FCC Test Report

Report No.:	2405A112470EC
Applicant:	Zhuhai Glory Technology Co., Ltd
Address:	8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China
Product Name:	Wi-Fi Doorbell Base Station
Product Model:	S1
Multiple Models:	N/A
Trade Mark:	N/A
FCC ID:	2BMPT-S1
Standards:	FCC CFR Title 47 Part 15C (§15.247)
Test Date:	2025-01-13 to 2025-02-24
Test Result:	Complied
Report Date:	2025-02-26

Reviewed by: Abel Chen — Abel Chen, Project Engineer

Approved by: Jacob Kong — Jacob Kong, Manager

Prepared by:

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Revision History

Version No.	Issued Date	Description
00	*2025-02-26*	*Original*

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1 General Information

1.1 Client Information

Applicant:	Zhuhai Glory Technology Co., Ltd
Address:	8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China
Manufacturer:	Zhuhai Glory Technology Co., Ltd
Address:	8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China

1.2 Product Description of EUT

The EUT is Wi-Fi Doorbell Base Station that contains 2.4G and 5G WLAN radios, this report covers the full testing of the 2.4G WLAN radio.

Sample Serial Number	2WLG-1 for CE test, 2WLG-2 for RE&RF conducted test (assigned by WATC)
Sample Received Date	2024-12-26
Sample Status	Good Condition
Frequency Range	Module 1: 2412MHz - 2462MHz(802.11b, g, n-HT20) Module 2: 2412MHz - 2462MHz(802.11b, g, n-HT20, ax-HE20) 2422MHz - 2452MHz(802.11n-HT40)
Maximum Conducted Peak Output Power	Module 1:24.83dBm Module 2:23.66dBm
Modulation Technology	Module 1: DSSS, OFDM Module 2: DSSS, OFDM, OFDMA
Antenna Gain#	Module 1: 2.42dBi Module 2: 2.42dBi
Spatial Streams#	Module 1: SISO (1TX, 1RX) Module 2: SISO (1TX, 1RX)
Power Supply	AC 100~240V
Adapter Information	N/A
Modification	Sample No Modification by the test lab
Note: the device installed two Wi-Fi modules, module 1 integrates RF chip RTL8731BU, module 2 integrates RF chip TR5330S, detail please refer the EUT photo, both the two module support 2.4G Wi-Fi.	

1.3 Antenna information

15.203 requirement:

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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Device Antenna information:	

The Wi-Fi antennas are integral antennas which cannot replace by end-user. Please see product internal photos for details.

1.4 Related Submittal(s)/Grant(s)

FCC Part 15, Subpart E, Equipment Class: NII, FCC ID: 2BMPT-S1

1.5 Measurement Uncertainty

Parameter		**Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))**
AC Power Lines Conducted Emissions		±3.14dB
Emissions, Radiated	Below 30MHz	±2.78dB
	Below 1GHz	±4.84dB
	Above 1GHz	±5.44dB
Emissions, Conducted		1.75dB
Conducted Power		0.74dB
Frequency Error		150Hz
Bandwidth		0.34%
Power Spectral Density		0.74dB

Note: *The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

1.6 Laboratory Location

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: qa@watc.com.cn

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

1.7 Test Methodology

FCC CFR 47 Part 2

FCC CFR 47 Part 15

KDB 558074 D01 15.247 Meas Guidance v05r02

ANSI C63.10-2013

Unless otherwise stated there are no any additions to, deviations, or exclusions from the method

2 Description of Measurement

2.1 Test Configuration

Operating channels:					
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	/	/
According to ANSI C63.10-2013 chapter 5.6.1 Table 11 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:					
802.11b, 802.11g, 802.11n-HT20, ax-HE20					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2412	6	2437	11	2462
802.11n-HT40					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
3	2422	6	2437	9	2452

Test Mode: (for module 1)				
Transmitting mode:	Keep the EUT in continuous transmitting with modulation			
Exercise software[#]:	SecureCRT			
Mode	**Worst-case Data rate**	**Power Level Setting[#]**		
		Low Channel	**Middle Channel**	**High Channel**
802.11b	1Mbps	14	14	14
802.11g	6Mbps	14	14	14
802.11n-HT20	MCSO	14	14	14
Test Mode: (for module 2)				
Transmitting mode:	Keep the EUT in continuous transmitting with modulation			
Exercise software[#]:	sscom5.13.1			
Mode	**Worst-case Data rate**	**Power Level Setting[#]**		
		Low Channel	**Middle Channel**	**High Channel**
802.11b	1Mbps	23	23	23
802.11g	6Mbps	20	20	20
802.11n-HT20	MCSO	25	25	25
802.11n-HT40	MCSO	35	35	35
802.11ax-HE20	MCSO	33	33	33
The exercise software and the maximum power setting that provided by manufacturer. For 802.11ax-HE20 the device only support full RU mode.				

Worst-Case Configuration:
For radiated emissions, EUT was investigated in three orthogonal orientation, the worst-case orientation was recorded in report For AC power line conducted emission and radiated emission 9kHz-1GHz and above 18GHz were performed with the EUT transmits at the channel with highest output power as worst-case scenario. For radiated emissions below 30MHz, three antenna orientations (parallel, perpendicular, gound-parallel) were tested, only record the worse case test data in report.

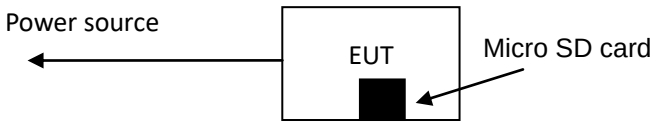
2.2 Test Auxiliary Equipment

Manufacturer	Description	Model	Serial Number
Kingston	micro SD card	unknown	unknown

2.3 Interconnecting Cables

Manufacturer	Description	Length(m)	From	To
/	/	/	/	/

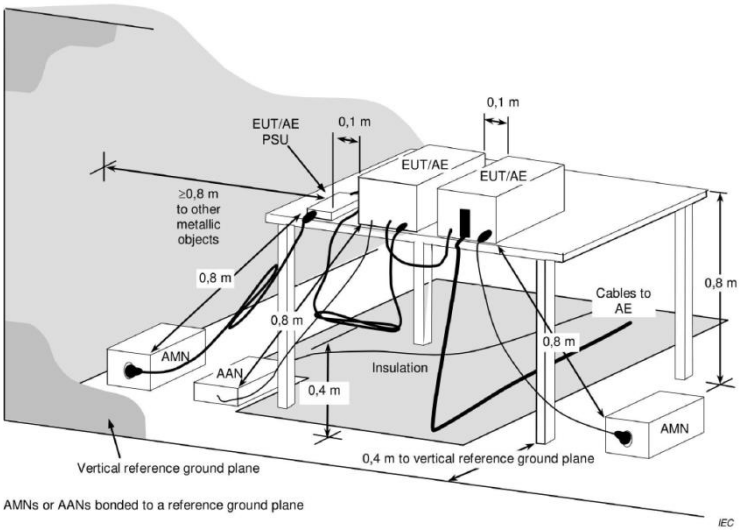
2.4 Block Diagram of Connection between EUT and AE



Note: for reference only, the actual connection setup used for testing please refer to the test photos.

2.5 Test Setup

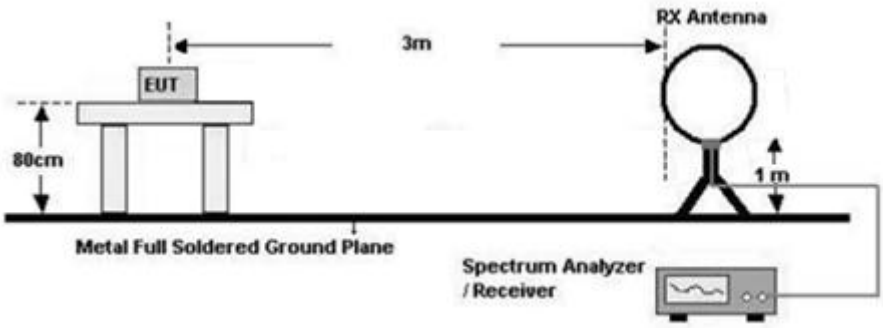
1) Conducted emission measurement:



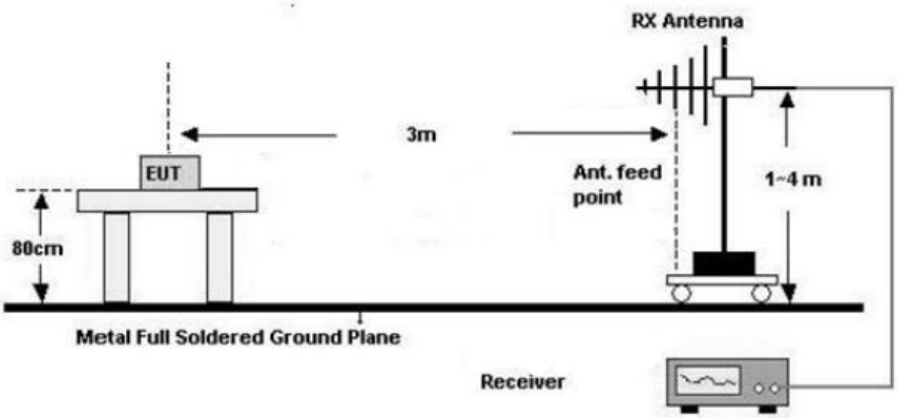
Note: The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be >0.8 m.

2) Radiated emission measurement:

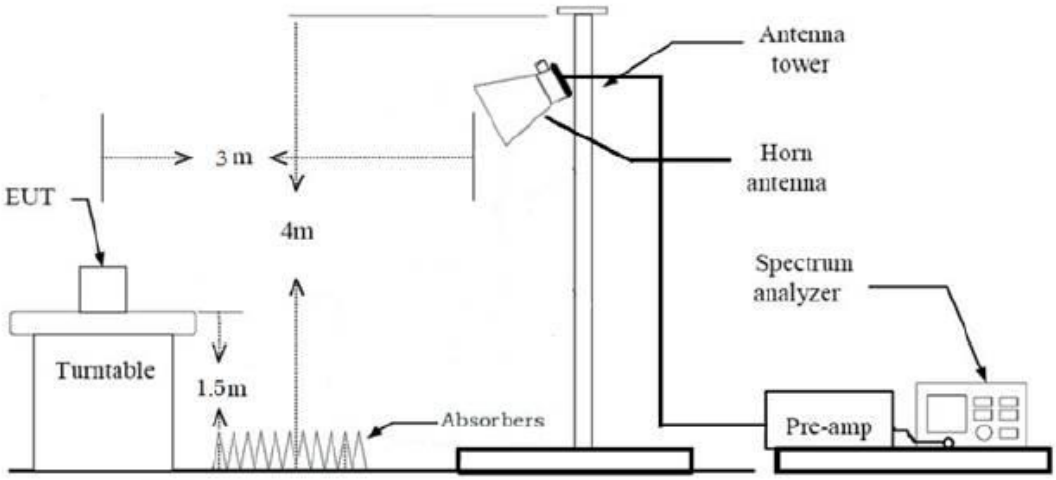
Below 30MHz (3m SAC)



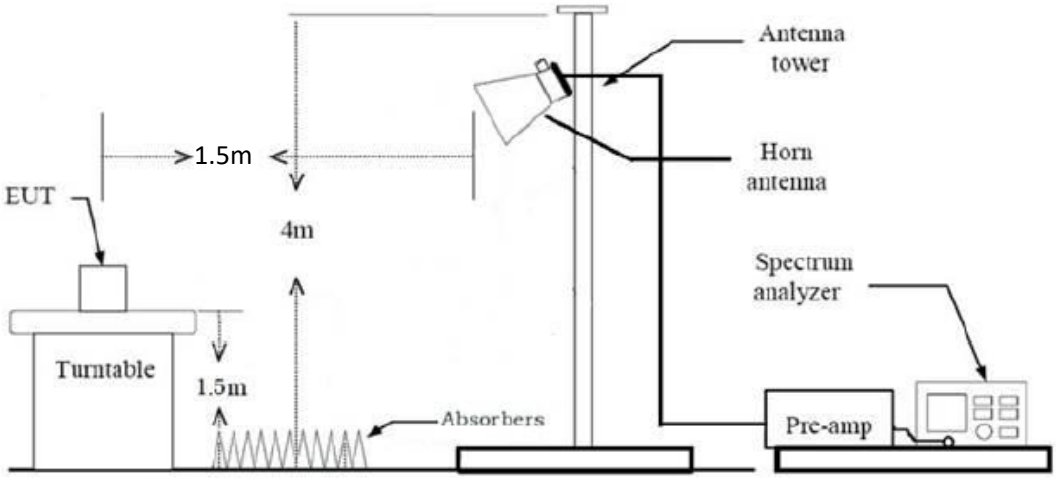
30MHz-1GHz (3m SAC)



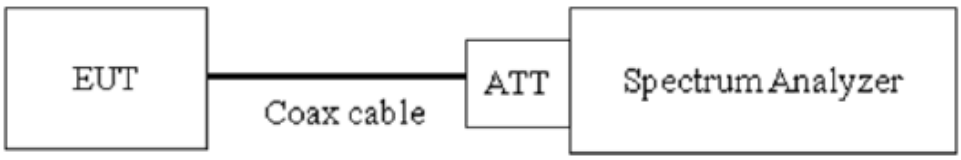
1GHz-18GHz



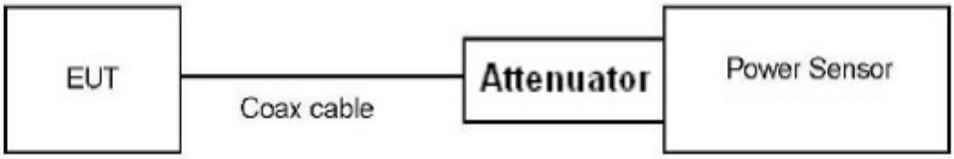
Above 18GHz



3) RF Conducted Test



or



2.6 Test Procedure

Conducted emission:

1. The E.U.T is placed on a non-conducting table 40cm from the vertical ground plane and 80cm above the horizontal ground plane (Please refer to the block diagram of the test setup and photographs).
2. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
3. Line conducted data is recorded for both Line and Neutral

Radiated Emission Procedure:

a) For below 30MHz

1. All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz- 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40*Log (test distance / specification distance).
2. Loop antenna use, investigation was done on the three antenna orientations (parallel, perpendicular, gound-parallel)
3. The RBW/VBW of receiver is set to 200Hz/1kHz for 9kHz to 150kHz range, to 10kHz/30kHz for 150kHz to 30MHz range for scan Peak emission, 200Hz/9kHz IF BW was used for final measurement in the Quasi-peak or average detection mode for frequency range 9~150kHz/150kHz~30MHz respectively.
4. If the Peak emission complies with the QP limit, then perform final measurement is optional.

b) For 30MHz-1GHz:

1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m.
2. EUT works in each mode of operation that needs to be tested. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
3. The RBW/VBW of receiver is set to 100kHz/300kHz for scan Peak emission, 120kHz IF BW was used for final measurement in the Quasi-peak detection mode.
4. If the Peak emission complies with the QP limit, then perform final measurement is optional.

c) For above 1GHz:

1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m (1-18GHz) and 1.5 m (above 18GHz).
2. EUT works in each mode of operation that needs to be tested，and having the EUT continuously working. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal

polarizations.

3. The RBW/VBW of spectrum analyzer is set to 1MHz/3MHz for scan Peak emission, for measured average emission, reduce the VBW to 10Hz(for duty cycle≥98%), or ≥1/T(for duty cycle<98%). T is minimum transmission duration. (Note: a high VBW (for example 1kHz, not less than 1/T) may used to scan average emissions to avoid long sweep time.)
4. If the Peak emission complies with the Average limit, then perform average measurement is optional.
5. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
6. Base on FCC 15.31 (f) (2): 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.

RF Conducted Test:

1. The antenna port of EUT was connected to the RF port of the test equipment (Power Meter or Spectrum analyzer) through Attenuator and RF cable.
2. The cable assembly insertion loss of 8.5dB (including 6.0 dB Attenuator and 2.5dB cable) was entered as an offset in the power meter. Note: Actual cable loss was unavailable at the time of testing, therefore a loss of 2.5dB was assumed as worst case. This was later verified to be true by laboratory. (if the RF cable provided by client, the cable loss declared by client)
3. The EUT is keeping in continuous transmission mode and tested in all modulation modes.

2.7 Measurement Method

Description of Test	Measurement Method
AC Line Conducted Emissions	ANSI C63.10-2013 Section 6.2
Maximum Conducted Output Power	ANSI C63.10-2013 Section 11.9.1.2 PKPM1 Peak power meter method or ANSI C63.10-2013 Section 11.9.2.3.2 Method AVGPM-G
Power Spectral Density	ANSI C63.10-2013 Section 11.10.2 Method PKPSD (peak PSD)
6 dB Emission Bandwidth	ANSI C63.10-2013 Section 11.8.1
99% Occupied Bandwidth	ANSI C63.10-2013 Section 6.9.3
100kHz Bandwidth of Frequency Band Edge	ANSI C63.10-2013 Section 6.10
Radiated emission	ANSI C63.10-2013 Section 11.11&11.12
Duty Cycle	ANSI C63.10-2013 Section 11.6

2.8 Measurement Equipment

Manufacturer	Description	Model	Management No.	Calibration Date	Calibration Due Date
AC Line Conducted Emission Test					
ROHDE& SCHWARZ	EMI TEST RECEIVER	ESR	101817	2024/6/4	2025/6/3
R&S	LISN	ENV216	101748	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.12	N/A	2024/6/4	2025/6/3
Farad	Test Software	EZ-EMC	Ver. EMEC-3A1	/	/
Radiated Emission Test					
R&S	EMI test receiver	ESR3	102758	2024/6/4	2025/6/3
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSV40-N	101608	2024/6/4	2025/6/3
SONOMA INSTRUMENT	Low frequency amplifier	310	186014	2024/6/4	2025/6/3
A.H. Systems	PREAMPLIFIER	PAM-0118P	531	2024/6/4	2025/6/3
COM-POWER	Amplifier	PAM-840A	461306	2024/8/7	2025/8/6
BACL	Loop Antenna	1313-1A	4010611	2024/2/7	2027/2/6
SCHWARZBECK	Log - periodic wideband antenna	VULB 9163	9163-872	2023/7/7	2026/7/6
Astro Antenna Ltd	Horn antenna	AHA-118S	3015	2023/7/6	2026/7/5
Ducommun technologies	Horn Antenna	ARH-4223-02	1007726-03	2023/7/10	2026/7/9
Oulitong	Band Reject Filter	OBSF-2400-248 3.5-50N	OE02103119	2024/6/4	2025/6/3
Unknown	6.7G High Pass Filter	Unknown	6.7G	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.9	N/A	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.13	N/A	2024/8/7	2025/8/6
N/A	Coaxial Cable	NO.15	N/A	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.16	N/A	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.17	N/A	2024/6/4	2025/6/3
Audix	Test Software	E3	191218 V9	/	/
RF Conducted Test					
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSV40	101419	2024/6/4	2025/6/3
ANRITSU	USB Power Sensor	MA24418A	12620	2024/6/4	2025/6/3
narda	6dB attenuator	603-06-1	N/A	2024/6/4	2025/6/3

Note: All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or International standards.

3 Test Results

3.1 Test Summary

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line Conducted Emissions	Compliance
§15.247(b)(3)	Maximum Conducted Output Power	Compliance
§15.247(e)	Power Spectral Density	Compliance
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliance
-	99% Occupied Bandwidth	Report only
§15.247(d)	100kHz Bandwidth of Frequency Band Edge	Compliance
§15.205, §15.209, §15.247(d)	Radiated emission	Compliance
-	Duty Cycle	Report only

3.2 Limit

Test items	Limit
AC Line Conducted Emissions	See details §15.207 (a)
Conducted Output Power	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.
6dB Emission Bandwidth	The minimum 6 dB bandwidth shall be at least 500 kHz.
Power Spectral Density	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
Spurious Emissions, 100kHz Bandwidth of Frequency Band Edge	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

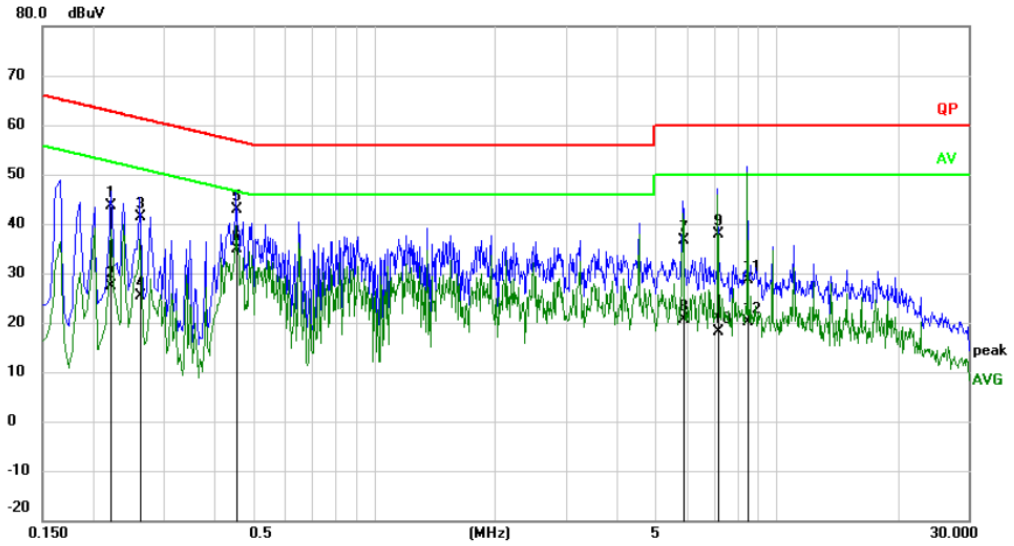
3.3 AC Line Conducted Emissions Test Data

Test Date:	2025-01-13	Test By:	Lirou Li
Environment condition:	Temperature: 22.1°C; Relative Humidity:32%; ATM Pressure: 101kPa		

For Module 1: RTL 8731BU

Conducted Emission Measurement

File :2405A112470E Data :#7 Date: 2025/1/13 Time: 17:51:10



Limit: QP
Mode:transmitting
Note: 802.11g-2412

Phase: L1
Power: AC 120V/60Hz

Temperature: 22.1 ℃
Humidity: 32 %
Air Pressure: 1010 hpa

Receiver Setting: 0.15~30MHz: Pre-scan: RBW: 9kHz, DET: PK/AV; Final measure: RBW: 9kHz, DET: QP/AV

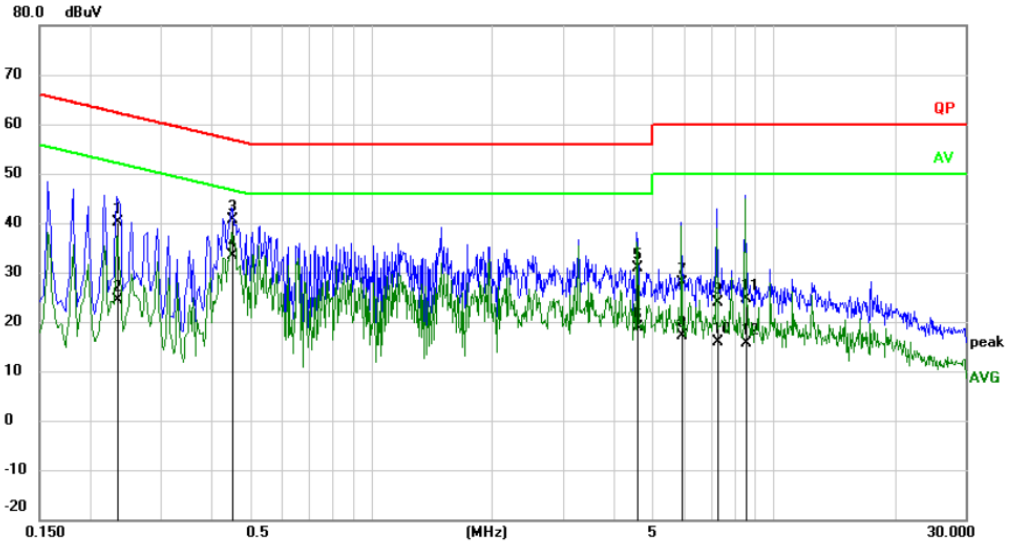
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2220	33.01	10.67	43.68	62.74	-19.06	QP	
2		0.2220	16.73	10.67	27.40	52.74	-25.34	AVG	
3		0.2620	30.73	10.68	41.41	61.37	-19.96	QP	
4		0.2620	14.71	10.68	25.39	51.37	-25.98	AVG	
5		0.4540	32.08	10.69	42.77	56.80	-14.03	QP	
6	*	0.4540	24.15	10.69	34.84	46.80	-11.96	AVG	
7		5.8659	26.13	10.48	36.61	60.00	-23.39	QP	
8		5.8659	10.27	10.48	20.75	50.00	-29.25	AVG	
9		7.1700	27.62	10.38	38.00	60.00	-22.00	QP	
10		7.1700	7.76	10.38	18.14	50.00	-31.86	AVG	
11		8.4660	18.18	10.48	28.66	60.00	-31.34	QP	
12		8.4660	9.59	10.48	20.07	50.00	-29.93	AVG	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Lirou

Conducted Emission Measurement

File :2405A112470E Data :#8 Date: 2025/1/13 Time: 17:53:18



Limit: QP
Mode: transmitting
Note: 802.11g-2412

Phase: N
Power: AC 120V/60Hz

Temperature: 22.1 ℃
Humidity: 32 %
Air Pressure: 1010 hpa

Receiver Setting: 0.15~30MHz: Pre-scan: RBW: 9kHz, DET: PK/AV; Final measure: RBW: 9kHz, DET: QP/AV

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2340	29.71	10.50	40.21	62.31	-22.10	QP	
2		0.2340	13.79	10.50	24.29	52.31	-28.02	AVG	
3		0.4500	30.01	10.73	40.74	56.88	-16.14	QP	
4	*	0.4500	22.75	10.73	33.48	46.88	-13.40	AVG	
5		4.5939	20.37	10.43	30.80	56.00	-25.20	QP	
6		4.5939	8.50	10.43	18.93	46.00	-27.07	AVG	
7		5.9060	17.59	10.34	27.93	60.00	-32.07	QP	
8		5.9060	6.80	10.34	17.14	50.00	-32.86	AVG	
9		7.2180	13.61	10.30	23.91	60.00	-36.09	QP	
10		7.2180	5.48	10.30	15.78	50.00	-34.22	AVG	
11		8.5340	14.07	10.48	24.55	60.00	-35.45	QP	
12		8.5340	5.18	10.48	15.66	50.00	-34.34	AVG	

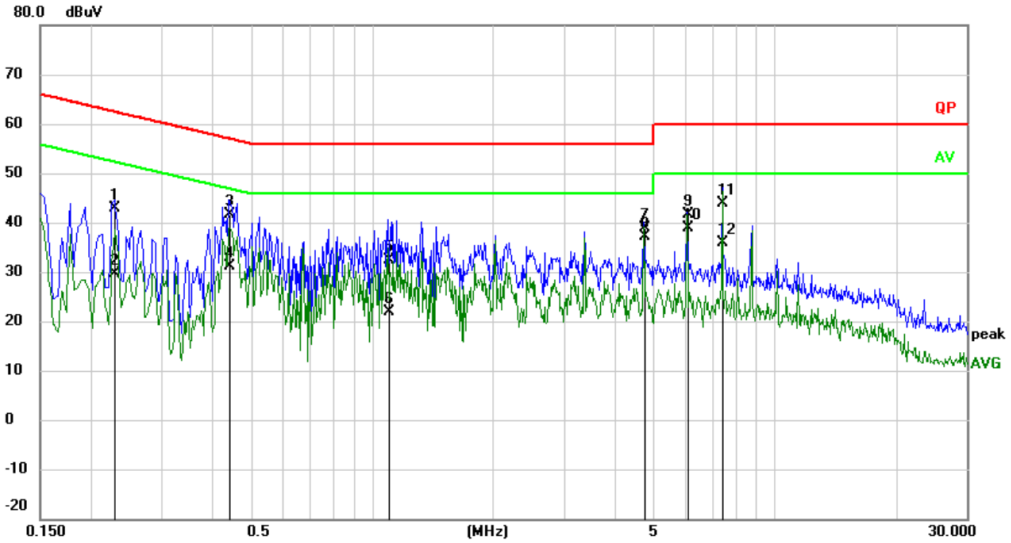
*:Maximum data x:Over limit !:over margin

Engineer Signature: Lirou

For Module 2: TR5330S

Conducted Emission Measurement

File :2405A112470E Data :#4 Date: 2025/1/13 Time: 17:17:56



Limit: QP
Mode:transmitting
Note: 802.11g-2437

Phase: *L1*
Power: AC 120V/60Hz

Temperature: 22.1 ℃
Humidity: 32 %
Air Pressure: 1010 hpa

Receiver Setting: 0.15~30MHz: Pre-scan: RBW: 9kHz, DET: PK/AV; Final measure: RBW: 9kHz, DET: QP/AV

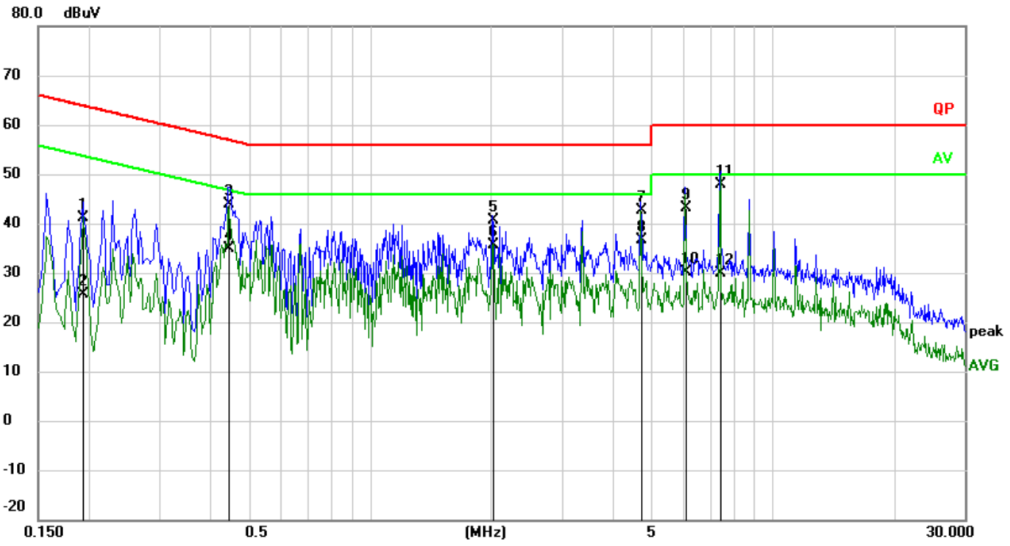
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2300	32.25	10.67	42.92	62.45	-19.53	QP	
2		0.2300	18.96	10.67	29.63	52.45	-22.82	AVG	
3		0.4420	30.85	10.68	41.53	57.02	-15.49	QP	
4		0.4420	20.41	10.68	31.09	47.02	-15.93	AVG	
5		1.0940	21.33	11.16	32.49	56.00	-23.51	QP	
6		1.0940	10.76	11.16	21.92	46.00	-24.08	AVG	
7		4.7300	28.18	10.60	38.78	56.00	-17.22	QP	
8	*	4.7300	26.50	10.60	37.10	46.00	-8.90	AVG	
9		6.0820	31.19	10.46	41.65	60.00	-18.35	QP	
10		6.0820	28.53	10.46	38.99	50.00	-11.01	AVG	
11		7.4300	33.52	10.40	43.92	60.00	-16.08	QP	
12		7.4300	25.37	10.40	35.77	50.00	-14.23	AVG	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Lirou

Conducted Emission Measurement

File :2405A112470E Data :#3 Date: 2025/1/13 Time: 17:14:54



Limit: QP
Mode:transmitting
Note: 802.11g-2437

Phase: N
Power: AC 120V/60Hz

Temperature: 22.1 ℃
Humidity: 32 %
Air Pressure: 1010 hpa

Receiver Setting: 0.15~30MHz: Pre-scan: RBW: 9kHz, DET: PK/AV; Final measure: RBW: 9kHz, DET: QP/AV

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1940	30.71	10.46	41.17	63.86	-22.69	QP	
2		0.1940	15.16	10.46	25.62	53.86	-28.24	AVG	
3		0.4460	33.16	10.73	43.89	56.95	-13.06	QP	
4		0.4460	24.22	10.73	34.95	46.95	-12.00	AVG	
5		2.0220	30.35	10.38	40.73	56.00	-15.27	QP	
6		2.0220	25.25	10.38	35.63	46.00	-10.37	AVG	
7		4.7180	32.14	10.42	42.56	56.00	-13.44	QP	
8	*	4.7180	26.09	10.42	36.51	46.00	-9.49	AVG	
9		6.0620	32.92	10.33	43.25	60.00	-16.75	QP	
10		6.0620	19.78	10.33	30.11	50.00	-19.89	AVG	
11		7.4100	37.51	10.32	47.83	60.00	-12.17	QP	
12		7.4100	19.48	10.32	29.80	50.00	-20.20	AVG	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Lirou

Remark:

Measurement (dBuV)= Reading Level (dBuV) + Correct Factor(dB)

Correct Factor (dB)= LISN Voltage Division Factor (dB)+ Cable loss(dB)

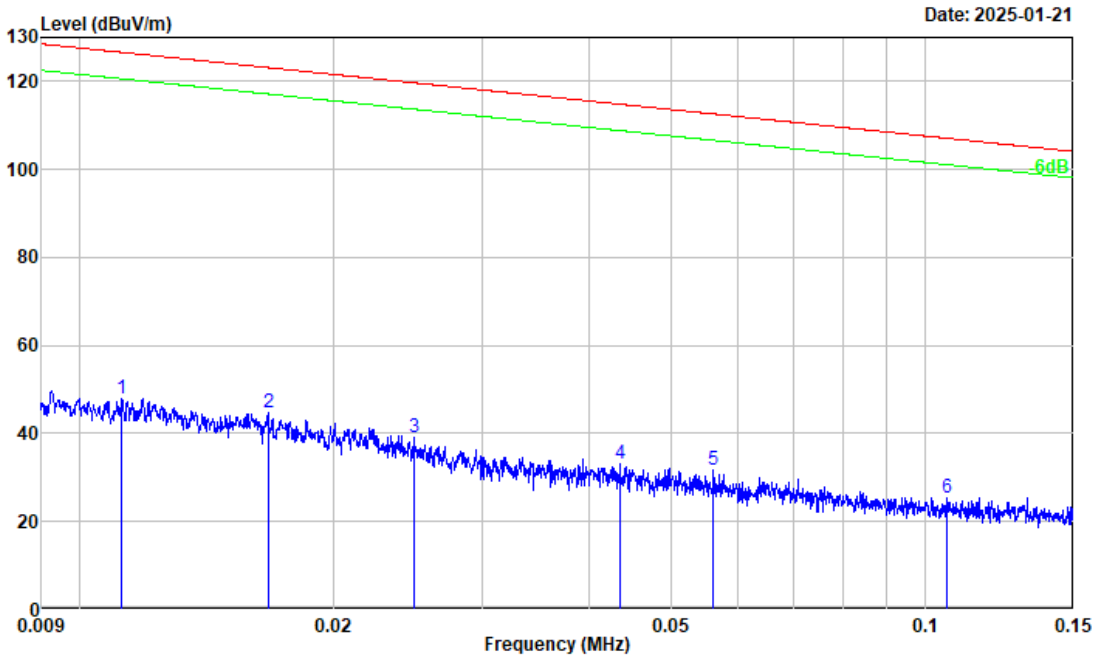
Over Limit = Measurement – Limit

3.4 Radiated emission Test Data

9 kHz-30MHz:

Test Date:	2025-01-21	Test By:	Bard Huang
Environment condition:	Temperature: 22.5°C; Relative Humidity:41%; ATM Pressure: 101.1kPa		

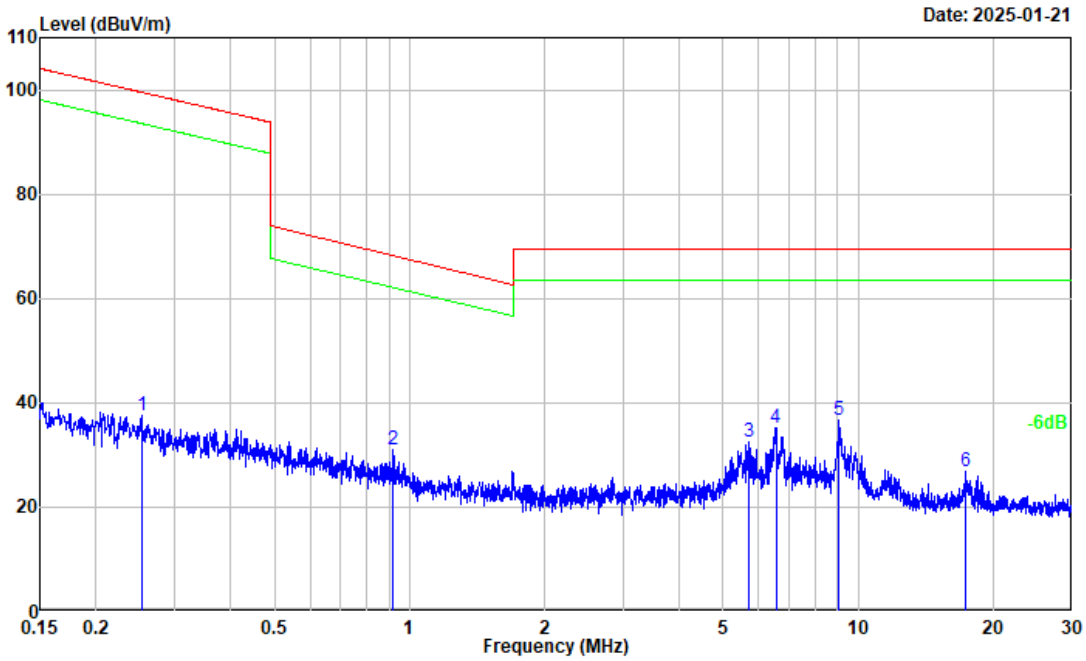
For Module 1: RTL 8731BU



Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.5℃/41%R.H./101.1kPa
Tested by : Bard Huang
Polarization : PARALLEL
Remark : 802.11g-2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	0.011	11.64	36.44	48.08	126.60	-78.52	Peak
2	0.017	11.85	32.95	44.80	123.14	-78.34	Peak
3	0.025	11.23	27.78	39.01	119.69	-80.68	Peak
4	0.044	11.22	21.73	32.95	114.82	-81.87	Peak
5	0.056	12.12	19.56	31.68	112.60	-80.92	Peak
6	0.106	10.48	14.81	25.29	107.08	-81.79	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: RBW/VBW: 200Hz/1kHz, DET: PK

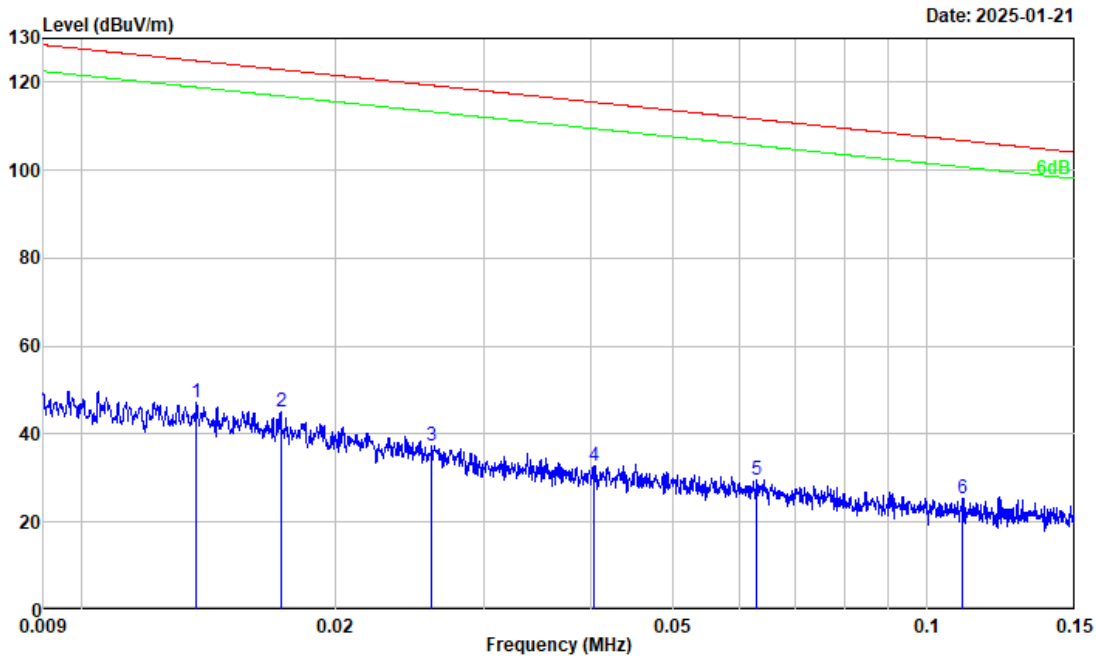


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.5℃/41%R.H./101.1kPa
Tested by : Bard Huang
Polarization : PARALLEL
Remark : 802.11g-2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	0.253	26.80	10.69	37.49	99.56	-62.07	Peak
2	0.921	29.77	1.21	30.98	68.21	-37.23	Peak
3	5.720	36.61	-4.05	32.56	69.54	-36.98	Peak
4	6.554	39.14	-4.03	35.11	69.54	-34.43	Peak
5	9.056	40.35	-3.66	36.69	69.54	-32.85	Peak
6	17.349	30.11	-3.26	26.85	69.54	-42.69	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: RBW/VBW: 9kHz/30kHz, DET: PK

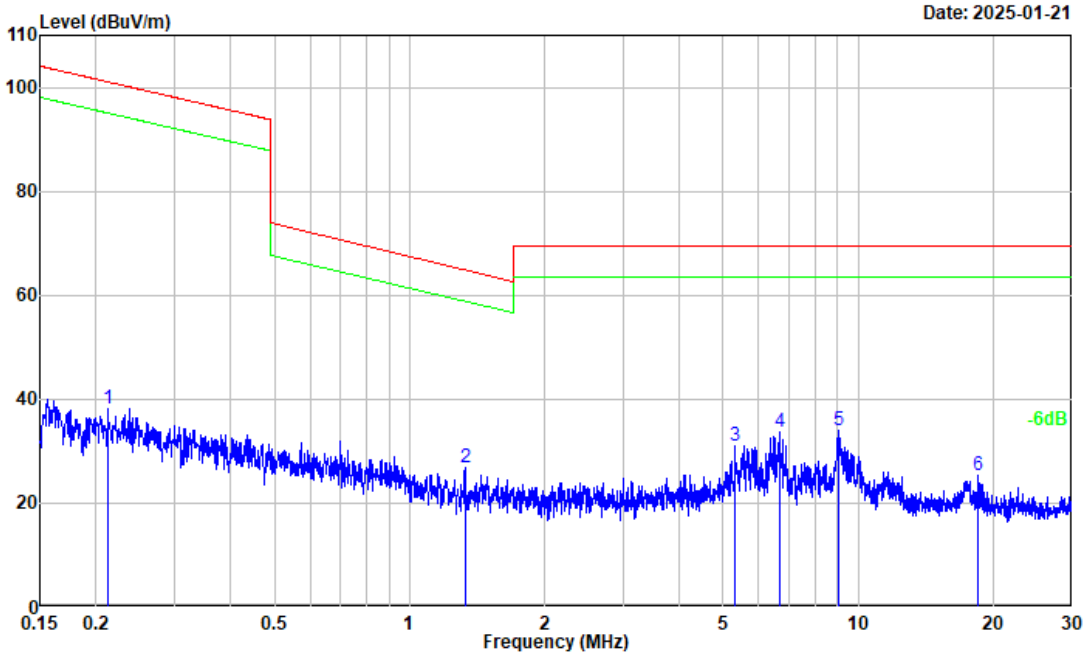
For Module 2: TR5330S



Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.5℃/41%R.H./101.1kPa
Tested by : Bard Huang
Polarization : PARALLEL
Remark : 802.11g-2437

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	0.014	12.32	34.88	47.20	124.88	-77.68	Peak
2	0.017	12.31	32.64	44.95	122.88	-77.93	Peak
3	0.026	10.37	27.10	37.47	119.33	-81.86	Peak
4	0.040	10.31	22.40	32.71	115.49	-82.78	Peak
5	0.063	11.07	18.64	29.71	111.64	-81.93	Peak
6	0.110	10.78	14.70	25.48	106.75	-81.27	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: RBW/VBW: 200Hz/1kHz, DET: PK



Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.5℃/41%R.H./101.1kPa
Tested by : Bard Huang
Polarization : PARALLEL
Remark : 802.11g-2437

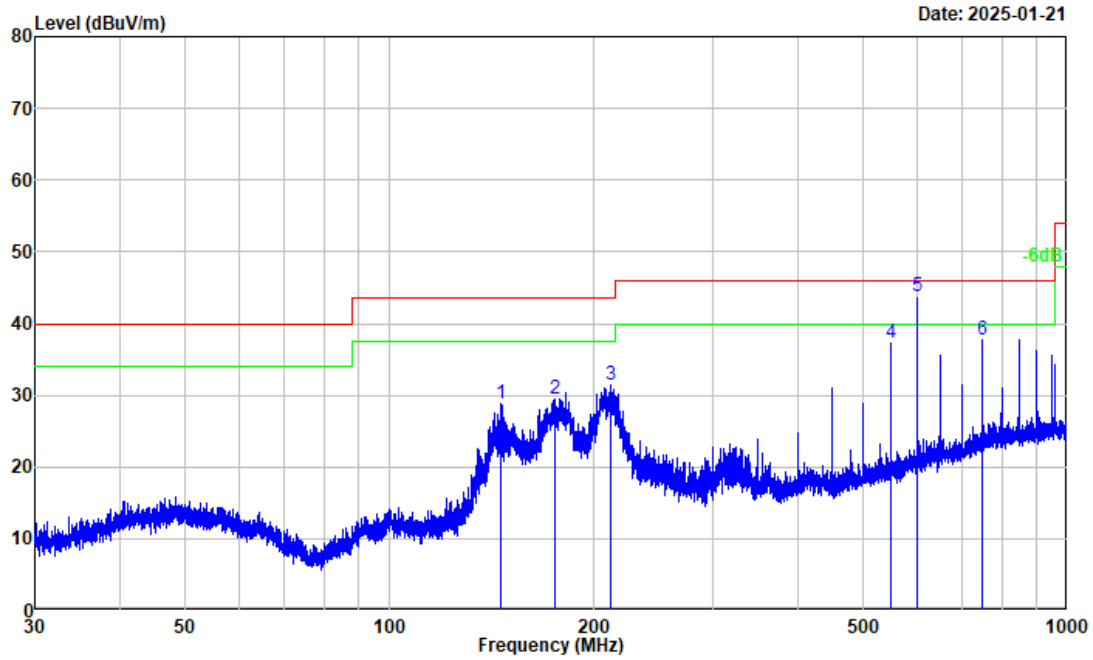
--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	0.213	26.24	11.80	38.04	101.04	-63.00	Peak
2	1.329	27.44	-0.55	26.89	64.95	-38.06	Peak
3	5.311	35.01	-4.00	31.01	69.54	-38.53	Peak
4	6.671	37.57	-4.02	33.55	69.54	-35.99	Peak
5	9.024	37.68	-3.67	34.01	69.54	-35.53	Peak
6	18.521	28.43	-3.15	25.28	69.54	-44.26	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: RBW/VBW: 9kHz/30kHz, DET: PK

30MHz-1GHz:

Test Date:	2025-01-21	Test By:	Bard Huang
Environment condition:	Temperature: 22.5°C; Relative Humidity:41%; ATM Pressure: 101.1kPa		

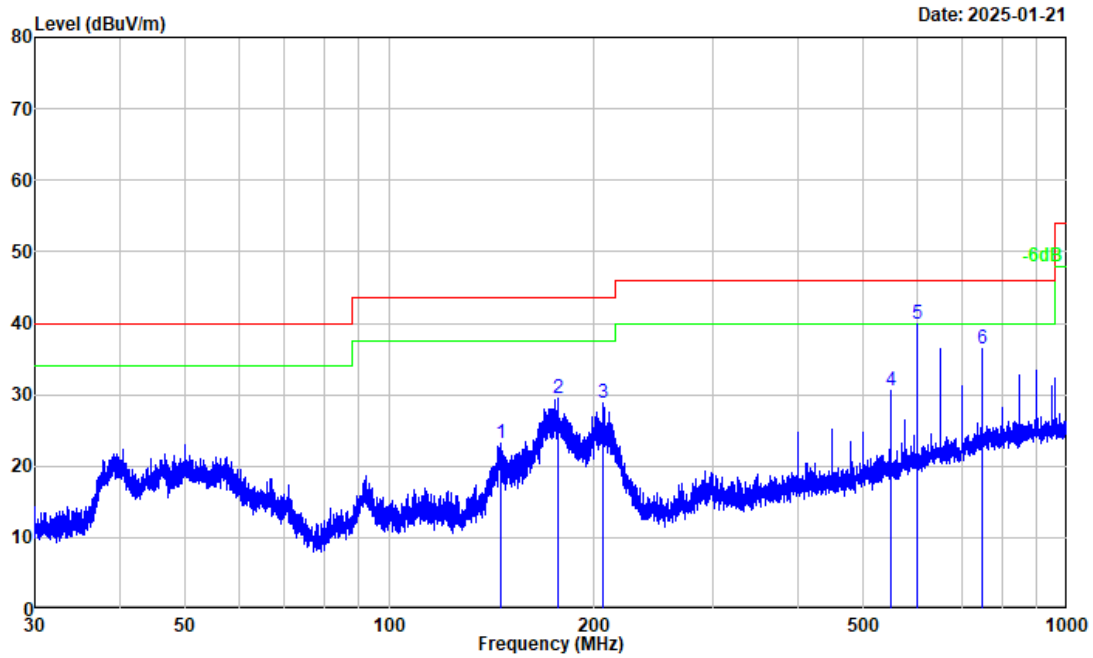
For Module 1: RTL 8731BU



Project No. : 2405A112470E-RF
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.5℃/41%R.H./101.1kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g-2412

--No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	146.374	46.22	-17.45	28.77	43.50	-14.73	Peak
2	175.421	45.47	-15.92	29.55	43.50	-13.95	Peak
3	212.084	45.26	-13.79	31.47	43.50	-12.03	Peak
4	549.983	43.71	-6.40	37.31	46.00	-8.69	Peak
5	600.110	48.81	-5.12	43.69	46.00	-2.31	QP
6	750.108	40.39	-2.66	37.73	46.00	-8.27	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Pre-scan: RBW/VBW: 100kHz/300kHz, DET: PK
Final measure: RBW: 120kHz, DET: QP

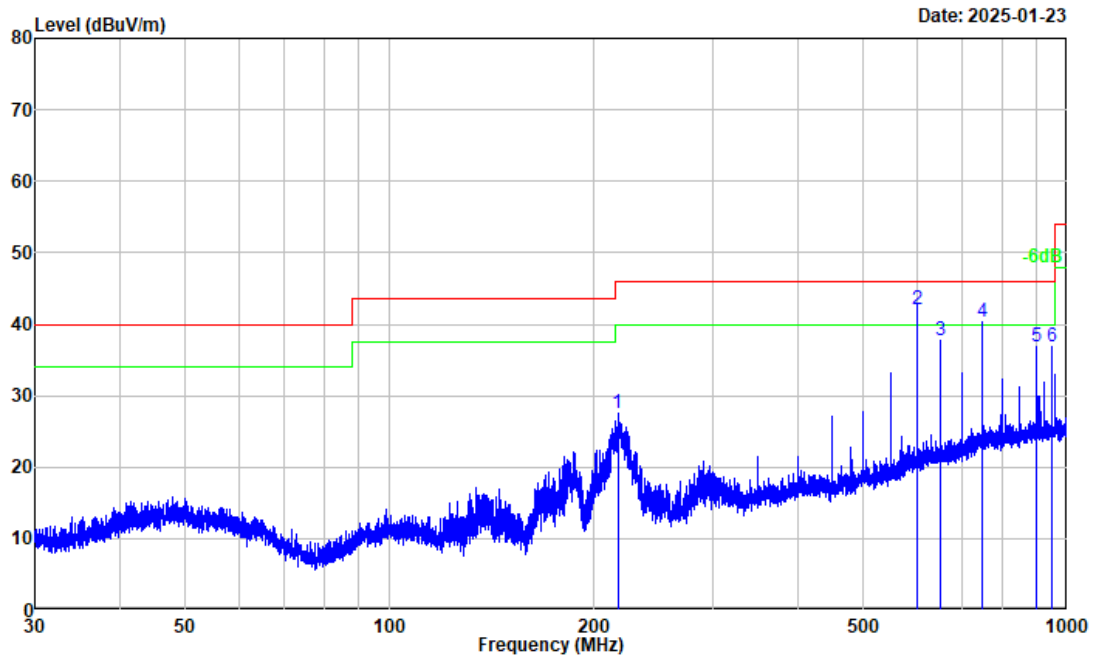


Project No. : 2405A112470E-RF
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.5℃/41%R.H./101.1kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g-2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	145.861	40.69	-17.45	23.24	43.50	-20.26	Peak
2	177.121	45.31	-15.79	29.52	43.50	-13.98	Peak
3	206.850	42.71	-13.77	28.94	43.50	-14.56	Peak
4	549.983	36.91	-6.40	30.51	46.00	-15.49	Peak
5	600.110	44.94	-5.12	39.82	46.00	-6.18	Peak
6	750.108	39.11	-2.66	36.45	46.00	-9.55	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Pre-scan: RBW/VBW: 100kHz/300kHz, DET: PK
Final measure: RBW: 120kHz, DET: QP

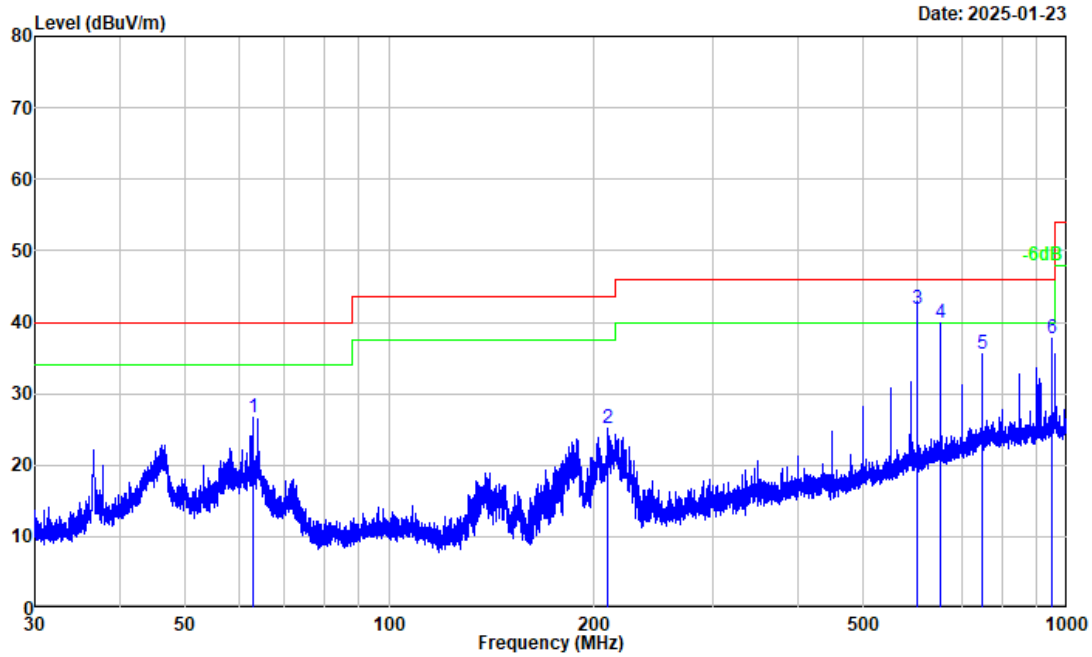
For Module 2: TR5330S



Project No. : 2405A112470E-RF
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.5℃/41%R.H./101.1kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g-2437

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	217.163	41.26	-13.64	27.62	46.00	-18.38	Peak
2	600.110	47.11	-5.12	41.99	46.00	-4.01	QP
3	650.229	42.05	-4.33	37.72	46.00	-8.28	Peak
4	750.108	42.90	-2.66	40.24	46.00	-5.76	QP
5	900.147	38.24	-1.43	36.81	46.00	-9.19	Peak
6	950.009	38.05	-1.14	36.91	46.00	-9.09	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Pre-scan: RBW/VBW: 100kHz/300kHz, DET: PK
Final measure: RBW: 120kHz, DET: QP



Project No. : 2405A112470E-RF
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.5℃/41%R.H./101.1kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g-2437

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	62.843	40.72	-13.95	26.77	40.00	-13.23	Peak
2	210.325	38.93	-13.81	25.12	43.50	-18.38	Peak
3	600.110	47.01	-5.12	41.89	46.00	-4.11	QP
4	650.229	44.31	-4.33	39.98	46.00	-6.02	Peak
5	750.108	38.28	-2.66	35.62	46.00	-10.38	Peak
6	950.426	38.96	-1.14	37.82	46.00	-8.18	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Pre-scan: RBW/VBW: 100kHz/300kHz, DET: PK
Final measure: RBW: 120kHz, DET: QP

Above 1GHz:

Test Date:	2025-01-25~2025-02-24	**Test By:**	Bard Huang
Environment condition:	Temperature: 22.8~23.4°C; Relative Humidity:40~55%; ATM Pressure: 101.0~101.5kPa		

For Module 1: RTL 8731BU

Frequency (MHz)	**Reading level (dBμV)**	**Polar (H/V)**	**Corrected Factor (dB/m)**	**Corrected Amplitude (dBμV/m)**	**Limit (dBμV/m)**	**Margin (dB)**	**Remark**
802.11b							
Low Channel							
4824.000	53.70	horizontal	-2.29	51.41	74.00	-22.59	Peak
4824.000	51.87	vertical	-2.29	49.58	74.00	-24.42	Peak
Middle Channel							
4874.000	47.17	horizontal	-1.92	45.25	74.00	-28.75	Peak
4874.000	47.39	vertical	-1.92	45.47	74.00	-28.53	Peak
High Channel							
4924.000	47.88	horizontal	-1.70	46.18	74.00	-27.82	Peak
4924.000	48.53	vertical	-1.70	46.83	74.00	-27.17	Peak
802.11g							
Low Channel							
4824.000	48.94	horizontal	-2.29	46.65	74.00	-27.35	Peak
4824.000	49.23	vertical	-2.29	46.94	74.00	-27.06	Peak
Middle Channel							
4874.000	50.47	horizontal	-1.92	48.55	74.00	-25.45	Peak
4874.000	49.85	vertical	-1.92	47.93	74.00	-26.07	Peak
High Channel							
4924.000	45.65	horizontal	-1.70	43.95	54.00	-10.05	Average
4924.000	56.99	horizontal	-1.70	55.29	74.00	-18.71	Peak
4924.000	53.73	vertical	-1.70	52.03	74.00	-21.97	Peak
802.11n20							
Low Channel							
4824.000	48.96	horizontal	-2.29	46.67	74.00	-27.33	Peak
4824.000	49.12	vertical	-2.29	46.83	74.00	-27.17	Peak
Middle Channel							
4874.000	51.99	horizontal	-1.92	50.07	74.00	-23.93	Peak
4874.000	51.73	vertical	-1.92	49.81	74.00	-24.19	Peak
High Channel							

4924.000	46.47	horizontal	-1.70	44.77	54.00	-9.23	Average
4924.000	56.08	horizontal	-1.70	54.38	74.00	-19.62	Peak
4924.000	54.94	vertical	-1.70	53.24	74.00	-20.76	Peak

Note:

Corrected factor=Antenna factor + Cable loss - Amplifier Gain

Corrected Amplitude=Reading level + Correct factor

Margin= Corrected Amplitude-Limit

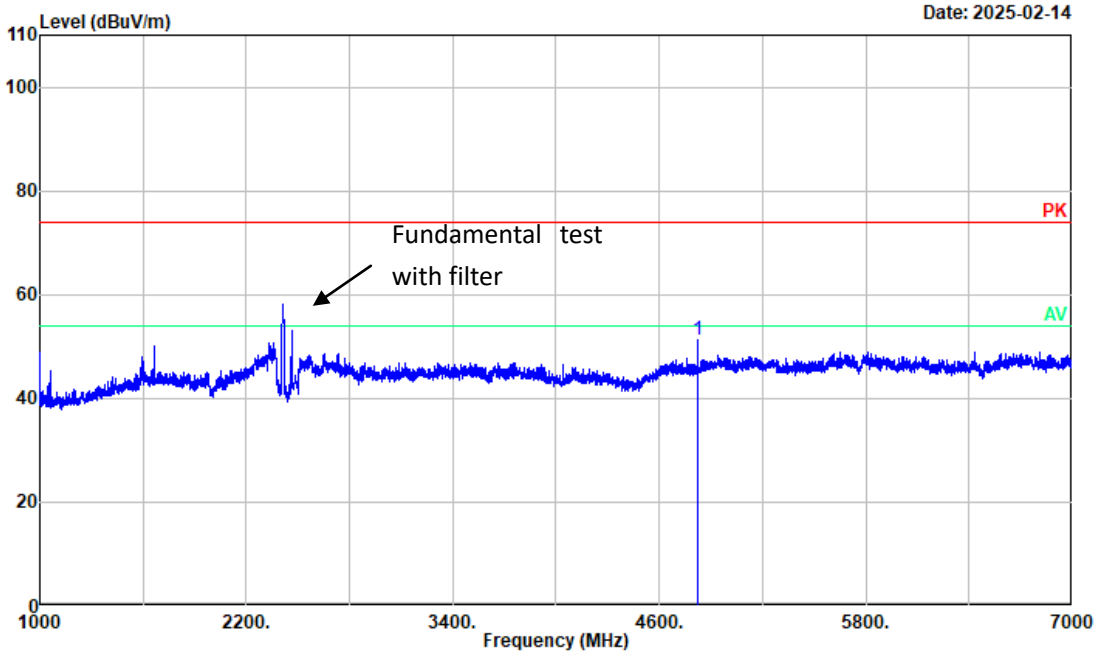
For the test result of Peak below the Peak limit more than 20dB, which can compliance with the average limit, just the Peak level was recorded.

The emission levels of other frequencies that were lower than the limit 20dB not show in test report.

For emissions in 18GHz-25GHz range, all emissions were investigated and in the noise floor level.

Test plot for example as below:

Mode:	802.11b	Channel:	2412MHz

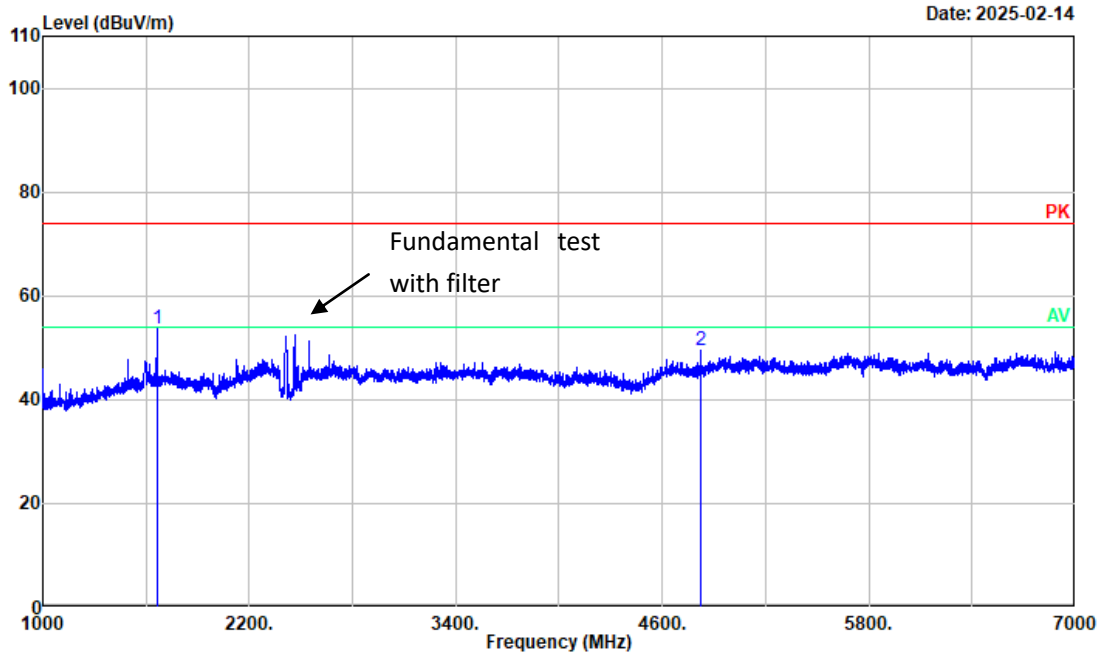


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11b 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4824.000	53.70	-2.29	51.41	74.00	-22.59	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11b	Channel:	2412MHz

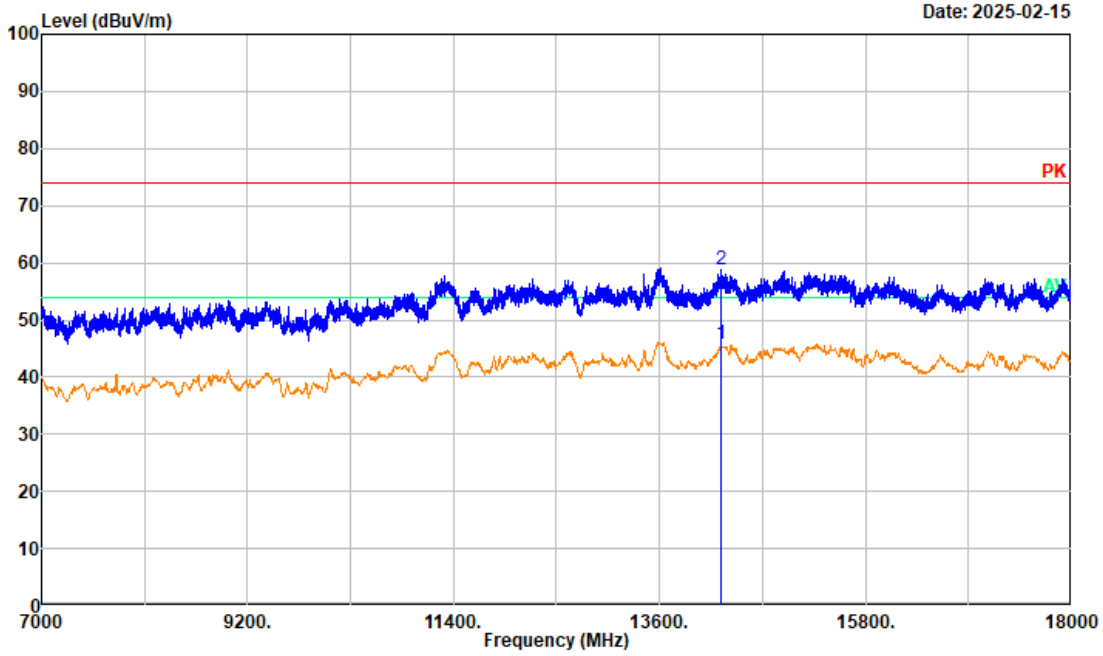


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11b 2412

--No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	1666.000	57.32	-3.77	53.55	74.00	-20.45	Peak
2	4824.000	51.87	-2.29	49.58	74.00	-24.42	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11b	Channel:	2412MHz

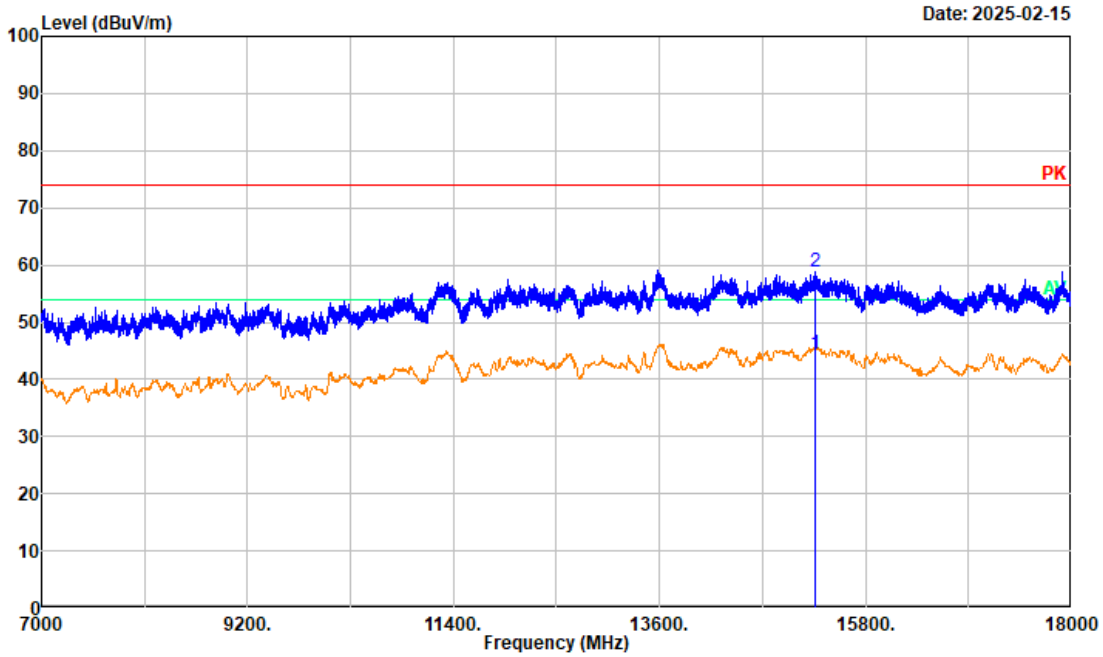


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11b 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	14260.000	38.96	6.77	45.73	54.00	-8.27	Average
2	14260.000	52.07	6.77	58.84	74.00	-15.16	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2412MHz

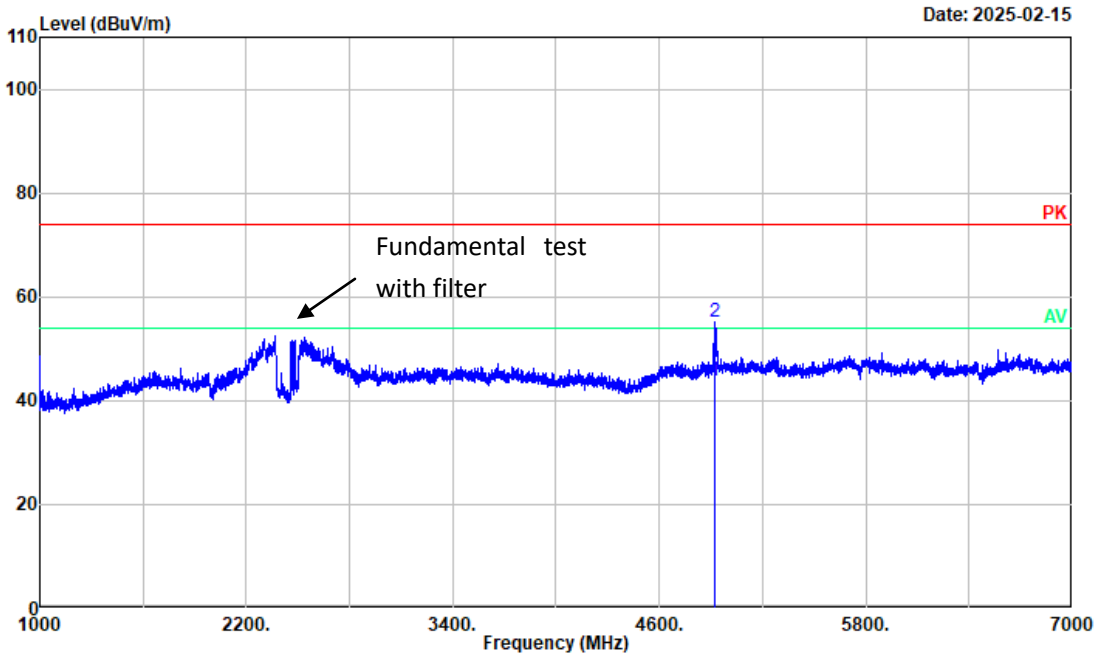


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11b 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15264.000	38.27	6.20	44.47	54.00	-9.53	Average
2	15264.000	52.73	6.20	58.93	74.00	-15.07	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

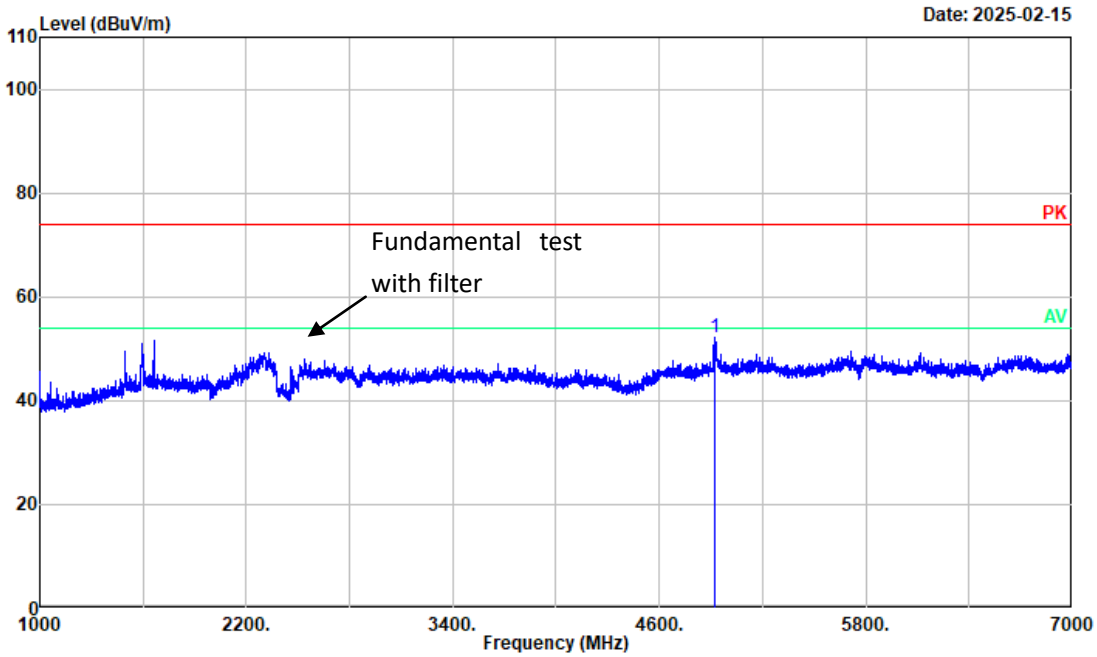


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	45.65	-1.70	43.95	54.00	-10.05	Average
2	4924.000	56.99	-1.70	55.29	74.00	-18.71	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

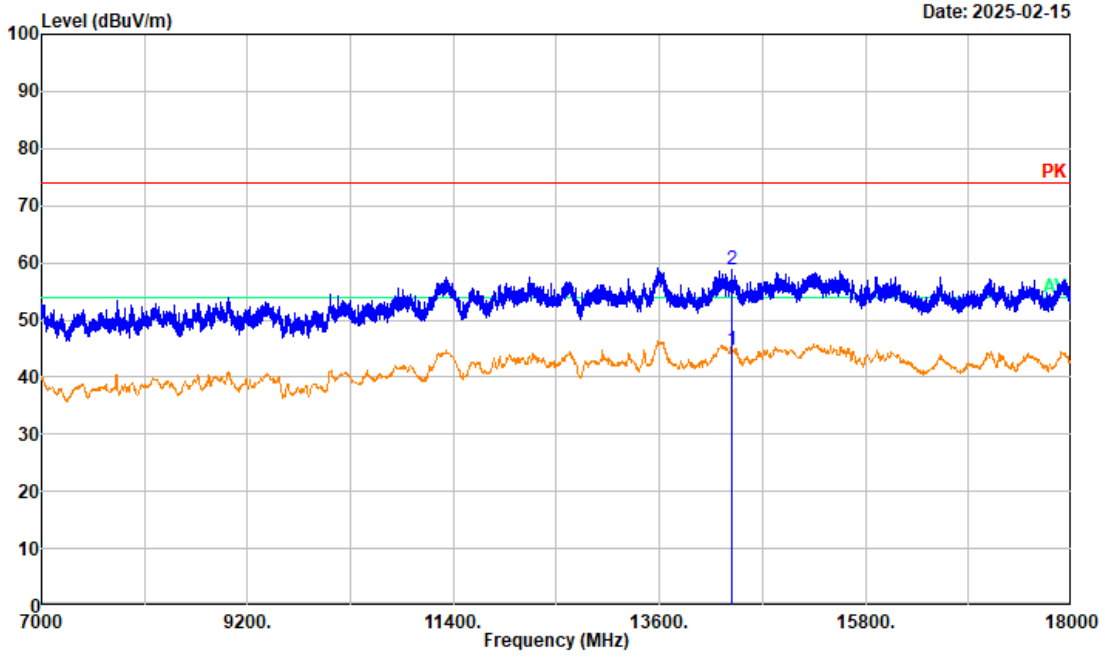


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	53.73	-1.70	52.03	74.00	-21.97	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

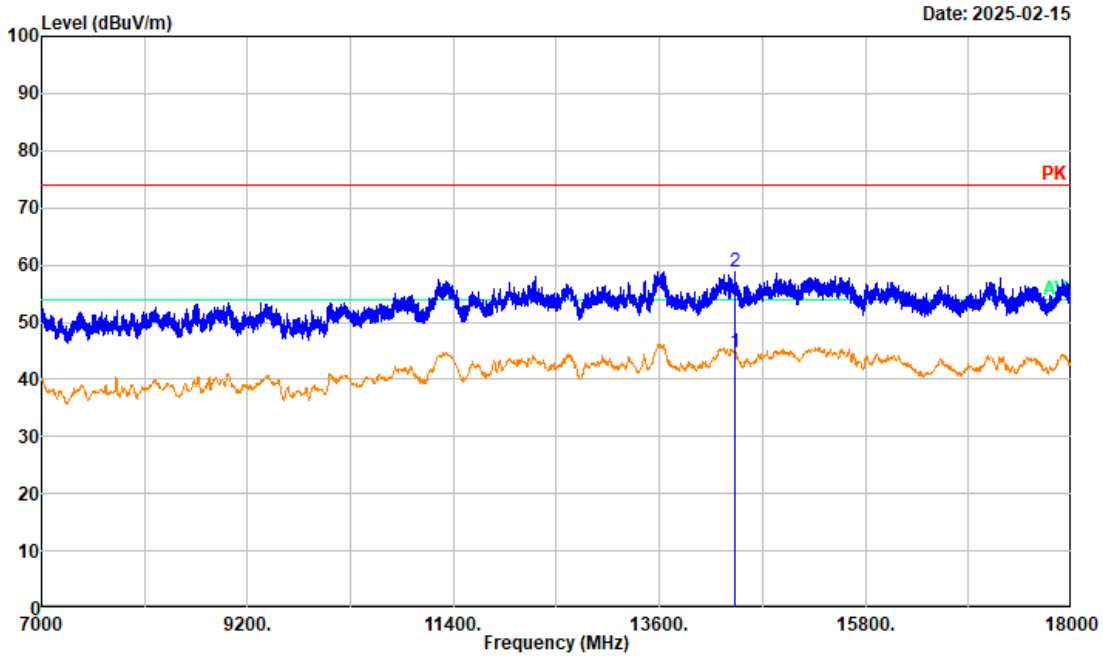


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	14366.000	38.22	6.47	44.69	54.00	-9.31	Average
2	14366.000	52.21	6.47	58.68	74.00	-15.32	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

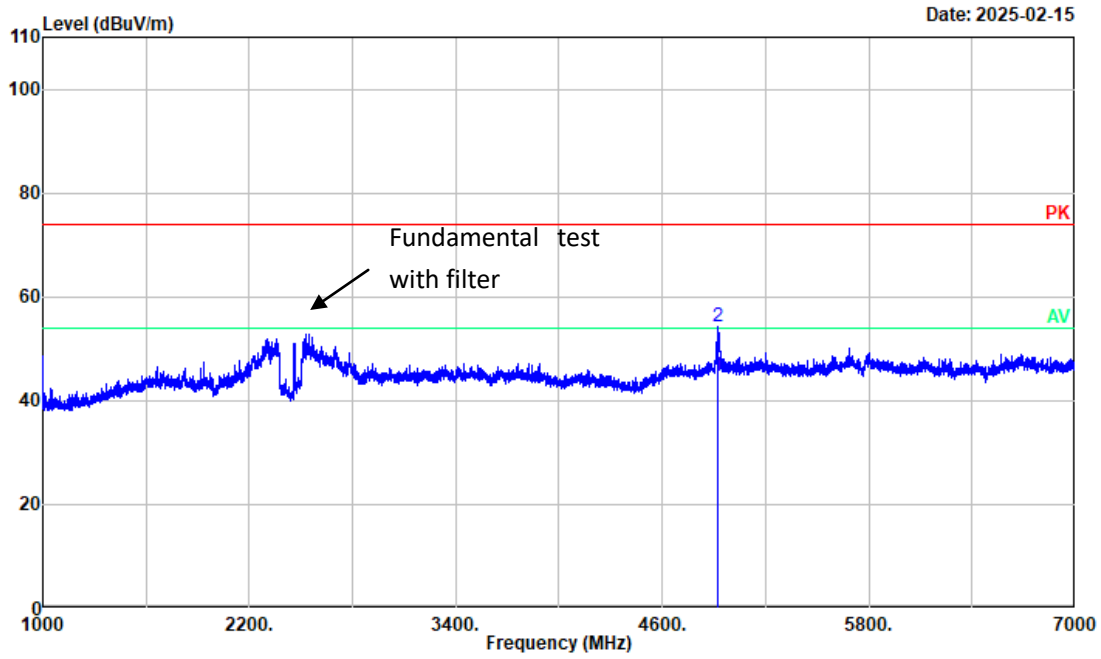


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	14405.000	38.39	6.21	44.60	54.00	-9.40	Average
2	14405.000	52.57	6.21	58.78	74.00	-15.22	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

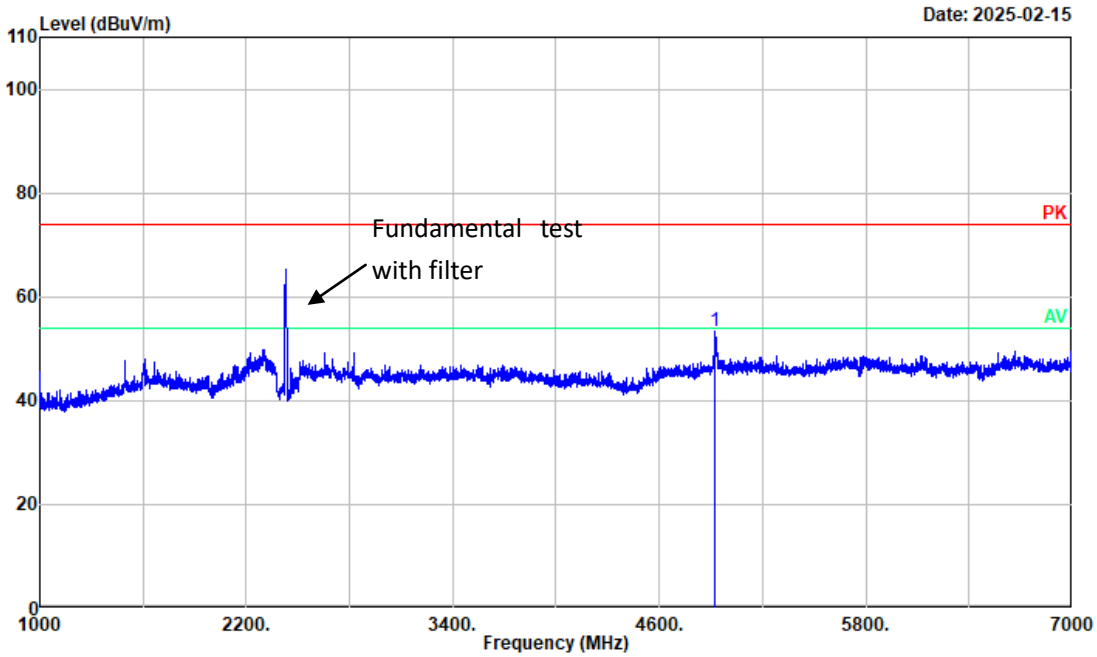


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	46.47	-1.70	44.77	54.00	-9.23	Average
2	4924.000	56.08	-1.70	54.38	74.00	-19.62	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

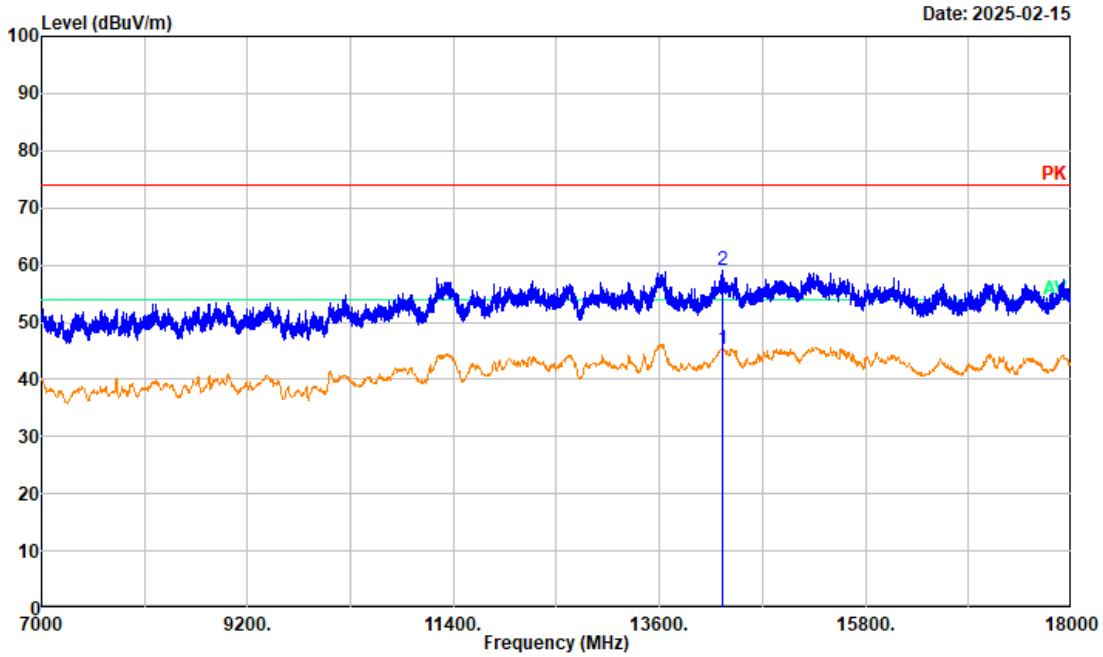


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	54.94	-1.70	53.24	74.00	-20.76	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

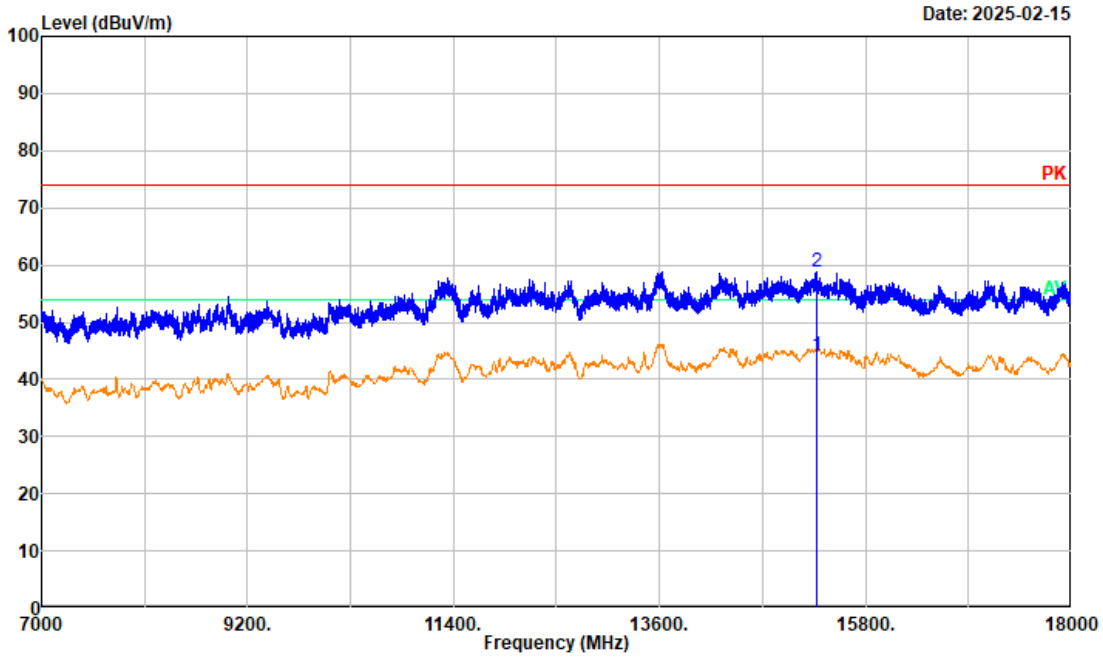


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	14270.000	38.56	6.81	45.37	54.00	-8.63	Average
2	14270.000	52.37	6.81	59.18	74.00	-14.82	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

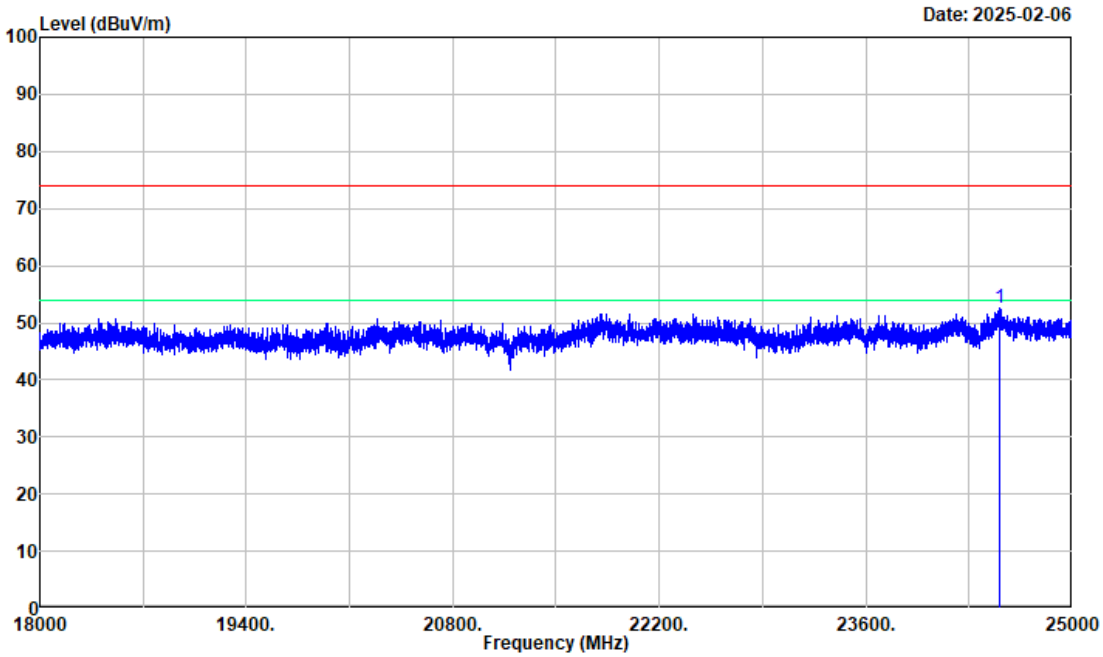


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15282.000	38.09	6.18	44.27	54.00	-9.73	Average
2	15282.000	52.56	6.18	58.74	74.00	-15.26	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2412MHz

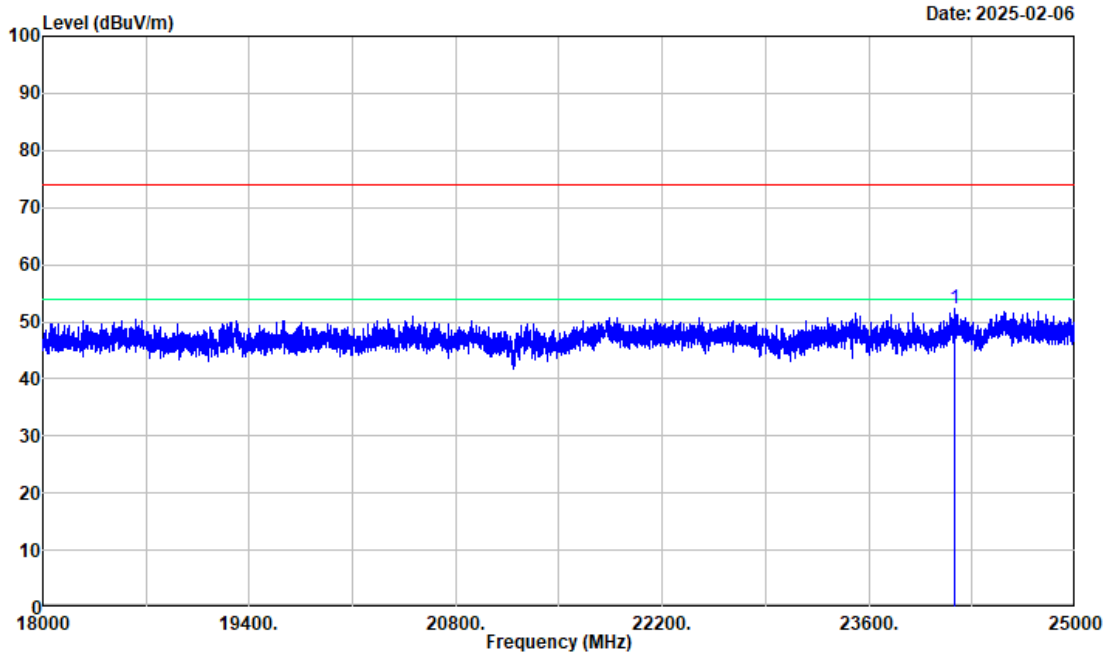


Project No. : 2405A112470E-RF
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g-2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	24509.000	53.87	-1.42	52.45	74.00	-21.55	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain - Distance extrapolate factor
Distance extrapolate factor = 20*log(specified distance/measured distance)
Specified distance = 3 meters, measured distance = 1.5 meters
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK

Mode:	802.11g	Channel:	2412MHz



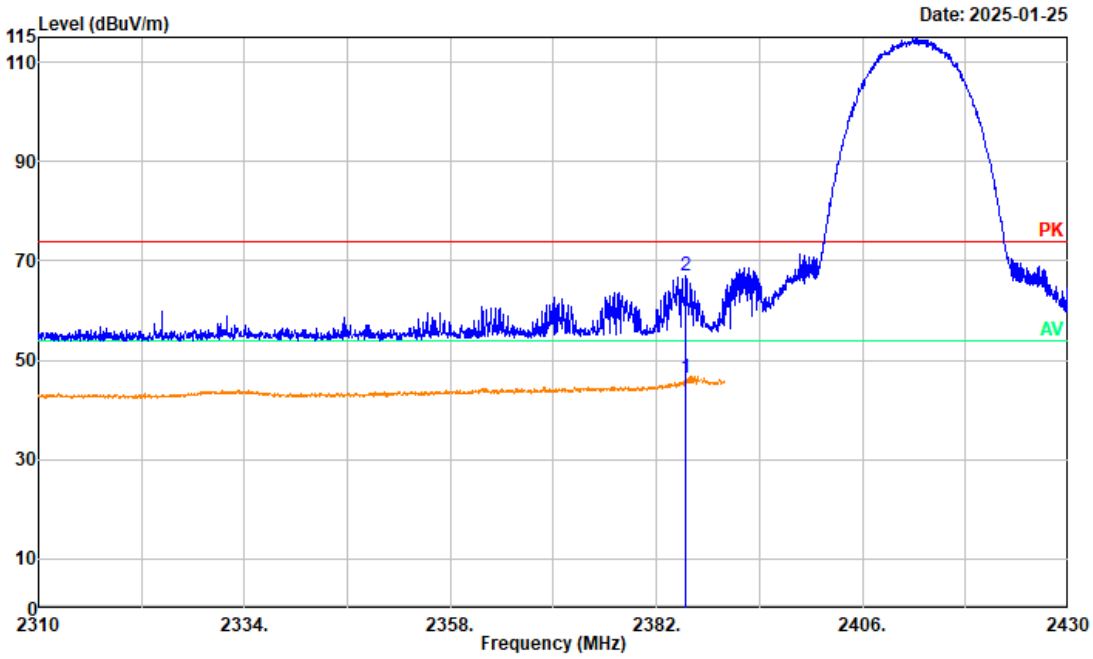
Project No. : 2405A112470E-RF
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g-2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	24181.000	53.87	-1.62	52.25	74.00	-21.75	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain - Distance extrapolate factor
Distance extrapolate factor = 20*log(specified distance/measured distance)
Specified distance = 3 meters, measured distance = 1.5 meters
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK

Radiated Band edge:

Mode:	802.11b	Channel:	2412MHz

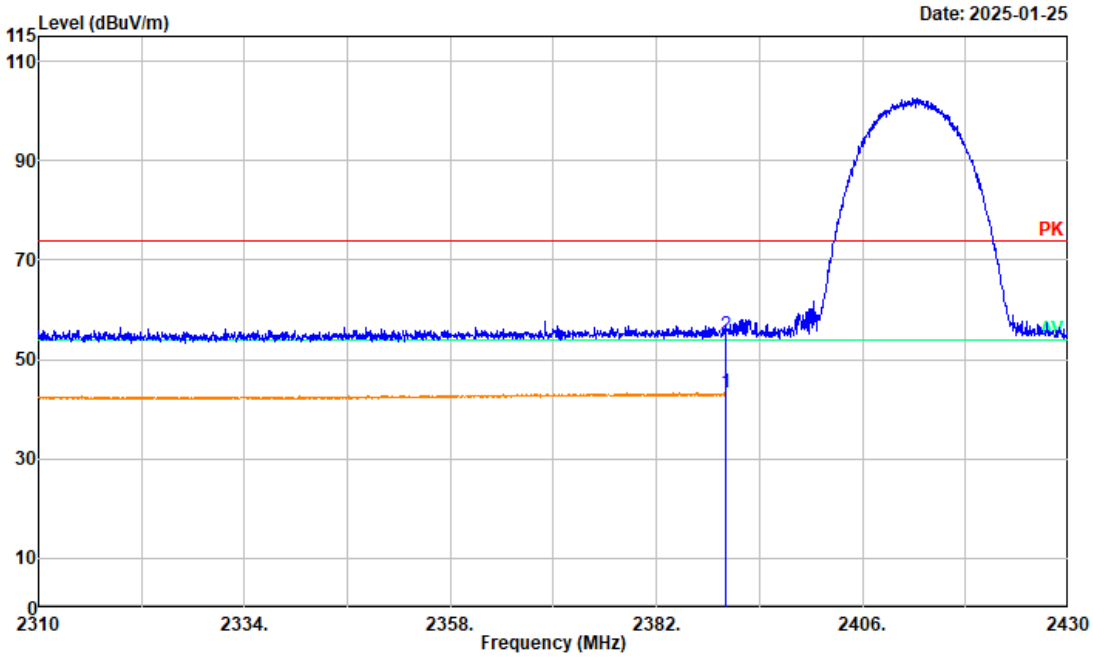


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11b 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2385.458	39.57	7.00	46.57	54.00	-7.43	Average
2	2385.458	59.89	7.00	66.89	74.00	-7.11	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2412MHz

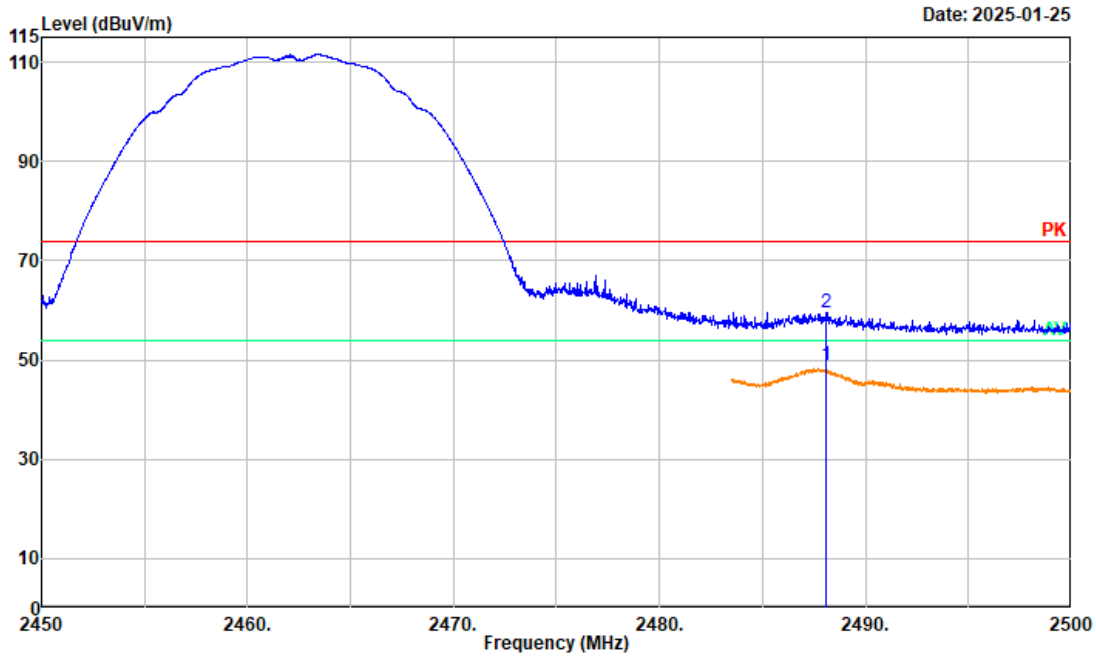


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11b 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2390.000	36.35	7.00	43.35	54.00	-10.65	Average
2	2390.000	47.96	7.00	54.96	74.00	-19.04	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2462MHz

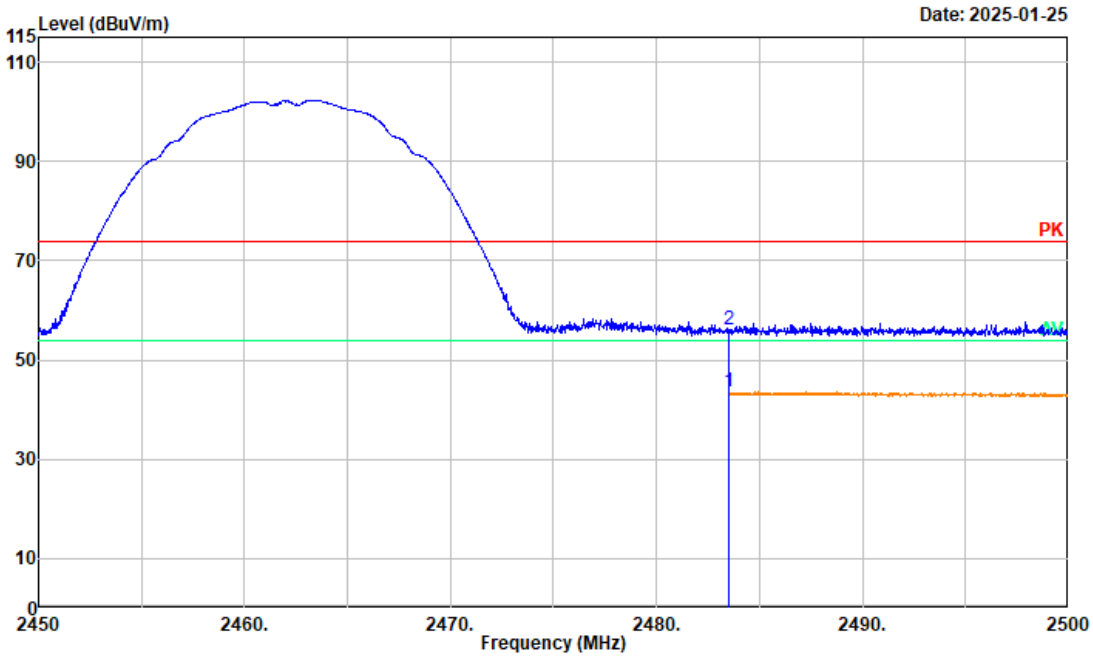


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11b 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2488.069	41.61	7.21	48.82	54.00	-5.18	Average
2	2488.069	52.38	7.21	59.59	74.00	-14.41	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2462MHz

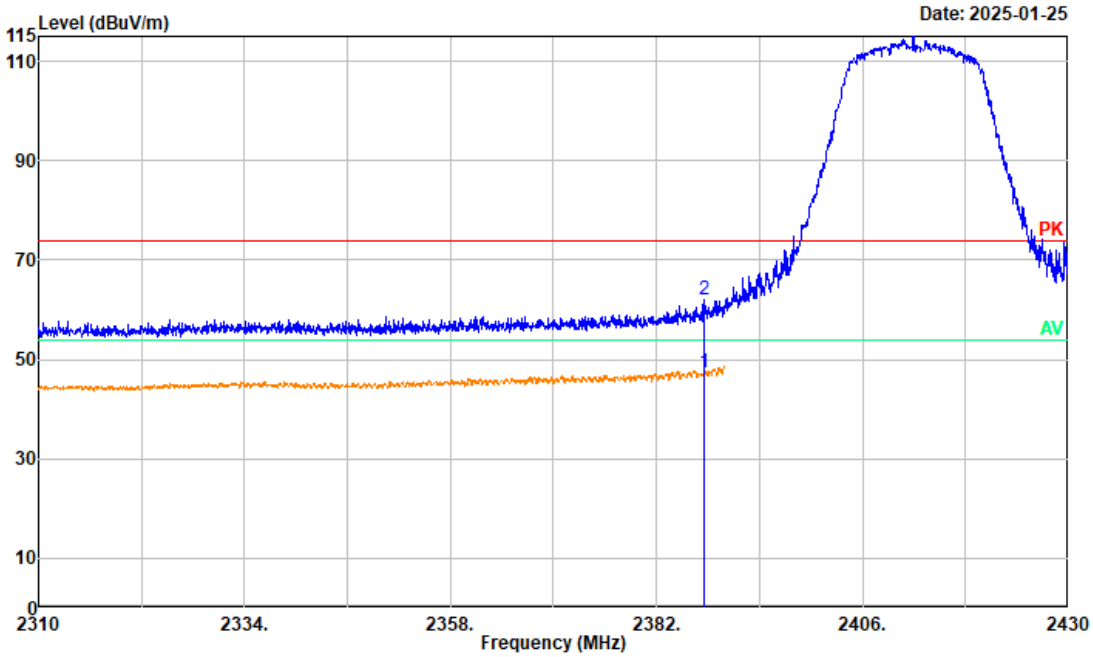


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11b 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.500	36.48	7.20	43.68	54.00	-10.32	Average
2	2483.500	48.81	7.20	56.01	74.00	-17.99	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2412MHz

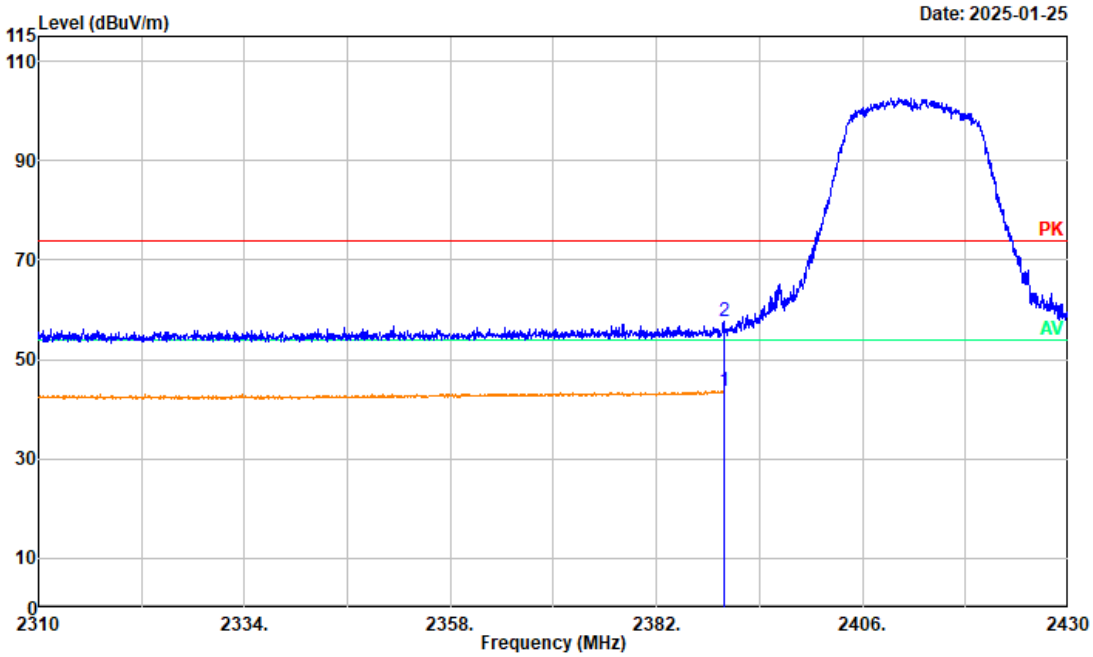


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2387.619	40.52	7.00	47.52	54.00	-6.48	Average
2	2387.619	54.87	7.00	61.87	74.00	-12.13	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2412MHz

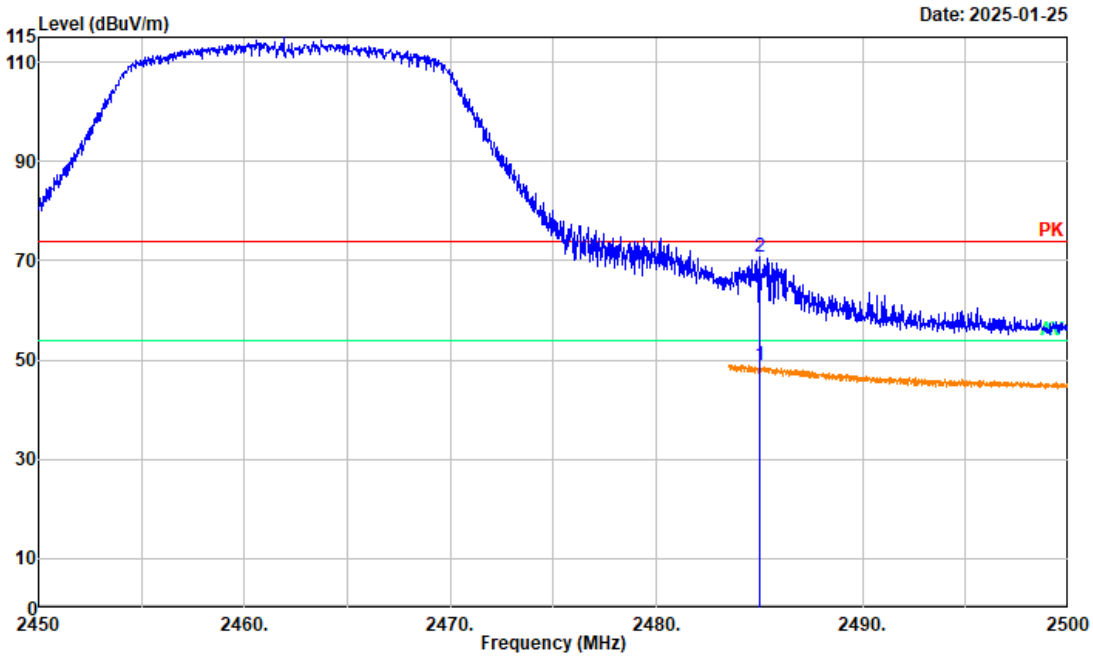


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2389.840	36.60	7.00	43.60	54.00	-10.40	Average
2	2389.840	50.56	7.00	57.56	74.00	-16.44	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

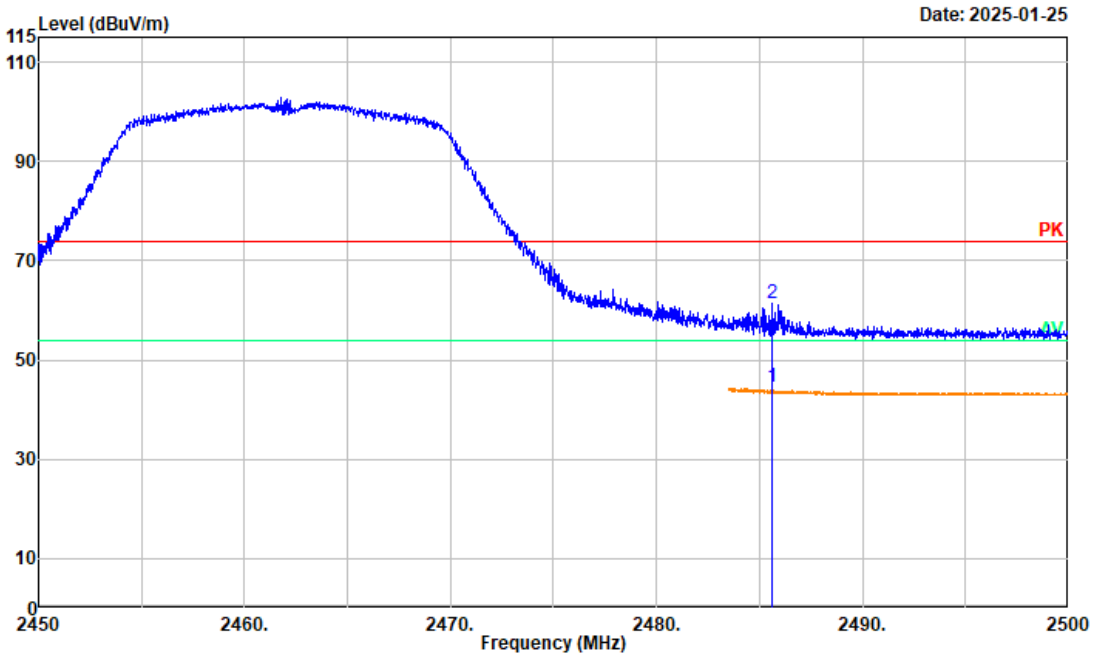


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2485.042	41.66	7.20	48.86	54.00	-5.14	Average
2	2485.042	63.40	7.20	70.60	74.00	-3.40	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

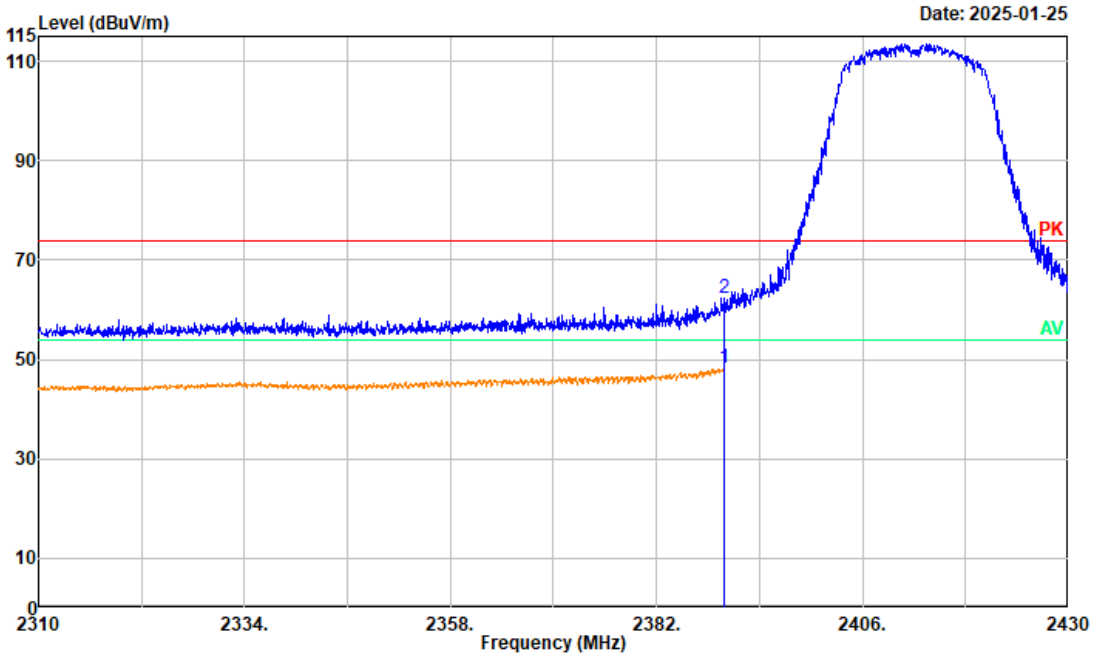


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2485.593	37.23	7.20	44.43	54.00	-9.57	Average
2	2485.593	54.09	7.20	61.29	74.00	-12.71	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2412MHz

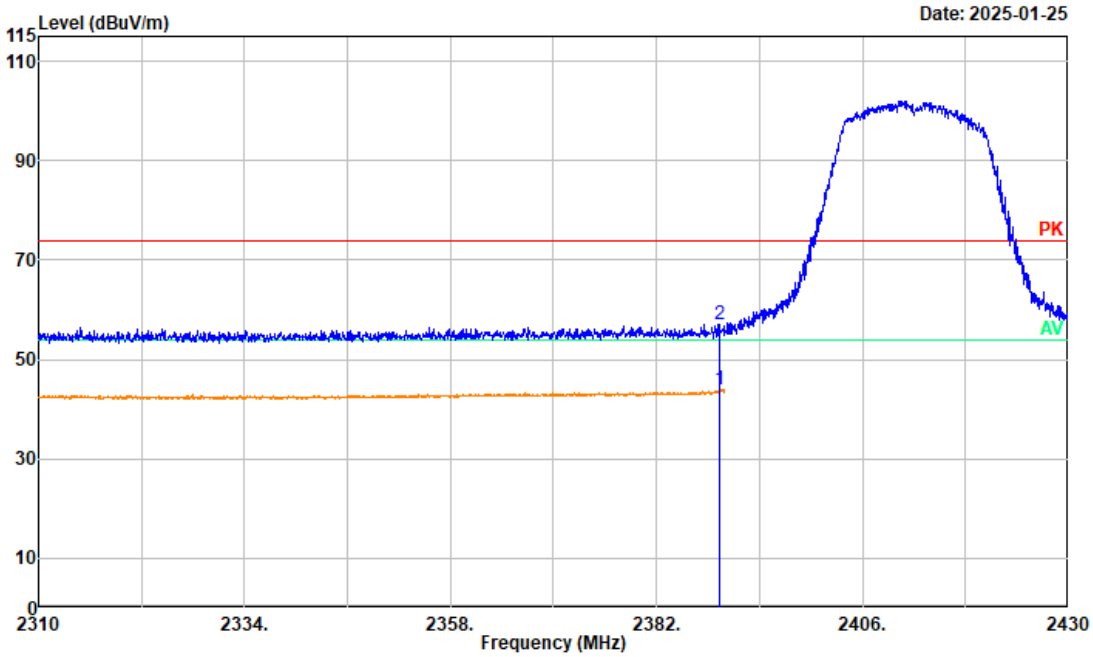


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n 2412

--No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	2389.900	41.22	7.00	48.22	54.00	-5.78	Average
2	2389.900	55.37	7.00	62.37	74.00	-11.63	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2412MHz

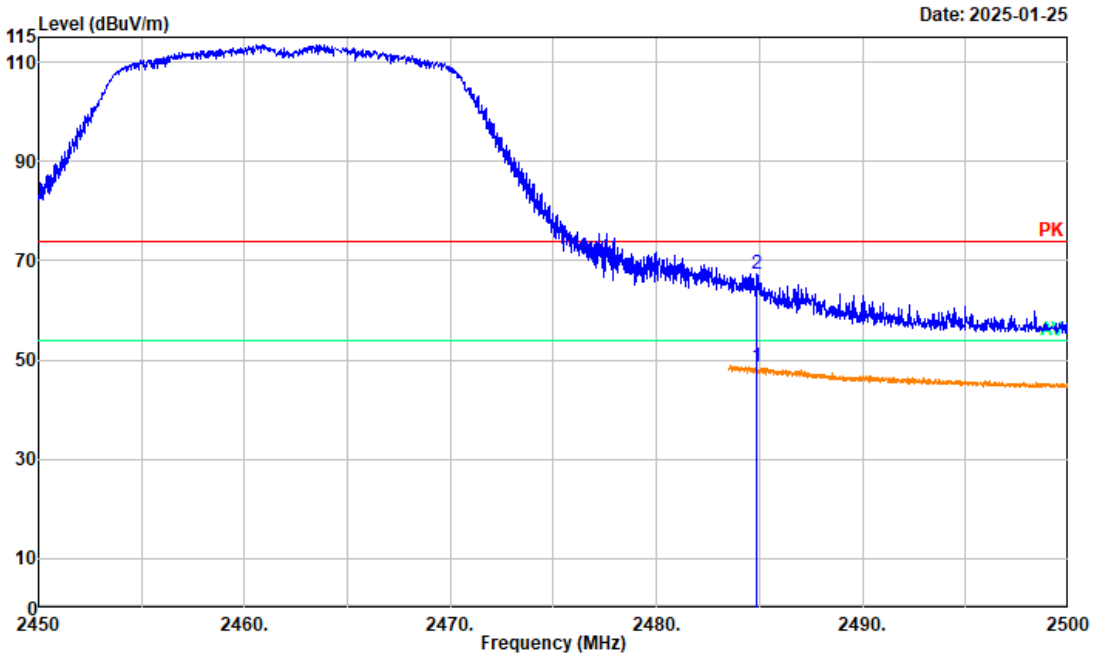


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2389.300	36.83	7.00	43.83	54.00	-10.17	Average
2	2389.300	50.09	7.00	57.09	74.00	-16.91	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

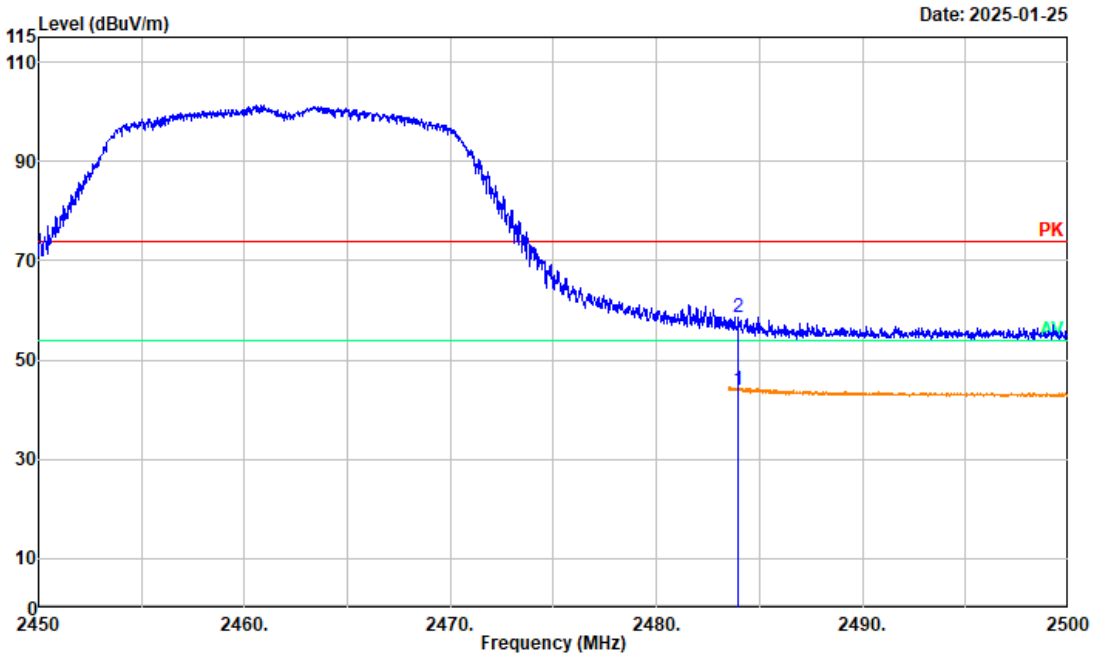


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2484.867	41.56	7.20	48.76	54.00	-5.24	Average
2	2484.867	60.07	7.20	67.27	74.00	-6.73	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz



Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.2℃/55%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	2483.992	36.72	7.20	43.92	54.00	-10.08	Average
2	2483.992	51.48	7.20	58.68	74.00	-15.32	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

For Module 2: TR5330S

Frequency (MHz)	Reading level (dBμV)	Polar (H/V)	Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
802.11b							
Low Channel							
4824.000	54.00	horizontal	-2.29	51.71	74.00	-22.29	Peak
4824.000	50.64	vertical	-2.29	48.35	74.00	-25.65	Peak
Middle Channel							
4874.000	55.25	horizontal	-1.92	53.33	74.00	-20.67	Peak
4874.000	51.27	vertical	-1.92	49.35	74.00	-24.65	Peak
High Channel							
4924.000	52.47	horizontal	-1.70	50.77	54.00	-3.23	Average
4924.000	56.86	horizontal	-1.70	55.16	74.00	-18.84	Peak
4924.000	50.81	vertical	-1.70	49.11	74.00	-24.89	Peak
802.11g							
Low Channel							
4824.000	52.82	horizontal	-2.29	50.53	74.00	-23.47	Peak
4824.000	48.34	vertical	-2.29	46.05	74.00	-27.95	Peak
Middle Channel							
4874.000	51.91	horizontal	-1.92	49.99	74.00	-24.01	Peak
4874.000	48.95	vertical	-1.92	47.03	74.00	-26.97	Peak
High Channel							
4924.000	54.66	horizontal	-1.70	52.96	74.00	-21.04	Peak
4924.000	48.83	vertical	-1.70	47.13	74.00	-26.87	Peak
802.11n20							
Low Channel							
4824.000	49.21	horizontal	-2.29	46.92	74.00	-27.08	Peak
4824.000	47.74	vertical	-2.29	45.45	74.00	-28.55	Peak
Middle Channel							
4874.000	50.04	horizontal	-1.92	48.12	74.00	-25.88	Peak
4874.000	48.21	vertical	-1.92	46.29	74.00	-27.71	Peak
High Channel							
4924.000	51.69	horizontal	-1.70	49.99	74.00	-24.01	Peak
4924.000	48.85	vertical	-1.70	47.15	74.00	-26.85	Peak
802.11n40							
Low Channel							
4844.000	47.73	horizontal	-2.17	45.56	74.00	-28.44	Peak

4844.000	48.29	vertical	-2.17	46.12	74.00	-27.88	Peak
Middle Channel							
4874.000	48.53	horizontal	-1.92	46.61	74.00	-27.39	Peak
4874.000	47.85	vertical	-1.92	45.93	74.00	-28.07	Peak
High Channel							
4904.000	48.20	horizontal	-1.71	46.49	74.00	-27.51	Peak
4904.000	48.47	vertical	-1.71	46.76	74.00	-27.24	Peak
802.11ax20							
Low Channel							
4824.000	48.52	horizontal	-2.29	46.23	74.00	-27.77	Peak
4824.000	48.50	vertical	-2.29	46.21	74.00	-27.79	Peak
Middle Channel							
4874.000	47.73	horizontal	-1.92	45.81	74.00	-28.19	Peak
4874.000	48.28	vertical	-1.92	46.36	74.00	-27.64	Peak
High Channel							
4924.000	49.15	horizontal	-1.70	47.45	74.00	-26.55	Peak
4924.000	47.61	vertical	-1.70	45.91	74.00	-28.09	Peak

Note:

Corrected factor=Antenna factor + Cable loss - Amplifier Gain

Corrected Amplitude=Reading level + Correct factor

Margin= Corrected Amplitude-Limit

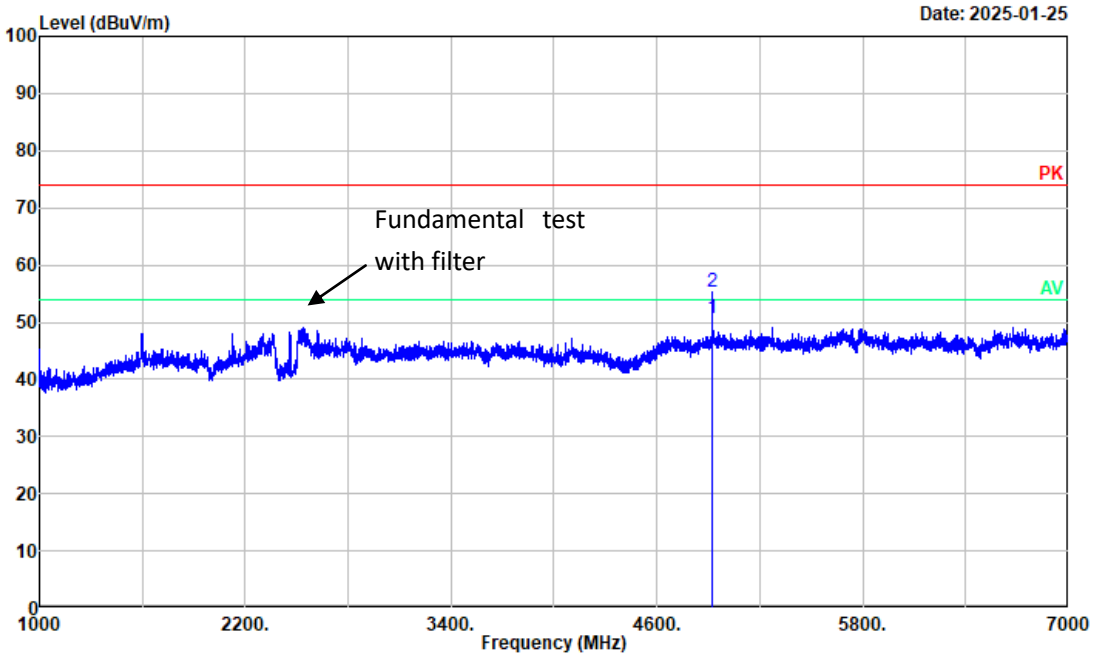
For the test result of Peak below the Peak limit more than 20dB, which can compliance with the average limit, just the Peak level was recorded.

The emission levels of other frequencies that were lower than the limit 20dB not show in test report.

For emissions in 18GHz-25GHz range, all emissions were investigated and in the noise floor level.

Test plot for example as below:

Mode:	802.11b	Channel:	2462MHz

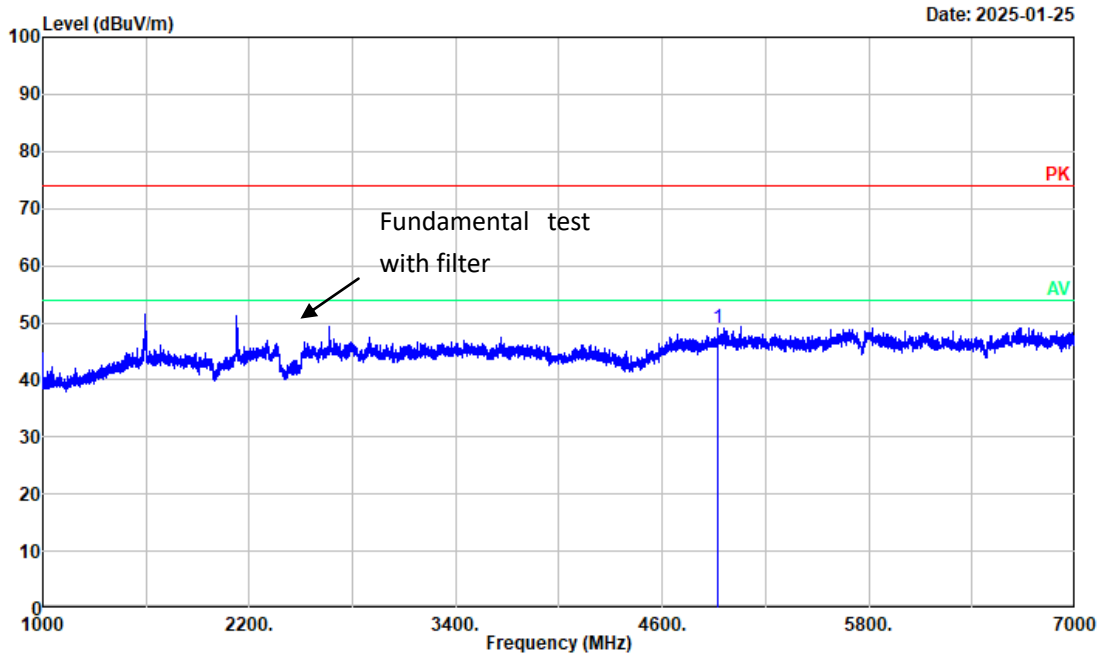


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11b 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	52.47	-1.70	50.77	54.00	-3.23	Average
2	4924.000	56.86	-1.70	55.16	74.00	-18.84	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2462MHz

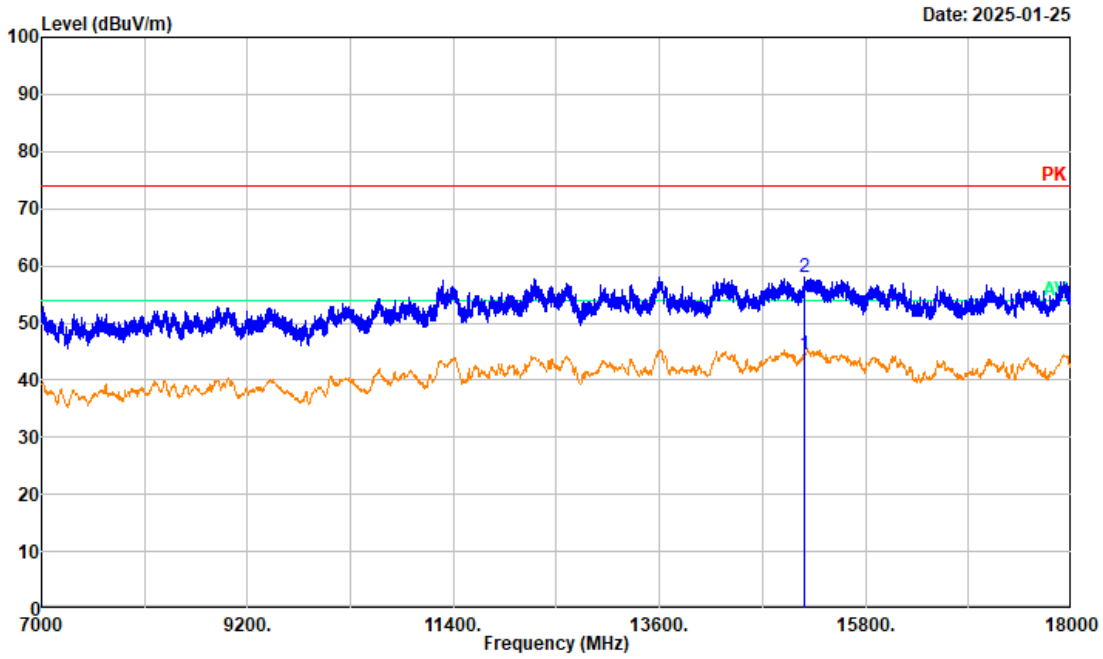


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11b 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	50.81	-1.70	49.11	74.00	-24.89	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11b	Channel:	2462MHz

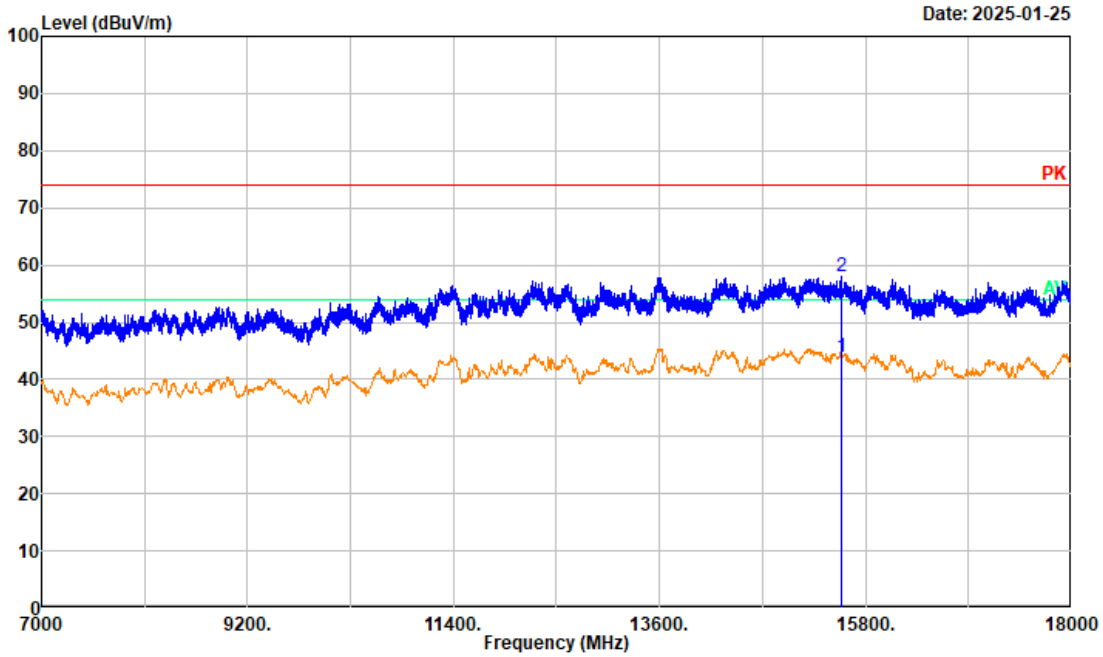


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11b 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15148.000	38.18	6.21	44.39	54.00	-9.61	Average
2	15148.000	51.71	6.21	57.92	74.00	-16.08	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2462MHz

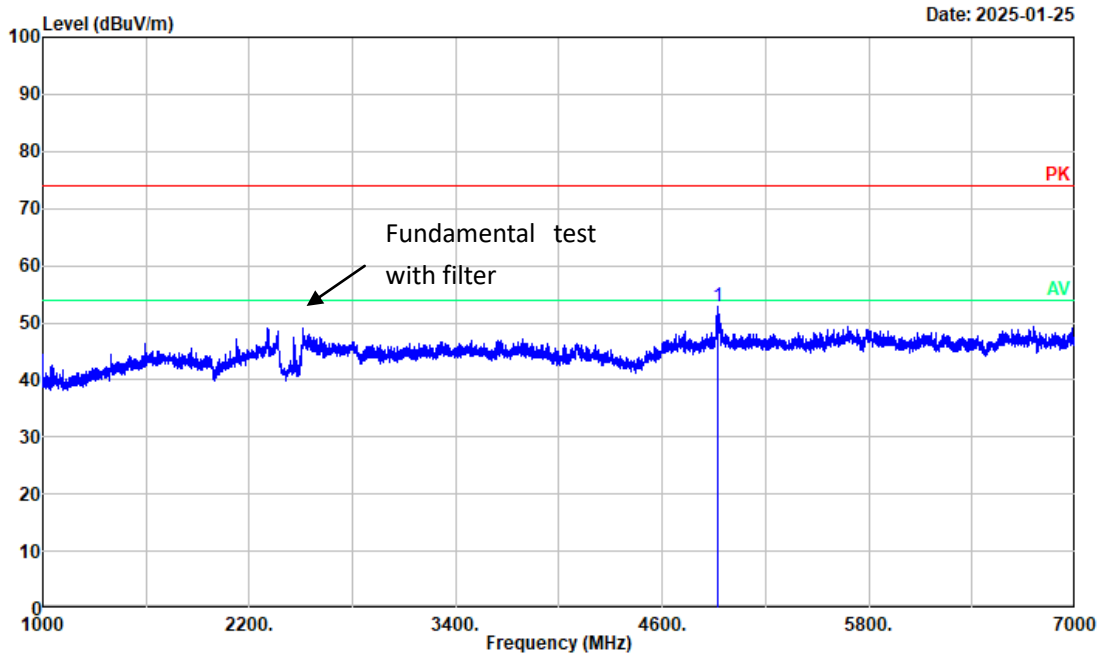


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11b 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15540.000	37.85	6.14	43.99	54.00	-10.01	Average
2	15540.000	51.95	6.14	58.09	74.00	-15.91	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

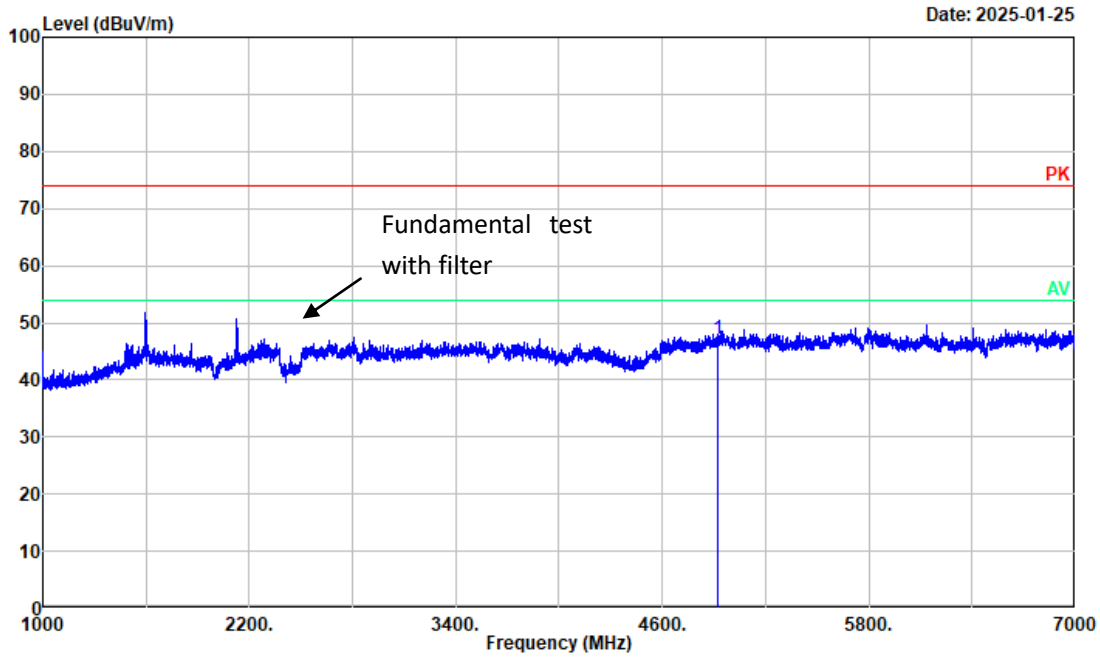


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	54.66	-1.70	52.96	74.00	-21.04	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

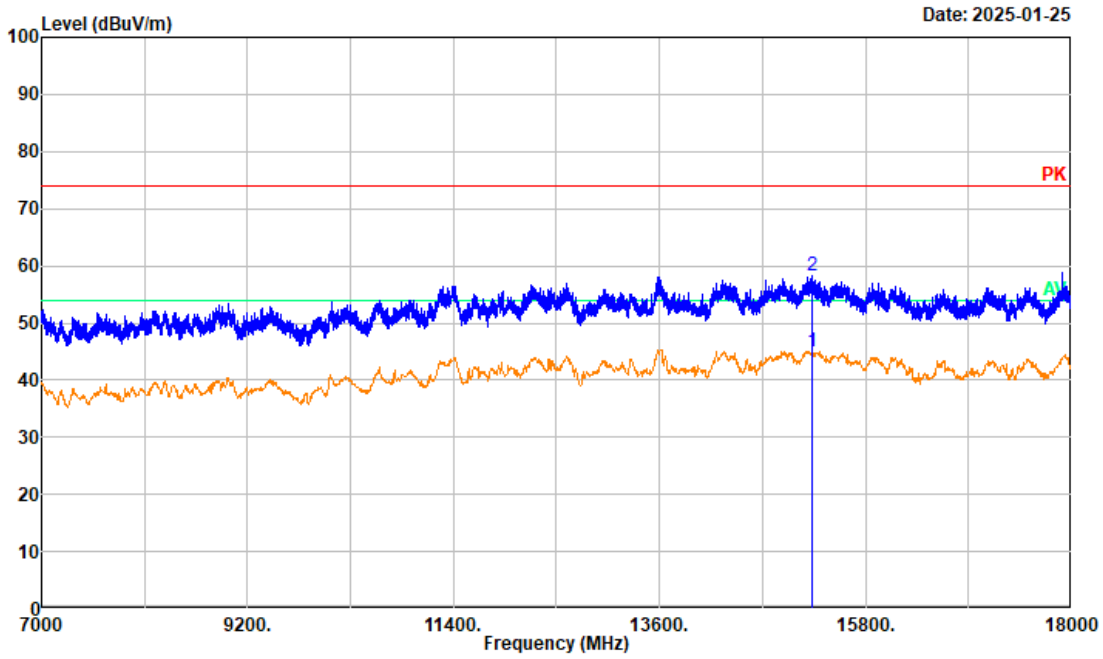


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	48.83	-1.70	47.13	74.00	-26.87	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

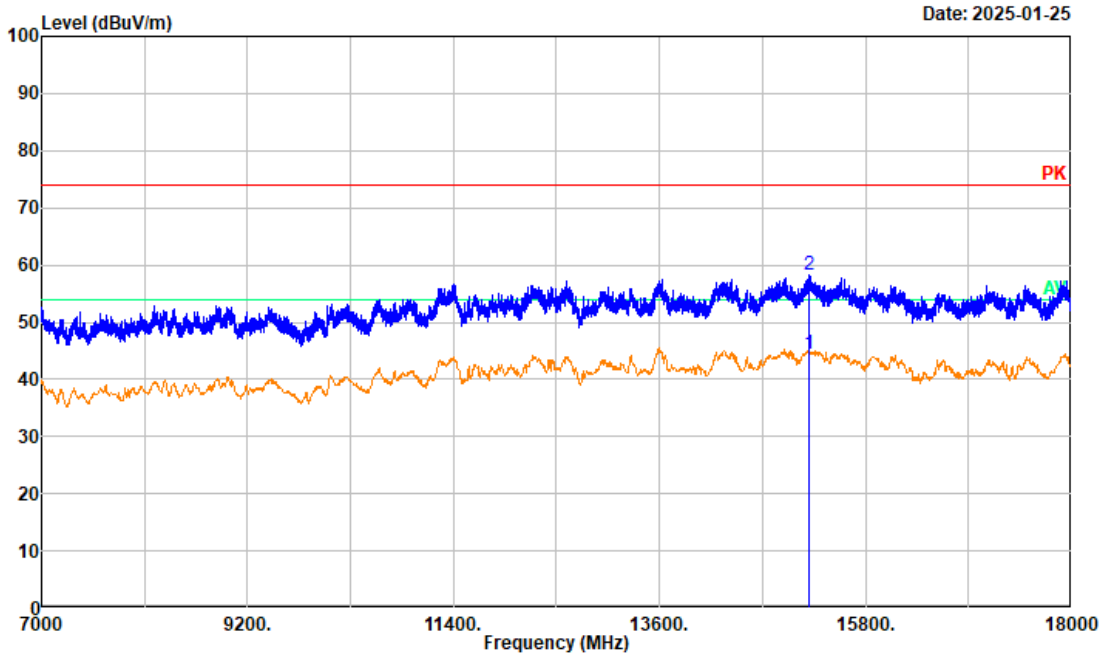


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15226.000	38.64	6.26	44.90	54.00	-9.10	Average
2	15226.000	52.04	6.26	58.30	74.00	-15.70	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

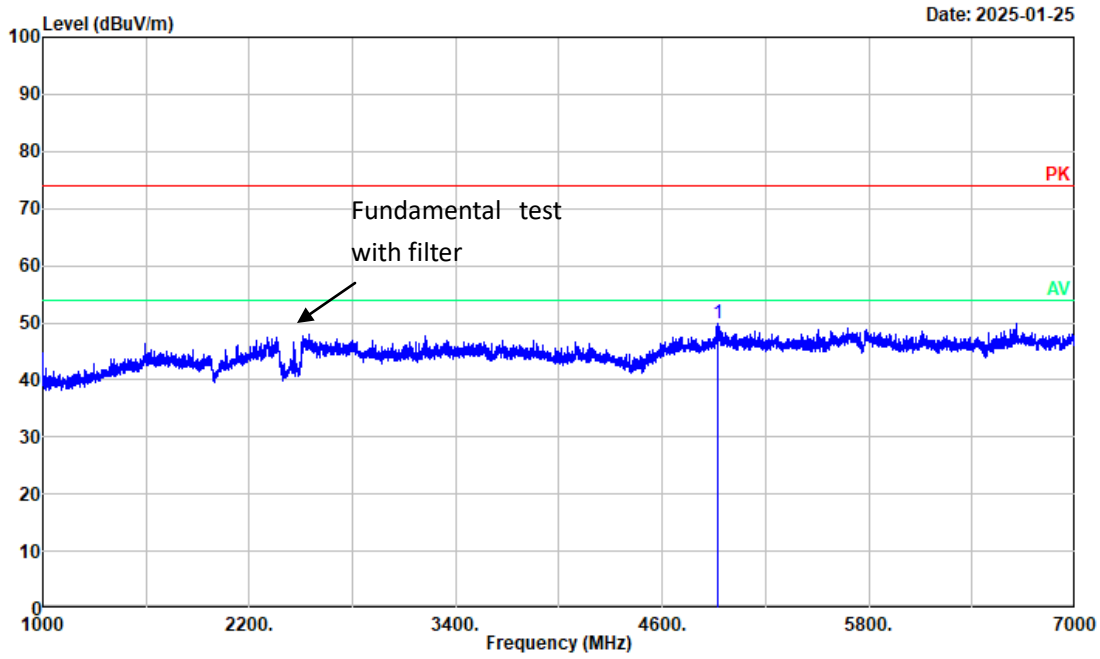


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15193.000	38.24	6.29	44.53	54.00	-9.47	Average
2	15193.000	52.00	6.29	58.29	74.00	-15.71	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

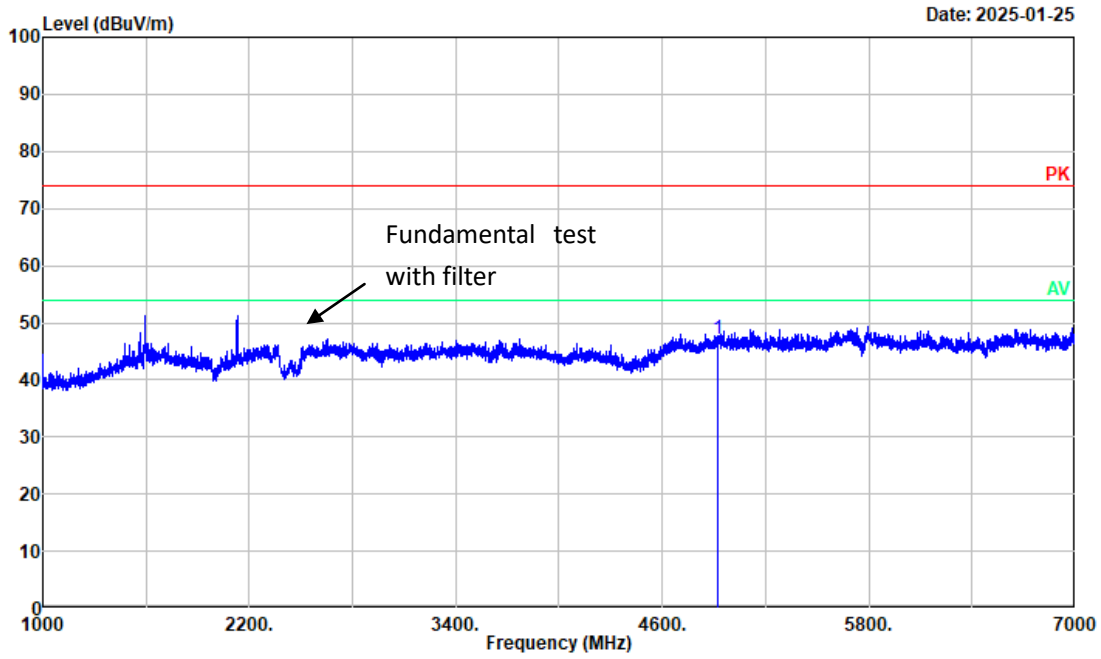


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	51.69	-1.70	49.99	74.00	-24.01	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

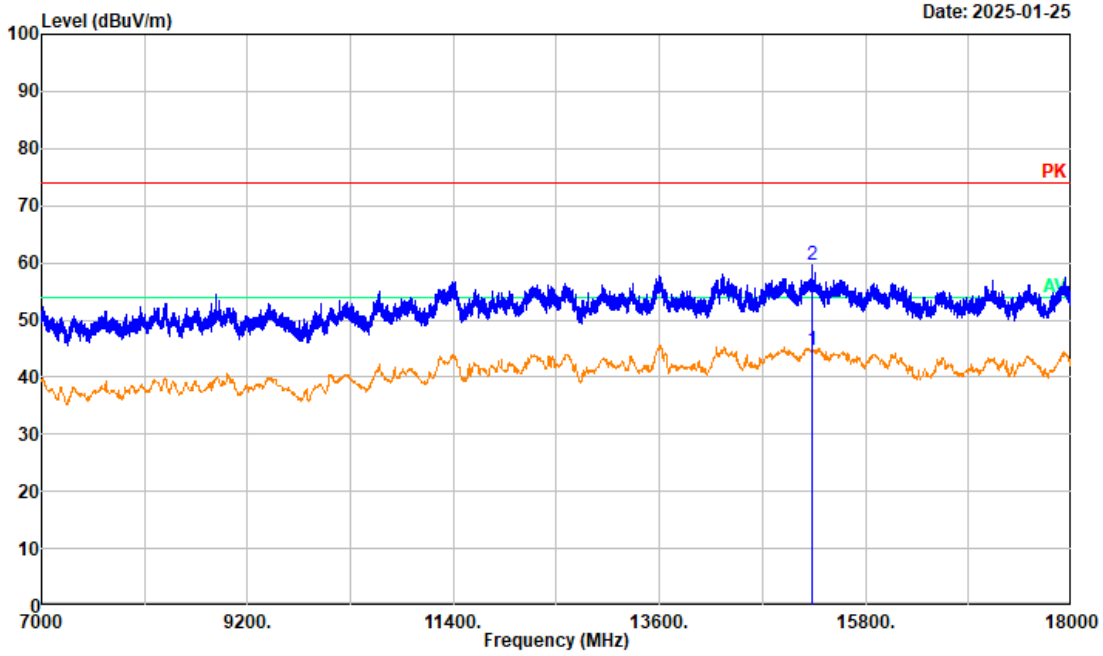


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	48.85	-1.70	47.15	74.00	-26.85	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

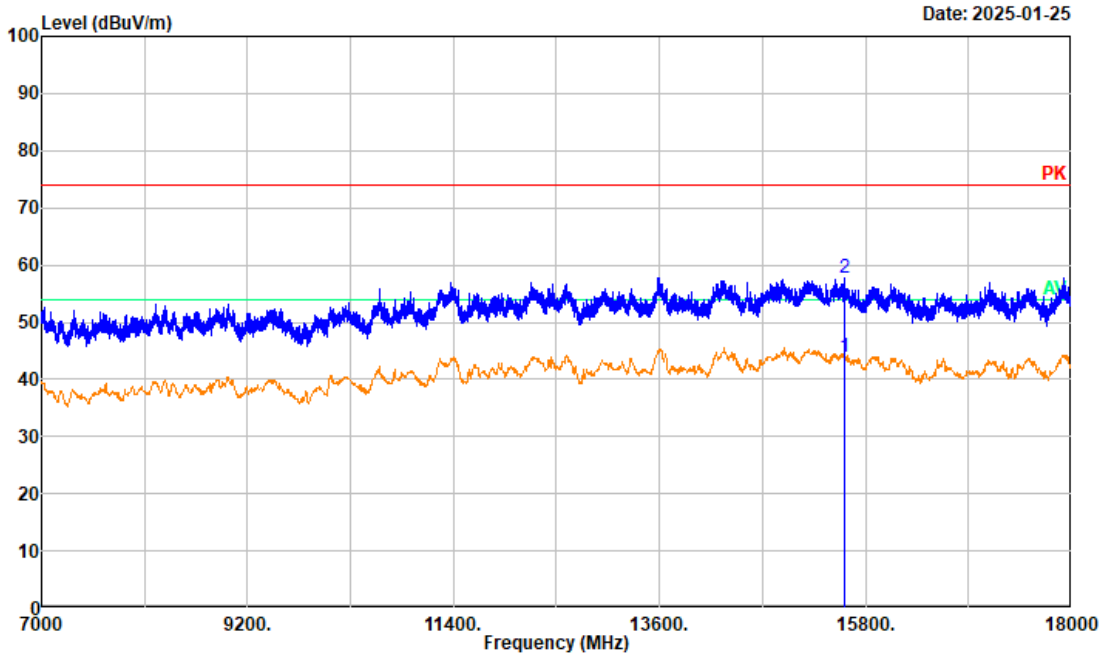


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15234.000	38.35	6.25	44.60	54.00	-9.40	Average
2	15234.000	53.24	6.25	59.49	74.00	-14.51	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

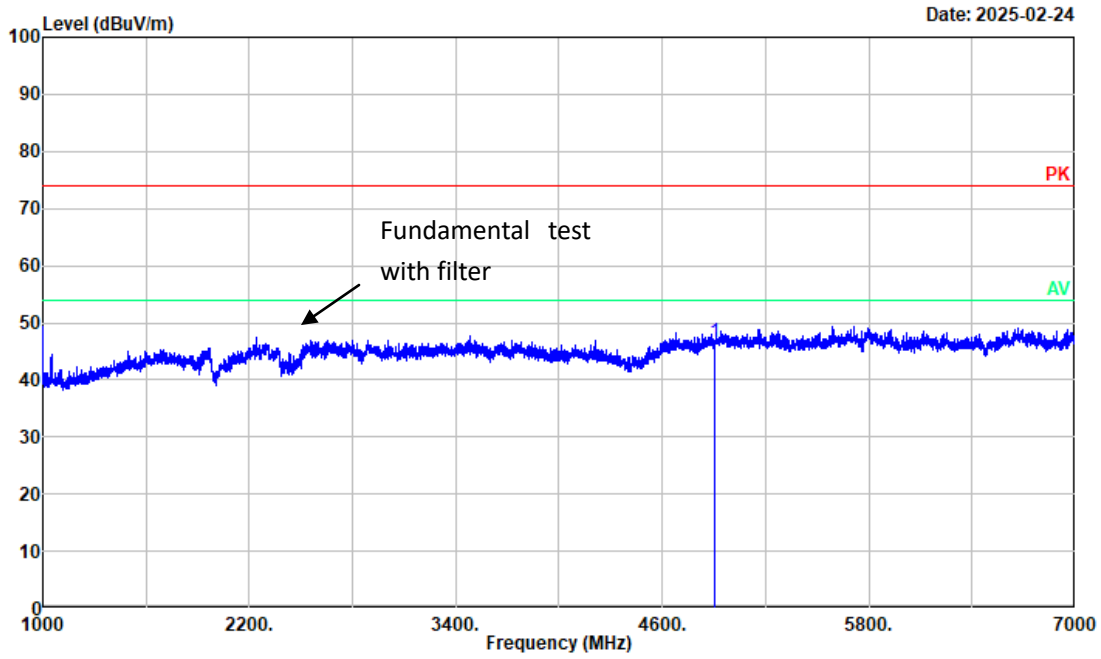


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15572.000	37.91	6.09	44.00	54.00	-10.00	Average
2	15572.000	51.51	6.09	57.60	74.00	-16.40	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n40	Channel:	2452MHz

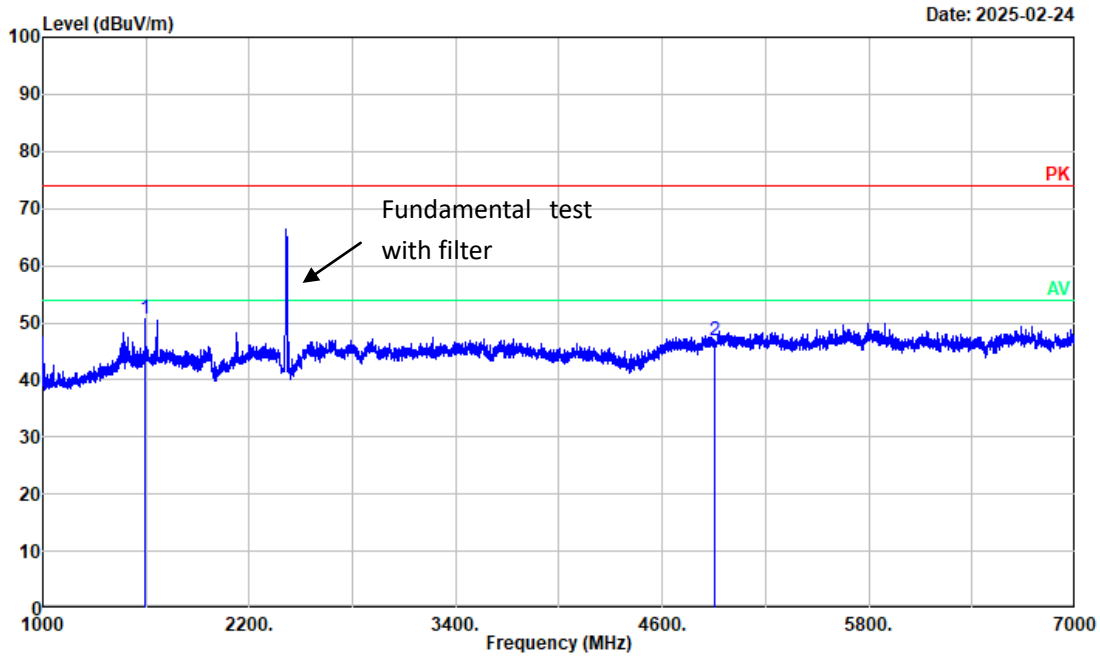


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n40 2452

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4904.000	48.20	-1.71	46.49	74.00	-27.51	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11n40	Channel:	2452MHz

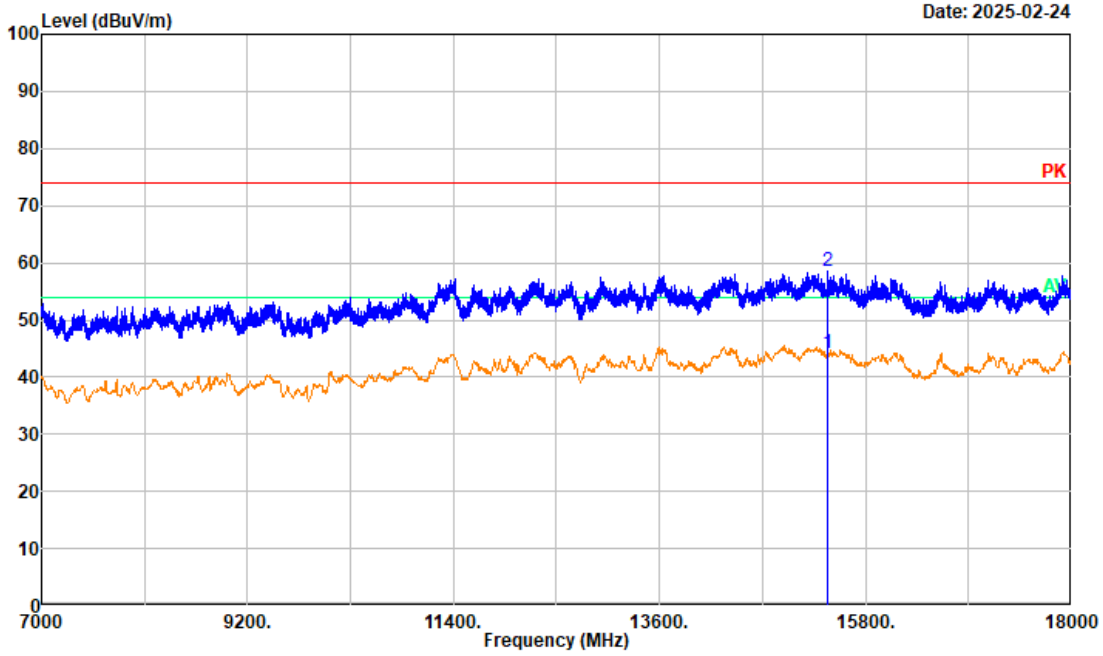


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n40 2452

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	1593.000	54.90	-4.27	50.63	74.00	-23.37	Peak
2	4904.000	48.47	-1.71	46.76	74.00	-27.24	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11n40	Channel:	2452MHz

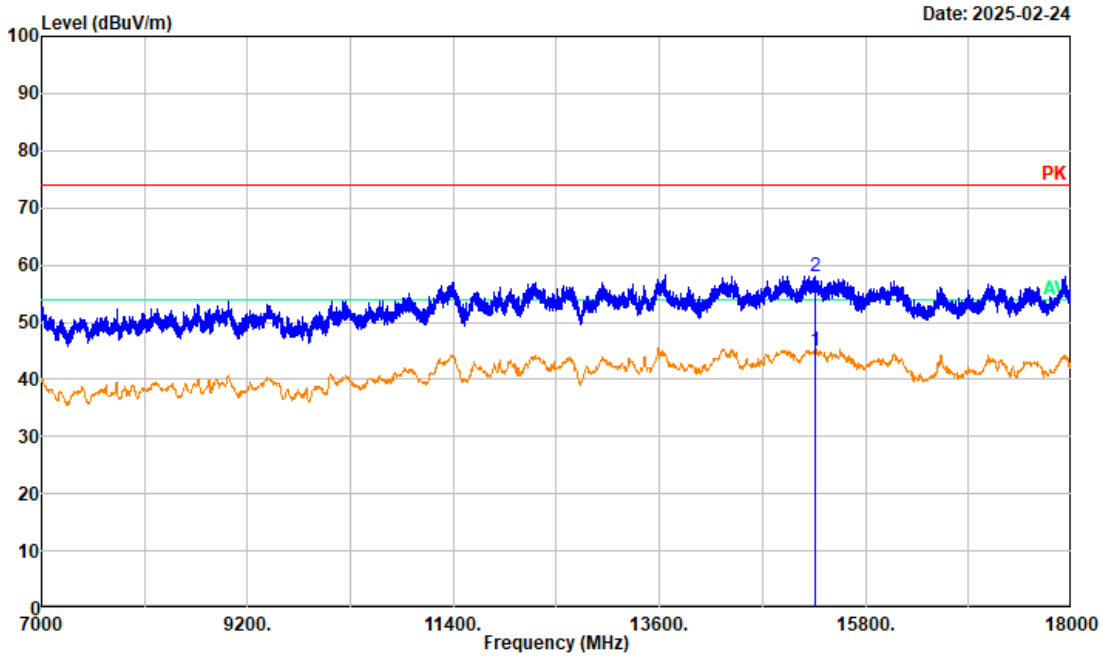


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n40 2452

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15388.000	37.46	6.64	44.10	54.00	-9.90	Average
2	15388.000	51.87	6.64	58.51	74.00	-15.49	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/2kHz , DET: PK

Mode:	802.11n40	Channel:	2452MHz

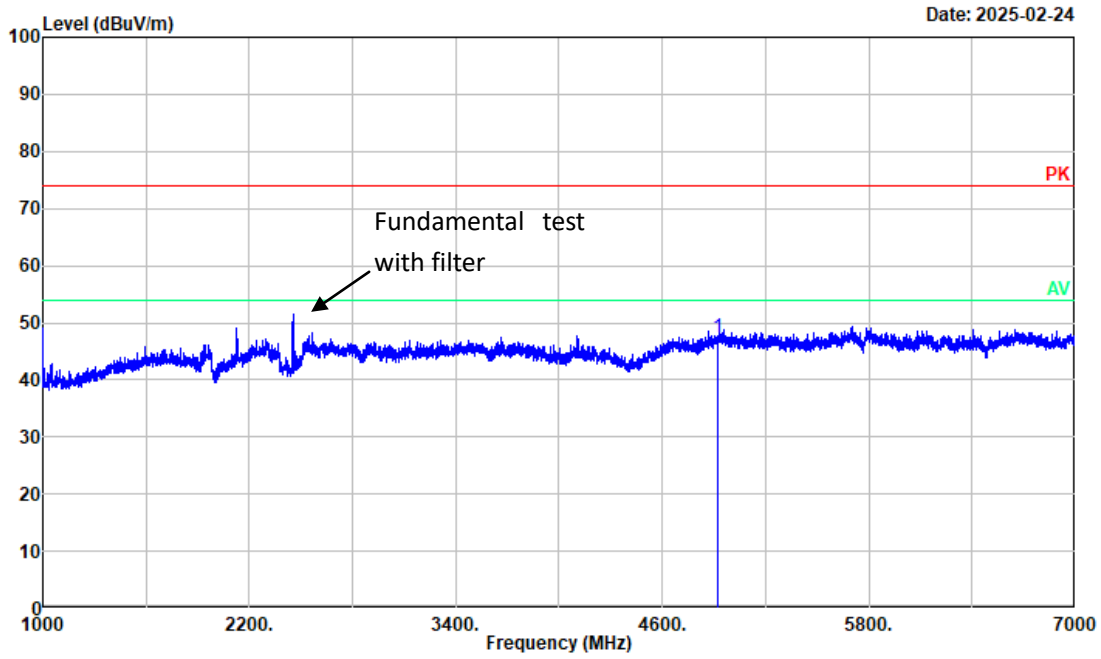


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n40 2452

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15261.000	38.74	6.21	44.95	54.00	-9.05	Average
2	15261.000	51.81	6.21	58.02	74.00	-15.98	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/2kHz , DET: PK

Mode:	802.11ax20	Channel:	2462MHz

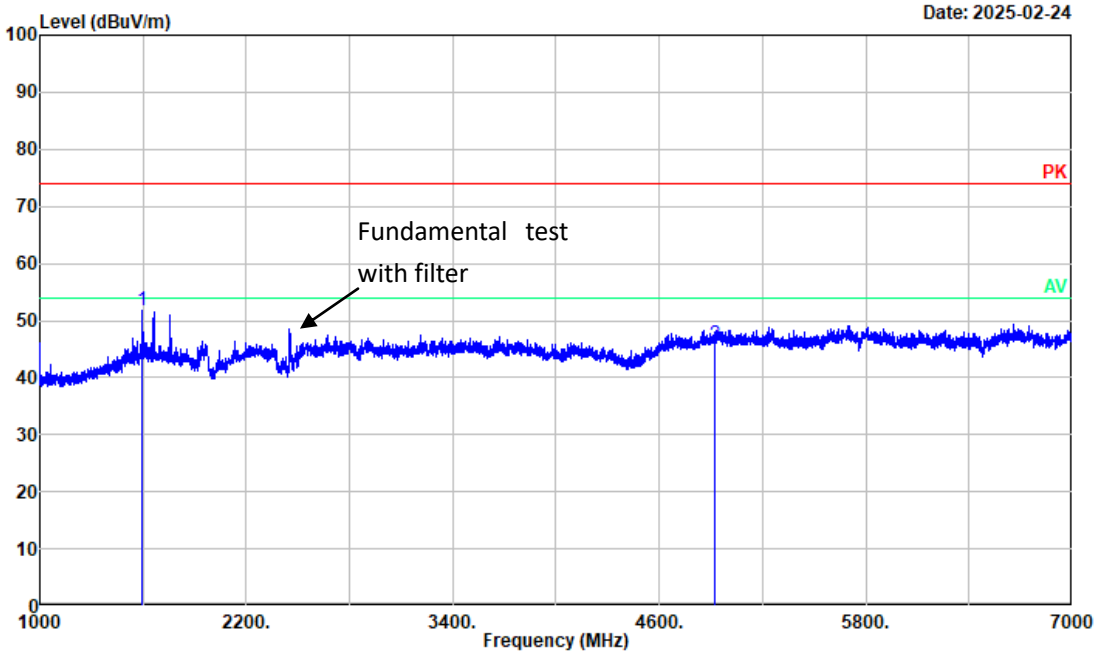


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11ax20 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	4924.000	49.15	-1.70	47.45	74.00	-26.55	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11ax20	Channel:	2462MHz

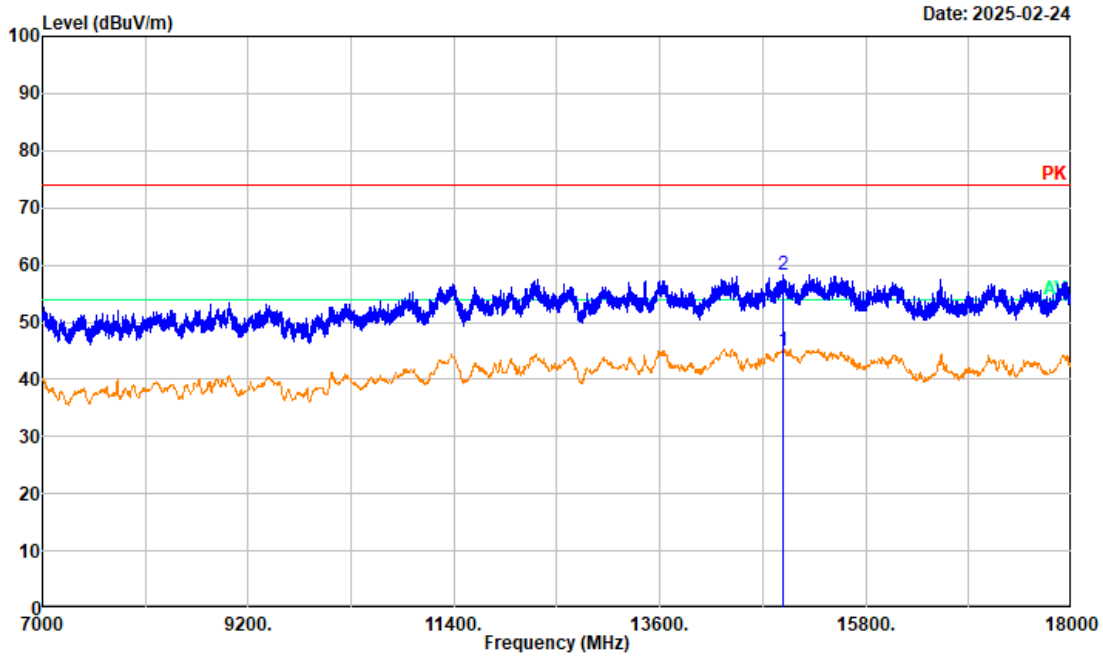


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11ax20 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	1596.000	56.09	-4.24	51.85	74.00	-22.15	Peak
2	4924.000	47.61	-1.70	45.91	74.00	-28.09	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK

Mode:	802.11ax20	Channel:	2462MHz

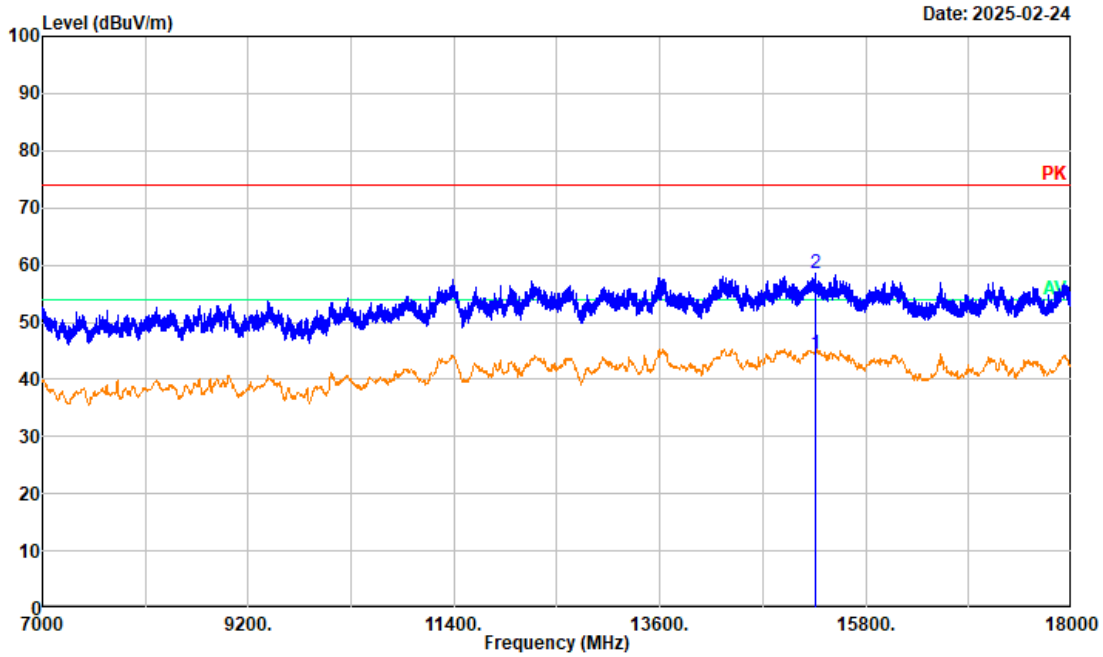


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11ax20 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	14910.000	38.54	6.54	45.08	54.00	-8.92	Average
2	14910.000	51.82	6.54	58.36	74.00	-15.64	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11ax20	Channel:	2462MHz

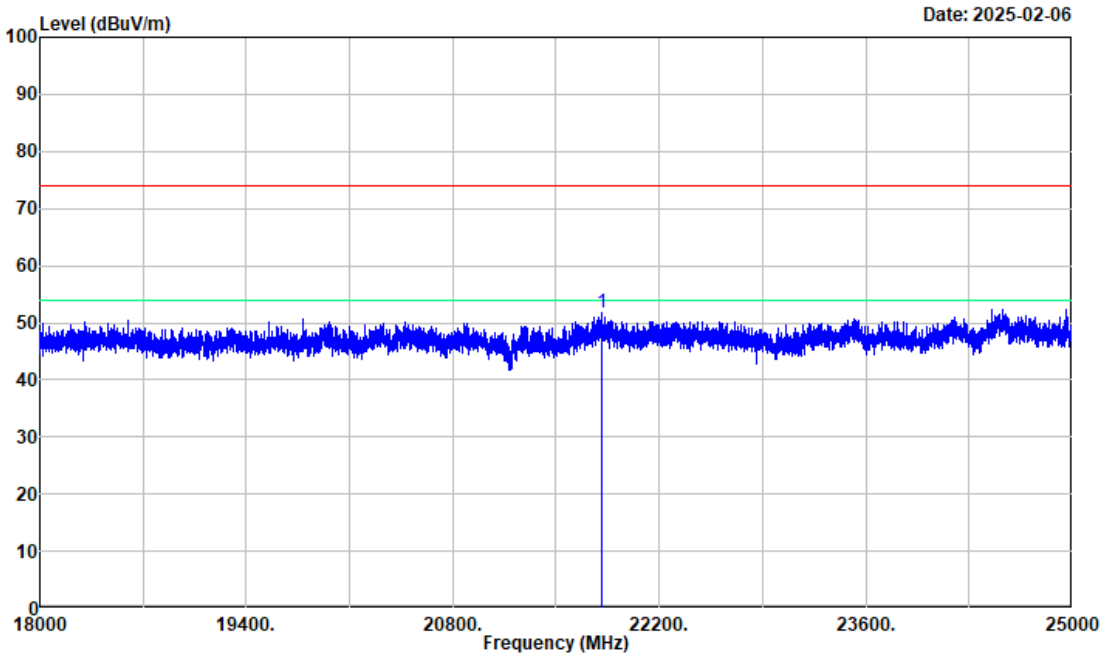


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11ax20 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15266.000	38.26	6.20	44.46	54.00	-9.54	Average
2	15266.000	52.22	6.20	58.42	74.00	-15.58	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2437MHz

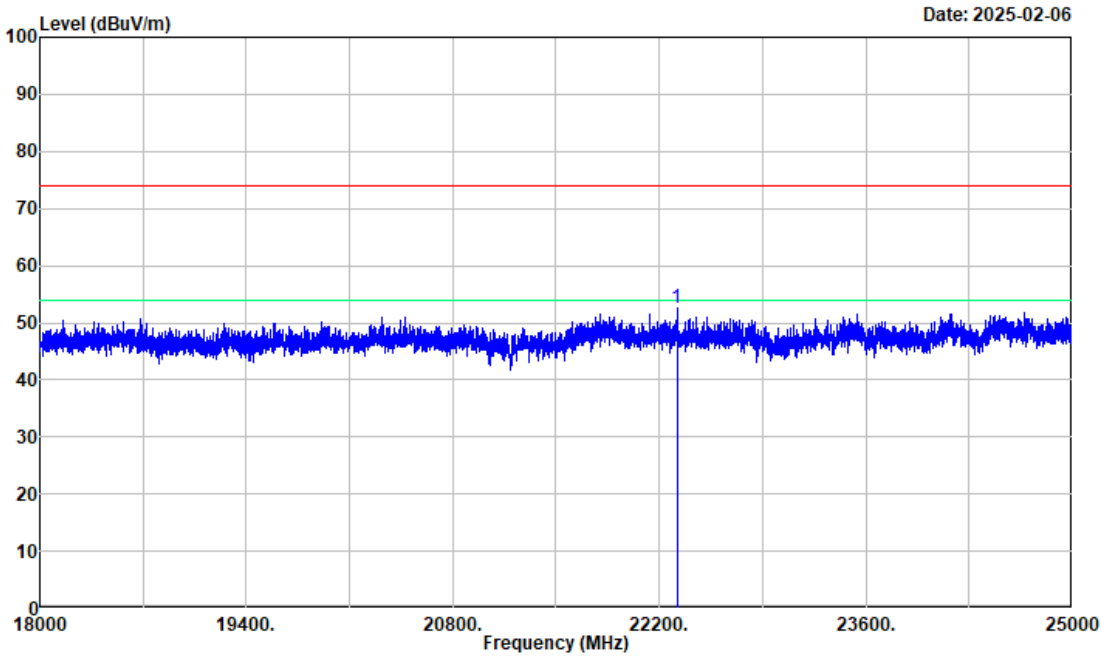


Project No. : 2405A112470E-RF
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g-2437

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	21806.000	54.84	-3.20	51.64	74.00	-22.36	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain - Distance extrapolate factor
Distance extrapolate factor = 20*log(specified distance/measured distance)
Specified distance = 3 meters, measured distance = 1.5 meters
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK

Mode:	802.11g	Channel:	2437MHz



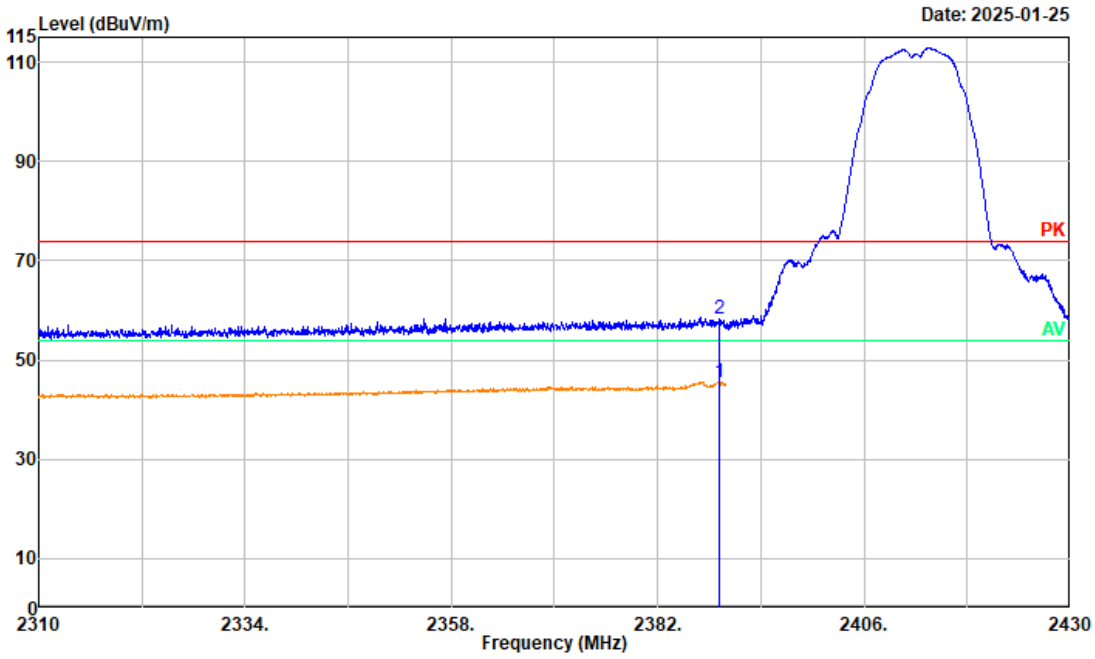
Project No. : 2405A112470E-RF
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 23.4℃/50%R.H./101.5kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g-2437

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	22319.000	55.59	-2.88	52.71	74.00	-21.29	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain - Distance extrapolate factor
Distance extrapolate factor = 20*log(specified distance/measured distance)
Specified distance = 3 meters, measured distance = 1.5 meters
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK

Radiated Band edge:

Mode:	802.11b	Channel:	2412MHz

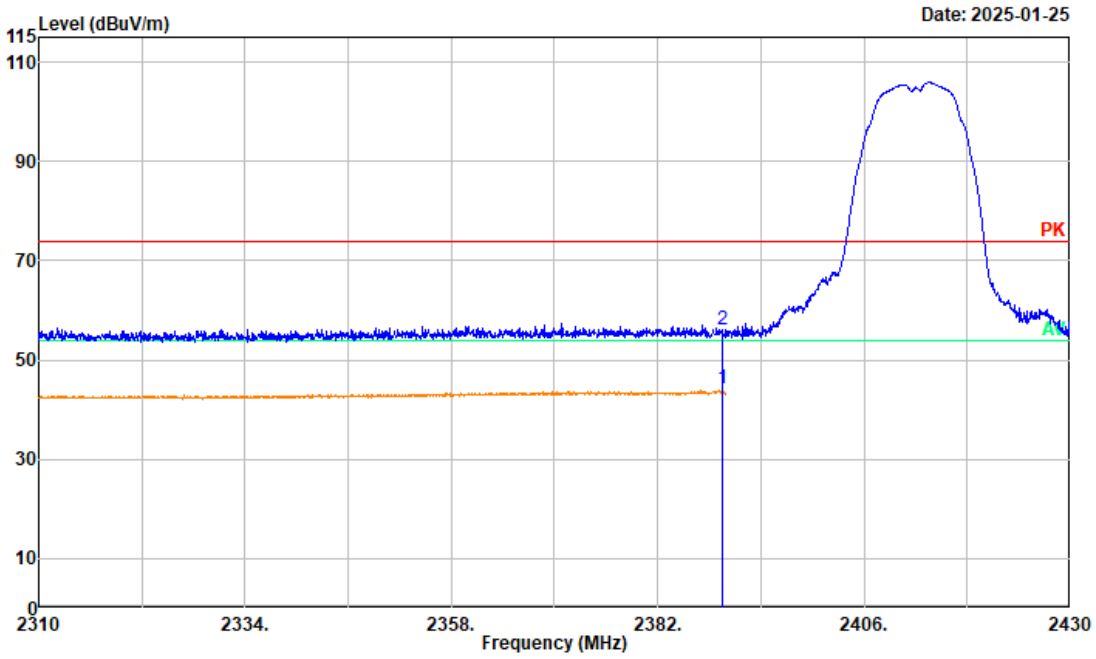


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11b 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2389.140	38.63	7.00	45.63	54.00	-8.37	Average
2	2389.140	51.19	7.00	58.19	74.00	-15.81	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2412MHz

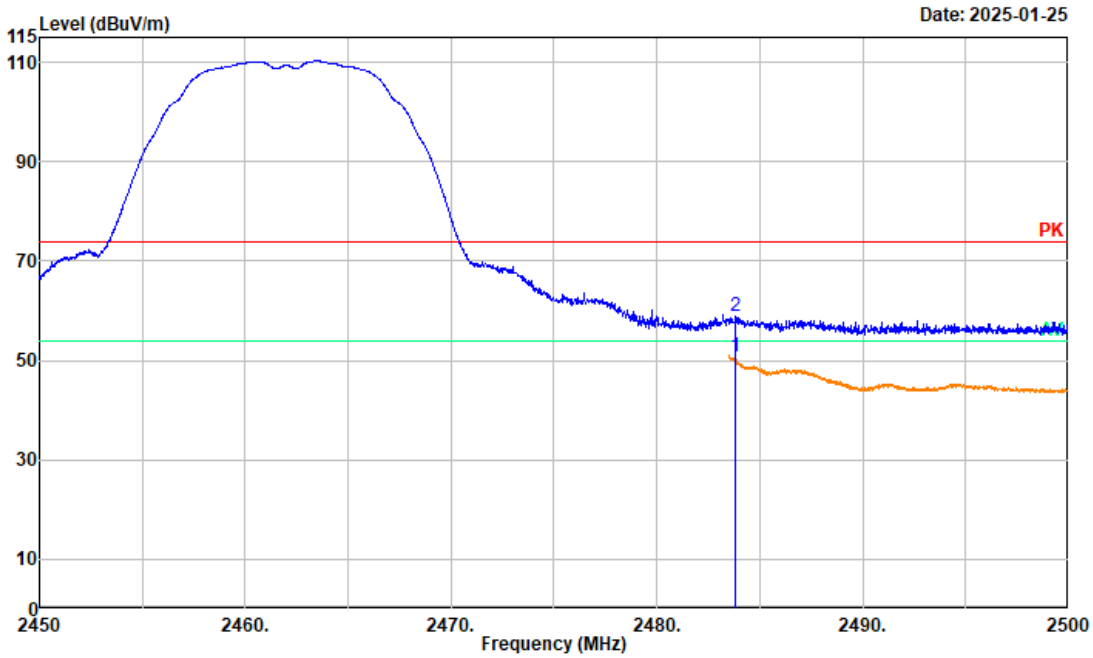


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11b 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2389.500	37.22	7.00	44.22	54.00	-9.78	Average
2	2389.500	49.07	7.00	56.07	74.00	-17.93	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2462MHz

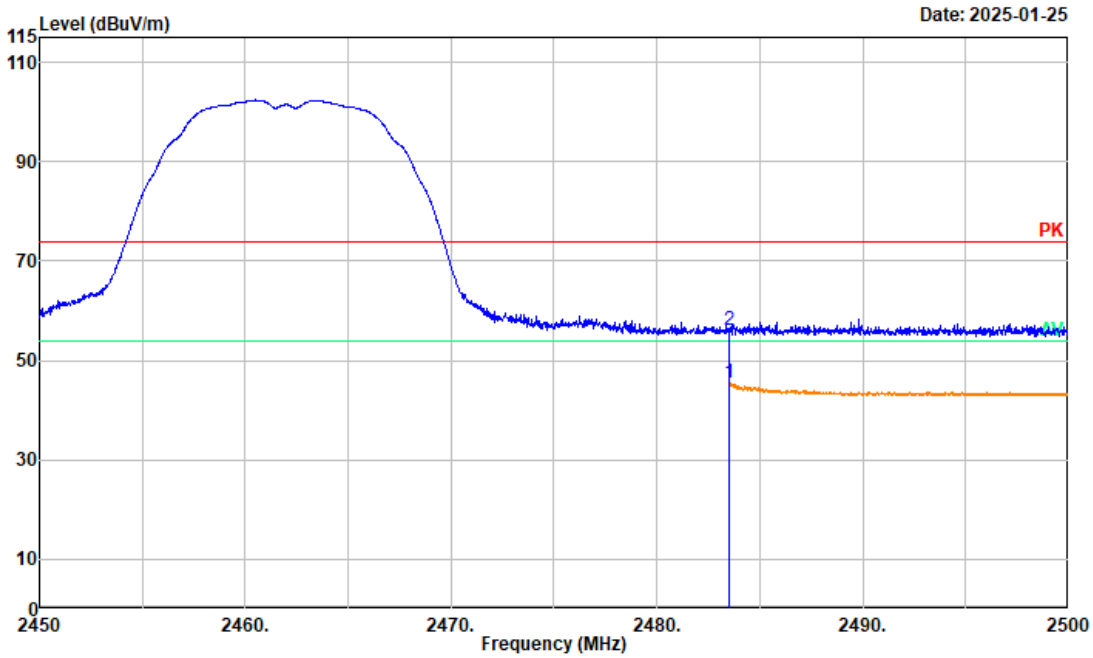


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11b 2462

--No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	2483.800	43.45	7.20	50.65	54.00	-3.35	Average
2	2483.800	51.56	7.20	58.76	74.00	-15.24	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11b	Channel:	2462MHz

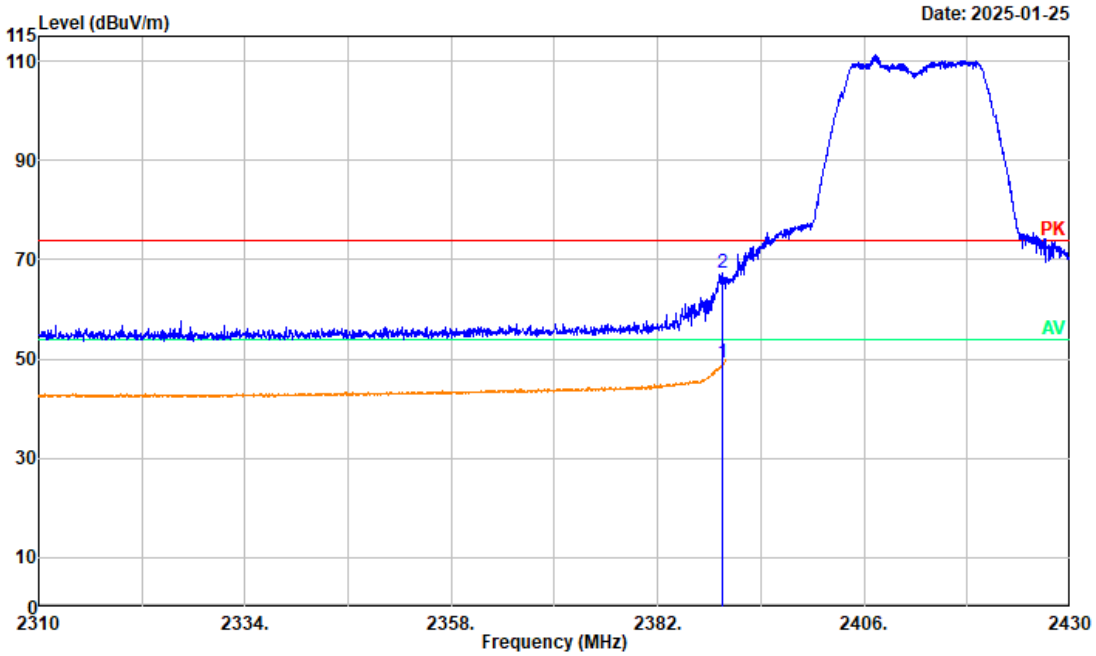


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11b 2462

--No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	2483.500	38.44	7.20	45.64	54.00	-8.36	Average
2	2483.500	48.80	7.20	56.00	74.00	-18.00	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2412MHz

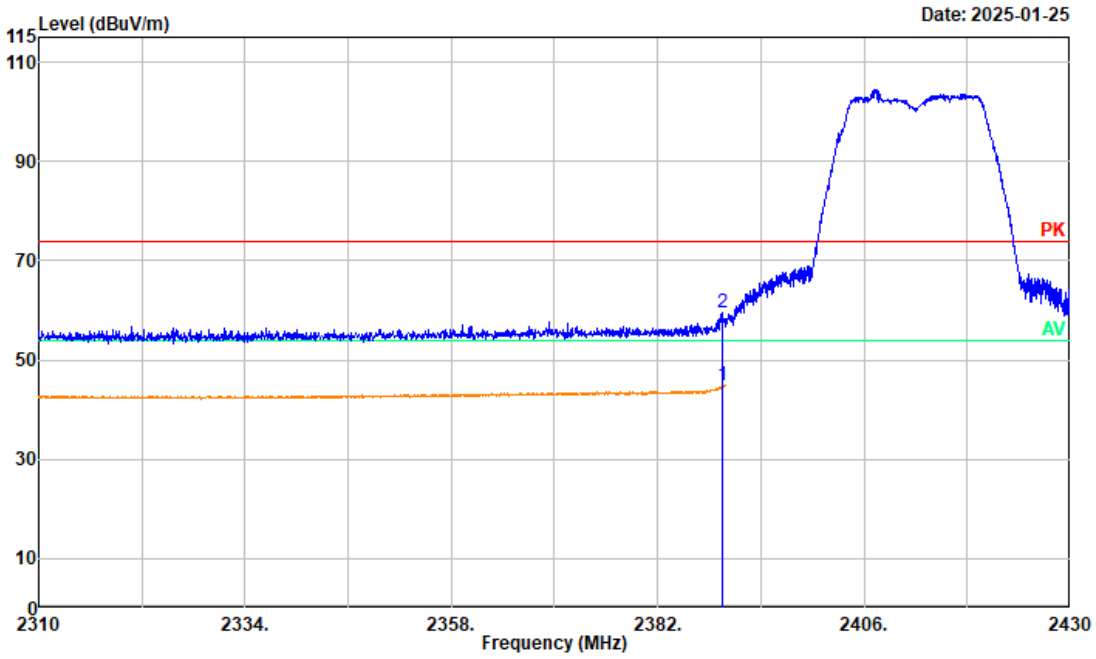


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2389.440	42.29	7.00	49.29	54.00	-4.71	Average
2	2389.440	60.21	7.00	67.21	74.00	-6.79	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2412MHz

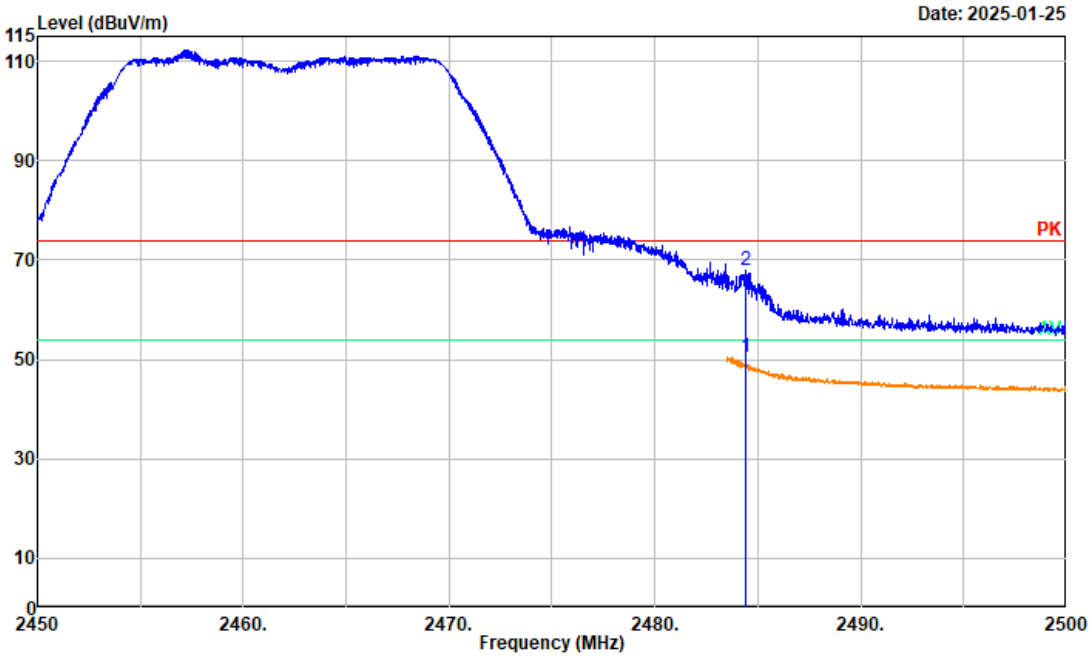


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2389.440	37.79	7.00	44.79	54.00	-9.21	Average
2	2389.440	52.57	7.00	59.57	74.00	-14.43	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

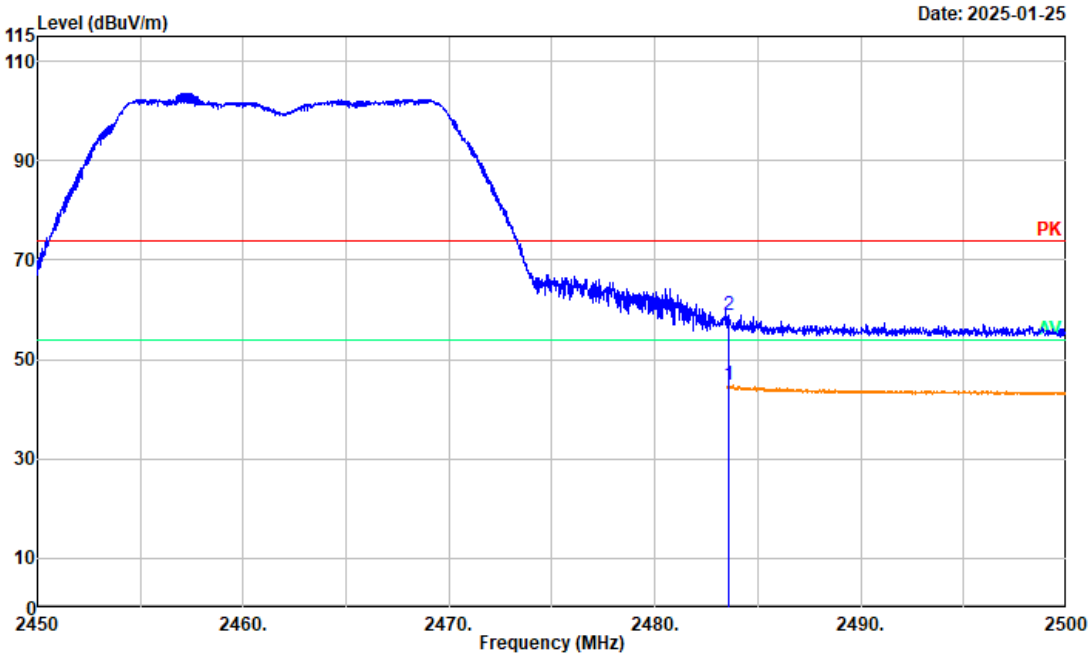


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2484.375	43.25	7.20	50.45	54.00	-3.55	Average
2	2484.375	60.65	7.20	67.85	74.00	-6.15	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11g	Channel:	2462MHz

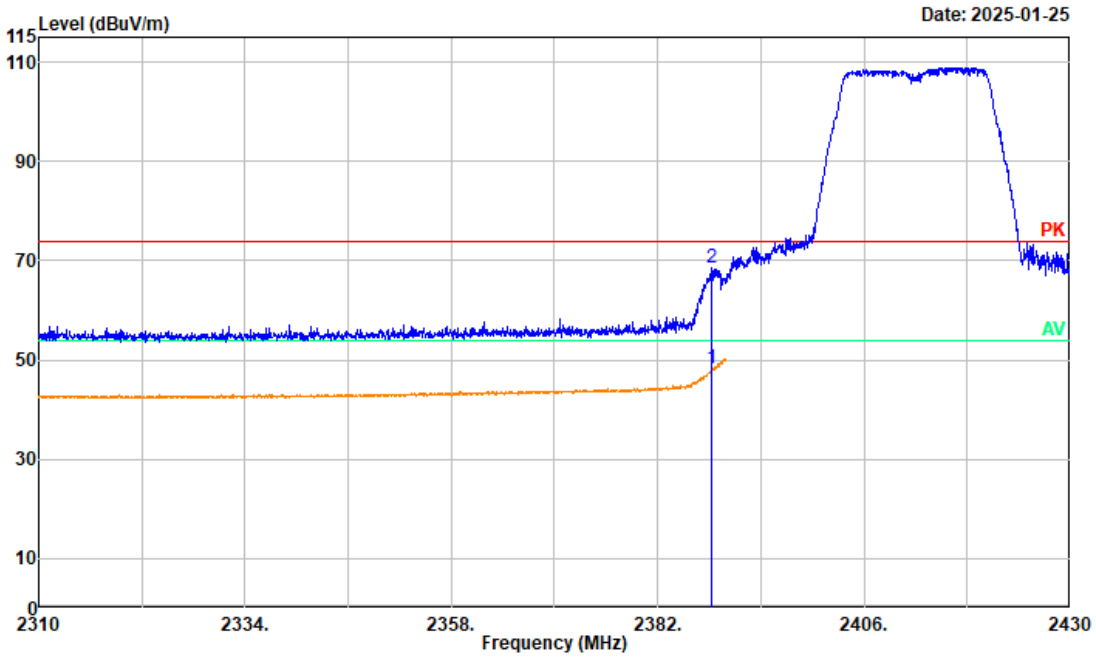


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11g 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.550	37.71	7.20	44.91	54.00	-9.09	Average
2	2483.550	51.64	7.20	58.84	74.00	-15.16	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2412MHz

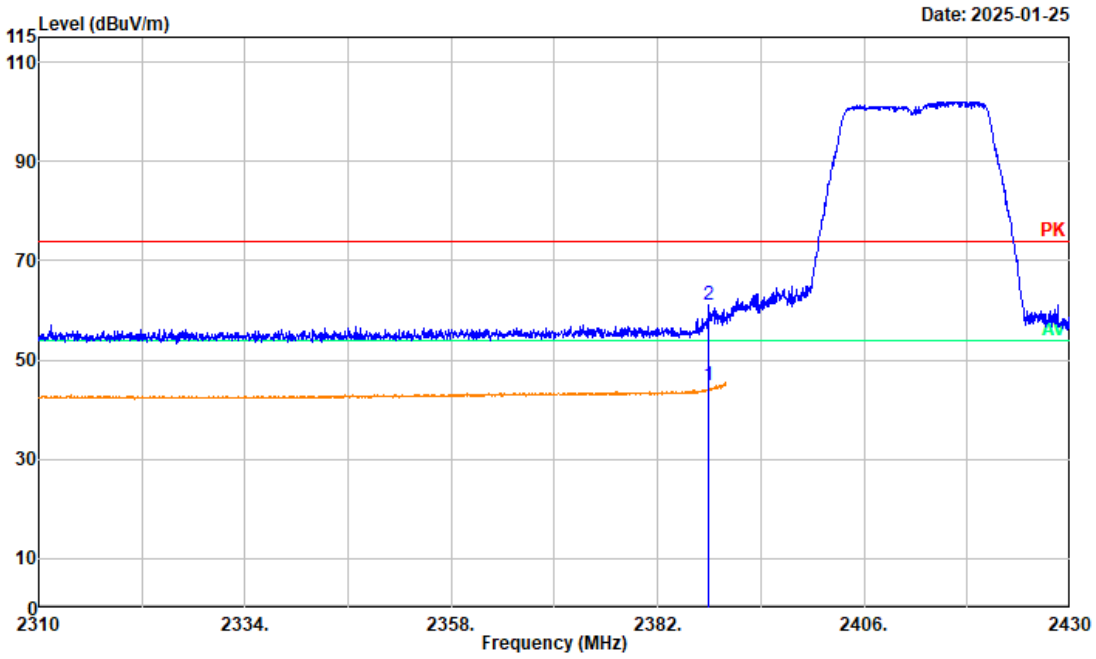


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2388.300	41.34	7.00	48.34	54.00	-5.66	Average
2	2388.300	61.50	7.00	68.50	74.00	-5.50	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2412MHz

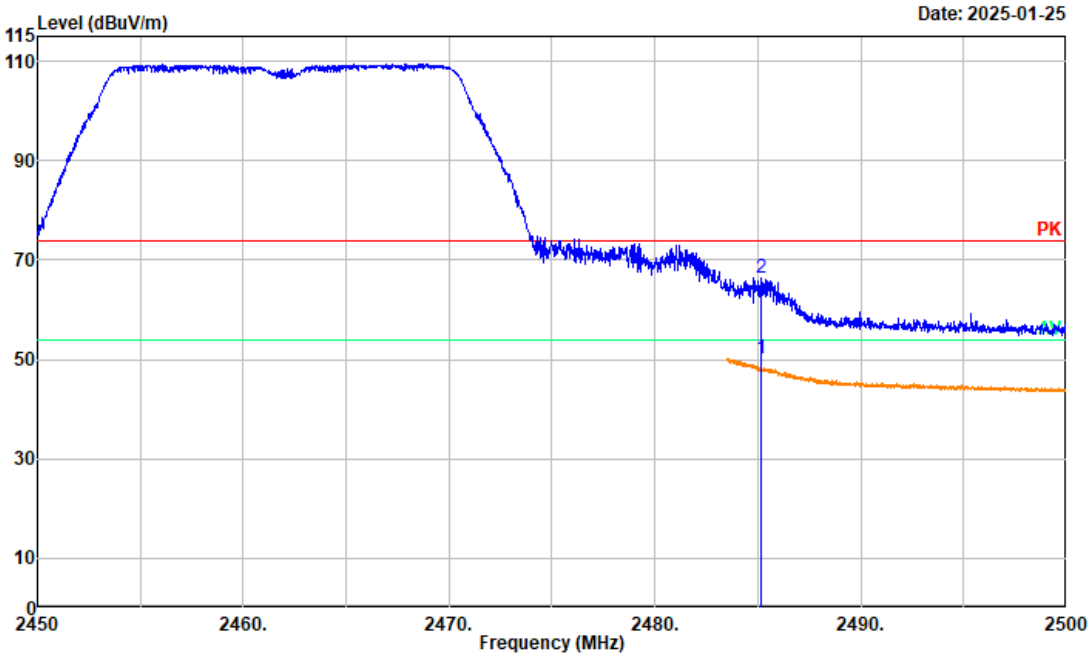


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2387.940	37.93	7.00	44.93	54.00	-9.07	Average
2	2387.940	54.18	7.00	61.18	74.00	-12.82	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

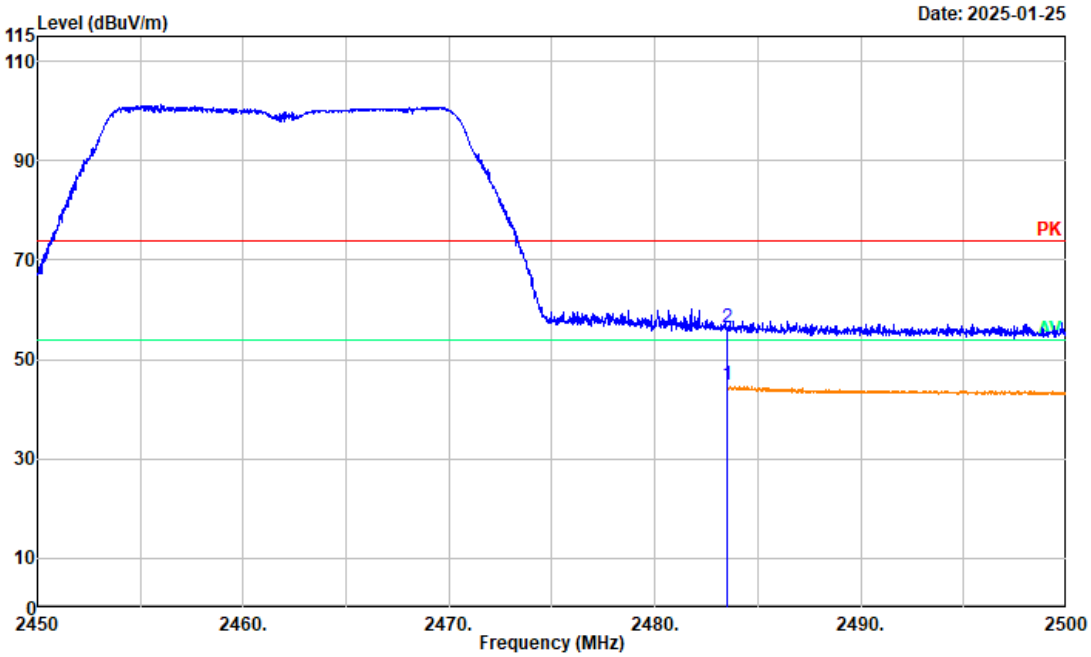


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2485.175	42.98	7.20	50.18	54.00	-3.82	Average
2	2485.175	59.32	7.20	66.52	74.00	-7.48	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n20	Channel:	2462MHz

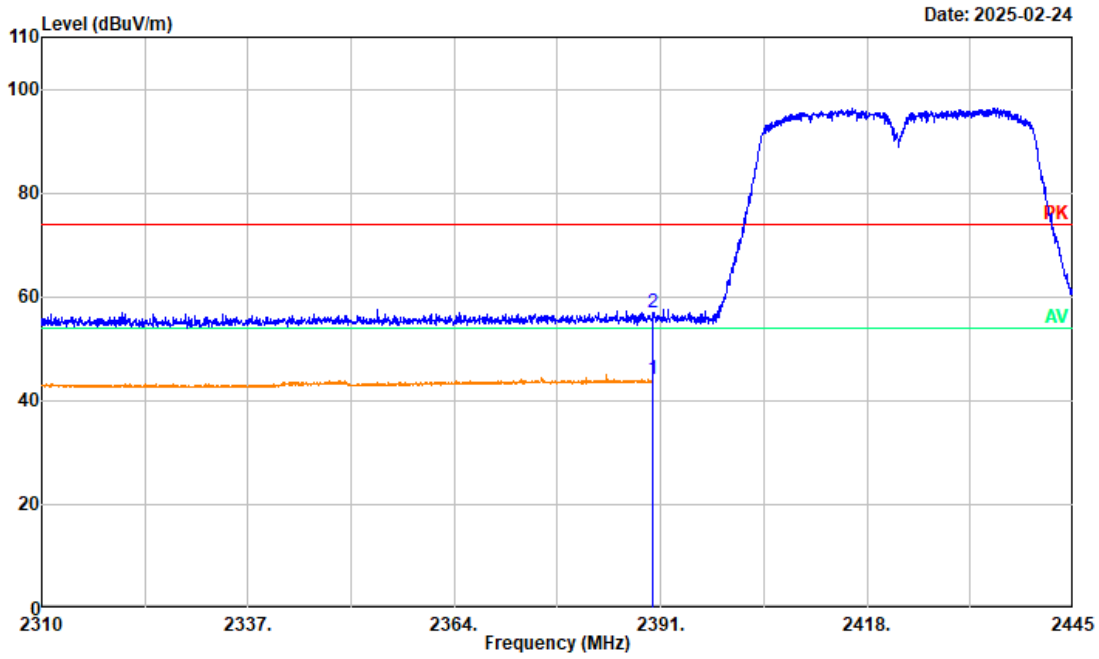


Project No. : 2405A112470E
Test Mode : Transmitting
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.500	37.81	7.20	45.01	54.00	-8.99	Average
2	2483.500	49.07	7.20	56.27	74.00	-17.73	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz, DET: PK

Mode:	802.11n40	Channel:	2422MHz

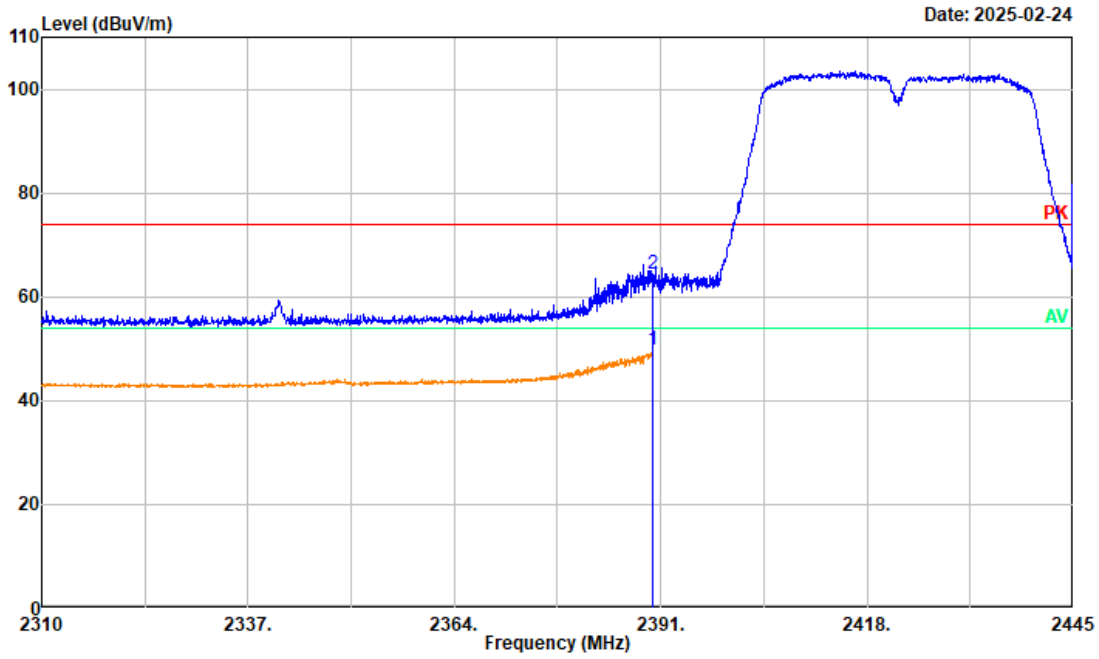


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n40 2422

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2390.000	37.05	7.00	44.05	54.00	-9.95	Average
2	2390.000	49.90	7.00	56.90	74.00	-17.10	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/2kHz , DET: PK

Mode:	802.11n40	Channel:	2422MHz

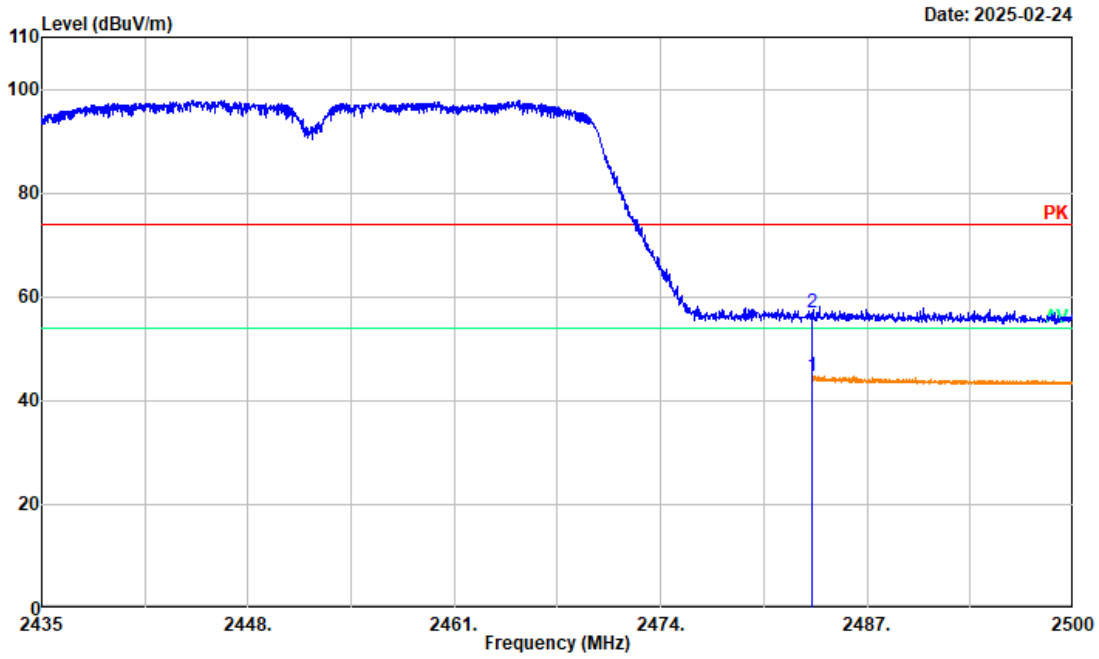


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n40 2422

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2389.960	42.81	7.00	49.81	54.00	-4.19	Average
2	2389.960	57.51	7.00	64.51	74.00	-9.49	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/2kHz , DET: PK

Mode:	802.11n40	Channel:	2452MHz

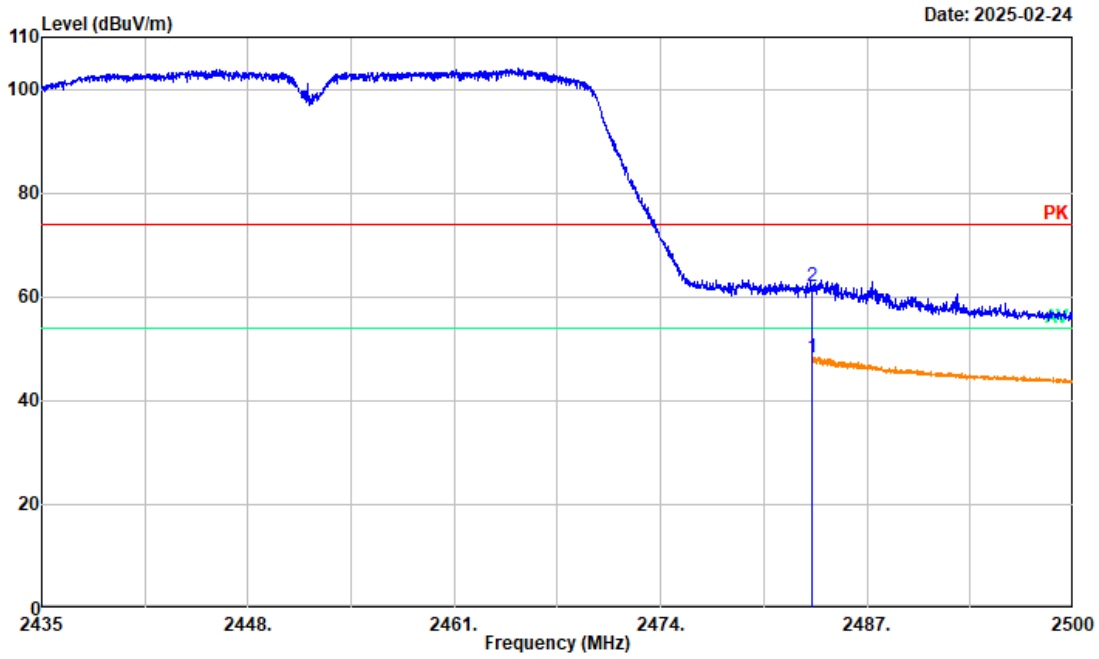


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11n40 2452

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.500	37.60	7.20	44.80	54.00	-9.20	Average
2	2483.500	49.79	7.20	56.99	74.00	-17.01	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/2kHz , DET: PK

Mode:	802.11n40	Channel:	2452MHz

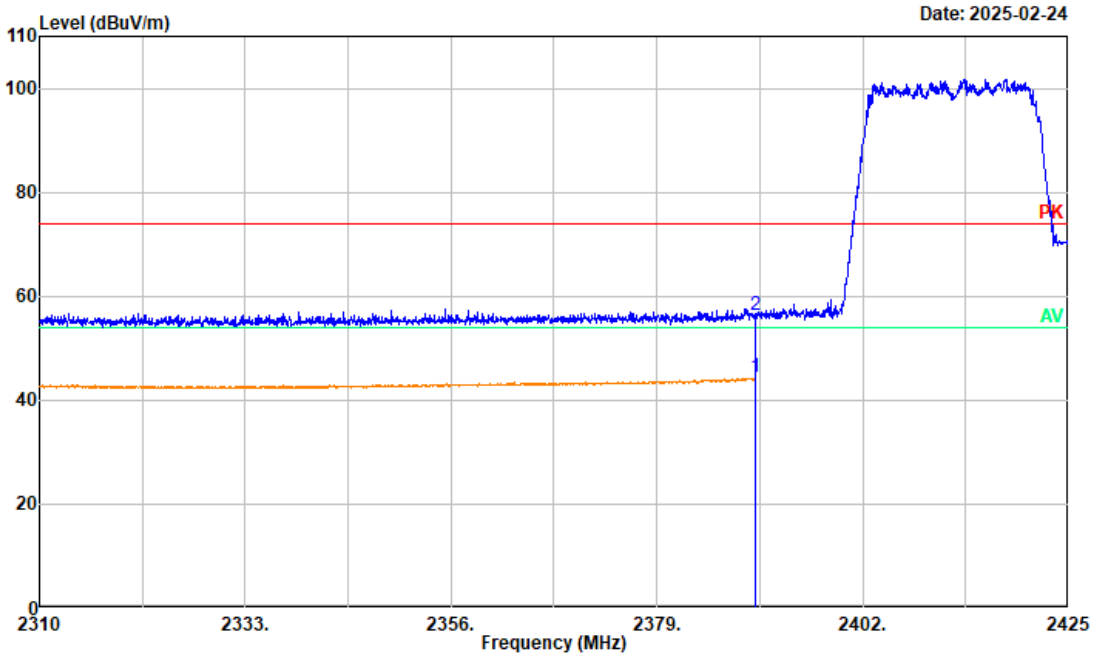


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11n40 2452

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.500	41.13	7.20	48.33	54.00	-5.67	Average
2	2483.500	54.69	7.20	61.89	74.00	-12.11	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/2kHz , DET: PK

Mode:	802.11ax20	Channel:	2412MHz

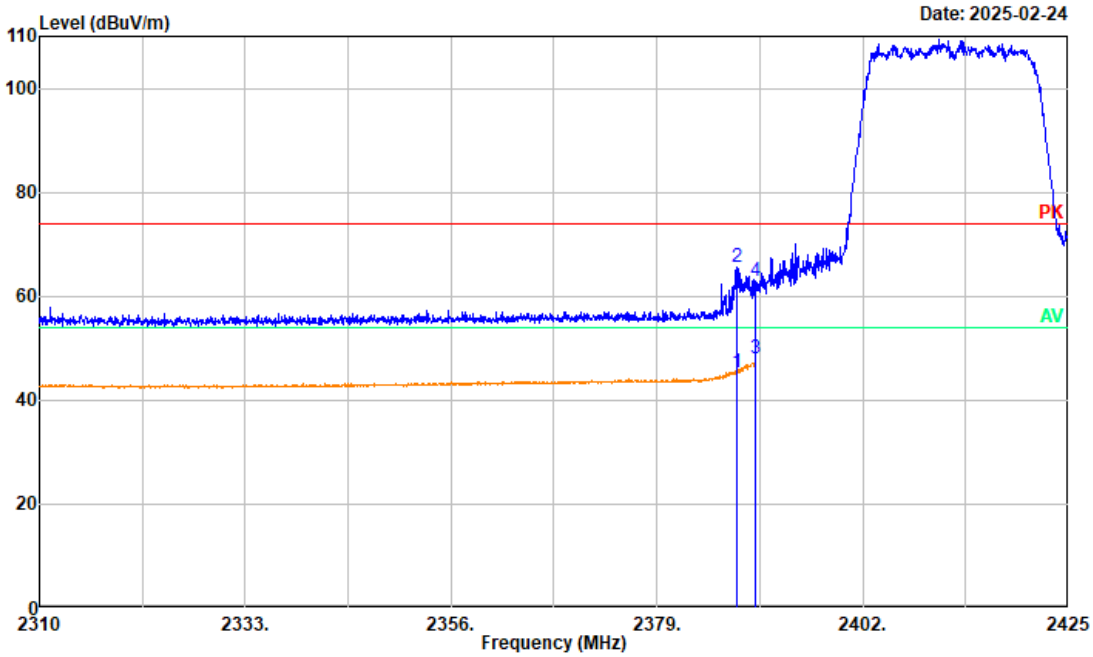


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11ax20 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2390.000	37.31	7.00	44.31	54.00	-9.69	Average
2	2390.000	49.40	7.00	56.40	74.00	-17.60	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz , DET: PK

Mode:	802.11ax20	Channel:	2412MHz

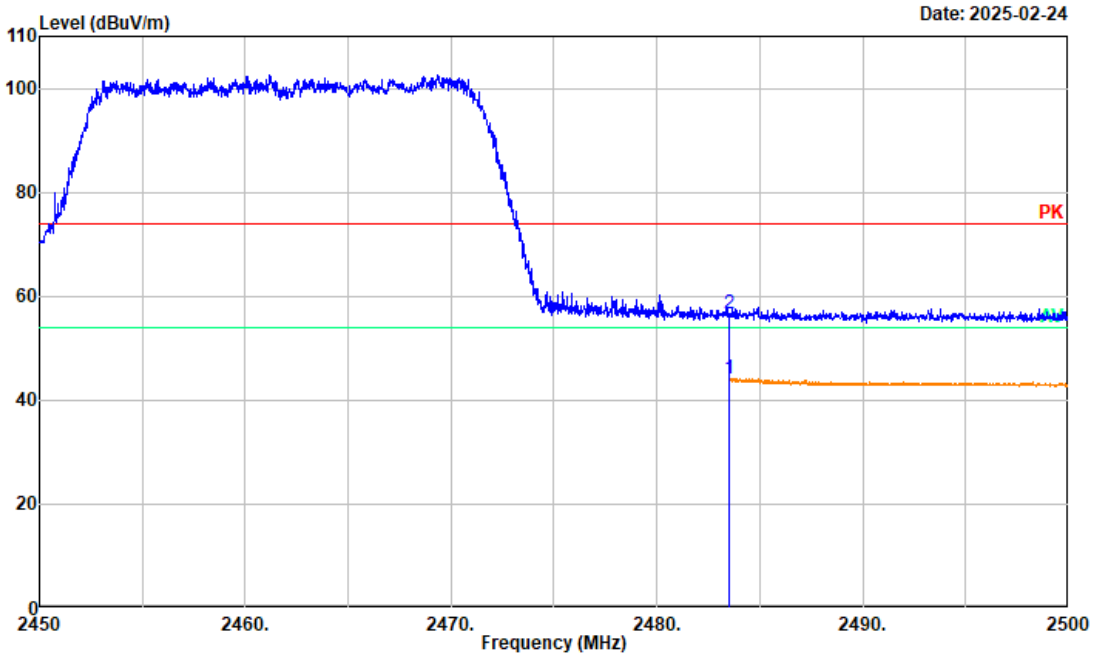


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11ax20 2412

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2387.951	38.37	7.00	45.37	54.00	-8.63	Average
2	2387.951	58.72	7.00	65.72	74.00	-8.28	Peak
3	2390.000	41.11	7.00	48.11	54.00	-5.89	Average
4	2390.000	55.93	7.00	62.93	74.00	-11.07	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz , DET: PK

Mode:	802.11ax20	Channel:	2462MHz

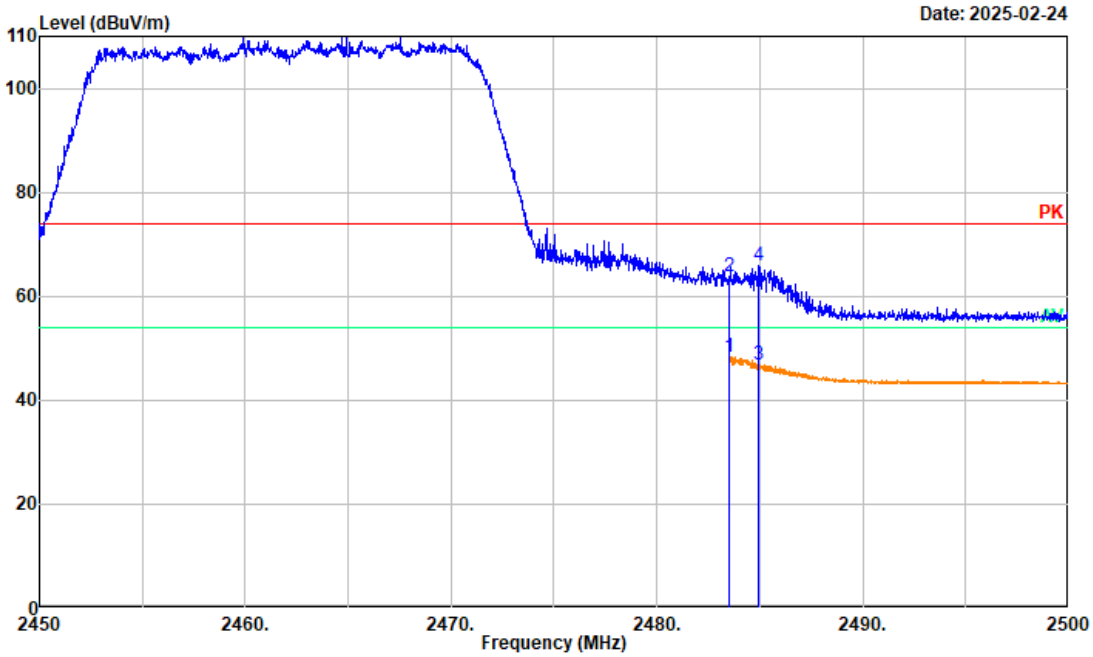


Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : horizontal
Remark : 802.11ax20 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.500	37.04	7.20	44.24	54.00	-9.76	Average
2	2483.500	49.42	7.20	56.62	74.00	-17.38	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz , DET: PK

Mode:	802.11ax20	Channel:	2462MHz



Project No. : 2405A112470E
Test Mode : Working
Test Voltage : AC 120V/60Hz
Environment : 22.8℃/40%R.H./101.0kPa
Tested by : Bard Huang
Polarization : vertical
Remark : 802.11ax20 2462

--No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.500	41.22	7.20	48.42	54.00	-5.58	Average
2	2483.500	56.72	7.20	63.92	74.00	-10.08	Peak
3	2484.968	39.46	7.20	46.66	54.00	-7.34	Average
4	2484.968	58.70	7.20	65.90	74.00	-8.10	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain
Result = Reading + Factor
Over Limit = Result - Limit
SA setting: Peak: RBW/VWB: 1MHz/3MHz, DET: PK
Average: RBW/VWB: 1MHz/1kHz , DET: PK

3.5 RF Conducted Test Data

Test Date:	2025-02-18~2025-02-24	Test By:	Ryan Zhang
Environment condition:	Temperature: 23.7~24.3°C; Relative Humidity:51~55%; ATM Pressure: 100.8~101.3kPa		

Note: the following RF conducted test data, the data of chain 0 was tested on module 1 antenna port, the data of chain 1 was tested on module 2 antenna port.

3.5.1 6dB Emission Bandwidth

For Module 1: RTL 8731BU

Mode	Antenna	Test Frequency (MHz)	Result (MHz)	Limit (MHz)	Verdict
802.11b	Chain 0	2412	9.129	≥0.5	Pass
		2437	9.610	≥0.5	Pass
		2462	9.129	≥0.5	Pass
802.11g	Chain 0	2412	16.376	≥0.5	Pass
		2437	16.376	≥0.5	Pass
		2462	16.376	≥0.5	Pass
802.11n20	Chain 0	2412	16.897	≥0.5	Pass
		2437	16.897	≥0.5	Pass
		2462	16.897	≥0.5	Pass

For Module 2: TR5330S

Mode	Antenna	Test Frequency (MHz)	Result (MHz)	Limit (MHz)	Verdict
802.11b	Chain 1	2412	10.130	≥0.5	Pass
		2437	10.130	≥0.5	Pass
		2462	10.130	≥0.5	Pass
802.11g	Chain 1	2412	16.457	≥0.5	Pass
		2437	16.457	≥0.5	Pass
		2462	16.457	≥0.5	Pass
802.11n20	Chain 1	2412	17.658	≥0.5	Pass
		2437	17.658	≥0.5	Pass
		2462	17.658	≥0.5	Pass
802.11n40	Chain 1	2422	35.315	≥0.5	Pass
		2437	35.315	≥0.5	Pass
		2452	35.315	≥0.5	Pass

Mode	Antenna	Test Frequency (MHz)	Result (MHz)	Limit (MHz)	Verdict
802.11ax20	Chain 1	2412	18.779	≥0.5	Pass
		2437	18.859	≥0.5	Pass
		2462	18.819	≥0.5	Pass

3.5.2 99% Occupied Bandwidth

For Module 1: RTL 8731BU

Mode	Antenna	Test Frequency (MHz)	99% OBW (MHz)
802.11b	Chain 0	2412	13.800
		2437	13.920
		2462	13.760
802.11g	Chain 0	2412	16.320
		2437	16.360
		2462	16.360
802.11n20	Chain 0	2412	17.480
		2437	17.440
		2462	17.440

For Module 2: TR5330S

Mode	Antenna	Test Frequency (MHz)	99% OBW (MHz)
802.11b	Chain 1	2412	11.920
		2437	11.880
		2462	11.920
802.11g	Chain 1	2412	16.680
		2437	16.680
		2462	16.720
802.11n20	Chain 1	2412	17.640
		2437	17.640
		2462	17.640
802.11n40	Chain 1	2422	36.000

Mode	Antenna	Test Frequency (MHz)	99% OBW (MHz)
		2437	36.000
		2452	36.000
802.11ax20	Chain 1	2412	18.920
		2437	18.920
		2462	18.880

3.5.3 Maximum Conducted Output Power

For Module 1: RTL 8731BU

Mode	Antenna	Test Frequency (MHz)	Peak Output Power(dBm)	Limit (dBm)	Verdict
802.11b	Chain 0	2412	16.83	30	Pass
		2437	16.92	30	Pass
		2462	15.44	30	Pass
802.11g	Chain 0	2412	24.83	30	Pass
		2437	23.81	30	Pass
		2462	22.85	30	Pass
802.11n20	Chain 0	2412	24.04	30	Pass
		2437	23.16	30	Pass
		2462	22.16	30	Pass

For Module 2: TR5330S

Mode	Antenna	Test Frequency (MHz)	Peak Output Power(dBm)	Limit (dBm)	Verdict
802.11b	Chain 1	2412	15.59	30	Pass
		2437	15.67	30	Pass
		2462	15.17	30	Pass
802.11g	Chain 1	2412	23.65	30	Pass
		2437	23.66	30	Pass
		2462	23.38	30	Pass
802.11n20	Chain 1	2412	20.64	30	Pass
		2437	20.84	30	Pass
		2462	20.36	30	Pass

Mode	Antenna	Test Frequency (MHz)	Peak Output Power(dBm)	Limit (dBm)	Verdict
802.11n40	Chain 1	2422	17.03	30	Pass
		2437	16.73	30	Pass
		2452	16.37	30	Pass
802.11ax20	Chain 1	2412	18.11	30	Pass
		2437	18.45	30	Pass
		2462	18.60	30	Pass

3.5.4 Power Spectral Density

For Module 1: RTL 8731BU

Mode	Antenna	Test Frequency (MHz)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
802.11b	Chain 0	2412	-7.37	8	Pass
		2437	-6.57	8	Pass
		2462	-6.89	8	Pass
802.11g	Chain 0	2412	-8.15	8	Pass
		2437	-8.15	8	Pass
		2462	-8.47	8	Pass
802.11n20	Chain 0	2412	-7.28	8	Pass
		2437	-7.45	8	Pass
		2462	-7.88	8	Pass

For Module 2: TR5330S

Mode	Antenna	Test Frequency (MHz)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
802.11b	Chain 1	2412	-12.62	8	Pass
		2437	-13.13	8	Pass
		2462	-12.95	8	Pass
802.11g	Chain 1	2412	-13.22	8	Pass
		2437	-13.29	8	Pass
		2462	-13.52	8	Pass

Mode	Antenna	Test Frequency (MHz)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
802.11n20	Chain 1	2412	-15.19	8	Pass
		2437	-16.06	8	Pass
		2462	-15.88	8	Pass
802.11n40	Chain 1	2422	-22.86	8	Pass
		2437	-23.17	8	Pass
		2452	-24.14	8	Pass
802.11ax20	Chain 1	2412	-18.74	8	Pass
		2437	-20.40	8	Pass
		2462	-20.50	8	Pass

3.5.5 100 kHz Bandwidth of Frequency Band Edge

For Module 1: RTL 8731BU

Mode	Antenna	Test Frequency (MHz)	Result (dB)	Limit (dB)	Verdict
802.11b	Chain 0	2412	47.67	30	Pass
		2462	54.12	30	Pass
802.11g	Chain 0	2412	39.18	30	Pass
		2462	47.19	30	Pass
802.11n20	Chain 0	2412	37.26	30	Pass
		2462	45.61	30	Pass

For Module 2: TR5330S

Mode	Antenna	Test Frequency (MHz)	Result (dB)	Limit (dB)	Verdict
802.11b	Chain 1	2412	48.51	20	Pass
		2462	50.21	20	Pass
802.11g	Chain 1	2412	41.00	20	Pass
		2462	48.19	20	Pass
802.11n20	Chain 1	2412	43.45	20	Pass
		2462	32.83	20	Pass
802.11n40	Chain 1	2422	39.74	20	Pass

Mode	Antenna	Test Frequency (MHz)	Result (dB)	Limit (dB)	Verdict
		2452	36.21	20	Pass
802.11ax20	Chain 1	2412	44.98	20	Pass
		2462	35.85	20	Pass

3.5.6 Duty Cycle

For Module 1: RTL 8731BU

Mode	Antenna	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
802.11b	Chain 0	2437	100	100	100	0	NA	0.010
802.11g	Chain 0	2437	100	100	100	0	NA	0.010
802.11n20	Chain 0	2437	100	100	100	0	NA	0.010

Duty Cycle = Ton/(Ton+Toff)*100%

For Module 2: TR5330S

Mode	Antenna	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
802.11b	Chain 1	2437	8.412	8.467	99.35	/	/	0.010
802.11g	Chain 1	2437	1.395	1.440	96.88	0.14	717	1
802.11n20	Chain 1	2437	1.306	1.386	94.23	0.26	766	1
802.11n40	Chain 1	2437	0.647	0.695	93.09	0.31	1546	2
802.11ax20	Chain 1	2437	1.186	1.239	95.72	0.19	843	1

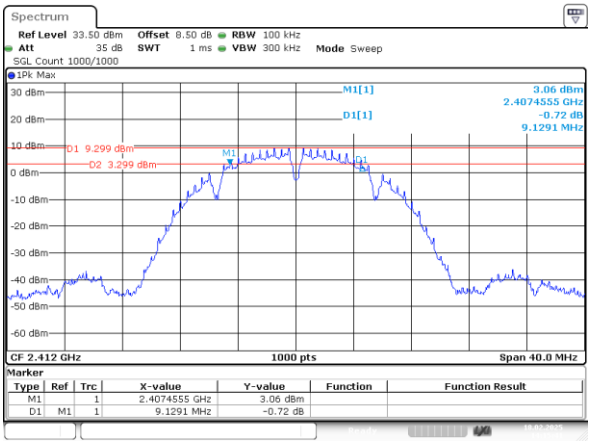
Duty Cycle = Ton/(Ton+Toff)*100%

Test Plots:

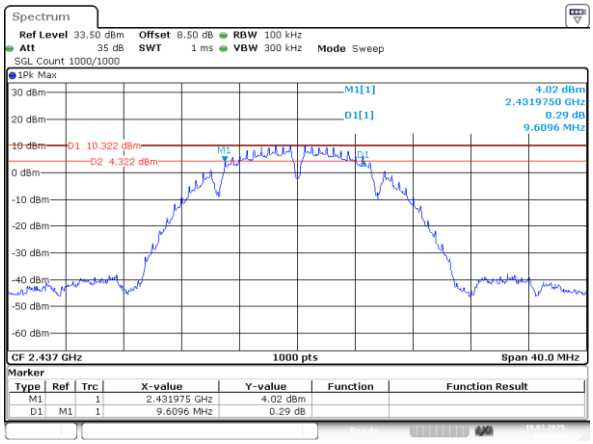
6 dB Emission Bandwidth:

2412~2462

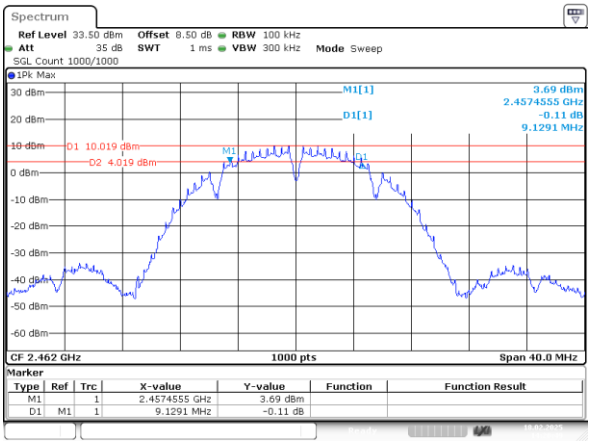
802.11b_2412MHz_Chain 0



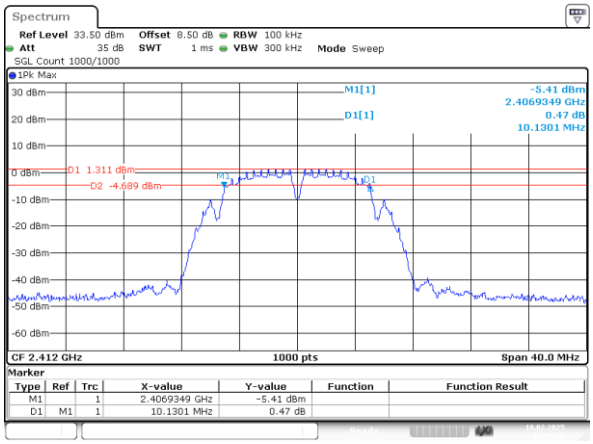
802.11b_2437MHz_Chain 0



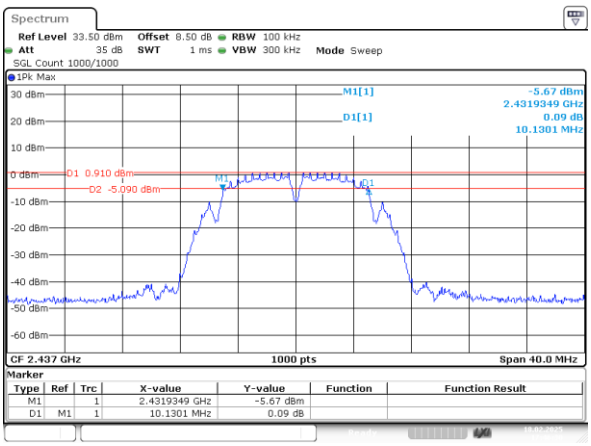
802.11b_2462MHz_Chain 0



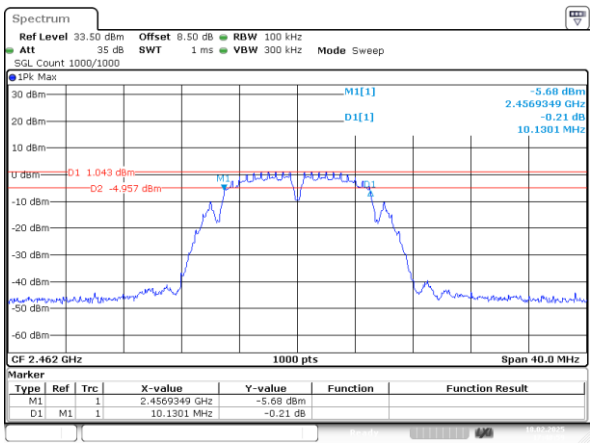
802.11b_2412MHz_Chain 1



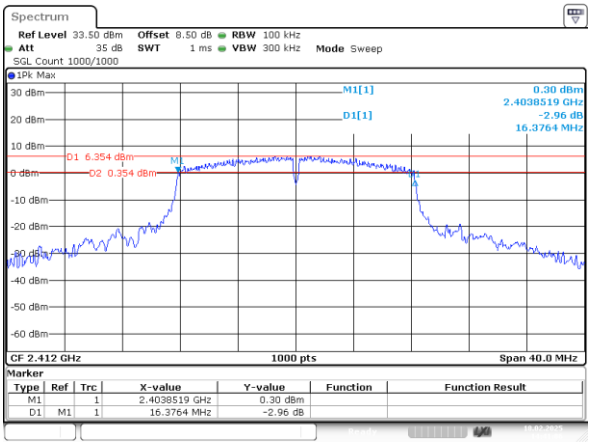
802.11b_2437MHz_Chain 1



802.11b_2462MHz_Chain 1

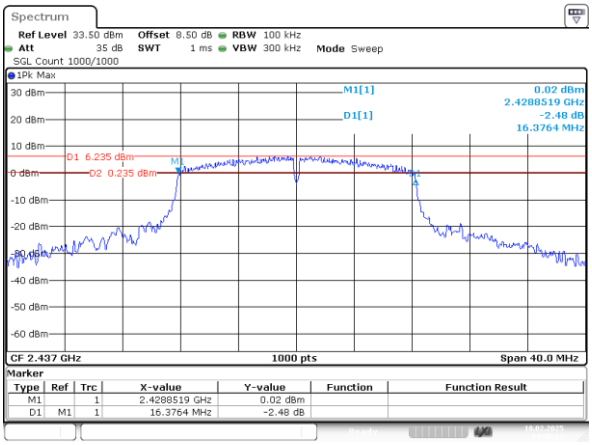


802.11g_2412MHz_Chain 0



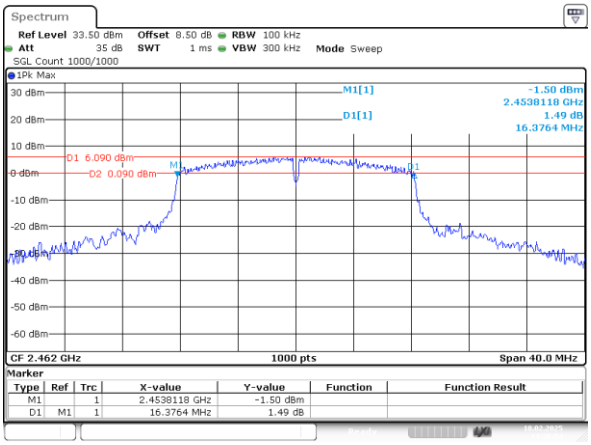
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 14:41:06

802.11g_2437MHz_Chain 0



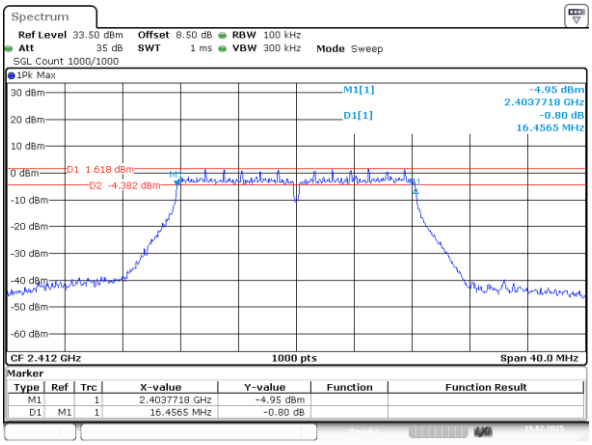
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 14:26:11

802.11g_2462MHz_Chain 0



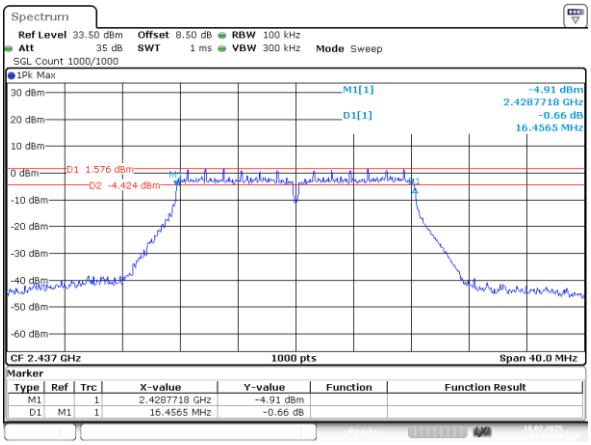
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 14:28:54

802.11g_2412MHz_Chain 1



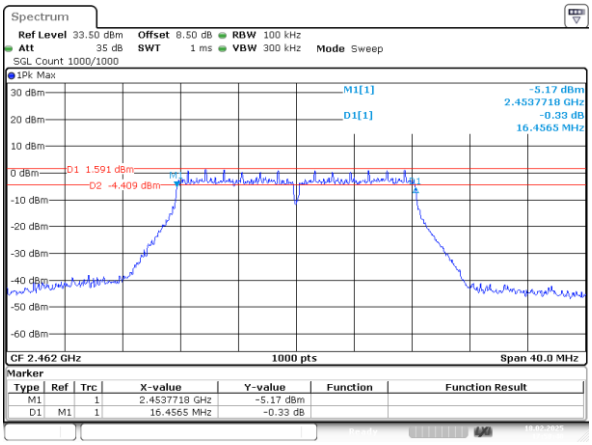
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 17:51:51

802.11g_2437MHz_Chain 1



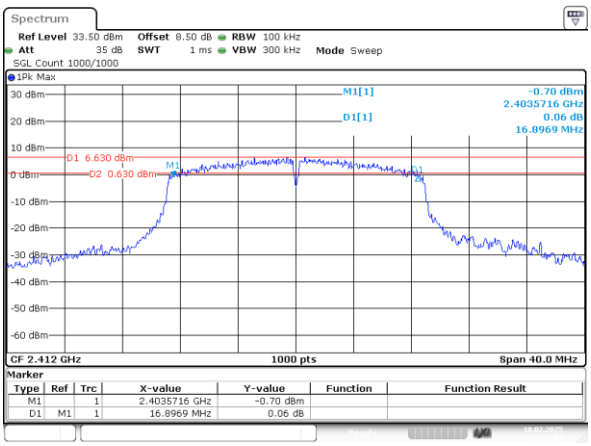
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 17:55:59

802.11g_2462MHz_Chain 1



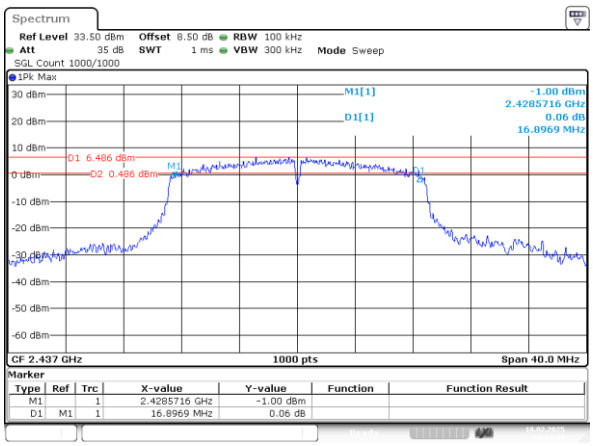
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 17:58:40

802.11n20_2412MHz_Chain 0



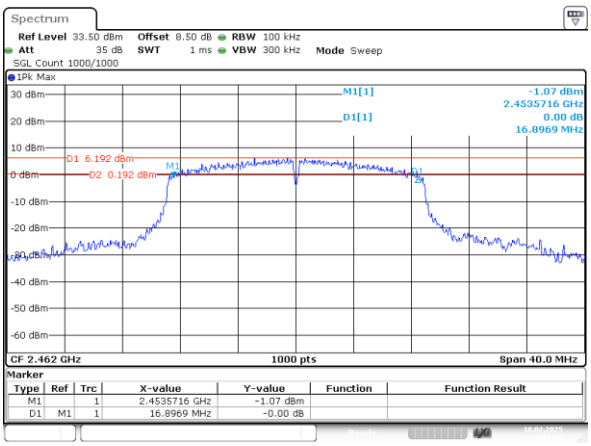
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 14:32:03

802.11n20_2437MHz_Chain 0



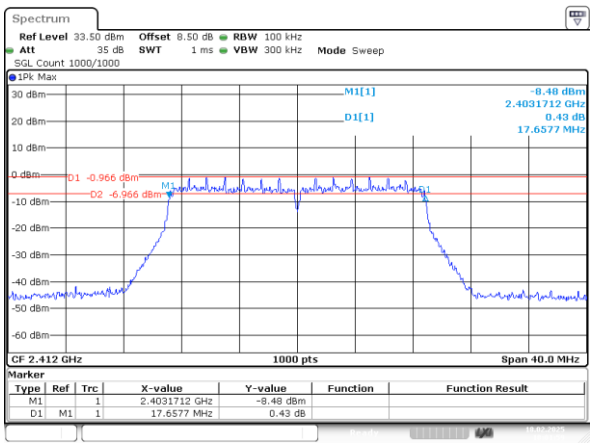
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 14:34:50

802.11n20_2462MHz_Chain 0



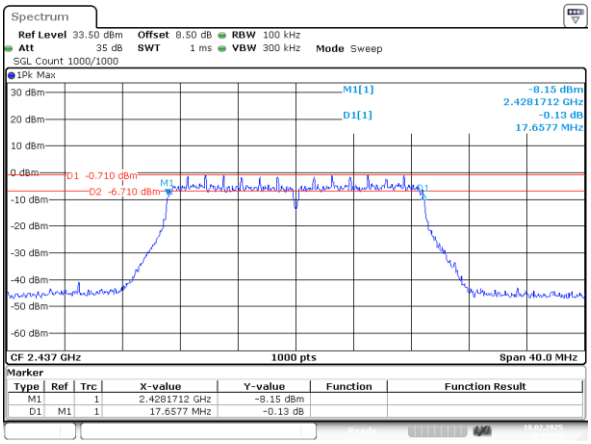
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 14:37:28

802.11n20_2412MHz_Chain 1



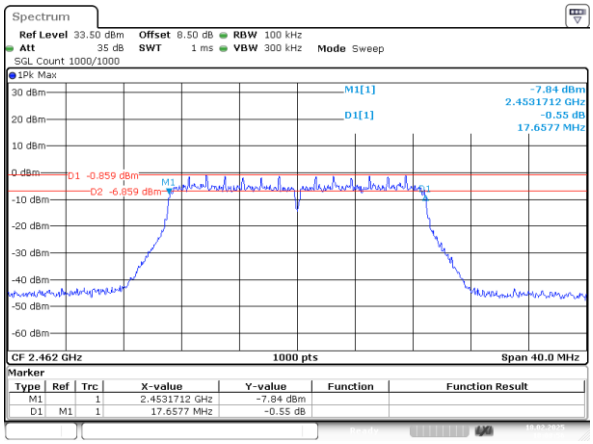
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 18:02:00

802.11n20_2437MHz_Chain 1



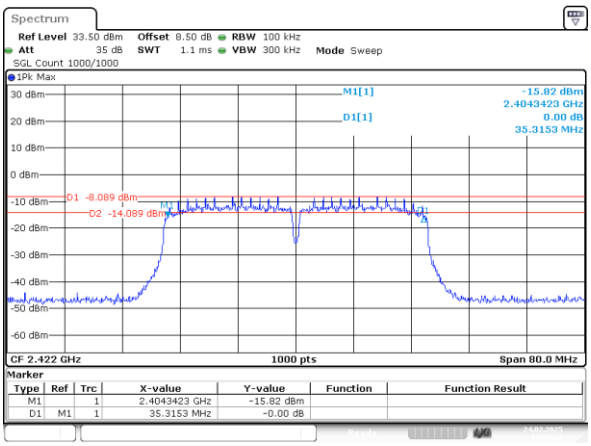
ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 18:05:49

802.11n20_2462MHz_Chain 1

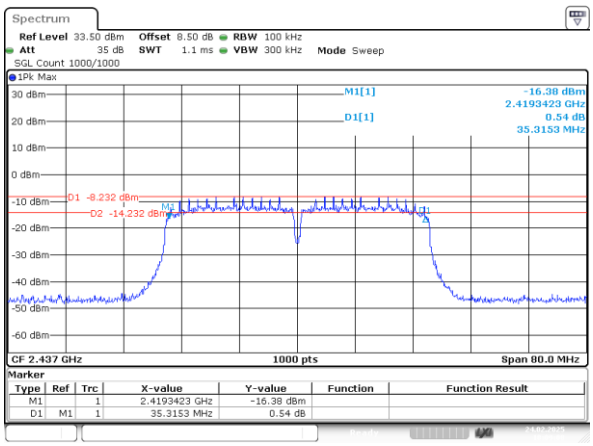


ProjectNo.:2405A112470E-RF Tester:Ryan Zhang
Date: 18.FEB.2025 18:08:56

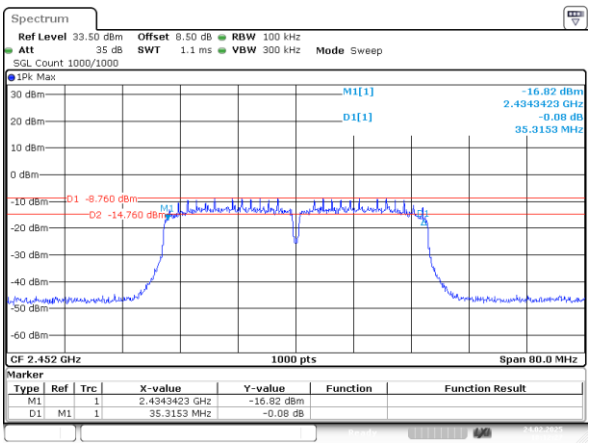
802.11n40_2422MHz_Chain 1



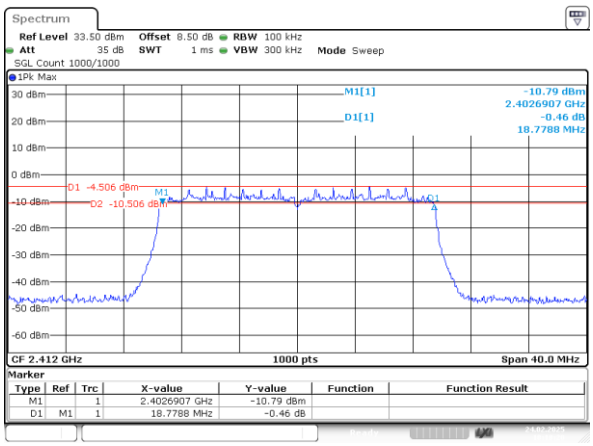
802.11n40_2437MHz_Chain 1



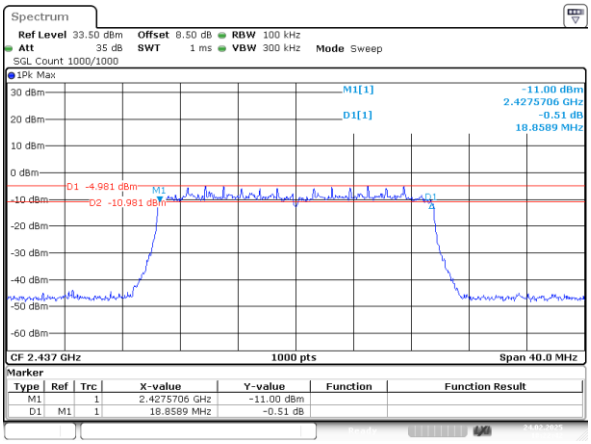
802.11n40_2452MHz_Chain 1



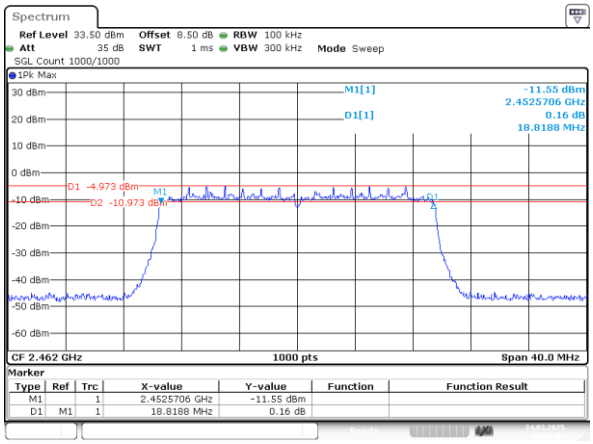
802.11ax20_2412MHz_Chain 1



802.11ax20_2437MHz_Chain 1



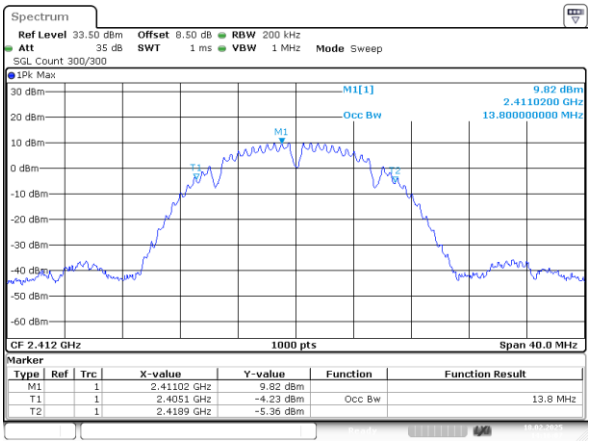
802.11ax20_2462MHz_Chain 1



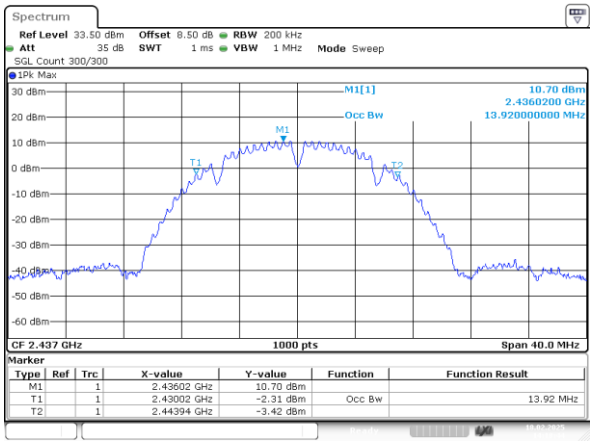
99% Occupied Bandwidth:

2412~2462

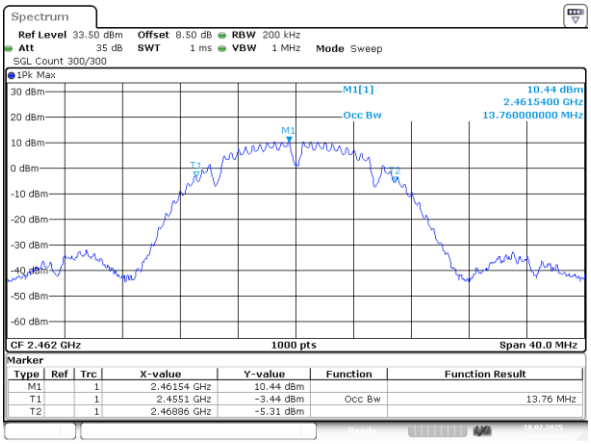
802.11b_2412MHz_Chain 0



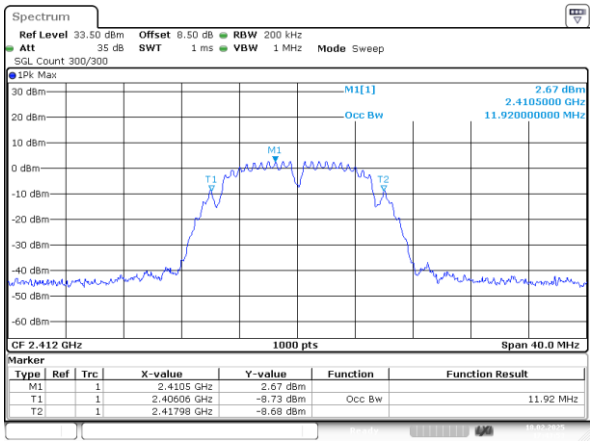
802.11b_2437MHz_Chain 0



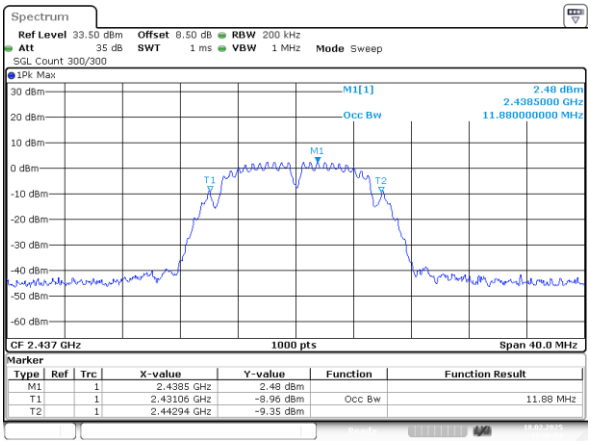
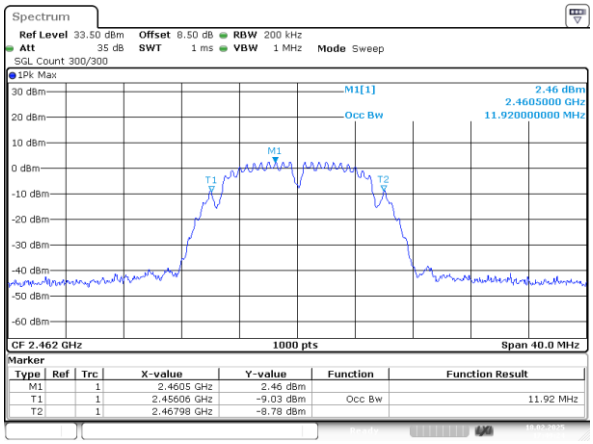
802.11b_2462MHz_Chain 0



802.11b_2412MHz_Chain 1



802.11b_2437MHz_Chain 1



802.11b_2462MHz_Chain 1