

RF TEST REPORT


FCC ID: 2BCGS-P1411

According to

47 CFR FCC Part 15, Subpart C(Section 15.247)

ANSI C63.10:2013

Product description : PrismXR Puppis S1
 Model No. : P1411
 Trade Mark : --
 Product No. : POC230711014-S001; POC230711014-S002
 Applicant : PRISM XR PTE LTD
 Address : 60 PAYA LEBAR ROAD #12-03 PAYA LEBAR SQUARE
 SINGAPORE, 409051
 Receipt date : 2023.07.15
 Test date : 2023.07.15~2023.09.17
 Issued Date : 2023.10.08

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Table of Contents

History of this test report.....	4
1. General Information	5
1.1 Applicant.....	5
1.2 Manufacturer.....	5
1.3 Basic Description of Equipment Under Test.....	5
1.4 Transmit Operating Mode	6
2. Summary of Test Results	8
2.1 Summary of Test Items	8
2.2 Application of Standard.....	8
2.3 Test Instruments	9
2.4 Test Mode	10
2.5 Parameters Of Test Software	11
2.6 Test Condition	11
2.7 Duty Cycle of Test Signal	12
2.8 Measurement Uncertainty.....	19
2.9 Test Location.....	19
2.10 Description of Support Units	19
2.11 Deviation from Standards	20
3. Test Procedure And Results	21
3.1 AC Power Line Conducted Emission	21
3.1.1 Limit.....	21
3.1.2 Test Procedure	21
3.1.3 Test Setup	21
3.1.4 Test Result.....	22
3.2 Radiated Emission and Band Edge	24
3.2.1 Limit.....	24
3.2.2 Test Procedure	24

3.2.3	Test Setup	26
3.2.4	Test Result.....	28
3.3	Spurious Emission at Antenna Port	66
3.3.1	Limit.....	66
3.3.2	Test Procedure	66
3.3.3	Test Setup	67
3.3.4	Test Result.....	68
	Conducted Band edge measurements.....	68
	Conducted Spurious Emission	81
3.4	6dB Bandwidth And 99% Occupied Bandwidth.....	157
3.4.1	Limit.....	157
3.4.2	Test Procedure	157
3.4.3	Test Setup	157
3.4.4	Test Result.....	158
	DTS Bandwidth.....	158
	Occupied channel bandwidth	177
3.5	Maximum conducted output power	196
3.5.1	Limit.....	196
3.5.2	Test Procedure	196
3.5.3	Test Setup	196
3.5.4	The Result.....	197
3.6	Power Spectral Density.....	199
3.6.1	Limit.....	199
3.6.2	Test Procedure	199
3.6.3	Test Setup	199
3.6.4	The Result.....	200

History of this test report

Original Report Issue Date: 2023.10.08

No additional attachment

Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. General Information

1.1 Applicant

PRISM XR PTE LTD

60 PAYA LEBAR ROAD #12-03 PAYA LEBAR SQUARE SINGAPORE, 409051

1.2 Manufacturer

PRISM XR PTE LTD

60 PAYA LEBAR ROAD #12-03 PAYA LEBAR SQUARE SINGAPORE, 409051

1.3 Basic Description of Equipment Under Test

Items	Description	
Equipment Name	PrismXR Puppis S1	
Test Model No.	P1411	
Series Models.	N/A	
Spec. Difference	N/A	
Trade Mark	N/A	
Power Supply	DC 5V From USB	
Adapter information	N/A	
Hardware Version	--	
Software Version	--	
Operate temperature	0°C-40°C	
EUT Stage	○ Product Unit	● Final-Sample
Operating Band and Conducted Output Power (Max power)	2400MHz ~ 2483.5MHz	●IEEE 802.11n(HT20):24.75dBm
Product Type	IEEE 802.11b: WLAN (2TX, 2RX) IEEE 802.11g: WLAN (2TX, 2RX) IEEE 802.11n: WLAN (2TX, 2RX) IEEE 802.11ax: WLAN (2TX, 2RX)	
Nominal Bandwidth	20MHz/ 40MHz	
Modulation	IEEE 802.11b: DSSS (DBPSK/DQPSK/CCK) IEEE 802.11g: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE 802.11n: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE 802.11ax: OFDMA (BPSK/QPSK/16QAM/64QAM/1024QAM)	
Data Rate (Mbps)	IEEE 802.11b mode: DSSS (1/2/5.5/11Mbps) IEEE 802.11g mode: OFDM (6/9/12/18/24/36/48/54Mbps) IEEE 802.11n: up to 300Mbps IEEE 802.11ax: up to 573.529Mbps	
Antenna gain	Ant1: 1.88dBi, Ant2: 2.56dBi	

Eleven channels are provided for 802.11b, 802.11g, 802.11n (20MHz), 802.11ax (20MHz):

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400MHz ~ 2483.5 MHz	01	2412MHz	07	2442MHz
	02	2417MHz	08	2447MHz
	03	2422MHz	09	2452MHz
	04	2427MHz	10	2457MHz
	05	2432MHz	11	2462MHz
	06	2437MHz	/	/

Seven channels are provided for 802.11n (40MHz), 802.11ax (40MHz):

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400MHz ~ 2483.5 MHz	03	2422 MHz	07	2442MHz
	04	2427MHz	08	2447MHz
	05	2432MHz	09	2452MHz
	06	2437MHz	/	/

Note: For 802.11ax mode only support full RU mode.

1.4 Transmit Operating Mode

Transmit Operating Mode				Transmit Multiple Antennas					
<input type="radio"/>	Operating mode 1 (single antenna)			<input type="radio"/>	1TX				
<input checked="" type="radio"/>	Operating mode 2 (multiple antenna, with beamforming)			<input type="radio"/>	2TX	<input type="radio"/>	3TX	<input type="radio"/>	4TX
<input type="radio"/>	Operating mode 3 (multiple antenna, with beamforming)			<input type="radio"/>	2TX	<input type="radio"/>	3TX	<input type="radio"/>	4TX
<input checked="" type="radio"/>	802.11b	Operating mode	<input type="radio"/>	1TX	<input type="radio"/>	2TX	<input checked="" type="radio"/>	2TX	
<input checked="" type="radio"/>	802.11g	Operating mode	<input type="radio"/>	1TX	<input type="radio"/>	2TX	<input checked="" type="radio"/>	2TX	
<input checked="" type="radio"/>	802.11n(HT20MHz)	Operating mode	<input type="radio"/>	1TX	<input type="radio"/>	2TX	<input checked="" type="radio"/>	2TX	
<input checked="" type="radio"/>	802.11n(HT40MHz)	Operating mode	<input type="radio"/>	1TX	<input type="radio"/>	2TX	<input checked="" type="radio"/>	2TX	
<input checked="" type="radio"/>	802.11ax(HE20MHz)	Operating mode	<input type="radio"/>	1TX	<input type="radio"/>	2TX	<input checked="" type="radio"/>	2TX	
<input checked="" type="radio"/>	802.11ax(HE40MHz)	Operating mode	<input type="radio"/>	1TX	<input type="radio"/>	2TX	<input checked="" type="radio"/>	2TX	

Transmit Operating Mode		Directional Gain (dBi)	
		Power spectral density	Power
802.11b	2TX With Beamforming	5.56	5.56
802.11g	2TX With Beamforming	5.56	5.56
802.11n(HT20MHz)	2TX With Beamforming	5.56	5.56
802.11n(HT40MHz)	2TX With Beamforming	5.56	5.56
802.11ax(HE20MHz)	2TX With Beamforming	5.56	5.56
802.11ax(HE40MHz)	2TX With Beamforming	5.56	5.56

Note: If antenna gains are not equal and each transmit antenna can be driven by more than one

spatial stream, directional gain may be calculated by either of the following formulas:

Directional gain = $G_{ANT\ MAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where N_{SS} = the number of independent spatial streams of data and $G_{ANT\ MAX}$ is the gain of the antenna having the highest gain (in dBi).

Directional gain = $2.56 + 10 \log(2/1)$ dBi = 5.56 dBi

Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

If all antennas have the same gain, G_{ANT} :

Directional gain = $G_{ANT} + 10 \log(N_{ANT}/N_{SS})$ dBi, where N_{SS} = the number of independent spatial streams of data and G_{ANT} is the antenna gain in dBi. (This formula can also be applied when antennas have different gains if the highest antenna gain is substituted for G_{ANT} .)

Ant gain provided by the manufacturer.

EUT with the lowest possible $N_{SS} = 1$

2. Summary of Test Results

2.1 Summary of Test Items

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Test item	FCC Clause	Results	Remarks
AC Power Conducted Emission	15.207	Pass	Meet the requirement of the limit
Radiated Emission and Band Edge Measurement	15.205/15.209 /15.247(d)	Pass	Meet the requirement of the limit
Spurious Emission at Antenna Port	15.247(d)	Pass	Meet the requirement of the limit
6dB Bandwidth	15.247(a)(2)	Pass	Meet the requirement of the limit
Conducted Power	15.247(b)	Pass	Meet the requirement of the limit
Power Spectral Density	15.247(e)	Pass	Meet the requirement of the limit
Antenna Requirements	15.203	Compliance	Note
Note: The EUT has 2 internal antennas arrangement which was permanently attached.			

2.2 Application of Standard

47 CFR FCC Part 15, Subpart C (Section 15.247)

KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10:2013

2.3 Test Instruments

Radiated Emissions						
No.	Equipment	Manufacturer	Type No.	Serial No.	Cal. date (yyyy/mm/dd)	Cal. Due date (yyyy/mm/dd)
1	Test receiver	Rohde&Schwarz	ESU	100184	2023/5/3	2024/5/2
2	Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-127 3	2023/4/23	2024/4/22
3	Low frequency amplifier	Unknown	LNA 0920N	2014	2023/5/3	2024/5/2
4	High frequency amplifier	Schwarzbeck	BBV 9718	284	2023/5/3	2024/5/2
5	Loop Antenna	Schwarzbeck	FMZB1519 B	00029	2022/7/4	2025/7/3
6	Log periodic antenna	Schwarzbeck	VULB 9168	1151	2023/4/23	2024/4/22
7	Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-127 3	2022/5/5	2025/5/4
8	Horn Antenna	Schwarzbeck	BBHA 9170	9170#685	2022/7/4	2025/7/3
9	Temp&Humidity Recorder	Meideshi	JR900	/	2023/5/3	2024/5/2
10	RF cable(966 chamber)9kHz-1 GHz	Unknown	Unknown	Unknown	2023/5/3	2024/5/2
11	RF cable(966 chamber)1GHz- 18GHz	Unknown	Unknown	Unknown	2023/5/3	2024/5/2
12	RF cable(966 chamber)18GHz -40GHz	Unknown	Unknown	Unknown	2023/5/3	2024/5/2
13	Test software	Farad Technology Co., Ltd	EZ-EMC	/	/	/
Conducted Emission						
1	Test receiver	Rohde&Schwarz	ESCI	100718	2023/5/3	2024/5/2
2	LISN	Rohde&Schwarz	ENV216	100075	2023/5/3	2024/5/2
3	Pulse limiter	Rohde&Schwarz	ESH3-Z2	102299	2023/5/3	2024/5/2
4	RF cable (9kHz-30MHz)	Unknown	Unknown	Unknown	2023/5/3	2024/5/2
5	Test software	Farad Technology Co., Ltd	EZ-EMC	/	/	/
RF Conducted Emission						
1	MXA Signal Analyzer	Keysight	N9021B	MY60080 169	2023/4/23	2024/4/22
2	RF Control Unit	dsusoft	JS0806-2	21G80604 49	2023/4/23	2024/4/22
3	power supply unit	dsusoft	JS0806-4 ADC	N/A	2023/4/23	2024/4/22
4	VXG Signal Generator	Keysight	M9384B	MY61270 787	2023/4/23	2024/4/22
5	EXG Analog Signal Generator	Keysight	N5173B	MY59101 282	2023/4/23	2024/4/22
6	Test software	dsusoft	JS1120-3	/	/	/

2.4 Test Mode

Frequency Range : 2400~2483.5 MHz				
Test Items	Mode	Data Rate	Channel	Antenna
AC Power Conducted Emission	802.11b	1Mbps	06	1&2
Radiated Emission and Band Edge Measurement	802.11b	1Mbps	01/06/11	1&2
	802.11n(20MHz)	MCS0	01/06/11	1&2
	802.11n(40MHz)	MCS0	03/06/09	1&2
Spurious Emission at Antenna Port	802.11b	1Mbps	01/06/11	1&2
	802.11n(20MHz)	MCS0	01/06/11	1&2
	802.11n(40MHz)	MCS0	03/06/09	1&2
	802.11ax(20MHz)	MCS0	01/06/11	1&2
	802.11ax(40MHz)	MCS0	03/06/09	1&2
6dB Bandwidth	802.11b	1Mbps	01/06/11	1&2
	802.11n(20MHz)	MCS0	01/06/11	1&2
	802.11n(40MHz)	MCS0	03/06/09	1&2
	802.11ax(20MHz)	MCS0	01/06/11	1&2
	802.11ax(40MHz)	MCS0	03/06/09	1&2
Conducted Power	802.11b	1Mbps	01/06/11	1&2
	802.11n(20MHz)	MCS0	01/06/11	1&2
	802.11n(40MHz)	MCS0	03/06/09	1&2
	802.11ax(20MHz)	MCS0	01/06/11	1&2
	802.11ax(40MHz)	MCS0	03/06/09	1&2
Power Spectral Density	802.11b	1Mbps	01/06/11	1&2
	802.11n(20MHz)	MCS0	01/06/11	1&2
	802.11n(40MHz)	MCS0	03/06/09	1&2
	802.11ax(20MHz)	MCS0	01/06/11	1&2
	802.11ax(40MHz)	MCS0	03/06/09	1&2

Note:

The EUT supports non-beamforming and beamforming modes, after evaluating, the beamforming mode has been evaluated to be the worst case, so it was selected to test.

2.5 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. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Test Software Version	QATool		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	16	16	16
IEEE 802.11g	15.5	19.5	20.5
IEEE 802.11n(HT20)	17	21.5	17.5
IEEE 802.11ax(HE20)	17	20.5	21.5
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(HT40)	16.5	18	17.5
IEEE 802.11ax(HE40)	16.5	18	17.5

Note: The EUT supports non-beamforming and beamforming modes, both modes have the same power setting, after evaluating, the beamforming mode has been evaluated to be the worst case, so it was selected to test.

2.6 Test Condition

Applicable to	Environmental conditions	Input Power	Tested by
AC Power Conducted Emission	25.3°C, 51% RH	AC 120V/60Hz	Albert Fan
Radiated Emission and Band Edge Measurement	25.3°C, 55% RH	AC 120V/60Hz	Albert Fan
Spurious Emission at Antenna Port	25.2°C, 52% RH	AC 120V/60Hz	Jason Huang
6dB Bandwidth	25.2°C, 52% RH	AC 120V/60Hz	Jason Huang
Conducted Power	25.2°C, 52% RH	AC 120V/60Hz	Jason Huang
Power Spectral Density	25.2°C, 52% RH	AC 120V/60Hz	Jason Huang

The applicant declare the operating environment of EUT as below:

Normal conditions: 120V AC, 15~35°C

2.7 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.

All the duty factor of other test mode have been considered.

For radiated emissions frequency above 1 GHz, Final VBW represents the video bandwidth set by the receiver/spectrum analyzer.

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty Cycle Correction Factor	1/T Minimum VBW(kHz)	Final VBW(kHz)
11B-MIMO	Ant1	2412	8.41	8.47	99.29	0.03	0.12	1
	Ant2	2412	8.42	8.48	99.29	0.03	0.12	1
11G-MIMO	Ant1	2412	1.4	1.46	95.89	0.18	0.71	1
	Ant2	2412	1.39	1.45	95.86	0.18	0.72	1
11N20MIMO	Ant1	2412	1.3	1.36	95.59	0.20	0.77	1
	Ant2	2412	1.3	1.36	95.59	0.20	0.77	1
11N40MIMO	Ant1	2422	0.65	0.7	92.86	0.32	1.54	2
	Ant2	2422	0.65	0.71	91.55	0.38	1.54	2
11AX20MIMO	Ant1	2412	0.21	0.27	77.78	1.09	4.76	5
	Ant2	2412	0.21	0.27	77.78	1.09	4.76	5
11AX40MIMO	Ant1	2422	0.2	0.26	76.92	1.14	5.00	5
	Ant2	2422	0.21	0.26	80.77	0.93	4.76	5

Note: The DUTY CYCLE of different channels in the same mode is the same, and the above test channels are represented in the report.

11B-MIMO_Ant1_2412



11B-MIMO_Ant2_2412



11G-MIMO_Ant1_2412



11G-MIMO_Ant2_2412



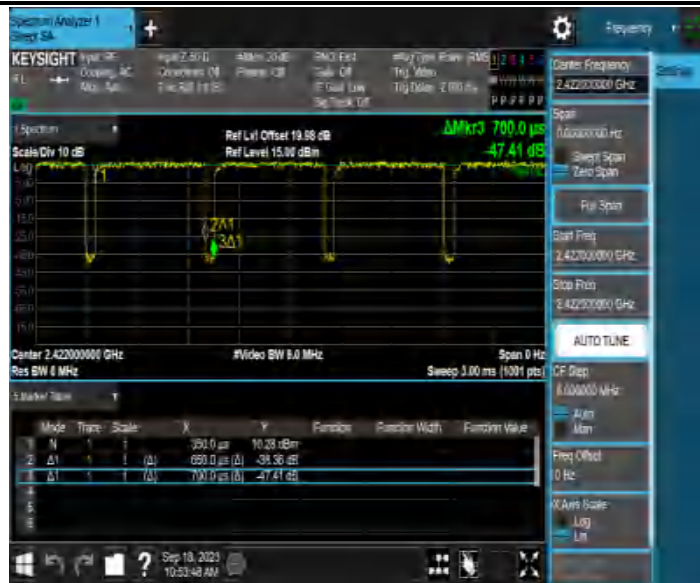
11N20MIMO_Ant1_2412



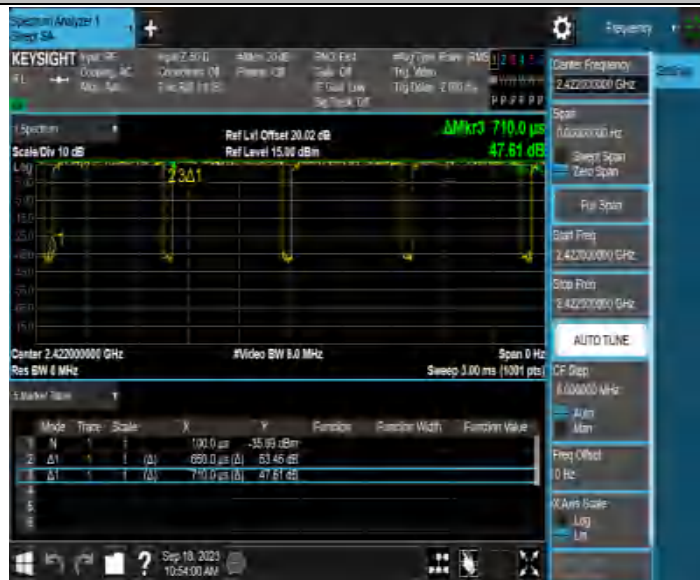
11N20MIMO_Ant2_2412



11N40MIMO_Ant1_2422



11N40MIMO_Ant2_2422



11AX20MIMO_Ant1_2412



11AX20MIMO_Ant2_2412



11AX40MIMO_Ant1_2422



11AX40MIMO_Ant2_2422



2.8 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT.

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

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	± 143.88 kHz
Power Spectral Density	± 0.743 dB
Conducted Spurious Emission	± 1.328 dB
RF power conducted	± 0.384 dB
Conducted emission(9kHz~30MHz) AC main	± 2.72 dB
Radiated emission(9kHz~30MHz)	± 2.66 dB
Radiated emission (30MHz~1GHz)	± 4.62 dB
Radiated emission (1GHz~18GHz)	± 4.86 dB
Radiated emission (18GHz~40GHz)	± 3.80 dB

2.9 Test Location

Company:	Shenzhen Haiyun Standard Technical CO., Ltd.
Address:	No. 110-113, 115, 116, Block B, Jinyuan Business Building, Bao'an District, Shenzhen, China
CNAS Registration Number:	CNAS L18252
CAB identifier	CN0145
A2LA Certificate Number	6823.01
Telephone:	0755-26024411

2.10 Description of Support Units

Test associated equipment

No.	Equipment	Manufacturer	Model	Series No
1	Notebook	L450	Think	/

Cable and Interconnection

Item	Interface	Shielded Type	Ferrite Core	Length
1	USB	Yes	No	1.5m

2.11 Deviation from Standards

None

3. Test Procedure And Results

3.1 AC Power Line Conducted Emission

3.1.1 Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

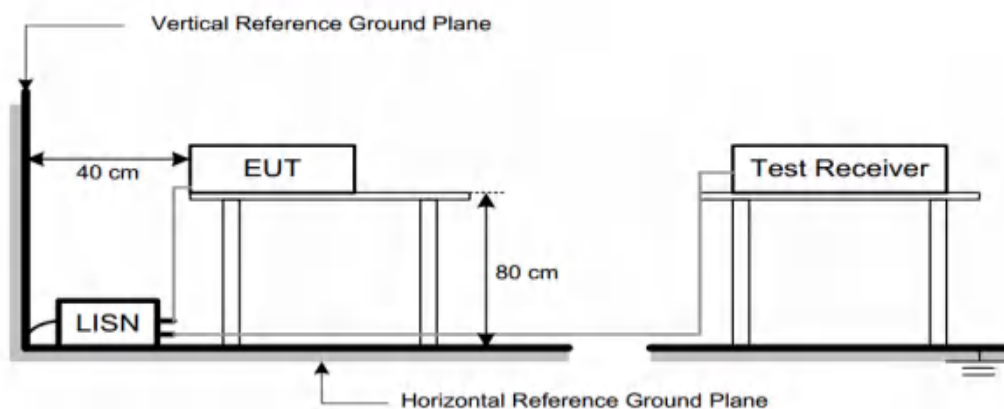
3.1.2 Test Procedure

Test Method	
<input checked="" type="radio"/> Conducted Measurement	<input type="radio"/> Radiated Measurement
Test Channels	
<input type="radio"/> Lowest, Middle and Highest Channel	<input type="radio"/> Lowest and Highest Channel
Environmental conditions	
<input checked="" type="radio"/> Normal	<input type="radio"/> Normal and Extreme

Note: ● : Test ○ : No Test

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

3.1.3 Test Setup



3.1.4 Test Result

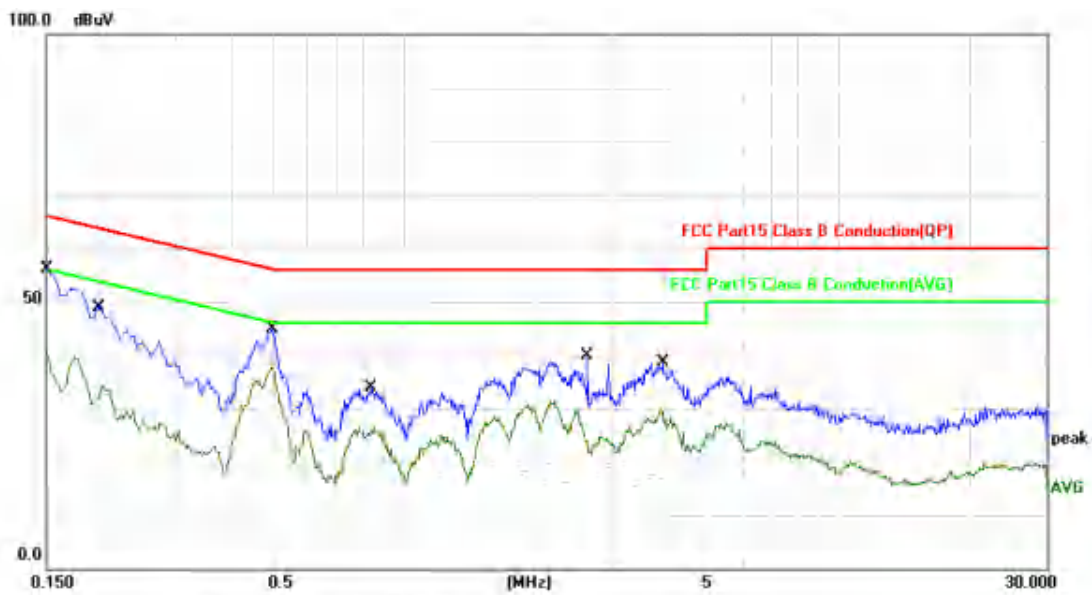
Note:

1. Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver Reading by the software automatically.
2. Measurement = Reading + Correct Factor.
3. Over = Measurement – Limit

Note: We only recorded the data of the worst mode. Please see the following:

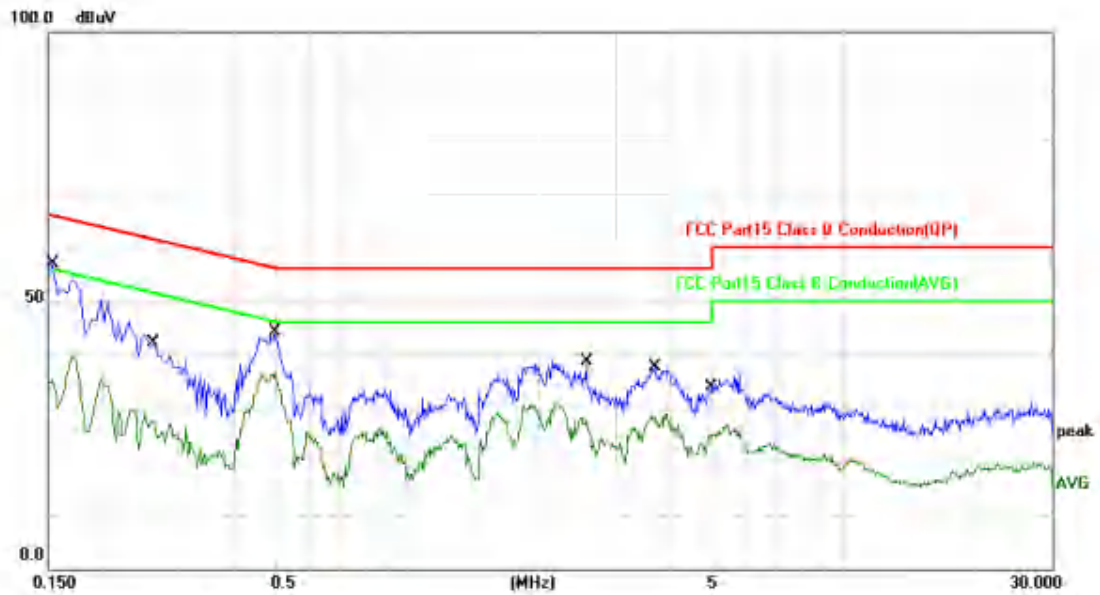
150kHz~30MHz	Worst Case Operating Mode: 11B-MIMO_ Channel:6
--------------	--

Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1500	34.15	19.49	53.64	66.00	-12.36	QP	
2		0.1500	21.02	19.49	40.51	56.00	-15.49	AVG	
3		0.1980	24.94	19.53	44.47	63.69	-19.22	QP	
4		0.1980	12.33	19.53	31.86	53.69	-21.83	AVG	
5		0.4980	21.61	19.53	41.14	56.03	-14.89	QP	
6 *		0.4980	16.72	19.53	36.25	46.03	-9.78	AVG	
7		0.8420	9.92	19.60	29.52	56.00	-26.48	QP	
8		0.8420	5.88	19.60	25.48	46.00	-20.52	AVG	
9		2.6380	8.50	20.48	28.98	56.00	-27.02	QP	
10		2.6380	2.75	20.48	23.23	46.00	-22.77	AVG	
11		3.9260	12.83	20.40	33.23	56.00	-22.77	QP	
12		3.9260	8.26	20.40	28.66	46.00	-17.34	AVG	

Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1540	32.84	19.70	52.54	65.78	-13.24	QP	
2		0.1540	15.06	19.70	34.76	55.78	-21.02	AVG	
3		0.2620	19.02	19.69	38.71	61.37	-22.66	QP	
4		0.2620	5.89	19.69	25.58	51.37	-25.79	AVG	
5		0.4980	21.29	19.74	41.03	56.03	-15.00	QP	
6	*	0.4980	16.08	19.74	35.82	46.03	-10.21	AVG	
7		2.5700	10.14	20.55	30.69	56.00	-25.31	QP	
8		2.5700	5.86	20.55	26.41	46.00	-19.59	AVG	
9		3.7020	11.66	20.26	31.92	56.00	-24.08	QP	
10		3.7020	6.27	20.26	26.53	46.00	-19.47	AVG	
11		4.9660	7.32	20.40	27.72	56.00	-28.28	QP	
12		4.9660	3.38	20.40	23.78	46.00	-22.22	AVG	

3.2 Radiated Emission and Band Edge

3.2.1 Limit

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency (MHz)	Distance Meters(m)	Field Strength Limit	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 – 0.49	300	2400/F(kHz)	-
0.490 – 1.705	30	24000/F(kHz)	-
1.705 – 30	30	30	-
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

Note: (1) Emission level $\text{dB}\mu\text{V} = 20 \log$ Emission level $\mu\text{V}/\text{m}$

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

3.2.2 Test Procedure

Test Method	
<input type="radio"/> Conducted Measurement	<input checked="" type="radio"/> Radiated Measurement
Test Channels	
<input checked="" type="radio"/> Lowest, Middle and Highest Channel	<input type="radio"/> Lowest and Highest Channel
Environmental conditions	
<input checked="" type="radio"/> Normal	<input type="radio"/> Normal and Extreme
Note: ● : Test ○ : No Test	

- 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 or 1.5m 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 1GHz)
- 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:

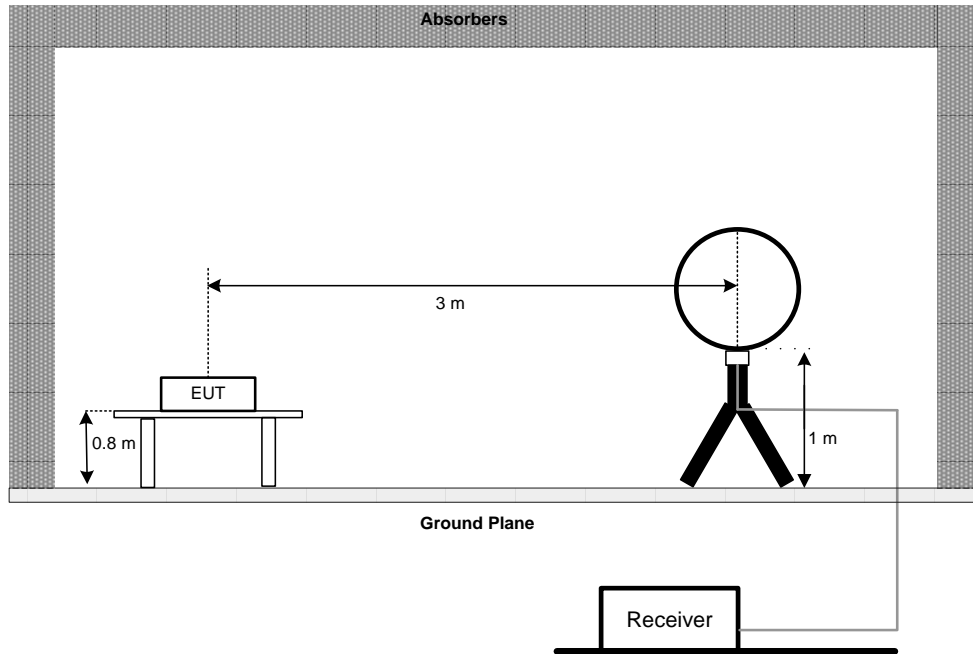
Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

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 (Refer to Final VBW in Section 2.6)for AVG value

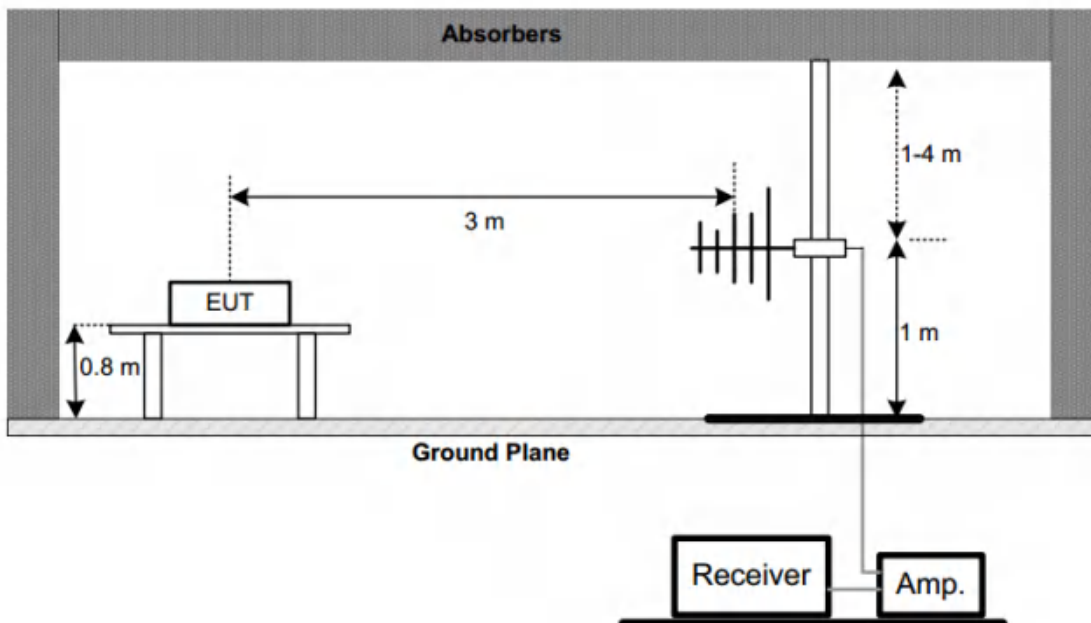
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector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

3.2.3 Test Setup

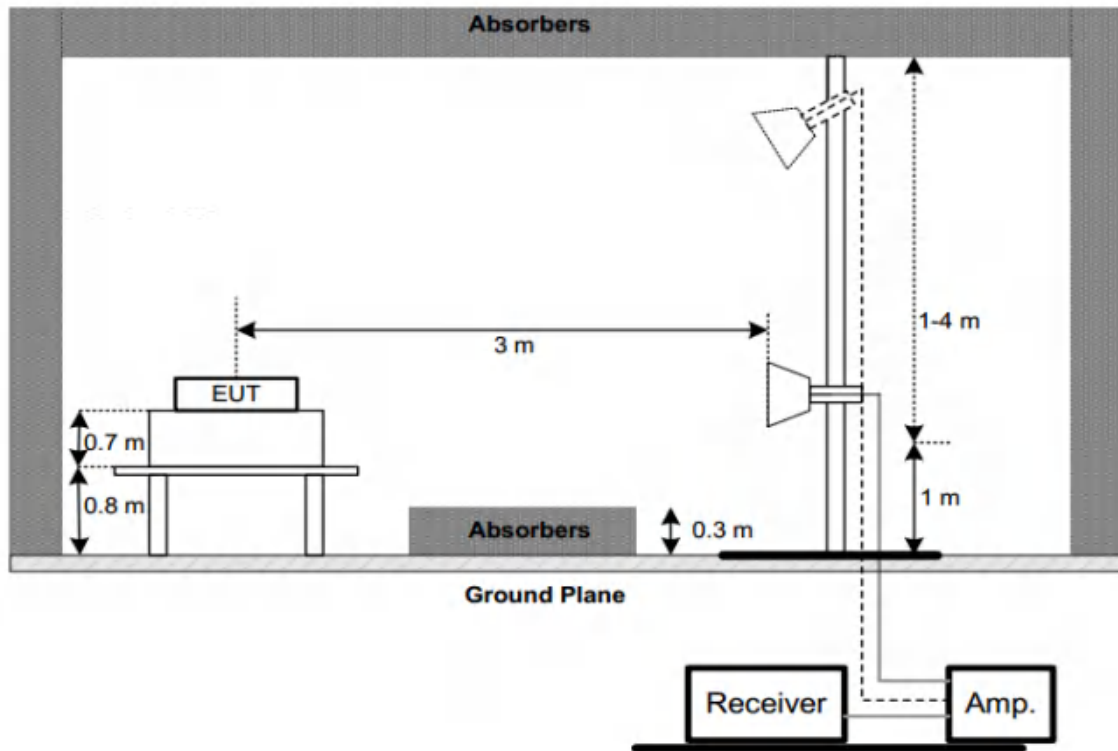
(A) Radiated Emission Test Set-Up Frequency Below 30 MHz



(B) Radiated Emission Test Set-Up Frequency 30 MHz-1000 MHz



(C) Radiated Emission Test Set-Up Frequency Above 1 GHz



3.2.4 Test Result

1) 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 recorded in this report.

2) Radiated emission: 30MHz-1G

Note:

1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit

We only recorded the data of the worst mode. Please see the following:

Below 1G (30MHz~1GHz)	Worst Case Operating Mode: 11B-MIMO_ Channel:6
-----------------------	--

VERTICAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		47.8260	9.79	21.01	30.80	40.00	-9.20	100	115	
2		66.2662	9.19	17.91	27.10	40.00	-12.90	113	0	
3		640.6110	7.33	28.53	35.86	46.00	-10.14	200	74	
4		704.2261	5.90	29.50	35.40	46.00	-10.60	100	309	
5		887.6100	1.79	31.61	33.40	46.00	-12.60	100	112	
6	*	938.8326	8.14	31.80	39.94	46.00	-6.06	200	190	

HORIZONTAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	!	599.3212	11.99	28.16	40.15	46.00	-5.85	QP	100	100
2		640.6110	9.51	28.53	38.04	46.00	-7.96	QP	100	121
3		750.1083	5.62	30.76	36.38	46.00	-9.62	QP	100	153
4		798.9797	5.56	29.88	35.44	46.00	-10.56	QP	100	133
5		900.1474	6.21	31.72	37.93	46.00	-8.07	QP	100	55
6	*	938.8326	10.34	31.80	42.14	46.00	-3.86	QP	100	222

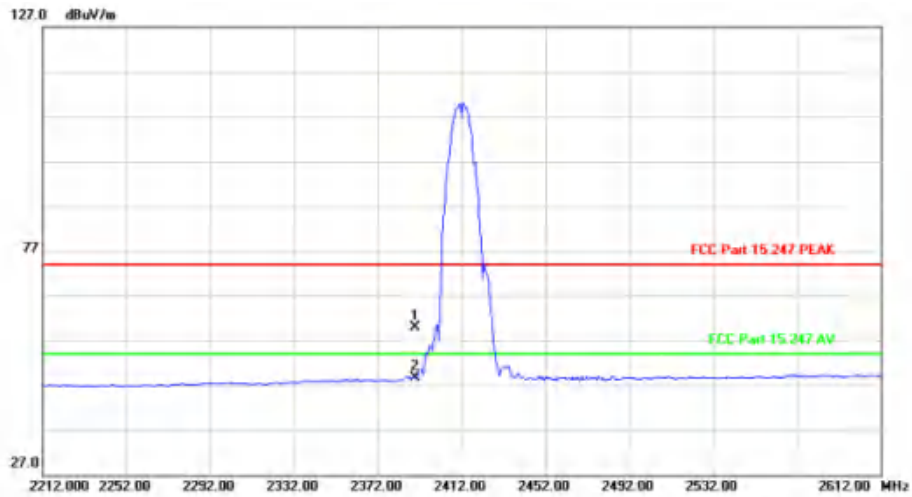
3) Radiated emission: Above 1G

Note:

1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit

Above 1G (1GHz~18GHz)	Test mode:11B-MIMO	Test Channel:1
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VERTICAL

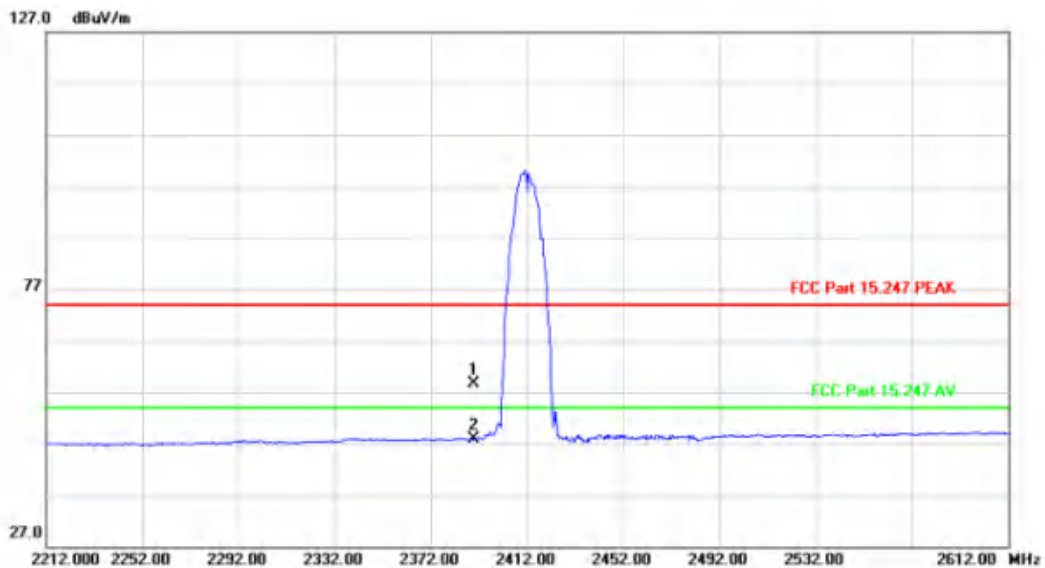


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	31.92	27.91	59.83	74.00	-14.17			peak
2	*	2390.000	20.75	27.91	48.66	54.00	-5.34			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4823.300	61.51	-14.02	47.49	74.00	-26.51			peak
2	*	4823.928	59.08	-14.02	45.06	54.00	-8.94			AVG
3		7236.652	50.93	-9.33	41.60	54.00	-12.40			AVG
4		7237.300	57.59	-9.33	48.26	74.00	-25.74			peak

HORIZONTAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		cm	degree	
1		2390.000	30.60	27.91	58.51	74.00	-15.49	peak			
2 *		2390.000	19.90	27.91	47.81	54.00	-6.19	AVG			



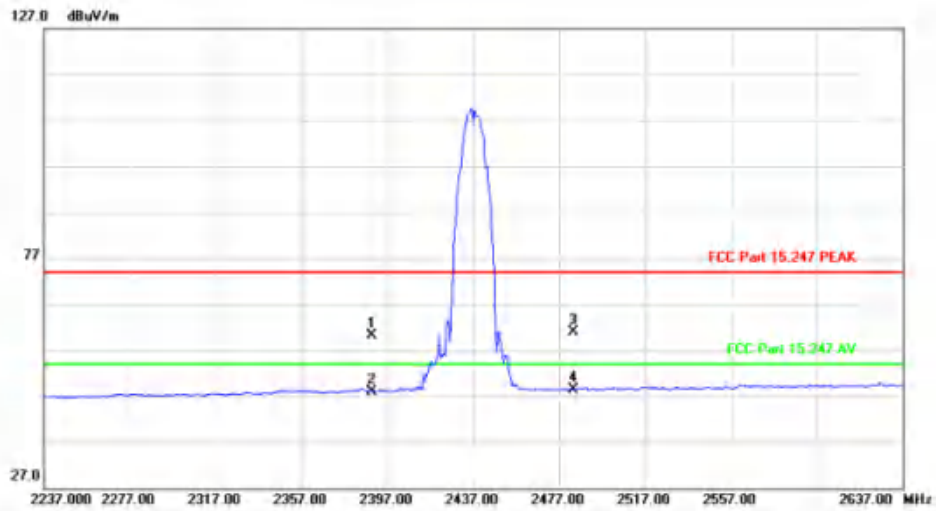
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		cm	degree	
1		4824.150	64.90	-14.02	50.88	74.00	-23.12	peak			
2		4824.210	63.03	-14.02	49.01	54.00	-4.99	AVG			
3		7233.900	65.74	-9.34	56.40	74.00	-17.60	peak			
4 *		7235.121	61.55	-9.34	52.21	54.00	-1.79	AVG			

Above 1G (1GHz~18GHz)

Test mode: 11B-MIMO

Test Channel: 6

VERTICAL

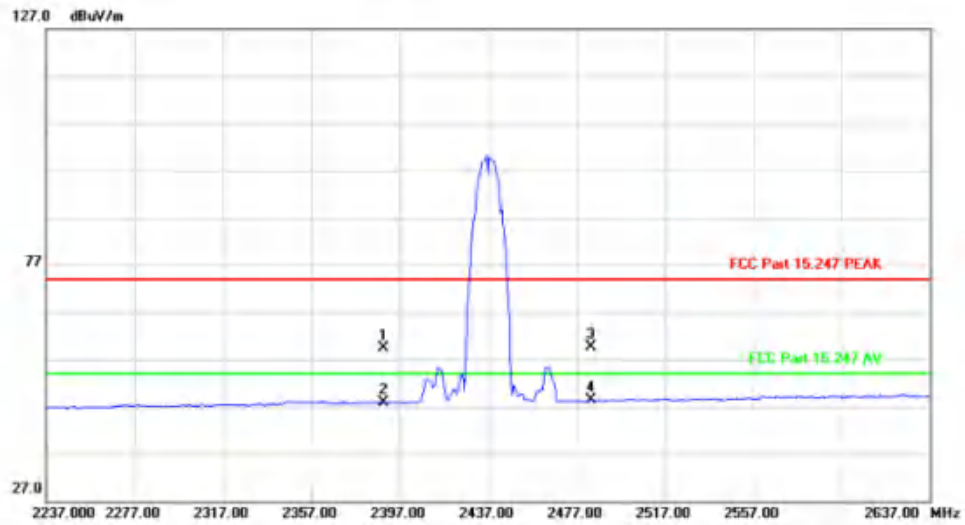


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	32.19	27.91	60.10	74.00	-13.90			peak
2		2390.000	20.09	27.91	48.00	54.00	-6.00			AVG
3		2483.500	32.60	28.16	60.76	74.00	-13.24			peak
4 *		2483.500	20.30	28.16	48.46	54.00	-5.54			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1 *		4873.875	57.50	-13.77	43.73	54.00	-10.27			AVG
2		4874.300	60.87	-13.77	47.10	74.00	-26.90			peak
3		7309.786	52.10	-9.11	42.99	54.00	-11.01			AVG
4		7311.250	57.73	-9.10	48.63	74.00	-25.37			peak

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	31.40	27.91	59.31	74.00	-14.69			peak
2		2390.000	19.88	27.91	47.79	54.00	-6.21			AVG
3		2483.500	31.53	28.16	59.69	74.00	-14.31			peak
4	*	2483.500	20.10	28.16	48.26	54.00	-5.74			AVG



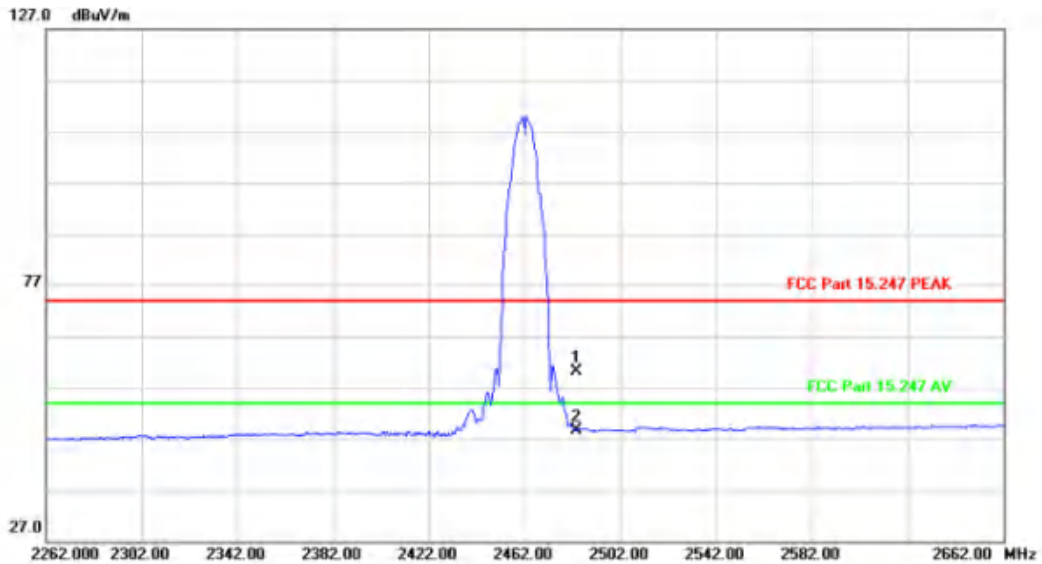
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4873.450	66.38	-13.77	52.61	74.00	-21.39			peak
2		4873.929	65.60	-13.77	51.83	54.00	-2.17			AVG
3		7309.550	65.02	-9.11	55.91	74.00	-18.09			peak
4	*	7310.123	60.97	-9.10	51.87	54.00	-2.13			AVG

Above 1G (1GHz~18GHz)

Test mode: 11B-MIMO

Test Channel:11

VERTICAL

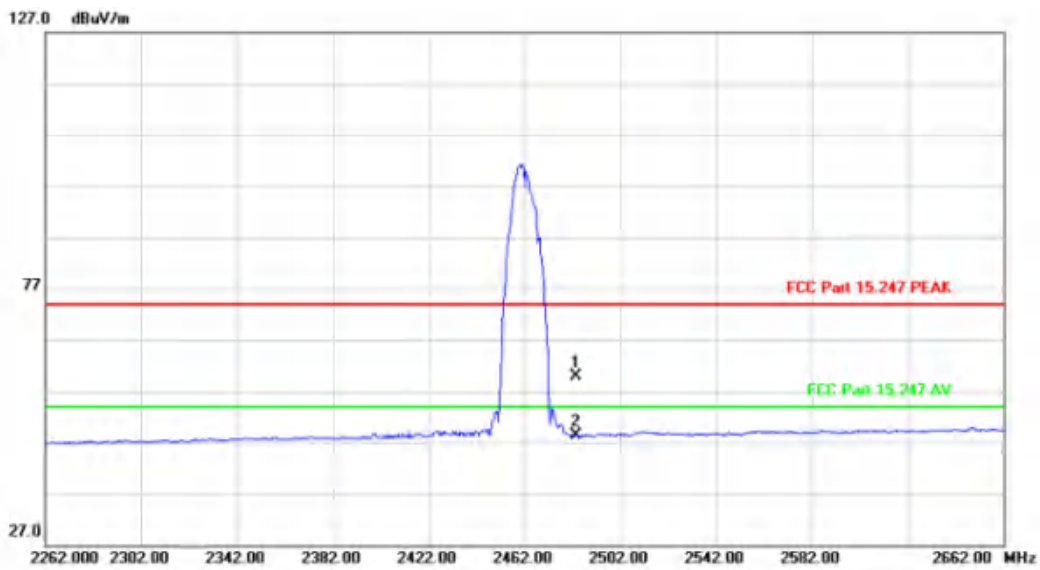


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	32.06	28.16	60.22	74.00	-13.78	peak		
2 *		2483.500	20.58	28.16	48.74	54.00	-5.26	AVG		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4923.600	60.87	-13.52	47.35	74.00	-26.65	peak		
2		4923.889	58.17	-13.52	44.65	54.00	-9.35	AVG		
3		7384.350	60.69	-8.88	51.81	74.00	-22.19	peak		
4 *		7385.132	56.50	-8.87	47.63	54.00	-6.37	AVG		

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	31.64	28.16	59.80	74.00	-14.20			peak
2 *		2483.500	20.33	28.16	48.49	54.00	-5.51			AVG



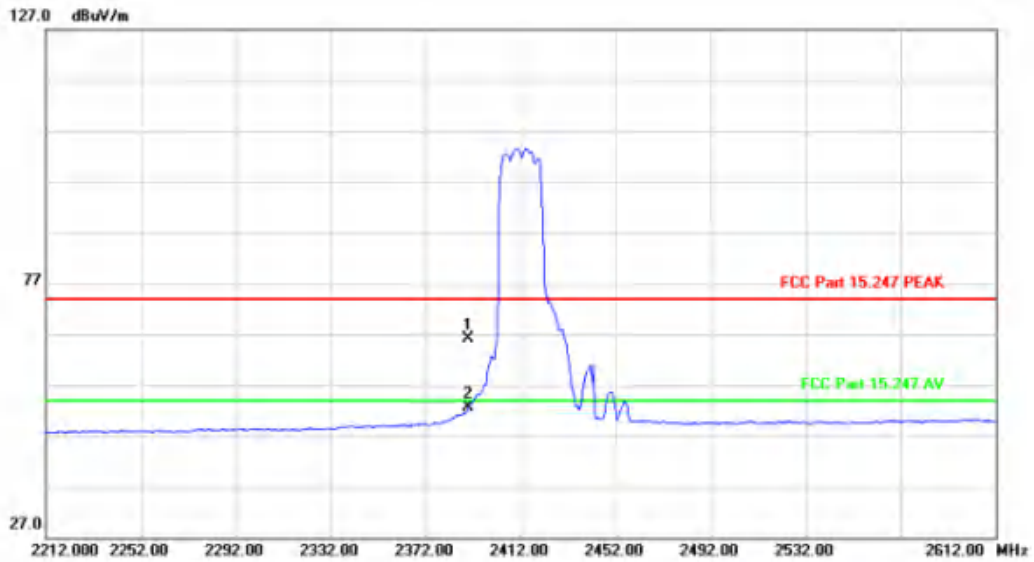
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4923.600	66.88	-13.52	53.36	74.00	-20.64			peak
2		4923.886	65.69	-13.52	52.17	54.00	-1.83			AVG
3		7384.350	65.30	-8.88	56.42	74.00	-17.58			peak
4 *		7385.150	61.68	-8.87	52.81	54.00	-1.19			AVG

Above 1G (1GHz~18GHz)

Test mode: 11G-MIMO

Test Channel:1

VERTICAL

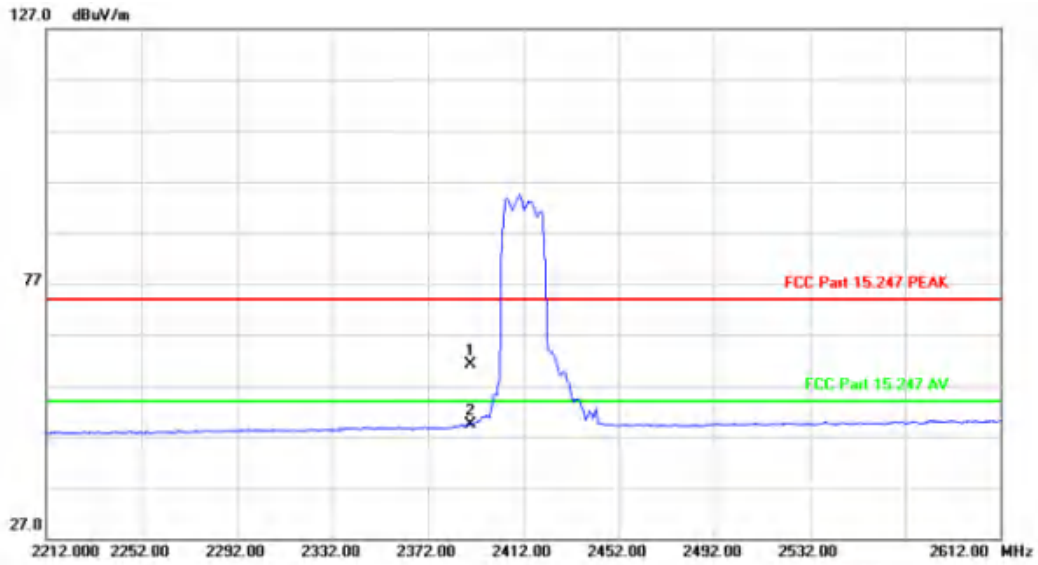


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	38.26	27.91	66.17	74.00	-7.83	peak	
2 *		2390.000	24.68	27.91	52.59	54.00	-1.41	AVG	



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1 *		4822.962	52.23	-14.03	38.20	54.00	-15.80	AVG	
2		4825.000	62.28	-14.02	48.26	74.00	-25.74	peak	
3		7222.000	57.87	-9.38	48.49	74.00	-25.51	peak	
4		7236.666	47.46	-9.33	38.13	54.00	-15.87	AVG	

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	33.11	27.91	61.02	74.00	-12.98	peak		
2	*	2390.000	21.50	27.91	49.41	54.00	-4.59	AVG		



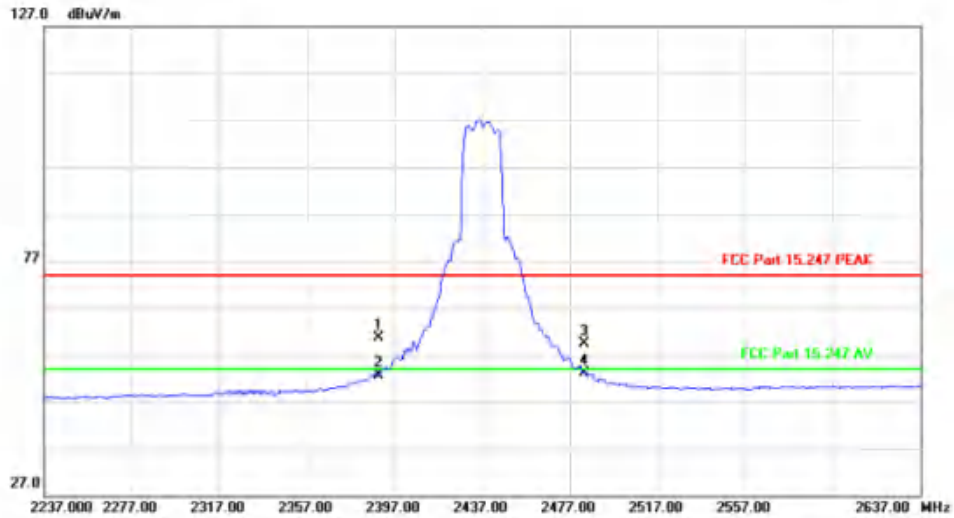
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4824.021	56.08	-14.02	42.06	54.00	-11.94	AVG		
2		4825.000	66.06	-14.02	52.04	74.00	-21.96	peak		
3		7222.000	59.54	-9.38	50.16	74.00	-23.84	peak		
4		7234.168	48.57	-9.34	39.23	54.00	-14.77	AVG		

Above 1G (1GHz~18GHz)

Test mode: 11G-MIMO

Test Channel: 6

VERTICAL

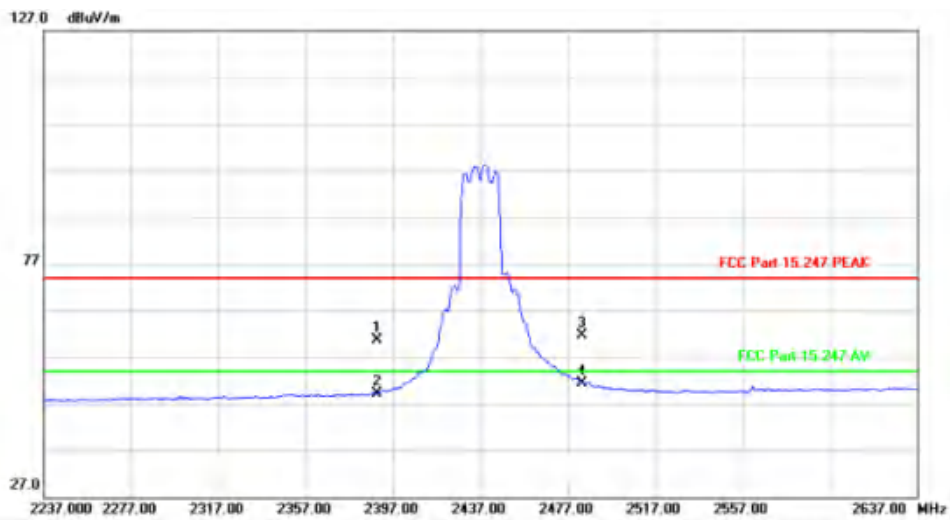


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	32.62	-27.91	60.53	74.00	-13.47			peak
2		2390.000	24.81	-27.91	52.72	54.00	-1.28			AVG
3		2483.500	31.10	-28.16	59.26	74.00	-14.74			peak
4 *		2483.500	24.91	-28.16	53.07	54.00	-0.93			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4870.050	57.90	-13.79	44.11	74.00	-29.89			peak
2		4874.371	46.43	-13.77	32.66	54.00	-21.34			AVG
3 *		7311.600	53.38	-9.10	44.28	54.00	-9.72			AVG
4		7316.350	62.66	-9.09	53.57	74.00	-20.43			peak

HORIZONTAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	32.65	27.91	60.56	74.00	-13.44			peak
2		2390.000	21.26	27.91	49.17	54.00	-4.83			AVG
3		2483.500	33.41	28.16	61.57	74.00	-12.43			peak
4 *		2483.500	23.21	28.16	51.37	54.00	-2.63			AVG



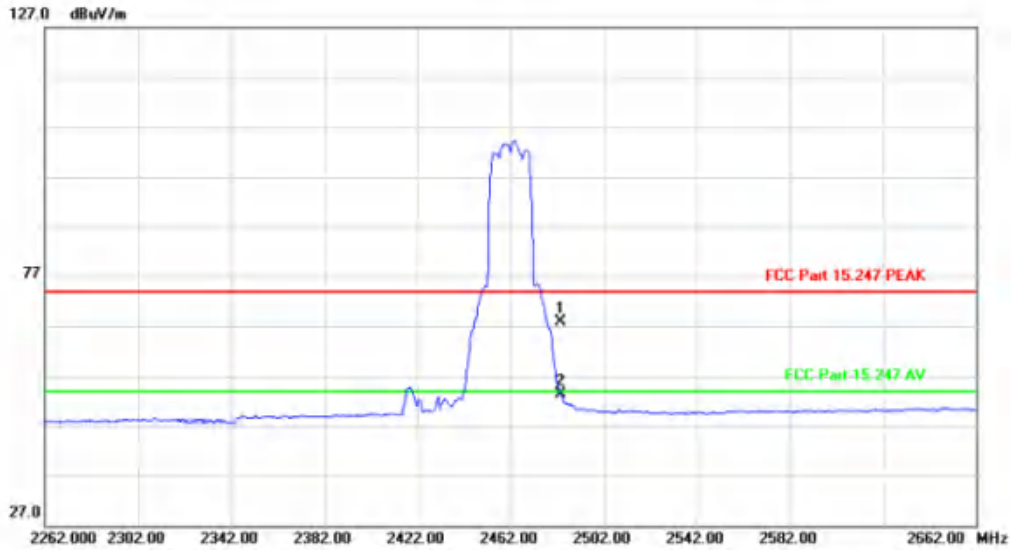
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4874.338	53.80	-13.77	40.03	54.00	-13.97			AVG
2		4879.400	62.20	-13.74	48.46	74.00	-25.54			peak
3		7311.250	71.10	-9.10	62.00	74.00	-12.00			peak
4 *		7311.368	62.35	-9.10	53.25	54.00	-0.75			AVG

Above 1G (1GHz~18GHz)

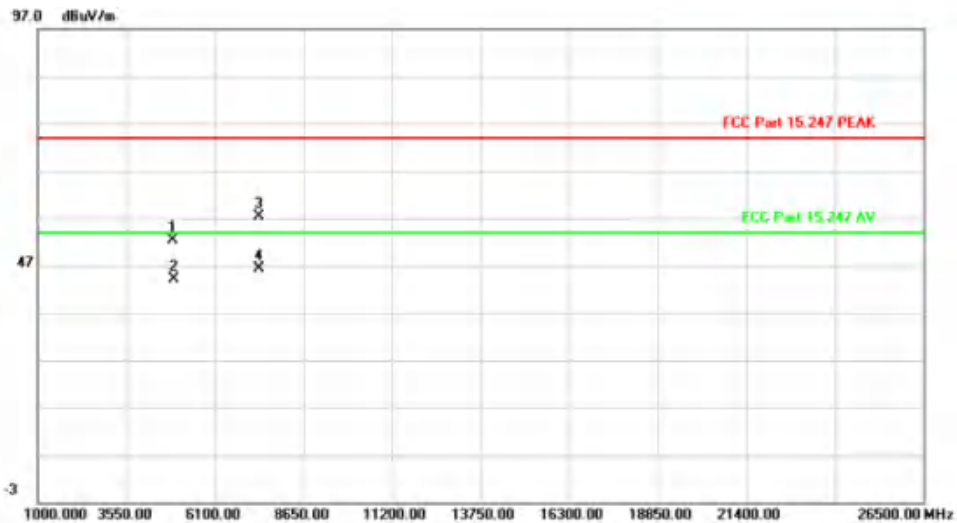
Test mode: 11G-MIMO

Test Channel:11

VERTICAL

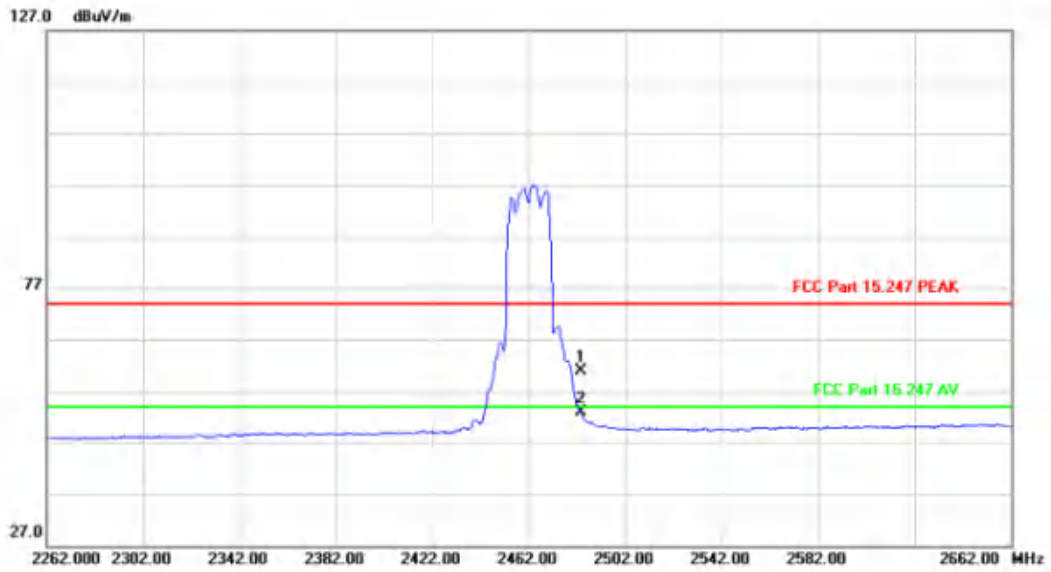


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2483.500	39.83	28.16	67.99	74.00	-6.01	peak	
2 *		2483.500	25.26	28.16	53.42	54.00	-0.58	AVG	



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4901.500	66.02	-13.63	52.39	74.00	-21.61	peak	
2		4924.536	57.59	-13.52	44.07	54.00	-9.93	AVG	
3		7375.000	66.16	-8.90	57.26	74.00	-16.74	peak	
4 *		7387.127	55.27	-8.87	46.40	54.00	-7.60	AVG	

HORIZONTAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	32.80	28.16	60.96	74.00	-13.04			peak
2 *		2483.500	24.60	28.16	52.76	54.00	-1.24			AVG



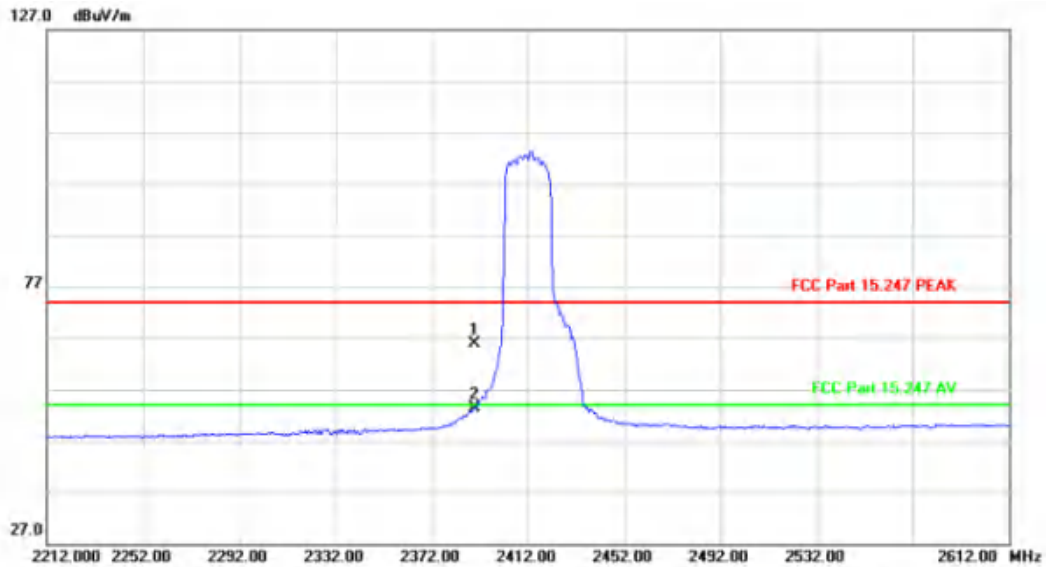
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4924.083	62.85	-13.52	49.33	54.00	-4.67			AVG
2		4927.000	74.05	-13.51	60.54	74.00	-13.46			peak
3		7375.000	73.01	-8.90	64.11	74.00	-9.89			peak
4 *		7385.809	61.25	-8.87	52.38	54.00	-1.62			AVG

Above 1G (1GHz~18GHz)

Test mode: 11N20MIMO

Test Channel:1

VERTICAL

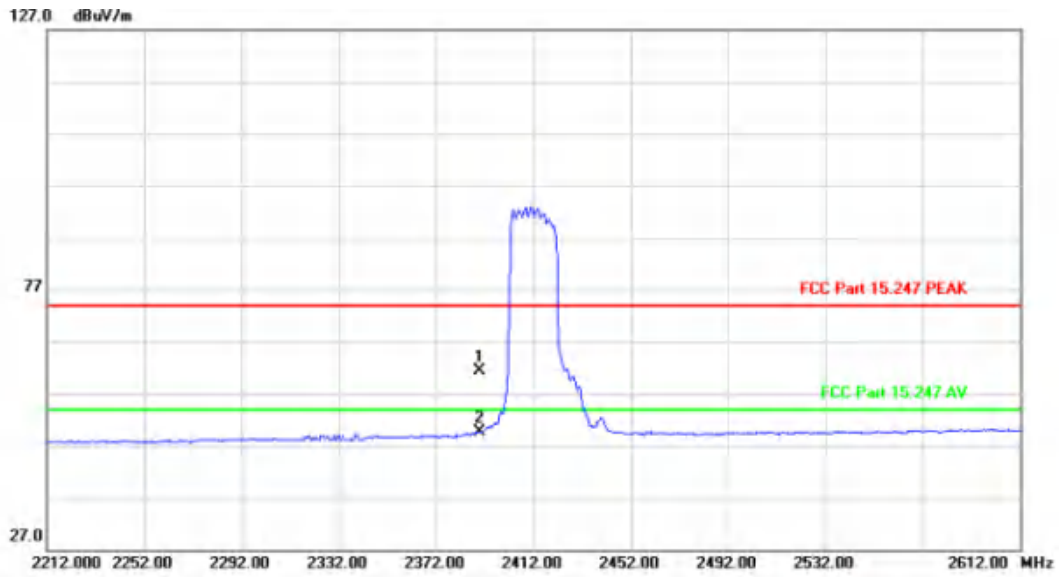


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	38.06	27.91	65.97	74.00	-8.03			peak
2 *		2390.000	25.42	27.91	53.33	54.00	-0.67			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1 *		4822.322	51.80	-14.03	37.77	54.00	-16.23			AVG
2		4825.000	62.01	-14.02	47.99	74.00	-26.01			peak
3		7233.454	47.06	-9.34	37.72	54.00	-16.28			AVG
4		7247.500	57.28	-9.30	47.98	74.00	-26.02			peak

HORIZONTALA

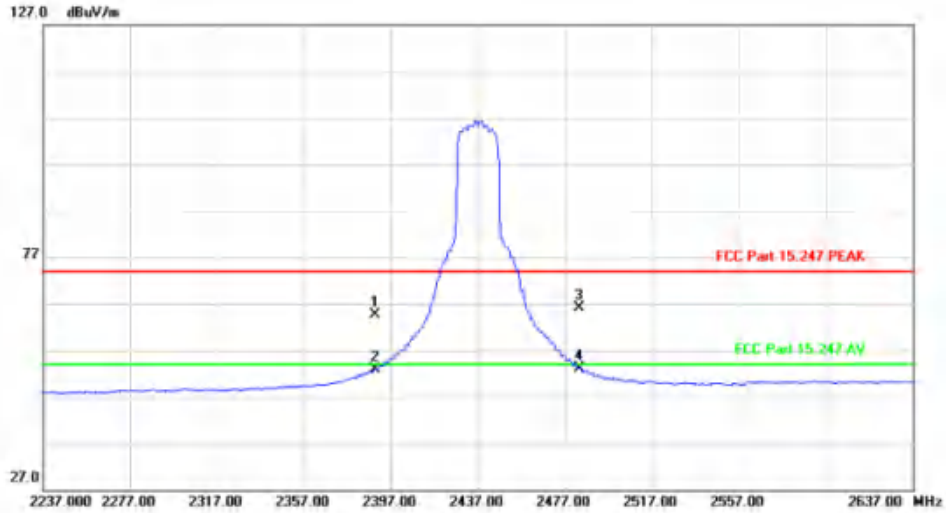


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	33.58	27.91	61.49	74.00	-12.51			peak
2	*	2390.000	21.67	27.91	49.58	54.00	-4.42			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4822.962	56.20	-14.03	42.17	54.00	-11.83			AVG
2		4825.000	67.12	-14.02	53.10	74.00	-20.90			peak
3		7222.000	59.50	-9.38	50.12	74.00	-23.88			peak
4		7233.728	48.39	-9.34	39.05	54.00	-14.95			AVG

VERTICAL

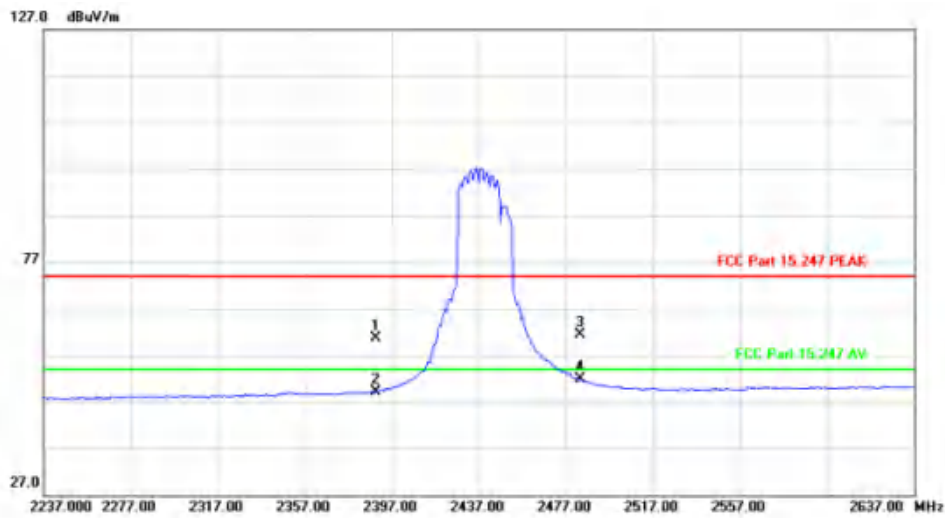


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	36.70	27.91	64.61	74.00	-9.39	peak	
2		2390.000	25.09	27.91	53.00	54.00	-1.00	AVG	
3		2483.500	38.09	28.16	66.25	74.00	-7.75	peak	
4 *		2483.500	25.06	28.16	53.22	54.00	-0.78	AVG	



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4850.500	65.33	-13.89	51.44	74.00	-22.56	peak	
2		4873.077	54.68	-13.77	40.91	54.00	-13.09	AVG	
3		7298.500	72.68	-9.14	63.54	74.00	-10.46	peak	
4 *		7311.007	60.04	-9.10	50.94	54.00	-3.06	AVG	

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	32.83	27.91	60.74	74.00	-13.26	peak	
2		2390.000	21.13	27.91	49.04	54.00	-4.96	AVG	
3		2483.500	33.31	28.16	61.47	74.00	-12.53	peak	
4 *		2483.500	23.60	28.16	51.76	54.00	-2.24	AVG	



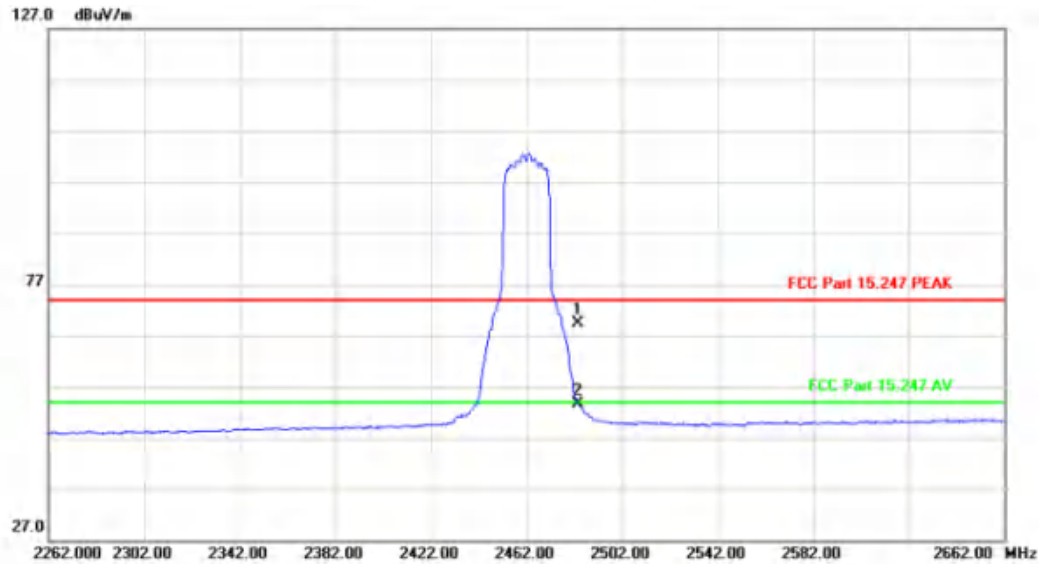
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4874.338	53.80	-13.77	40.03	54.00	-13.97	AVG	
2		4879.400	62.20	-13.74	48.46	74.00	-25.54	peak	
3		7311.250	71.10	-9.10	62.00	74.00	-12.00	peak	
4 *		7311.368	62.35	-9.10	53.25	54.00	-0.75	AVG	

Above 1G (1GHz~18GHz)

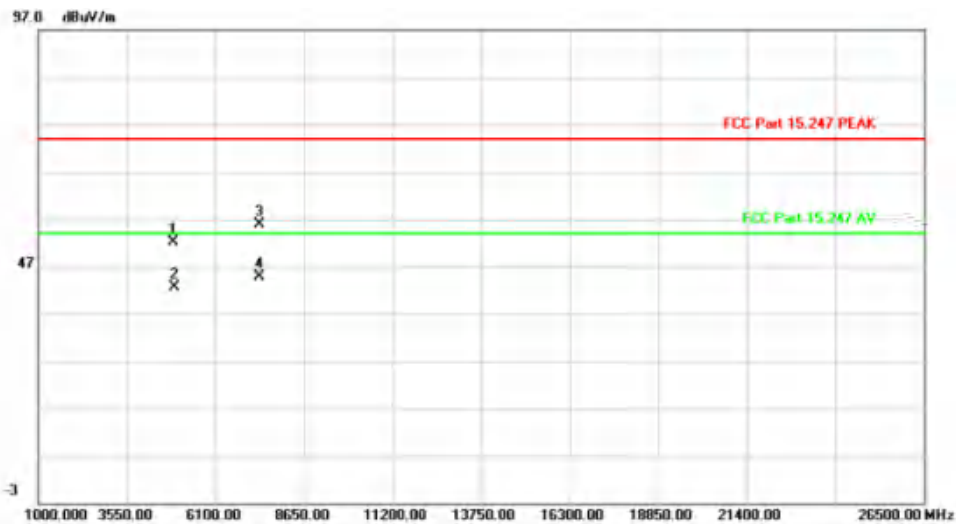
Test mode: 11N20MIMO

Test Channel:11

VERTICAL

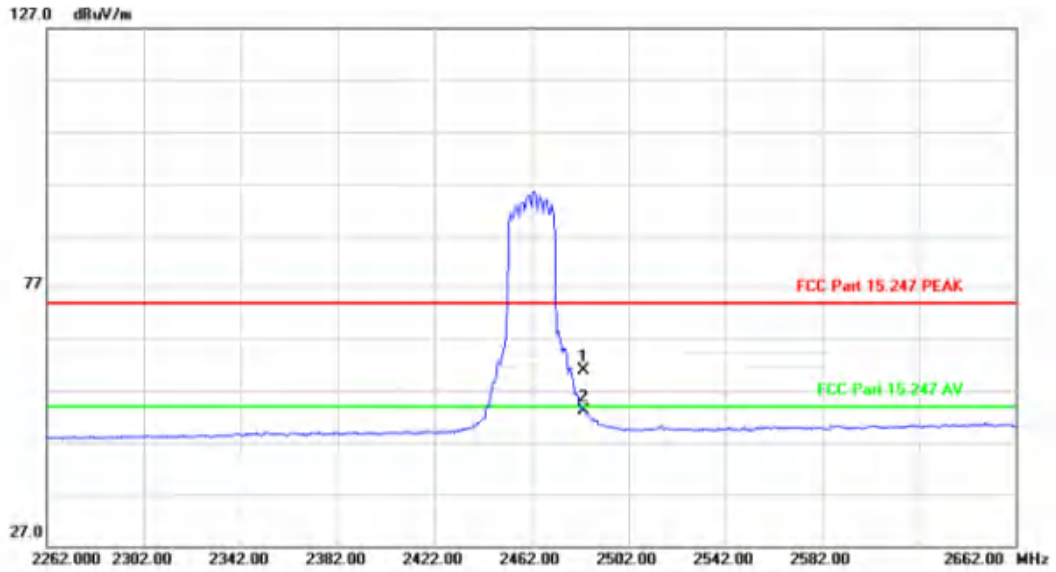


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	41.20	28.16	69.36	74.00	-4.64			peak
2	*	2483.500	25.45	28.16	53.61	54.00	-0.39			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4901.500	65.77	-13.63	52.14	74.00	-21.86			peak
2		4924.217	56.27	-13.52	42.75	54.00	-11.25			AVG
3		7375.000	64.66	-8.90	55.76	74.00	-18.24			peak
4	*	7386.308	53.66	-8.87	44.79	54.00	-9.21			AVG

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	32.64	28.16	60.80	74.00	-13.20			peak
2 *		2483.500	25.00	28.16	53.16	54.00	-0.84			AVG



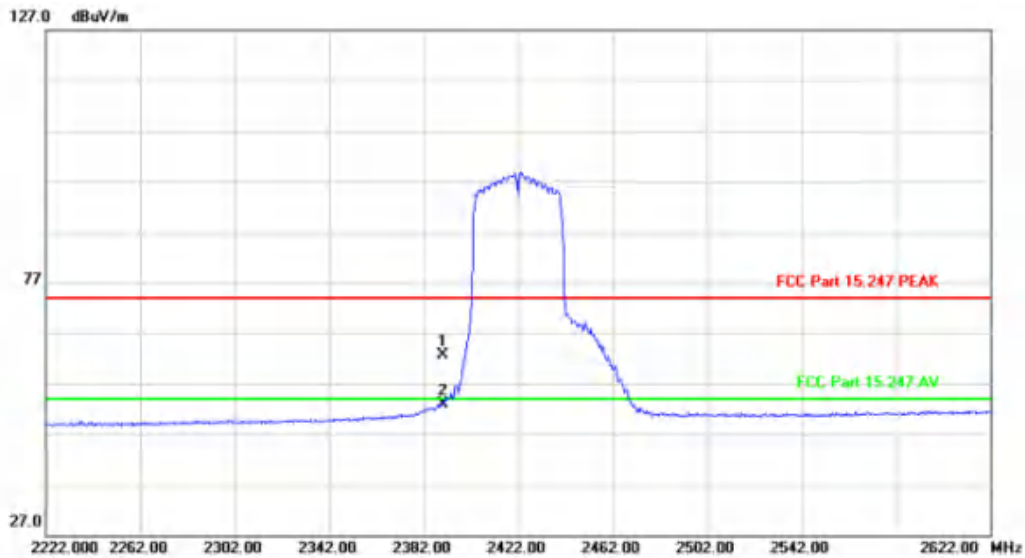
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4925.222	61.74	-13.51	48.23	54.00	-5.77			AVG
2		4927.000	71.64	-13.51	58.13	74.00	-15.87			peak
3		7375.000	71.23	-8.90	62.33	74.00	-11.67			peak
4 *		7382.933	59.67	-8.88	50.79	54.00	-3.21			AVG

Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel:3

VERTICAL

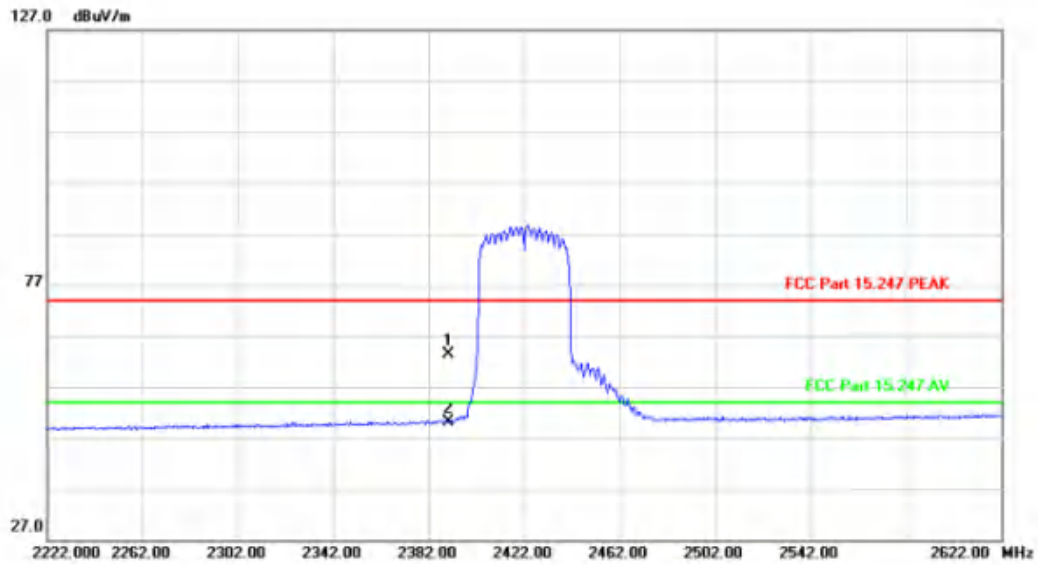


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	34.75	27.91	62.66	74.00	-11.34	peak	
2	*	2390.000	25.03	27.91	52.94	54.00	-1.06	AVG	



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4825.000	58.58	-14.02	44.56	74.00	-29.44	peak	
2		4843.042	47.59	-13.92	33.67	54.00	-20.33	AVG	
3		7247.500	61.52	-9.30	52.22	74.00	-21.78	peak	
4	*	7257.889	52.27	-9.27	43.00	54.00	-11.00	AVG	

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	35.41	27.91	63.32	74.00	-10.68	peak	
2	*	2390.000	22.26	27.91	50.17	54.00	-3.83	AVG	



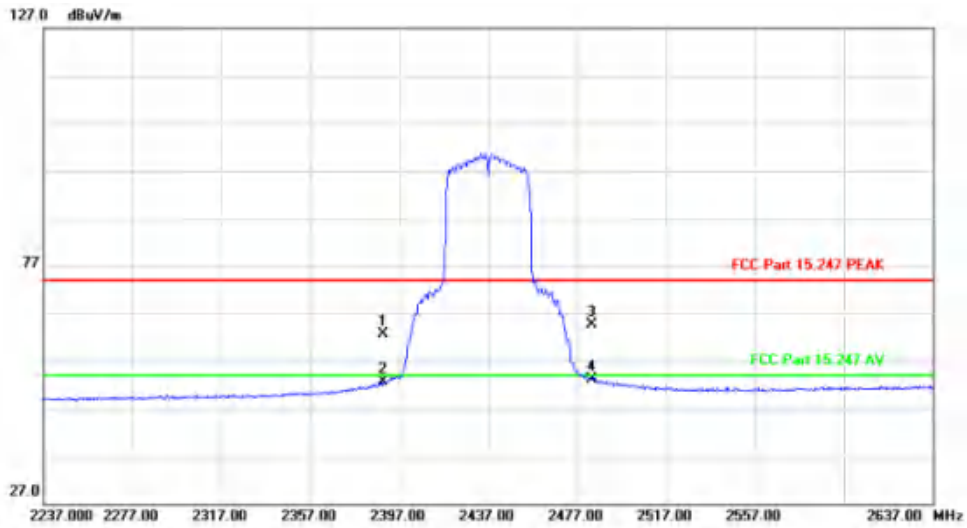
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4825.000	62.40	-14.02	48.38	74.00	-25.62	peak	
2	*	4844.042	51.56	-13.92	37.64	54.00	-16.36	AVG	
3		7257.015	44.90	-9.27	35.63	54.00	-18.37	AVG	
4		7273.000	56.80	-9.22	47.58	74.00	-26.42	peak	

Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel: 6

VERTICAL

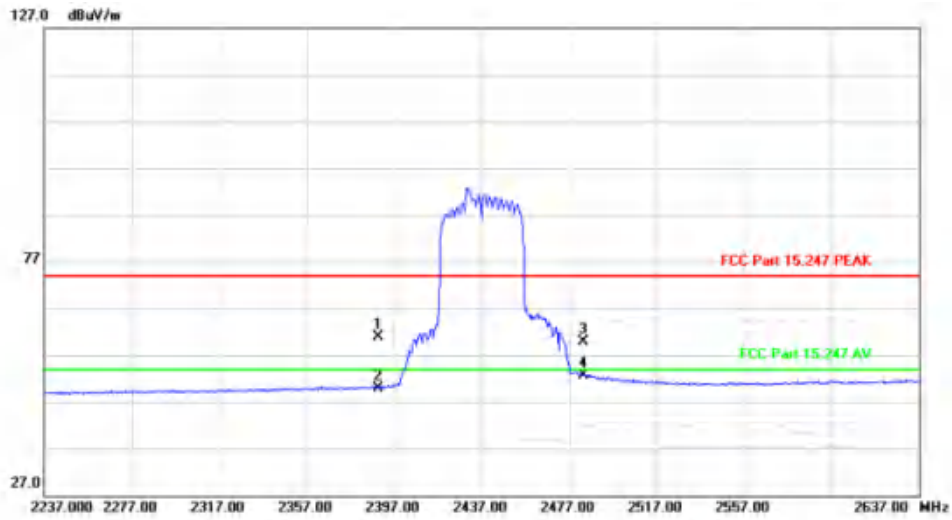


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		2390.000	34.71	27.91	62.62	74.00	-11.38	peak			
2		2390.000	24.70	27.91	52.61	54.00	-1.39	AVG			
3		2483.500	36.51	28.16	64.67	74.00	-9.33	peak			
4 *		2483.500	25.03	28.16	53.19	54.00	-0.81	AVG			



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		4870.046	48.96	-13.79	35.17	54.00	-18.83	AVG			
2		4876.000	60.29	-13.76	46.53	74.00	-27.47	peak			
3		7298.500	59.01	-9.14	49.87	74.00	-24.13	peak			
4 *		7309.329	48.00	-9.11	38.89	54.00	-15.11	AVG			

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	32.90	27.91	60.81	74.00	-13.19	peak	
2		2390.000	22.04	27.91	49.95	54.00	-4.05	AVG	
3		2483.500	31.80	28.16	59.96	74.00	-14.04	peak	
4 *		2483.500	24.49	28.16	52.65	54.00	-1.35	AVG	



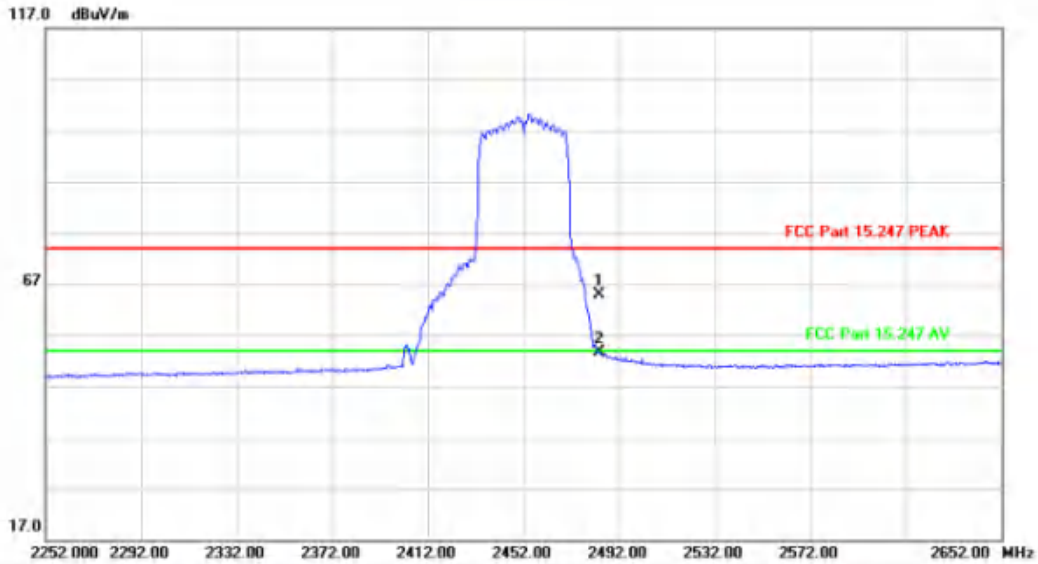
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1 *		4873.982	53.79	-13.77	40.02	54.00	-13.98	AVG	
2		4876.000	64.65	-13.76	50.89	74.00	-23.11	peak	
3		7309.295	48.61	-9.11	39.50	54.00	-14.50	AVG	
4		7324.000	60.46	-9.06	51.40	74.00	-22.60	peak	

Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel:9

VERTICAL

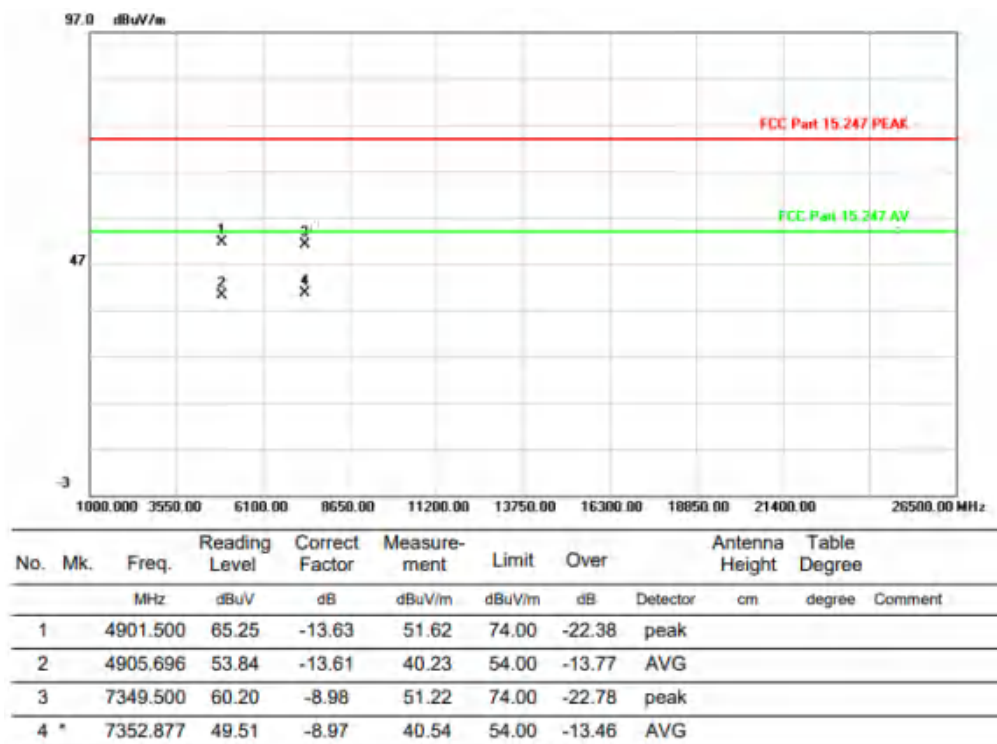
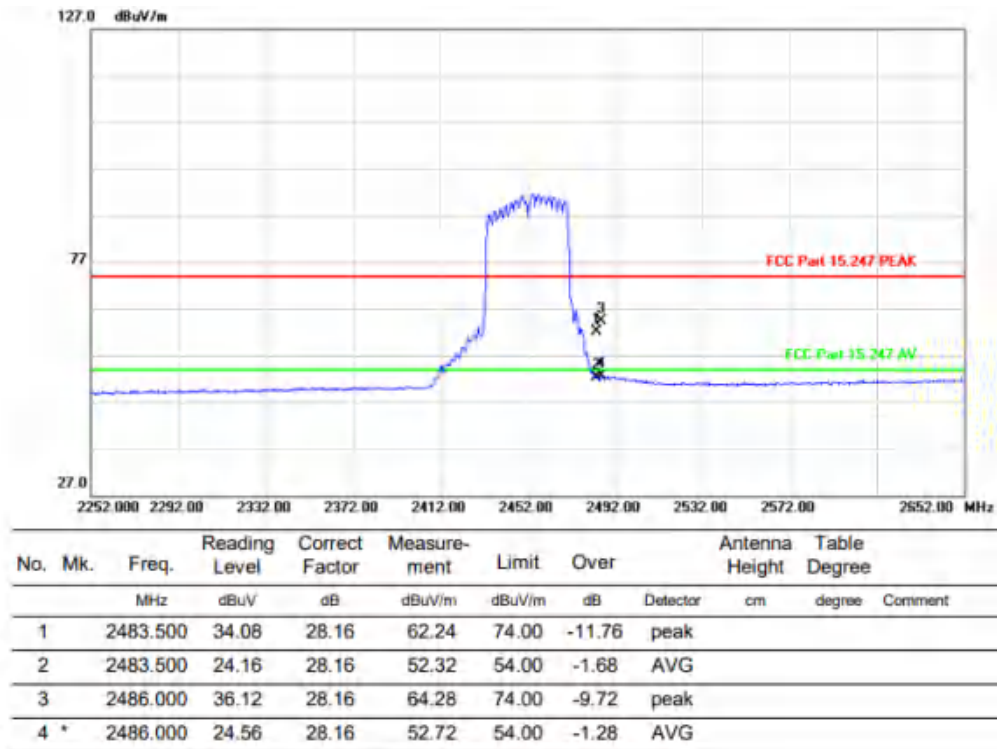


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	36.71	28.16	64.87	74.00	-9.13			peak
2	*	2483.500	25.55	28.16	53.71	54.00	-0.29			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4901.500	58.34	-13.63	44.71	74.00	-29.29			peak
2		4903.777	48.23	-13.62	34.61	54.00	-19.39			AVG
3		7349.500	57.99	-8.98	49.01	74.00	-24.99			peak
4	*	7355.774	48.03	-8.96	39.07	54.00	-14.93			AVG

HORIZONTAL

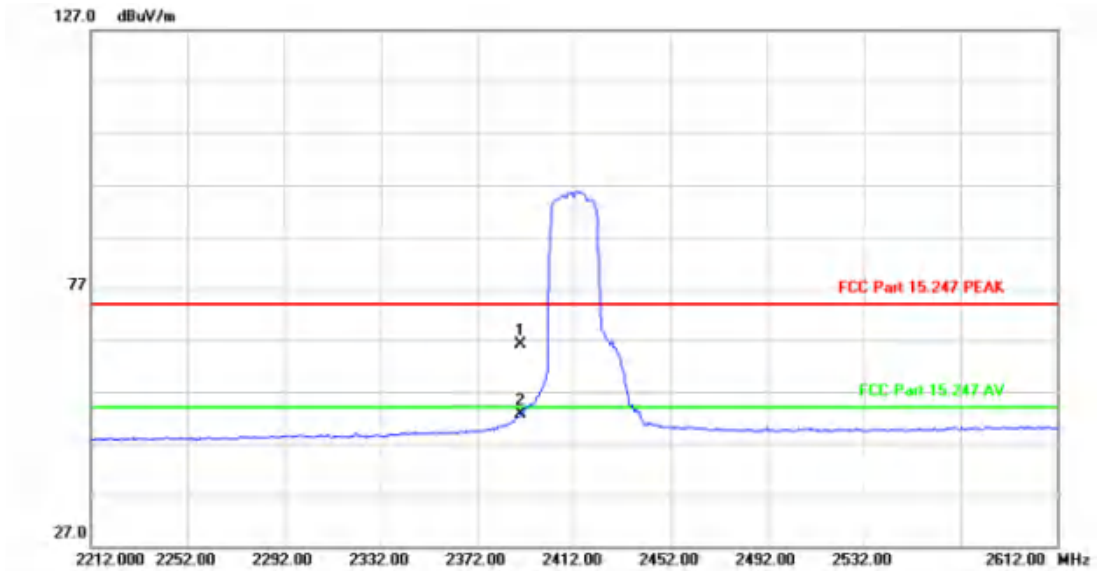


Above 1G (1GHz~18GHz)

Test mode: 11AX20MIMO

Test Channel:1

VERTICAL

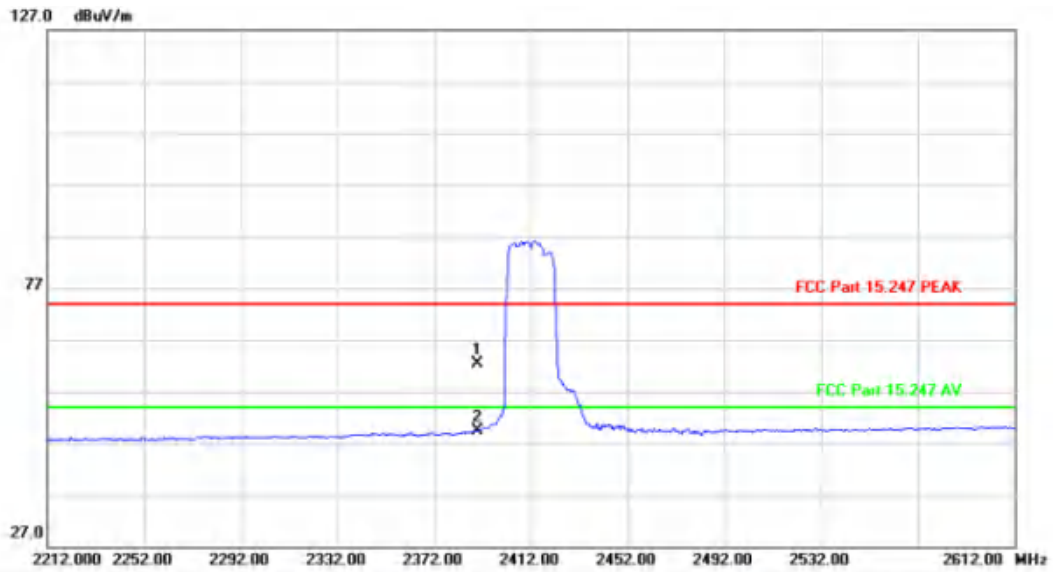


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	38.20	27.91	66.11	74.00	-7.89			peak
2 *		2390.000	24.64	27.91	52.55	54.00	-1.45			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4799.500	68.36	-14.14	54.22	74.00	-19.78			peak
2 *		4821.179	56.36	-14.03	42.33	54.00	-11.67			AVG
3		7222.000	65.60	-9.38	56.22	74.00	-17.78			peak
4		7232.129	49.20	-9.34	39.86	54.00	-14.14			AVG

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	34.52	27.91	62.43	74.00	-11.57	peak	
2 *		2390.000	21.43	27.91	49.34	54.00	-4.66	AVG	



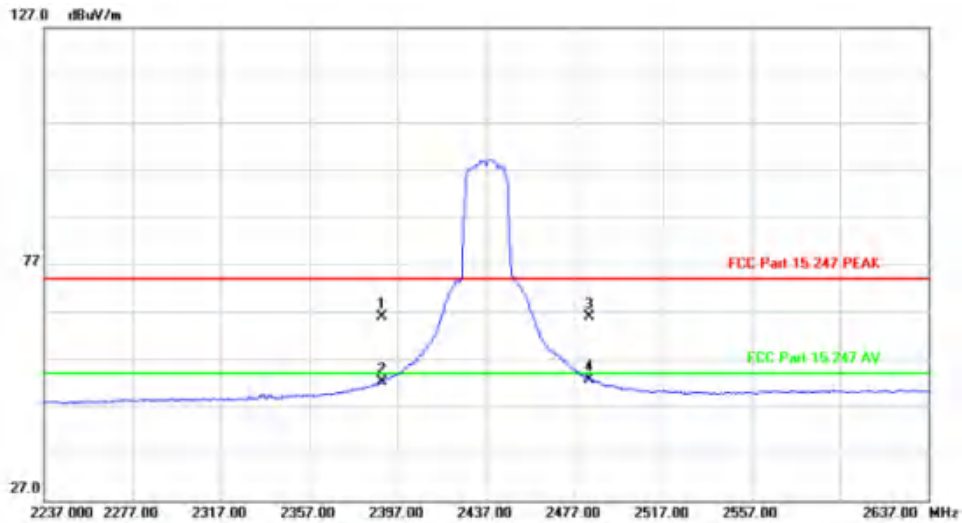
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1 *		4821.744	60.86	-14.03	46.83	54.00	-7.17	AVG	
2		4825.000	73.47	-14.02	59.45	74.00	-14.55	peak	
3		7222.000	68.72	-9.38	59.34	74.00	-14.66	peak	
4		7233.628	53.76	-9.34	44.42	54.00	-9.58	AVG	

Above 1G (1GHz~18GHz)

Test mode: 11AX20MIMO

Test Channel: 6

VERTICAL

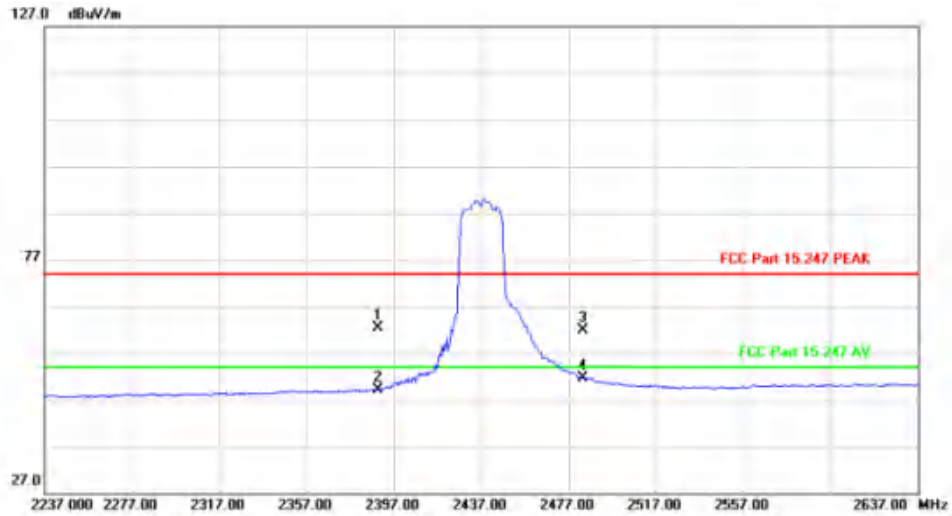


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	38.02	27.91	65.93	74.00	-8.07			peak
2		2390.000	24.21	27.91	52.12	54.00	-1.88			AVG
3		2483.500	37.66	28.16	65.82	74.00	-8.18			peak
4 *		2483.500	24.55	28.16	52.71	54.00	-1.29			AVG

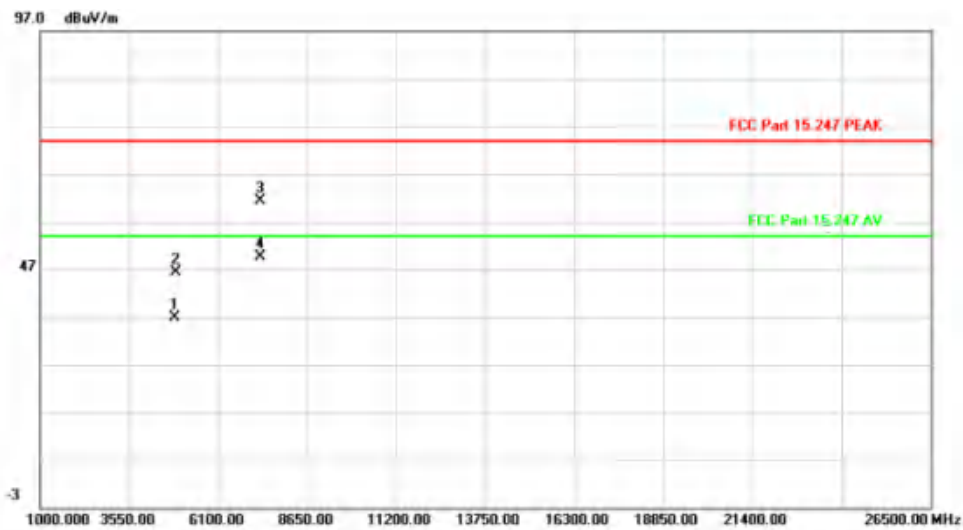


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4870.050	56.41	-13.79	42.62	74.00	-31.38			peak
2		4874.558	44.73	-13.77	30.96	54.00	-23.04			AVG
3 *		7308.378	50.15	-9.11	41.04	54.00	-12.96			AVG
4		7324.000	60.94	-9.06	51.88	74.00	-22.12			peak

HORIZONTALA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	34.45	27.91	62.36	74.00	-11.64	peak	
2		2390.000	21.34	27.91	49.25	54.00	-4.75	AVG	
3		2483.500	33.79	28.16	61.95	74.00	-12.05	peak	
4 *		2483.500	23.54	28.16	51.70	54.00	-2.30	AVG	



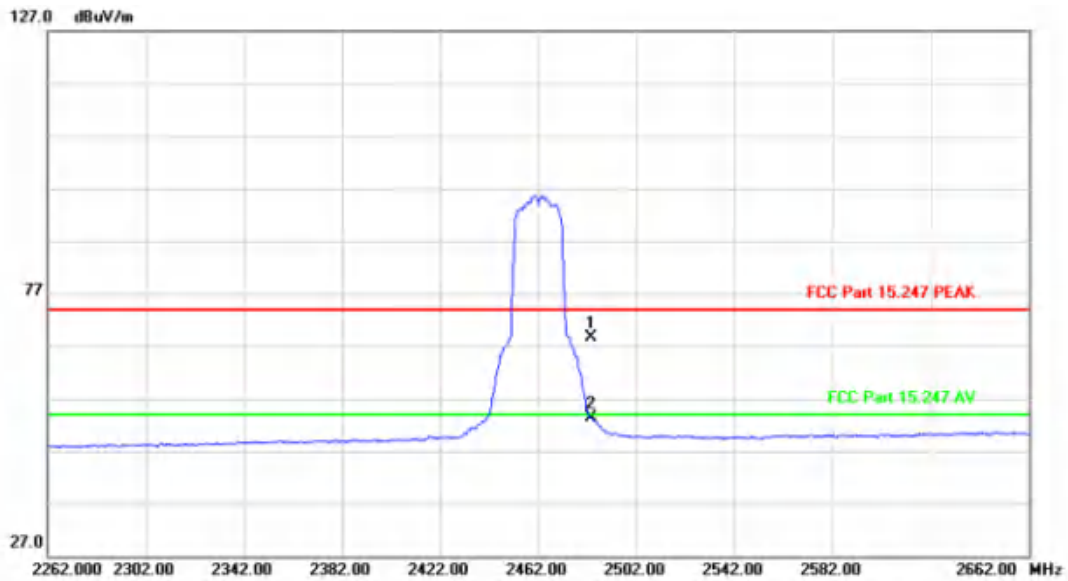
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4873.690	50.61	-13.77	36.84	54.00	-17.16	AVG	
2		4879.400	60.07	-13.74	46.33	74.00	-27.67	peak	
3		7307.000	70.59	-9.11	61.48	74.00	-12.52	peak	
4 *		7310.613	58.67	-9.10	49.57	54.00	-4.43	AVG	

Above 1G (1GHz~18GHz)

Test mode: 11AX20MIMO

Test Channel:11

VERTICAL

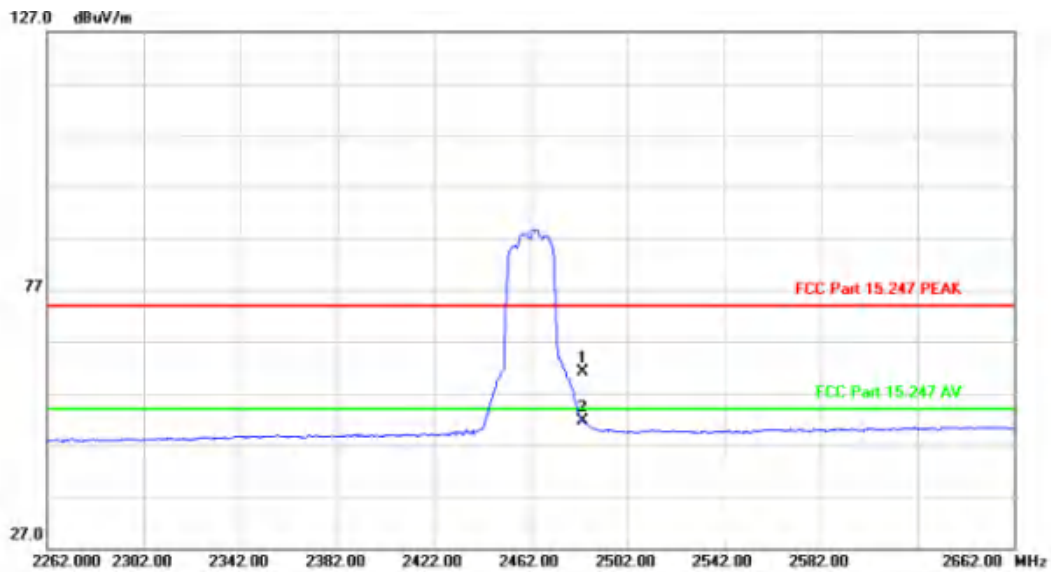


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	40.53	28.16	68.69	74.00	-5.31			peak
2 *		2483.500	25.15	28.16	53.31	54.00	-0.69			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4901.500	66.80	-13.63	53.17	74.00	-20.83			peak
2		4925.056	53.74	-13.51	40.23	54.00	-13.77			AVG
3		7375.000	71.11	-8.90	62.21	74.00	-11.79			peak
4 *		7387.707	56.77	-8.87	47.90	54.00	-6.10			AVG

HORIZONTAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2483.500	33.03	28.16	61.19	74.00	-12.81	peak	
2 *		2483.500	23.40	28.16	51.56	54.00	-2.44	AVG	



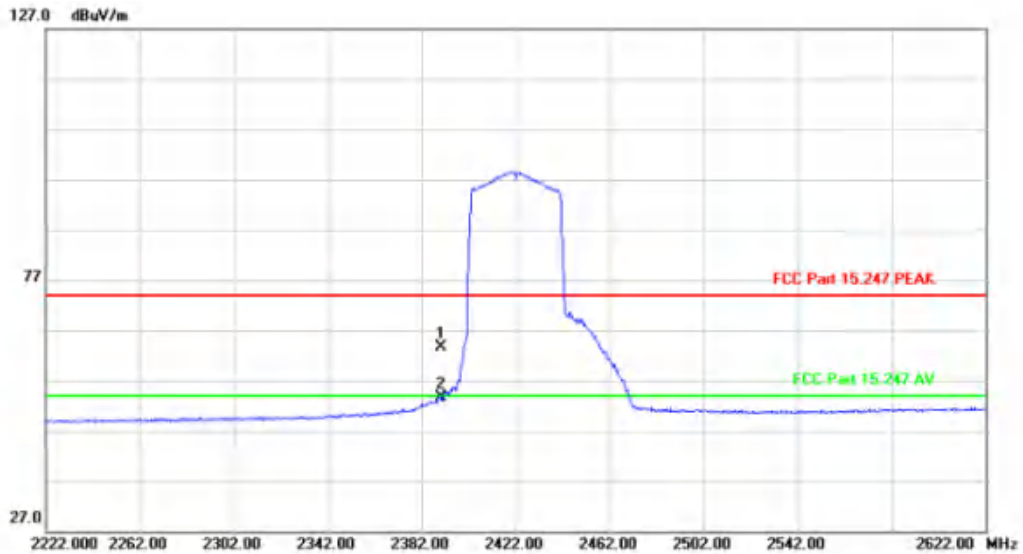
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4901.500	74.42	-13.63	60.79	74.00	-13.21	peak	
2		4924.697	60.92	-13.52	47.40	54.00	-6.60	AVG	
3		7375.000	72.34	-8.90	63.44	74.00	-10.56	peak	
4 *		7386.029	58.37	-8.87	49.50	54.00	-4.50	AVG	

Above 1G (1GHz~18GHz)

Test mode: 11AX40MIMO

Test Channel:3

VERTICAL

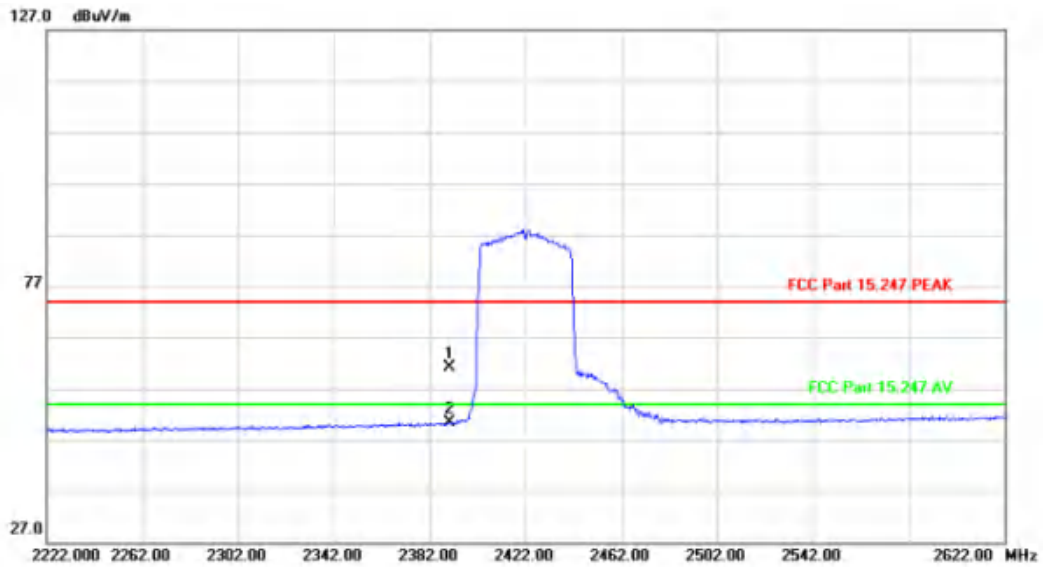


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	35.66	27.91	63.57	74.00	-10.43	peak	
2 *		2390.000	25.61	27.91	53.52	54.00	-0.48	AVG	



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4825.000	64.34	-14.02	50.32	74.00	-23.68	peak	
2 *		4838.646	52.20	-13.95	38.25	54.00	-15.75	AVG	
3		7247.500	59.10	-9.30	49.80	74.00	-24.20	peak	
4		7254.693	45.76	-9.28	36.48	54.00	-17.52	AVG	

HORIZONTAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	33.29	27.91	61.20	74.00	-12.80			peak
2	*	2390.000	22.50	27.91	50.41	54.00	-3.59			AVG



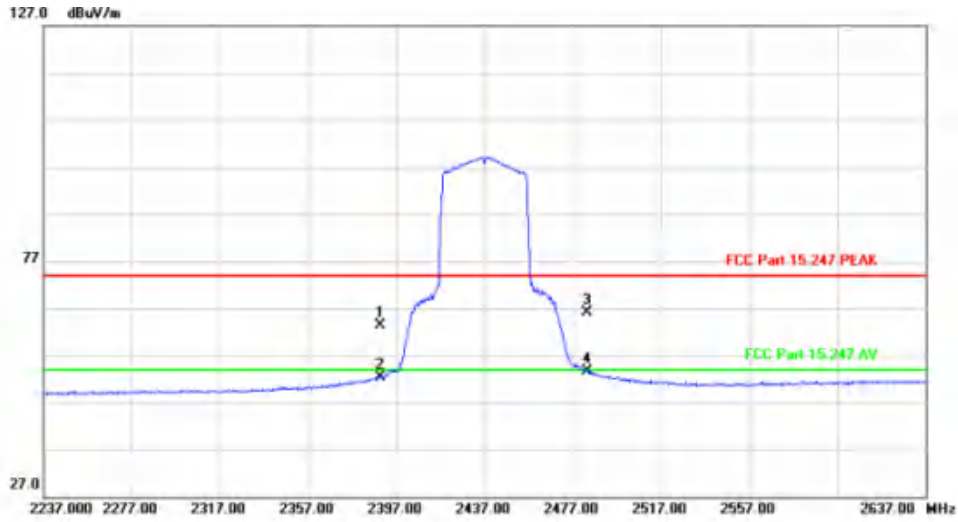
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4839.032	56.07	-13.94	42.13	54.00	-11.87			AVG
2		4850.500	70.09	-13.89	56.20	74.00	-17.80			peak
3		7247.500	64.75	-9.30	55.45	74.00	-18.55			peak
4		7261.286	48.35	-9.26	39.09	54.00	-14.91			AVG

Above 1G (1GHz~18GHz)

Test mode: 11AX40MIMO

Test Channel: 6

VERTICAL

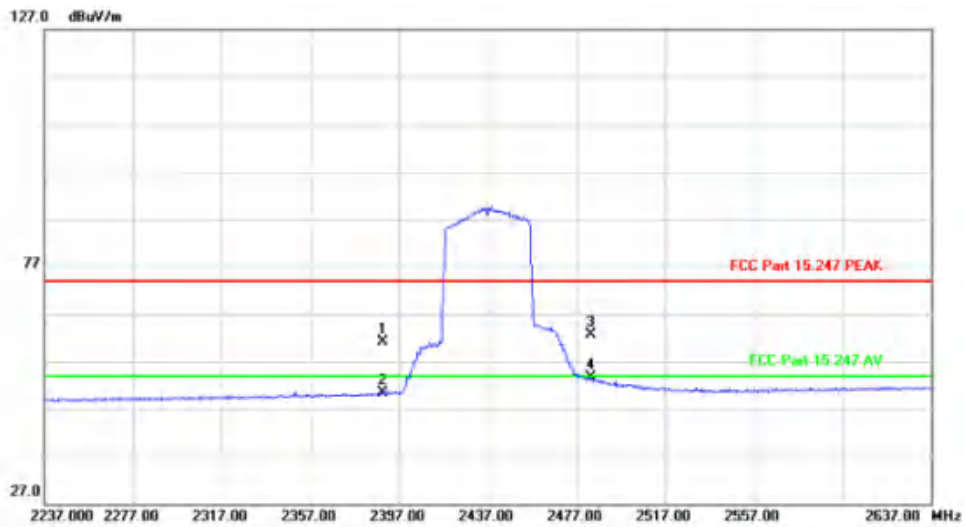


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	35.36	27.91	63.27	74.00	-10.73			peak
2		2390.000	24.52	27.91	52.43	54.00	-1.57			AVG
3		2483.500	37.91	28.16	66.07	74.00	-7.93			peak
4 *		2483.500	25.49	28.16	53.65	54.00	-0.35			AVG



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4868.587	52.81	-13.80	39.01	54.00	-14.99			AVG
2		4876.000	66.13	-13.76	52.37	74.00	-21.63			peak
3 *		7316.707	49.11	-9.08	40.03	54.00	-13.97			AVG
4		7324.000	62.10	-9.06	53.04	74.00	-20.96			peak

HORIZONTAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	33.34	27.91	61.25	74.00	-12.75			peak
2		2390.000	22.55	27.91	50.46	54.00	-3.54			AVG
3		2483.500	34.48	28.16	62.64	74.00	-11.36			peak
4 *		2483.500	25.42	28.16	53.58	54.00	-0.42			AVG



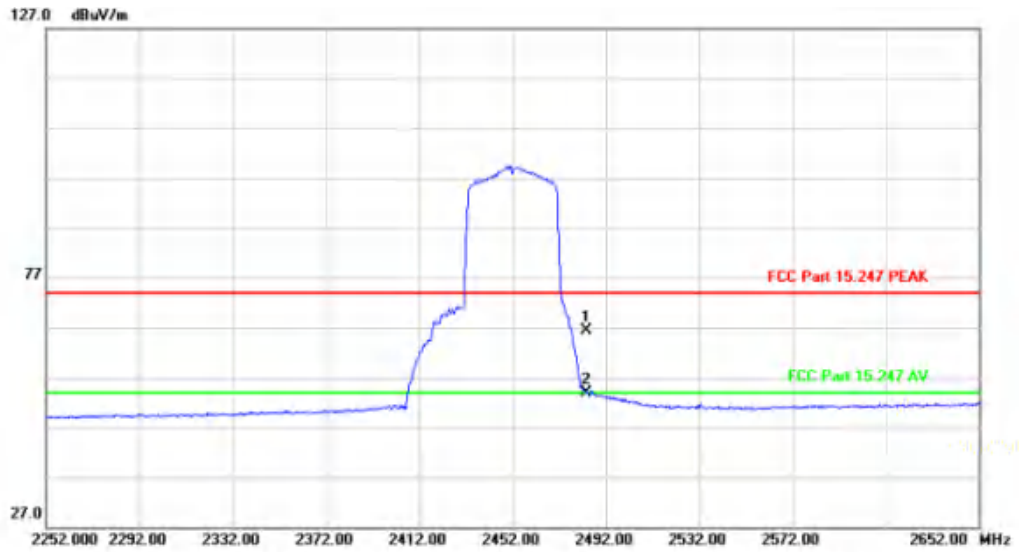
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4868.907	58.59	-13.80	44.79	54.00	-9.21			AVG
2		4876.000	71.91	-13.76	58.15	74.00	-15.85			peak
3		7298.500	68.23	-9.14	59.09	74.00	-14.91			peak
4 *		7309.849	54.65	-9.11	45.54	54.00	-8.46			AVG

Above 1G (1GHz~18GHz)

Test mode: 11AX40MIMO

Test Channel:9

VERTICAL

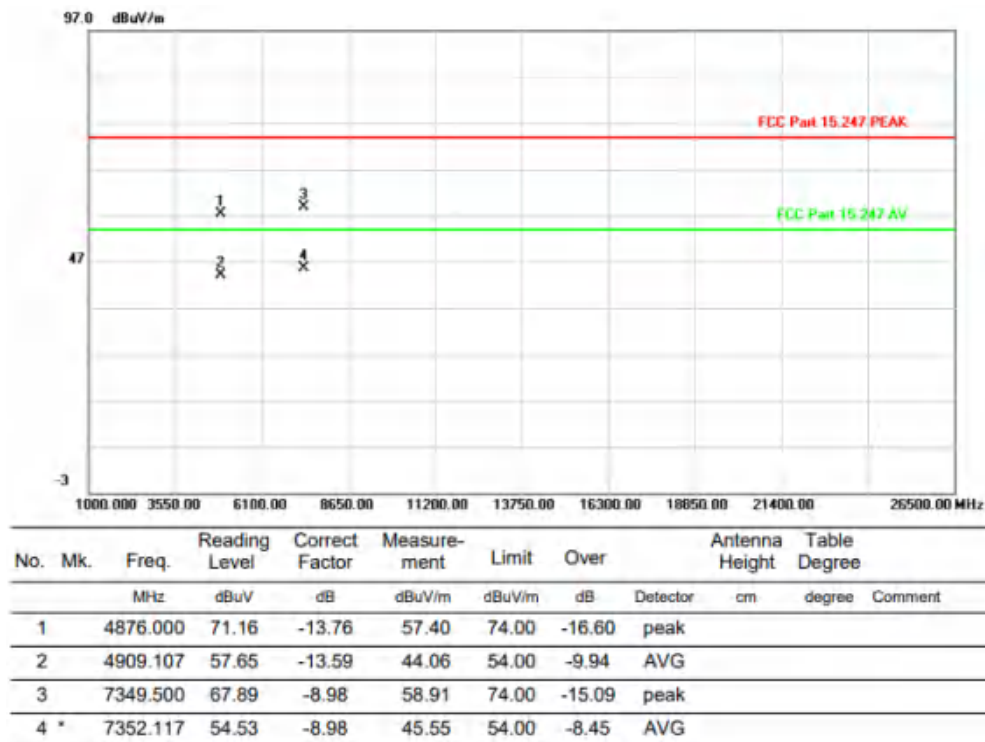
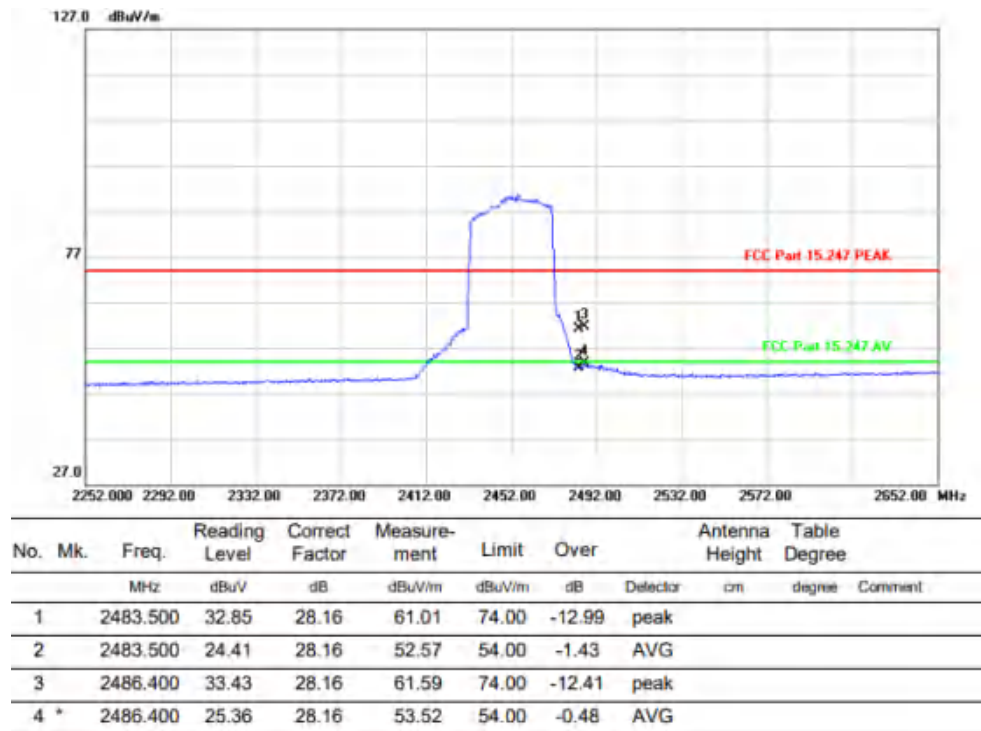


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2483.500	38.21	28.16	66.37	74.00	-7.63	peak	
2 *		2483.500	25.77	28.16	53.93	54.00	-0.07	AVG	



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		4901.500	63.47	-13.63	49.84	74.00	-24.16	peak	
2		4909.132	50.91	-13.59	37.32	54.00	-16.68	AVG	
3		7349.500	63.34	-8.98	54.36	74.00	-19.64	peak	
4 *		7352.317	48.98	-8.97	40.01	54.00	-13.99	AVG	

HORIZONTALA



Note: All the EUT's emissions had been evaluated for simultaneous transmission with the WIFI 2.4GHz and WIFI 5GHz, and there were no any additional or worse emissions found.

3.3 Spurious Emission at Antenna Port

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

3.3.2 Test Procedure

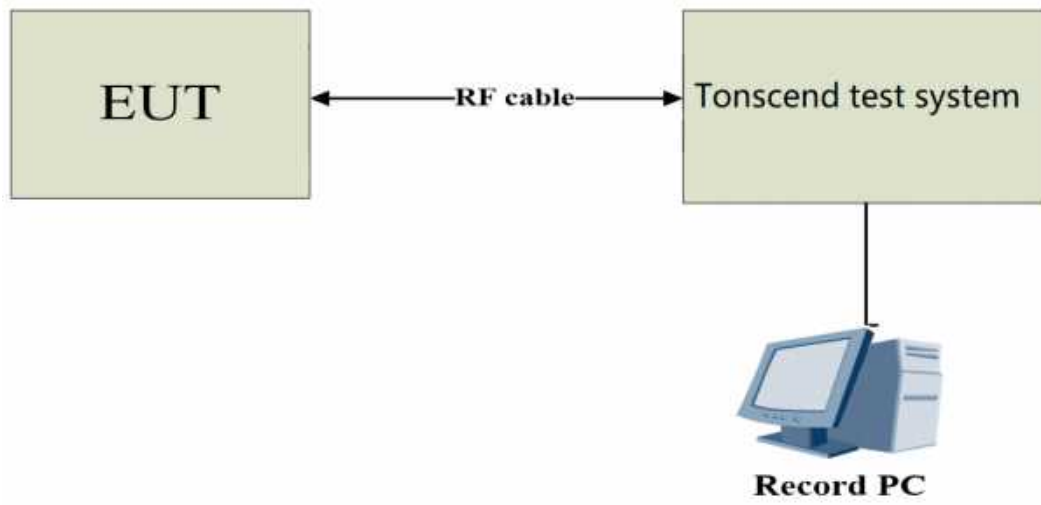
Test Method	
<input checked="" type="radio"/> Conducted Measurement	<input type="radio"/> Radiated Measurement
Test Channels	
<input checked="" type="radio"/> Lowest, Middle and Highest Channel	<input type="radio"/> Lowest and Highest Channel
Environmental conditions	
<input checked="" type="radio"/> Normal	<input type="radio"/> Normal and Extreme
Note: ● : Test ○ : No Test	

a) The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.

b) Spectrum Setting as below:

Centre Frequency	The centre frequency of the channel under test
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

3.3.3 Test Setup



3.3.4 Test Result

Conducted Band edge measurements

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B-MIMO	Ant1	Low	2412	8.33	-37.78	≤-21.67	PASS
	Ant2	Low	2412	7.98	-37.07	≤-22.03	PASS
	Ant1	High	2462	4.66	-38.13	≤-25.34	PASS
	Ant2	High	2462	5.35	-38.74	≤-24.65	PASS
11G-MIMO	Ant1	Low	2412	6.84	-35.29	≤-23.16	PASS
	Ant2	Low	2412	7.21	-36.03	≤-22.79	PASS
	Ant1	High	2462	7.43	-37.88	≤-22.57	PASS
	Ant2	High	2462	8.64	-38.73	≤-21.36	PASS
11N20MIMO	Ant1	Low	2412	7.59	-35.15	≤-22.41	PASS
	Ant2	Low	2412	7.33	-35.78	≤-22.67	PASS
	Ant1	High	2462	6.88	-37.93	≤-23.12	PASS
	Ant2	High	2462	8.08	-39.2	≤-21.92	PASS
11N40MIMO	Ant1	Low	2422	3.86	-31.41	≤-26.14	PASS
	Ant2	Low	2422	3.90	-31.41	≤-26.11	PASS
	Ant1	High	2452	4.32	-37.07	≤-25.68	PASS
	Ant2	High	2452	4.86	-39.16	≤-25.14	PASS
11AX20MIMO	Ant1	Low	2412	7.61	-37.05	≤-22.39	PASS
	Ant2	Low	2412	7.33	-36.04	≤-22.67	PASS
	Ant1	High	2462	7.00	-37.88	≤-23	PASS
	Ant2	High	2462	7.86	-38.28	≤-22.14	PASS
11AX40MIMO	Ant1	Low	2422	3.88	-31.13	≤-26.12	PASS
	Ant2	Low	2422	4.09	-31.26	≤-25.92	PASS
	Ant1	High	2452	4.31	-37.87	≤-25.69	PASS
	Ant2	High	2452	4.70	-38.95	≤-25.3	PASS

Test Graphs

11B-MIMO_Ant1_Low_2412



11B-MIMO_Ant2_Low_2412



11B-MIMO_Ant1_High_2462



11B-MIMO_Ant2_High_2462



11G-MIMO_Ant1_Low_2412



11G-MIMO_Ant2_Low_2412



11G-MIMO_Ant1_High_2462



11G-MIMO_Ant2_High_2462



11N20MIMO_Ant1_Low_2412



11N20MIMO_Ant2_Low_2412



11N20MIMO_Ant1_High_2462



11N20MIMO_Ant2_High_2462



11N40MIMO_Ant1_Low_2422



11N40MIMO_Ant2_Low_2422



11N40MIMO_Ant1_High_2452



11N40MIMO_Ant2_High_2452



11AX20MIMO_Ant1_Low_2412



11AX20MIMO_Ant2_Low_2412



11AX20MIMO_Ant1_High_2462



11AX20MIMO_Ant2_High_2462



11AX40MIMO_Ant1_Low_2422



11AX40MIMO_Ant2_Low_2422



11AX40MIMO_Ant1_High_2452



11AX40MIMO_Ant2_High_2452



Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B-MIMO	Ant1	2412	Reference	8.18	8.18	---	PASS
			30~1000	8.18	-43.43	≤-21.82	PASS
			1000~6000	8.18	-45.56	≤-21.82	PASS
			6000~26500	8.18	-36.07	≤-21.82	PASS
	Ant2	2412	Reference	8.12	8.12	---	PASS
			30~1000	8.12	-43.01	≤-21.88	PASS
			1000~6000	8.12	-46.73	≤-21.88	PASS
			6000~26500	8.12	-37.13	≤-21.88	PASS
	Ant1	2437	Reference	7.62	7.62	---	PASS
			30~1000	7.62	-35.36	≤-22.38	PASS
			1000~6000	7.62	-45.62	≤-22.38	PASS
			6000~26500	7.62	-36.42	≤-22.38	PASS
	Ant2	2437	Reference	8.31	8.31	---	PASS
			30~1000	8.31	-44.07	≤-21.69	PASS
			1000~6000	8.31	-45.63	≤-21.69	PASS
			6000~26500	8.31	-37	≤-21.69	PASS
	Ant1	2462	Reference	4.70	4.70	---	PASS
			30~1000	4.70	-49.56	≤-25.3	PASS
			1000~6000	4.70	-45.85	≤-25.3	PASS
			6000~26500	4.70	-35.03	≤-25.3	PASS
Ant2	2462	Reference	5.36	5.36	---	PASS	
		30~1000	5.36	-51.43	≤-24.64	PASS	
		1000~6000	5.36	-46.73	≤-24.64	PASS	
		6000~26500	5.36	-37.01	≤-24.64	PASS	
11G-MIMO	Ant1	2412	Reference	7.41	7.41	---	PASS
			30~1000	7.41	-50.51	≤-22.59	PASS
			1000~6000	7.41	-45	≤-22.59	PASS
			6000~26500	7.41	-36.07	≤-22.59	PASS
	Ant2	2412	Reference	7.55	7.55	---	PASS
			30~1000	7.55	-50.51	≤-22.45	PASS
			1000~6000	7.55	-46.31	≤-22.45	PASS
			6000~26500	7.55	-35.76	≤-22.45	PASS
	Ant1	2437	Reference	10.83	10.83	---	PASS
			30~1000	10.83	-37.21	≤-19.17	PASS
			1000~6000	10.83	-45.38	≤-19.17	PASS
			6000~26500	10.83	-35.71	≤-19.17	PASS

	Ant2	2437	Reference	11.67	11.67	---	PASS
			30~1000	11.67	-39.13	≤ -18.33	PASS
			1000~6000	11.67	-46.5	≤ -18.33	PASS
			6000~26500	11.67	-37.11	≤ -18.33	PASS
	Ant1	2462	Reference	8.15	8.15	---	PASS
			30~1000	8.15	-49.61	≤ -21.85	PASS
			1000~6000	8.15	-45.42	≤ -21.85	PASS
			6000~26500	8.15	-35.34	≤ -21.85	PASS
	Ant2	2462	Reference	8.33	8.33	---	PASS
			30~1000	8.33	-51.54	≤ -21.67	PASS
			1000~6000	8.33	-46.54	≤ -21.67	PASS
			6000~26500	8.33	-36.04	≤ -21.67	PASS
11N20MIMO	Ant1	2412	Reference	7.70	7.70	---	PASS
			30~1000	7.70	-50.33	≤ -22.3	PASS
			1000~6000	7.70	-45.34	≤ -22.3	PASS
			6000~26500	7.70	-35.67	≤ -22.3	PASS
	Ant2	2412	Reference	7.56	7.56	---	PASS
			30~1000	7.56	-42.7	≤ -22.44	PASS
			1000~6000	7.56	-46.22	≤ -22.44	PASS
			6000~26500	7.56	-37.23	≤ -22.44	PASS
	Ant1	2437	Reference	11.51	11.51	---	PASS
			30~1000	11.51	-32.8	≤ -18.49	PASS
			1000~6000	11.51	-44.77	≤ -18.49	PASS
			6000~26500	11.51	-35.51	≤ -18.49	PASS
	Ant2	2437	Reference	12.02	12.02	---	PASS
			30~1000	12.02	-32.89	≤ -17.98	PASS
			1000~6000	12.02	-46.27	≤ -17.98	PASS
			6000~26500	12.02	-37	≤ -17.98	PASS
	Ant1	2462	Reference	7.13	7.13	---	PASS
			30~1000	7.13	-50.35	≤ -22.87	PASS
			1000~6000	7.13	-45.37	≤ -22.87	PASS
			6000~26500	7.13	-36.07	≤ -22.87	PASS
	Ant2	2462	Reference	8.12	8.12	---	PASS
			30~1000	8.12	-40.38	≤ -21.88	PASS
			1000~6000	8.12	-46.56	≤ -21.88	PASS
			6000~26500	8.12	-36.52	≤ -21.88	PASS
11N40MIMO	Ant1	2422	Reference	3.94	3.94	---	PASS
			30~1000	3.94	-40.6	≤ -26.06	PASS
			1000~6000	3.94	-45.86	≤ -26.06	PASS
			6000~26500	3.94	-35.93	≤ -26.06	PASS
	Ant2	2422	Reference	4.24	4.24	---	PASS

			30~1000	4.24	-45.5	≤ -25.76	PASS
			1000~6000	4.24	-46.48	≤ -25.76	PASS
			6000~26500	4.24	-35.7	≤ -25.76	PASS
	Ant1	2437	Reference	5.36	5.36	---	PASS
			30~1000	5.36	-36.5	≤ -24.64	PASS
			1000~6000	5.36	-45.71	≤ -24.64	PASS
	Ant2	2437	6000~26500	5.36	-35.5	≤ -24.64	PASS
			Reference	6.01	6.01	---	PASS
			30~1000	6.01	-42.61	≤ -23.99	PASS
	Ant1	2452	1000~6000	6.01	-46.43	≤ -23.99	PASS
			6000~26500	6.01	-36.92	≤ -23.99	PASS
			Reference	4.26	4.26	---	PASS
	Ant2	2452	30~1000	4.26	-49.07	≤ -25.74	PASS
			1000~6000	4.26	-45.16	≤ -25.74	PASS
			6000~26500	4.26	-35.29	≤ -25.74	PASS
	11AX20MIMO	Ant1	2412	Reference	4.96	4.96	---
30~1000				4.96	-49.95	≤ -25.04	PASS
1000~6000				4.96	-45.48	≤ -25.04	PASS
Ant2		2412	6000~26500	4.96	-37.05	≤ -25.04	PASS
			Reference	7.68	7.68	---	PASS
			30~1000	7.68	-41.78	≤ -22.32	PASS
Ant1		2412	1000~6000	7.68	-44.87	≤ -22.32	PASS
			6000~26500	7.68	-35.78	≤ -22.32	PASS
			Reference	7.42	7.42	---	PASS
Ant2		2412	30~1000	7.42	-50.62	≤ -22.58	PASS
			1000~6000	7.42	-46.06	≤ -22.58	PASS
			6000~26500	7.42	-36.74	≤ -22.58	PASS
Ant1		2437	Reference	10.45	10.45	---	PASS
			30~1000	10.45	-49.77	≤ -19.55	PASS
			1000~6000	10.45	-45.04	≤ -19.55	PASS
Ant2		2437	6000~26500	10.45	-35.23	≤ -19.55	PASS
	Reference		10.65	10.65	---	PASS	
	30~1000		10.65	-40.91	≤ -19.35	PASS	
Ant1	2462	1000~6000	10.65	-46.71	≤ -19.35	PASS	
		6000~26500	10.65	-36.64	≤ -19.35	PASS	
		Reference	6.88	6.88	---	PASS	
Ant2	2462	30~1000	6.88	-50.54	≤ -23.12	PASS	
		1000~6000	6.88	-45.86	≤ -23.12	PASS	
		6000~26500	6.88	-35.99	≤ -23.12	PASS	
Ant1	2462	Reference	7.50	7.50	---	PASS	
		30~1000	7.50	-50.35	≤ -22.5	PASS	

			1000~6000	7.50	-45.68	≤ -22.5	PASS
			6000~26500	7.50	-37.72	≤ -22.5	PASS
11AX40MIMO	Ant1	2422	Reference	3.96	3.96	---	PASS
			30~1000	3.96	-50.32	≤ -26.04	PASS
			1000~6000	3.96	-45.34	≤ -26.04	PASS
			6000~26500	3.96	-36.17	≤ -26.04	PASS
	Ant2	2422	Reference	4.05	4.05	---	PASS
			30~1000	4.05	-45.98	≤ -25.95	PASS
			1000~6000	4.05	-46.37	≤ -25.95	PASS
			6000~26500	4.05	-37.14	≤ -25.95	PASS
	Ant1	2437	Reference	4.67	4.67	---	PASS
			30~1000	4.67	-47.57	≤ -25.33	PASS
			1000~6000	4.67	-44.85	≤ -25.33	PASS
			6000~26500	4.67	-36.26	≤ -25.33	PASS
	Ant2	2437	Reference	5.36	5.36	---	PASS
			30~1000	5.36	-38.97	≤ -24.64	PASS
			1000~6000	5.36	-45.97	≤ -24.64	PASS
			6000~26500	5.36	-36.91	≤ -24.64	PASS
	Ant1	2452	Reference	4.25	4.25	---	PASS
			30~1000	4.25	-49.28	≤ -25.75	PASS
			1000~6000	4.25	-44.9	≤ -25.75	PASS
			6000~26500	4.25	-36.12	≤ -25.75	PASS
Ant2	2452	Reference	5.01	5.01	---	PASS	
		30~1000	5.01	-50.73	≤ -24.99	PASS	
		1000~6000	5.01	-46.32	≤ -24.99	PASS	
		6000~26500	5.01	-36.44	≤ -24.99	PASS	

Test Graphs

11B-MIMO_Ant1_2412_0-Reference



11B-MIMO_Ant1_2412_30~1000



11B-MIMO_Ant1_2412_1000-6000



11B-MIMO_Ant1_2412_6000~26500



11B-MIMO_Ant2_2412_0~Reference



11B-MIMO_Ant2_2412_30~1000



11B-MIMO_Ant2_2412_1000~6000



11B-MIMO_Ant2_2412_6000~26500



11B-MIMO_Ant1_2437_0~Reference



11B-MIMO_Ant1_2437_30~1000



11B-MIMO_Ant1_2437_1000~6000



11B-MIMO_Ant1_2437_6000~26500



11B-MIMO_Ant2_2437_0~Reference



11B-MIMO_Ant2_2437_30~1000



11B-MIMO_Ant2_2437_1000~6000



11B-MIMO_Ant2_2437_6000~26500



11B-MIMO_Ant1_2462_0~Reference



11B-MIMO_Ant1_2462_30~1000



11B-MIMO_Ant1_2462_1000~6000



11B-MIMO_Ant1_2462_6000~26500



11B-MIMO_Ant2_2462_0-Reference



11B-MIMO_Ant2_2462_30~1000



11B-MIMO_Ant2_2462_1000~6000



11B-MIMO_Ant2_2462_6000~26500



11G-MIMO_Ant1_2412_0~Reference



11G-MIMO_Ant1_2412_30~1000



11G-MIMO_Ant1_2412_1000~6000



11G-MIMO_Ant1_2412_6000~26500



11G-MIMO_Ant2_2412_0~Reference



11G-MIMO_Ant2_2412_30~1000



11G-MIMO_Ant2_2412_1000~6000



11G-MIMO_Ant2_2412_6000~26500



11G-MIMO_Ant1_2437_0~Reference



11G-MIMO_Ant1_2437_30~1000



11G-MIMO_Ant1_2437_1000~6000



11G-MIMO_Ant1_2437_6000~26500



11G-MIMO_Ant2_2437_0~Reference



11G-MIMO_Ant2_2437_30~1000



11G-MIMO_Ant2_2437_1000~6000



11G-MIMO_Ant2_2437_6000~26500



11G-MIMO_Ant1_2462_0~Reference



11G-MIMO_Ant1_2462_30~1000



11G-MIMO_Ant1_2462_1000~6000



11G-MIMO_Ant1_2462_6000~26500



11G-MIMO_Ant2_2462_0~Reference



11G-MIMO_Ant2_2462_30~1000



11G-MIMO_Ant2_2462_1000~6000



11G-MIMO_Ant2_2462_6000~26500



11N20MIMO_Ant1_2412_0-Reference



11N20MIMO_Ant1_2412_30-1000



11N20MIMO_Ant1_2412_1000-6000



11N20MIMO_Ant1_2412_6000~26500



11N20MIMO_Ant2_2412_0~Reference



11N20MIMO_Ant2_2412_30-1000



11N20MIMO_Ant2_2412_1000-6000



11N20MIMO_Ant2_2412_6000~26500



11N20MIMO_Ant1_2437_0-Reference



11N20MIMO_Ant1_2437_30-1000



11N20MIMO_Ant1_2437_1000-6000



11N20MIMO_Ant1_2437_6000~26500



11N20MIMO_Ant2_2437_0-Reference



11N20MIMO_Ant2_2437_30~1000



11N20MIMO_Ant2_2437_1000~6000



11N20MIMO_Ant2_2437_6000~26500



11N20MIMO_Ant1_2462_0~Reference



11N20MIMO_Ant1_2462_30-1000



11N20MIMO_Ant1_2462_1000-6000



11N20MIMO_Ant1_2462_6000~26500



11N20MIMO_Ant2_2462_0~Reference



11N20MIMO_Ant2_2462_30-1000



11N20MIMO_Ant2_2462_1000-6000



11N20MIMO_Ant2_2462_6000~26500



11N40MIMO_Ant1_2422_0-Reference



11N40MIMO_Ant1_2422_30-1000



11N40MIMO_Ant1_2422_1000-6000



11N40MIMO_Ant1_2422_6000~26500



11N40MIMO_Ant2_2422_0~Reference



11N40MIMO_Ant2_2422_30~1000



11N40MIMO_Ant2_2422_1000~6000



11N40MIMO_Ant2_2422_6000~26500



11N40MIMO_Ant1_2437_0-Reference



11N40MIMO_Ant1_2437_30~1000



11N40MIMO_Ant1_2437_1000~6000



11N40MIMO_Ant1_2437_6000~26500



11N40MIMO_Ant2_2437_0~Reference



11N40MIMO_Ant2_2437_30~1000



11N40MIMO_Ant2_2437_1000~6000



11N40MIMO_Ant2_2437_6000~26500



11N40MIMO_Ant1_2452_0-Reference



11N40MIMO_Ant1_2452_30-1000



11N40MIMO_Ant1_2452_1000-6000



11N40MIMO_Ant1_2452_6000~26500



11N40MIMO_Ant2_2452_0-Reference



11N40MIMO_Ant2_2452_30-1000



11N40MIMO_Ant2_2452_1000-6000



11N40MIMO_Ant2_2452_6000~26500



11AX20MIMO_Ant1_2412_0~Reference



11AX20MIMO_Ant1_2412_30~1000



11AX20MIMO_Ant1_2412_1000~6000



11AX20MIMO_Ant1_2412_6000~26500



11AX20MIMO_Ant2_2412_0~Reference



11AX20MIMO_Ant2_2412_30~1000



11AX20MIMO_Ant2_2412_1000~6000



11AX20MIMO_Ant2_2412_6000~26500



11AX20MIMO_Ant1_2437_0~Reference



11AX20MIMO_Ant1_2437_30~1000



11AX20MIMO_Ant1_2437_1000~6000



11AX20MIMO_Ant1_2437_6000~26500



11AX20MIMO_Ant2_2437_0~Reference



11AX20MIMO_Ant2_2437_30~1000



11AX20MIMO_Ant2_2437_1000~6000



11AX20MIMO_Ant2_2437_6000~26500



11AX20MIMO_Ant1_2462_0~Reference



11AX20MIMO_Ant1_2462_30~1000



11AX20MIMO_Ant1_2462_1000~6000



11AX20MIMO_Ant1_2462_6000~26500



11AX20MIMO_Ant2_2462_0~Reference



11AX20MIMO_Ant2_2462_30~1000



11AX20MIMO_Ant2_2462_1000~6000



11AX20MIMO_Ant2_2462_6000~26500



11AX40MIMO_Ant1_2422_0~Reference



11AX40MIMO_Ant1_2422_30~1000



11AX40MIMO_Ant1_2422_1000~6000



11AX40MIMO_Ant1_2422_6000~26500



11AX40MIMO_Ant2_2422_0~Reference



11AX40MIMO_Ant2_2422_30~1000



11AX40MIMO_Ant2_2422_1000~6000



11AX40MIMO_Ant2_2422_6000~26500



11AX40MIMO_Ant1_2437_0~Reference



11AX40MIMO_Ant1_2437_30~1000



11AX40MIMO_Ant1_2437_1000~6000



11AX40MIMO_Ant1_2437_6000~26500



11AX40MIMO_Ant2_2437_0~Reference



11AX40MIMO_Ant2_2437_30~1000



11AX40MIMO_Ant2_2437_1000~6000



11AX40MIMO_Ant2_2437_6000~26500



11AX40MIMO_Ant1_2452_0~Reference



11AX40MIMO_Ant1_2452_30~1000



11AX40MIMO_Ant1_2452_1000~6000



11AX40MIMO_Ant1_2452_6000~26500



11AX40MIMO_Ant2_2452_0~Reference



11AX40MIMO_Ant2_2452_30~1000



11AX40MIMO_Ant2_2452_1000~6000



11AX40MIMO_Ant2_2452_6000~26500



3.4 6dB Bandwidth And 99% Occupied Bandwidth

3.4.1 Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

3.4.2 Test Procedure

Test Method	
<input checked="" type="radio"/> Conducted Measurement	<input type="radio"/> Radiated Measurement
Test Channels	
<input checked="" type="radio"/> Lowest, Middle and Highest Channel	<input type="radio"/> Lowest and Highest Channel
Environmental conditions	
<input checked="" type="radio"/> Normal	<input type="radio"/> Normal and Extreme
Note: ● : Test ○ : No Test	

a) The EUT was connected to the tonscend test system, and the spectrum analyser is set as follow:

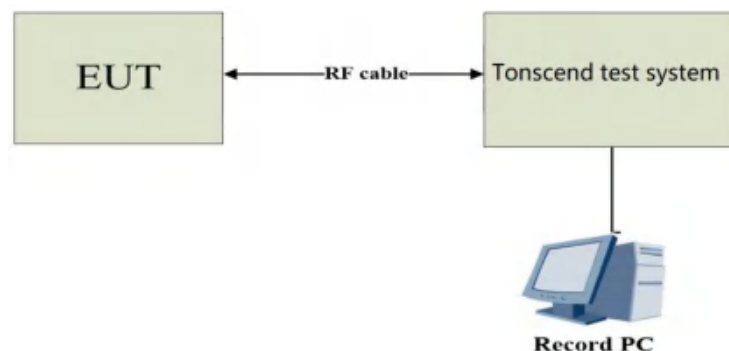
Centre Frequency	The centre frequency of the channel under test
RBW	For 6dB Bandwidth :100K For 99% Occupied Bandwidth :1% to 5% of the occupied bandwidth
VBW	For 6dB Bandwidth : $\geq 3 \times \text{RBW}$ For 99% Occupied Bandwidth : approximately $3 \times \text{RBW}$
Frequency span	2x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

b) Wait for the trace to stabilize then find the peak value of the trace and place the analyser marker on this peak.

c) Use the -6dB bandwidth function of the spectrum analyser to measure the 6dB Bandwidth of the EUT. This value shall be recorded.

d) Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

3.4.3 Test Setup



3.4.4 Test Result

DTS Bandwidth

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-MIMO	Ant1	2412	7.520	2408.440	2415.960	0.5	PASS
	Ant2	2412	8.040	2407.960	2416.000	0.5	PASS
	Ant1	2437	8.000	2433.000	2441.000	0.5	PASS
	Ant2	2437	8.080	2432.920	2441.000	0.5	PASS
	Ant1	2462	7.960	2458.000	2465.960	0.5	PASS
	Ant2	2462	7.600	2458.400	2466.000	0.5	PASS
11G-MIMO	Ant1	2412	14.680	2404.200	2418.880	0.5	PASS
	Ant2	2412	16.320	2403.800	2420.120	0.5	PASS
	Ant1	2437	16.320	2428.800	2445.120	0.5	PASS
	Ant2	2437	15.720	2428.800	2444.520	0.5	PASS
	Ant1	2462	16.280	2453.840	2470.120	0.5	PASS
	Ant2	2462	16.280	2453.800	2470.080	0.5	PASS
11N20MIMO	Ant1	2412	16.120	2403.480	2419.600	0.5	PASS
	Ant2	2412	16.640	2403.200	2419.840	0.5	PASS
	Ant1	2437	17.520	2428.200	2445.720	0.5	PASS
	Ant2	2437	17.280	2428.200	2445.480	0.5	PASS
	Ant1	2462	16.520	2453.600	2470.120	0.5	PASS
	Ant2	2462	16.320	2453.800	2470.120	0.5	PASS
11N40MIMO	Ant1	2422	35.040	2404.480	2439.520	0.5	PASS
	Ant2	2422	35.040	2404.400	2439.440	0.5	PASS
	Ant1	2437	34.080	2420.680	2454.760	0.5	PASS
	Ant2	2437	34.800	2419.640	2454.440	0.5	PASS
	Ant1	2452	35.120	2434.400	2469.520	0.5	PASS
	Ant2	2452	35.120	2434.400	2469.520	0.5	PASS
11AX20MIMO	Ant1	2412	18.360	2402.560	2420.920	0.5	PASS
	Ant2	2412	18.520	2402.680	2421.200	0.5	PASS
	Ant1	2437	17.760	2428.480	2446.240	0.5	PASS
	Ant2	2437	15.680	2429.320	2445.000	0.5	PASS
	Ant1	2462	17.480	2453.280	2470.760	0.5	PASS
	Ant2	2462	17.040	2453.080	2470.120	0.5	PASS
11AX40MIMO	Ant1	2422	36.080	2403.440	2439.520	0.5	PASS
	Ant2	2422	35.120	2404.400	2439.520	0.5	PASS
	Ant1	2437	35.440	2419.080	2454.520	0.5	PASS
	Ant2	2437	36.400	2419.400	2455.800	0.5	PASS
	Ant1	2452	36.320	2434.480	2470.800	0.5	PASS
	Ant2	2452	36.400	2434.400	2470.800	0.5	PASS

11B-MIMO_Ant1_2412



11B-MIMO_Ant2_2412



11B-MIMO_Ant1_2437



11B-MIMO_Ant2_2437



11B-MIMO_Ant1_2462



11B-MIMO_Ant2_2462



11G-MIMO_Ant1_2412



11G-MIMO_Ant2_2412



11G-MIMO_Ant1_2437



11G-MIMO_Ant2_2437



11G-MIMO_Ant1_2462



11G-MIMO_Ant2_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



11N40MIMO_Ant1_2422



11N40MIMO_Ant2_2422



11N40MIMO_Ant1_2437



11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



11AX20MIMO_Ant1_2412



11AX20MIMO_Ant2_2412



11AX20MIMO_Ant1_2437



11AX20MIMO_Ant2_2437



11AX20MIMO_Ant1_2462



11AX20MIMO_Ant2_2462



11AX40MIMO_Ant1_2422



11AX40MIMO_Ant2_2422



11AX40MIMO_Ant1_2437



11AX40MIMO_Ant2_2437



11AX40MIMO_Ant1_2452



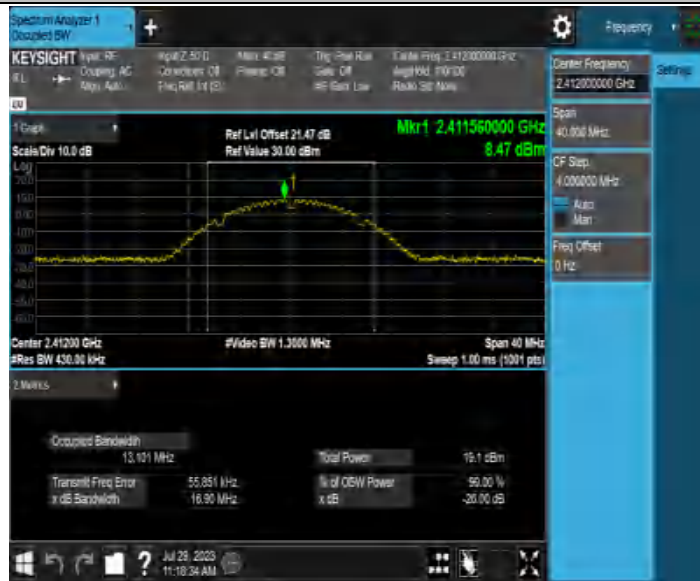
11AX40MIMO_Ant2_2452



Occupied channel bandwidth

TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-MIMO	Ant1	2412	13.101	2405.5054	2418.6064	---	---
	Ant2	2412	13.028	2405.5413	2418.5693	---	---
	Ant1	2437	13.148	2430.4623	2443.6103	---	---
	Ant2	2437	13.027	2430.5136	2443.5406	---	---
	Ant1	2462	13.514	2455.2638	2468.7778	---	---
	Ant2	2462	13.329	2455.3694	2468.6984	---	---
11G-MIMO	Ant1	2412	17.246	2403.5469	2420.7929	---	---
	Ant2	2412	17.000	2403.6051	2420.6051	---	---
	Ant1	2437	17.226	2428.4601	2445.6861	---	---
	Ant2	2437	17.078	2428.5118	2445.5898	---	---
	Ant1	2462	17.166	2453.4365	2470.6025	---	---
	Ant2	2462	17.012	2453.5576	2470.5696	---	---
11N20MIMO	Ant1	2412	18.153	2403.0633	2421.2163	---	---
	Ant2	2412	17.990	2403.0845	2421.0745	---	---
	Ant1	2437	18.342	2427.8664	2446.2084	---	---
	Ant2	2437	18.335	2427.9505	2446.2855	---	---
	Ant1	2462	18.239	2452.9179	2471.1569	---	---
	Ant2	2462	18.000	2453.0378	2471.0378	---	---
11N40MIMO	Ant1	2422	36.601	2403.8055	2440.4065	---	---
	Ant2	2422	36.310	2403.9617	2440.2717	---	---
	Ant1	2437	36.595	2418.7914	2455.3864	---	---
	Ant2	2437	36.574	2418.8071	2455.3811	---	---
	Ant1	2452	36.592	2433.6655	2470.2575	---	---
	Ant2	2452	36.432	2433.8511	2470.2831	---	---
11AX20MIMO	Ant1	2412	18.992	2402.5726	2421.5646	---	---
	Ant2	2412	18.999	2402.5368	2421.5358	---	---
	Ant1	2437	19.176	2427.4957	2446.6717	---	---
	Ant2	2437	19.160	2427.4666	2446.6266	---	---
	Ant1	2462	19.105	2452.5254	2471.6304	---	---
	Ant2	2462	19.084	2452.5456	2471.6296	---	---
11AX40MIMO	Ant1	2422	37.751	2403.3009	2441.0519	---	---
	Ant2	2422	37.865	2403.2494	2441.1144	---	---
	Ant1	2437	37.965	2418.1058	2456.0708	---	---
	Ant2	2437	37.909	2418.1116	2456.0206	---	---
	Ant1	2452	37.900	2433.0604	2470.9604	---	---
	Ant2	2452	37.827	2433.1063	2470.9333	---	---

11B-MIMO_Ant1_2412



11B-MIMO_Ant2_2412



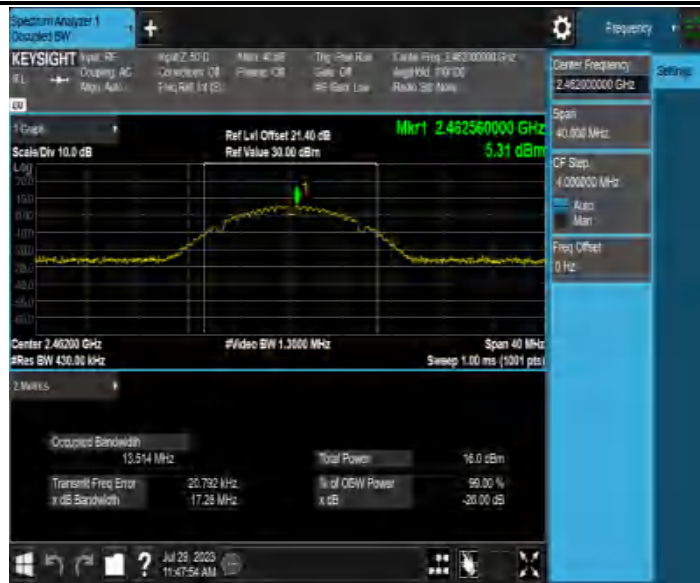
11B-MIMO_Ant1_2437



11B-MIMO_Ant2_2437



11B-MIMO_Ant1_2462



11B-MIMO_Ant2_2462



11G-MIMO_Ant1_2412



11G-MIMO_Ant2_2412



11G-MIMO_Ant1_2437



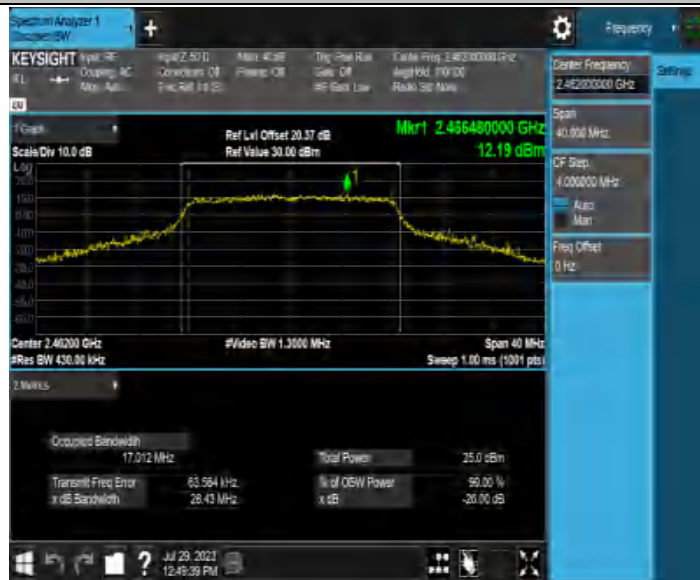
11G-MIMO_Ant2_2437



11G-MIMO_Ant1_2462



11G-MIMO_Ant2_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



11N40MIMO_Ant1_2422



11N40MIMO_Ant2_2422



11N40MIMO_Ant1_2437



11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



11AX20MIMO_Ant1_2412



11AX20MIMO_Ant2_2412



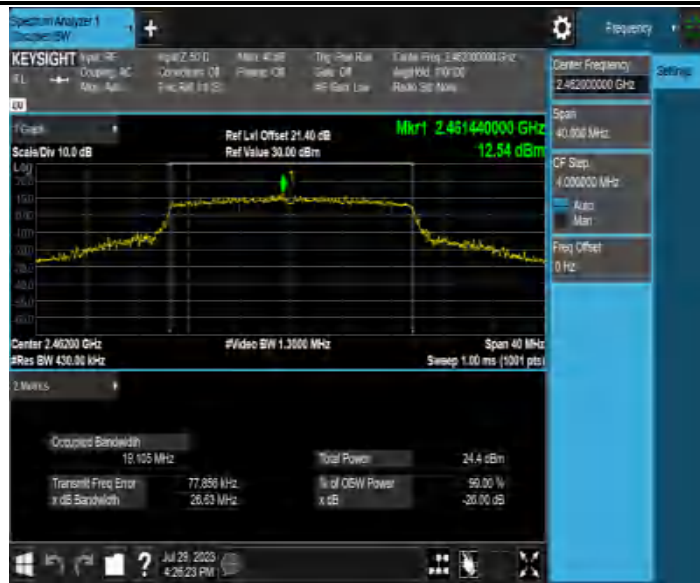
11AX20MIMO_Ant1_2437



11AX20MIMO_Ant2_2437



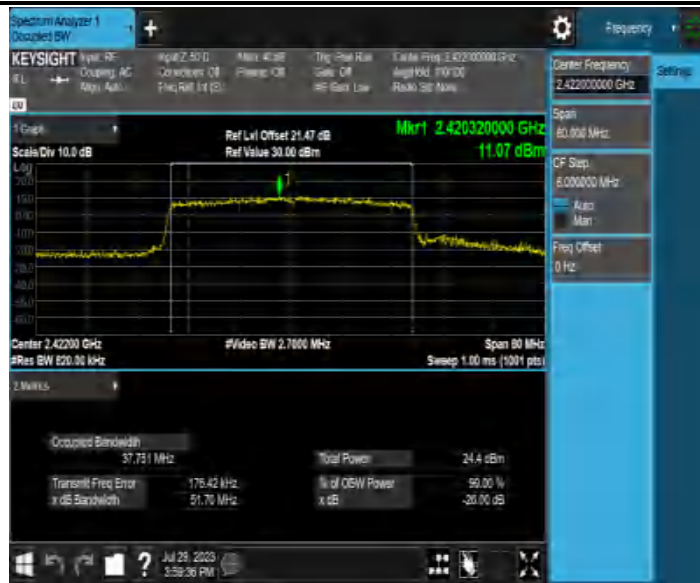
11AX20MIMO_Ant1_2462



11AX20MIMO_Ant2_2462



11AX40MIMO_Ant1_2422



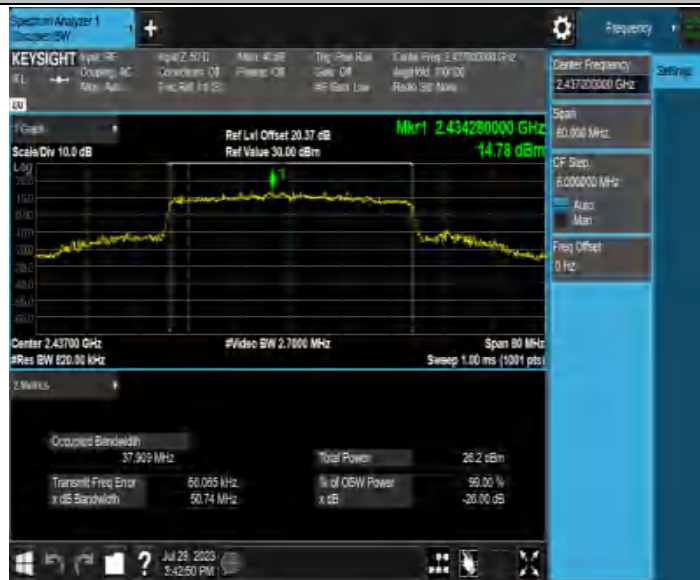
11AX40MIMO_Ant2_2422



11AX40MIMO_Ant1_2437



11AX40MIMO_Ant2_2437



11AX40MIMO_Ant1_2452



11AX40MIMO_Ant2_2452



3.5 Maximum conducted output power

3.5.1 Limit

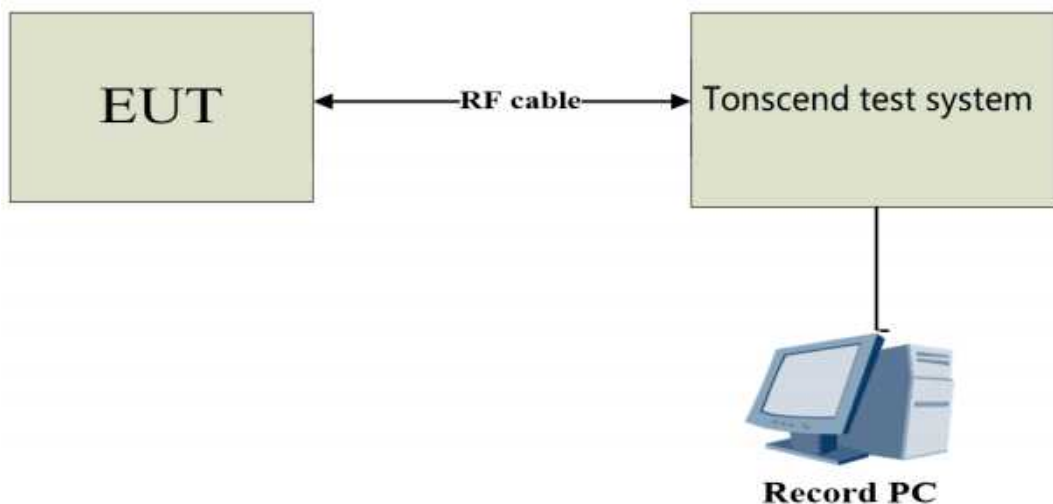
For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

3.5.2 Test Procedure

Test Method	
<input checked="" type="radio"/> Conducted Measurement	<input type="radio"/> Radiated Measurement
Test Channels	
<input checked="" type="radio"/> Lowest, Middle and Highest Channel	<input type="radio"/> Lowest and Highest Channel
Environmental conditions	
<input checked="" type="radio"/> Normal	<input type="radio"/> Normal and Extreme
Note: ● : Test ○ : No Test	

- a) The EUT was directly connected to the tonscend test system and antenna output port as show in the block diagram below.
- b) The maximum conducted output power was performed in accordance with method 11.9.1.3 (for peak power) of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

3.5.3 Test Setup



3.5.4 The Result

TestMode	Antenna	Frequency [MHz]	Conducted (AVG) Power [dBm]	Conducted Limit [dBm]	Verdict
11B-MIMO	Ant1	2412	16.08	≤30.00	PASS
	Ant2	2412	16.20	≤30.00	PASS
	total	2412	19.15	≤30.00	PASS
	Ant1	2437	15.49	≤30.00	PASS
	Ant2	2437	16.14	≤30.00	PASS
	total	2437	18.84	≤30.00	PASS
	Ant1	2462	12.76	≤30.00	PASS
	Ant2	2462	13.06	≤30.00	PASS
	total	2462	15.92	≤30.00	PASS
11G-MIMO	Ant1	2412	17.61	≤30.00	PASS
	Ant2	2412	17.76	≤30.00	PASS
	total	2412	20.70	≤30.00	PASS
	Ant1	2437	20.88	≤30.00	PASS
	Ant2	2437	21.59	≤30.00	PASS
	total	2437	24.26	≤30.00	PASS
	Ant1	2462	17.96	≤30.00	PASS
	Ant2	2462	18.60	≤30.00	PASS
	total	2462	21.30	≤30.00	PASS
11N20MIMO	Ant1	2412	17.61	≤30.00	PASS
	Ant2	2412	17.71	≤30.00	PASS
	total	2412	20.67	≤30.00	PASS
	Ant1	2437	21.37	≤30.00	PASS
	Ant2	2437	22.08	≤30.00	PASS
	total	2437	24.75	≤30.00	PASS
	Ant1	2462	17.45	≤30.00	PASS
	Ant2	2462	18.12	≤30.00	PASS
	total	2462	20.81	≤30.00	PASS
11N40MIMO	Ant1	2422	16.96	≤30.00	PASS
	Ant2	2422	17.12	≤30.00	PASS
	total	2422	20.05	≤30.00	PASS
	Ant1	2437	18.31	≤30.00	PASS
	Ant2	2437	19.03	≤30.00	PASS
	total	2437	21.70	≤30.00	PASS
	Ant1	2452	17.28	≤30.00	PASS
	Ant2	2452	17.88	≤30.00	PASS
	total	2452	20.60	≤30.00	PASS
11AX20MIMO	Ant1	2412	17.87	≤30.00	PASS

O	Ant2	2412	17.75	≤30.00	PASS
	total	2412	20.82	≤30.00	PASS
	Ant1	2437	20.64	≤30.00	PASS
	Ant2	2437	21.29	≤30.00	PASS
	total	2437	23.99	≤30.00	PASS
	Ant1	2462	17.70	≤30.00	PASS
	Ant2	2462	18.19	≤30.00	PASS
	total	2462	20.96	≤30.00	PASS
11AX40MIM O	Ant1	2422	17.18	≤30.00	PASS
	Ant2	2422	17.29	≤30.00	PASS
	total	2422	20.25	≤30.00	PASS
	Ant1	2437	18.02	≤30.00	PASS
	Ant2	2437	18.46	≤30.00	PASS
	total	2437	21.26	≤30.00	PASS
	Ant1	2452	17.50	≤30.00	PASS
	Ant2	2452	18.12	≤30.00	PASS
	total	2452	20.83	≤30.00	PASS

Note: The results have compensated for the Duty Cycle Correction Factor.

3.6 Power Spectral Density

3.6.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmitting.

3.6.2 Test Procedure

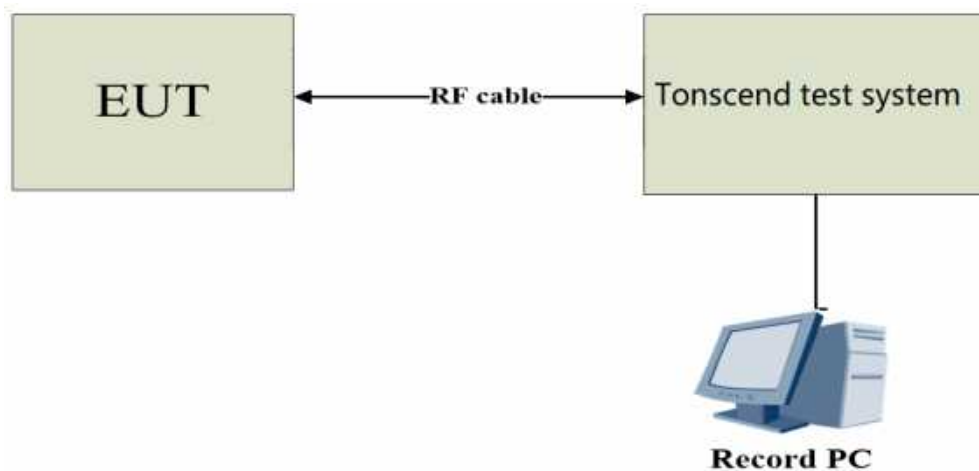
Test Method	
<input checked="" type="radio"/> Conducted Measurement	<input type="radio"/> Radiated Measurement
Test Channels	
<input checked="" type="radio"/> Lowest, Middle and Highest Channel	<input type="radio"/> Lowest and Highest Channel
Environmental conditions	
<input checked="" type="radio"/> Normal	<input type="radio"/> Normal and Extreme
Note: ● : Test ○ : No Test	

a) The EUT was directly connected to the tonscend test system and antenna output port as show in the block diagram below.

b) Spectrum analyser settings as following:

Spectrum Parameters	Setting
Span Frequency	1.5 times the DTS bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	Rms
Trace	Max Hold
Sweep Time	Auto

3.6.3 Test Setup



3.6.4 The Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B-MIMO	Ant1	2412	-14.88	≤8.00	PASS
	Ant2	2412	-12.67	≤8.00	PASS
	total	2412	-10.63	≤8.00	PASS
	Ant1	2437	-13.49	≤8.00	PASS
	Ant2	2437	-12.81	≤8.00	PASS
	total	2437	-10.13	≤8.00	PASS
	Ant1	2462	-15.91	≤8.00	PASS
	Ant2	2462	-15.92	≤8.00	PASS
	total	2462	-12.90	≤8.00	PASS
11G-MIMO	Ant1	2412	-14.03	≤8.00	PASS
	Ant2	2412	-14.08	≤8.00	PASS
	total	2412	-11.04	≤8.00	PASS
	Ant1	2437	-10.75	≤8.00	PASS
	Ant2	2437	-9.92	≤8.00	PASS
	total	2437	-7.30	≤8.00	PASS
	Ant1	2462	-13.72	≤8.00	PASS
	Ant2	2462	-12.88	≤8.00	PASS
	total	2462	-10.27	≤8.00	PASS
11N20MIMO	Ant1	2412	-14.18	≤8.00	PASS
	Ant2	2412	-14.23	≤8.00	PASS
	total	2412	-11.19	≤8.00	PASS
	Ant1	2437	-10.24	≤8.00	PASS
	Ant2	2437	-9.65	≤8.00	PASS
	total	2437	-6.92	≤8.00	PASS
	Ant1	2462	-14.57	≤8.00	PASS
	Ant2	2462	-13.48	≤8.00	PASS
	total	2462	-10.98	≤8.00	PASS
11N40MIMO	Ant1	2422	-17.88	≤8.00	PASS
	Ant2	2422	-17.09	≤8.00	PASS
	total	2422	-14.46	≤8.00	PASS
	Ant1	2437	-15.56	≤8.00	PASS
	Ant2	2437	-15.58	≤8.00	PASS
	total	2437	-12.56	≤8.00	PASS
	Ant1	2452	-16.94	≤8.00	PASS
	Ant2	2452	-15.89	≤8.00	PASS
	total	2452	-13.37	≤8.00	PASS
11AX20MIMO	Ant1	2412	-11.64	≤8.00	PASS
	Ant2	2412	-11.55	≤8.00	PASS
	total	2412	-8.58	≤8.00	PASS

	Ant1	2437	-8.41	≤8.00	PASS
	Ant2	2437	-7.91	≤8.00	PASS
	total	2437	-5.14	≤8.00	PASS
	Ant1	2462	-12.93	≤8.00	PASS
	Ant2	2462	-12.24	≤8.00	PASS
	total	2462	-9.56	≤8.00	PASS
11AX40MIMO	Ant1	2422	-14.35	≤8.00	PASS
	Ant2	2422	-15.12	≤8.00	PASS
	total	2422	-11.71	≤8.00	PASS
	Ant1	2437	-13.51	≤8.00	PASS
	Ant2	2437	-13.09	≤8.00	PASS
	total	2437	-10.28	≤8.00	PASS
	Ant1	2452	-14.08	≤8.00	PASS
	Ant2	2452	-13.13	≤8.00	PASS
total	2452	-10.57	≤8.00	PASS	

Note: The results have compensated for the Duty Cycle Correction Factor

11B-MIMO_Ant1_2412



11B-MIMO_Ant2_2412



11B-MIMO_Ant1_2437



11B-MIMO_Ant2_2437



11B-MIMO_Ant1_2462



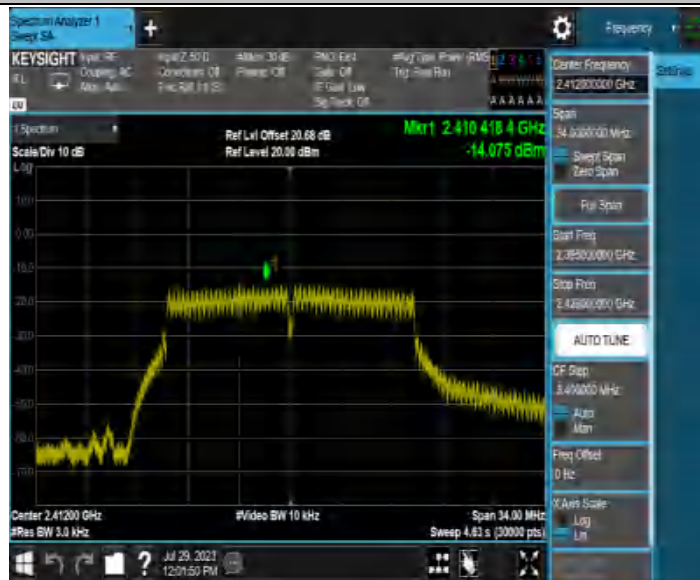
11B-MIMO_Ant2_2462



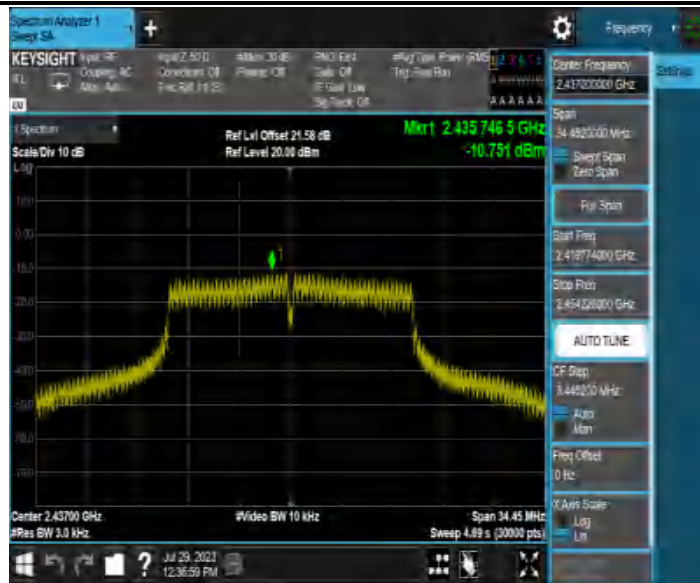
11G-MIMO_Ant1_2412



11G-MIMO_Ant2_2412



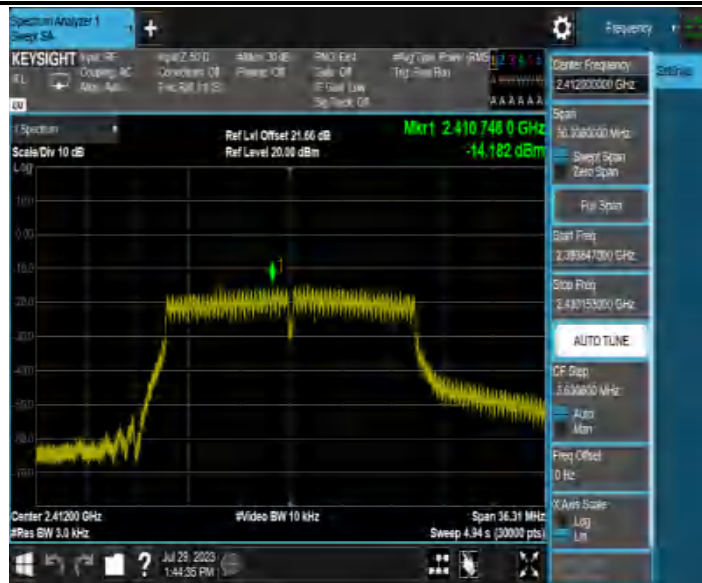
11G-MIMO_Ant1_2437



11G-MIMO_Ant2_2437



11G-MIMO_Ant1_2462



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



11N40MIMO_Ant1_2422



11N40MIMO_Ant2_2422



11N40MIMO_Ant1_2437



11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



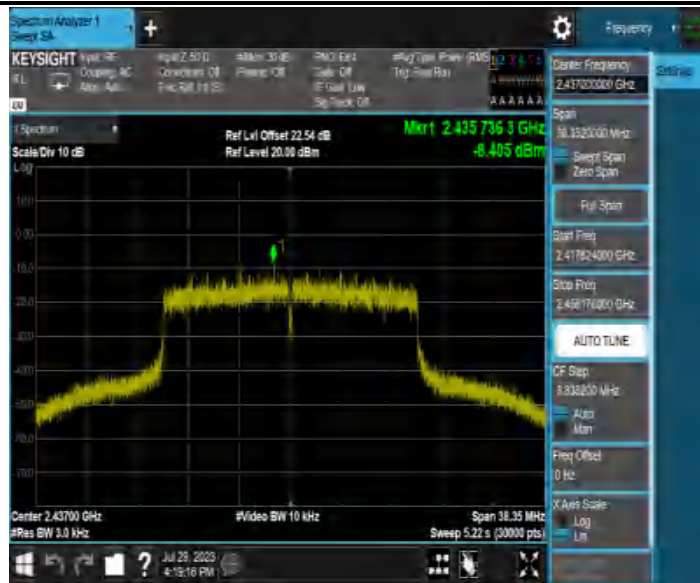
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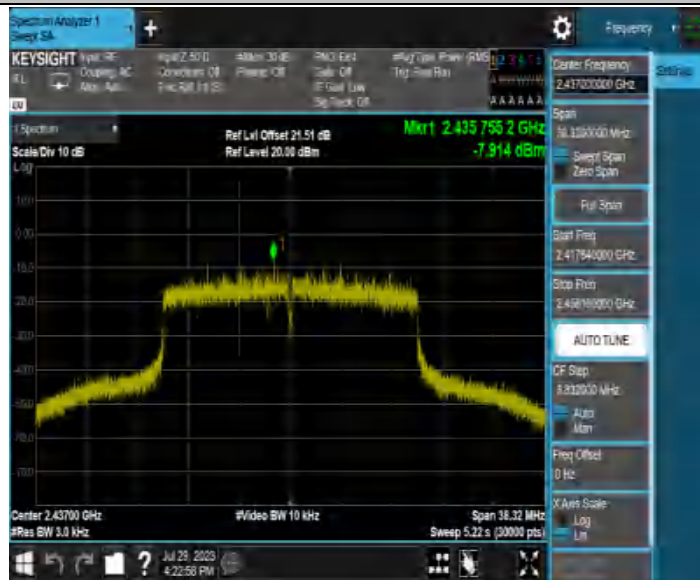
11AX20MIMO_Ant2_2412



11AX20MIMO_Ant1_2437



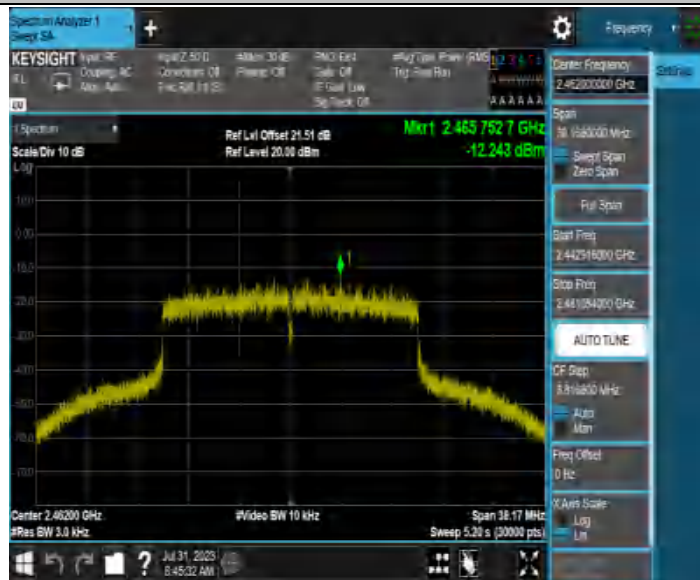
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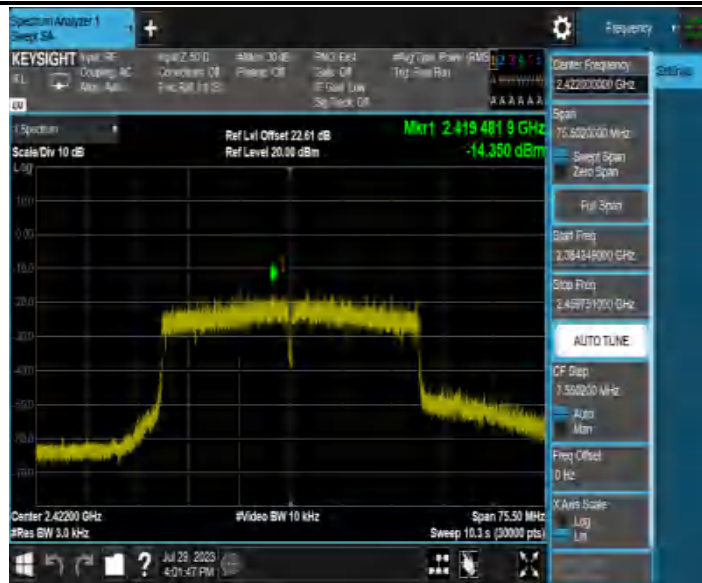
11AX20MIMO_Ant1_2462



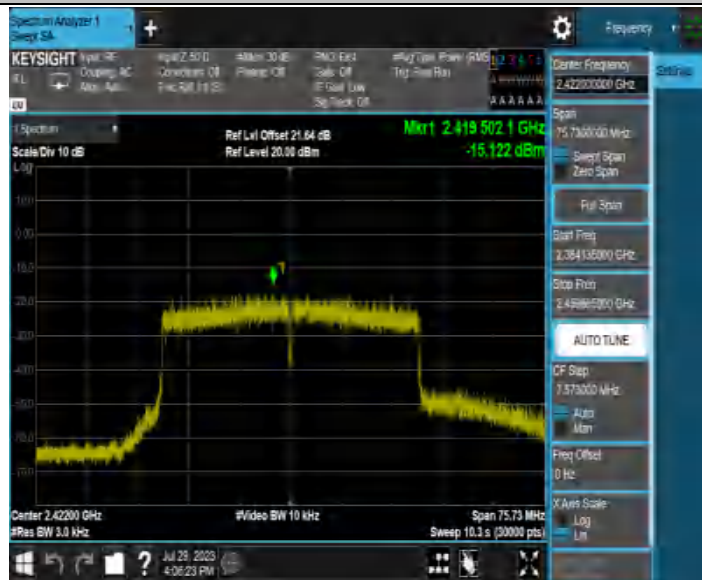
11AX20MIMO_Ant2_2462



11AX40MIMO_Ant1_2422



11AX40MIMO_Ant2_2422



11AX40MIMO_Ant1_2437



11AX40MIMO_Ant2_2437



11AX40MIMO_Ant1_2452



11AX40MIMO_Ant2_2452



End of Test Report