

Product Name: Tapo Smart Floodlight Camera	Report No: FCC022022-05623RF1
Product Model: Tapo C720	Security Classification: Open
Version: V1.0	Total Page: 103

TIRT Testing Report



Prepared By:	Checked By:	Approved By:	A circular blue stamp with the text "TIRT Shenzhen" in the center and "Beijing TIRT Technology Service Co., Ltd" around the perimeter.
Stone Tang	Randy Lv	Daniel Chen	
<i>Stone Tang</i>	<i>Randy Lv</i>	<i>Daniel Chen</i>	

FCC Radio Test Report

FCC ID: 2AXJ4C720

This report concerns: Original Grant

Project No. : 2022-05623
Equipment : Tapo Smart Floodlight Camera
Brand Name : TP-Link
Test Model : Tapo C720
Series Model : N/A
Applicant : TP-Link Corporation Limited
Address : Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer : TP-Link Corporation Limited
Address : Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong
Date of Receipt : 2022.10.17
Date of Test : 2022.10.17-2022.10.28
Issued Date : 2022.10.28
Report Version : V1.0
Test Sample : Engineering Sample No.: 20221026018940
Standard(s) : FCC CFR Title 47, Part 15, Subpart C
FCC KDB 558074 D01 15.247 Meas Guidance v05r02
ANSI C63.10-2013

- The test result referred exclusively to the presented test model /sample.
- Without written approval of TIRT Inc. the test report shall not reproduced except in full.

Lab: Beijing TIRT Technology Service Co.,Ltd Shenzhen

Add: 101, 3 # Factory Building, Gongjin Electronics, Shatin Community, KengziStreet, Pingshan District, Shenzhen City, Guangdong province, China

TEL: +86-0755-27087573

Table of Contents	Page
REPORT ISSUED HISTORY	6
1 . SUMMARY OF TEST RESULTS	7
1.1 TEST FACILITY	8
1.2 MEASUREMENT UNCERTAINTY	8
1.3 TEST ENVIRONMENT CONDITIONS	8
2 . GENERAL INFORMATION	9
2.1 GENERAL DESCRIPTION OF EUT	9
2.2 DESCRIPTION OF TEST MODES	10
2.3 PARAMETERS OF TEST SOFTWARE	11
2.4 DUTY CYCLE OF TEST SIGNAL	11
2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	11
2.6 SUPPORT UNITS	12
3 . AC POWER LINE CONDUCTED EMISSIONS	13
3.1 LIMIT	13
3.2 TEST PROCEDURE	13
3.3 DEVIATION FROM TEST STANDARD	13
3.4 TEST SETUP	14
3.5 EUT OPERATING CONDITIONS	14
3.6 TEST RESULTS	14
4 . RADIATED EMISSIONS	15
4.1 LIMIT	15
4.2 TEST PROCEDURE	16
4.3 DEVIATION FROM TEST STANDARD	17
4.4 TEST SETUP	17
4.5 EUT OPERATING CONDITIONS	18
4.6 TEST RESULT - 9 KHZ TO 30 MHZ	18
4.7 TEST RESULT - 30 MHZ TO 1000 MHZ	18
4.8 TEST RESULT - ABOVE 1000 MHZ	18
5 . BANDWIDTH	19
5.1 LIMIT	19
5.2 TEST PROCEDURE	19
5.3 DEVIATION FROM STANDARD	19
5.4 TEST SETUP	19

Table of Contents	Page
5.5 EUT OPERATION CONDITIONS	19
5.6 TEST RESULTS	19
6 . MAXIMUM OUTPUT POWER	20
6.1 LIMIT	20
6.2 TEST PROCEDURE	20
6.3 DEVIATION FROM STANDARD	20
6.4 TEST SETUP	20
6.5 EUT OPERATION CONDITIONS	20
6.6 TEST RESULTS	20
7 . CONDUCTED SPURIOUS EMISSION	21
7.1 LIMIT	21
7.2 TEST PROCEDURE	21
7.3 DEVIATION FROM STANDARD	21
7.4 TEST SETUP	21
7.5 EUT OPERATION CONDITIONS	21
7.6 TEST RESULTS	21
8 . POWER SPECTRAL DENSITY	22
8.1 LIMIT	22
8.2 TEST PROCEDURE	22
8.3 DEVIATION FROM STANDARD	22
8.4 TEST SETUP	22
8.5 EUT OPERATION CONDITIONS	22
8.6 TEST RESULTS	22
9 . MEASUREMENT INSTRUMENTS LIST	23
10 . EUT TEST PHOTO	24
APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS	26
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ	29
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ	30
APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ	33
APPENDIX E - BANDWIDTH	76
APPENDIX F - MAXIMUM OUTPUT POWER	91
APPENDIX G - CONDUCTED SPURIOUS EMISSION	93

Table of Contents	Page
APPENDIX H - POWER SPECTRAL DENSITY	100

REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
FCC022022-05623RF1	V1.0	Original Report.	2022.10.28	Valid

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart C				
Standard(s) Section	Test Item	Test Result	Judgment	Remark
15.207	AC Power Line Conducted Emissions	APPENDIX A	PASS	-----
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	-----
15.247(a)(2)	Bandwidth	APPENDIX E	PASS	-----
15.247(b)(3)	Maximum Output Power	APPENDIX F	PASS	-----
15.247(d)	Conducted Spurious Emission	APPENDIX G	PASS	-----
15.247(e)	Power Spectral Density	APPENDIX H	PASS	-----
15.203	Antenna Requirement	-----	PASS	Note(2)

Note:

- (1) "N/A" denotes test is not applicable to this device.
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

1.1 TEST FACILITY

Company:	Beijing TIRT Technology Service Co.,Ltd Shenzhen
Address:	101, 3 # Factory Building, Gongjin Electronics, Shatin Community, KengziStreet, Pingshan District, Shenzhen City, Guangdong province, China
CNAS Registration Number:	CNAS L14158
A2LA Registration Number:	6049.01
Telephone:	+86-0755-27087573

1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

The TIRT measurement uncertainty as below table:

Parameter	Uncertainty
Occupied Channel Bandwidth	±142.12 KHz
RF power conducted	±0.74 dB
RF power radiated	±3.25dB
Spurious emissions, conducted	±1.78dB
Spurious emissions, radiated (30MHz~1GHz)	±4.6dB
Spurious emissions, radiated (1GHz ~18GHz)	±4.9dB
Conduction Emissions(150kHz~30MHz)	±3.1 dB
Humidity	±4.6%
Temperature	±0.7°C
Time	±1.25%

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25°C	56%	AC 120V/60Hz	Stone Tang
Radiated Emissions-9 kHz to 30 MHz	24°C	62%	AC 120V/60Hz	Stone Tang
Radiated Emissions-30 MHz to 1000 MHz	24°C	54%	AC 120V/60Hz	Stone Tang
Radiated Emissions-Above 1000 MHz	23°C	53%	AC 120V/60Hz	Stone Tang
Bandwidth	23-26°C	49-53%	AC 120V/60Hz	Stone Tang
Maximum Output Power	23-26°C	49-53%	AC 120V/60Hz	Stone Tang
Conducted Spurious Emission	23-26°C	49-53%	AC 120V/60Hz	Stone Tang
Power Spectral Density	23-26°C	49-53%	AC 120V/60Hz	Stone Tang

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Tapo Smart Floodlight Camera
Brand Name	TP-Link
Test Model	Tapo C720
Series Model	N/A
Model Difference(s)	N/A
Power Source	Supplied from AC Power Port.
Power Rating	AC 110-240V~50/60Hz
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
Bit Rate of Transmitter	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 144.4 Mbps
Max. Output Power	26.89dBm (0.489W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	TP-Link	N/A	IFA	N/A	0.02
2	TP-Link	N/A	Dipole	N/A	-0.40

Note:

- The antenna gain is provided by the manufacturer.
- EUT support CDD, power Directional Gain 0.02 dBi

2.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	802.11b _ Channel 01/02/06/10/11
Mode 2	802.11g _ Channel 01/02/06/10/11
Mode 3	802.11n(20MHz) _ Channel 01/02/06/10/11
Mode 4	802.11n(20MHz)_ Channel 06

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test	
Final Test Mode	Description
Mode 4	802.11n(20MHz)_ Channel 06

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 4	802.11n(20MHz)_ Channel 06

Radiated emissions test - Above 1GHz	
Final Test Mode	Description
Mode 1	802.11b _ Channel 01/02/06/10/11
Mode 2	802.11g _ Channel 01/02/06/10/11
Mode 3	802.11n(20MHz) _ Channel 01/02/06/10/11

Conducted test	
Final Test Mode	Description
Mode 5	802.11b _ Channel 01/06/11
Mode 6	802.11g _ Channel 01/06/11
Mode 7	802.11n(20MHz) _ Channel 01/06/11

Note:

- (1) For radiated emission above 1 GHz test, the spurious points of 1GHz~26.5GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.
- (2) For AC power line conducted emissions and radiated emissions below 1 GHz test, the 802.11n(20MHz)_ Channel 06 is found to be the worst case and recorded.
- (3) For radiated emission above 1 GHz test, the polarization of Vertical and Horizontal are evaluated.

2.3 PARAMETERS OF TEST SOFTWARE

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Test Software Version	MobaXterm_Installer_v12.4		
Frequency (MHz)	2412	2437	2462
2412-2462	60	60	60

2.4 DUTY CYCLE OF TEST SIGNAL

If duty cycle is $\geq 98\%$, duty factor is not required.

If duty cycle is $< 98\%$, duty factor shall be considered.

So all the duty factor of other test mode shall be considered

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty Factor
11B	Ant1	2437	12.42	12.55	98.96	--
11B	Ant2	2437	12.42	12.52	99.20	--
11G	Ant1	2437	2.06	2.14	96.26	0.33
11G	Ant2	2437	2.06	2.18	94.50	0.49
11N20SISO	Ant1	2437	1.92	2.09	91.87	0.74
11N20SISO	Ant2	2437	1.92	2.07	92.75	0.65

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Support Equipment				
No.	Equipment	Brand Name	Model Name	Remarks
1	USB Cable	unknown	unknown	0.8m, No Shielding
2	PC	Lenovo	M4500T	NA
3	SD Card	unknown	unknown	NA

3. AC POWER LINE CONDUCTED EMISSIONS

3.1 LIMIT

Frequency of Emission (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

3.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

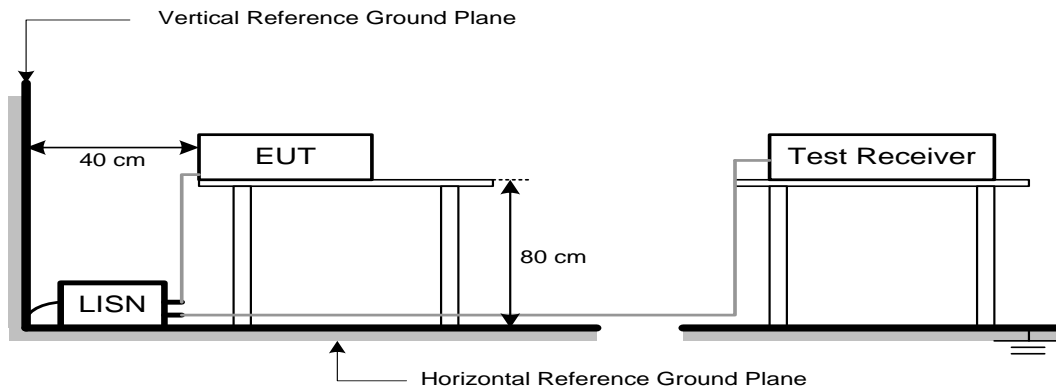
The following table is the setting of the receiver:

Receiver Parameters	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP



3.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.6 TEST RESULTS

Please refer to the APPENDIX A.

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』 . If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a “ * ” marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150 kHz to 30 MHz.

4. RADIATED EMISSIONS

4.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-1000 MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

Frequency (MHz)	(dBuV/m at 3 m)	
	Peak	Average
Above 1000	74	54

Note:

- (1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

4.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1 GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
(below 1 GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)
- i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

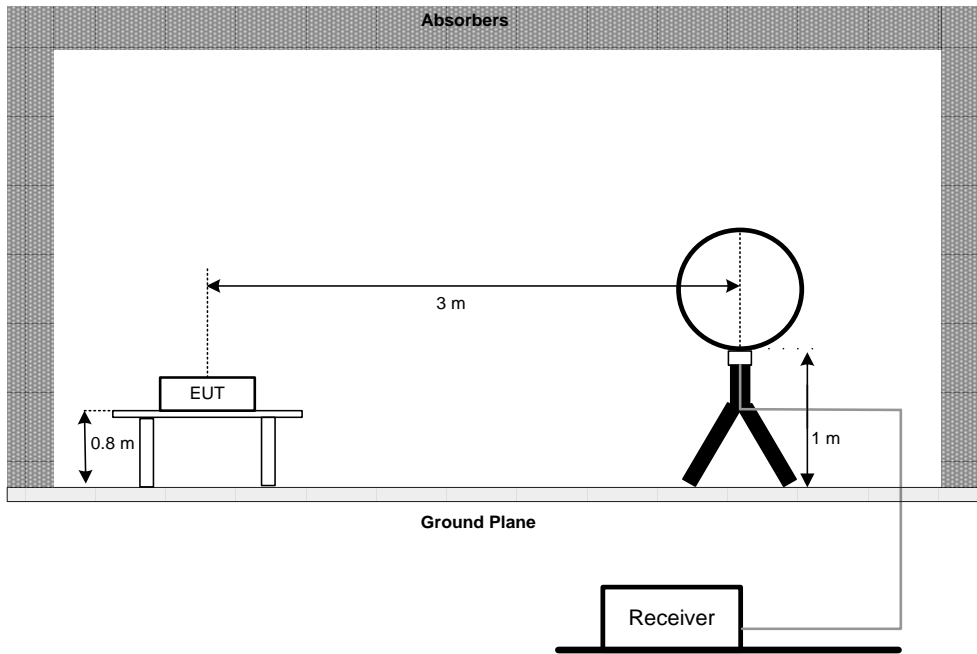
Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector
Start ~ Stop Frequency	1 GHz~26.5 GHz for PK/AVG detector

4.3 DEVIATION FROM TEST STANDARD

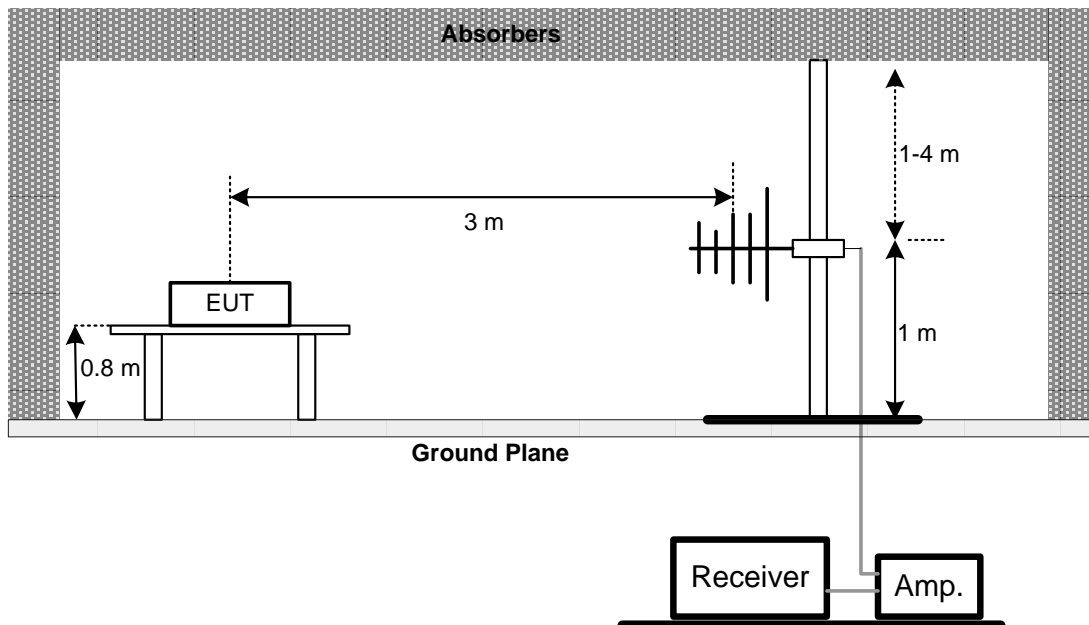
No deviation.

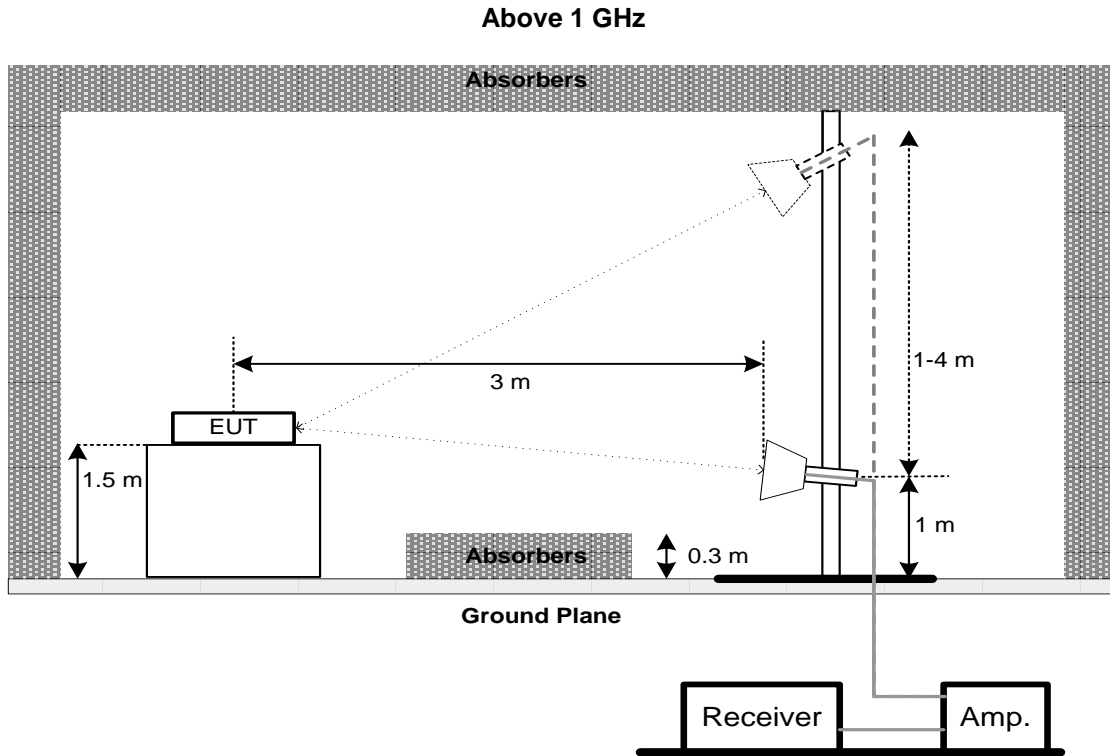
4.4 TEST SETUP

9 kHz to 30 MHz



30 MHz to 1 GHz





4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULT - 9 kHz TO 30 MHz

Please refer to the APPENDIX B.

Remark:

- (1) Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB).
- (2) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.7 TEST RESULT - 30 MHz TO 1000 MHz

Please refer to the APPENDIX C.

4.8 TEST RESULT - ABOVE 1000 MHz

Please refer to the APPENDIX D.

Remark:

- (1) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

5. BANDWIDTH

5.1 LIMIT

Section	Test Item	Limit
FCC 15.247(a)(2)	6 dB Bandwidth	≥ 500 kHz
	99% Emission Bandwidth	-

5.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- The following table is the setting of the spectrum analyzer:

For 6 dB Bandwidth:

Spectrum Parameters	Setting
Span Frequency	$>$ Measurement Bandwidth
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

For 99% Emission Bandwidth:

Spectrum Parameters	Setting
Span Frequency	Between 1.5 times and 5.0 times the OBW
RBW	30 kHz
VBW	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX E.

6. MAXIMUM OUTPUT POWER

6.1 LIMIT

Section	Test Item	Limit
FCC 15.247(b)(3)	Maximum Output Power	1.0000 watt or 30.00 dBm

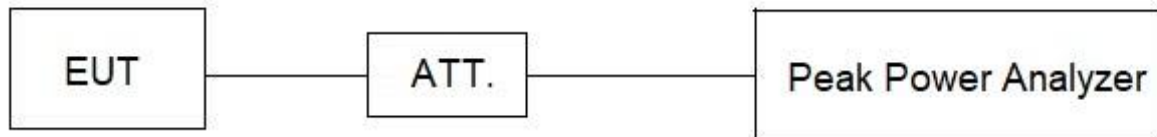
6.2 TEST PROCEDURE

- The EUT was directly connected to the peak power analyzer and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.2.3.1 of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX F.

7. CONDUCTED SPURIOUS EMISSION

7.1 LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required.

7.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
Start Frequency	30 MHz
Stop Frequency	26.5 GHz
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

Please refer to the APPENDIX G.

8. POWER SPECTRAL DENSITY

8.1 LIMIT

Section	Test Item	Limit
FCC 15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)

8.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
RBW	3 kHz
VBW	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX H.

9. MEASUREMENT INSTRUMENTS LIST

No.	Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Receiver	Rohde&Schwarz	ESCI	1166.5950.03	2022/11/16
2	AMN	Rohde&Schwarz	ENV216	3560.6550.05	2022/11/09
3	AMN	Schwarzbeck	NSLK8127	#829	2022/11/09
4	ECSI RF IN RF Cable	Rohde&Schwarz	RP-X1	\	2022/11/18
5	ECSI RF IN RF Cable	Rohde&Schwarz	Sapre sm	\	2022/11/09
6	EMI Receiver	Rohde&Schwarz	ESR7	102013	2022/11/09
7	Spectrum analyzer	Rohde&Schwarz	FSV30	103741	2022/11/09
8	EMI receiver	Rohde&Schwarz	ESU	100184	2023/07/20
9	Spectrum analyzer	KEYSIGHT	N9010A-44	MY51440158	2022/11/09
10	Loop Antenna*	Schwarzbeck	FMZB1519B	00029	2025/07/03
11	Integral Antenna	Schwarzbeck	VULB 9163	VULB 9163-361	2022/11/09
12	Integral Antenna	Schwarzbeck	BBHA 9120D	BBHA 9120D 1201	2022/11/09
13	Integral Antenna	Schwarzbeck	BBHA 9170	9170#685	2022/11/09
14	Preamplifier	CD Systems Inc	PAP-03036-3 0	85060000	2022/11/09
15	Preamplifier	Schwarzbeck	BBV9721	9721-019	2022/11/09
16	Preamplifier	emci	EMC012645S E	980417	2022/11/09
17	ECSI RF IN RF Cable	Rohde&Schwarz	AP-X1	\	2022/11/09
18	Spectrum Analyzer	Agilent	N9010A	MY52221119	2022/11/09
19	Power Collection Unit	Tonscend	JS0806-2	188060134	2022/11/09
20	Tonscend Test System	Tonscend	2.6.77.0518	NA	NA
21	10dB Attenuator	Tonscend	10dB	NA	NA
22	Temp&Humidity Recorder	Anymetre	JR900	NA	2022/11/03
23	Temp&Humidity Chamber	ETOMA	NTH1100-30A	16080628	2022/11/03
24	Filter	STI	STI15-9845	N/A	N/A
25	Filter	STI	5.1G	N/A	N/A
26	Filter	STI	STI15-9845	N/A	N/A
27	Testing Software	EZ-EMC	TW-03A2	N/A	N/A

Remark: "N/A" denotes no model name, serial no. or calibration specified.

"**" calibration period of equipment list is three year.

Except * item, all calibration period of equipment list is one year.

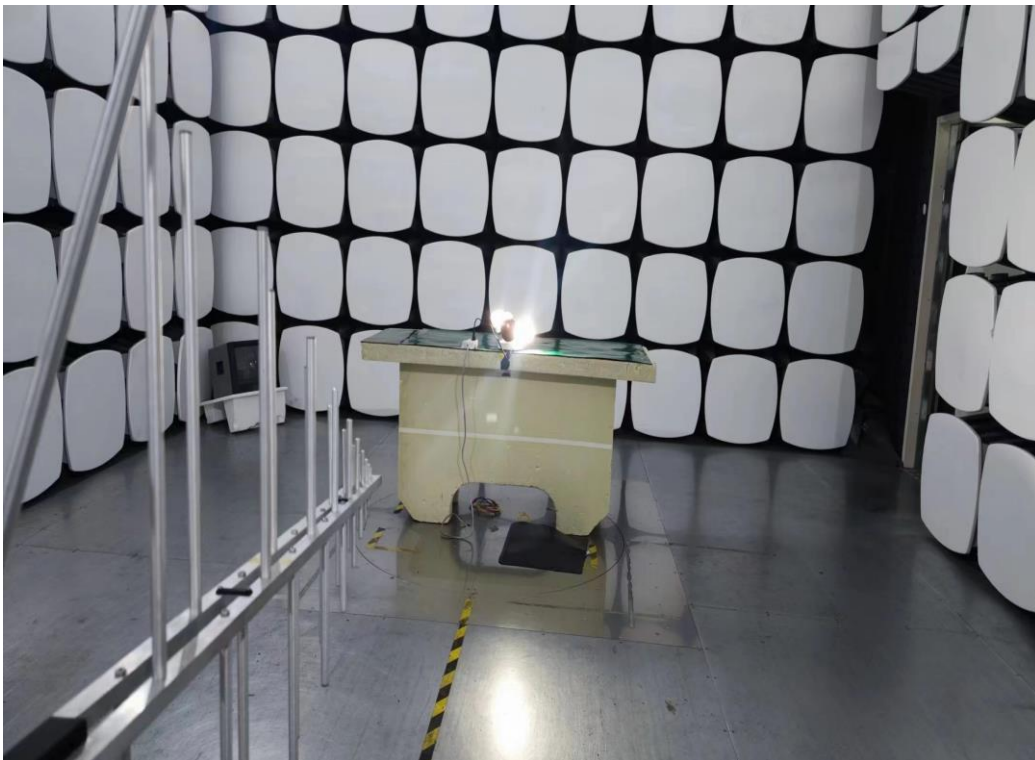
10. EUT TEST PHOTO

AC Power Line Conducted Emissions Test Photos

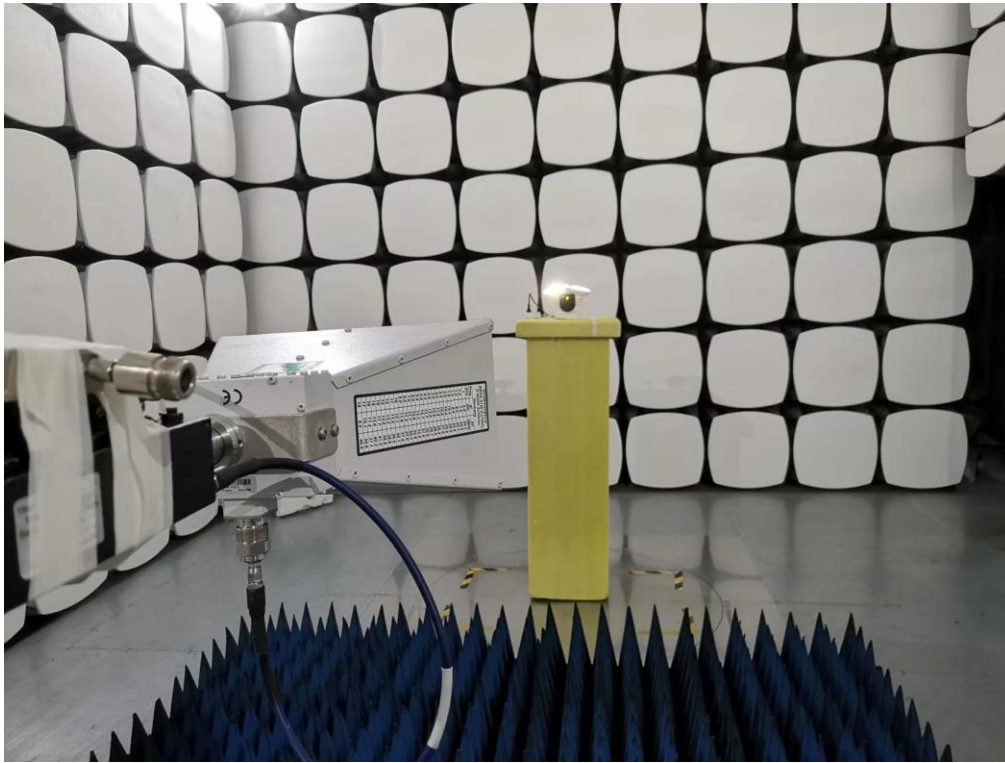


Radiated Emissions Test Photos

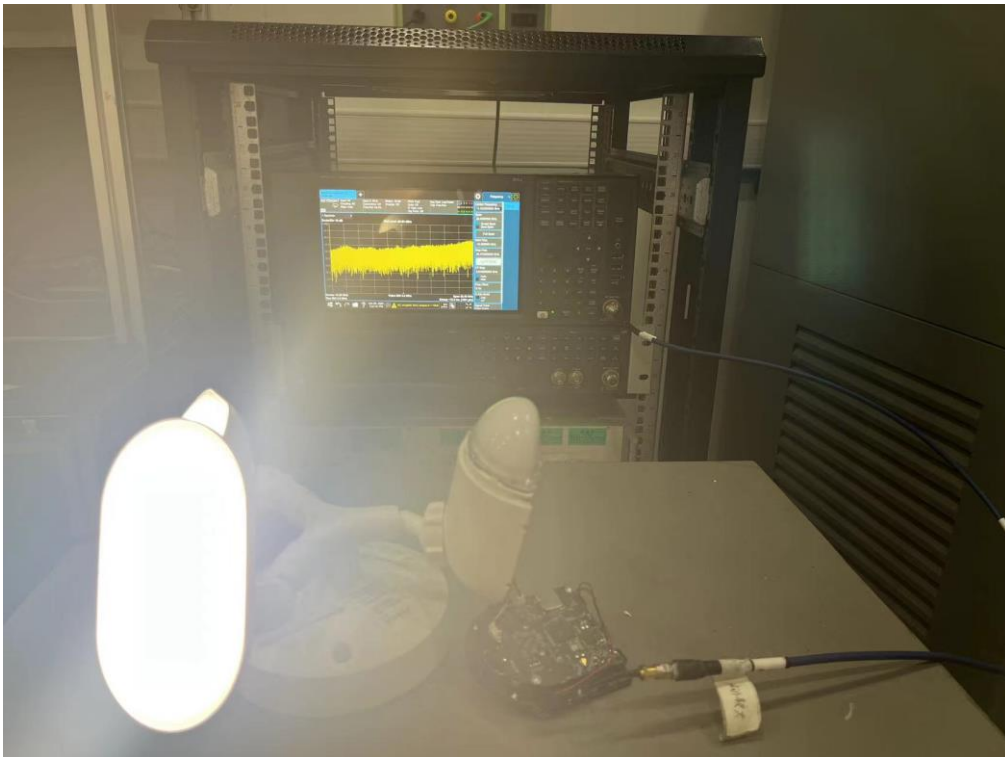
30 MHz to 1000 MHz



Radiated Emissions Test Photos
Above 1 GHz



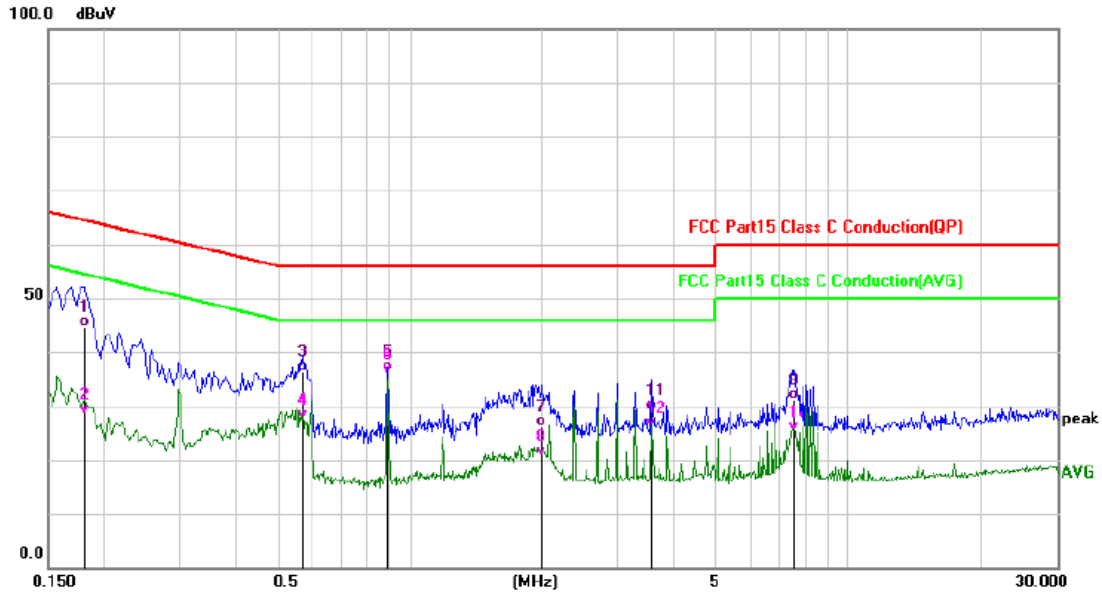
Conducted Test Photos



APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode	TX 2437MHz_802.11n(20MHz)_ Channel 06	Phase	Line
-----------	---------------------------------------	-------	------

Conducted Emission Measurement



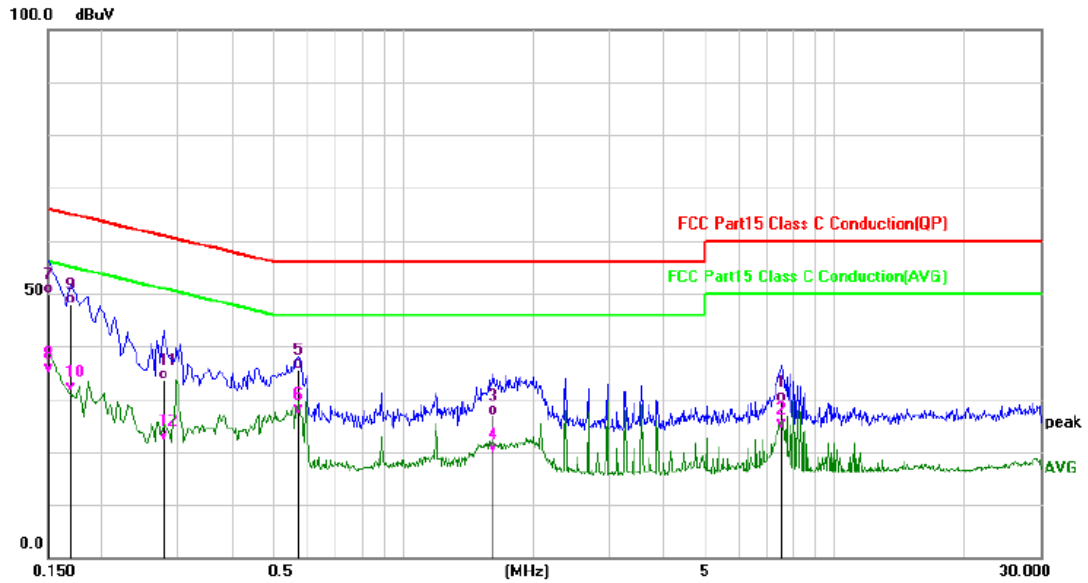
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1820	25.14	19.53	44.67	64.39	-19.72	QP	
2		0.1820	8.93	19.53	28.46	54.39	-25.93	AVG	
3		0.5740	16.91	19.53	36.44	56.00	-19.56	QP	
4		0.5740	7.96	19.53	27.49	46.00	-18.51	AVG	
5		0.8940	16.71	19.63	36.34	56.00	-19.66	QP	
6	*	0.8940	16.22	19.63	35.85	46.00	-10.15	AVG	
7		2.0100	6.12	20.08	26.20	56.00	-29.80	QP	
8		2.0100	0.49	20.08	20.57	46.00	-25.43	AVG	
9		7.5260	10.34	20.76	31.10	60.00	-28.90	QP	
10		7.5260	4.48	20.76	25.24	50.00	-24.76	AVG	
11		3.5820	8.48	20.53	29.01	56.00	-26.99	QP	
12		3.5820	5.38	20.53	25.91	46.00	-20.09	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2437MHz_802.11n(20MHz)_ Channel 06	Phase	Neutral
-----------	---------------------------------------	-------	---------

Conducted Emission Measurement



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		7.5500	8.65	20.74	29.39	60.00	-30.61	QP	
2		7.5500	3.52	20.74	24.26	50.00	-25.74	AVG	
3		1.6140	6.84	20.11	26.95	56.00	-29.05	QP	
4		1.6140	-0.47	20.11	19.64	46.00	-26.36	AVG	
5		0.5740	15.81	19.75	35.56	56.00	-20.44	QP	
6		0.5740	7.29	19.75	27.04	46.00	-18.96	AVG	
7 *		0.1500	30.08	19.70	49.78	66.00	-16.22	QP	
8		0.1500	15.23	19.70	34.93	56.00	-21.07	AVG	
9		0.1700	28.12	19.70	47.82	64.96	-17.14	QP	
10		0.1700	11.61	19.70	31.31	54.96	-23.65	AVG	
11		0.2780	14.04	19.70	33.74	60.88	-27.14	QP	
12		0.2780	2.32	19.70	22.02	50.88	-28.86	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

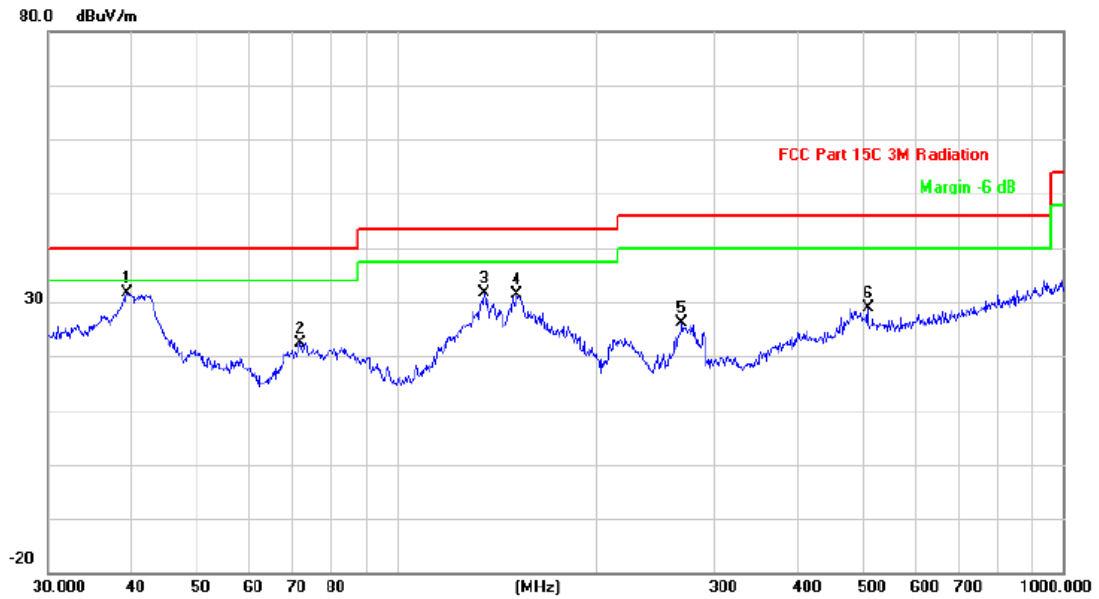
Radiated emission: 9KHz-30MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

Test Mode	TX 2437MHz_802.11n(20MHz)_ Channel 06	Polarization	Vertical
-----------	---------------------------------------	--------------	----------

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	39.4371	41.63	-9.98	31.65	40.00	-8.35			peak
2		71.8320	35.10	-12.66	22.44	40.00	-17.56			peak
3		135.5062	41.97	-10.40	31.57	43.50	-11.93			peak
4		151.5972	41.30	-9.82	31.48	43.50	-12.02			peak
5		268.4853	35.93	-9.78	26.15	46.00	-19.85			peak
6		510.0436	32.47	-3.60	28.87	46.00	-17.13			peak

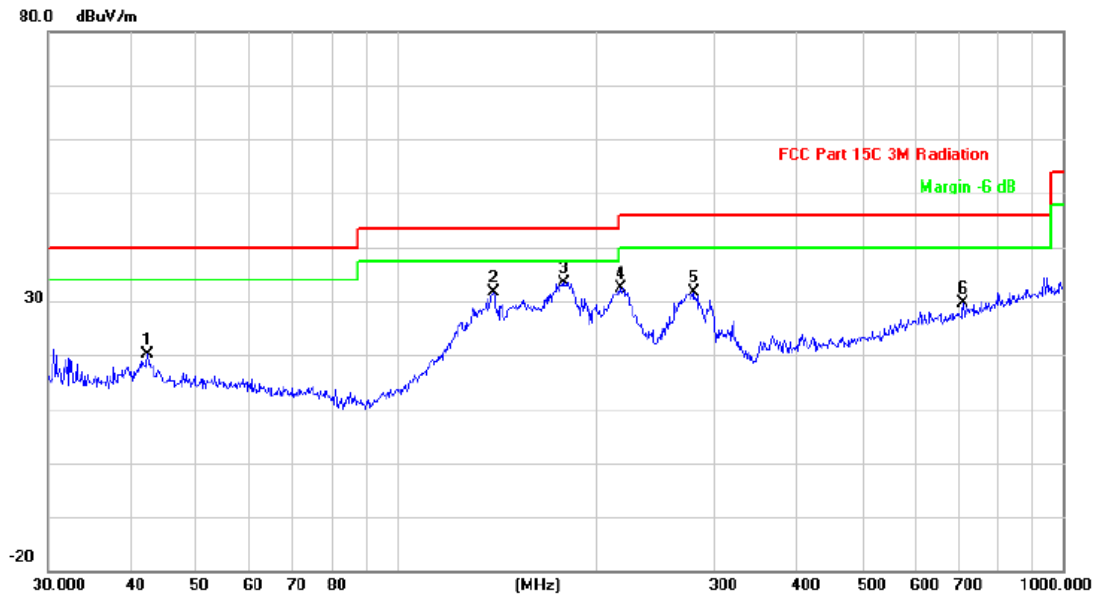
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2437MHz_802.11n(20MHz)_ Channel 06	Polarization	Horizontal
-----------	---------------------------------------	--------------	------------

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		42.3022	29.99	-9.96	20.03	40.00	-19.97			peak
2		139.8508	41.69	-10.03	31.66	43.50	-11.84			peak
3	*	178.1327	44.79	-11.34	33.45	43.50	-10.05			peak
4		216.7828	44.54	-12.06	32.48	46.00	-13.52			peak
5		279.0436	40.95	-9.29	31.66	46.00	-14.34			peak
6		709.1823	29.11	0.49	29.60	46.00	-16.40			peak

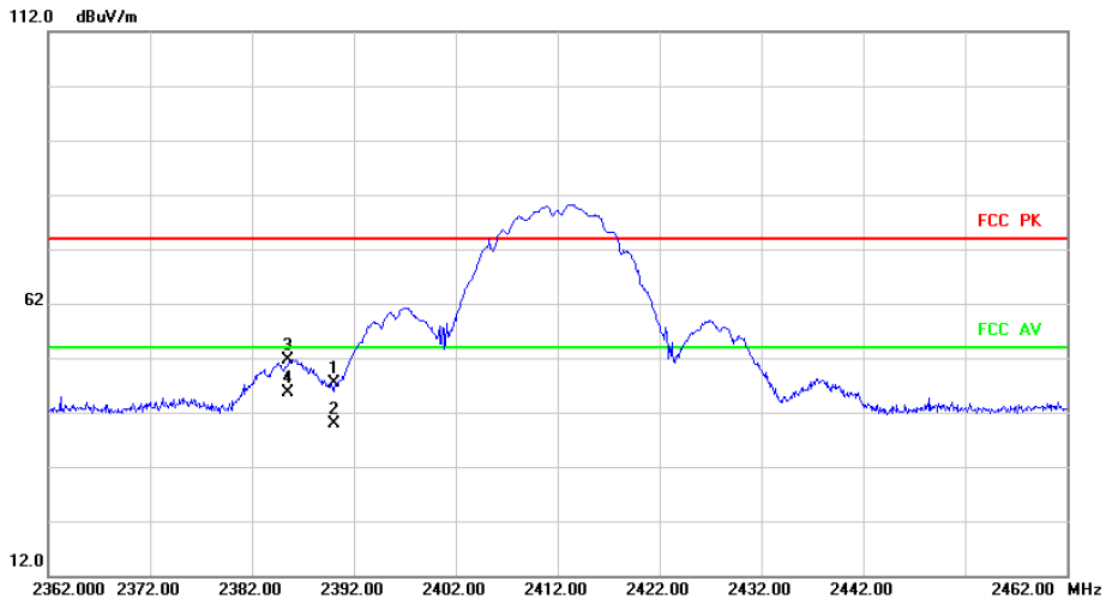
REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

Test Mode	TX 2412MHz_802.11b _ Channel 01	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



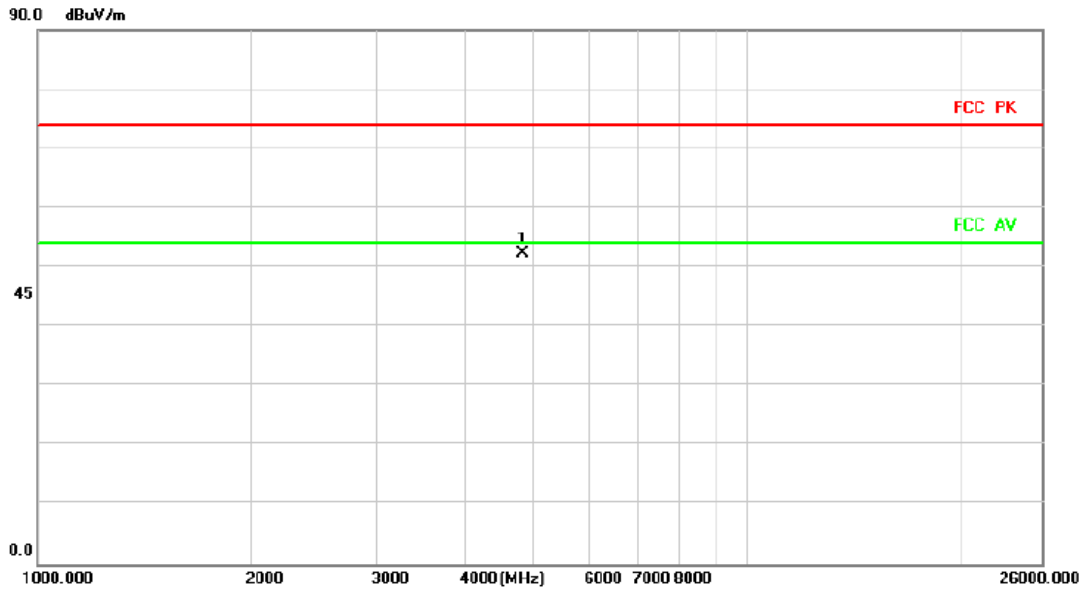
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	59.11	-11.67	47.44	74.00	-26.56			peak
2		2390.000	51.63	-11.67	39.96	54.00	-14.04			AVG
3		2385.524	63.32	-11.68	51.64	74.00	-22.36			peak
4	*	2385.524	57.39	-11.68	45.71	54.00	-8.29			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11b _ Channel 01	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



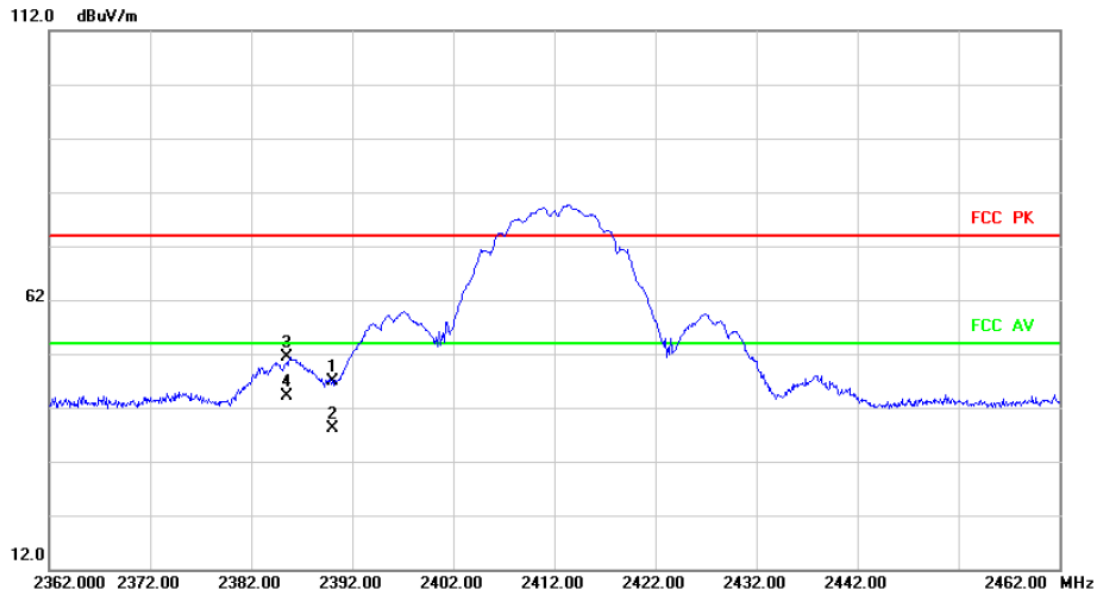
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4824.000	54.16	-1.88	52.28	74.00	-21.72	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11b _ Channel 01	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



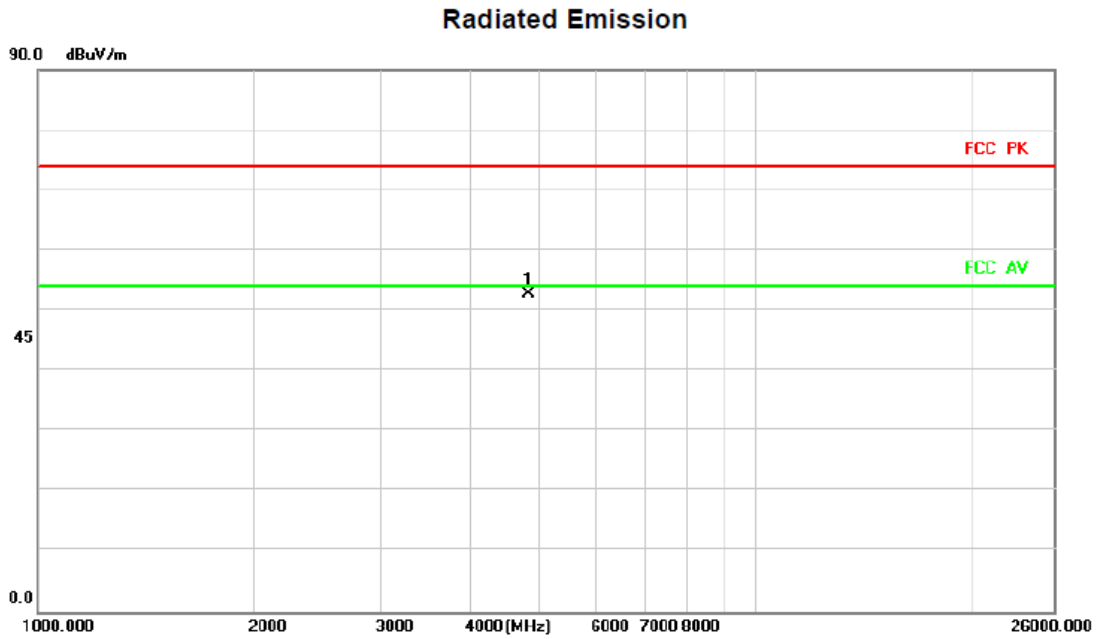
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	58.50	-11.67	46.83	74.00	-27.17			peak
2		2390.000	49.85	-11.67	38.18	54.00	-15.82			AVG
3		2385.524	63.03	-11.68	51.35	74.00	-22.65			peak
4	*	2385.524	55.77	-11.68	44.09	54.00	-9.91			AVG

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11b _ Channel 01	Polarization	Vertical
-----------	---------------------------------	--------------	----------



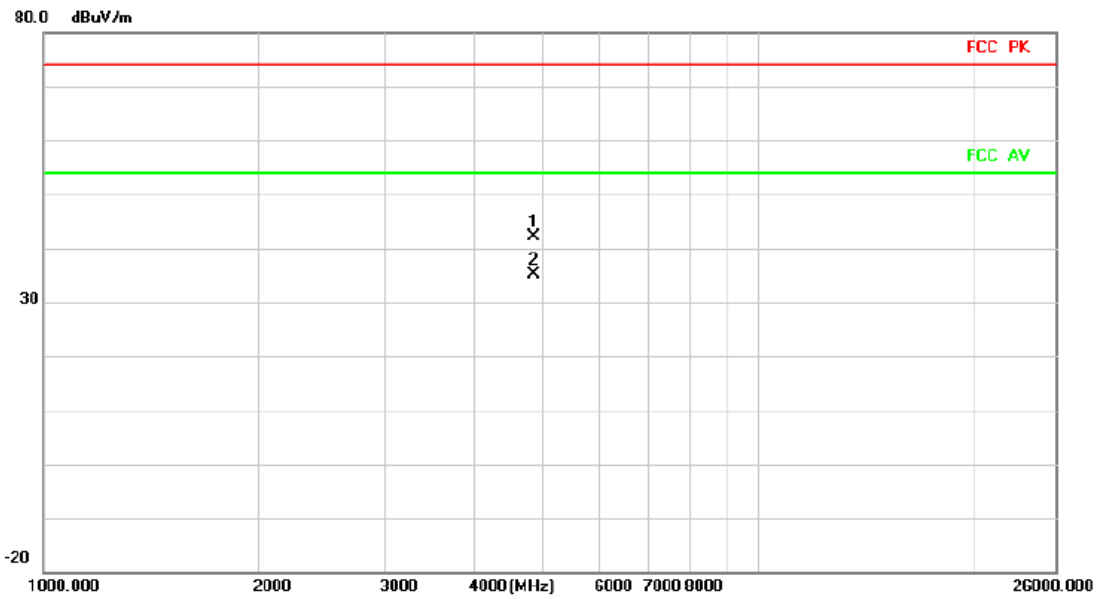
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4824.000	54.73	-1.88	52.85	74.00	-21.15	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2417MHz_802.11b _ Channel 02	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



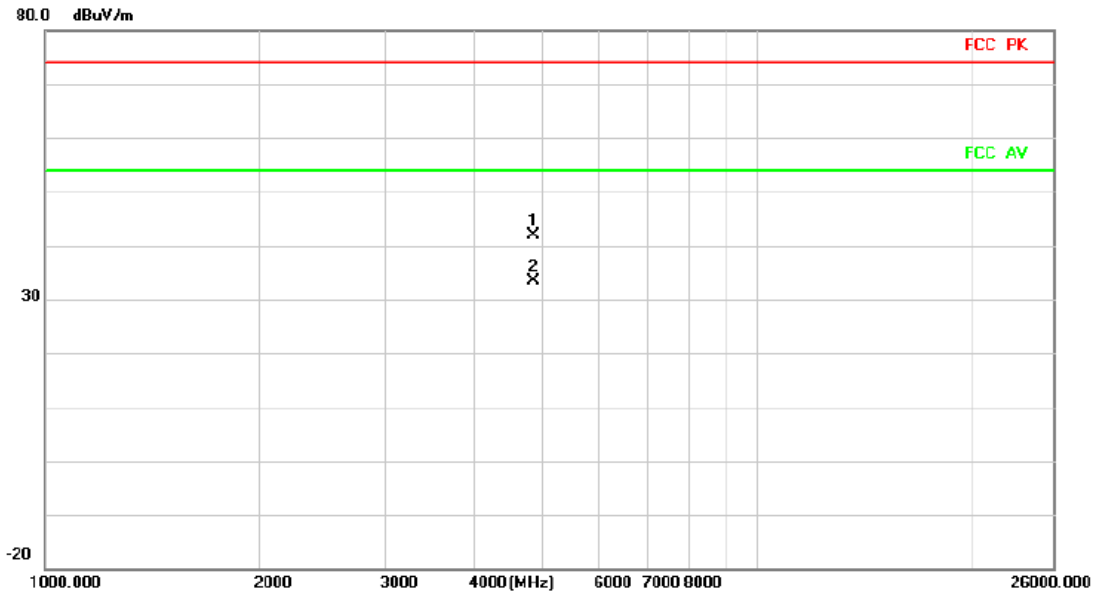
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4834.000	43.96	-1.82	42.14	74.00	-31.86	peak		
2	*	4834.000	36.88	-1.82	35.06	54.00	-18.94	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2417MHz_802.11b _ Channel 02	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



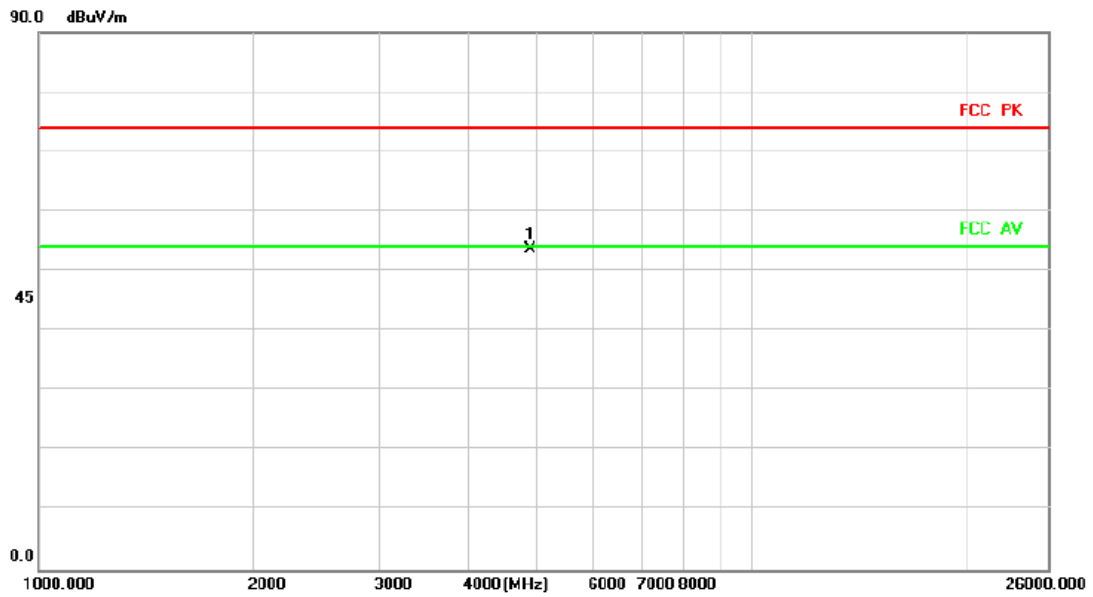
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4834.000	43.58	-1.82	41.76	74.00	-32.24	peak		
2	*	4834.000	35.22	-1.82	33.40	54.00	-20.60	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2437MHz_802.11b _ Channel 06	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



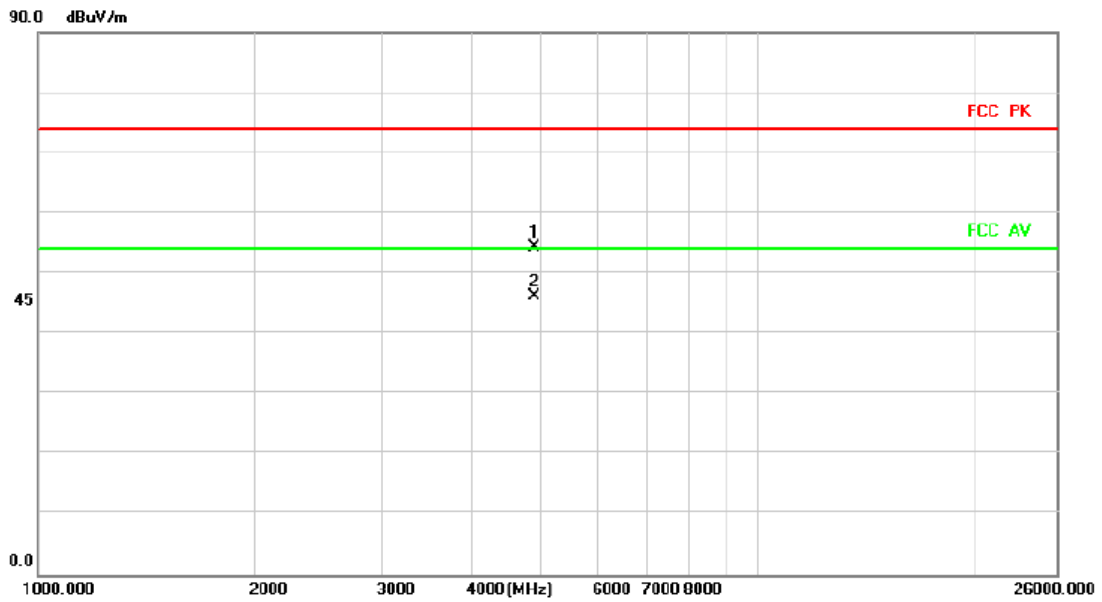
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4874.000	55.17	-1.59	53.58	74.00	-20.42	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2437MHz_802.11b _ Channel 06	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



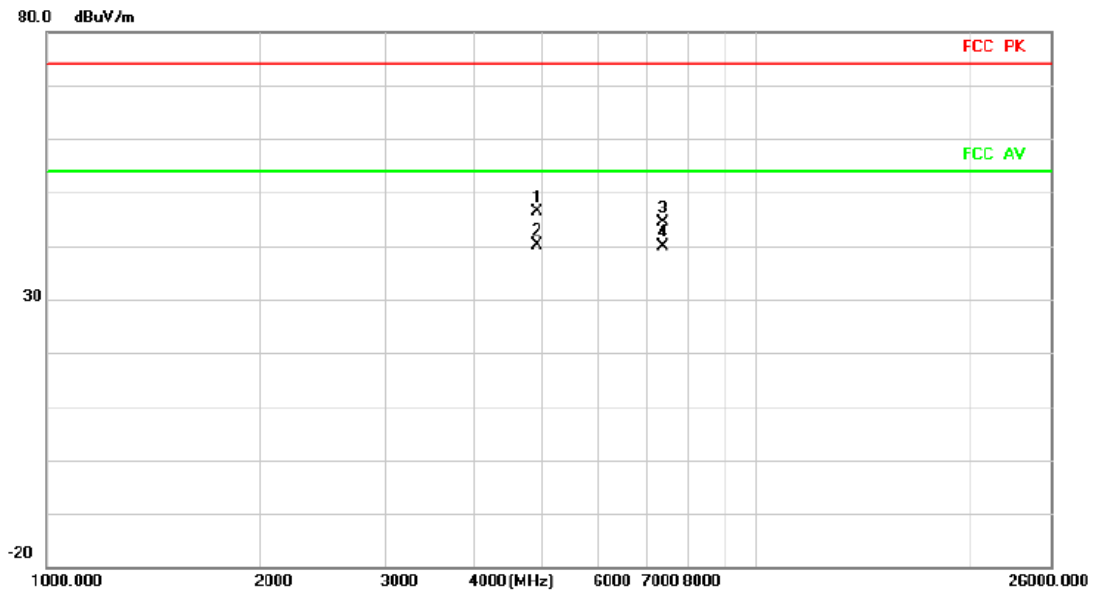
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4874.000	55.84	-1.59	54.25	74.00	-19.75			peak
2	*	4874.000	47.81	-1.59	46.22	54.00	-7.78			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2457MHz_802.11b _ Channel 10	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



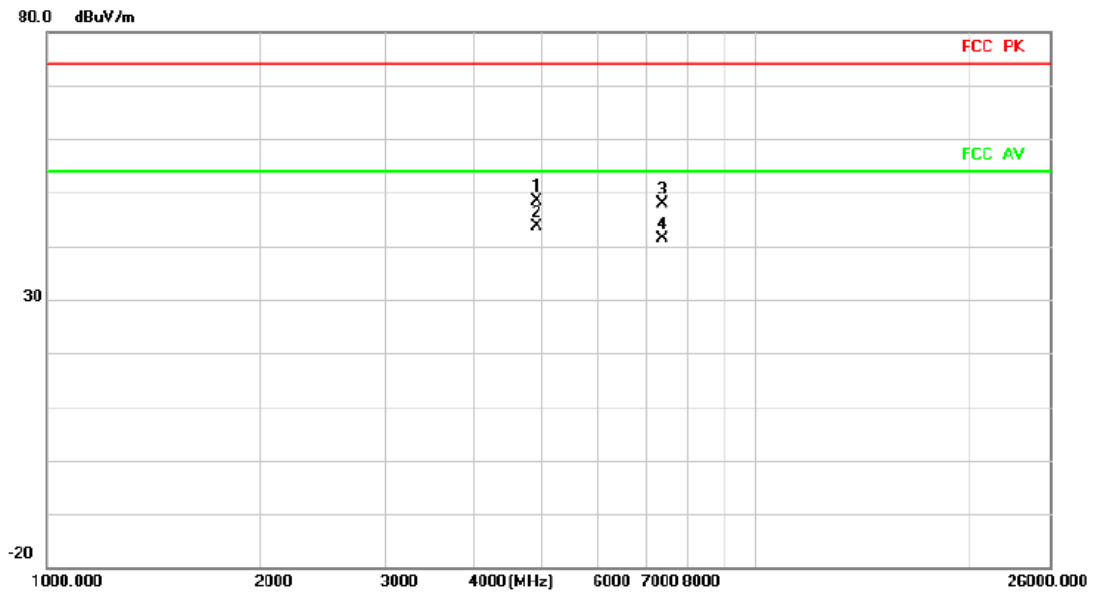
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4914.000	47.81	-1.36	46.45	74.00	-27.55			peak
2	*	4914.000	41.51	-1.36	40.15	54.00	-13.85			AVG
3		7371.000	40.36	4.09	44.45	74.00	-29.55			peak
4		7371.000	35.82	4.09	39.91	54.00	-14.09			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2457MHz_802.11b _ Channel 10	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



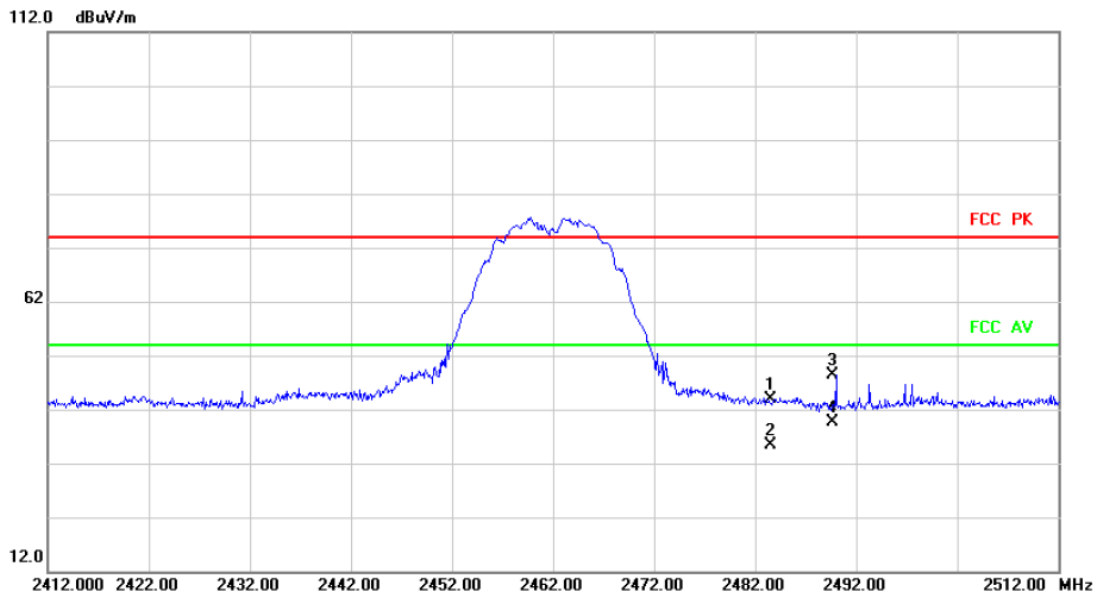
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4914.000	49.82	-1.36	48.46	74.00	-25.54			peak
2	*	4914.000	45.08	-1.36	43.72	54.00	-10.28			AVG
3		7371.000	43.82	4.09	47.91	74.00	-26.09			peak
4		7371.000	37.17	4.09	41.26	54.00	-12.74			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11b _ Channel 11	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



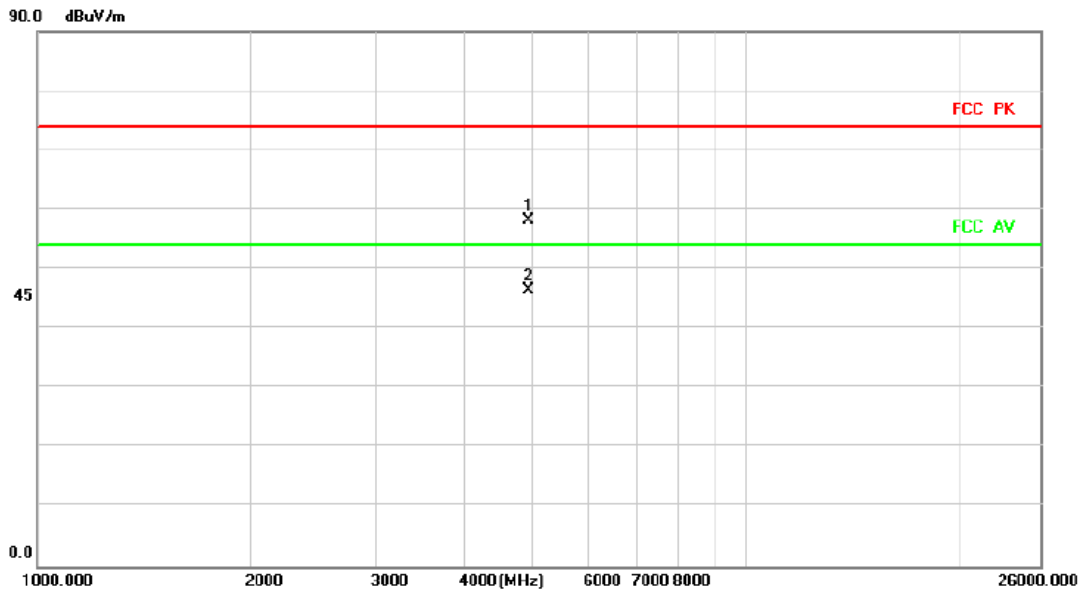
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	55.15	-11.28	43.87	74.00	-30.13	peak		
2		2483.500	46.73	-11.28	35.45	54.00	-18.55	AVG		
3		2489.650	59.74	-11.25	48.49	74.00	-25.51	peak		
4	*	2489.650	50.87	-11.25	39.62	54.00	-14.38	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11b _ Channel 11	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



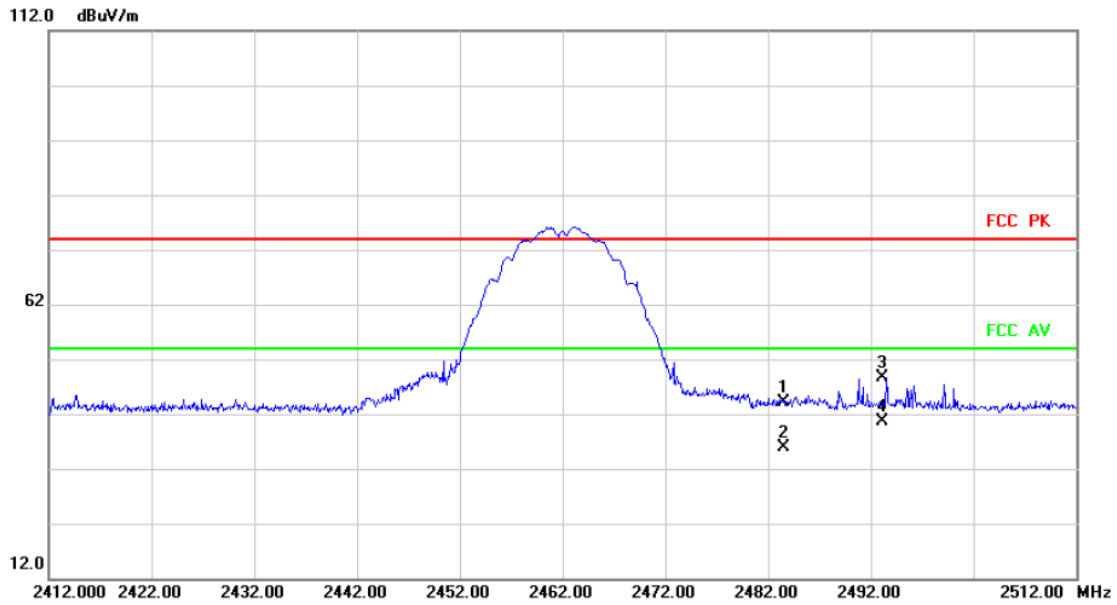
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4920.955	59.59	-1.33	58.26	74.00	-15.74			peak
2	*	4920.955	47.68	-1.33	46.35	54.00	-7.65			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11b _ Channel 11	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



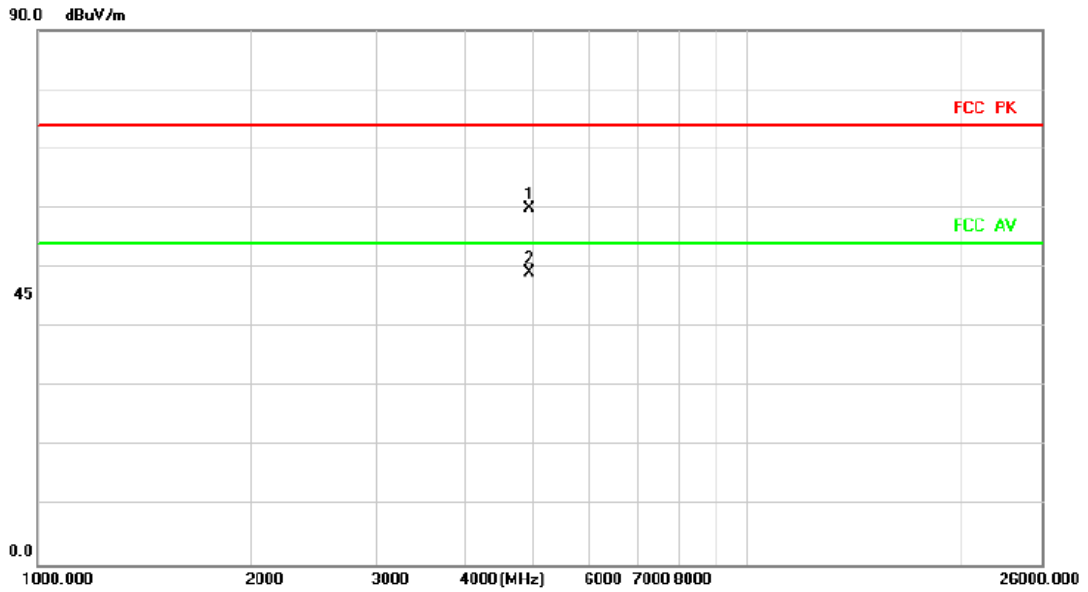
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	55.37	-11.28	44.09	74.00	-29.91			peak
2		2483.500	47.15	-11.28	35.87	54.00	-18.13			AVG
3		2493.192	59.75	-11.23	48.52	74.00	-25.48			peak
4	*	2493.192	51.93	-11.23	40.70	54.00	-13.30			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11b _ Channel 11	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



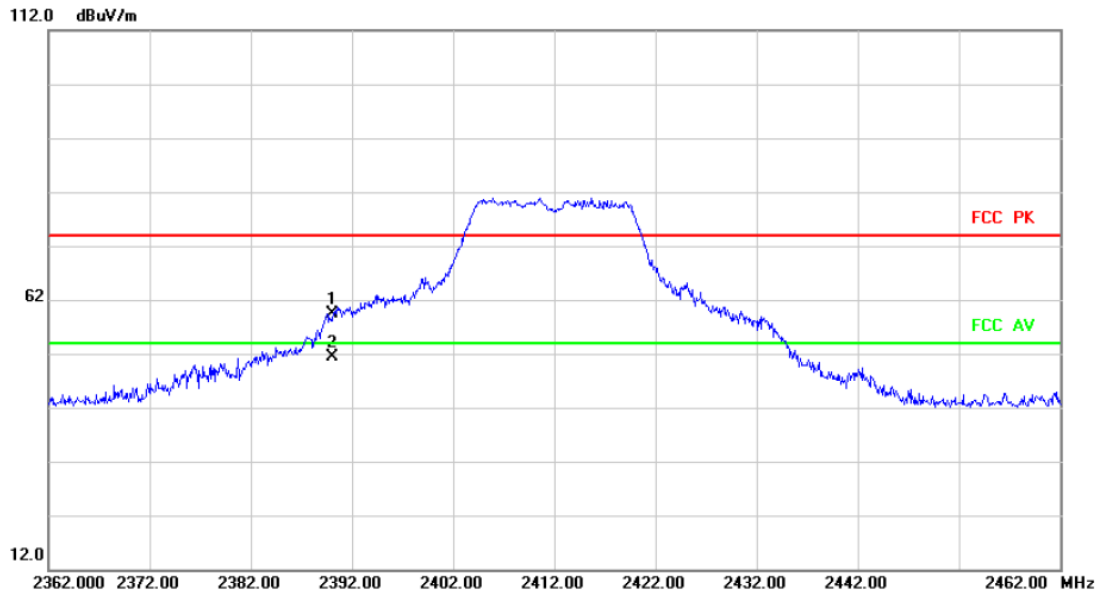
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4924.000	61.33	-1.30	60.03	74.00	-13.97	peak		
2	*	4924.000	50.54	-1.30	49.24	54.00	-4.76	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11g _ Channel 01	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



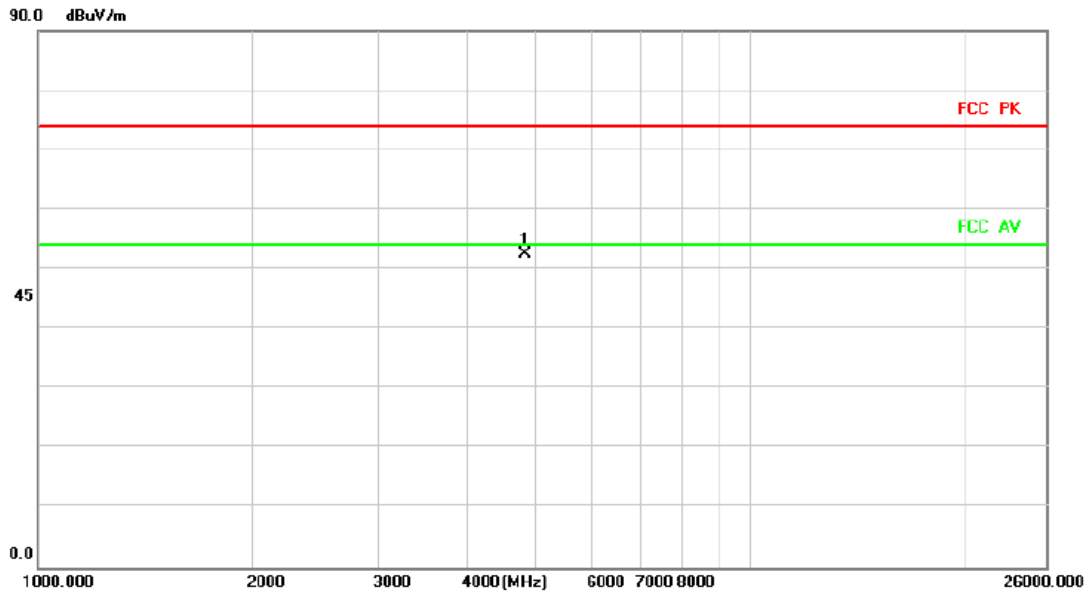
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	2390.000	71.14	-11.67	59.47	74.00	-14.53	peak		
2		2390.000	62.93	-11.67	51.26	74.00	-22.74	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11g _ Channel 01	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



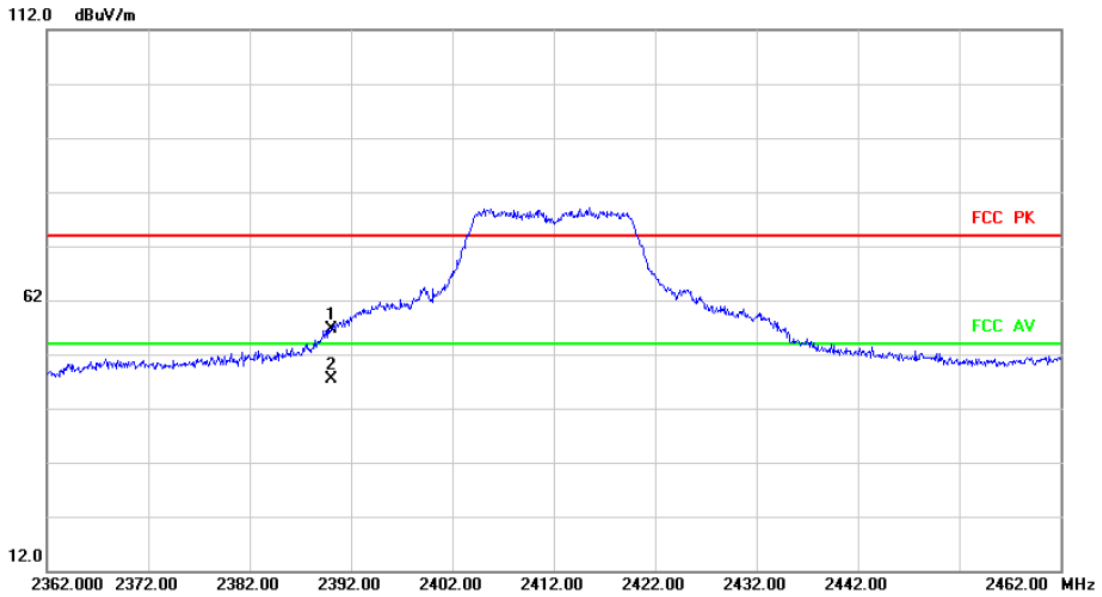
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree
1	*	4824.000	54.47	-1.88	52.59	74.00	-21.41	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11g _ Channel 01	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



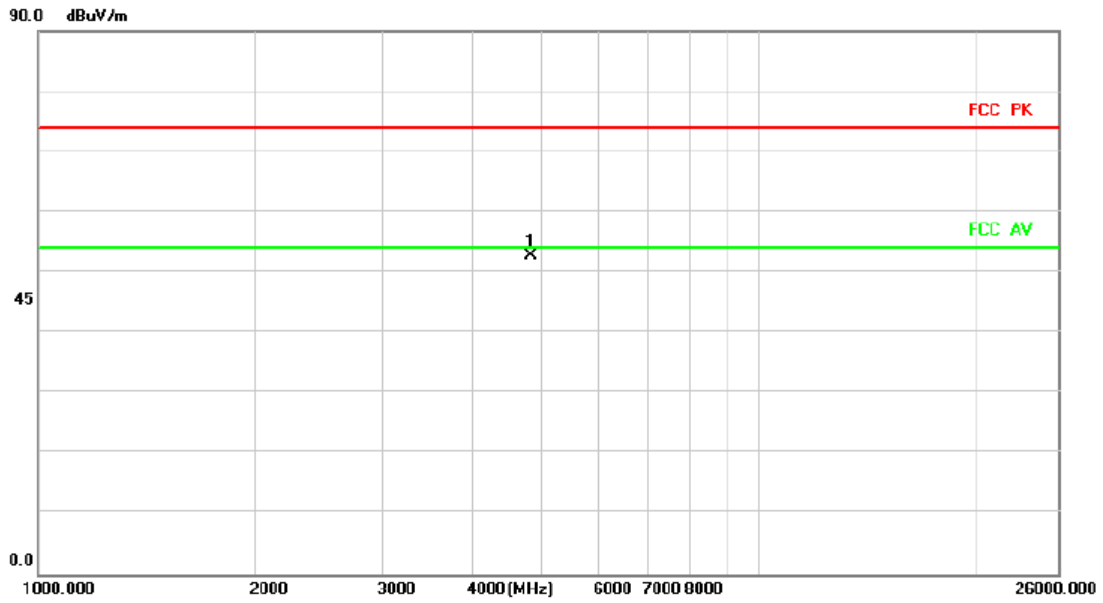
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	58.19	-1.67	56.52	74.00	-17.48			peak
2	*	2390.000	49.17	-1.67	47.50	54.00	-6.50			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11g _ Channel 01	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



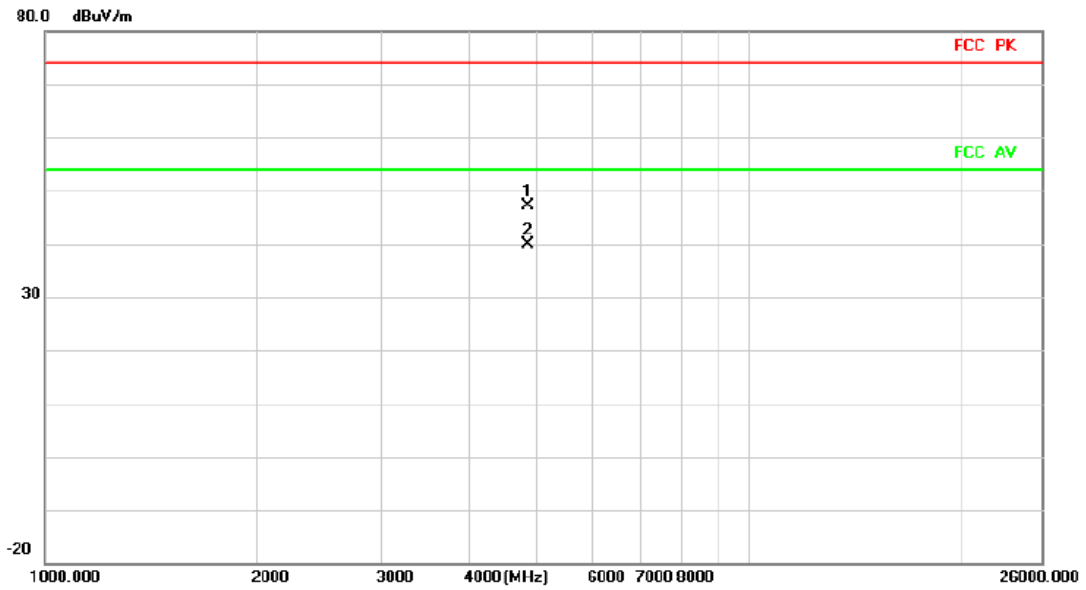
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4824.000	54.66	-1.88	52.78	74.00	-21.22	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2417MHz_802.11g _ Channel 02	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



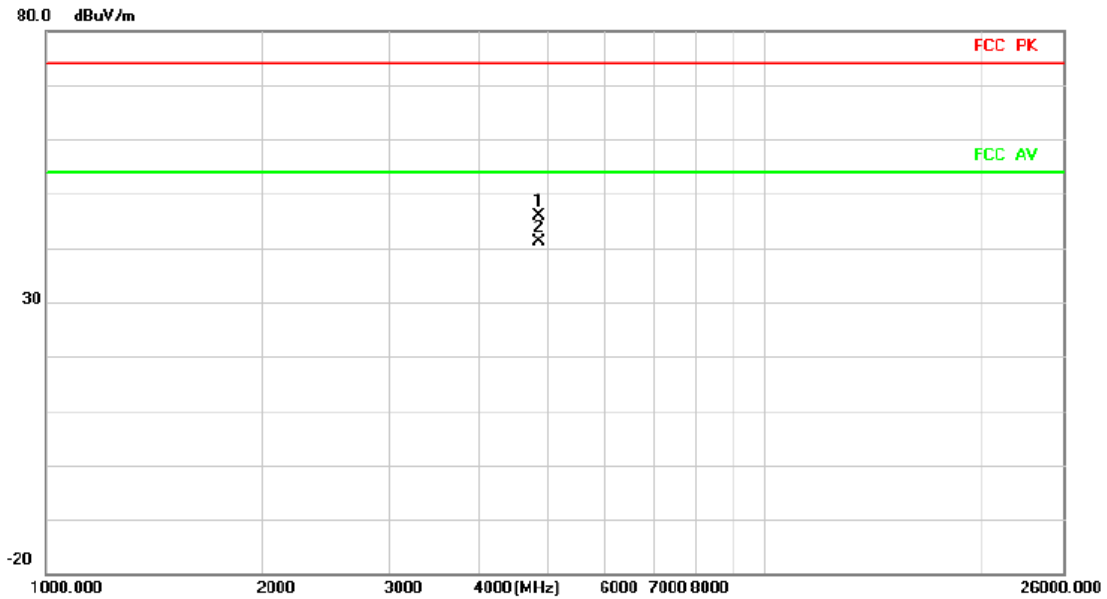
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4834.000	48.98	-1.82	47.16	74.00	-26.84	peak		
2	*	4834.000	41.63	-1.82	39.81	54.00	-14.19	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2417MHz_802.11g _ Channel 02	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



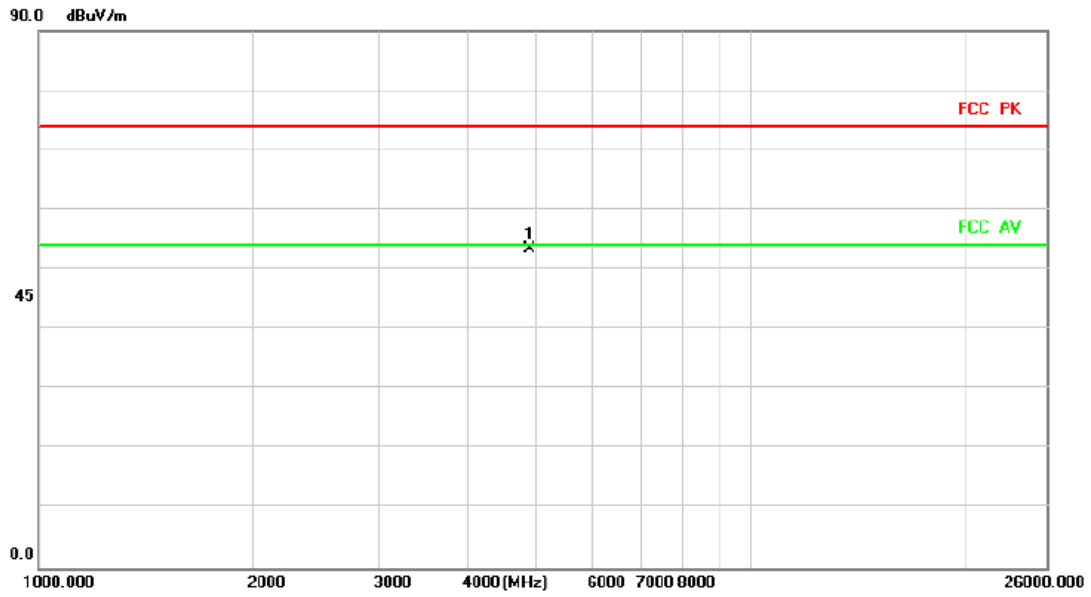
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4834.000	47.62	-1.82	45.80	74.00	-28.20			peak
2	*	4834.000	42.95	-1.82	41.13	54.00	-12.87			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value

Test Mode	TX 2437MHz_802.11g _ Channel 06	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



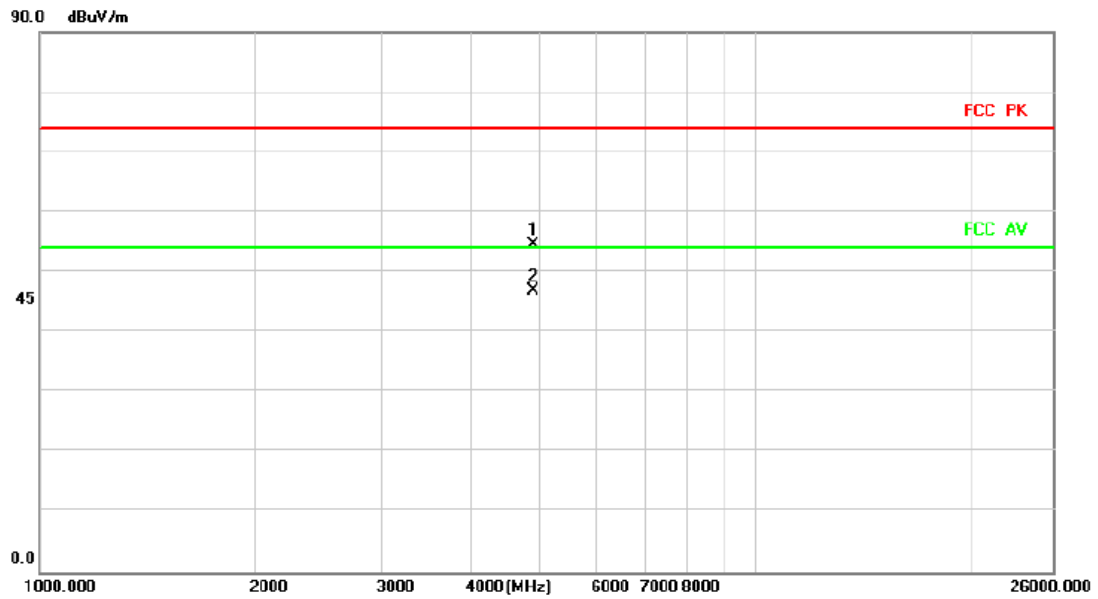
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree
1	*	4874.000	55.09	-1.59	53.50	74.00	-20.50	peak	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2437MHz_802.11g _ Channel 06	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



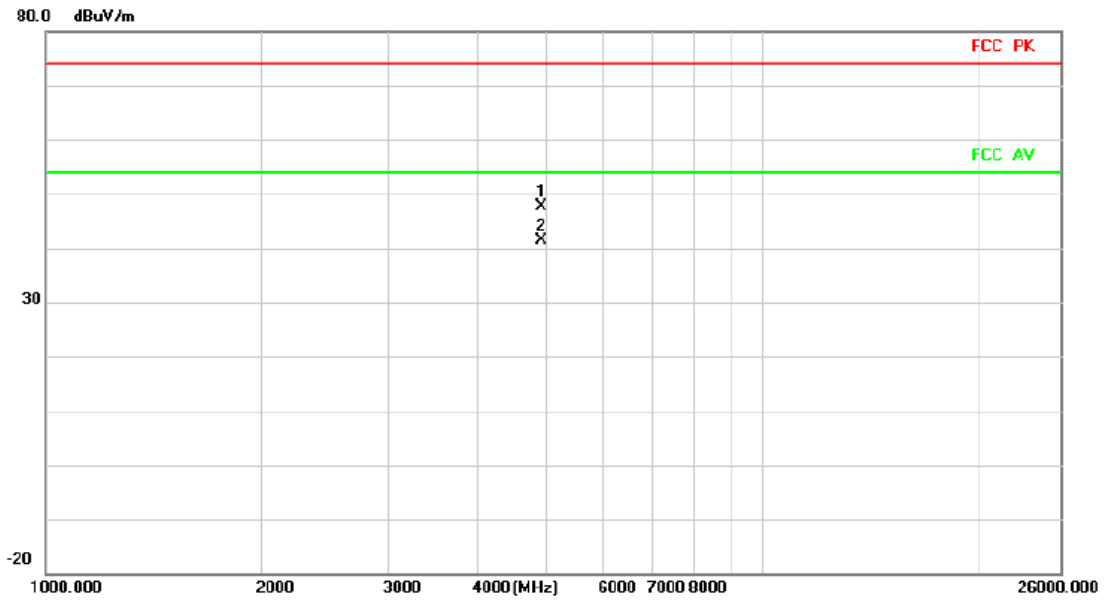
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4874.000	56.10	-1.59	54.51	74.00	-19.49			peak
2	*	4874.000	48.40	-1.59	46.81	54.00	-7.19			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2457MHz_802.11g _ Channel 10	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



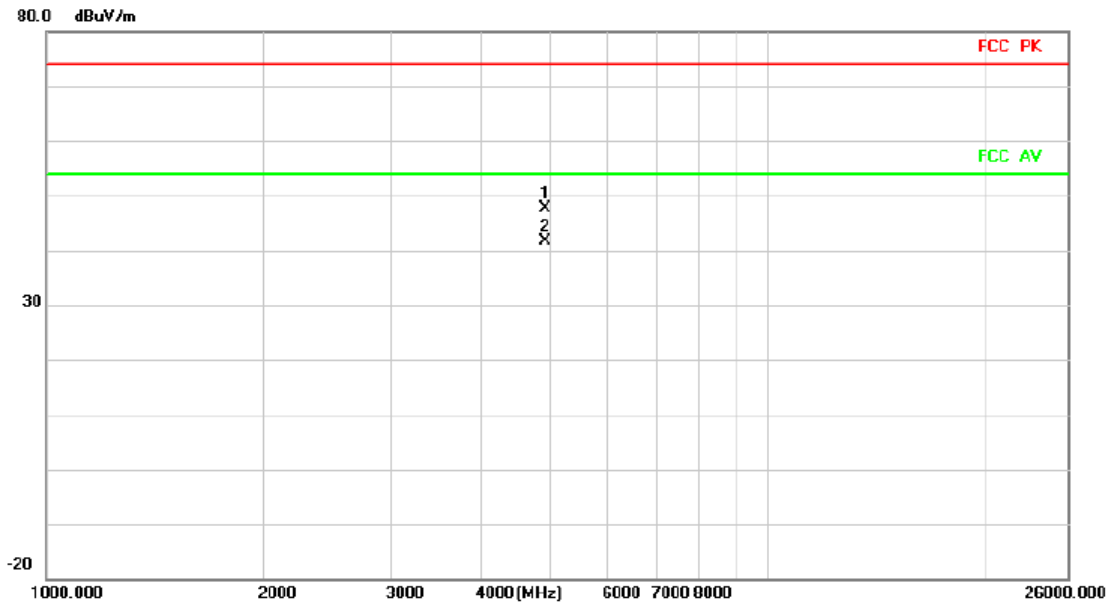
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4914.000	48.87	-1.36	47.51	74.00	-26.49			peak
2	*	4914.000	42.71	-1.36	41.35	54.00	-12.65			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2457MHz_802.11g _ Channel 10	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



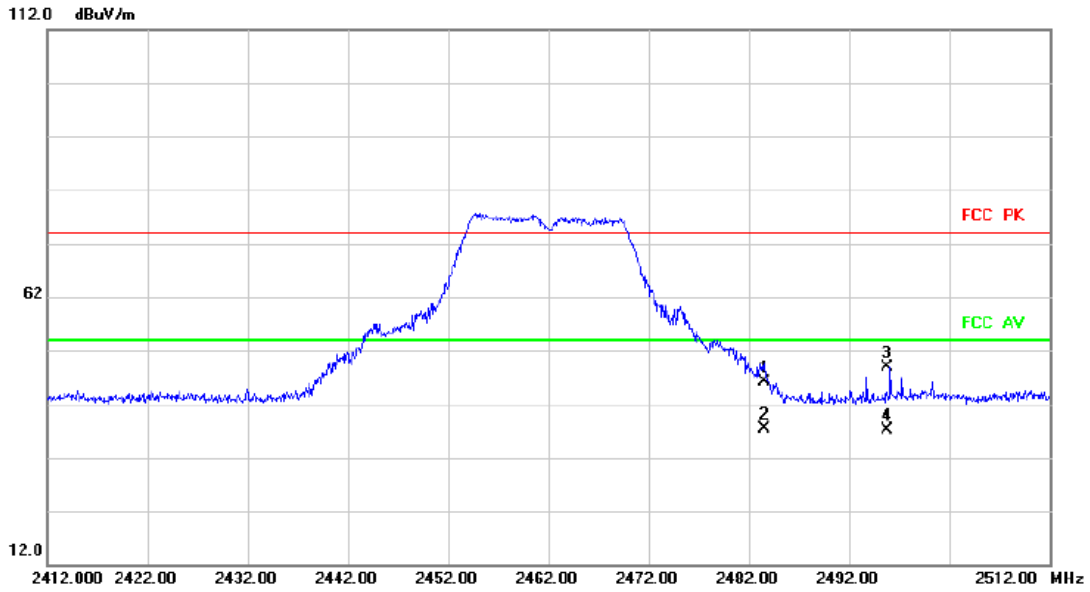
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4914.000	49.03	-1.36	47.67	74.00	-26.33			peak
2	*	4914.000	42.97	-1.36	41.61	54.00	-12.39			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value

Test Mode	TX 2462MHz_802.11g _ Channel 11	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



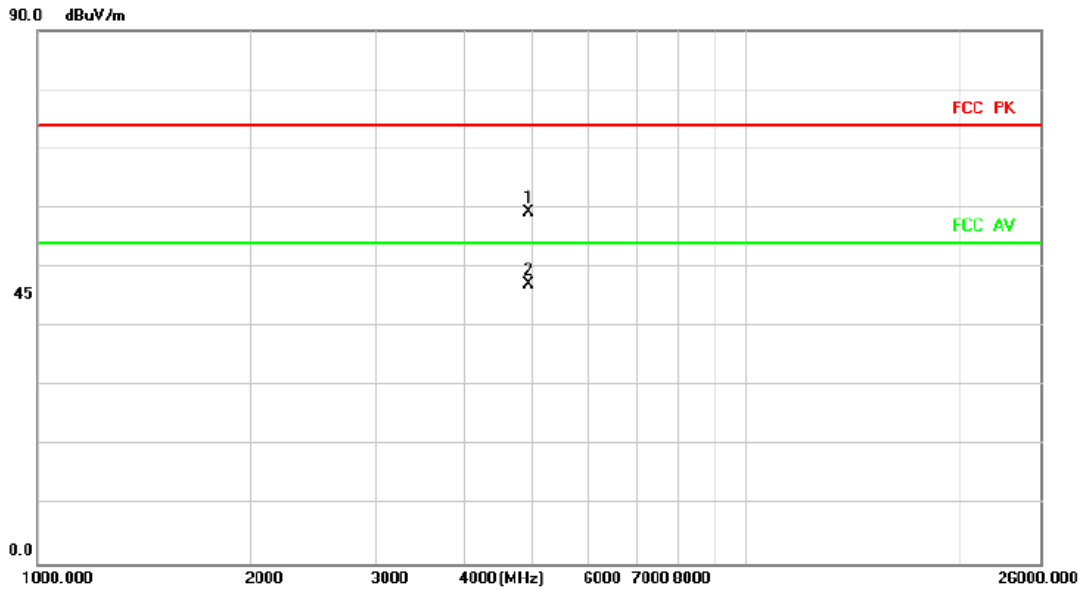
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	57.46	-11.28	46.18	74.00	-27.82	peak		
2	*	2483.500	48.63	-11.28	37.35	54.00	-16.65	AVG		
3		2495.827	60.11	-11.22	48.89	74.00	-25.11	peak		
4		2495.827	48.23	-11.22	37.01	74.00	-36.99	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11g _ Channel 11	Polarization	Horizontal
-----------	---------------------------------	--------------	------------

Radiated Emission



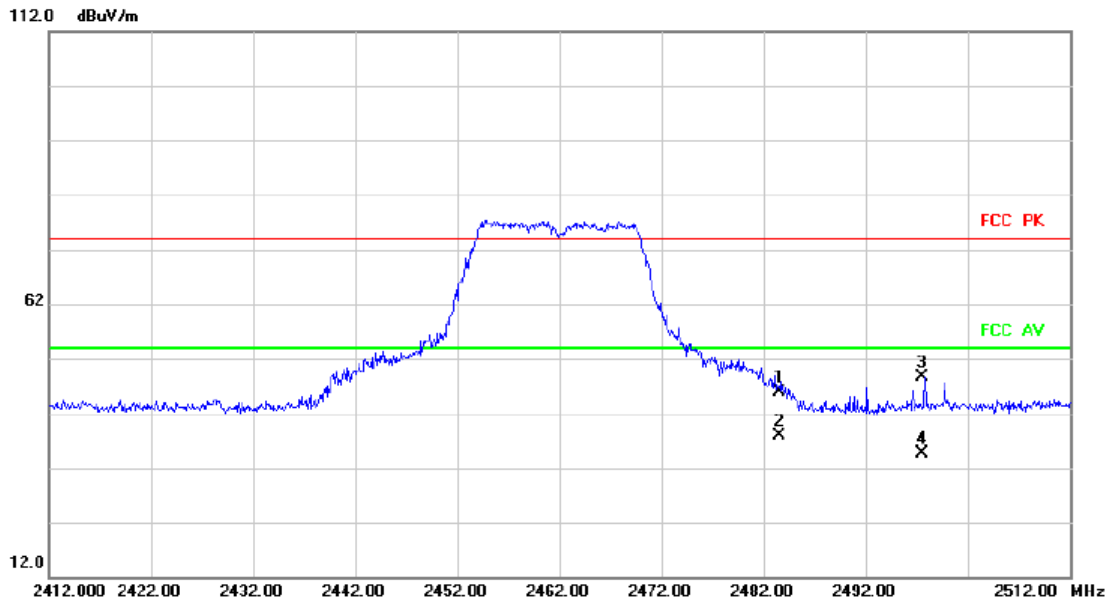
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4924.000	60.48	-1.30	59.18	74.00	-14.82	peak		
2	*	4924.000	48.35	-1.30	47.05	54.00	-6.95	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11g _ Channel 11	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



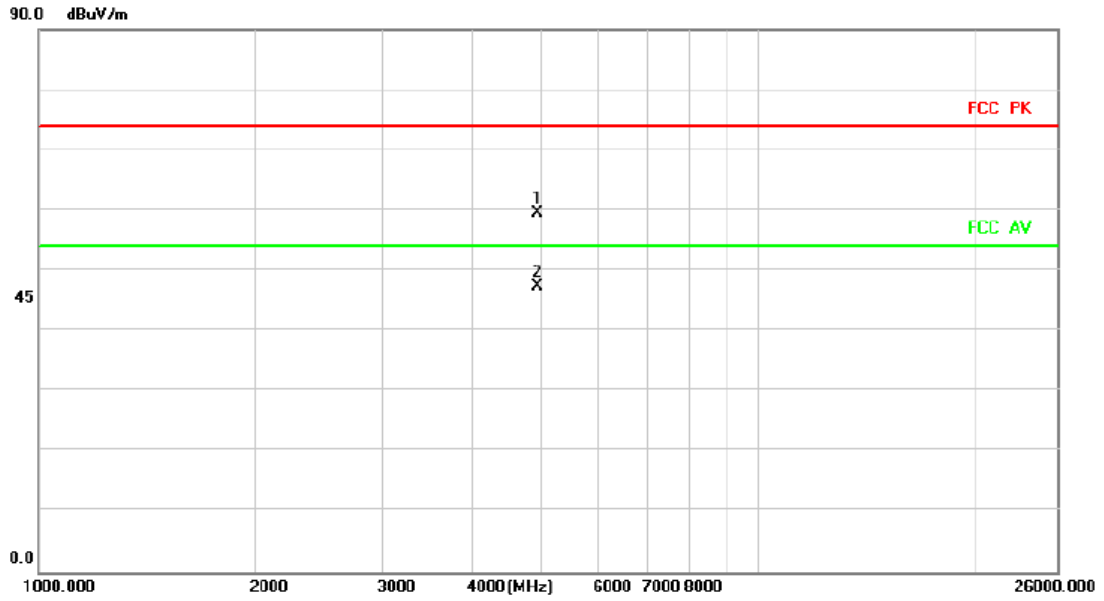
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	57.19	-11.28	45.91	74.00	-28.09			peak
2		2483.500	49.06	-11.28	37.78	74.00	-36.22			peak
3	*	2497.551	59.78	-11.22	48.56	74.00	-25.44			peak
4		2497.551	45.91	-11.22	34.69	74.00	-39.31			peak

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11g _ Channel 11	Polarization	Vertical
-----------	---------------------------------	--------------	----------

Radiated Emission



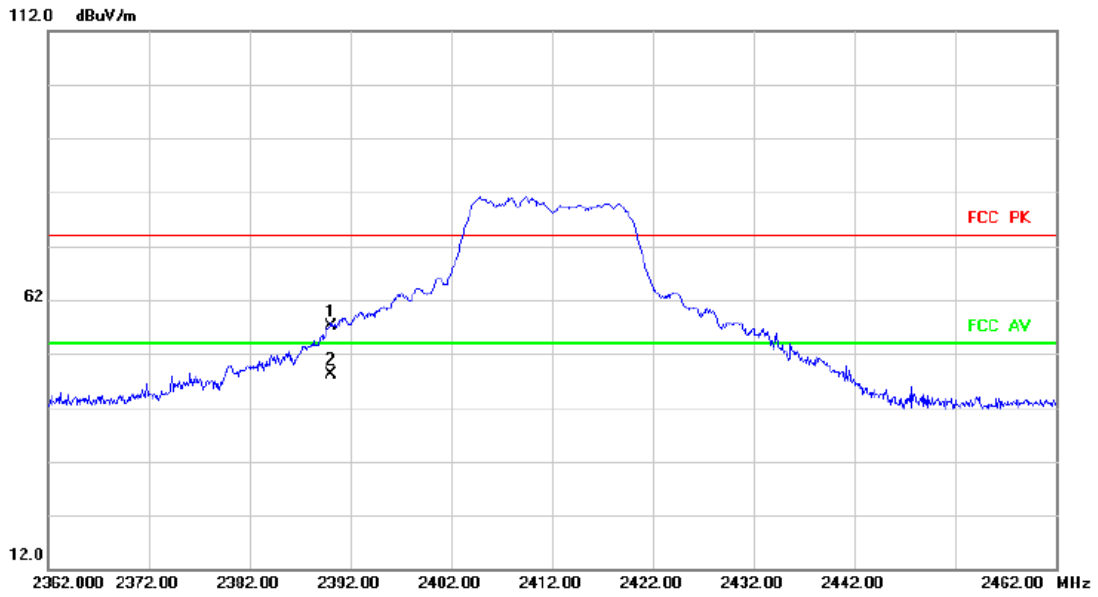
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4924.000	60.71	-1.30	59.41	74.00	-14.59	peak		
2	*	4924.000	48.67	-1.30	47.37	54.00	-6.63	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11n(20MHz) _ Channel 01	Polarization	Horizontal
-----------	--	--------------	------------

Radiated Emission



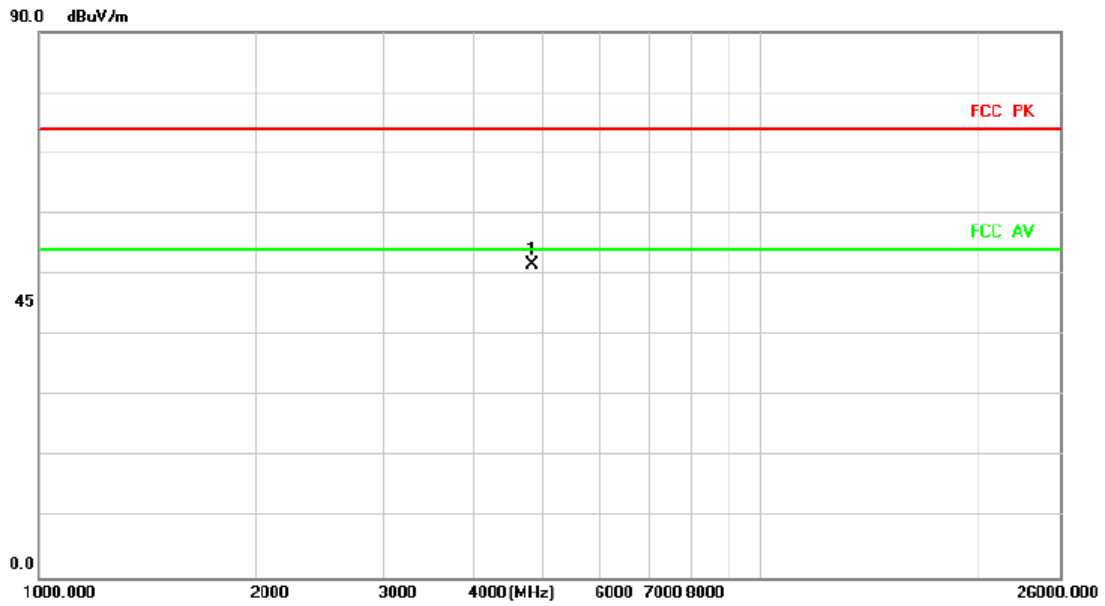
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	68.77	-11.67	57.10	74.00	-16.90	peak		
2	*	2390.000	59.88	-11.67	48.21	54.00	-5.79	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11n(20MHz) _ Channel 01	Polarization	Horizontal
-----------	--	--------------	------------

Radiated Emission



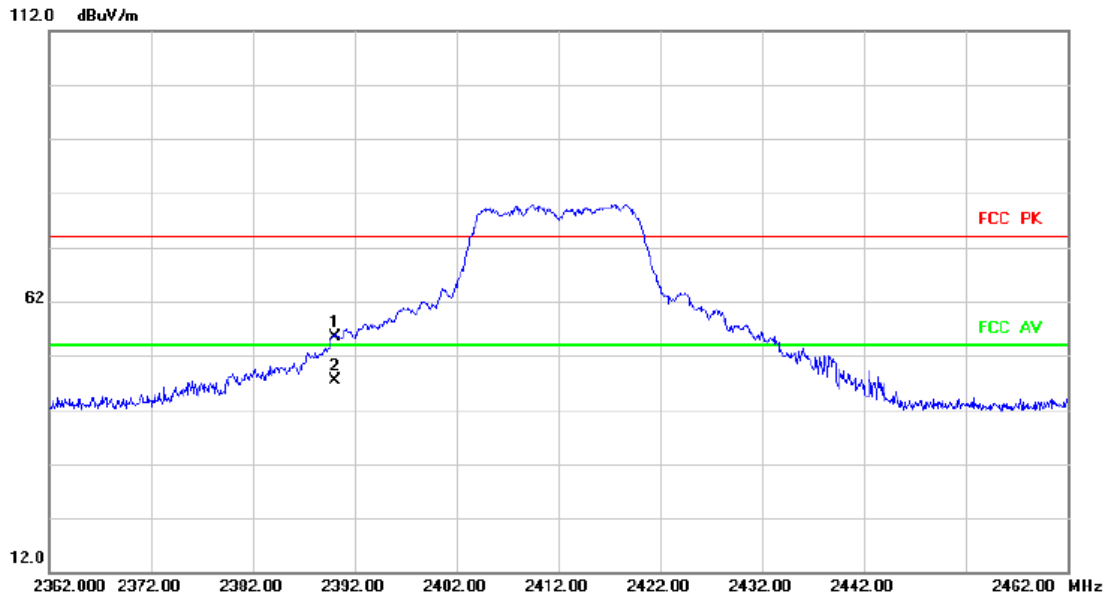
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4824.000	53.62	-1.88	51.74	74.00	-22.26	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11n(20MHz)_ Channel 01	Polarization	Vertical
-----------	---------------------------------------	--------------	----------

Radiated Emission



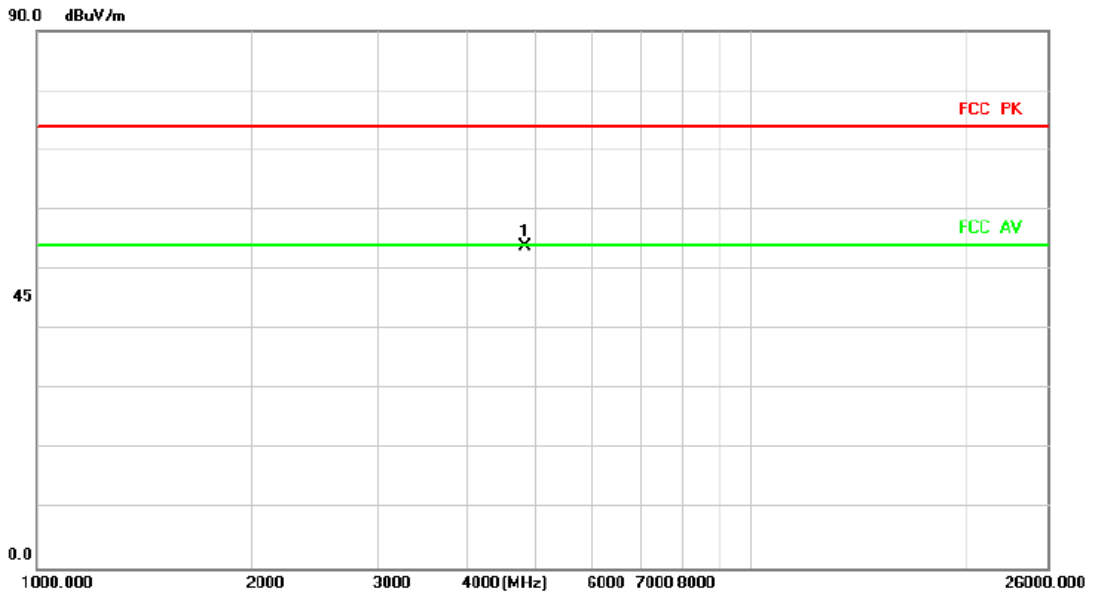
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	2390.000	67.08	-11.67	55.41	74.00	-18.59	peak		
2		2390.000	59.03	-11.67	47.36	74.00	-26.64	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2412MHz_802.11n(20MHz)_ Channel 01	Polarization	Vertical
-----------	---------------------------------------	--------------	----------

Radiated Emission



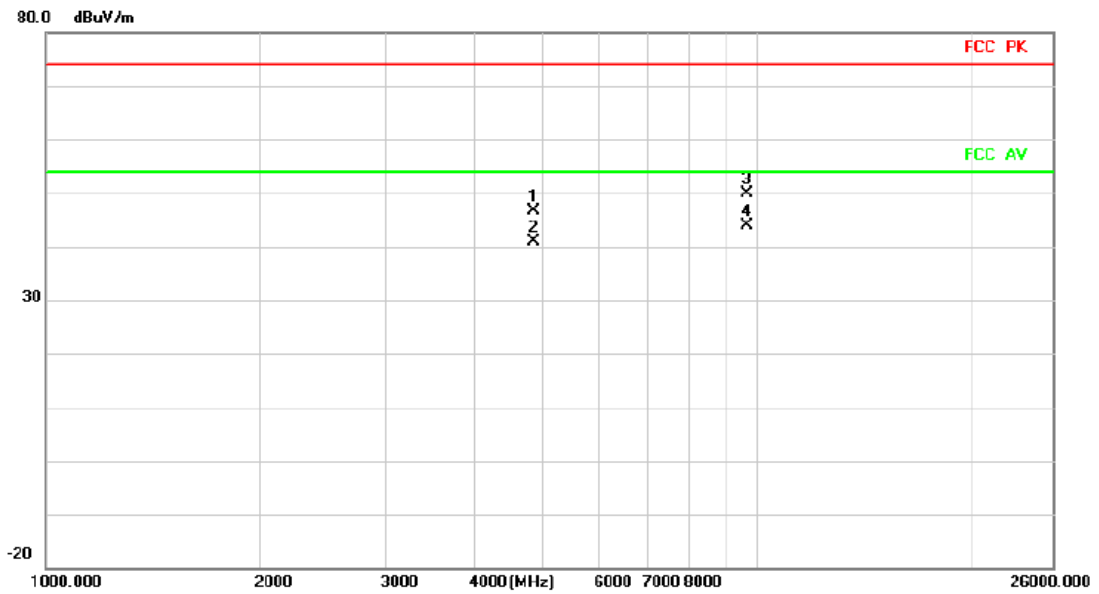
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4824.000	55.85	-1.88	53.97	74.00	-20.03	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2417MHz_802.11n(20MHz)_Channel 02	Polarization	Horizontal
-----------	--------------------------------------	--------------	------------

Radiated Emission



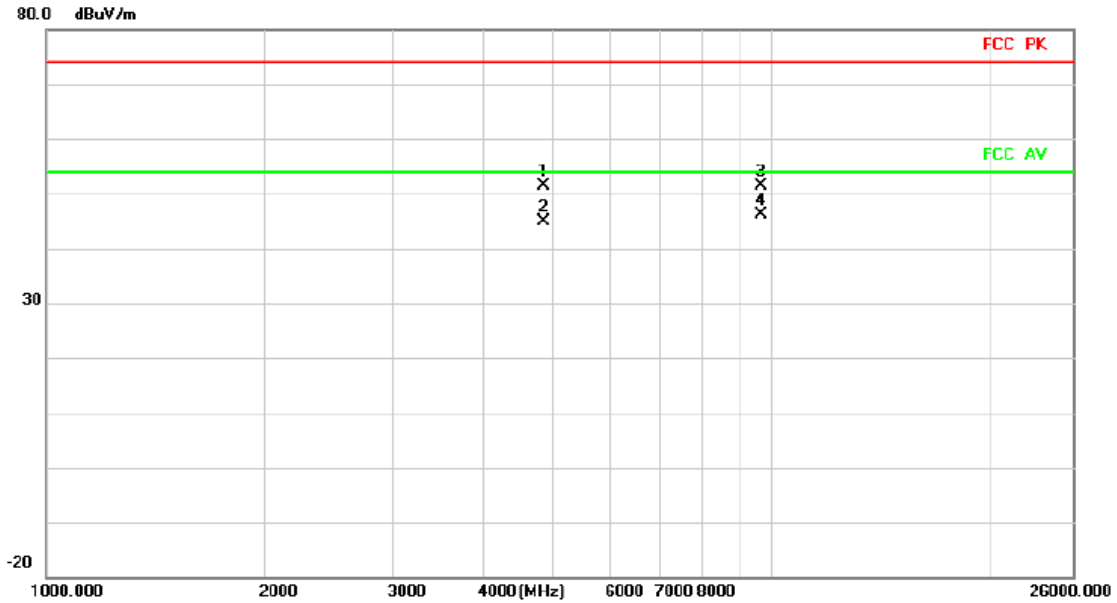
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4834.000	48.57	-1.82	46.75	74.00	-27.25			peak
2		4834.000	42.77	-1.82	40.95	54.00	-13.05			AVG
3		9668.000	41.68	8.08	49.76	74.00	-24.24			peak
4	*	9668.000	35.91	8.08	43.99	54.00	-10.01			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2417MHz_802.11n(20MHz)_Channel 02	Polarization	Vertical
-----------	--------------------------------------	--------------	----------

Radiated Emission



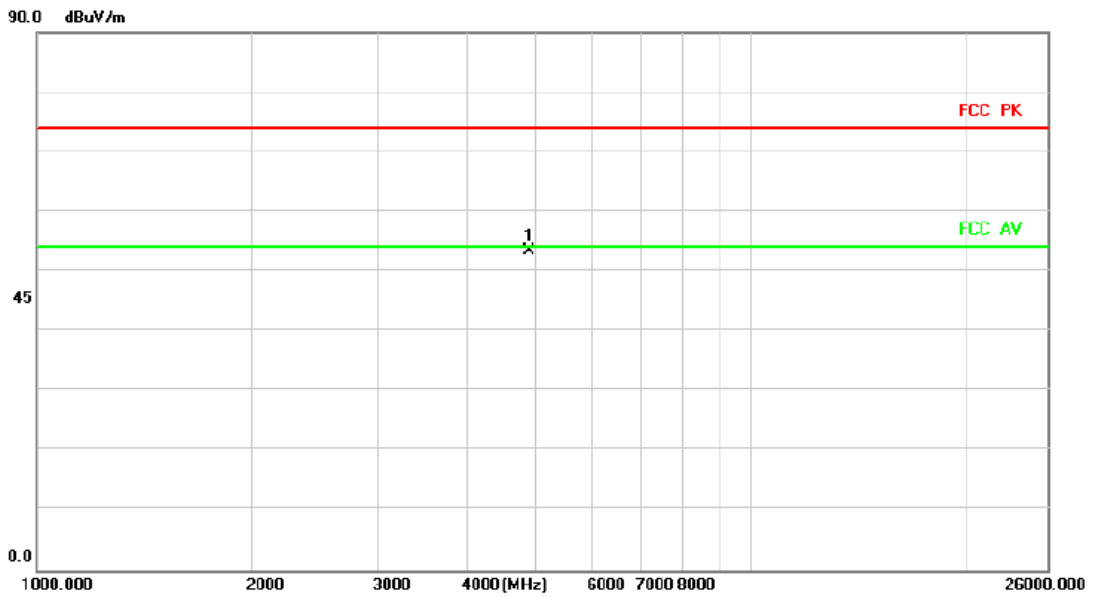
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4834.000	53.31	-1.82	51.49	74.00	-22.51			peak
2		4834.000	46.58	-1.82	44.76	54.00	-9.24			AVG
3		9668.000	43.22	8.08	51.30	74.00	-22.70			peak
4	*	9668.000	37.93	8.08	46.01	54.00	-7.99			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value

Test Mode	TX 2437MHz_802.11n(20MHz)_ Channel 06	Polarization	Horizontal
-----------	---------------------------------------	--------------	------------

Radiated Emission



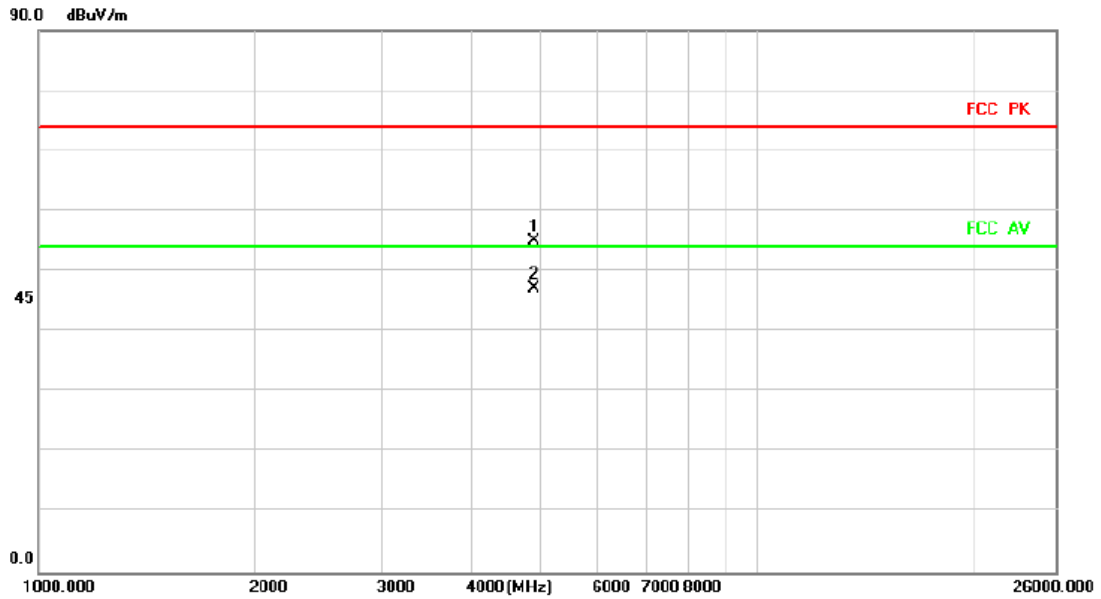
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4874.000	54.95	-1.59	53.36	74.00	-20.64	peak		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2437MHz_802.11n(20MHz) _ Channel 06	Polarization	Vertical
-----------	--	--------------	----------

Radiated Emission



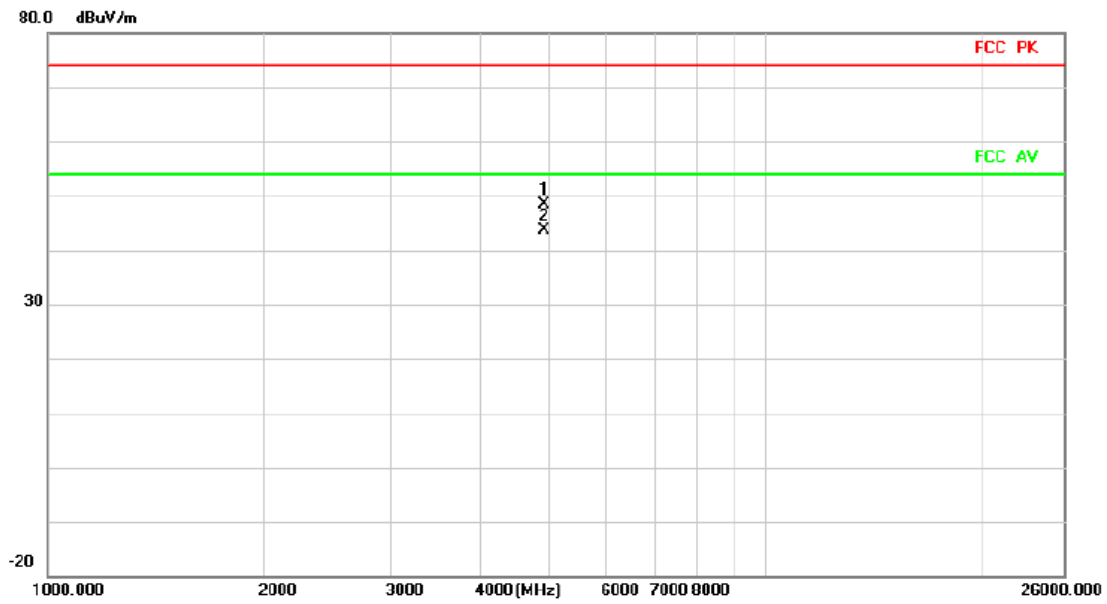
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4874.000	56.68	-1.59	55.09	74.00	-18.91			peak
2	*	4874.000	48.80	-1.59	47.21	54.00	-6.79			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2457MHz_802.11n(20MHz)_Channel 10	Polarization	Horizontal
-----------	--------------------------------------	--------------	------------

Radiated Emission



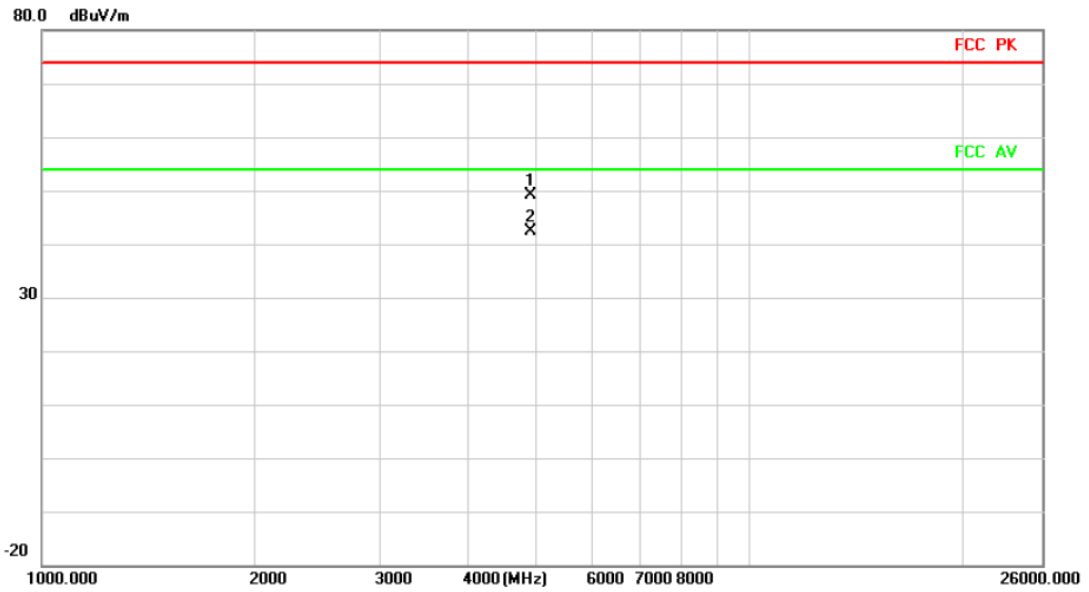
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4914.000	49.66	-1.36	48.30	74.00	-25.70			peak
2	*	4914.000	44.88	-1.36	43.52	54.00	-10.48			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2457MHz_802.11n(20MHz)_Channel 10	Polarization	Vertical
-----------	--------------------------------------	--------------	----------

Radiated Emission



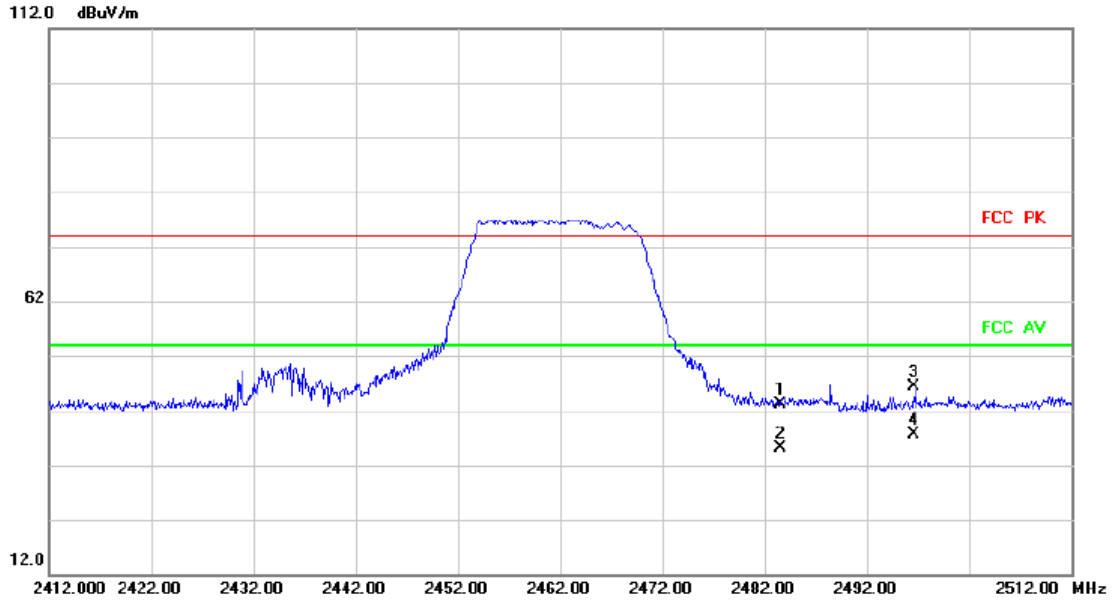
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4914.000	50.57	-1.36	49.21	74.00	-24.79	peak		
2	*	4914.000	43.69	-1.36	42.33	54.00	-11.67	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value

Test Mode	TX 2462MHz_802.11n(20MHz)_ Channel 11	Polarization	Horizontal
-----------	---------------------------------------	--------------	------------

Radiated Emission



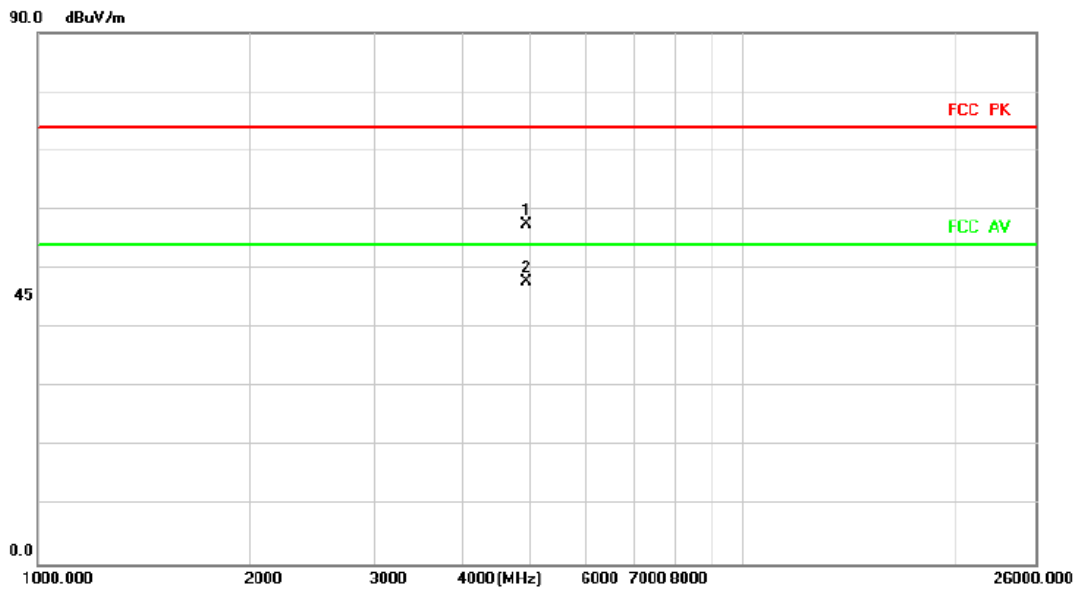
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	54.33	-11.28	43.05	74.00	-30.95			peak
2		2483.500	46.37	-11.28	35.09	54.00	-18.91			AVG
3		2496.537	57.69	-11.22	46.47	74.00	-27.53			peak
4	*	2496.537	48.75	-11.22	37.53	54.00	-16.47			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11n(20MHz)_ Channel 11	Polarization	Horizontal
-----------	---------------------------------------	--------------	------------

Radiated Emission



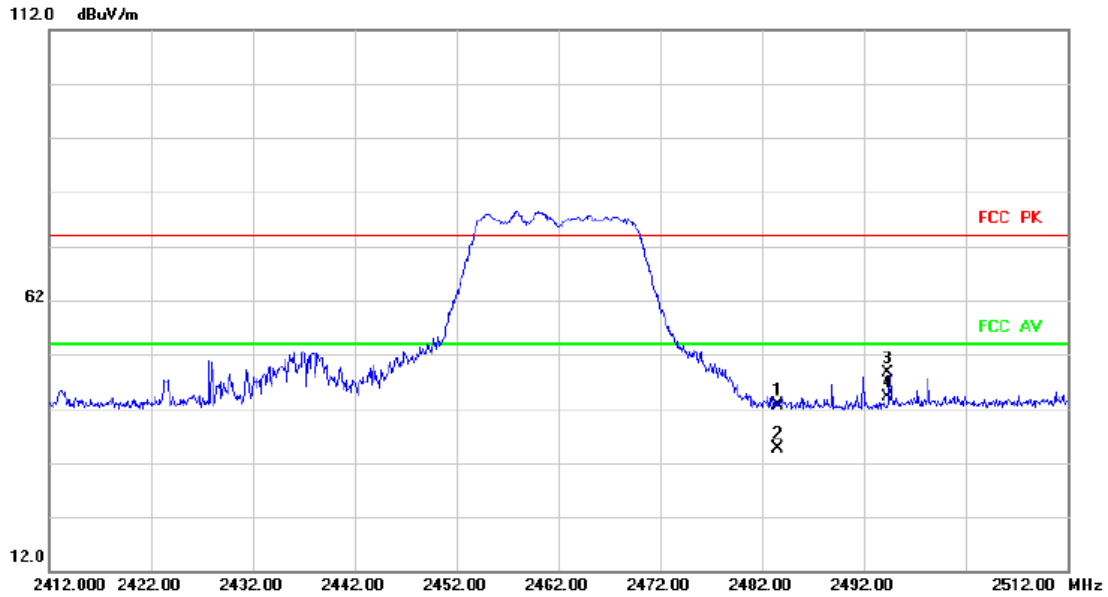
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4924.000	58.81	-1.30	57.51	74.00	-16.49	peak		
2	*	4924.000	49.14	-1.30	47.84	54.00	-6.16	AVG		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11n(20MHz)_ Channel 11	Polarization	Vertical
-----------	---------------------------------------	--------------	----------

Radiated Emission



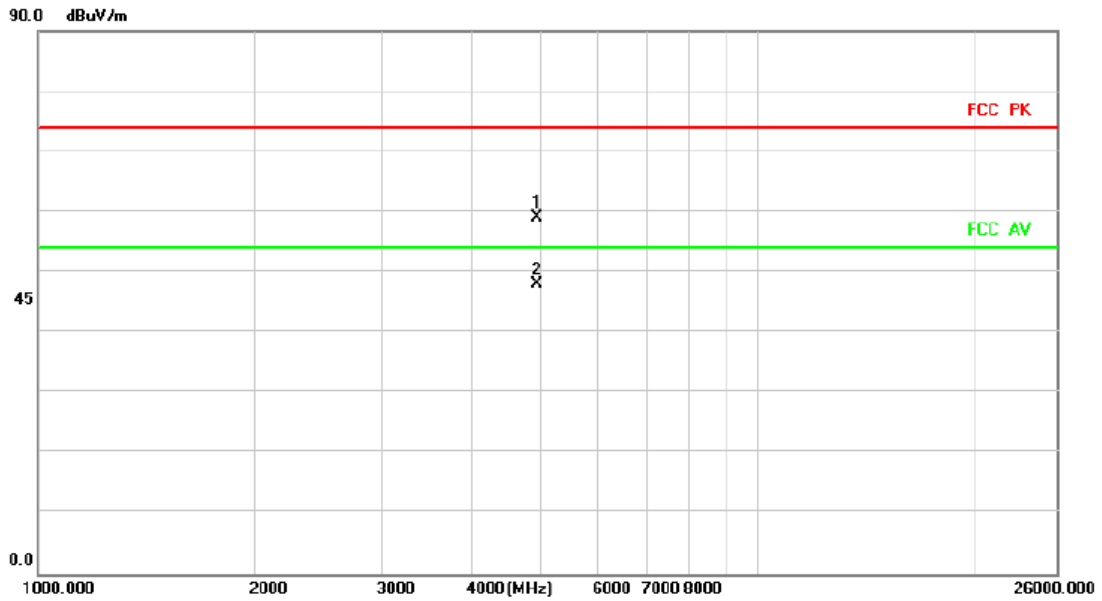
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	53.83	-11.28	42.55	74.00	-31.45			peak
2		2483.500	45.98	-11.28	34.70	54.00	-19.30			AVG
3		2494.307	59.88	-11.24	48.64	74.00	-25.36			peak
4	*	2494.307	55.27	-11.24	44.03	54.00	-9.97			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2462MHz_802.11n(20MHz) _ Channel 11	Polarization	Vertical
-----------	--	--------------	----------

Radiated Emission



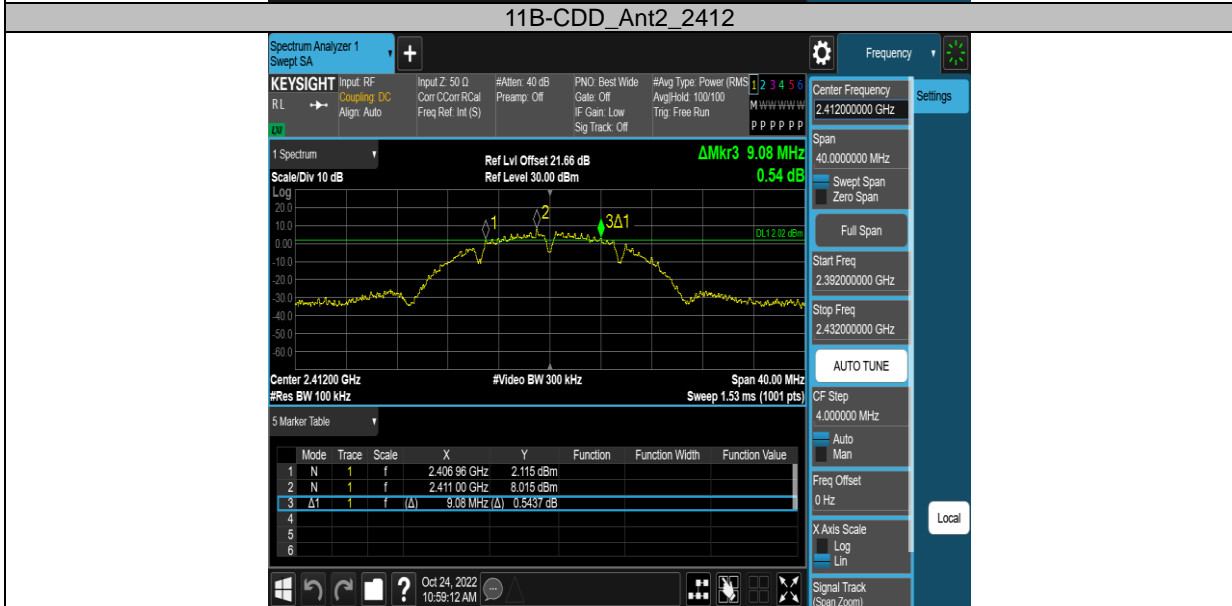
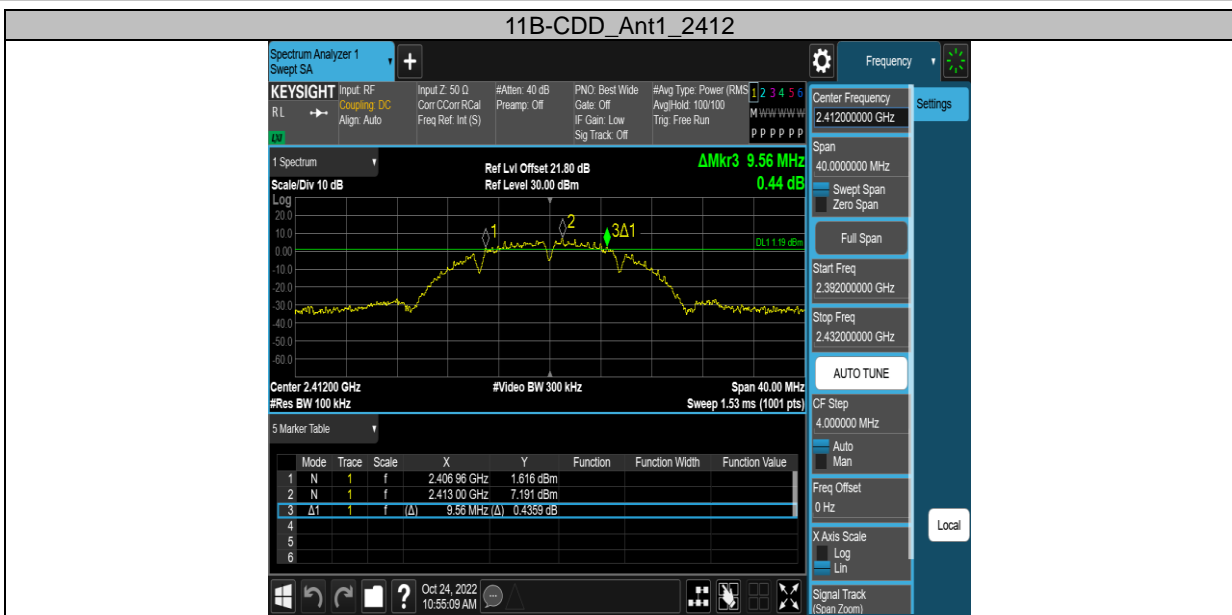
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4924.000	60.28	-1.30	58.98	74.00	-15.02			peak
2	*	4924.000	49.41	-1.30	48.11	54.00	-5.89			AVG

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX E - BANDWIDTH

TestMode	Antenna	Channel	-6dB Bandwidth (MHz)	Limit[MHz]	Verdict
11B-CDD	Ant1	2412	9.560	≥ 0.5	PASS
	Ant2	2412	9.080	≥ 0.5	PASS
	Ant1	2437	10.080	≥ 0.5	PASS
	Ant2	2437	10.040	≥ 0.5	PASS
	Ant1	2462	9.080	≥ 0.5	PASS
	Ant2	2462	10.040	≥ 0.5	PASS
11G-CDD	Ant1	2412	16.360	≥ 0.5	PASS
	Ant2	2412	16.360	≥ 0.5	PASS
	Ant1	2437	16.360	≥ 0.5	PASS
	Ant2	2437	16.360	≥ 0.5	PASS
	Ant1	2462	16.360	≥ 0.5	PASS
	Ant2	2462	16.360	≥ 0.5	PASS
11N20MIMO	Ant1	2412	17.560	≥ 0.5	PASS
	Ant2	2412	17.600	≥ 0.5	PASS
	Ant1	2437	17.560	≥ 0.5	PASS
	Ant2	2437	17.560	≥ 0.5	PASS
	Ant1	2462	17.640	≥ 0.5	PASS
	Ant2	2462	17.560	≥ 0.5	PASS



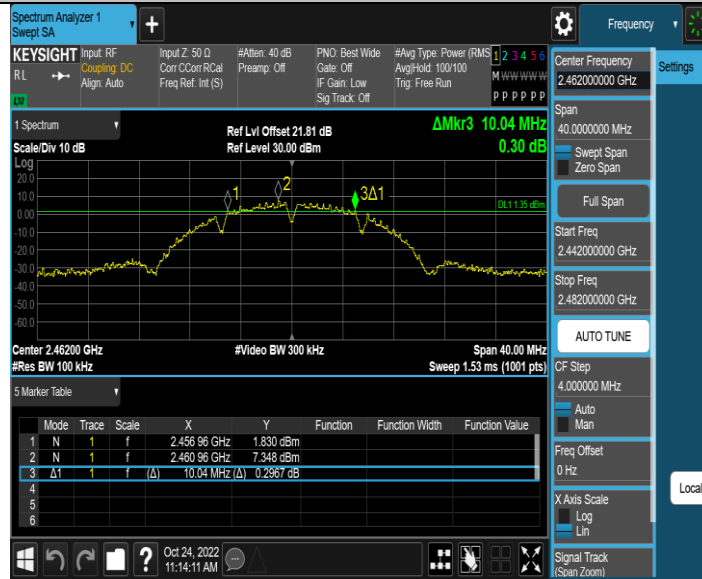
11B-CDD_Ant2_2437



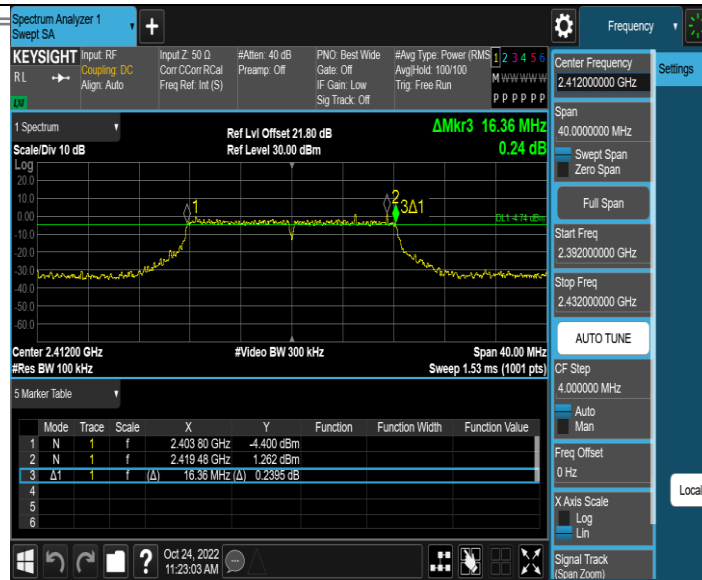
11B-CDD_Ant1_2462



11B-CDD_Ant2_2462



11G-CDD_Ant1_2412



11G-CDD_Ant2_2412



11G-CDD_Ant1_2437



11G-CDD_Ant2_2437



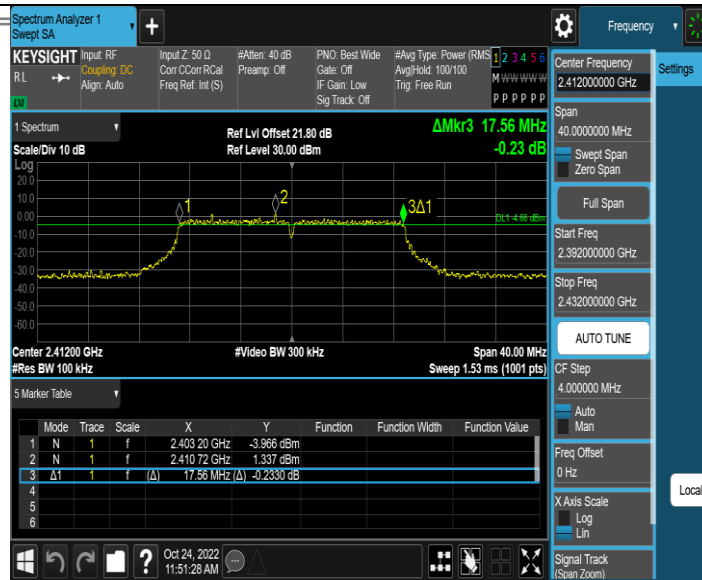
11G-CDD_Ant1_2462



11G-CDD_Ant2_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



TestMode	Antenna	Channel	99% Occupied Bandwidth (MHz)	Limit[MHz]	Verdict
11B-CDD	Ant1	2412	15.547	≥ 0.5	PASS
	Ant2	2412	15.628	≥ 0.5	PASS
	Ant1	2437	15.562	≥ 0.5	PASS
	Ant2	2437	15.641	≥ 0.5	PASS
	Ant1	2462	15.579	≥ 0.5	PASS
	Ant2	2462	15.663	≥ 0.5	PASS
11G-CDD	Ant1	2412	17.497	≥ 0.5	PASS
	Ant2	2412	17.354	≥ 0.5	PASS
	Ant1	2437	17.471	≥ 0.5	PASS
	Ant2	2437	17.404	≥ 0.5	PASS
	Ant1	2462	17.462	≥ 0.5	PASS
	Ant2	2462	17.366	≥ 0.5	PASS
11N20MIMO	Ant1	2412	18.347	≥ 0.5	PASS
	Ant2	2412	18.388	≥ 0.5	PASS
	Ant1	2437	18.422	≥ 0.5	PASS
	Ant2	2437	18.304	≥ 0.5	PASS
	Ant1	2462	18.429	≥ 0.5	PASS
	Ant2	2462	18.457	≥ 0.5	PASS

