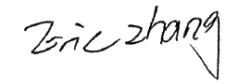
CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China
Tel: +86-755- 27521059 Fax: +86-755- 27521011 Http://www.sz-ctc.org.cn

TEST REPORT

Report No. ……:	**CTC20221749E04**
FCC ID……:	**2A76QTW220**
Applicant……:	**Shenzhen Ntmer Technology Co., Ltd.**
Address……:	2109, Hivac Building, NO.2, Keji South 8th Road, High Tech Zone Community, Yuehai Subdistrict, Nanshan District, Shenzhen, China
Manufacturer……:	Shenzhen Ntmer Technology Co., Ltd.
Address……:	2109, Hivac Building, NO.2, Keji South 8th Road, High Tech Zone Community, Yuehai Subdistrict, Nanshan District, Shenzhen, China
Product Name……:	**Portable Computer**
Trade Mark……:	Robo&Kala
Model/Type reference……:	TW220
Listed Model(s) ……:	/
Standard……:	**FCC CFR Title 47 Part 15 Subpart C Section 15.247**
Date of receipt of test sample…:	Sep. 28, 2022
Date of testing……...:	Sep. 29, 2022 ~ Nov. 28, 2022
Date of issue……....:	Nov. 29, 2022
Result……:	**PASS**

Compiled by: (Printed name+signature)	Terry Su	
Supervised by: (Printed name+signature)	Eric Zhang	
Approved by: (Printed name+signature)	Totti Zhao	

Testing Laboratory Name……:	**CTC Laboratories, Inc.**
Address……:	1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.

RSS 247 Issue 2: Standard Specifications for Frequency Hopping Systems (FHSs) and Digital Transmission Systems (DTSs) Operating in the Bands 902-928MHz, 2400-2483.5MHz and 5725-5850MHz.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

1.2. Report version

Revised No.	Date of issue	Description
01	Nov. 29, 2022	Original

1.3. Test Description

FCC Part 15 Subpart C (15.247) / RSS 247 Issue 2				
Test Item	Standard Section		Result	Test Engineer
	FCC	IC		
Antenna Requirement	15.203	/	Pass	Alicia Liu
Conducted Emission	15.207	RSS-Gen 8.8	Pass	Eva Feng
Radiated Band Edge and Spurious Emissions	15.205&15.209& 15.247(d)	RSS 247 5.5	Pass	Alicia Liu
Conducted Band Edge and Spurious Emissions	15.247(d)	RSS 247 5.5	Pass	Alicia Liu
6dB Bandwidth	15.247(a)(2)	RSS 247 5.2 (a)	Pass	Alicia Liu
Conducted Max Output Power	15.247(b)(3)	RSS 247 5.4 (d)	Pass	Alicia Liu
Power Spectral Density	15.247(e)	RSS 247 5.2 (b)	Pass	Alicia Liu
Transmitter Radiated Spurious	15.209&15.247(d)	RSS 247 5.5& RSS-Gen 8.9	Pass	Alicia Liu

Note: The measurement uncertainty is not included in the test result.

1.4. Test Facility

CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained inour files. Registration 951311, Aug 26, 2017.

1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for CTC Laboratories, Inc.

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.42 dB	(1)
Transmitter power Radiated	2.14 dB	(1)
Conducted spurious emissions 9kHz~40GHz	1.60 dB	(1)
Radiated spurious emissions 9kHz~40GHz	2.20 dB	(1)
Conducted Emissions 9kHz~30MHz	3.08 dB	(1)
Radiated Emissions 30~1000MHz	4.51 dB	(1)
Radiated Emissions 1~18GHz	5.84 dB	(1)
Radiated Emissions 18~40GHz	6.12 dB	(1)
Occupied Bandwidth	---------	(1)

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

1.6. Environmental conditions

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

Temperature:	21°C ~ 27°C
Relative Humidity:	40% ~ 60%
Air Pressure:	101kPa

2. GENERAL INFORMATION

2.1. Client Information

Applicant:	Shenzhen Ntmer Technology Co., Ltd.
Address:	2109, Hivac Building, NO.2, Keji South 8th Road, High Tech Zone Community, Yuehai Subdistrict, Nanshan District, Shenzhen, China
Manufacturer:	Shenzhen Ntmer Technology Co., Ltd.
Address:	2109, Hivac Building, NO.2, Keji South 8th Road, High Tech Zone Community, Yuehai Subdistrict, Nanshan District, Shenzhen, China

2.2. General Description of EUT

Product Name:	Portable Computer
Trade Mark:	Robo&Kala
Model/Type reference:	TW220
Listed Model(s):	/
Power supply:	DC Voltage supplied from AC/DC Adapter 7.74Vdc from 5250mAh Li-ion Battery
Adapter 1 model:	KS65C-GaNC1-CU Input: 100-240V~ 50/60Hz 1.5A Max Output: 5Vdc/3A, 9Vdc/3A, 12Vdc/3A, 15Vdc/3A, 20Vdc/3.25A
Adapter 2 model:	PA-1650-67 Input: 100-240V~ 50/60Hz 1.6A Output: 5Vdc/3A, 9Vdc/3A, 12Vdc/3A, 15Vdc/3A, 20Vdc/3.25A
Hardware version:	V2.0
Software version:	N1-SW-9800
WIFI 802.11b/ g/ n(HT20)/ n(HT40)/ ax(HE20)/ ax(HE40)	
Modulation:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/ n/ ax: OFDM(BPSK, QPSK, 16QAM, 64QAM)
Operation frequency:	802.11b/ g/ n(HT20)/ ax(HE20): 2412MHz~2462MHz 802.11n(HT40)/ ax(HE40): 2422MHz~2452MHz
Channel number:	802.11b/ g/ n(HT20): 11channels 802.11n(HT40)/ ax(HE40): 7channels
Channel separation:	5MHz
Antenna type:	PIFA Antenna
Antenna 1 gain:	-1.14dBi Max
Antenna 2 gain:	-0.75dBi Max
Antenna 1 and 2 Directional gain:	2.07dBi Max

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

Directional gain=10*log[(10(-1.14/20)+10(-0.75/20))2/2]=10*log$^{1.61}$=2.07dBi

2.3. Accessory Equipment information

Equipment Information			
Name	Model	S/N	Manufacturer
Notebook	ThinkBook 14G3 ACL	MP246QDR	Lenovo
/	/	/	/
Cable Information			
Name	Shielded Type	Ferrite Core	Length
/	/	/	/
Test Software Information			
Name	Version	/	/
QRCT	V4.0	/	/

2.4. Operation state

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

Operation Frequency List:

Channel	Frequency (MHz)
01	2412
02	2417
03	2422
04	2427
05	2432
06	2437
07	2442
08	2447
09	2452
10	2457
11	2462

Note: CH 01~CH 11 for 802.11b/g/n(HT20)/ax(HE20), CH 03~CH 09 for 802.11n(HT40)/ax(HE40).

Data Rated

Preliminary tests were performed in different data rate, and found which the below bit rate is worst case mode, so only show data which it is a worst case mode.

Mode	Data rate (worst mode)
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)/ (HT40)	HT-MCS0
802.11ax(HE20)/ (HE40)	HE-MCS0

Test mode

For RF test items:
The engineering test program was provided and enabled to make EUT continuous transmit.
For AC power line conducted emissions:
The EUT was set to connect with the WLAN AP under large package sizes transmission.
For Radiated spurious emissions test item:
The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data Recorded in the report.

RU Configuration

Operating Mode	Resource Unit	26 Tone (2M)
802.11ax(HE20)	Specific Resource Unit	0
		⋮
		4
		⋮
		8
	Resource Unit	52 Tone (4M)
	Specific Resource Unit	37
		38
		39
		40
	Resource Unit	106 Tone (8M)
	Specific Resource Unit	53
		54
	Resource Unit	242 Tone (20M)
	Specific Resource Unit	61
Operating Mode	Resource Unit	26 Tone (2M)
802.11ax(HE40)	Specific Resource Unit	0
		⋮
		8
		⋮
		17
	Resource Unit	52 Tone (4M)
	Specific Resource Unit	37
		38
		39
		40
		41
		42
		43
		44
	Resource Unit	106 Tone (8M)
	Specific Resource Unit	53
		54
		55
		56
	Resource Unit	242 Tone (20M)
	Specific Resource Unit	61
		62
	Resource Unit	484 Tone (40M)
	Specific Resource Unit	65

RF Cable loss

1. 802.11b, 802.11g, 802.11n(HT20), 802.11n(HT40) test results increased RF cable loss by 1.2dB.

2. 802.11ax(HE20), 802.11ax(HE40) test results increased RF cable loss by 5dB, Full RU RF cable loss by 1.2dB.

2.5. Measurement Instruments List

Tonscend JS0806-2 Test system					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Spectrum Analyzer	KEYSIGHT	N9020A	100231	Dec. 23, 2022
2	Spectrum Analyzer	Rohde & Schwarz	FUV40-N	101331	Mar. 15, 2023
3	MXG Vector Signal Generator	Agilent	N5182A	MY47420864	Dec. 23, 2022
4	Signal Generator	Agilent	E8257D	MY46521908	Dec. 23, 2022
5	Power Sensor	Agilent	U2021XA	MY5365004	Mar. 15, 2023
6	Power Sensor	Agilent	U2021XA	MY5365006	Mar. 15, 2023
7	High and low temperature box	ESPEC	MT3035	N/A	Mar. 15, 2023
8	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	102414	Dec. 23, 2022
9	300328 v2.2.2 test system	TONSCEND	v2.6	/	/

Radiated emission(3m chamber 2)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-1013	Jan. 12, 2023
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Dec. 23, 2022
3	Loop Antenna	LAPLAC	RF300	9138	Dec. 23, 2022
4	Spectrum Analyzer	R&S	FSU26	100105	Dec. 23, 2022
5	Spectrum Analyzer	R&S	FSV40-N	101331	Mar. 15, 2023
6	Pre-Amplifier	SONOMA	310	186194	Dec. 23, 2022
7	Low Noise Pre-Amplifier	EMCI	EMC051835	980075	Dec. 23, 2022
8	Test Receiver	R&S	ESCI7	100967	Dec. 23, 2022
9	3m chamber 2	Frankonia	EE025	/	Oct. 23, 2024

Radiated emission(3m chamber 3)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-759	Nov. 09, 2022 Mar. 30. 2023
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Dec. 23, 2022
3	Test Receiver	Keysight	N9038A	MY56400071	Dec. 23, 2022
4	Broadband Premplifier	SCHWARZBECK	BBV9743B	259	Dec. 23, 2022
5	Mirowave Broadband Amplifier	SCHWARZBECK	BBV9718C	111	Dec. 23, 2022
6	Pre-Amplifier	R&S	SCU-26	10033	Dec. 23, 2022
7	Pre-Amplifier	R&S	SCU-40	10030	Dec. 23, 2022
8	Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	BBHA 9170-497	Dec. 23, 2022
9	3m chamber 3	YIHENG	EE106	/	Sep. 09, 2023

Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	LISN	R&S	ENV216	101112	Dec. 23, 2022
2	LISN	R&S	ENV216	101113	Dec. 23, 2022
3	EMI Test Receiver	R&S	ESCS30	100353	Dec. 23, 2022

Note: 1. The Cal. Interval was one year.
2. The Cal. Interval was three year of the chamber
3. The cable loss has calculated in test result which connection between each test instruments.

3. TEST ITEM AND RESULTS

3.1. Conducted Emission

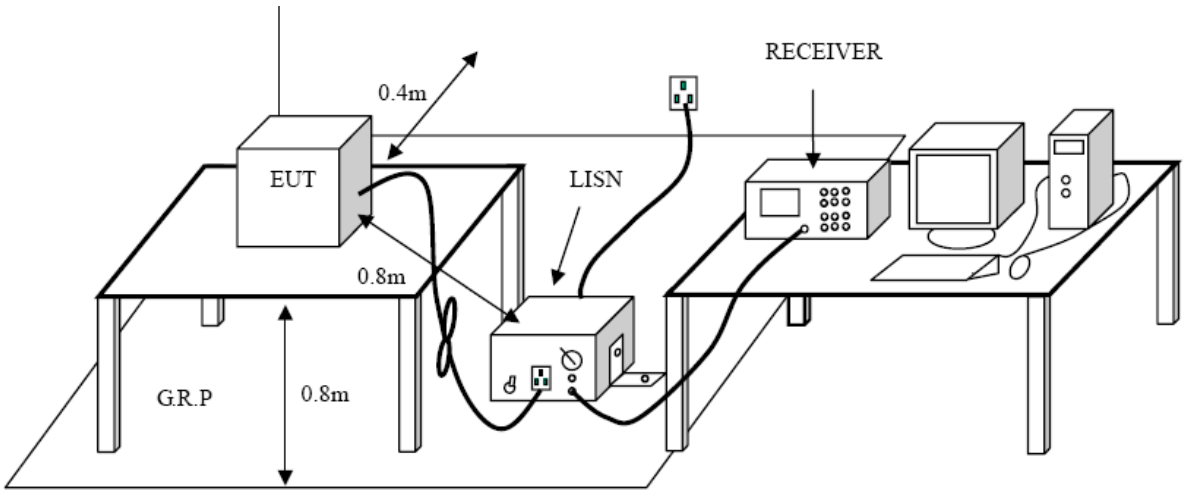
Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.207/ RSS - Gen 8.8:

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

Test Configuration



Test Procedure

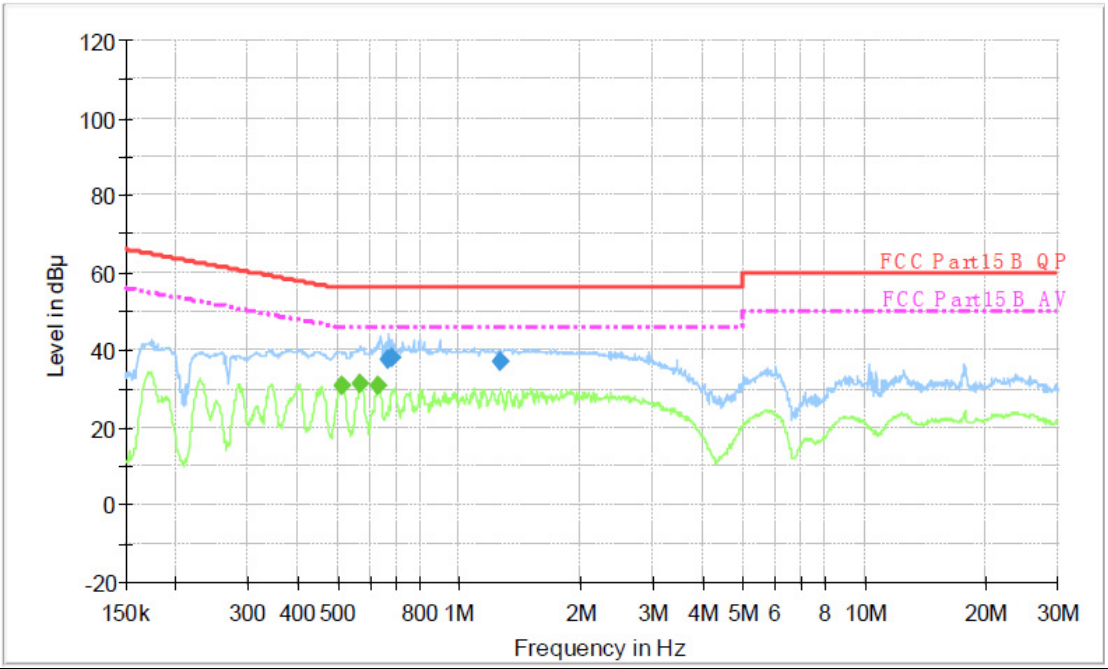
1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
7. During the above scans, the emissions were maximized by cable manipulation.

Test Mode:

Please refer to the clause 2.4.

Test Results

Test Voltage:	AC 120V/60 Hz
Terminal:	Line
Adapter model:	KS65C-GaNC1-CU



Final Measurement Detector 1

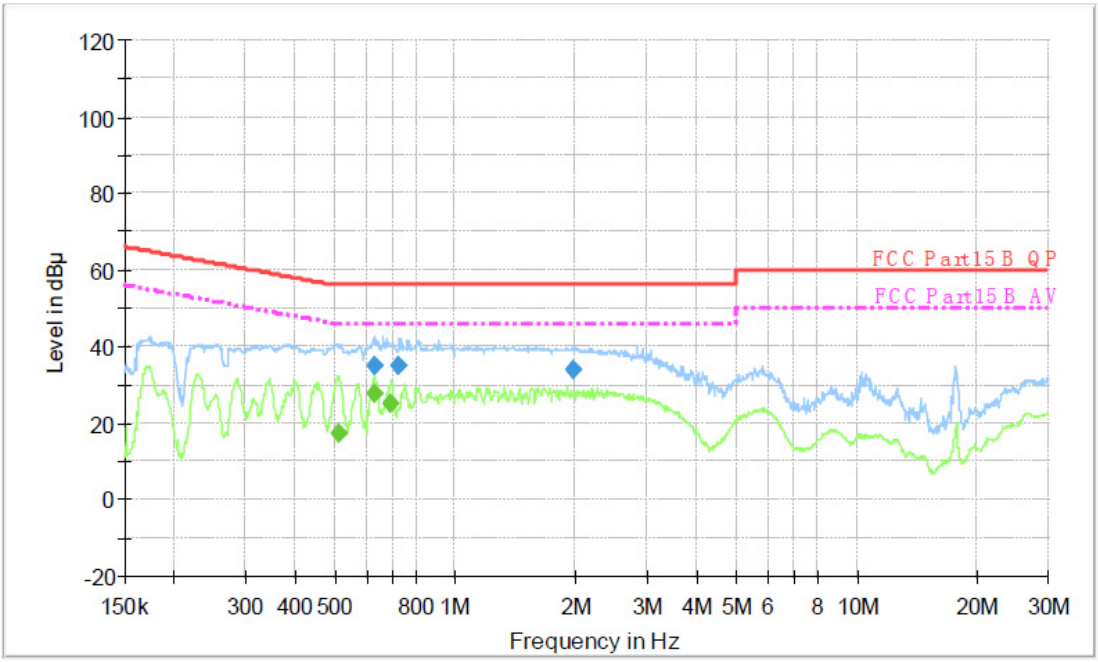
Frequency (MHz)	QuasiPeak (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.670250	37.7	1000.00	9.000	On	L1	9.7	18.3	56.0	
0.683760	38.2	1000.00	9.000	On	L1	9.7	17.8	56.0	
1.259390	37.3	1000.00	9.000	On	L1	9.7	18.7	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.512950	30.6	1000.00	9.000	On	L1	9.7	15.4	46.0	
0.571330	31.5	1000.00	9.000	On	L1	9.7	14.5	46.0	
0.631290	30.8	1000.00	9.000	On	L1	9.7	15.2	46.0	

Emission Level= Read Level+ Correct Factor

Test Voltage:	AC 120V/60 Hz
Terminal:	Neutral
Adapter model:	KS65C-GaNC1-CU



Final Measurement Detector 1

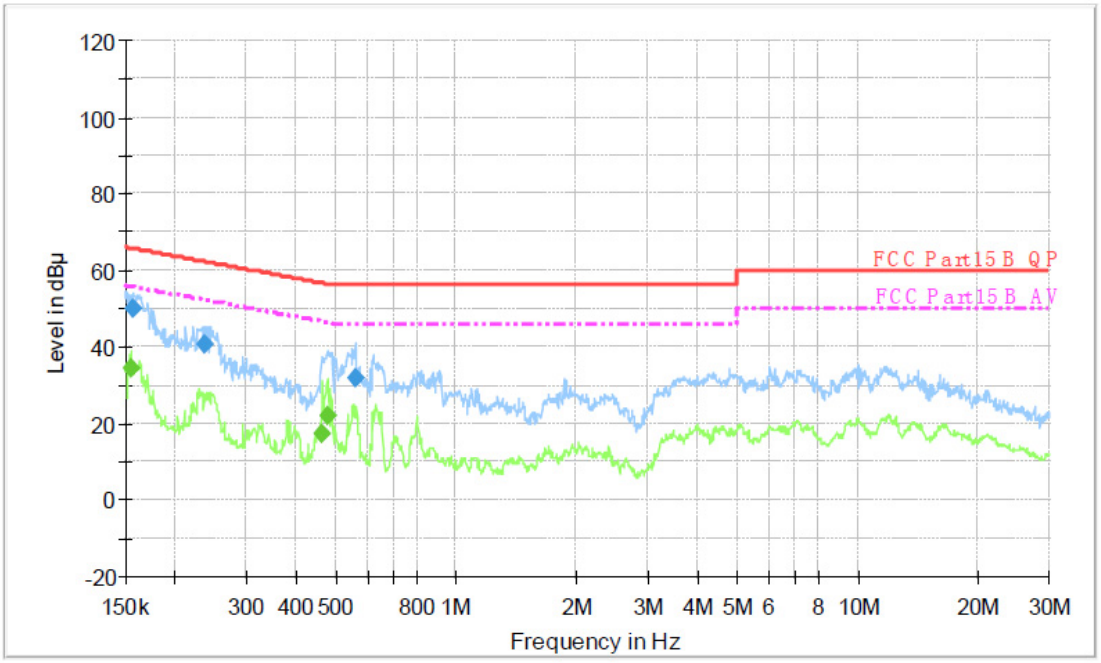
Frequency (MHz)	QuasiPeak (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.628770	35.2	1000.00	9.000	On	N	10.0	20.8	56.0	
0.723060	35.1	1000.00	9.000	On	N	10.0	20.9	56.0	
1.977290	33.9	1000.00	9.000	On	N	10.0	22.1	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.512950	17.5	1000.00	9.000	On	N	10.0	28.5	46.0	
0.628770	27.6	1000.00	9.000	On	N	10.0	18.4	46.0	
0.692000	25.1	1000.00	9.000	On	N	10.0	20.9	46.0	

Emission Level= Read Level+ Correct Factor

Test Voltage:	AC 120V/60 Hz
Terminal:	Line
Adapter model:	PA-1650-67



Final Measurement Detector 1

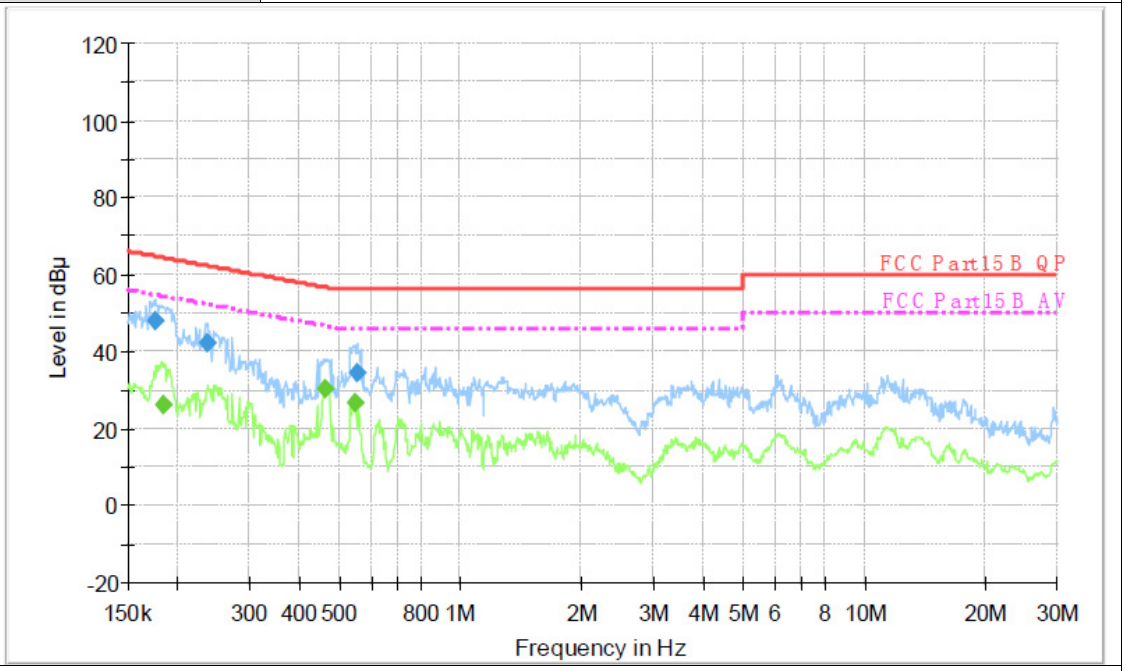
Frequency (MHz)	QuasiPeak (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.156730	49.8	1000.00	9.000	On	L1	9.7	15.8	65.6	
0.236450	40.4	1000.00	9.000	On	L1	9.7	21.8	62.2	
0.560040	31.9	1000.00	9.000	On	L1	9.7	24.1	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.154870	34.5	1000.00	9.000	On	L1	9.7	21.2	55.7	
0.464230	17.3	1000.00	9.000	On	L1	9.7	29.3	46.6	
0.477380	22.1	1000.00	9.000	On	L1	9.7	24.3	46.4	

Emission Level= Read Level+ Correct Factor

Test Voltage:	AC 120V/60 Hz
Terminal:	Neutral
Adapter model:	PA-1650-67



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.175270	48.2	1000.00	9.000	On	N	10.0	16.5	64.7	
0.235510	42.1	1000.00	9.000	On	N	10.0	20.2	62.3	
0.553370	34.6	1000.00	9.000	On	N	10.0	21.4	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.183870	26.0	1000.00	9.000	On	N	10.0	28.3	54.3	
0.464230	30.1	1000.00	9.000	On	N	10.0	16.5	46.6	
0.546780	26.4	1000.00	9.000	On	N	10.0	19.6	46.0	

Emission Level= Read Level+ Correct Factor

3.2. Radiated Emission

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.209/ RSS – Gen 8.9:

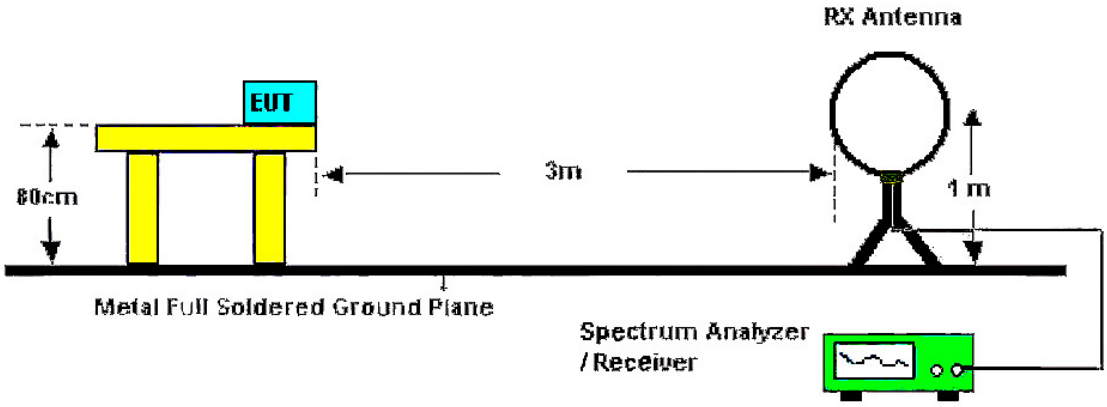
Frequency	Limit (dBuV/m @3m)	Value
30 MHz ~ 88 MHz	40.00	Quasi-peak
88 MHz ~ 216 MHz	43.50	Quasi-peak
216 MHz ~ 960 MHz	46.00	Quasi-peak
960 MHz ~ 1 GHz	54.00	Quasi-peak
Above 1 GHz	54.00	Average
	74.00	Peak

Note:

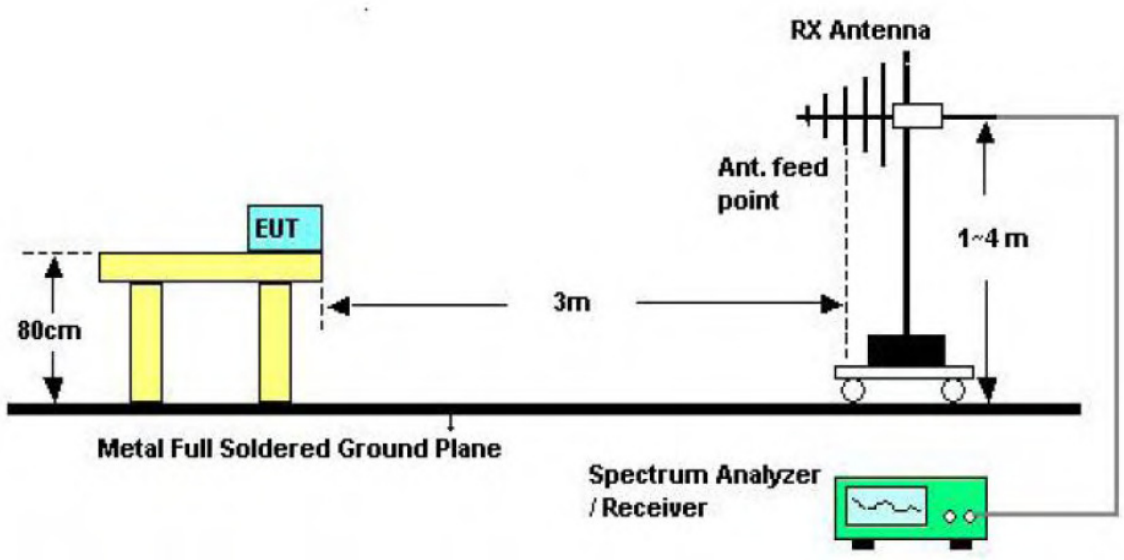
(1) The tighter limit applies at the band edges.

(2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

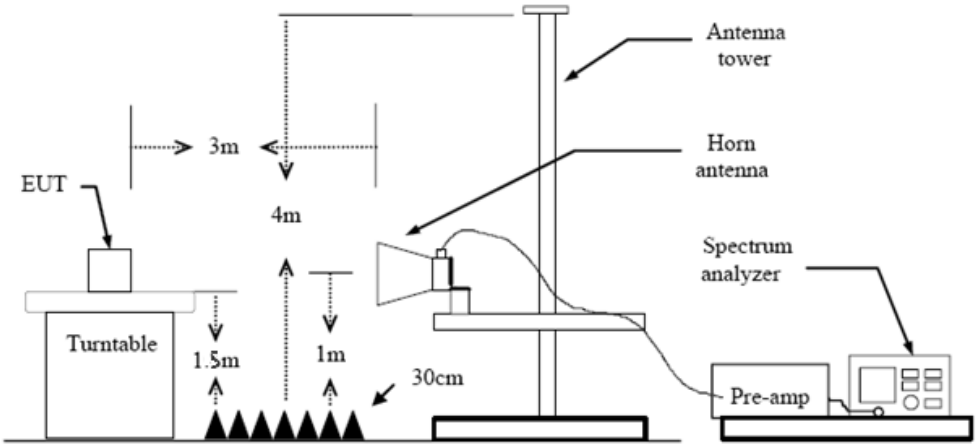
Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings

(1) Span shall wide enough to fully capture the emission being measured;
(2) Below 1 GHz:
RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
(3) From 1 GHz to 10^{th} harmonic:
RBW=1MHz, VBW=3MHz Peak detector for Peak value.
RBW=1MHz, VBW≥1/T Peak detector for Average value.
Note 1: For the 1/T& Duty Cycle please refer to clause 3.8 Duty Cycle.

Test Mode

Please refer to the clause 2.4.

Test Result

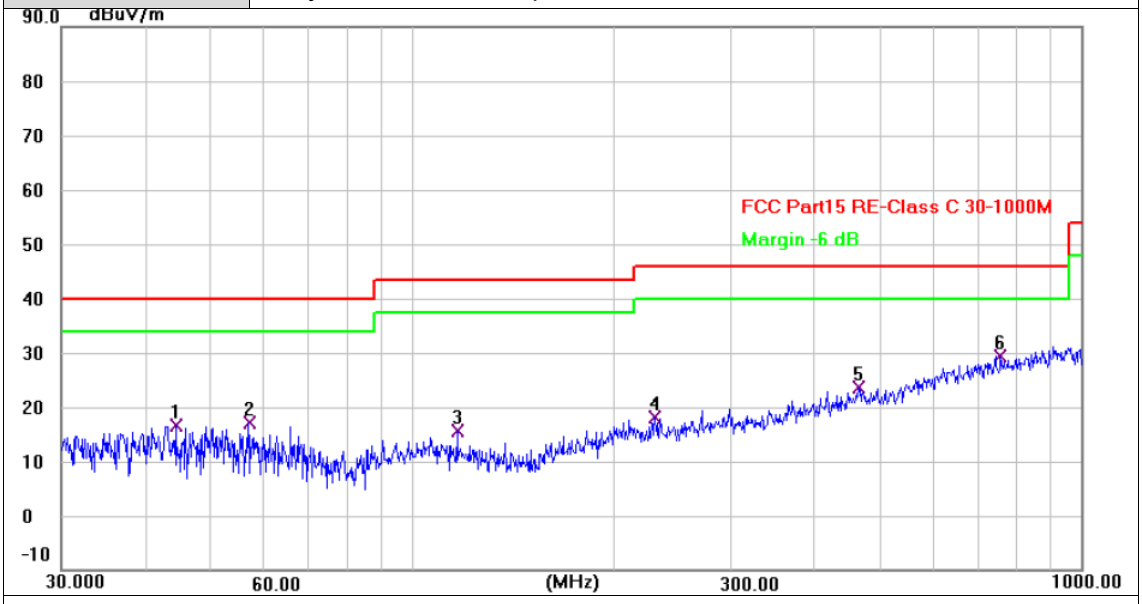
9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS
Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Pre-scan all antenna, only show the test data for worse case antenna on the test report.
Pre-scan all RU, only show the test data for worse case RU on the test report.

30MHz-1GHz

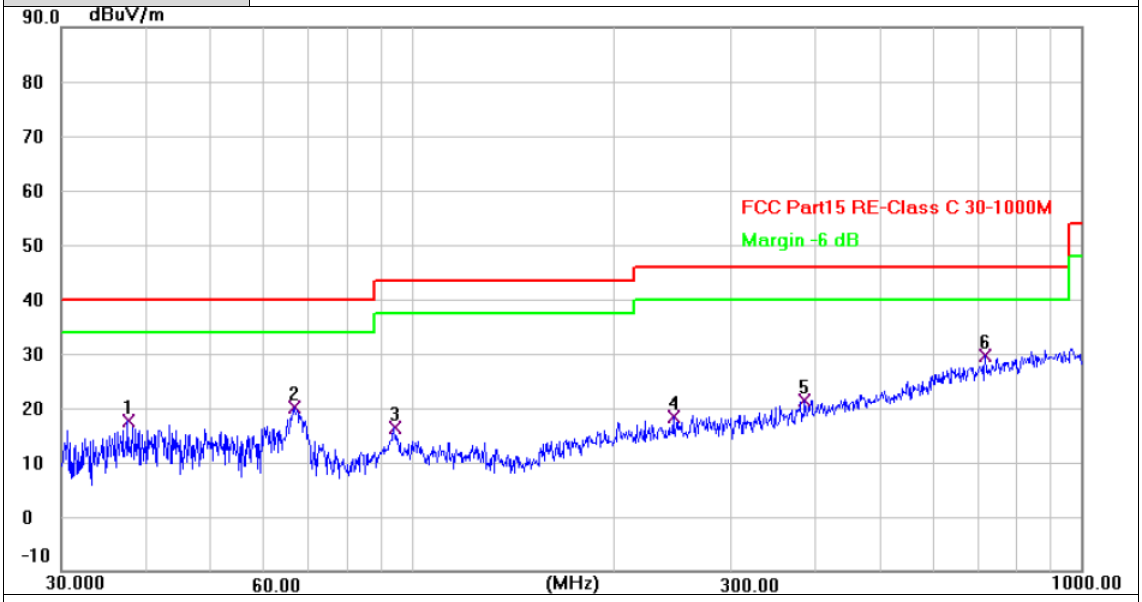
Ant. Pol.	Horizontal
Test Mode:	TX Ant 2 802.11b Mode 2412MHz
Remark:	Only worse case is reported



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	44.4307	30.72	-14.14	16.58	40.00	-23.42	QP
2	56.9912	32.46	-15.42	17.04	40.00	-22.96	QP
3	116.9494	33.19	-17.58	15.61	43.50	-27.89	QP
4	230.9067	33.36	-15.19	18.17	46.00	-27.83	QP
5	465.5994	33.41	-9.83	23.58	46.00	-22.42	QP
6 *	758.0407	34.12	-4.70	29.42	46.00	-16.58	QP

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

Ant. Pol.	Vertical
Test Mode:	TX Ant 2 802.11b Mode 2412MHz
Remark:	Only worse case is reported

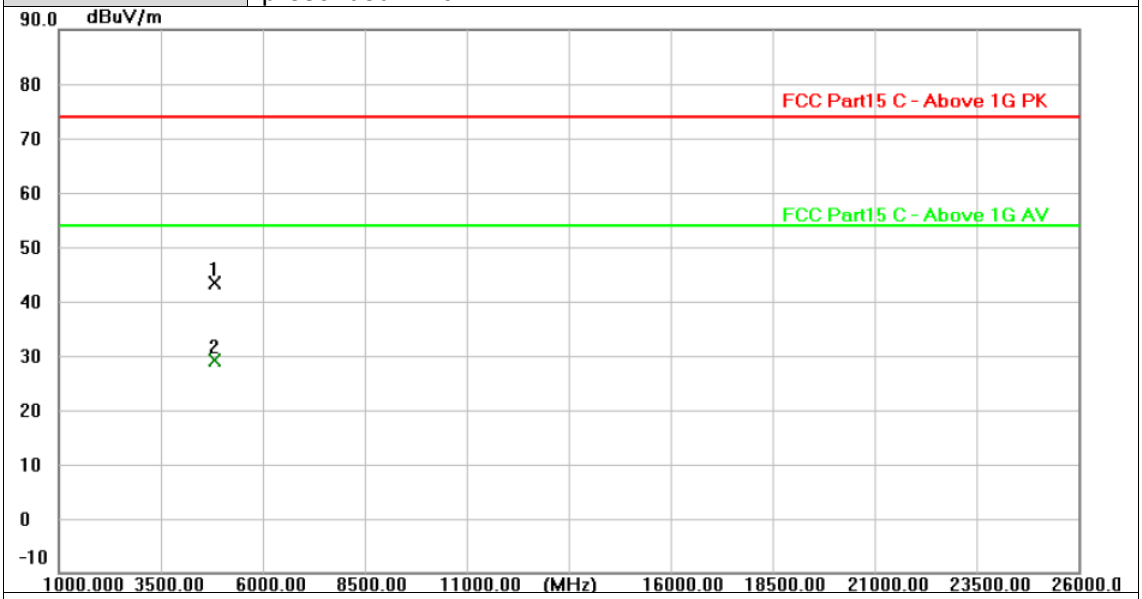


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	37.6798	32.88	-15.34	17.54	40.00	-22.46	QP
2	66.7325	37.67	-17.64	20.03	40.00	-19.97	QP
3	94.0979	33.69	-17.34	16.35	43.50	-27.15	QP
4	245.9509	33.25	-14.76	18.49	46.00	-27.51	QP
5	386.6338	32.79	-11.39	21.40	46.00	-24.60	QP
6 *	719.1995	34.88	-5.26	29.62	46.00	-16.38	QP

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

Adobe 1GHz

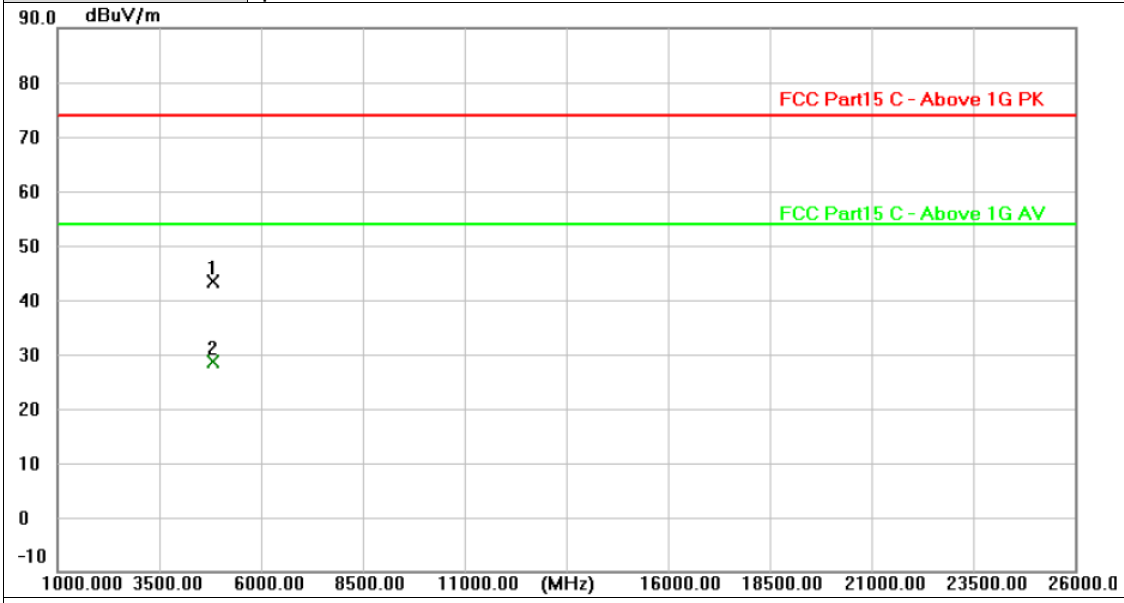
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2412MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4823.930	41.09	2.20	43.29	74.00	-30.71	peak
2 *	4824.349	26.91	2.20	29.11	54.00	-24.89	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

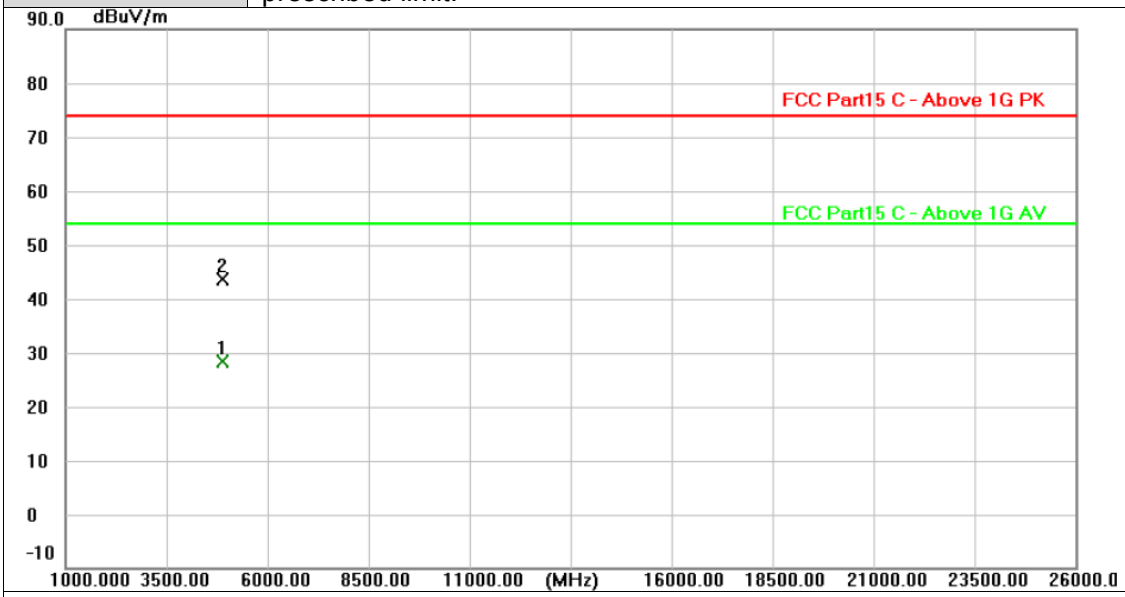
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2412MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4824.101	41.17	2.20	43.37	74.00	-30.63	peak
2 *	4824.273	26.41	2.20	28.61	54.00	-25.39	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

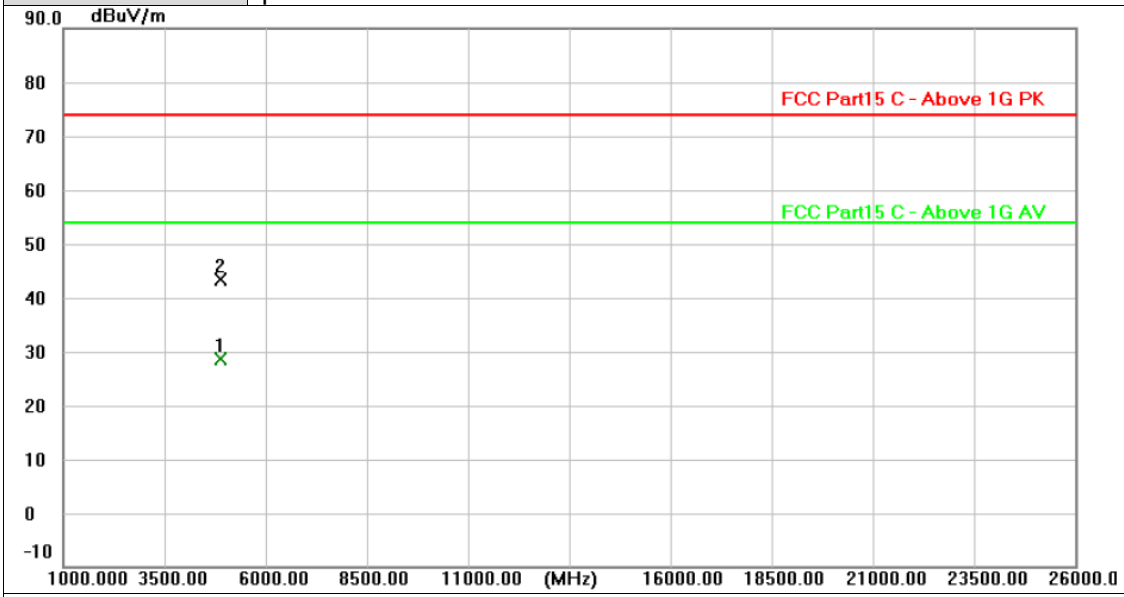
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4873.963	26.05	2.30	28.35	54.00	-25.65	AVG
2	4874.354	41.38	2.30	43.68	74.00	-30.32	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

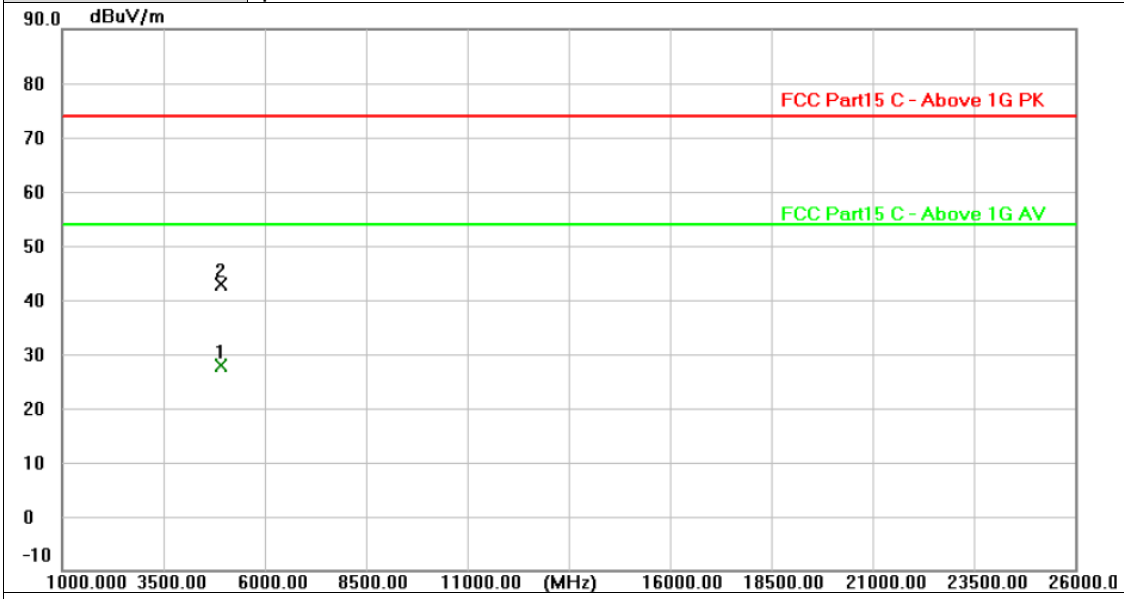
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4873.590	26.40	2.30	28.70	54.00	-25.30	AVG
2	4874.398	41.05	2.30	43.35	74.00	-30.65	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

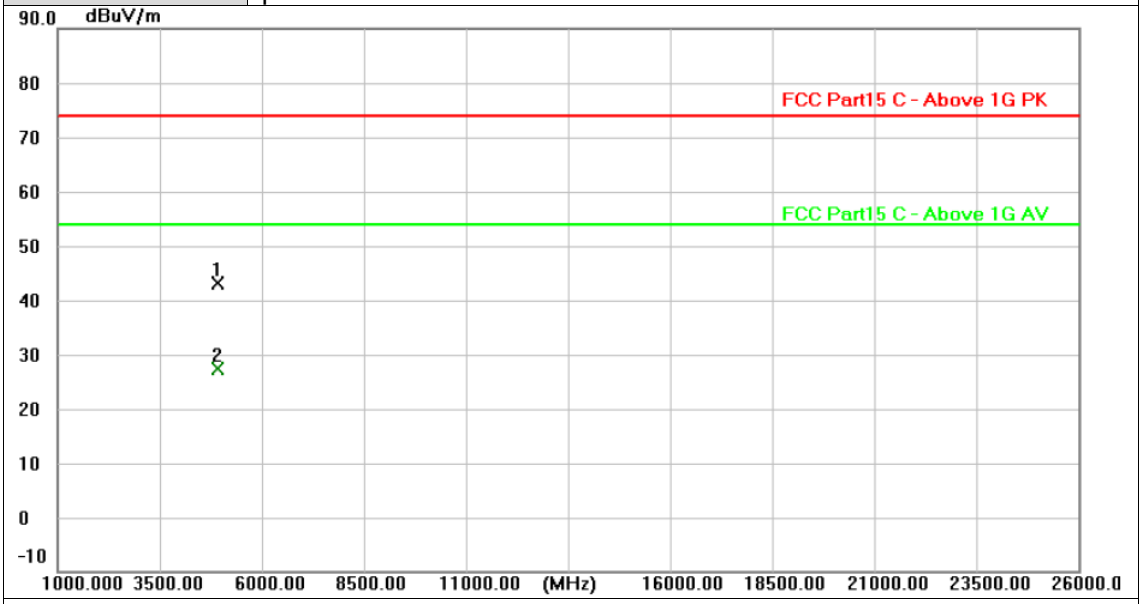
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2462MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4923.736	25.52	2.41	27.93	54.00	-26.07	AVG
2	4924.456	40.40	2.41	42.81	74.00	-31.19	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

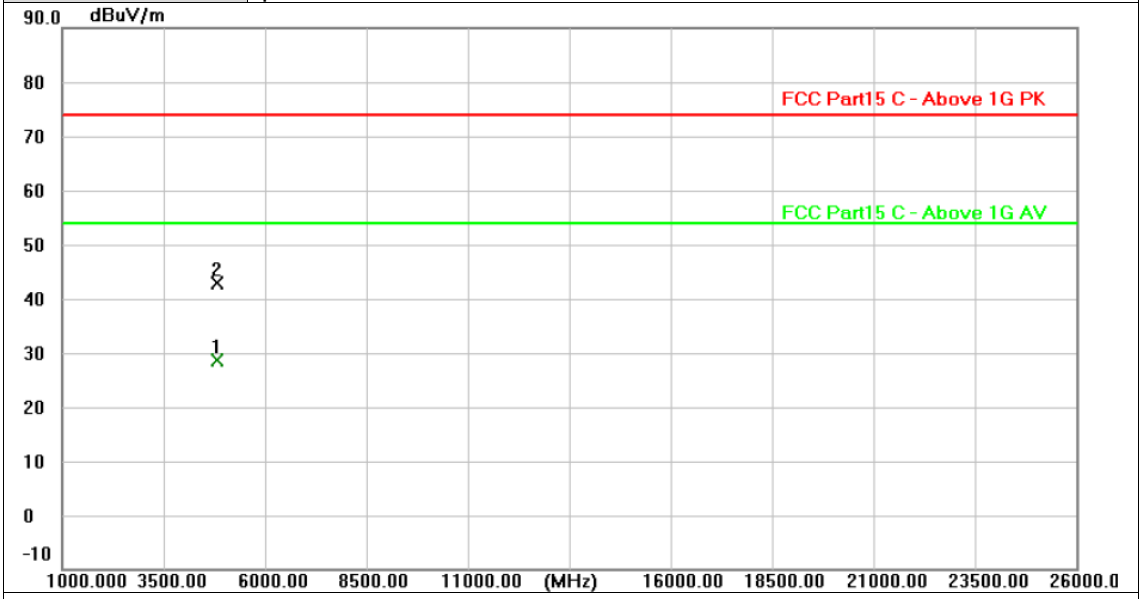
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2462MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4923.874	40.60	2.41	43.01	74.00	-30.99	peak
2 *	4924.217	25.07	2.41	27.48	54.00	-26.52	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

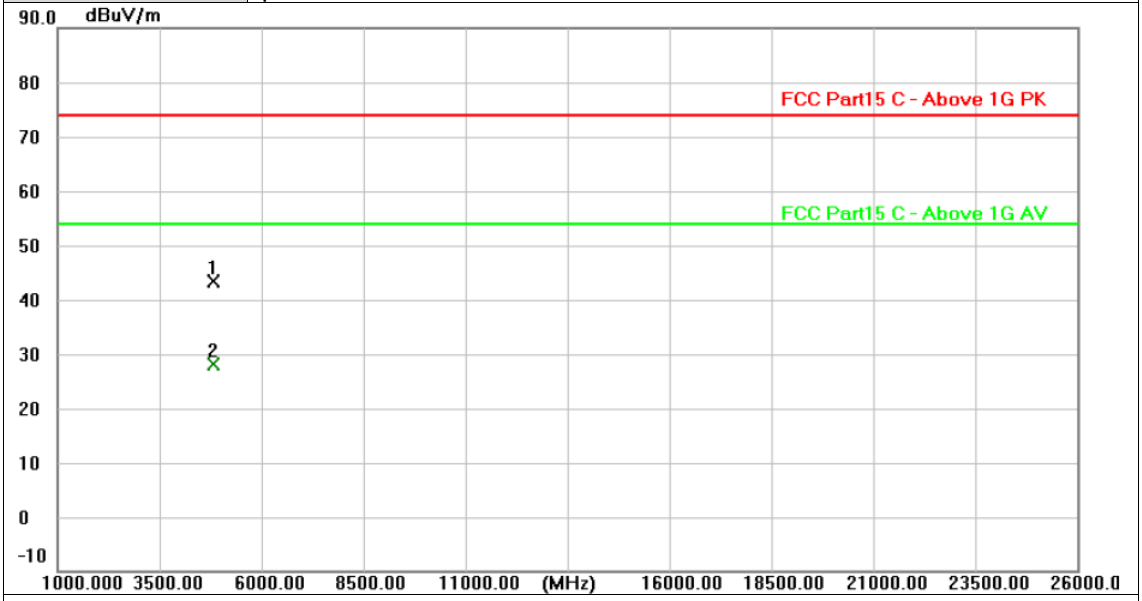
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11g Mode 2412MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4824.152	26.37	2.20	28.57	54.00	-25.43	AVG
2	4824.190	40.76	2.20	42.96	74.00	-31.04	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

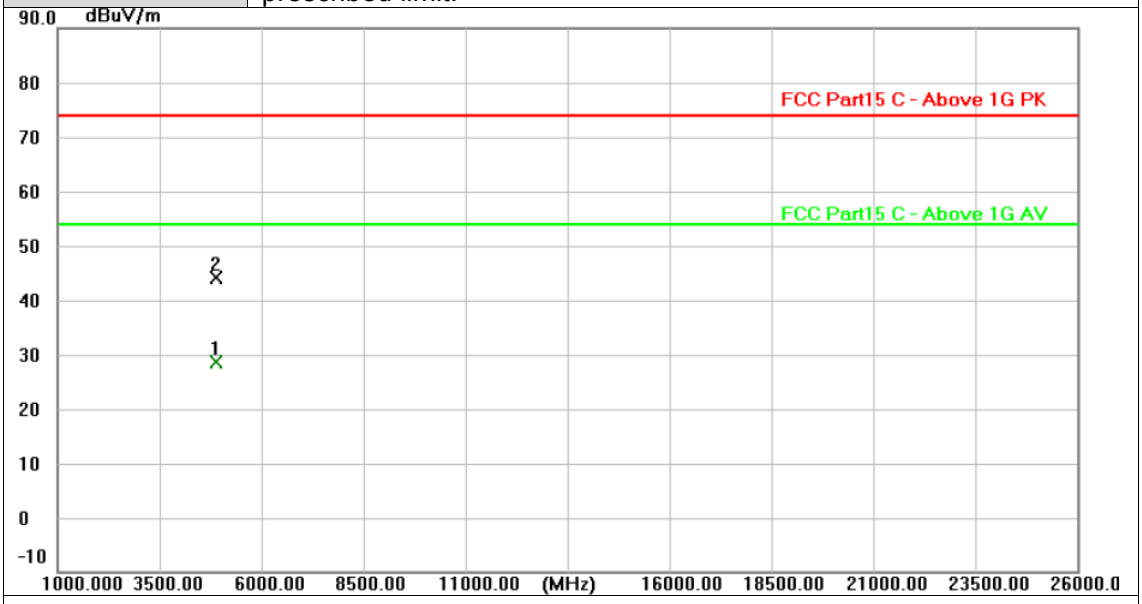
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11g Mode 2412MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4823.720	41.15	2.20	43.35	74.00	-30.65	peak
2 *	4823.977	26.05	2.20	28.25	54.00	-25.75	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

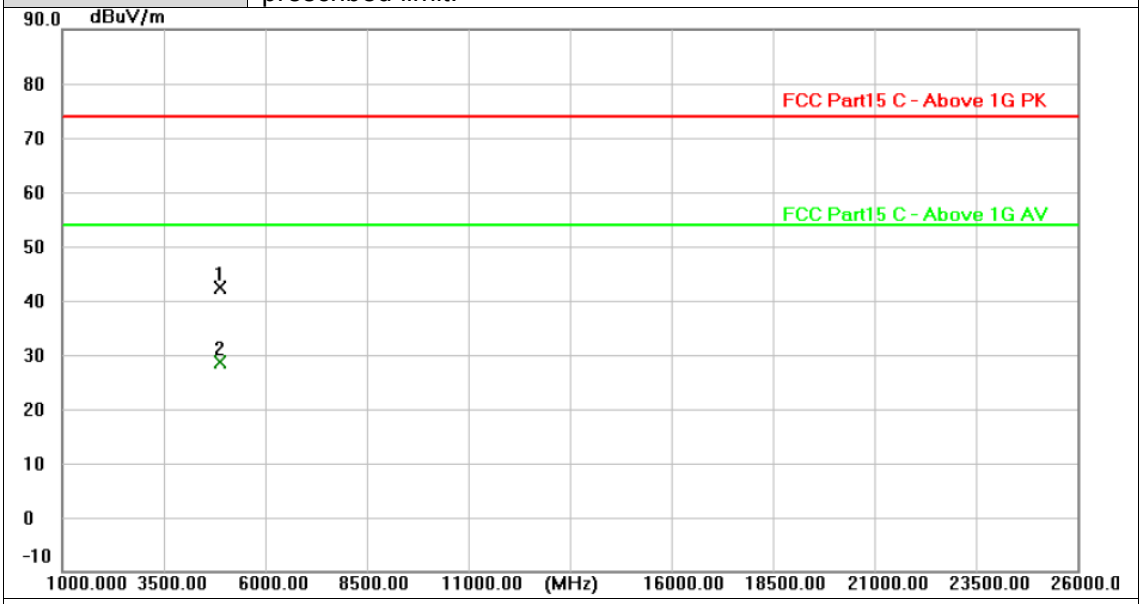
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11g Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4874.203	26.36	2.30	28.66	54.00	-25.34	AVG
2	4874.363	41.72	2.30	44.02	74.00	-29.98	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

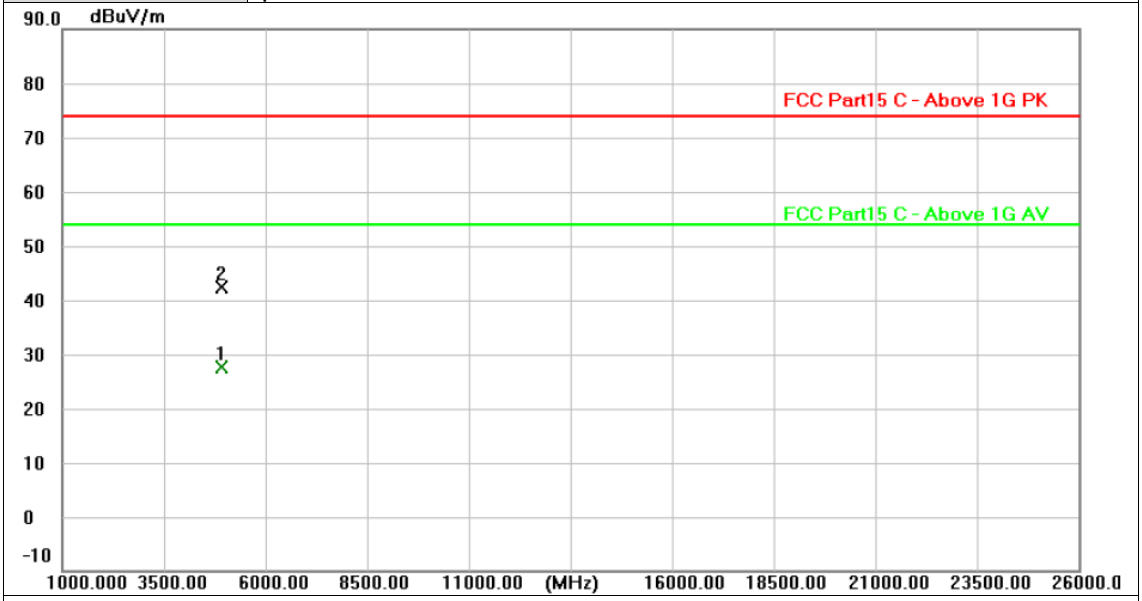
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11g Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4873.695	40.15	2.30	42.45	74.00	-31.55	peak
2 *	4874.374	26.26	2.30	28.56	54.00	-25.44	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

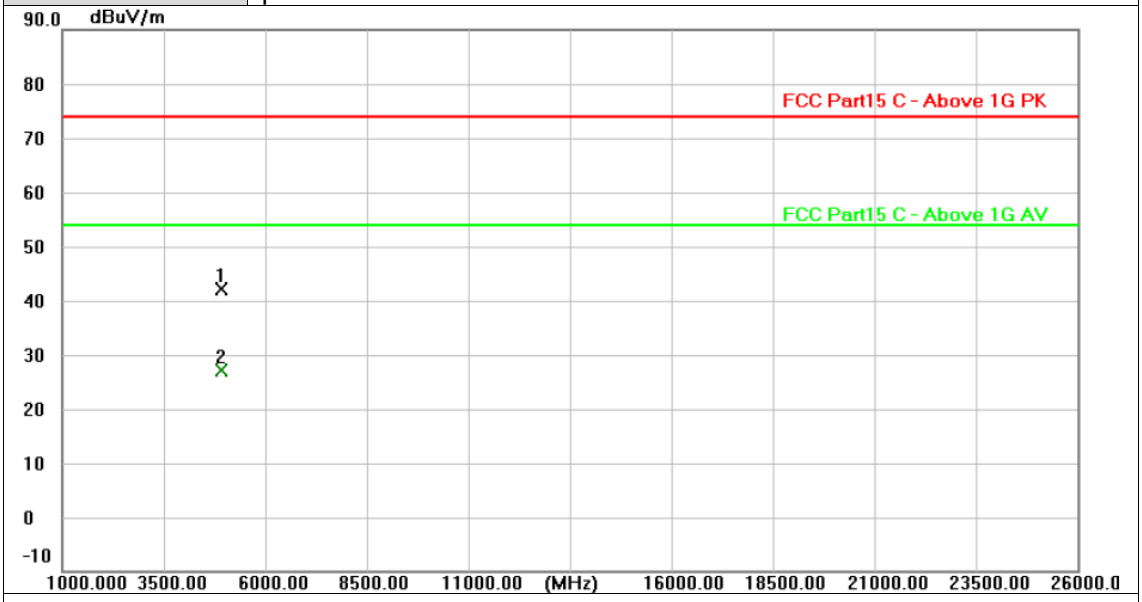
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11g Mode 2462MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4923.809	25.12	2.41	27.53	54.00	-26.47	AVG
2	4923.890	40.01	2.41	42.42	74.00	-31.58	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

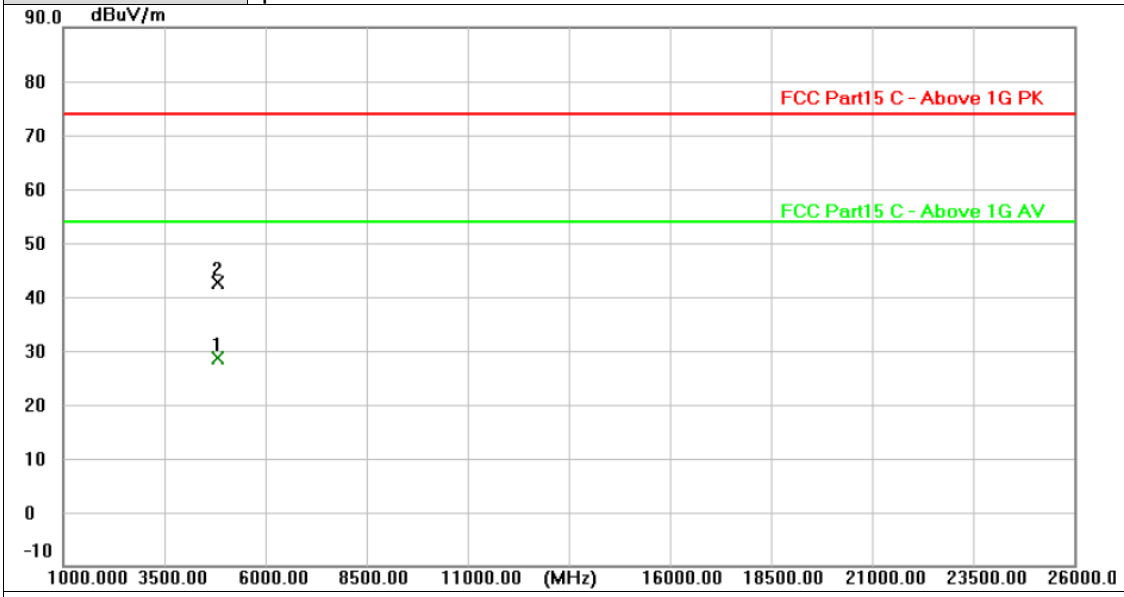
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11g Mode 2462MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4924.132	39.72	2.41	42.13	74.00	-31.87	peak
2 *	4924.496	24.80	2.41	27.21	54.00	-26.79	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

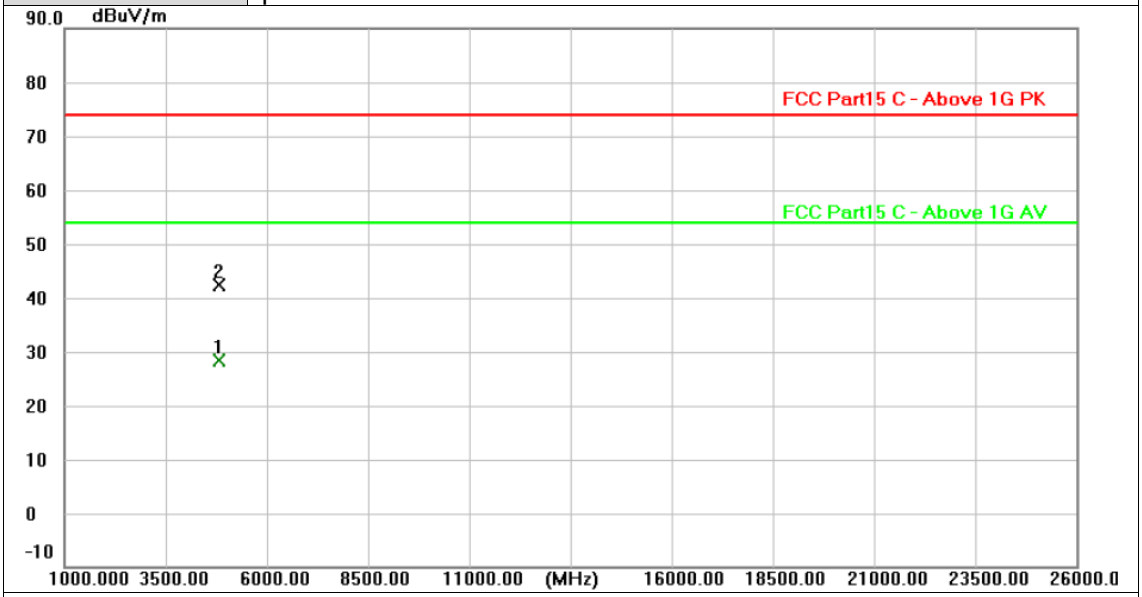
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11n(HT20) Mode 2412MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4823.659	26.40	2.20	28.60	54.00	-25.40	AVG
2	4823.802	40.53	2.20	42.73	74.00	-31.27	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

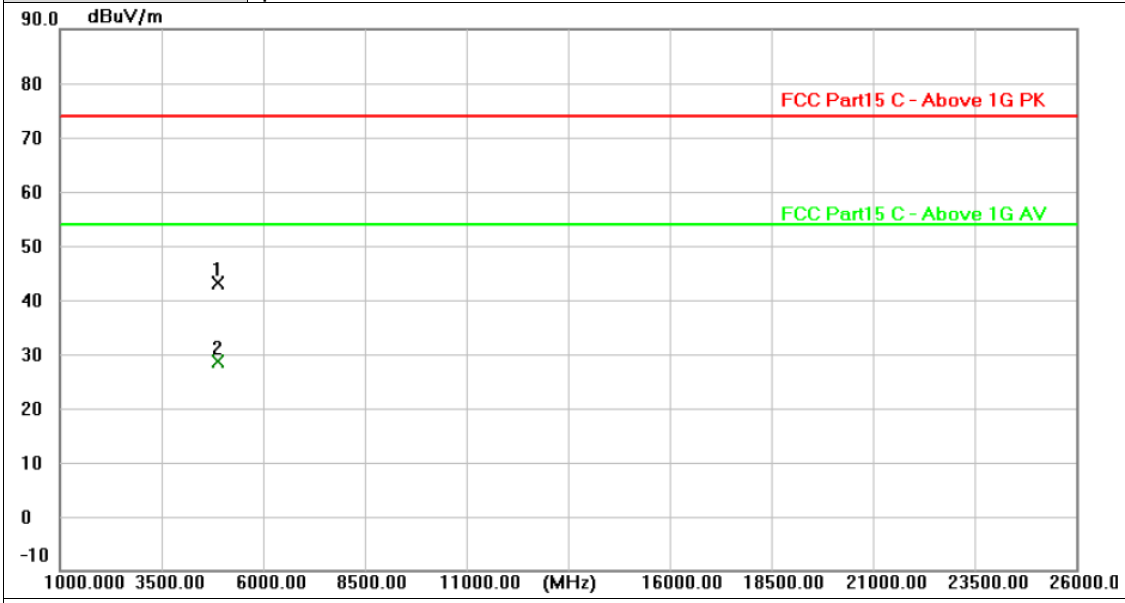
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11n(HT20) Mode 2412MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4823.590	26.30	2.20	28.50	54.00	-25.50	AVG
2	4824.083	40.28	2.20	42.48	74.00	-31.52	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

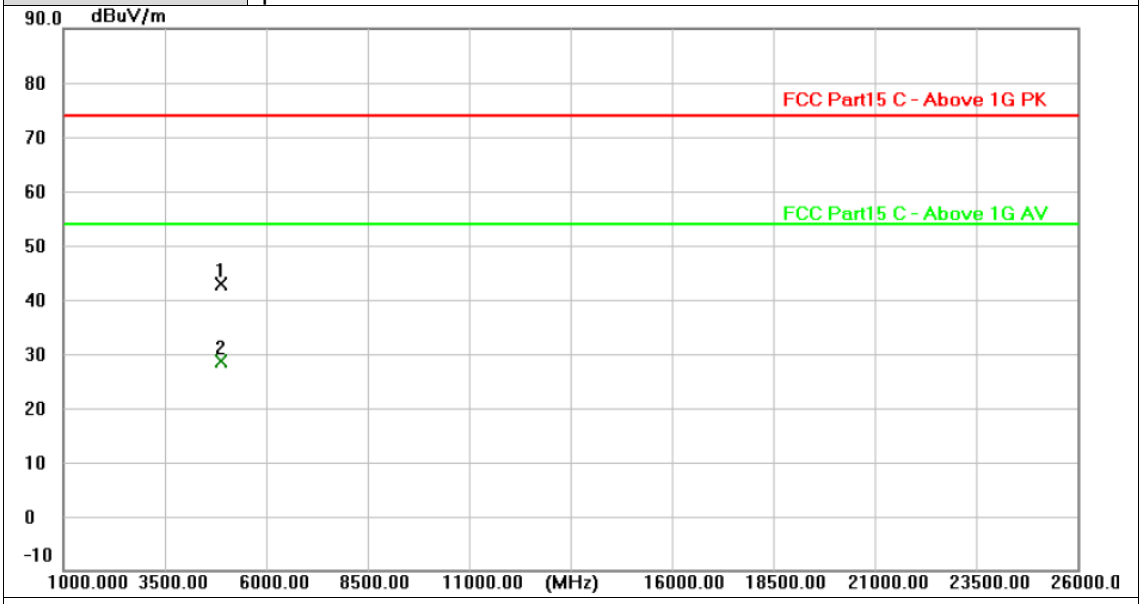
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11n(HT20) Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4873.546	40.75	2.30	43.05	74.00	-30.95	peak
2 *	4873.553	26.31	2.30	28.61	54.00	-25.39	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

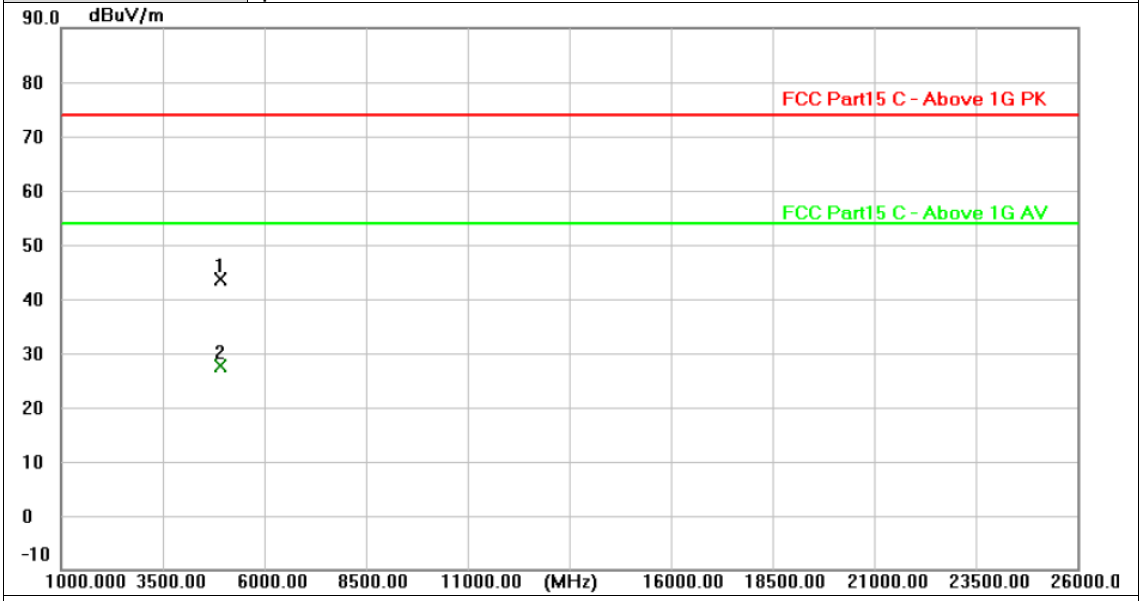
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11n(HT20) Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4873.756	40.56	2.30	42.86	74.00	-31.14	peak
2 *	4874.467	26.29	2.30	28.59	54.00	-25.41	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

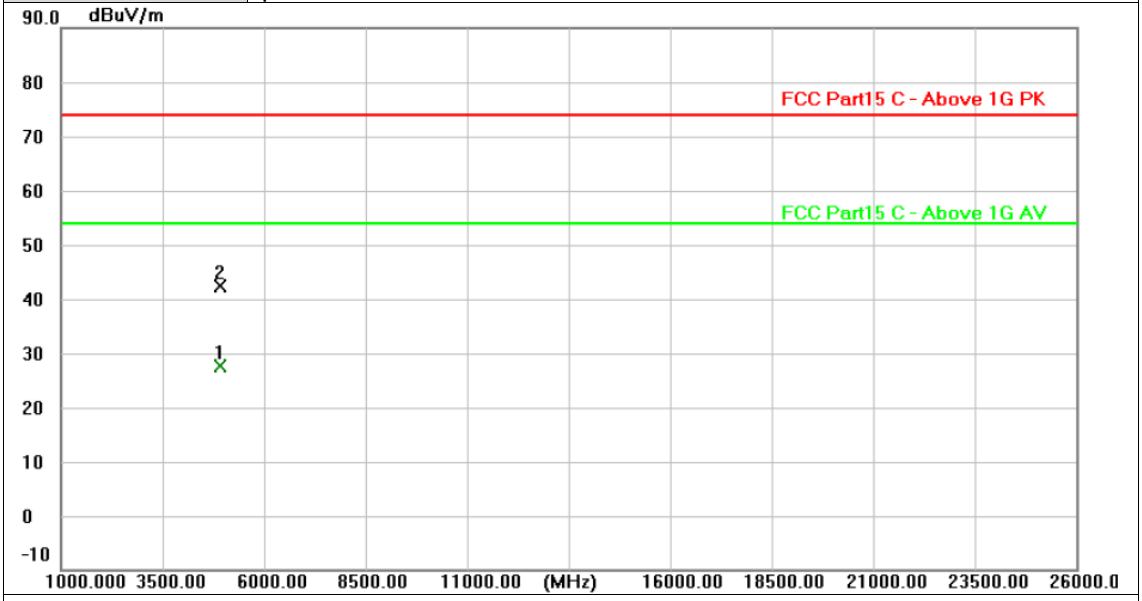
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11n(HT20) Mode 2462MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4924.181	41.19	2.41	43.60	74.00	-30.40	peak
2 *	4924.181	25.18	2.41	27.59	54.00	-26.41	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

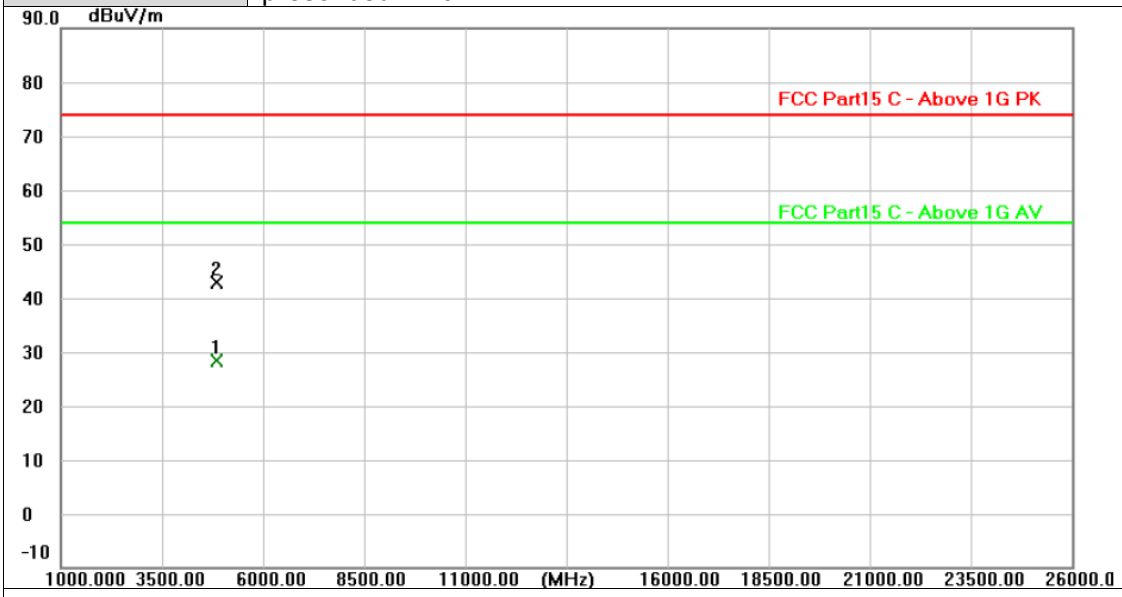
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11n(HT20) Mode 2462MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4923.618	25.22	2.41	27.63	54.00	-26.37	AVG
2	4924.234	39.92	2.41	42.33	74.00	-31.67	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

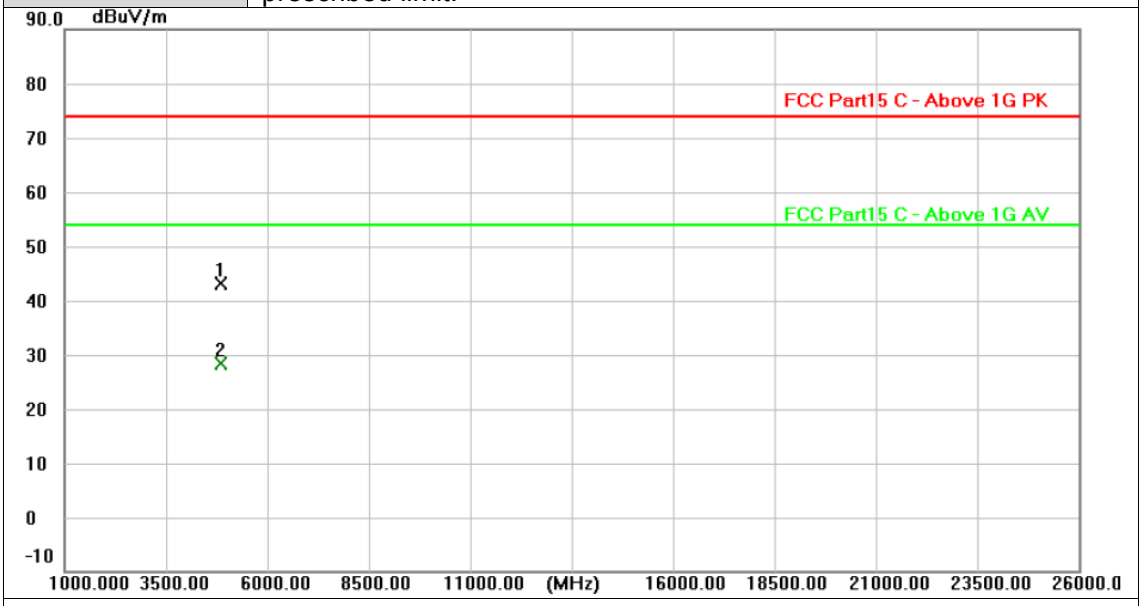
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11n(HT40) Mode 2422MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4843.660	26.14	2.24	28.38	54.00	-25.62	AVG
2	4844.104	40.56	2.24	42.80	74.00	-31.20	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

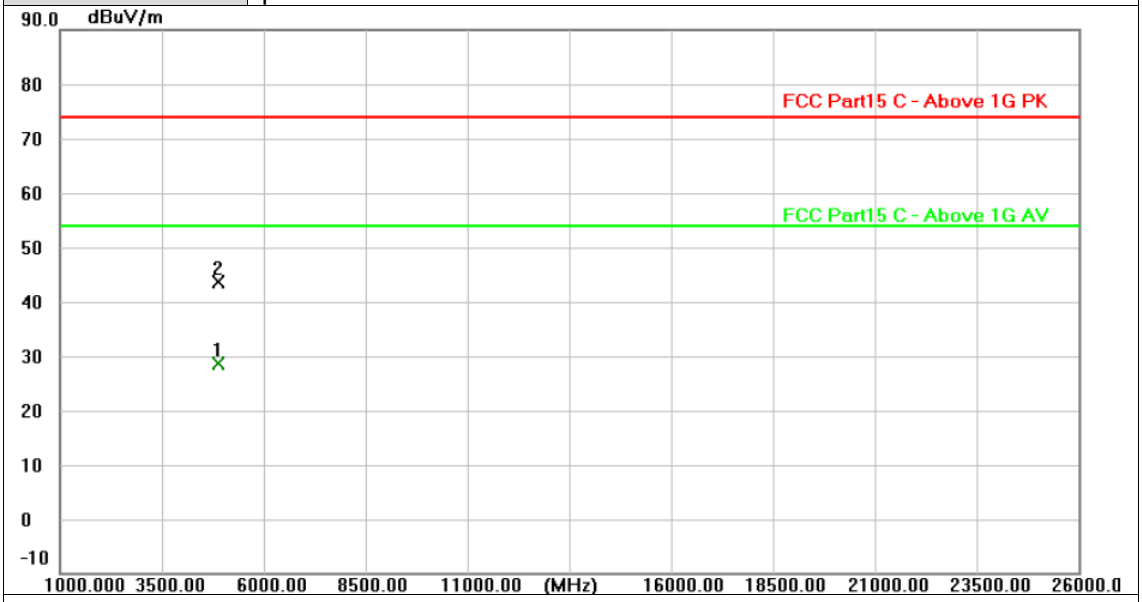
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11n(HT40) Mode 2422MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4843.808	40.88	2.24	43.12	74.00	-30.88	peak
2 *	4844.422	26.21	2.24	28.45	54.00	-25.55	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

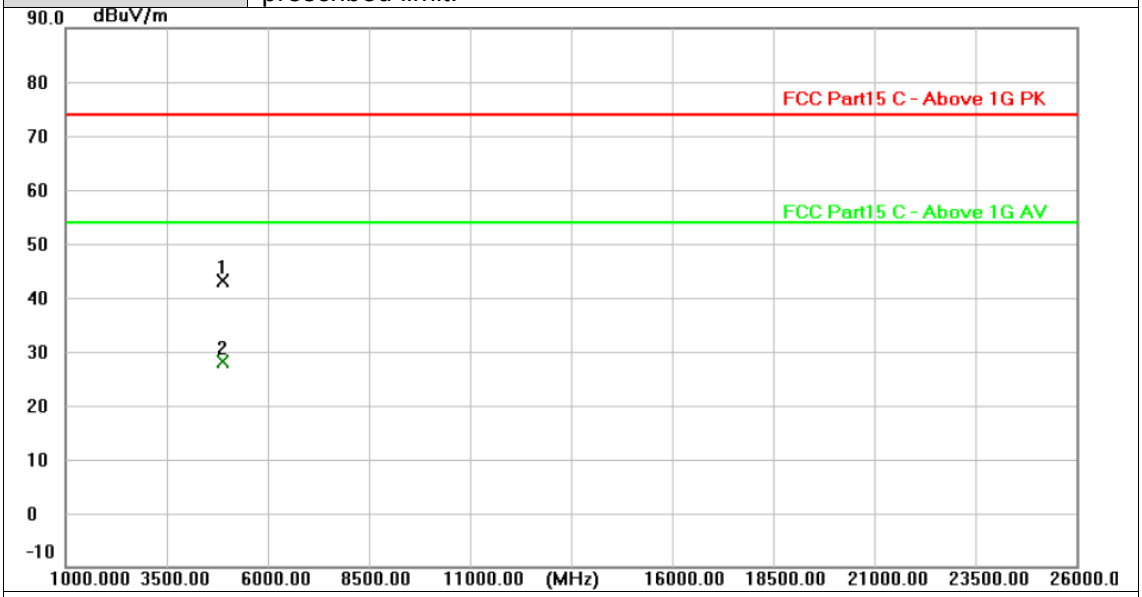
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11n(HT40) Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4874.100	26.32	2.30	28.62	54.00	-25.38	AVG
2	4874.251	41.31	2.30	43.61	74.00	-30.39	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

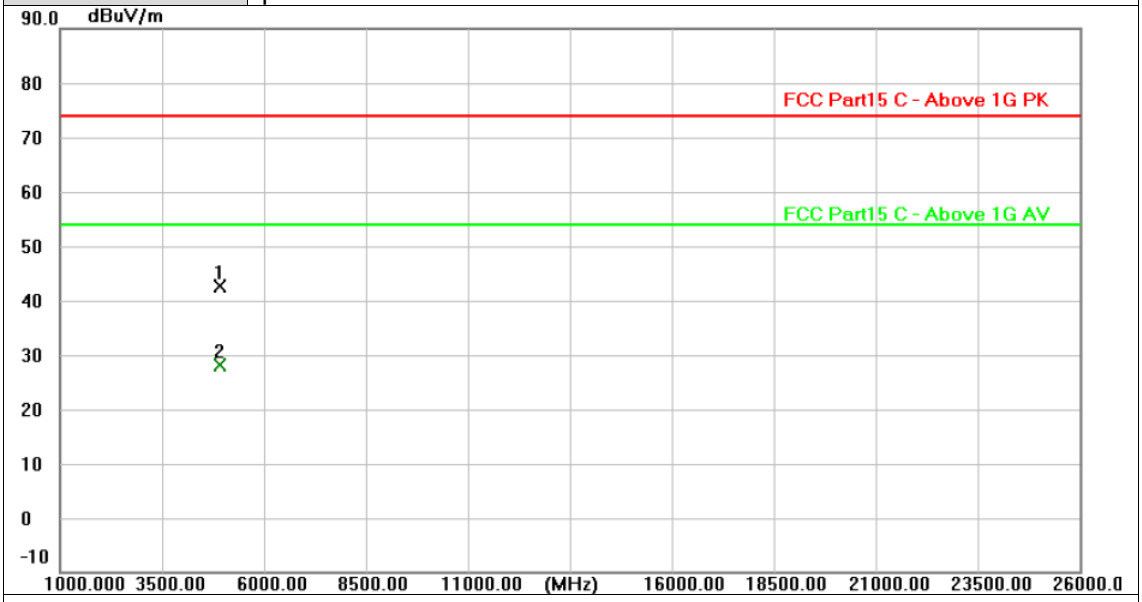
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11n(HT40) Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4873.784	40.79	2.30	43.09	74.00	-30.91	peak
2 *	4873.900	25.88	2.30	28.18	54.00	-25.82	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

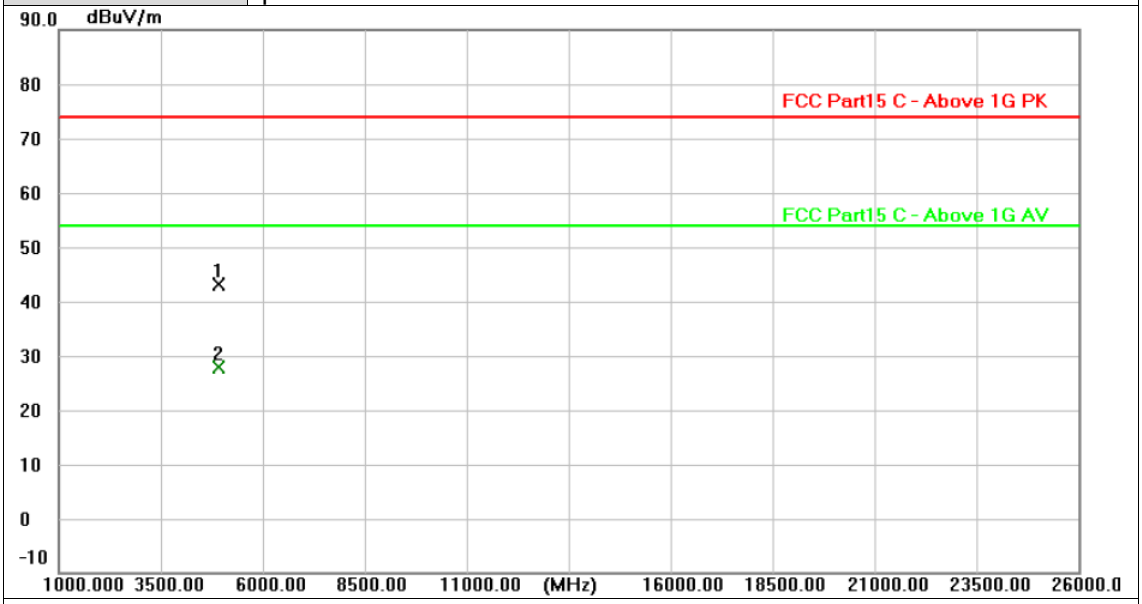
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11n(HT40) Mode 2452MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4903.990	40.15	2.36	42.51	74.00	-31.49	peak
2 *	4904.395	25.81	2.36	28.17	54.00	-25.83	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

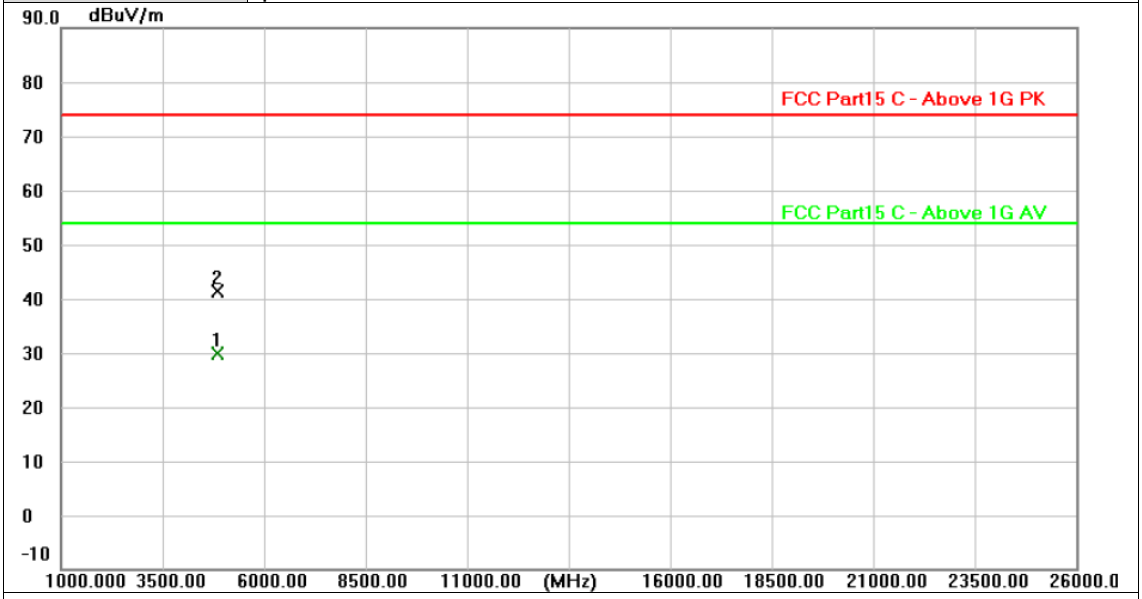
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11n(HT40) Mode 2452MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4903.941	40.87	2.36	43.23	74.00	-30.77	peak
2 *	4904.493	25.61	2.36	27.97	54.00	-26.03	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

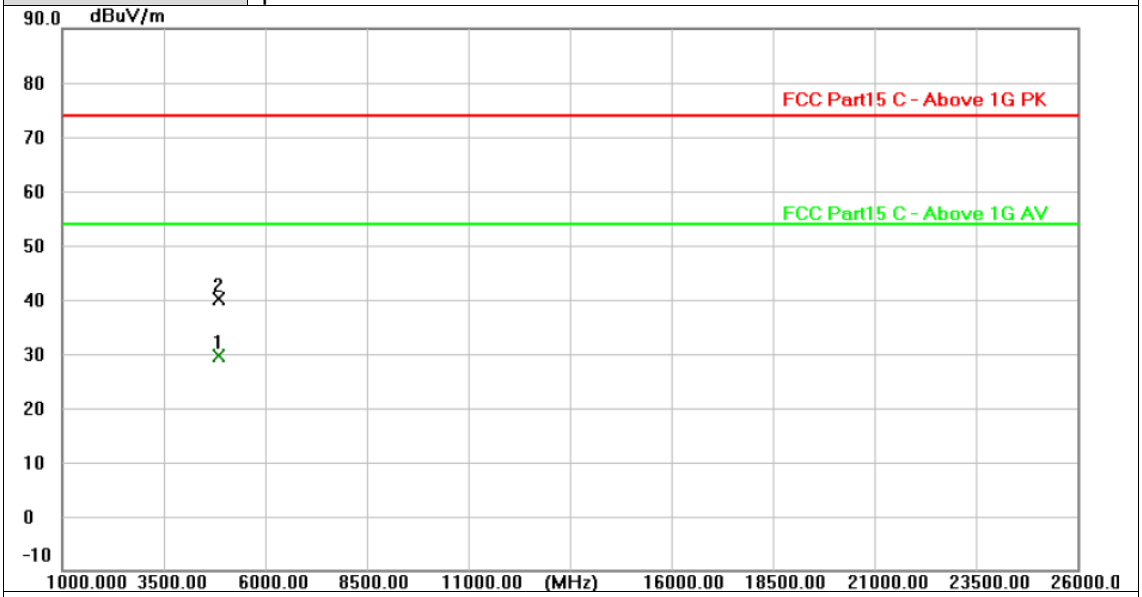
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11ax(HE20) Mode 2412MHz 242/61
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4823.477	27.57	2.20	29.77	54.00	-24.23	AVG
2	4824.871	39.24	2.20	41.44	74.00	-32.56	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

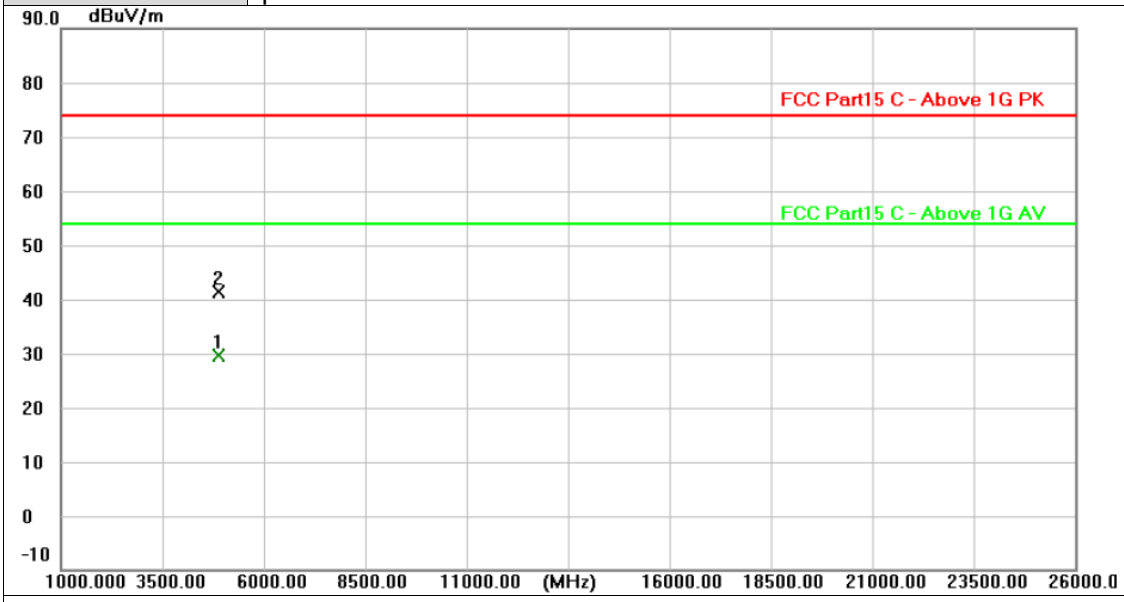
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11ax(HE20) Mode 2412MHz 242/61
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4824.219	27.43	2.20	29.63	54.00	-24.37	AVG
2	4824.778	37.99	2.20	40.19	74.00	-33.81	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

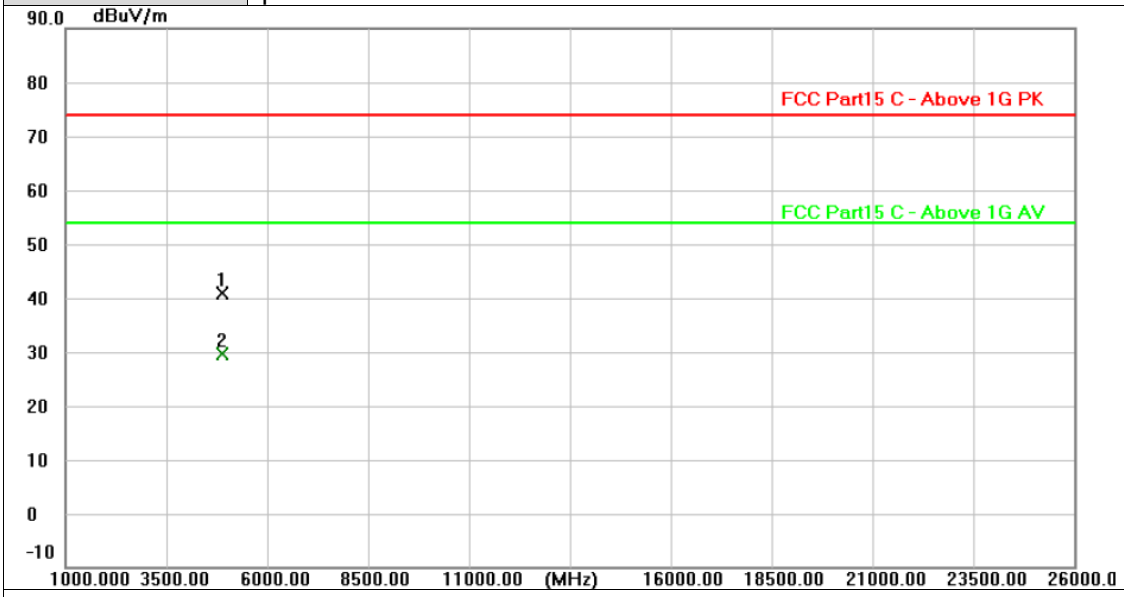
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11ax(HE20) Mode 2437MHz 242/61
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4873.360	27.40	2.30	29.70	54.00	-24.30	AVG
2	4874.047	39.01	2.30	41.31	74.00	-32.69	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

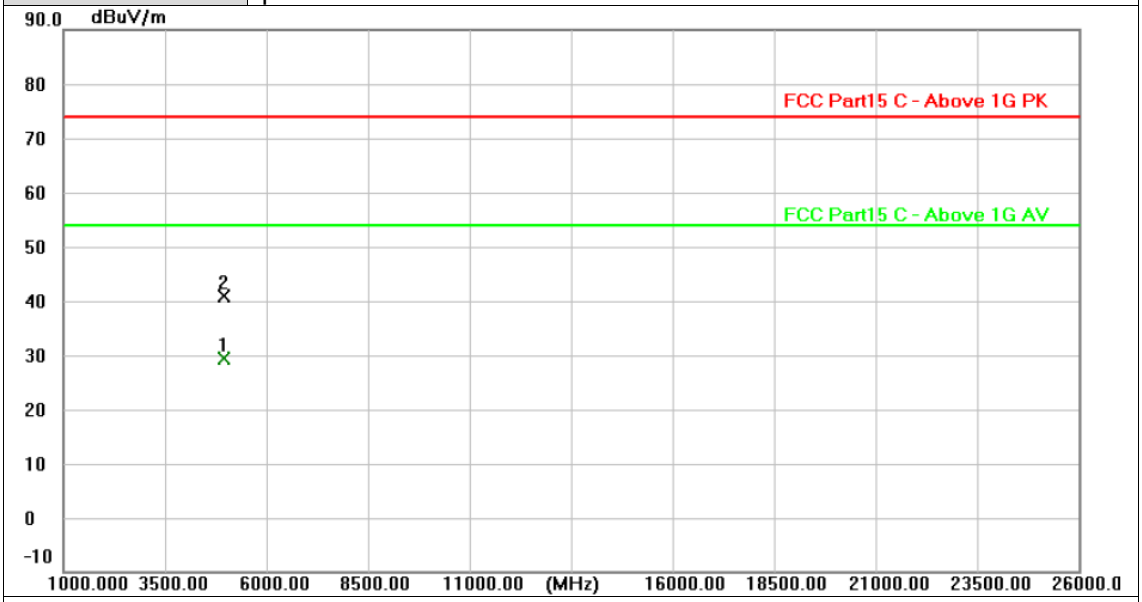
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11ax(HE20) Mode 2437MHz 242/61
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4873.069	38.70	2.30	41.00	74.00	-33.00	peak
2 *	4873.902	27.43	2.30	29.73	54.00	-24.27	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

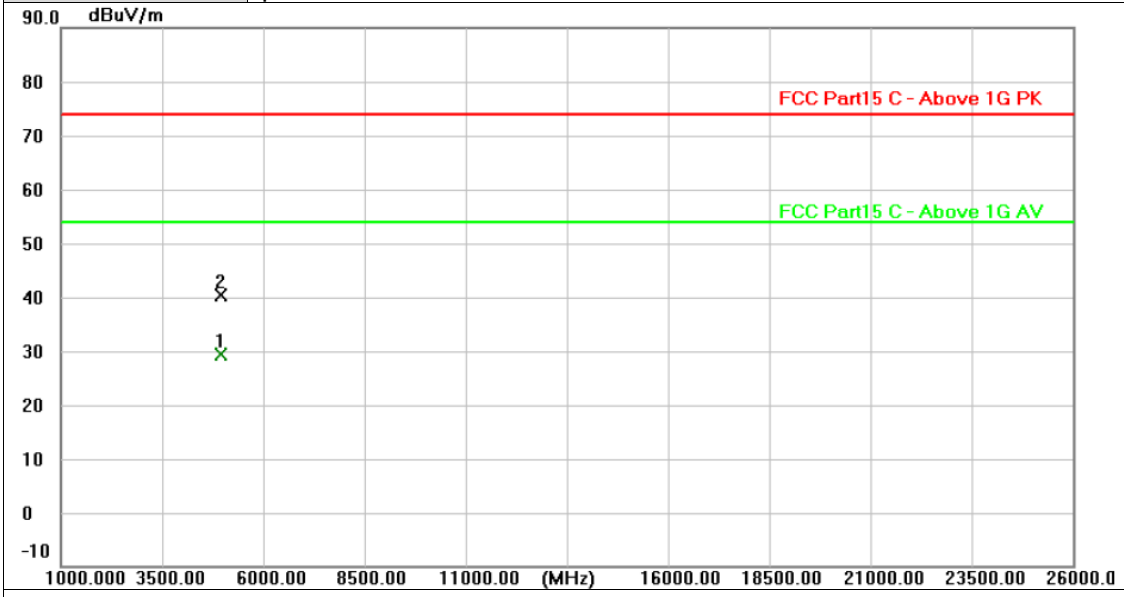
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11ax(HE20) Mode 2462MHz 242/61
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4923.519	26.95	2.41	29.36	54.00	-24.64	AVG
2	4923.836	38.53	2.41	40.94	74.00	-33.06	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

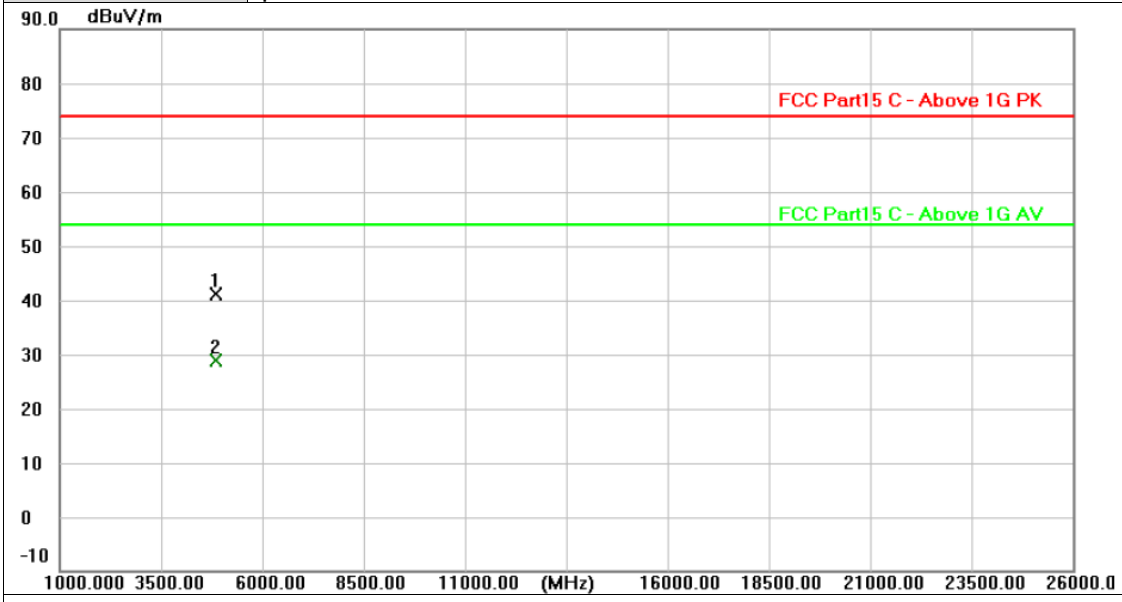
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11ax(HE20) Mode 2462MHz 242/61
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4924.597	26.94	2.41	29.35	54.00	-24.65	AVG
2	4924.755	37.96	2.41	40.37	74.00	-33.63	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

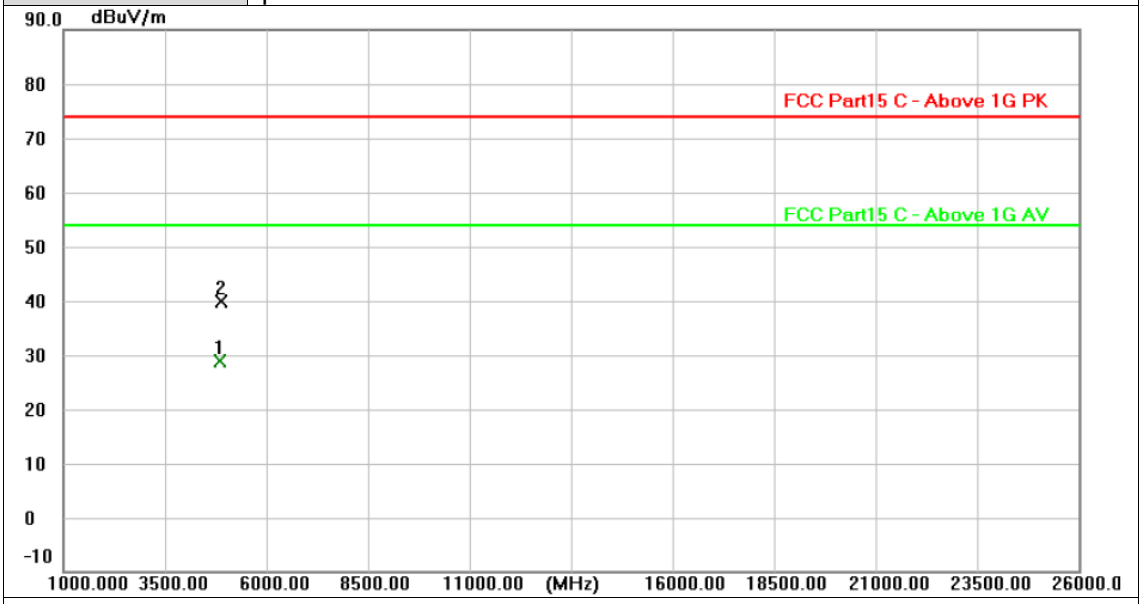
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11ax(HE40) Mode 2422MHz 484/65
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4843.051	38.96	2.24	41.20	74.00	-32.80	peak
2 *	4843.163	26.66	2.24	28.90	54.00	-25.10	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

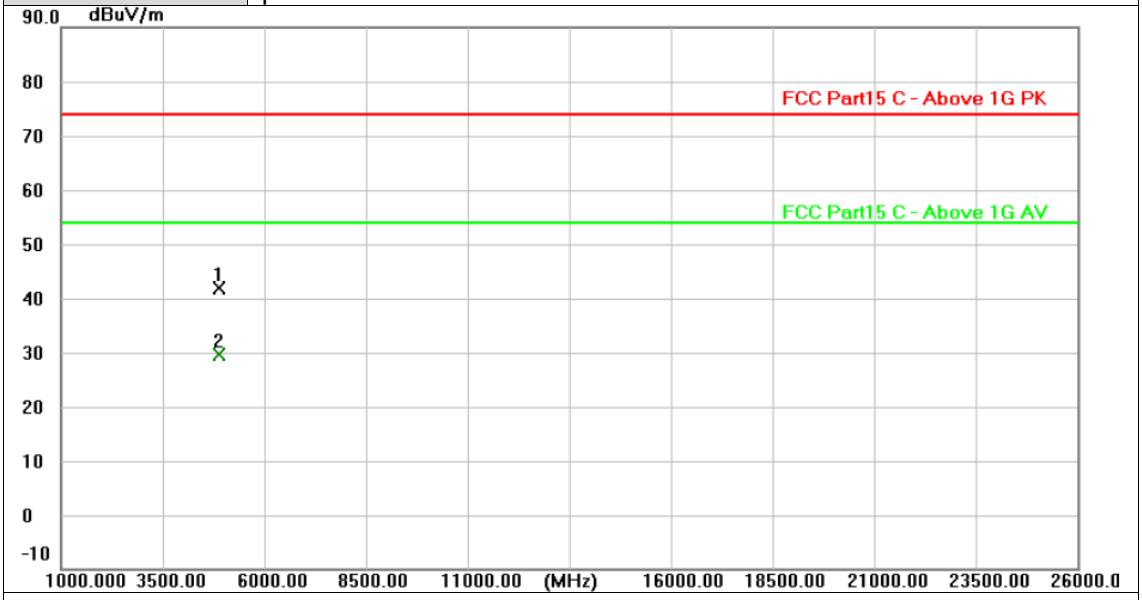
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11ax(HE40) Mode 2422MHz 484/65
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4844.055	26.67	2.24	28.91	54.00	-25.09	AVG
2	4844.669	37.70	2.24	39.94	74.00	-34.06	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

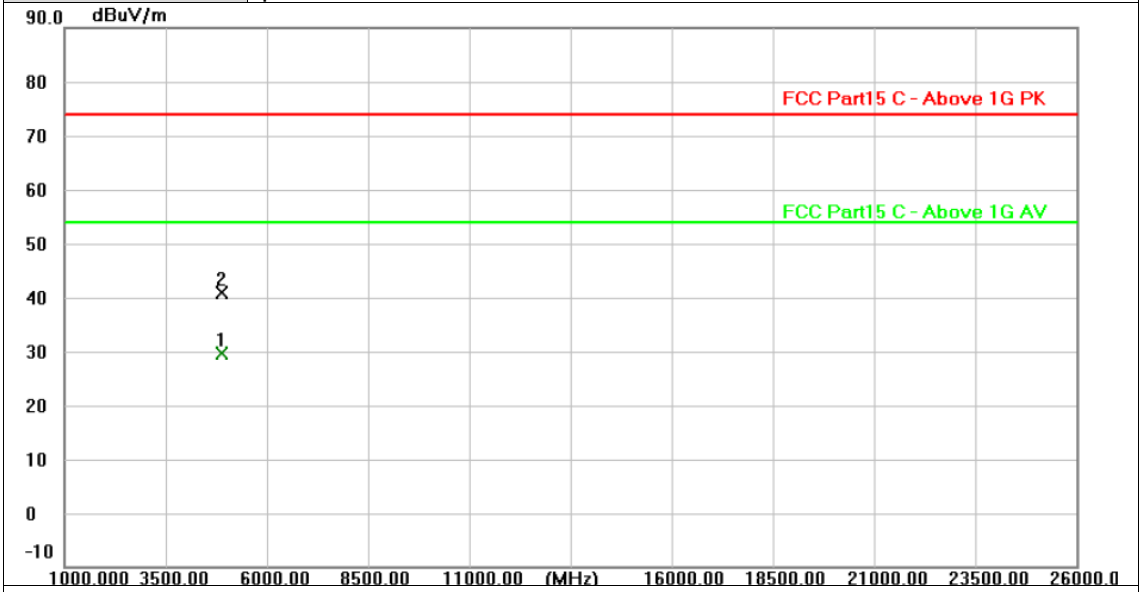
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11ax(HE40) Mode 2437MHz 484/65
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4873.169	39.48	2.30	41.78	74.00	-32.22	peak
2 *	4873.420	27.42	2.30	29.72	54.00	-24.28	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

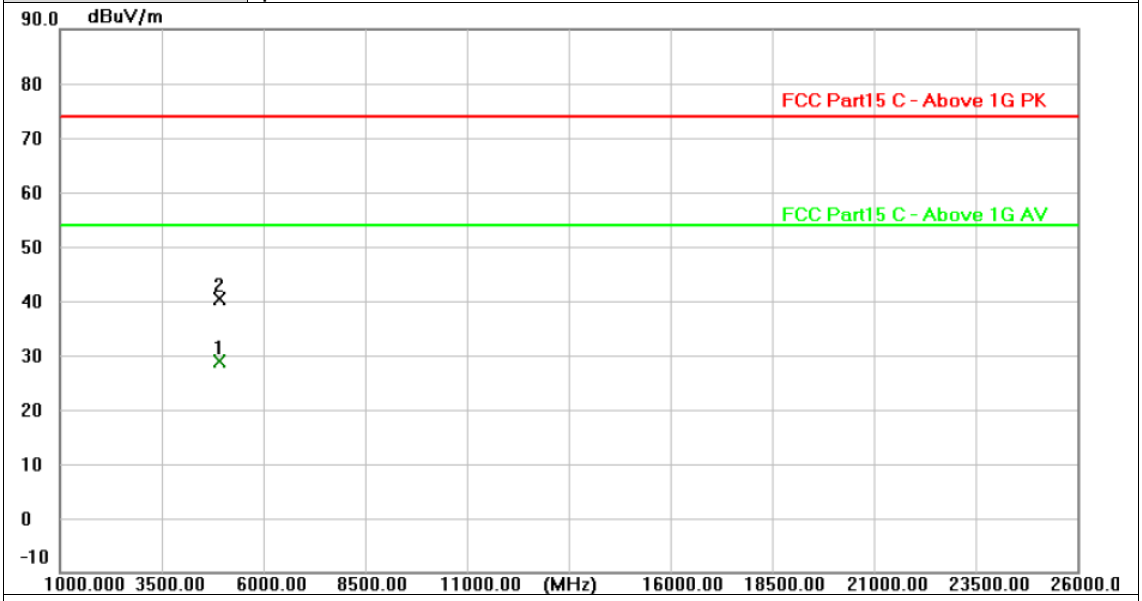
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11ax(HE40) Mode 2437MHz 484/65
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4873.517	27.42	2.30	29.72	54.00	-24.28	AVG
2	4874.835	38.60	2.30	40.90	74.00	-33.10	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

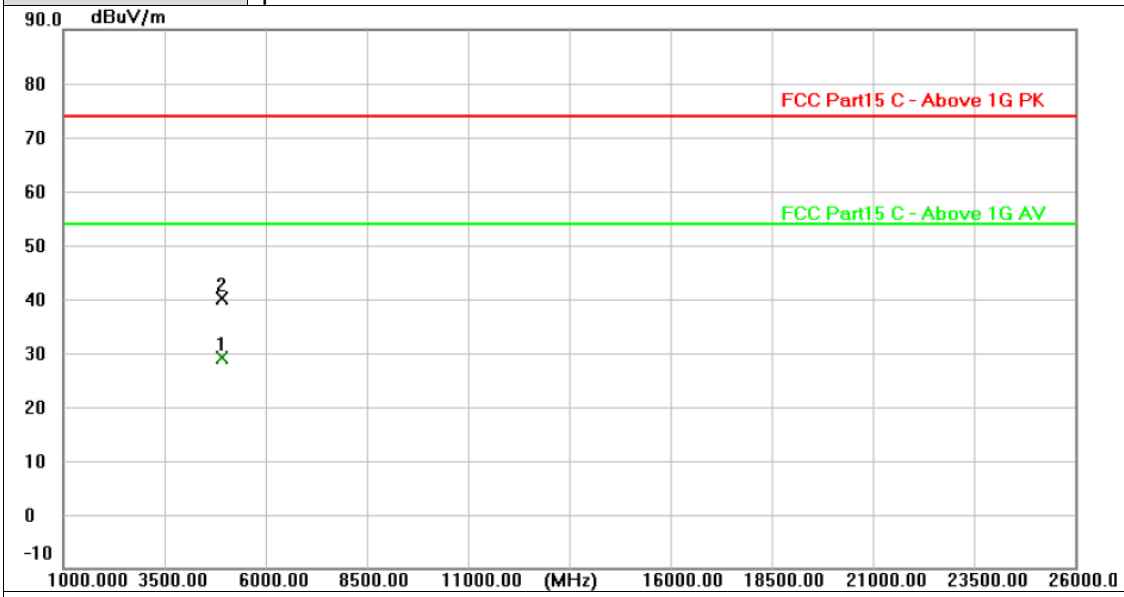
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	TX 802.11ax(HE40) Mode 2452MHz 484/65
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4903.525	26.60	2.36	28.96	54.00	-25.04	AVG
2	4904.718	37.91	2.36	40.27	74.00	-33.73	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	TX 802.11ax(HE40) Mode 2452MHz 484/65
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4903.624	26.78	2.36	29.14	54.00	-24.86	AVG
2	4904.355	37.84	2.36	40.20	74.00	-33.80	peak

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

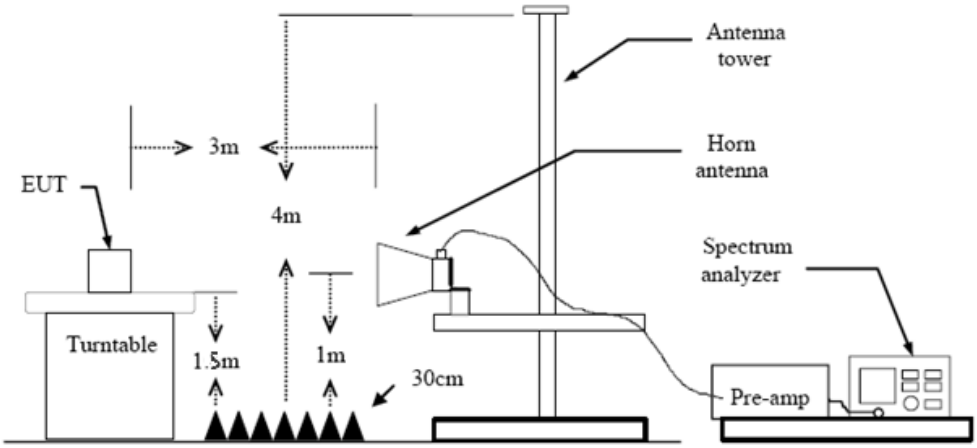
3.3. Band Edge Emissions (Radiated)

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d)/ RSS 247 5.5:

Restricted Frequency Band (MHz)	(dBuV/m)(at 3m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:
   RBW=1MHz, VBW=3MHz Peak detector for Peak value.
   RBW=1MHz, VBW see note 1 with Peak Detector for Average Value.

   Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 3.8 Duty Cycle.

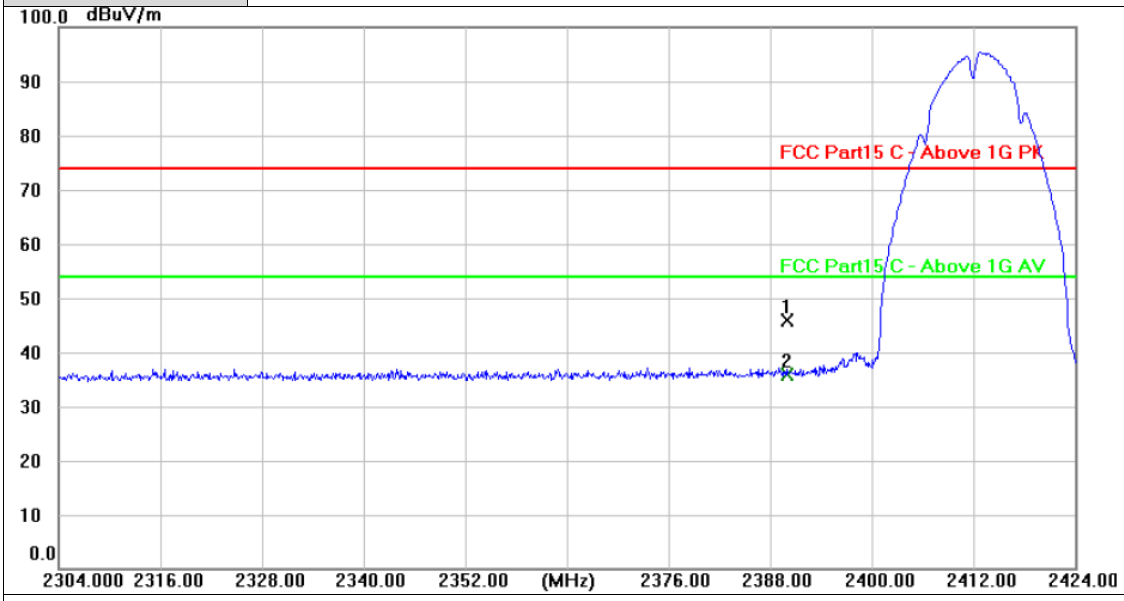
Test Mode

Please refer to the clause 2.4.

Test Results

Pre-scan all antenna, only show the test data for worse case antenna on the test report.

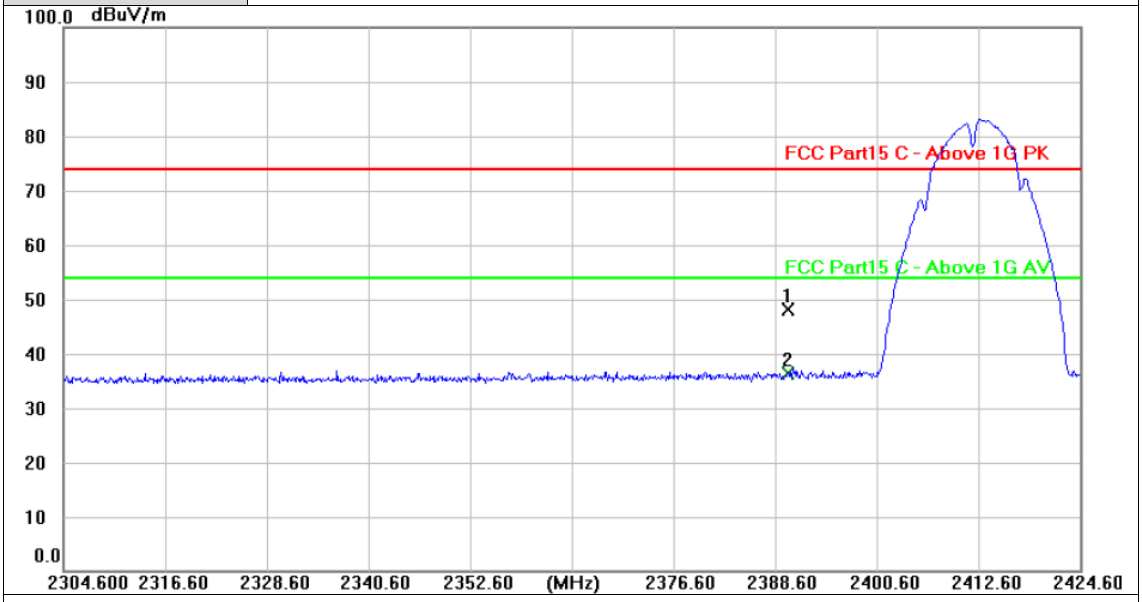
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11b Mode 2412MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	15.10	30.84	45.94	74.00	-28.06	peak
2 *	2390.000	5.08	30.84	35.92	54.00	-18.08	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

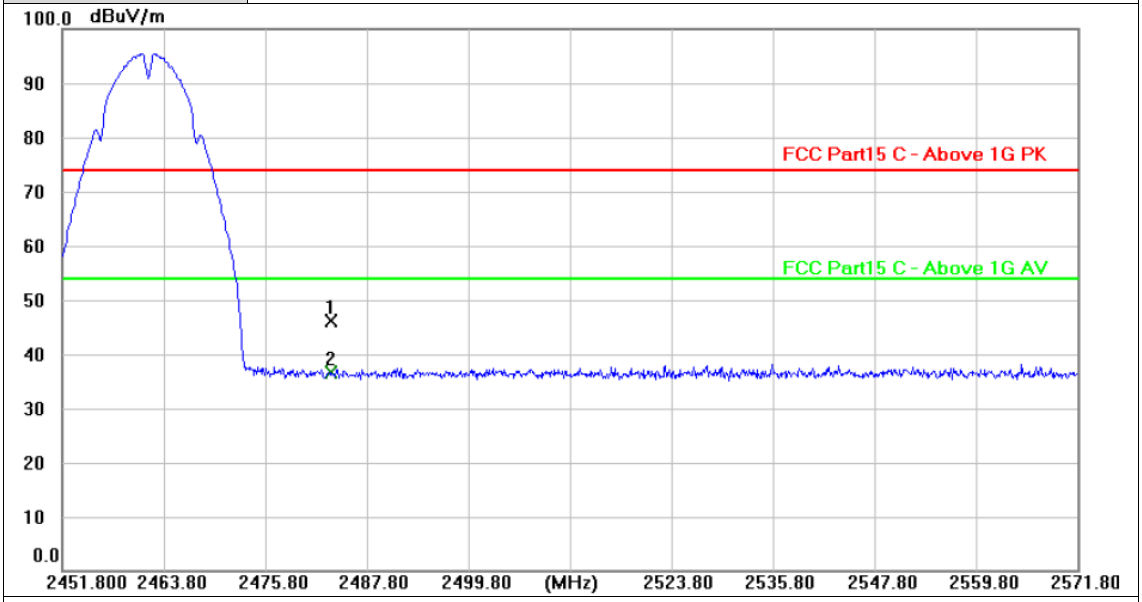
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11b Mode 2412MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	17.17	30.84	48.01	74.00	-25.99	peak
2 *	2390.000	5.44	30.84	36.28	54.00	-17.72	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

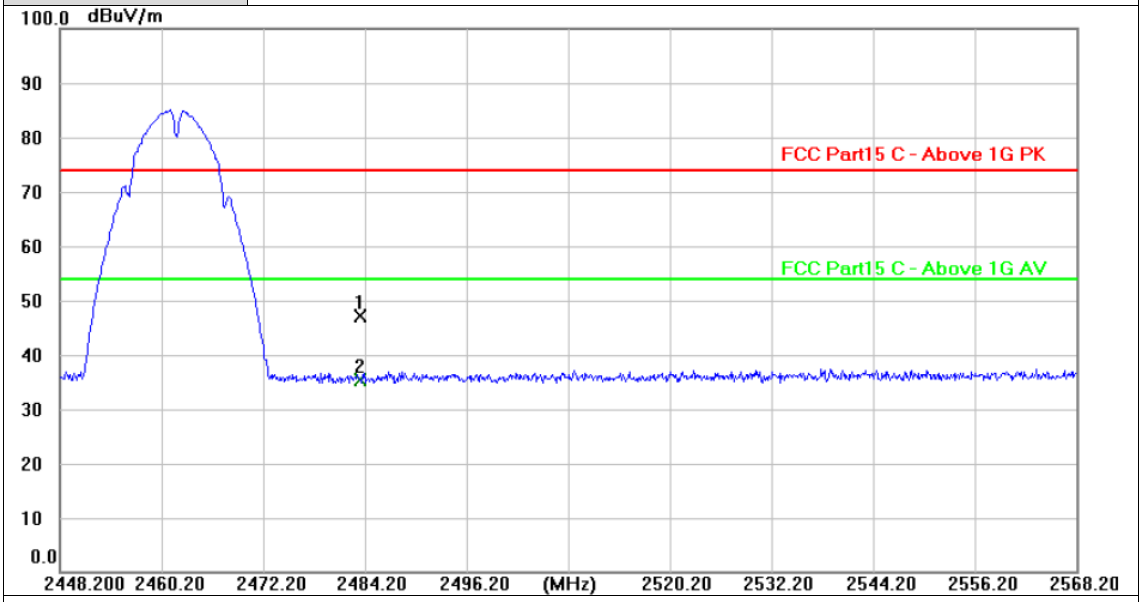
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11b Mode 2462 MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	14.83	31.24	46.07	74.00	-27.93	peak
2 *	2483.500	5.41	31.24	36.65	54.00	-17.35	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

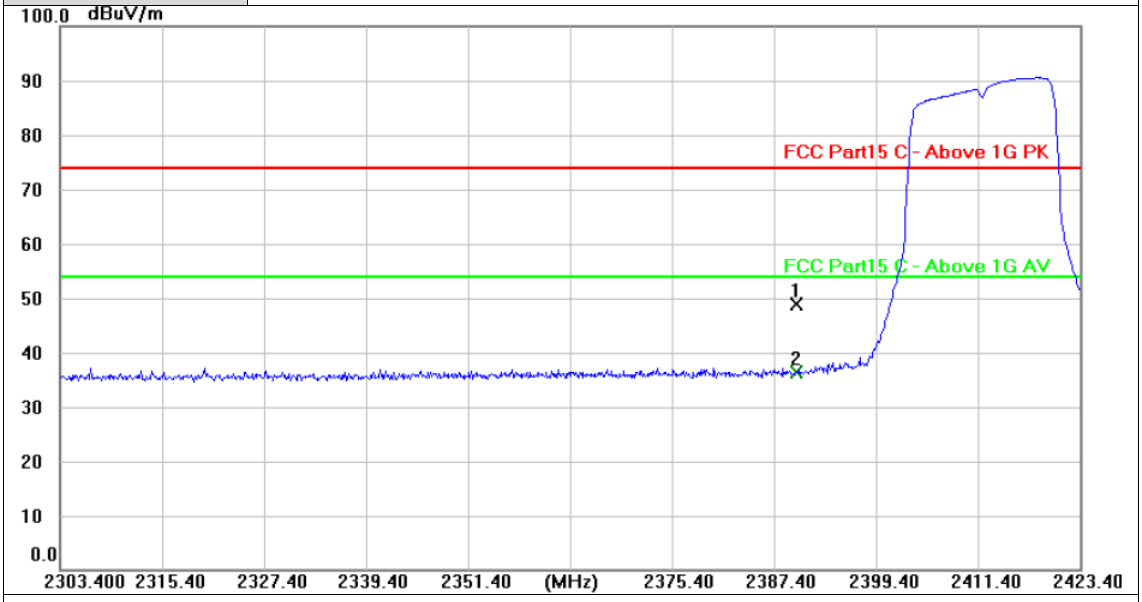
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11b Mode 2462 MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	15.78	31.24	47.02	74.00	-26.98	peak
2 *	2483.500	4.23	31.24	35.47	54.00	-18.53	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

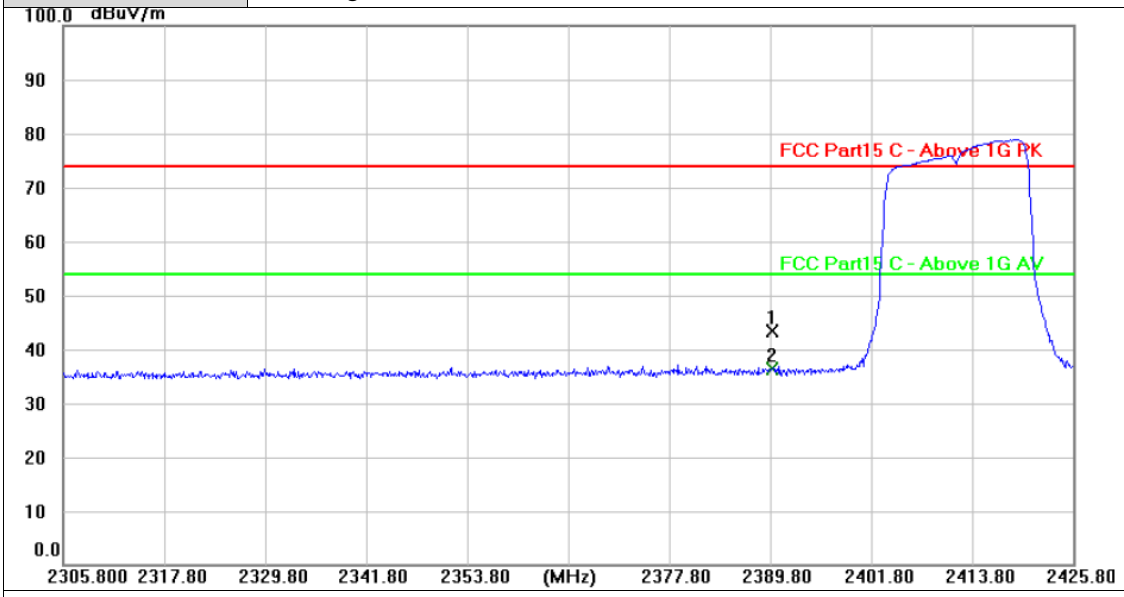
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11g Mode 2412MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	18.12	30.84	48.96	74.00	-25.04	peak
2 *	2390.000	5.55	30.84	36.39	54.00	-17.61	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

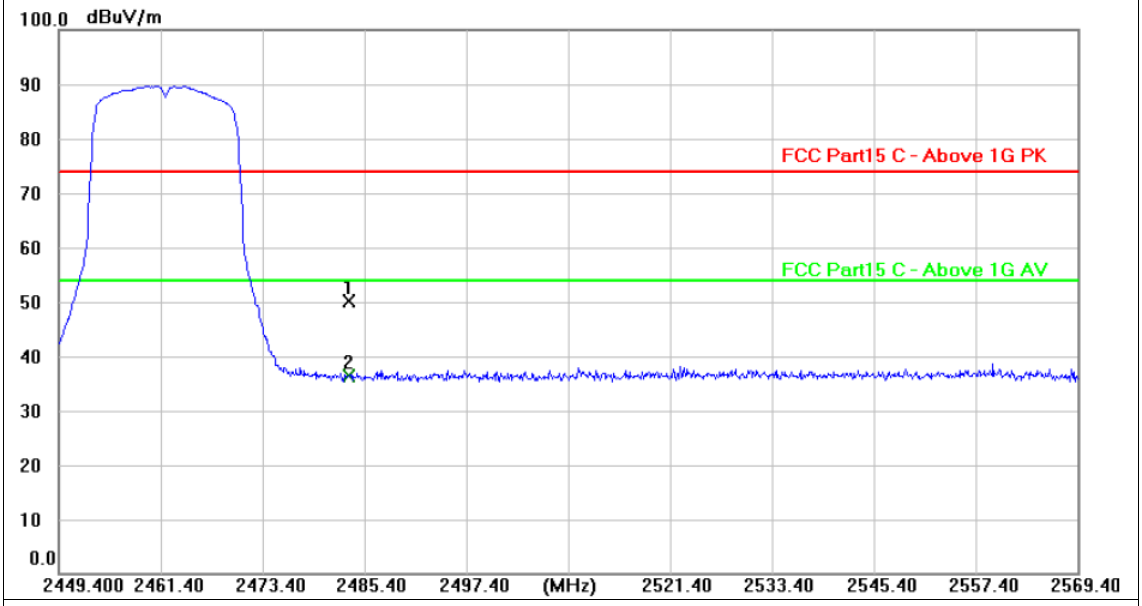
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11g Mode 2412MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	12.58	30.84	43.42	74.00	-30.58	peak
2 *	2390.000	5.47	30.84	36.31	54.00	-17.69	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

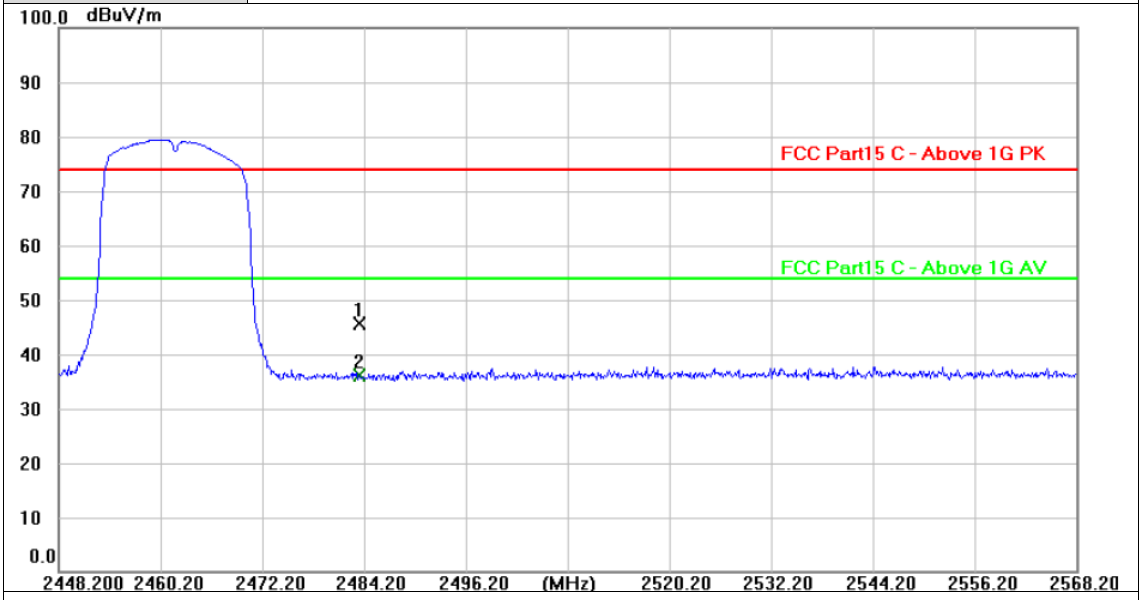
Ant No.:	Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11g Mode 2462MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	18.82	31.24	50.06	74.00	-23.94	peak
2 *	2483.500	5.12	31.24	36.36	54.00	-17.64	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

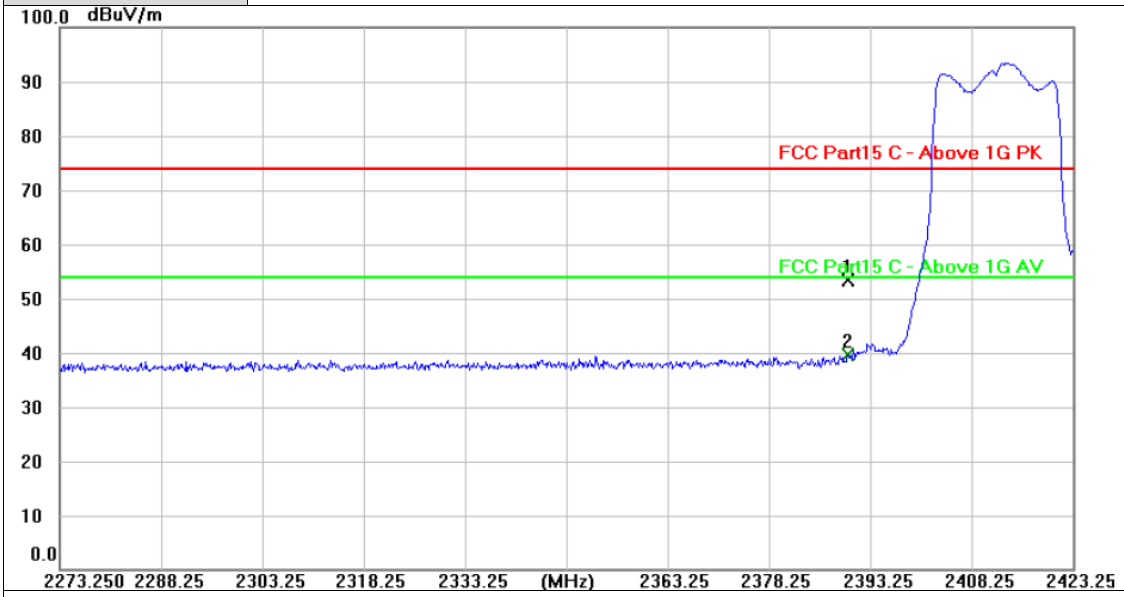
Ant No.:	Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11g Mode 2462MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	14.39	31.24	45.63	74.00	-28.37	peak
2 *	2483.500	4.81	31.24	36.05	54.00	-17.95	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

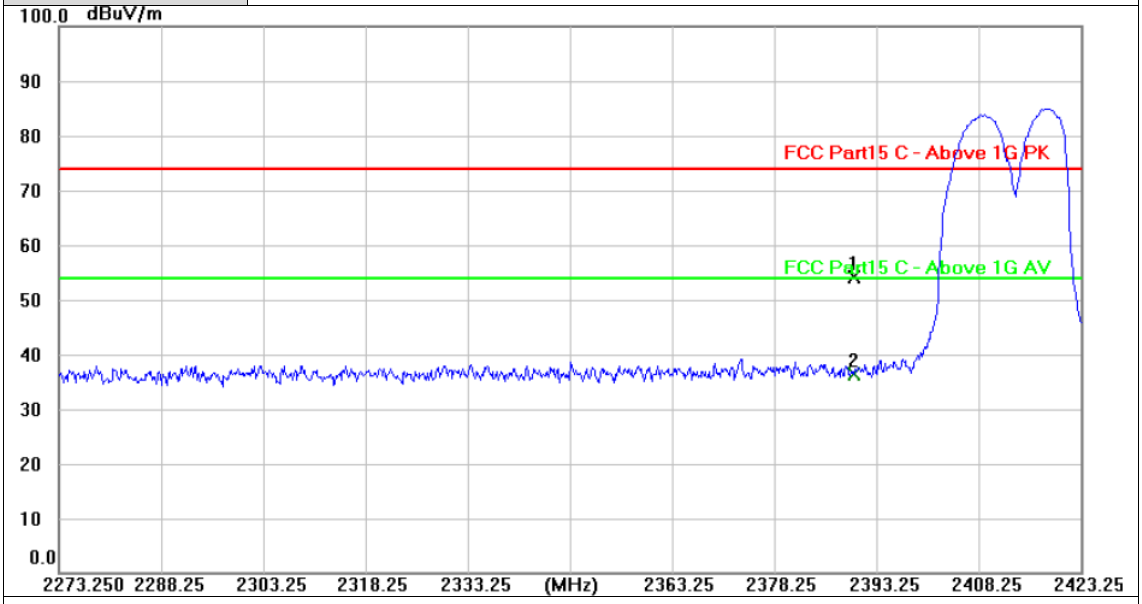
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11n(HT20) Mode 2412MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	22.58	30.84	53.42	74.00	-20.58	peak
2 *	2390.000	8.84	30.84	39.68	54.00	-14.32	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

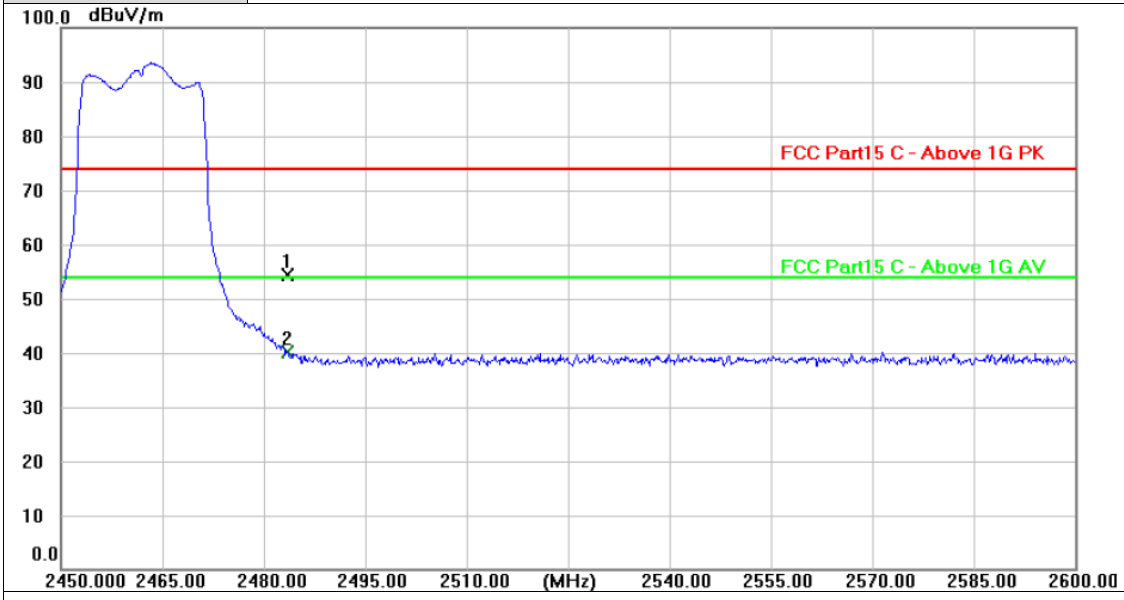
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11n(HT20) Mode 2412MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	23.21	30.84	54.05	74.00	-19.95	peak
2 *	2390.000	5.55	30.84	36.39	54.00	-17.61	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

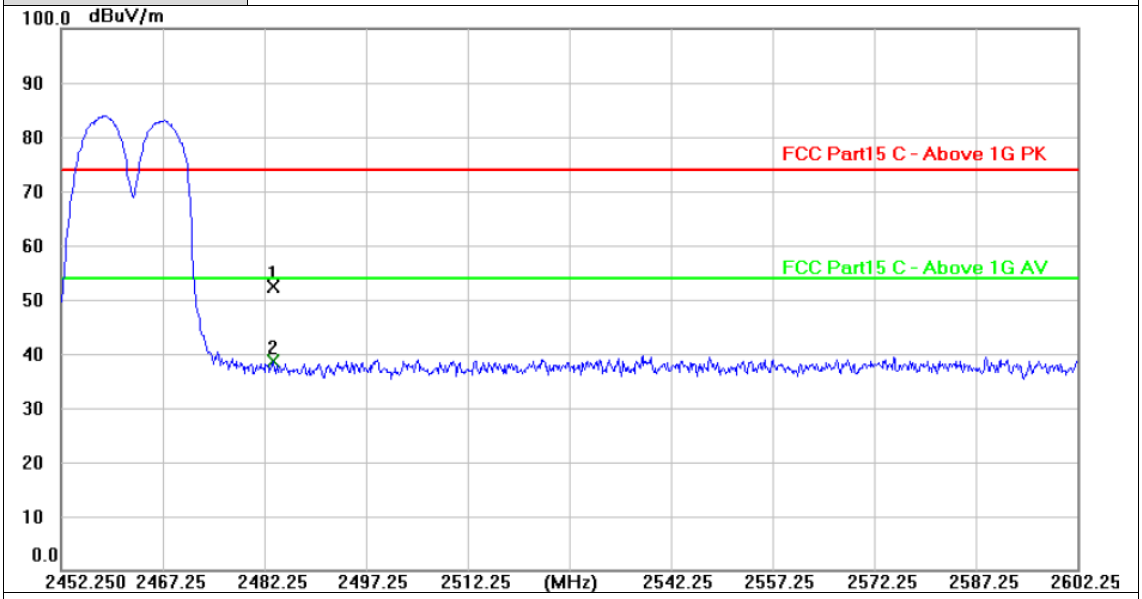
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11n(HT20) Mode 2462MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	23.08	31.24	54.32	74.00	-19.68	peak
2 *	2483.500	8.90	31.24	40.14	54.00	-13.86	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

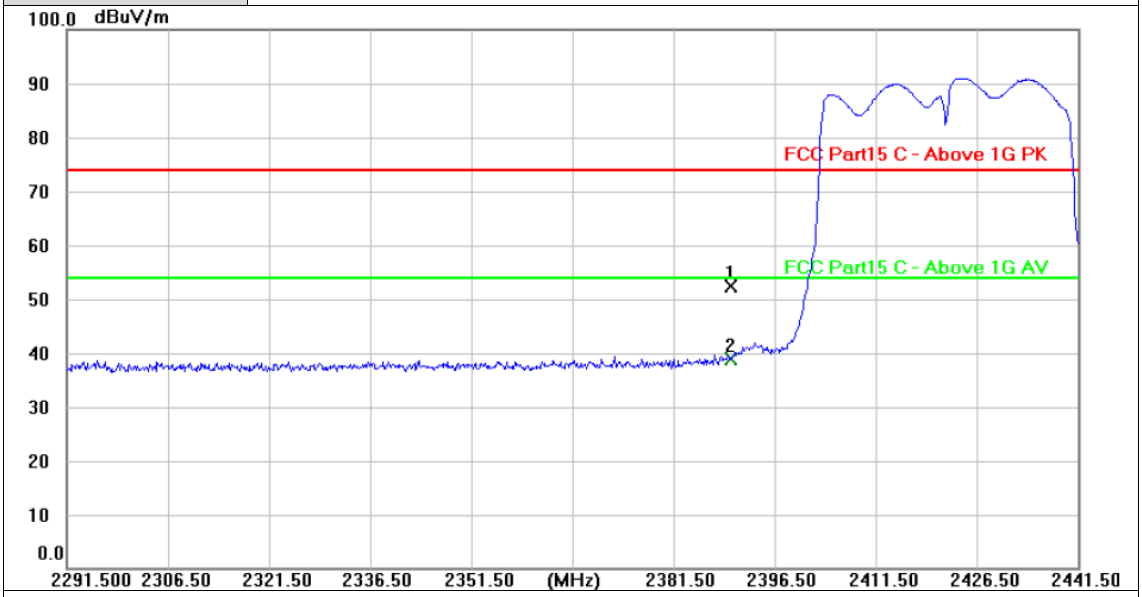
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11n(HT20) Mode 2462MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	21.07	31.24	52.31	74.00	-21.69	peak
2 *	2483.500	7.28	31.24	38.52	54.00	-15.48	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

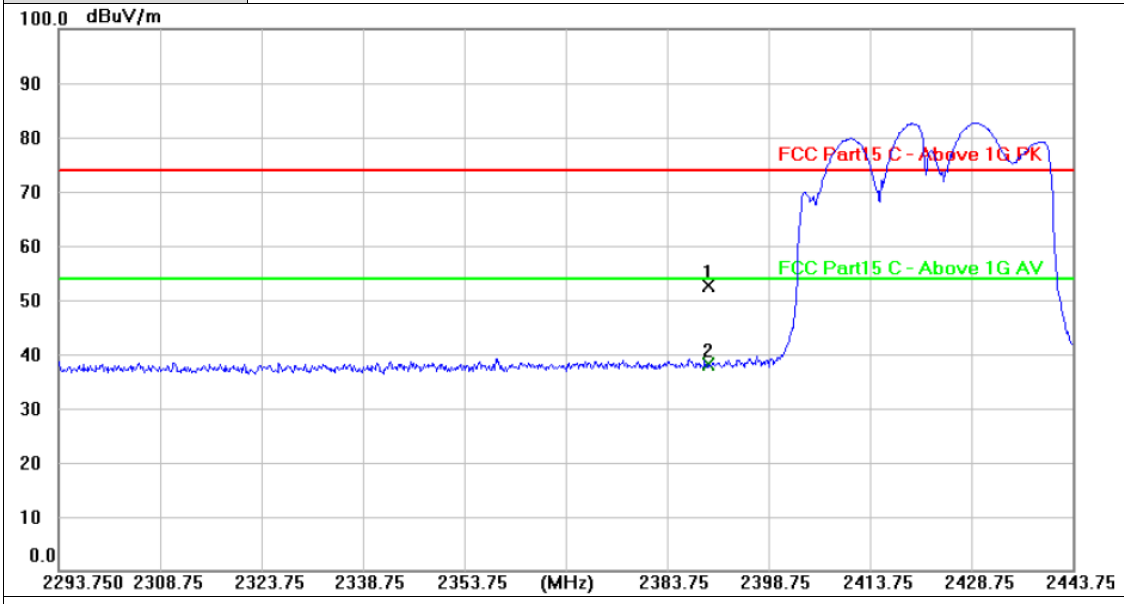
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11n(HT40) Mode 2422MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	21.64	30.84	52.48	74.00	-21.52	peak
2 *	2390.000	8.15	30.84	38.99	54.00	-15.01	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

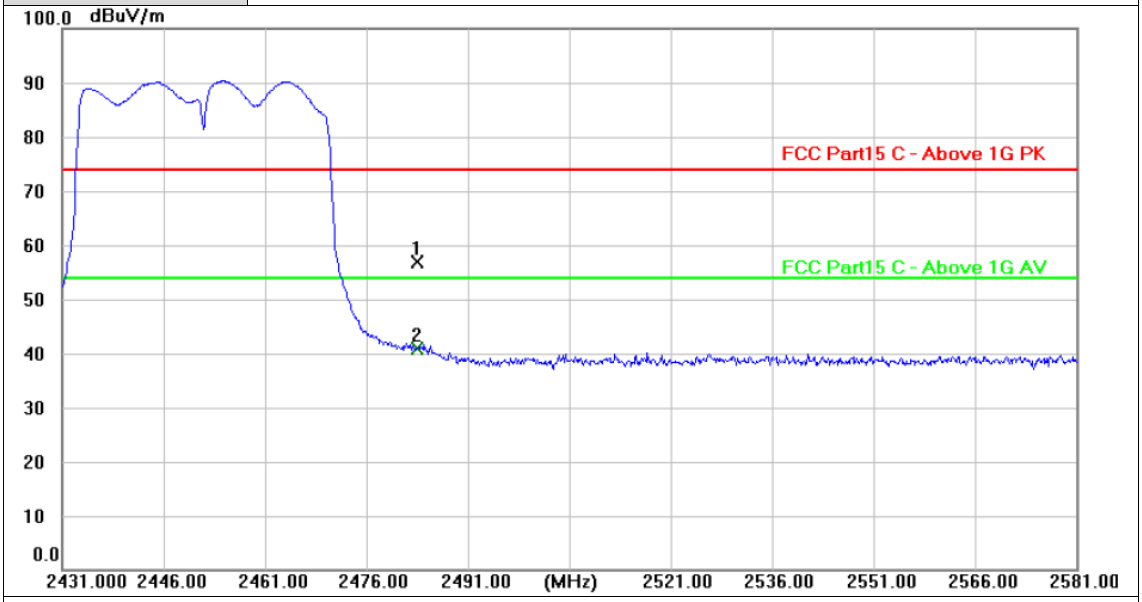
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11n(HT40) Mode 2422MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	21.68	30.84	52.52	74.00	-21.48	peak
2 *	2390.000	7.19	30.84	38.03	54.00	-15.97	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

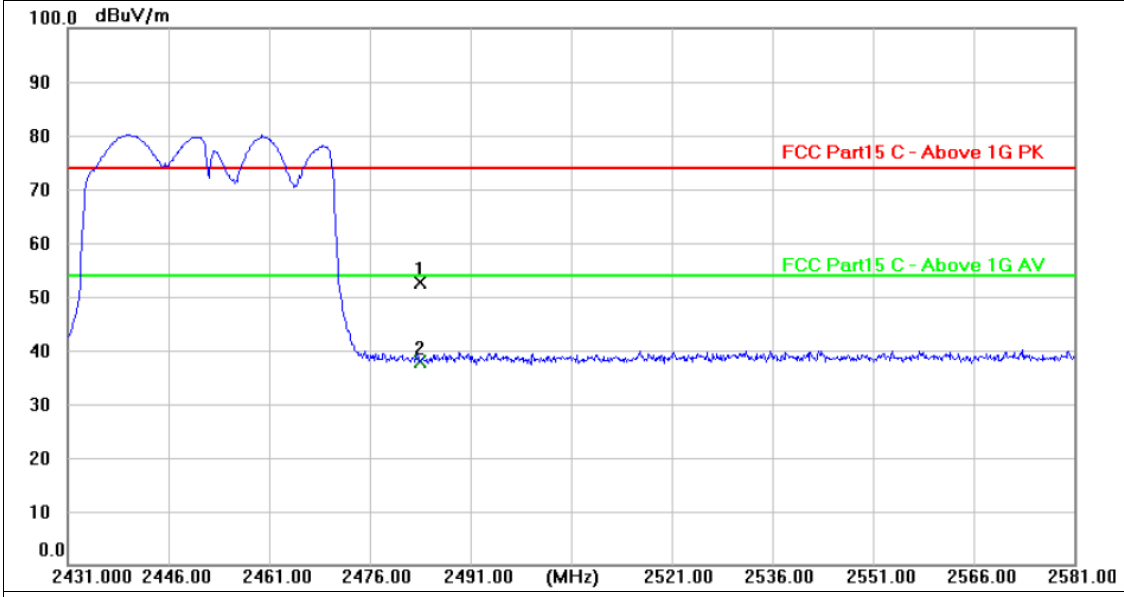
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11n(HT40) Mode 2452MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	25.67	31.24	56.91	74.00	-17.09	peak
2 *	2483.500	9.68	31.24	40.92	54.00	-13.08	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

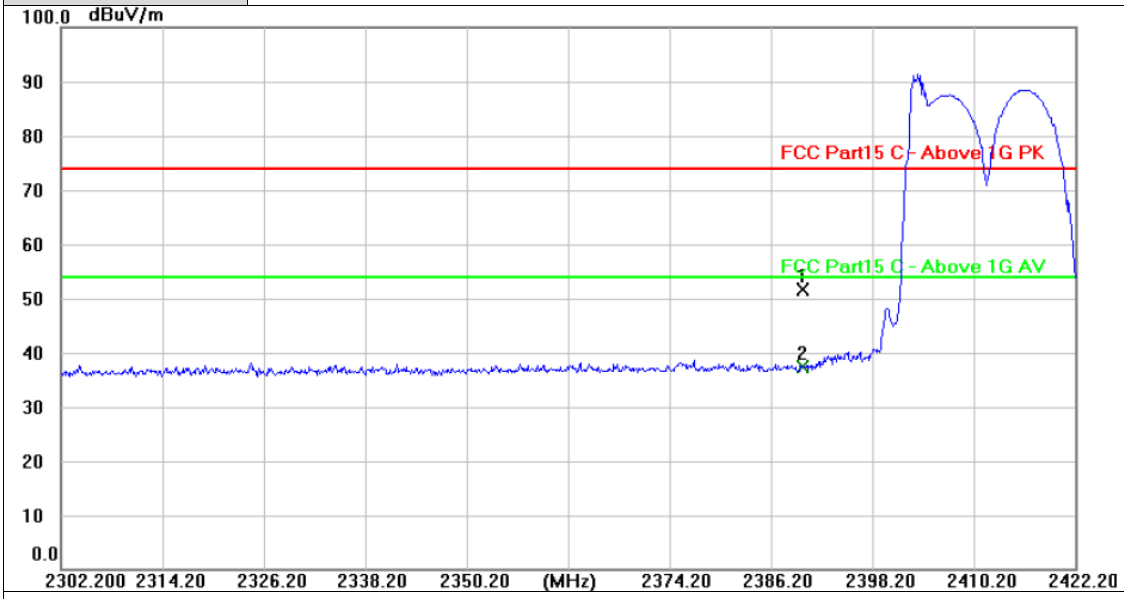
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11n(HT40) Mode 2452MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	21.49	31.24	52.73	74.00	-21.27	peak
2 *	2483.500	6.62	31.24	37.86	54.00	-16.14	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

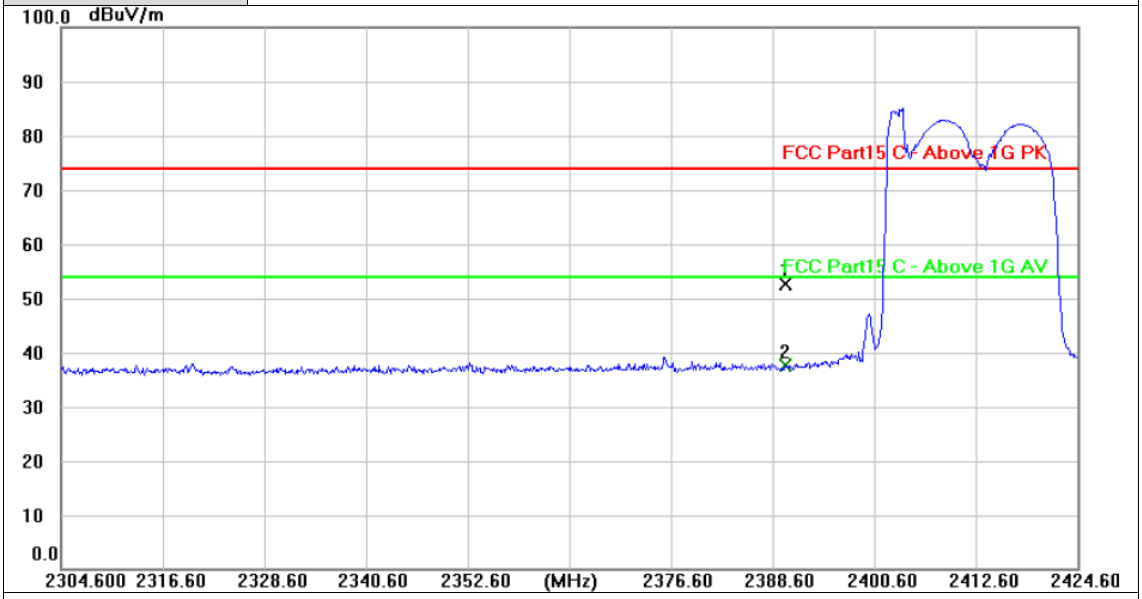
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE20) Mode 2412MHz 26/0



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	20.75	30.84	51.59	74.00	-22.41	peak
2 *	2390.000	6.60	30.84	37.44	54.00	-16.56	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

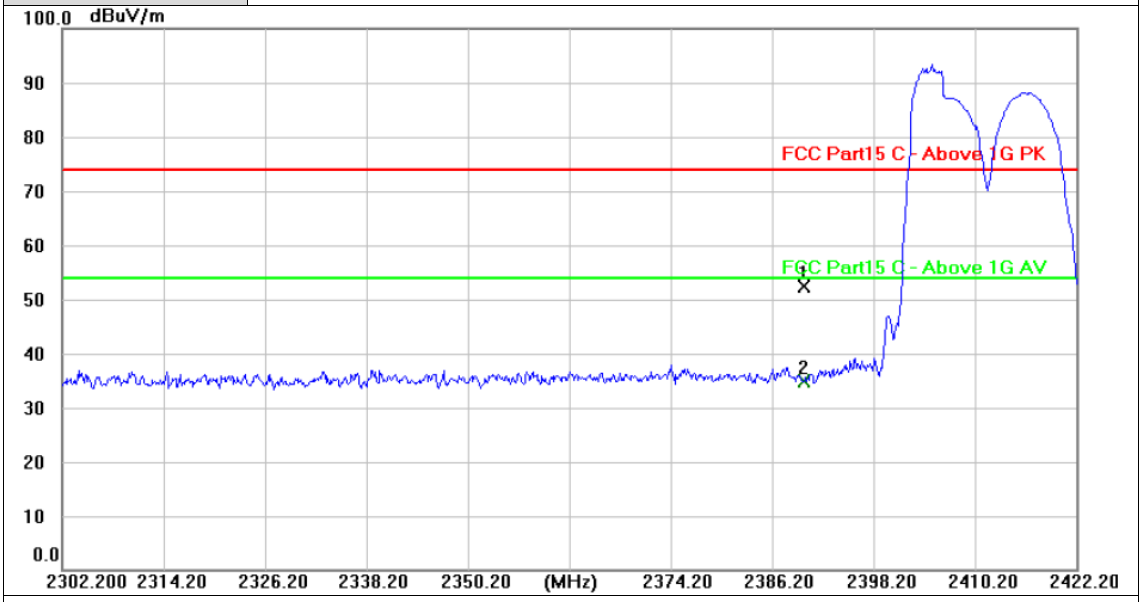
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE20) Mode 2412MHz 26/0



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	21.89	30.84	52.73	74.00	-21.27	peak
2 *	2390.000	6.75	30.84	37.59	54.00	-16.41	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

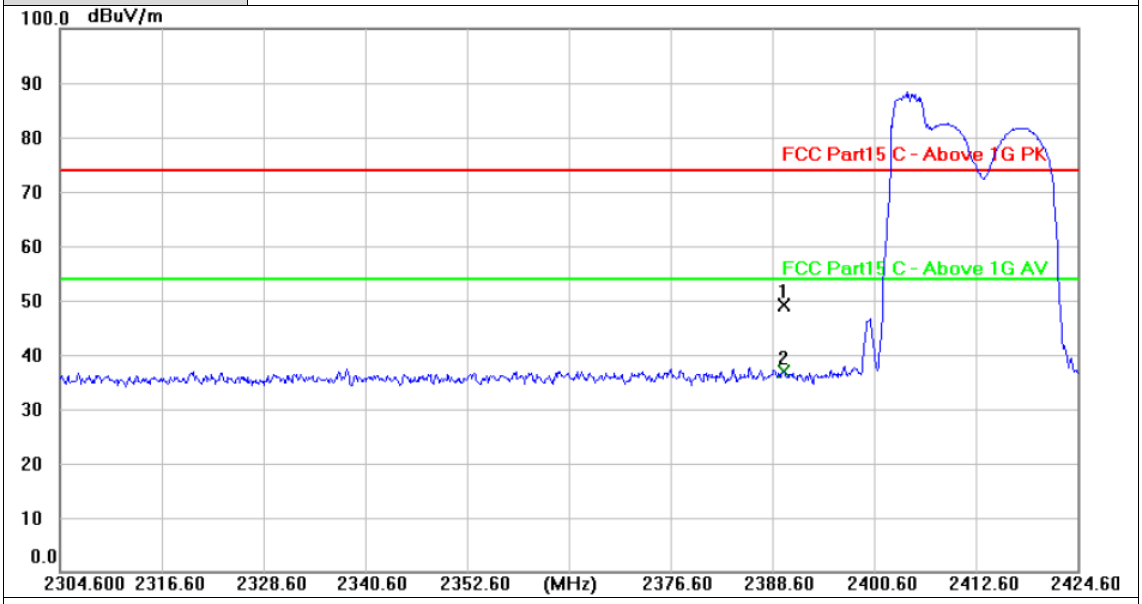
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE20) Mode 2412MHz 52/37



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	21.48	30.84	52.32	74.00	-21.68	peak
2 *	2390.000	4.10	30.84	34.94	54.00	-19.06	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

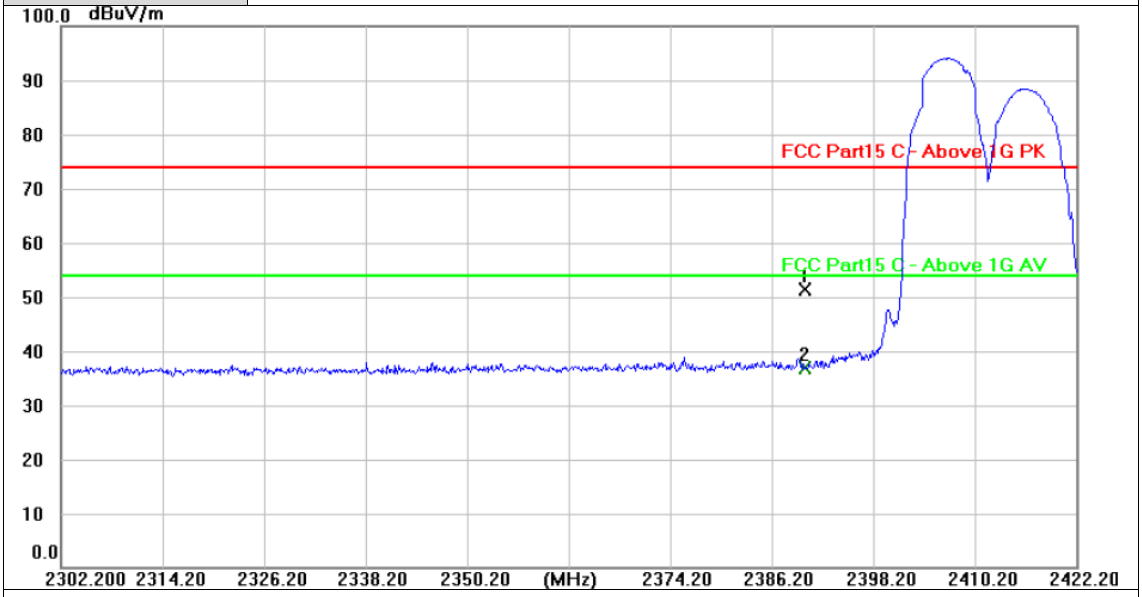
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE20) Mode 2412MHz 52/37



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	18.24	30.84	49.08	74.00	-24.92	peak
2 *	2390.000	6.03	30.84	36.87	54.00	-17.13	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

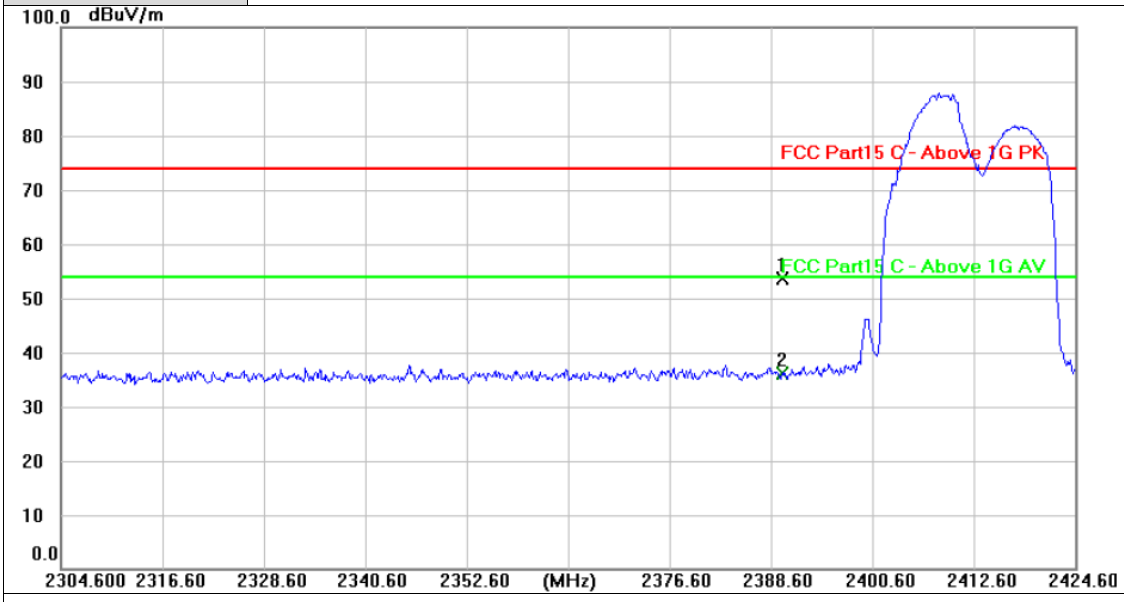
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE20) Mode 2412MHz 106/53



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	20.46	30.84	51.30	74.00	-22.70	peak
2 *	2390.000	6.01	30.84	36.85	54.00	-17.15	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

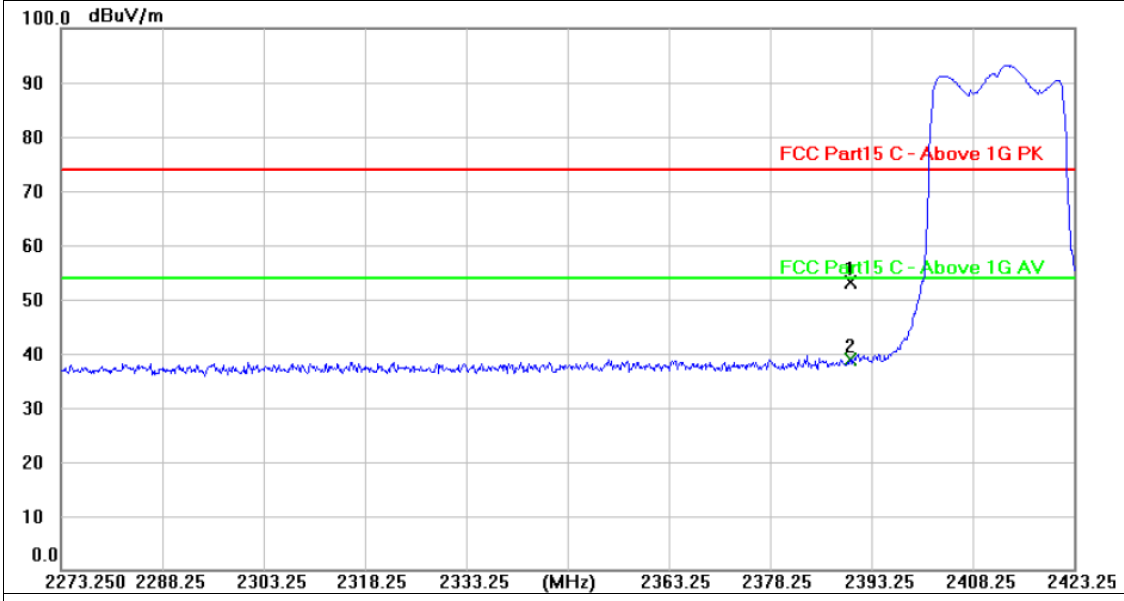
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE20) Mode 2412MHz 106/53



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	22.68	30.84	53.52	74.00	-20.48	peak
2 *	2390.000	5.17	30.84	36.01	54.00	-17.99	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

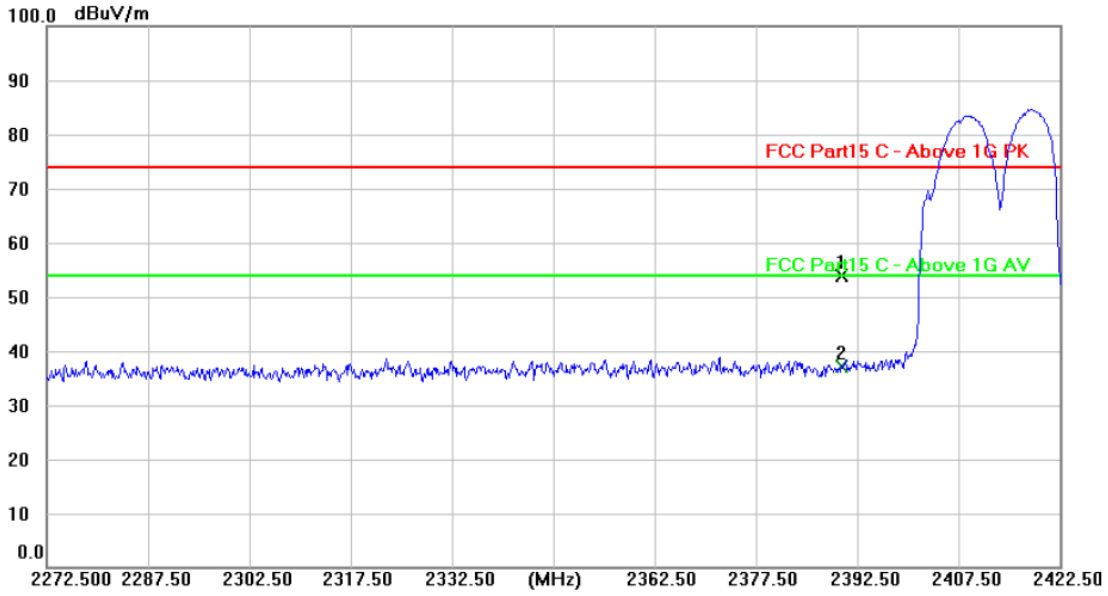
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE20) Mode 2412MHz 242/61



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	22.29	30.84	53.13	74.00	-20.87	peak
2 *	2390.000	7.97	30.84	38.81	54.00	-15.19	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

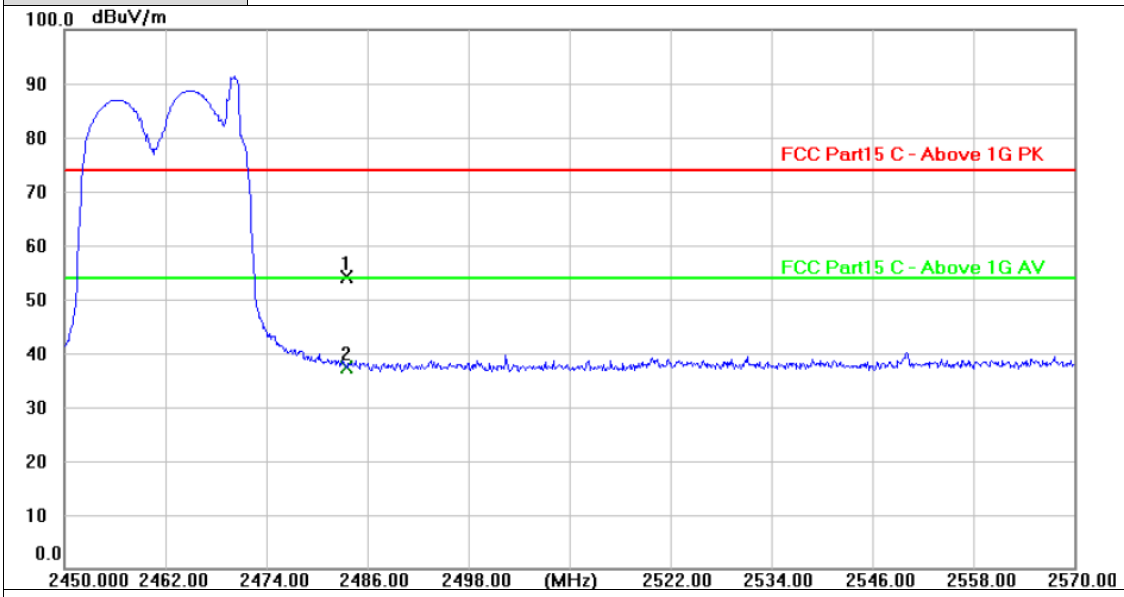
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE20) Mode 2412MHz 242/61



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	23.16	30.84	54.00	74.00	-20.00	peak
2 *	2390.000	6.39	30.84	37.23	54.00	-16.77	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

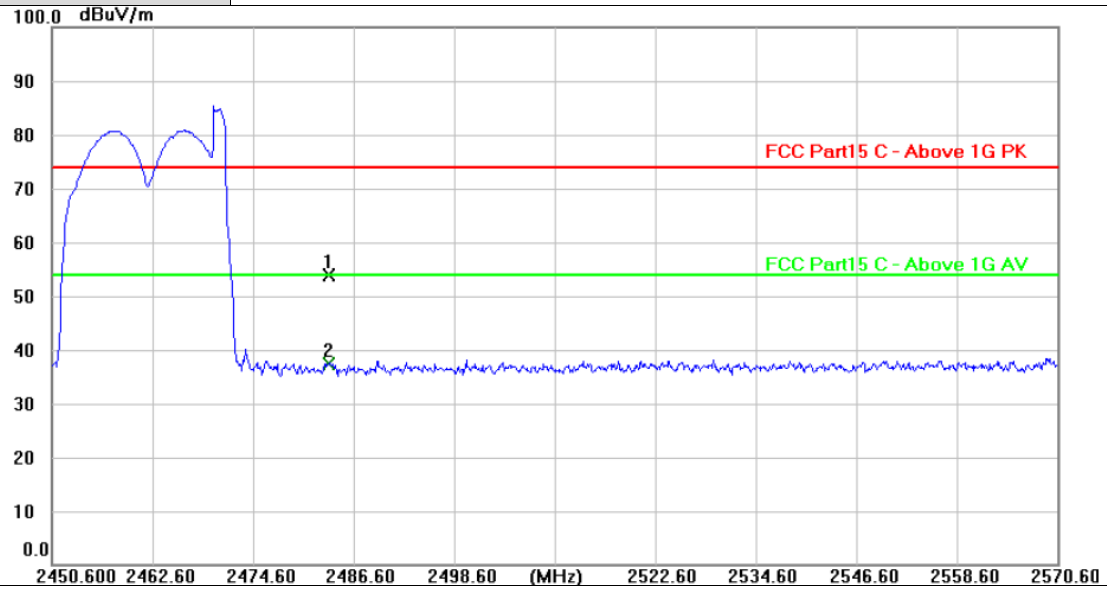
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE20) Mode 2462MHz 26/8



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.91	31.24	54.15	74.00	-19.85	peak
2 *	2483.500	6.14	31.24	37.38	54.00	-16.62	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

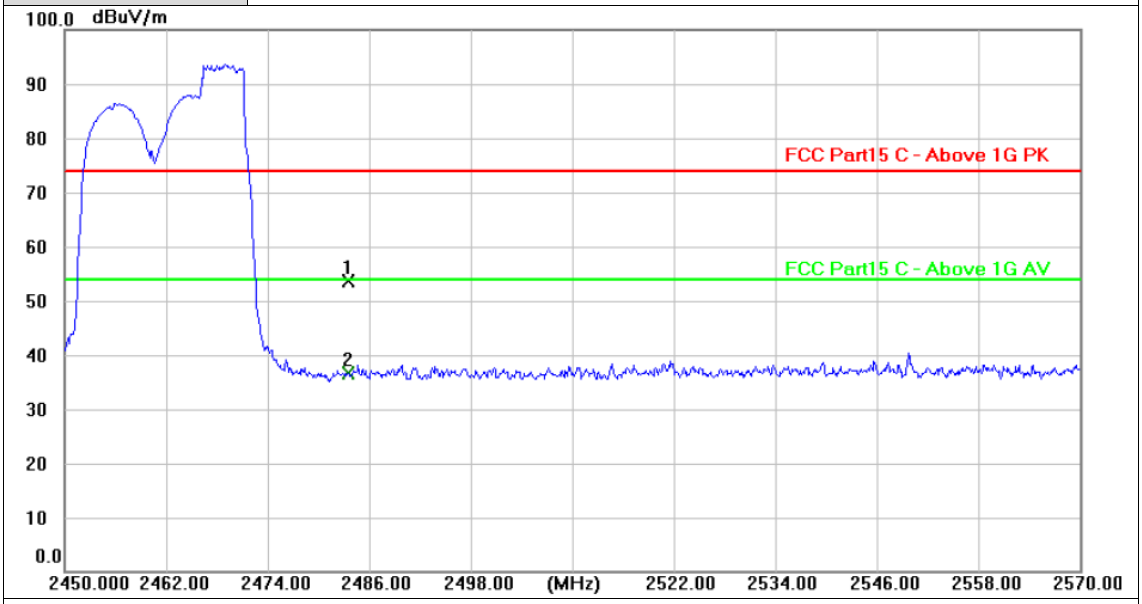
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE20) Mode 2462MHz 26/8



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.70	31.24	53.94	74.00	-20.06	peak
2 *	2483.500	6.13	31.24	37.37	54.00	-16.63	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

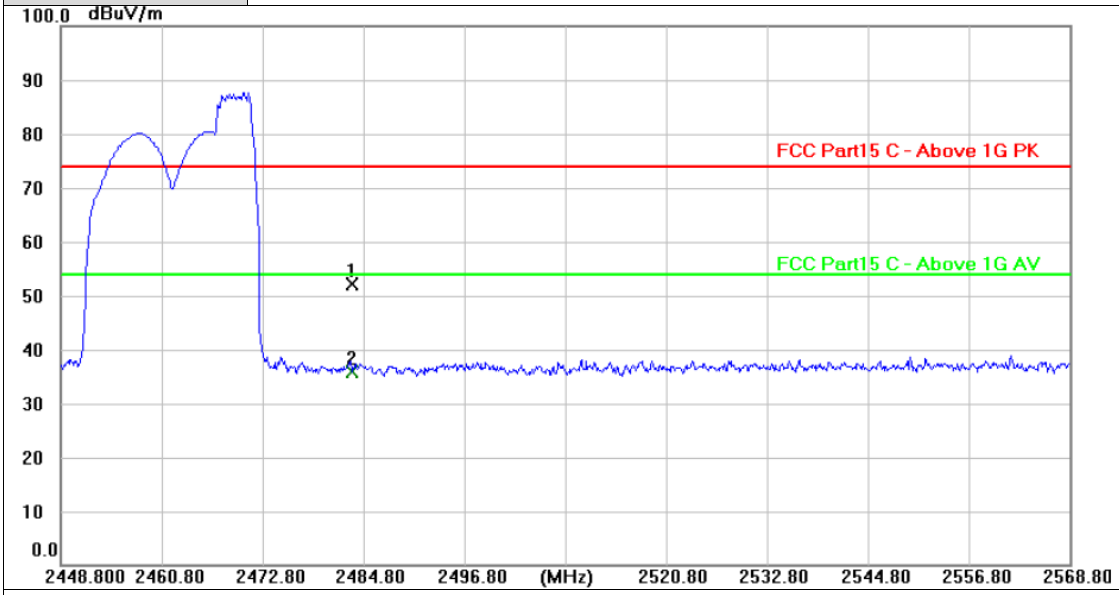
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE20) Mode 2462MHz 52/40



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.42	31.24	53.66	74.00	-20.34	peak
2 *	2483.500	5.45	31.24	36.69	54.00	-17.31	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

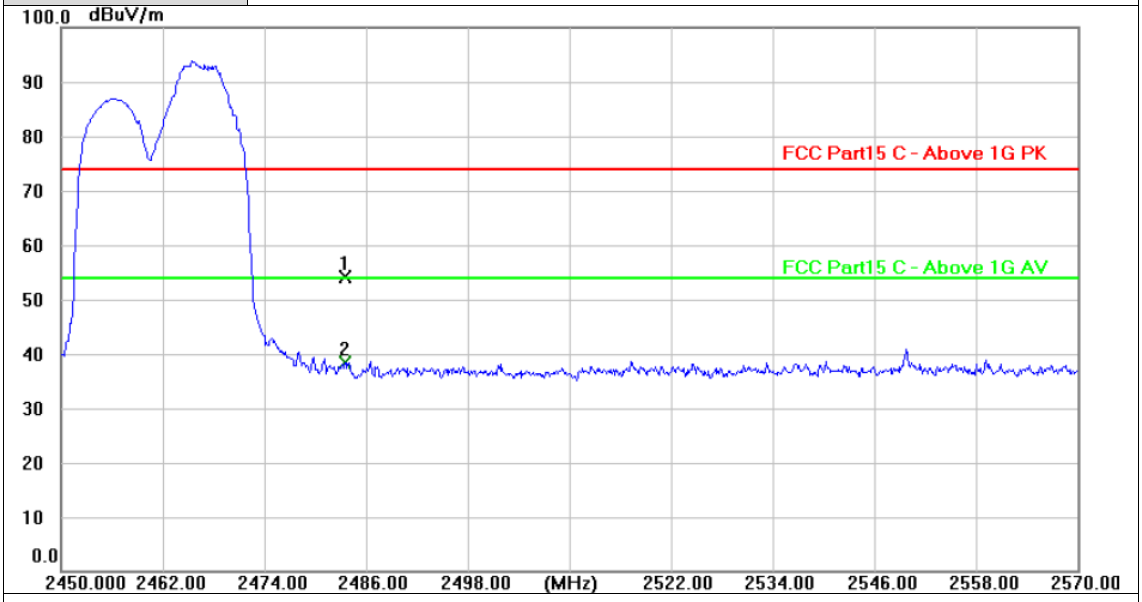
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE20) Mode 2462MHz 52/40



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	21.00	31.24	52.24	74.00	-21.76	peak
2 *	2483.500	4.56	31.24	35.80	54.00	-18.20	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

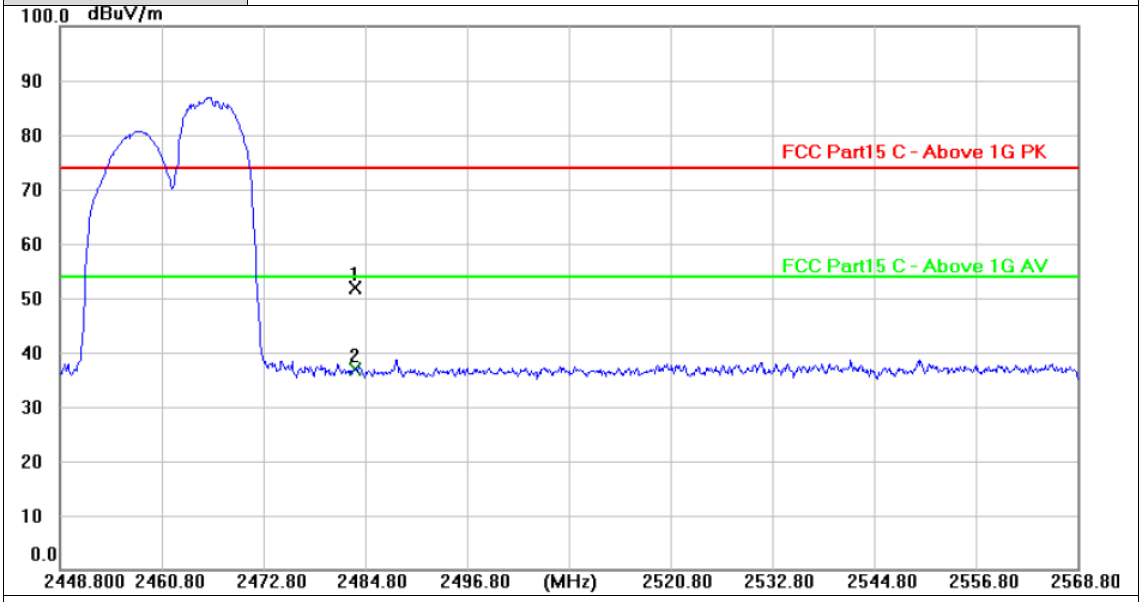
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE20) Mode 2462MHz 106/54



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.78	31.24	54.02	74.00	-19.98	peak
2 *	2483.500	7.02	31.24	38.26	54.00	-15.74	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

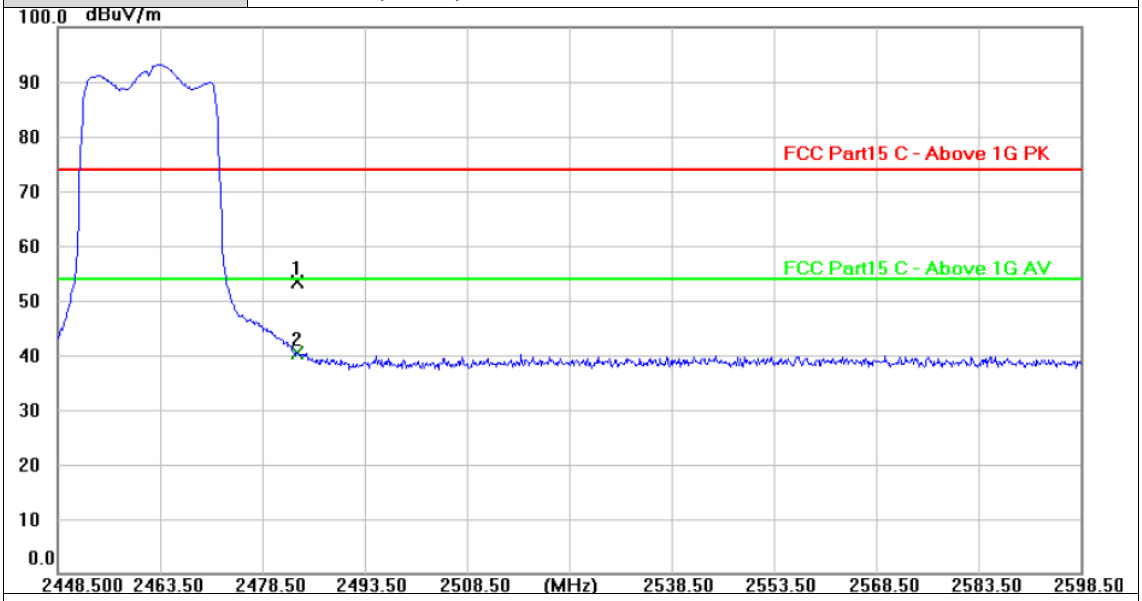
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE20) Mode 2462MHz 106/54



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	20.74	31.24	51.98	74.00	-22.02	peak
2 *	2483.500	5.58	31.24	36.82	54.00	-17.18	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

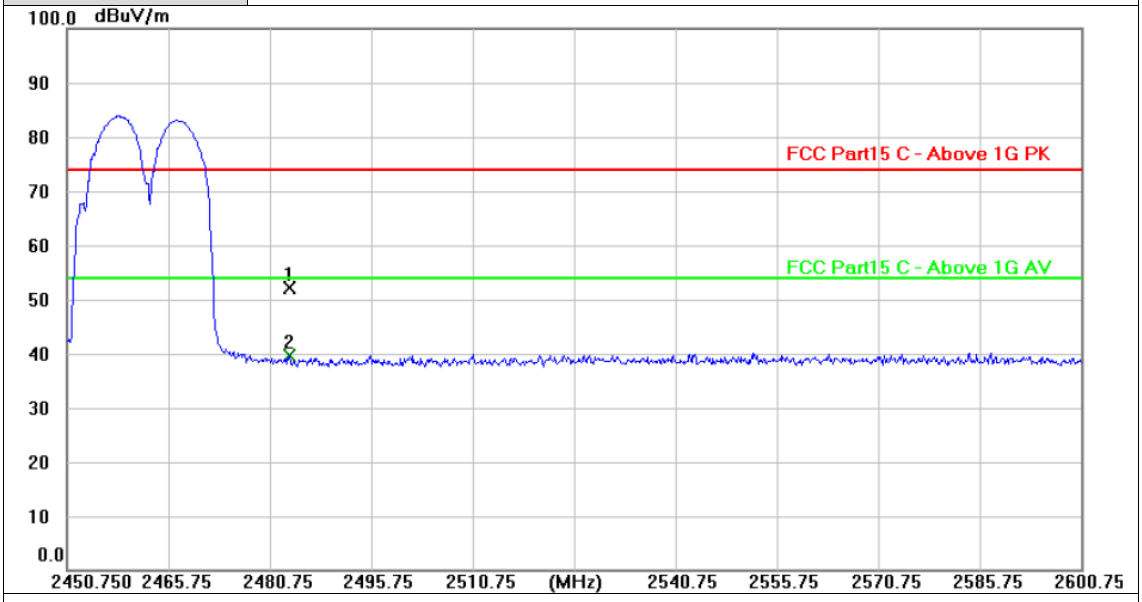
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE20) Mode 2462MHz 242/61



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.07	31.24	53.31	74.00	-20.69	peak
2 *	2483.500	9.10	31.24	40.34	54.00	-13.66	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

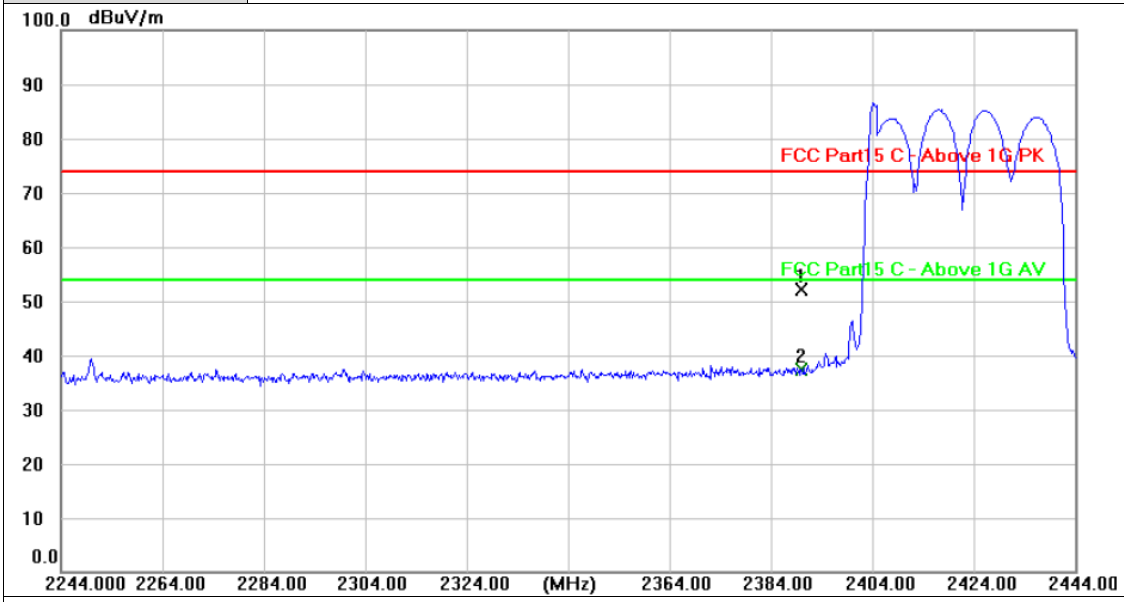
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE20) Mode 2462MHz 242/61



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	20.85	31.24	52.09	74.00	-21.91	peak
2 *	2483.500	8.32	31.24	39.56	54.00	-14.44	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

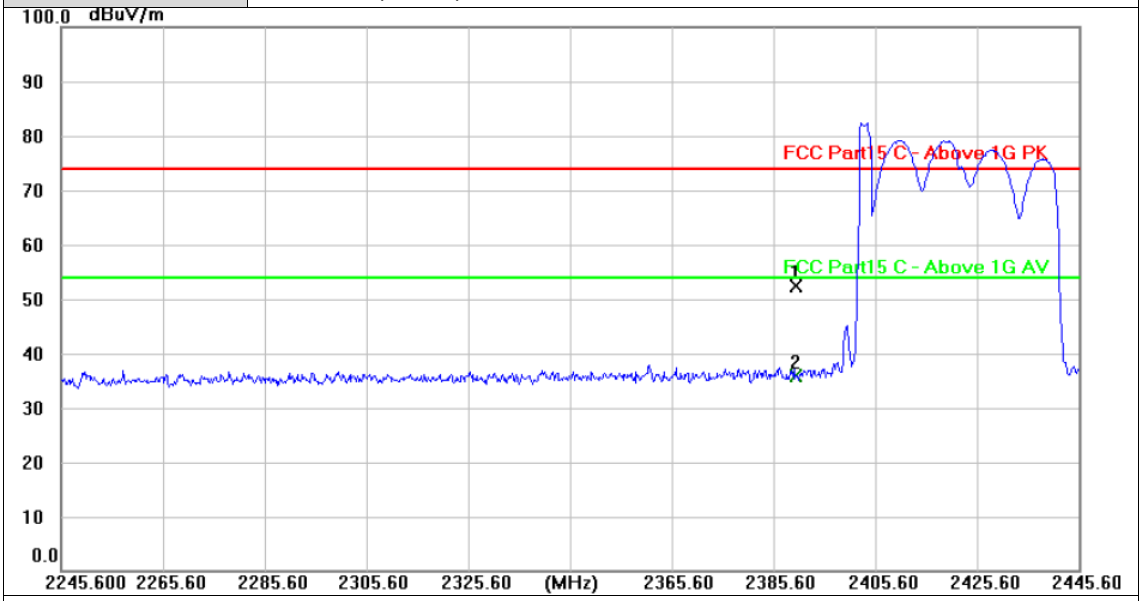
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2422MHz 26/0



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	21.19	30.84	52.03	74.00	-21.97	peak
2 *	2390.000	6.48	30.84	37.32	54.00	-16.68	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

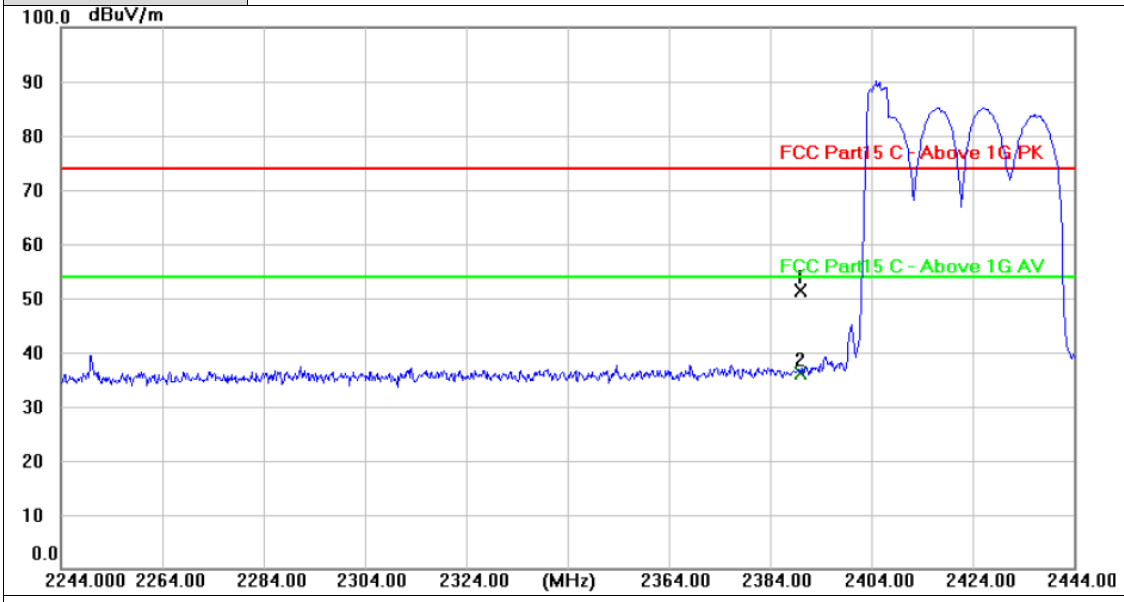
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2422MHz 26/0



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	21.47	30.84	52.31	74.00	-21.69	peak
2 *	2390.000	4.98	30.84	35.82	54.00	-18.18	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

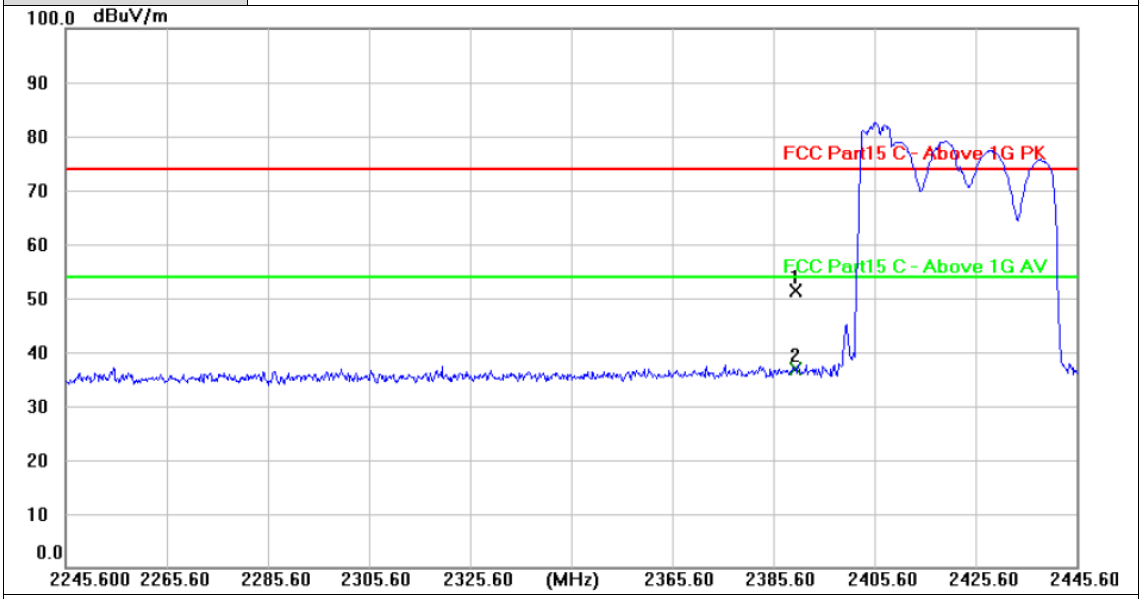
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2422MHz 52/37



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	20.51	30.84	51.35	74.00	-22.65	peak
2 *	2390.000	5.25	30.84	36.09	54.00	-17.91	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

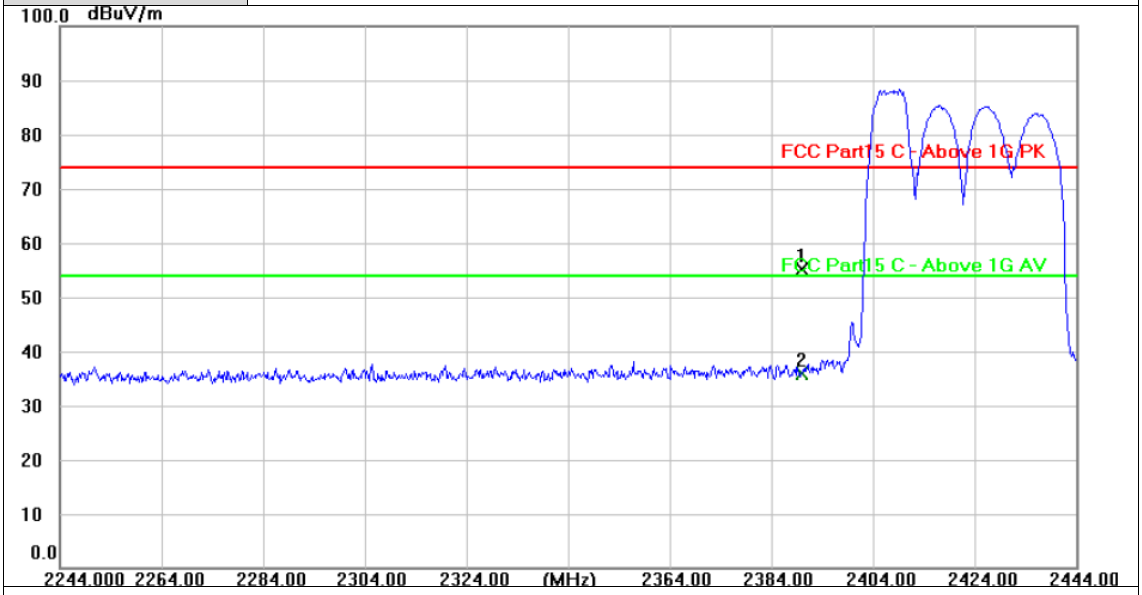
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2422MHz 52/37



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	20.43	30.84	51.27	74.00	-22.73	peak
2 *	2390.000	5.97	30.84	36.81	54.00	-17.19	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

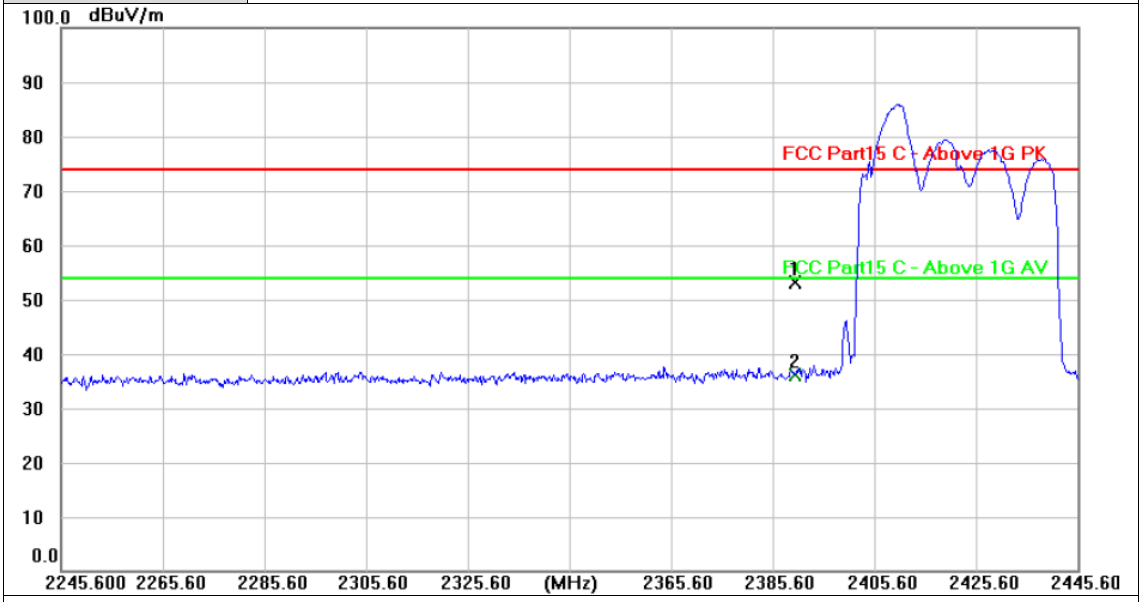
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2422MHz 106/53



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	24.28	30.84	55.12	74.00	-18.88	peak
2 *	2390.000	5.16	30.84	36.00	54.00	-18.00	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

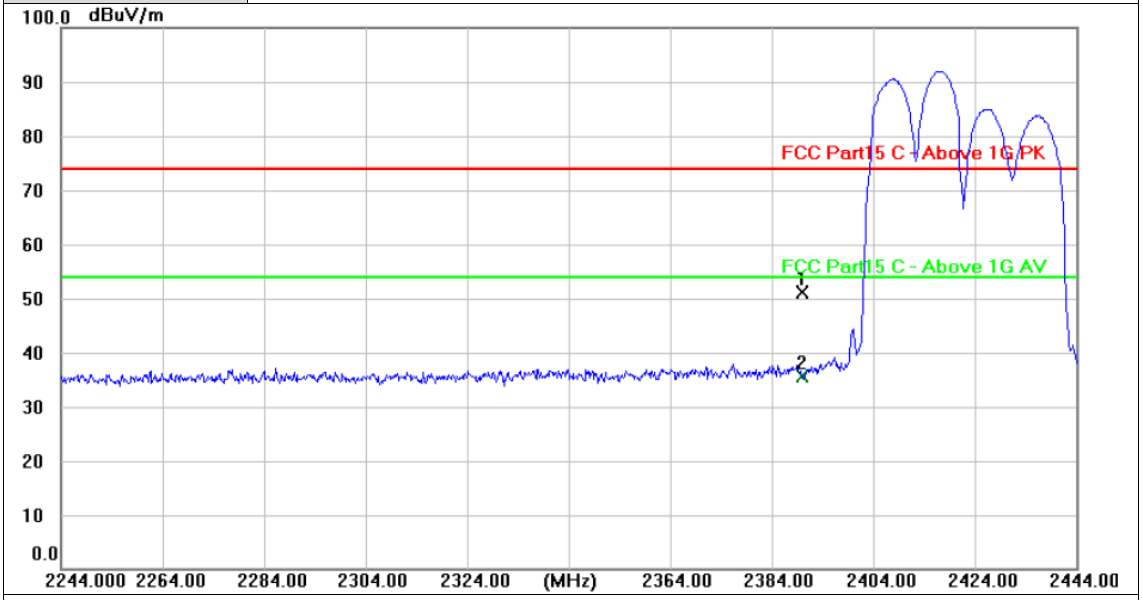
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2422MHz 106/53



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	22.28	30.84	53.12	74.00	-20.88	peak
2 *	2390.000	5.41	30.84	36.25	54.00	-17.75	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

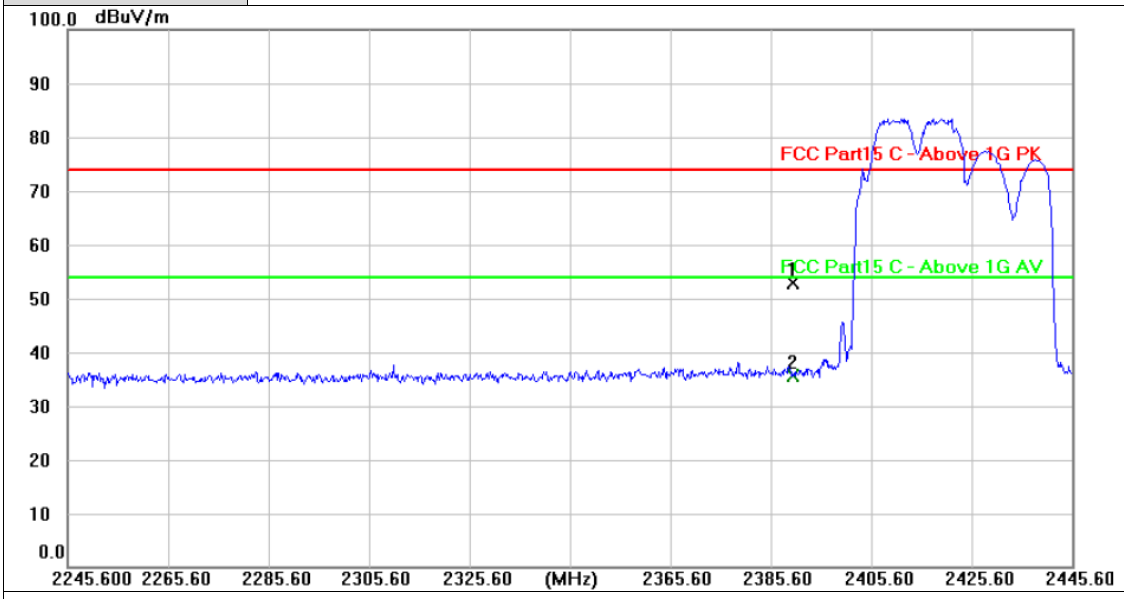
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2422MHz 242/61



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	20.30	30.84	51.14	74.00	-22.86	peak
2 *	2390.000	4.90	30.84	35.74	54.00	-18.26	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

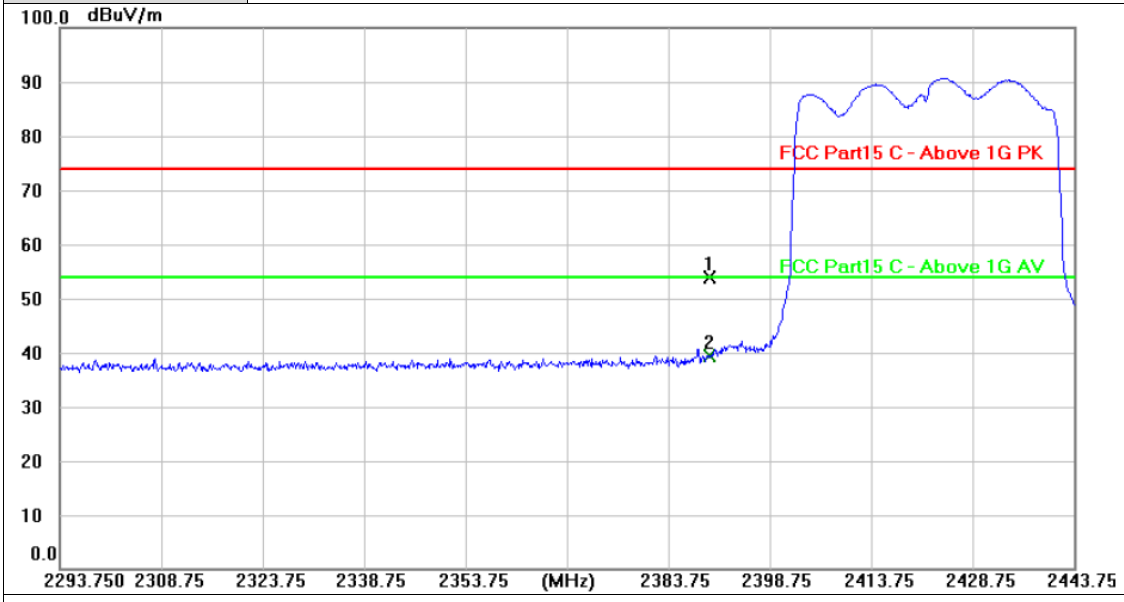
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2422MHz 242/61



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	22.07	30.84	52.91	74.00	-21.09	peak
2 *	2390.000	4.80	30.84	35.64	54.00	-18.36	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

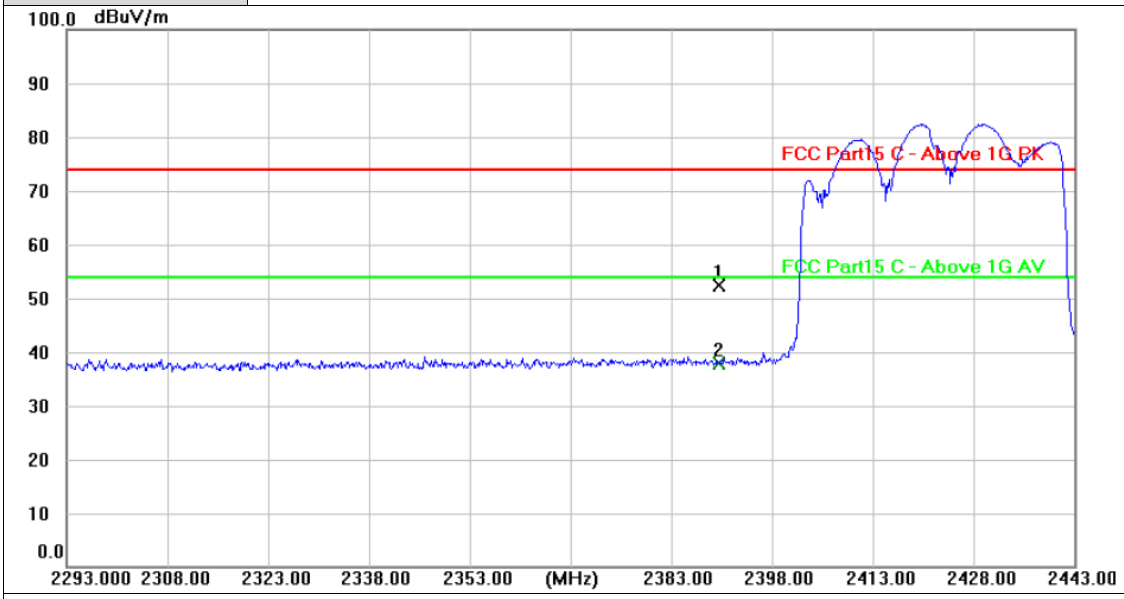
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2422MHz 484/65



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	22.99	30.84	53.83	74.00	-20.17	peak
2 *	2390.000	8.57	30.84	39.41	54.00	-14.59	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

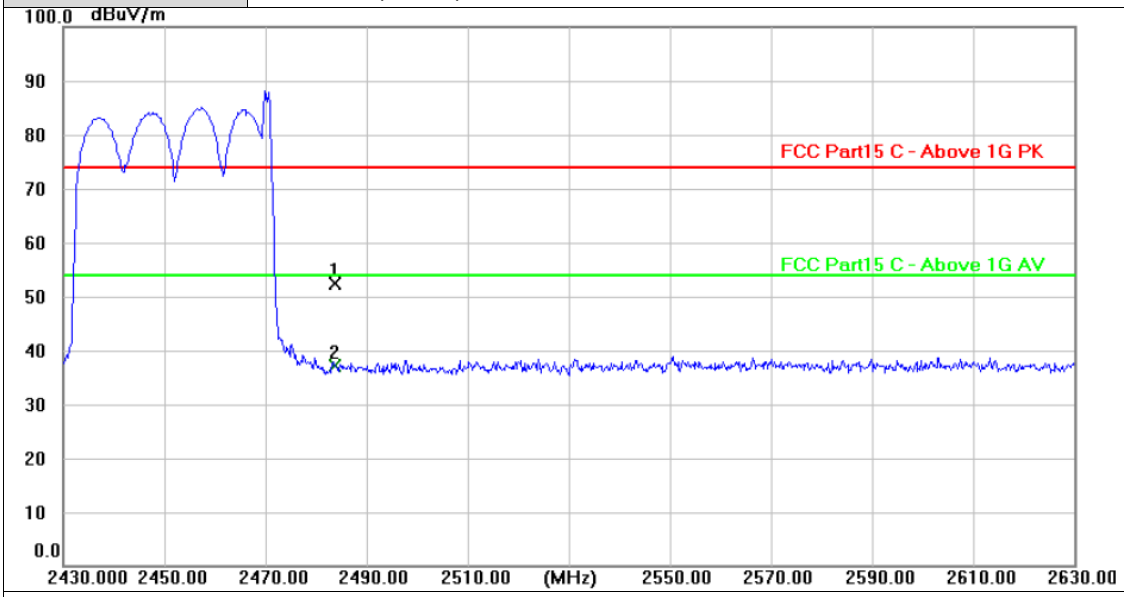
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2422MHz 484/65



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	21.44	30.84	52.28	74.00	-21.72	peak
2 *	2390.000	7.10	30.84	37.94	54.00	-16.06	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

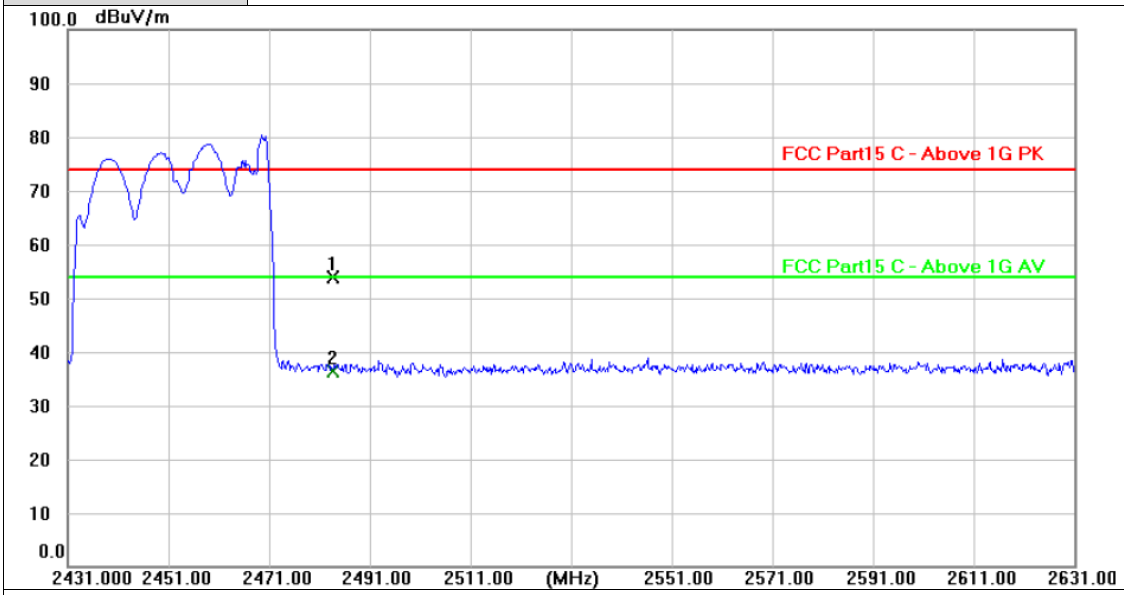
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2452MHz 26/8



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	21.23	31.24	52.47	74.00	-21.53	peak
2 *	2483.500	5.97	31.24	37.21	54.00	-16.79	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

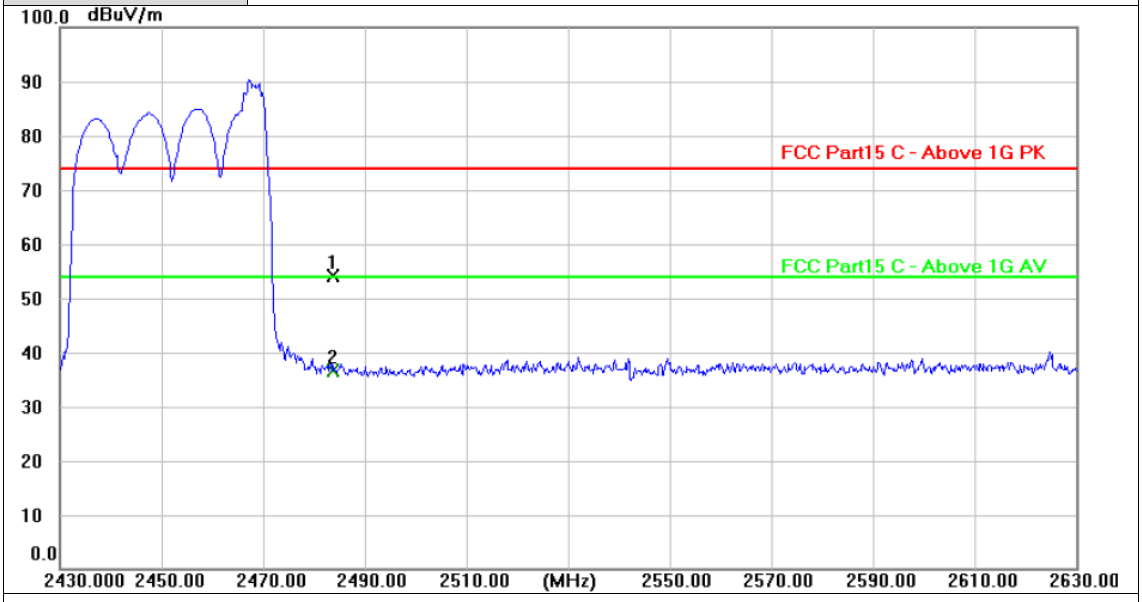
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2452MHz 26/8



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.58	31.24	53.82	74.00	-20.18	peak
2 *	2483.500	5.02	31.24	36.26	54.00	-17.74	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

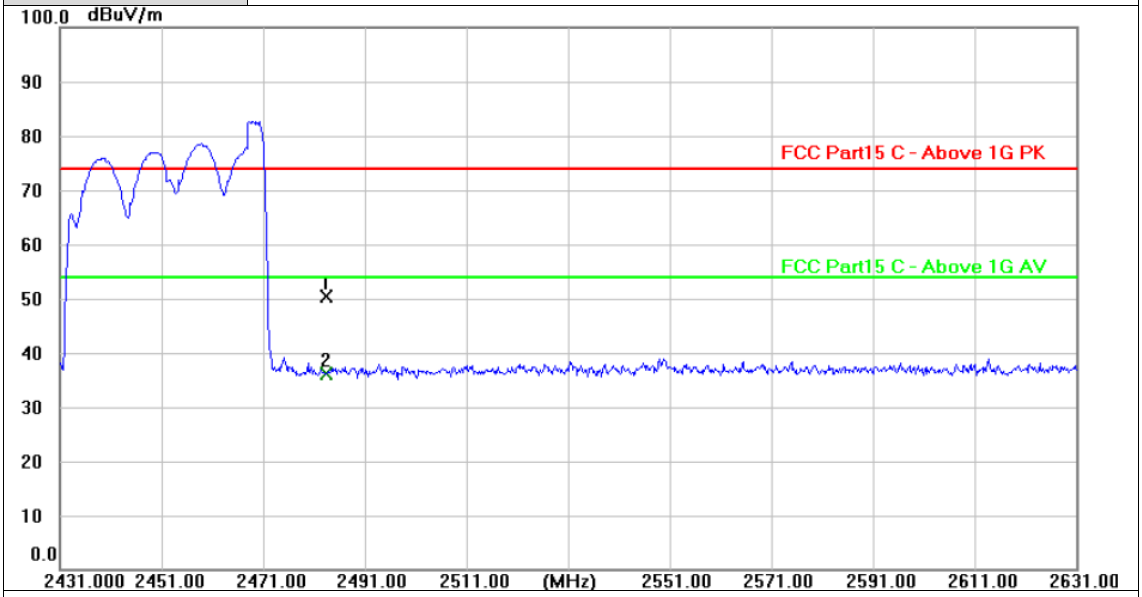
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2452MHz 52/40



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.90	31.24	54.14	74.00	-19.86	peak
2 *	2483.500	5.50	31.24	36.74	54.00	-17.26	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

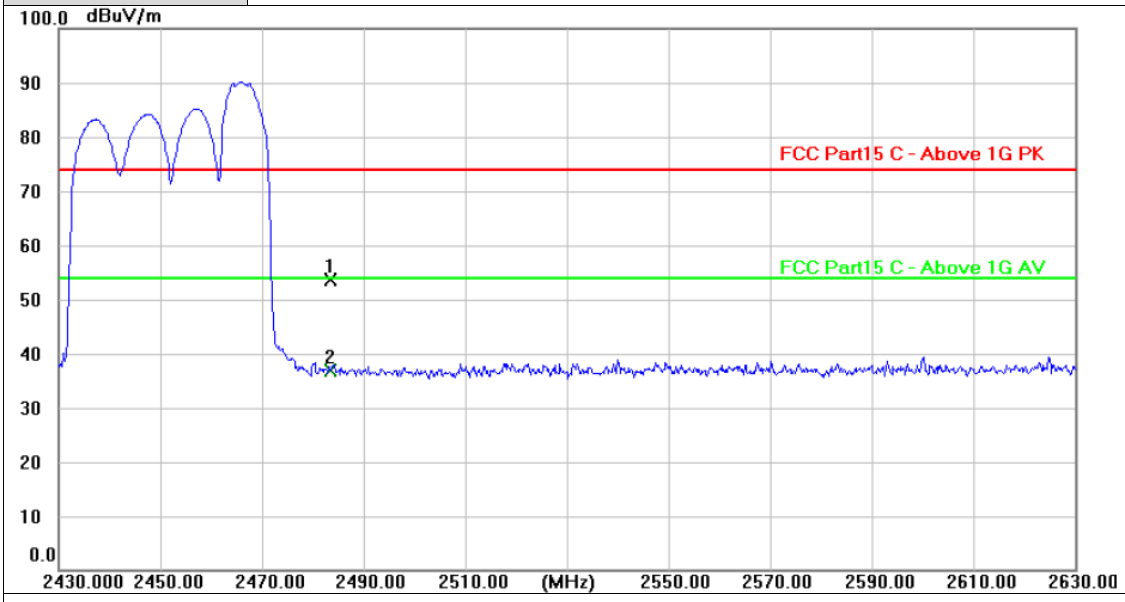
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2452MHz 52/40



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	19.03	31.24	50.27	74.00	-23.73	peak
2 *	2483.500	4.84	31.24	36.08	54.00	-17.92	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

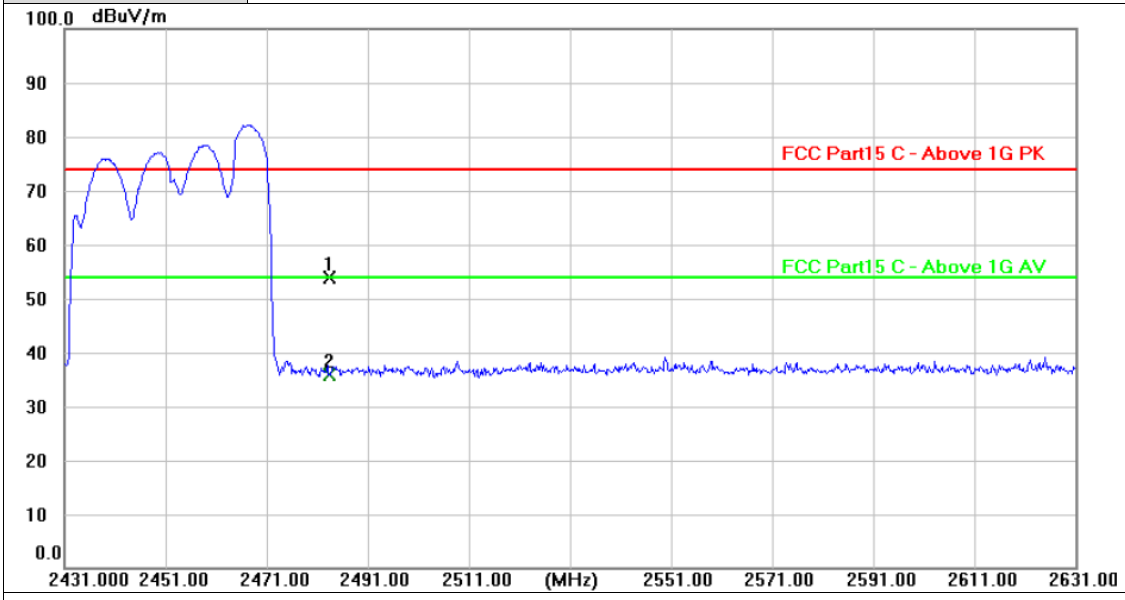
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2452MHz 106/56



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.30	31.24	53.54	74.00	-20.46	peak
2 *	2483.500	5.66	31.24	36.90	54.00	-17.10	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

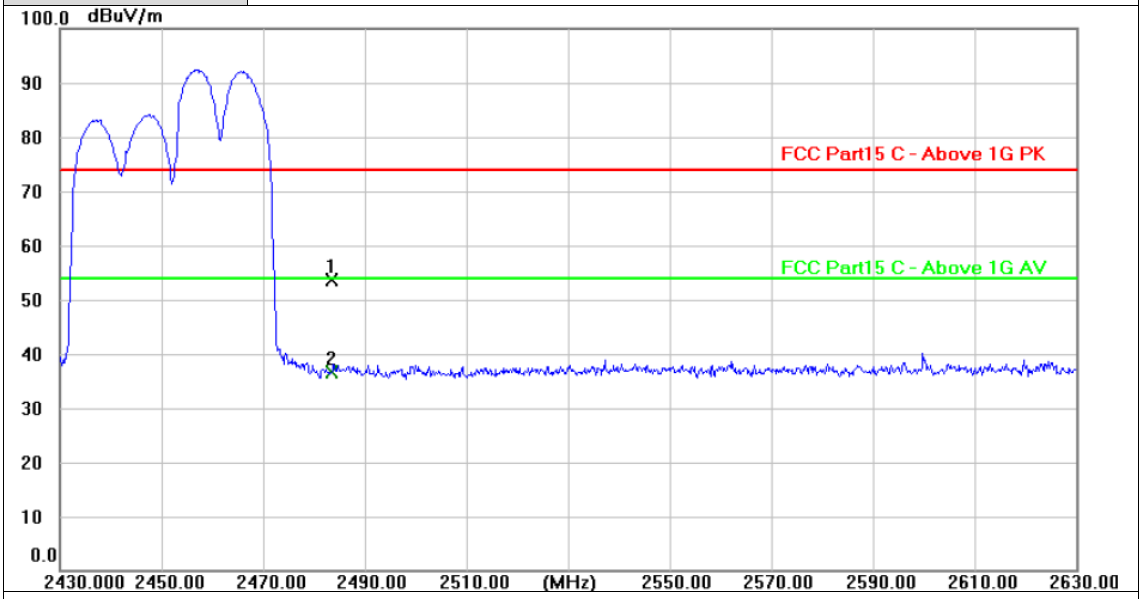
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2452MHz 106/56



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.68	31.24	53.92	74.00	-20.08	peak
2 *	2483.500	4.60	31.24	35.84	54.00	-18.16	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

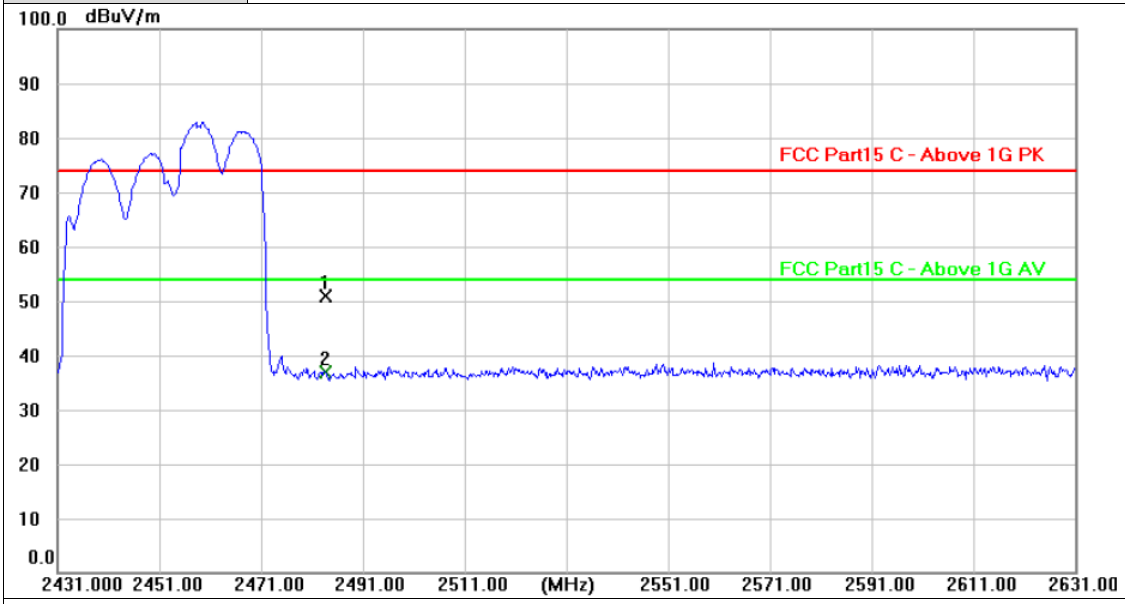
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2452MHz 242/62



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.33	31.24	53.57	74.00	-20.43	peak
2 *	2483.500	5.40	31.24	36.64	54.00	-17.36	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

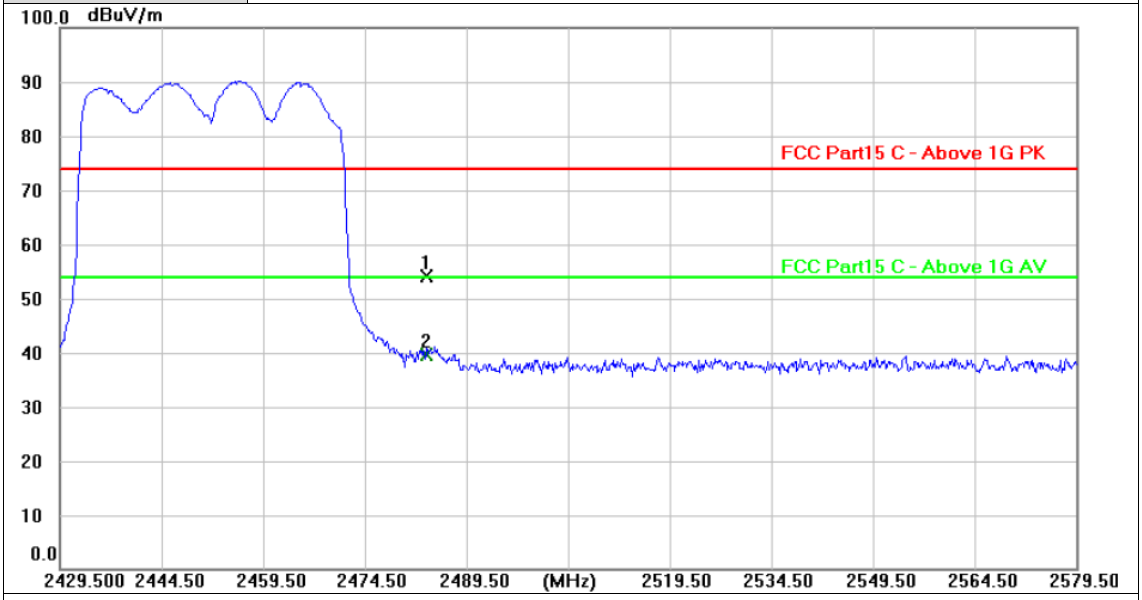
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2452MHz 242/62



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	19.66	31.24	50.90	74.00	-23.10	peak
2 *	2483.500	5.58	31.24	36.82	54.00	-17.18	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

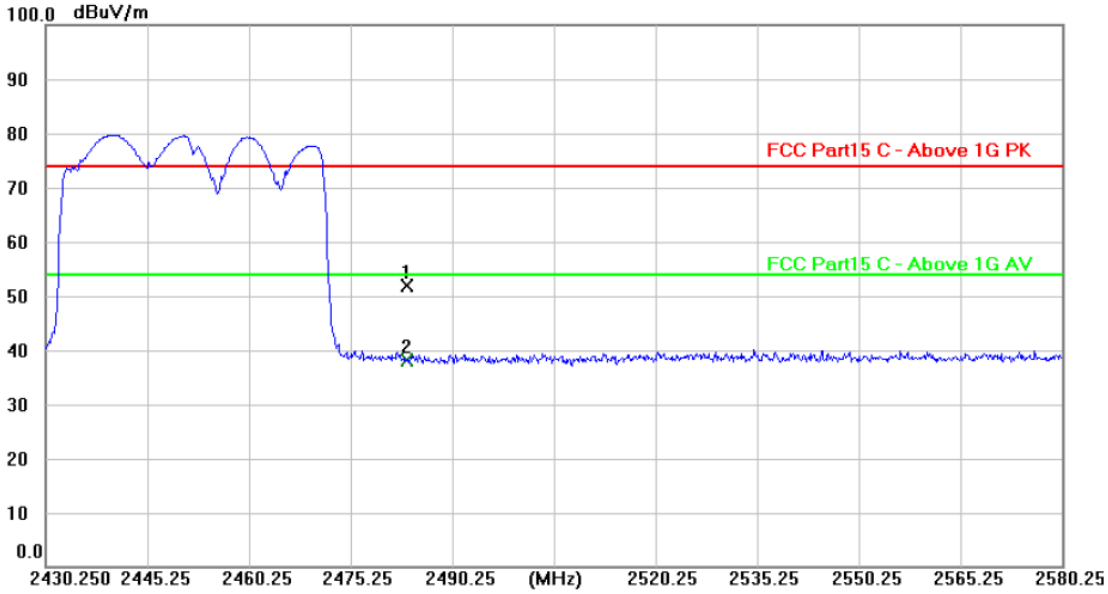
Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Horizontal
Test Mode:	802.11ax(HE40) Mode 2452MHz 484/65



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	22.94	31.24	54.18	74.00	-19.82	peak
2 *	2483.500	8.35	31.24	39.59	54.00	-14.41	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

Ant No.:	Ant 1 + Ant 2
Ant. Pol.	Vertical
Test Mode:	802.11ax(HE40) Mode 2452MHz 484/65



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	20.64	31.24	51.88	74.00	-22.12	peak
2 *	2483.500	6.92	31.24	38.16	54.00	-15.84	AVG

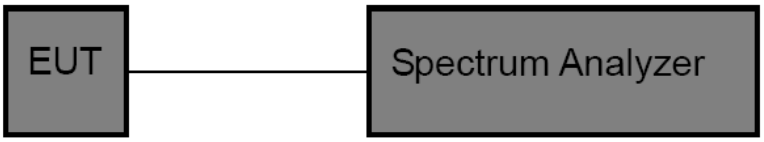
Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

3.4. Band edge and Spurious Emissions (Conducted)

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 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.

Test Configuration



Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:
   RBW = 100 kHz, VBW ≥ RBW, scan up through 10th harmonic.
   Sweep = auto, Detector function = peak, Trace = max hold
4. Measure and record the results in the test report.

Test Mode

Please refer to the clause 2.4.

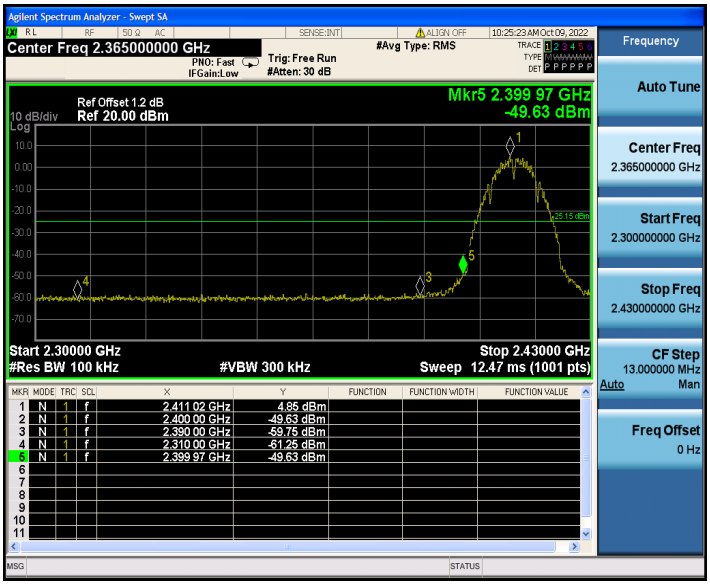
Test Results

(1) Band edge Conducted Test

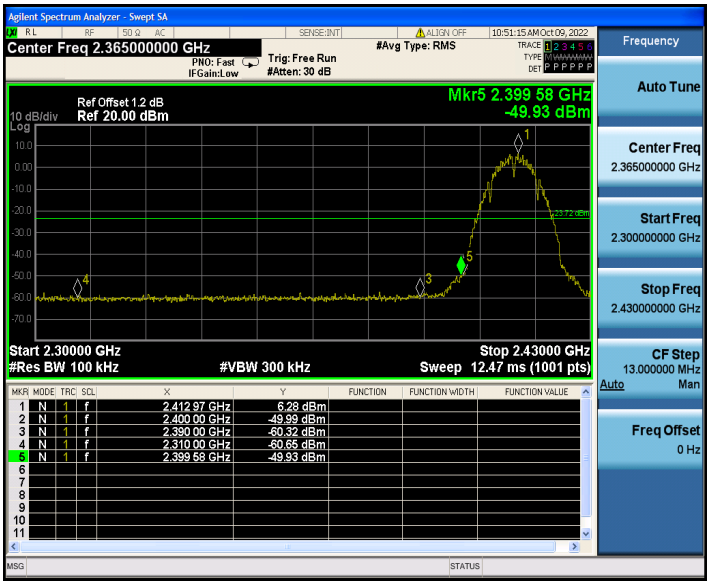
Test Mode	Antenna	Frequency [MH]	RU Configuration	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
802.11b	Ant1	2412	/	4.85	-49.63	≤-25.15	PASS
	Ant2	2412	/	6.28	-49.94	≤-23.72	PASS
	Ant1	2462	/	5.04	-57.57	≤-24.97	PASS
	Ant2	2462	/	5.61	-57.86	≤-24.39	PASS
802.11g	Ant1	2412	/	1.53	-42.67	≤-28.47	PASS
	Ant2	2412	/	2.82	-37.84	≤-27.18	PASS
	Ant1	2462	/	1.46	-53.93	≤-28.54	PASS
	Ant2	2462	/	2.99	-54.38	≤-27.01	PASS
802.11n(HT20)	Ant1	2412	/	1.92	-42.12	≤-28.08	PASS
	Ant2	2412	/	3.52	-38.75	≤-26.48	PASS
	Ant1	2462	/	1.55	-54.05	≤-28.45	PASS
	Ant2	2462	/	2.42	-54.40	≤-27.58	PASS
802.11n(HT40)	Ant1	2422	/	-0.82	-48.12	≤-30.82	PASS
	Ant2	2422	/	0.46	-44.80	≤-29.54	PASS
	Ant1	2452	/	-0.86	-50.80	≤-30.86	PASS
	Ant2	2452	/	0.31	-53.33	≤-29.69	PASS
802.11ax(HE20)	Ant1	2412	26/0	-0.33	-43.89	≤-30.33	PASS
	Ant2	2412	26/0	-1.43	-44.65	≤-31.43	PASS
	Ant1	2412	52/37	-3.43	-42.89	≤-33.43	PASS
	Ant2	2412	52/37	-0.48	-45.41	≤-30.48	PASS
	Ant1	2412	106/53	-3.64	-41.56	≤-33.46	PASS
	Ant2	2412	106/53	-3.92	-39.17	≤-33.92	PASS
	Ant1	2412	242/61	1.86	-41.25	≤-28.14	PASS
	Ant2	2412	242/61	3.01	-37.47	≤-26.99	PASS
	Ant1	2462	26/8	-1.08	-55.24	≤-31.08	PASS
	Ant2	2462	26/8	1.36	-54.60	≤-28.64	PASS
	Ant1	2462	52/40	-1.55	-54.26	≤-31.55	PASS
	Ant2	2462	52/40	0.69	-55.50	≤-29.31	PASS
	Ant1	2462	106/54	-5.61	-55.63	≤-35.61	PASS
	Ant2	2462	106/54	-0.70	-53.65	≤-30.70	PASS
	Ant1	2462	242/61	1.52	-52.29	≤-28.48	PASS
	Ant2	2462	242/61	2.34	-54.02	≤-27.66	PASS
802.11ax(HE40)	Ant1	2422	26/0	5.38	-39.23	≤-24.62	PASS
	Ant2	2422	26/0	-1.39	-38.62	≤-31.39	PASS
	Ant1	2422	52/37	-2.25	-44.10	≤-32.25	PASS
	Ant2	2422	52/37	-0.62	-35.49	≤-30.62	PASS
	Ant1	2422	106/53	-5.10	-41.66	≤-35.10	PASS
	Ant2	2422	106/53	-5.53	-43.61	≤-35.53	PASS
	Ant1	2422	242/61	-6.87	-41.35	≤-36.87	PASS
	Ant2	2422	242/61	-5.39	-37.17	≤-35.39	PASS
	Ant1	2422	484/65	-0.77	-46.41	≤-30.77	PASS

	Ant2	2422	484/65	0.32	-43.82	≤-29.68	PASS
	Ant1	2452	26/17	-1.08	-46.38	≤--31.08	PASS
	Ant2	2452	26/17	0.42	-55.37	≤-29.58	PASS
	Ant1	2452	52/44	-1.67	-47.28	≤-31.67	PASS
	Ant2	2452	52/44	-0.19	-54.67	≤-30.19	PASS
	Ant1	2452	106/56	-1.63	-51.04	≤-31.63	PASS
	Ant2	2452	106/56	-4.09	-55.81	≤-34.09	PASS
	Ant1	2452	242/62	-3.81	-55.23	≤-33.81	PASS
	Ant2	2452	242/62	-6.03	-55.41	≤-36.03	PASS
	Ant1	2452	484/65	-0.81	-50.84	≤-30.81	PASS
	Ant2	2452	484/65	-0.59	-49.44	≤-30.59	PASS

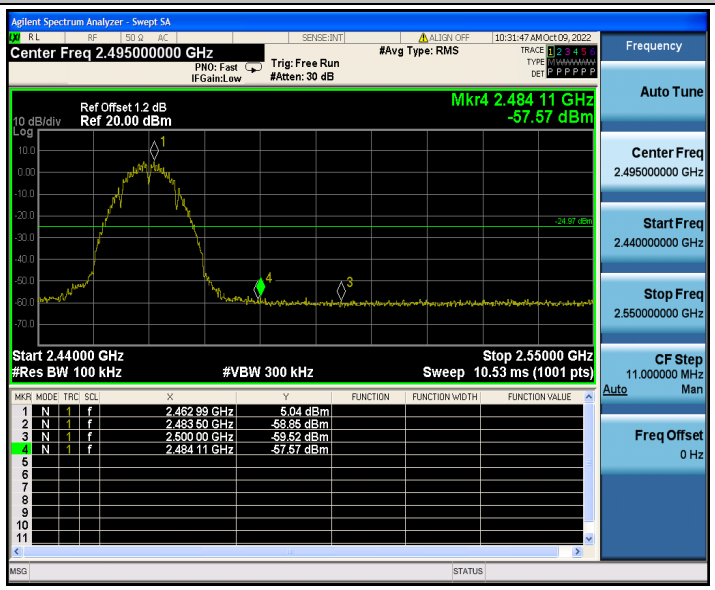
802.11b_Ant1_Low_2412



802.11b_Ant2_Low_2412



802.11b_Ant1_High_2462



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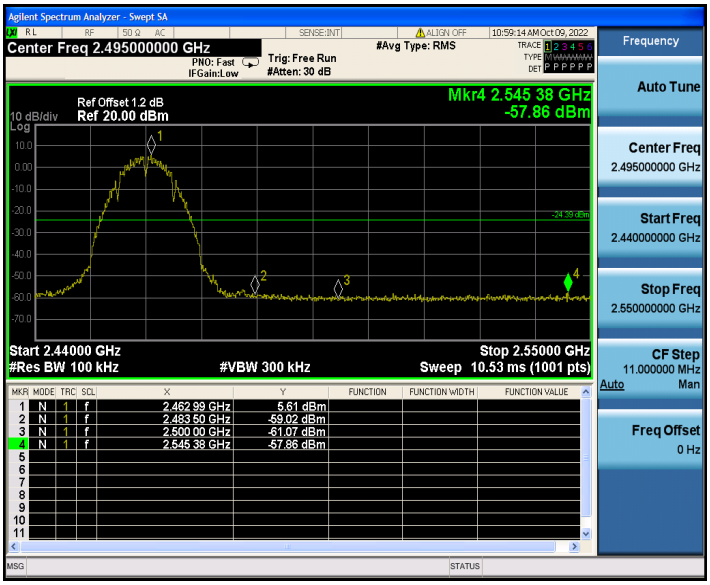
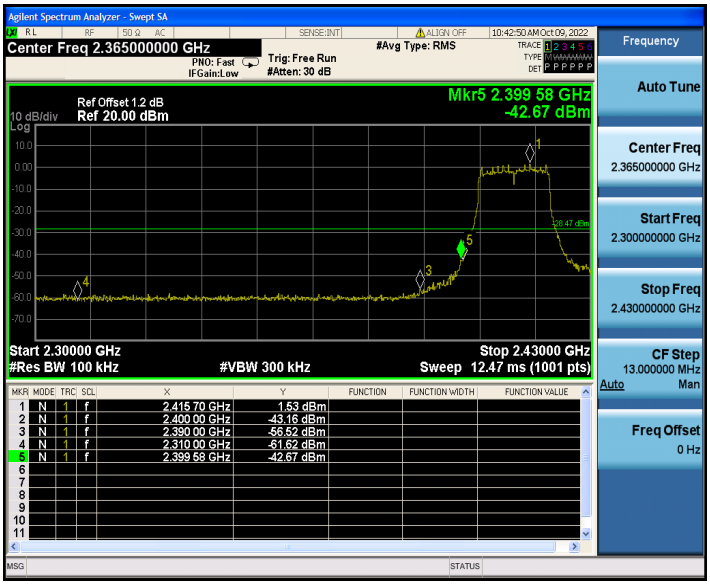
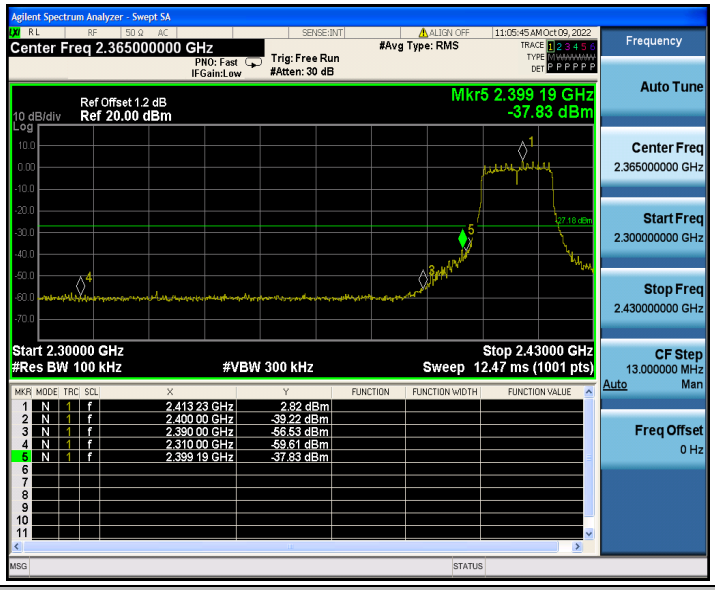
802.11b_Ant2_High_2462



802.11g_Ant1_Low_2412



802.11g_Ant2_Low_2412



802.11g_Ant1_High_2462

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