FCC PART 15.247

TEST REPORT

For

AKUVOX (XIAMEN) NETWORKS CO., LTD.

10/F, No.56 Guanri Road, Software Park II, Xiamen 361009, China

FCC ID: 2AHCR-PH81

Report Type:	**Product Name:**
Original Report	HyPanel Ultra

Report Number:	2407T76694E-RF-02
Report Date:	2024-12-30
Reviewed By:	Ash Lin
Approved By:	Miles Chen
Prepared By:	Bay Area Compliance Laboratories Corp. (Xiamen) Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen Tel: +86-592-3200111 www.baclcorp.com.cn

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	2407T76694E-RF-02	R1V1	2024-12-30	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name:	HyPanel Ultra
Tested Model:	PH81
Power Supply:	DC 12-24V
Maximum Conducted Peak Output Power:	BLE: 6.18dBm 2.4G WIFI: 21.77dBm
Frequency Range:	BLE: 2402-2480MHz 2.4G WIFI: 802.11b/g/n20: 2412-2462 MHz 802.11n40: 2422-2452 MHz
Modulation Technique:	BLE: GFSK 2.4G WIFI: 802.11b: DSSS 802.11g/n: OFDM
Antenna Type:	FPC Antenna
★Maximum Antenna Gain:	-3.5dBi
EUT Received Status:	Good
Note: *1. The Maximum Antenna Gain was declared by manufacturer.* *2. All measurement and test data in this report was gathered from production sample serial number: 2LM0-1 (Assigned by the BACL(Xiamen). The EUT supplied by the applicant was received on 2024-05-20)*	

Objective

This report is prepared on behalf of *AKUVOX (XIAMEN) NETWORKS CO., LTD.* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission's rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and KDB 558074 D01 15.247 Meas Guidance v05r02.

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on the Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen.

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN1384.

Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the product as specified in CISPR 16-4-2. This uncertainty represents expanded uncertainty expressed at 95% confidence level using a coverage factor of k=2.

$$u_c(y) = \sqrt{\sum_i c_i^2 \; u^2(x_i)}$$

Item	Frequency Range	U_{lab} = 2 u_c (y) (Confidence of 95%)
Conducted Emissions	150kHz-30MHz	2.33dB
Radiated Spurious Emission	9kHz-30MHz	2.59dB
	30MHz~200MHz	4.38dB
	200MHz~1GHz	4.50dB
	1GHz~6GHz	4.58dB
	6GHz~18GHz	5.43dB
	18GHz~26.5GHz	5.47 dB
Transmitter Conducted Power		0.624 dB
Power Spectral Density		0.61dB
Occupy Bandwidth		0.053kHz
Voltage (DC)		0.4%
Temperature		1℃
Humidity		5%

SYSTEM TEST CONFIGURATION

Test Mode and Voltage

The system was configured for testing in a typical mode (as normally used by a typical user).	
Test mode:	Test Mode: Transmitting
Test voltage:	AC 120V/60Hz
Remark:	During all emission tests, the EUT was configured to measure its highest possible emission level and the worst case's test data was presented in this test report.

Description of Test Configuration

For BLE mode, 40 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2442
1	2404	21	2444
2	2406	22	2446
3	2408	23	2448
4	2410	24	2450
5	2412	25	2452
6	2414	26	2454
7	2416	27	2456
8	2418	28	2458
9	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

EUT was tested with Channel 0, 19 and 39.

For 802.11b, 802.11g, 802.11n-HT20, 802.11n-HT40 mode, 11 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	/	/
6	2437	/	/
7	2442	/	/

For 802.11b, 802.11g, 802.11n-HT20 mode, EUT was tested with Channel 1, 6 and 11.
For 802.11n-HT40 mode, EUT was tested with Channel 3, 6 and 9.

Equipment Modifications

No modification was made to the EUT tested.

★EUT Exercise Software

BLE & 2.4G Wi-Fi test in the engineer mode.

RF Test Tool: SecureCRTPortable.exe

The device was tested with the worst case was performed as below:

Mode	Data rate	Power level		
		Low channel	Middle channel	High channel
802.11b	1 Mbps	18	18	18
802.11g	6 Mbps	18	18	18
802.11n-HT20	MCS0	17	17	17
802.11n-HT40	MCS0	17	17	17
BLE	1 Mbps	default	default	default
	2 Mbps	default	default	default

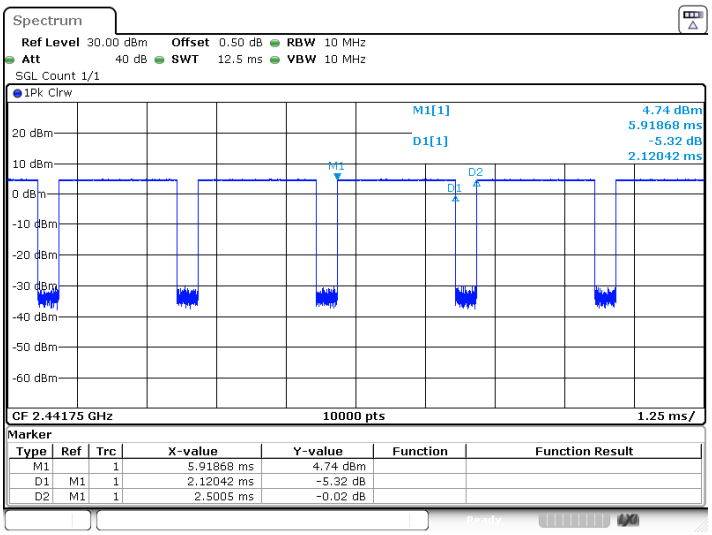
Pre-scan with all the data rates, the above data rate is the worst case for 2.4G Wi-Fi and BLE test.

Duty cycle

For BLE:

Test Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)	1/T (Hz)	VBW Setting (kHz)
BLE 1Mbps	2.12	2.5	84.80	472	0.5
BLE 2Mbps	1.063	1.875	56.69	941	1

BLE 1Mbps Middle Channel



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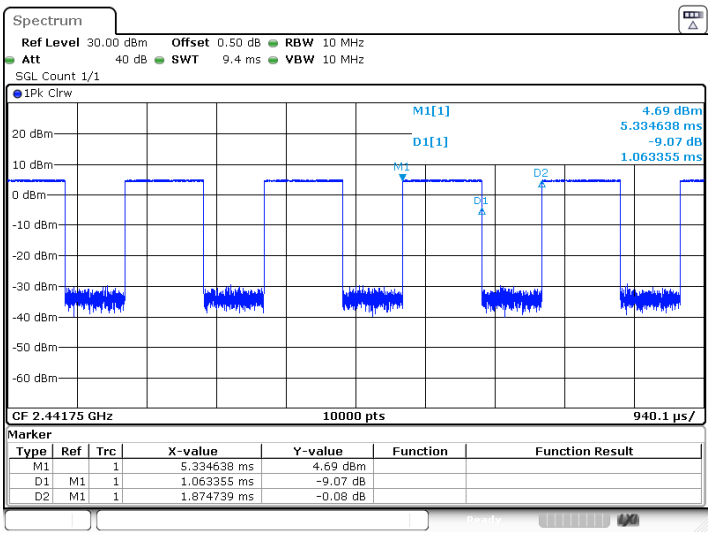
BLE 2Mbps Middle Channel



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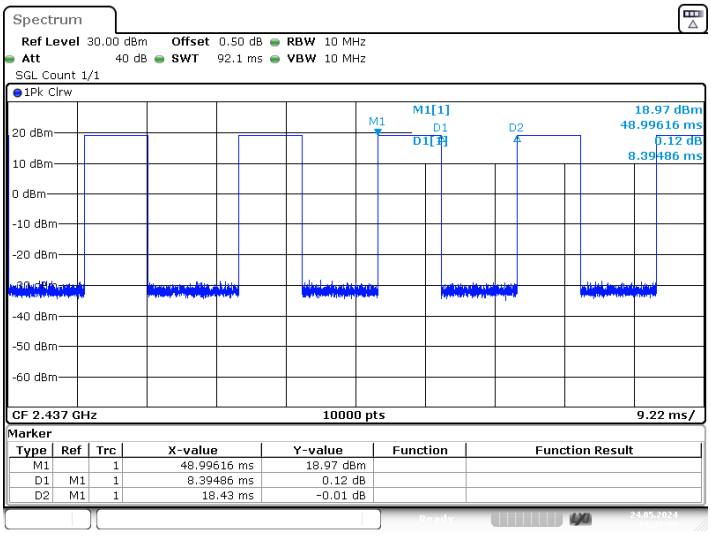
For 2.4G WIFI:

Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)	1/T (Hz)	Duty Factor (dB)	VBW Setting (kHz)
802.11b	8.395	18.430	45.55	119	3.42	0.200
802.11g	1.393	11.426	12.19	718	9.14	1
802.11n ht20	5.077	15.125	33.57	197	4.74	0.200
802.11n ht40	3.857	13.893	27.76	259	5.57	0.300

802.11b Middle Channel



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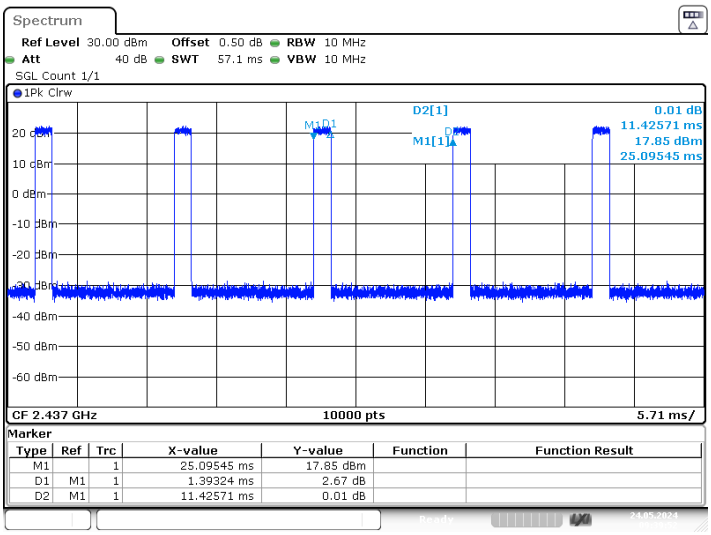
802.11g Middle Channel



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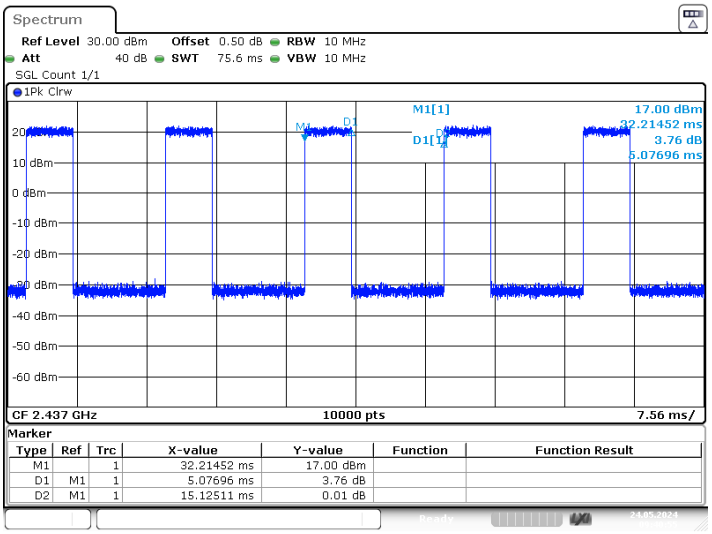
802.11n ht20 Middle Channel



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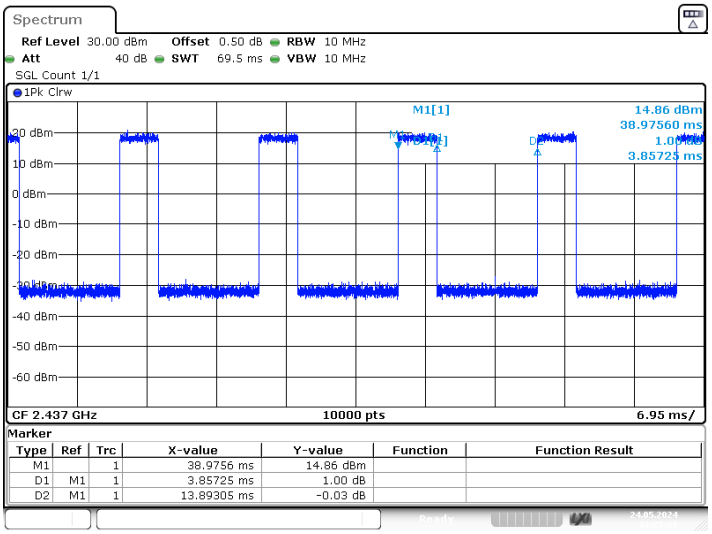
802.11n ht40 Middle Channel



ProjectNo.:2407T76694E-RF Tester:Stein Peng

Date: 24.MAY.2024 13:25:20

Support Equipment List and Details

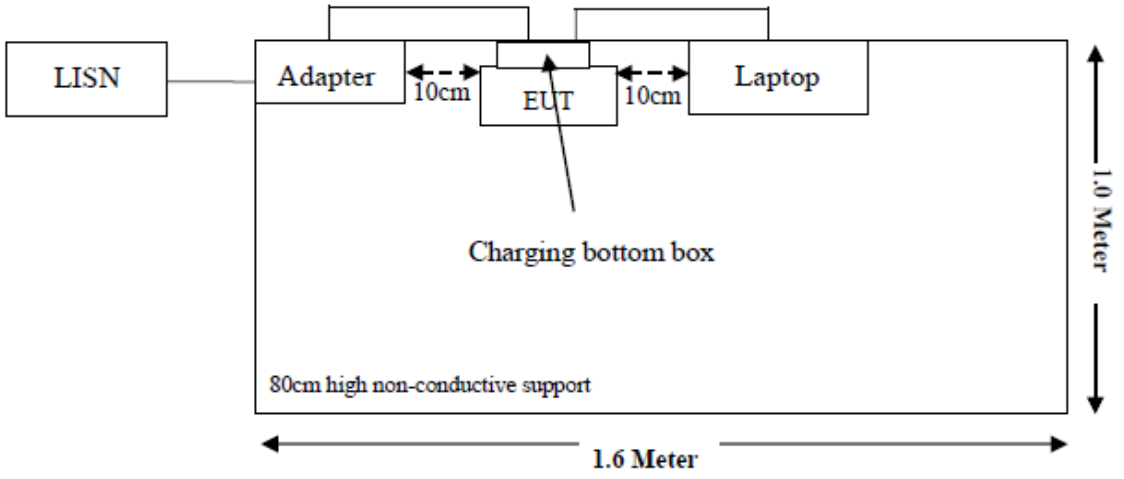
Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	T480	PF1P5K4F
Akuvox	Charging bottom box	FX1-ST	Unknown
KLEC	Switching Adapter	SW-0222	Unknown

External I/O Cable

Cable Description	Length (m)	From Port	To
Adapter cable	1.0	Charging bottom box	Adapter
NETWORK cable	8	Charging bottom box	Laptop

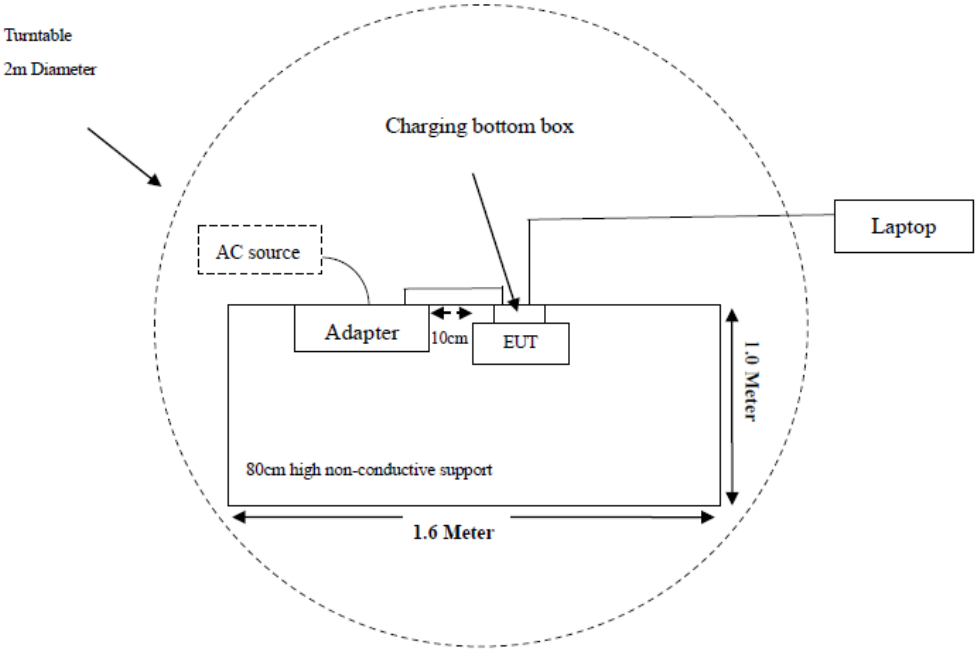
Block Diagram of Test Setup

Conducted Emission:

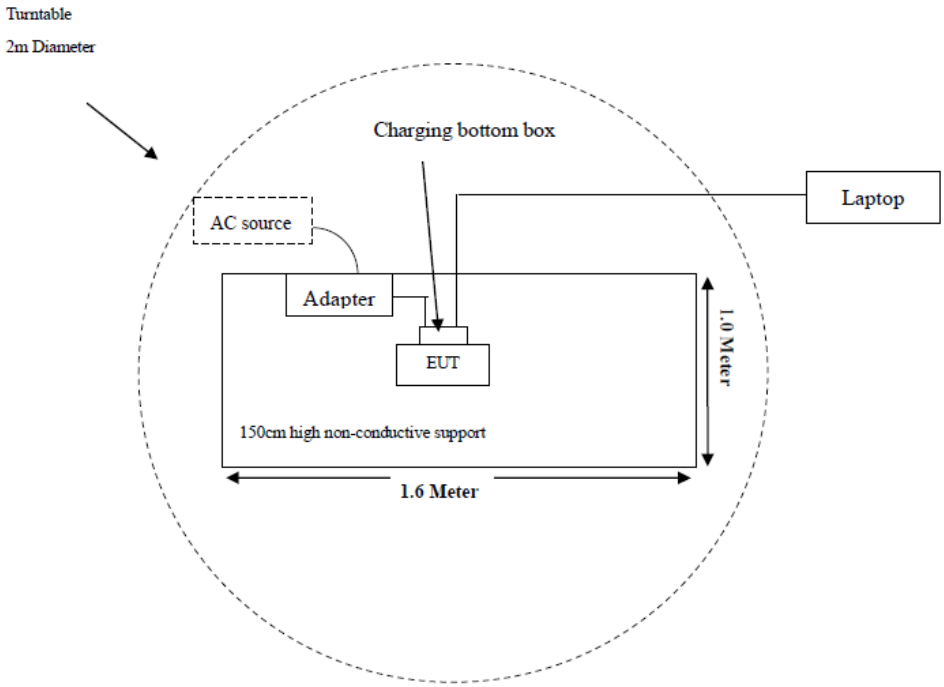


Radiated Emission:

Below 1GHz



Above 1GHz



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line Conducted Emissions	Compliance
§15.205, §15.209, §15.247 (d)	Spurious Emissions	Compliance
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliance
§15.247 (b)(3)	Maximum Conducted Output Power	Compliance
§15.247 (d)	100 kHz Bandwidth of Frequency Band Edge	Compliance
§15.247 (e)	Power Spectral Density	Compliance

TEST EQUIPMENT LIST

Test Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions					
EMI Test Receiver	Rohde & Schwarz	ESR	103105	2024/03/29	2025/03/28
LISN	Rohde & Schwarz	ENV216	100129	2024/03/29	2025/03/28
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	0357.8810.54	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC001	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Below 1GHz					
EMI Test Receiver	Rohde & Schwarz	ESR	103103	2024/03/29	2025/03/28
Loop Antenna	Rohde & Schwarz	HFH2-Z2	830749/001	2023/07/27	2026/07/26
Antenna	Sunol Sciences	JB6	A122022-5	2023/07/27	2026/07/26
Amplifier	Sonoma	310B	120903	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC002	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH460B-N-2M	CC006	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH460B-N-12M	CC007	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	HFH2-CC	335.3609	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Above 1 GHz					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2024/03/29	2025/03/28
Filter Switch Unit	Decentest	DT7220FSU	DS79904	2024/02/23	2025/02/22
Multiplex Switch Test Control Set	Decentest	DT7220SCU	DS79901	2024/02/23	2025/02/22
Double Ridge Guide Horn Antenna	A.H.Systems	SAS-571	1980	2023/07/28	2026/07/27
Preamplifier	A.H.Systems	PAM-0118P	489	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH800A-N-6M	CC003	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH800A-N-1M	CC005	2024/03/29	2025/03/28
Horn Antenna	EMCO	3116	9407-2232	2023/07/31	2026/07/30
Preamplifier	A.H.Systems	PAM-1840	200	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH360A-2.92-3M	CC008	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH360A-2.92-1M	CC009	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
RF Conducted Test					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2024/03/29	2025/03/28
Coaxial Cable	N/A	N/A	N/A	2024/03/29	2025/03/28
USB Wideband Power Sensor	Boonton	55318	8934	2023/09/20	2024/09/19

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Xiamen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.
c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has one FPC antenna arrangement for Bluetooth & 2.4G WIFI, which was permanently attached and the antenna gain is -3.5 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

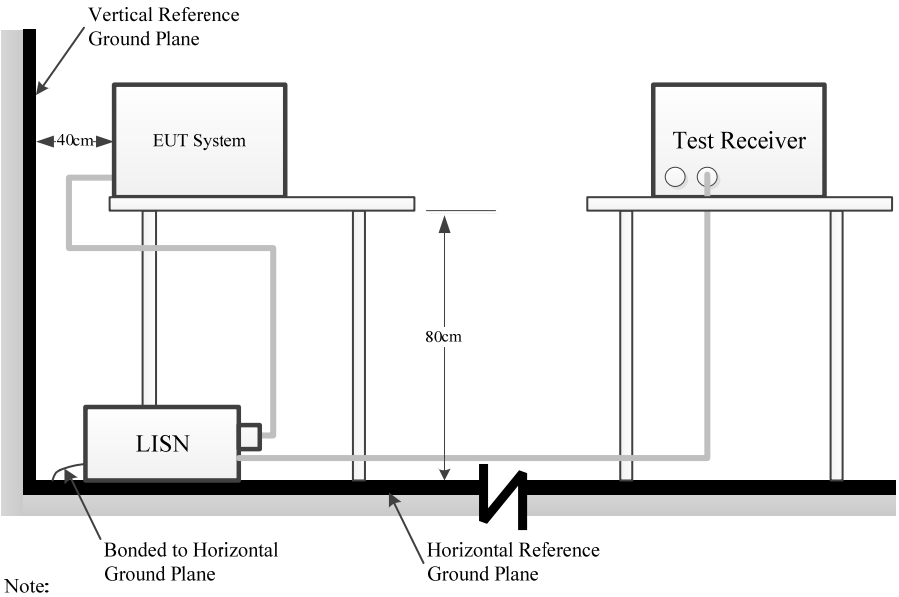
Result: Compliance

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207

EUT Setup



Note:
1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at least 80 cm from other units and oter metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW	Detector
150 kHz – 30 MHz	9 kHz	30 kHz	QP/AV

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

Result &Margin Calculation

The Result is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
Result (dBμV) = Reading (dBμV) + Factor (dB)

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBμV) –Result (dBμV)

Test Data

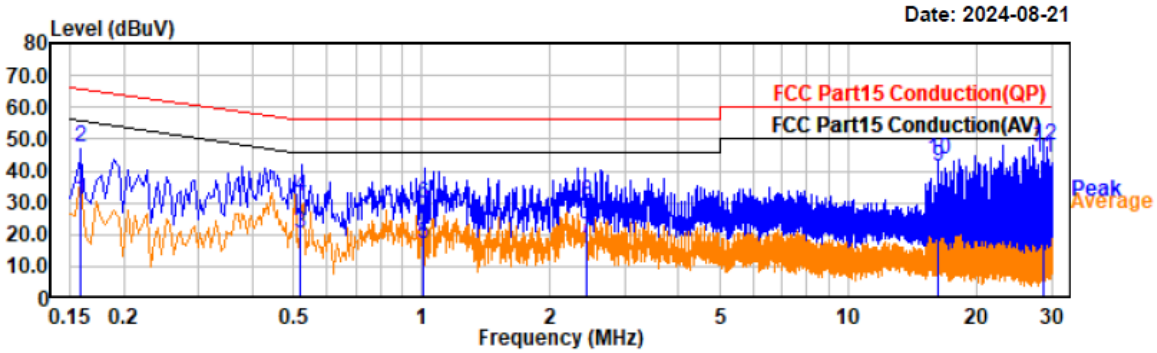
Temperature:	23.5℃
Relative Humidity:	54 %
ATM Pressure:	101.1kPa
Test Date:	2024-08-21
Test Engineer:	Spike Gao

For BLE:

EUT operation mode: Transmitting in BLE 1Mbps low channel (worst case)

Project No.: 2407T76694E-RF
Test Mode: BLE 1M 2402MHz
EUT Model: PH81

Temp/Humi/ATM: 23.5℃/54%/101.1kPa
Tested by: Spike Gao
Power Source: AC 120V/60Hz

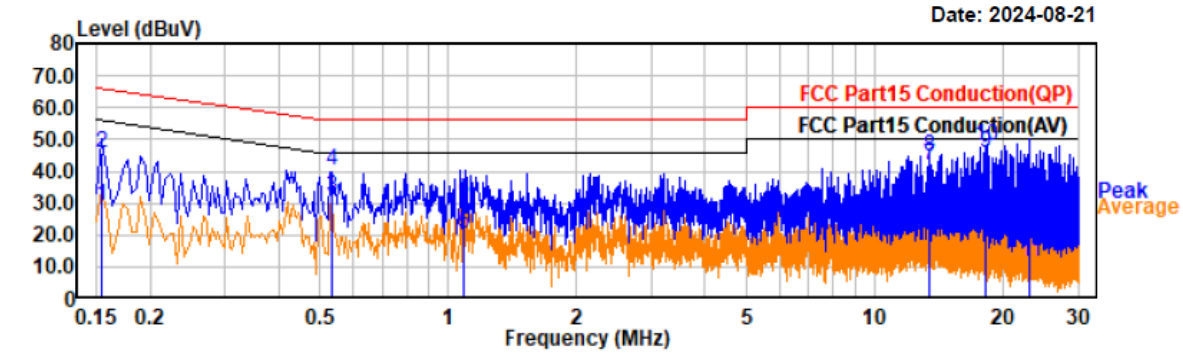


Trace: 1

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.16	9.95	20.87	30.82	55.54	24.72	Line	Average
0.16	26.57	20.87	47.44	65.54	18.10	Line	QP
0.52	0.05	20.31	20.36	46.00	25.64	Line	Average
0.52	11.61	20.31	31.92	56.00	24.08	Line	QP
1.01	-3.56	20.92	17.36	46.00	28.64	Line	Average
1.01	8.79	20.92	29.71	56.00	26.29	Line	QP
2.43	-2.16	21.00	18.84	46.00	27.16	Line	Average
2.43	9.30	21.00	30.30	56.00	25.70	Line	QP
16.23	20.25	21.01	41.26	50.00	8.74	Line	Average
16.23	22.43	21.01	43.44	60.00	16.56	Line	QP
28.69	22.89	21.29	44.18	50.00	5.82	Line	Average
28.69	26.74	21.29	48.03	60.00	11.97	Line	QP

Project No.: 2407T76694E-RF
Test Mode: BLE 1M 2402MHz
EUT Model: PH81

Temp/Humi/ATM: 23.5℃/54%/101.1kPa
Tested by: Spike Gao
Power Source: AC 120V/60Hz



Trace: 1

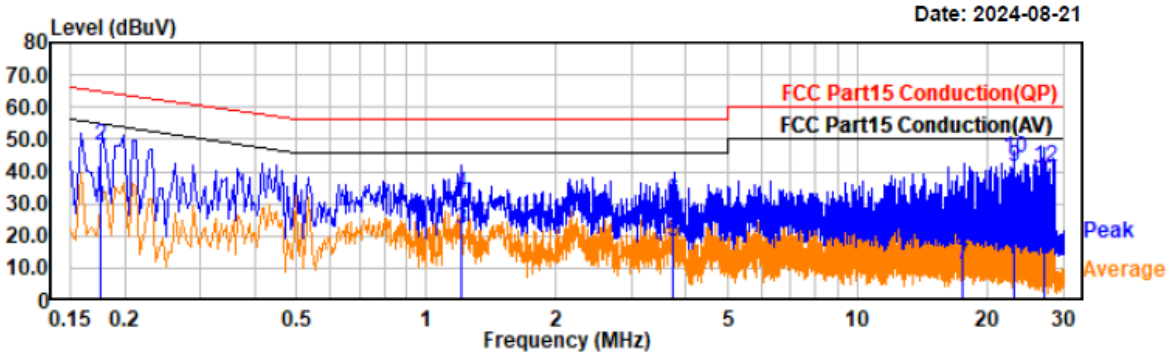
Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.15	8.55	20.73	29.28	55.78	26.50	Neutral	Average
0.15	25.33	20.73	46.06	65.78	19.72	Neutral	QP
0.53	11.55	20.37	31.92	46.00	14.08	Neutral	Average
0.53	20.05	20.37	40.42	56.00	15.58	Neutral	QP
1.09	-0.52	20.93	20.41	46.00	25.59	Neutral	Average
1.09	10.00	20.93	30.93	56.00	25.07	Neutral	QP
13.42	20.72	20.99	41.71	50.00	8.29	Neutral	Average
13.42	23.45	20.99	44.44	60.00	15.56	Neutral	QP
18.24	24.81	21.18	45.99	50.00	4.01	Neutral	Average
18.24	27.05	21.18	48.23	60.00	11.77	Neutral	QP
23.13	-10.28	21.71	11.43	50.00	38.57	Neutral	Average
23.13	-2.42	21.71	19.29	60.00	40.71	Neutral	QP

For 2.4G WIFI:

EUT operation mode: Transmitting in Wifi 802.11n20 high channel (worst case)

Project No.: 2407T76694E-RF
Test Mode: 2.4G Wi-Fi 11n20 2462MHz
EUT Model: PH81

Temp/Humi/ATM: 23.5℃/54%/101.1kPa
Tested by: Spike Gao
Power Source: AC 120V/60Hz

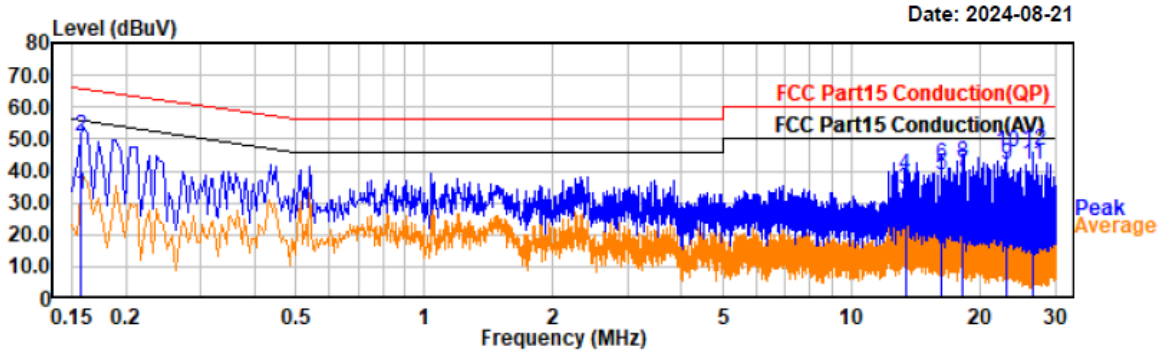


Trace: 1

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.18	8.22	20.73	28.95	54.68	25.73	Line	Average
0.18	27.33	20.73	48.06	64.68	16.62	Line	QP
1.21	0.94	20.97	21.91	46.00	24.09	Line	Average
1.21	12.20	20.97	33.17	56.00	22.83	Line	QP
3.72	-2.52	20.71	18.19	46.00	27.81	Line	Average
3.72	10.21	20.71	30.92	56.00	25.08	Line	QP
17.58	-10.31	21.13	10.82	50.00	39.18	Line	Average
17.58	-0.85	21.13	20.28	60.00	39.72	Line	QP
23.13	19.74	21.77	41.51	50.00	8.49	Line	Average
23.13	22.28	21.77	44.05	60.00	15.95	Line	QP
27.16	16.29	21.47	37.76	50.00	12.24	Line	Average
27.16	19.95	21.47	41.42	60.00	18.58	Line	QP

Project No.: 2407T76694E-RF
Test Mode: 2.4G Wi-Fi 11n20 2462MHz
EUT Model: PH81

Temp/Humi/ATM: 23.5℃/54%/101.1kPa
Tested by: Spike Gao
Power Source: AC 120V/60Hz



Trace: 1

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.16	12.04	20.73	32.77	55.59	22.82	Neutral	Average
0.16	30.01	20.73	50.74	65.59	14.85	Neutral	QP
13.36	12.96	20.98	33.94	50.00	16.06	Neutral	Average
13.36	17.48	20.98	38.46	60.00	21.54	Neutral	QP
16.23	17.48	21.13	38.61	50.00	11.39	Neutral	Average
16.23	20.73	21.13	41.86	60.00	18.14	Neutral	QP
18.24	18.53	21.18	39.71	50.00	10.29	Neutral	Average
18.24	21.43	21.18	42.61	60.00	17.39	Neutral	QP
23.13	20.41	21.71	42.12	50.00	7.88	Neutral	Average
23.13	23.82	21.71	45.53	60.00	14.47	Neutral	QP
26.49	20.55	21.45	42.00	50.00	8.00	Neutral	Average
26.49	24.81	21.45	46.26	60.00	13.74	Neutral	QP

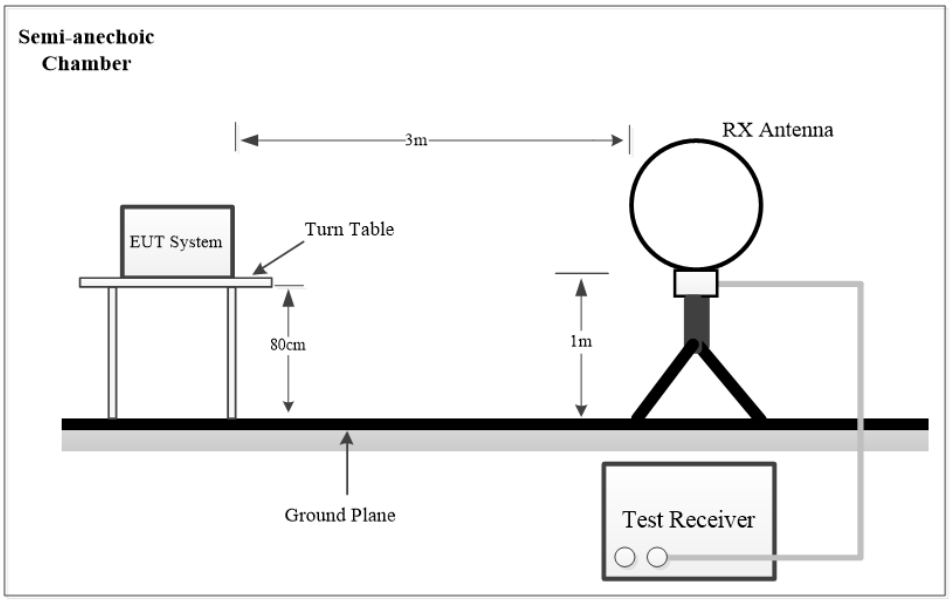
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

Applicable Standard

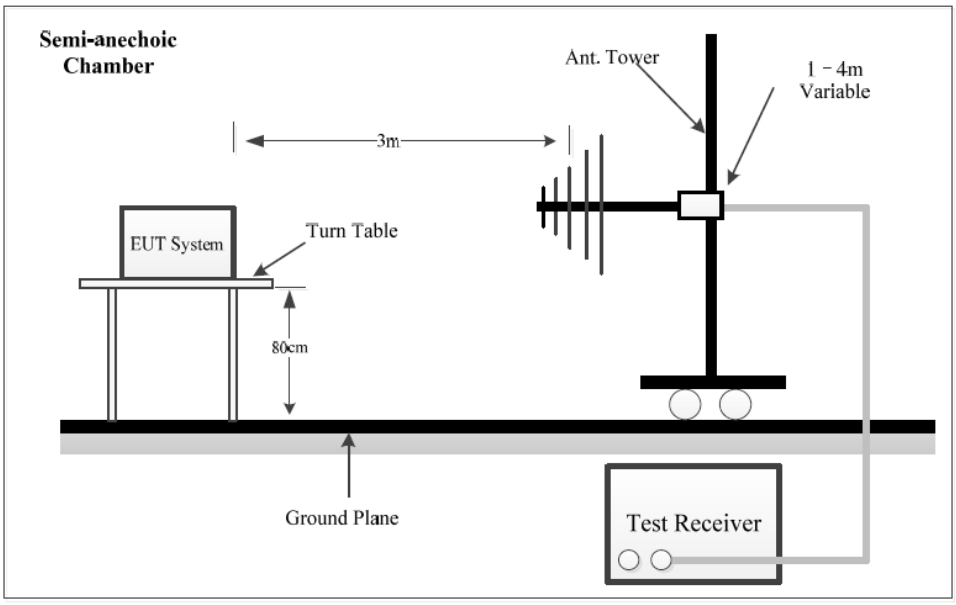
FCC §15.247 (d); §15.209; §15.205;

EUT Setup

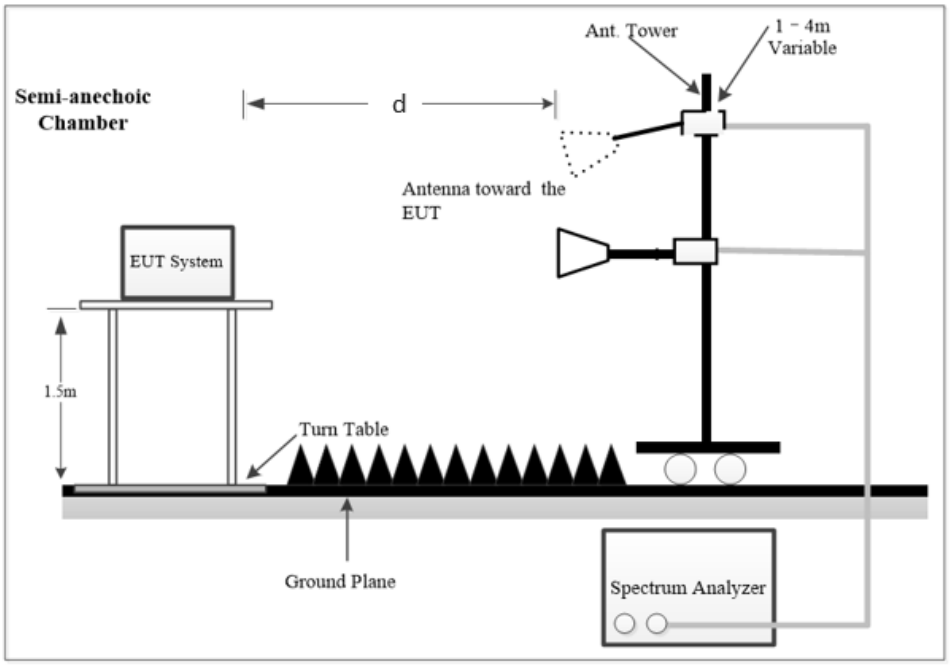
9 kHz-30MHz:



30MHz -1 GHz:



Above 1GHz:



The radiated emission tests using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

NOTE: d is testing distance;
For Radiated Emission test (1GHz-18GHz) and Bandedge Emission test, which was performed at 3 m distance.

For Radiated Emission test (18GHz-25GHz), which was performed at 1.0 m distance, according to ANSI C63.10-2013, the test result shall be extrapolated to the specified distance using an extrapolation Factor of 20dB/decade from 3m to 1.0m.
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1.0m]) dB= 9.54 dB

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 25 GHz.

During the radiated emission test, the EMI test receiver & spectrum analyzer setup were set with the following configurations:

Below 1GHz:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	200Hz	1 kHz	200Hz	QP/AV
150 kHz – 30 MHz	10 kHz	30 kHz	9 kHz	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	/	PK
	/	/	120kHz	QP

Above 1GHz:
Pre-scan:

Duty Cycle	RBW	VBW	Measurement
Any	1MHz	3MHz	PK
＞98%	1MHz	5kHz	AV
＜98%	1MHz	≥1/T, not less than 5kHz	AV

Final measurement for emission identified during the pre-scan:

Duty Cycle	RBW	VBW	Measurement
Any	1MHz	3MHz	PK
＞98%	1MHz	10Hz	AV
＜98%	1MHz	≥1/T	AV

Note: T is minimum transmission duration

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

For each measurement antenna alignment, the EUT shall be rotated through 0°to 360°on a turntable. The report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground parallel) unless the margin is greater than 20 dB, then the following statement shall be made: “all emissions were greater than 20 dB below the limit.”

Below 1GHz, if the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 6 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

Above 1GHz, if the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is below the AV emission limit, there's no need to record the measured AV level of the emissions in the report.

Result &Margin Calculation

The Result is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

For 9 kHz to 18GHz Radiated emission test
Factor (dB/m) =Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

For 18GHz to 25GHz Radiated emission test and Bandedge emissions test
Factor (dB/m) =Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB) - Extrapolation factor (dB)

Extrapolation factor=9.54dB (distance=1m)

Result (dBμV/m) = Reading (dBμV) + Factor (dB/m)

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBμV/m) –Result (dBμV/m)

Test Data

Please refer to the below table and plots.
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

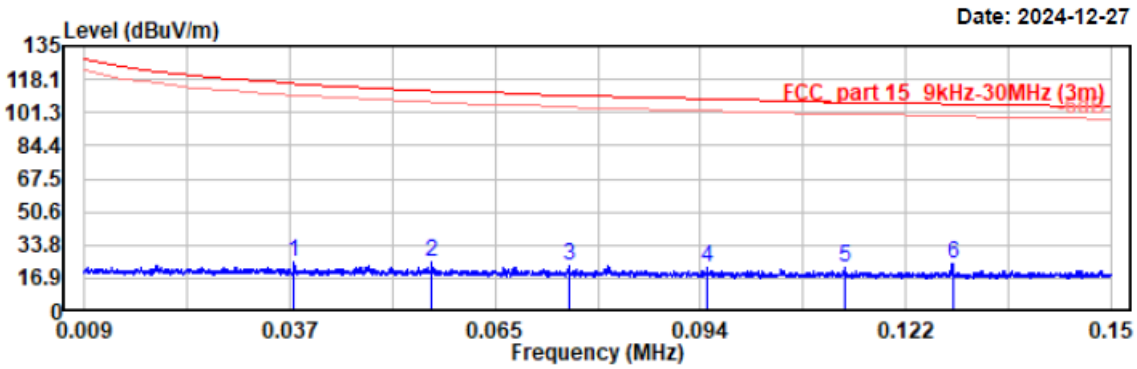
Frequency Range:	Below 1 GHz	Above 1 GHz
Temperature:	22.8℃~23.6℃	21.3℃~23.8℃
Relative Humidity:	50 %~56 %	51%~58%
ATM Pressure:	100.2kPa ~100.5kPa	100.1kPa~100.5kPa
Test Date:	2024-08-09~2024-12-27	2024-11-06~2024-12-11
Test Engineer:	Wlif Wu	Wlif Wu

1) 9 kHz~30MHz

EUT operation mode: Transmitting in Wifi 802.11n20 high channel in parallel (worst case)

Project No.: 2407T76694E-RF
Test Mode: 802.11n20 2462MHz
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 22.8℃/50%/100.2kPa
Tested by: Wlif Wu
Power Source: AC120V/60Hz

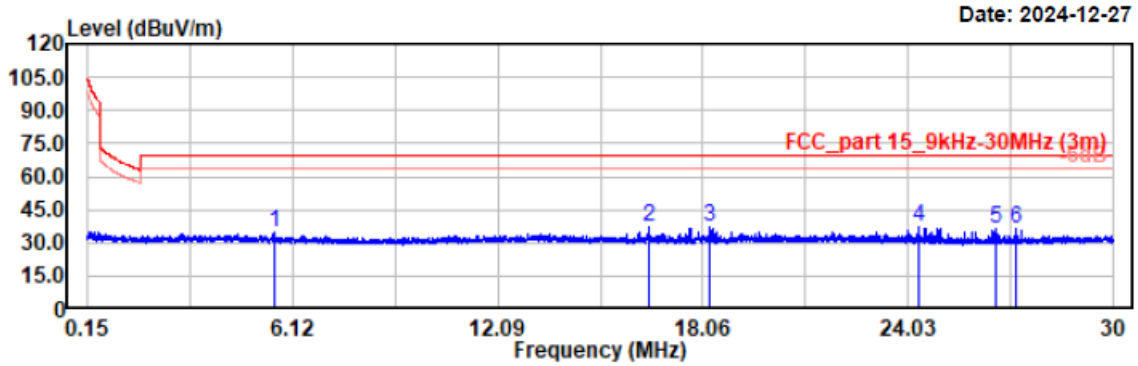


Condition: PK RBW:200Hz VBW:1kHz SWT:auto
QP RBW:200Hz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
0.038	5.32	19.91	25.23	116.07	90.84	Peak
0.057	5.34	19.91	25.25	112.54	87.29	Peak
0.076	3.94	19.75	23.69	110.04	86.35	Peak
0.094	2.51	19.78	22.29	108.10	85.81	Peak
0.113	2.30	19.73	22.03	106.51	84.48	Peak
0.128	4.41	19.73	24.14	105.44	81.30	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n20 2462MHz
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 22.8℃/50%/100.2kPa
Tested by: Wlif Wu
Power Source: AC120V/60Hz



Condition: PK RBW:10kHz VBW:30kHz SWT:auto
QP RBW:9kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
5.568	14.96	19.75	34.71	69.54	34.83	Peak
16.472	16.99	19.86	36.85	69.54	32.69	Peak
18.245	17.19	19.97	37.16	69.54	32.38	Peak
24.352	16.92	20.21	37.13	69.54	32.41	Peak
26.612	16.31	20.14	36.45	69.54	33.09	Peak
27.161	16.17	20.11	36.28	69.54	33.26	Peak

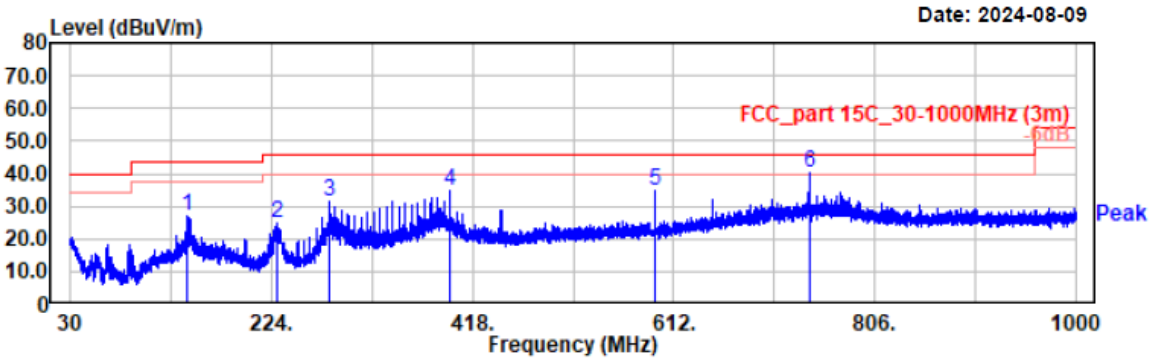
2) 30 MHz-1GHz

For BLE:

EUT operation mode: Transmitting in BLE 1Mbps low channel in Z-axis of orientation (worst case)

Project No.: 2407T76694E-RF
Test Mode: 1M-2402
EUT Model: PH81
Test distance: 3m

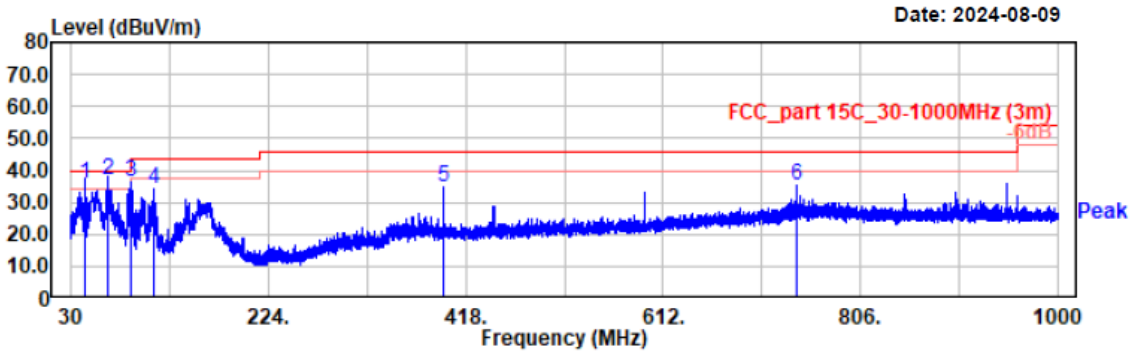
Temp/Humi: 23.6℃/56%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/50HZ



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
143.30	38.17	-10.91	27.26	43.50	16.24	Horizontal	Peak
229.24	37.21	-12.23	24.98	46.00	21.02	Horizontal	Peak
279.48	40.84	-9.34	31.50	46.00	14.50	Horizontal	Peak
395.98	41.06	-6.57	34.49	46.00	11.51	Horizontal	Peak
593.96	37.08	-2.44	34.64	46.00	11.36	Horizontal	Peak
742.56	39.77	0.38	40.15	46.00	5.85	Horizontal	QP

Project No.: 2407T76694E-RF
Test Mode: 1M-2402
EUT Model: PH81
Test distance: 3m

Temp/Humi: 23.6℃/56%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



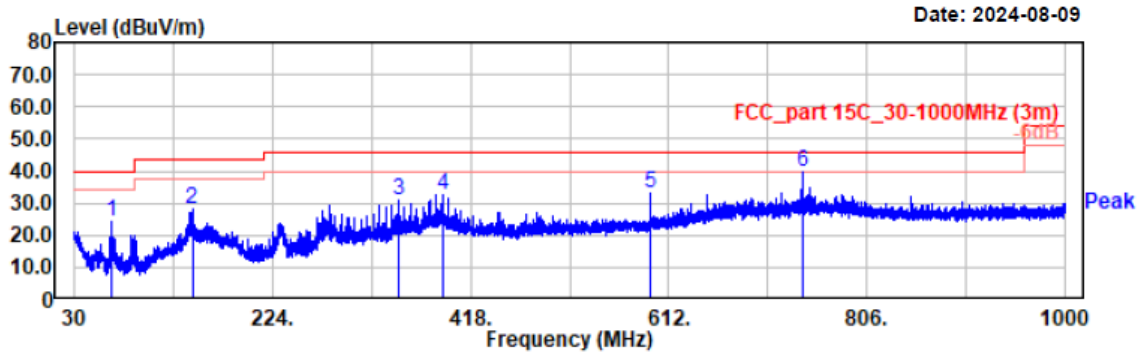
Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
43.77	50.09	-14.43	35.66	40.00	4.34	Vertical	QP
66.28	54.15	-17.27	36.88	40.00	3.12	Vertical	QP
88.78	53.85	-17.18	36.67	43.50	6.83	Vertical	QP
110.70	45.98	-11.74	34.24	43.50	9.26	Vertical	QP
395.98	41.58	-6.57	35.01	46.00	10.99	Vertical	QP
742.56	34.92	0.38	35.30	46.00	10.70	Vertical	QP

For 2.4G WIFI:

EUT operation mode: Transmitting in Wifi 802.11n20 high channel in Z-axis of orientation (worst case)

Project No.: 2407T76694E-RF
Test Mode: 11n20-2462
EUT Model: PH81
Test distance: 3m

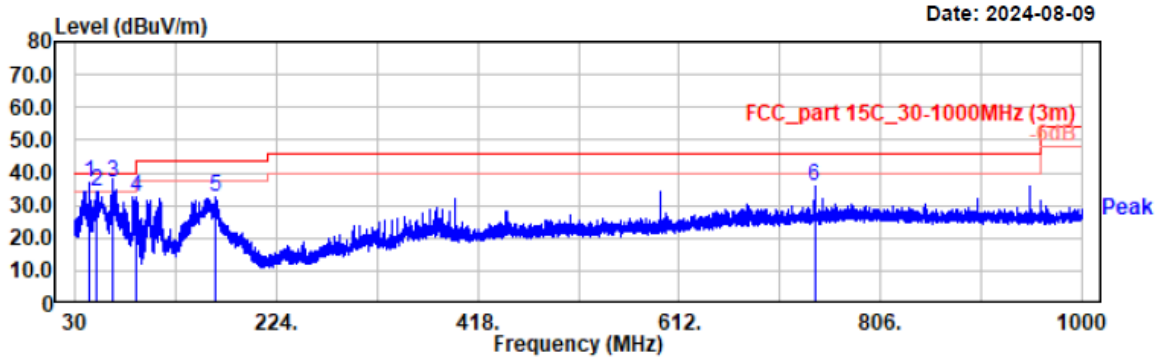
Temp/Humi: 23.6℃/56%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
66.28	41.71	-17.27	24.44	40.00	15.56	Horizontal	QP
145.24	39.20	-10.97	28.23	43.50	15.27	Horizontal	QP
347.09	38.83	-8.15	30.68	46.00	15.32	Horizontal	QP
390.16	39.28	-6.65	32.63	46.00	13.37	Horizontal	QP
594.06	35.44	-2.44	33.00	46.00	13.00	Horizontal	QP
742.56	39.12	0.38	39.50	46.00	6.50	Horizontal	QP

Project No.: 2407T76694E-RF
Test Mode: 11n20-2462
EUT Model: PH81
Test distance: 3m

Temp/Humi: 23.6℃/56%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



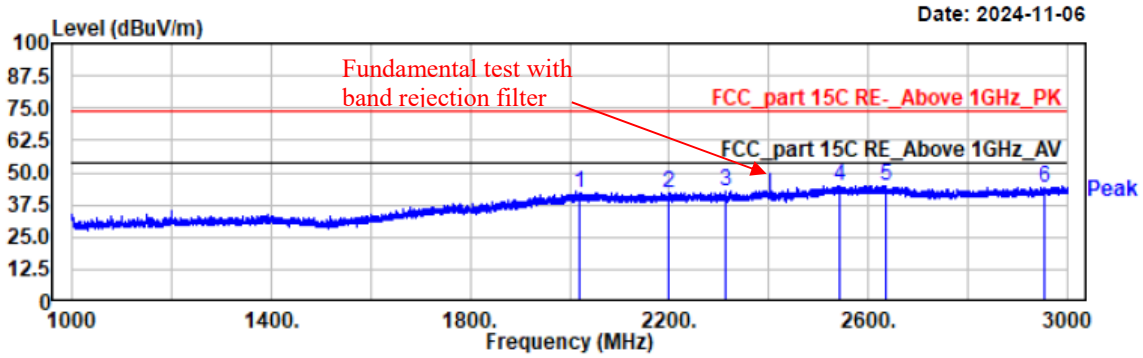
Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
43.77	51.62	-14.43	37.19	40.00	2.81	Vertical	QP
49.98	51.36	-17.33	34.03	40.00	5.97	Vertical	QP
66.29	54.15	-17.27	36.88	40.00	3.12	Vertical	QP
88.78	49.88	-17.18	32.70	43.50	10.80	Vertical	QP
164.44	44.31	-11.61	32.70	43.50	10.80	Vertical	QP
742.47	35.71	0.38	36.09	46.00	9.91	Vertical	QP

3) 1GHz~3GHz

For BLE 1Mbps:

Project No.: 2407T76694E-RF
Test Mode: 1M 2402MHz
EUT Model: PH81
Test distance: 3m

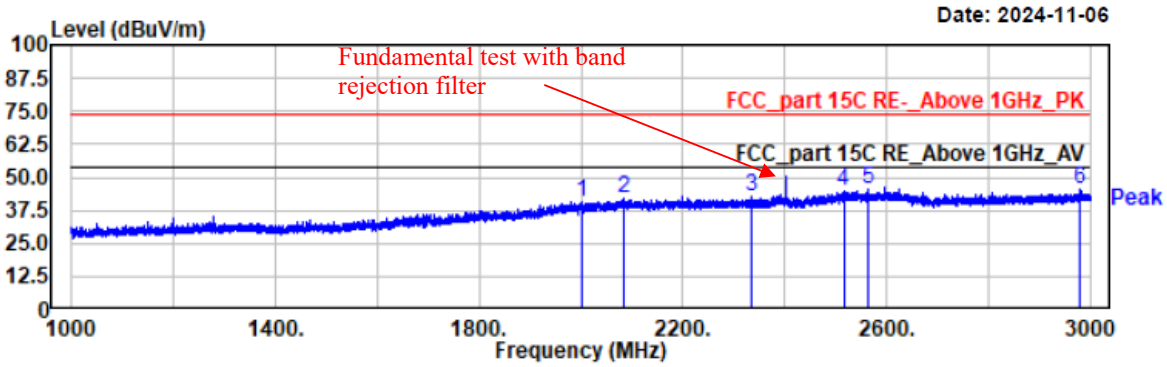
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2021.00	48.51	-6.43	42.08	74.00	31.92	Horizontal	Peak
2200.00	48.26	-6.25	42.01	74.00	31.99	Horizontal	Peak
2313.40	49.04	-6.20	42.84	74.00	31.16	Horizontal	Peak
2540.80	48.64	-3.59	45.05	74.00	28.95	Horizontal	Peak
2637.20	48.36	-3.35	45.01	74.00	28.99	Horizontal	Peak
2955.80	48.42	-4.18	44.24	74.00	29.76	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 1M 2402MHz
EUT Model: PH81
Test distance: 3m

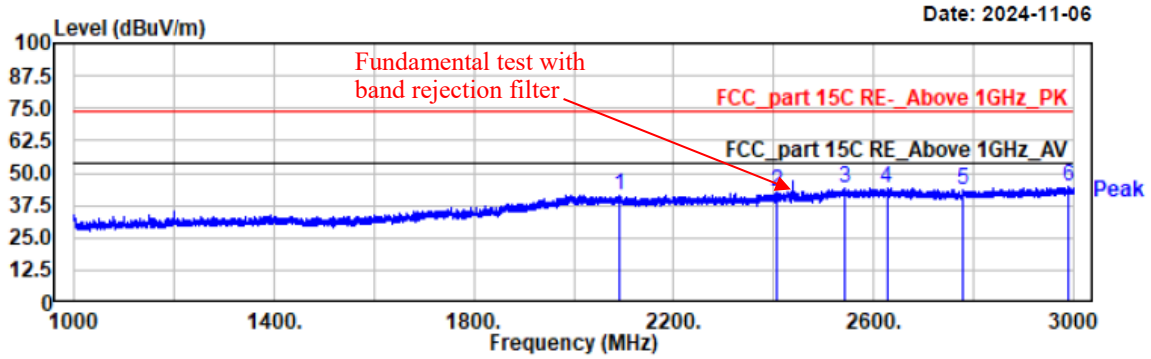
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2001.60	47.58	-6.73	40.85	74.00	33.15	vertical	Peak
2085.00	48.48	-6.50	41.98	74.00	32.02	vertical	Peak
2333.40	48.62	-6.02	42.60	74.00	31.40	vertical	Peak
2515.60	48.90	-3.93	44.97	74.00	29.03	vertical	Peak
2565.00	48.81	-3.42	45.39	74.00	28.61	vertical	Peak
2978.80	49.43	-4.09	45.34	74.00	28.66	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 1M 2440MHz
EUT Model: PH81
Test distance: 3m

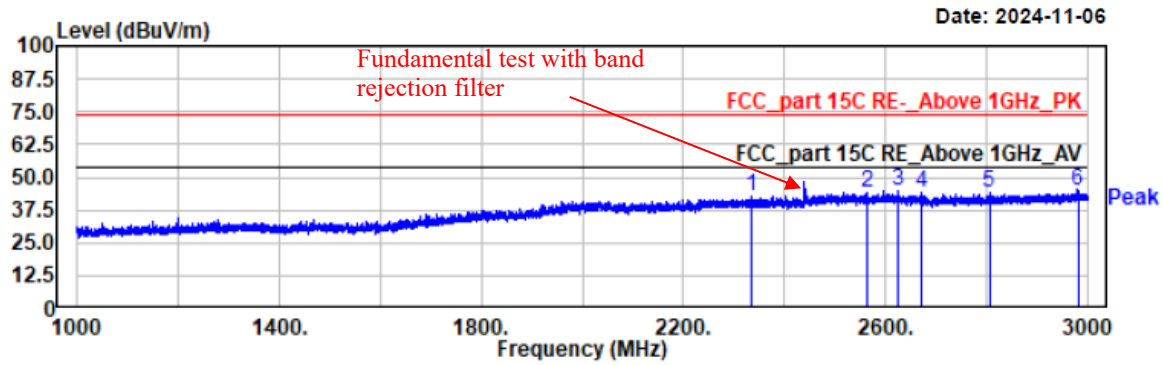
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2090.20	48.19	-6.57	41.62	74.00	32.38	Horizontal	Peak
2407.20	47.80	-5.19	42.61	74.00	31.39	Horizontal	Peak
2540.80	47.64	-3.59	44.05	74.00	29.95	Horizontal	Peak
2626.60	47.45	-3.33	44.12	74.00	29.88	Horizontal	Peak
2780.20	48.47	-4.74	43.73	74.00	30.27	Horizontal	Peak
2991.00	48.54	-4.05	44.49	74.00	29.51	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 1M 2440MHz
EUT Model: PH81
Test distance: 3m

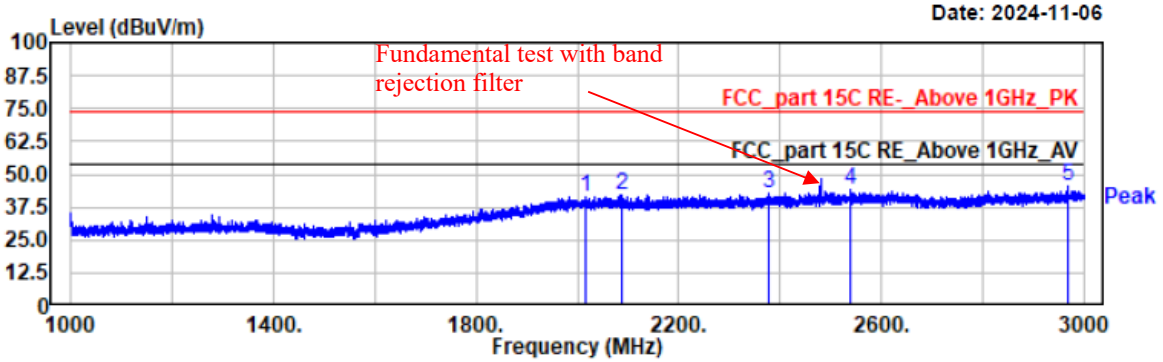
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2333.40	48.62	-6.02	42.60	74.00	31.40	vertical	Peak
2565.00	47.81	-3.42	44.39	74.00	29.61	vertical	Peak
2626.00	48.17	-3.33	44.84	74.00	29.16	vertical	Peak
2671.60	48.14	-3.92	44.22	74.00	29.78	vertical	Peak
2805.60	48.64	-4.68	43.96	74.00	30.04	vertical	Peak
2981.00	49.19	-4.09	45.10	74.00	28.90	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 1M 2480MHz
EUT Model: PH81
Test distance: 3m

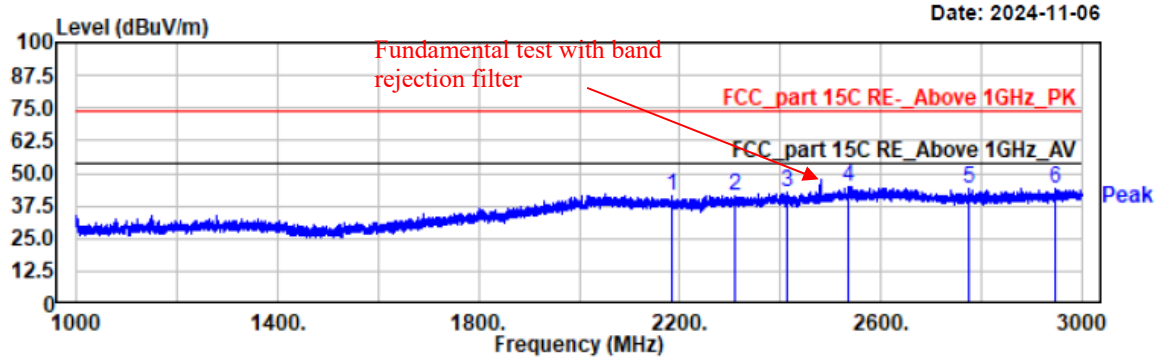
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2015.40	48.05	-6.51	41.54	74.00	32.46	Horizontal	Peak
2086.60	48.79	-6.53	42.26	74.00	31.74	Horizontal	Peak
2377.80	48.55	-5.49	43.06	74.00	30.94	Horizontal	Peak
2539.60	47.92	-3.61	44.31	74.00	29.69	Horizontal	Peak
2966.80	49.77	-4.14	45.63	74.00	28.37	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 1M 2480MHz
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

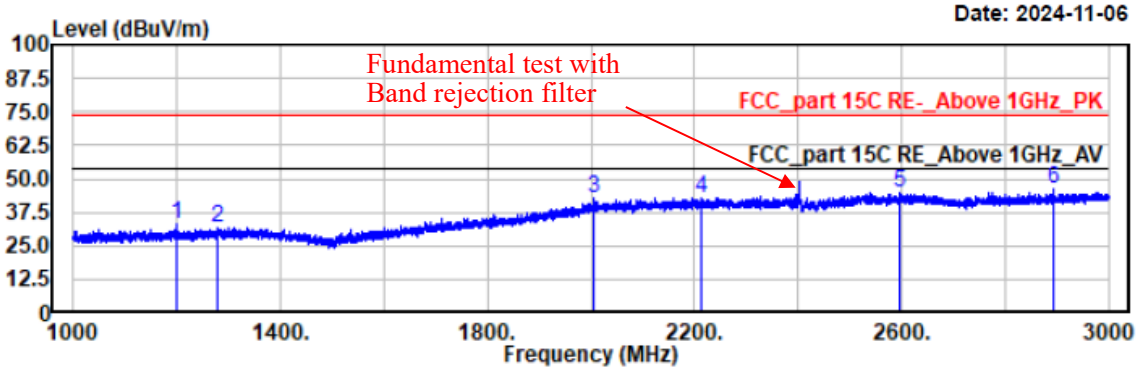


Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2183.40	47.83	-6.42	41.41	74.00	32.59	vertical	Peak
2309.20	47.91	-6.25	41.66	74.00	32.34	vertical	Peak
2412.00	47.80	-5.17	42.63	74.00	31.37	vertical	Peak
2537.00	48.43	-3.64	44.79	74.00	29.21	vertical	Peak
2774.00	48.79	-4.76	44.03	74.00	29.97	vertical	Peak
2947.60	48.69	-4.22	44.47	74.00	29.53	vertical	Peak

For BLE 2Mbps:

Project No.: 2407T76694E-RF
Test Mode: 2M 2402MHz
EUT Model: PH81
Test distance: 3m

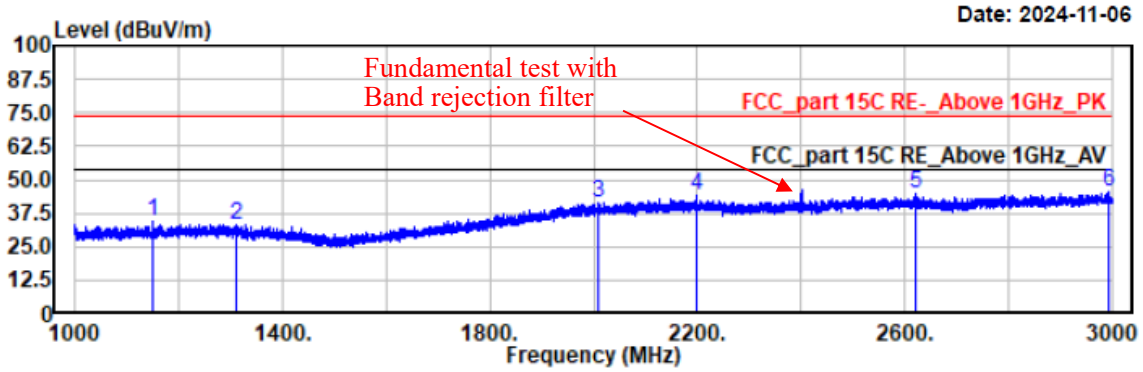
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1200.40	49.14	-16.05	33.09	74.00	40.91	Horizontal	Peak
1279.80	47.58	-15.51	32.07	74.00	41.93	Horizontal	Peak
2005.00	49.38	-6.68	42.70	74.00	31.30	Horizontal	Peak
2211.40	49.23	-6.26	42.97	74.00	31.03	Horizontal	Peak
2595.40	48.18	-3.31	44.87	74.00	29.13	Horizontal	Peak
2895.00	50.54	-4.40	46.14	74.00	27.86	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 2M 2402MHz
EUT Model: PH81
Test distance: 3m

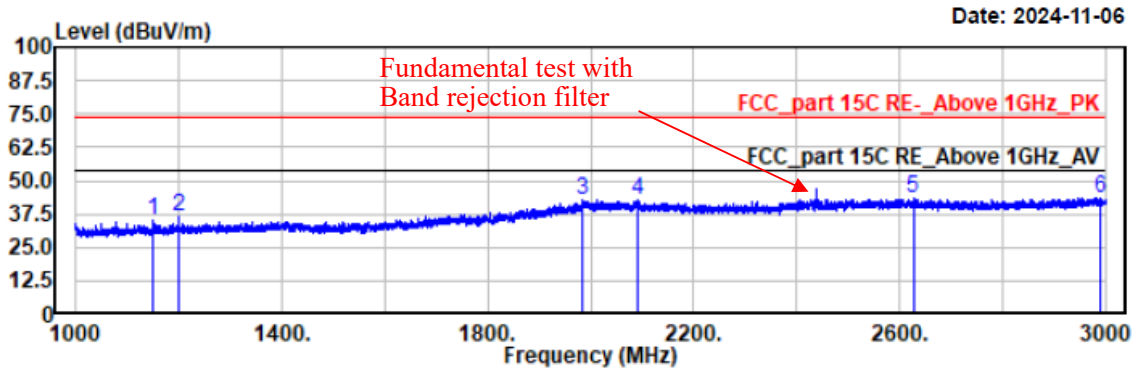
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1150.00	50.93	-16.39	34.54	74.00	39.46	vertical	Peak
1311.40	48.86	-15.48	33.38	74.00	40.62	vertical	Peak
2009.20	47.88	-6.61	41.27	74.00	32.73	vertical	Peak
2197.80	50.11	-6.27	43.84	74.00	30.16	vertical	Peak
2620.00	47.97	-3.33	44.64	74.00	29.36	vertical	Peak
2992.80	49.87	-4.04	45.83	74.00	28.17	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 2M 2440MHz
EUT Model: PH81
Test distance: 3m

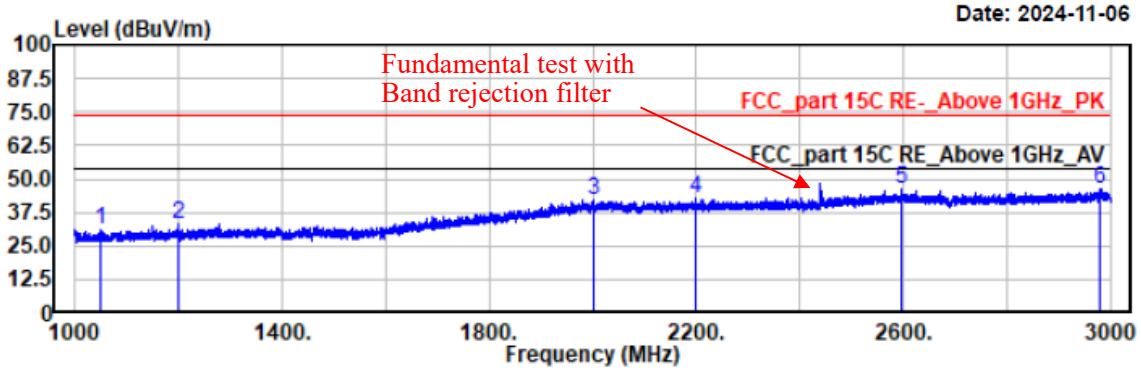
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1149.60	51.41	-16.39	35.02	74.00	38.98	Horizontal	Peak
1200.60	52.32	-16.04	36.28	74.00	37.72	Horizontal	Peak
1984.80	50.39	-7.29	43.10	74.00	30.90	Horizontal	Peak
2090.20	49.19	-6.57	42.62	74.00	31.38	Horizontal	Peak
2626.60	46.45	-3.33	43.12	74.00	30.88	Horizontal	Peak
2991.00	47.54	-4.05	43.49	74.00	30.51	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 2M 2440MHz
EUT Model: PH81
Test distance: 3m

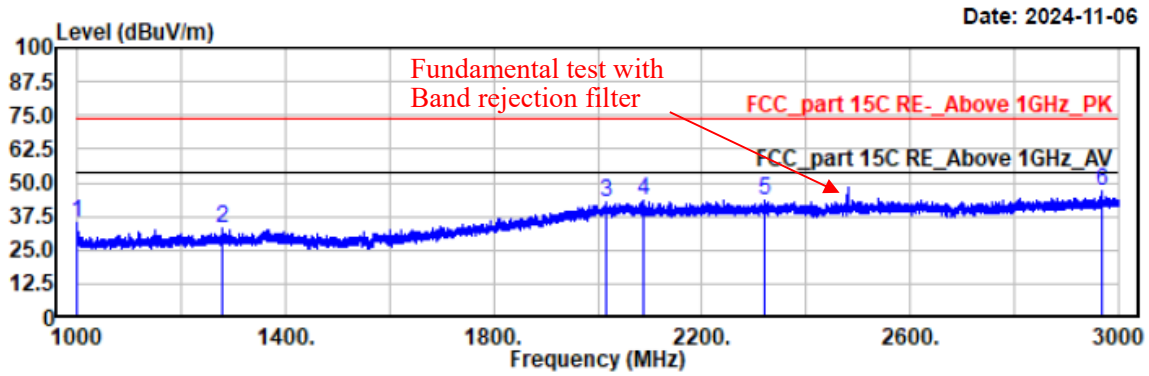
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1050.20	48.26	-17.04	31.22	74.00	42.78	vertical	Peak
1199.60	49.35	-16.05	33.30	74.00	40.70	vertical	Peak
2001.60	48.58	-6.73	41.85	74.00	32.15	vertical	Peak
2199.40	48.72	-6.26	42.46	74.00	31.54	vertical	Peak
2596.80	49.20	-3.31	45.89	74.00	28.11	vertical	Peak
2978.80	50.43	-4.09	46.34	74.00	27.66	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 2M 2480MHz
EUT Model: PH81
Test distance: 3m

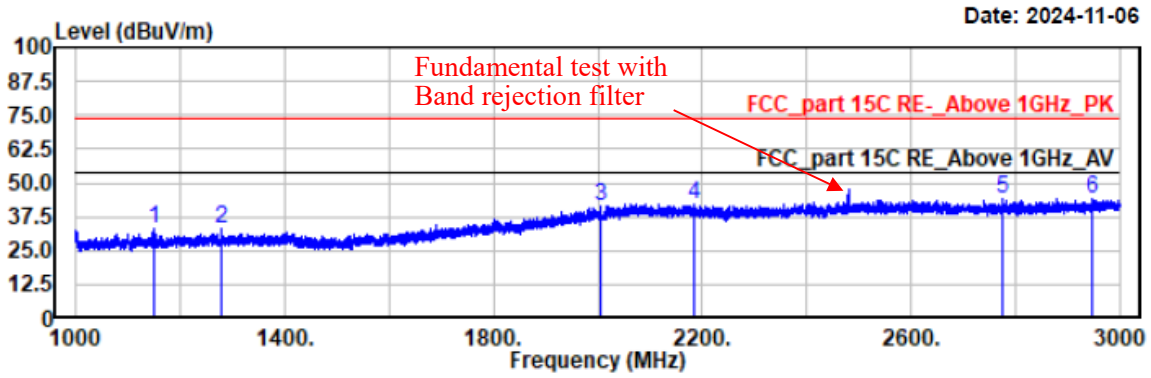
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1000.00	52.27	-17.24	35.03	74.00	38.97	Horizontal	Peak
1280.40	48.83	-15.50	33.33	74.00	40.67	Horizontal	Peak
2015.40	49.05	-6.51	42.54	74.00	31.46	Horizontal	Peak
2086.60	49.79	-6.53	43.26	74.00	30.74	Horizontal	Peak
2319.80	49.38	-6.14	43.24	74.00	30.76	Horizontal	Peak
2966.80	50.77	-4.14	46.63	74.00	27.37	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 2M 2480MHz
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

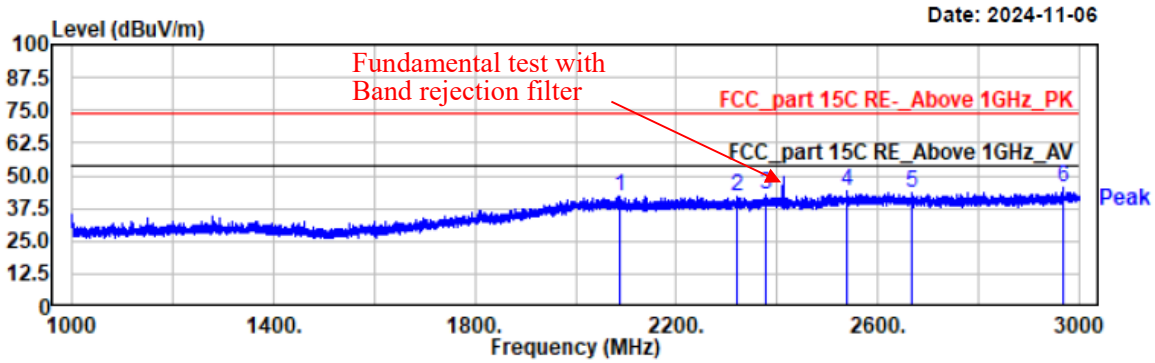


Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1150.00	49.19	-16.39	32.80	74.00	41.20	vertical	Peak
1280.00	48.45	-15.51	32.94	74.00	41.06	vertical	Peak
2003.80	47.96	-6.69	41.27	74.00	32.73	vertical	Peak
2183.40	48.83	-6.42	42.41	74.00	31.59	vertical	Peak
2774.00	48.79	-4.76	44.03	74.00	29.97	vertical	Peak
2947.60	48.69	-4.22	44.47	74.00	29.53	vertical	Peak

For 2.4G WIFI:

Project No.: 2407T76694E-RF
Test Mode: 802.11b 2412MHz
EUT Model: PH81
Test distance: 3m

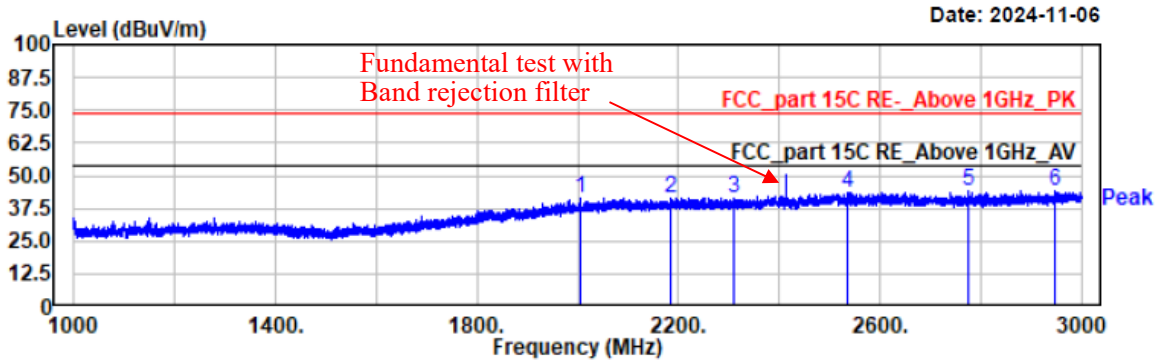
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2086.60	48.79	-6.53	42.26	74.00	31.74	Horizontal	Peak
2319.80	48.38	-6.14	42.24	74.00	31.76	Horizontal	Peak
2377.80	48.55	-5.49	43.06	74.00	30.94	Horizontal	Peak
2539.60	47.92	-3.61	44.31	74.00	29.69	Horizontal	Peak
2667.80	47.04	-3.82	43.22	74.00	30.78	Horizontal	Peak
2966.80	49.77	-4.14	45.63	74.00	28.37	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11b 2412MHz
EUT Model: PH81
Test distance: 3m

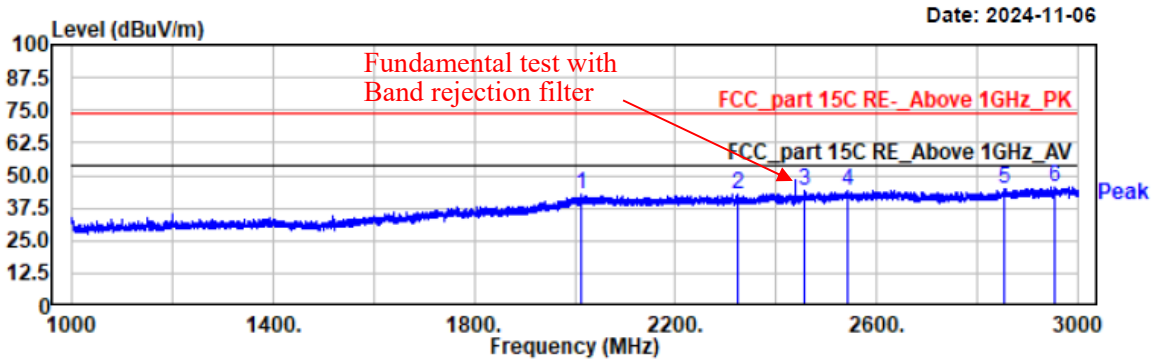
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2003.80	47.96	-6.69	41.27	74.00	32.73	vertical	Peak
2183.40	47.83	-6.42	41.41	74.00	32.59	vertical	Peak
2309.20	47.91	-6.25	41.66	74.00	32.34	vertical	Peak
2537.00	47.43	-3.64	43.79	74.00	30.21	vertical	Peak
2774.00	48.79	-4.76	44.03	74.00	29.97	vertical	Peak
2947.60	48.69	-4.22	44.47	74.00	29.53	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11b 2437MHz
EUT Model: PH81
Test distance: 3m

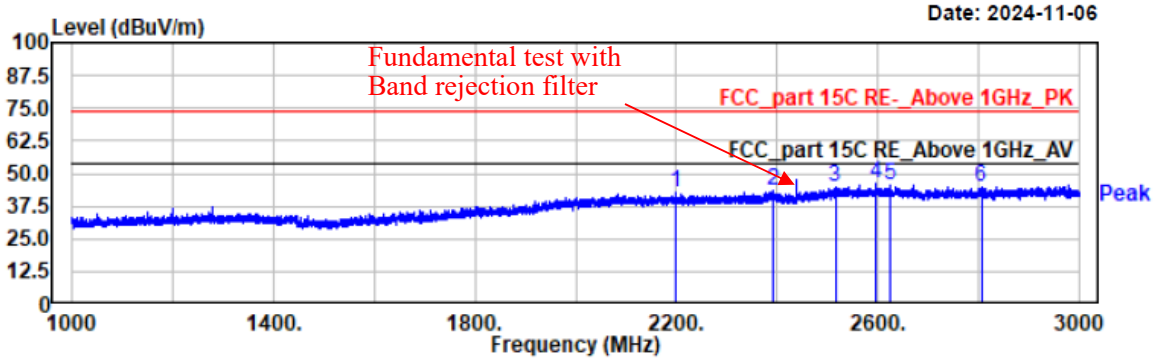
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2014.00	49.01	-6.53	42.48	74.00	31.52	Horizontal	Peak
2323.80	49.01	-6.10	42.91	74.00	31.09	Horizontal	Peak
2458.00	49.02	-4.96	44.06	74.00	29.94	Horizontal	Peak
2540.80	47.64	-3.59	44.05	74.00	29.95	Horizontal	Peak
2854.00	49.19	-4.53	44.66	74.00	29.34	Horizontal	Peak
2955.80	49.42	-4.18	45.24	74.00	28.76	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11b 2437MHz
EUT Model: PH81
Test distance: 3m

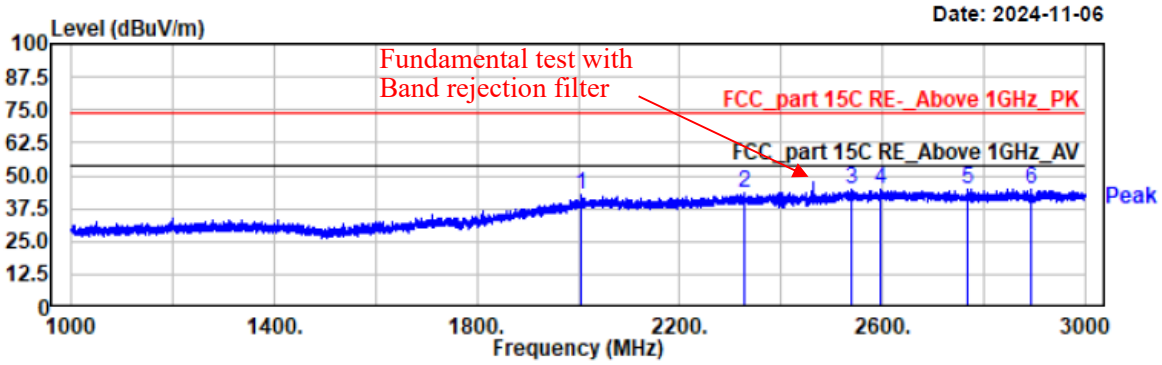
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2199.40	48.72	-6.26	42.46	74.00	31.54	vertical	Peak
2391.20	48.55	-5.30	43.25	74.00	30.75	vertical	Peak
2515.60	48.90	-3.93	44.97	74.00	29.03	vertical	Peak
2596.80	49.20	-3.31	45.89	74.00	28.11	vertical	Peak
2626.00	49.17	-3.33	45.84	74.00	28.16	vertical	Peak
2805.60	49.64	-4.68	44.96	74.00	29.04	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11b 2462MHz
EUT Model: PH81
Test distance: 3m

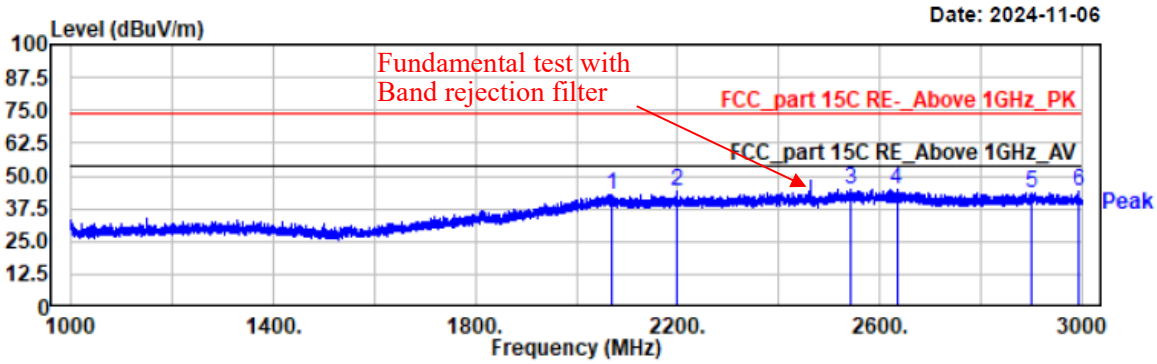
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2005.00	49.38	-6.68	42.70	74.00	31.30	Horizontal	Peak
2326.20	49.33	-6.08	43.25	74.00	30.75	Horizontal	Peak
2538.40	48.12	-3.62	44.50	74.00	29.50	Horizontal	Peak
2595.40	48.18	-3.31	44.87	74.00	29.13	Horizontal	Peak
2769.60	49.83	-4.77	45.06	74.00	28.94	Horizontal	Peak
2895.00	49.54	-4.40	45.14	74.00	28.86	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11b 2462MHz
EUT Model: PH81
Test distance: 3m

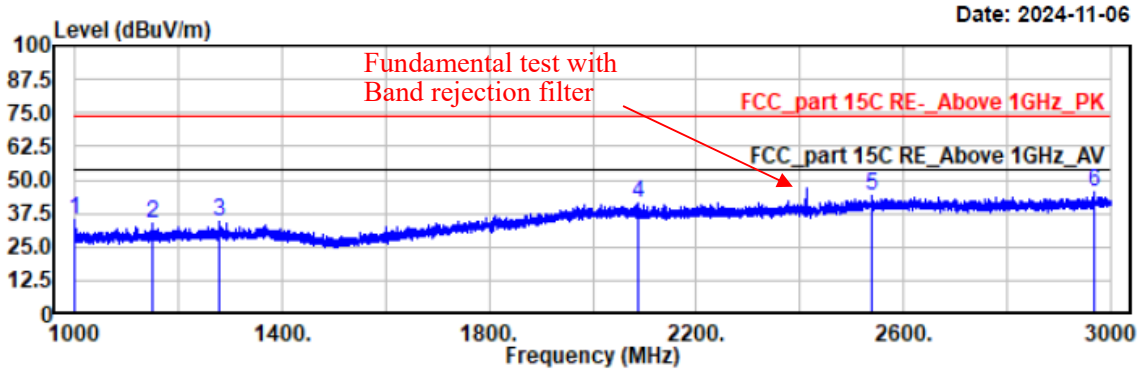
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2068.40	48.84	-6.25	42.59	74.00	31.41	vertical	Peak
2197.80	50.11	-6.27	43.84	74.00	30.16	vertical	Peak
2543.80	48.54	-3.56	44.98	74.00	29.02	vertical	Peak
2633.80	48.00	-3.35	44.65	74.00	29.35	vertical	Peak
2899.80	47.99	-4.39	43.60	74.00	30.40	vertical	Peak
2992.80	47.87	-4.04	43.83	74.00	30.17	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11g 2412MHz
EUT Model: PH81
Test distance: 3m

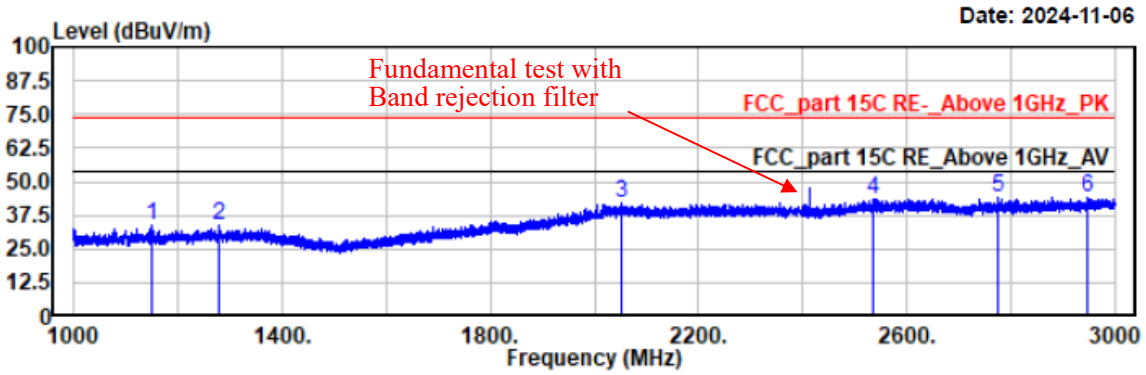
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1000.00	52.27	-17.24	35.03	74.00	38.97	Horizontal	Peak
1149.60	49.85	-16.39	33.46	74.00	40.54	Horizontal	Peak
1280.40	49.83	-15.50	34.33	74.00	39.67	Horizontal	Peak
2086.60	47.79	-6.53	41.26	74.00	32.74	Horizontal	Peak
2539.60	47.92	-3.61	44.31	74.00	29.69	Horizontal	Peak
2966.80	49.77	-4.14	45.63	74.00	28.37	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11g 2412MHz
EUT Model: PH81
Test distance: 3m

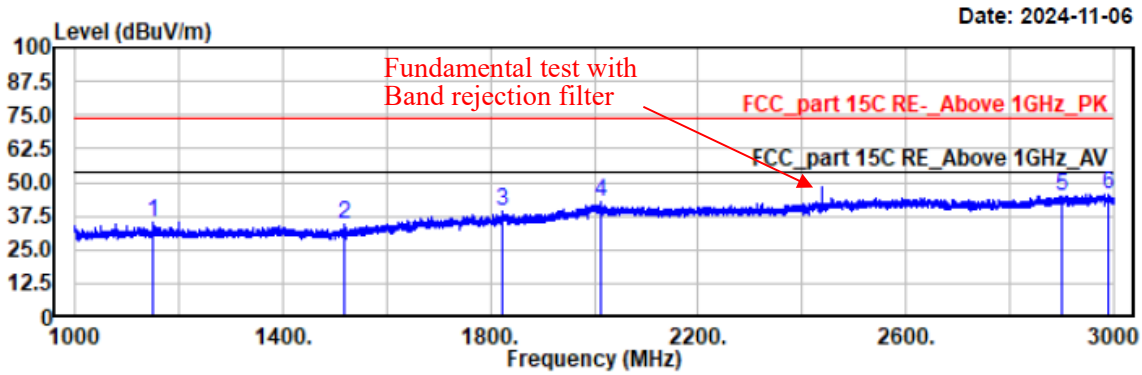
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1150.00	50.19	-16.39	33.80	74.00	40.20	vertical	Peak
1280.00	49.45	-15.51	33.94	74.00	40.06	vertical	Peak
2052.80	48.05	-6.02	42.03	74.00	31.97	vertical	Peak
2537.00	47.43	-3.64	43.79	74.00	30.21	vertical	Peak
2774.00	48.79	-4.76	44.03	74.00	29.97	vertical	Peak
2947.60	48.69	-4.22	44.47	74.00	29.53	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11g 2437MHz
EUT Model: PH81
Test distance: 3m

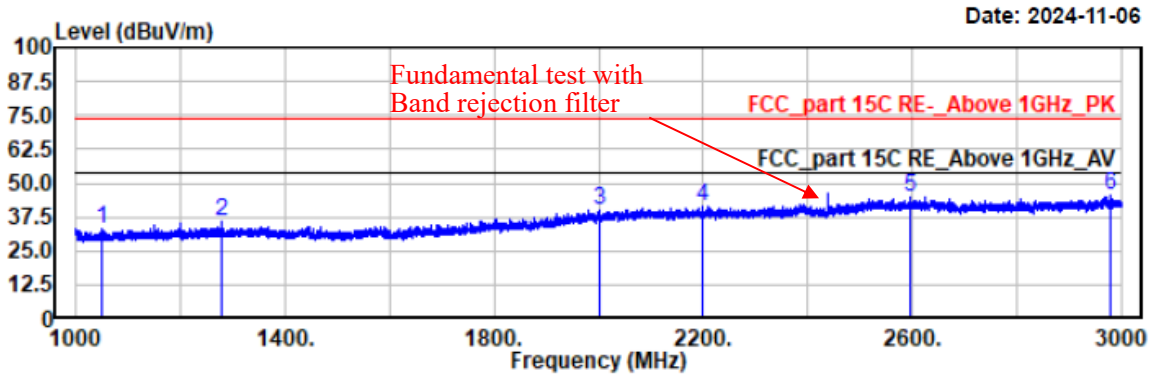
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1149.60	51.41	-16.39	35.02	74.00	38.98	Horizontal	Peak
1520.20	52.60	-18.22	34.38	74.00	39.62	Horizontal	Peak
1822.40	50.60	-11.45	39.15	74.00	34.85	Horizontal	Peak
2013.00	49.11	-6.55	42.56	74.00	31.44	Horizontal	Peak
2900.80	49.21	-4.39	44.82	74.00	29.18	Horizontal	Peak
2991.00	49.54	-4.05	45.49	74.00	28.51	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11g 2437MHz
EUT Model: PH81
Test distance: 3m

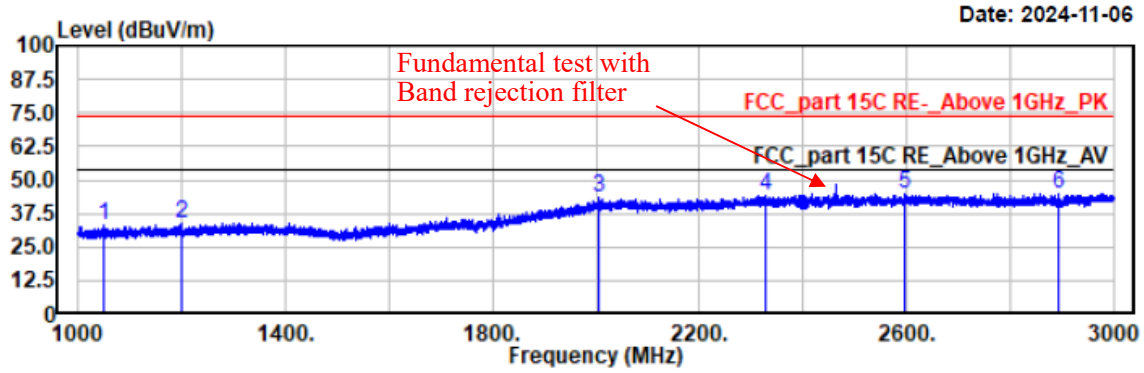
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1050.20	50.26	-17.04	33.22	74.00	40.78	vertical	Peak
1279.60	51.52	-15.51	36.01	74.00	37.99	vertical	Peak
2001.60	46.58	-6.73	39.85	74.00	34.15	vertical	Peak
2199.40	47.72	-6.26	41.46	74.00	32.54	vertical	Peak
2596.80	48.20	-3.31	44.89	74.00	29.11	vertical	Peak
2978.80	49.43	-4.09	45.34	74.00	28.66	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11g 2462MHz
EUT Model: PH81
Test distance: 3m

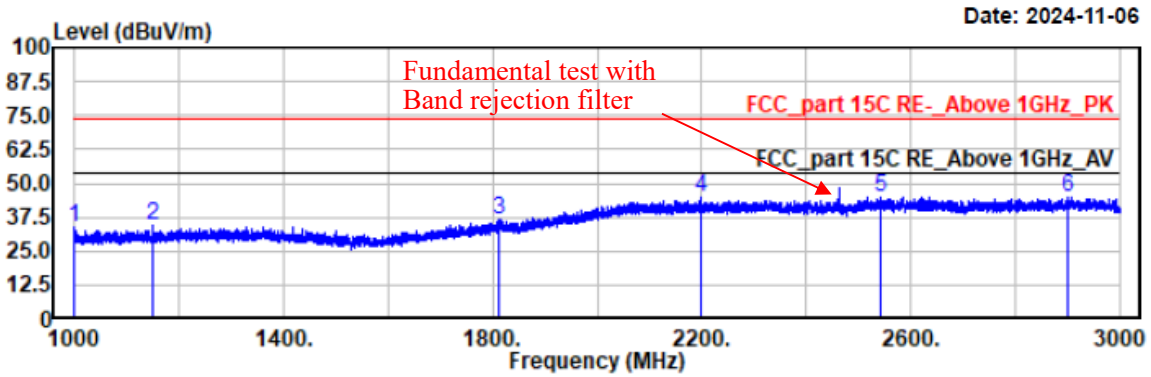
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1049.80	50.17	-17.04	33.13	74.00	40.87	Horizontal	Peak
1200.40	50.14	-16.05	34.09	74.00	39.91	Horizontal	Peak
2005.00	50.38	-6.68	43.70	74.00	30.30	Horizontal	Peak
2326.20	50.33	-6.08	44.25	74.00	29.75	Horizontal	Peak
2595.40	48.18	-3.31	44.87	74.00	29.13	Horizontal	Peak
2895.00	49.54	-4.40	45.14	74.00	28.86	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11g 2462MHz
EUT Model: PH81
Test distance: 3m

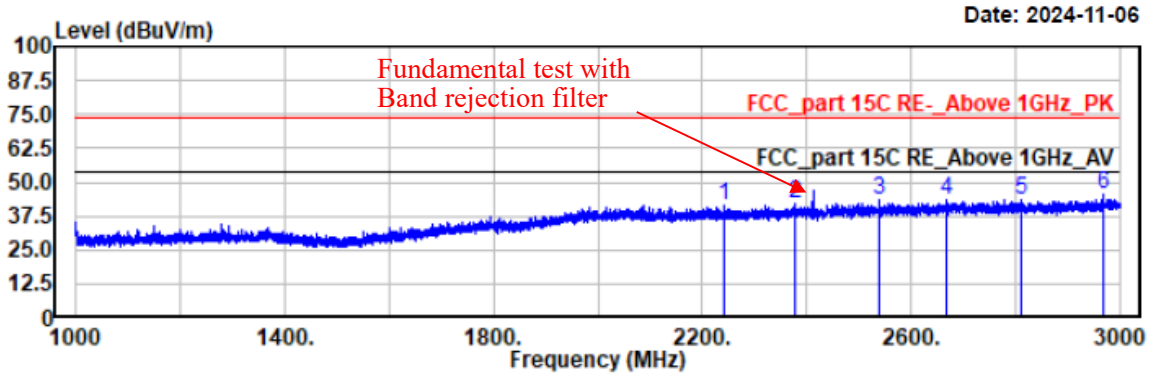
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1000.20	51.01	-17.24	33.77	74.00	40.23	vertical	Peak
1150.00	50.93	-16.39	34.54	74.00	39.46	vertical	Peak
1811.80	48.33	-11.50	36.83	74.00	37.17	vertical	Peak
2197.80	51.11	-6.27	44.84	74.00	29.16	vertical	Peak
2543.80	48.54	-3.56	44.98	74.00	29.02	vertical	Peak
2899.80	48.99	-4.39	44.60	74.00	29.40	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n20 2412MHz
EUT Model: PH81
Test distance: 3m

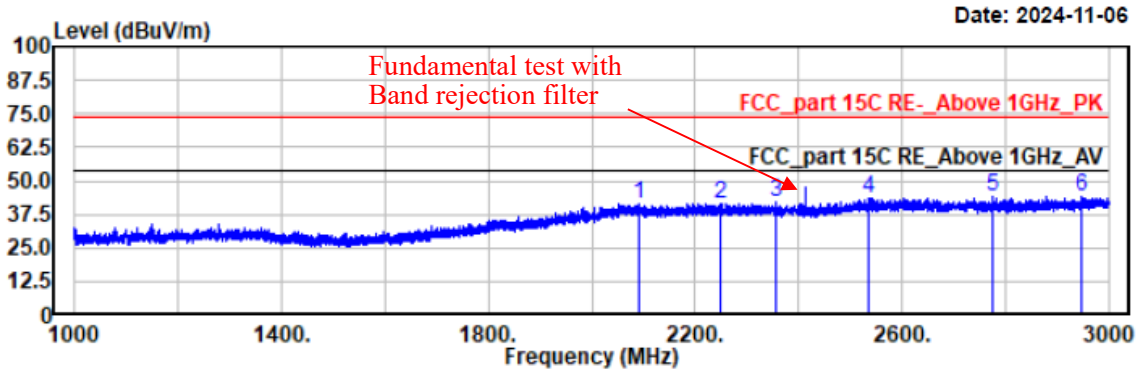
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2242.40	47.44	-6.25	41.19	74.00	32.81	Horizontal	Peak
2377.80	47.55	-5.49	42.06	74.00	31.94	Horizontal	Peak
2539.60	46.92	-3.61	43.31	74.00	30.69	Horizontal	Peak
2667.80	47.04	-3.82	43.22	74.00	30.78	Horizontal	Peak
2809.80	47.84	-4.67	43.17	74.00	30.83	Horizontal	Peak
2966.80	49.77	-4.14	45.63	74.00	28.37	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n20 2412MHz
EUT Model: PH81
Test distance: 3m

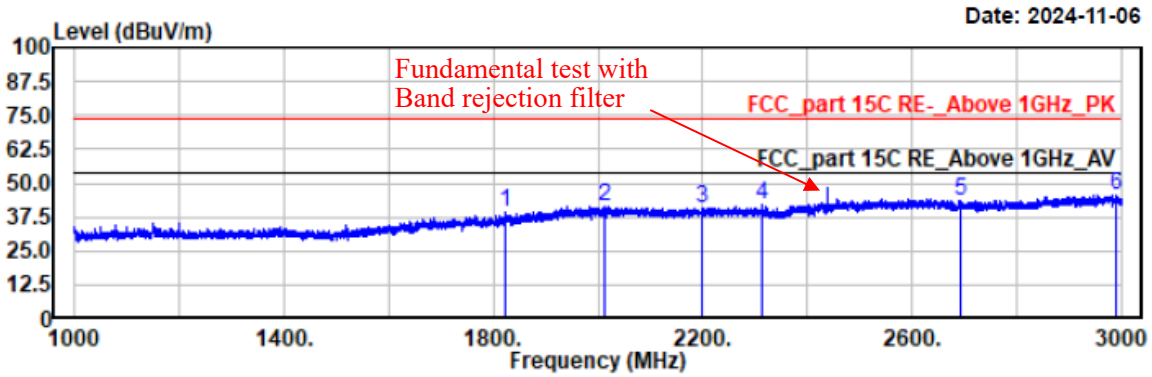
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2090.00	47.93	-6.57	41.36	74.00	32.64	vertical	Peak
2248.40	47.76	-6.23	41.53	74.00	32.47	vertical	Peak
2357.80	47.86	-5.75	42.11	74.00	31.89	vertical	Peak
2537.00	47.43	-3.64	43.79	74.00	30.21	vertical	Peak
2774.00	48.79	-4.76	44.03	74.00	29.97	vertical	Peak
2947.60	48.69	-4.22	44.47	74.00	29.53	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n20 2437MHz
EUT Model: PH81
Test distance: 3m

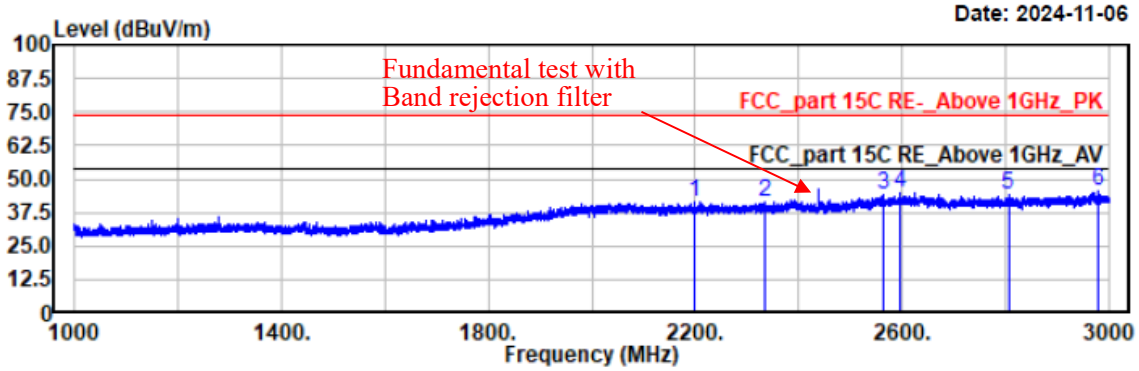
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1822.40	50.60	-11.45	39.15	74.00	34.85	Horizontal	Peak
2013.00	48.11	-6.55	41.56	74.00	32.44	Horizontal	Peak
2200.00	47.26	-6.25	41.01	74.00	32.99	Horizontal	Peak
2313.40	48.04	-6.20	41.84	74.00	32.16	Horizontal	Peak
2691.80	48.14	-4.44	43.70	74.00	30.30	Horizontal	Peak
2991.00	49.54	-4.05	45.49	74.00	28.51	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n20 2437MHz
EUT Model: PH81
Test distance: 3m

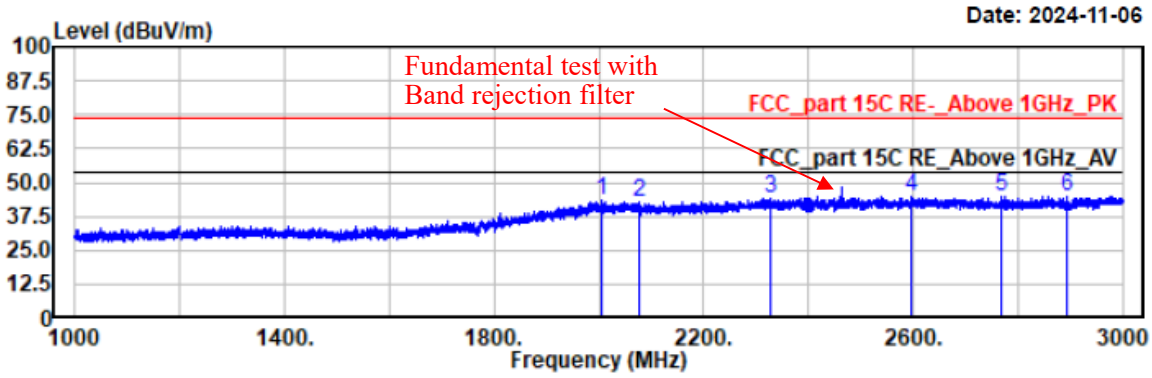
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2199.40	47.72	-6.26	41.46	74.00	32.54	vertical	Peak
2333.40	47.62	-6.02	41.60	74.00	32.40	vertical	Peak
2565.00	47.81	-3.42	44.39	74.00	29.61	vertical	Peak
2596.80	48.20	-3.31	44.89	74.00	29.11	vertical	Peak
2805.60	48.64	-4.68	43.96	74.00	30.04	vertical	Peak
2978.80	49.43	-4.09	45.34	74.00	28.66	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n20 2462MHz
EUT Model: PH81
Test distance: 3m

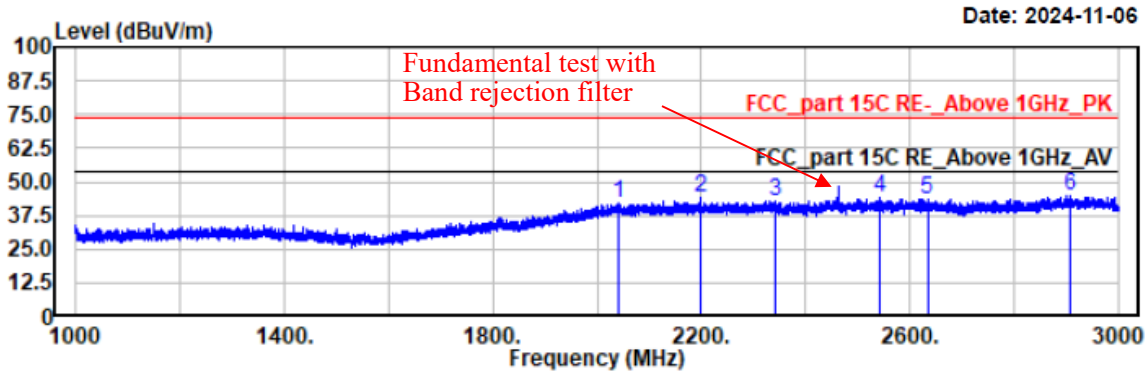
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2005.00	50.38	-6.68	43.70	74.00	30.30	Horizontal	Peak
2075.40	49.14	-6.37	42.77	74.00	31.23	Horizontal	Peak
2326.20	50.33	-6.08	44.25	74.00	29.75	Horizontal	Peak
2595.40	48.18	-3.31	44.87	74.00	29.13	Horizontal	Peak
2769.60	49.83	-4.77	45.06	74.00	28.94	Horizontal	Peak
2895.00	49.54	-4.40	45.14	74.00	28.86	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n20 2462MHz
EUT Model: PH81
Test distance: 3m

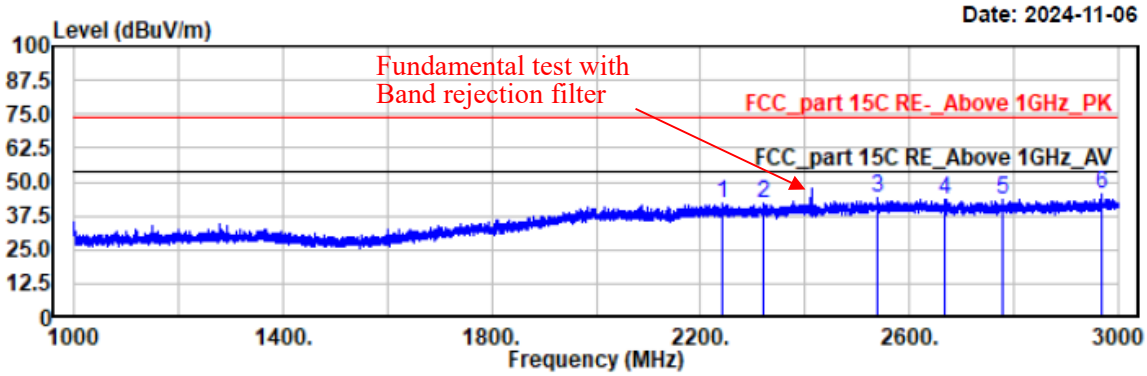
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2042.20	48.11	-6.10	42.01	74.00	31.99	vertical	Peak
2197.80	50.11	-6.27	43.84	74.00	30.16	vertical	Peak
2341.00	48.98	-5.94	43.04	74.00	30.96	vertical	Peak
2543.80	47.54	-3.56	43.98	74.00	30.02	vertical	Peak
2633.80	47.00	-3.35	43.65	74.00	30.35	vertical	Peak
2907.40	48.91	-4.37	44.54	74.00	29.46	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n40 2422MHz
EUT Model: PH81
Test distance: 3m

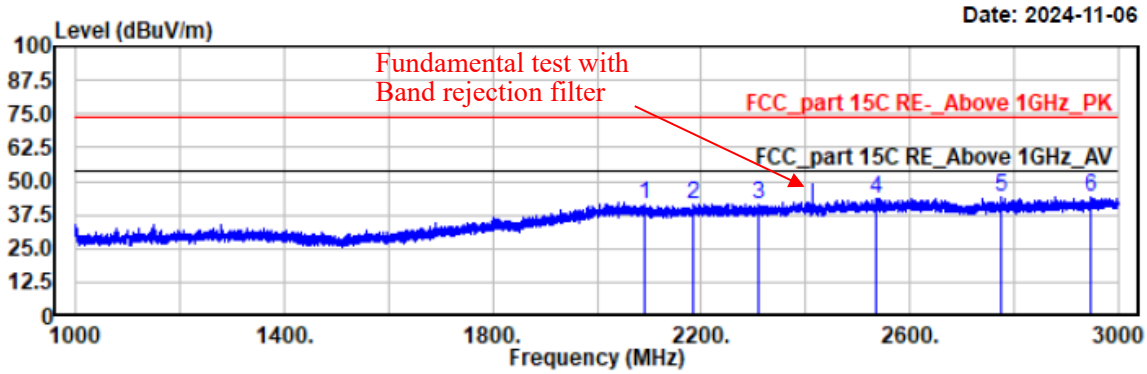
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2242.40	48.44	-6.25	42.19	74.00	31.81	Horizontal	Peak
2319.80	48.38	-6.14	42.24	74.00	31.76	Horizontal	Peak
2539.60	47.92	-3.61	44.31	74.00	29.69	Horizontal	Peak
2667.80	47.04	-3.82	43.22	74.00	30.78	Horizontal	Peak
2779.40	47.97	-4.74	43.23	74.00	30.77	Horizontal	Peak
2966.80	49.77	-4.14	45.63	74.00	28.37	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n40 2422MHz
EUT Model: PH81
Test distance: 3m

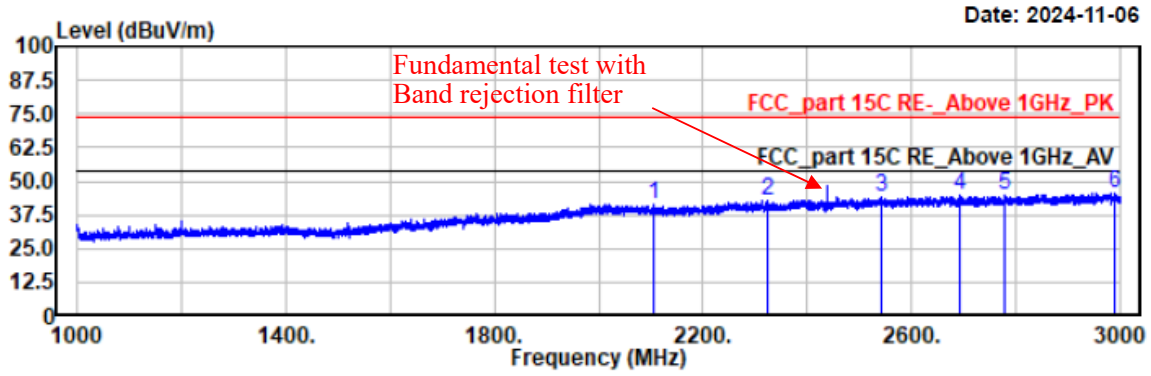
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2090.00	47.93	-6.57	41.36	74.00	32.64	vertical	Peak
2183.40	47.83	-6.42	41.41	74.00	32.59	vertical	Peak
2309.20	47.91	-6.25	41.66	74.00	32.34	vertical	Peak
2537.00	47.43	-3.64	43.79	74.00	30.21	vertical	Peak
2774.00	48.79	-4.76	44.03	74.00	29.97	vertical	Peak
2947.60	48.69	-4.22	44.47	74.00	29.53	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n40 2437MHz
EUT Model: PH81
Test distance: 3m

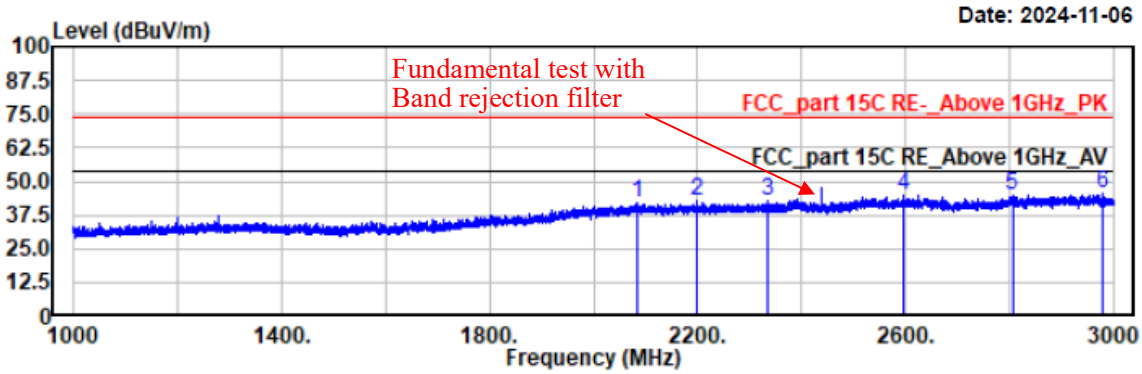
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2106.80	48.13	-6.73	41.40	74.00	32.60	Horizontal	Peak
2323.80	49.01	-6.10	42.91	74.00	31.09	Horizontal	Peak
2540.80	47.64	-3.59	44.05	74.00	29.95	Horizontal	Peak
2691.80	49.14	-4.44	44.70	74.00	29.30	Horizontal	Peak
2780.20	49.47	-4.74	44.73	74.00	29.27	Horizontal	Peak
2991.00	49.54	-4.05	45.49	74.00	28.51	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n40 2437MHz
EUT Model: PH81
Test distance: 3m

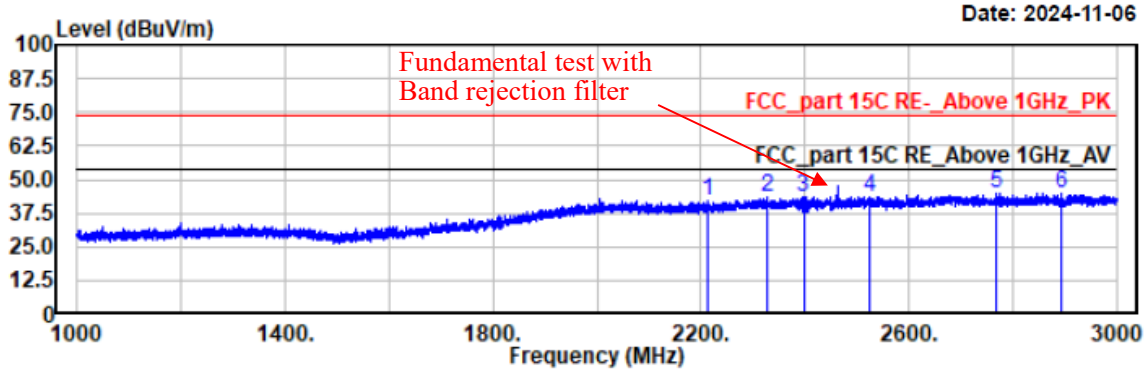
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2085.00	48.48	-6.50	41.98	74.00	32.02	vertical	Peak
2199.40	48.72	-6.26	42.46	74.00	31.54	vertical	Peak
2333.40	48.62	-6.02	42.60	74.00	31.40	vertical	Peak
2596.80	48.20	-3.31	44.89	74.00	29.11	vertical	Peak
2805.60	49.64	-4.68	44.96	74.00	29.04	vertical	Peak
2978.80	49.43	-4.09	45.34	74.00	28.66	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n40 2452MHz
EUT Model: PH81
Test distance: 3m

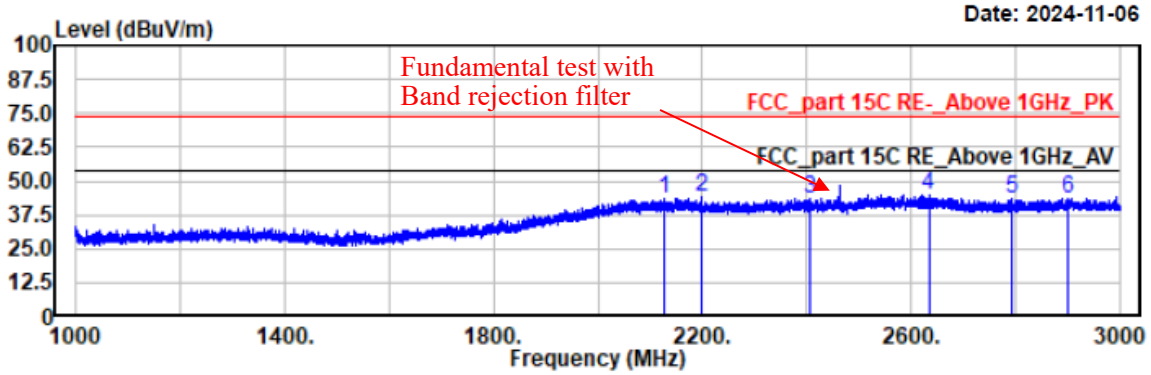
Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2211.40	48.23	-6.26	41.97	74.00	32.03	Horizontal	Peak
2326.20	49.33	-6.08	43.25	74.00	30.75	Horizontal	Peak
2397.40	48.53	-5.23	43.30	74.00	30.70	Horizontal	Peak
2523.60	47.46	-3.83	43.63	74.00	30.37	Horizontal	Peak
2769.60	49.83	-4.77	45.06	74.00	28.94	Horizontal	Peak
2895.00	49.54	-4.40	45.14	74.00	28.86	Horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 802.11n40 2452MHz
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 23.5℃/54%/100.5kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



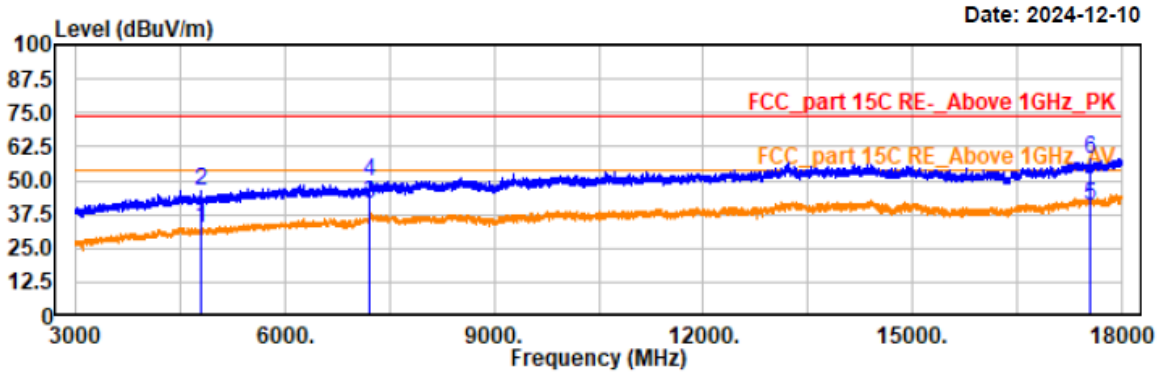
Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2125.80	50.22	-6.73	43.49	74.00	30.51	vertical	Peak
2197.80	50.11	-6.27	43.84	74.00	30.16	vertical	Peak
2408.00	48.70	-5.18	43.52	74.00	30.48	vertical	Peak
2633.80	48.00	-3.35	44.65	74.00	29.35	vertical	Peak
2793.00	47.91	-4.71	43.20	74.00	30.80	vertical	Peak
2899.80	47.99	-4.39	43.60	74.00	30.40	vertical	Peak

5) 3GHz~18GHz

For BLE 1Mbps:

Project No.: 2407T76694E-RF
Test Mode: BLE 1M 2402
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

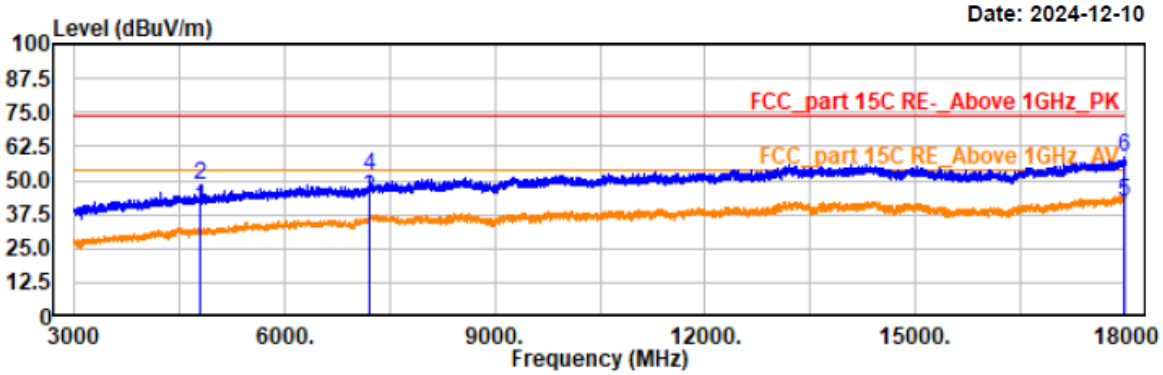


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4804.00	37.18	-4.45	32.73	54.00	21.27	horizontal	Average
4804.00	50.95	-4.45	46.50	74.00	27.50	horizontal	Peak
7206.00	42.81	-1.73	41.08	54.00	12.92	horizontal	Average
7206.00	51.64	-1.73	49.91	74.00	24.09	horizontal	Peak
17554.50	34.33	6.47	40.80	54.00	13.20	horizontal	Average
17554.50	51.32	6.47	57.79	74.00	16.21	horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 1M 2402
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

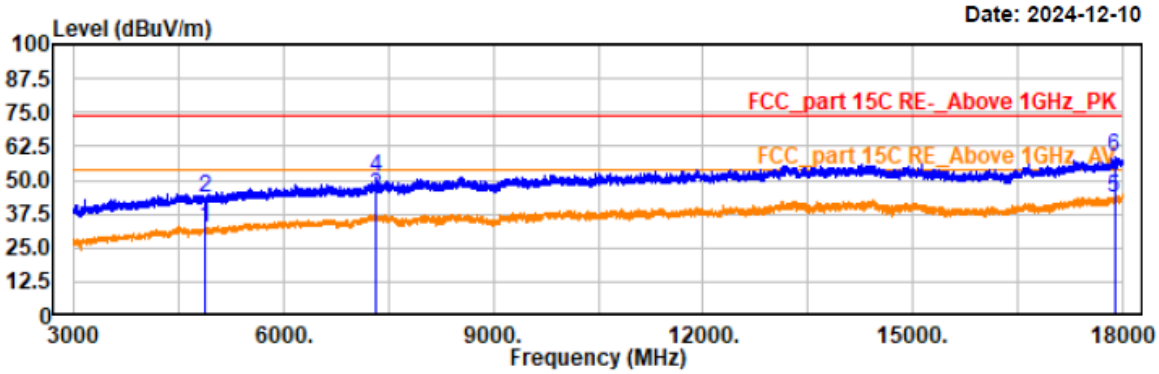


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4803.00	44.32	-4.45	39.87	54.00	14.13	vertical	Average
4804.50	52.41	-4.45	47.96	74.00	26.04	vertical	Peak
7206.00	45.10	-1.73	43.37	54.00	10.63	vertical	Average
7206.00	53.78	-1.73	52.05	74.00	21.95	vertical	Peak
17976.00	34.41	7.71	42.12	54.00	11.88	vertical	Average
17976.00	50.69	7.71	58.40	74.00	15.60	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 1M 2440
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

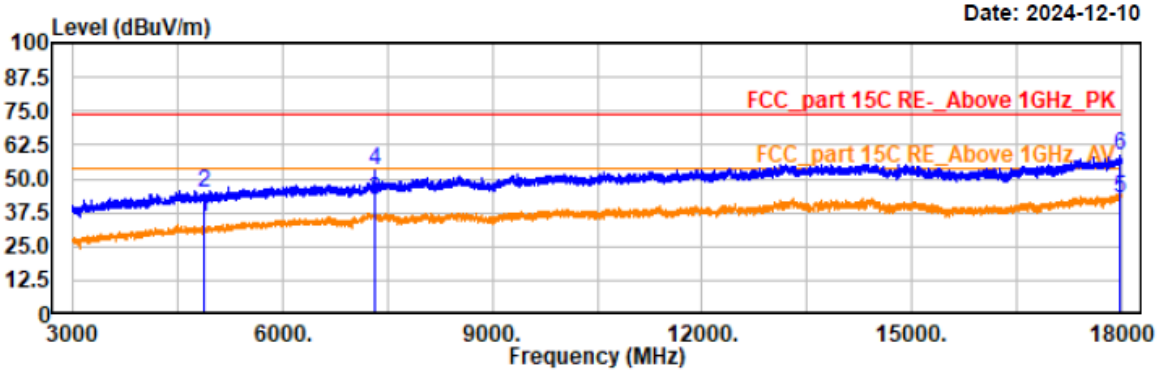


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4879.50	36.53	-4.25	32.28	54.00	21.72	horizontal	Average
4879.50	47.56	-4.25	43.31	74.00	30.69	horizontal	Peak
7320.00	45.89	-1.61	44.28	54.00	9.72	horizontal	Average
7320.00	52.90	-1.61	51.29	74.00	22.71	horizontal	Peak
17884.50	35.75	7.53	43.28	54.00	10.72	horizontal	Average
17884.50	51.03	7.53	58.56	74.00	15.44	horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 1M 2440
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

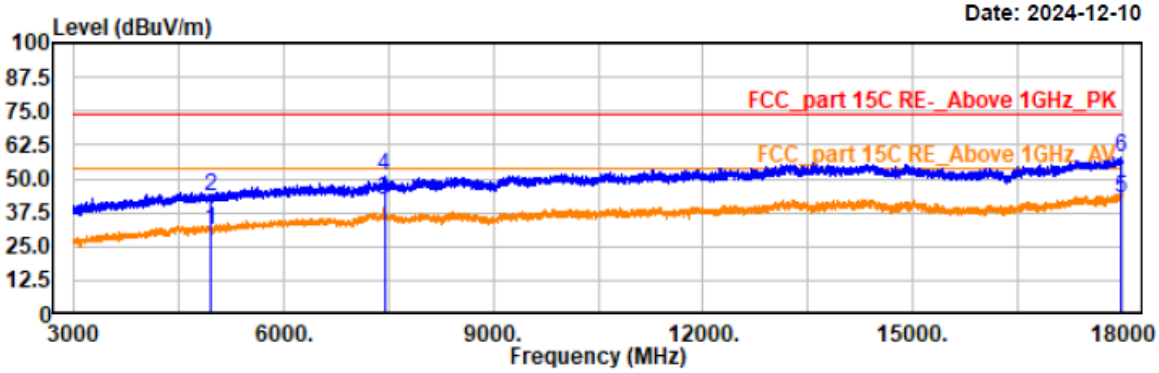


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4879.50	40.00	-4.25	35.75	54.00	18.25	vertical	Average
4879.50	48.99	-4.25	44.74	74.00	29.26	vertical	Peak
7320.00	43.40	-1.61	41.79	54.00	12.21	vertical	Average
7320.00	54.48	-1.61	52.87	74.00	21.13	vertical	Peak
17986.50	34.81	7.72	42.53	54.00	11.47	vertical	Average
17986.50	50.84	7.72	58.56	74.00	15.44	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 1M 2480
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

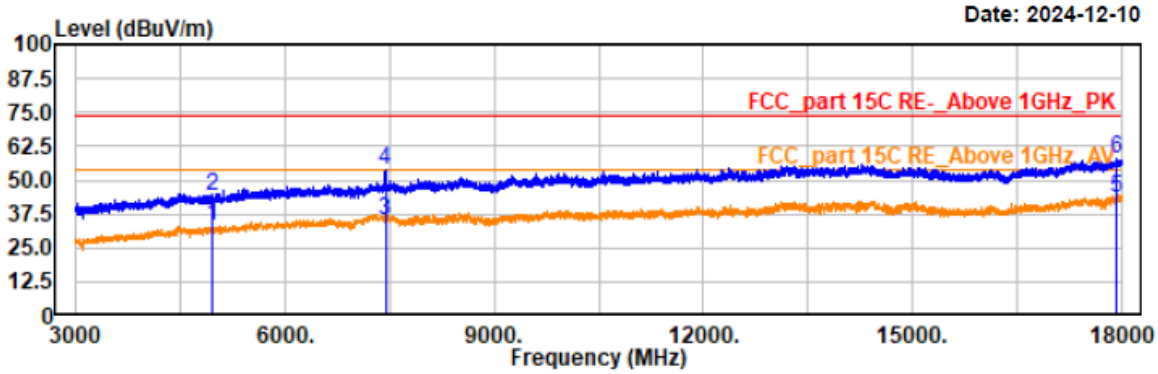


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.50	35.06	-4.01	31.05	54.00	22.95	horizontal	Average
4960.50	47.46	-4.01	43.45	74.00	30.55	horizontal	Peak
7440.00	43.87	-1.59	42.28	54.00	11.72	horizontal	Average
7440.00	52.43	-1.59	50.84	74.00	23.16	horizontal	Peak
17976.00	34.99	7.71	42.70	54.00	11.30	horizontal	Average
17976.00	50.15	7.71	57.86	74.00	16.14	horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 1M 2480
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



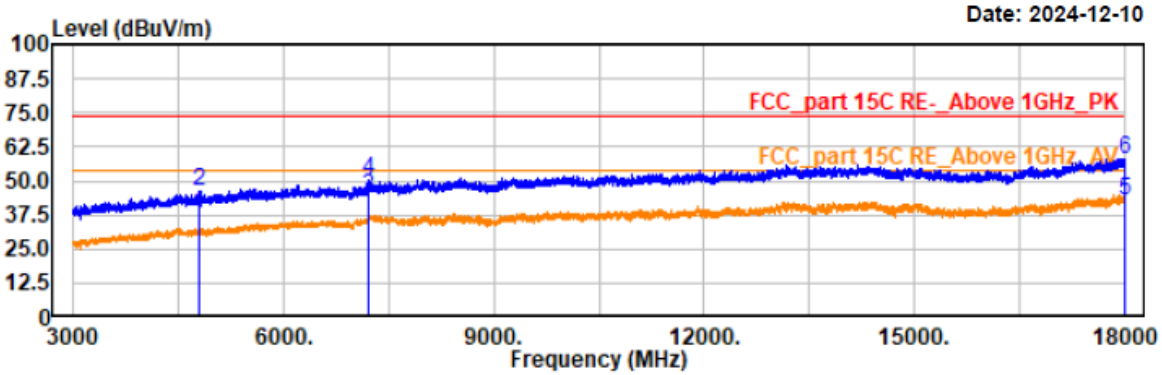
Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.50	36.80	-4.01	32.79	54.00	21.21	vertical	Average
4960.50	48.04	-4.01	44.03	74.00	29.97	vertical	Peak
7440.00	37.00	-1.59	35.41	54.00	18.59	vertical	Average
7440.00	55.21	-1.59	53.62	74.00	20.38	vertical	Peak
17932.50	36.06	7.63	43.69	54.00	10.31	vertical	Average
17932.50	50.18	7.63	57.81	74.00	16.19	vertical	Peak

For BLE 2Mbps:

Project No.: 2407T76694E-RF
Test Mode: BLE 2M 2402
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

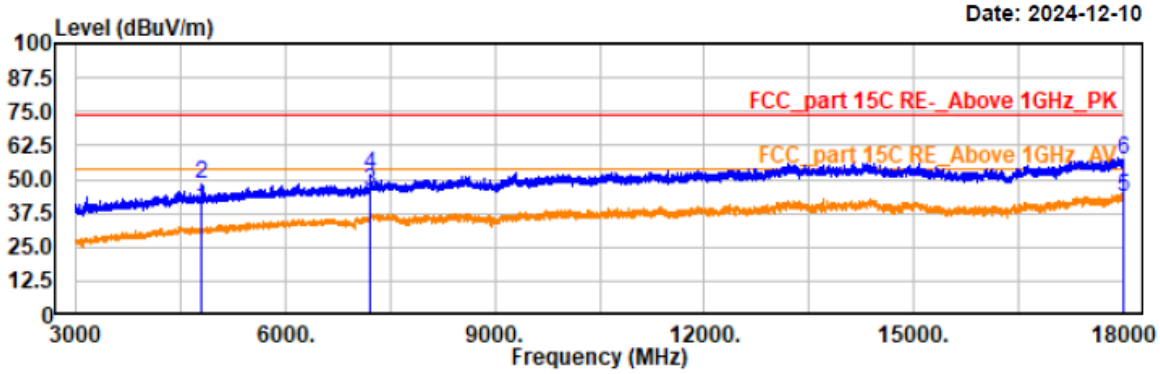


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4803.00	42.71	-4.45	38.26	54.00	15.74	horizontal	Average
4803.00	50.43	-4.45	45.98	74.00	28.02	horizontal	Peak
7206.00	45.64	-1.73	43.91	54.00	10.09	horizontal	Average
7206.00	51.85	-1.73	50.12	74.00	23.88	horizontal	Peak
17994.00	34.76	7.72	42.48	54.00	11.52	horizontal	Average
17994.00	50.17	7.72	57.89	74.00	16.11	horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 2M 2402
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

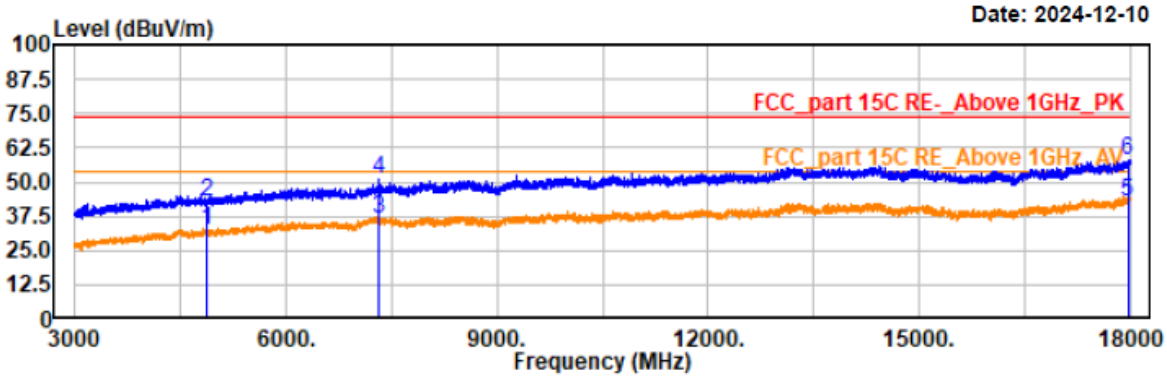


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4803.00	44.10	-4.45	39.65	54.00	14.35	vertical	Average
4804.50	52.88	-4.45	48.43	74.00	25.57	vertical	Peak
7206.00	47.01	-1.73	45.28	54.00	8.72	vertical	Average
7206.00	53.57	-1.73	51.84	74.00	22.16	vertical	Peak
17998.50	35.88	7.74	43.62	54.00	10.38	vertical	Average
17998.50	49.66	7.74	57.40	74.00	16.60	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 2M 2440
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

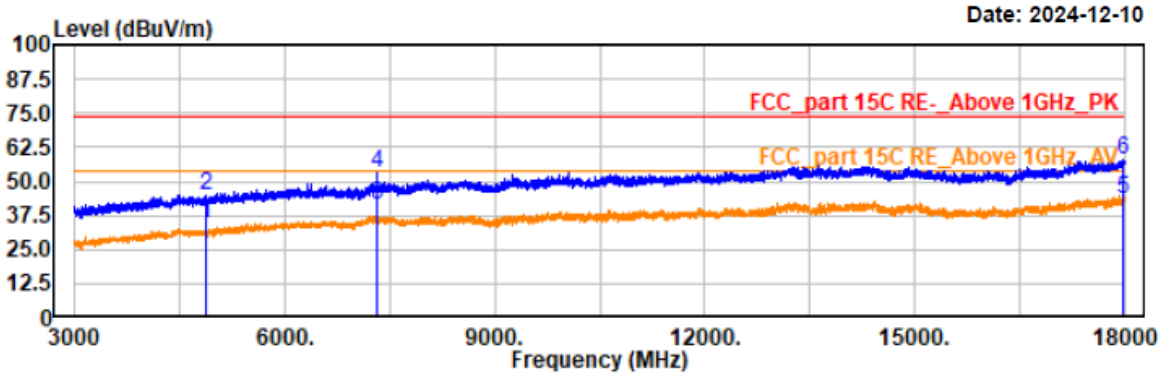


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4879.50	36.61	-4.25	32.36	54.00	21.64	horizontal	Average
4879.50	46.96	-4.25	42.71	74.00	31.29	horizontal	Peak
7320.00	38.22	-1.61	36.61	54.00	17.39	horizontal	Average
7320.00	52.52	-1.61	50.91	74.00	23.09	horizontal	Peak
17965.50	34.79	7.69	42.48	54.00	11.52	horizontal	Average
17965.50	50.38	7.69	58.07	74.00	15.93	horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 2M 2440
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

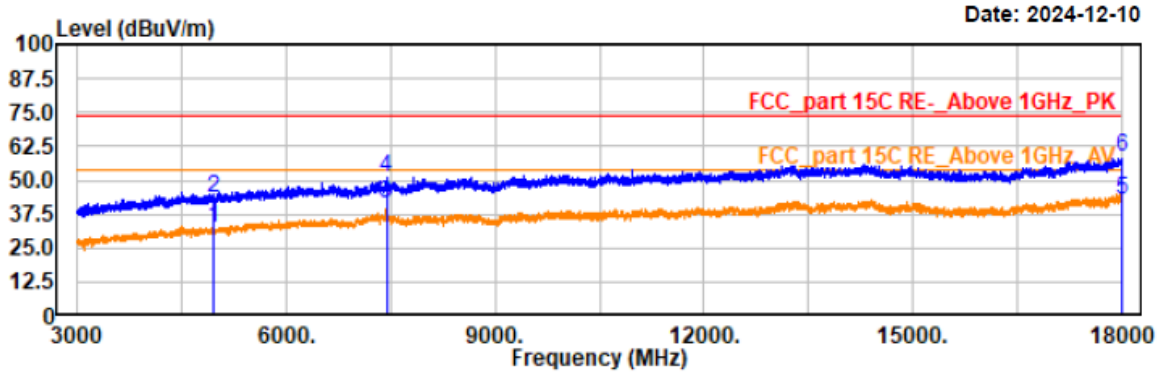


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4880.00	38.58	-4.25	34.33	54.00	19.67	vertical	Average
4880.00	48.92	-4.25	44.67	74.00	29.33	vertical	Peak
7320.00	42.69	-1.61	41.08	54.00	12.92	vertical	Average
7320.00	54.76	-1.61	53.15	74.00	20.85	vertical	Peak
17986.50	35.82	7.72	43.54	54.00	10.46	vertical	Average
17986.50	50.25	7.72	57.97	74.00	16.03	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 2M 2480
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

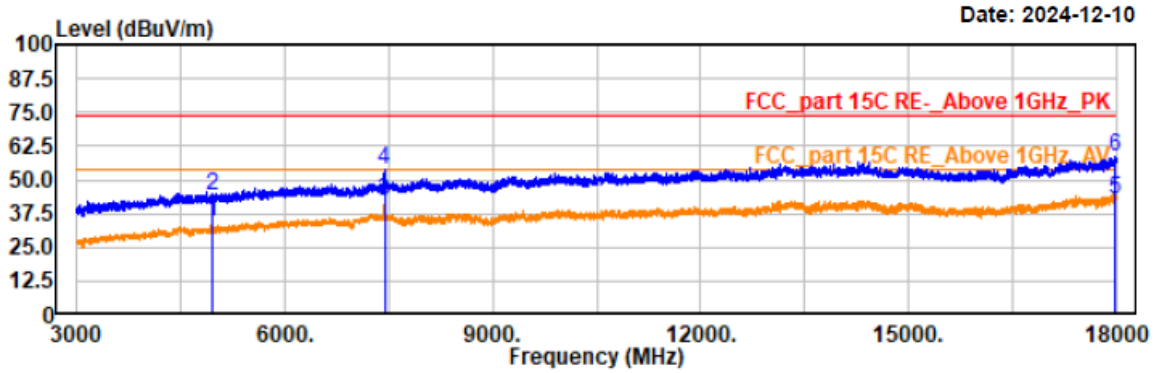


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4960.50	36.45	-4.01	32.44	54.00	21.56	horizontal	Average
4960.50	47.40	-4.01	43.39	74.00	30.61	horizontal	Peak
7440.00	43.01	-1.59	41.42	54.00	12.58	horizontal	Average
7440.00	52.38	-1.59	50.79	74.00	23.21	horizontal	Peak
17998.00	35.07	7.74	42.81	54.00	11.19	horizontal	Average
17998.00	50.64	7.74	58.38	74.00	15.62	horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: BLE 2M 2480
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 21.3℃/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



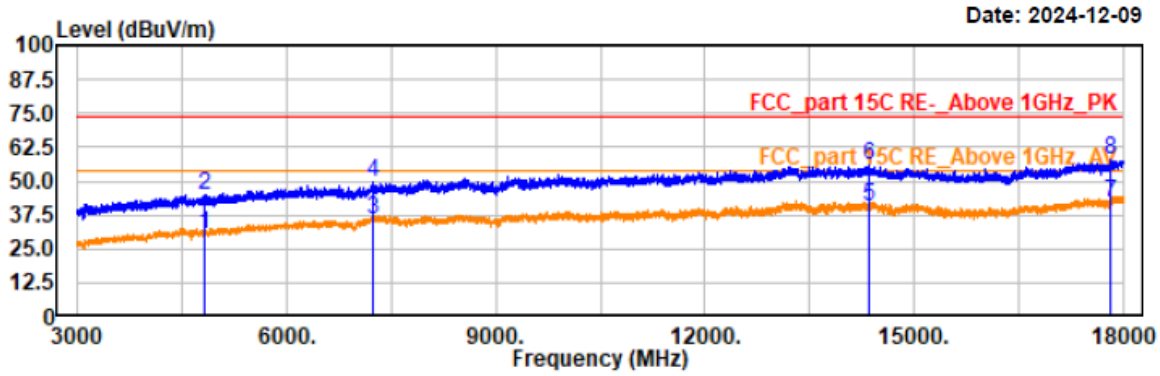
Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4960.50	38.53	-4.01	34.52	54.00	19.48	vertical	Average
4960.50	48.13	-4.01	44.12	74.00	29.88	vertical	Peak
7440.00	43.76	-1.59	42.17	54.00	11.83	vertical	Average
7440.00	55.50	-1.59	53.91	74.00	20.09	vertical	Peak
17989.50	35.37	7.72	43.09	54.00	10.91	vertical	Average
17989.50	50.95	7.72	58.67	74.00	15.33	vertical	Peak

For 2.4G WIFI:

Project No.: 2407T76694E-RF
Test Mode: 11b-2412
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 23.1℃/53%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

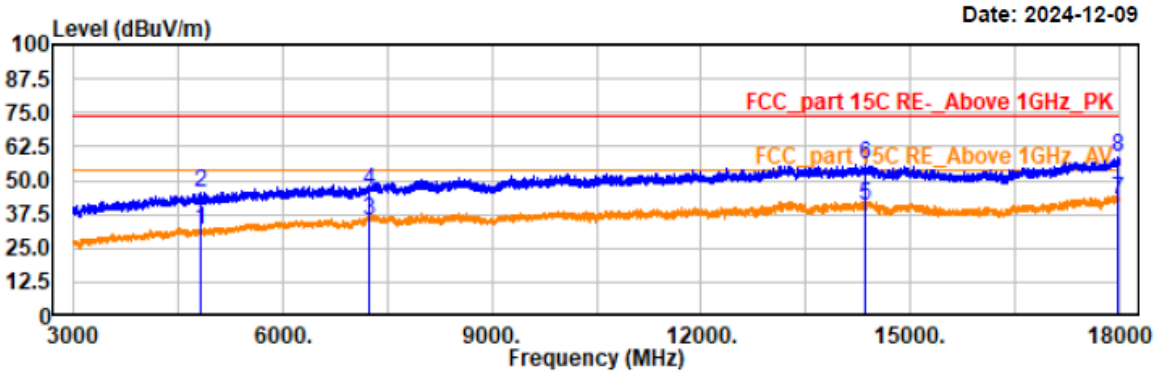


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4824.00	35.05	-4.39	30.66	54.00	23.34	horizontal	Average
4824.00	48.95	-4.39	44.56	74.00	29.44	horizontal	Peak
7236.00	37.35	-1.70	35.65	54.00	18.35	horizontal	Average
7236.00	51.39	-1.70	49.69	74.00	24.31	horizontal	Peak
14350.50	35.59	5.17	40.76	54.00	13.24	horizontal	Average
14350.50	50.40	5.17	55.57	74.00	18.43	horizontal	Peak
17824.50	35.02	7.32	42.34	54.00	11.66	horizontal	Average
17824.50	50.35	7.32	57.67	74.00	16.33	horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 11b-2412
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 23.1℃/53%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

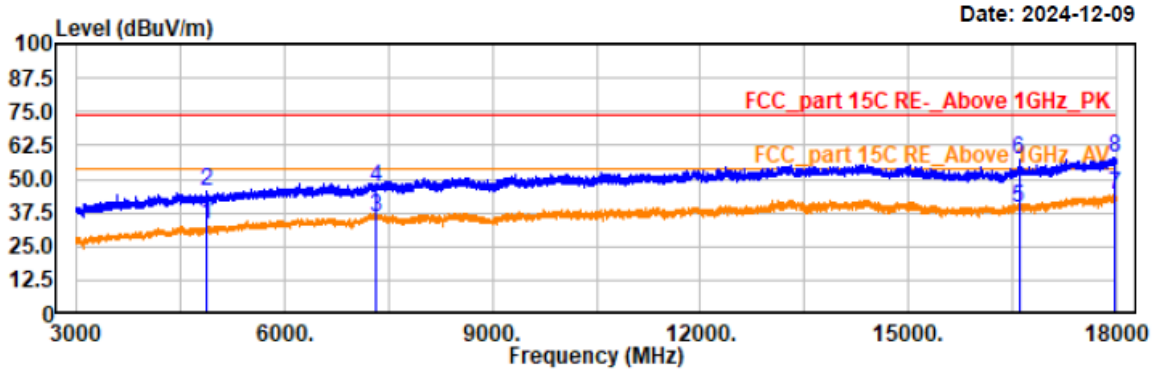


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4824.00	35.77	-4.39	31.38	54.00	22.62	vertical	Average
4824.00	50.14	-4.39	45.75	74.00	28.25	vertical	Peak
7236.00	37.19	-1.70	35.49	54.00	18.51	vertical	Average
7236.00	48.11	-1.70	46.41	74.00	27.59	vertical	Peak
14350.50	35.52	5.17	40.69	54.00	13.31	vertical	Average
14350.50	50.69	5.17	55.86	74.00	18.14	vertical	Peak
17980.50	34.81	7.71	42.52	54.00	11.48	vertical	Average
17980.50	51.00	7.71	58.71	74.00	15.29	vertical	Peak

Project No.: 2407T76694E-RF
Test Mode: 11b-2437
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 23.1℃/53%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

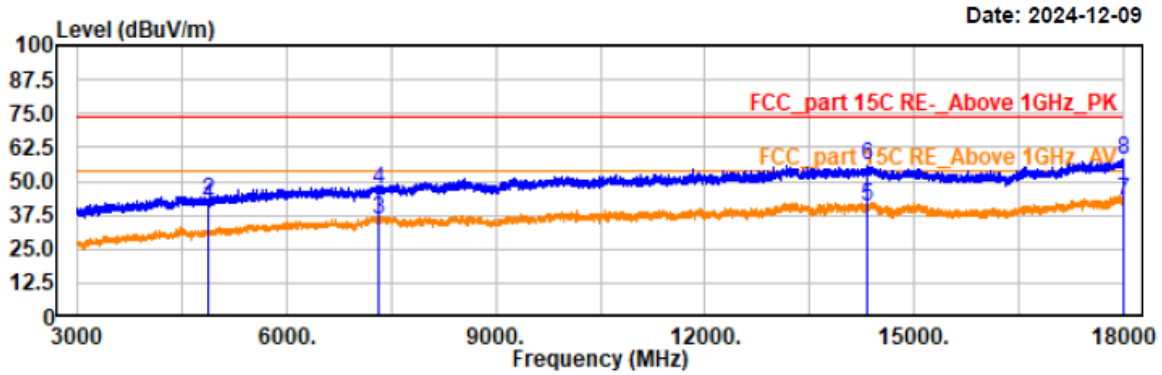


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4873.50	37.35	-4.26	33.09	54.00	20.91	horizontal	Average
4873.50	49.96	-4.26	45.70	74.00	28.30	horizontal	Peak
7311.00	37.56	-1.63	35.93	54.00	18.07	horizontal	Average
7311.00	48.41	-1.63	46.78	74.00	27.22	horizontal	Peak
16596.00	35.70	3.76	39.46	54.00	14.54	horizontal	Average
16596.00	53.32	3.76	57.08	74.00	16.92	horizontal	Peak
17985.00	36.26	7.72	43.98	54.00	10.02	horizontal	Average
17985.00	50.05	7.72	57.77	74.00	16.23	horizontal	Peak

Project No.: 2407T76694E-RF
Test Mode: 11b-2437
EUT Model: PH81
Test distance: 3m

Temp/Humi/ATM: 23.1℃/53%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4873.50	44.87	-4.26	40.61	54.00	13.39	vertical	Average
4873.50	46.90	-4.26	42.64	74.00	31.36	vertical	Peak
7311.00	37.80	-1.63	36.17	54.00	17.83	vertical	Average
7311.00	48.30	-1.63	46.67	74.00	27.33	vertical	Peak
14325.00	35.56	5.19	40.75	54.00	13.25	vertical	Average
14325.00	50.63	5.19	55.82	74.00	18.18	vertical	Peak
17995.50	35.17	7.74	42.91	54.00	11.09	vertical	Average
17995.50	50.34	7.74	58.08	74.00	15.92	vertical	Peak