

BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09



Certificate #6613.01

FCC TEST REPORT

(Part 15, Subpart C)

Applicant:	Beijing InHand Networks Technology Co., Ltd.
Address:	Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing China

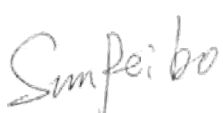
Manufacturer or Supplier:	Beijing InHand Networks Technology Co., Ltd.
Address:	Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing China
Product:	5G Fixed Wireless Access
Brand Name:	inhand
Model Name:	FWA12-NANR
FCC ID:	2AANY-FWA12
Date of tests:	Jan. 17, 2025 ~ Apr. 08, 2025

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 15, Subpart C, Section 15.247**

☒ **ANSI C63.10-2020**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
 Date: Apr. 08, 2025	 Date: Apr. 08, 2025

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1 SUMMARY OF TEST RESULTS.....	5
1.1 MEASUREMENT UNCERTAINTY	6
2 GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF EUT	7
2.2 DESCRIPTION OF TEST MODES	9
2.2.1 CONFIGURATION OF SYSTEM UNDER TEST	10
2.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL.....	10
2.3 DUTY CYCLE OF TEST SIGNAL	14
2.4 GENERAL DESCRIPTION OF APPLIED STANDARDS	14
2.5 DESCRIPTION OF SUPPORT UNITS	15
3 TEST TYPES AND RESULTS.....	16
3.1 CONDUCTED EMISSION MEASUREMENT	16
3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	16
3.1.2 TEST INSTRUMENTS.....	16
3.1.3 TEST PROCEDURES	17
3.1.4 DEVIATION FROM TEST STANDARD	17
3.1.5 TEST SETUP	18
3.1.6 EUT OPERATING CONDITIONS	18
3.1.7 TEST RESULTS	19
3.2 RADIATED EMISSION MEASUREMENT	20
3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT	20
3.2.2 TEST INSTRUMENTS.....	21
3.2.3 TEST PROCEDURES	22
3.2.4 DEVIATION FROM TEST STANDARD	22
3.2.5 TEST SETUP	23
3.2.6 EUT OPERATING CONDITIONS	24
3.2.7 TEST RESULTS	25
3.3 6 dB BANDWIDTH MEASUREMENT	98
3.3.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT	98
3.3.2 TEST INSTRUMENTS.....	98
3.3.3 TEST PROCEDURE.....	99
3.3.4 DEVIATION FROM TEST STANDARD	99
3.3.5 TEST SETUP	99
3.3.6 EUT OPERATING CONDITIONS	99
3.3.7 TEST RESULTS	99
3.4 CONDUCTED OUTPUT POWER.....	100
3.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT	100
3.4.2 TEST SETUP	100



3.4.3	TEST INSTRUMENTS	100
3.4.4	TEST PROCEDURES	100
3.4.5	DEVIATION FROM TEST STANDARD	100
3.4.6	EUT OPERATING CONDITIONS	100
3.4.7	TEST RESULTS	100
3.4.7.1	MAXIMUM PEAK OUTPUT POWER	100
3.4.7.2	AVERAGE OUTPUT POWER (FOR REFERENCE)	101
3.5	POWER SPECTRAL DENSITY MEASUREMENT	102
3.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	102
3.5.2	TEST SETUP	102
3.5.3	TEST INSTRUMENTS	102
3.5.4	TEST PROCEDURE	102
3.5.5	DEVIATION FROM TEST STANDARD	102
3.5.6	EUT OPERATING CONDITION	102
3.5.7	TEST RESULTS	103
3.6	OUT OF BAND EMISSION MEASUREMENT	104
3.6.1	LIMITS OF OUT OF BAND EMISSION MEASUREMENT	104
3.6.2	TEST SETUP	104
3.6.3	TEST INSTRUMENTS	104
3.6.4	TEST PROCEDURE	104
3.6.5	DEVIATION FROM TEST STANDARD	105
3.6.6	EUT OPERATING CONDITION	105
3.6.7	TEST RESULTS	105
3.7	ANTENNA REQUIREMENTS	106
3.7.1	STANDARD APPLICABLE	106
3.7.2	ANTENNA CONNECTED CONSTRUCTION	106
3.7.3	ANTENNA GAIN	106
4	PHOTOGRAPHS OF THE TEST CONFIGURATION	107
5	MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	107
6	APPENDIX	108
WLAN 2.4G		108



Test Report No.: PSU-NQN2502170113RF09

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-NQN2502170113RF09	Original release	Apr. 08, 2025



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)		
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT
15.207	AC Power Conducted Emission	Compliance
15.205 15.209	Radiated Emissions	Compliance
15.247(d)	Out of band Emission Measurement	Compliance
15.247(a)(2)	6dB bandwidth	Compliance
15.247(b)	Conducted Output power	Compliance
15.247(e)	Power Spectral Density	Compliance
15.203	Antenna Requirement	Compliance

Note : Except the data of RSE and AC Power Conducted Emission, other data please refer to Appendix.

*Test Lab Information Reference

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province

Accredited Test Lab Cert 6613.01

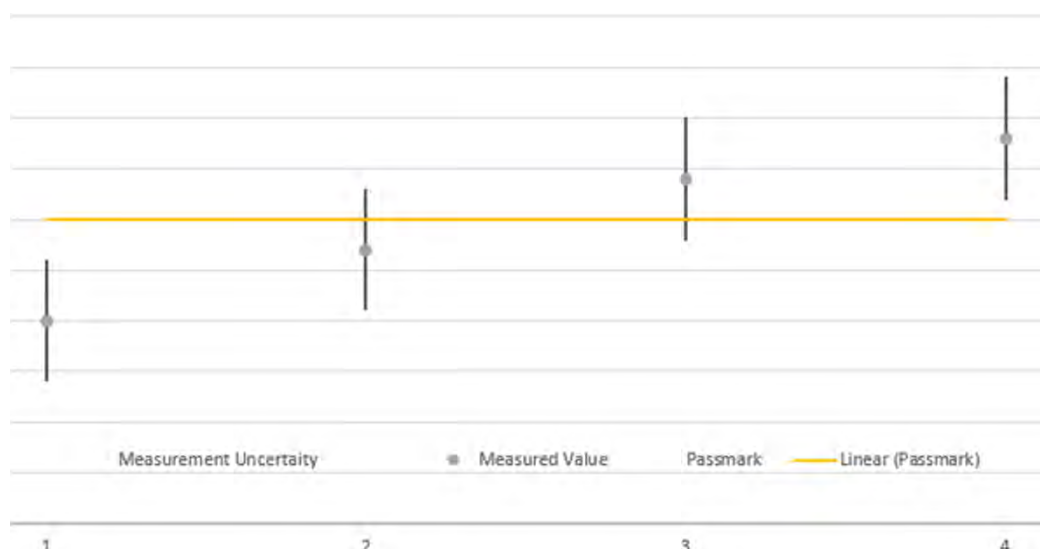
The FCC Site Registration No. is 434559; The Designation No. is CN1325.

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	$\pm 2.70\text{dB}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Power Spectral Density	$\pm 0.85\text{ dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	5G Fixed Wireless Access
BRAND NAME*	inhand
MODEL NAME*	FWA12-NANR
NOMINAL VOLTAGE*	12.0Vdc(adapter or host equipment)
MODULATION *	DSSS ,OFDM, OFDMA
TRANSMISSION RATE	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ax: up to 573.5 Mbps 802.11be: up to 688.2 Mbps
OPERATING FREQUENCY	2412-2462MHz for 11b/g/n(HT20/40)/ax(HE20/40)/be(EHT20/40)
Resource Unit (RU)	Single RU: 26-tone, 52-tone,106-tone,242-tone,484-tone, 996-tone,2*996-tone Multi-RU (Small RU):52-tone + 26-tone, 106-tone + 26-tone Multi-RU (Large RU):484-tone + 242-tone
MAX. OUTPUT POWER	WLAN: 462.38(Maximum) RU WLAN: 447.71(Maximum)
ANTENNA TYPE*	ANT 1/2/3: Built-in FPC Antenna with 4.13dBi gain for WIFI
HW VERSION*	N/A
SW VERSION*	V2.0
I/O PORTS*	Refer to user's manual



**BUREAU
VERITAS**

Test Report No.: PSU-NQN2502170113RF09

NOTE:

1. *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. The EUT incorporates a MIMO function. Physically, the EUT provides three transmitter and three receiver.

MODULATION MODE	TX/RX FUNCTION
802.11b	3TX /3RX
802.11g	3TX /3RX
802.11n(HT20)/ax(HE20)	3TX /3RX
802.11n(HT40)/ax(HE40)	3TX /3RX
802.11ax (20MHz RU 26/52/106/242)	3TX /3RX
802.11ax (40MHz RU 26/52/106/242/484)	3TX /3RX
802.11be(EHT20)	3TX /3RX
802.11be(EHT40)	3TX /3RX
802.11be(20MHz RU 26/52/106/242 MRU52+26/106+26)	3TX /3RX
802.11be(40MHz RU 26/52/106/242/484 MRU52+26/106+26/484+242)	3TX /3RX

4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
5. Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.



2.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20), 802.11ax20 (HE20), 802.11be20 (EHT20); 802.11ax/be20 (RU 26/52/106/242) (MRU52+26/106+26):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

7 channels are provided for 802.11n (HT40), 802.11ax40 (HE40); 802.11be40 (EHT40); 802.11ax/be40 (RU RU 26/52/106/242/484) (MRU52+26/106+26/484-tone + 242-tone):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422 MHz	7	2442 MHz
4	2427 MHz	8	2447 MHz
5	2432 MHz	9	2452 MHz
6	2437 MHz		



2.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 4 photographs of the test configuration for reference.

2.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.

The worst case was found when positioned on Y axis for radiated emission. Following test modes were selected for the final test, and the final worst case is marked in boldface and recorded in the report:

EUT CONFIGURE MODE	APPLICABLE TO				MODE
	RE<1G	RE≥1G	PLC	APCM	
-	√	√	√	√	-

Where **RE<1G**: Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE: No need to concern of Conducted Emission due to the EUT is powered by battery.

RADIATED EMISSION TEST (BELOW 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0

**RADIATED EMISSION TEST (ABOVE 1GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ax HE20	1 to 11	1, 6, 11	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
802.11ax HE40	3 to 9	3,6,9	OFDM	MCS0
802.11ax 20 (RU 26/52/106/242)	1 to 11	1, 6, 11	OFDMA	MCS0
802.11ax 40 (RU 26/52/106/242/484)	3 to 9	3,6,9	OFDMA	MCS0
802.11be(EHT20)	1 to 11	1, 6, 11	OFDM	MCS0
802.11be(EHT40)	3 to 9	3,6,9	OFDM	MCS0
802.11be(20MHz RU 26/52/106/242 MRU52+26/106+26)	1 to 11	1, 6, 11	OFDMA	MCS0
802.11be(40MHz RU 26/52/106/242/484 MRU52+26/106+26/484+242)	3 to 9	3,6,9	OFDMA	MCS0

POWER LINE CONDUCTED EMISSION TEST

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11ax 20	1 to 11	1, 11	OFDMA	MCS0



BANDEDGE MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ax HE20	1 to 11	1, 6, 11	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
802.11ax 20 (RU 26/52/106/242)	1 to 11	1,11	OFDMA	MCS0
802.11ax 40 (RU 26/52/106/242/484)	3 to 9	3,9	OFDMA	MCS0
802.11be(EHT20)	1 to 11	1, 6, 11	OFDM	MCS0
802.11be(EHT40)	3 to 9	3,6,9	OFDM	MCS0
802.11be(20MHz RU 26/52/106/242 MRU52+26/106+26)	1 to 11	1, 6, 11	OFDMA	MCS0
802.11be(40MHz RU 26/52/106/242/484 MRU52+26/106+26/484+242)	3 to 9	3,6,9	OFDMA	MCS0

**ANTENNA PORT CONDUCTED MEASUREMENT:**

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ax HE20	1 to 11	1, 6, 11	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
802.11ax HE40	3 to 9	3,6,9	OFDM	MCS0
802.11ax 20 (RU 26/52/106/242)	1 to 11	1,11	OFDMA	MCS0
802.11ax 40 (RU26/52/106/242/484)	3 to 9	3,9	OFDMA	MCS0
802.11be(EHT20)	1 to 11	1, 6, 11	OFDM	MCS0
802.11be(EHT40)	3 to 9	3,6,9	OFDM	MCS0
802.11be(20MHz RU 26/52/106/242 MRU52+26/106+26)	1 to 11	1, 6, 11	OFDMA	MCS0
802.11be(40MHz RU 26/52/106/242/484 MRU52+26/106+26/484+242)	3 to 9	3,6,9	OFDMA	MCS0



BUREAU VERITAS Test Report No.: PSU-NQN2502170113RF09

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	23deg. C, 70%RH	DC12V By Adapter	Hanwen Xu
RE≥1G	23deg. C, 70%RH	DC 12V By Adapter	Hanwen Xu
PLC	25deg. C, 52%RH	DC12V By Adapter	Hanwen Xu
APCM	25deg. C, 60%RH	DC 14V By DC Adapter	Hanwen Xu

2.3 DUTY CYCLE OF TEST SIGNAL

Please Refer to Appendix1 Of this test report.

2.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C, Section 15.247

KDB 558074 D01 DTS Meas Guidance v05r02

ANSI C63.10-2020

Note :

1. All test items have been performed and recorded as per the above standards.
2. The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.



2.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Laptop	Lenovo	Thinkpad E14	SL10W47313	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1.5m
2	AC Line: Unshielded, Detachable 1.5m
3	AC Line: Unshielded, Detachable 1.5m



3 TEST TYPES AND RESULTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE: 1.The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	102749	Mar.28,24	Mar.27,26
ELEKTRA test software	Rohde&Schwarz	ELEKTRA	NA	N/A	N/A
LISN network	Rohde&Schwarz	ENV216	102640	Mar.28,24	Mar.27,26
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.27,24	Apr.26,25
CABLE	Rohde&Schwarz	W601	N/A	Apr.27,24	Apr.26,25

NOTE:

1. The test was performed in CE shielded room.

2. The calibration interval of the above test instruments is 12 /24months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.



3.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

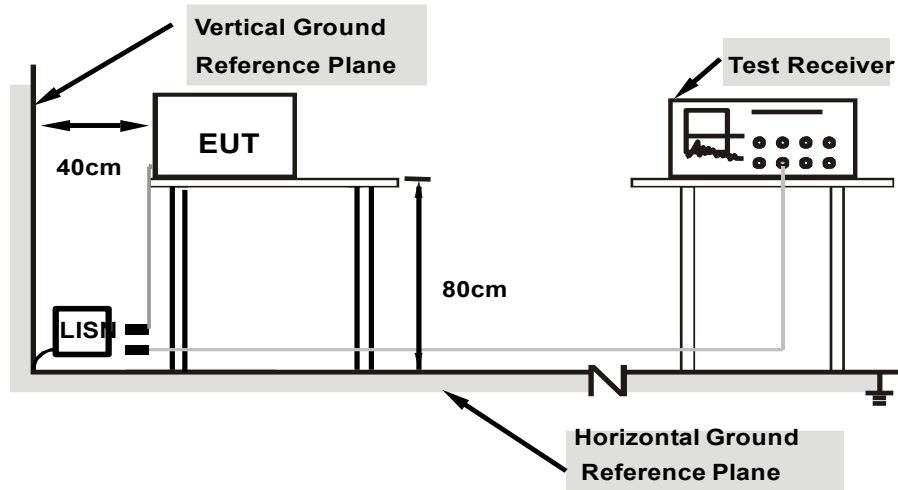
NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.1.4 DEVIATION FROM TEST STANDARD

No deviation.



3.1.5 TEST SETUP



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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.6 EUT OPERATING CONDITIONS

- Turned on the power and connected of all equipment.
- EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.



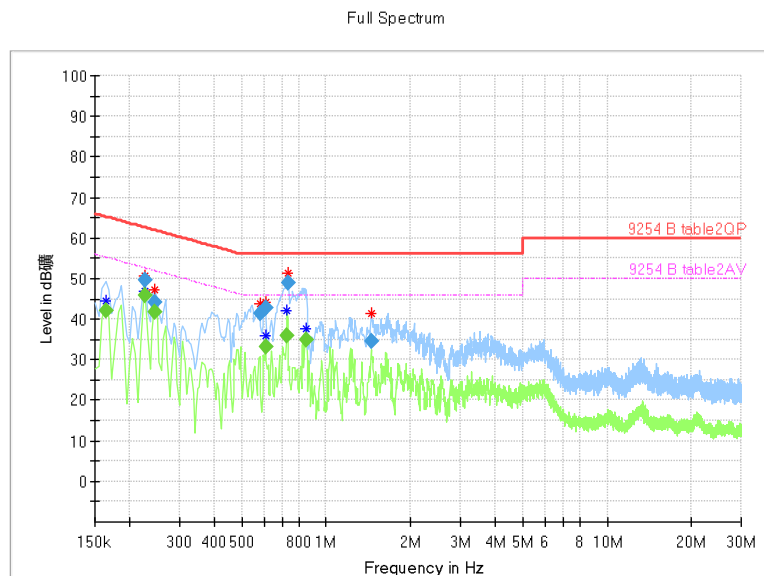
3.1.7 TEST RESULTS

A “reference path loss” Corr.(dB) is established and the $L_{\text{cable}} + \text{ATT} + \text{VDF}$ is the attenuation of “reference path loss”, and including the cable loss, the attenuation of the attenuator, the voltage division factor of AMN.

The measurement results are obtained as described below:

$$P_{\text{result}} = P_{\text{mea}} + \text{Corr. (dB)}$$

Sample calculation: $(42.02 \text{ dB}\mu\text{V}) = (31.62 \text{ dB}\mu\text{V}) + (10.4 \text{ dB})$, the corresponding frequency is 0.163568 MHz .



L+N Line

MEASUREMENT RESULT:

Frequency (MHz)	QuasiPea k	CAverag e	Limit (dBμV)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Corr. (dB)	Pmea (dBμV)
0.163568	---	42.02	55.28	13.26	5000.0	9.000	L1	10.4	31.62
0.226886	---	45.78	52.56	6.79	5000.0	9.000	L1	10.4	35.38
0.226886	49.53	---	62.56	13.03	5000.0	9.000	L1	10.4	39.13
0.244977	44.11	---	61.93	17.81	5000.0	9.000	L1	10.4	33.71
0.244977	---	41.79	51.93	10.14	5000.0	9.000	L1	10.4	31.39
0.579659	41.53	---	56.00	14.47	5000.0	9.000	N	10.4	31.13
0.606795	42.68	---	56.00	13.32	5000.0	9.000	N	10.4	32.28
0.606795	---	33.04	46.00	12.96	5000.0	9.000	N	10.4	22.64
0.724386	---	36.08	46.00	9.92	5000.0	9.000	N	10.4	25.68
0.728909	49.06	---	56.00	6.94	5000.0	9.000	N	10.4	38.66
0.851023	---	34.91	46.00	11.09	5000.0	9.000	N	10.4	24.51
1.443500	34.56	---	56.00	21.44	5000.0	9.000	L1	10.4	24.16



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,23	Aug.29,25
Pre-Amplifier	R&S	SCU08F1	101028	Jan.22,24	Jan.21,26
Signal Generator	R&S	SMB100A	182185	Mar.29,24	Mar.28,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESW44	101973	Mar.28,24	Mar.27,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Dec.26,23	Dec.25,25
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,23	Aug.21,25
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Jul.15,24	Jul.14,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,23	Aug.21,25
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.23,25	Feb.22,27
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.19,24	Jun.18,26
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	N/A	N/A
DC Source	HYELEC	HY3010B	551016	Aug.31,23	Aug.30,25
Hygrothermograph	DELI	20210528	SZ014	Sep.06,23	Sep.05,25
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25

- NOTE:**
1. The calibration interval of the above test instruments is 12/ 24/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Chamber.
 3. The FCC Site Registration No. is 434559; The Designation No. is CN1325.

3.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

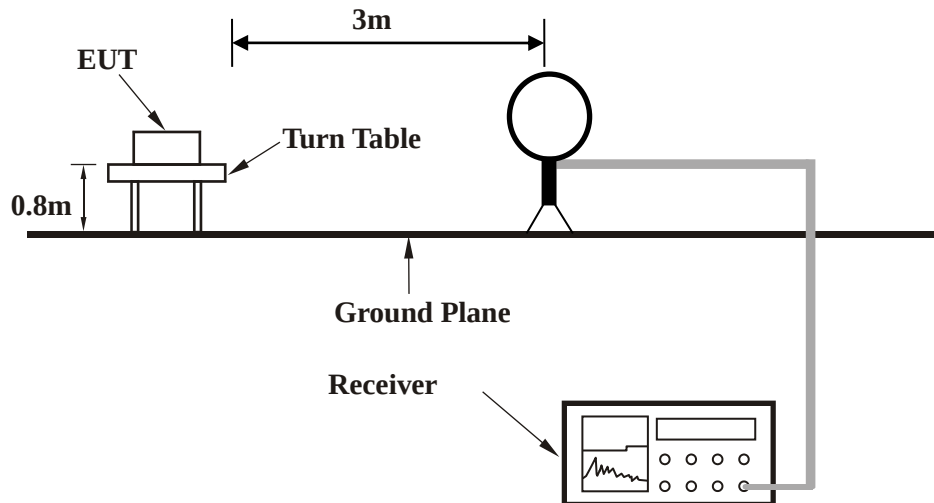
3.2.4 DEVIATION FROM TEST STANDARD

No deviation

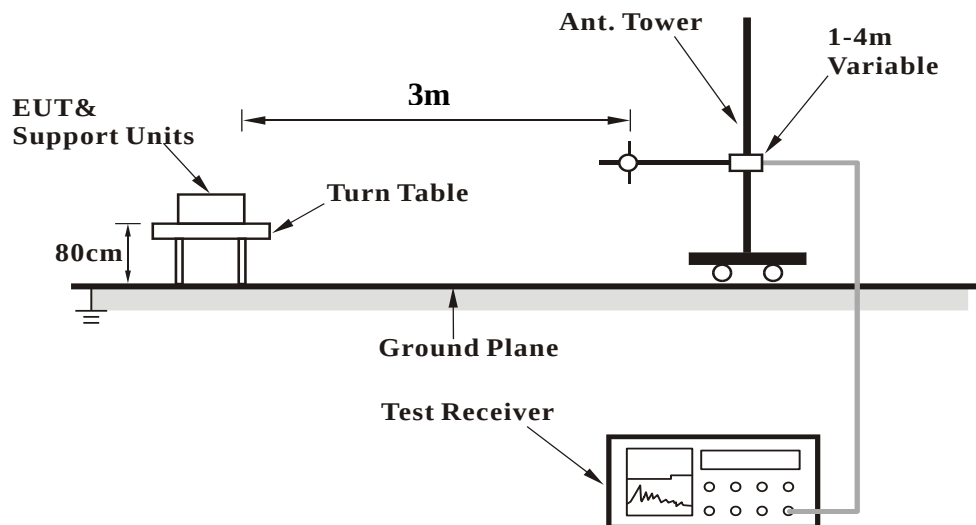


3.2.5 TEST SETUP

<Frequency Range 9KHz~30MHz >

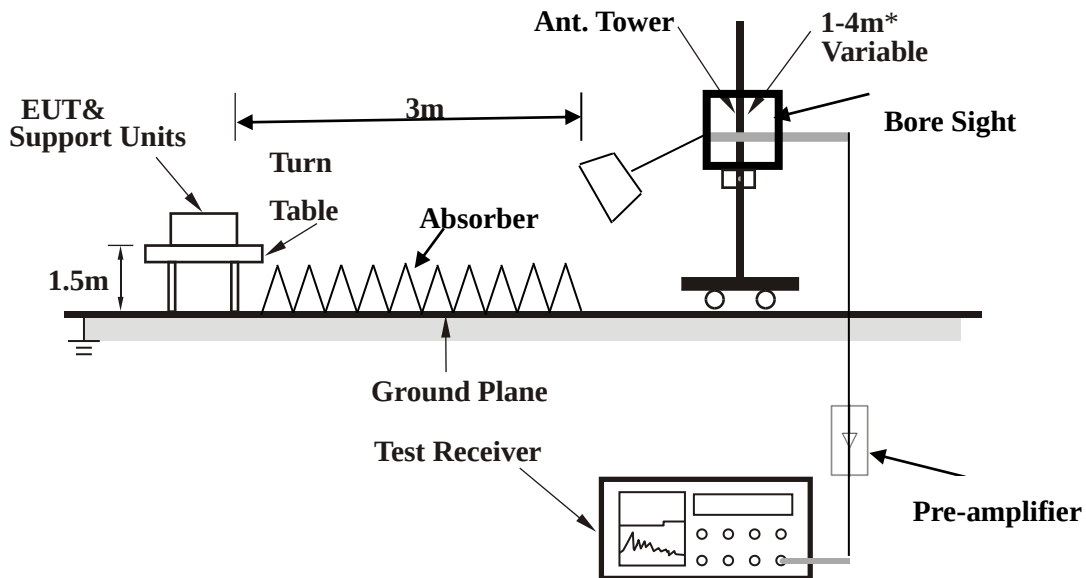


< Frequency Range 30MHz~1GHz >





<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

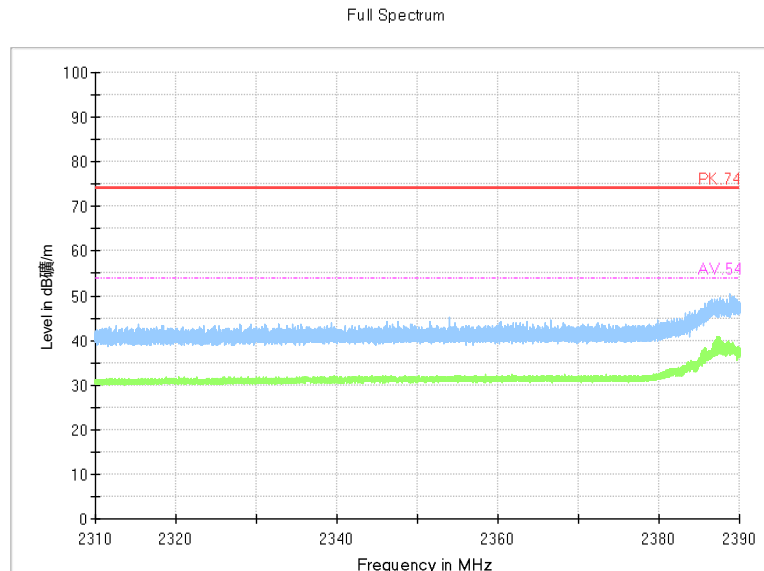
3.2.6 EUT OPERATING CONDITIONS

- Set the EUT under full load condition and placed them on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the EUT in full functions.



3.2.7 TEST RESULTS

Radiated Emission Band Edge for WIFI

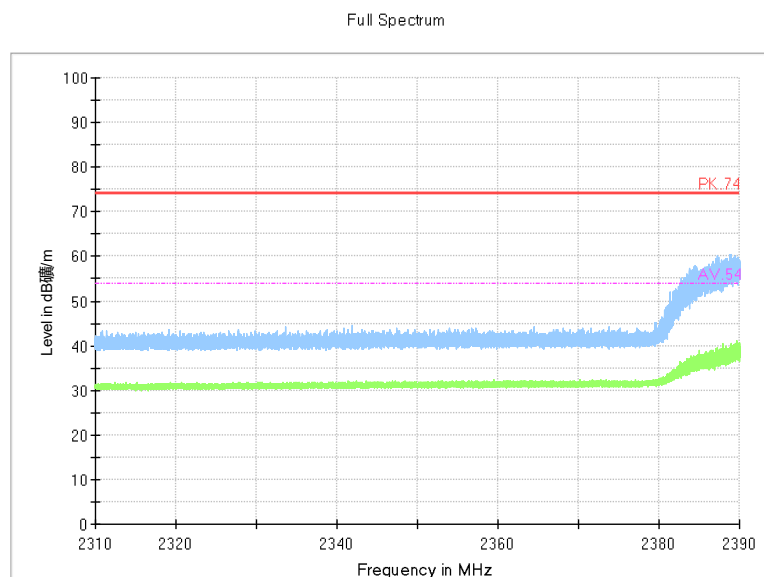


Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11b

Polarization: V



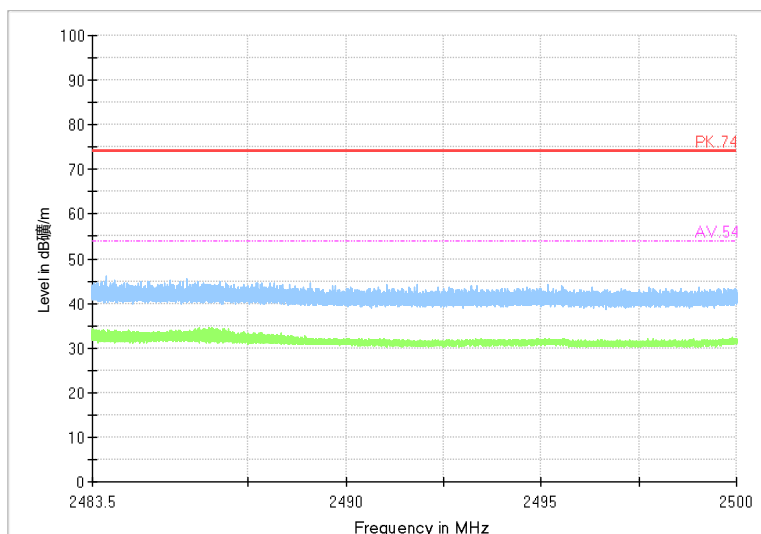
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11b

Polarization: H

Full Spectrum



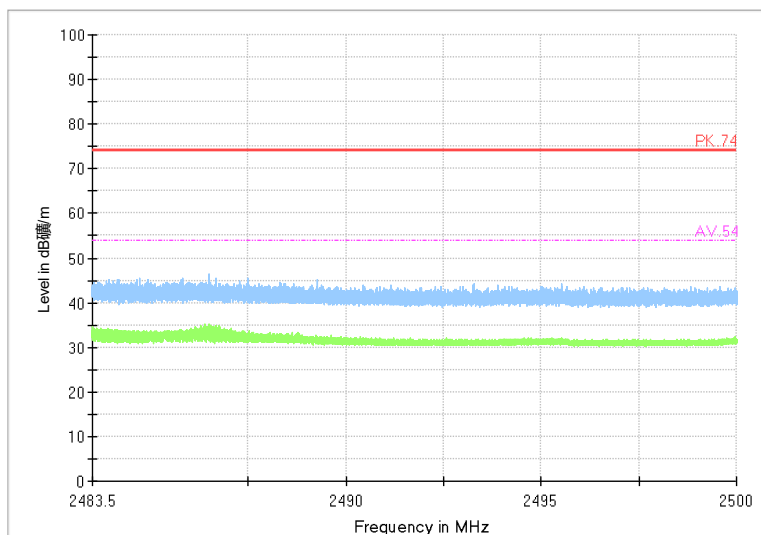
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11b

Polarization: V

Full Spectrum



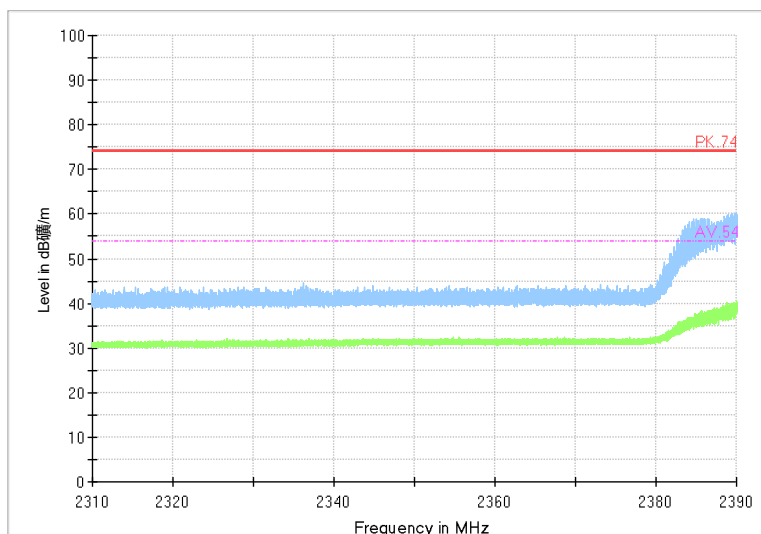
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11b

Polarization: H

Full Spectrum



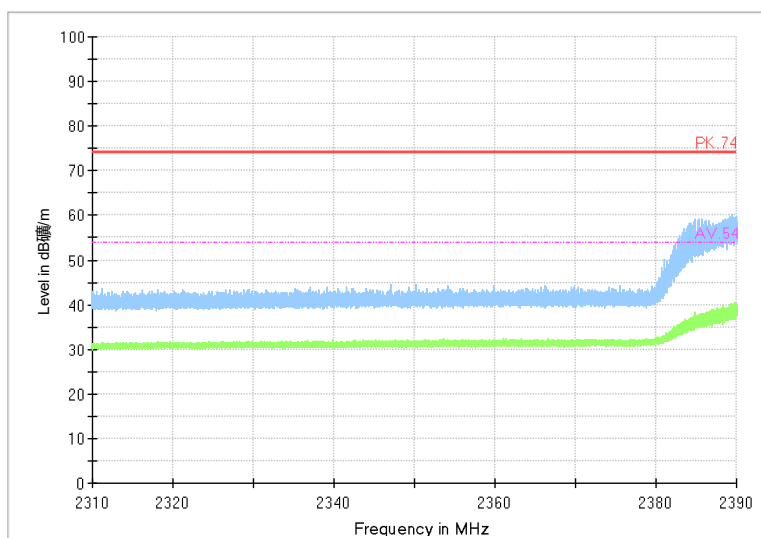
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11g

Polarization: V

Full Spectrum



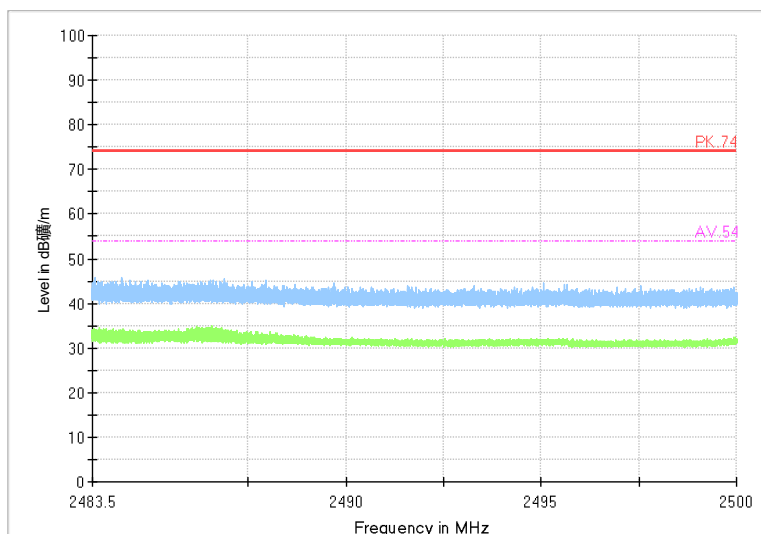
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11g

Polarization: H

Full Spectrum



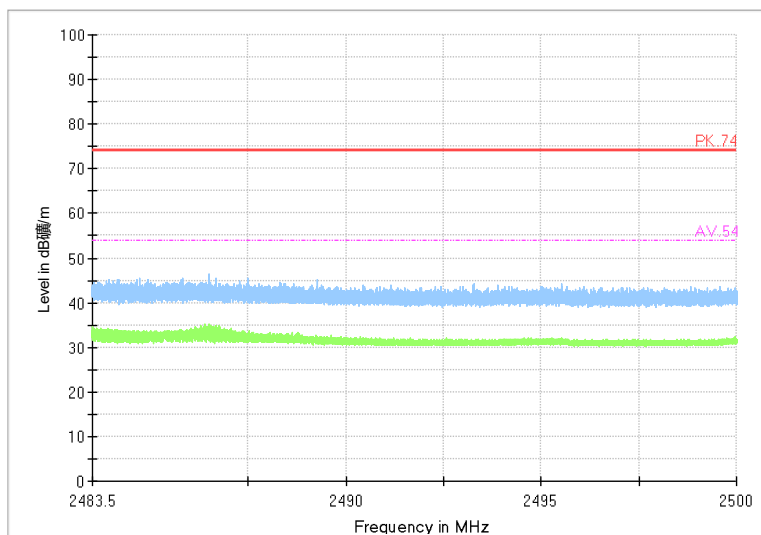
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11g

Polarization: V

Full Spectrum



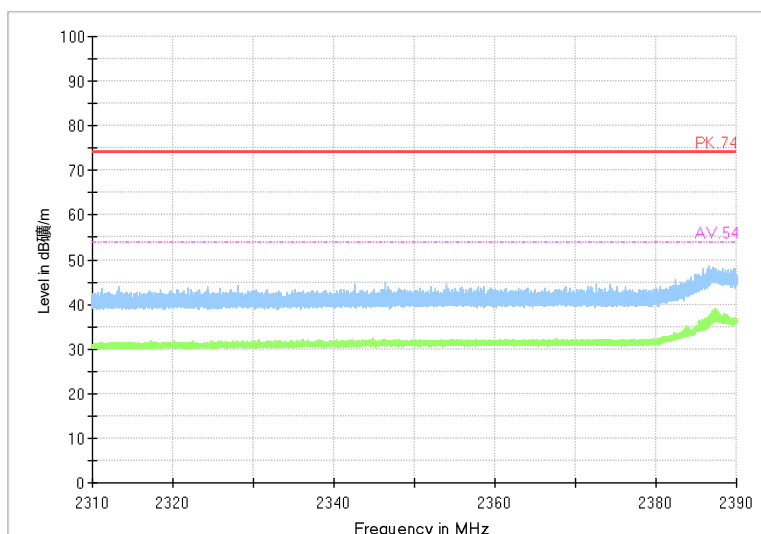
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11g

Polarization: H

Full Spectrum



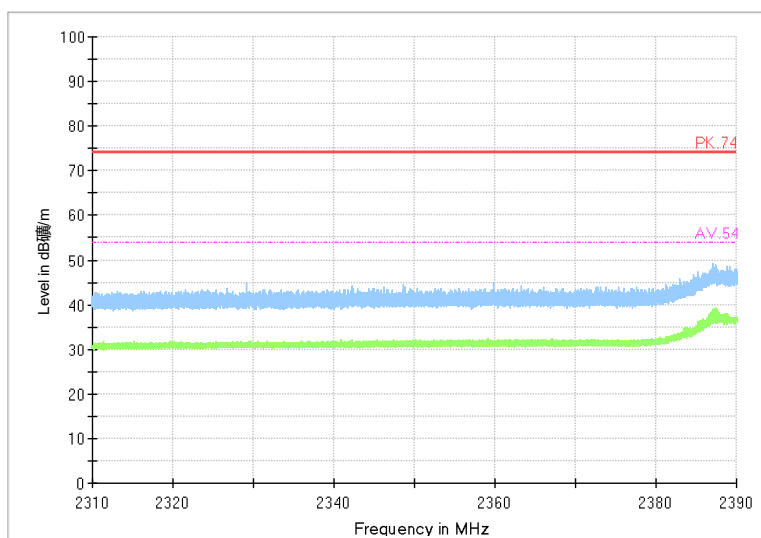
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11n

Polarization: V

Full Spectrum



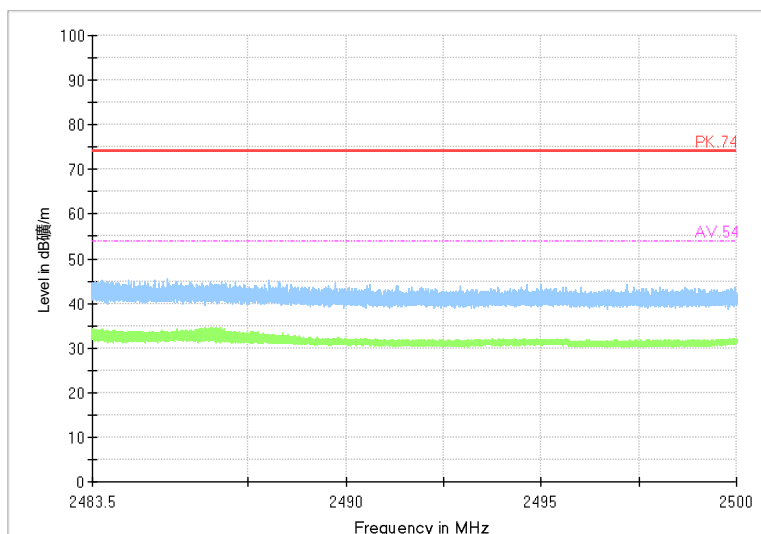
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11n

Polarization: H

Full Spectrum



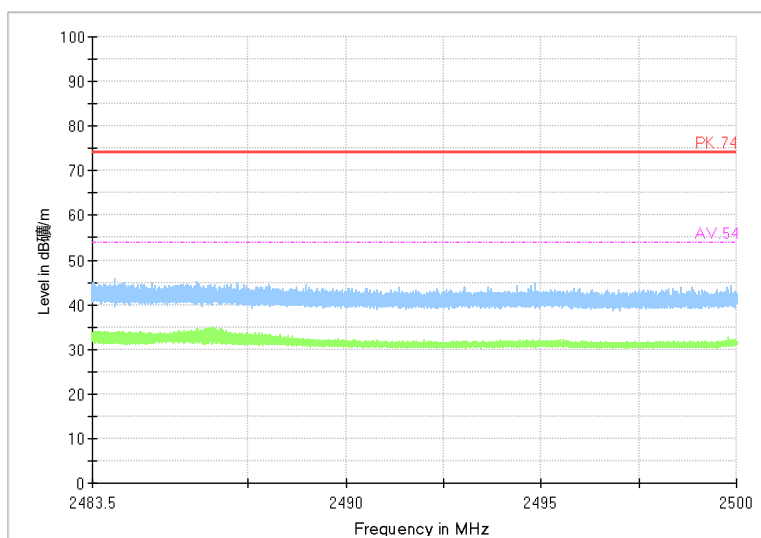
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11n

Polarization: V

Full Spectrum



Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11n

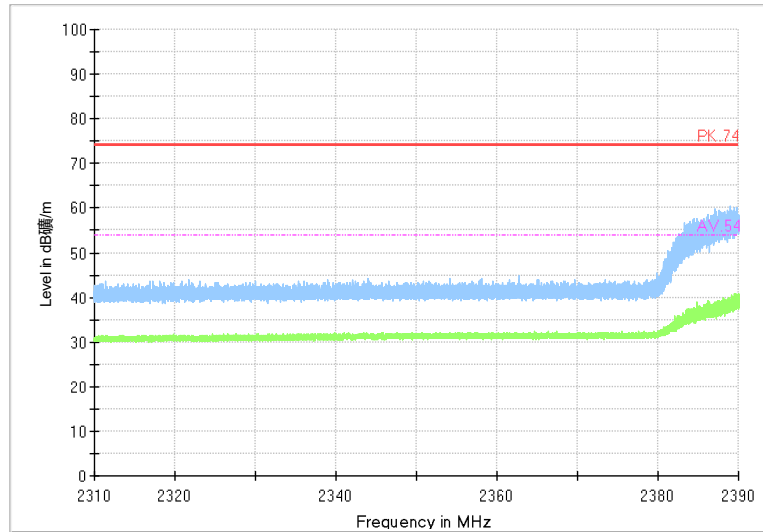
Polarization: H



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

Full Spectrum



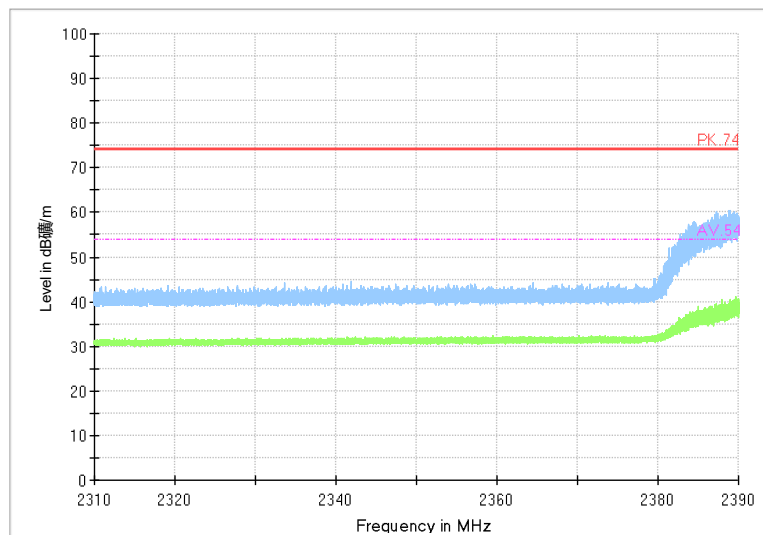
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11ax

Polarization: V

Full Spectrum



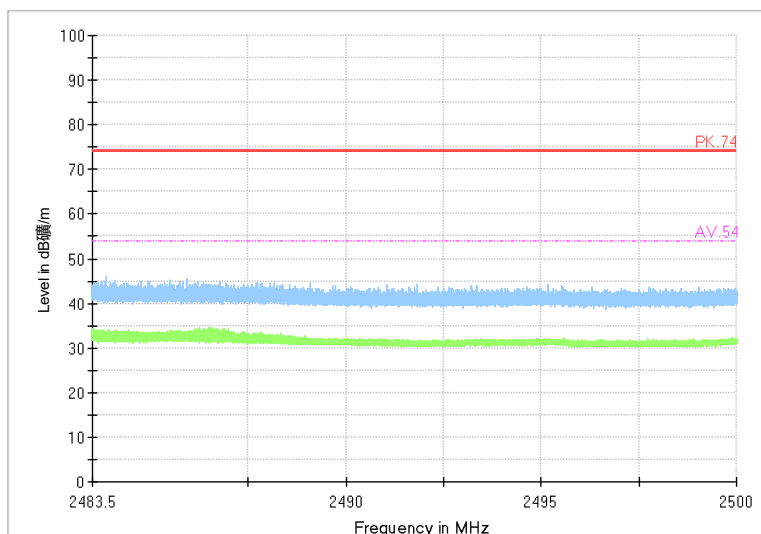
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11ax

Polarization: H

Full Spectrum



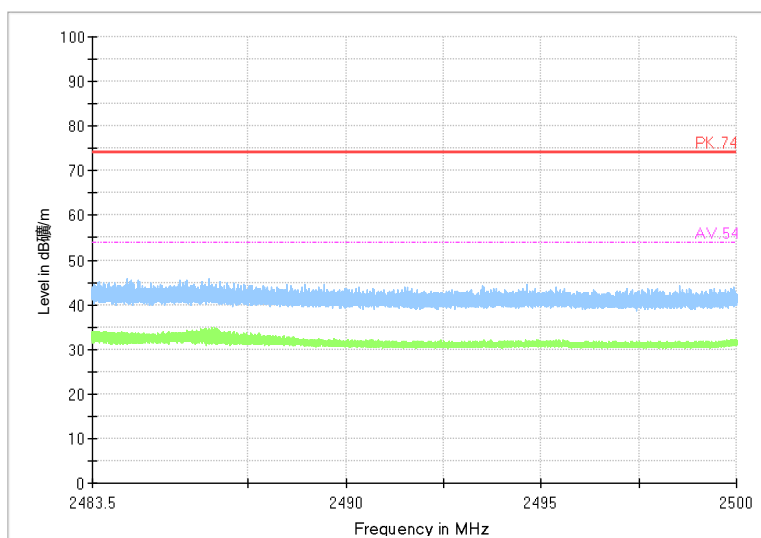
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11ax

Polarization: V

Full Spectrum



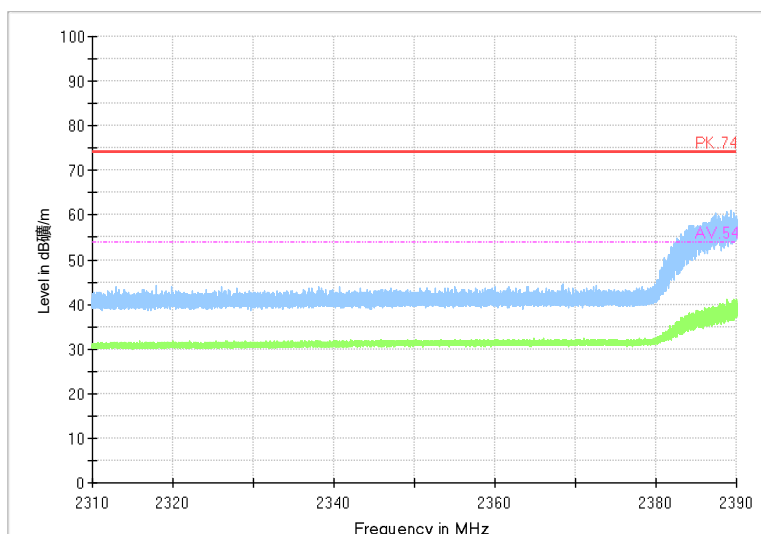
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11ax

Polarization: H

Full Spectrum



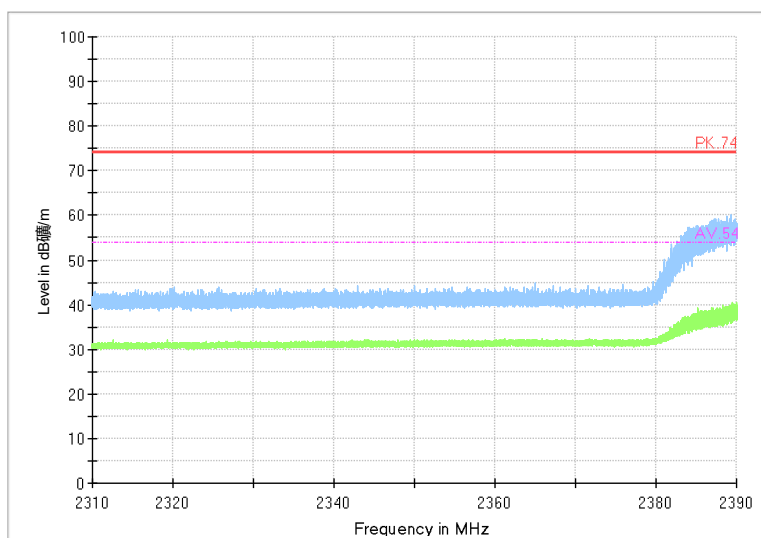
Radiated Emission Band Edge

Channel No.:3

Test Mode: 802.11n40

Polarization: V

Full Spectrum



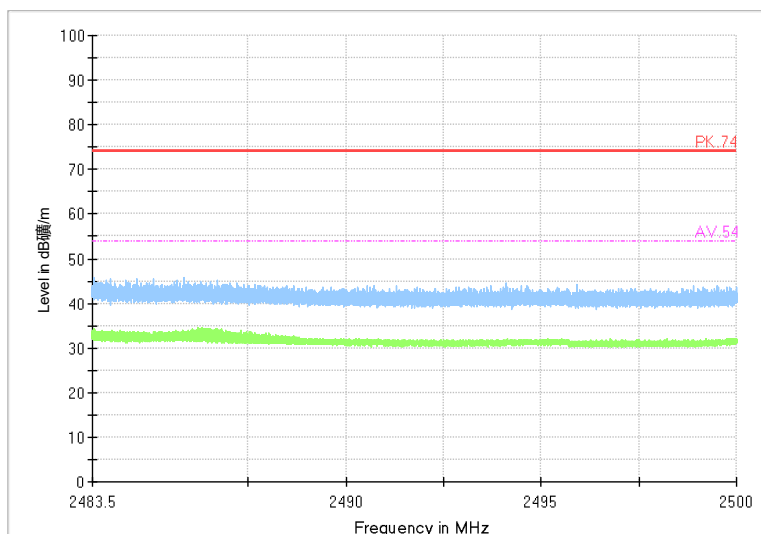
Radiated Emission Band Edge

Channel No.:3

Test Mode: 802.11n40

Polarization: H

Full Spectrum



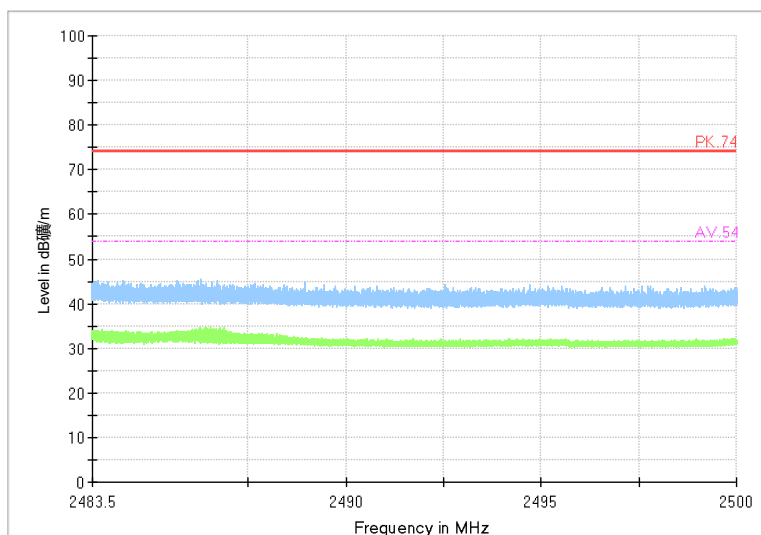
Radiated Emission Band Edge

Channel No.:9

Test Mode: 802.11n40

Polarization: V

Full Spectrum



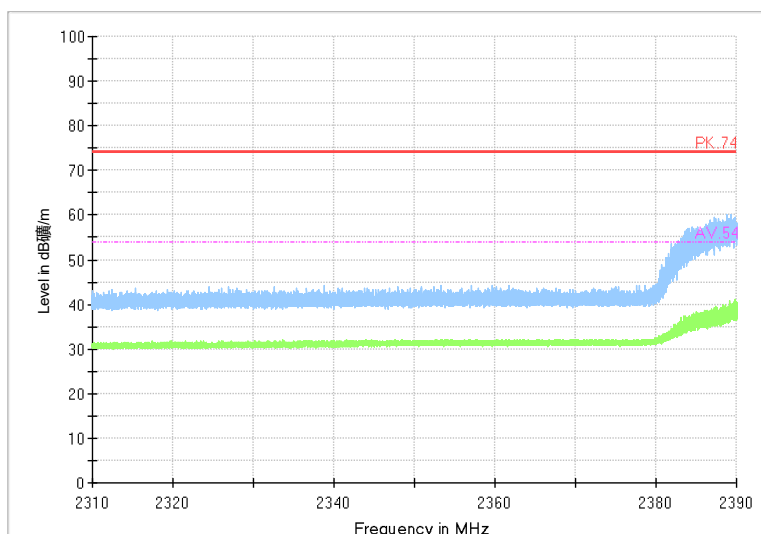
Radiated Emission Band Edge

Channel No.:9

Test Mode: 802.11n40

Polarization: H

Full Spectrum



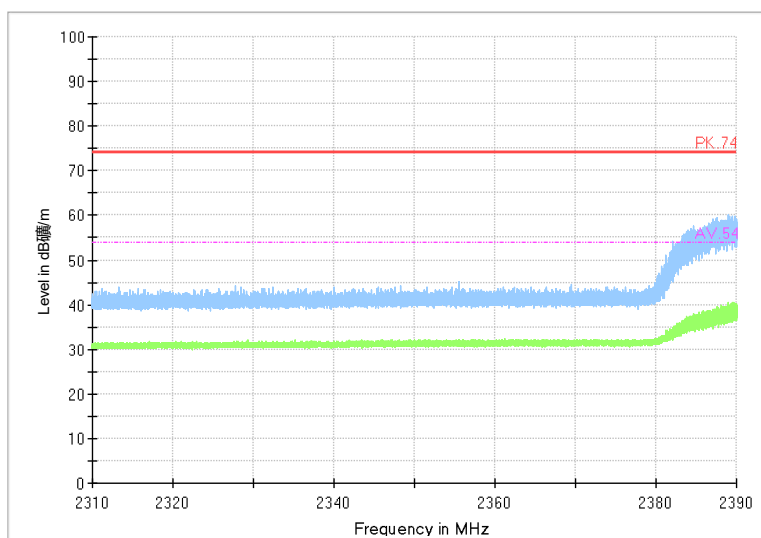
Radiated Emission Band Edge

Channel No.:3

Test Mode: 802.11ax40

Polarization: V

Full Spectrum



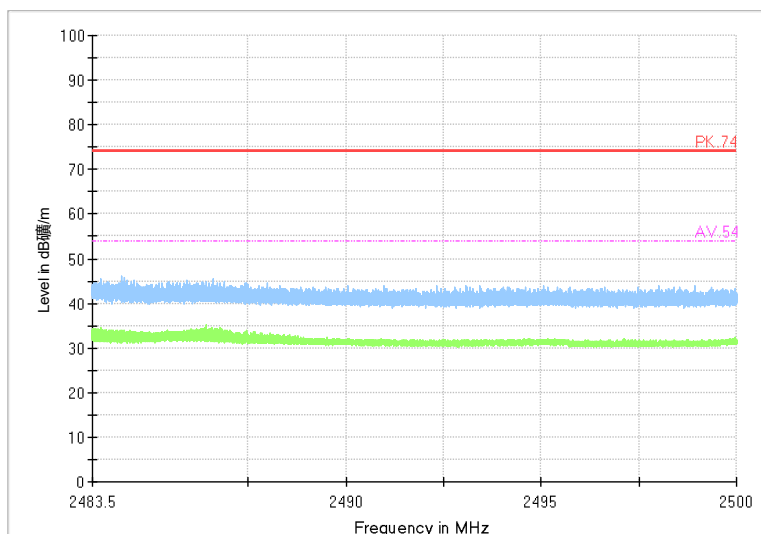
Radiated Emission Band Edge

Channel No.:3

Test Mode: 802.11ax40

Polarization: H

Full Spectrum



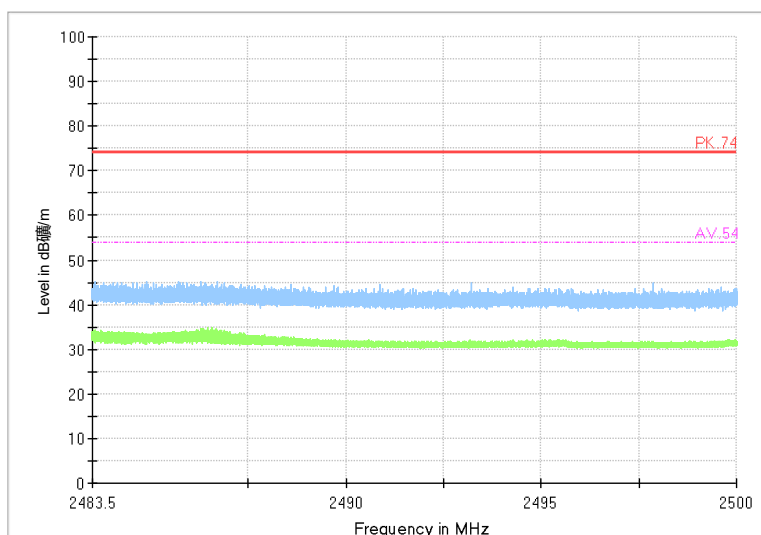
Radiated Emission Band Edge

Channel No.:9

Test Mode: 802.11ax40

Polarization: V

Full Spectrum



Radiated Emission Band Edge

Channel No.:9

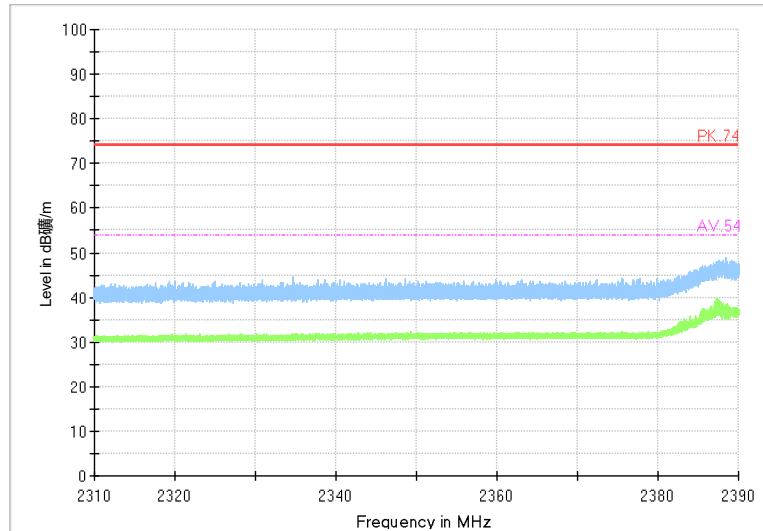
Test Mode: 802.11ax40

Polarization: H



RU (Tone26)

Full Spectrum



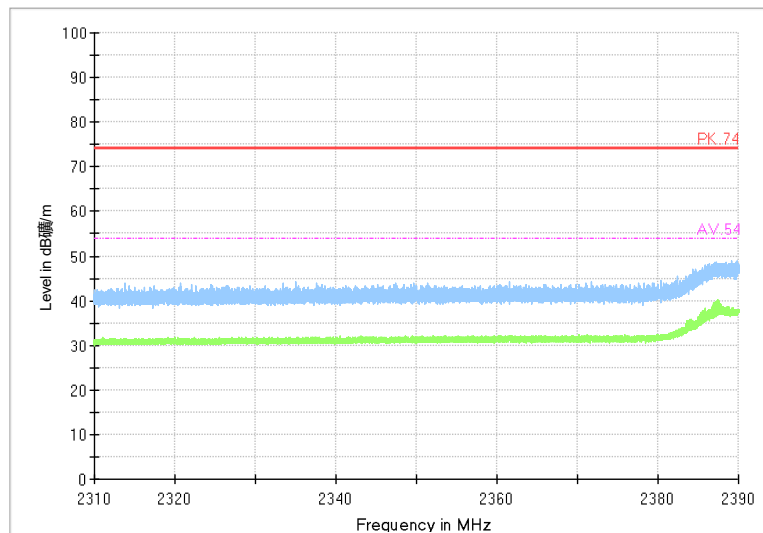
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11ax RU (Tone26)

Polarization: V

Full Spectrum



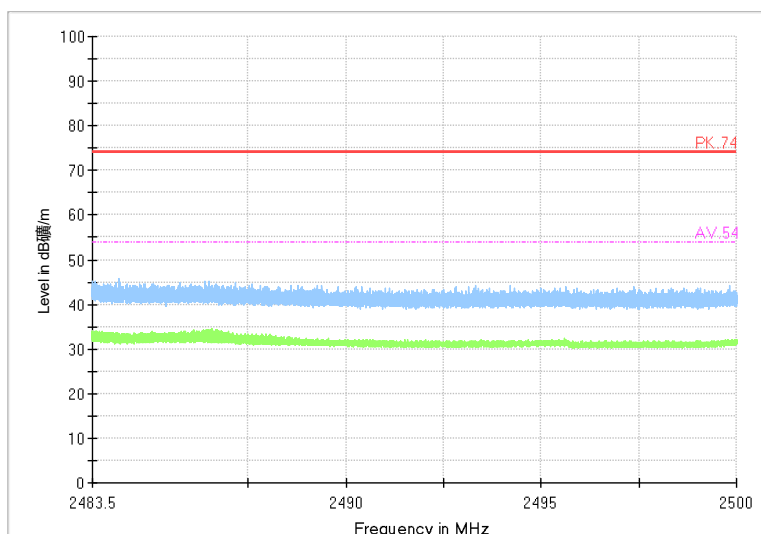
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11ax RU (Tone26)

Polarization: H

Full Spectrum



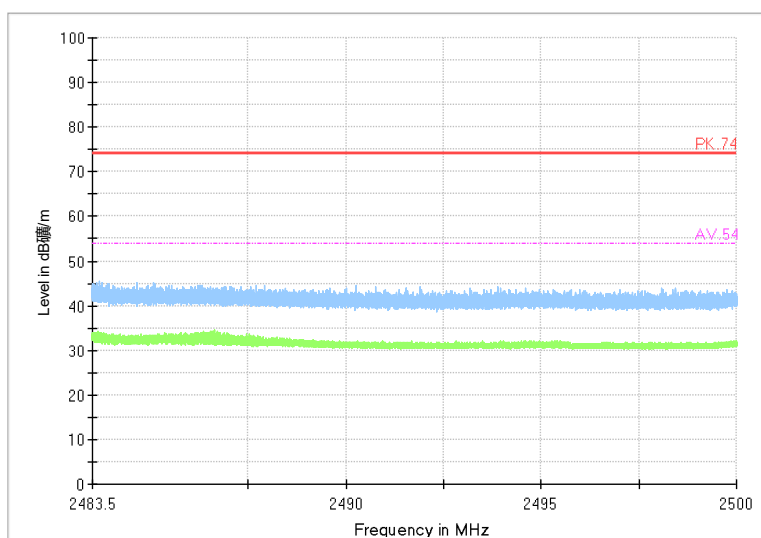
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11ax RU (Tone26)

Polarization: V

Full Spectrum



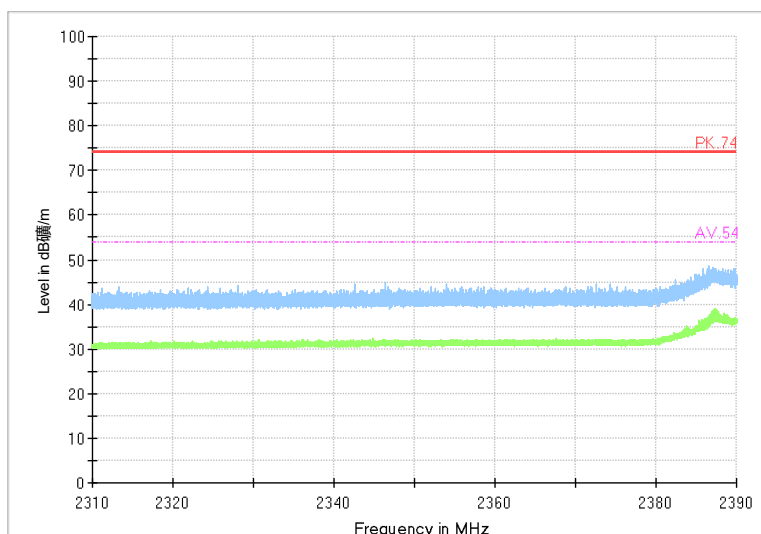
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11ax RU (Tone26)

Polarization: H

Full Spectrum



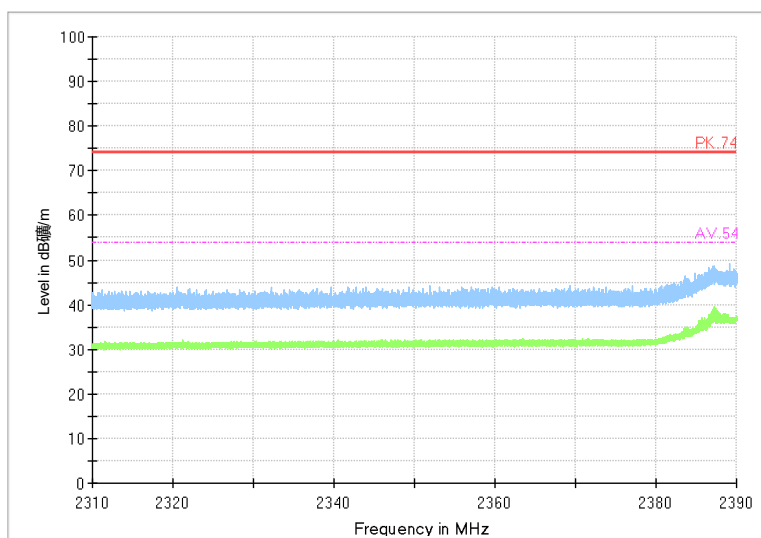
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11ax40 RU (Tone26)

Polarization: V

Full Spectrum



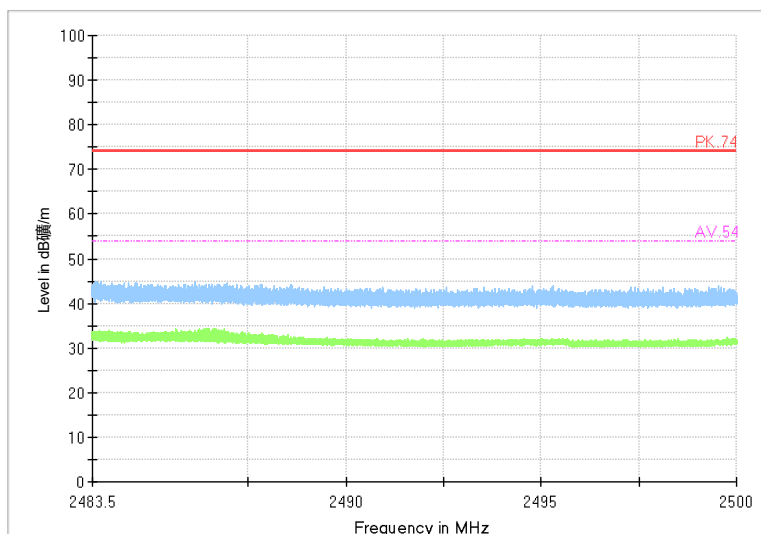
Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11ax40 RU (Tone26)

Polarization: H

Full Spectrum



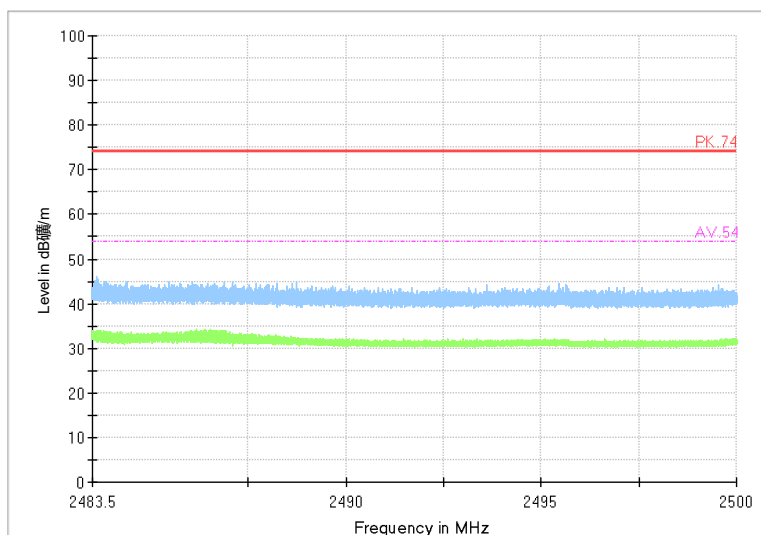
Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11ax40 RU (Tone26)

Polarization: V

Full Spectrum



Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11ax40 RU (Tone26)

Polarization: H



Radiated Emission for WIFI

After comparison, the worst case attitude is EUT lay down.

Determining Spurious Emissions Levels

A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{mea}} + A_{Rpl}$$

Sample calculation: $(25.12 \text{ dB}\mu\text{V/m}) = (48.12 \text{ dB}\mu\text{V}) + (-23 \text{ dB/m})$, the corresponding frequency is 225.002333 MHz.

For 802.11b Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
225.002333	25.12	-23	48.12	Vertical	46.00	20.88
249.996000	29.50	-22	51.50	Vertical	46.00	16.50
374.996667	31.22	-18	49.22	Vertical	46.00	14.78
450.010000	28.84	-17	45.84	Vertical	46.00	17.16
781.725333	22.04	-10	32.04	Vertical	46.00	23.96
782.061333	26.93	-10	36.93	Vertical	46.00	19.07

For 802.11g Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
99.538667	21.51	-25	46.51	Vertical	43.50	21.99
224.979333	25.08	-23	48.08	Vertical	46.00	20.92
249.996000	29.79	-22	51.79	Vertical	46.00	16.22
374.996667	30.54	-18	48.54	Vertical	46.00	15.46
449.977667	26.74	-17	43.74	Vertical	46.00	19.26
783.498667	25.49	-10	35.49	Horizontal	46.00	20.51

For 802.11n(HT20) Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
----------------	----------------	-----------	---------------	----------	----------------	-------------



BUREAU VERITAS Test Report No.: PSU-NQN2502170113RF09

45.368667	20.05	-23	20.05	Vertical	40.00	19.95
99.553333	20.04	-25	20.04	Vertical	43.50	23.46
249.996000	33.83	-22	33.83	Vertical	46.00	12.17
374.996667	29.49	-18	29.49	Vertical	46.00	16.51
786.984667	23.32	-10	23.32	Vertical	46.00	22.68
869.462667	26.39	-8	26.39	Horizontal	46.00	19.61

For 802.11ax(HE20) Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
45.474000	21.34	-23	44.34	Vertical	40.00	18.66
51.621667	21.42	-23	44.42	Vertical	40.00	18.58
99.543000	22.19	-25	47.19	Vertical	43.50	21.31
249.996000	34.12	-22	56.12	Horizontal	46.00	11.88
374.996667	28.78	-18	46.78	Horizontal	46.00	17.22
786.506333	20.29	-10	30.29	Horizontal	46.00	25.71

For 802.11b Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
45.383000	21.47	-23	44.47	Vertical	40.00	18.53
57.554000	22.19	-24	46.19	Vertical	40.00	17.81
99.534667	20.13	-25	45.13	Vertical	43.50	23.37
249.996000	34.00	-22	56.00	Vertical	46.00	12.00
374.996667	29.26	-18	47.26	Vertical	46.00	16.74
775.280000	22.43	-10	32.43	Horizontal	46.00	23.57

For 802.11g Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
71.085333	6.38	-28	34.38	Vertical	40.00	33.62
73.336000	7.90	-28	35.90	Vertical	40.00	32.10
79.319333	8.02	-29	37.02	Vertical	40.00	31.98
93.793667	16.60	-26	42.60	Horizontal	43.50	26.90
106.896333	21.49	-25	46.49	Vertical	43.50	22.01

**BUREAU VERITAS Test Report No.: PSU-NQN2502170113RF09**

777.534667	25.76	-10	35.76	Vertical	46.00	20.24
------------	-------	-----	-------	----------	-------	-------

For 802.11n(HT20) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
39.136000	16.67	-25	41.67	Vertical	40.00	23.33
99.502333	21.40	-25	46.40	Vertical	43.50	22.10
225.000667	25.82	-23	48.82	Horizontal	46.00	20.18
249.996000	29.53	-22	51.53	Horizontal	46.00	16.47
374.996667	31.03	-18	49.03	Vertical	46.00	14.97
782.715000	25.48	-10	35.48	Vertical	46.00	20.52

For 802.11ax(HE20) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
224.979333	30.79	-23	53.79	Horizontal	46.00	15.21
48.077667	21.77	-23	44.77	Vertical	40.00	18.23
249.996000	30.25	-22	52.25	Vertical	46.00	15.75
782.770333	28.37	-10	38.37	Vertical	46.00	17.63
374.996667	31.36	-18	49.36	Vertical	46.00	14.64
57.829667	21.58	-24	45.58	Vertical	40.00	18.42

For 802.11b Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
99.541333	21.23	-25	46.23	Vertical	43.50	22.27
167.777333	18.29	-27	45.29	Vertical	43.50	25.21
225.008333	25.84	-23	48.84	Vertical	46.00	20.16
249.996000	30.15	-22	52.15	Vertical	46.00	15.85
374.996667	30.78	-18	48.78	Vertical	46.00	15.22
782.192333	26.49	-10	36.49	Vertical	46.00	19.51

For 802.11g Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
----------------	----------------	-----------	---------------	----------	----------------	-------------



279.834667	22.71	-21	43.71	Vertical	46.00	23.29
349.833667	25.08	-19	44.08	Vertical	46.00	20.92
419.843000	24.93	-17	41.93	Vertical	46.00	21.07
766.690333	23.95	-10	33.95	Vertical	46.00	22.05
839.676000	25.33	-9	34.33	Vertical	46.00	20.67
924.812333	21.58	-8	29.58	Vertical	46.00	24.42

For 802.11n(HT20) Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
225.002333	24.21	-23	47.21	Vertical	46.00	21.79
249.996000	29.48	-22	51.48	Vertical	46.00	16.52
374.996667	30.89	-18	48.89	Vertical	46.00	15.11
449.977667	27.13	-17	44.13	Vertical	46.00	18.87
781.695667	22.54	-10	32.54	Vertical	46.00	23.46
878.139000	22.47	-8	30.47	Vertical	46.00	23.53

For 802.11ax(HE20) Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
101.683000	21.01	-25	46.01	Vertical	43.50	22.49
171.517000	19.89	-26	45.89	Vertical	43.50	23.61
241.336667	21.18	-22	43.18	Vertical	46.00	24.82
249.996000	29.73	-22	51.73	Vertical	46.00	16.27
374.996667	31.30	-18	49.30	Vertical	46.00	14.70
773.682000	19.78	-10	29.78	Vertical	46.00	26.22

For 802.11n(HT40) Channel No.:3

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
70.200667	18.48	-27	45.48	Vertical	40.00	21.52
101.715333	20.83	-25	45.83	Vertical	43.50	22.67
174.987000	20.23	-26	46.23	Vertical	43.50	23.27
249.996000	29.29	-22	51.29	Vertical	46.00	16.71
374.996667	30.85	-18	48.85	Vertical	46.00	15.15



BUREAU VERITAS Test Report No.: PSU-NQN2502170113RF09

783.207667	21.58	-10	31.58	Vertical	46.00	24.42
------------	-------	-----	-------	----------	-------	-------

For 802.11ax(HE40) Channel No.:3

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
87.099000	19.54	-27	46.54	Vertical	40.00	20.46
124.995333	25.72	-27	52.72	Vertical	43.50	17.78
249.996000	34.03	-22	56.03	Vertical	46.00	11.97
450.010000	33.83	-17	50.83	Vertical	46.00	12.17
781.827333	27.20	-10	37.20	Vertical	46.00	18.80
782.926000	22.19	-10	32.19	Vertical	46.00	23.81

For 802.11n(HT40) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
38.929000	19.23	-25	44.23	Vertical	40.00	20.77
42.073000	16.78	-24	40.78	Vertical	40.00	23.22
42.365667	16.44	-24	40.44	Vertical	40.00	23.56
225.137667	23.72	-23	46.72	Vertical	46.00	22.28
249.996000	30.32	-22	52.32	Vertical	46.00	15.68
374.996667	31.62	-18	49.62	Vertical	46.00	14.38

For 802.11ax(HE40) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
224.994667	24.92	-23	47.92	Vertical	46.00	21.08
249.996000	29.52	-22	51.52	Vertical	46.00	16.49
374.996667	30.33	-18	48.33	Vertical	46.00	15.67
449.985333	29.09	-17	46.09	Vertical	46.00	16.91
781.902333	24.09	-10	34.09	Vertical	46.00	21.91
879.427333	22.15	-8	30.15	Vertical	46.00	23.85

For 802.11n(HT40) Channel No.:9

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
----------------	----------------	-----------	---------------	----------	----------------	-------------



BUREAU VERITAS Test Report No.: PSU-NQN2502170113RF09

249.996000	30.85	-22	52.85	Vertical	46.00	15.15
450.010000	29.03	-17	46.03	Vertical	46.00	16.97
773.014000	25.43	-10	35.43	Vertical	46.00	20.57
781.877667	24.45	-10	34.45	Vertical	46.00	21.55
783.207667	28.73	-10	38.73	Vertical	46.00	17.27
883.167667	28.32	-8	36.32	Vertical	46.00	17.68

For 802.11ax(HE40) Channel No.:9

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
46.439667	19.27	-23	42.27	Vertical	40.00	20.73
249.996000	31.59	-22	53.59	Vertical	46.00	14.41
374.996667	27.28	-18	45.28	Vertical	46.00	18.72
778.172000	24.33	-10	34.33	Vertical	46.00	21.67
780.678000	20.06	-10	30.06	Vertical	46.00	25.94
785.476000	20.49	-10	30.49	Vertical	46.00	25.51



Partial RU (Tone26)

For 802.11ax(HE20) Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
87.047000	20.01	-28	48.01	Vertical	40.00	19.99
106.105000	23.42	-25	48.42	Vertical	43.50	20.08
124.995333	25.61	-27	52.61	Vertical	43.50	17.89
249.996000	34.02	-22	56.02	Vertical	46.00	11.98
449.977667	33.42	-17	50.42	Vertical	46.00	12.58
783.300333	25.29	-10	35.29	Vertical	46.00	20.71

For 802.11ax(HE20) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
86.762000	19.38	-28	47.38	Vertical	40.00	20.62
99.515000	20.82	-25	45.82	Vertical	43.50	22.68
124.995333	25.80	-27	52.80	Vertical	43.50	17.70
249.996000	34.05	-22	56.05	Vertical	46.00	11.95
374.996667	28.11	-18	46.11	Vertical	46.00	17.89
781.841000	21.10	-10	31.10	Vertical	46.00	24.91

For 802.11ax(HE20) Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
87.169667	19.56	-27	46.56	Vertical	40.00	20.44
98.888000	22.21	-25	47.21	Vertical	43.50	21.29
249.996000	33.33	-22	55.33	Vertical	46.00	12.67
781.050667	22.19	-10	32.19	Vertical	46.00	23.81
781.921000	20.52	-10	30.52	Vertical	46.00	25.48
784.169000	21.85	-10	31.85	Vertical	46.00	24.15

For 802.11ax(HE40) Channel No.:3

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
----------------	----------------	-----------	---------------	----------	----------------	-------------



BUREAU VERITAS Test Report No.: PSU-NQN2502170113RF09

86.536667	19.51	-28	47.51	Vertical	40.00	20.49
124.995333	26.11	-27	53.11	Vertical	43.50	17.39
249.996000	34.02	-22	56.02	Vertical	46.00	11.98
374.996667	28.12	-18	46.12	Vertical	46.00	17.88
449.977667	25.61	-17	42.61	Vertical	46.00	20.39
783.524000	23.76	-10	33.76	Vertical	46.00	22.24

For 802.11ax(HE40) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
449.977667	35.16	-17	52.16	Vertical	46.00	10.84
146.432333	23.85	-28	51.85	Vertical	43.50	19.65
82.283000	23.43	-29	52.43	Vertical	40.00	16.57
915.739333	26.41	-8	34.41	Vertical	46.00	19.59
374.996667	28.77	-18	46.77	Vertical	46.00	17.23
249.996000	34.70	-22	56.70	Vertical	46.00	11.30

For 802.11ax(HE40) Channel No.:9

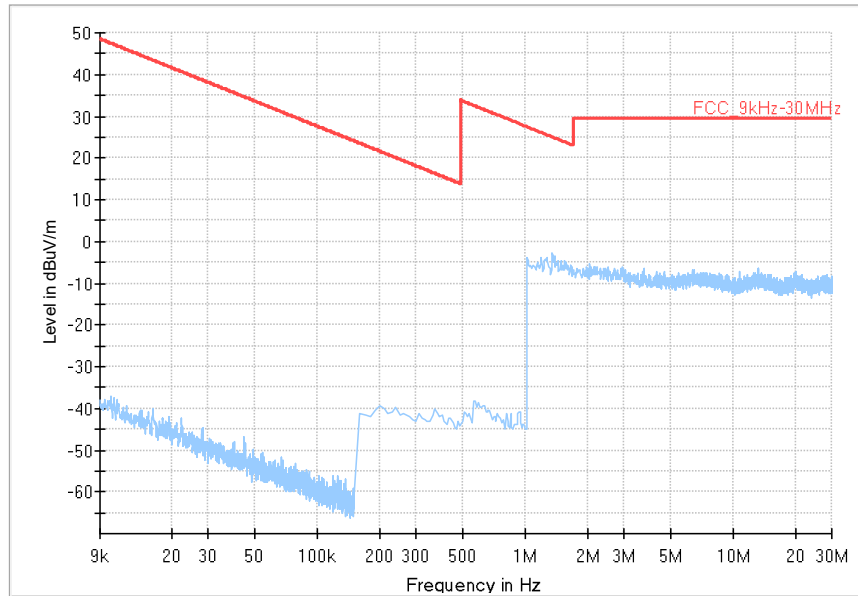
Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
948.590000	26.73	-7	33.73	Vertical	46.00	19.27
950.788667	26.52	-7	33.52	Vertical	46.00	19.48
374.996667	28.85	-18	46.85	Vertical	46.00	17.15
79.890333	24.90	-29	53.90	Vertical	40.00	15.10
69.899333	21.01	-27	48.01	Vertical	40.00	18.99
249.996000	33.12	-22	55.12	Vertical	46.00	12.88



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

Full Spectrum



Frequency Range: 9kHz -30MHz

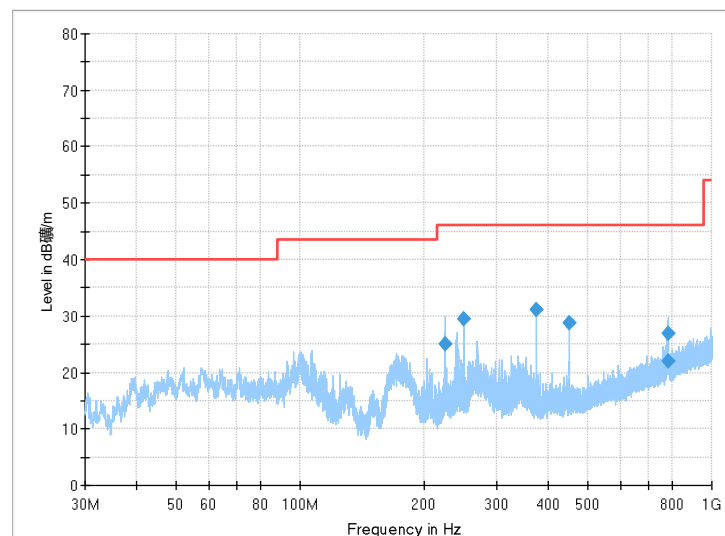
Detector: QP mode

Note: The relevant tests have been performed in order to verify in which mode would have the worst features, the result show above is the worst case.

Carrier frequency (MHz): 2412

Channel No.:1

Full Spectrum

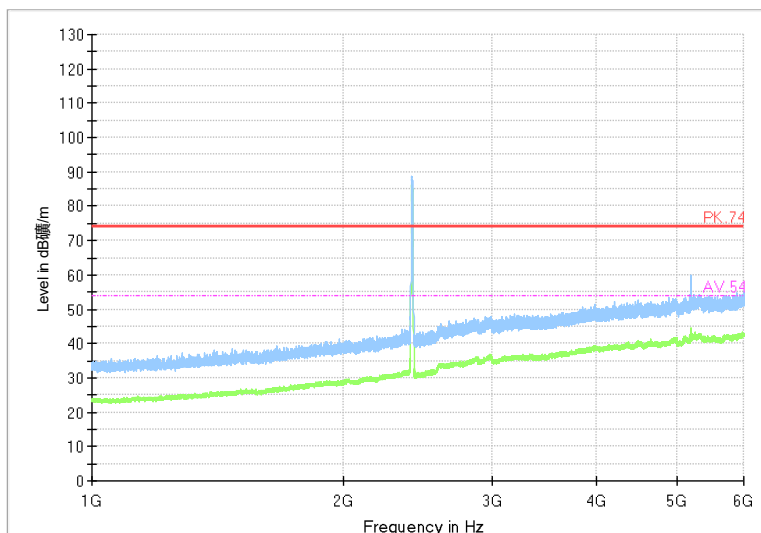


Frequency Range 30MHz -1GHz

Detector: Av mode and PK mode

Modulation type: 802.11b

Full Spectrum

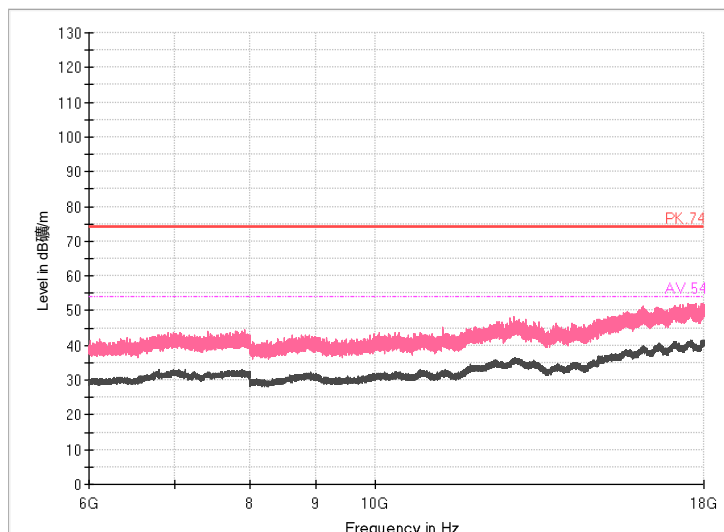


Frequency Range: 1GHz -6GHz

Detector: Av mode and PK mode

Modulation type: 802.11b

Full Spectrum



Frequency Range: 6GHz -18GHz

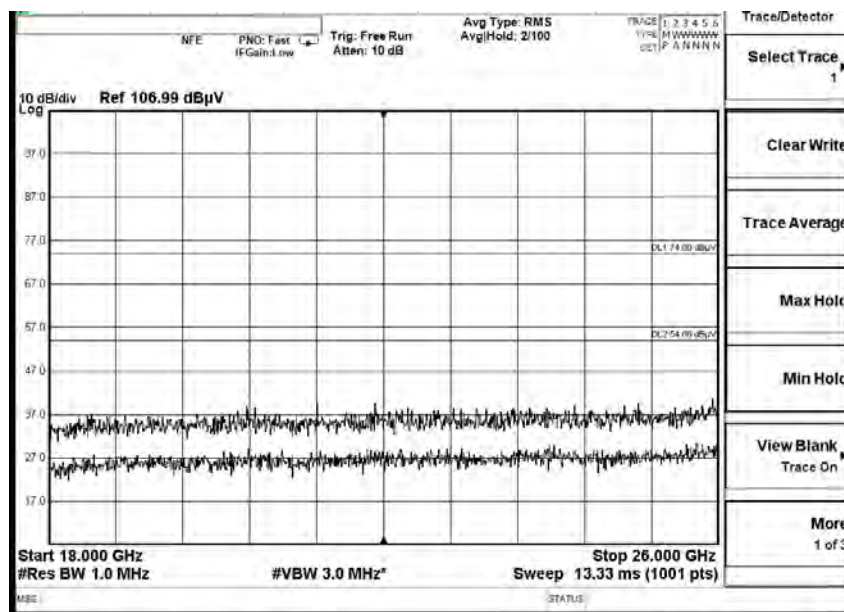
Detector: Av mode and PK mode

Modulation type: 802.11b



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

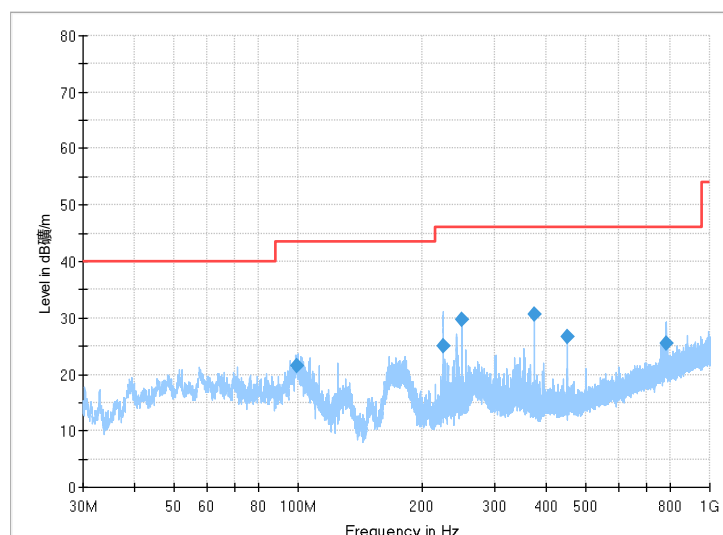


Frequency Range: 18GHz -26GHz

Detector: Av mode and PK mode

Modulation type: 802.11b

Full Spectrum



Frequency Range: 30MHz -1GHz

Detector: Av mode and PK mode

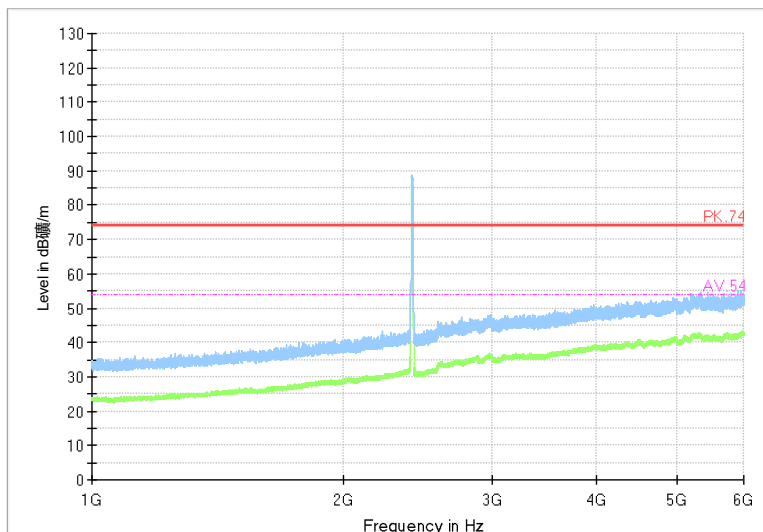
Modulation type: 802.11g



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

Full Spectrum

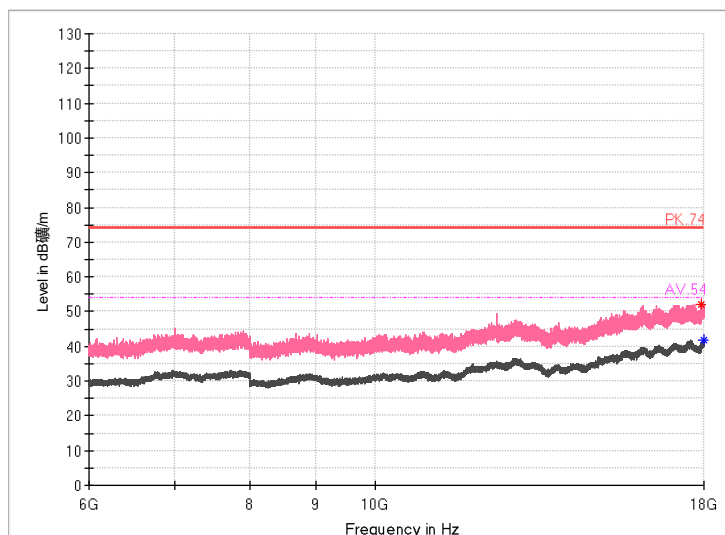


Frequency Range: 1GHz -6GHz

Detector: Av mode and PK mode

Modulation type: 802.11g

Full Spectrum



Frequency Range: 6GHz -18GHz

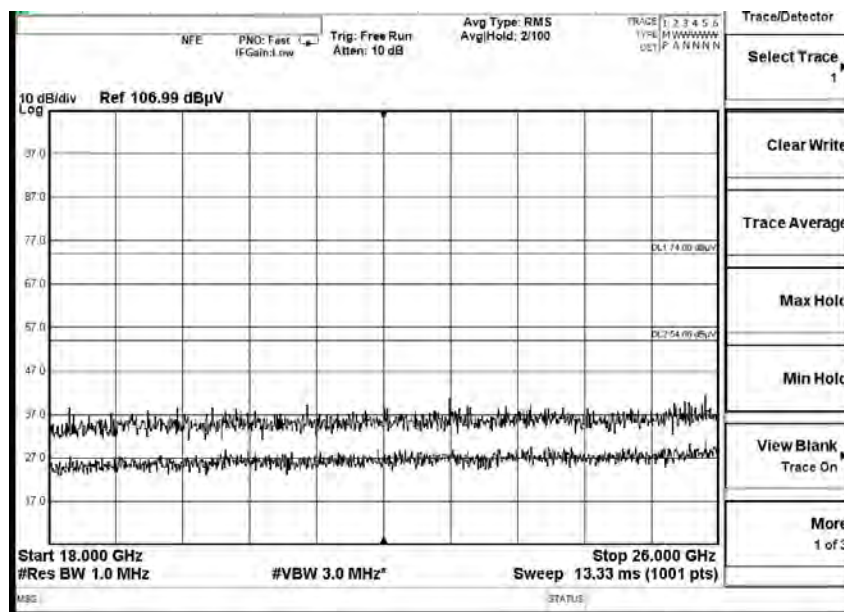
Detector: Av mode and PK mode

Modulation type: 802.11g



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

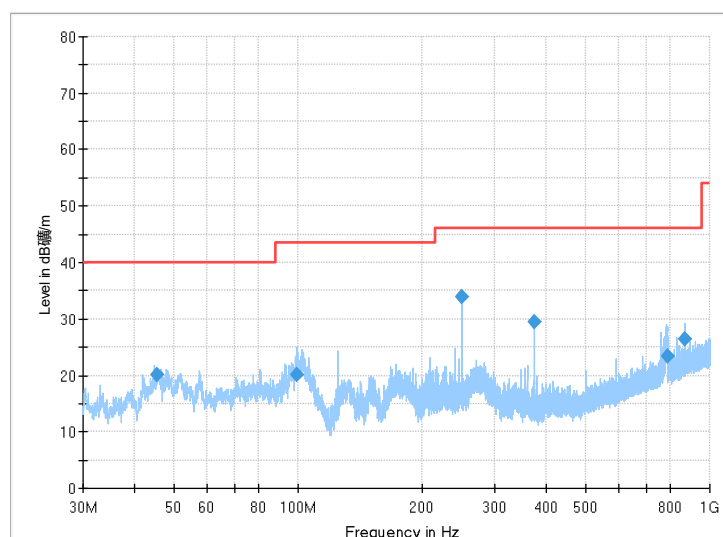


Frequency Range: 18GHz -26GHz

Detector: Av mode and PK mode

Modulation type: 802.11g

Full Spectrum



Frequency Range: 30MHz -1GHz

Detector: Av mode and PK mode

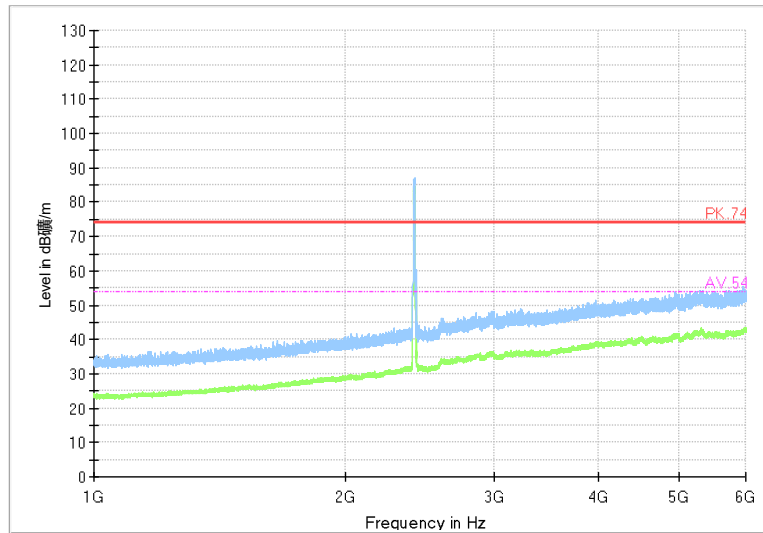
Modulation type: 802.11n(HT20)



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

Full Spectrum

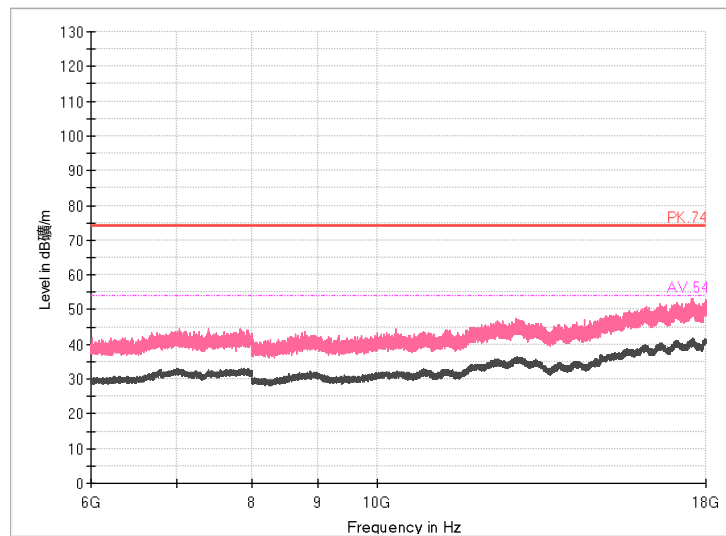


Frequency Range: 1GHz -6GHz

Detector: Av mode and PK mode

Modulation type: 802.11n(HT20)

Full Spectrum



Frequency Range: 6GHz -18GHz

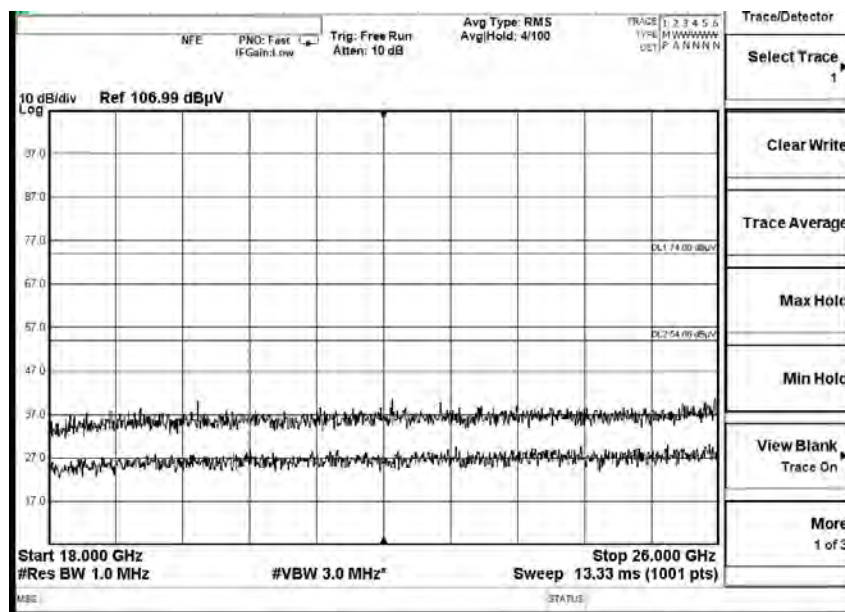
Detector: Av mode and PK mode

Modulation type: 802.11n(HT20)



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

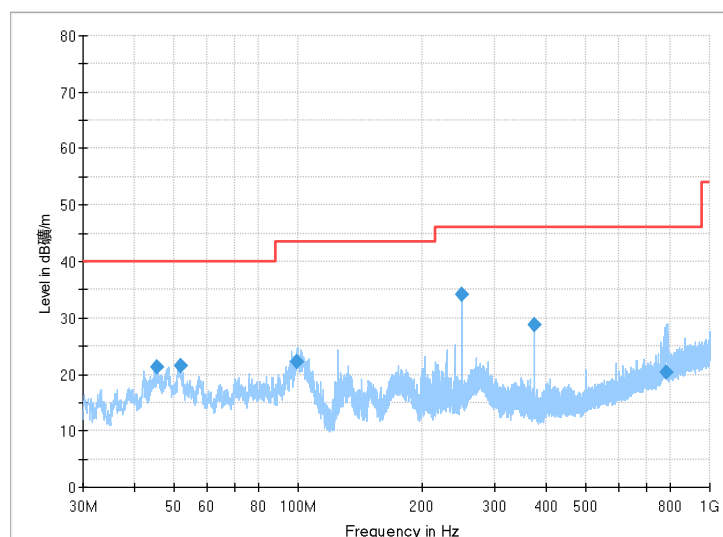


Frequency Range: 18GHz -26GHz

Detector: Av mode and PK mode

Modulation type: 802.11n(HT20)

Full Spectrum



Frequency Range: 30MHz -1GHz

Detector:QP

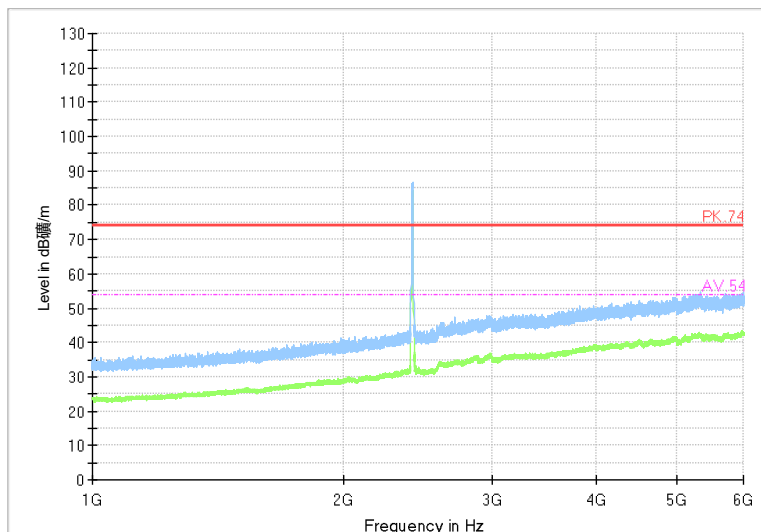
Modulation type: 802.11 ax(HE20)



BUREAU
VERITAS

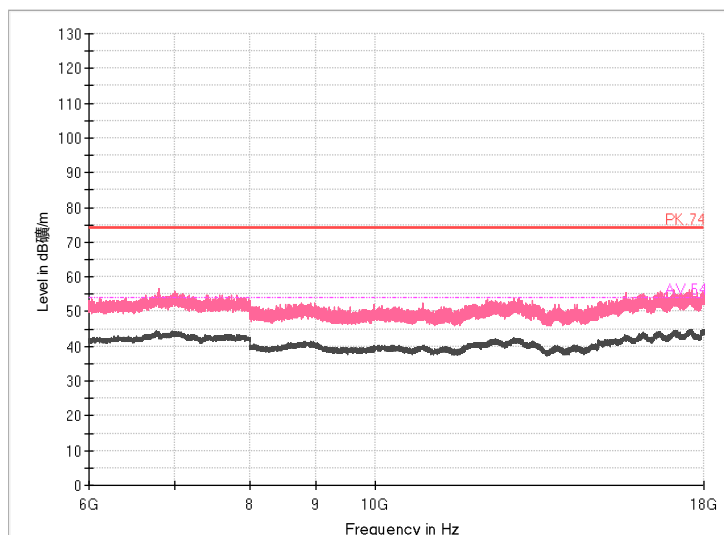
Test Report No.: PSU-NQN2502170113RF09

Full Spectrum



Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11 ax(HE20)

Full Spectrum

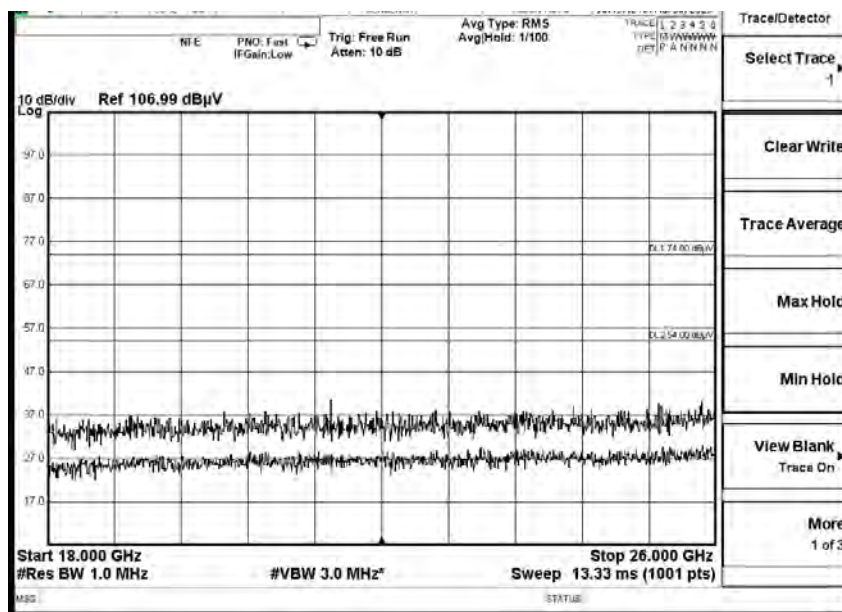


Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11 ax(HE20)



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09



Frequency Range: 18GHz -26GHz

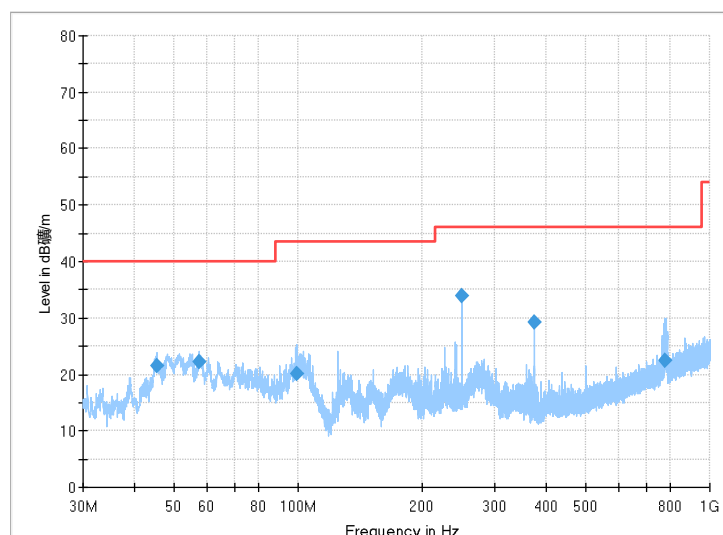
Detector: Av mode and PK mode

Modulation type: 802.11 ax(HE20)

Carrier frequency (MHz): 2437

Channel No.:6

Full Spectrum



Frequency Range: 30MHz -1GHz

Detector:QP

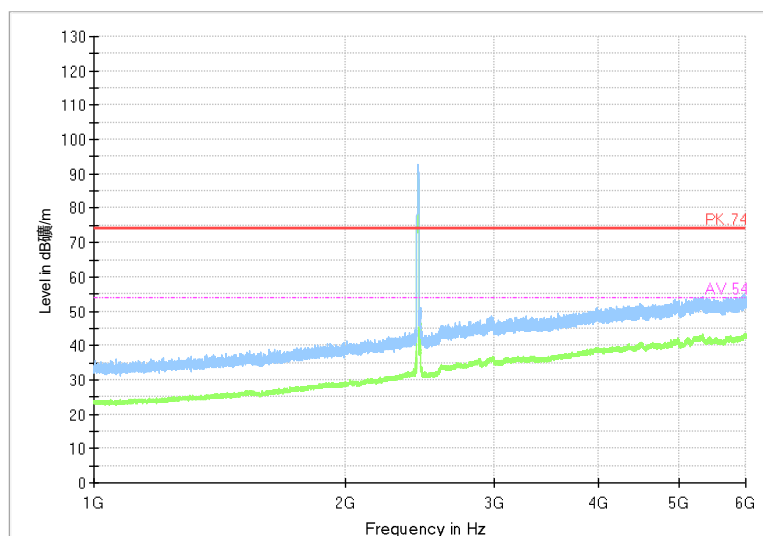
Modulation type: 802.11b



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

Full Spectrum

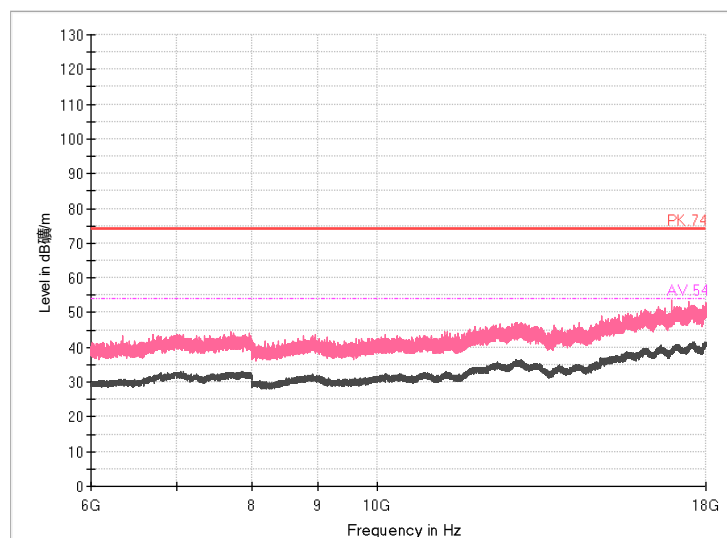


Frequency Range: 1GHz -6GHz

Detector: Av mode and PK mode

Modulation type: 802.11b

Full Spectrum



Frequency Range: 6GHz -18GHz

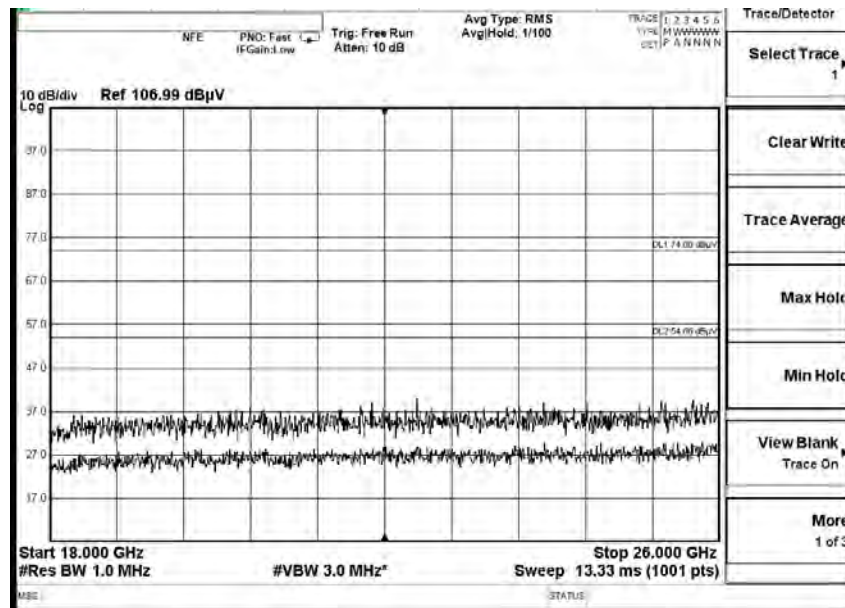
Detector: Av mode and PK mode

Modulation type: 802.11b



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

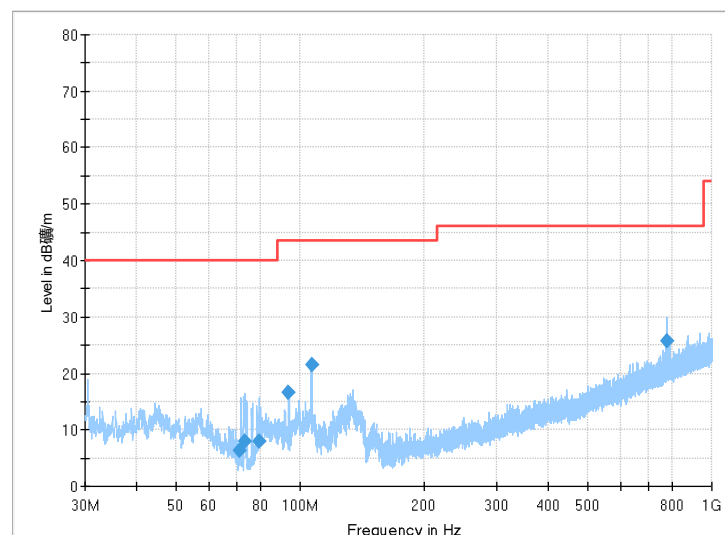


Frequency Range: 18GHz -26GHz

Detector: Av mode and PK mode

Modulation type: 802.11b

Full Spectrum



Frequency Range: 30MHz -1GHz

Detector:QP

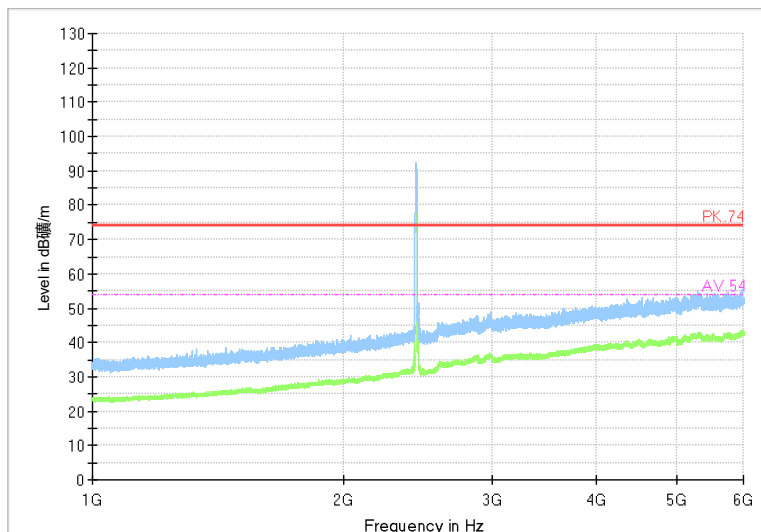
Modulation type: 802.11g



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

Full Spectrum

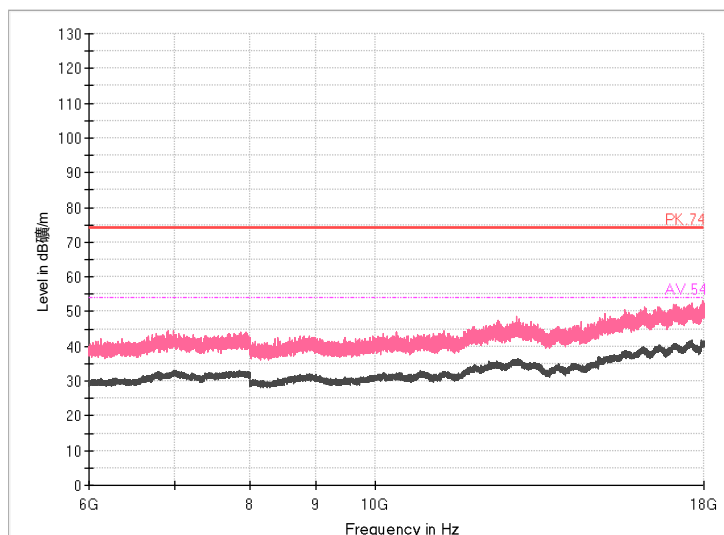


Frequency Range: 1GHz -6GHz

Detector: Av mode and PK mode

Modulation type: 802.11g

Full Spectrum



Frequency Range: 6GHz -18GHz

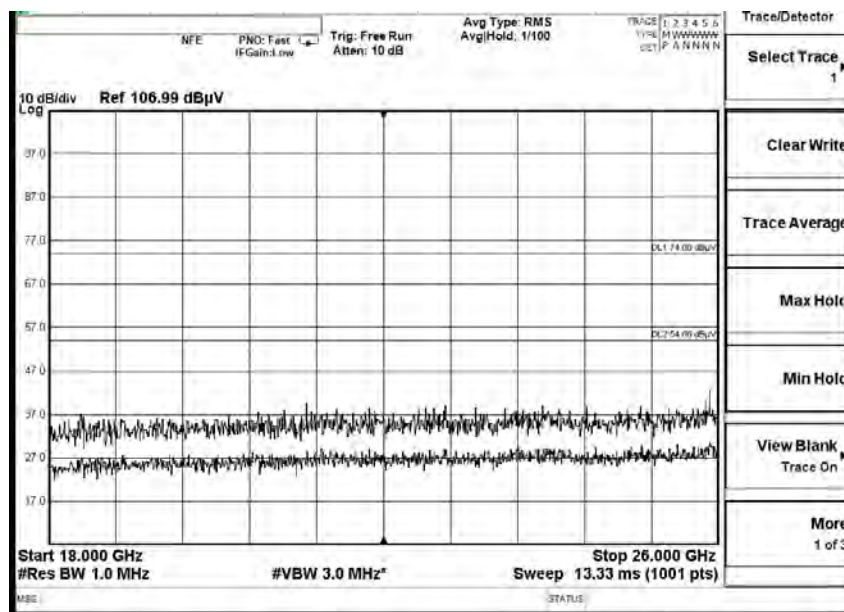
Detector: Av mode and PK mode

Modulation type: 802.11g



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

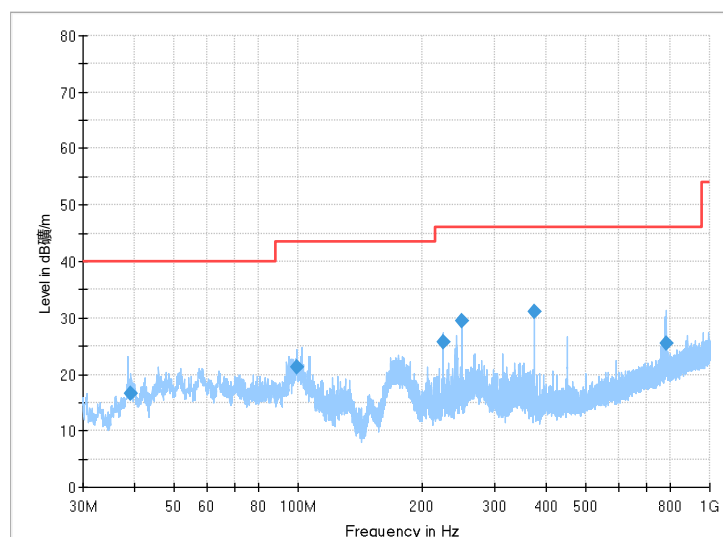


Frequency Range: 18GHz -26GHz

Detector: Av mode and PK mode

Modulation type: 802.11g

Full Spectrum



Frequency Range: 30MHz -1GHz

Detector:QP

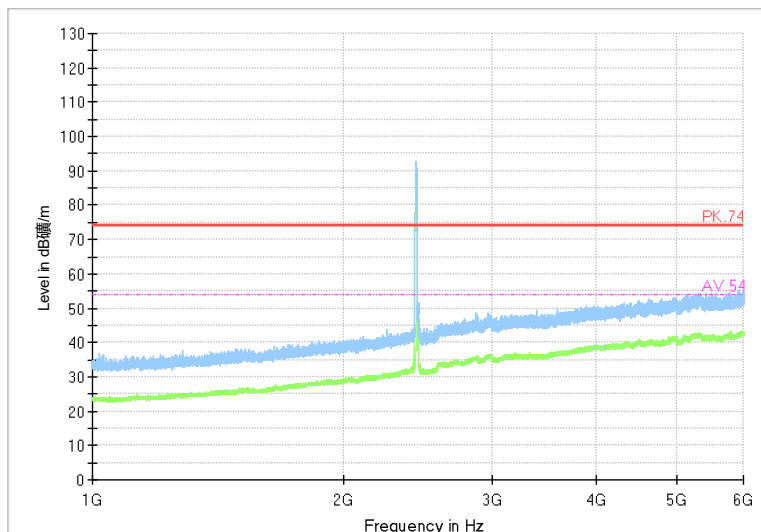
Modulation type: 802.11n(HT20)



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09

Full Spectrum

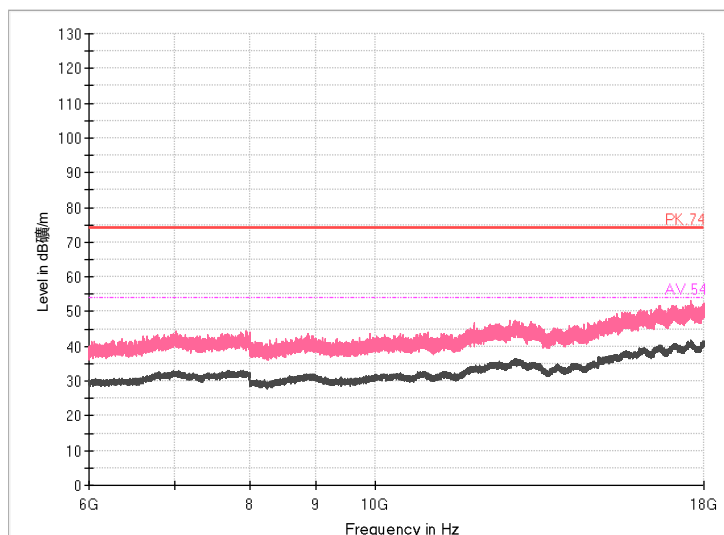


Frequency Range: 1GHz -6GHz

Detector: Av mode and PK mode

Modulation type: 802.11n(HT20)

Full Spectrum



Frequency Range: 6GHz -18GHz

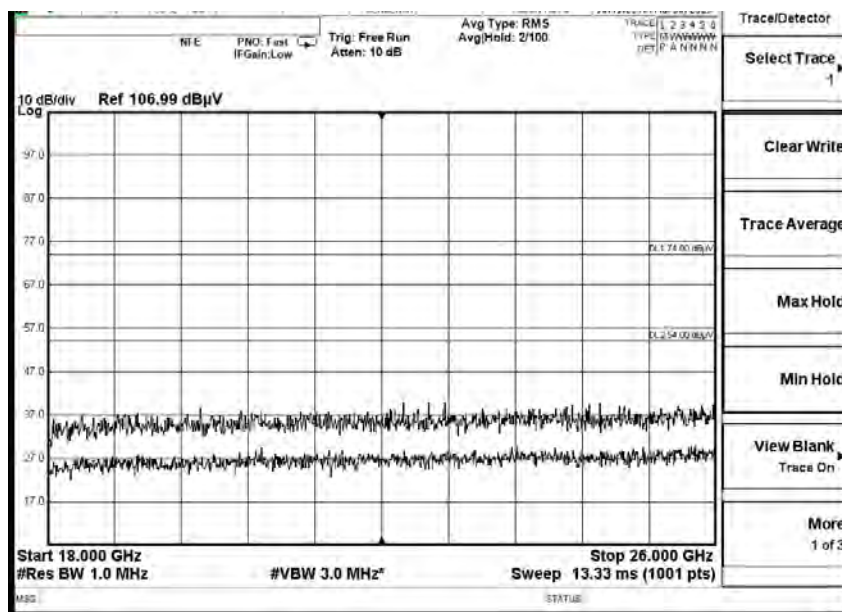
Detector: Av mode and PK mode

Modulation type: 802.11n(HT20)



BUREAU
VERITAS

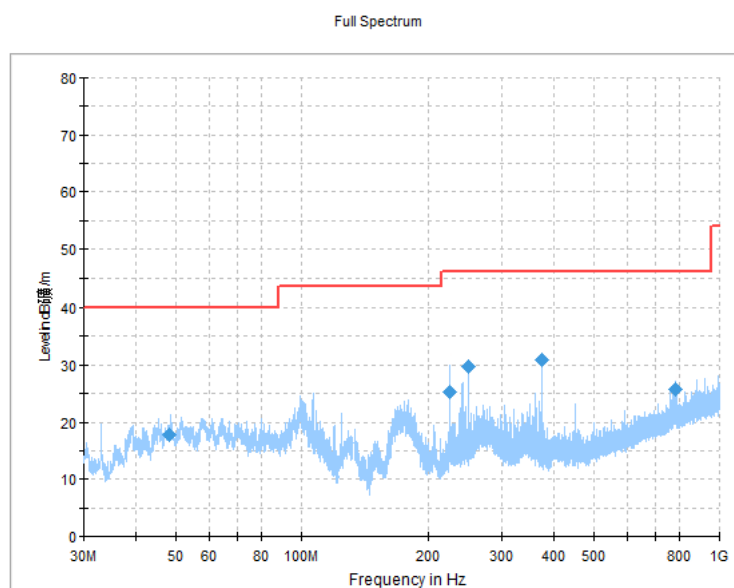
Test Report No.: PSU-NQN2502170113RF09



Frequency Range: 18GHz -26GHz

Detector: Av mode and PK mode

Modulation type: 802.11n(HT20)



Frequency Range: 30MHz -1GHz

Detector:QP

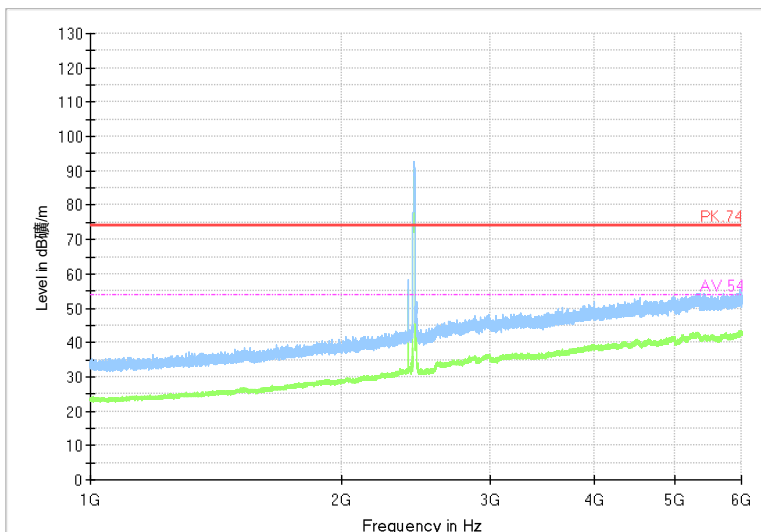
Modulation type: 802.11 ax(HE20)



BUREAU
VERITAS

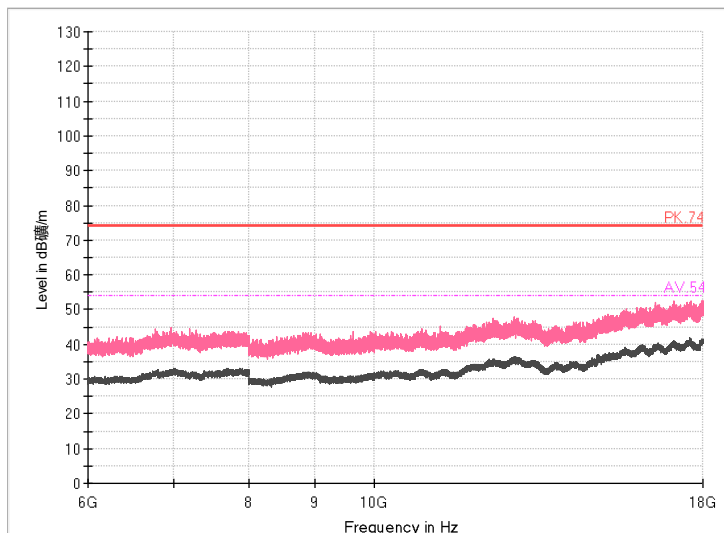
Test Report No.: PSU-NQN2502170113RF09

Full Spectrum



Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11 ax(HE20)

Full Spectrum

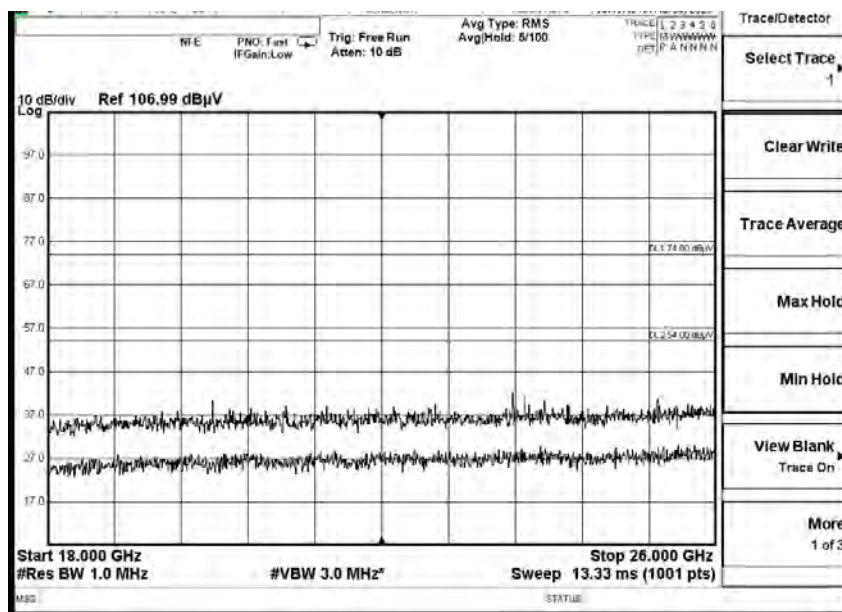


Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11 ax(HE20)



BUREAU
VERITAS

Test Report No.: PSU-NQN2502170113RF09



Frequency Range: 18GHz -26GHz

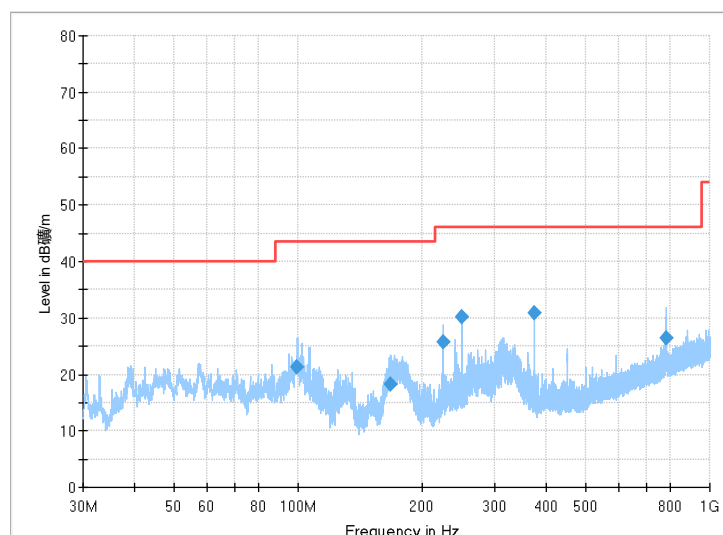
Detector: Av mode and PK mode

Modulation type: 802.11 ax(HE20)

Carrier frequency (MHz): 2462

Channel No.:11

Full Spectrum



Frequency Range: 30MHz -1GHz

Detector:QP

Modulation type: 802.11b