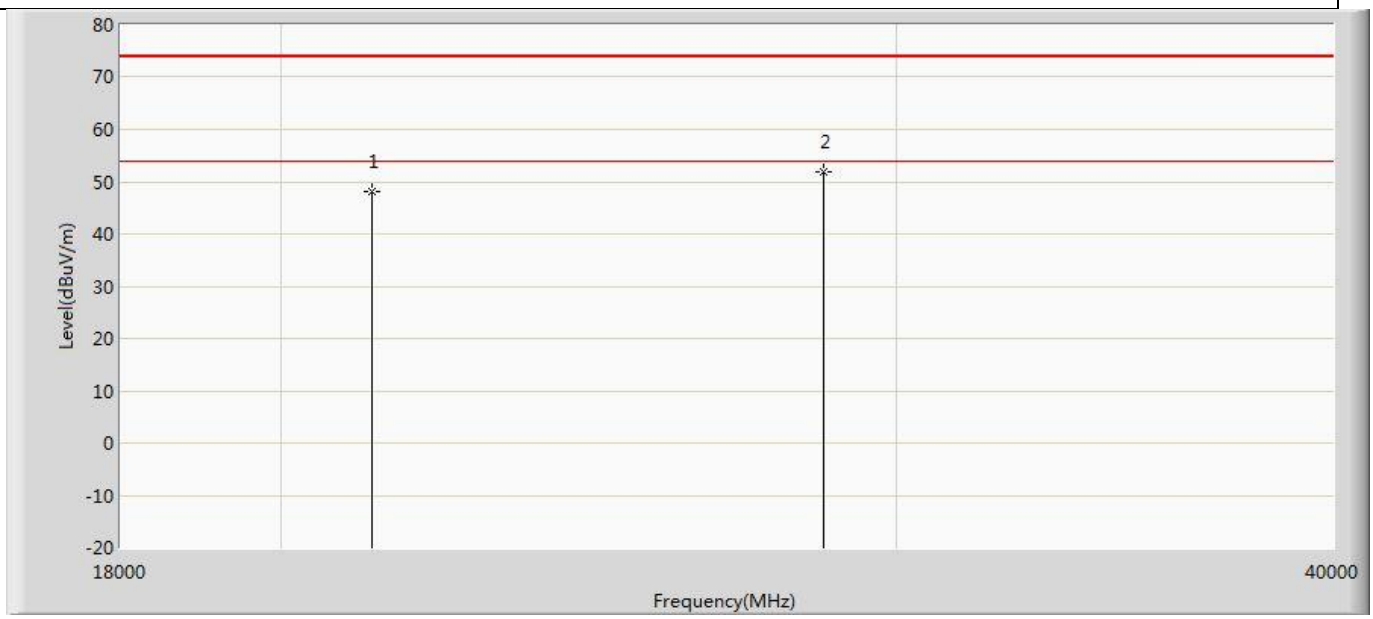
Profile: 24A0319R	Page No.: 12
Engineer: Yu Liu	
Site: AC2	Time: 2024/10/25 - 08:53
Limit: FCC_Part 15.209_RE (3m)_Class B	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Horizontal
EUT: POS Terminal	Power: Battery Powered
Note: Mode 1: Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		33.638	24.845	1.687	-15.155	40.000	23.159	QP
2		39.458	24.517	4.651	-15.483	40.000	19.867	QP
3		91.474	26.616	10.389	-16.884	43.500	16.227	QP
4		145.066	24.859	7.013	-18.641	43.500	17.845	QP
5		215.997	26.568	10.098	-16.932	43.500	16.470	QP
6	*	917.186	32.072	2.115	-13.928	46.000	29.957	QP

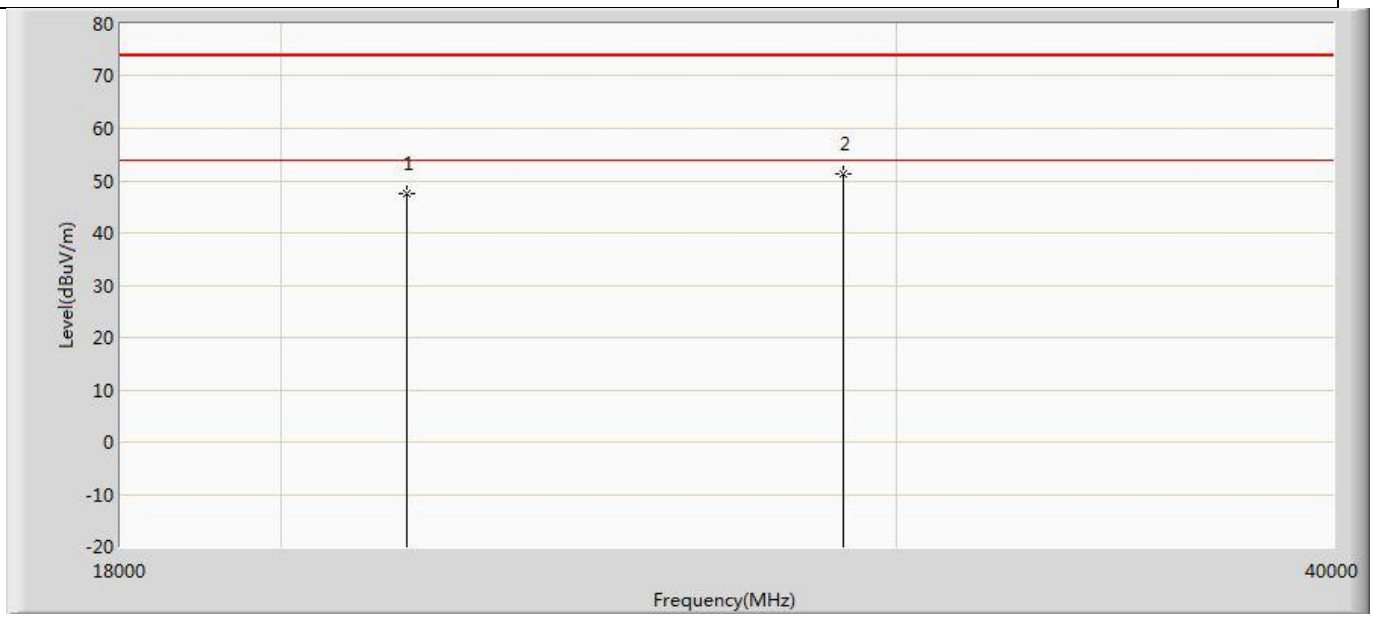
The worst case of Radiated Emission above 18GHz：

Profile: 24A0319R	Page No.: 81
Engineer: Yuliu	
Site: AC5	Time: 2024/10/25 - 22:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA 9170_294(18-40GHz)	Polarity: Horizontal
EUT: POS Terminal	Power: Battery Powered
Note: Mode 1: Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		21234.000	48.114	49.033	-25.886	74.000	-0.919	PK
2	*	28604.000	51.754	49.328	-22.246	74.000	2.426	PK

Profile: 24A0319R	Page No.: 82
Engineer: Yuliu	
Site: AC5	Time: 2024/10/25 - 22:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA 9170_294(18-40GHz)	Polarity: Vertical
EUT: POS Terminal	Power: Battery Powered
Note: Mode 1: Transmit at 2402MHz by DH5	



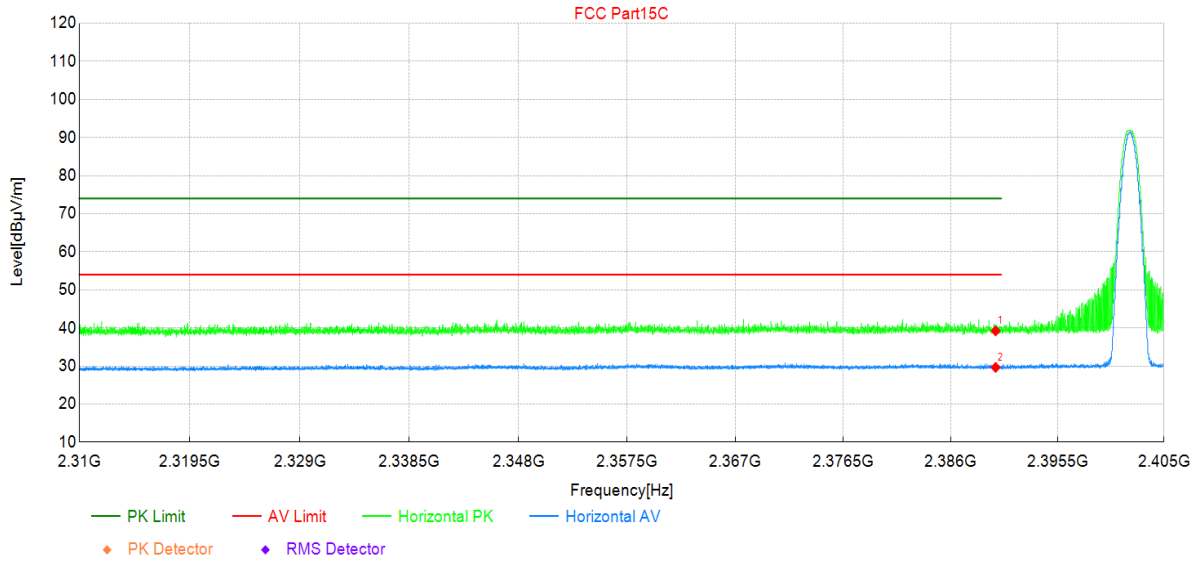
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		21740.000	47.593	48.057	-26.407	74.000	-0.464	PK
2	*	28978.000	51.246	49.118	-22.754	74.000	2.128	PK

Note:
1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp)
3. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
4. If the test result on peak is lower than average limit, then average measurement needn't be performed.

Appendix C: Band edge measurements

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2402MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph

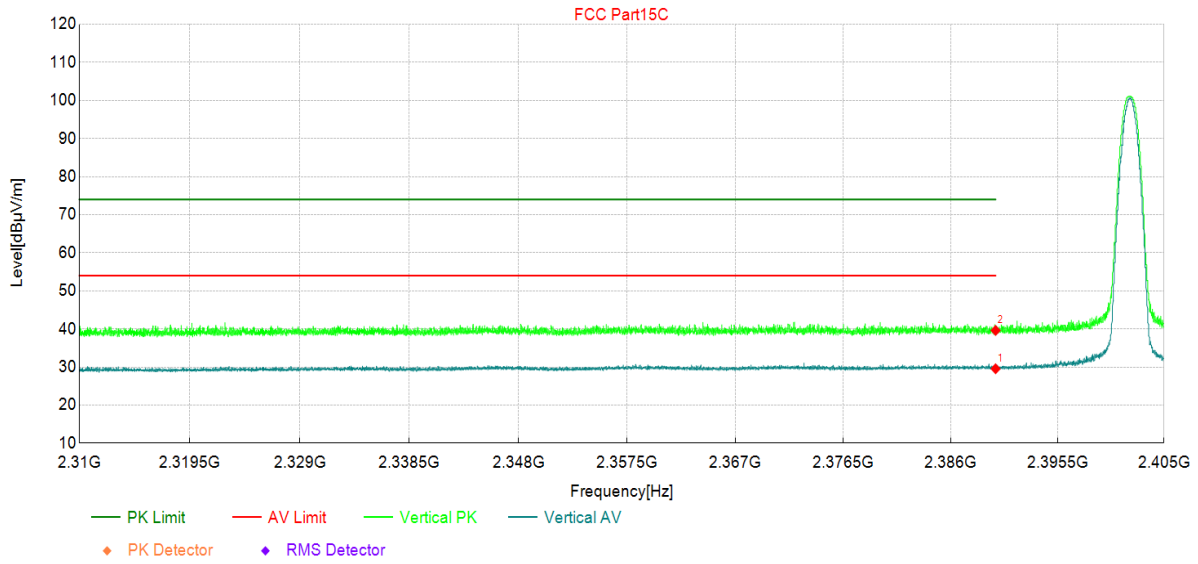


Suspected Data List									
NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2390	35.53	39.23	3.70	74.00	34.77	PK	Horizo	PASS
2	2390	25.93	29.63	3.70	54.00	24.37	AV	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2402MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



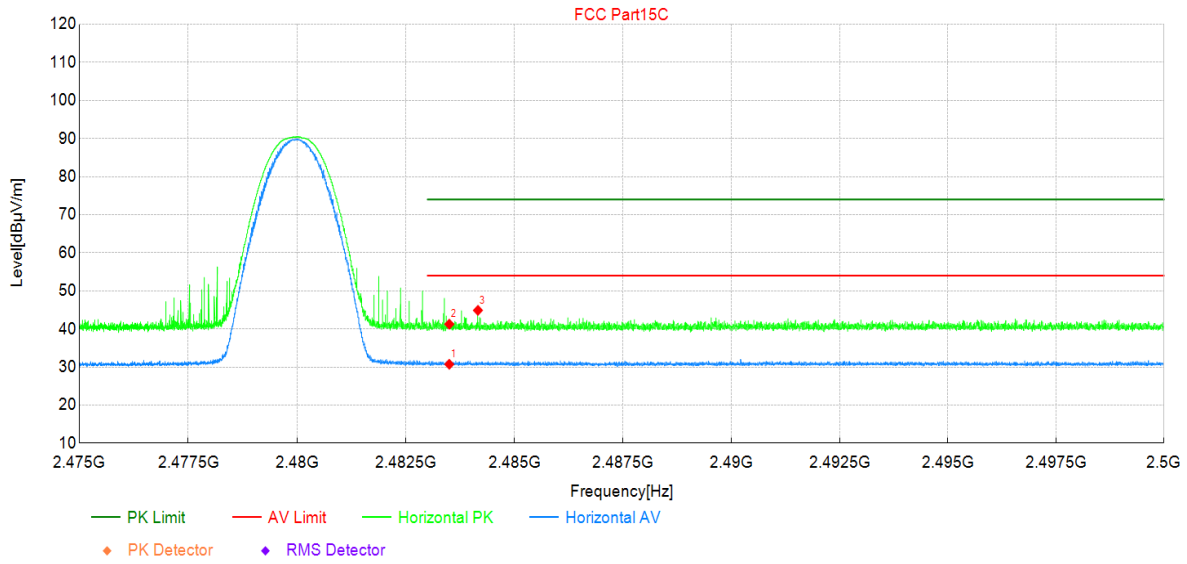
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2390	25.84	29.54	3.70	-	-	AV	Vertic	NA
2	2390	35.91	39.61	3.70	-	-	PK	Vertic	NA

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2480MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph

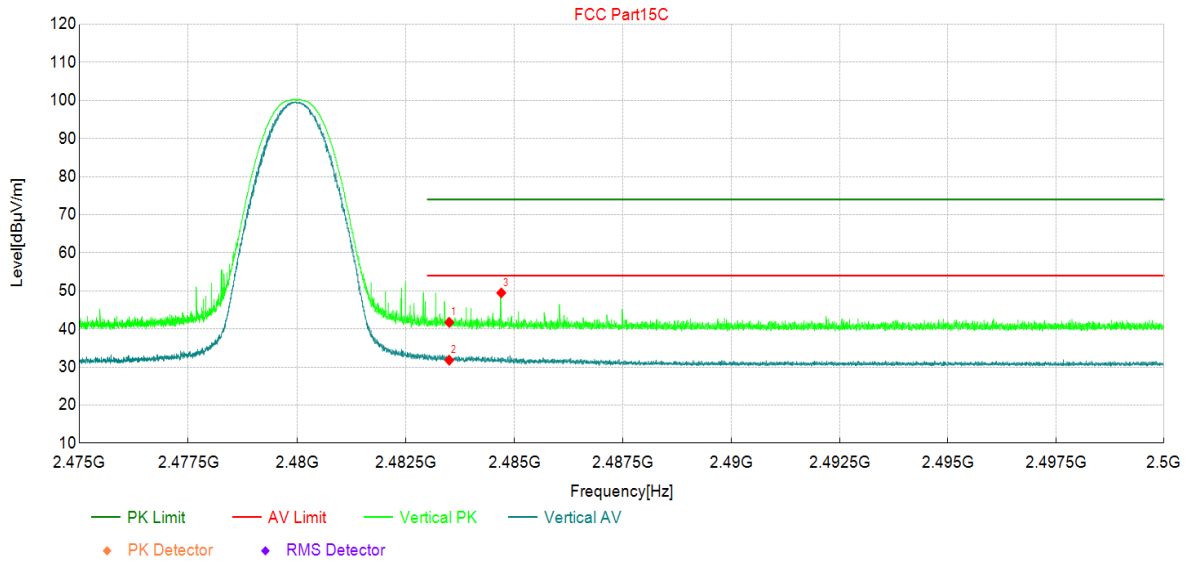


Suspected Data List									
NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2484	26.57	30.72	4.15	54.00	23.28	AV	Horizo	PASS
2	2484	37.10	41.25	4.15	74.00	32.75	PK	Horizo	PASS
3	2484	40.71	44.88	4.17	74.00	29.12	PK	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 1: Transmit at 2480MHz by DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



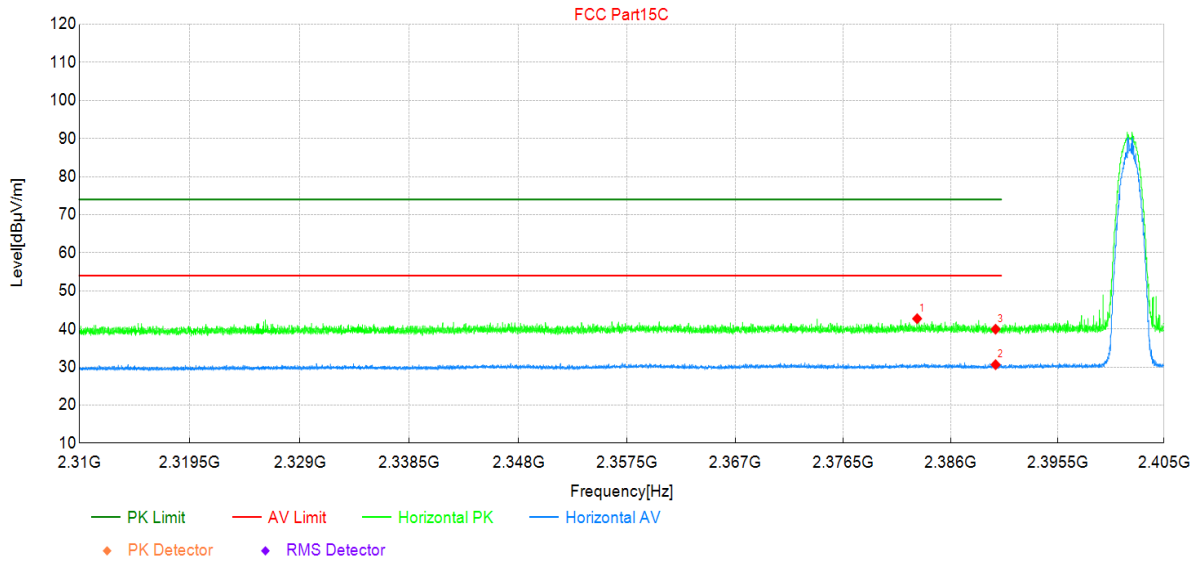
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2484	37.57	41.72	4.15	74.00	32.28	PK	Vertic	PASS
2	2484	27.63	31.78	4.15	54.00	22.22	AV	Vertic	PASS
3	2485	45.30	49.47	4.17	74.00	24.53	PK	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2402MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



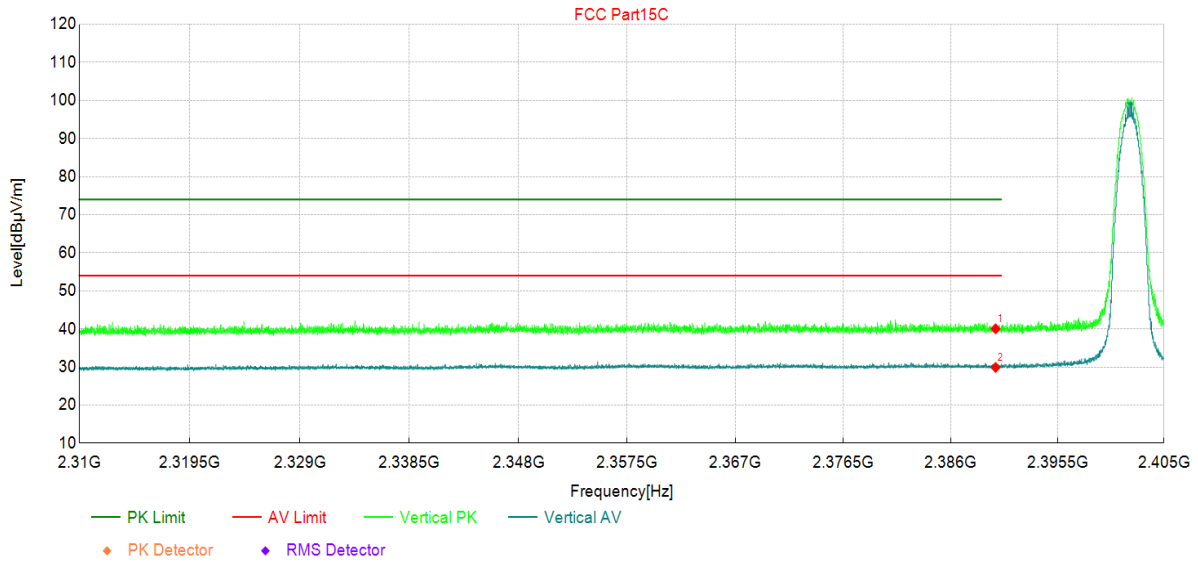
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2383	39.03	42.69	3.66	74.00	31.31	PK	Horizo	PASS
2	2390	26.92	30.62	3.70	54.00	23.38	AV	Horizo	PASS
3	2390	36.23	39.93	3.70	74.00	34.07	PK	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2402MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



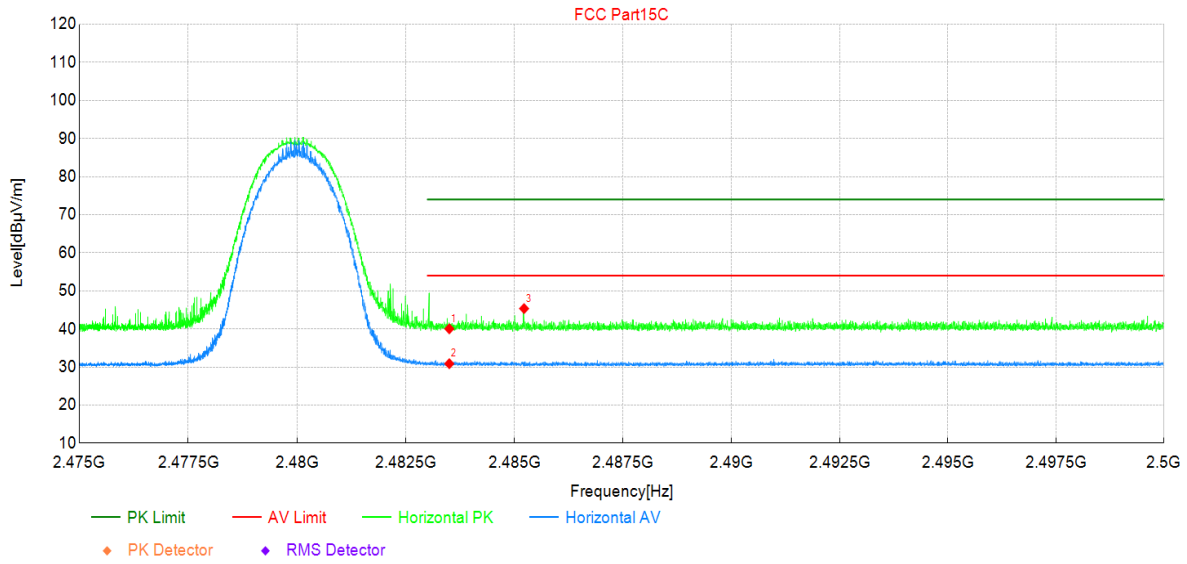
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2390	36.34	40.04	3.70	74.00	33.96	PK	Vertic	PASS
2	2390	26.19	29.89	3.70	54.00	24.11	AV	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2480MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



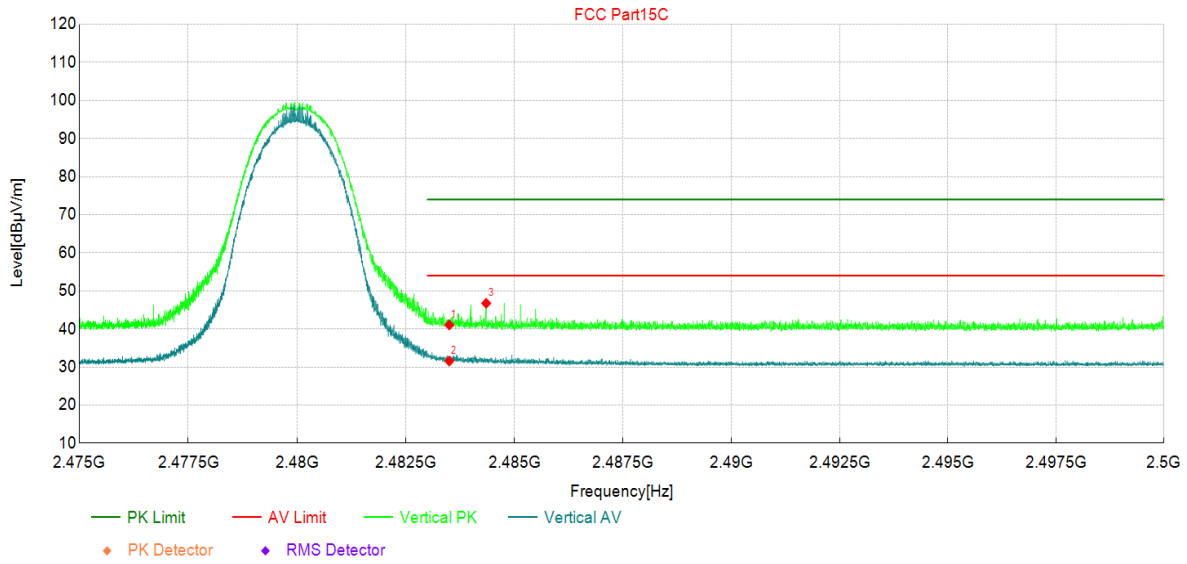
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2484	35.88	40.03	4.15	74.00	33.97	PK	Horizo	PASS
2	2484	26.72	30.87	4.15	54.00	23.13	AV	Horizo	PASS
3	2485	41.17	45.34	4.17	74.00	28.66	PK	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 2: Transmit at 2480MHz by 2DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



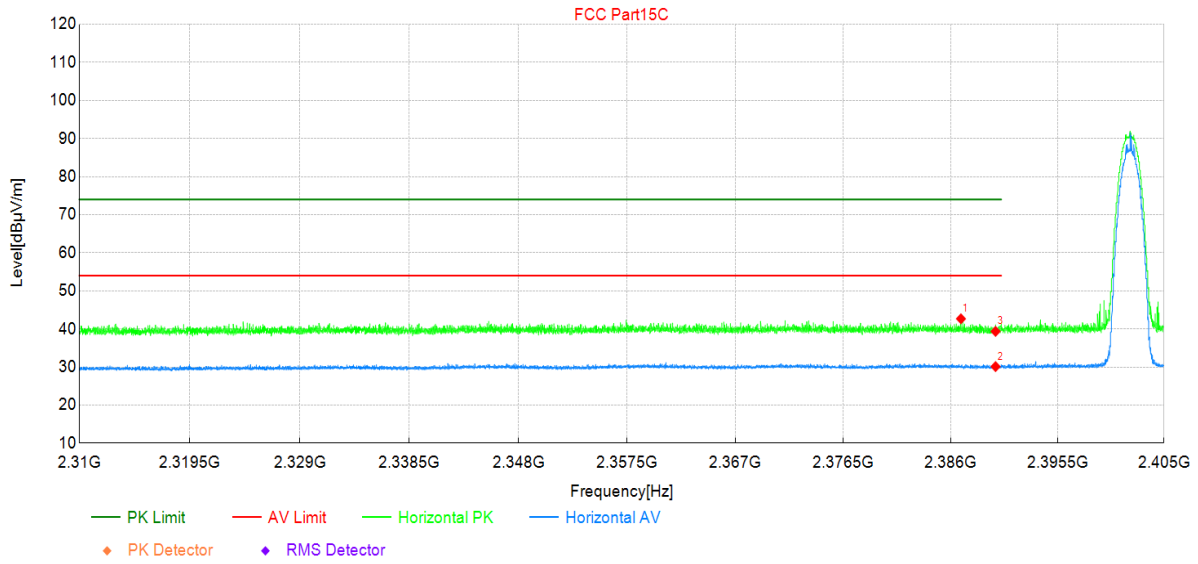
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2484	36.90	41.05	4.15	74.00	32.95	PK	Vertic	PASS
2	2484	27.41	31.56	4.15	54.00	22.44	AV	Vertic	PASS
3	2484	42.57	46.74	4.17	74.00	27.26	PK	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2402MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph

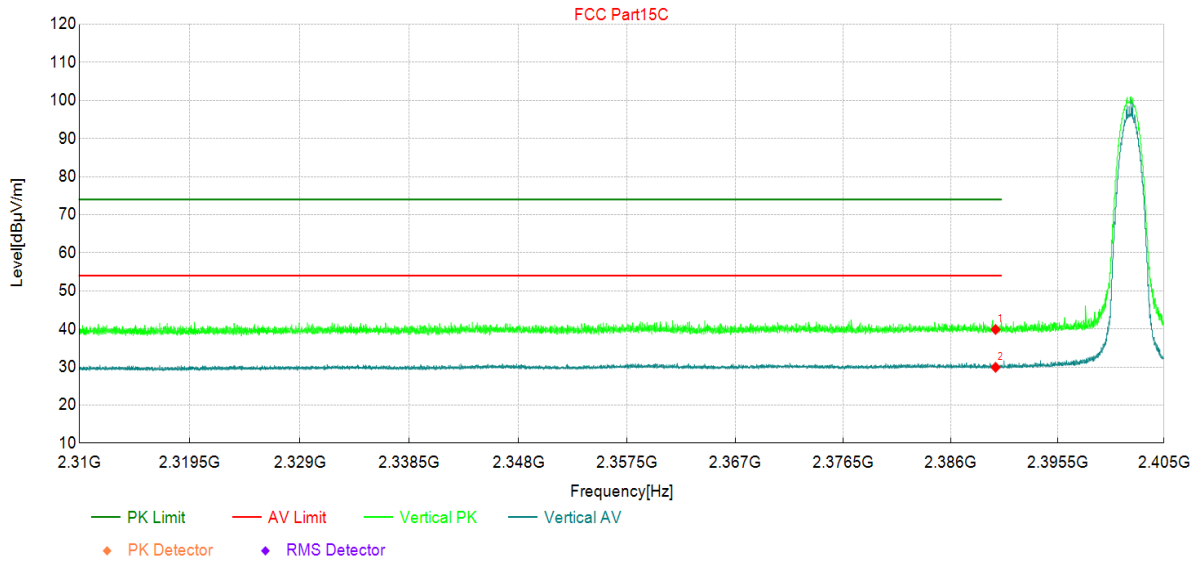


Suspected Data List									
NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2387	38.99	42.67	3.68	74.00	31.33	PK	Horizo	PASS
2	2390	26.41	30.11	3.70	54.00	23.89	AV	Horizo	PASS
3	2390	35.66	39.36	3.70	74.00	34.64	PK	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2402MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



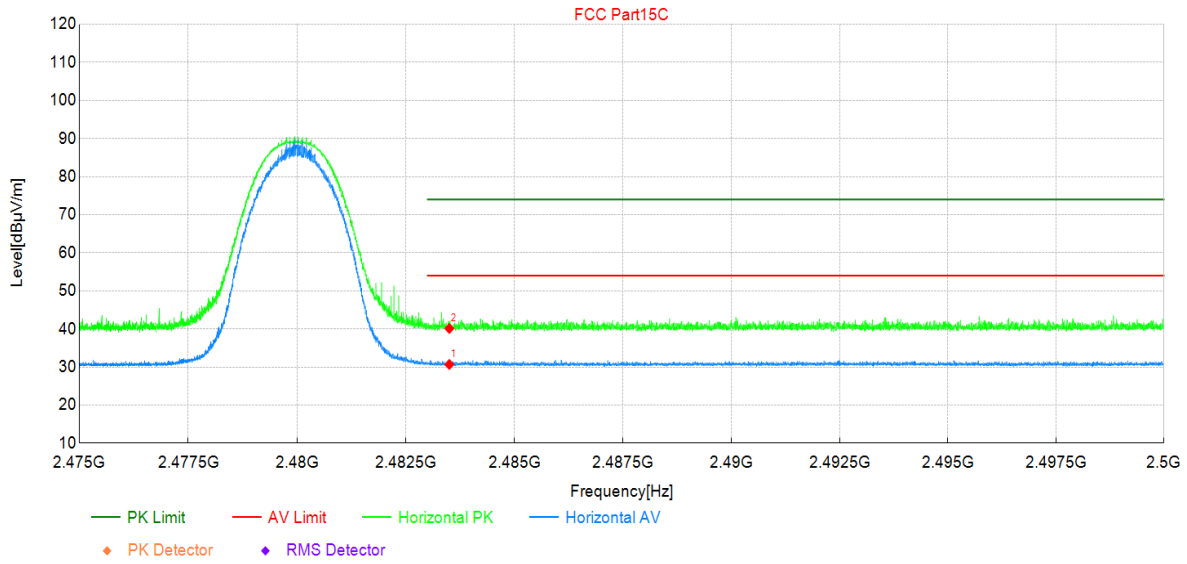
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2390	36.16	39.86	3.70	74.00	34.14	PK	Vertic	PASS
2	2390	26.22	29.92	3.70	54.00	24.08	AV	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2480MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



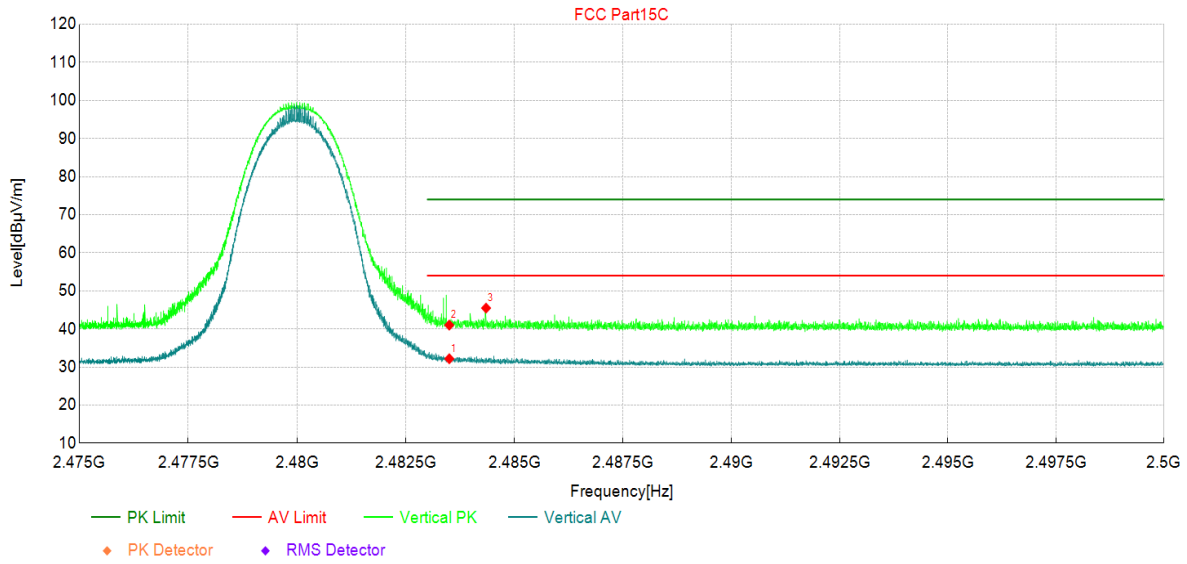
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2484	26.52	30.67	4.15	54.00	23.33	AV	Horizo	PASS
2	2484	35.97	40.12	4.15	74.00	33.88	PK	Horizo	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Project Information			
Profile:	24A0319R	EUT:	POS Terminal
Mode:	Mode 3: Transmit at 2480MHz by 3DH5	Voltage:	Battery Powered
Environment:	Temp: 25℃; Humi:60%	Engineer	Yu Liu
Test Standard:	FCC Part15C		

Test Graph



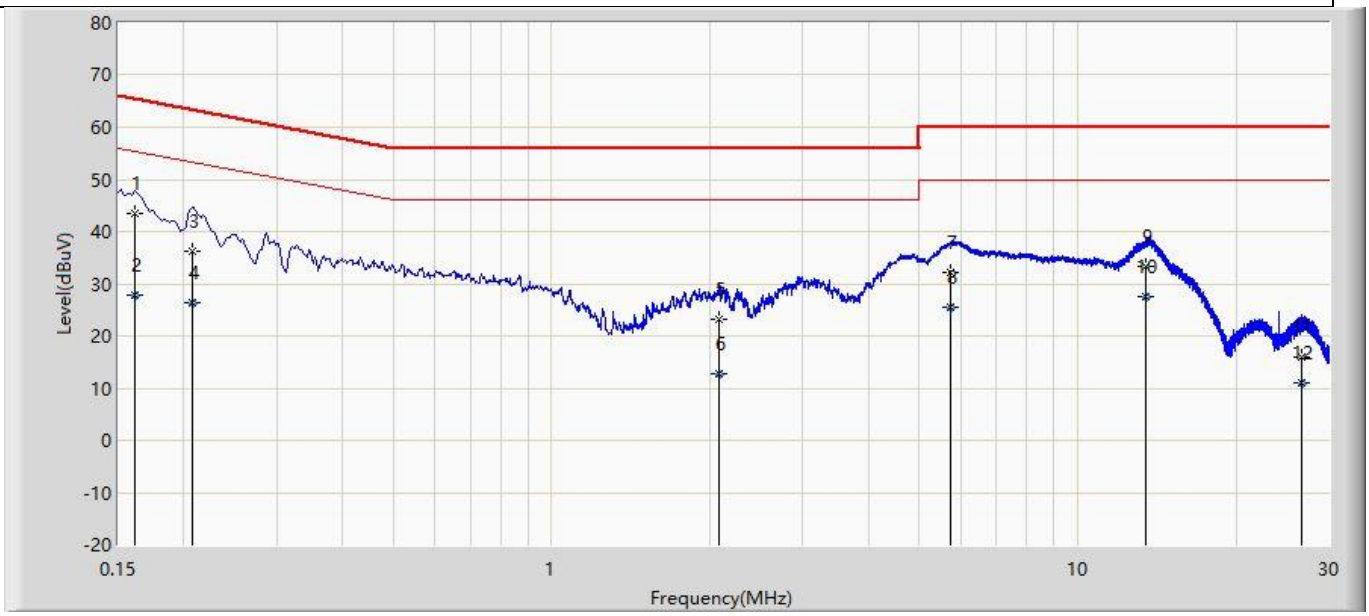
Suspected Data List

NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	2484	28.02	32.17	4.15	54.00	21.83	AV	Vertic	PASS
2	2484	36.85	41.00	4.15	74.00	33.00	PK	Vertic	PASS
3	2484	41.31	45.48	4.17	74.00	28.52	PK	Vertic	PASS

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Appendix D: AC Power Line Conducted Emission

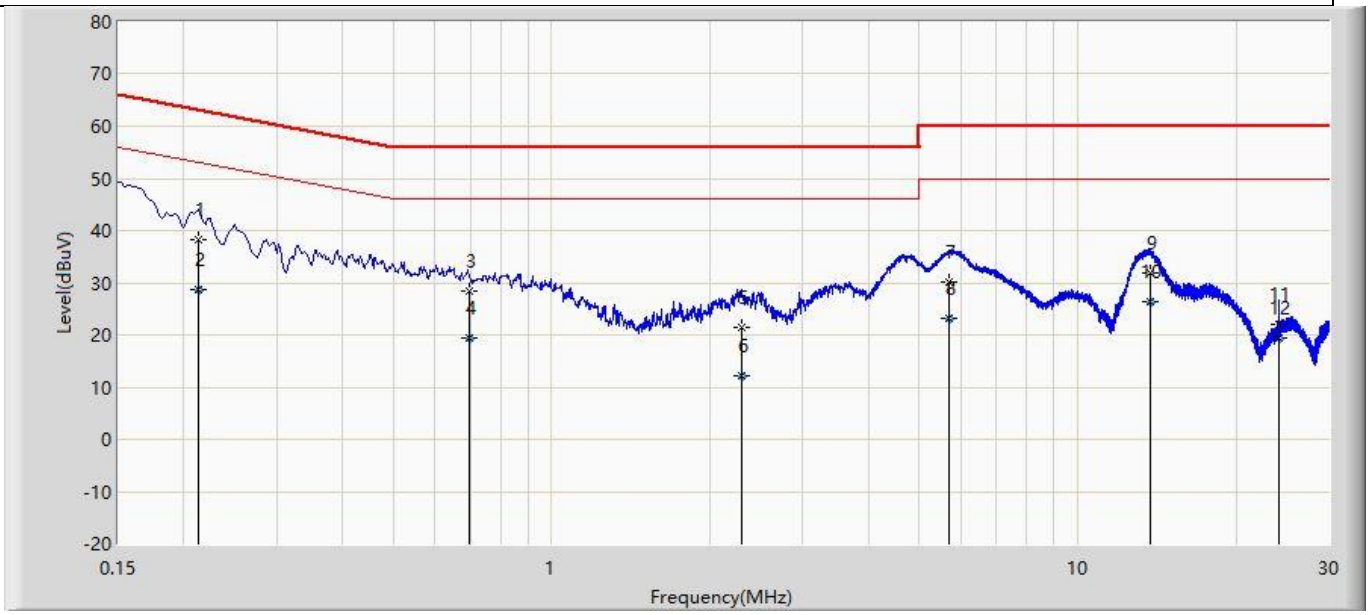
Profile: 24A0319R	Page No.: 91
Engineer: Yu Liu	
Site: TR1	Time: 2024/10/25 - 00:46
Limit: FCC_Part 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: POS Terminal	Power: 120 Vac / 60 Hz
Note: Mode：L-Line	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.161	43.337	33.713	-22.063	65.399	9.624	QP
2		0.161	27.811	18.187	-27.589	55.399	9.624	AV
3		0.208	36.276	26.652	-26.989	63.265	9.623	QP
4		0.208	26.459	16.835	-26.806	53.265	9.623	AV
5		2.080	23.116	13.419	-32.884	56.000	9.697	QP
6		2.080	12.798	3.101	-33.202	46.000	9.697	AV
7		5.741	32.164	22.383	-27.836	60.000	9.781	QP
8		5.741	25.589	15.808	-24.411	50.000	9.781	AV
9		13.506	33.246	23.323	-26.754	60.000	9.923	QP
10		13.506	27.675	17.752	-22.325	50.000	9.923	AV
11		26.655	16.031	5.953	-43.969	60.000	10.078	QP
12		26.655	11.089	1.011	-38.911	50.000	10.078	AV

Note:
1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).
3. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.

Profile: 24A0319R	Page No.: 92
Engineer: Yu Liu	
Site: TR1	Time: 2024/10/25 - 00:48
Limit: FCC_Part 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: POS Terminal	Power: 120 Vac / 60 Hz
Note: Mode：Neutral	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.213	38.202	28.568	-24.886	63.088	9.633	QP
2		0.213	28.558	18.925	-24.530	53.088	9.633	AV
3		0.695	28.520	18.865	-27.480	56.000	9.655	QP
4		0.695	19.516	9.861	-26.484	46.000	9.655	AV
5		2.290	21.366	11.661	-34.634	56.000	9.705	QP
6		2.290	12.299	2.594	-33.701	46.000	9.705	AV
7		5.681	30.219	20.433	-29.781	60.000	9.786	QP
8		5.681	23.044	13.258	-26.956	50.000	9.786	AV
9		13.715	31.857	21.911	-28.143	60.000	9.946	QP
10	*	13.715	26.348	16.402	-23.652	50.000	9.946	AV
11		24.112	22.002	11.901	-37.998	60.000	10.101	QP
12		24.112	19.449	9.348	-30.551	50.000	10.101	AV

Note:
1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).
3. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.

The End