

RF TEST REPORT

FCC ID: 2BCFY-ERO1XPRO

Test Report No.....: RF230906019-01-002

Product(s) Name.....: Fiber Mesh

Model(s).....: ERO1X PRO

Trade Mark.....: N/A

Applicant.....: Heights Telecom T LTD

Address.....: Ha-Sakhlav 6, Irus, 7680900, Israel

Receipt Date.....: 2023.09.07

Test Date.....: 2023.09.14~2023.10.12

Issued Date.....: 2023.10.13

Standards.....: 47 CFR FCC Part 15, Subpart C(Section 15.247);
ANSI C63.10:2013

Testing Laboratory.....: Shenzhen Haiyun Standard Technical Co., Ltd.

Prepared By:	Checked By:	Approved By:	
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History of this test report

Original Report Issue Date: 2023.10.13

- ☒ No additional attachment
- ☐ Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. General Information

1.1 Applicant

Heights Telecom T LTD

Ha-Sakhlav,6 IruS HaMerkaz 7680900 Israel

1.2 Manufacturer

Heights Telecom T LTD

Ha-Sakhlav,6 IruS HaMerkaz 7680900 Israel

1.3 Basic Description of Equipment Under Test

Items	Description	
Equipment Name	Fiber Mesh	
Test Model No.	ERO1X PRO	
Series Models.	N/A	
Spec. Difference	N/A	
Trade Mark	N/A	
Power Supply	12.0V $\Rightarrow$ 2.0 A	
Adapter information	Model No.: SOY-1200200US-063 Input: 100-240V~, 50-60Hz, 0.75A Max. Output: 12.0 V $\Rightarrow$ 2.0 A 24W	
Hardware Version	--	
Software Version	--	
Operate temperature	0°C-45°C	
EUT Stage	○ Product Unit	● Final-Sample
Operating Band and Conducted Output Power (Max power)	2400MHz ~ 2483.5MHz	● IEEE 802.11b:24.78dBm (0.30061 W)
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: 3.92dBi, Ant4: 3.61dBi	

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					
☐	Operating mode 1 (single antenna)				☐	1TX				
☒	Operating mode 2 (multiple antenna, with beamforming)				☐	2TX	☐	3TX	☐	4TX
☐	Operating mode 3 (multiple antenna, with beamforming)				☐	2TX	☐	3TX	☐	4TX
☒	802.11b	Operating mode	☐	1TX	☐	2TX	☒	2TX		
☒	802.11g	Operating mode	☐	1TX	☐	2TX	☒	2TX		
☒	802.11n(HT20MHz)	Operating mode	☐	1TX	☐	2TX	☒	2TX		
☒	802.11n(HT40MHz)	Operating mode	☐	1TX	☐	2TX	☒	2TX		
☒	802.11ax(HE20MHz)	Operating mode	☐	1TX	☐	2TX	☒	2TX		
☒	802.11ax(HE40MHz)	Operating mode	☐	1TX	☐	2TX	☒	2TX		

Transmit Operating Mode		Directional Gain (dBi)	
		Power spectral density	Power
802.11b	2TX With Beamforming	5.55	5.55
802.11g	2TX With Beamforming	5.55	5.55
802.11n(HT20MHz)	2TX With Beamforming	5.55	5.55
802.11n(HT40MHz)	2TX With Beamforming	5.55	5.55
802.11ax(HE20MHz)	2TX With Beamforming	5.55	5.55
802.11ax(HE40MHz)	2TX With Beamforming	5.55	5.55
Ant gain provided by the manufacturer, for details about the antenna, refer to the file: ERO1X PRO V3			

-Antenna passive pretest report.

☒ With Beamforming Mode

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.

If antenna gains are not equal and each transmit antenna is driven by only one spatial stream, directional gain may be calculated by either of the following two formulas.

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

☒ Or

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

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

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

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

EUT with the lowest possible NSS =1

Ant gain provided by the manufacturer.

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

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	accessMTool_REL_3_2_1_3		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	76	84	78
IEEE 802.11g	61	78	64
IEEE 802.11n(HT20)	61	78	64
IEEE 802.11ax(HE20)	52	76	54
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(HT40)	58	66	64
IEEE 802.11ax(HE40)	58	66	63

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 Final test.

2.5 Test Condition

Applicable to	Environmental conditions	Input Power	Tested by
AC Power Conducted Emission	25.4°C, 52% RH	AC 120V/60Hz	Albert Fan
Radiated Emission and Band Edge Measurement	25.2°C, 56% RH	AC 120V/60Hz	Albert Fan
Spurious Emission at Antenna Port	25.7°C, 54% RH	AC 120V/60Hz	Jason Huang
6dB Bandwidth	25.7°C, 54% RH	AC 120V/60Hz	Jason Huang
Conducted Power	25.7°C, 54% RH	AC 120V/60Hz	Jason Huang
Power Spectral Density	25.7°C, 54% RH	AC 120V/60Hz	Jason Huang

The applicant declare the operating environment of EUT as below:

Normal conditions: 120V AC, 15~35°C

2.6 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.

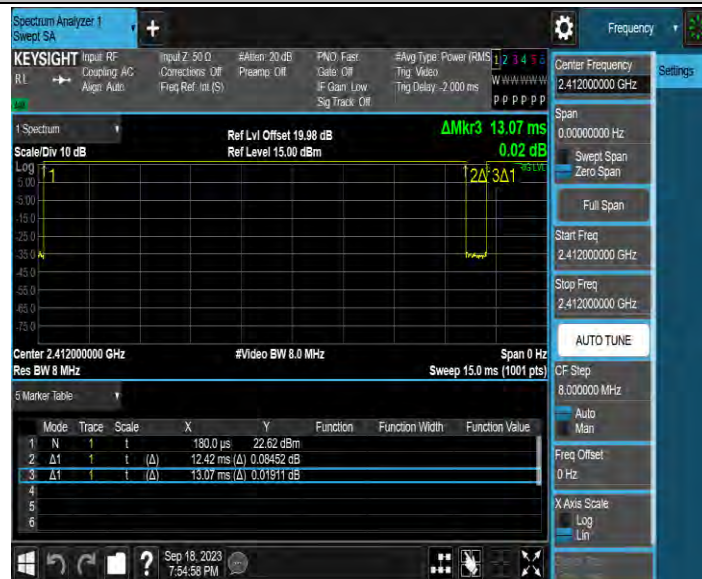
All the duty factor of other test mode have been considered.

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

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle	Duty Cycle	1/T	Final VBW(kHz)
							Minimum VBW(kHz)	
11B-MIMO	Ant1	2412	12.42	13.07	95.03	0.22	0.08	0.1
	Ant4	2412	12.42	13.07	95.03	0.22	0.08	0.1
11G-MIMO	Ant1	2412	2.06	2.17	94.93	0.23	0.49	1
	Ant4	2412	2.06	2.17	94.93	0.23	0.49	1
11N20MIMO	Ant1	2412	1.92	2.02	95.05	0.22	0.52	1
	Ant4	2412	1.92	2.02	95.05	0.22	0.52	1
11N40MIMO	Ant1	2422	0.95	1.05	90.48	0.43	1.05	2
	Ant4	2422	0.95	1.05	90.48	0.43	1.05	2
11AX20MIMO	Ant1	2412	1.49	1.52	98.03	0.09	0.67	1
	Ant4	2412	1.49	1.52	98.03	0.09	0.67	1
11AX40MIMO	Ant1	2422	0.78	0.81	96.3	0.16	1.28	2
	Ant4	2422	0.78	0.81	96.3	0.16	1.28	2

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

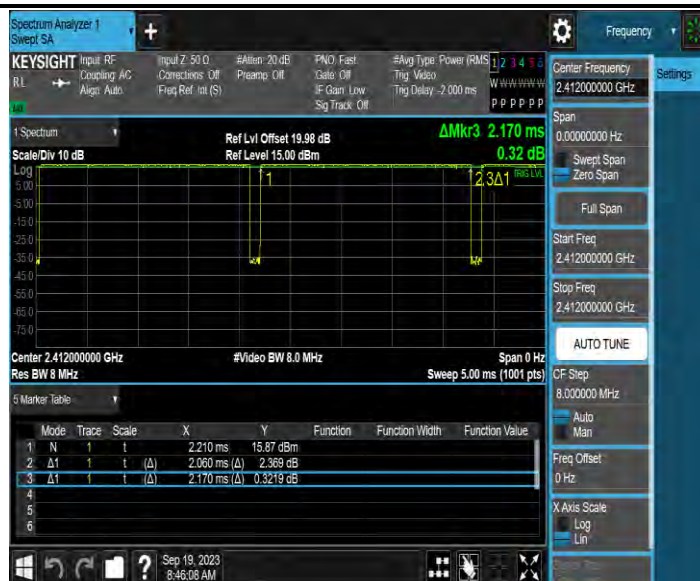
11B-MIMO_Ant1_2412



11B-MIMO_Ant4_2412



11G-MIMO_Ant1_2412



11G-MIMO_Ant4_2412



11N20MIMO_Ant1_2412



11N20MIMO_Ant4_2412



11N40MIMO_Ant1_2422



11N40MIMO_Ant4_2422



11AX20MIMO_Ant1_2412



11AX20MIMO_Ant4_2412



11AX40MIMO_Ant1_2422



11AX40MIMO_Ant4_2422



2.7 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

2.8 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

2.9 Description of Support Units

Test associated equipment

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

Cable and Interconnection

Item	Interface	Shielded Type	Ferrite Core	Length
1	RJ45	No	No	10m

2.10 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.

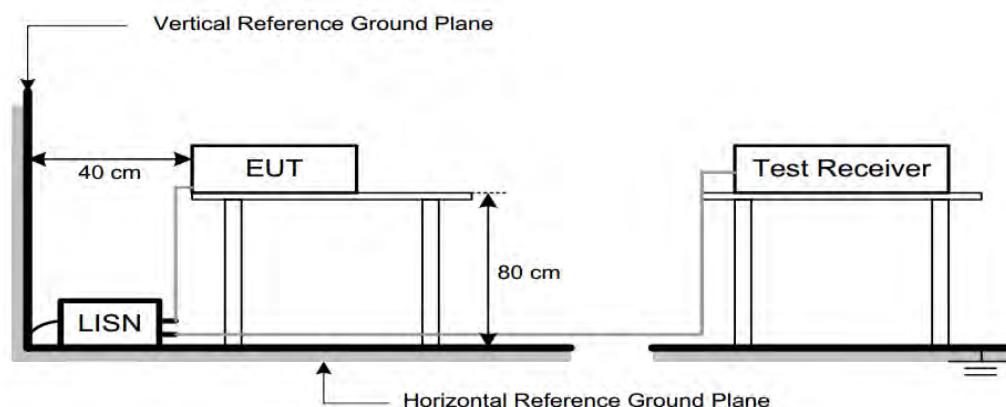
3.1.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☐ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ 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

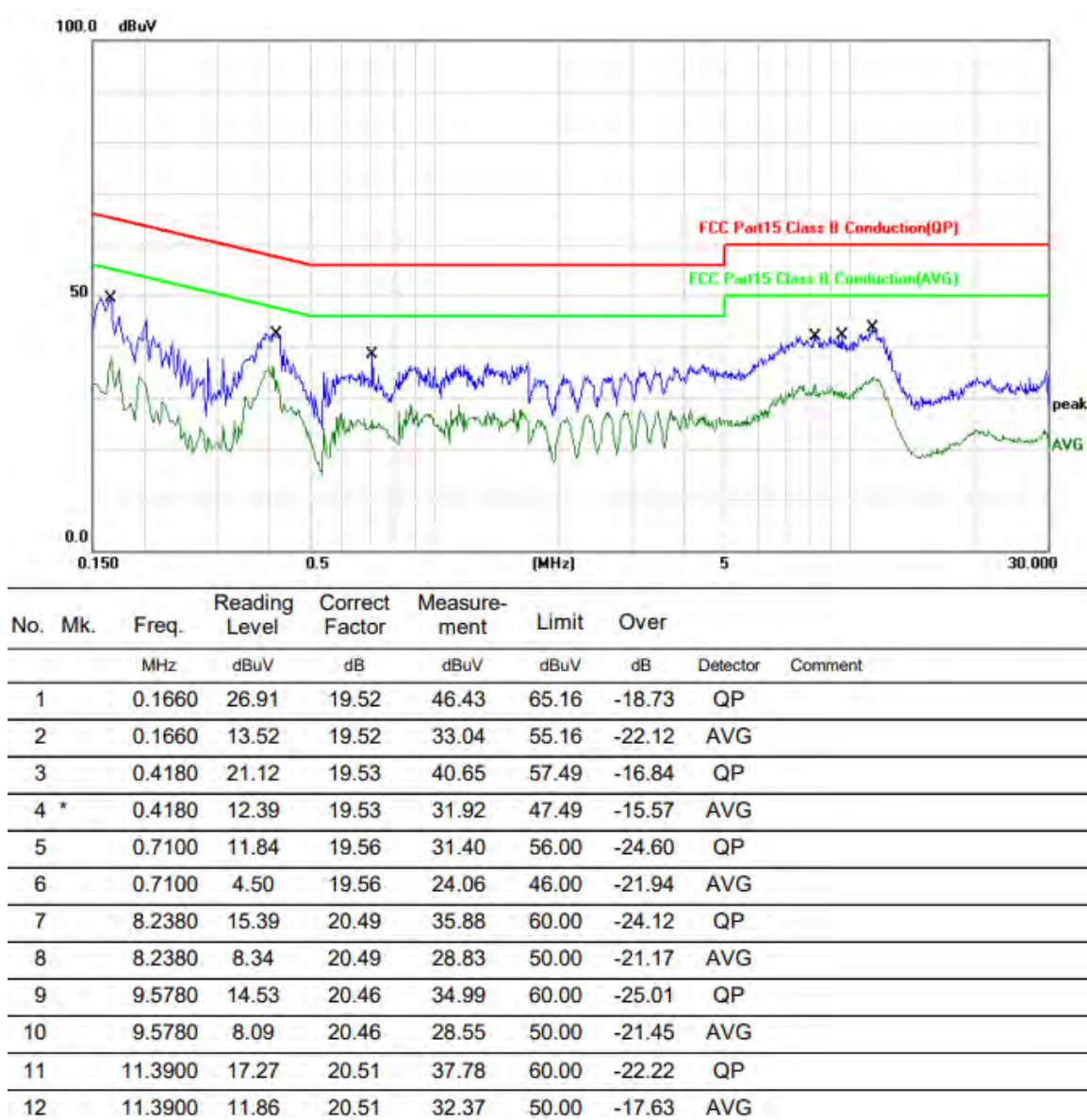
Note:

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

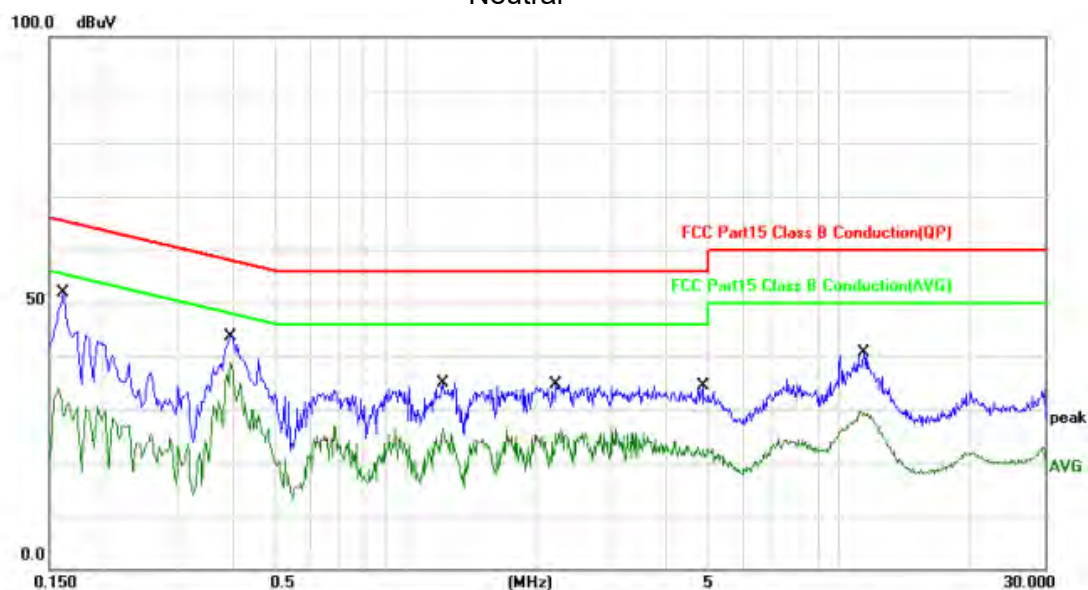
Note: We only recorded the data of the worst mode. Please see the following:

150kHz~30MHz Worst Case Operating Mode: 11b-MIMO _ Channel:6

Line



Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1620	25.70	19.70	45.40	65.36	-19.96	QP	
2		0.1620	10.02	19.70	29.72	55.36	-25.64	AVG	
3		0.3940	22.40	19.71	42.11	57.98	-15.87	QP	
4 *		0.3940	15.17	19.71	34.88	47.98	-13.10	AVG	
5		1.2180	10.44	19.96	30.40	56.00	-25.60	QP	
6		1.2180	3.66	19.96	23.62	46.00	-22.38	AVG	
7		2.2260	8.99	20.44	29.43	56.00	-26.57	QP	
8		2.2260	1.73	20.44	22.17	46.00	-23.83	AVG	
9		4.8500	6.49	20.38	26.87	56.00	-29.13	QP	
10		4.8500	0.42	20.38	20.80	46.00	-25.20	AVG	
11		11.4980	12.97	20.52	33.49	60.00	-26.51	QP	
12		11.4980	7.49	20.52	28.01	50.00	-21.99	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	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
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 $\mu\text{V/m}$

(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	
☐ Conducted Measurement	☒ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

- 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)
- 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)
- 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:

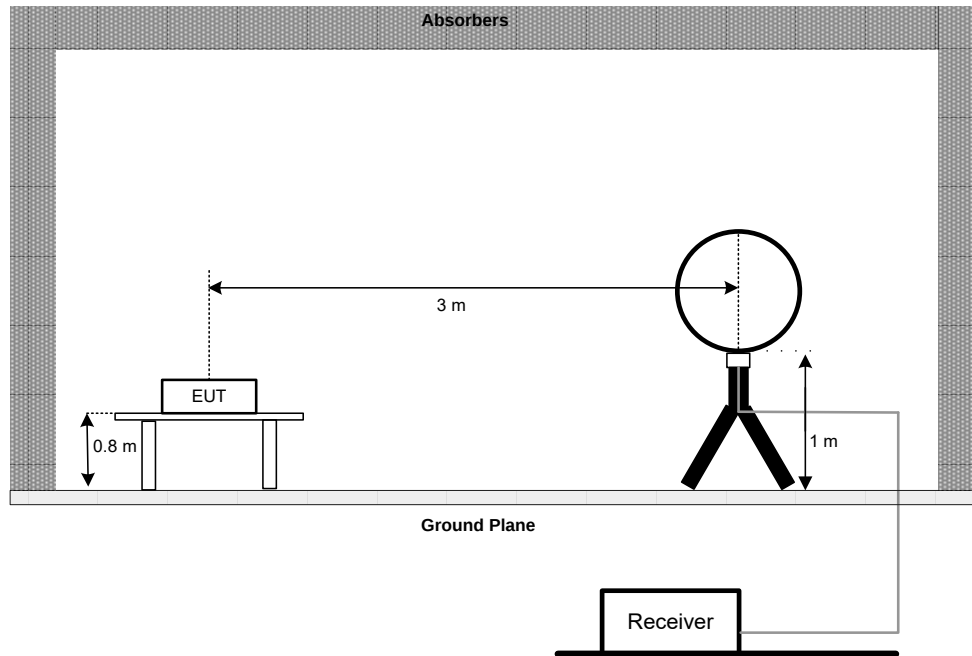
Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

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

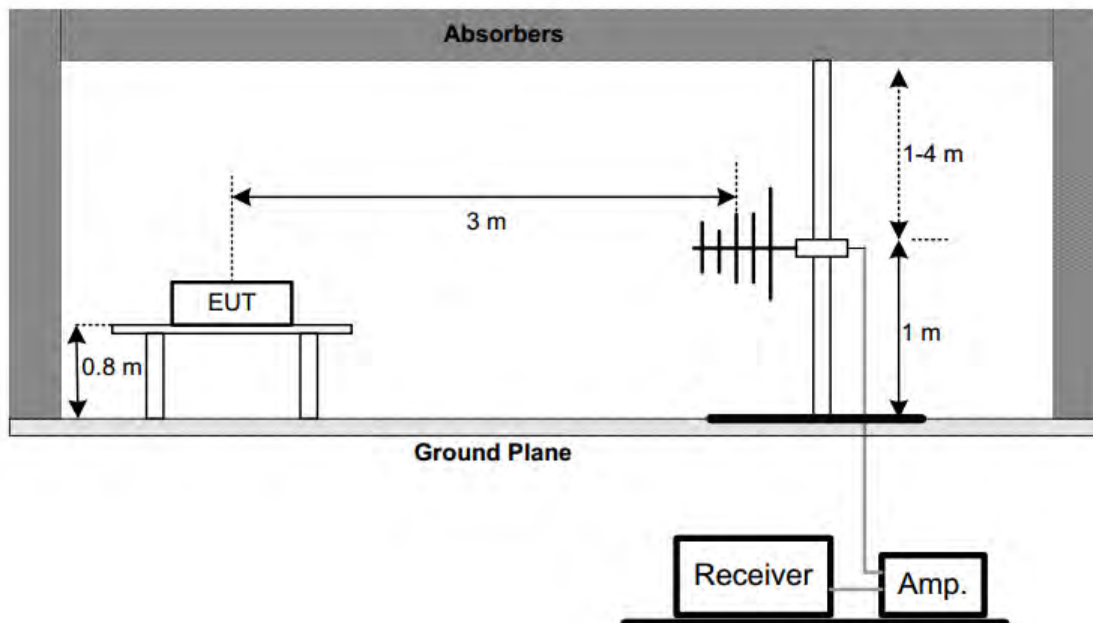
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector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

3.2.3 Test Setup

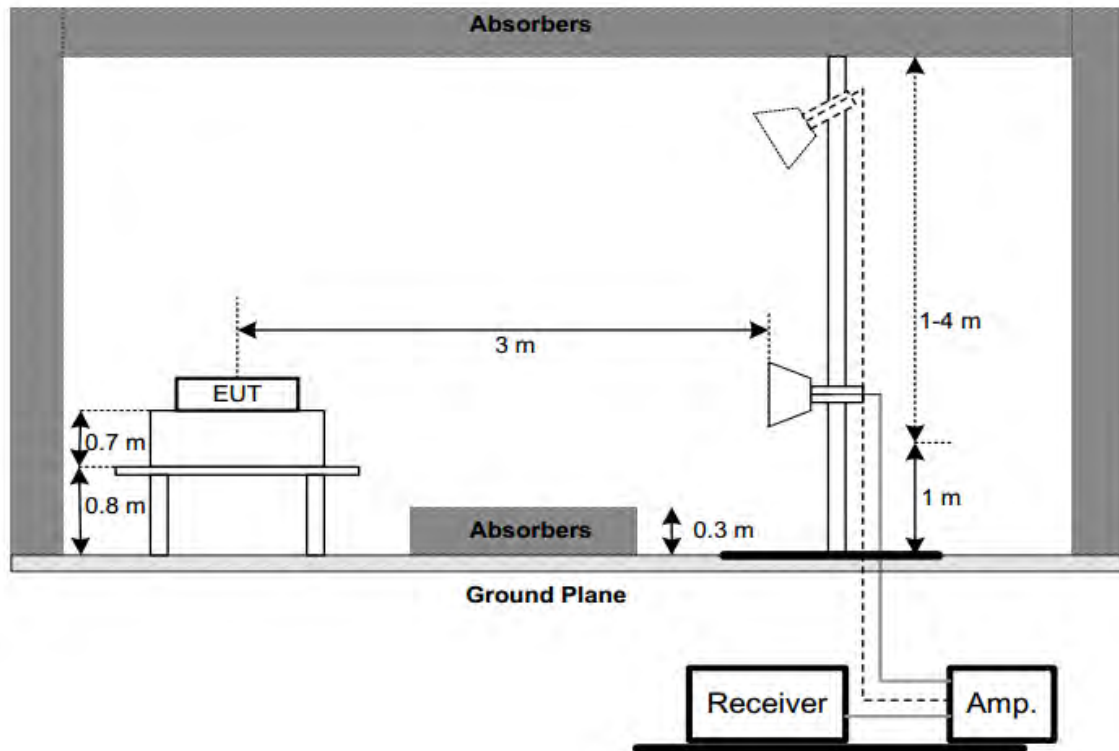
(A) Radiated Emission Test Set-Up Frequency Below 30 MHz



(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

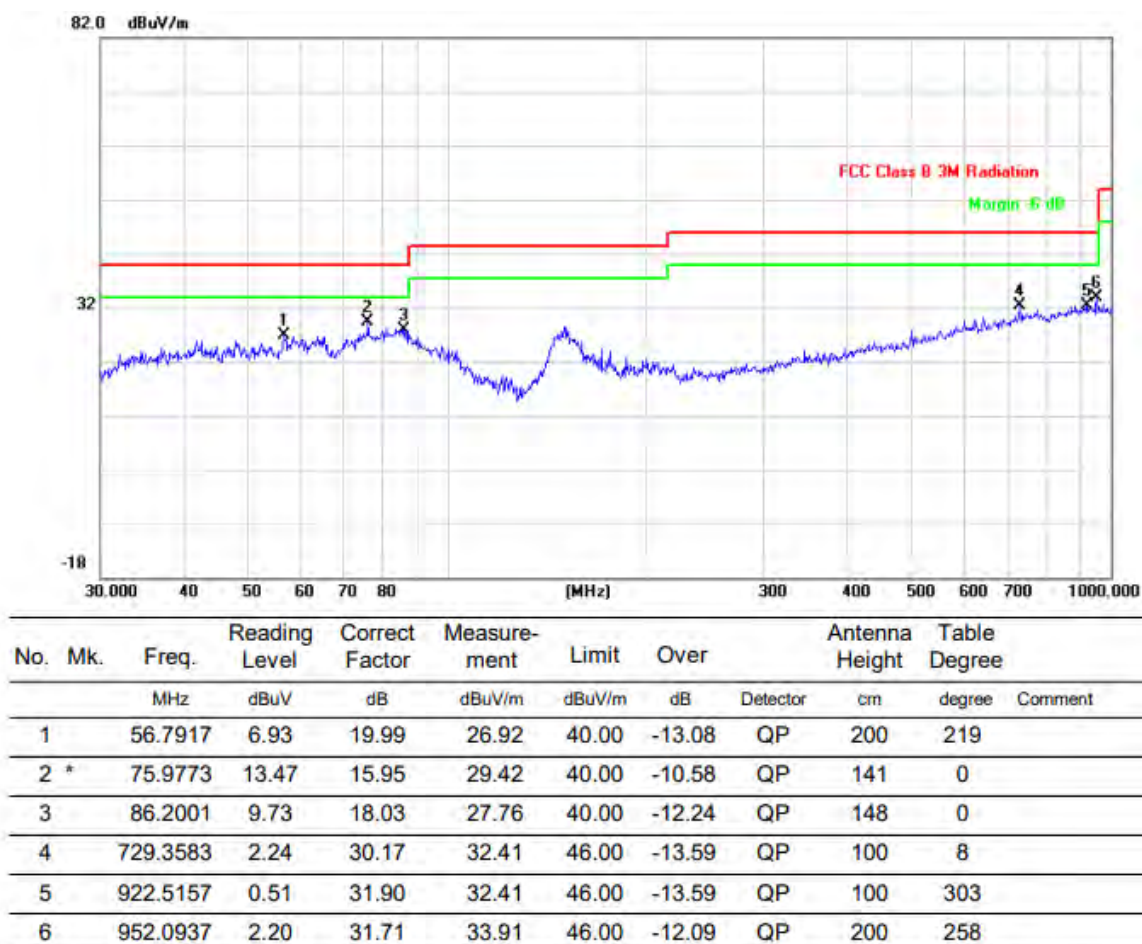
Note:

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
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VERTICAL



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		104.5361	-1.23	20.14	18.91	43.50	-24.59	QP	200	163
2		144.8418	4.40	16.17	20.57	43.50	-22.93	QP	200	11
3		202.1005	1.41	18.84	20.25	43.50	-23.25	QP	200	252
4		374.6225	-0.72	23.63	22.91	46.00	-23.09	QP	100	142
5		625.0780	1.95	28.37	30.32	46.00	-15.68	QP	200	319
6	*	709.1823	1.09	29.61	30.70	46.00	-15.30	QP	200	224

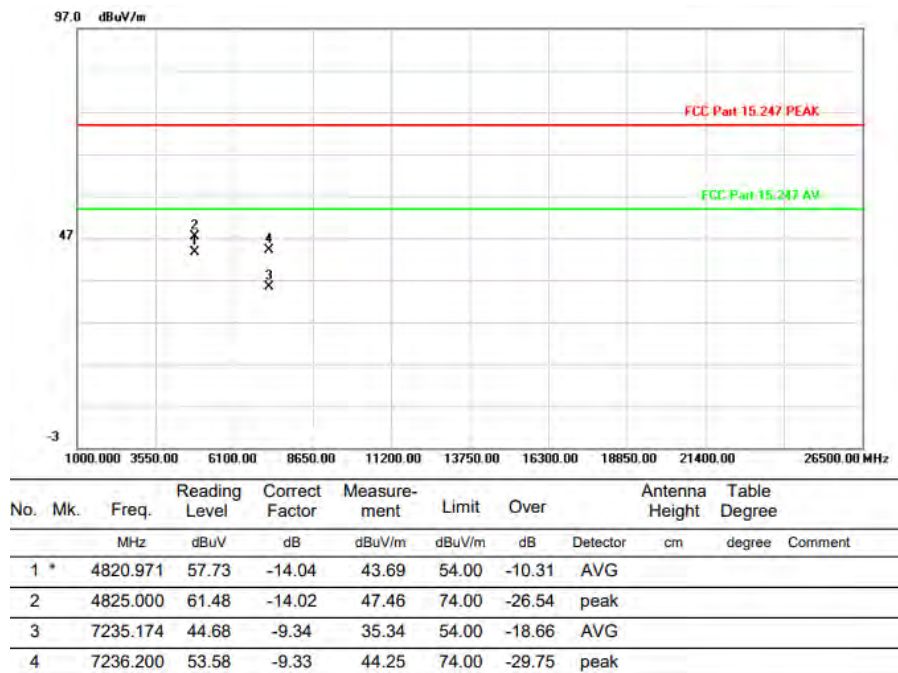
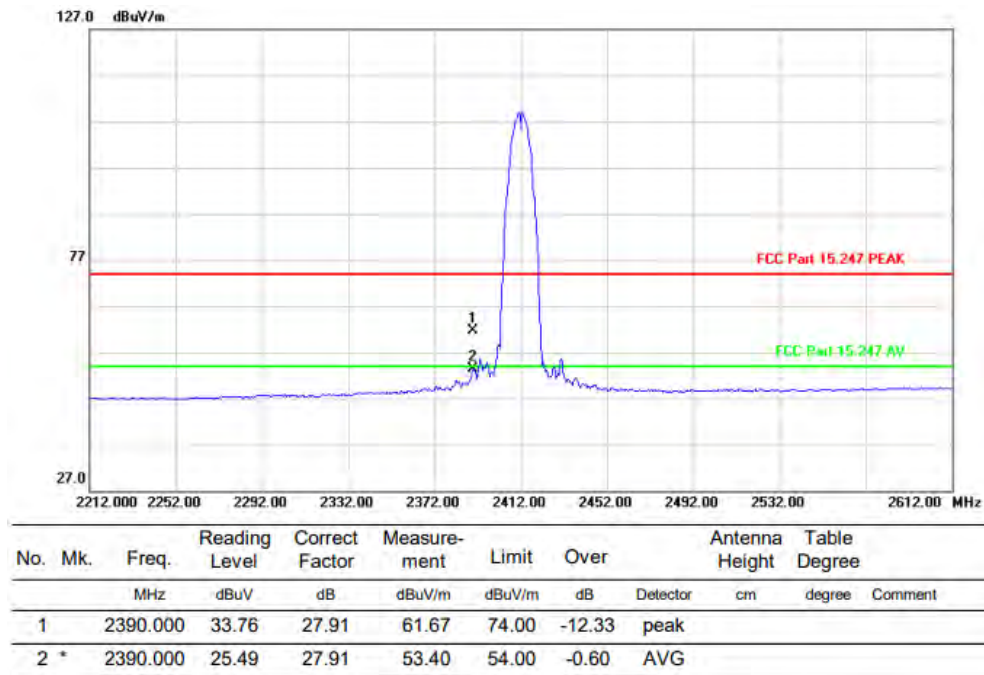
3) Radiated emission: Above 1G

Note:

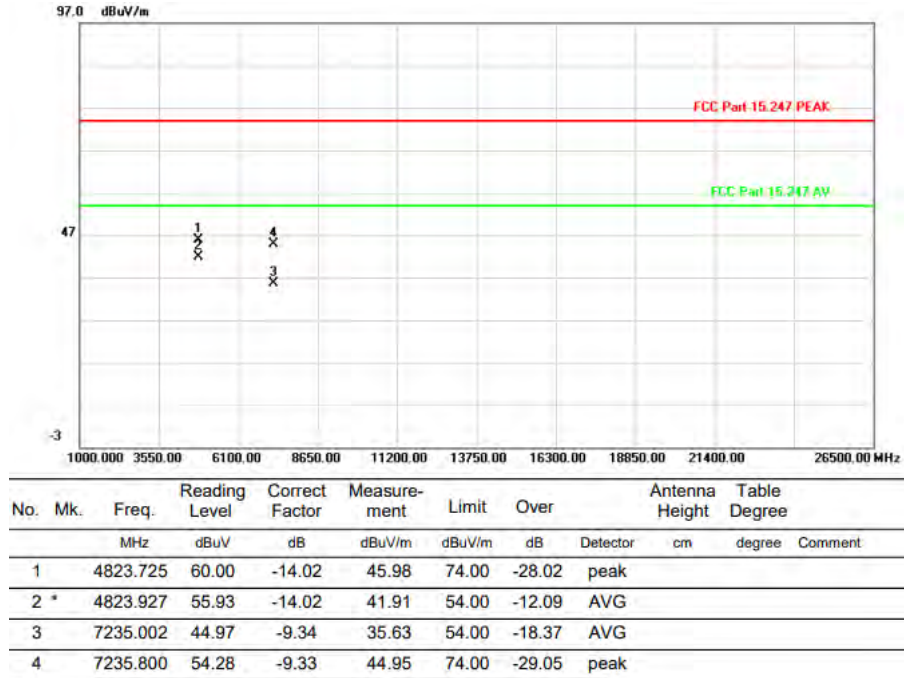
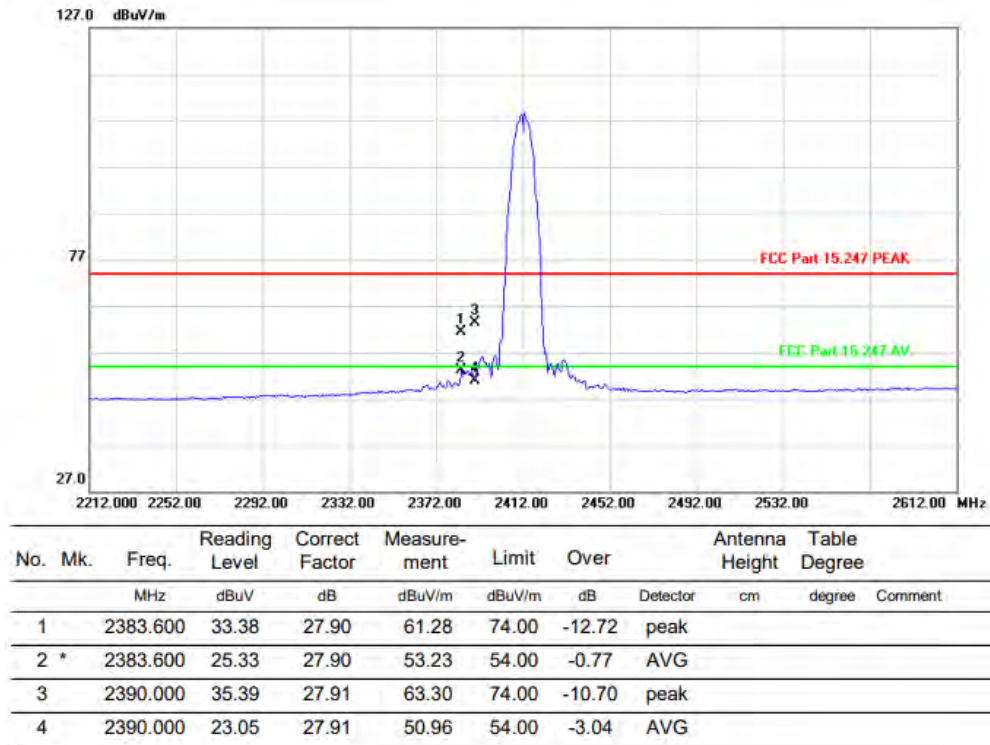
1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit

Above 1G (1GHz~18GHz)	Test mode:11B_MIMO	Test Channel:1
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VERTICAL



HORIZONTAL

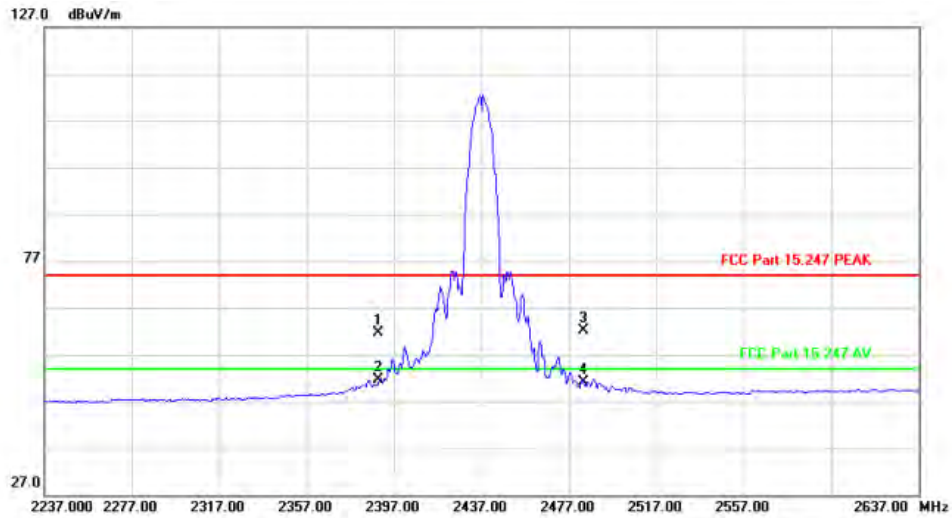


Above 1G (1GHz~18GHz)

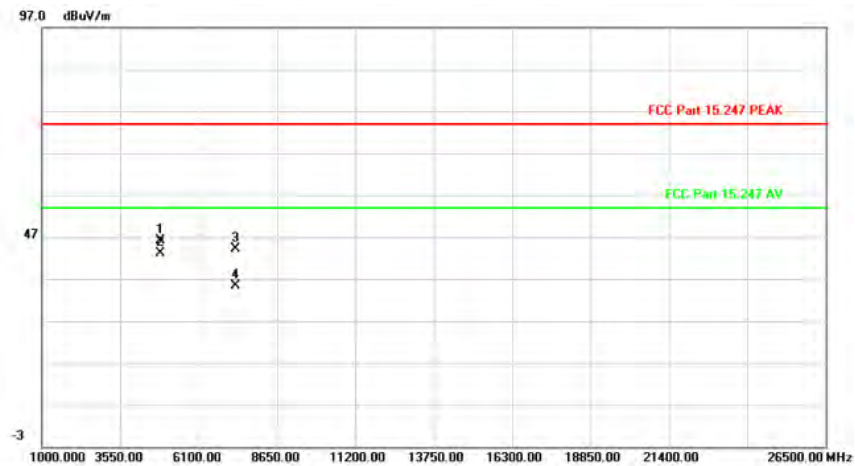
Test mode: 11B_MIMO

Test Channel: 6

VERTICAL

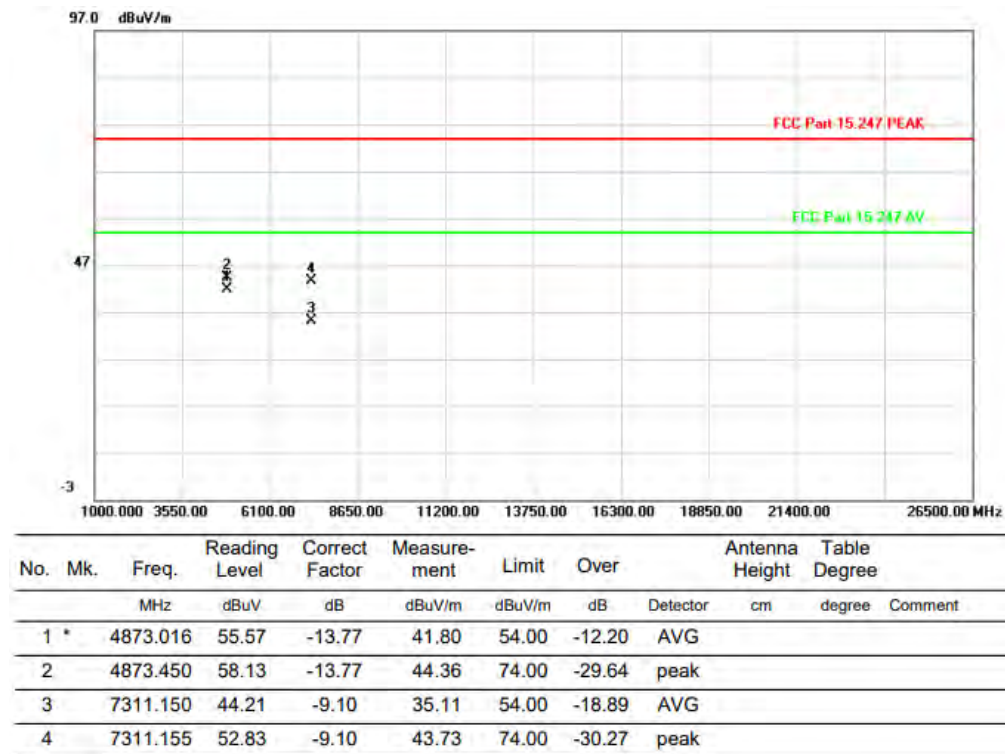
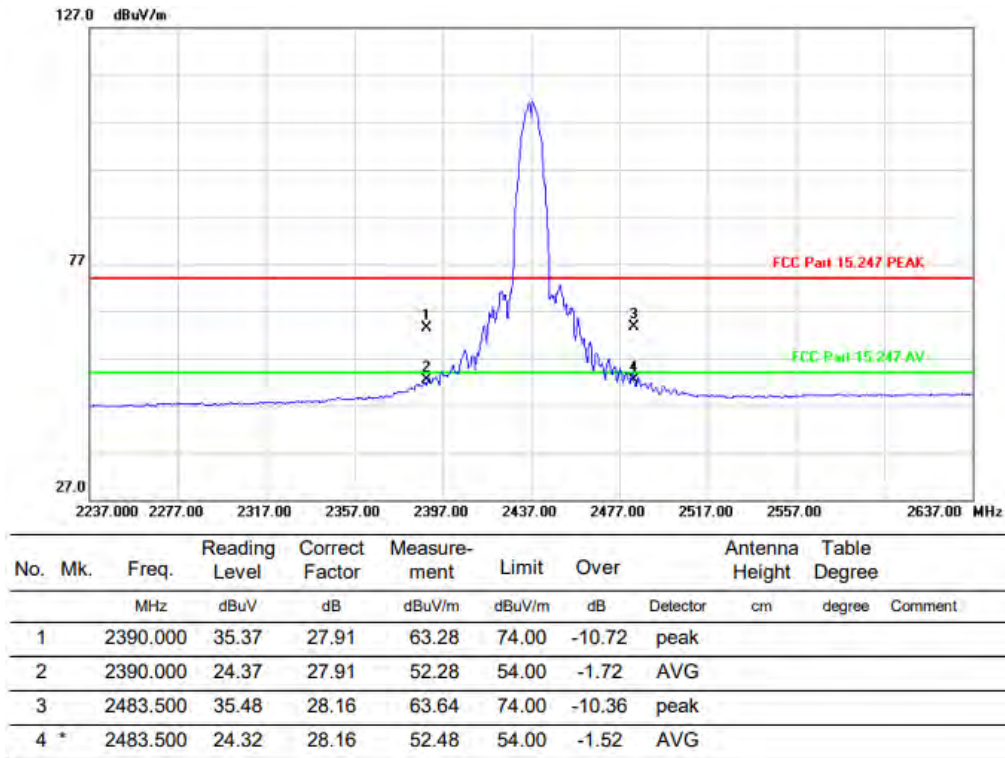


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	33.62	27.91	61.53	74.00	-12.47	peak		
2 *		2390.000	23.69	27.91	51.60	54.00	-2.40	AVG		
3		2483.500	33.88	28.16	62.04	74.00	-11.96	peak		
4		2483.500	22.95	28.16	51.11	54.00	-2.89	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		4869.625	59.91	-13.79	46.12	74.00	-27.88	peak		
2 *		4871.067	56.91	-13.78	43.13	54.00	-10.87	AVG		
3		7310.780	53.34	-9.10	44.24	74.00	-29.76	peak		
4		7311.602	44.46	-9.10	35.36	54.00	-18.64	AVG		

HORIZONTAL

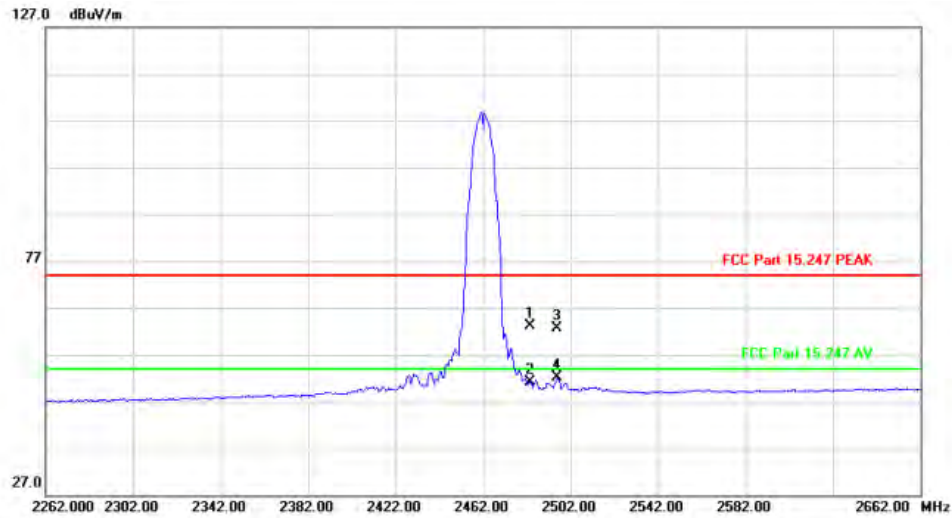


Above 1G (1GHz~18GHz)

Test mode: 11B_MIMO

Test Channel:11

VERTICAL

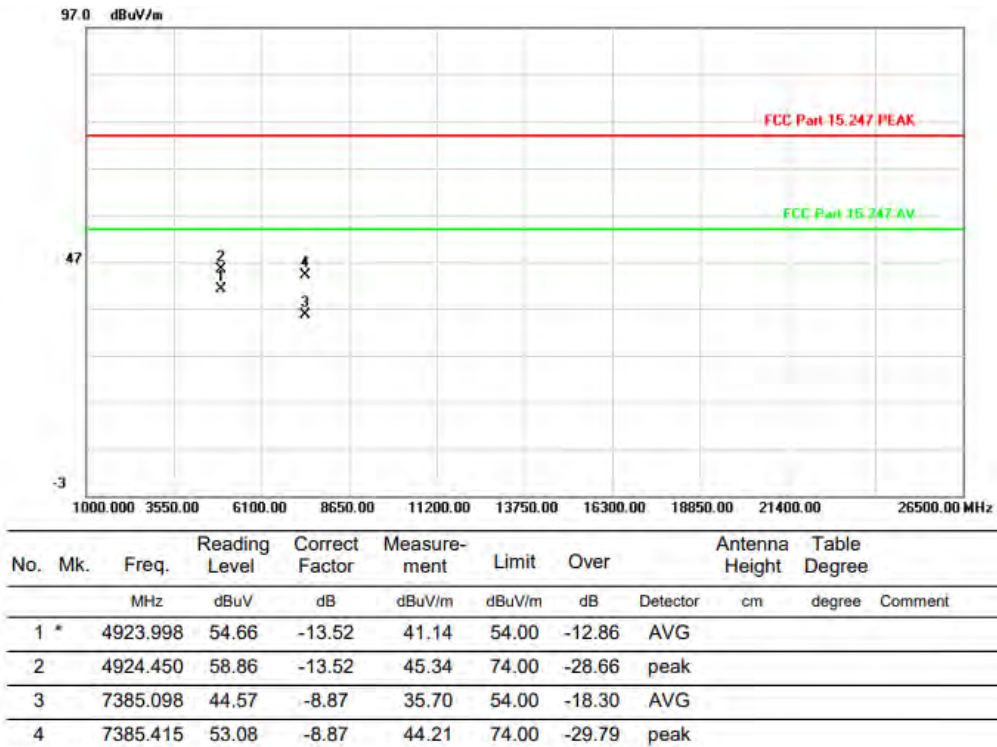
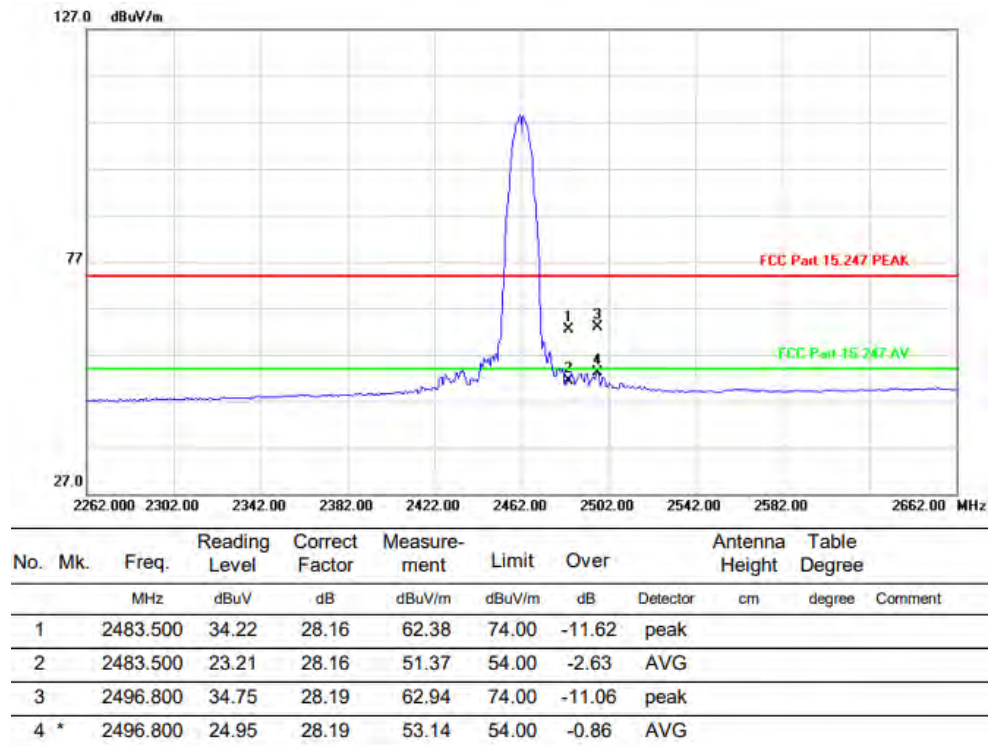


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	35.00	28.16	63.16	74.00	-10.84	peak		
2		2483.500	23.02	28.16	51.18	54.00	-2.82	AVG		
3		2496.000	34.40	28.19	62.59	74.00	-11.41	peak		
4 *		2496.000	23.83	28.19	52.02	54.00	-1.98	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		4927.000	59.84	-13.51	46.33	74.00	-27.67	peak		
2 *		4927.005	56.89	-13.50	43.39	54.00	-10.61	AVG		
3		7385.100	44.68	-8.87	35.81	54.00	-18.19	AVG		
4		7386.489	53.09	-8.87	44.22	74.00	-29.78	peak		

HORIZONTAL

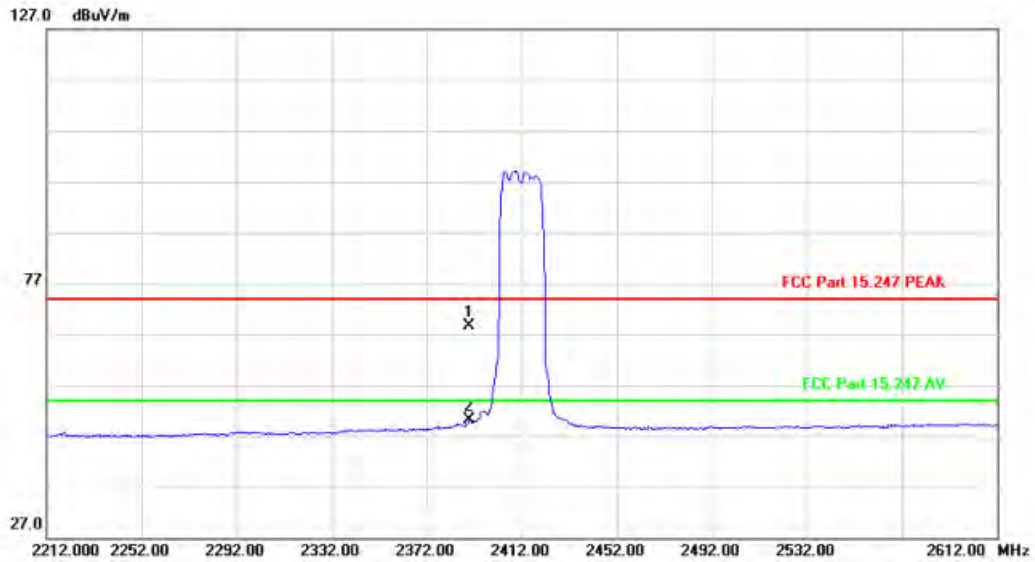


Above 1G (1GHz~18GHz)

Test mode: 11G_MIMO

Test Channel:1

VERTICAL

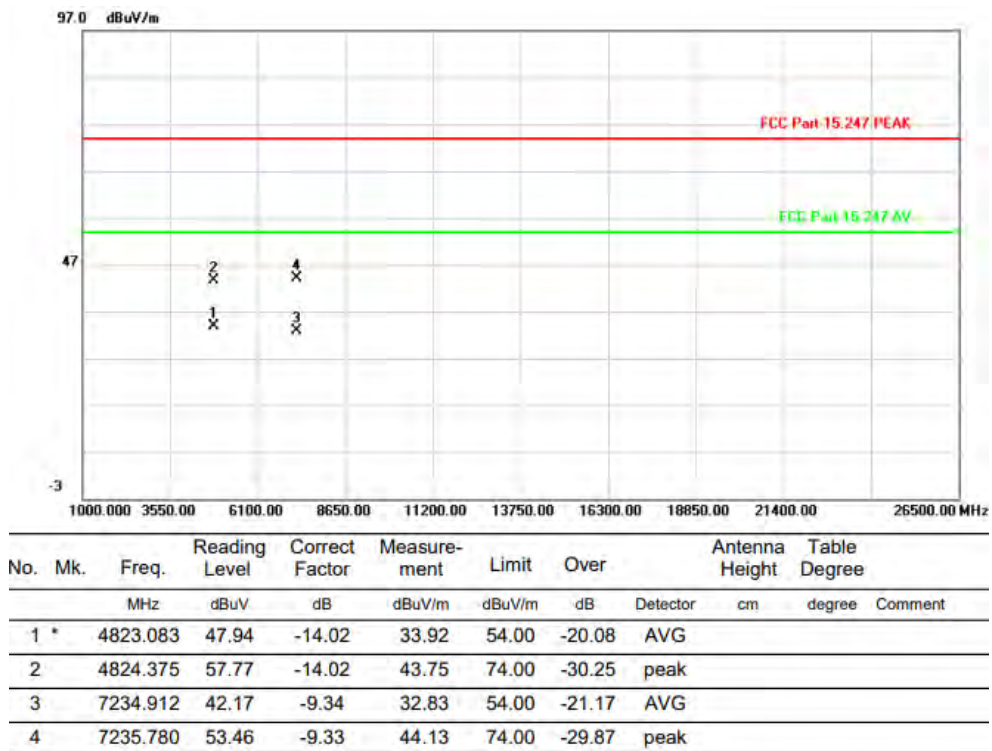
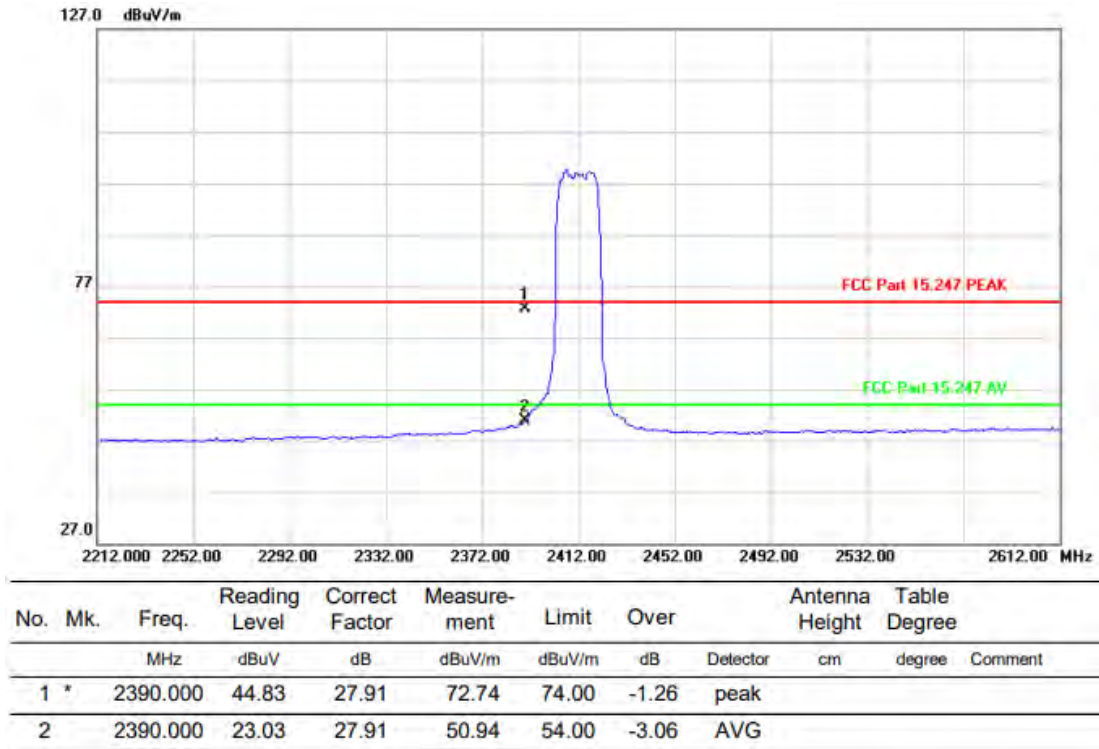


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	40.64	27.91	68.55	74.00	-5.45			peak
2 *		2390.000	22.16	27.91	50.07	54.00	-3.93			AVG



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		4822.250	58.13	-14.03	44.10	74.00	-29.90			peak
2 *		4823.300	47.12	-14.02	33.10	54.00	-20.90			AVG
3		7235.460	54.72	-9.33	45.39	74.00	-28.61			peak
4		7237.613	42.25	-9.33	32.92	54.00	-21.08			AVG

HORIZONTAL

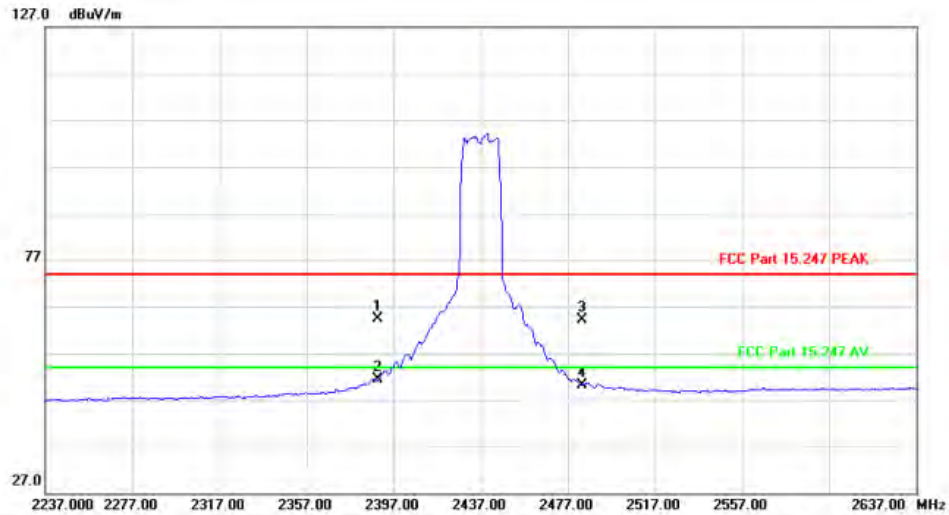


Above 1G (1GHz~18GHz)

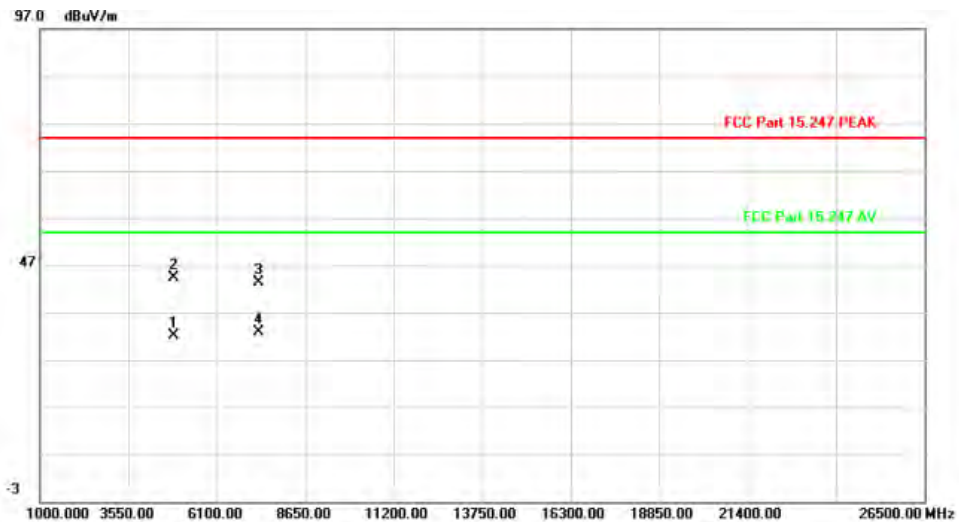
Test mode: 11G_MIMO

Test Channel: 6

VERTICAL

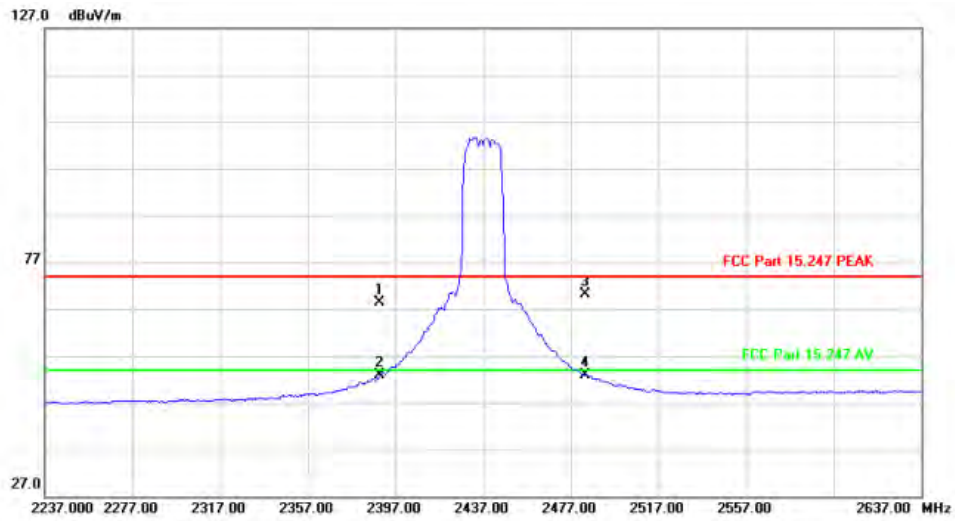


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1		2390.000	36.58	27.91	64.49	74.00	-9.51			peak
2 *		2390.000	23.39	27.91	51.30	54.00	-2.70			AVG
3		2483.500	35.95	28.16	64.11	74.00	-9.89			peak
4		2483.500	21.95	28.16	50.11	54.00	-3.89			AVG



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1		4873.280	45.91	-13.77	32.14	54.00	-21.86			AVG
2		4874.350	58.07	-13.77	44.30	74.00	-29.70			peak
3		7311.450	52.49	-9.10	43.39	74.00	-30.61			peak
4 *		7311.815	41.88	-9.10	32.78	54.00	-21.22			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	40.41	27.91	68.32	74.00	-5.68			peak
2		2390.000	24.90	27.91	52.81	54.00	-1.19			AVG
3		2483.500	41.89	28.16	70.05	74.00	-3.95			peak
4 *		2483.500	24.77	28.16	52.93	54.00	-1.07			AVG



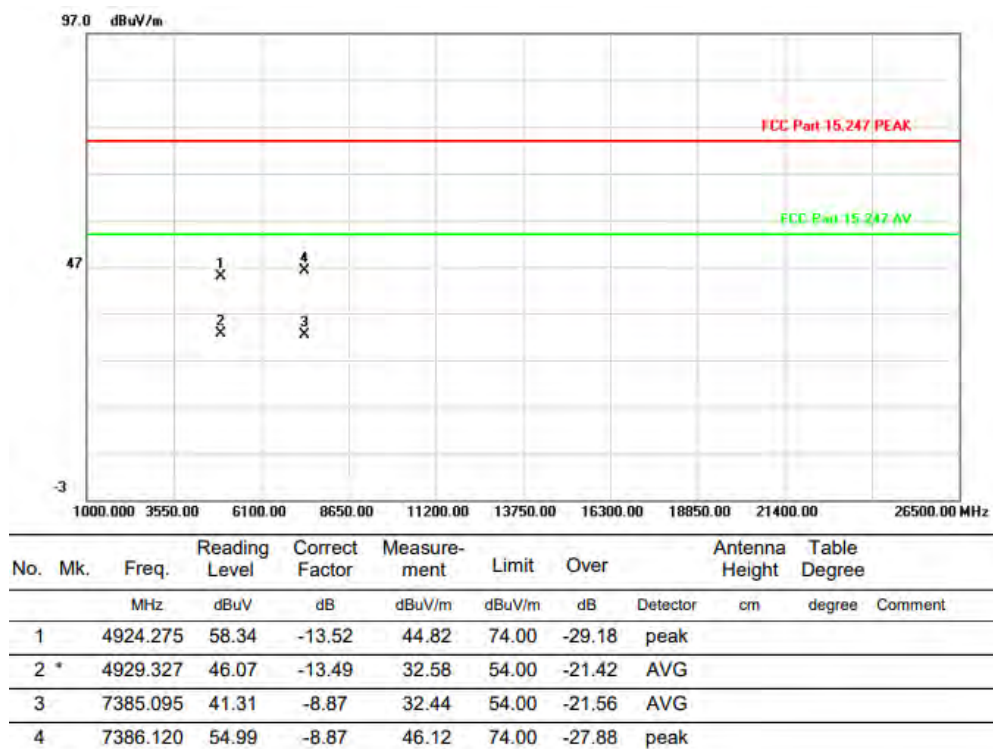
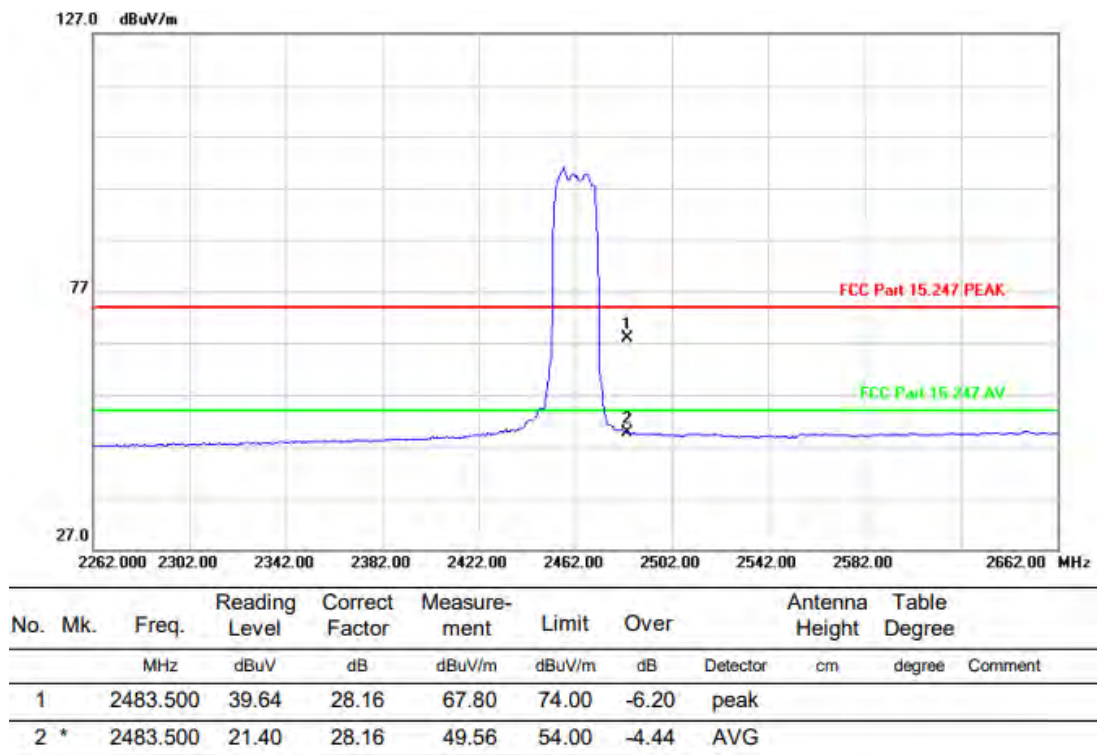
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4873.250	57.13	-13.77	43.36	74.00	-30.64			peak
2 *		4873.283	47.05	-13.77	33.28	54.00	-20.72			AVG
3		7310.870	52.98	-9.10	43.88	74.00	-30.12			peak
4		7311.057	41.53	-9.10	32.43	54.00	-21.57			AVG

Above 1G (1GHz~18GHz)

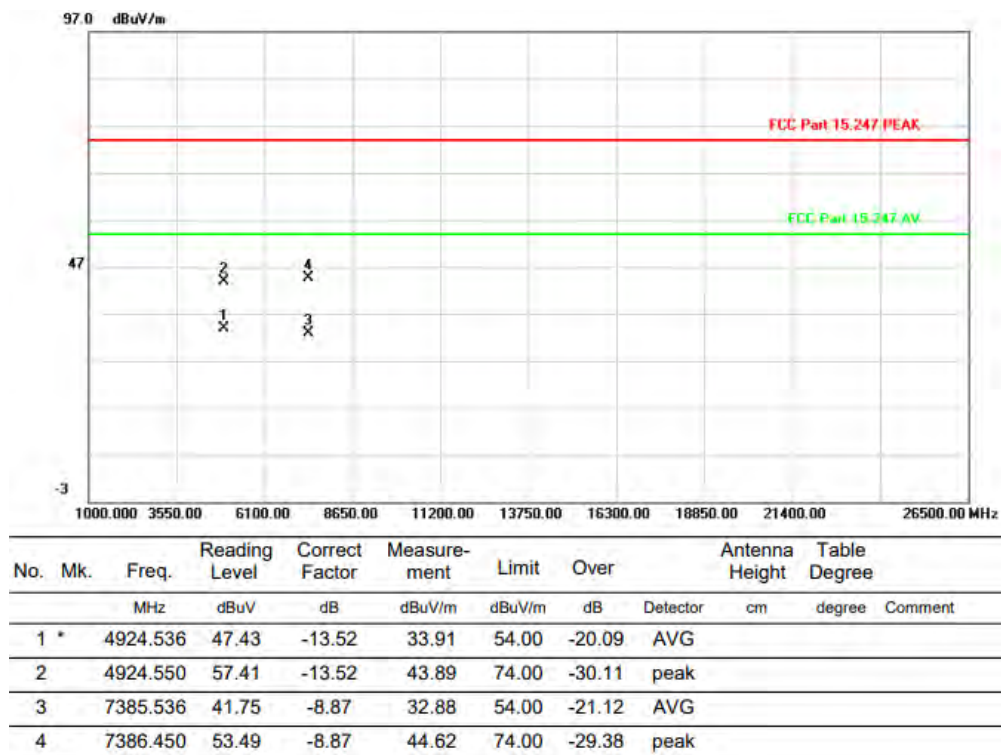
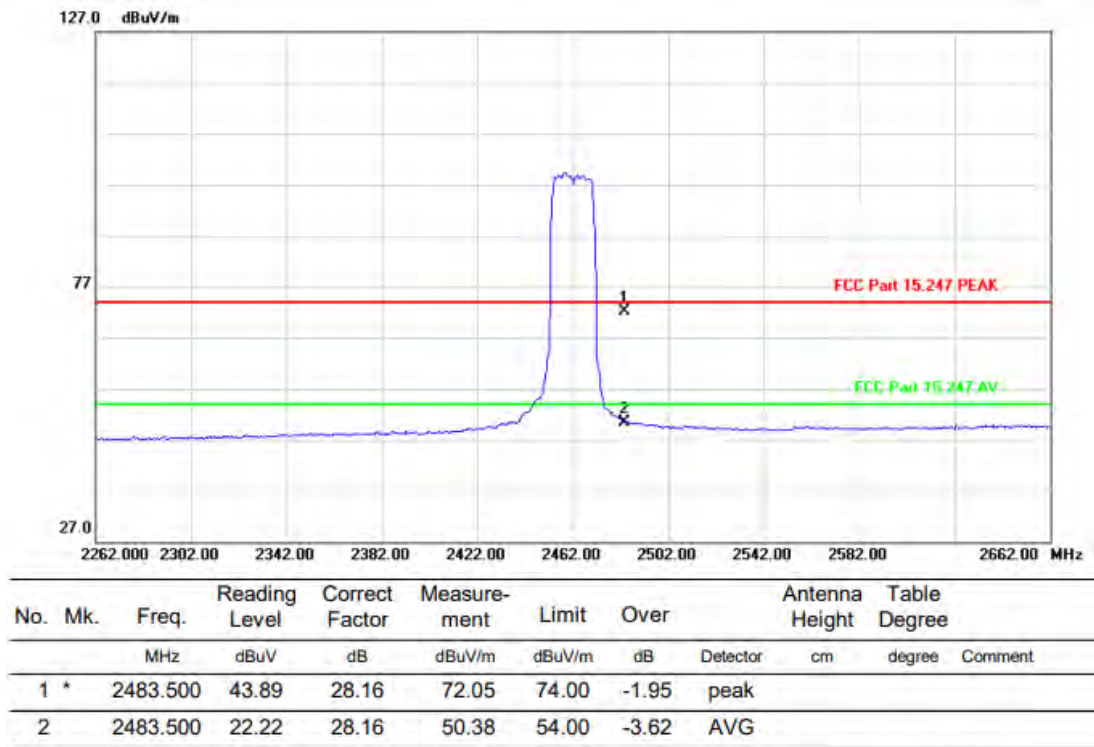
Test mode: 11G_MIMO

Test Channel:11

VERTICAL



HORIZONTAL

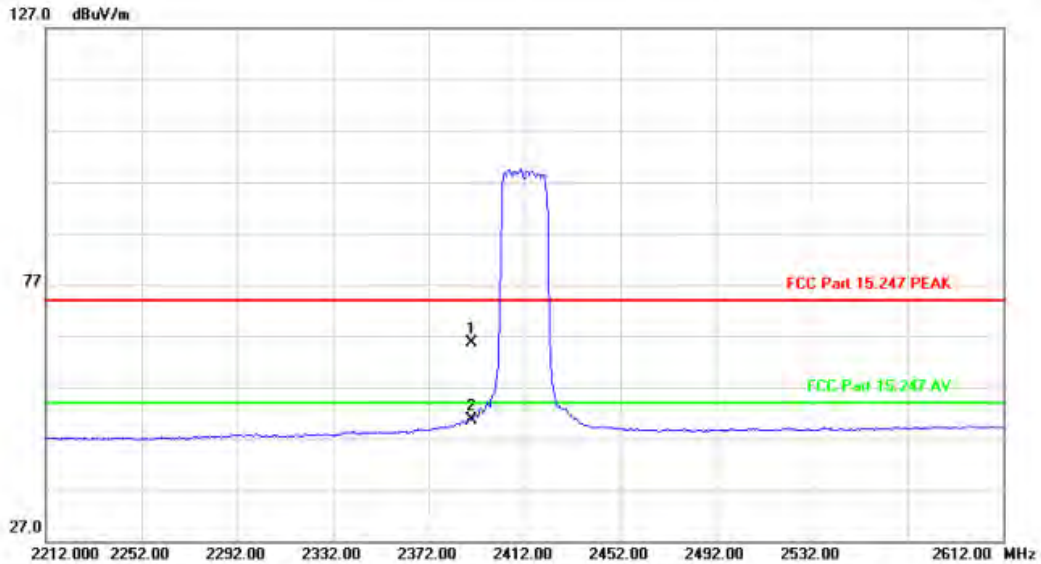


Above 1G (1GHz~18GHz)

Test mode: 11N20_MIMO

Test Channel:1

VERTICAL

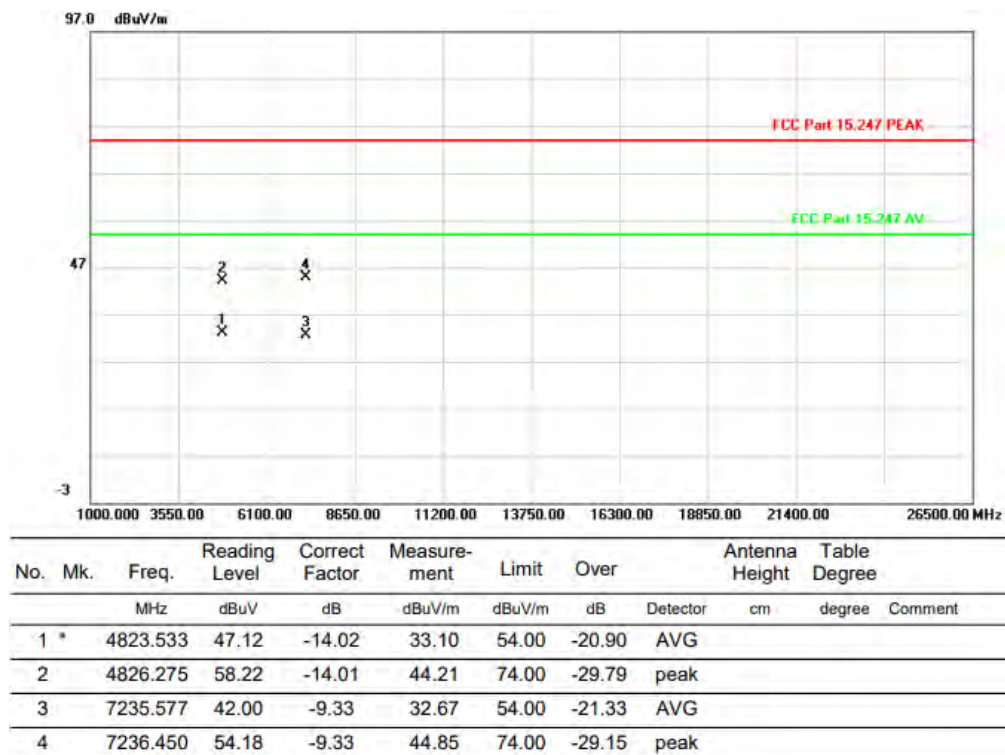
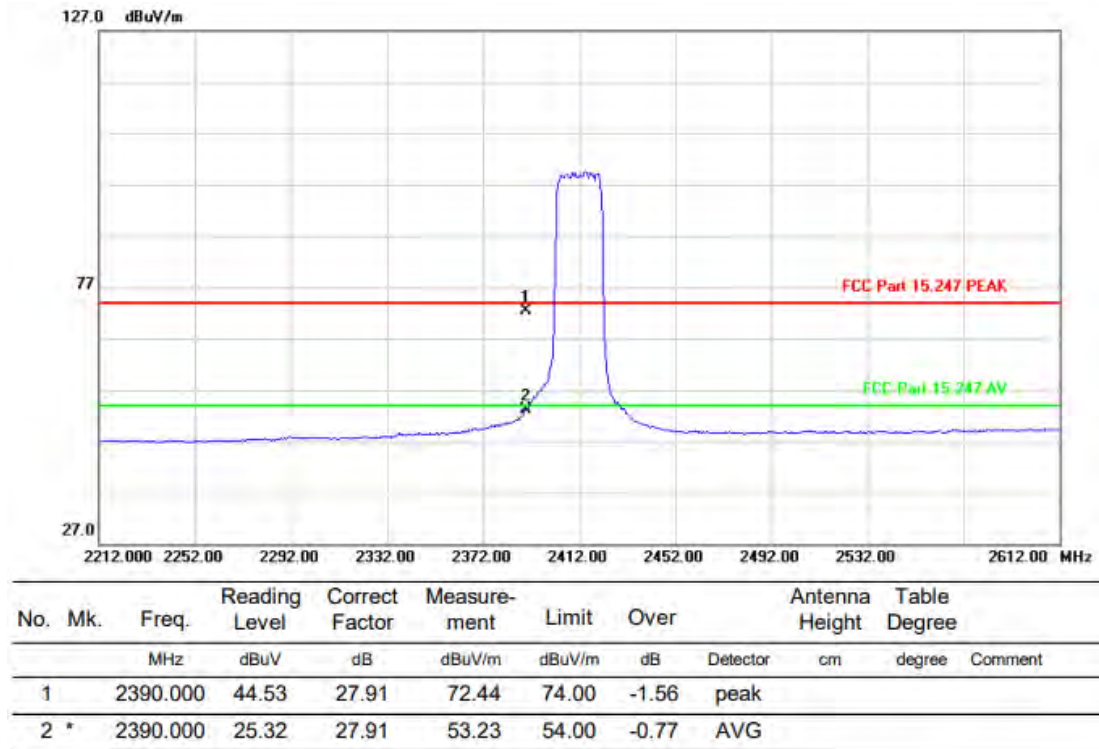


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	37.80	27.91	65.71	74.00	-8.29	peak		
2	*	2390.000	22.77	27.91	50.68	54.00	-3.32	AVG		



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		4823.735	46.50	-14.02	32.48	54.00	-21.52	AVG		
2		4826.275	59.32	-14.01	45.31	74.00	-28.69	peak		
3		7235.890	52.95	-9.33	43.62	74.00	-30.38	peak		
4	*	7238.304	42.05	-9.33	32.72	54.00	-21.28	AVG		

HORIZONTAL

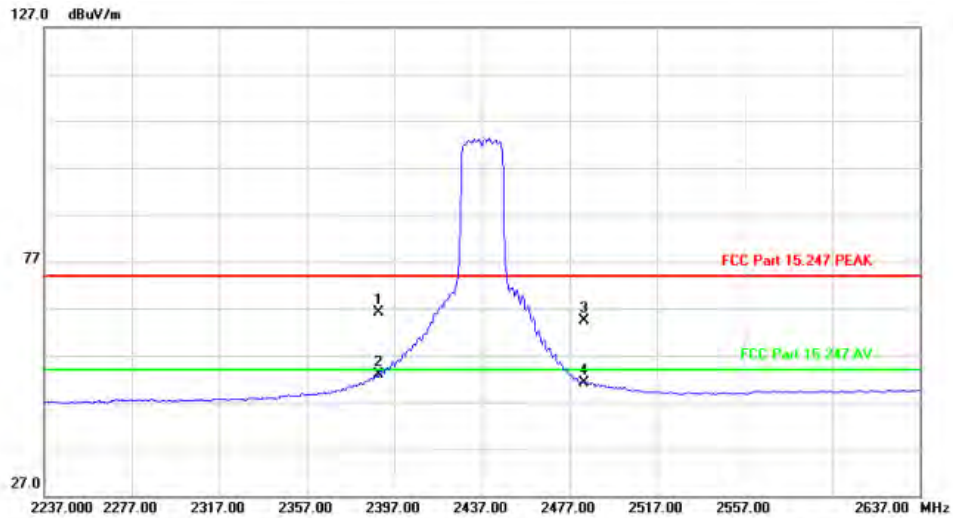


Above 1G (1GHz~18GHz)

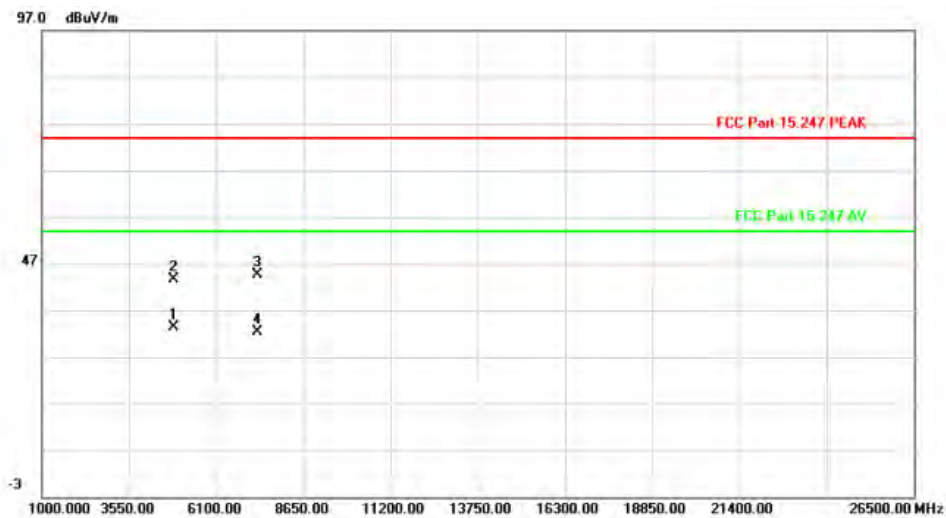
Test mode: 11N20_MIMO

Test Channel: 6

VERTICAL

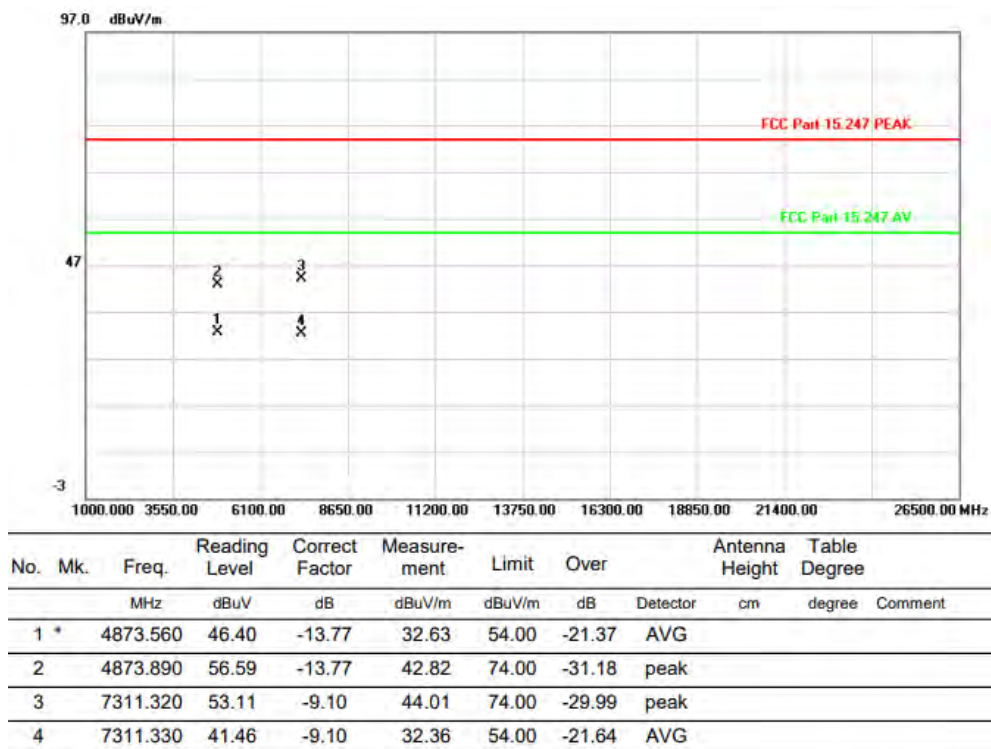
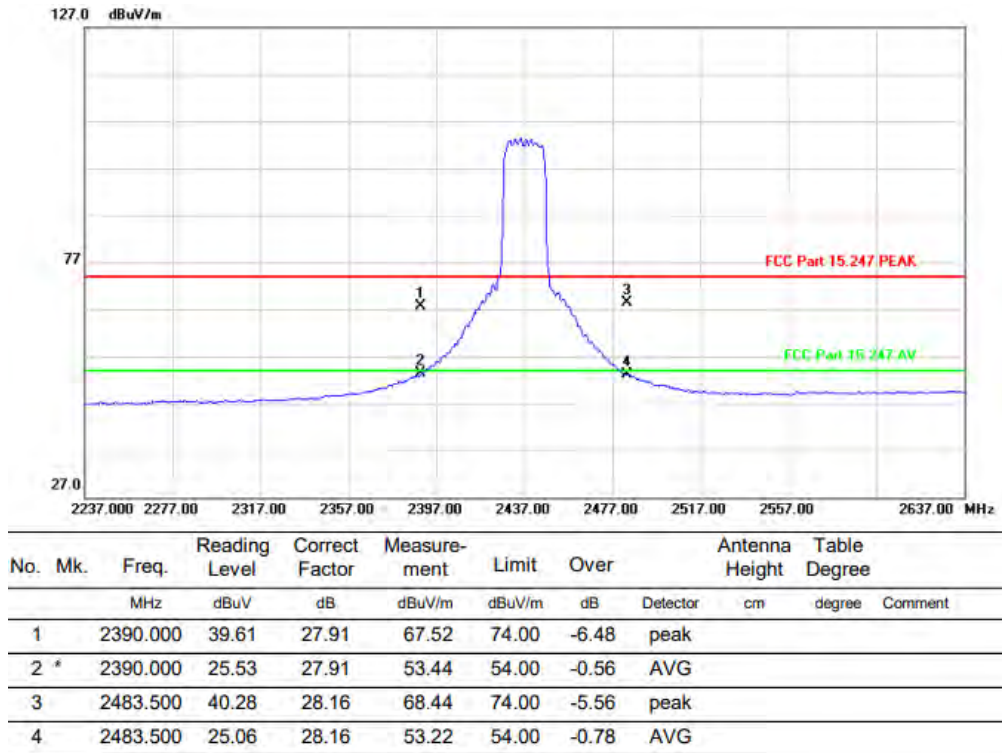


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1		2390.000	38.31	27.91	66.22	74.00	-7.78		peak	
2 *		2390.000	24.85	27.91	52.76	54.00	-1.24		AVG	
3		2483.500	36.31	28.16	64.47	74.00	-9.53		peak	
4		2483.500	23.06	28.16	51.22	54.00	-2.78		AVG	



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1 *		4873.717	47.06	-13.77	33.29	54.00	-20.71		AVG	
2		4874.075	57.48	-13.77	43.71	74.00	-30.29		peak	
3		7310.450	53.63	-9.10	44.53	74.00	-29.47		peak	
4		7310.833	41.38	-9.10	32.28	54.00	-21.72		AVG	

HORIZONTAL

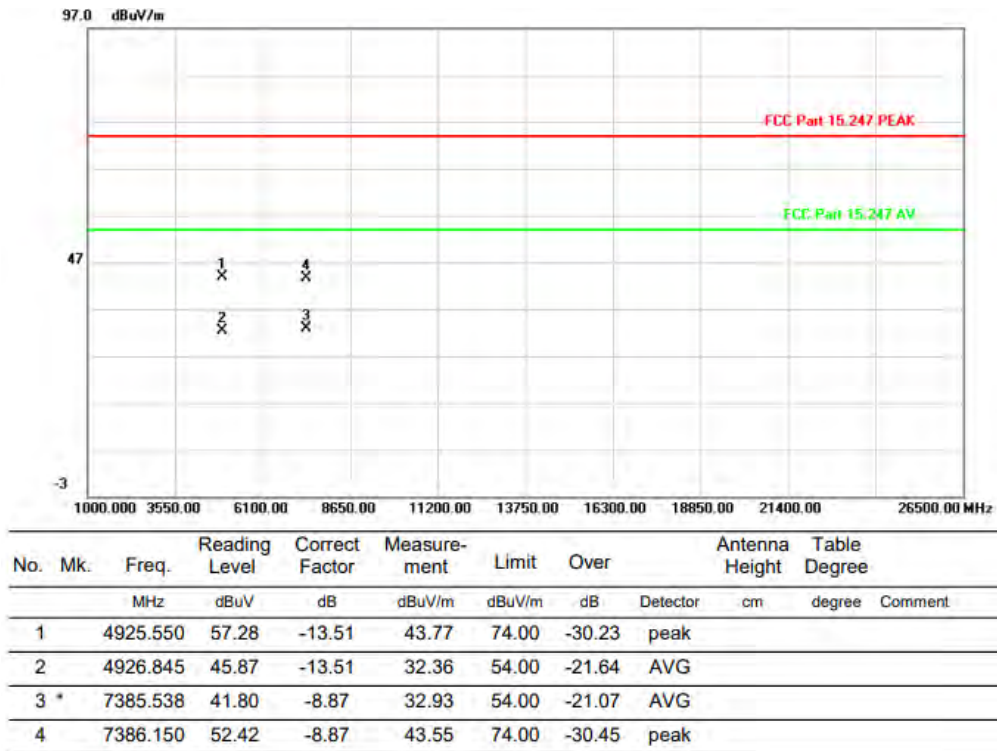
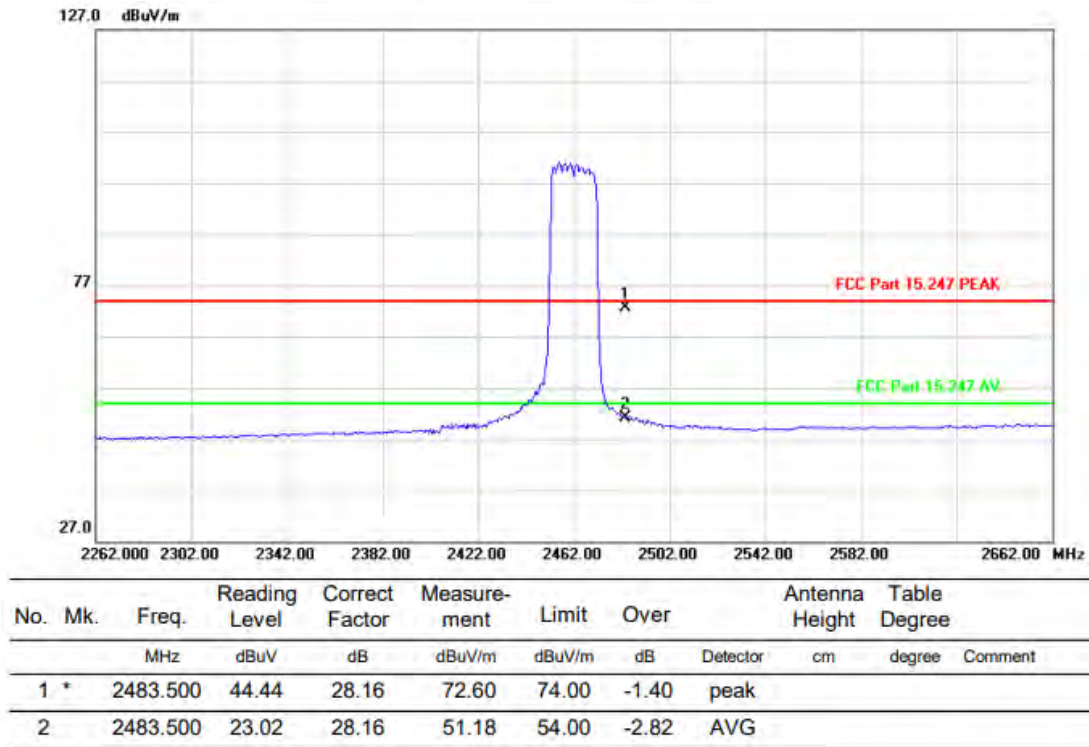


Above 1G (1GHz~18GHz)

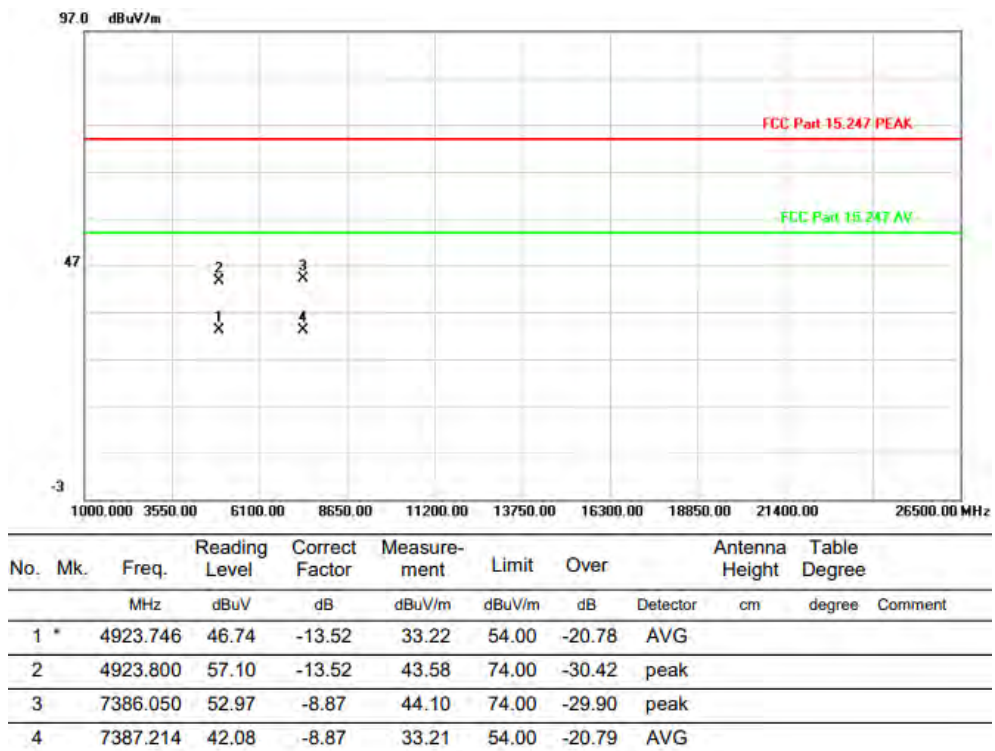
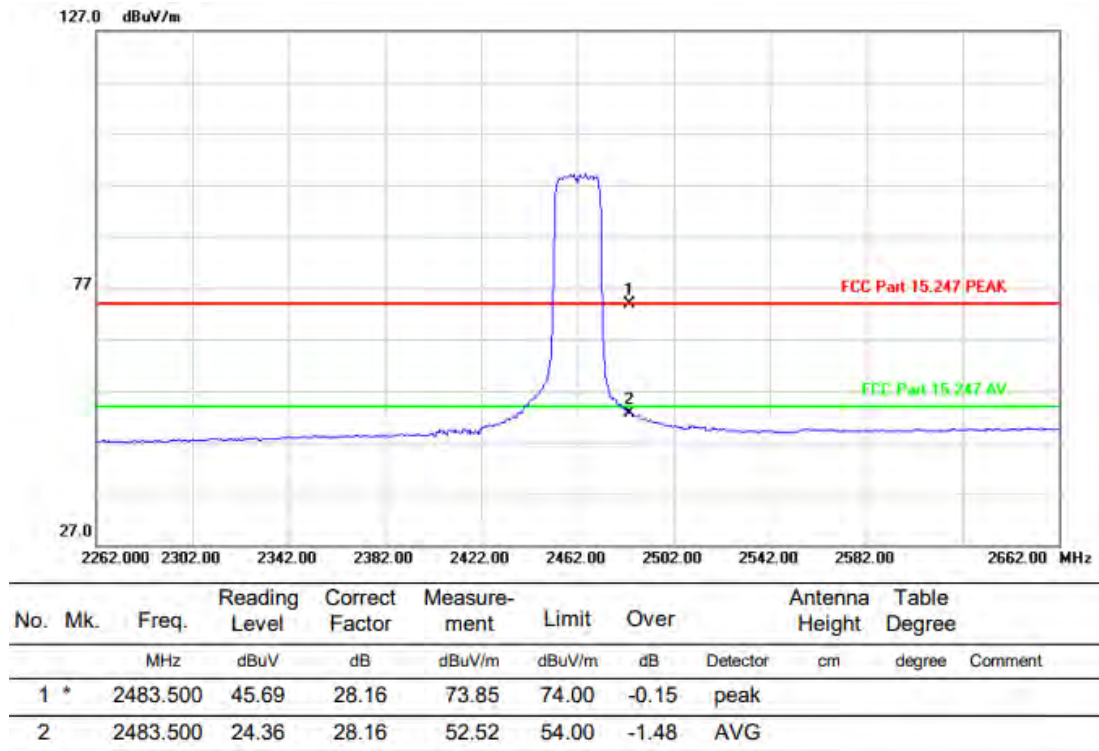
Test mode: 11N20_MIMO

Test Channel:11

VERTICAL



HORIZONTAL

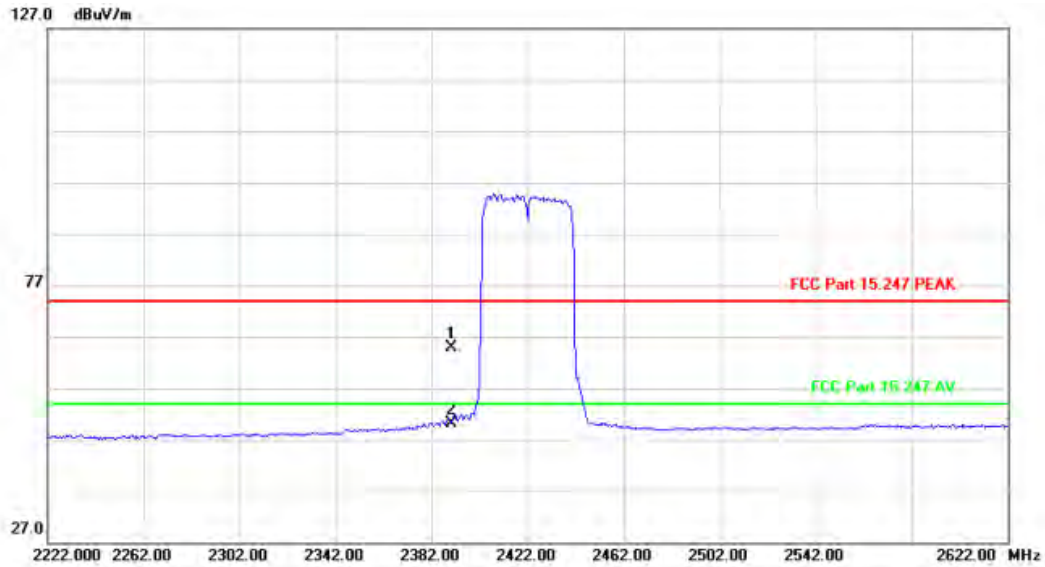


Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel:3

VERTICAL

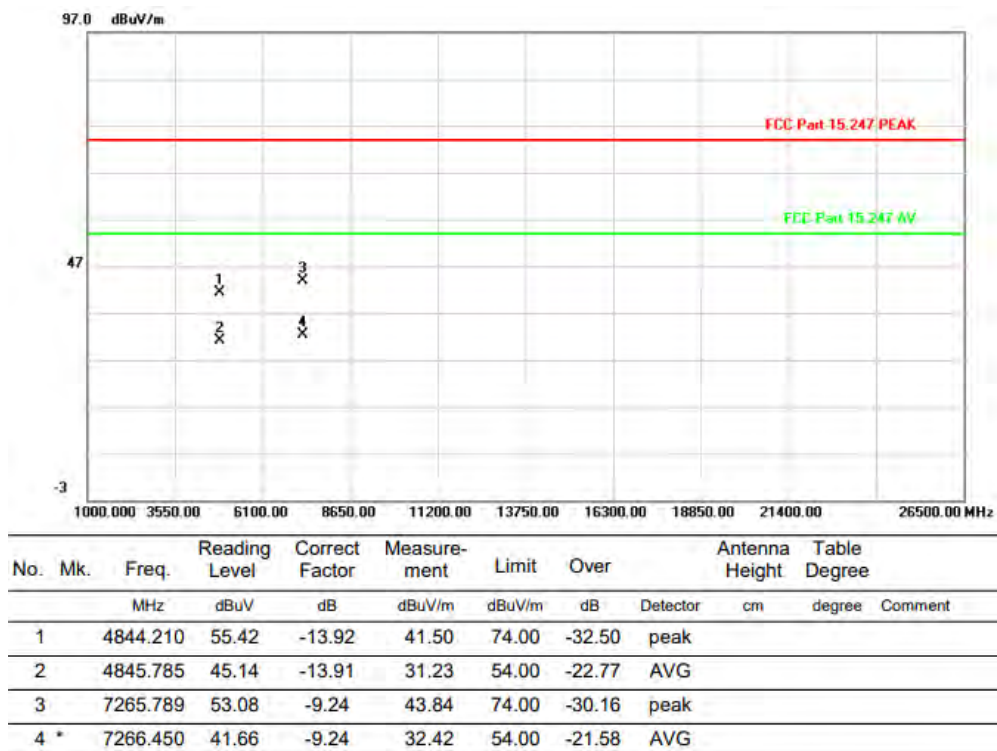
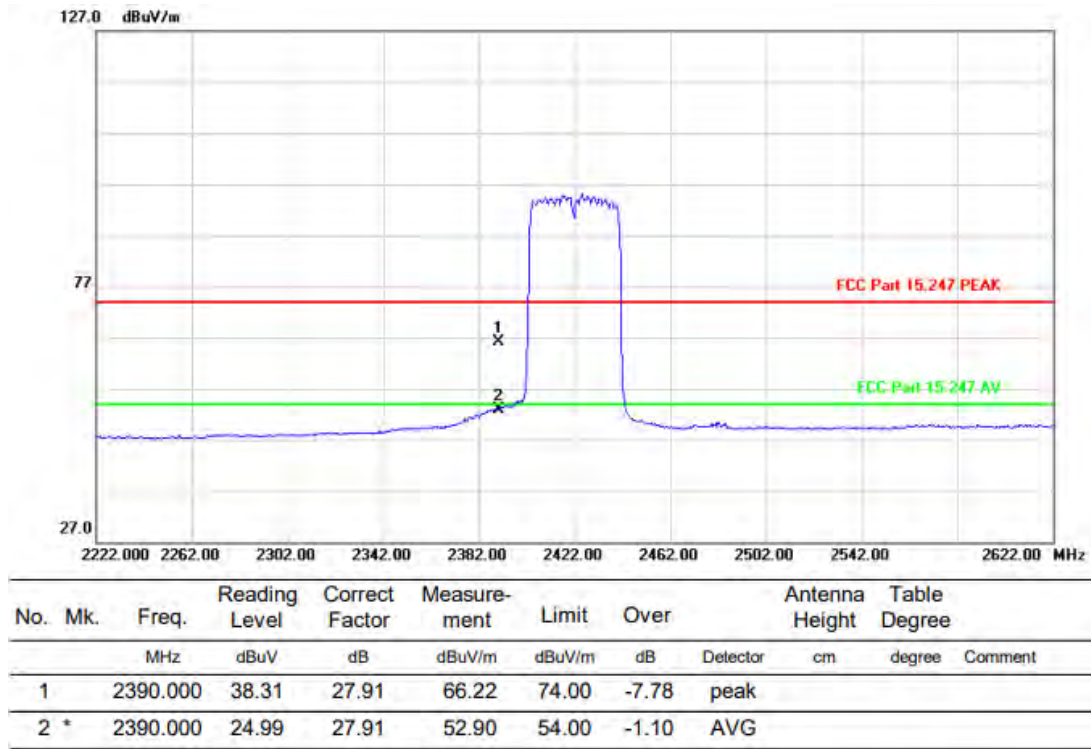


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	36.90	27.91	64.81	74.00	-9.19	peak		
2	*	2390.000	22.27	27.91	50.18	54.00	-3.82	AVG		



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		4834.664	45.19	-13.97	31.22	54.00	-22.78	AVG		
2		4844.045	55.95	-13.92	42.03	74.00	-31.97	peak		
3	*	7266.068	41.45	-9.24	32.21	54.00	-21.79	AVG		
4		7266.780	53.15	-9.24	43.91	74.00	-30.09	peak		

HORIZONTAL

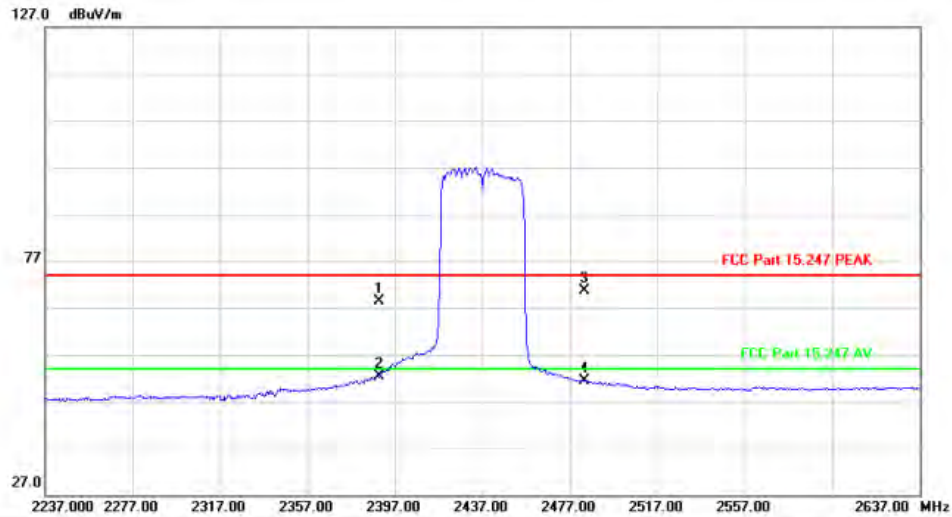


Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel: 6

VERTICAL

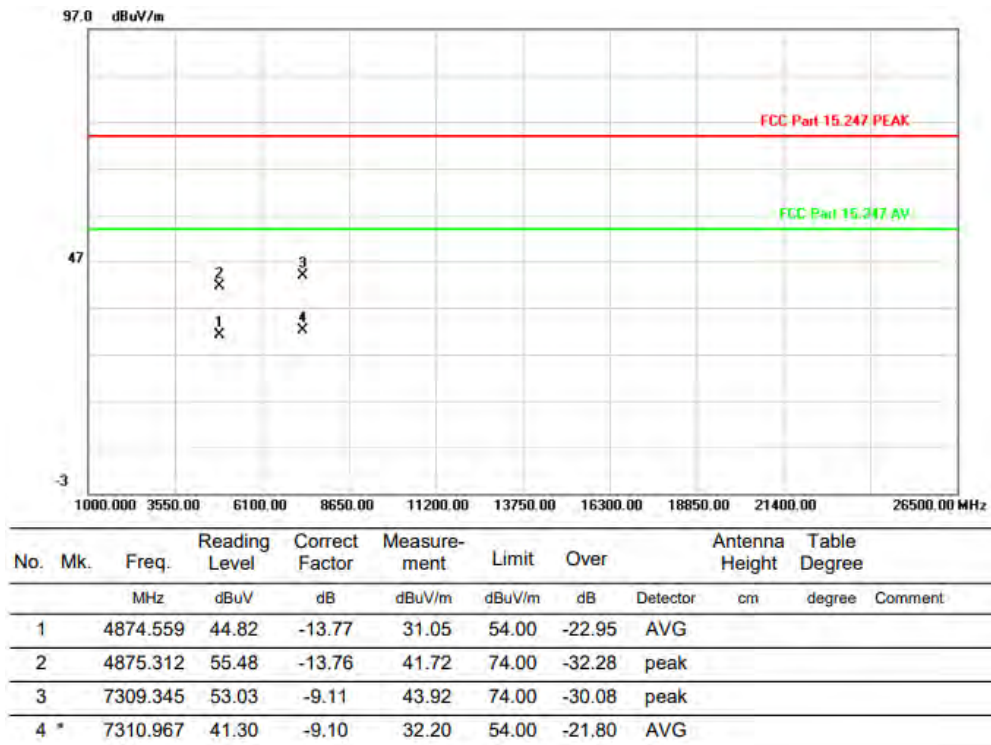
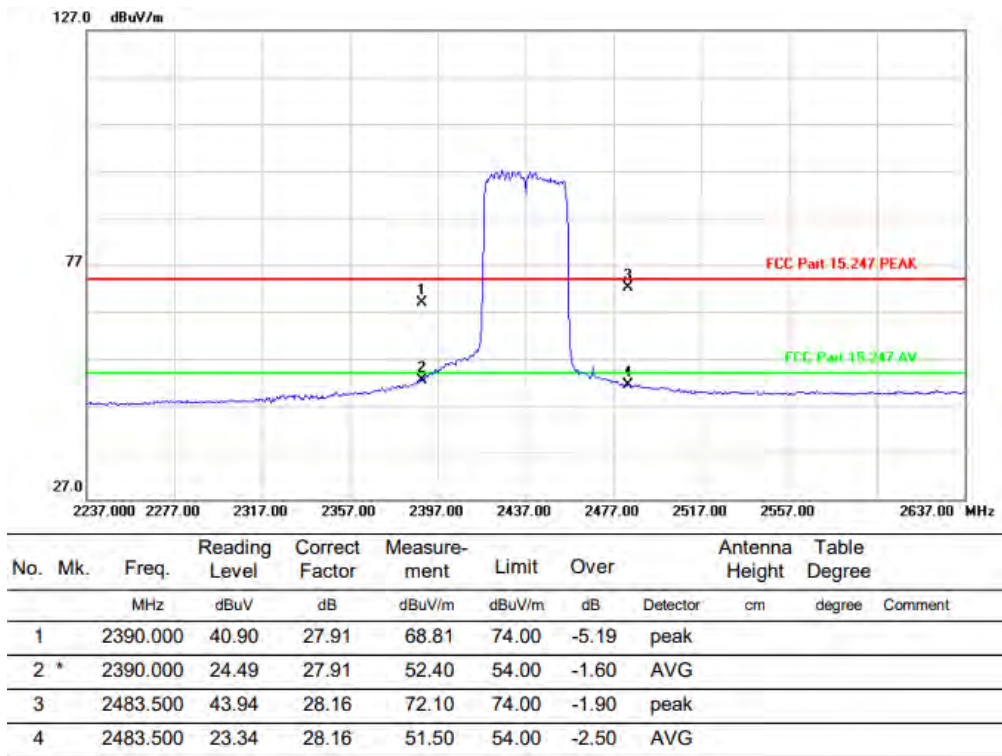


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2390.000	40.59	27.91	68.50	74.00	-5.50	peak	
2 *		2390.000	24.58	27.91	52.49	54.00	-1.51	AVG	
3		2483.500	42.41	28.16	70.57	74.00	-3.43	peak	
4		2483.500	23.26	28.16	51.42	54.00	-2.58	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		4782.450	54.81	-14.23	40.58	74.00	-33.42	peak	
2		4873.450	44.12	-13.77	30.35	54.00	-23.65	AVG	
3		7310.145	53.59	-9.10	44.49	74.00	-29.51	peak	
4 *		7312.050	41.16	-9.10	32.06	54.00	-21.94	AVG	

HORIZONTAL

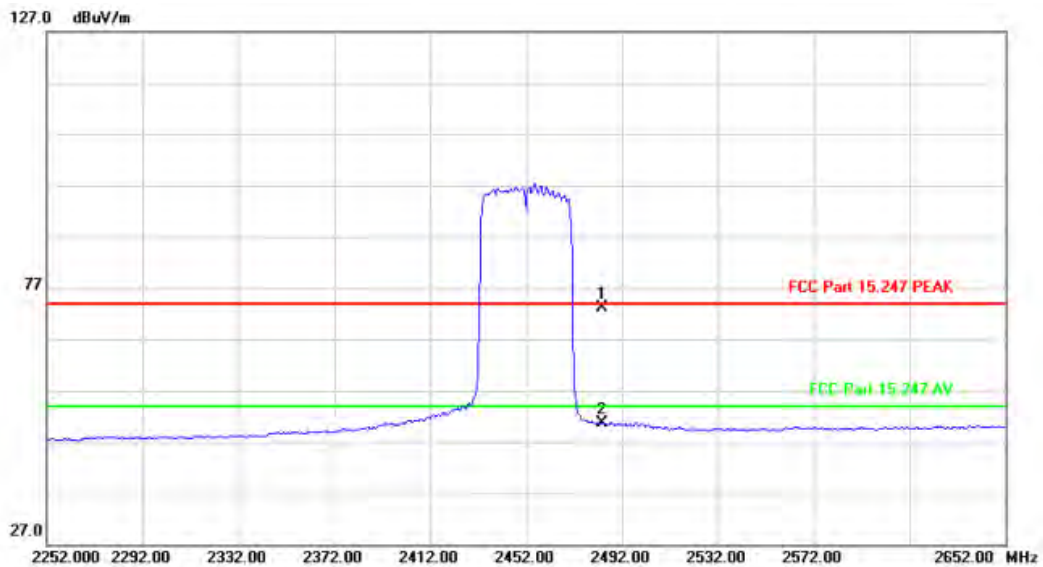


Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel:9

VERTICAL

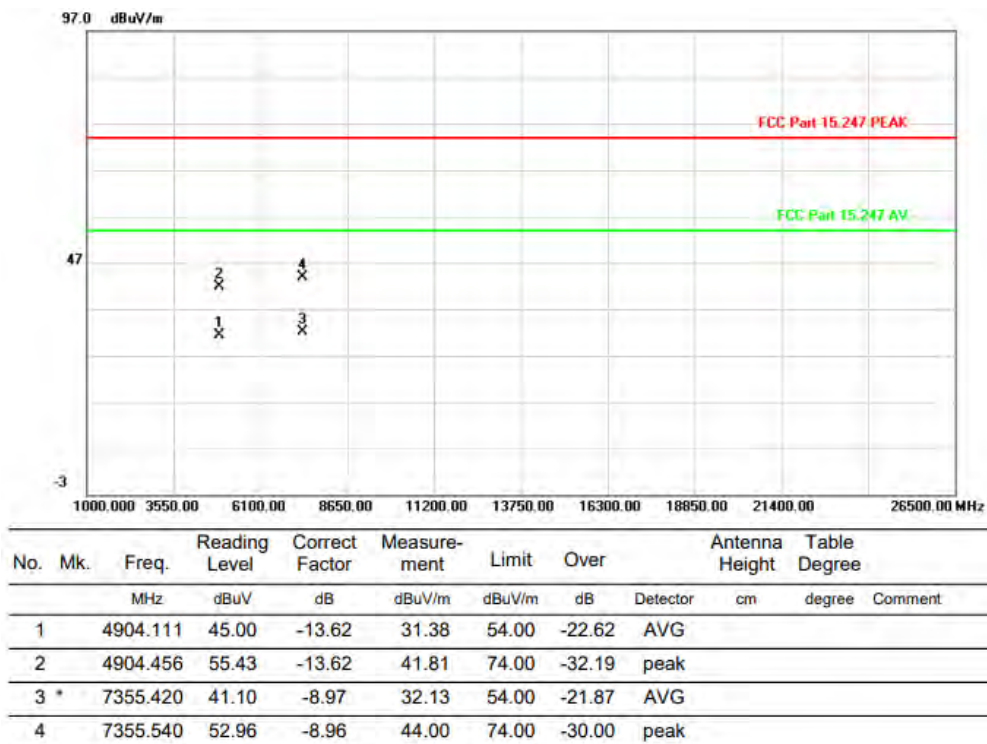
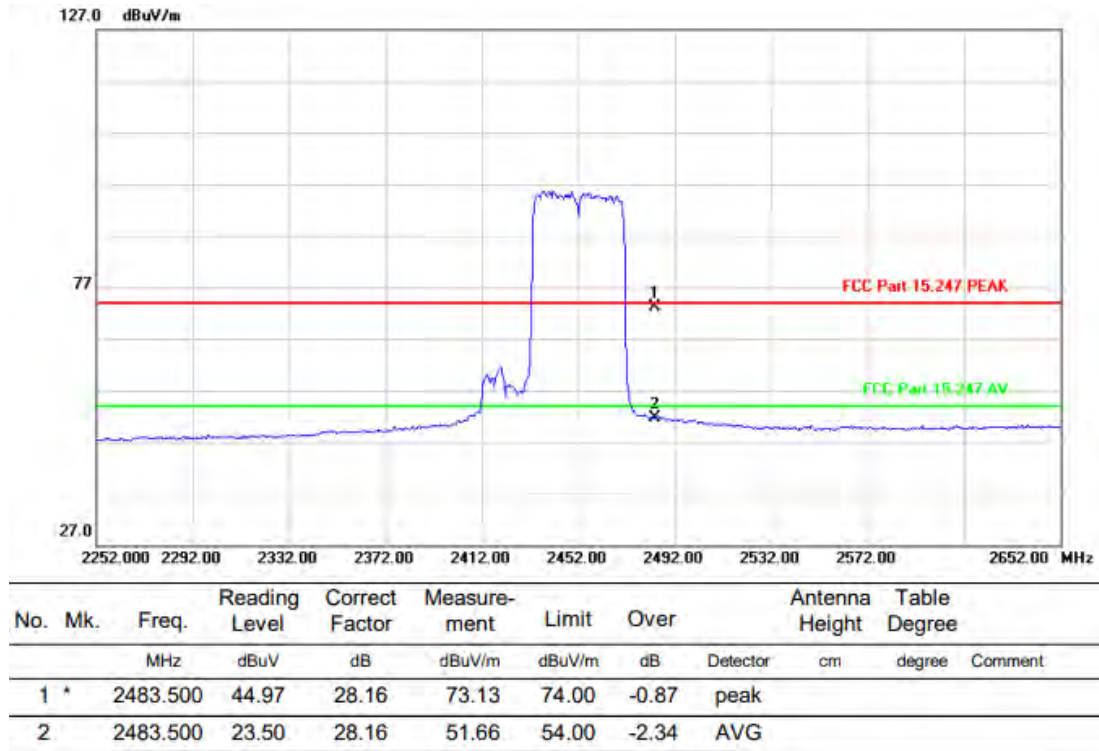


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	2483.500	44.91	28.16	73.07	74.00	-0.93	peak		
2		2483.500	22.58	28.16	50.74	54.00	-3.26	AVG		



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		4903.345	55.56	-13.62	41.94	74.00	-32.06	peak		
2		4903.748	45.47	-13.62	31.85	54.00	-22.15	AVG		
3	*	7355.002	41.73	-8.97	32.76	54.00	-21.24	AVG		
4		7357.650	52.83	-8.96	43.87	74.00	-30.13	peak		

HORIZONTAL

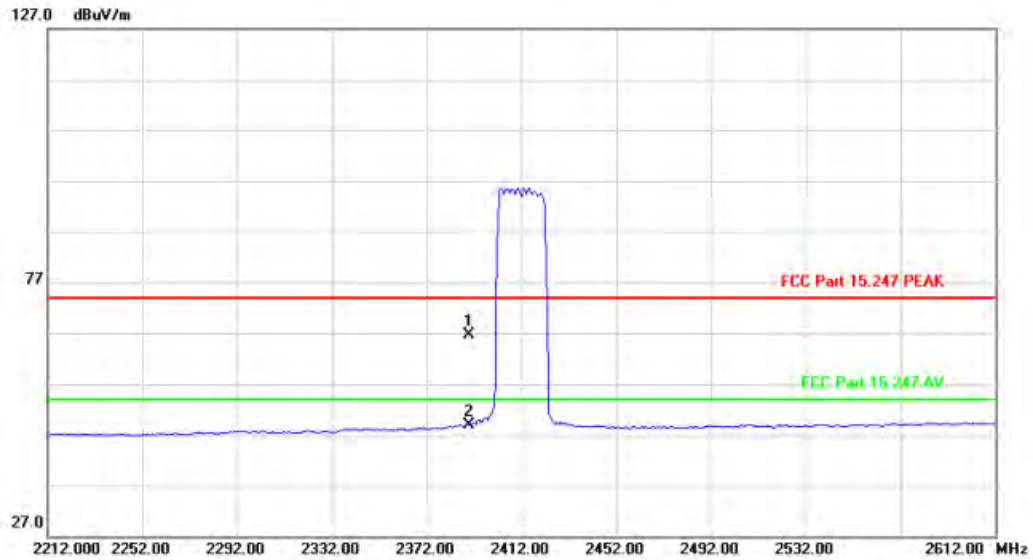


Above 1G (1GHz~18GHz)

Test mode: 11AX20MIMO

Test Channel:1

VERTICAL

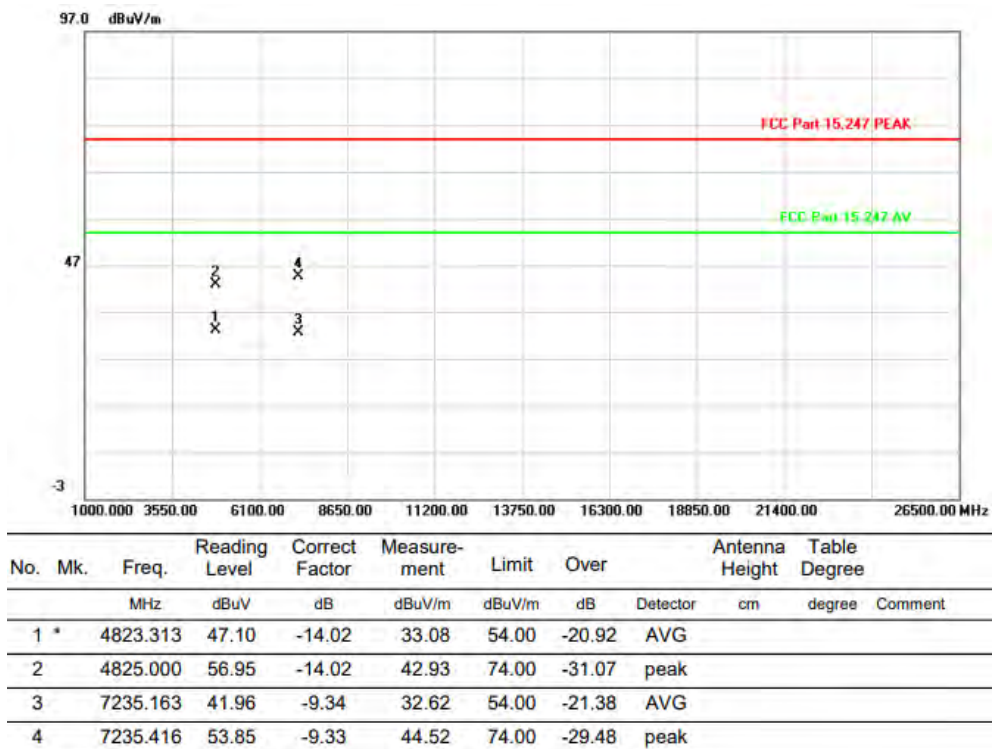
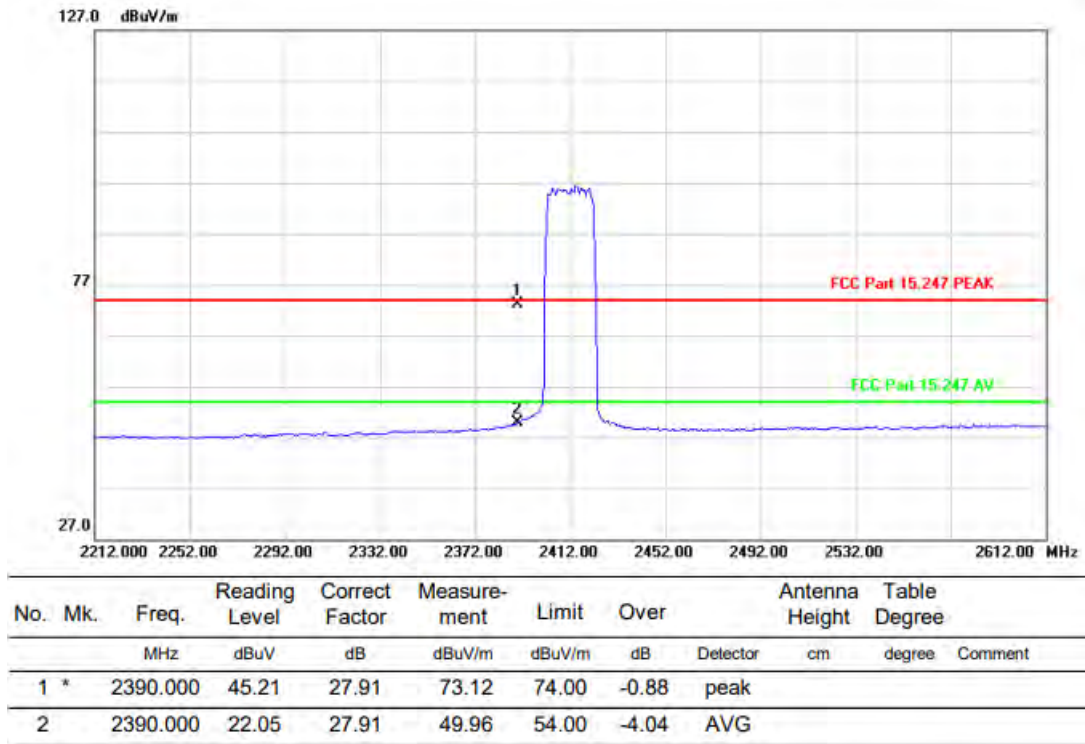


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	38.74	27.91	66.65	74.00	-7.35	peak		
2 *		2390.000	21.02	27.91	48.93	54.00	-5.07	AVG		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		4823.783	46.53	-14.02	32.51	54.00	-21.49	AVG		
2		4823.825	56.66	-14.02	42.64	74.00	-31.36	peak		
3		7235.625	53.69	-9.33	44.36	74.00	-29.64	peak		
4 *		7238.618	42.08	-9.32	32.76	54.00	-21.24	AVG		

HORIZONTAL

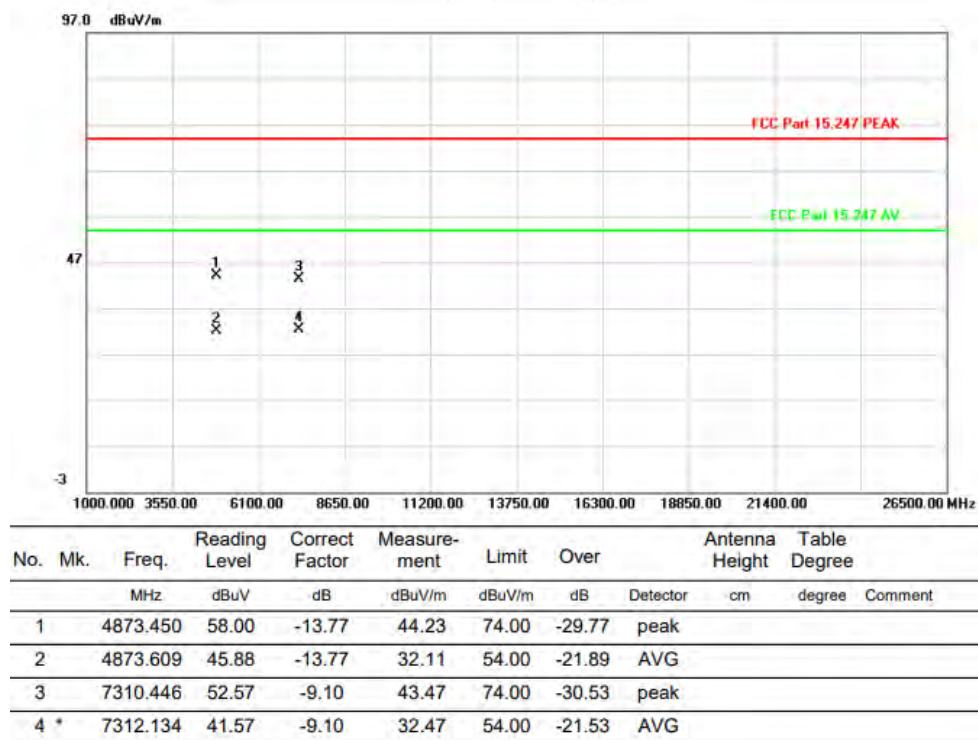
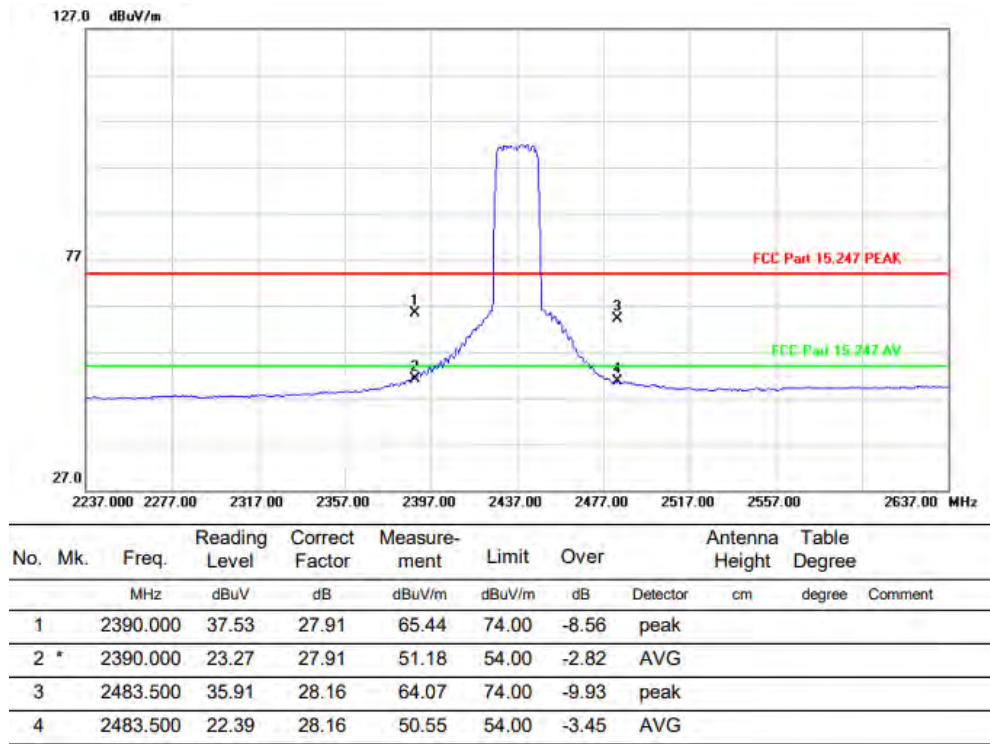


Above 1G (1GHz~18GHz)

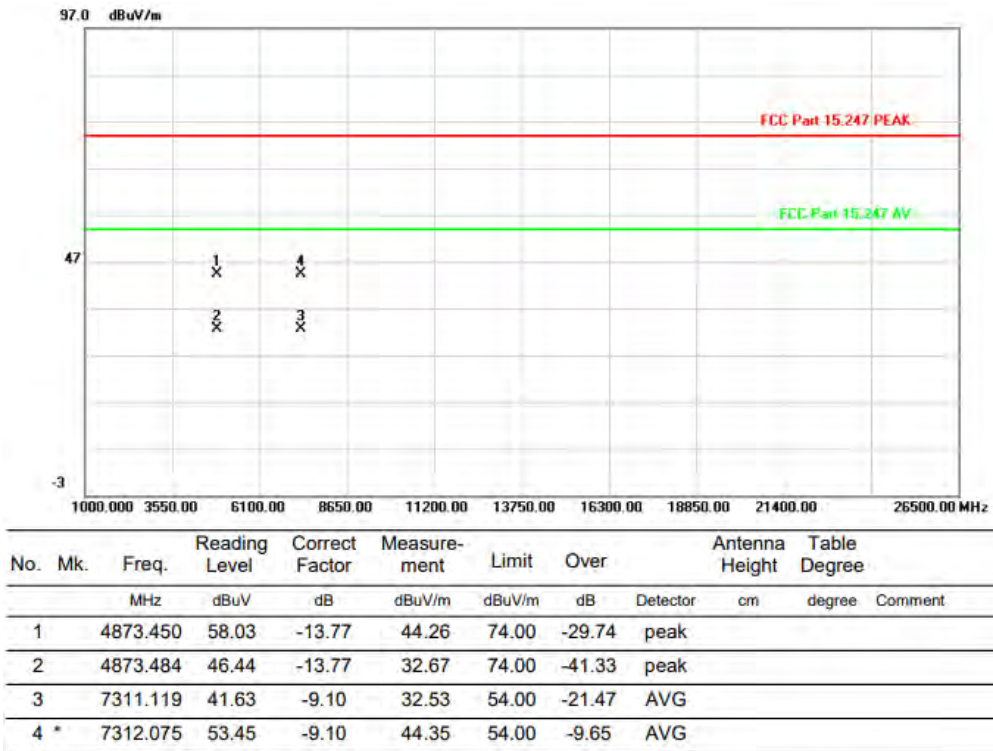
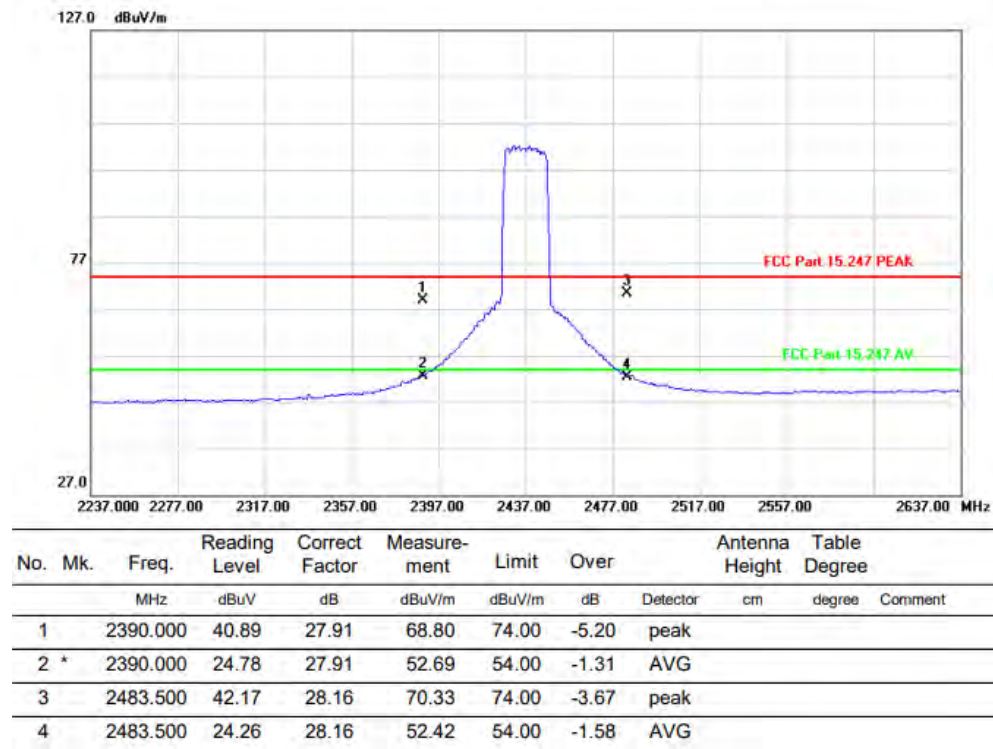
Test mode: 11AX20MIMO

Test Channel: 6

VERTICAL



HORIZONTAL

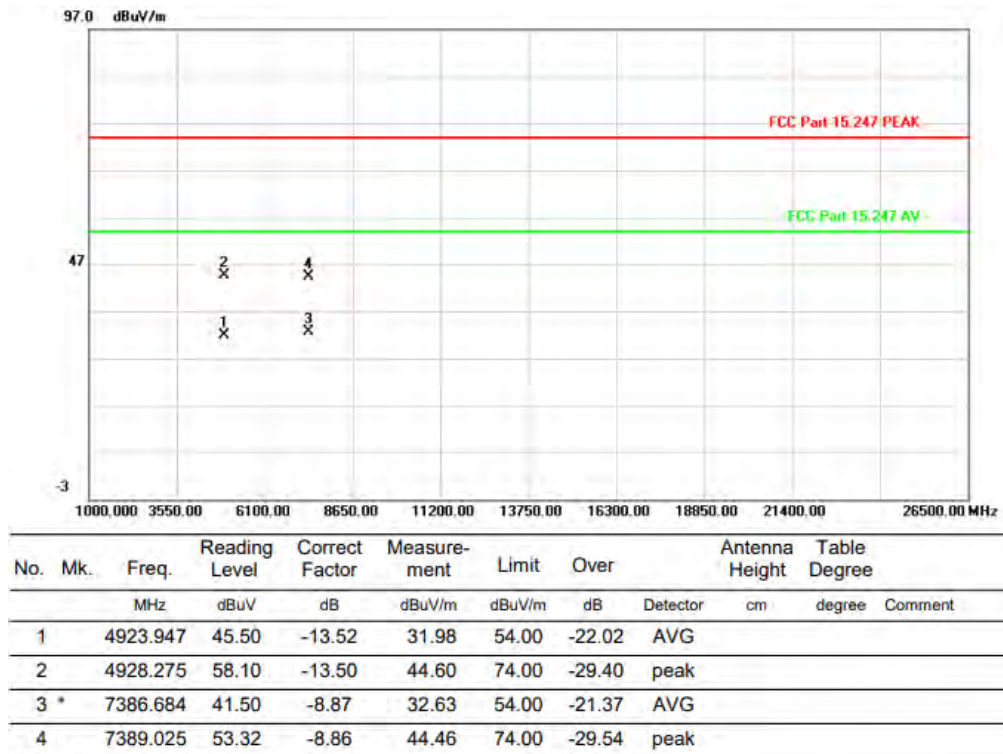
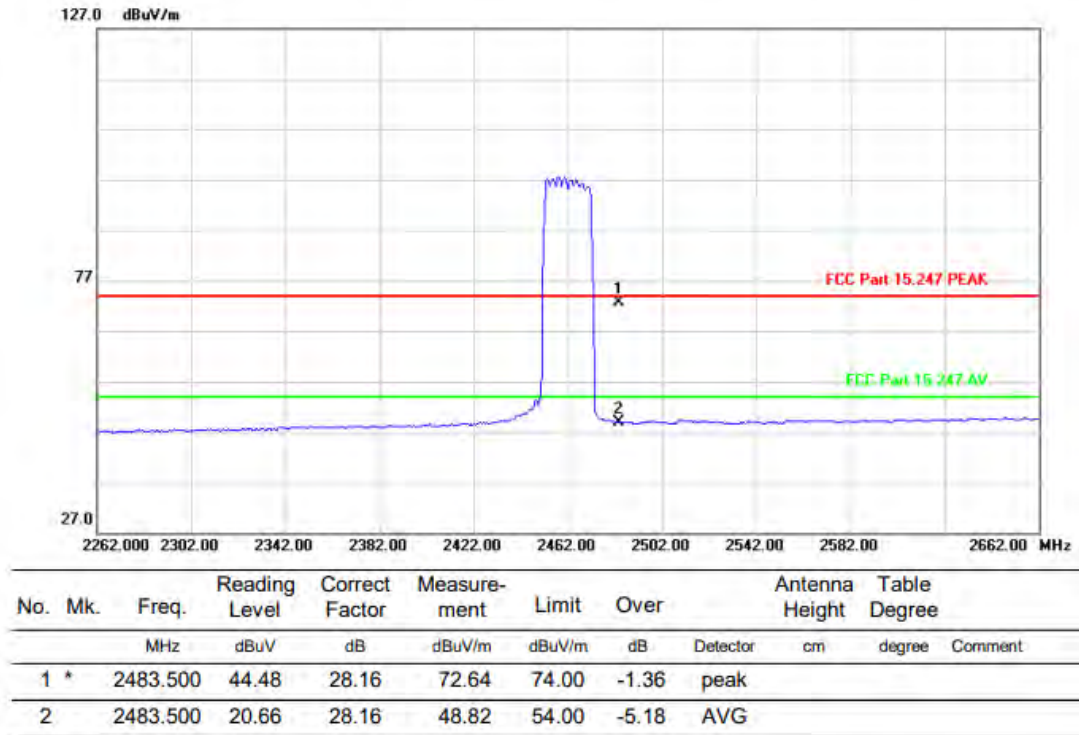


Above 1G (1GHz~18GHz)

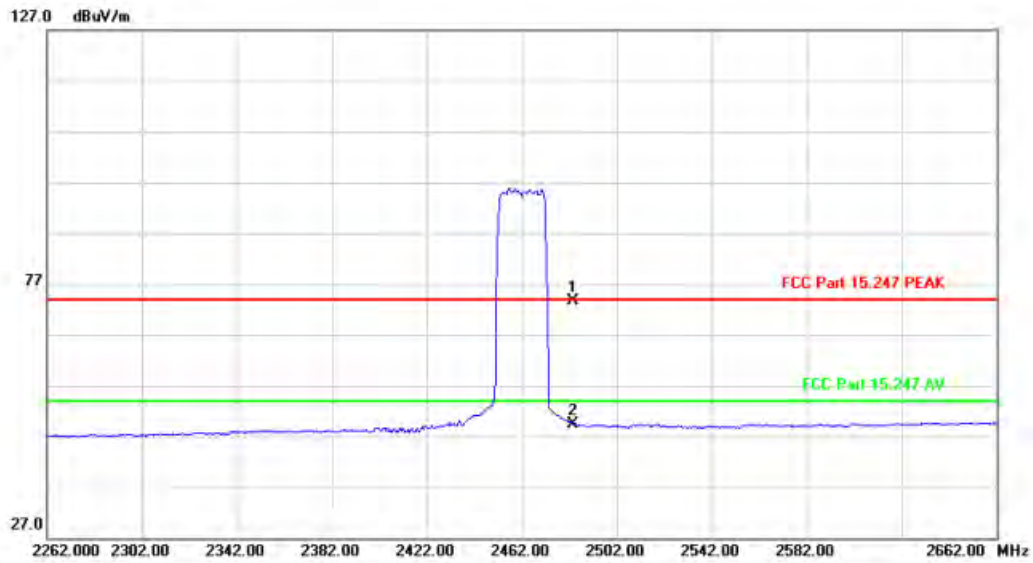
Test mode: 11AX20MIMO

Test Channel:11

VERTICAL



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	45.51	28.16	73.67	74.00	-0.33	peak		
2		2483.500	21.31	28.16	49.47	54.00	-4.53	AVG		



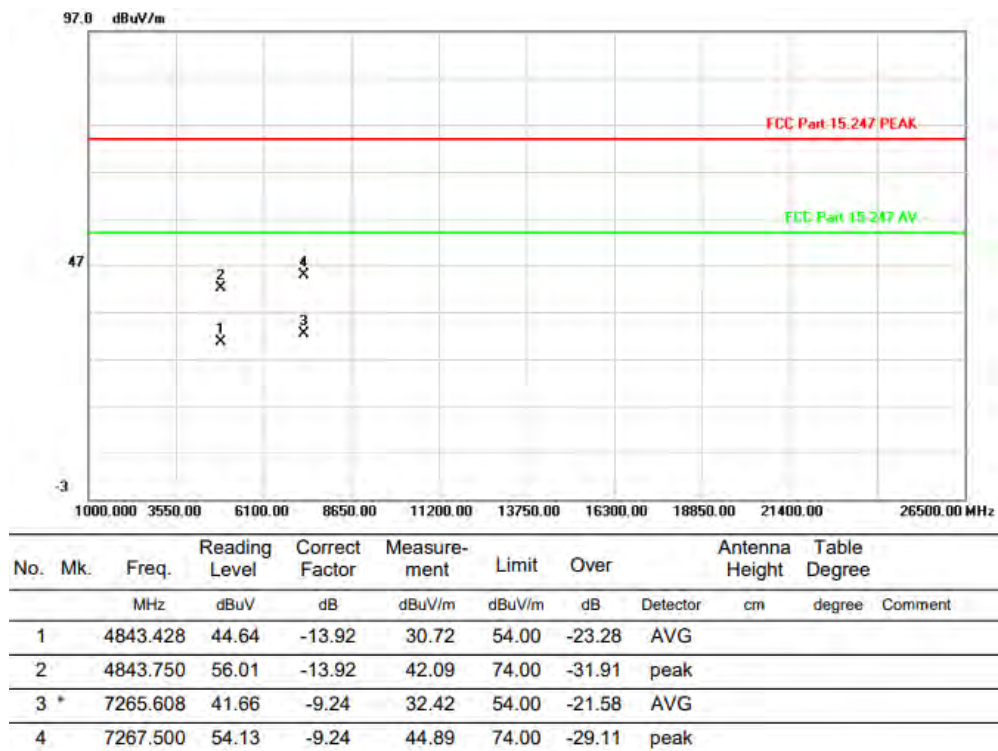
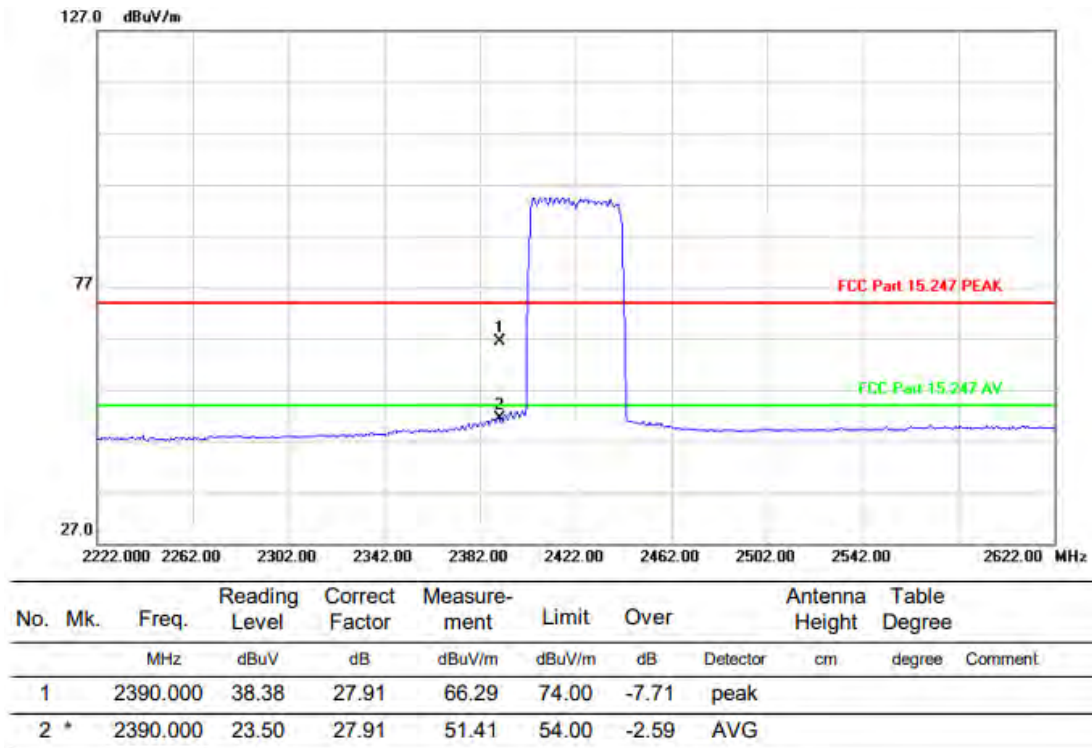
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	4926.629	46.42	-13.51	32.91	54.00	-21.09	AVG		
2		4927.000	56.44	-13.51	42.93	74.00	-31.07	peak		
3		7385.386	41.15	-8.87	32.28	54.00	-21.72	AVG		
4		7385.975	53.68	-8.87	44.81	74.00	-29.19	peak		

Above 1G (1GHz~18GHz)

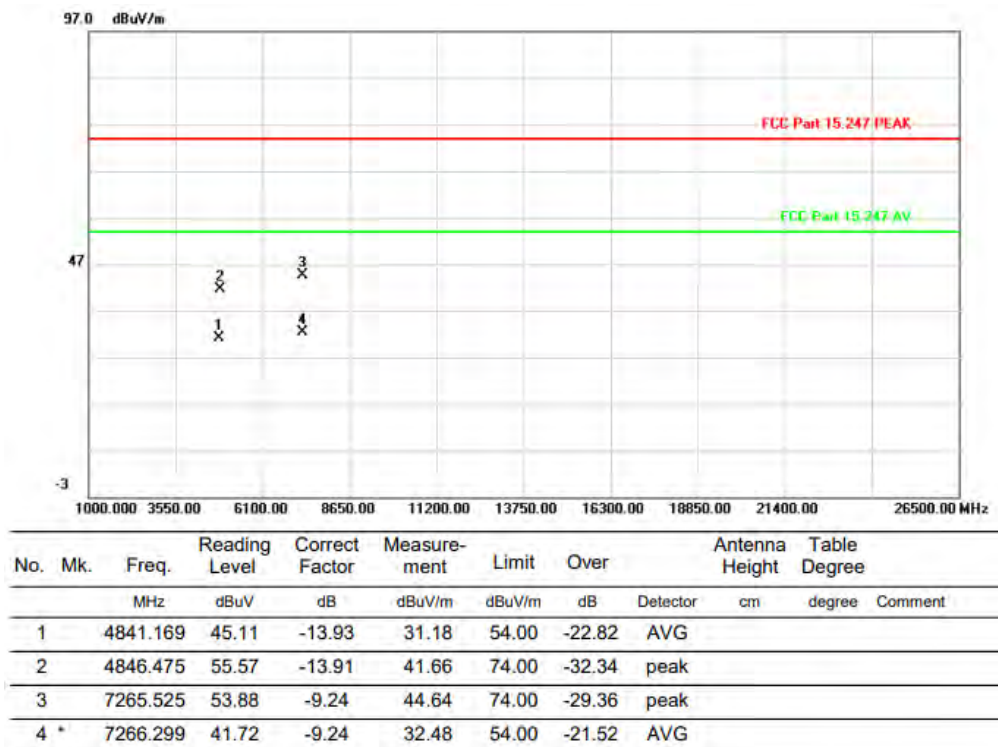
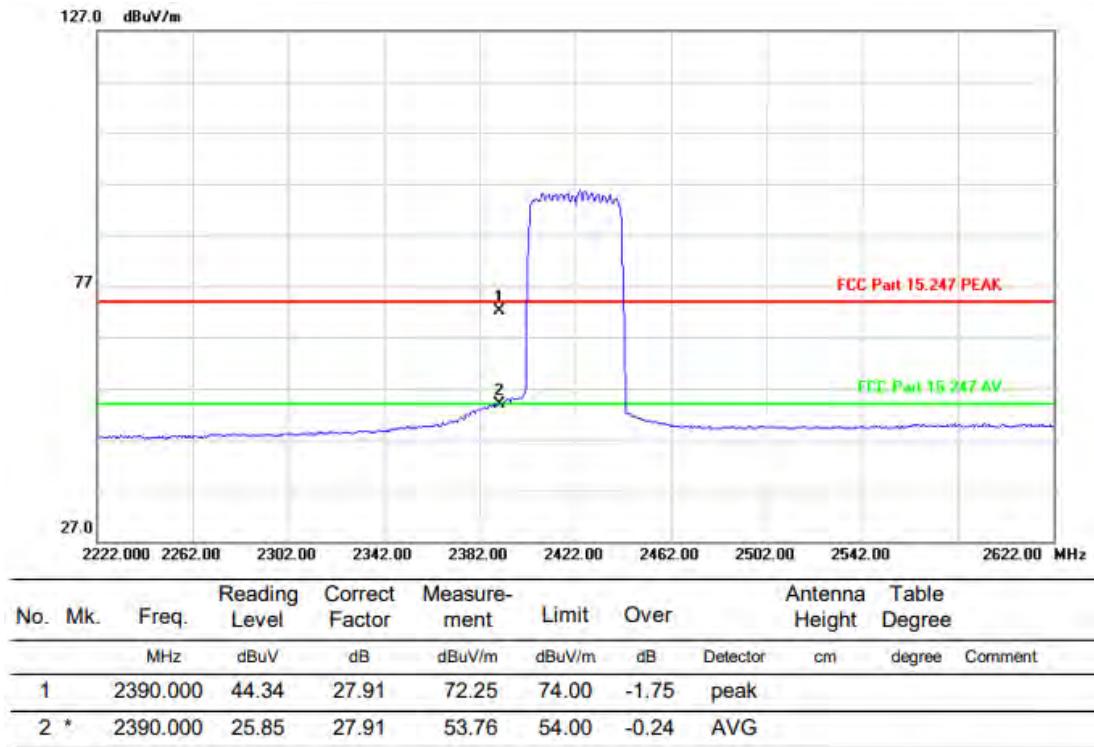
Test mode: 11AX40MIMO

Test Channel:3

VERTICAL



HORIZONTAL

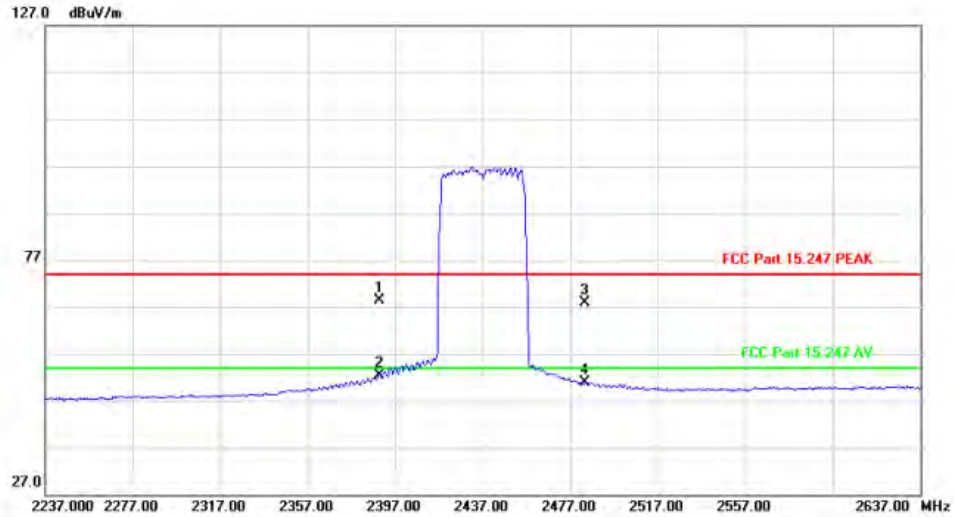


Above 1G (1GHz~18GHz)

Test mode: 11AX40MIMO

Test Channel: 6

VERTICAL

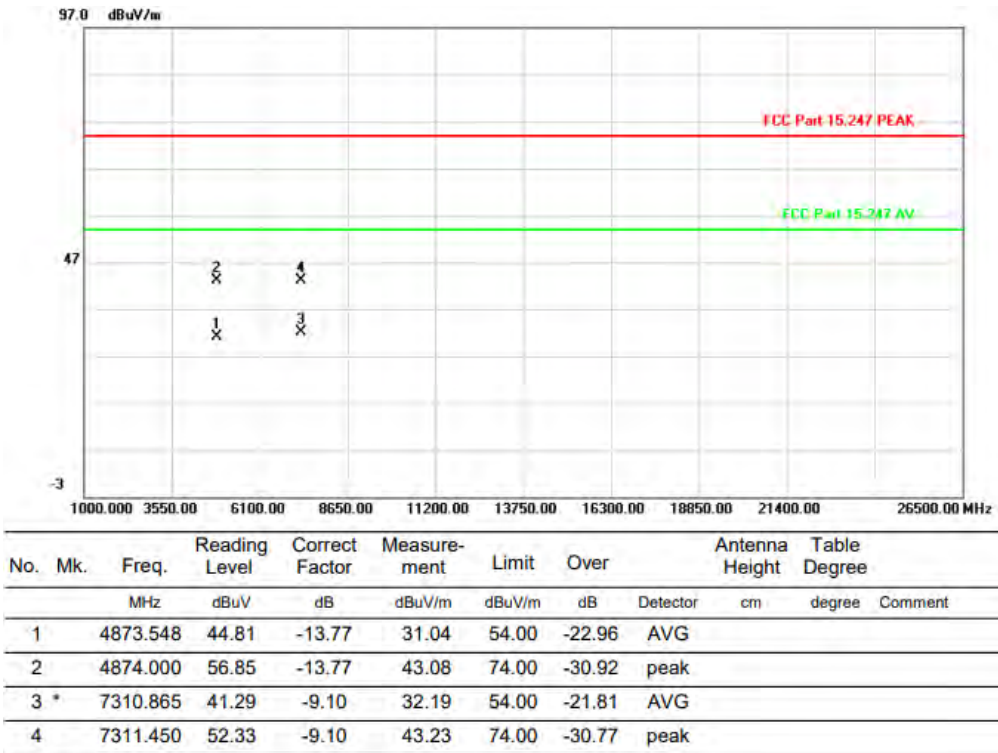
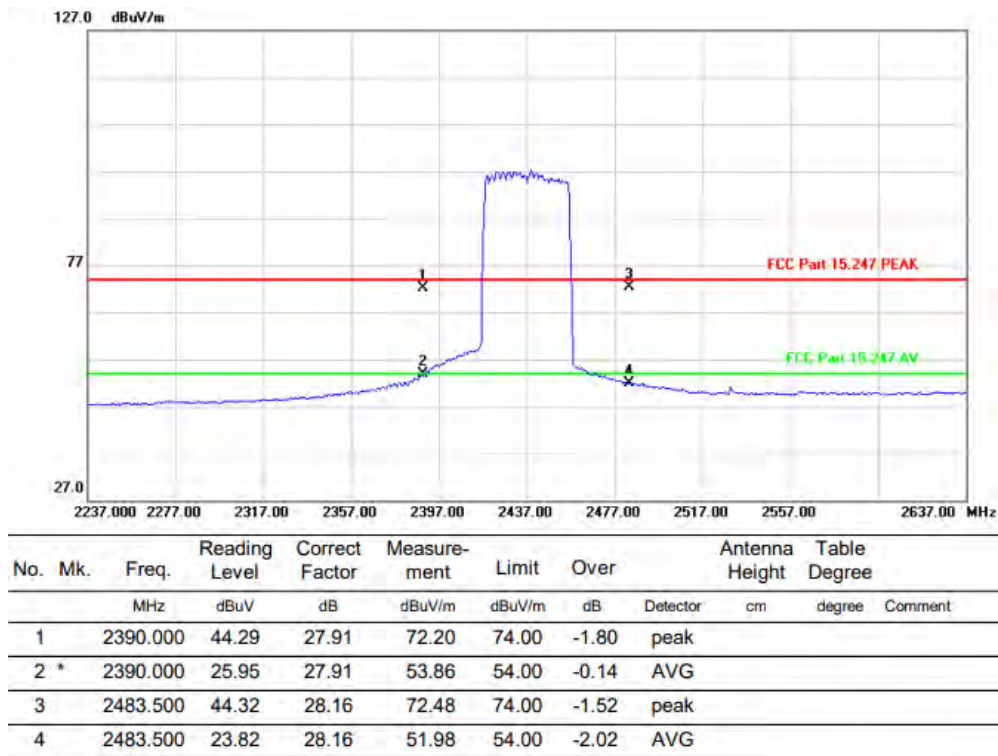


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	40.44	27.91	68.35	74.00	-5.65	peak		
2 *		2390.000	24.48	27.91	52.39	54.00	-1.61	AVG		
3		2483.500	39.60	28.16	67.76	74.00	-6.24	peak		
4		2483.500	22.62	28.16	50.78	54.00	-3.22	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		4873.394	45.00	-13.77	31.23	54.00	-22.77	AVG		
2		4873.775	55.98	-13.77	42.21	74.00	-31.79	peak		
3		7311.350	52.89	-9.10	43.79	74.00	-30.21	peak		
4 *		7311.641	41.47	-9.10	32.37	54.00	-21.63	AVG		

HORIZONTAL

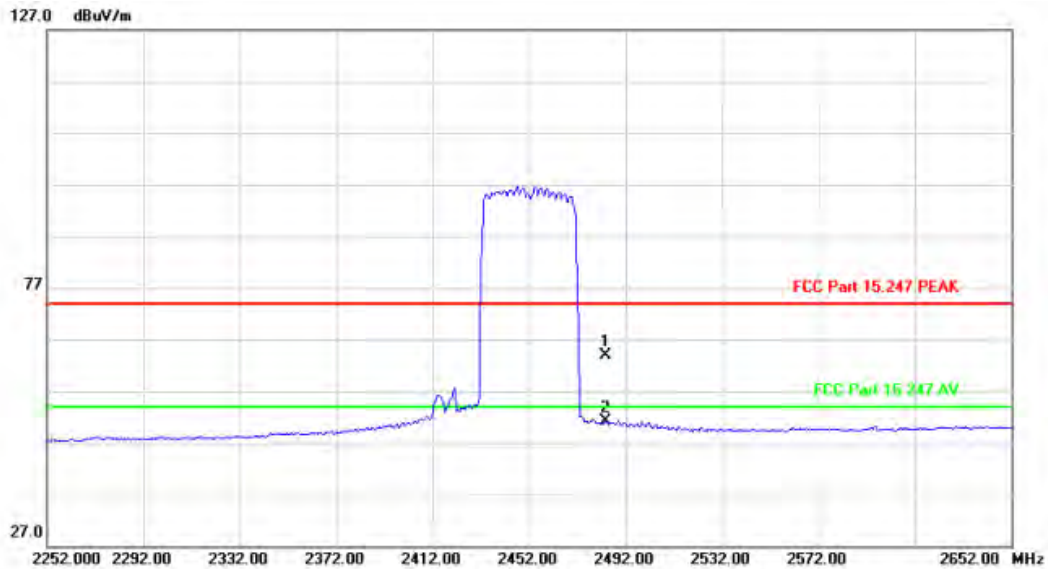


Above 1G (1GHz~18GHz)

Test mode: 11AX40MIMO

Test Channel:9

VERTICAL

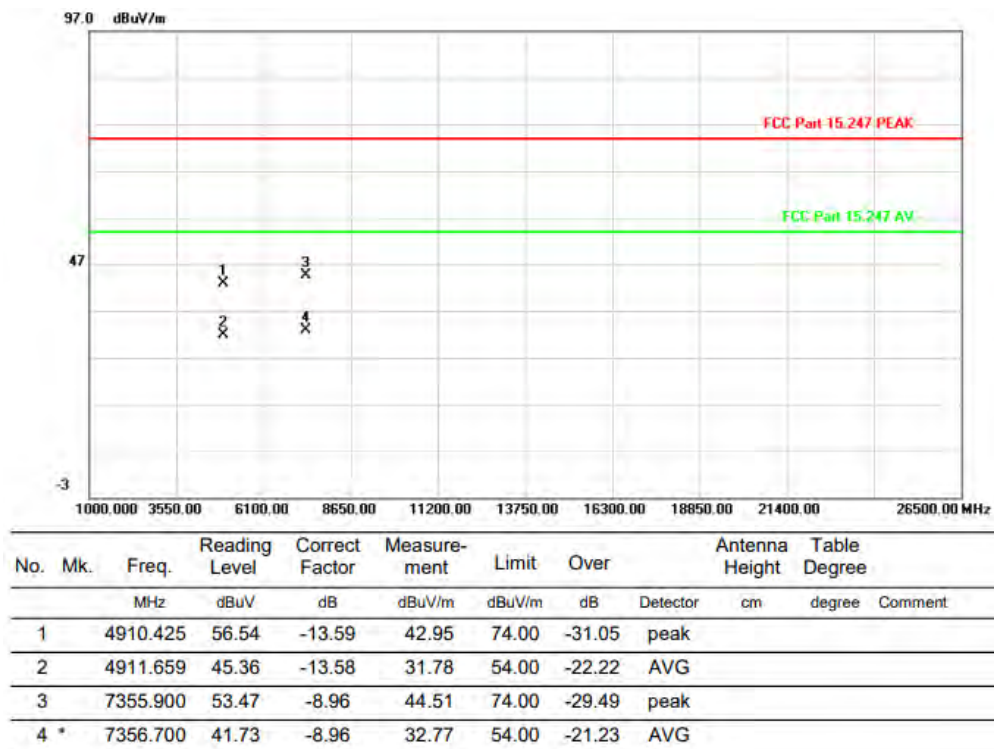
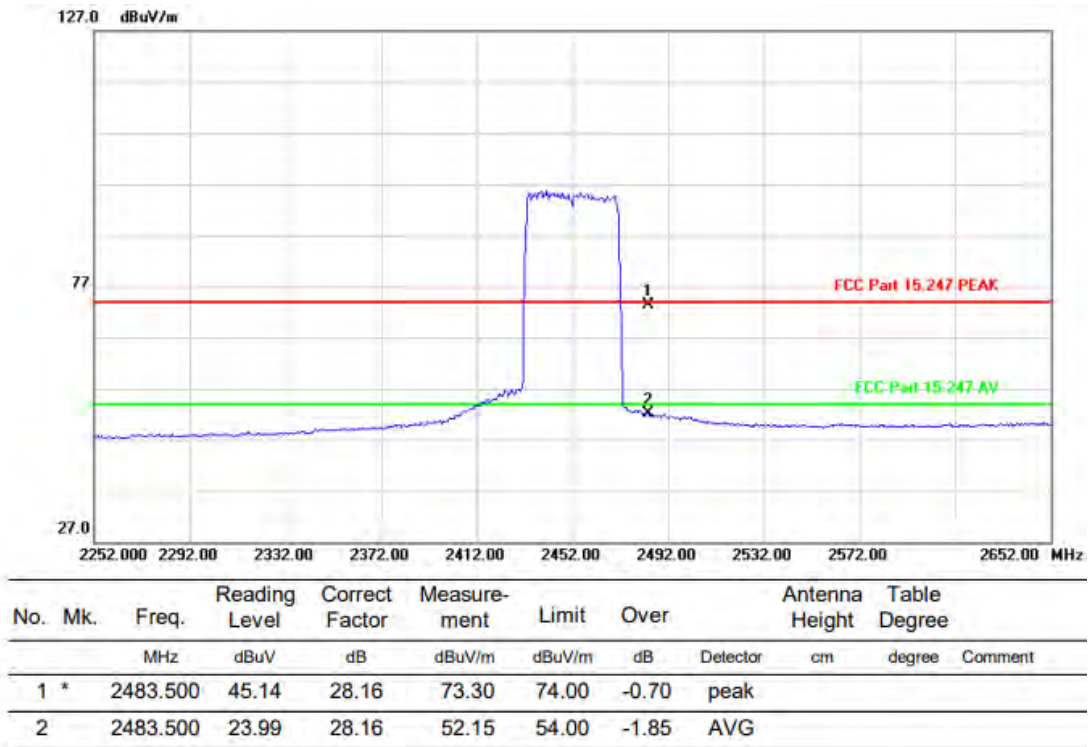


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	35.69	28.16	63.85	74.00	-10.15	peak		
2 *		2483.500	22.91	28.16	51.07	54.00	-2.93	AVG		



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		4902.825	56.74	-13.63	43.11	74.00	-30.89	peak		
2		4905.859	44.16	-13.61	30.55	54.00	-23.45	AVG		
3 *		7352.975	41.74	-8.97	32.77	54.00	-21.23	AVG		
4		7360.975	53.00	-8.95	44.05	74.00	-29.95	peak		

HORIZONTAL



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

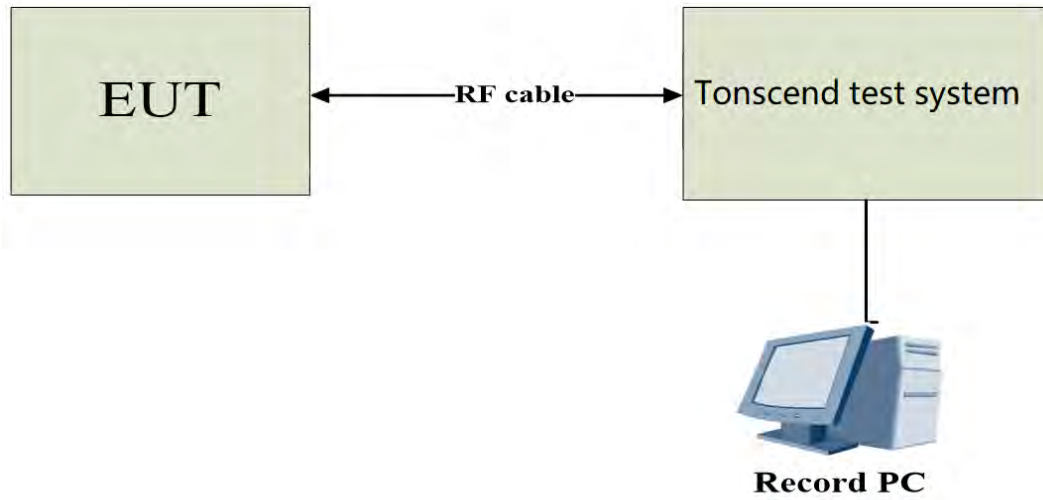
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

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	11.15	-39.34	≤ -18.85	PASS
	Ant4	Low	2412	11.60	-36.94	≤ -18.4	PASS
	Ant1	High	2462	12.08	-38.17	≤ -17.92	PASS
	Ant4	High	2462	12.10	-38.97	≤ -17.9	PASS
11G-MIMO	Ant1	Low	2412	3.44	-36.66	≤ -26.56	PASS
	Ant4	Low	2412	4.35	-38.06	≤ -25.65	PASS
	Ant1	High	2462	4.03	-37.64	≤ -25.97	PASS
	Ant4	High	2462	4.31	-39.01	≤ -25.69	PASS
11N20MIMO	Ant1	Low	2412	3.85	-36.69	≤ -26.15	PASS
	Ant4	Low	2412	4.48	-36.34	≤ -25.52	PASS
	Ant1	High	2462	3.81	-36.71	≤ -26.19	PASS
	Ant4	High	2462	4.57	-38.73	≤ -25.44	PASS
11N40MIMO	Ant1	Low	2422	0.53	-37.44	≤ -29.47	PASS
	Ant4	Low	2422	0.97	-38.53	≤ -29.03	PASS
	Ant1	High	2452	1.61	-38.05	≤ -28.39	PASS
	Ant4	High	2452	2.12	-37.47	≤ -27.88	PASS
11AX20MIMO	Ant1	Low	2412	1.65	-37.89	≤ -28.35	PASS
	Ant4	Low	2412	2.25	-38.42	≤ -27.75	PASS
	Ant1	High	2462	1.96	-37.31	≤ -28.04	PASS
	Ant4	High	2462	2.08	-38.62	≤ -27.92	PASS
11AX40MIMO	Ant1	Low	2422	0.61	-37.56	≤ -29.39	PASS
	Ant4	Low	2422	0.94	-38.14	≤ -29.06	PASS
	Ant1	High	2452	1.09	-37.25	≤ -28.91	PASS
	Ant4	High	2452	1.76	-37.12	≤ -28.25	PASS

Test Graphs

11B-MIMO_Ant1_Low_2412



11B-MIMO_Ant4_Low_2412



11B-MIMO_Ant1_High_2462



11B-MIMO_Ant4_High_2462



11G-MIMO_Ant1_Low_2412



11G-MIMO_Ant4_Low_2412



11G-MIMO_Ant1_High_2462



11G-MIMO_Ant4_High_2462



11N20MIMO_Ant1_Low_2412



11N20MIMO_Ant4_Low_2412



11N20MIMO_Ant1_High_2462



11N20MIMO_Ant4_High_2462



11N40MIMO_Ant1_Low_2422



11N40MIMO_Ant4_Low_2422



11N40MIMO_Ant1_High_2452



11N40MIMO_Ant4_High_2452



11AX20MIMO_Ant1_Low_2412



11AX20MIMO_Ant4_Low_2412



11AX20MIMO_Ant1_High_2462



11AX20MIMO_Ant4_High_2462



11AX40MIMO_Ant1_Low_2422



11AX40MIMO_Ant4_Low_2422



11AX40MIMO_Ant1_High_2452



11AX40MIMO_Ant4_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	11.21	11.21	---	PASS
			30~1000	11.21	-47.23	≤-18.79	PASS
			1000~6000	11.21	-47.12	≤-18.79	PASS
			6000~26500	11.21	-37.13	≤-18.79	PASS
	Ant4	2412	Reference	11.90	11.90	---	PASS
			30~1000	11.90	-51.62	≤-18.1	PASS
			1000~6000	11.90	-46.74	≤-18.1	PASS
			6000~26500	11.90	-36.88	≤-18.1	PASS
	Ant1	2437	Reference	14.17	14.17	---	PASS
			30~1000	14.17	-51.66	≤-15.83	PASS
			1000~6000	14.17	-47.09	≤-15.83	PASS
			6000~26500	14.17	-36.2	≤-15.83	PASS
	Ant4	2437	Reference	14.37	14.37	---	PASS
			30~1000	14.37	-41.52	≤-15.63	PASS
			1000~6000	14.37	-46.9	≤-15.63	PASS
			6000~26500	14.37	-37.36	≤-15.63	PASS
	Ant1	2462	Reference	12.22	12.22	---	PASS
			30~1000	12.22	-50.75	≤-17.78	PASS
			1000~6000	12.22	-47.03	≤-17.78	PASS
			6000~26500	12.22	-36.11	≤-17.78	PASS
	Ant4	2462	Reference	12.11	12.11	---	PASS
			30~1000	12.11	-51.79	≤-17.89	PASS
			1000~6000	12.11	-47.37	≤-17.89	PASS
			6000~26500	12.11	-37.37	≤-17.89	PASS
11G-MIMO	Ant1	2412	Reference	3.37	3.37	---	PASS
			30~1000	3.37	-51.95	≤-26.63	PASS
			1000~6000	3.37	-47.34	≤-26.63	PASS
			6000~26500	3.37	-1000	≤-26.63	PASS
	Ant4	2412	Reference	4.20	4.20	---	PASS
			30~1000	4.20	-51.79	≤-25.8	PASS
			1000~6000	4.20	-46.65	≤-25.8	PASS
			6000~26500	4.20	-37.43	≤-25.8	PASS
	Ant1	2437	Reference	7.89	7.89	---	PASS
			30~1000	7.89	-51.34	≤-22.11	PASS
			1000~6000	7.89	-46.95	≤-22.11	PASS
			6000~26500	7.89	-37.65	≤-22.11	PASS

	Ant4	2437	Reference	8.24	8.24	---	PASS
			30~1000	8.24	-49.83	≤ -21.76	PASS
			1000~6000	8.24	-46.65	≤ -21.76	PASS
			6000~26500	8.24	-36.69	≤ -21.76	PASS
	Ant1	2462	Reference	4.31	4.31	---	PASS
			30~1000	4.31	-51.44	≤ -25.69	PASS
			1000~6000	4.31	-46.32	≤ -25.69	PASS
			6000~26500	4.31	-37.14	≤ -25.69	PASS
	Ant4	2462	Reference	4.72	4.72	---	PASS
			30~1000	4.72	-47.7	≤ -25.28	PASS
			1000~6000	4.72	-46.9	≤ -25.28	PASS
			6000~26500	4.72	-36.59	≤ -25.28	PASS
11N20MIMO	Ant1	2412	Reference	3.81	3.81	---	PASS
			30~1000	3.81	-52.08	≤ -26.19	PASS
			1000~6000	3.81	-47.16	≤ -26.19	PASS
			6000~26500	3.81	-35.53	≤ -26.19	PASS
	Ant4	2412	Reference	4.38	4.38	---	PASS
			30~1000	4.38	-49.56	≤ -25.62	PASS
			1000~6000	4.38	-46.12	≤ -25.62	PASS
			6000~26500	4.38	-36.82	≤ -25.62	PASS
	Ant1	2437	Reference	7.71	7.71	---	PASS
			30~1000	7.71	-51.54	≤ -22.29	PASS
			1000~6000	7.71	-46.84	≤ -22.29	PASS
			6000~26500	7.71	-36.85	≤ -22.29	PASS
	Ant4	2437	Reference	8.66	8.66	---	PASS
			30~1000	8.66	-50.91	≤ -21.34	PASS
			1000~6000	8.66	-46.72	≤ -21.34	PASS
			6000~26500	8.66	-37.34	≤ -21.34	PASS
	Ant1	2462	Reference	4.08	4.08	---	PASS
			30~1000	4.08	-51.93	≤ -25.92	PASS
			1000~6000	4.08	-46.78	≤ -25.92	PASS
			6000~26500	4.08	-36.99	≤ -25.92	PASS
	Ant4	2462	Reference	4.62	4.62	---	PASS
			30~1000	4.62	-51.72	≤ -25.38	PASS
			1000~6000	4.62	-46.94	≤ -25.38	PASS
			6000~26500	4.62	-36.7	≤ -25.38	PASS
11N40MIMO	Ant1	2422	Reference	0.58	0.58	---	PASS
			30~1000	0.58	-51.76	≤ -29.42	PASS
			1000~6000	0.58	-46.8	≤ -29.42	PASS
			6000~26500	0.58	-36.58	≤ -29.42	PASS
	Ant4	2422	Reference	1.02	1.02	---	PASS

			30~1000	1.02	-52.11	≤ -28.98	PASS
			1000~6000	1.02	-46.78	≤ -28.98	PASS
			6000~26500	1.02	-37.49	≤ -28.98	PASS
	Ant1	2437	Reference	2.44	2.44	---	PASS
			30~1000	2.44	-51.79	≤ -27.56	PASS
			1000~6000	2.44	-46.69	≤ -27.56	PASS
			6000~26500	2.44	-37.04	≤ -27.56	PASS
	Ant4	2437	Reference	2.75	2.75	---	PASS
			30~1000	2.75	-51.76	≤ -27.25	PASS
			1000~6000	2.75	-47.1	≤ -27.25	PASS
			6000~26500	2.75	-37.54	≤ -27.25	PASS
	Ant1	2452	Reference	1.58	1.58	---	PASS
			30~1000	1.58	-52.13	≤ -28.42	PASS
			1000~6000	1.58	-46.58	≤ -28.42	PASS
			6000~26500	1.58	-36.76	≤ -28.42	PASS
	Ant4	2452	Reference	2.09	2.09	---	PASS
			30~1000	2.09	-51.6	≤ -27.91	PASS
			1000~6000	2.09	-47.21	≤ -27.91	PASS
			6000~26500	2.09	-35.11	≤ -27.91	PASS
11AX20MIMO	Ant1	2412	Reference	1.65	1.65	---	PASS
			30~1000	1.65	-50.48	≤ -28.35	PASS
			1000~6000	1.65	-46.52	≤ -28.35	PASS
			6000~26500	1.65	-37.3	≤ -28.35	PASS
	Ant4	2412	Reference	2.22	2.22	---	PASS
			30~1000	2.22	-49.94	≤ -27.78	PASS
			1000~6000	2.22	-47.03	≤ -27.78	PASS
			6000~26500	2.22	-36.95	≤ -27.78	PASS
	Ant1	2437	Reference	7.49	7.49	---	PASS
			30~1000	7.49	-51.78	≤ -22.51	PASS
			1000~6000	7.49	-45.76	≤ -22.51	PASS
			6000~26500	7.49	-37.17	≤ -22.51	PASS
	Ant4	2437	Reference	8.03	8.03	---	PASS
			30~1000	8.03	-47.51	≤ -21.97	PASS
			1000~6000	8.03	-47.02	≤ -21.97	PASS
			6000~26500	8.03	-37.38	≤ -21.97	PASS
	Ant1	2462	Reference	1.96	1.96	---	PASS
			30~1000	1.96	-51.46	≤ -28.04	PASS
			1000~6000	1.96	-47.09	≤ -28.04	PASS
			6000~26500	1.96	-37.16	≤ -28.04	PASS
	Ant4	2462	Reference	2.26	2.26	---	PASS
			30~1000	2.26	-51.48	≤ -27.74	PASS

			1000~6000	2.26	-46.11	≤ -27.74	PASS
			6000~26500	2.26	-36.99	≤ -27.74	PASS
11AX40MIMO	Ant1	2422	Reference	0.67	0.67	---	PASS
			30~1000	0.67	-51.7	≤ -29.33	PASS
			1000~6000	0.67	-47.24	≤ -29.33	PASS
			6000~26500	0.67	-36.98	≤ -29.33	PASS
	Ant4	2422	Reference	1.02	1.02	---	PASS
			30~1000	1.02	-43.51	≤ -28.98	PASS
			1000~6000	1.02	-46.9	≤ -28.98	PASS
			6000~26500	1.02	-36.95	≤ -28.98	PASS
	Ant1	2437	Reference	2.08	2.08	---	PASS
			30~1000	2.08	-49.7	≤ -27.92	PASS
			1000~6000	2.08	-46.61	≤ -27.92	PASS
			6000~26500	2.08	-37.23	≤ -27.92	PASS
	Ant4	2437	Reference	2.80	2.80	---	PASS
			30~1000	2.80	-51.6	≤ -27.2	PASS
			1000~6000	2.80	-46.96	≤ -27.2	PASS
			6000~26500	2.80	-36.33	≤ -27.2	PASS
	Ant1	2452	Reference	1.12	1.12	---	PASS
			30~1000	1.12	-51.89	≤ -28.88	PASS
			1000~6000	1.12	-46.65	≤ -28.88	PASS
			6000~26500	1.12	-36.86	≤ -28.88	PASS
	Ant4	2452	Reference	1.79	1.79	---	PASS
			30~1000	1.79	-51.17	≤ -28.21	PASS
			1000~6000	1.79	-45.99	≤ -28.21	PASS
			6000~26500	1.79	-37.44	≤ -28.21	PASS

Test Graphs

11B-MIMO_Ant1_2412_0~Reference



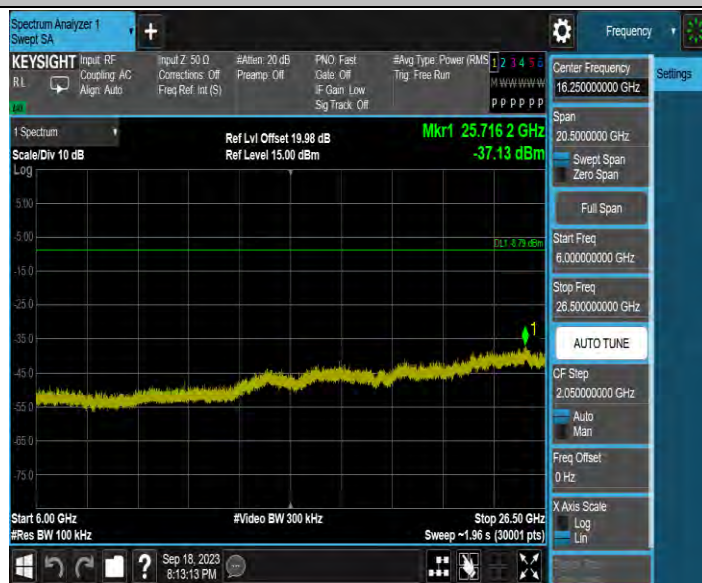
11B-MIMO_Ant1_2412_30~1000



11B-MIMO_Ant1_2412_1000~6000



11B-MIMO_Ant1_2412_6000~26500



11B-MIMO_Ant4_2412_0~Reference



11B-MIMO_Ant4_2412_30~1000



11B-MIMO_Ant4_2412_1000~6000



11B-MIMO_Ant4_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_Ant4_2437_0~Reference