

FCC Test Report

(Class II Permissive Change)

Product Name	Intel® Wi-Fi 6 AX200
Model No	AX200D2WL
FCC ID.	CJ6AX200D2WLWB

Applicant	Dynabook Inc.
Address	6-15, Toyosu 5-chome, Koto-ku, Tokyo, 135-8505, Japan

Date of Receipt	Jan. 01, 2022
Issue Date	May 03, 2022
Report No.	2210170R-RFUSWL2V01-B
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

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Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report

Issue Date: May 03, 2022

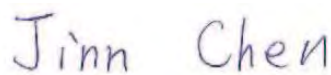
Report No.: 2210170R-RFUSWL2V01-B



Product Name	Intel® Wi-Fi 6 AX200
Applicant	Dynabook Inc.
Address	6-15, Toyosu 5-chome, Koto-ku, Tokyo, 135-8505, Japan
Manufacturer	Intel Mobile Communications
Model No.	AX200D2WL
FCC ID.	CJ6AX200D2WLWB
EUT Rated Voltage	AC 100-240V, 50-60Hz
EUT Test Voltage	AC 120V / 60Hz
Trade Name	Intel
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.4: 2014, ANSI C63.10: 2013
Test Result	Complied

Documented By

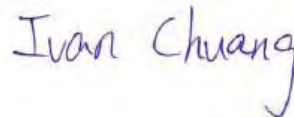
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(Supervisor / Jinn Chen)

Tested By

:



(Senior Engineer / Ivan Chuang)

Approved By

:



(Senior Engineer / Alan Chen)

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Revision History

Report No.	Version	Description	Issued Date
2210170R-RFUSWL2V01-B	V1.0	Initial issue of report.	May 03, 2022

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Wi-Fi 6 AX200
Trade Name	Intel
Model No.	AX200D2WL
FCC ID.	CJ6AX200D2WLWB
Frequency Range	802.11b/g/n/ax-20: 2412-2472MHz, 802.11n/ax-40: 2422-2462MHz
Number of Channels	802.11b/g/n/ax-20: 13CH, 802.11n/ax-40: 9CH
Data Rate	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 300Mbps, 802.11ax-20MHz : 17.2-286.8Mbps, 802.11ax-40MHz : 34.4-573.5Mbps
Channel Separation	802.11b/g/n/ax: 5 MHz
Type of Modulation	802.11b:DSSS, DBPSK, DQPSK, CCK 802.11g/n/ax: OFDM, OFDMA, BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Antenna Type	Folded Dipole Antenna
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
Power Adapter #1	MFR: Chicony, M/N: PA5177E-1AC3 Input: AC 100-240V~1.3A 50-60Hz Output: 19V $\overline{=}$ 2.37A Cable out: Non-Shielded, 1.8m. Power cord: Non-Shielded, 1.8m.
Power Adapter #2	MFR: Chicony, M/N: PA5177U-1ACA Input: AC 100-240V~1.3A 50-60Hz Output: 19V $\overline{=}$ 2.37A Cable out: Non-Shielded, 1.8m. Power cord: Non-Shielded, 1.8m.
Power Adapter #3	MFR: Lite-On, M/N: PA5177E-1AC3 Input: AC 100-240V~1.3A 50-60Hz Output: 19V $\overline{=}$ 2.37A Cable out: Non-Shielded, 1.8m. Power cord: Non-Shielded, 1.8m.
Power Adapter #4	MFR: Lite-On, M/N: PA5177U-1ACA Input: AC 100-240V~1.3A 50-60Hz Output: 19V $\overline{=}$ 2.37A Cable out: Non-Shielded, 1.8m. Power cord: Non-Shielded, 1.8m.

Antenna List

No.	Manufacturer	Part No. (Vendor)	Antenna Type	Peak Gain
1	SLEing	SLEingB219790388 (Main)	Folded Dipole	0.84dBi in 2.4 GHz
		SLEingB219790491 (Aux)	Folded Dipole	1.64dBi in 2.4 GHz

Note: The antenna of EUT is conforming to FCC 15.203.

802.11b/g/n/ax-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz	Channel 12:	2467 MHz
Channel 13:	2472 MHz						

802.11n/ax-40MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz	Channel 10:	2457 MHz
Channel 11:	2462 MHz						

Note:

1. The EUT is an Intel® Wi-Fi 6 AX200 with built-in WLAN and Bluetooth transceiver, this report for WLAN 2.4GHz.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report.
4. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n/ax transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
5. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report.
6. This is to request a Class II permissive change for FCC ID: CJ6AX200D2WLWB, originally granted on 03/28/2022.

The major change filed under this application is:

Change #1: Additional Chassis added, Product name: Notebook PC, Model number: SATELLITE C50D-B, SATELLITE PRO C50D-B

Change #2: Reduce the Output Power through firmware, and SAR measurement were evaluated. (Only reduce Wi-Fi Output Power, Bluetooth Output Power haven't changes).

Change #3: Addition a Folded Dipole Antenna, the antenna type is different with the original application.

Test Mode (2.4GHz)	Mode 1 SISO A: Transmit (802.11b_1Mbps) Mode 2 SISO A: Transmit (802.11g_6Mbps) Mode 3 SISO A: Transmit (802.11n-20BW_7.2Mbps) Mode 4 SISO A: Transmit (802.11n-40BW_15Mbps) Mode 5 SISO A: Transmit (802.11ax-20BW_8.6Mbps) Mode 6 SISO A: Transmit (802.11ax-40BW_17.2Mbps) Mode 7 SISO B: Transmit (802.11b_1Mbps) Mode 8 SISO B: Transmit (802.11g_6Mbps) Mode 9 SISO B: Transmit (802.11n-20BW_7.2Mbps) Mode 10 SISO B: Transmit (802.11n-40BW_15Mbps) Mode 11 SISO B: Transmit (802.11ax-20BW_8.6Mbps) Mode 12 SISO B: Transmit (802.11ax-40BW_17.2Mbps) Mode 13 MIMO: Transmit (802.11n-20BW_14.4Mbps) Mode 14 MIMO: Transmit (802.11n-40BW_30Mbps) Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps)
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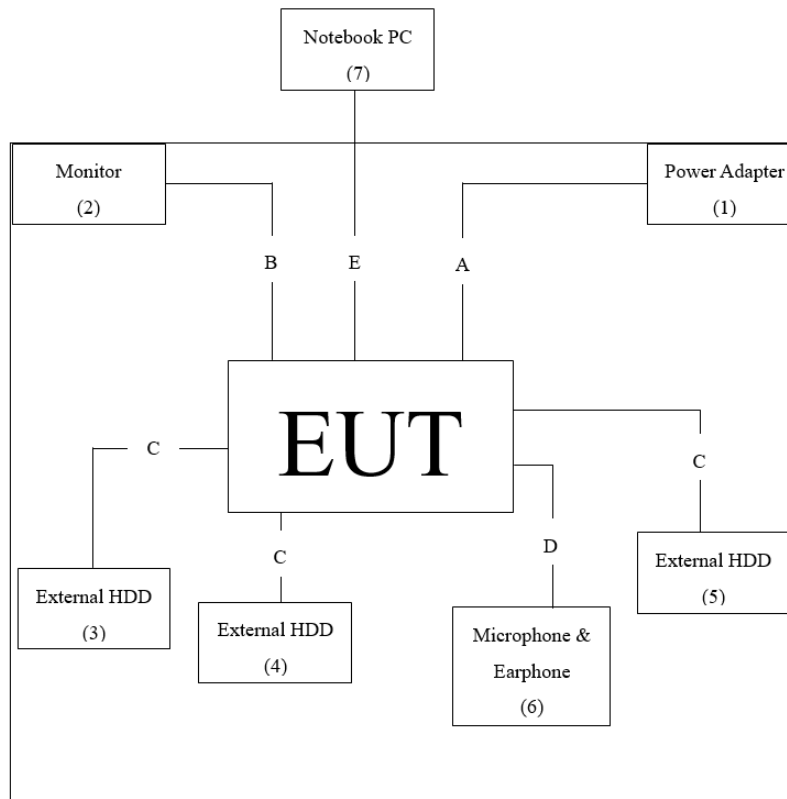
1.2. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord
1 Power Adapter	Chicony	PA-5177E-1AC3	N/A	Non-shielded, 1.8m
2 Monitor	Lenovo	A21215FS0	V5DMD987	Non-shielded, 1.8m
3 External HDD	Transcend	TS1TSJ25MC	F30467-0011	N/A
4 External HDD	Transcend	TS1TSJ25H3B	F21786-0005	N/A
5 External HDD	Transcend	TS1TSJ25H3B	F21786-0103	N/A
6 Microphone & Earphone	Verbatim	C09024VB	N/A	N/A
7 Notebook PC	DELL	Inspiron 15 3000	GT5JPJ2	N/A

Signal Cable Type	Signal cable Description
A Power Cable	Non-shielded, 1.8m
B HDMI Cable	Shielded, 1.8m
C USB Cable	Shielded, 1.5m, three PCS.
D Microphone & Earphone Cable	Non-shielded, 1.2m
E LAN Cable	Non-shielded, 3m

1.3. Configuration of Tested System



1.4. EUT Exercise Software

1. Setup the EUT as shown in Section 1.3.
2. Execute software “DRTU V22.21050.0.0-OEM.DRTU.12004” on the EUT.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous Transmit.
5. Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Radiated Emission	Temperature (°C)	10~40 °C	23.8 °C
	Humidity (%RH)	10~90 %	62.4 %
Conductive	Temperature (°C)	10~40 °C	22 °C
	Humidity (%RH)	10~90 %	68.4 %

USA : **FCC Registration Number: TW0033**

Canada : **CAB Identifier Number: TW0323 / Company Number: 26930**

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No. 5-22, Ruishukeng Linkou District, New Taipei City,
24451, Taiwan

Performed Location : No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City
333411, Taiwan, R.O.C.

Phone number : +886-3-275-7255
Fax number : +866-3-327-8031
Email address : info.tw@dekra.com
Website : <http://www.dekra.com.tw>

1.6. List of Test Item and Equipment

For Conducted measurements /SH2

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
X	Spectrum Analyzer	R&S	FSV30	103464	2022/03/25	2023/03/24
X	Peak Power Analyzer	KEYSIGHT	8900B	MY51000539	2021/06/07	2022/06/06
X	Power Sensor	KEYSIGHT	N1923A	MY59240002	2021/05/17	2022/05/16
X	Power Sensor	KEYSIGHT	N1923A	MY59240003	2021/05/17	2022/05/16

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Conduction Test System V9.0.5.

For Radiated measurements /966-3

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
	Loop Antenna	AMETEK	HLA6121	56736	2021/04/14	2022/04/13
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-675	2021/08/11	2022/08/10
X	Horn Antenna	ETS-Lindgren	3117	00227700	2021/10/12	2022/10/11
	Horn Antenna	Com-Power	AH-840	101100	2021/10/04	2022/10/03
X	Pre-Amplifier	SGH	PRAMP118	20200202	2021/03/25	2022/03/24
X	Pre-Amplifier	EMCI	EMC001330	980302	2021/07/26	2022/07/25
	Pre-Amplifier	SGH	EM330	60736	2021.08.11	2022.08.10
X	Pre-Amplifier	EMCI	EMC051835SE	980313	2021/11/24	2022/11/23
	Pre-Amplifier	EMCI	EMC05820SE	980309	2021/09/27	2022/09/26
	Pre-Amplifier	EMCI	EMC05820SE	980310	2021/07/07	2022/07/06
X	Pre-Amplifier	EMCI	EMC184045SE	980369	2021/04/27	2022/04/26
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314	2021/04/27	2022/04/26
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242	2021/04/27	2022/04/26
X	Filter	MICRO TRONICS	BRM50702	G251	2021/09/16	2022/09/15
	Filter	MICRO TRONICS	BRM50716	G188	2021/09/16	2022/09/15
X	EMI Test Receiver	R&S	ESR3	102793	2021/12/15	2022/12/14
X	Spectrum Analyzer	R&S	FSV3044	101114	2022/02/11	2023/02/10
X	Coaxial Cable	SGH	HA800	GD20110222-3	2022/01/05	2023/01/04
	Coaxial Cable	SGH	SGH18	20110223-1	2022/01/05	2023/01/04
	Coaxial Cable	SGH	SGH18	2021005-3	2022/01/05	2023/01/04
	Coaxial Cable	SGH	SGH18	2021001-18	2022/01/05	2023/01/04

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : AUDIX e3 V9.

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.

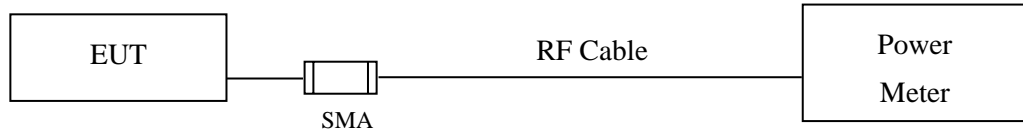
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	Uncertainty	
Peak Power Output	Power Meter ± 0.91 dB	
Radiated Emission	Under 1GHz ± 4.06 dB	Above 1GHz ± 3.73 dB
Duty Cycle	± 2.31 ms	

2. Peak Power Output

2.1. Test Setup



2.2. Limits

The maximum peak power shall be less 1 Watt.

2.3. Test Procedure

The EUT was tested according to C63.10:2013 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using C63.10:2013 Section 11.9.1.3 PKPM1 Peak power meter method. The maximum average conducted output power using C63.10:2013 Section 11.9.2.3 Measurement using a power meter (PM). (Measurement using a gated RF average-reading power meter).

2.4. Test Result of Peak Power Output

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11			
		Measurement Level (dBm)						
01	2412	16.76	--	--	--	18.89	<30dBm	Pass
07	2442	16.89	16.86	16.79	16.71	19.02	<30dBm	Pass
11	2462	16.81	--	--	--	18.97	<30dBm	Pass
12	2467	16.77	--	--	--	18.93	<30dBm	Pass
13	2472	14.78	--	--	--	16.77	<30dBm	Pass

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 2 SISO A: Transmit (802.11g_6Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	16.85	--	--	--	--	--	--	--	21.78	<30dBm	Pass
07	2442	16.62	16.53	16.46	16.38	16.33	16.24	16.2	16.15	21.41	<30dBm	Pass
11	2462	14.78	--	--	--	--	--	--	--	19.46	<30dBm	Pass
12	2467	13.27	--	--	--	--	--	--	--	17.87	<30dBm	Pass
13	2472	11.21	--	--	--	--	--	--	--	19.51	<30dBm	Pass

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 3 SISO A: Transmit (802.11n-20BW_7.2Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
		Measurement Level (dBm)										
01	2412	16.77	--	--	--	--	--	--	--	21.65	<30dBm	Pass
07	2442	16.9	16.83	16.79	16.71	16.66	16.63	16.56	16.48	21.67	<30dBm	Pass
11	2462	14.72	--	--	--	--	--	--	--	19.55	<30dBm	Pass
12	2467	13.24	--	--	--	--	--	--	--	18.13	<30dBm	Pass
13	2472	11.82	--	--	--	--	--	--	--	20.13	<30dBm	Pass

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 4 SISO A: Transmit (802.11n-40BW_15Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
		Measurement Level (dBm)										
03	2422	16.83	--	--	--	--	--	--	--	22.56	<30dBm	Pass
07	2442	16.91	16.87	16.83	16.77	16.68	16.63	16.57	16.49	22.43	<30dBm	Pass
09	2452	13.79	--	--	--	--	--	--	--	19.43	<30dBm	Pass
10	2457	11.24	--	--	--	--	--	--	--	18.34	<30dBm	Pass
11	2462	11.83	--	--	--	--	--	--	--	20.19	<30dBm	Pass

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 5 SISO A: Transmit (802.11ax-20BW_8.6Mbps)

RU config: Full

Channel No	Frequency (MHz)	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
01	2412	16.61	--	--	--	--	--	--	--	--	--	--	--	21.66	<30dBm	Pass		
07	2442	16.68	16.62	16.52	16.47	16.43	16.36	16.33	16.23	16.19	16.16	16.06	15.99	21.73	<30dBm	Pass		
11	2462	15.27	--	--	--	--	--	--	--	--	--	--	--	20.34	<30dBm	Pass		
12	2467	13.31	--	--	--	--	--	--	--	--	--	--	--	18.51	<30dBm	Pass		
13	2472	10.82	--	--	--	--	--	--	--	--	--	--	--	19.53	<30dBm	Pass		

RU config: Other

Frequency (MHz)	RU setting	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
2412	26/0	16.59	--	--	--	--	--	--	--	--	--	--	--	21.44	<30dBm	Pass		
	52/37	16.55	16.52	16.46	16.40	16.36	16.32	16.26	16.20	16.14	16.08	16.03	15.97	21.62	<30dBm	Pass		
	106/53	16.57	--	--	--	--	--	--	--	--	--	--	--	21.51	<30dBm	Pass		
2472	26/8	4.31	--	--	--	--	--	--	--	--	--	--	--	8.41	<30dBm	Pass		
	52/40	3.55	3.48	3.45	3.40	3.36	3.30	3.27	3.23	3.17	3.13	3.07	3.02	7.44	<30dBm	Pass		
	106/54	5.18	--	--	--	--	--	--	--	--	--	--	--	9.14	<30dBm	Pass		

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 6 SISO A: Transmit (802.11ax-40BW_17.2Mbps)

RU config: Full

Channel No	Frequency (MHz)	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
03	2422	16.69	--	--	--	--	--	--	--	--	--	--	--	22.44	<30dBm	Pass		
07	2442	16.78	16.74	16.69	16.66	16.61	16.56	16.51	16.46	16.36	16.33	16.24	16.2	22.32	<30dBm	Pass		
09	2452	13.83	--	--	--	--	--	--	--	--	--	--	--	19.43	<30dBm	Pass		
10	2457	11.79	--	--	--	--	--	--	--	--	--	--	--	19.13	<30dBm	Pass		
11	2462	11.21	--	--	--	--	--	--	--	--	--	--	--	19.54	<30dBm	Pass		

RU config: Other

Frequency (MHz)	RU setting	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
2422	242/61	16.57	16.53	16.48	16.43	16.39	16.32	16.28	16.22	16.17	16.11	16.06	16.00	22.36	<30dBm	Pass		
2462	242/62	8.67	8.63	8.60	8.55	8.50	8.43	8.38	8.32	8.27	8.20	8.14	8.09	16.85	<30dBm	Pass		

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 7 SISO B: Transmit (802.11b_1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	16.78	--	--	--	18.89	<30dBm	Pass
07	2442	16.77	15.31	15.2	15.11	18.92	<30dBm	Pass
11	2462	16.66	--	--	--	18.84	<30dBm	Pass
12	2467	16.65	--	--	--	18.83	<30dBm	Pass
13	2472	15.39	--	--	--	17.44	<30dBm	Pass

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 8 SISO B: Transmit (802.11g_6Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	16.79	--	--	--	--	--	--	--	21.58	<30dBm	Pass
07	2442	16.8	16.29	16.03	15.89	15.61	15.48	15.3	15.19	21.51	<30dBm	Pass
11	2462	14.69	--	--	--	--	--	--	--	19.25	<30dBm	Pass
12	2467	13.36	--	--	--	--	--	--	--	18.27	<30dBm	Pass
13	2472	11.21	--	--	--	--	--	--	--	20.11	<30dBm	Pass

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 9 SISO B: Transmit (802.11n-20BW_7.2Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
		Measurement Level (dBm)										
01	2412	16.68	--	--	--	--	--	--	--	21.44	<30dBm	Pass
07	2442	16.97	13.29	13.15	13.15	12.98	12.85	12.8	12.79	21.78	<30dBm	Pass
11	2462	15.29	--	--	--	--	--	--	--	19.95	<30dBm	Pass
12	2467	13.25	--	--	--	--	--	--	--	18.26	<30dBm	Pass
13	2472	11.81	--	--	--	--	--	--	--	16.57	<30dBm	Pass

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 10 SISO B: Transmit (802.11n-40BW_15Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
		Measurement Level (dBm)										
03	2422	16.9	--	--	--	--	--	--	--	22.55	<30dBm	Pass
07	2442	16.81	13.29	13.15	13.15	12.98	12.85	12.8	12.79	22.37	<30dBm	Pass
09	2452	14.28	--	--	--	--	--	--	--	20.11	<30dBm	Pass
10	2457	11.77	--	--	--	--	--	--	--	19.64	<30dBm	Pass
11	2462	11.74	--	--	--	--	--	--	--	20.58	<30dBm	Pass

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 11 SISO B: Transmit (802.11ax-20BW_8.6Mbps)

RU config: Full

Channel No	Frequency (MHz)	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
01	2412	16.81	--	--	--	--	--	--	--	--	--	--	--	21.68	<30dBm	Pass		
07	2442	16.83	16.76	16.66	16.6	16.53	16.43	16.34	16.3	16.2	16.15	16.09	15.99	21.62	<30dBm	Pass		
11	2462	15.27	--	--	--	--	--	--	--	--	--	--	--	20.27	<30dBm	Pass		
12	2467	13.76	--	--	--	--	--	--	--	--	--	--	--	18.92	<30dBm	Pass		
13	2472	10.88	--	--	--	--	--	--	--	--	--	--	--	19.87	<30dBm	Pass		

RU config: Other

Frequency (MHz)	RU setting	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
2412	26/0	16.75	--	--	--	--	--	--	--	--	--	--	--	21.55	<30dBm	Pass		
	52/37	16.66	16.63	16.59	16.53	16.47	16.44	16.39	16.34	16.29	16.25	16.19	16.12	21.49	<30dBm	Pass		
	106/53	16.71	--	--	--	--	--	--	--	--	--	--	--	21.47	<30dBm	Pass		
2472	26/8	3.36	--	--	--	--	--	--	--	--	--	--	--	8.74	<30dBm	Pass		
	52/40	4.01	3.98	3.93	3.88	3.83	3.78	3.71	3.66	3.61	3.56	3.52	3.48	9.02	<30dBm	Pass		
	106/54	5.44	--	--	--	--	--	--	--	--	--	--	--	9.57	<30dBm	Pass		

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 12 SISO B: Transmit (802.11ax-40BW_17.2Mbps)

RU config: Full

Channel No	Frequency (MHz)	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
03	2422	16.72	--	--	--	--	--	--	--	--	--	--	--	22.44	<30dBm	Pass		
07	2442	16.85	16.77	16.73	16.63	16.54	16.45	16.36	16.29	16.24	16.16	16.06	15.96	22.48	<30dBm	Pass		
09	2452	13.77	--	--	--	--	--	--	--	--	--	--	--	19.34	<30dBm	Pass		
10	2457	13.38	--	--	--	--	--	--	--	--	--	--	--	20.62	<30dBm	Pass		
11	2462	11.37	--	--	--	--	--	--	--	--	--	--	--	20.97	<30dBm	Pass		

RU config: Other

Frequency (MHz)	RU setting	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
2422	242/61	16.64	16.60	16.55	16.52	16.45	16.40	16.33	16.29	16.24	16.19	16.16	16.12	22.74	<30dBm	Pass		
2462	242/62	8.22	8.17	8.11	8.06	8.02	7.98	7.92	7.85	7.79	7.76	7.72	7.68	14.87	<30dBm	Pass		

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 13 MIMO: Transmit (802.11n-20BW_14.4Mbps)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate									Peak Power	Required Limit	Result
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8			
		Measurement Level (dBm)											
01	2412	16.71	--	--	--	--	--	--	--	21.55	<30dBm	Pass	
07	2442	16.75	16.67	16.64	16.55	16.51	16.42	16.33	16.3	21.51	<30dBm	Pass	
11	2462	14.81	--	--	--	--	--	--	--	19.93	<30dBm	Pass	
12	2467	13.24	13.17	13.09	13.06	13	12.95	12.9	12.84	18.43	<30dBm	Pass	
13	2472	9.83	--	--	--	--	--	--	--	19.11	<30dBm	Pass	

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate									Peak Power	Required Limit	Result
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8			
		Measurement Level (dBm)											
01	2412	16.85	--	--	--	--	--	--	--	21.71	<30dBm	Pass	
07	2442	16.87	16.83	16.75	16.69	16.62	16.53	16.43	16.38	21.62	<30dBm	Pass	
11	2462	15.13	--	--	--	--	--	--	--	20.25	<30dBm	Pass	
12	2467	13.37	13.34	13.3	13.26	13.2	13.12	13.02	12.99	18.59	<30dBm	Pass	
13	2472	10.16	--	--	--	--	--	--	--	19.68	<30dBm	Pass	

Chain A+B

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Peak Power Output (dBm)	Limit (dBm)	Result
01	2412	HT8	21.55	21.71	24.64	<30dBm	Pass
07	2442	HT8	21.51	21.62	24.58	<30dBm	Pass
11	2462	HT8	19.93	20.25	23.10	<30dBm	Pass
12	2467	HT8	18.43	18.59	21.52	<30dBm	Pass
13	2472	HT8	19.11	19.68	22.41	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 14 MIMO: Transmit (802.11n-40BW_30Mbps)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate									Peak Power	Required Limit	Result
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8			
		Measurement Level (dBm)											
03	2422	16.67	--	--	--	--	--	--	--	22.45	<30dBm	Pass	
07	2442	16.76	16.7	16.63	16.58	16.55	16.46	16.4	16.3	22.03	<30dBm	Pass	
09	2452	13.75	--	--	--	--	--	--	--	19.99	<30dBm	Pass	
10	2457	11.24	11.19	11.09	11.03	10.93	10.84	10.76	10.66	18.93	<30dBm	Pass	
11	2462	10.58	--	--	--	--	--	--	--	20.3	<30dBm	Pass	

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate									Peak Power	Required Limit	Result
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8			
		Measurement Level (dBm)											
03	2422	16.84	--	--	--	--	--	--	--	22.49	<30dBm	Pass	
07	2442	16.85	16.82	16.77	16.67	16.6	16.52	16.46	16.36	22.34	<30dBm	Pass	
09	2452	14.27	--	--	--	--	--	--	--	20.26	<30dBm	Pass	
10	2457	11.84	11.75	11.72	11.64	11.56	11.49	11.44	11.37	19.64	<30dBm	Pass	
11	2462	11.13	--	--	--	--	--	--	--	21.22	<30dBm	Pass	

Chain A+B

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Peak Power Output (dBm)	Limit (dBm)	Result
03	2422	HT8	22.45	22.49	25.48	<30dBm	Pass
07	2442	HT8	22.03	22.34	25.20	<30dBm	Pass
09	2452	HT8	19.99	20.26	23.14	<30dBm	Pass
10	2457	HT8	18.93	19.64	22.31	<30dBm	Pass
11	2462	HT8	20.30	21.22	23.79	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps)

RU config: Full Chain A

Channel No	Frequency (MHz)	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
01	2412	16.71	--	--	--	--	--	--	--	--	--	--	--	21.87	<30dBm	Pass		
07	2442	16.73	16.67	16.63	16.55	16.45	16.36	16.31	16.22	16.15	16.09	15.99	15.95	21.91	<30dBm	Pass		
11	2462	15.36	--	--	--	--	--	--	--	--	--	--	--	20.55	<30dBm	Pass		
12	2467	13.27	--	--	--	--	--	--	--	--	--	--	--	18.47	<30dBm	Pass		
13	2472	9.47	--	--	--	--	--	--	--	--	--	--	--	19.25	<30dBm	Pass		

RU config: Full Chain B

Channel No	Frequency (MHz)	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
01	2412	16.78	--	--	--	--	--	--	--	--	--	--	--	21.98	<30dBm	Pass		
07	2442	16.73	16.68	16.64	16.54	16.48	16.45	16.38	16.3	16.27	16.21	16.16	16.07	21.86	<30dBm	Pass		
11	2462	15.26	--	--	--	--	--	--	--	--	--	--	--	20.27	<30dBm	Pass		
12	2467	13.64	--	--	--	--	--	--	--	--	--	--	--	19.02	<30dBm	Pass		
13	2472	9.91	--	--	--	--	--	--	--	--	--	--	--	19.61	<30dBm	Pass		

RU config: Full Chain A+B

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
01	2412	MCS0	21.87	21.98	24.94	<30dBm	Pass
07	2442	MCS0	21.91	21.86	24.90	<30dBm	Pass
11	2462	MCS0	20.55	20.27	23.42	<30dBm	Pass
12	2467	MCS0	18.47	19.02	21.76	<30dBm	Pass
13	2472	MCS0	19.25	19.61	22.44	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

RU config: Other Chain A

Frequency (MHz)	RU setting	Peak Power Output (dBm)															Required Limit	Result
		Average Power													Peak Power			
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
2412	26/0	16.62	--	--	--	--	--	--	--	--	--	--	--	21.61	<30dBm	Pass		
	52/37	16.55	16.50	16.46	16.43	16.38	16.34	16.27	16.21	16.14	16.10	16.05	15.99	21.55	<30dBm	Pass		
	106/53	15.18	--	--	--	--	--	--	--	--	--	--	--	20.98	<30dBm	Pass		
2472	26/8	0.98	--	--	--	--	--	--	--	--	--	--	--	5.32	<30dBm	Pass		
	52/40	2.71	2.65	2.61	2.55	2.49	2.42	2.39	2.32	2.25	2.21	2.16	2.09	6.87	<30dBm	Pass		
	106/54	5.63	--	--	--	--	--	--	--	--	--	--	--	9.36	<30dBm	Pass		

RU config: Other Chain B

Frequency (MHz)	RU setting	Peak Power Output (dBm)															Required Limit	Result
		Average Power													Peak Power			
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
2412	26/0	16.66	--	--	--	--	--	--	--	--	--	--	--	21.55	<30dBm	Pass		
	52/37	16.58	16.54	16.48	16.44	16.41	16.36	16.32	16.27	16.21	16.15	16.11	16.04	21.43	<30dBm	Pass		
	106/53	16.08	--	--	--	--	--	--	--	--	--	--	--	21.06	<30dBm	Pass		
2472	26/8	0.96	--	--	--	--	--	--	--	--	--	--	--	5.12	<30dBm	Pass		
	52/0	3.36	3.30	3.24	3.20	3.16	3.11	3.04	2.99	2.96	2.90	2.86	2.82	7.55	<30dBm	Pass		
	106/54	4.35	--	--	--	--	--	--	--	--	--	--	--	8.41	<30dBm	Pass		

RU config: Other Chain A+B

Channel	Frequency (MHz)	RU settin	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
1	2412	26/0	21.61	21.55	24.59	<30dBm	Pass
		52/37	21.55	21.43	24.50	<30dBm	Pass
		106/3	20.98	21.06	24.03	<30dBm	Pass
13	2472	26/8	5.32	5.12	8.23	<30dBm	Pass
		52/40	6.87	7.55	10.23	<30dBm	Pass
		106/54	9.36	8.41	11.92	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : Intel® Wi-Fi 6 AX200
 Test Item : Peak Power Output
 Test Date : 2022/02/18
 Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps)

RU config: Full Chain A

Channel No	Frequency (MHz)	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
03	2422	16.81	--	--	--	--	--	--	--	--	--	--	--	22.79	<30dBm	Pass		
07	2442	16.88	16.84	16.77	16.72	16.68	16.65	16.6	16.51	16.44	16.38	16.28	16.18	22.75	<30dBm	Pass		
09	2452	13.67	--	--	--	--	--	--	--	--	--	--	--	19.89	<30dBm	Pass		
10	2457	11.87	--	--	--	--	--	--	--	--	--	--	--	19.5	<30dBm	Pass		
11	2462	10.52	--	--	--	--	--	--	--	--	--	--	--	20.06	<30dBm	Pass		

RU config: Full Chain B

Channel No	Frequency (MHz)	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0						
03	2422	16.74	--	--	--	--	--	--	--	--	--	--	--	22.78	<30dBm	Pass		
07	2442	16.85	16.76	16.68	16.65	16.55	16.49	16.4	16.31	16.28	16.19	16.09	16.01	22.86	<30dBm	Pass		
09	2452	13.7	--	--	--	--	--	--	--	--	--	--	--	19.89	<30dBm	Pass		
10	2457	13.19	--	--	--	--	--	--	--	--	--	--	--	20.7	<30dBm	Pass		
11	2462	10.94	--	--	--	--	--	--	--	--	--	--	--	21.24	<30dBm	Pass		

RU config: Full Chain A+B

Channel	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
03	2422	MCS0	22.79	22.78	25.80	<30dBm	Pass
07	2442	MCS0	22.75	22.86	25.82	<30dBm	Pass
09	2452	MCS0	19.89	19.89	22.90	<30dBm	Pass
10	2457	MCS0	19.50	20.70	23.15	<30dBm	Pass
11	2462	MCS0	20.06	21.24	23.70	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

RU config: Other Chain A

Frequency (MHz)	RU setting	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0				
2422	242/61	16.11	--	--	--	--	--	--	--	--	--	--	--	22.68	<30dBm	Pass		
2462	242/62	8.35	8.30	8.25	8.21	8.16	8.10	8.03	7.96	7.90	7.85	7.79	7.75	18.21	<30dBm	Pass		

RU config: Other Chain B

Frequency (MHz)	RU setting	Peak Power Output (dBm)														Peak Power	Required Limit	Result
		Average Power																
		For different Data Rate																
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0				
2422	242/61	15.87	--	--	--	--	--	--	--	--	--	--	--	22.15	<30dBm	Pass		
2462	242/62	7.02	6.96	6.89	6.86	6.83	6.76	6.69	6.63	6.59	6.54	6.50	6.47	17.89	<30dBm	Pass		

RU config: Other Chain A+B

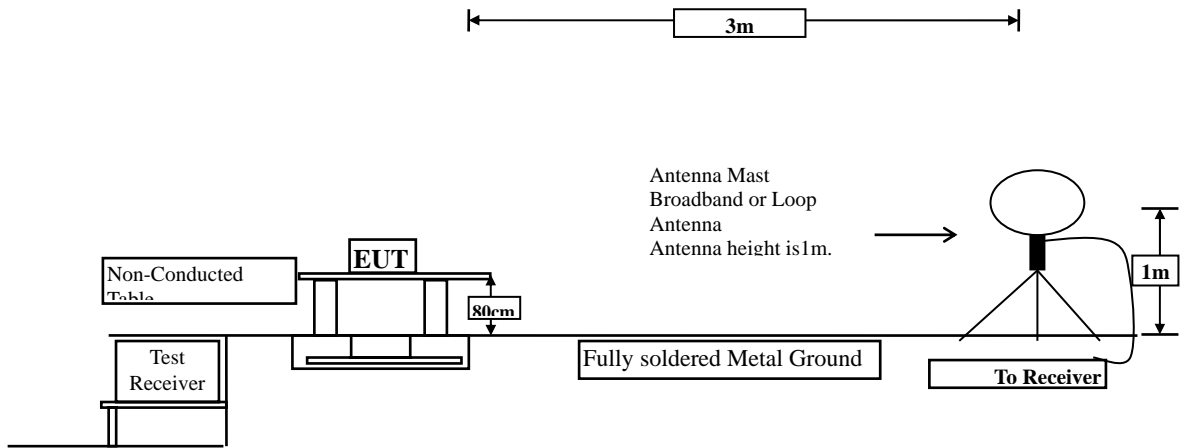
Channel	Frequency (MHz)	RU settin	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
3	2422	242-61	22.68	22.15	25.43	<30dBm	Pass
11	2462	242-62	18.21	17.89	21.06	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

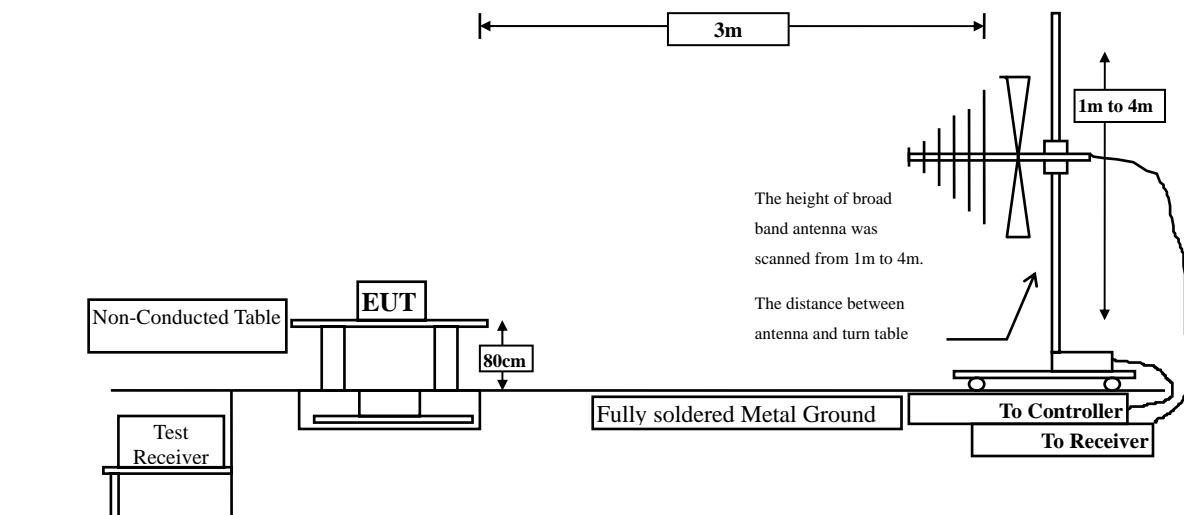
3. Radiated Emission

3.1. Test Setup

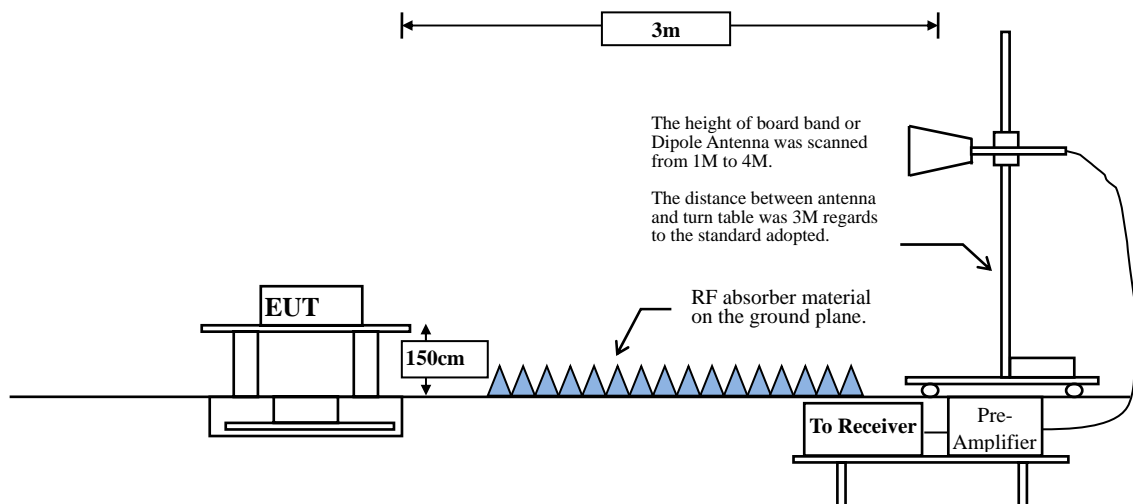
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



3.2. Limits

➤ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

- Remarks:
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
 2. In the Above Table, the tighter limit applies at the band edges.
 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range from 9kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

$VBW \geq 3 \times RBW$.

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle $\geq 98 \%$

$VBW \geq 1/T$, when duty cycle $< 98 \%$

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

SISO A

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 b	99.05	8.3600	120	10
802.11 g	97.89	2.0900	478	500
802.11 n20	98.66	3.9840	251	10
802.11 n40	99.03	17.7470	56	10
802.11ax20	98.73	4.6500	215	10
802.11 ax40	99.15	18.6200	54	10

Note: Duty Cycle Refer to Section 5.

SISO B

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 b	99.17	8.3570	120	10
802.11 g	97.89	2.0920	478	500
802.11 n20	98.66	3.9730	252	10
802.11 n40	98.66	3.9640	252	10
802.11ax20	98.40	2.5900	386	10
802.11 ax40	98.93	18.6700	54	10

Note: Duty Cycle Refer to Section 5.

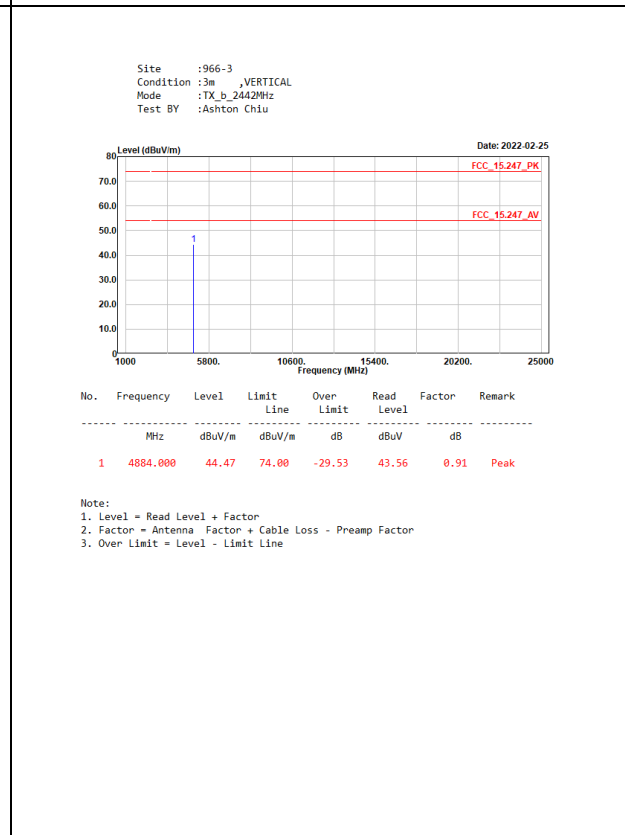
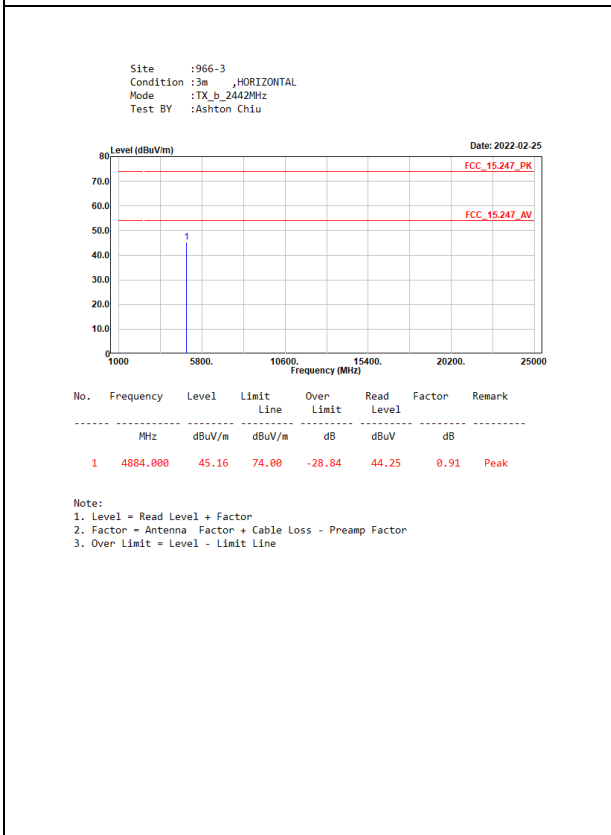
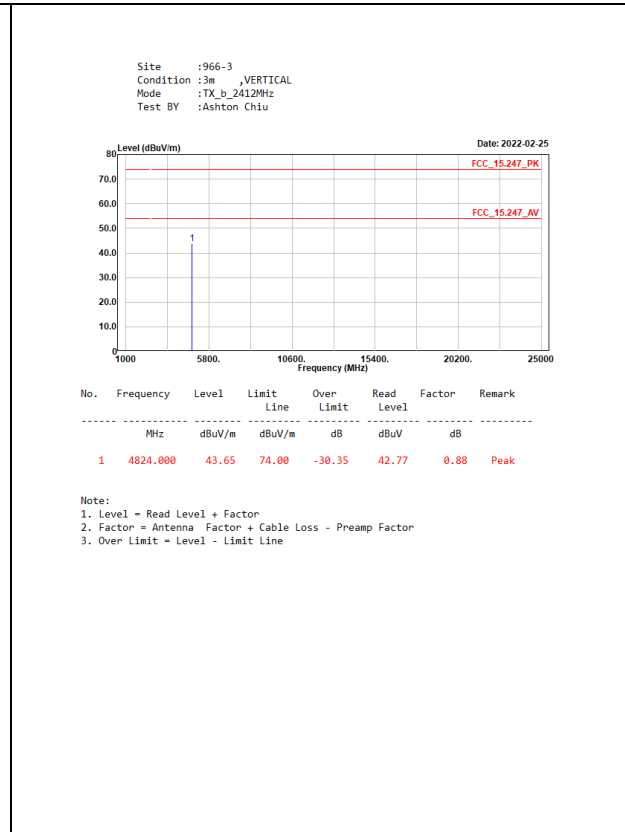
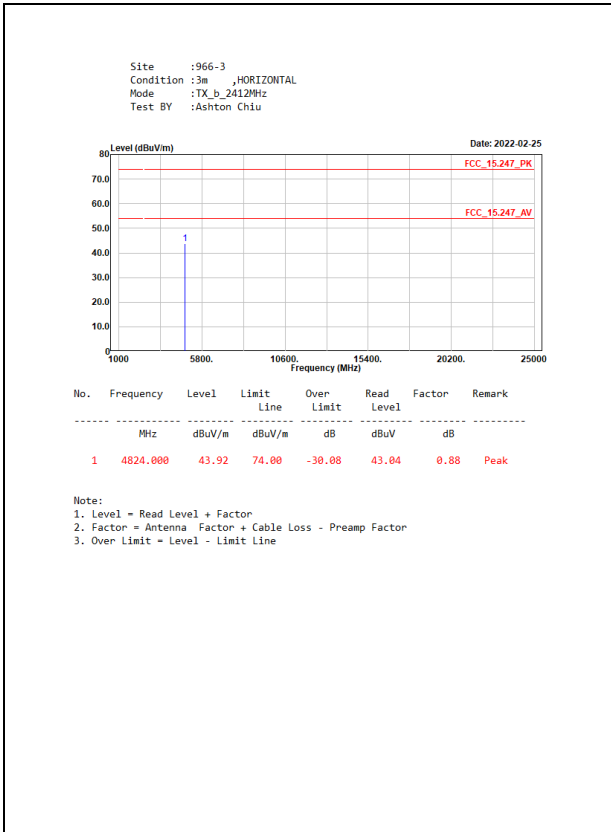
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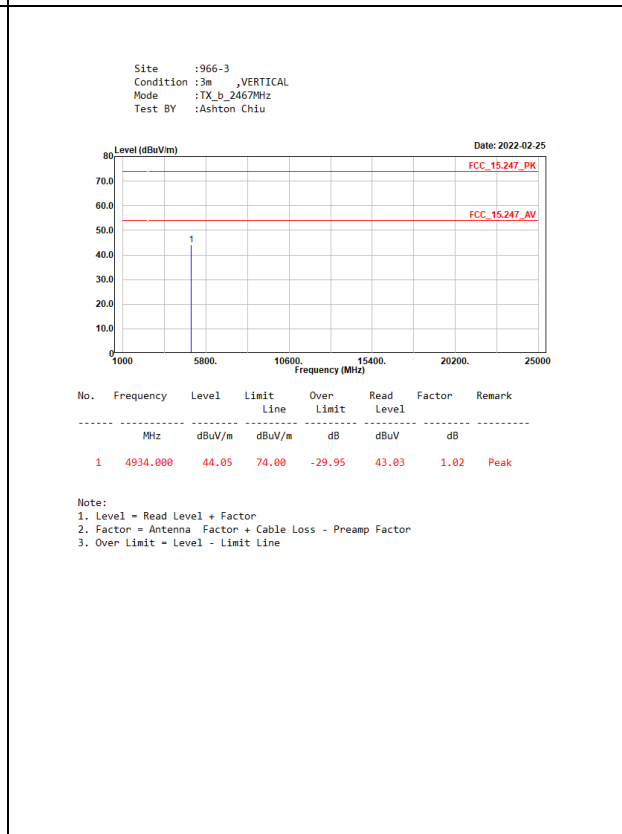
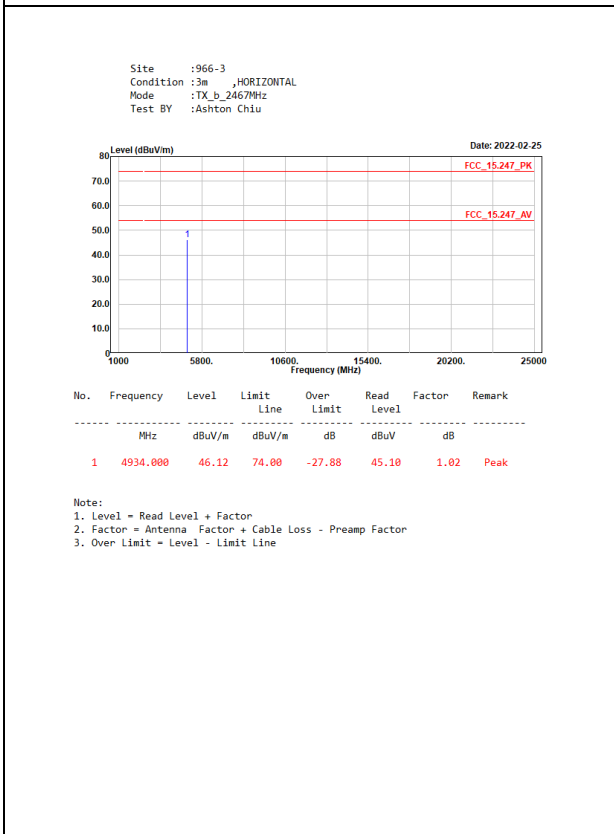
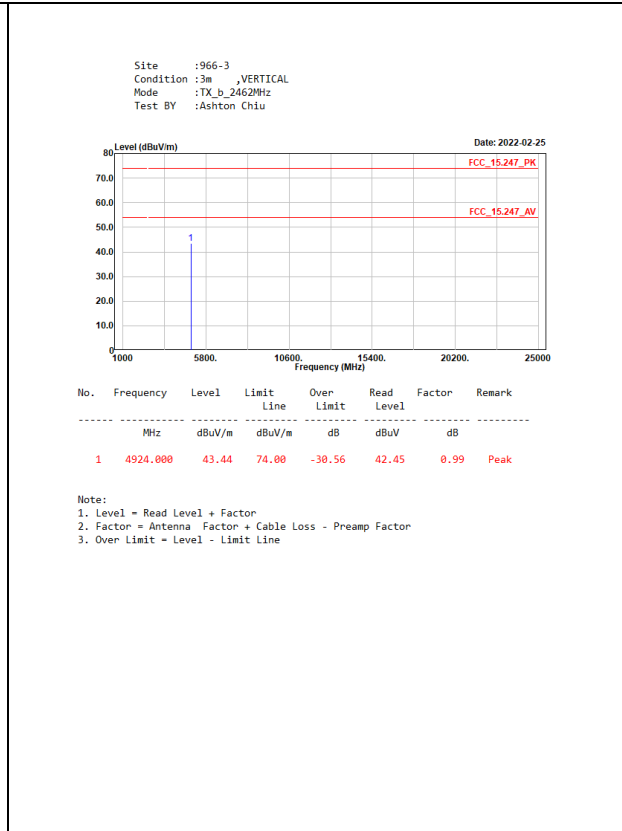
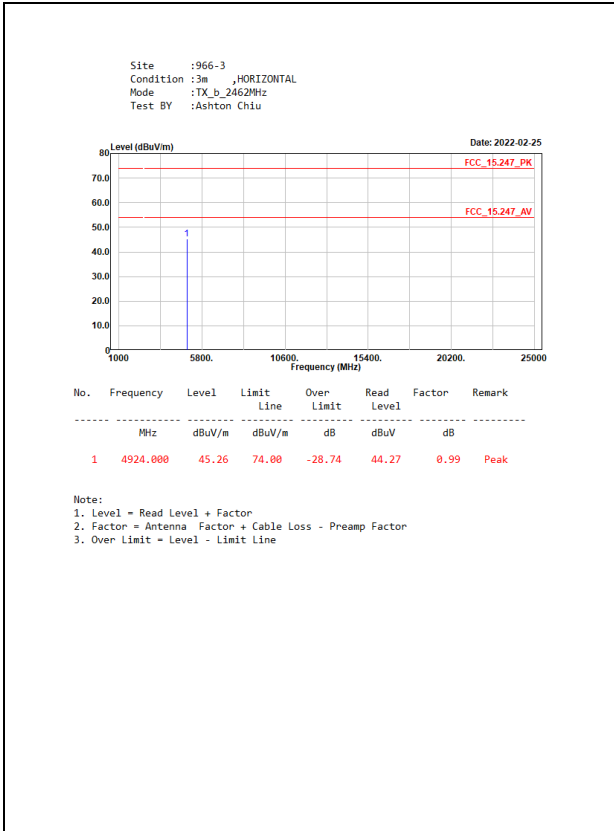
2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 n20	99.12	18.4900	54	10
802.11 n40	98.89	8.9400	112	10
802.11ax20	99.04	18.6500	54	10
802.11 ax40	98.94	9.3000	108	10

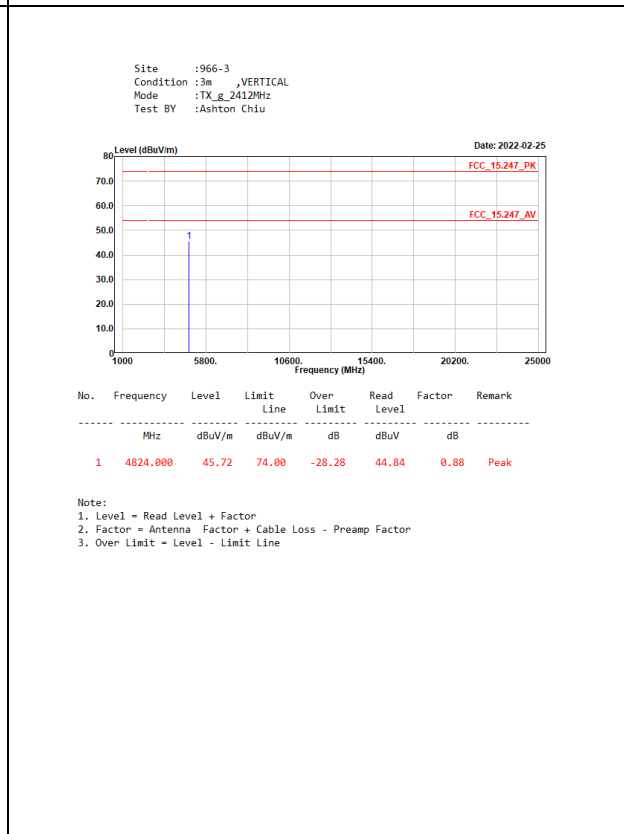
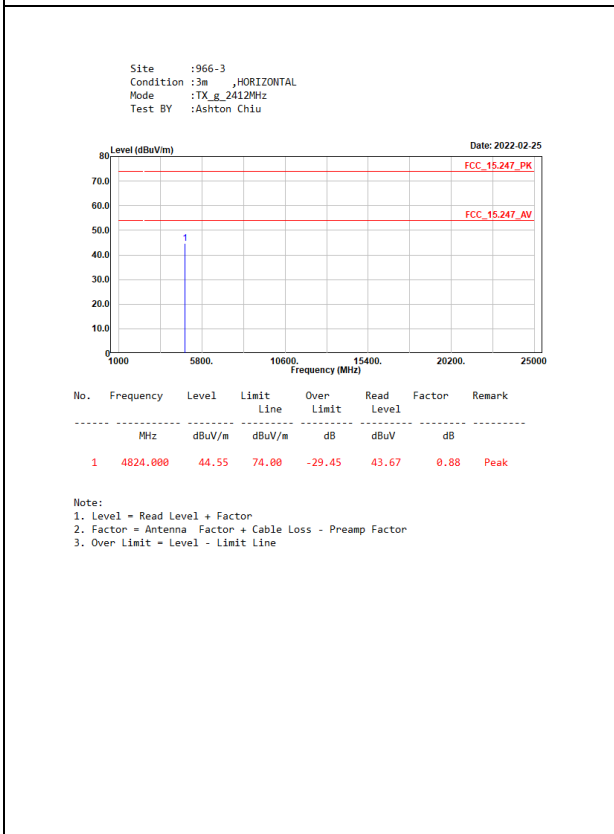
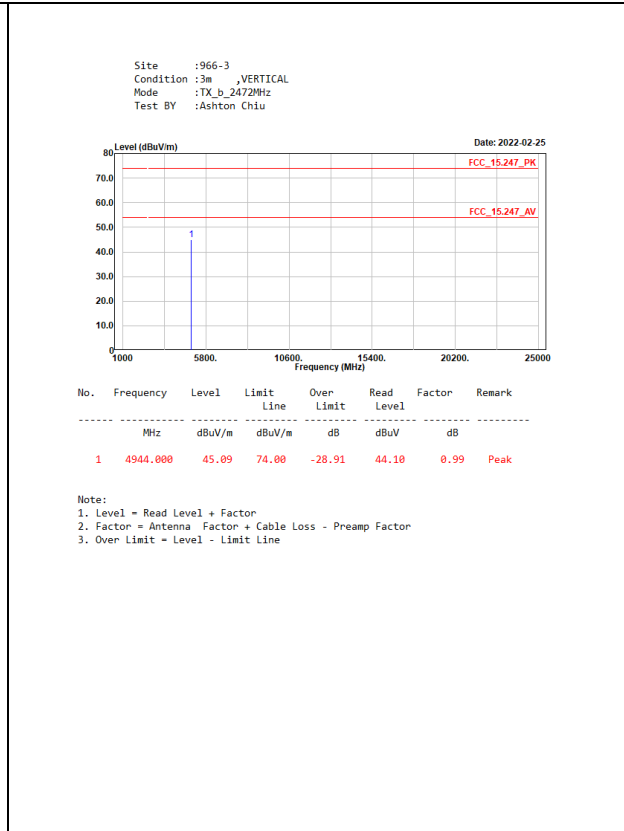
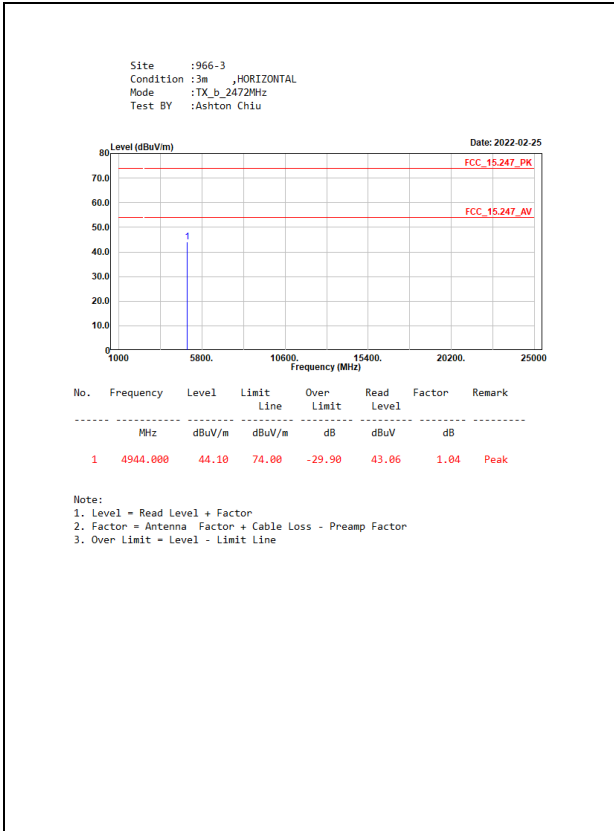
Note: Duty Cycle Refer to Section 5.

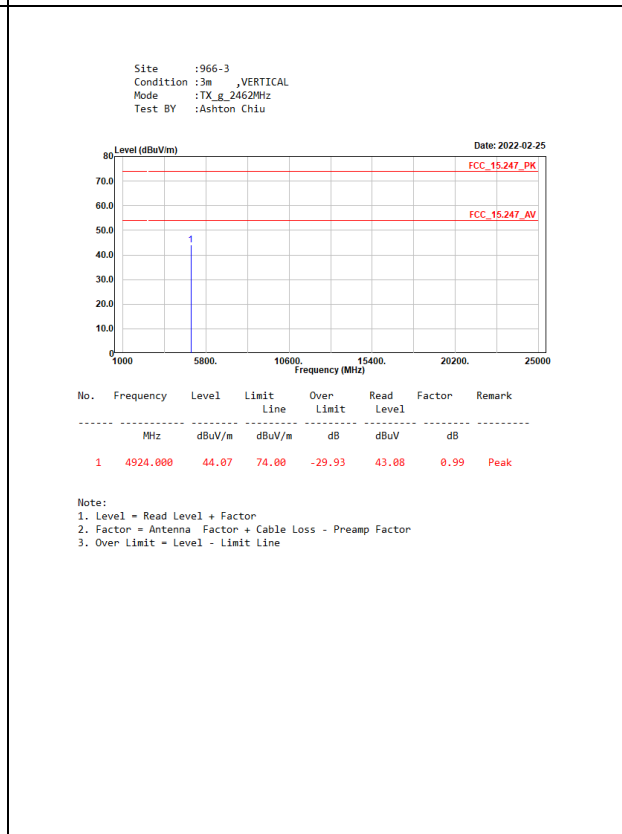
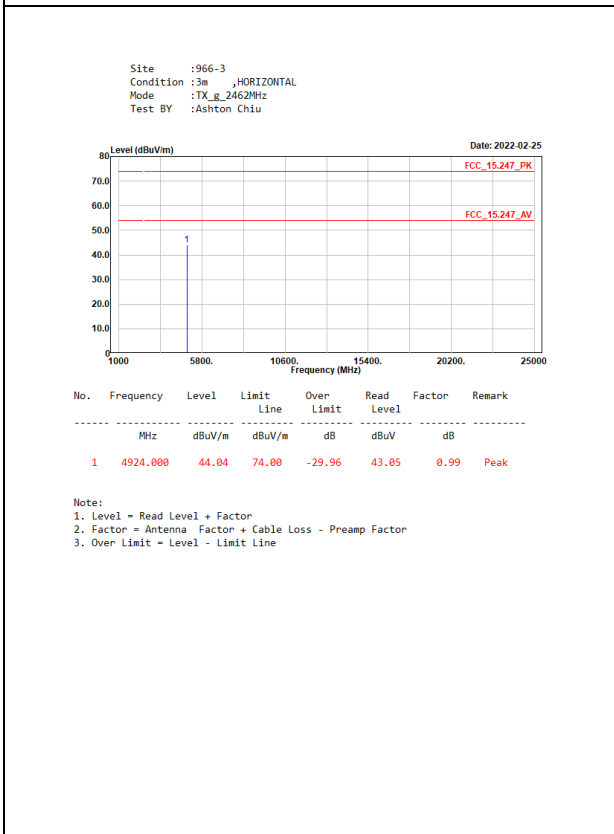
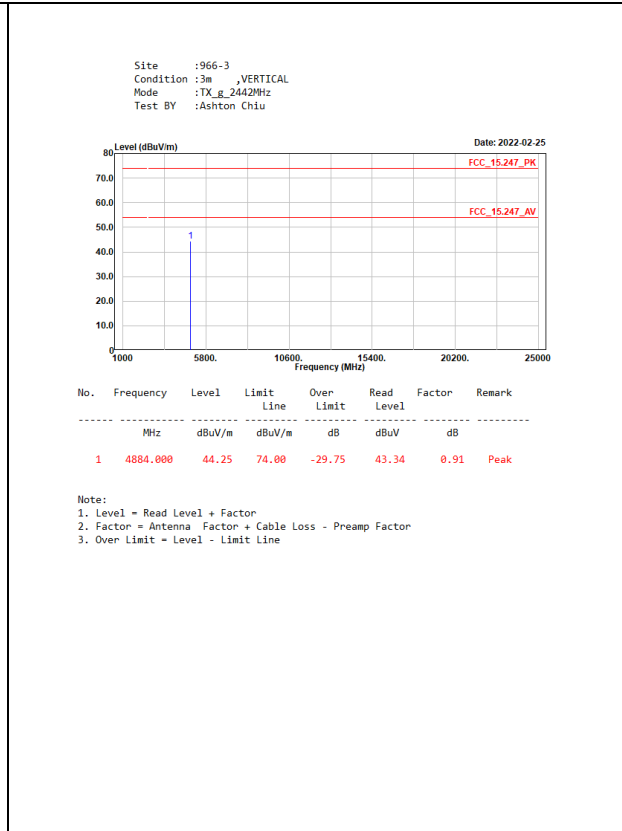
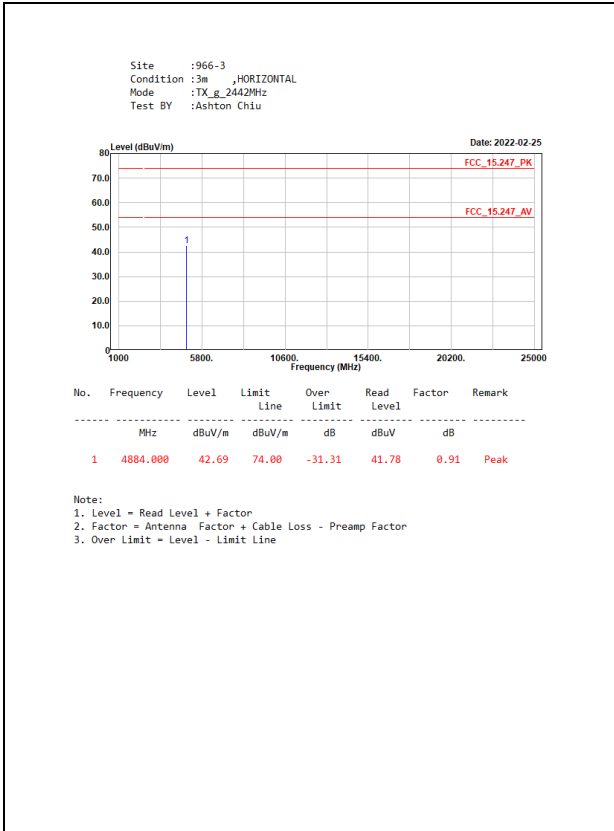
3.4. Test Result of Radiated Emission

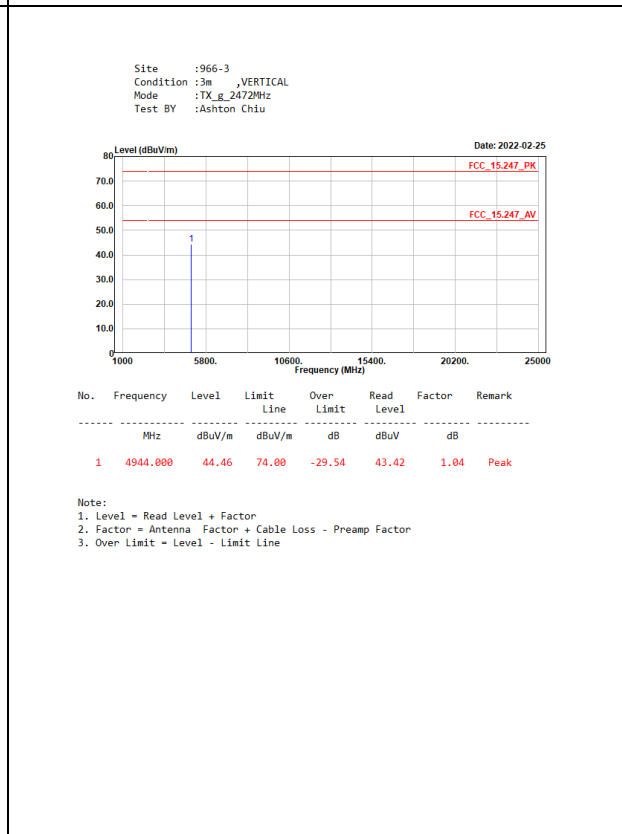
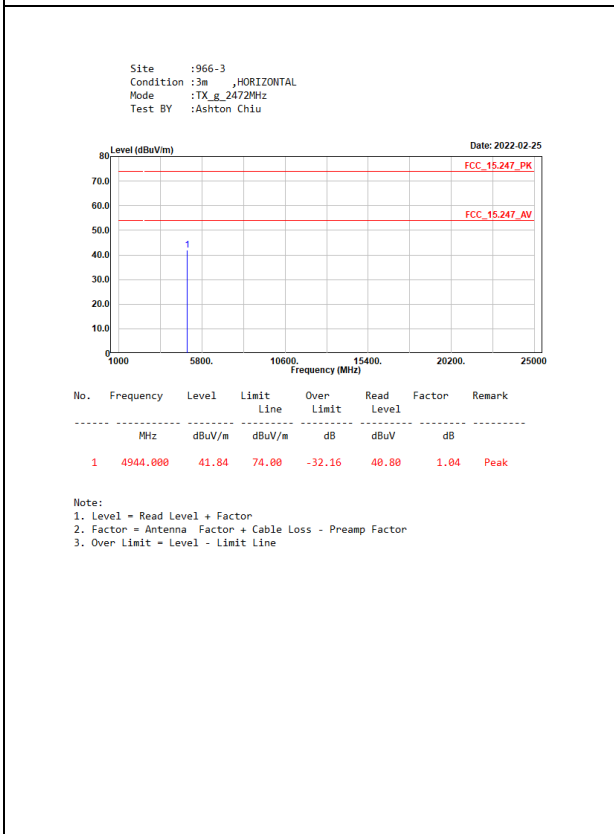
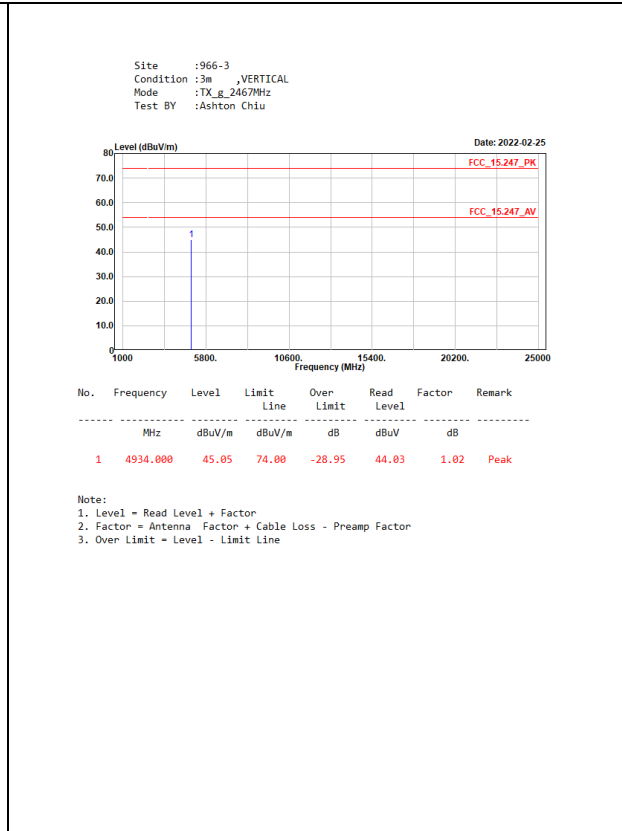
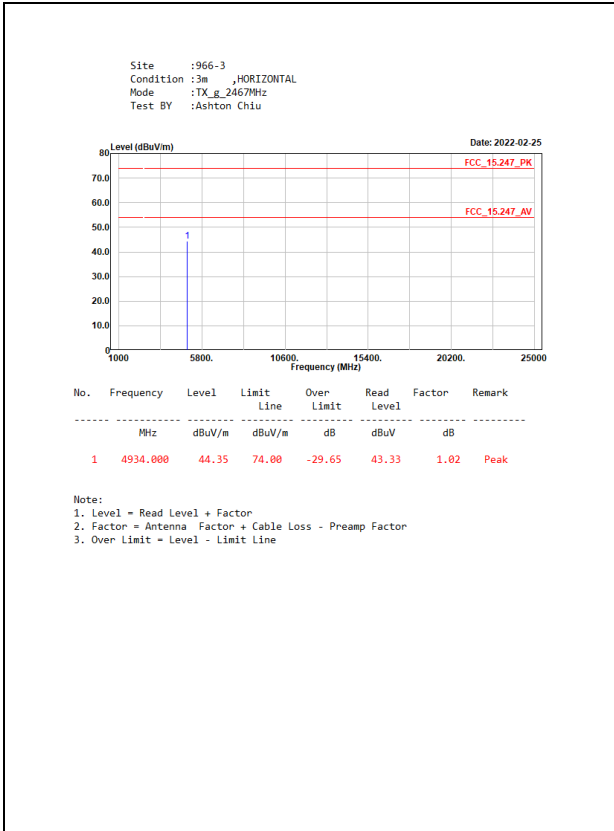
SISO A

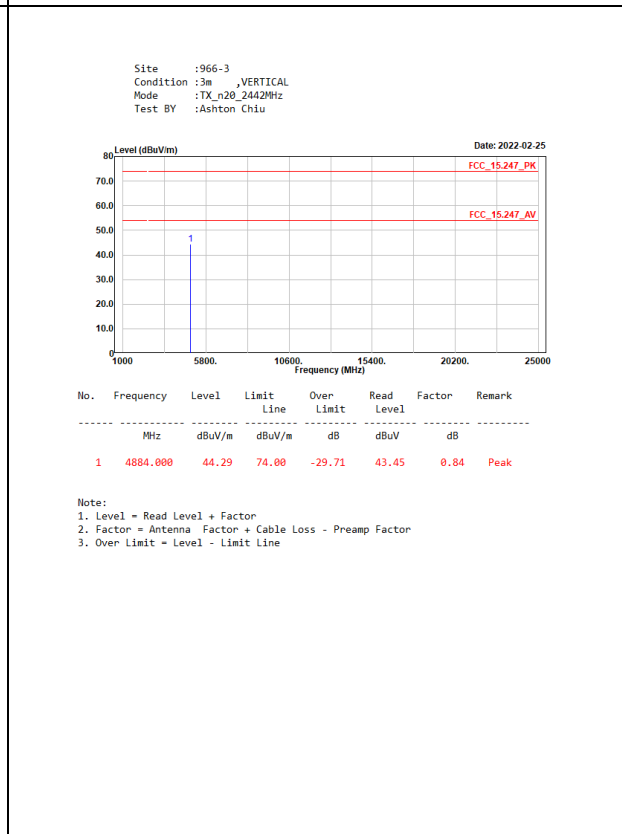
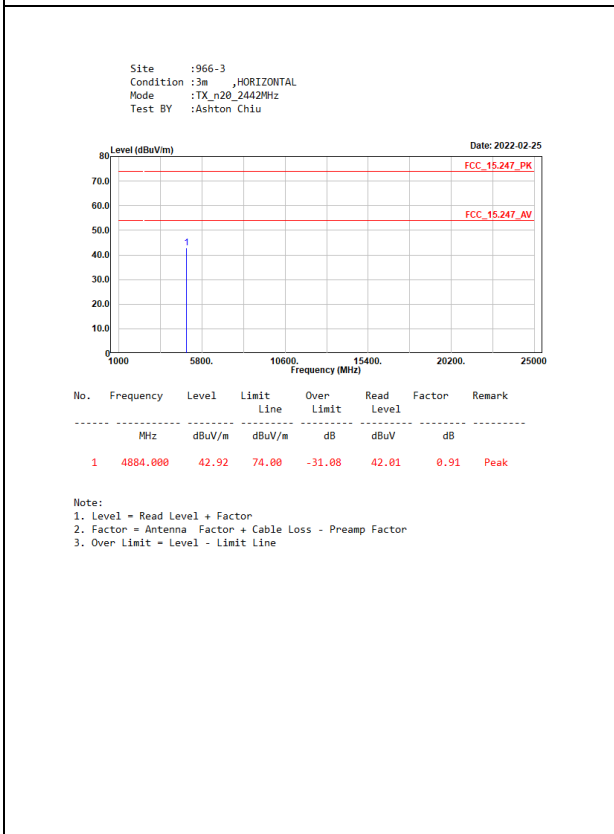
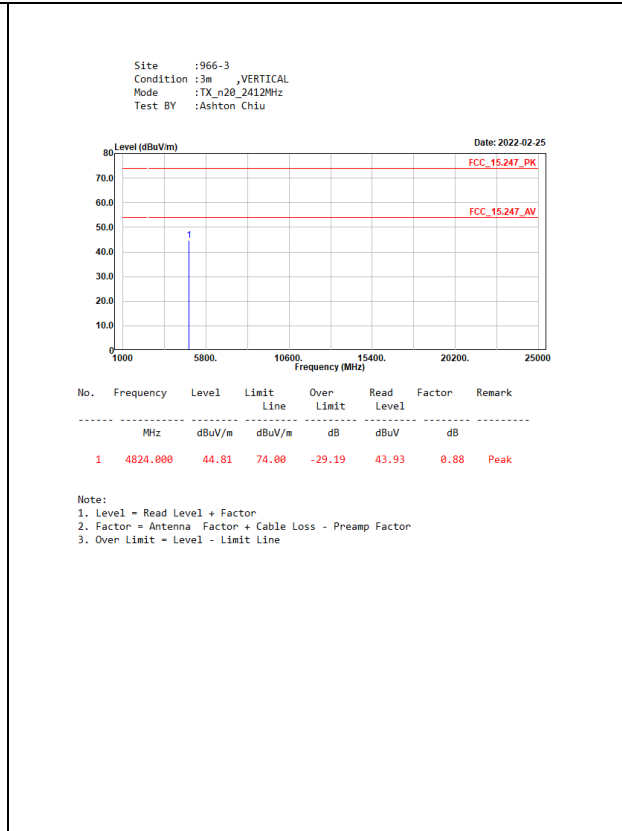
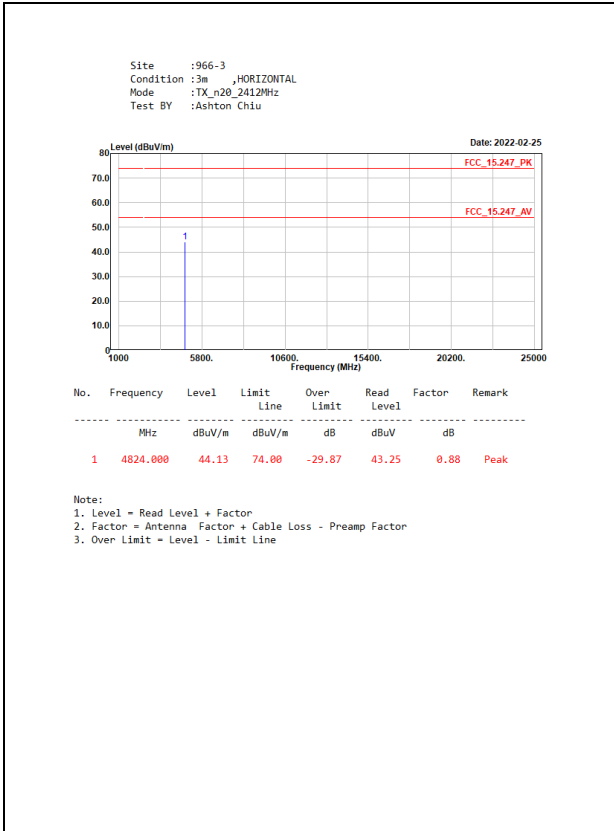


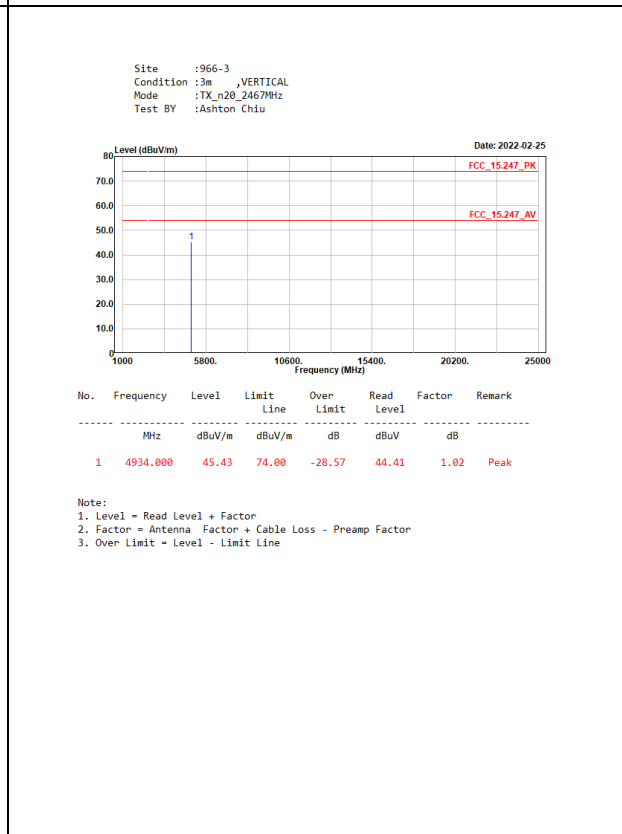
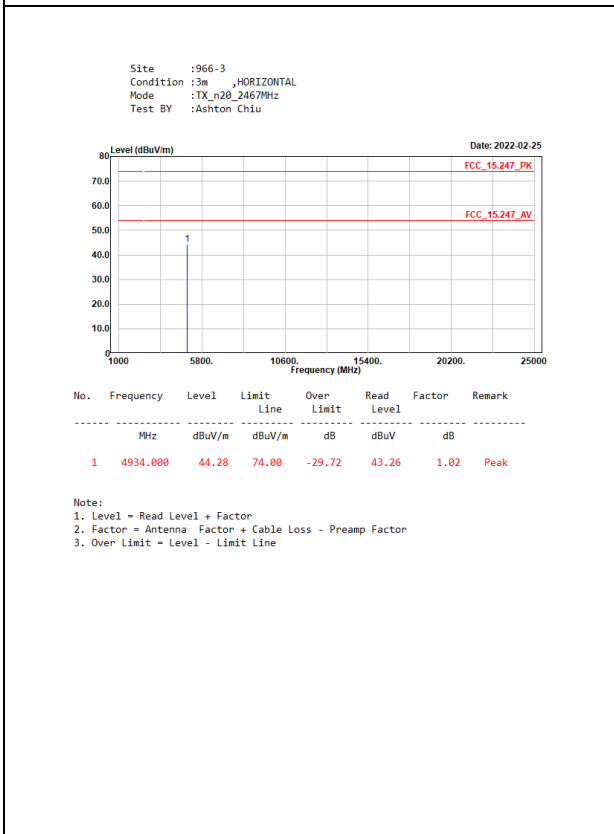
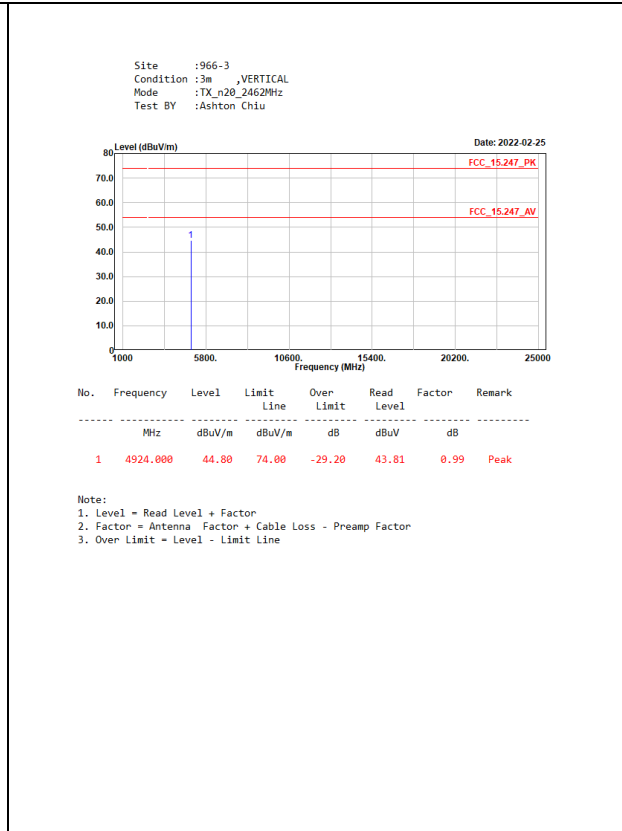
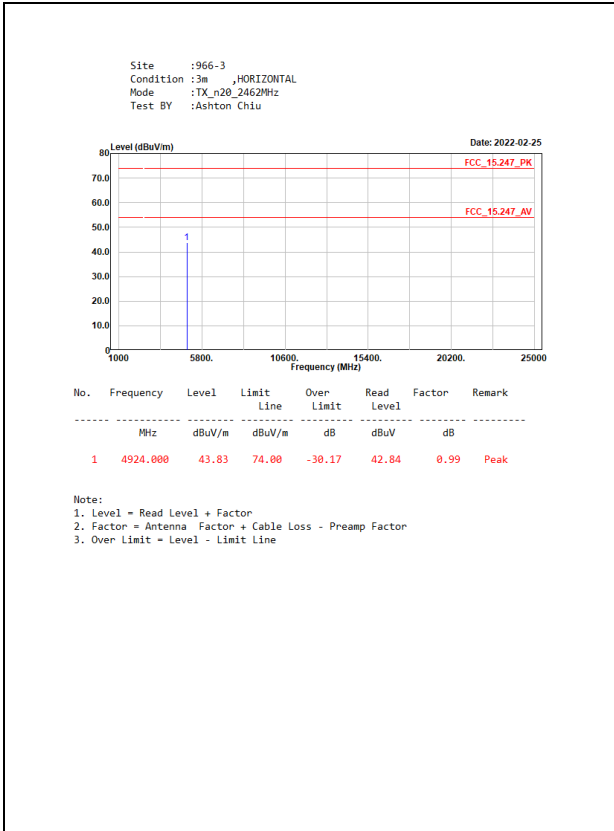


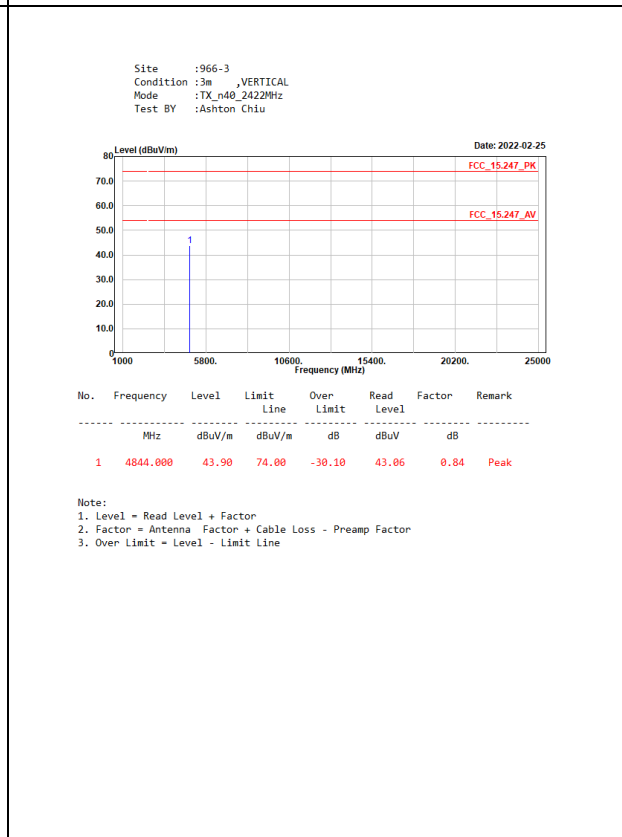
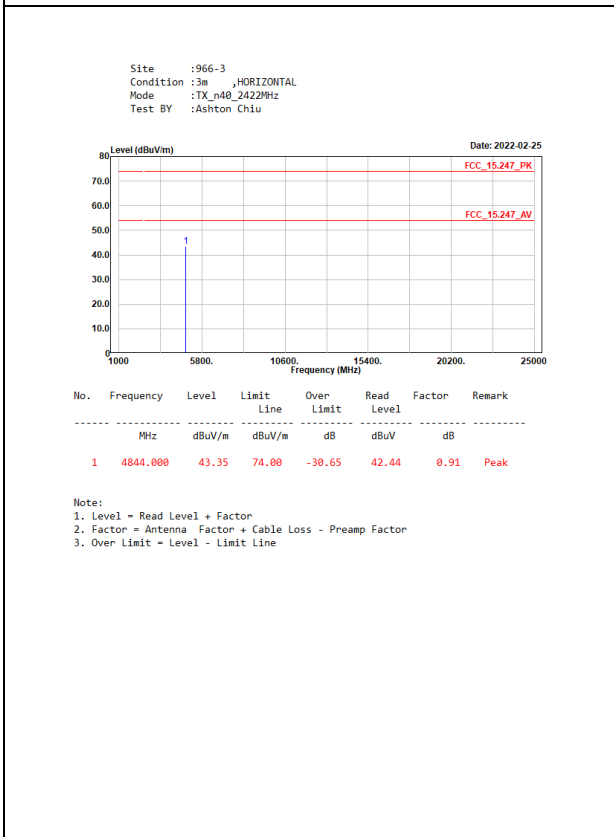
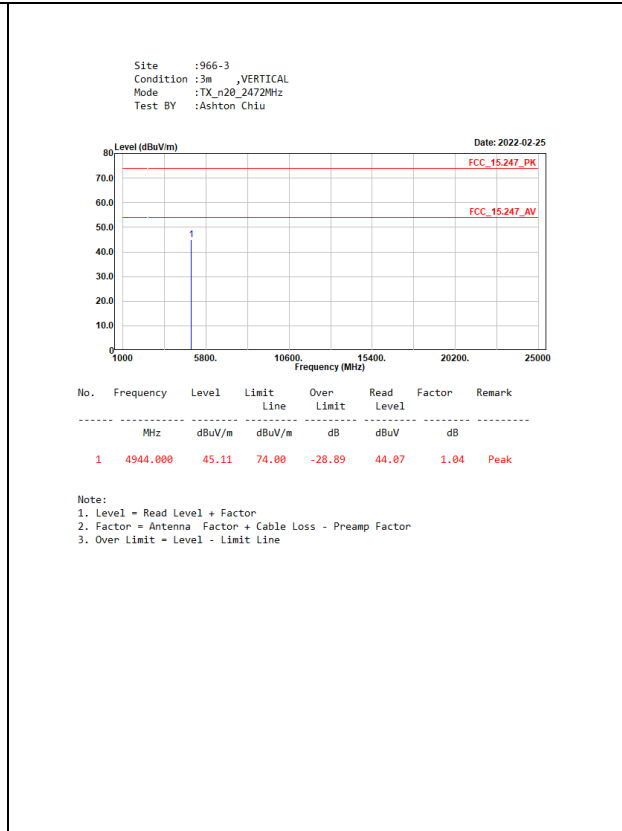
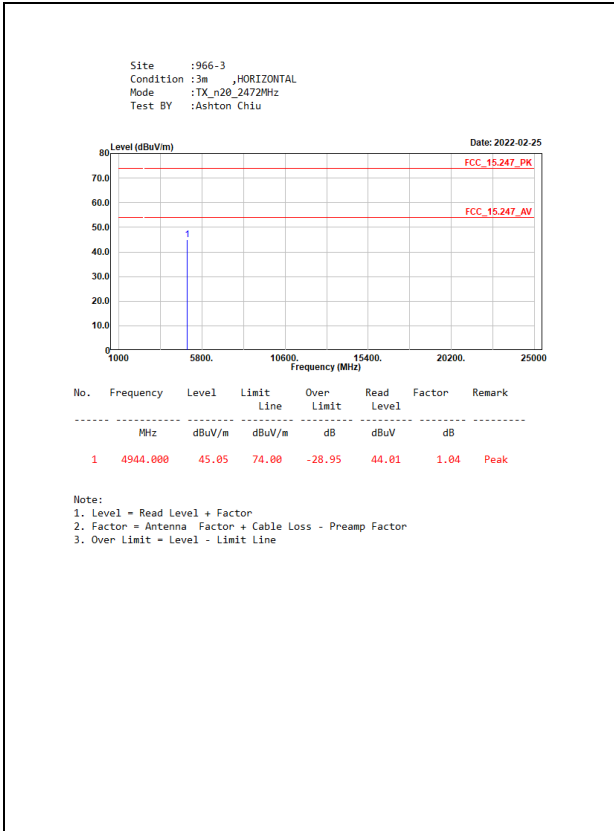


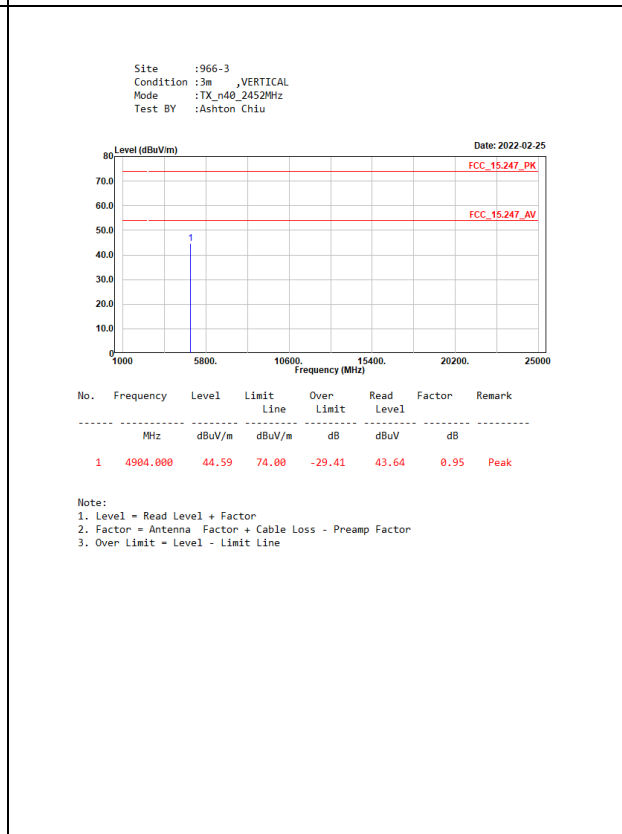
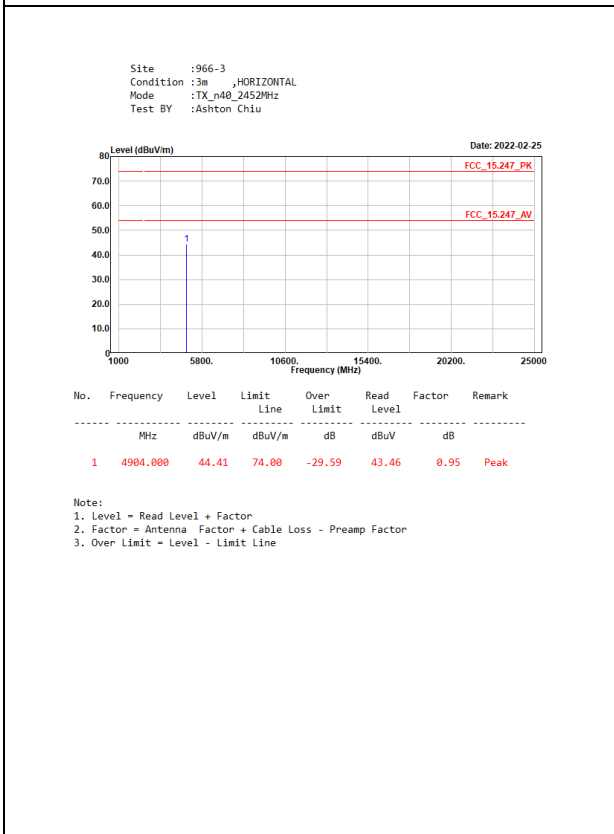
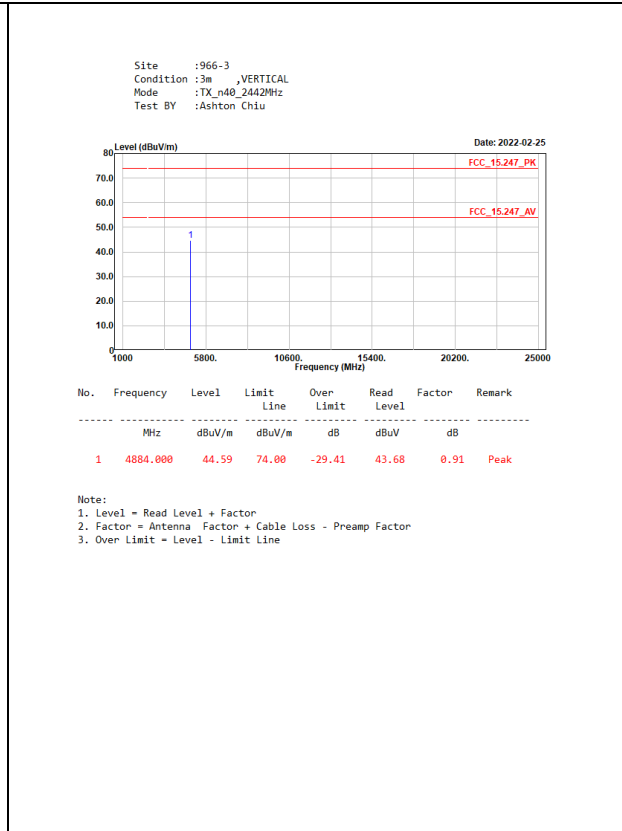
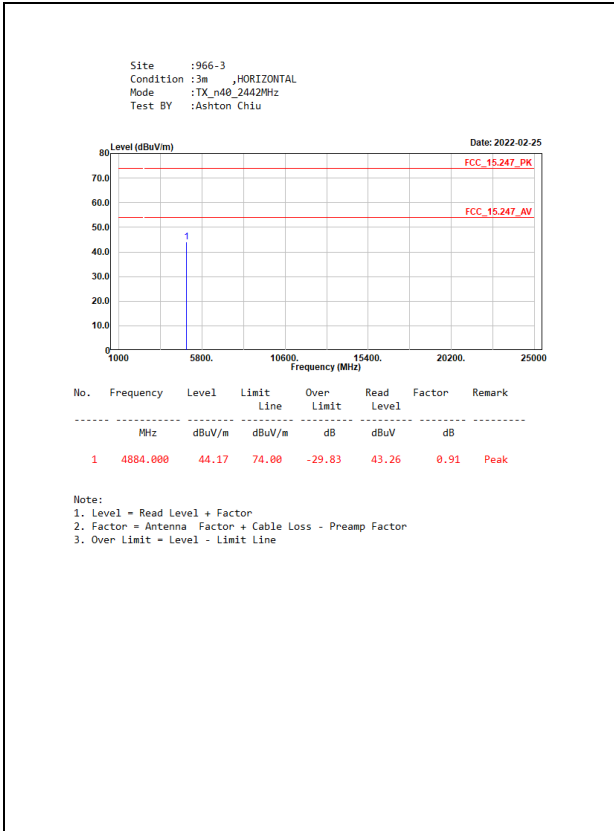


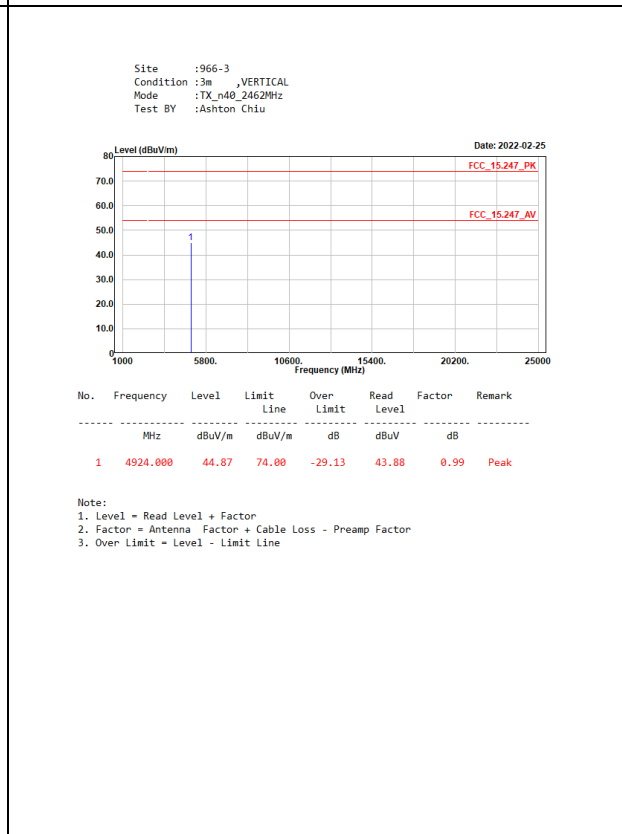
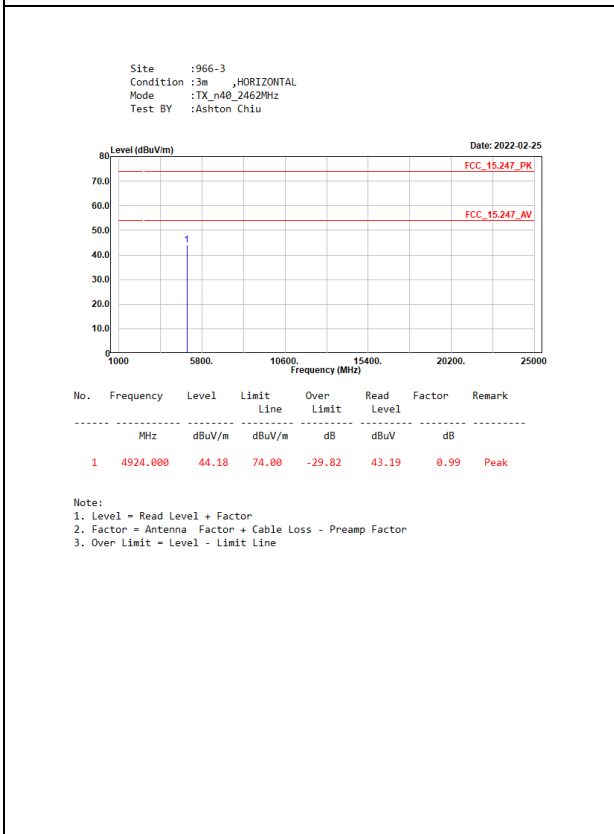
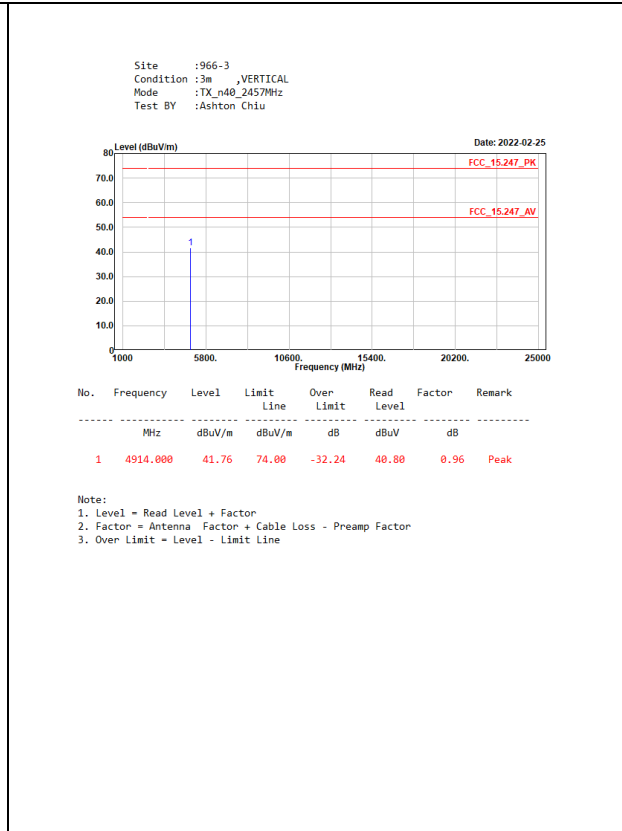
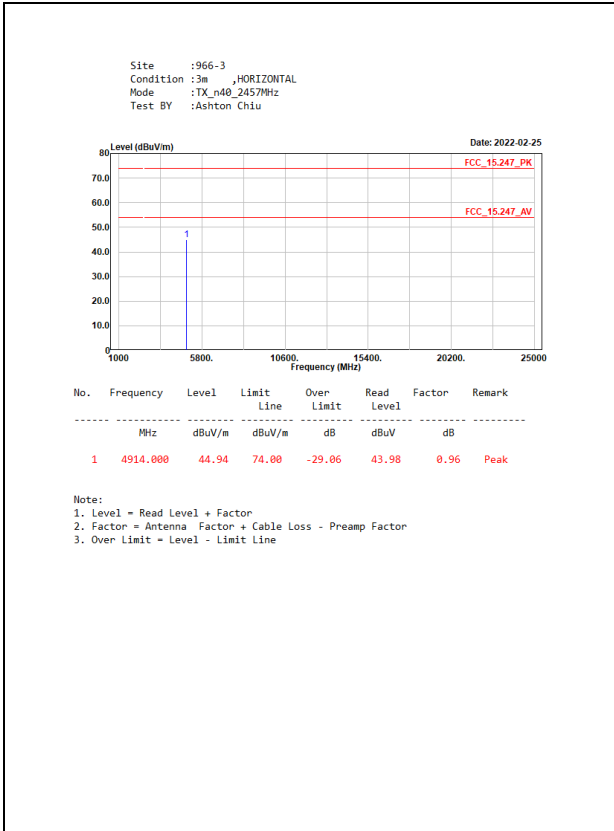


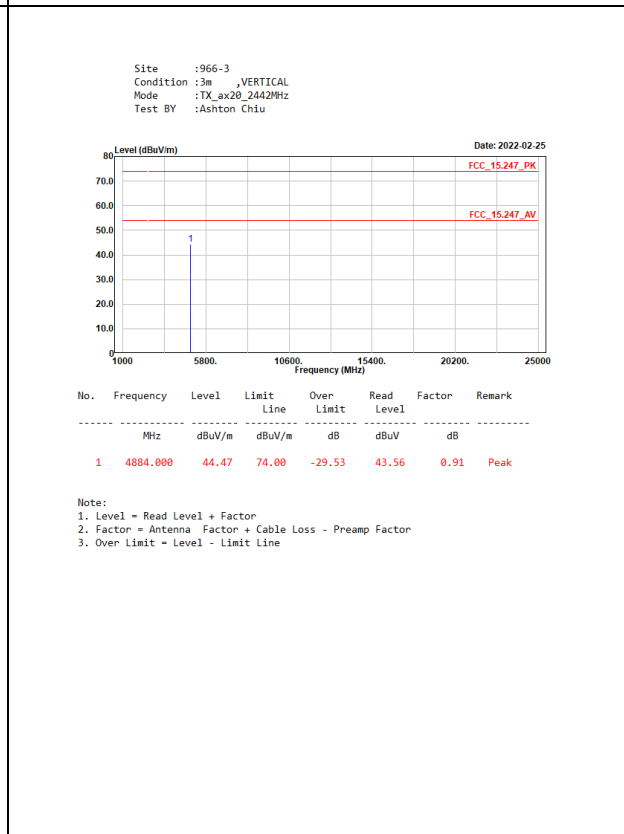
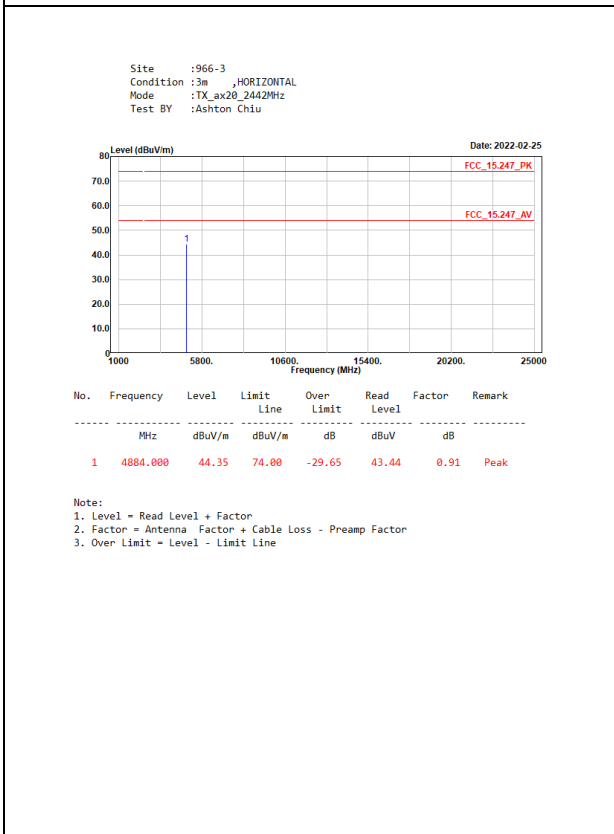
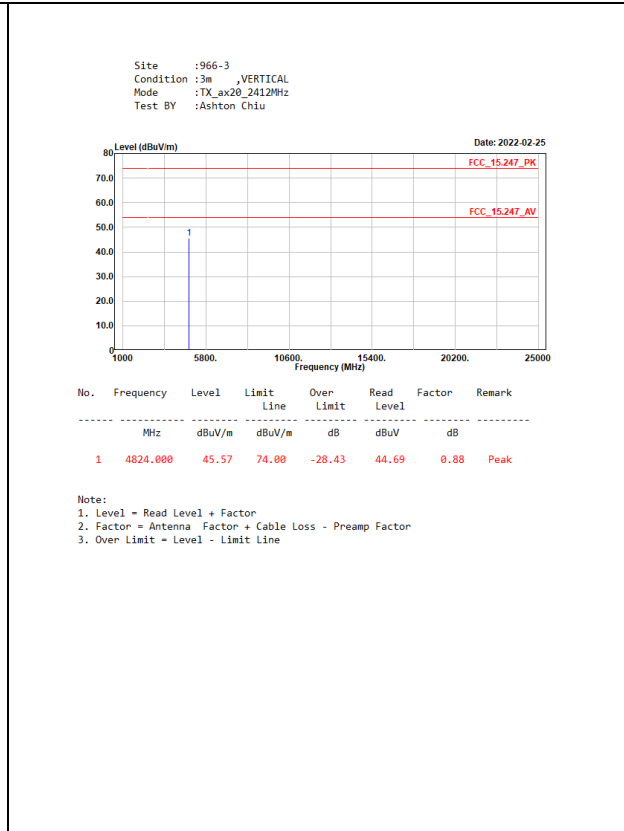
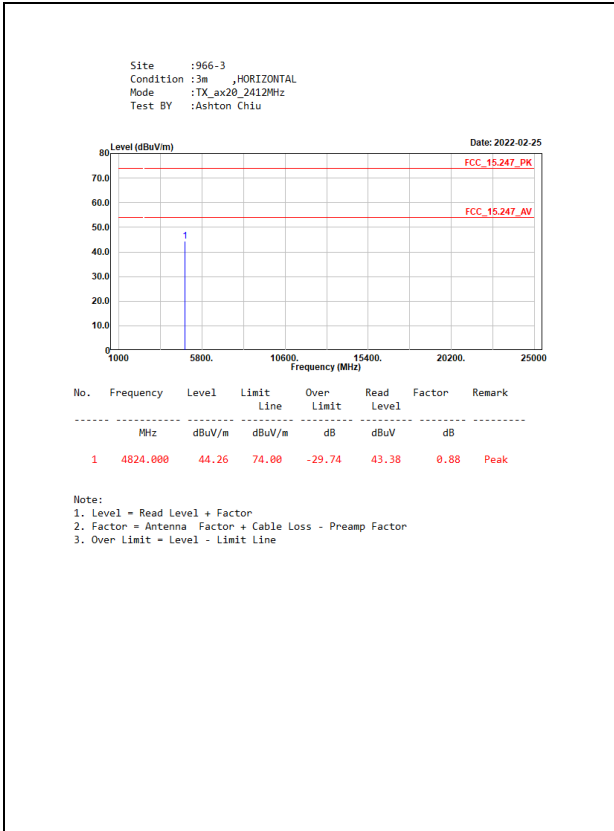


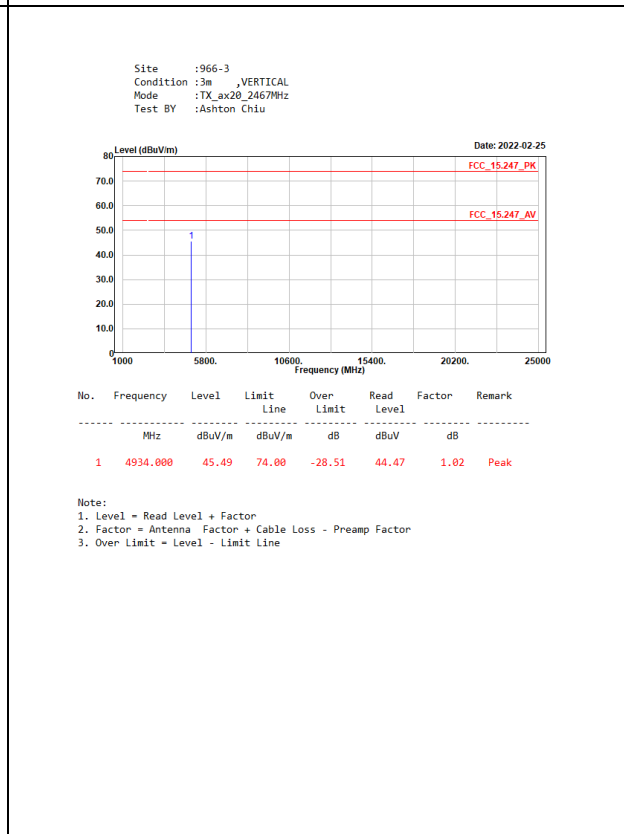
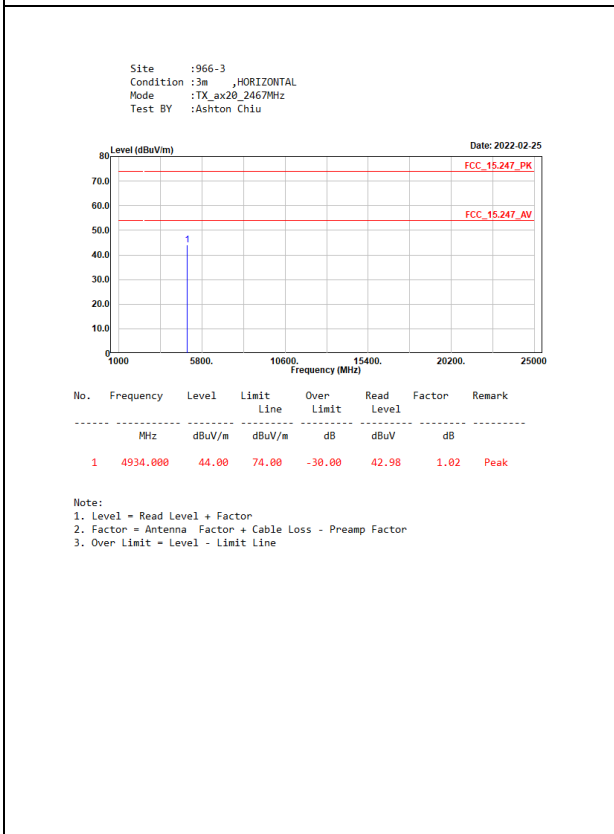
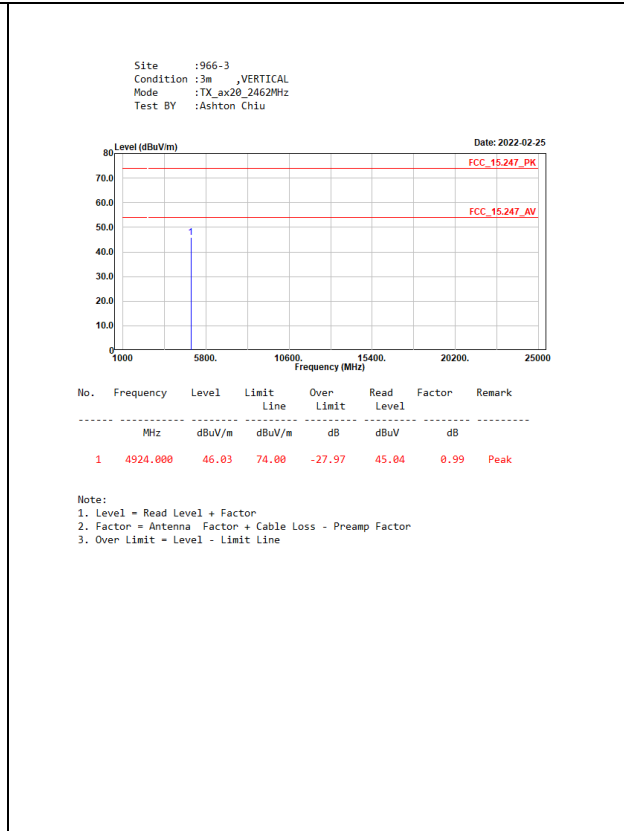
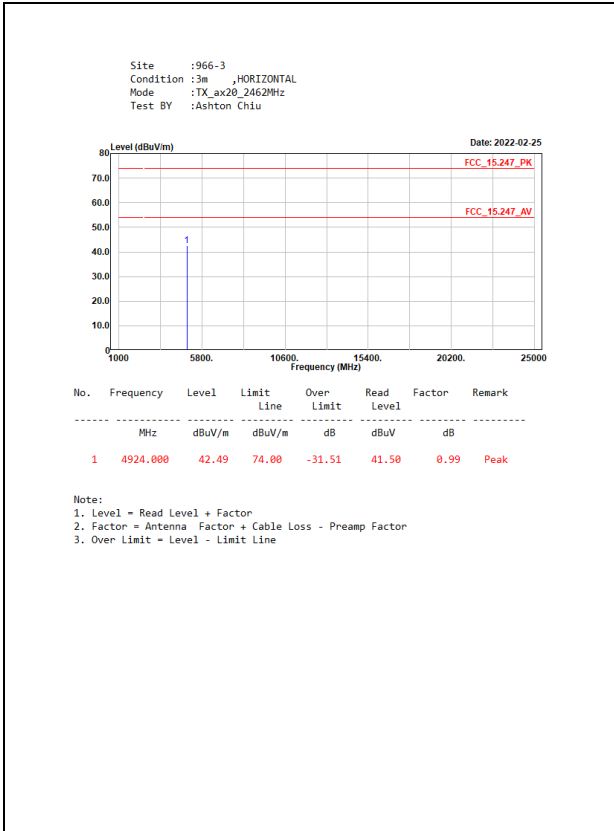


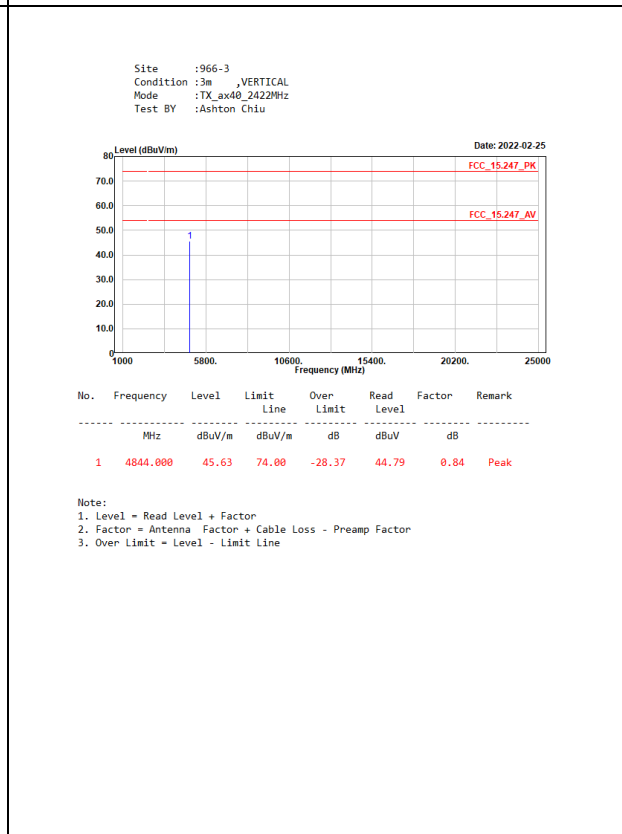
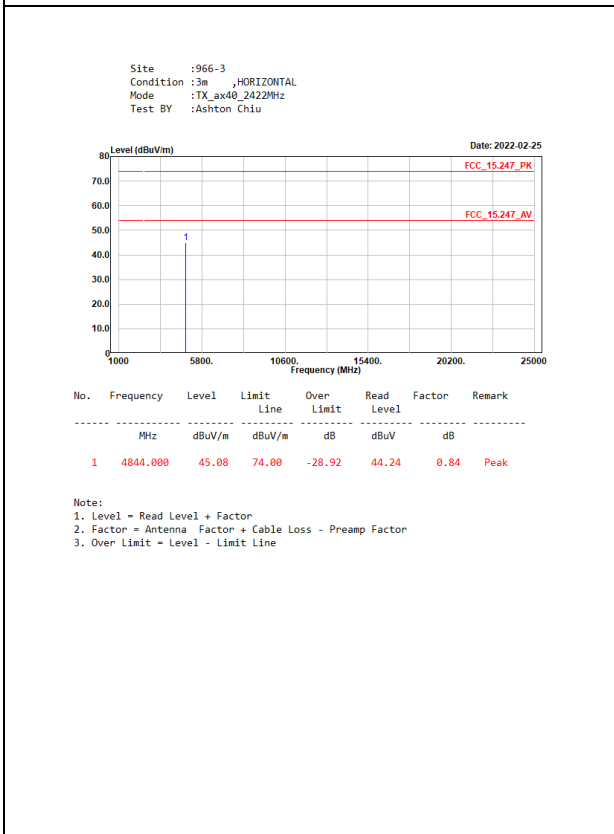
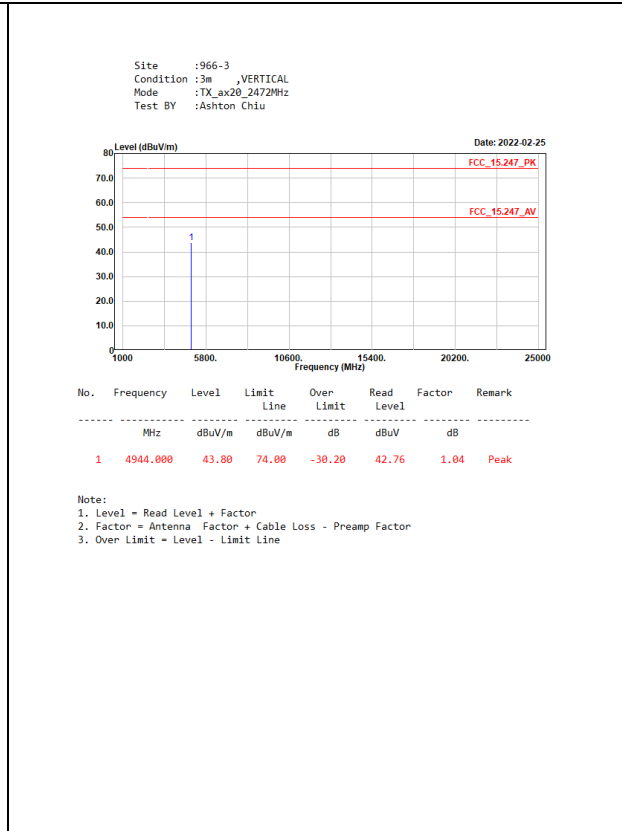
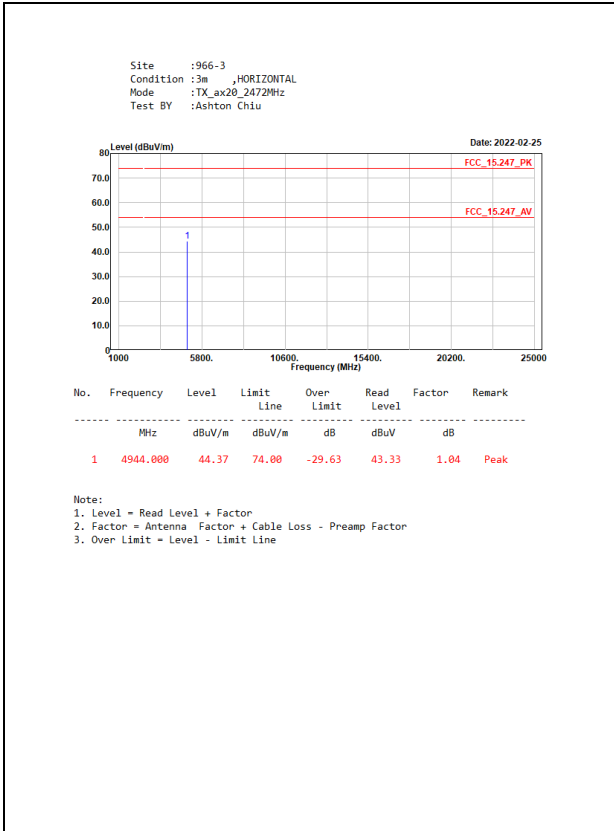


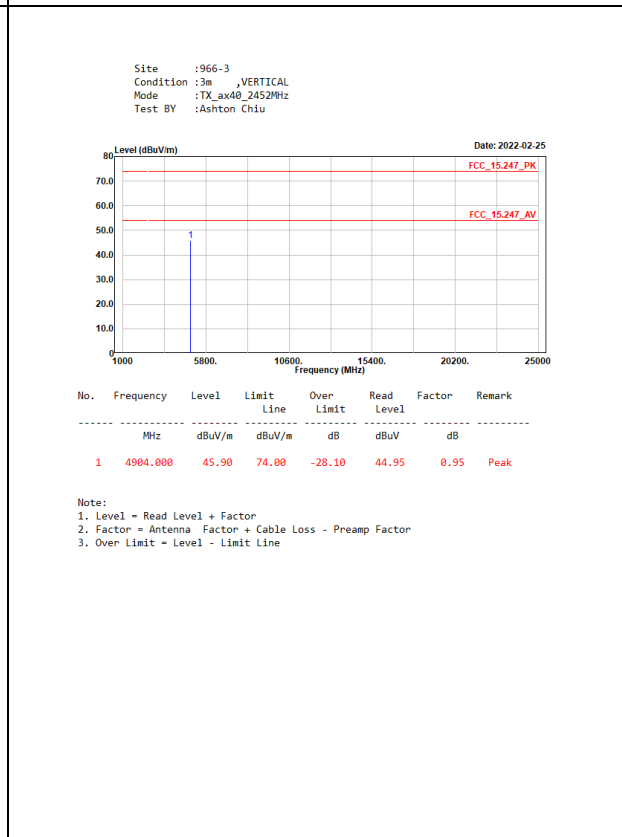
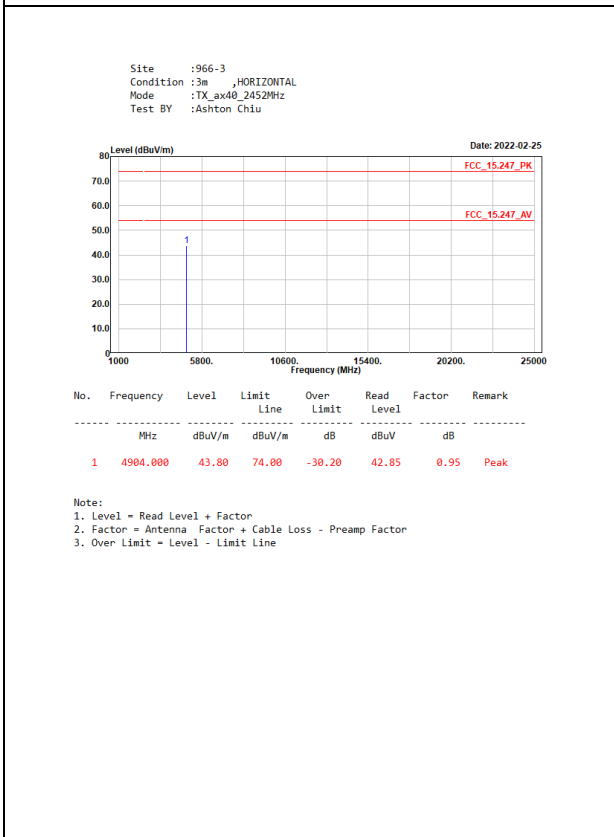
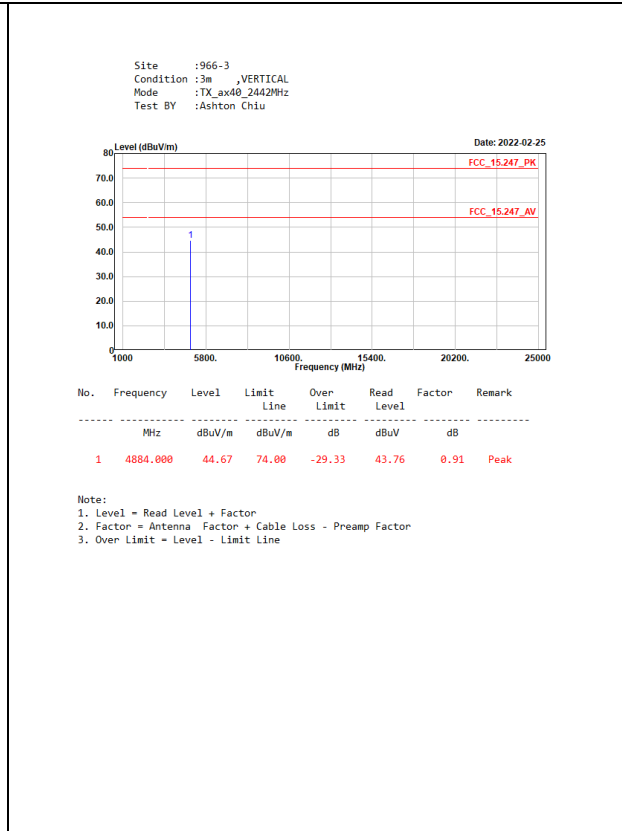
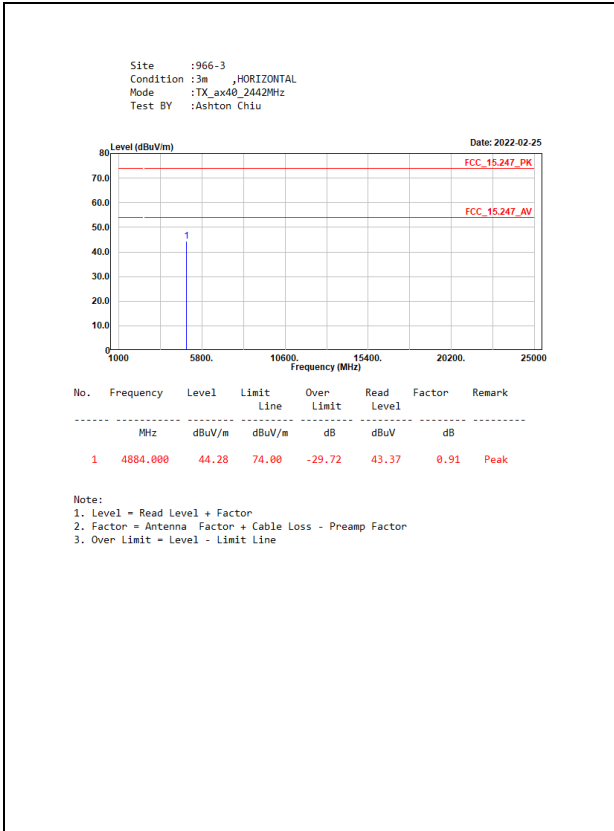


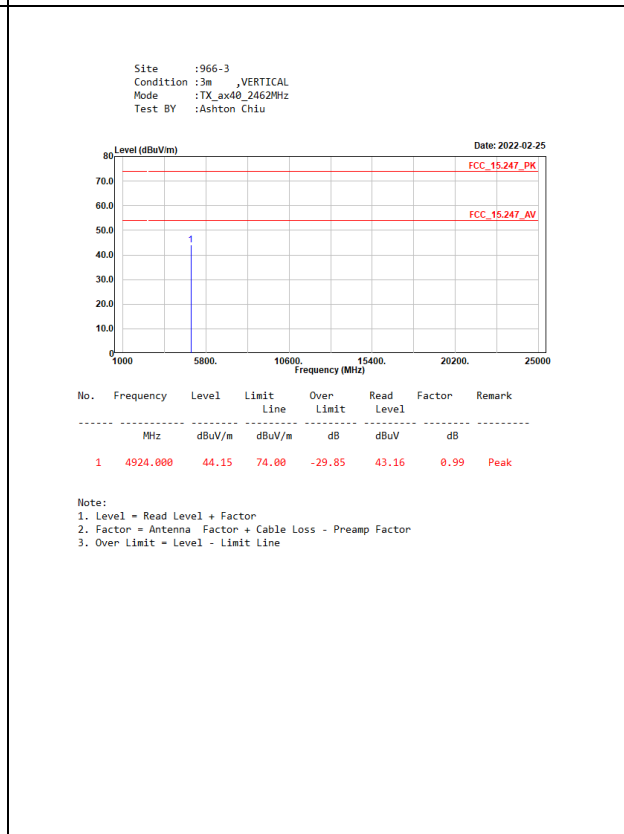
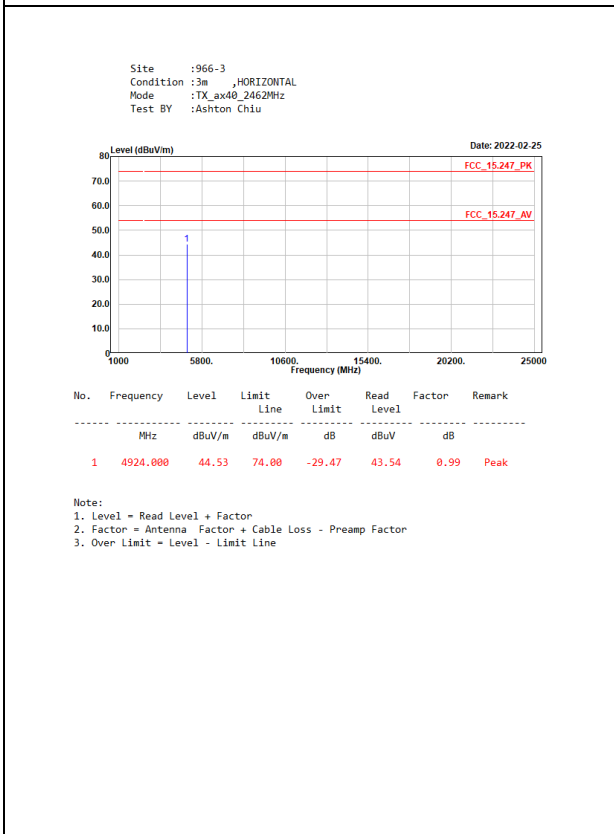
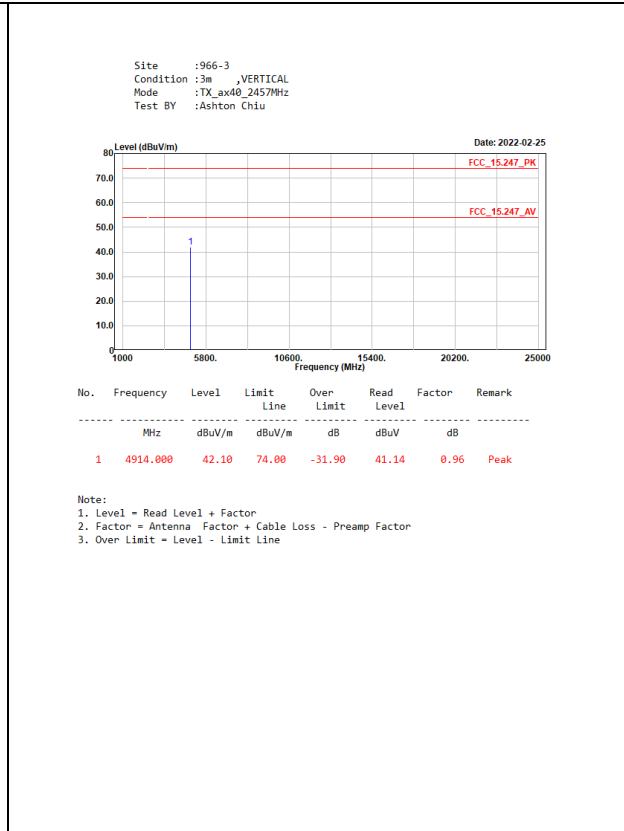
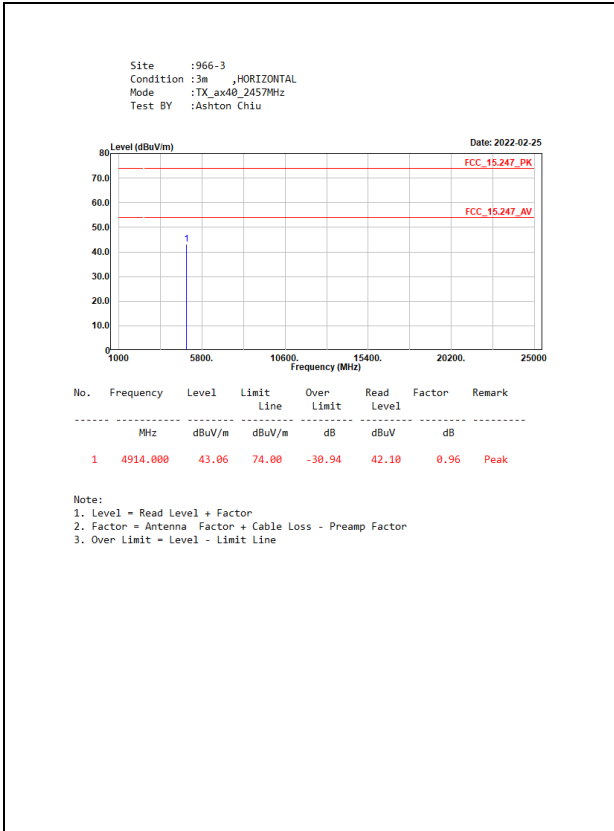


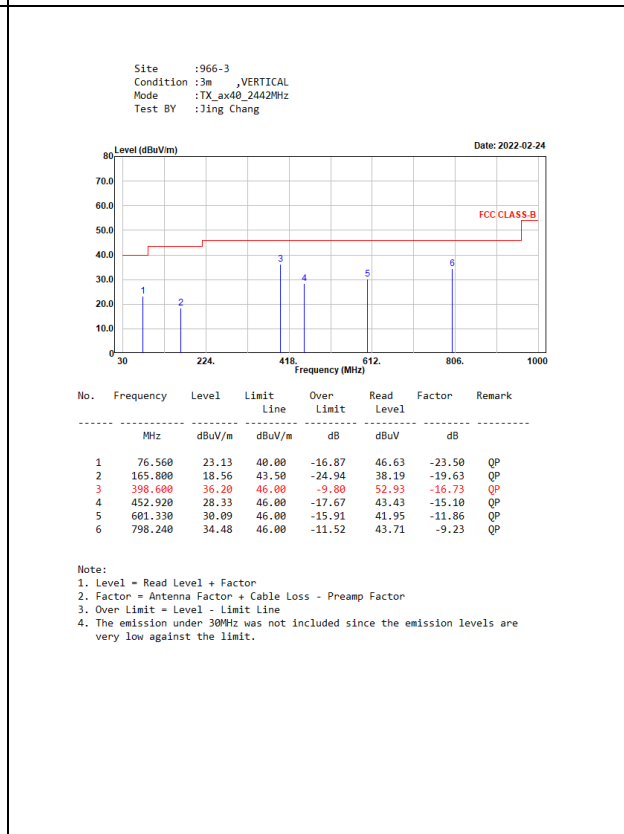
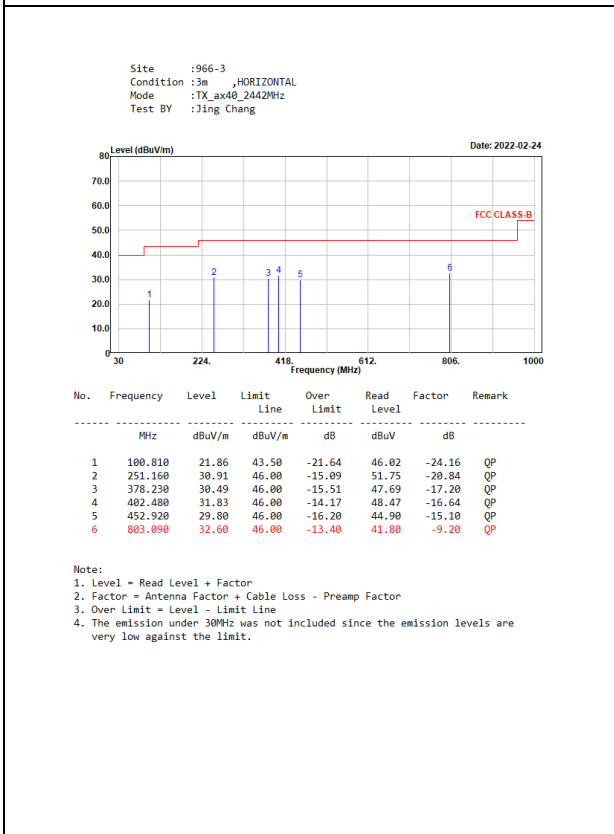
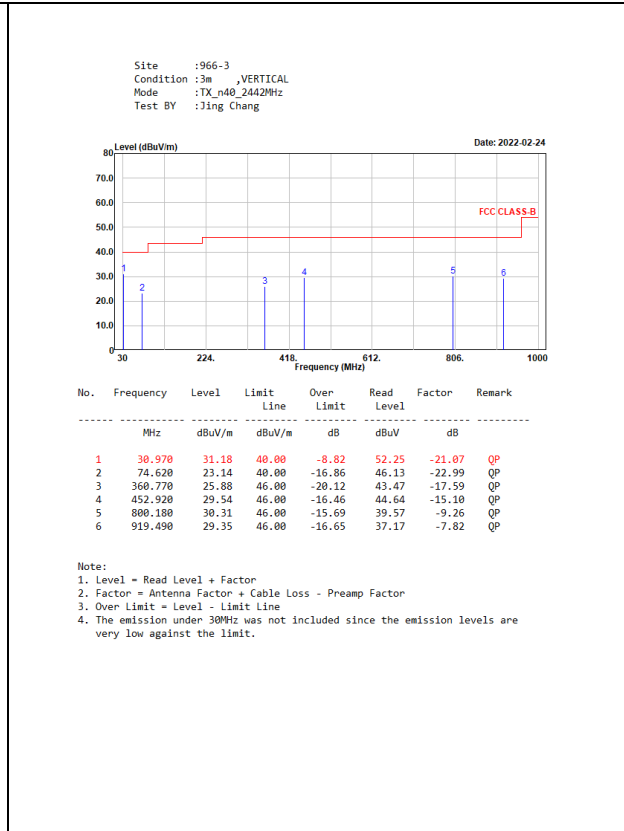
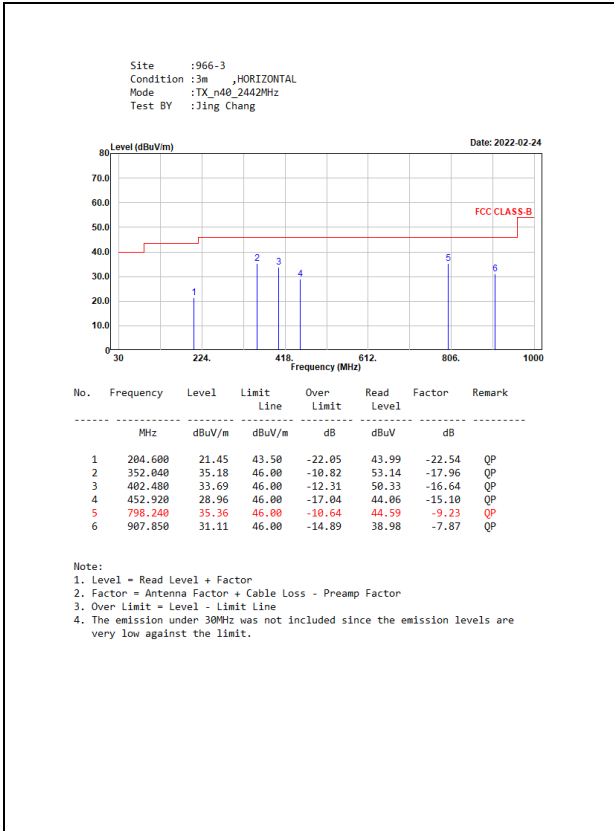




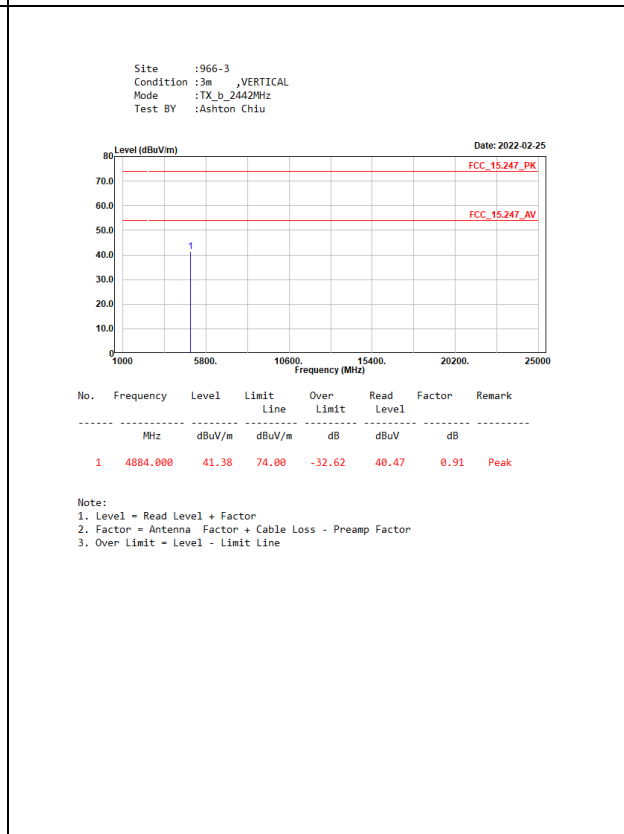
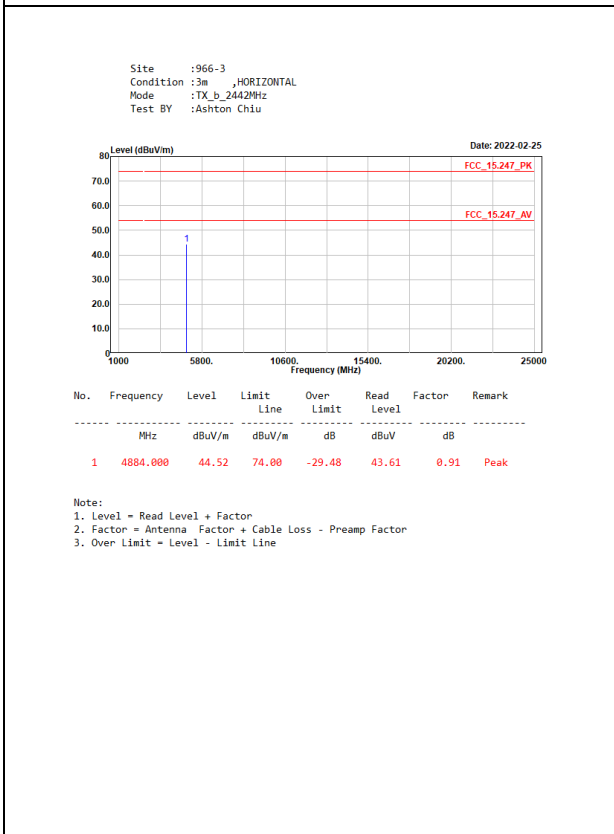
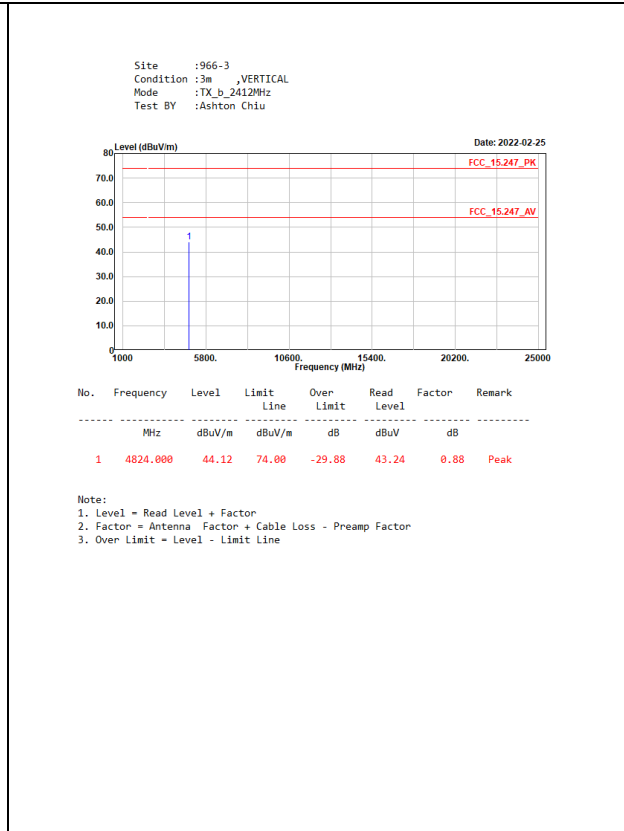
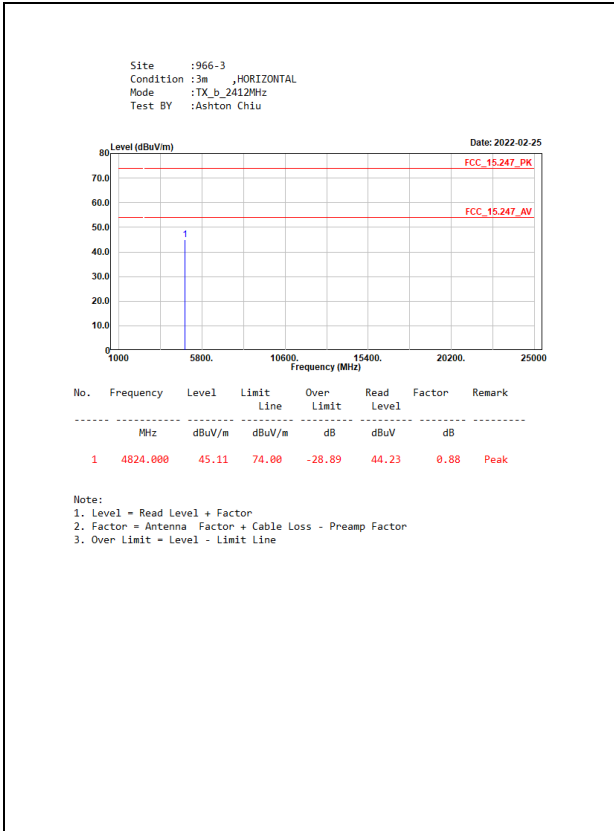


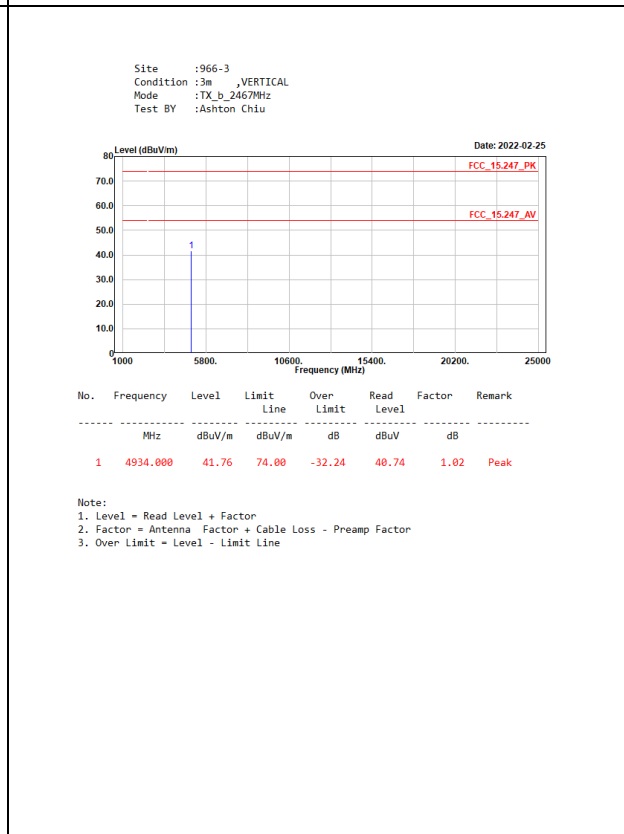
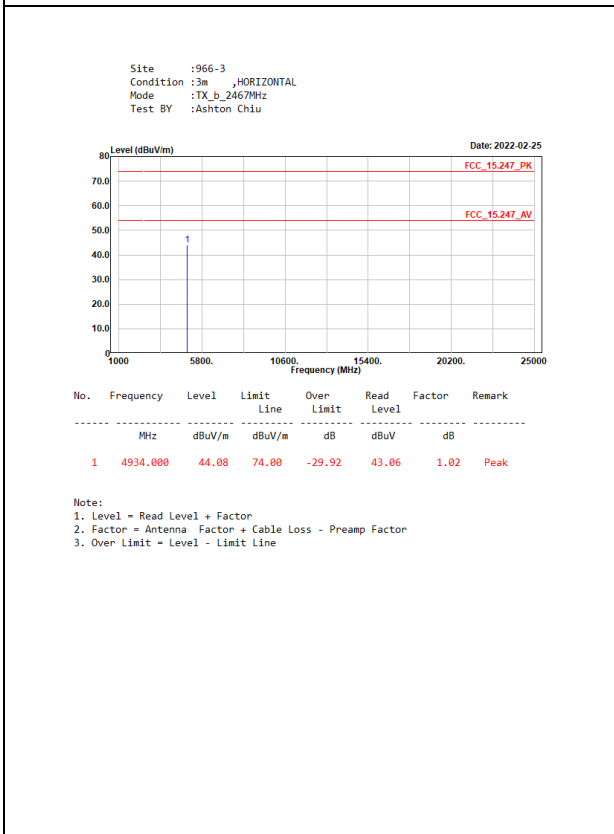
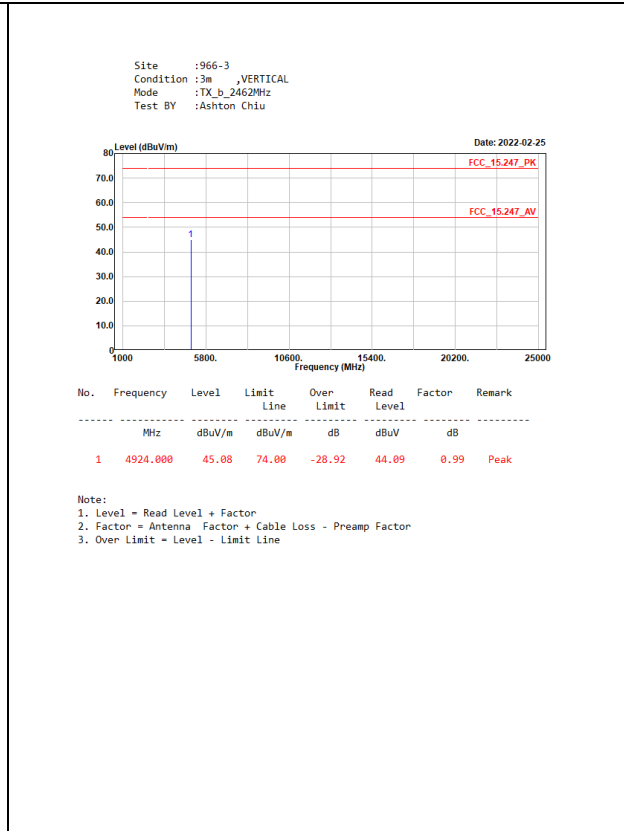
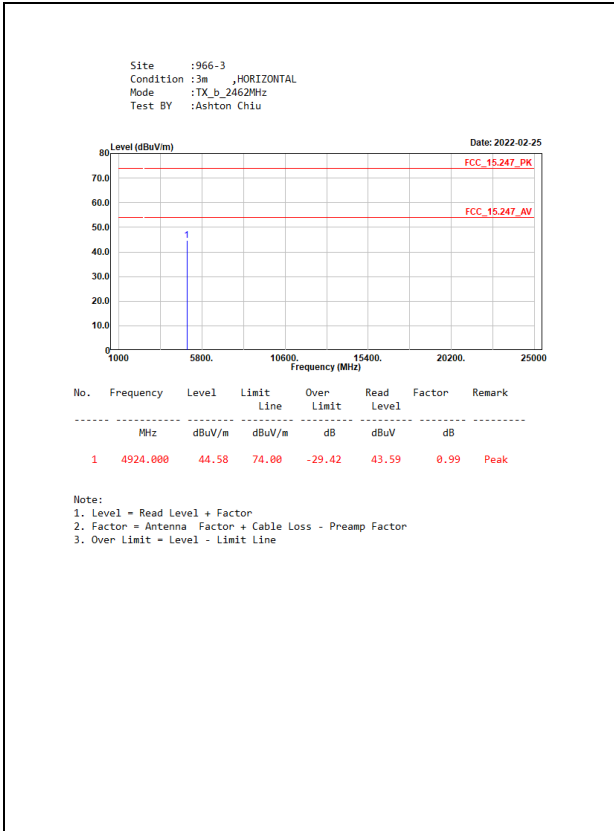


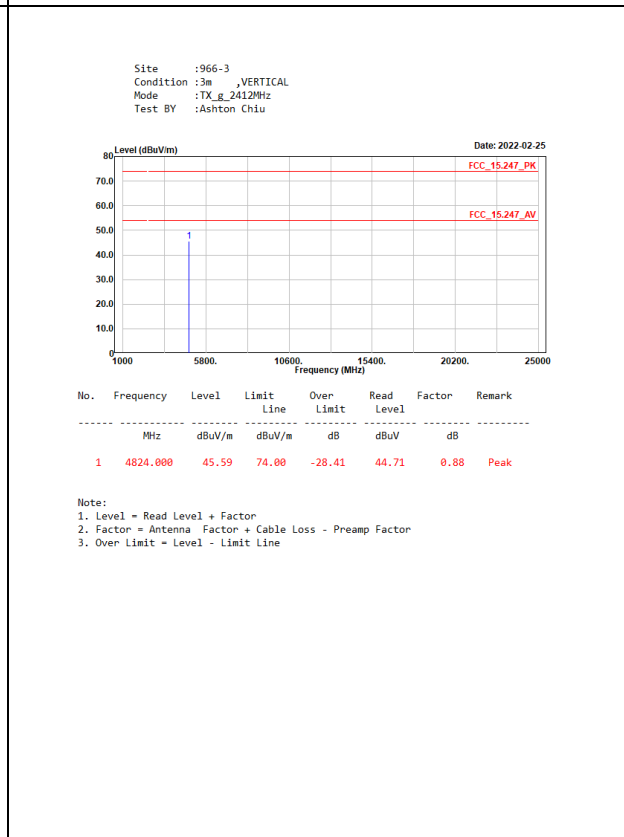
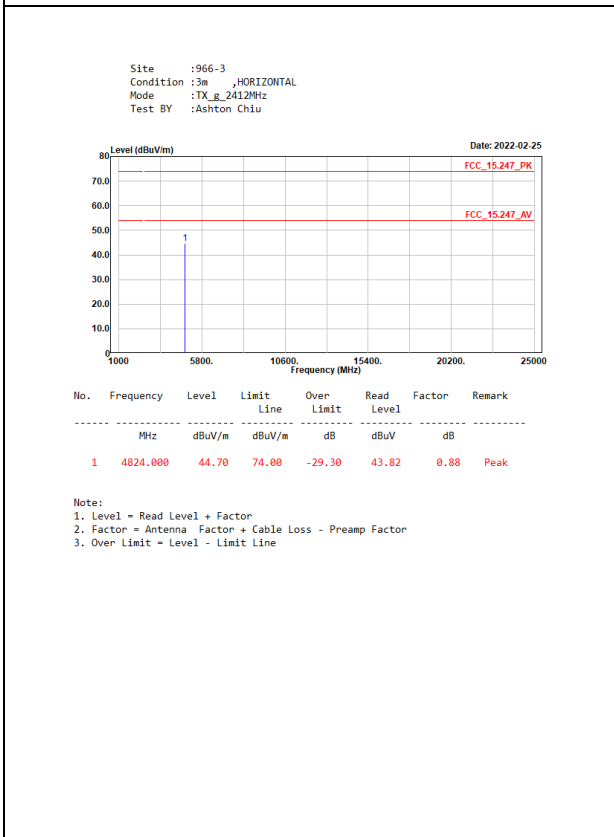
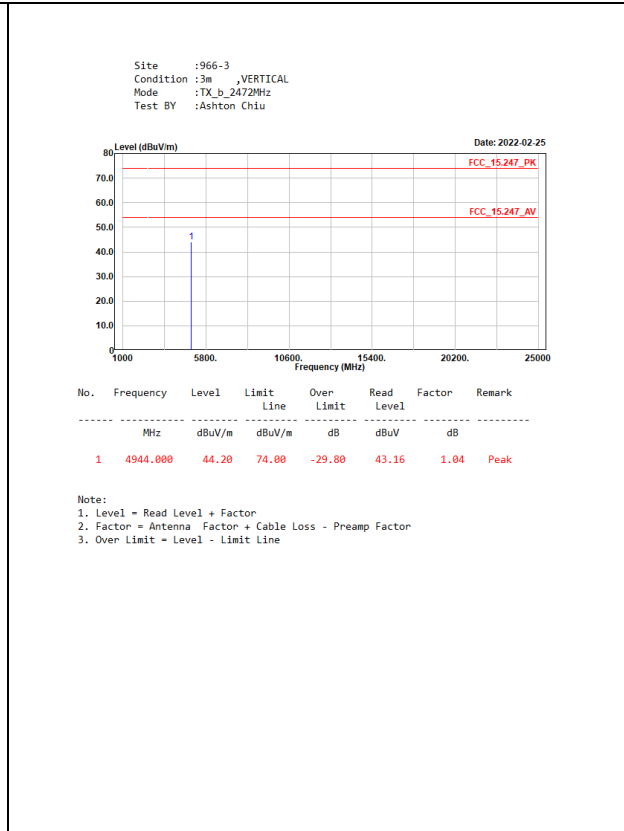
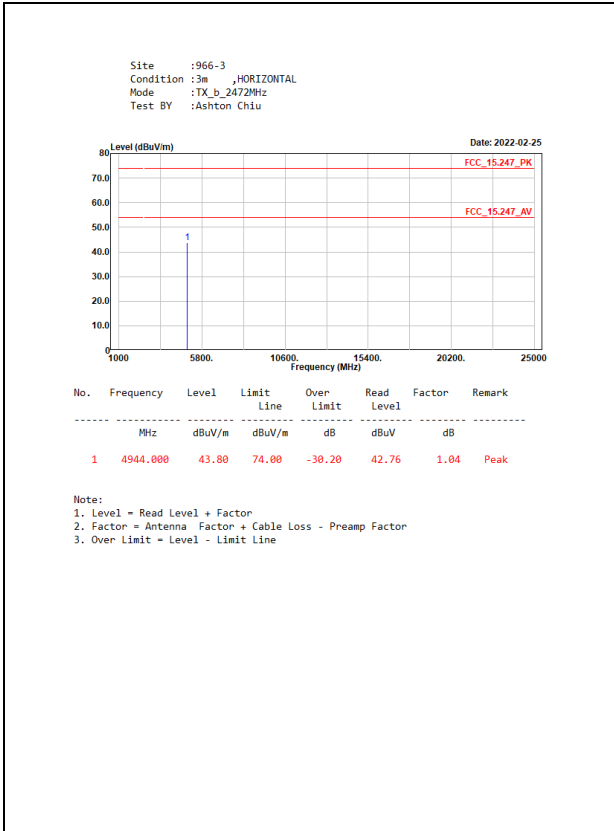


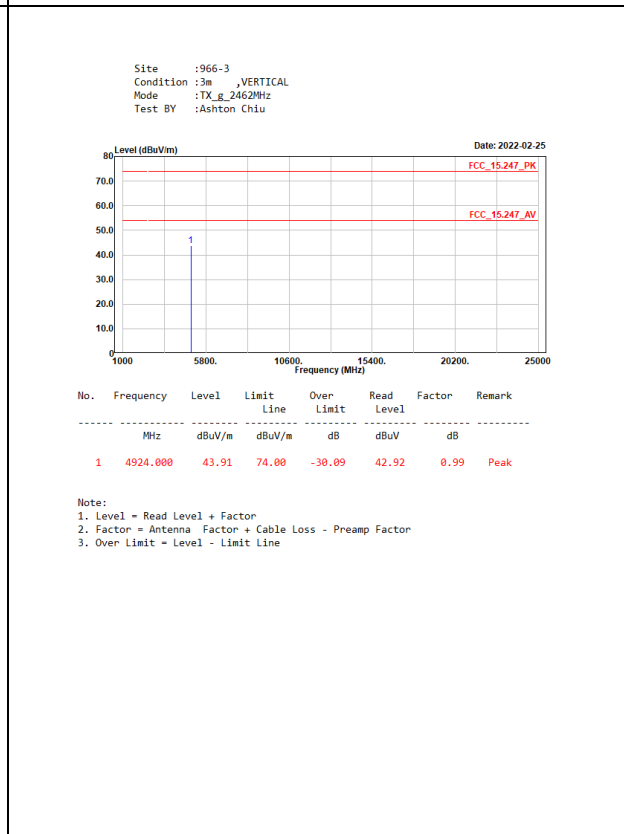
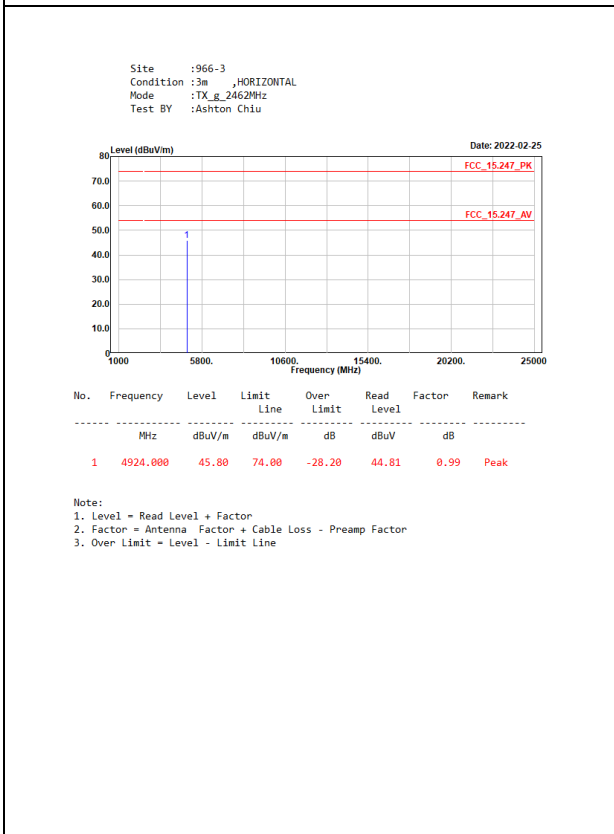
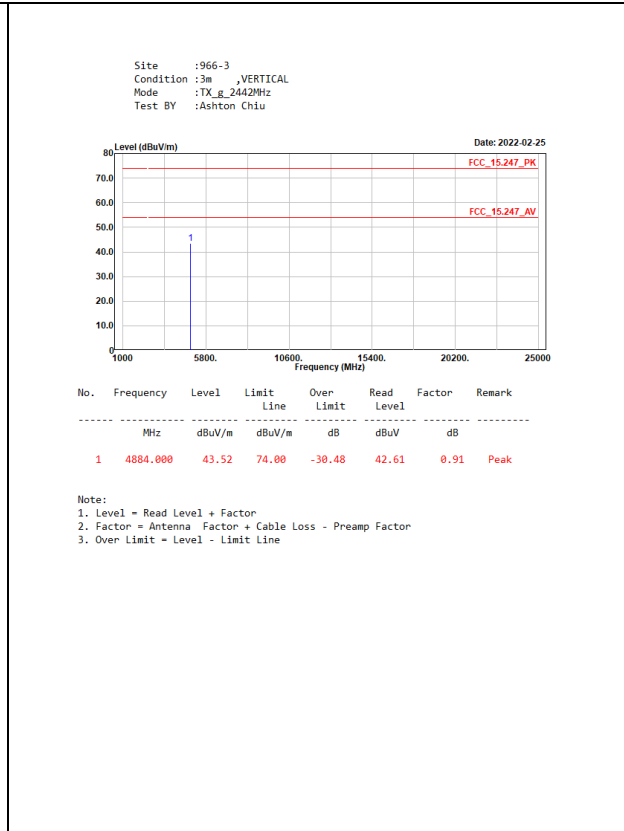
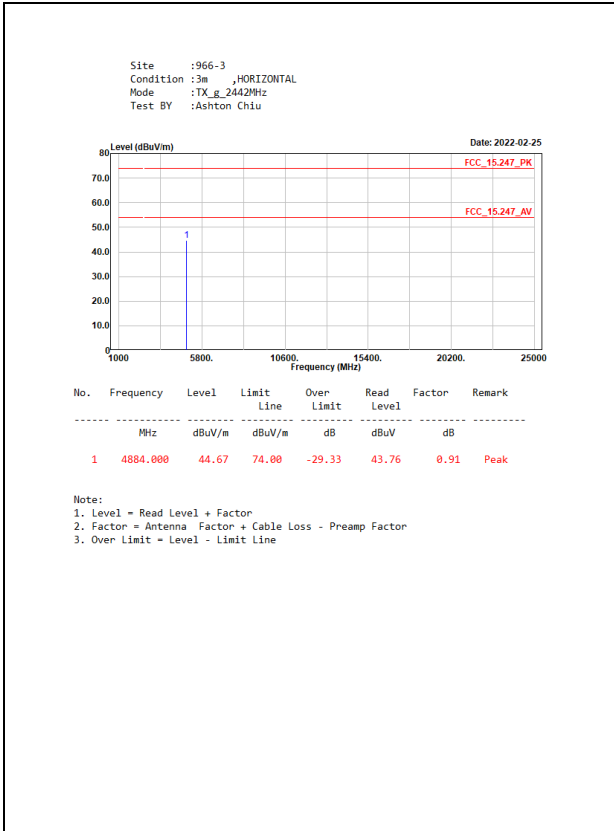


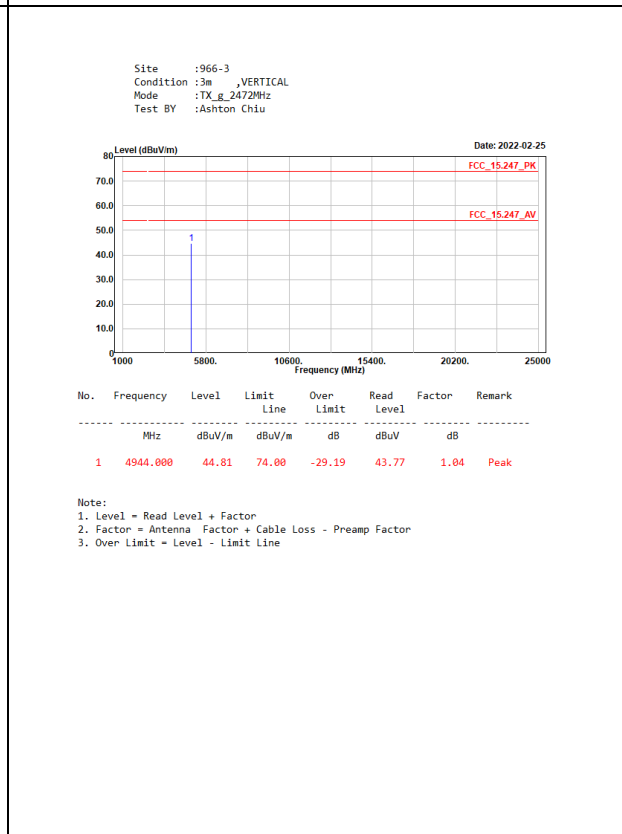
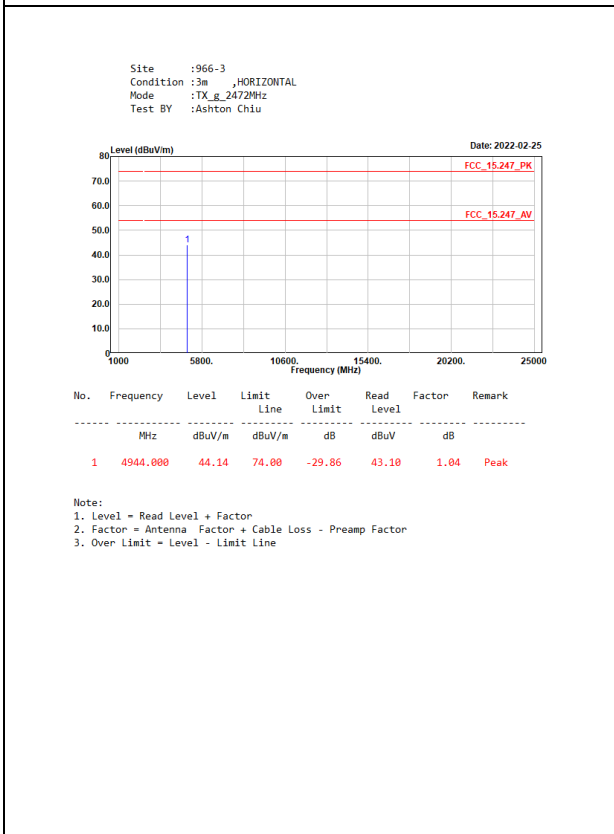
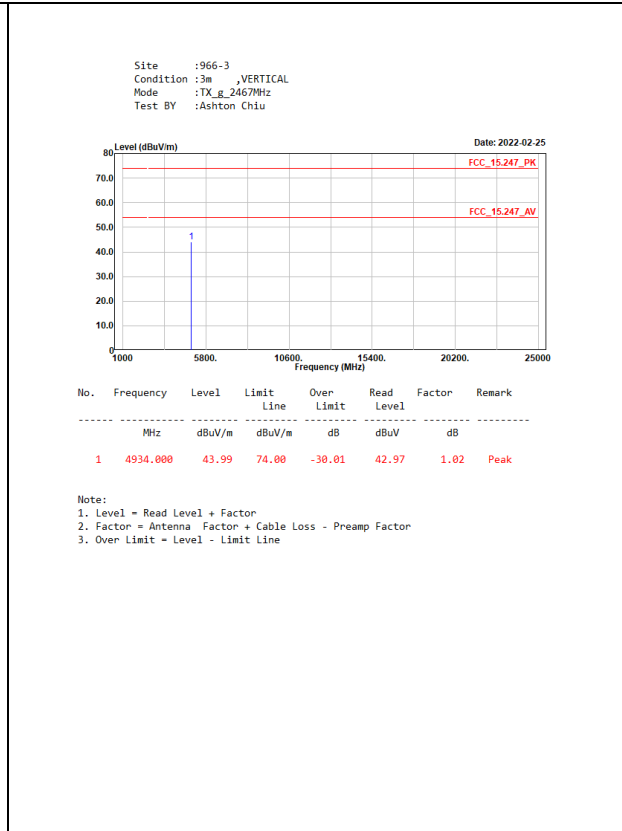
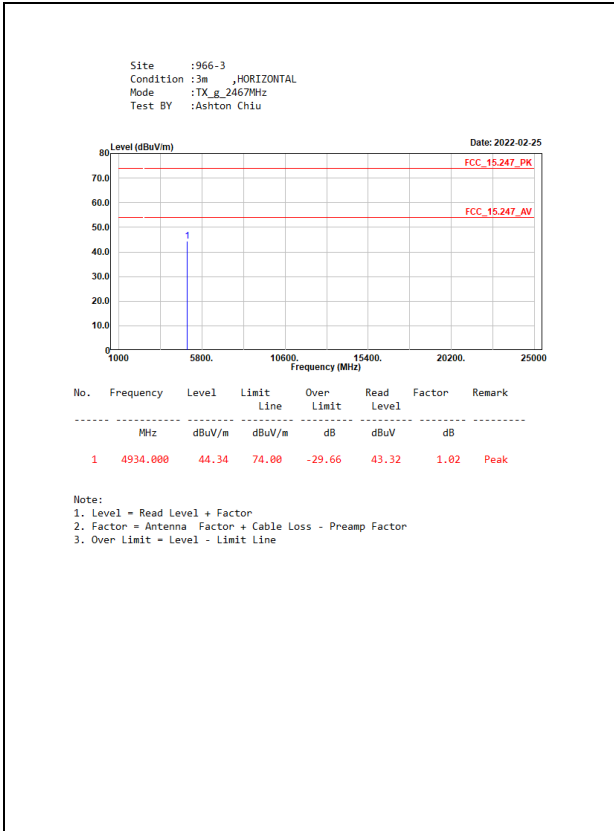
SISO B

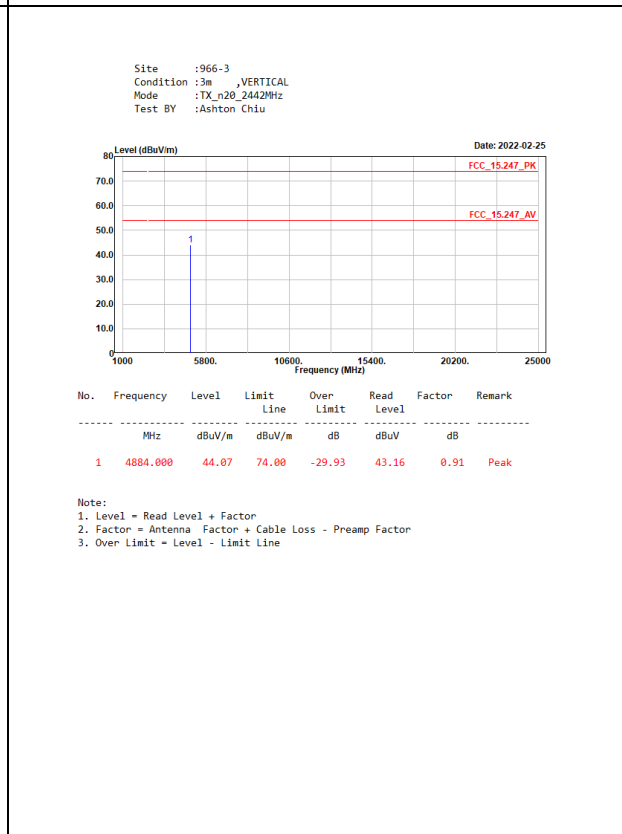
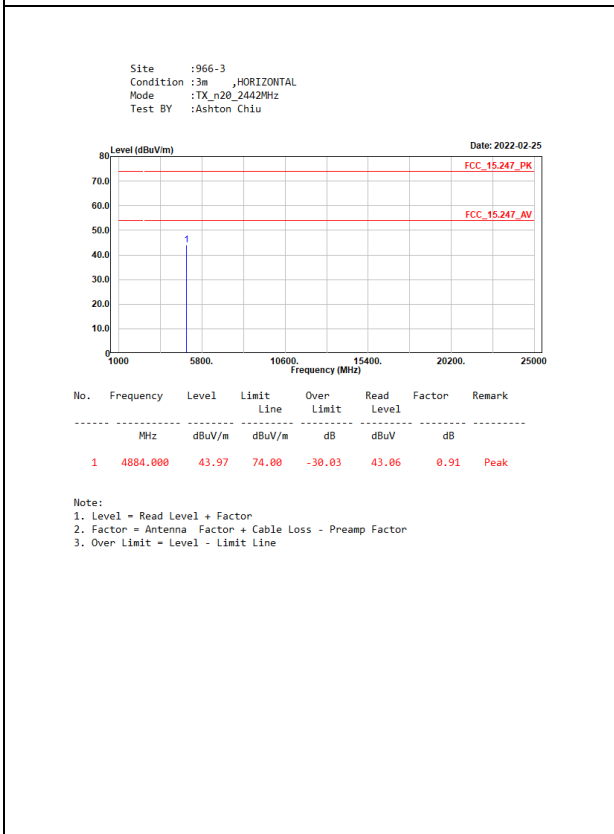
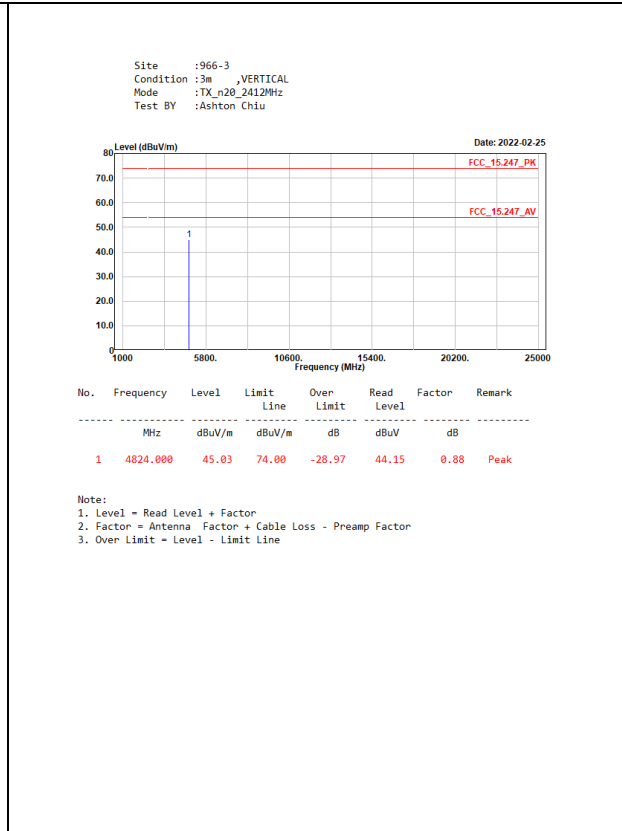
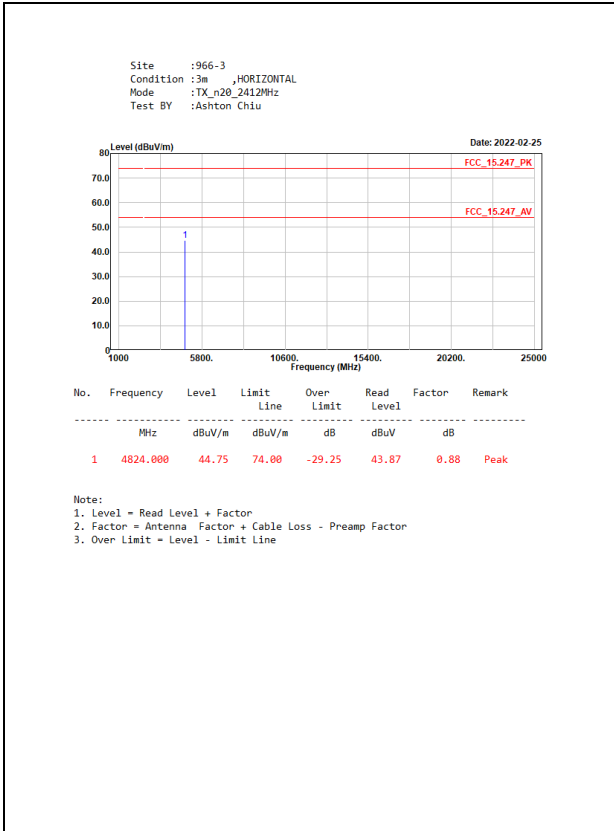


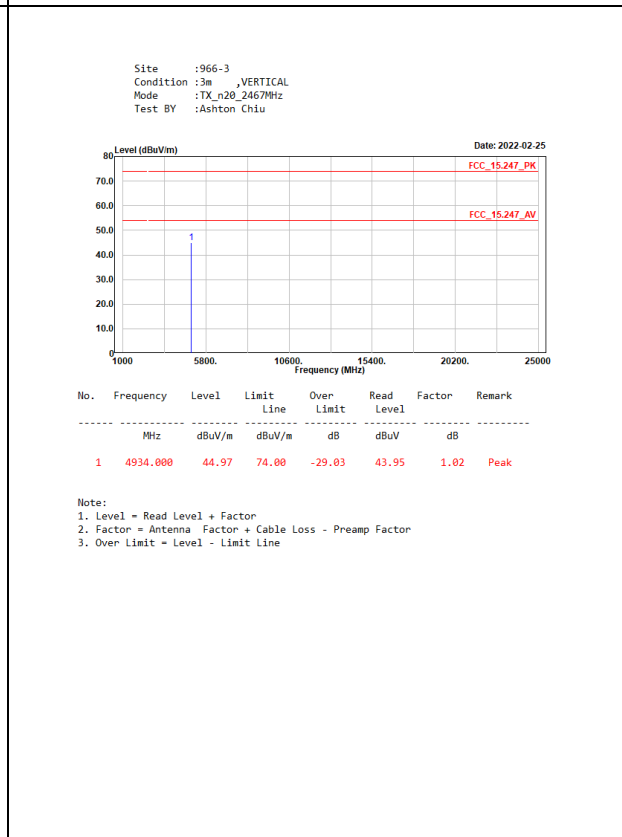
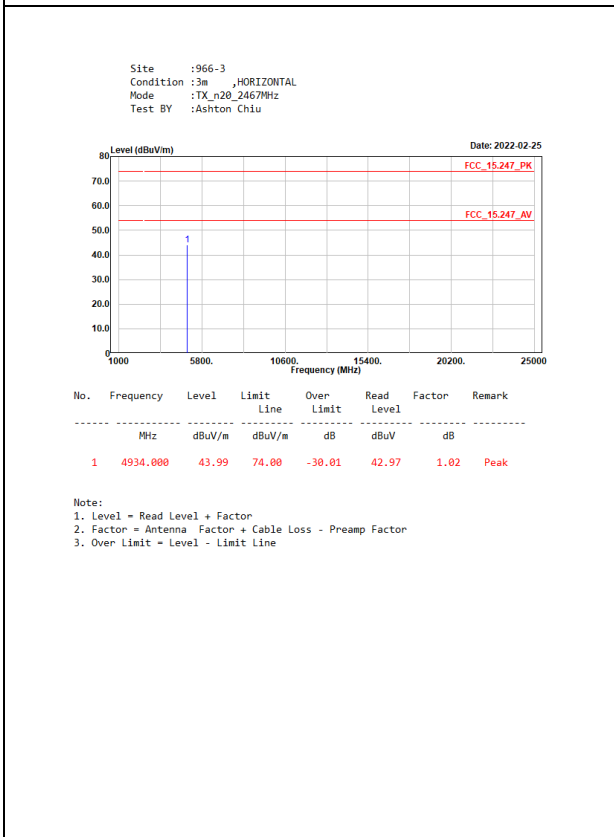
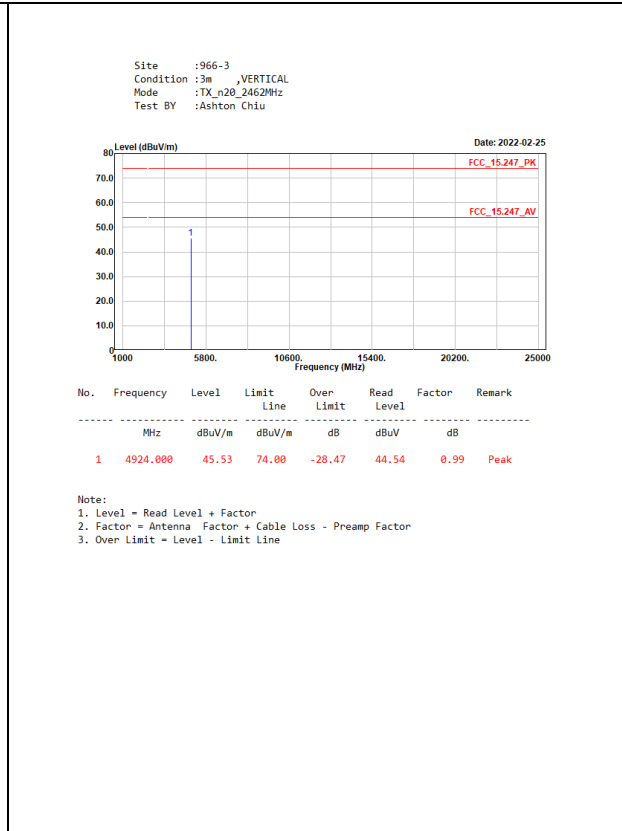
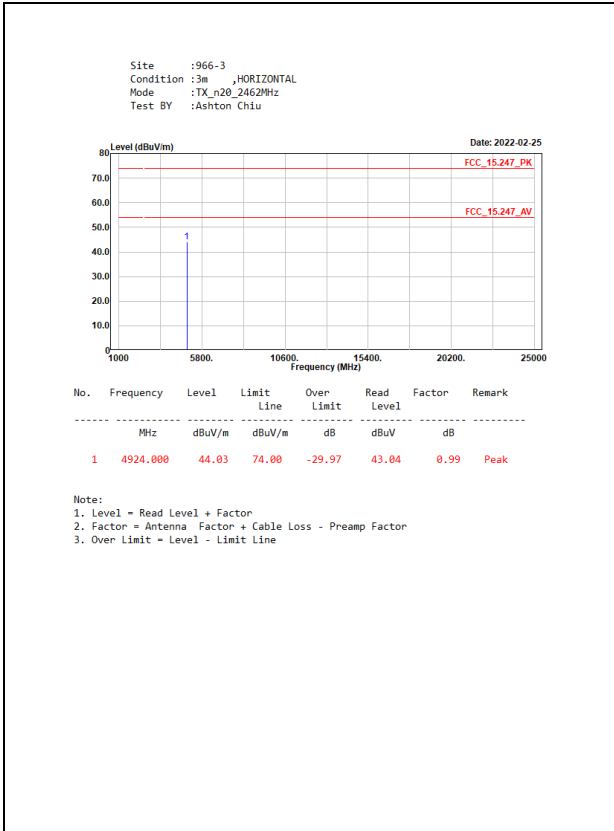


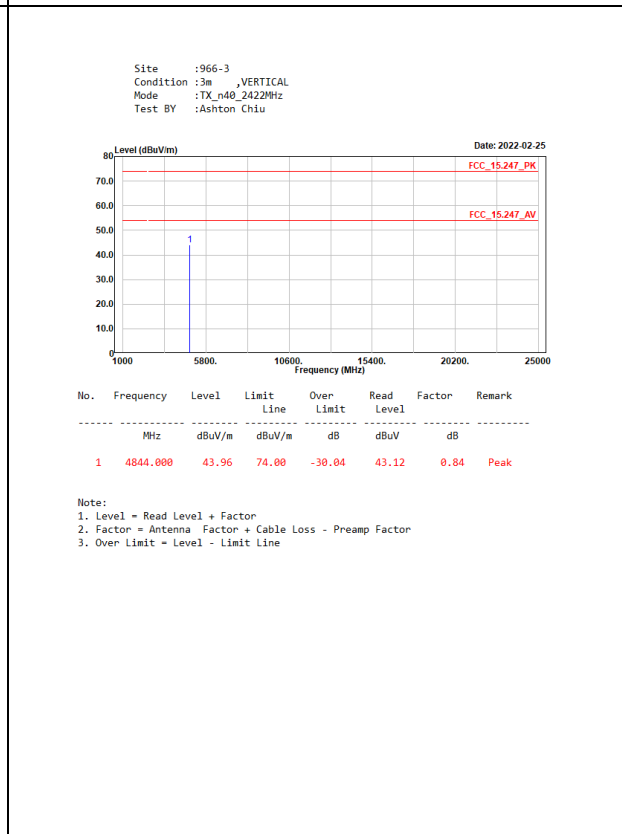
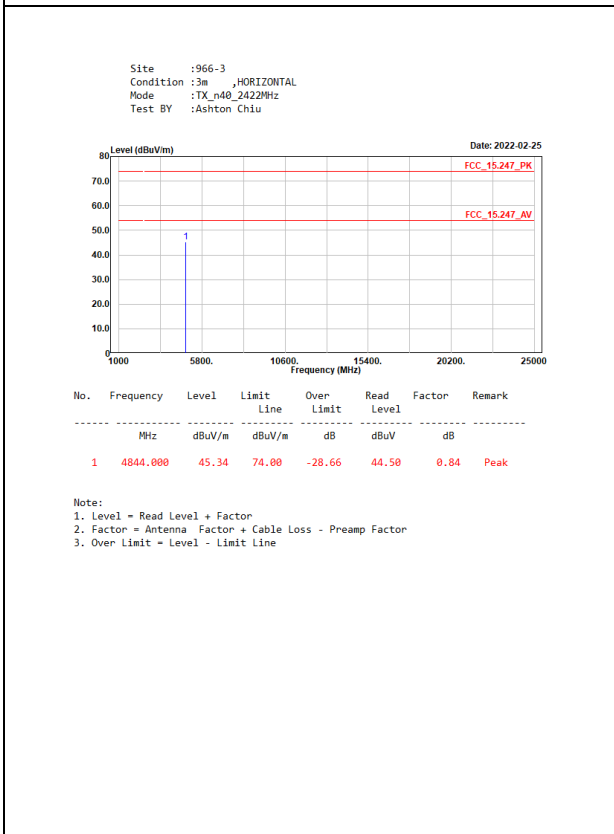
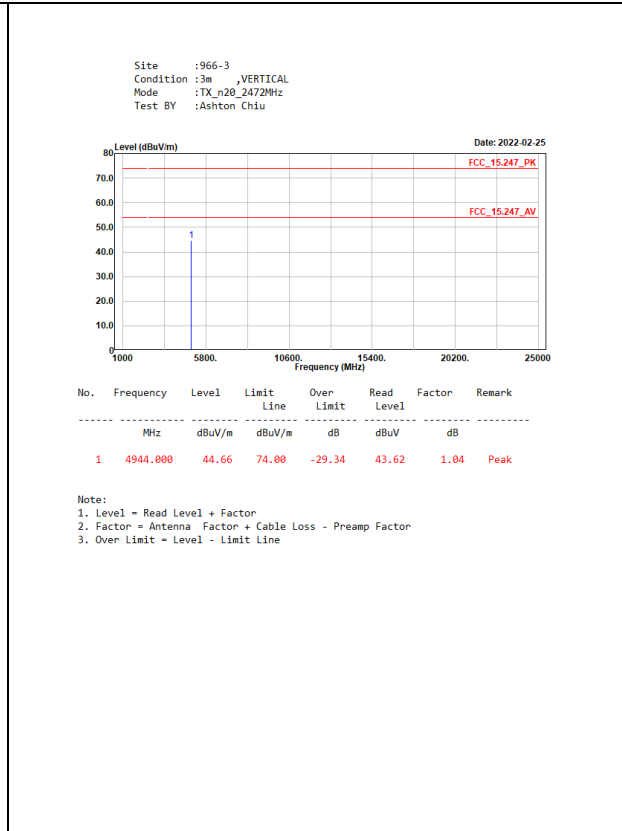
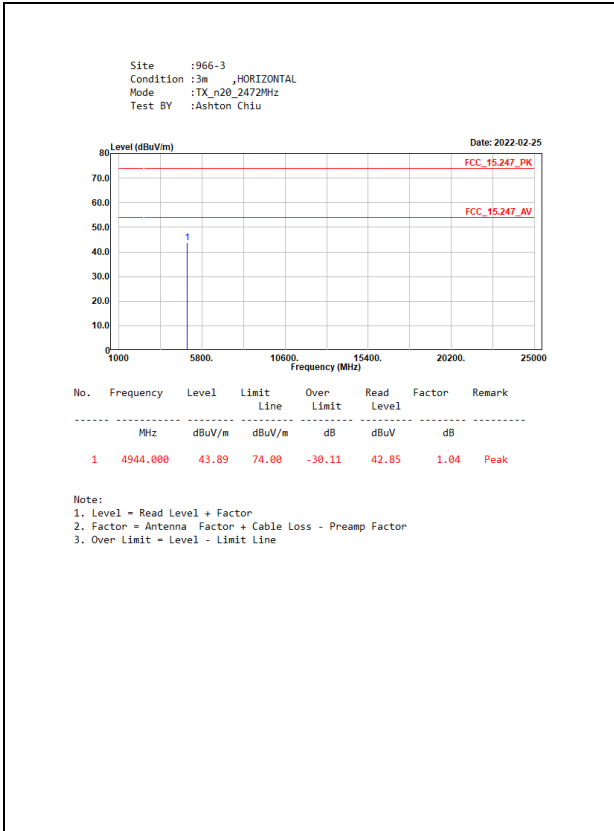


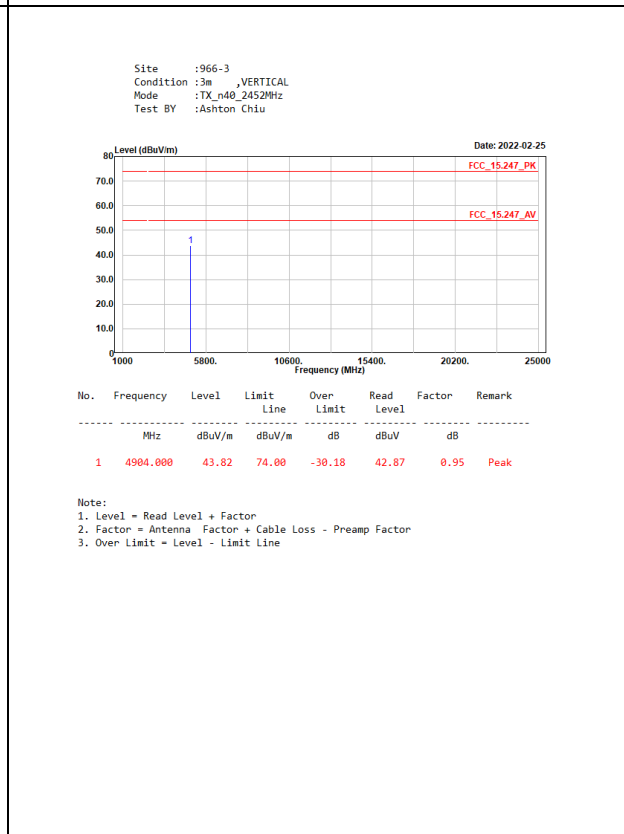
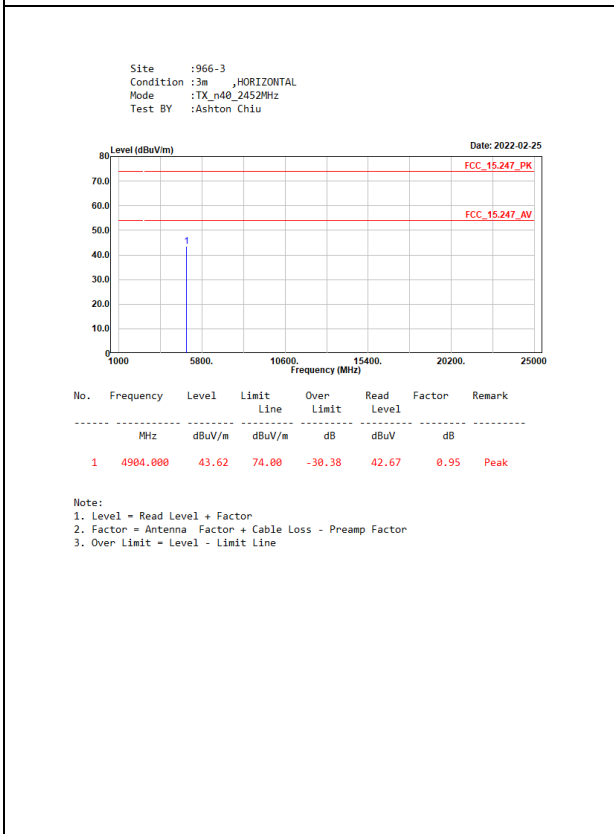
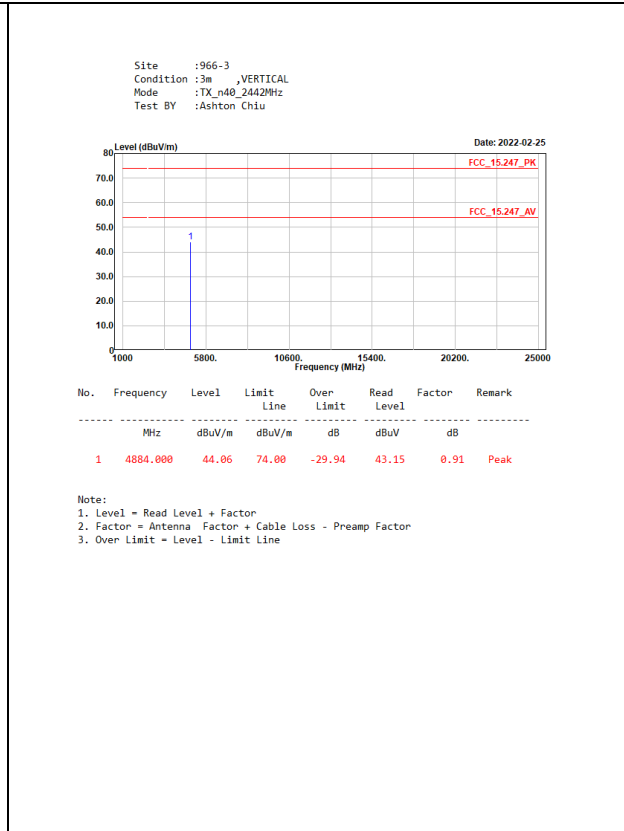
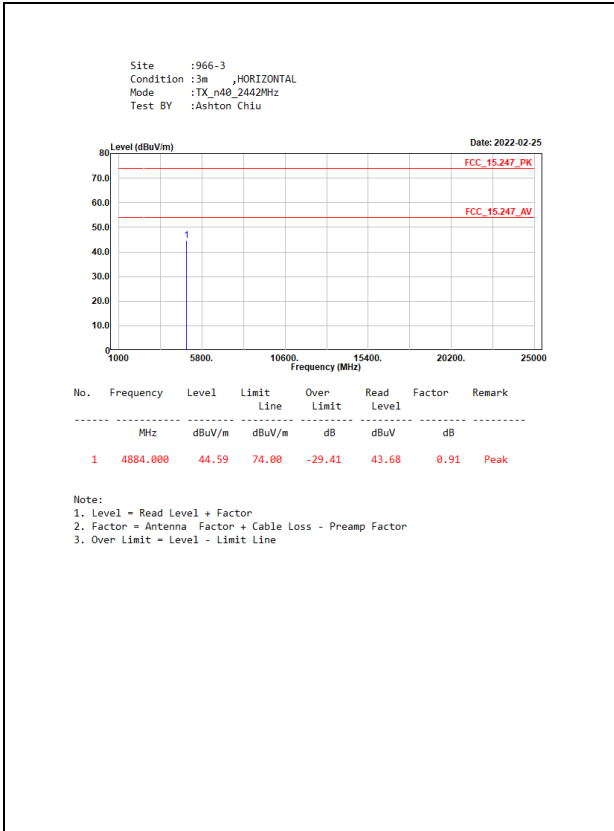


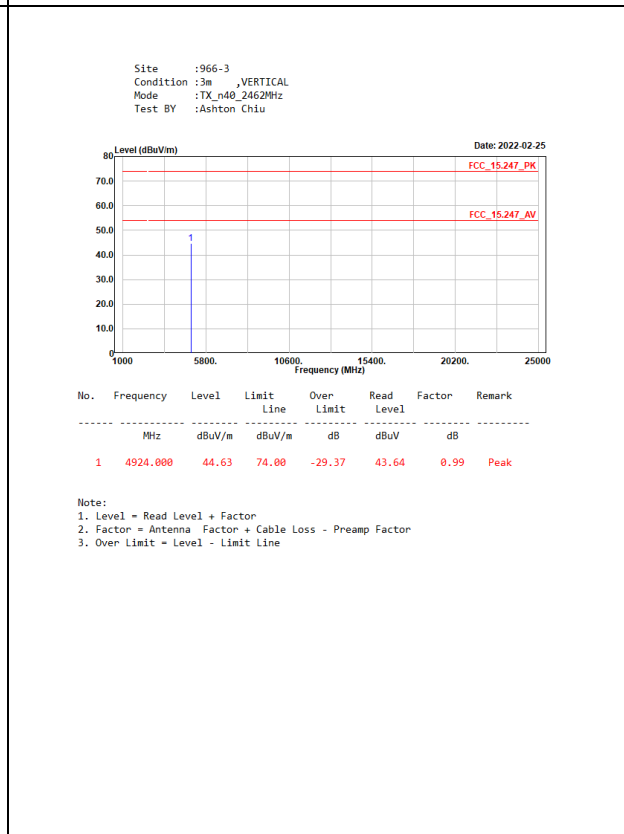
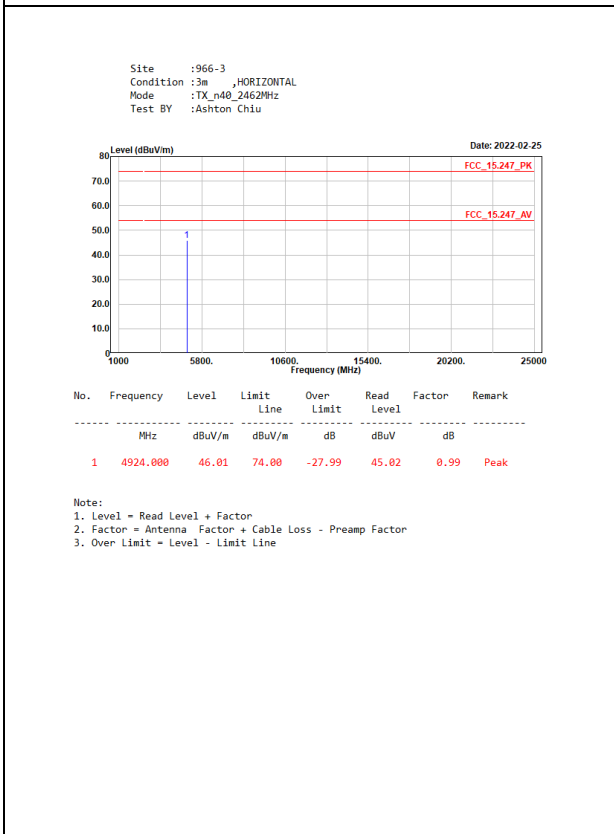
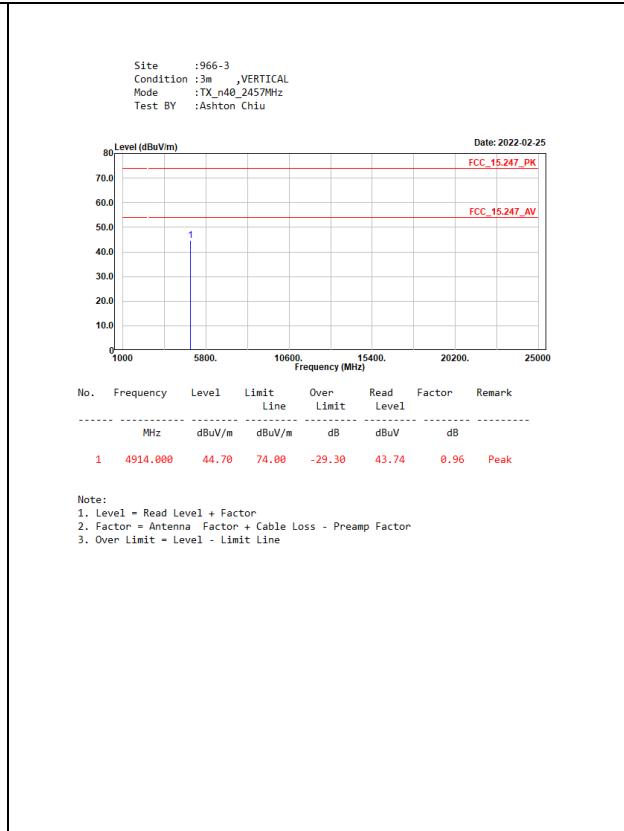
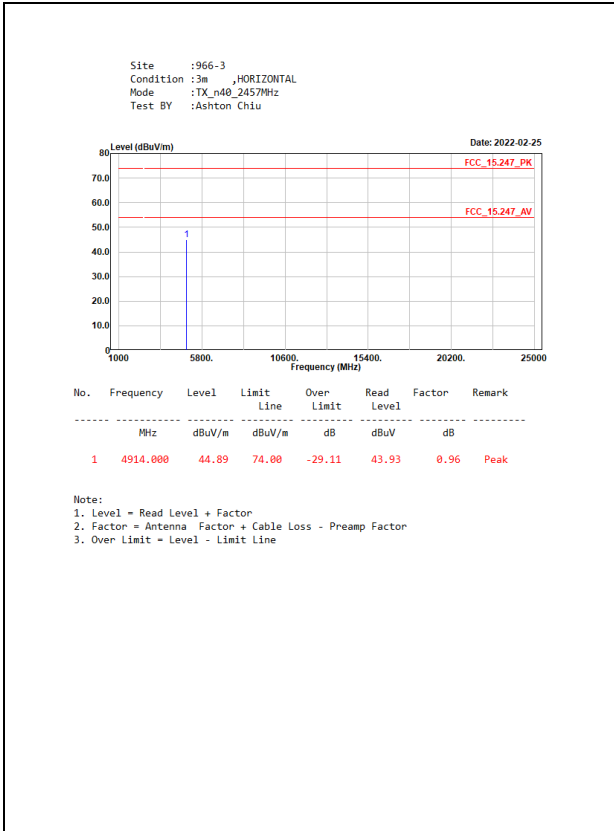


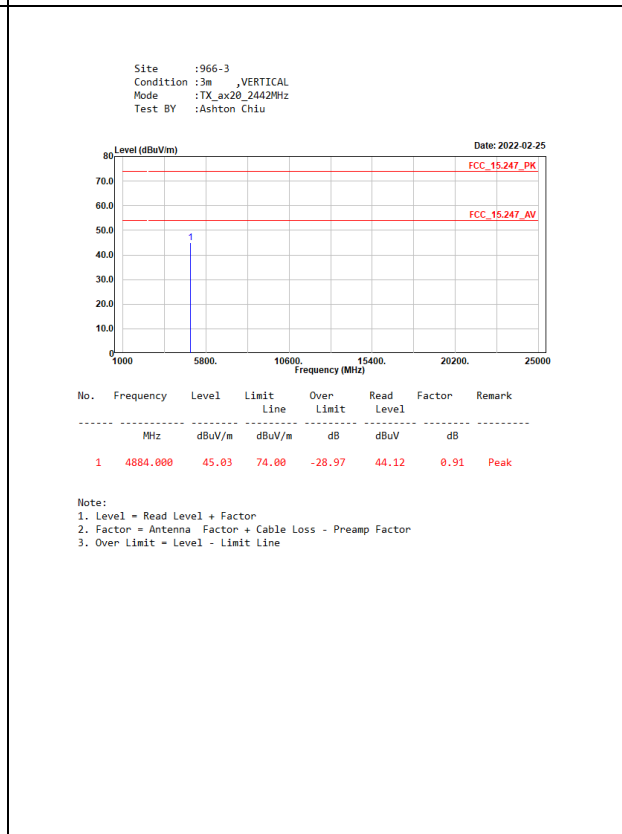
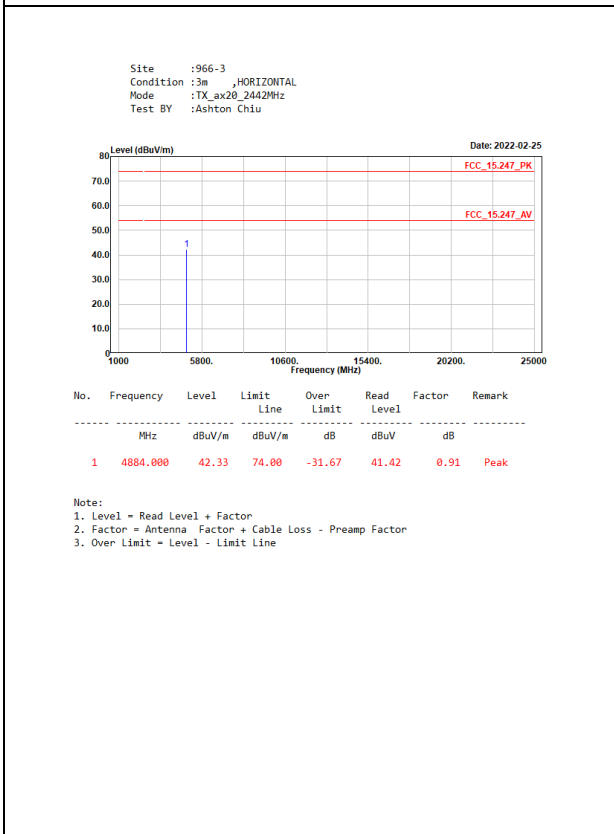
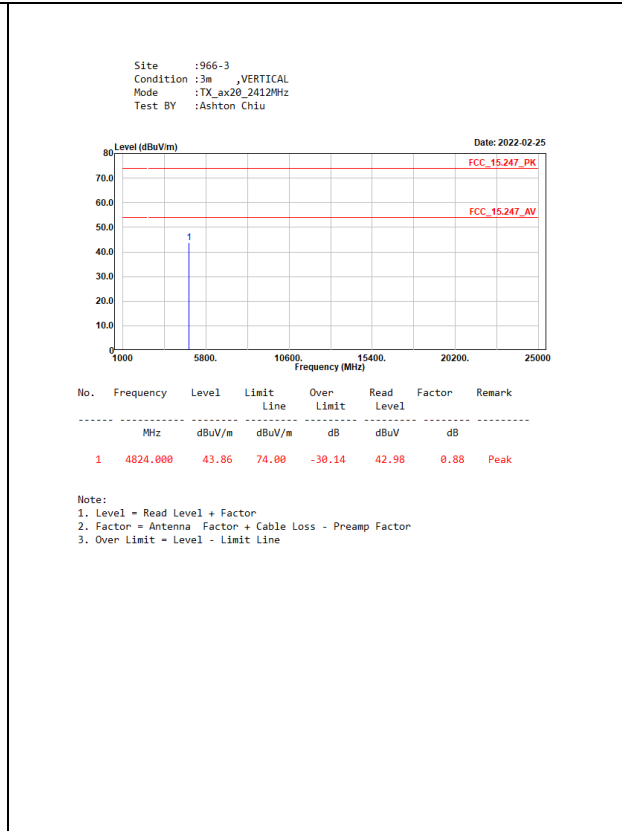
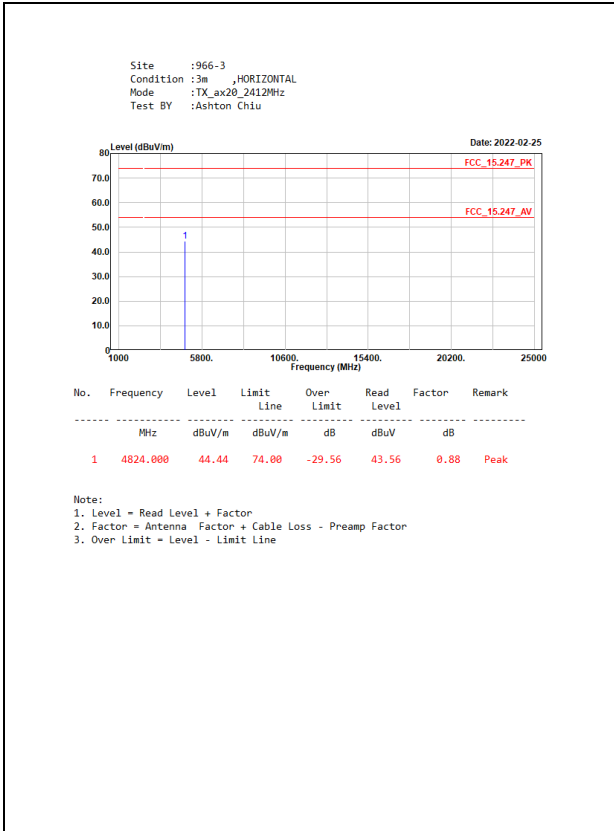


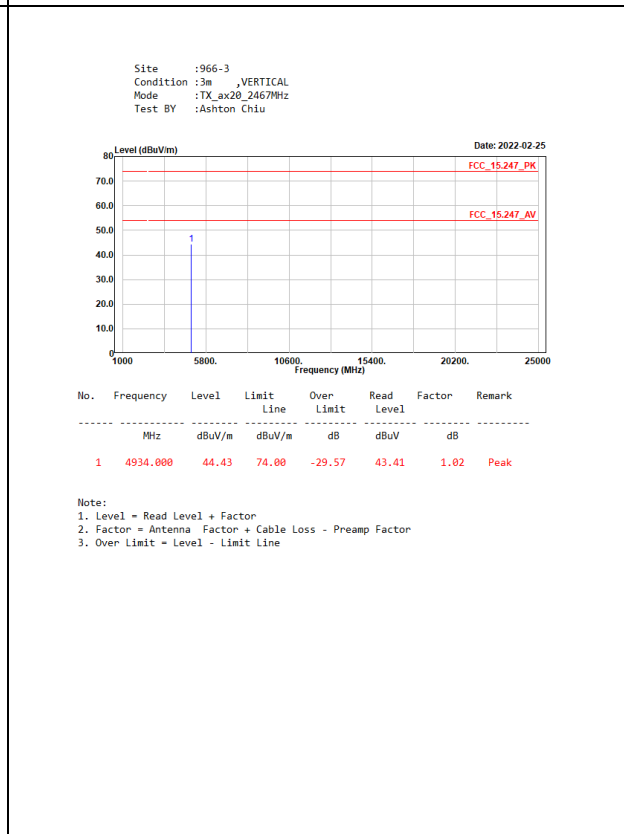
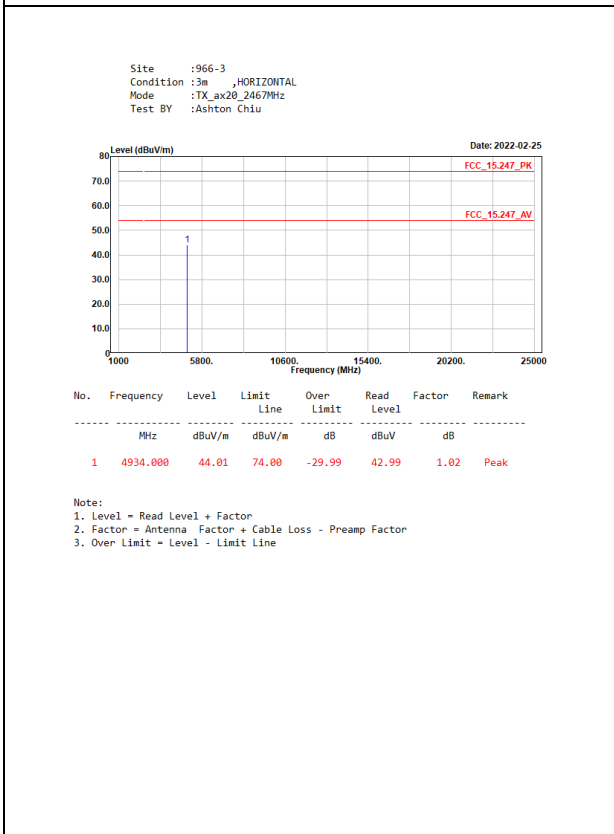
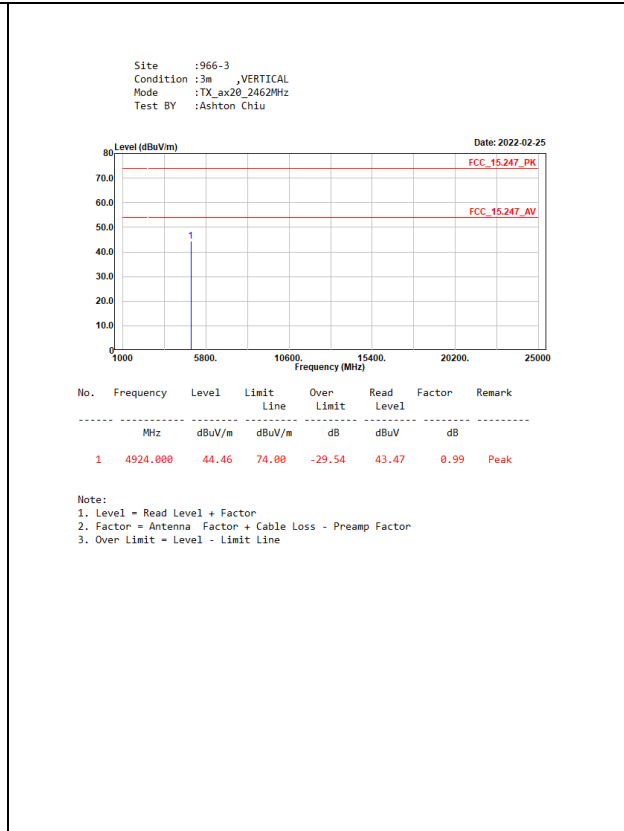
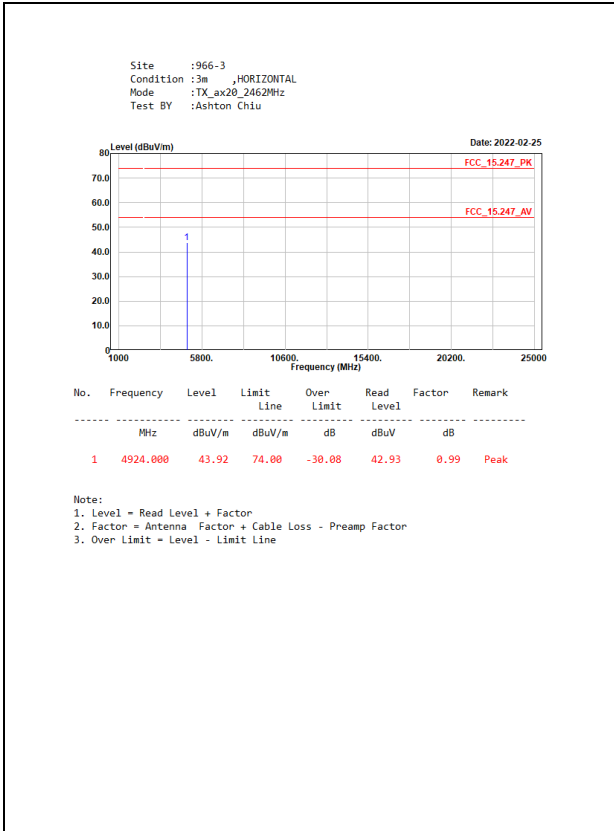


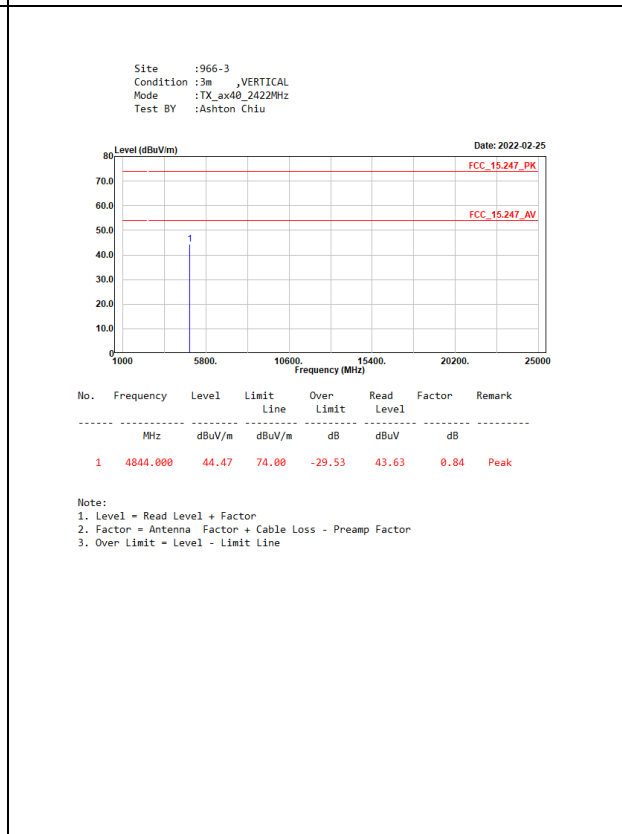
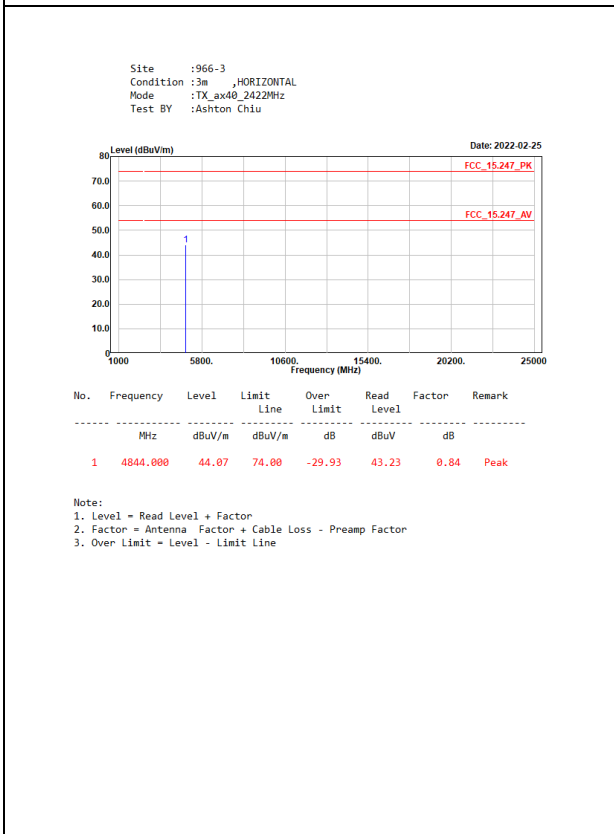
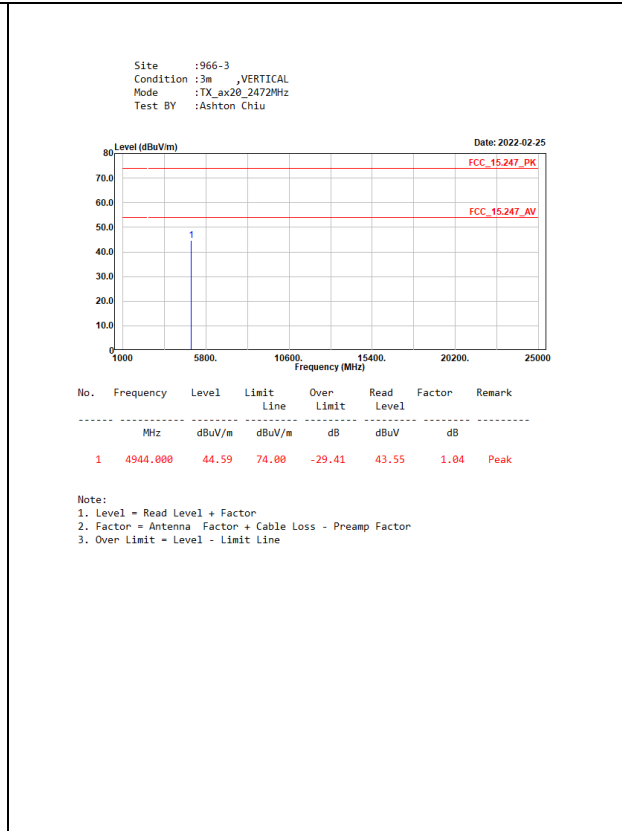
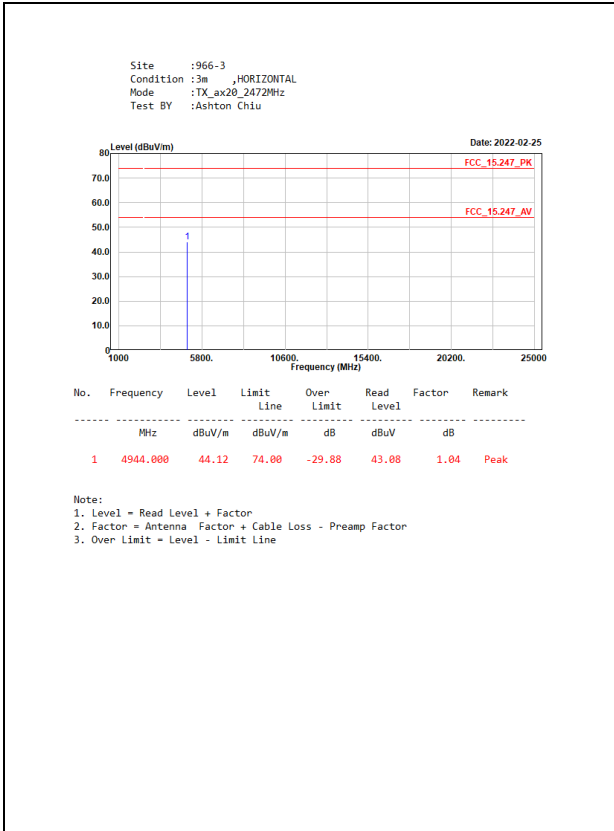


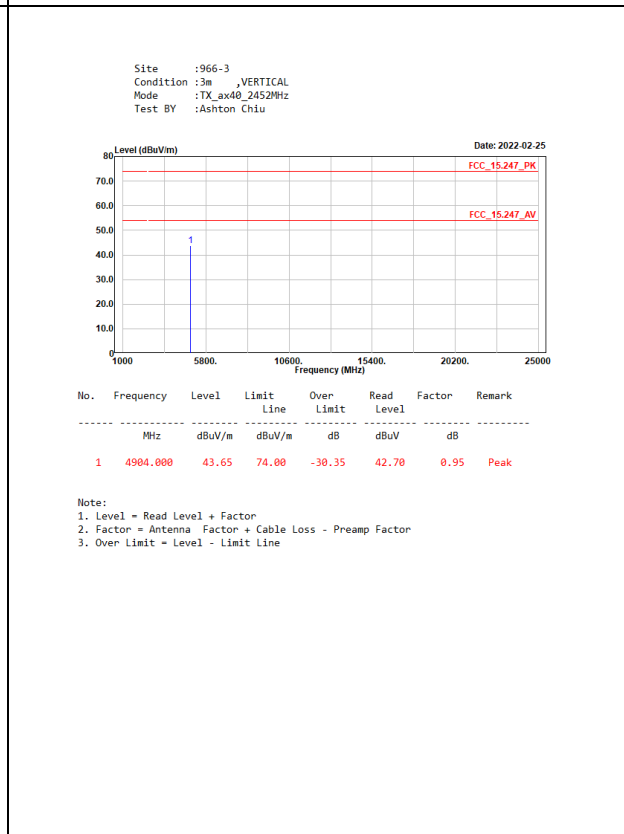
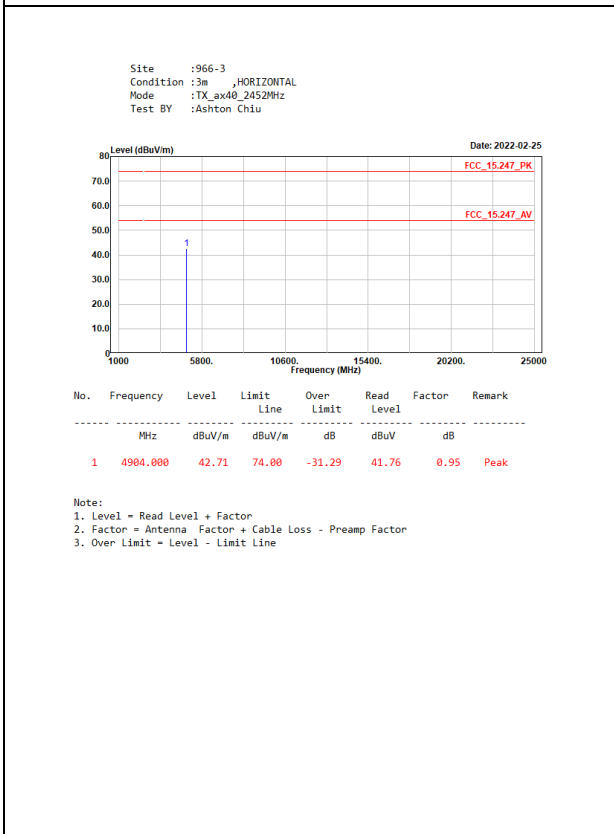
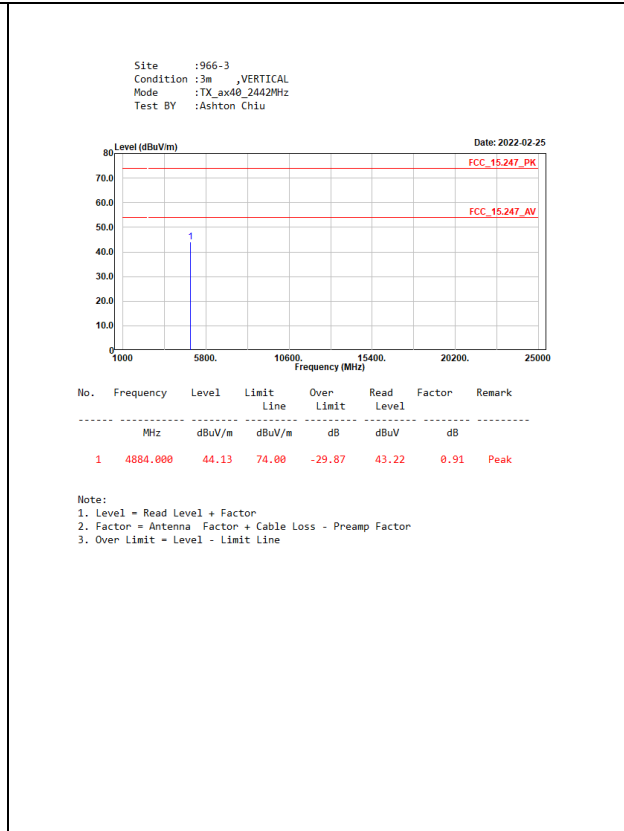
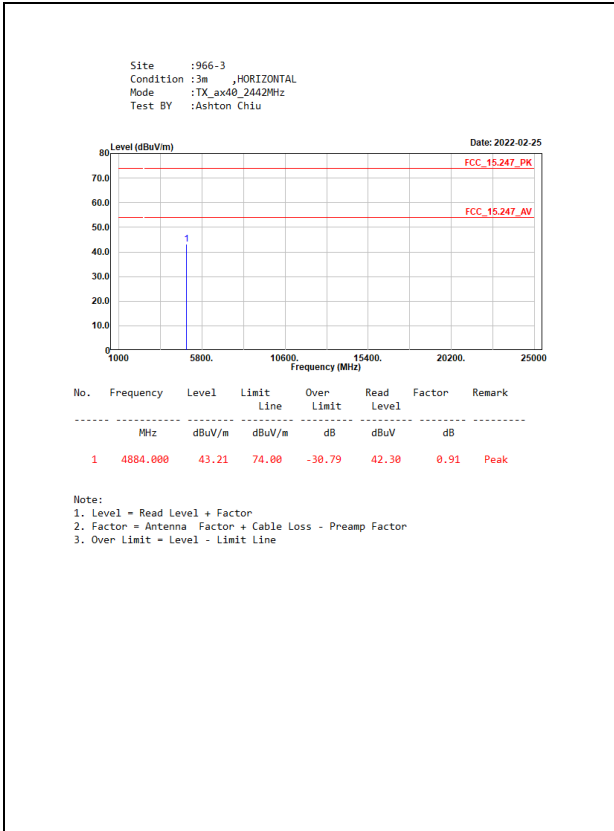


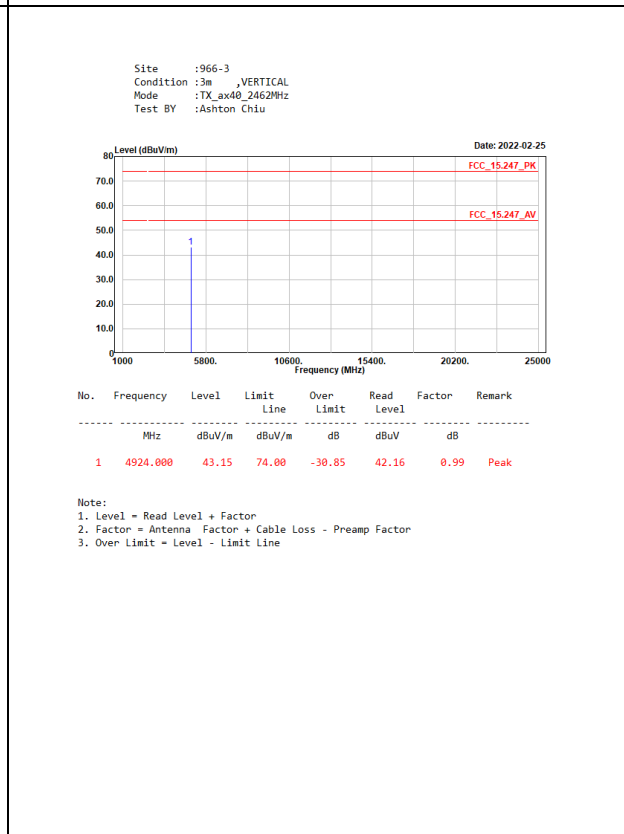
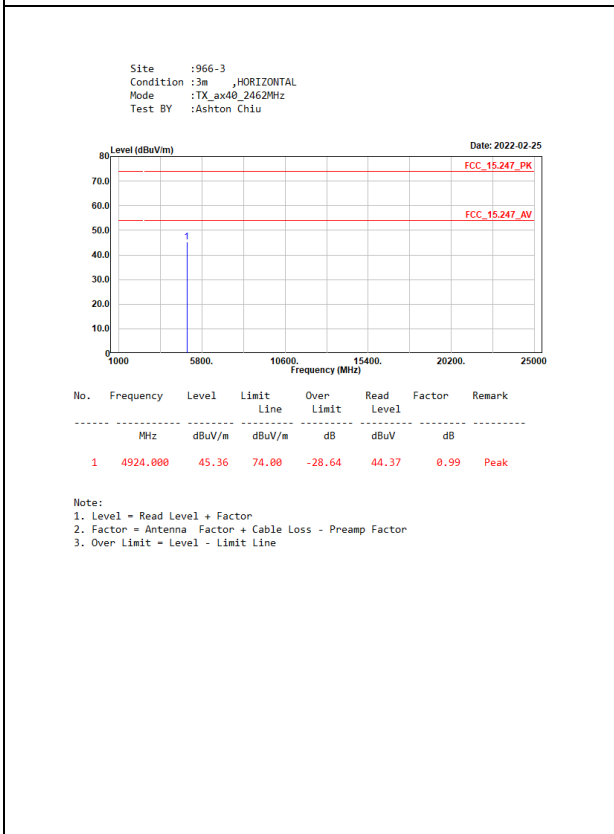
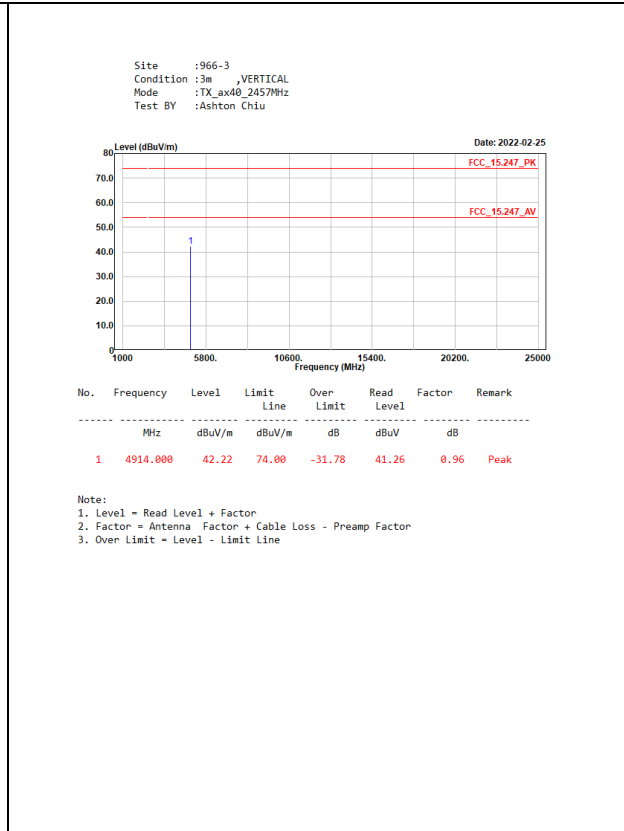
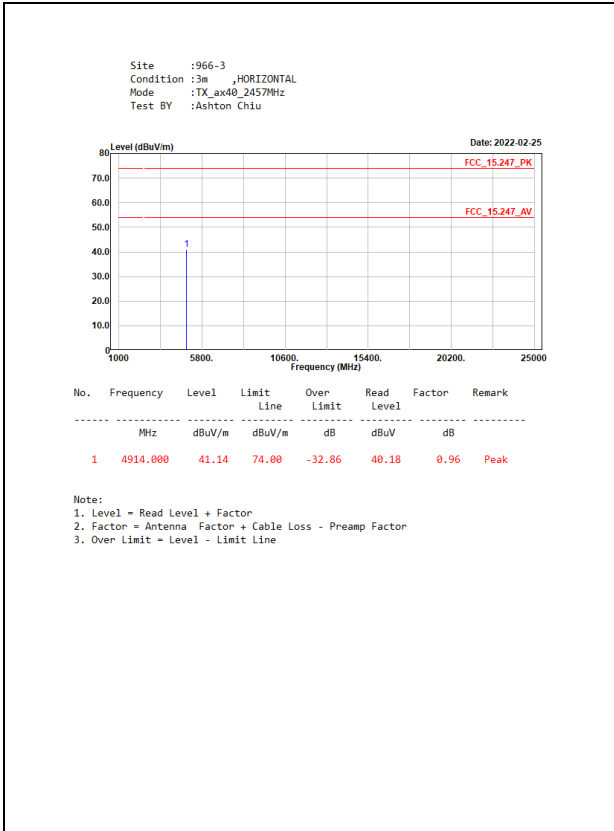


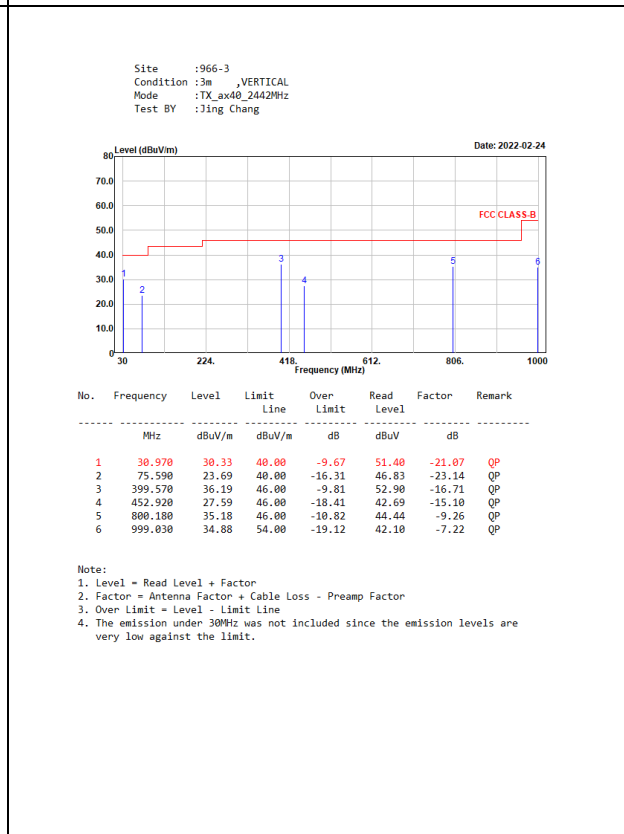
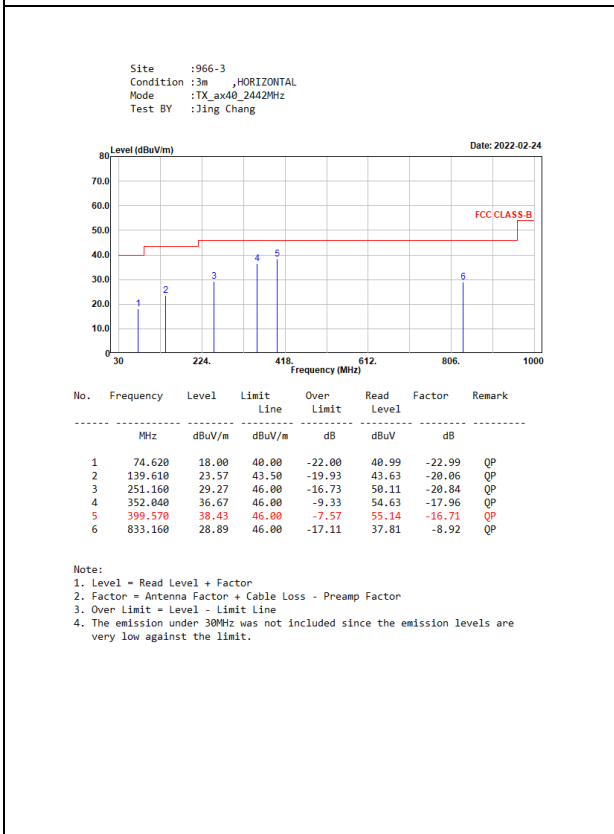
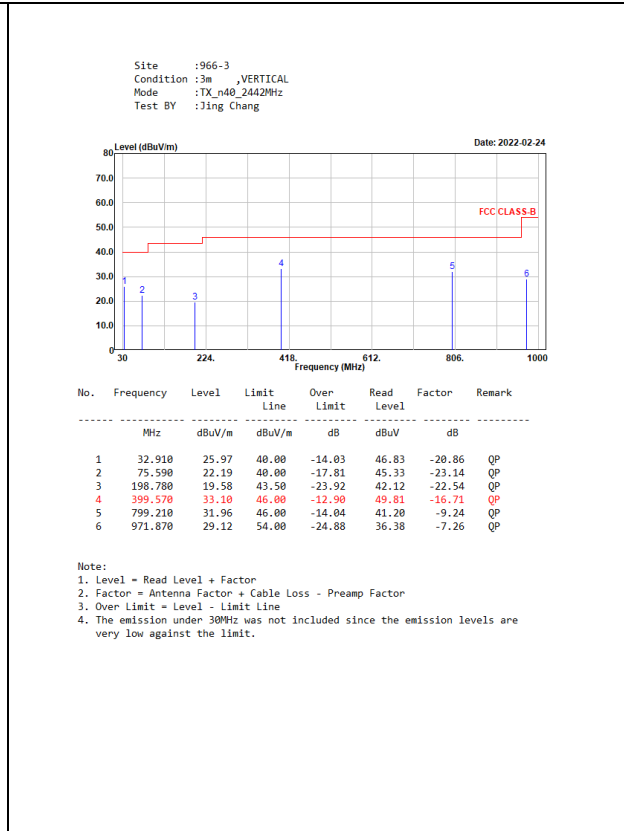
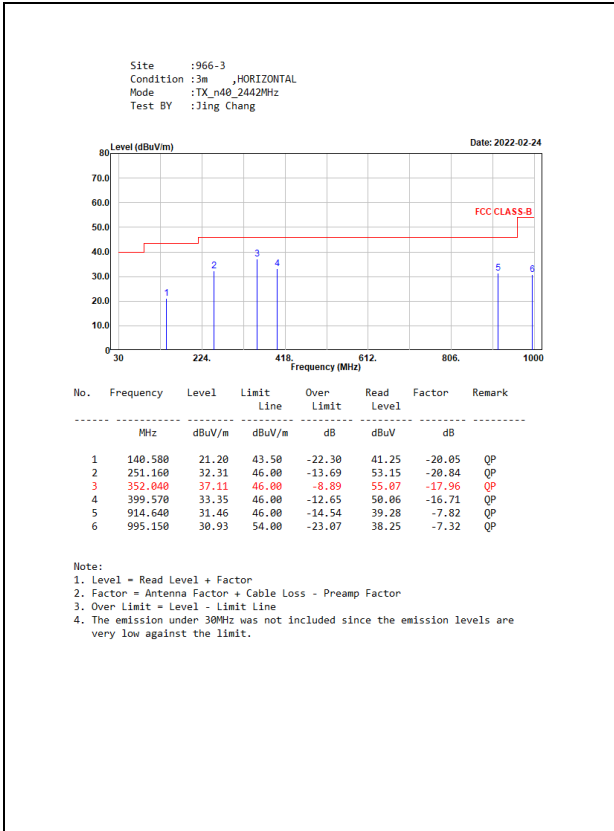




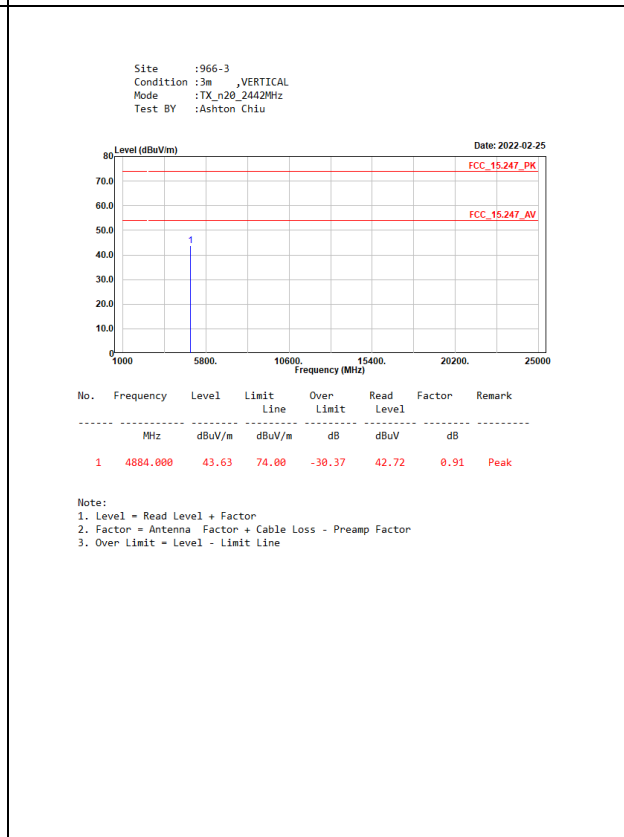
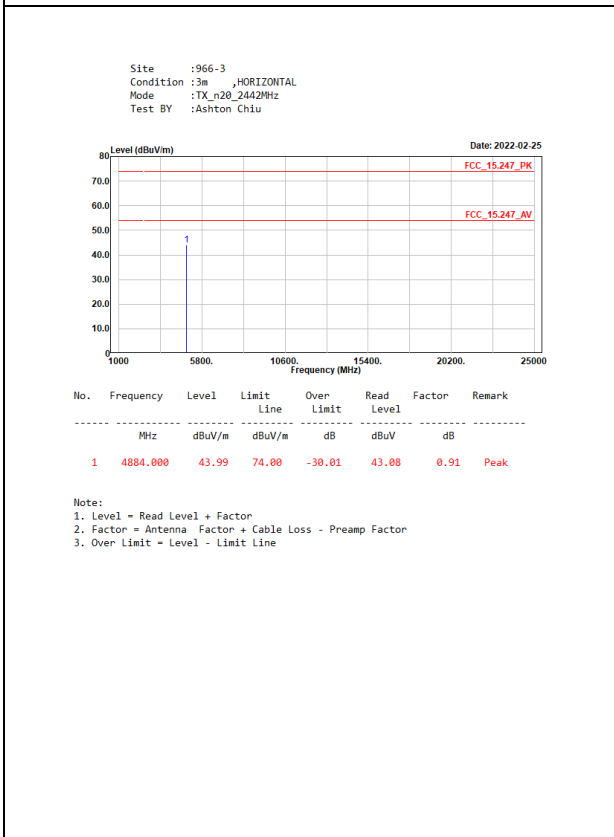
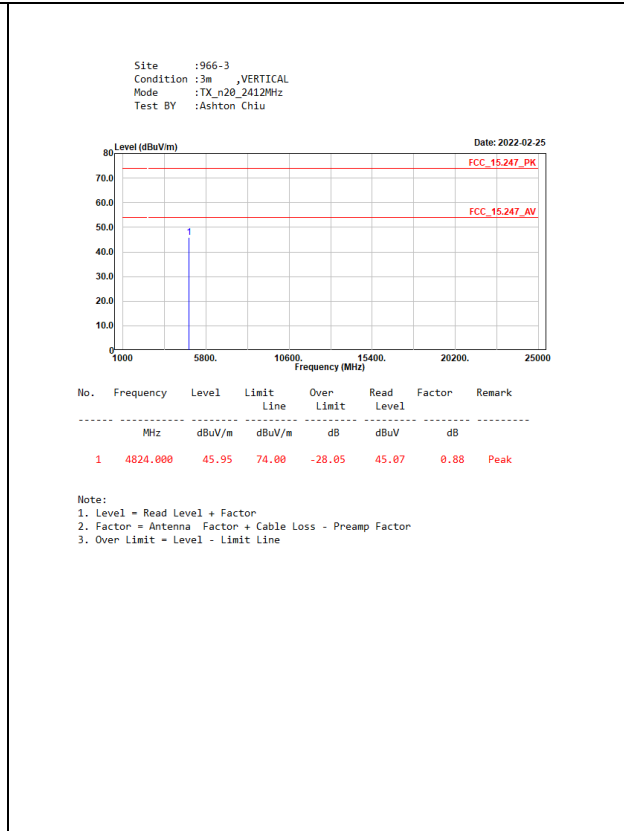
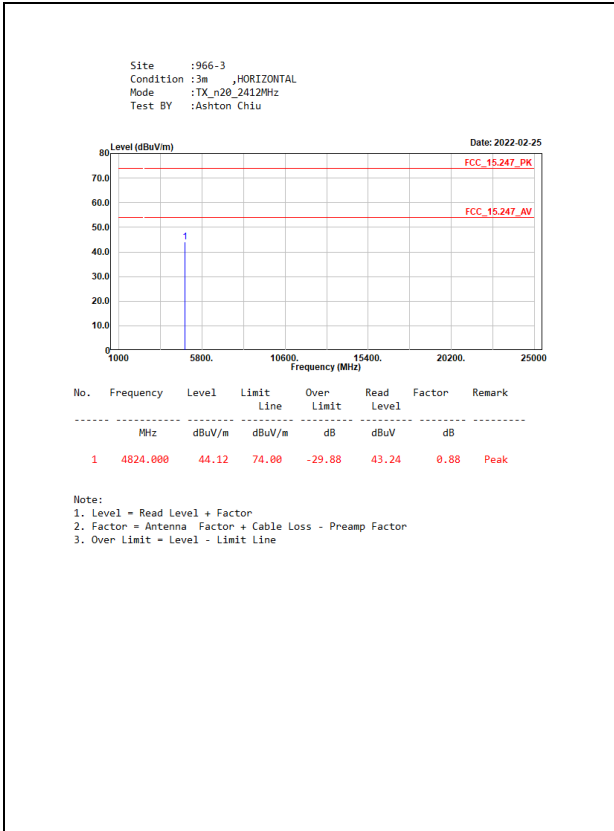


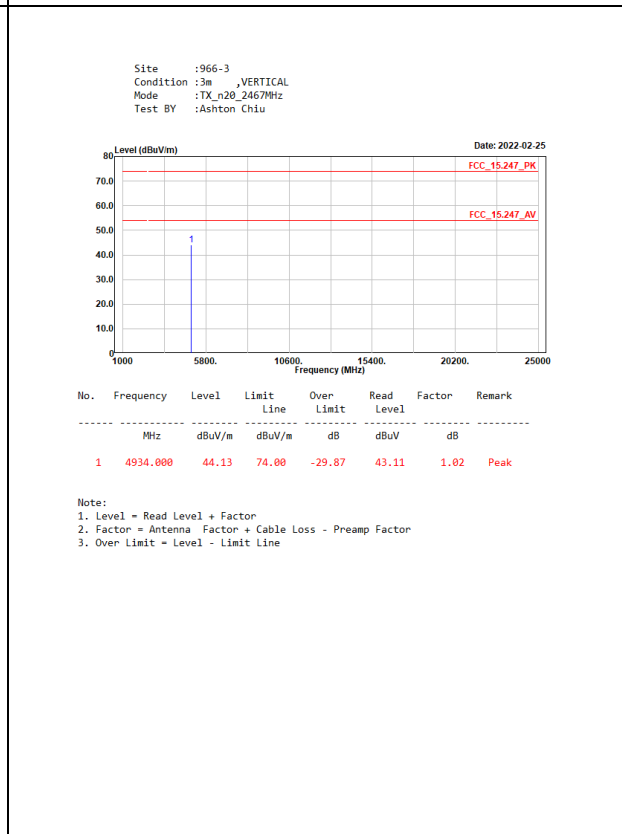
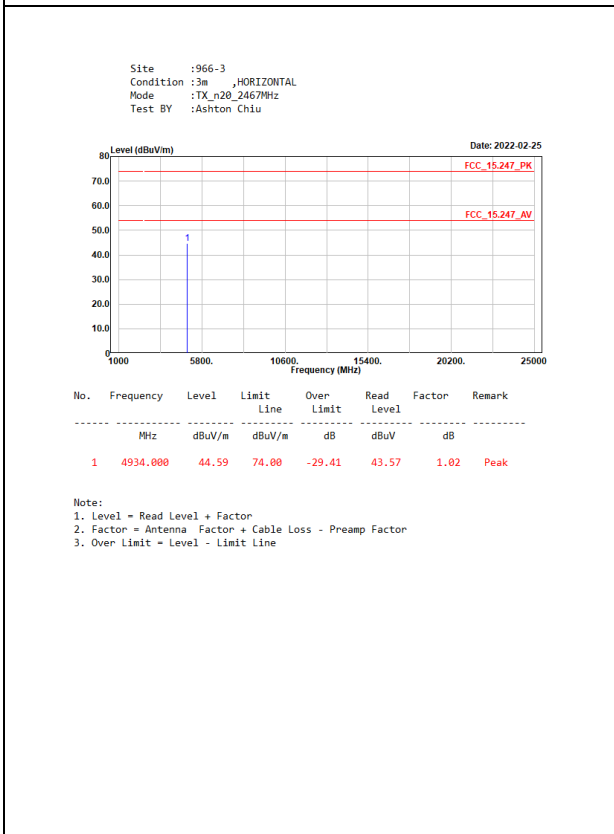
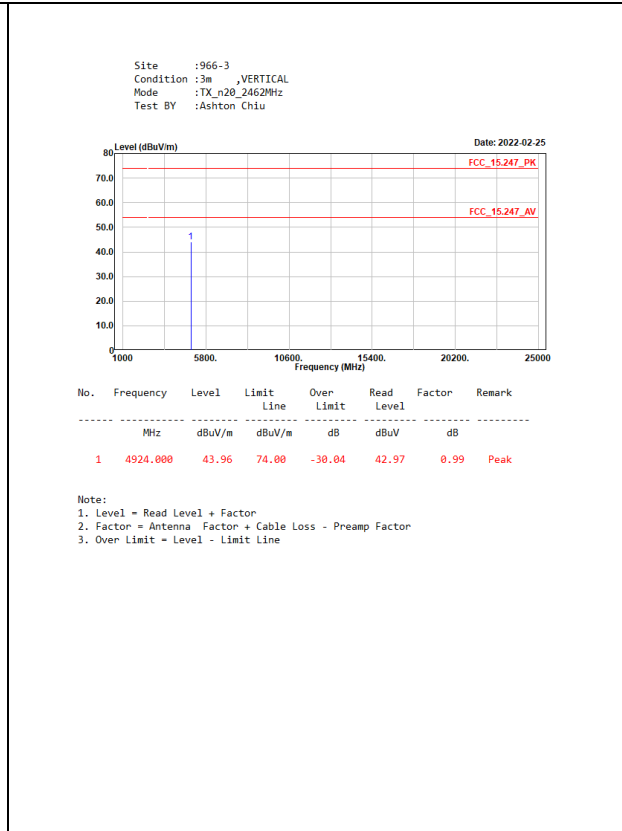
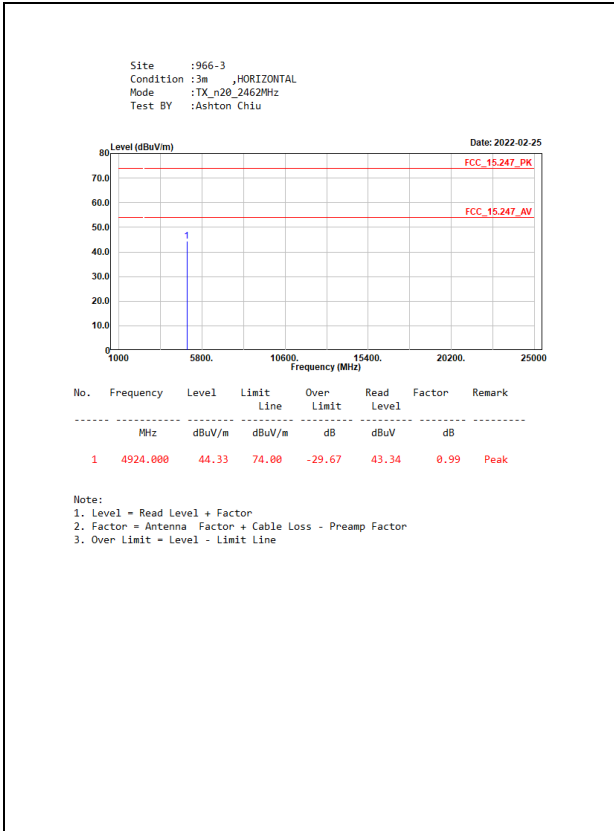


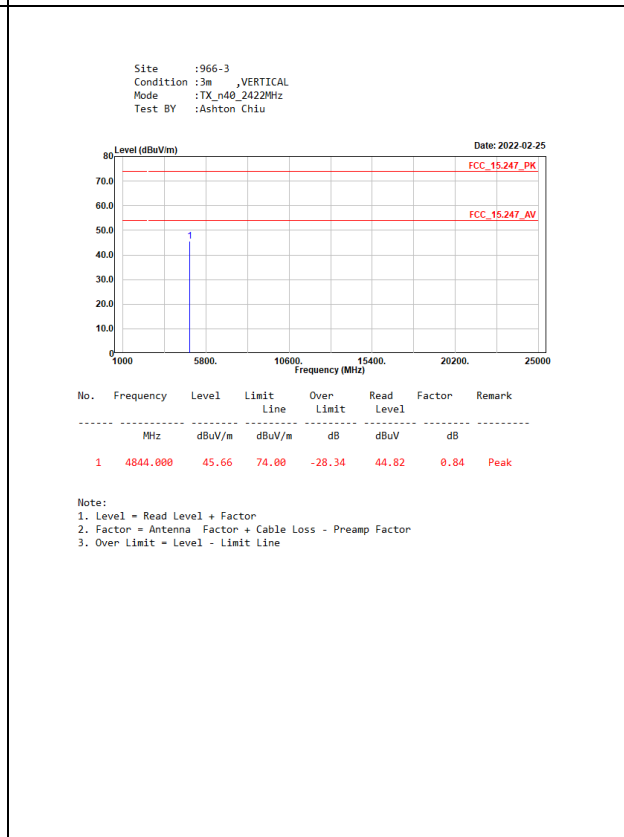
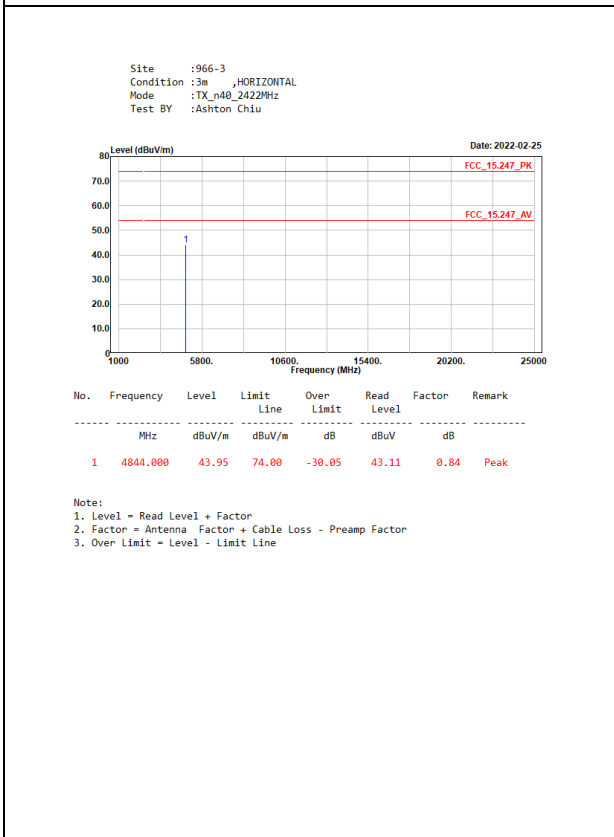
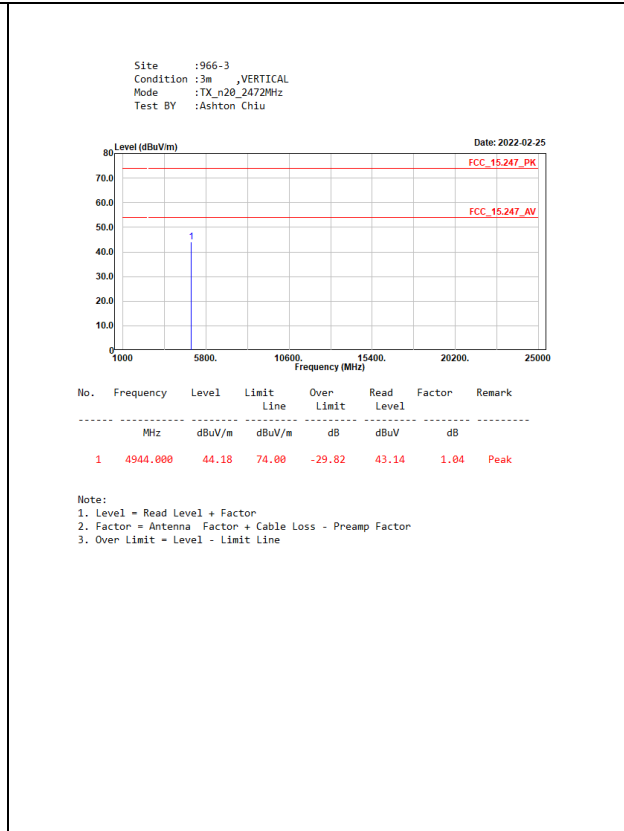
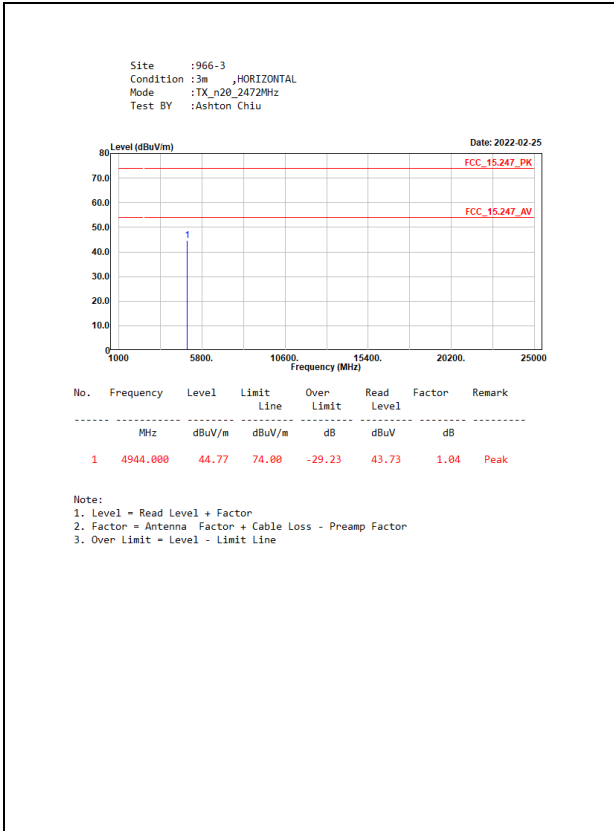


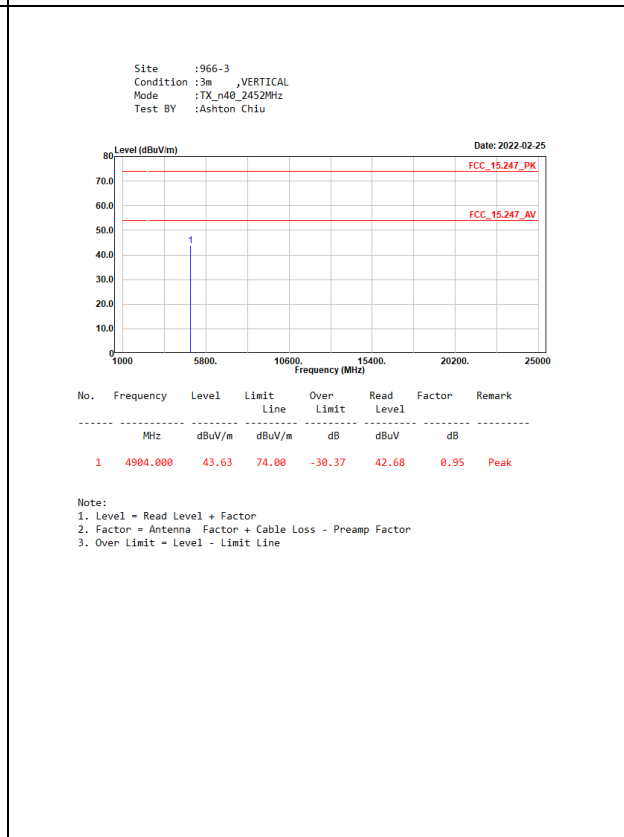
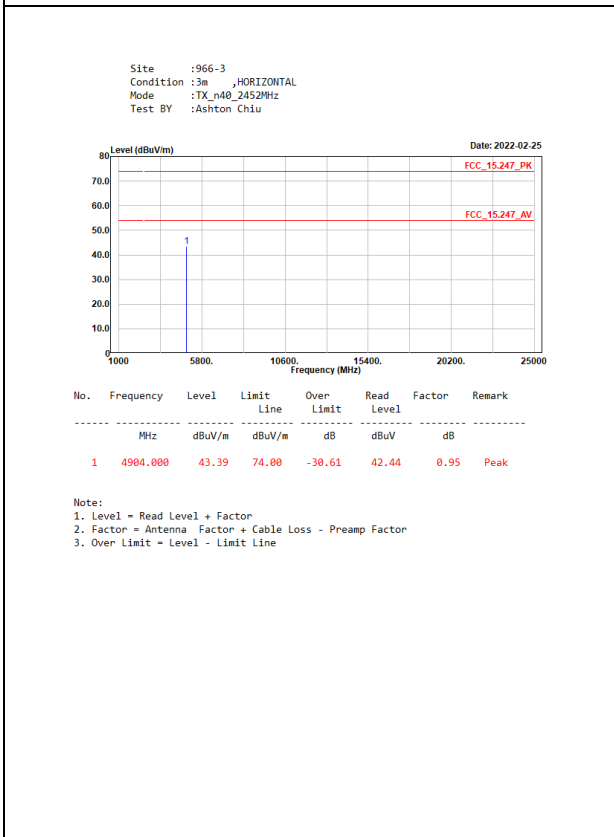
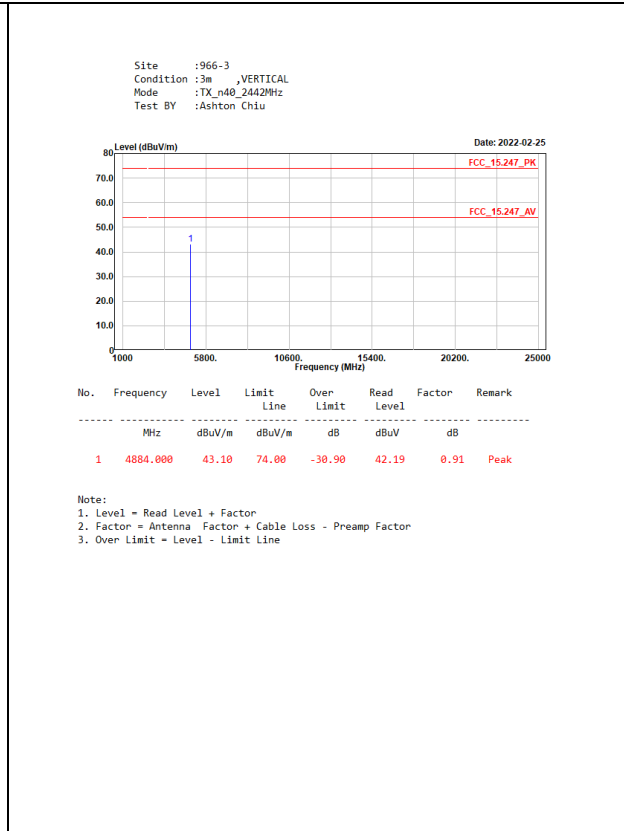
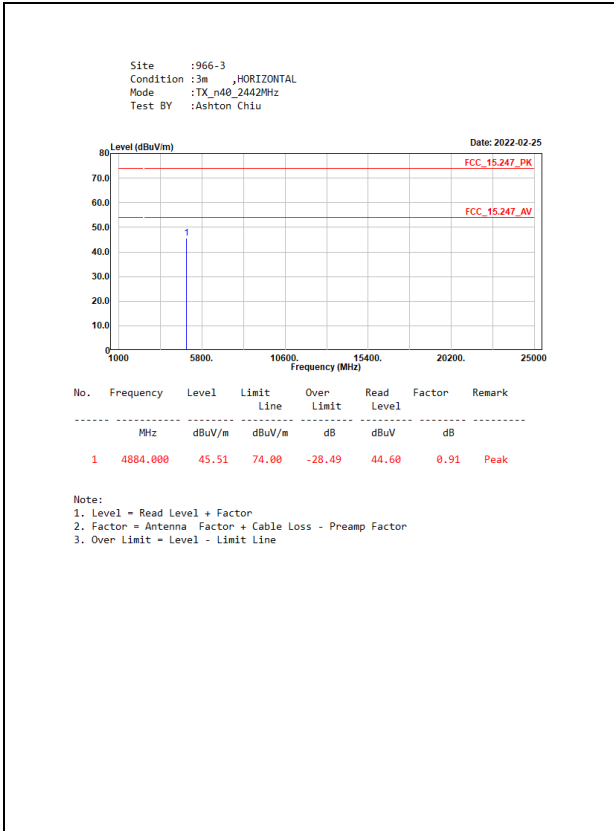


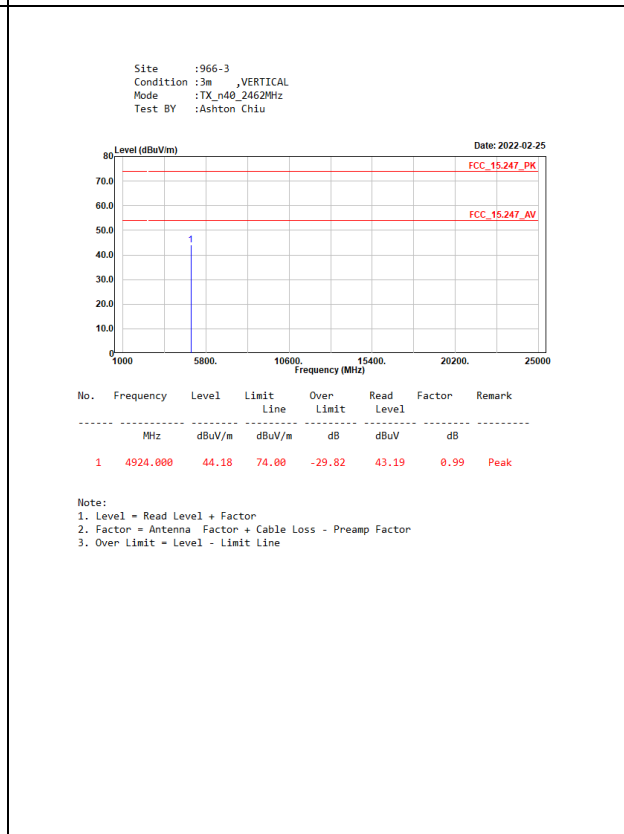
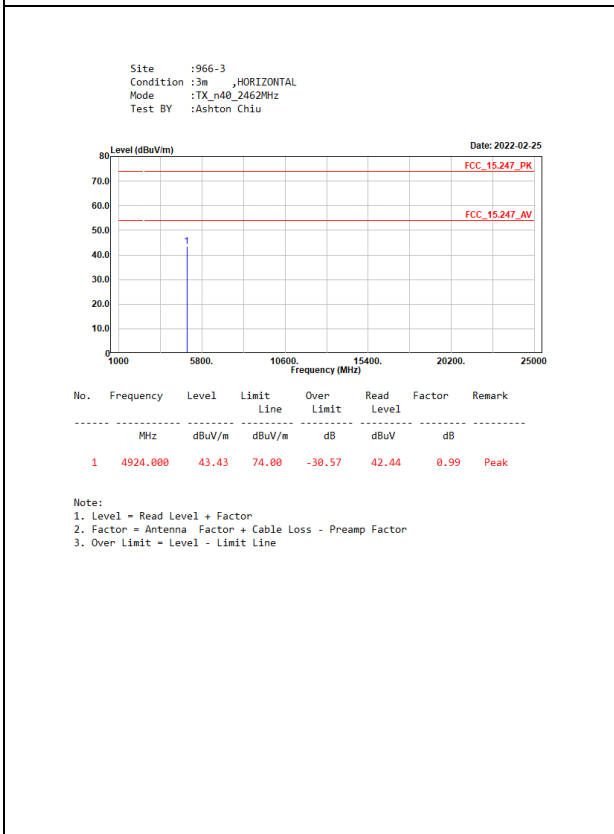
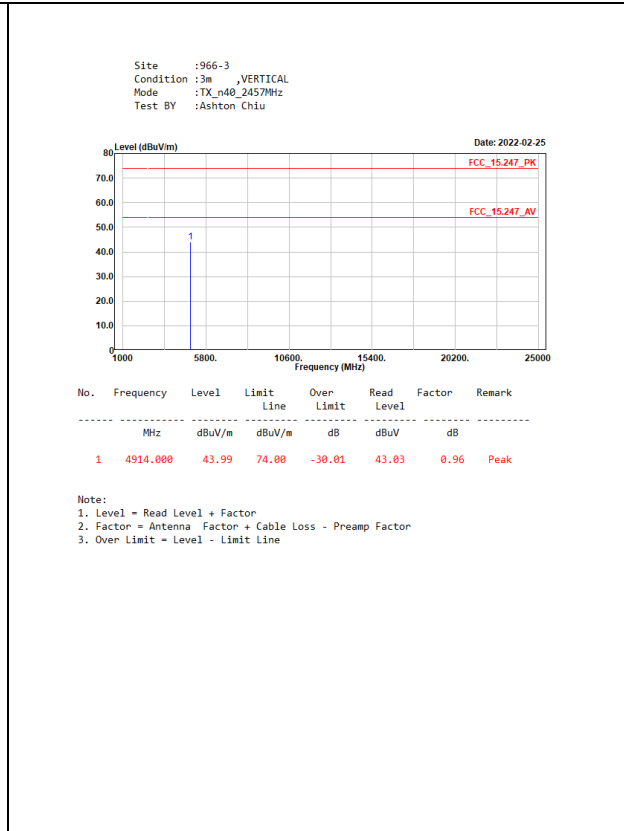
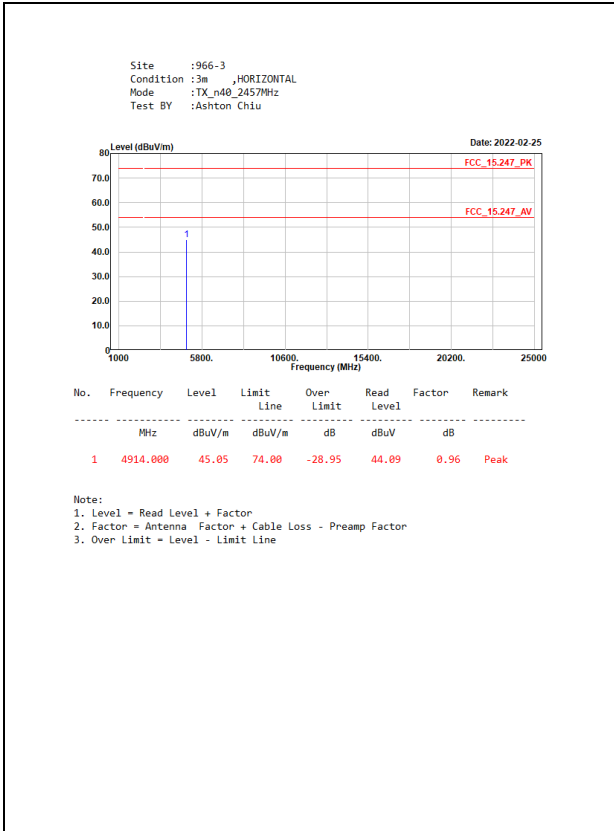
MIMO

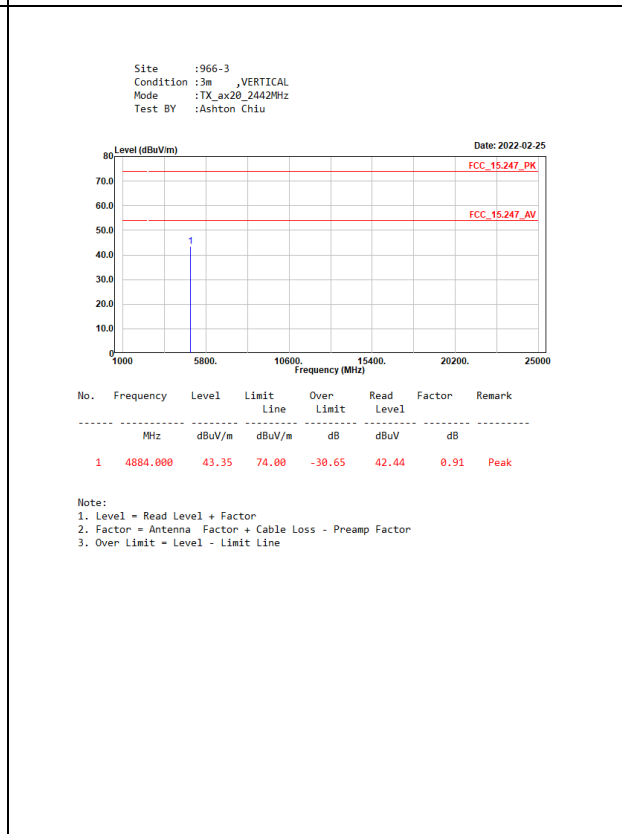
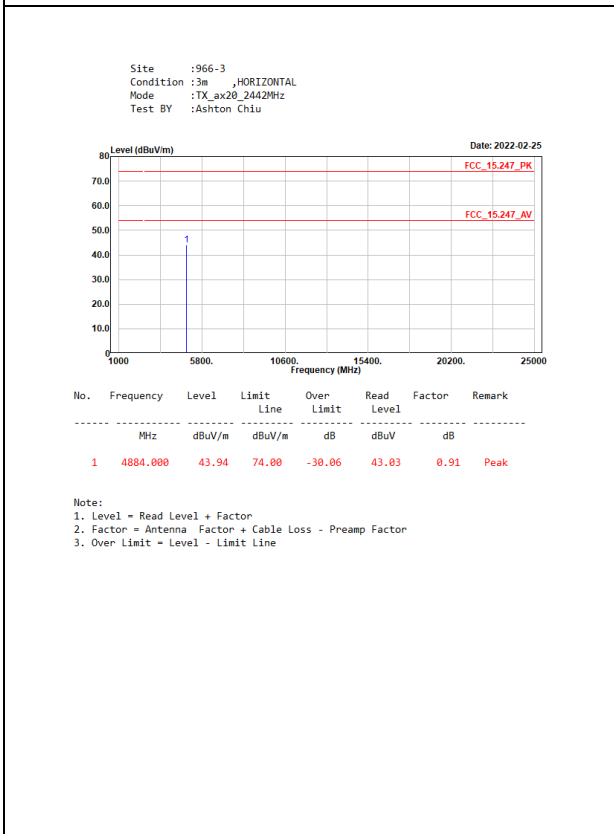
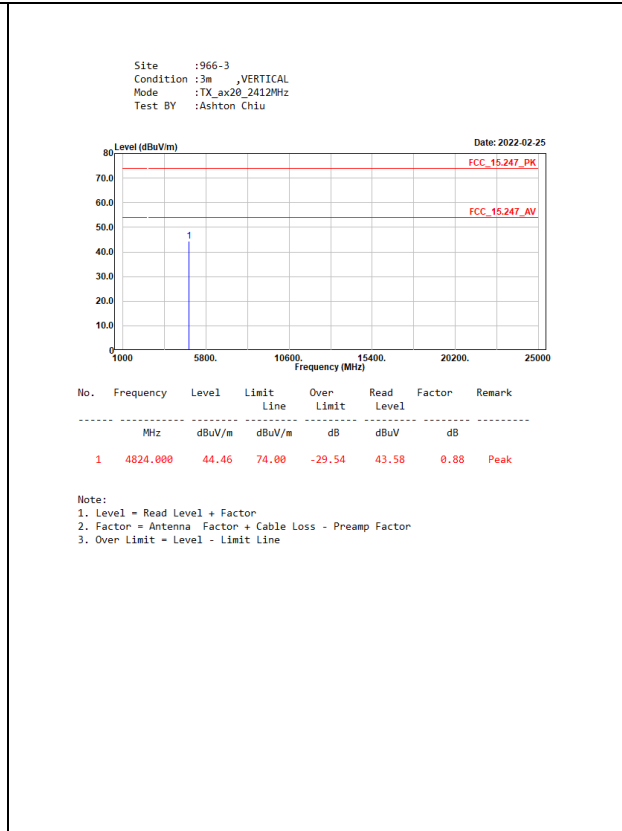
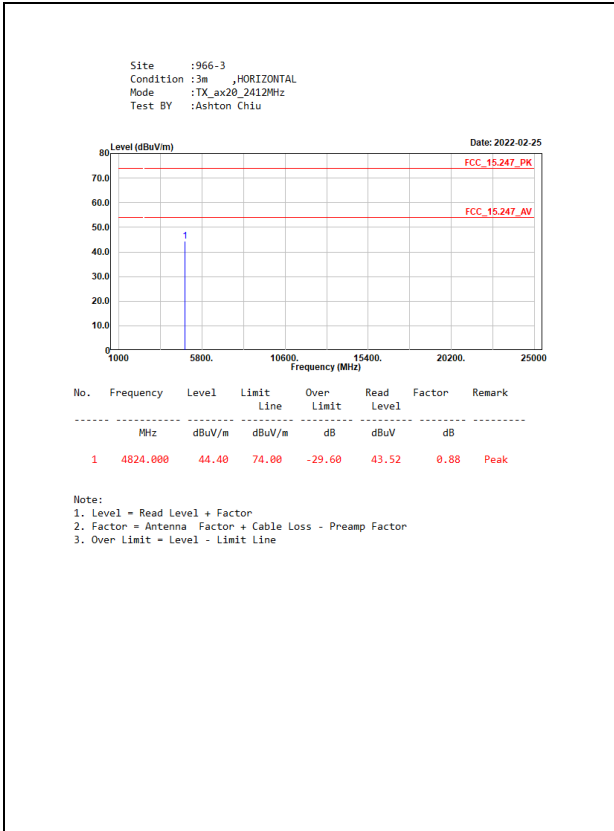


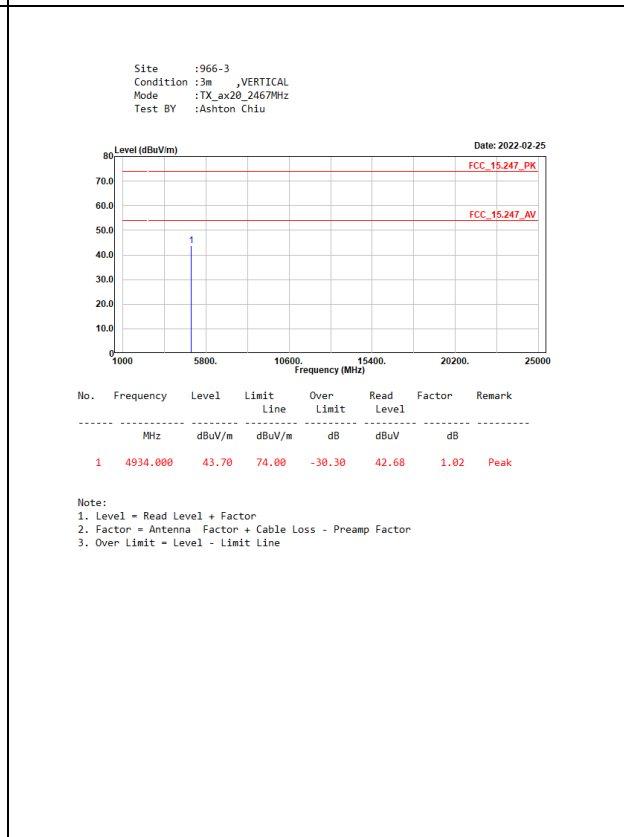
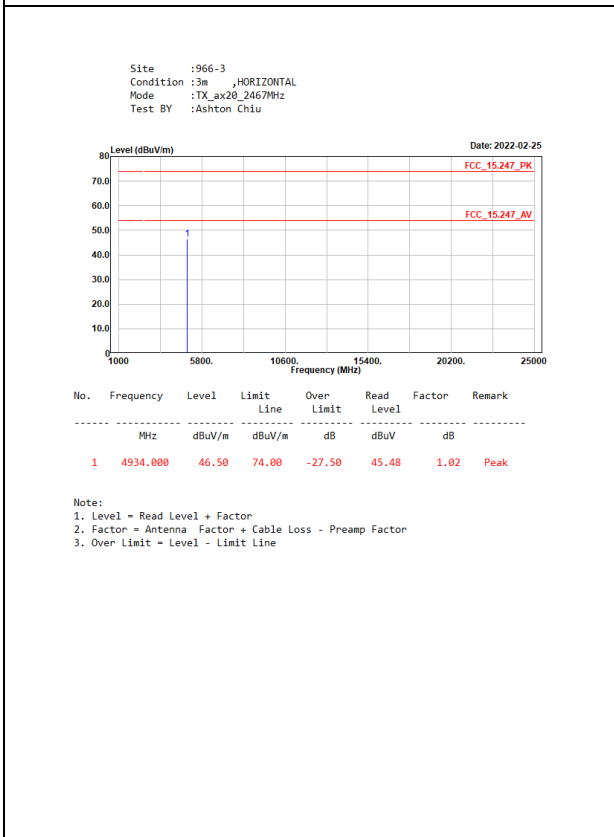
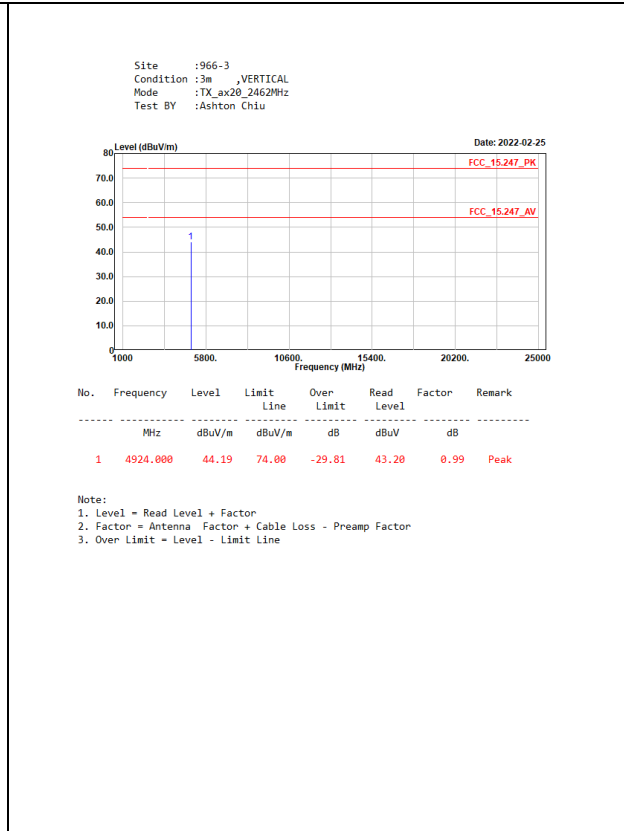
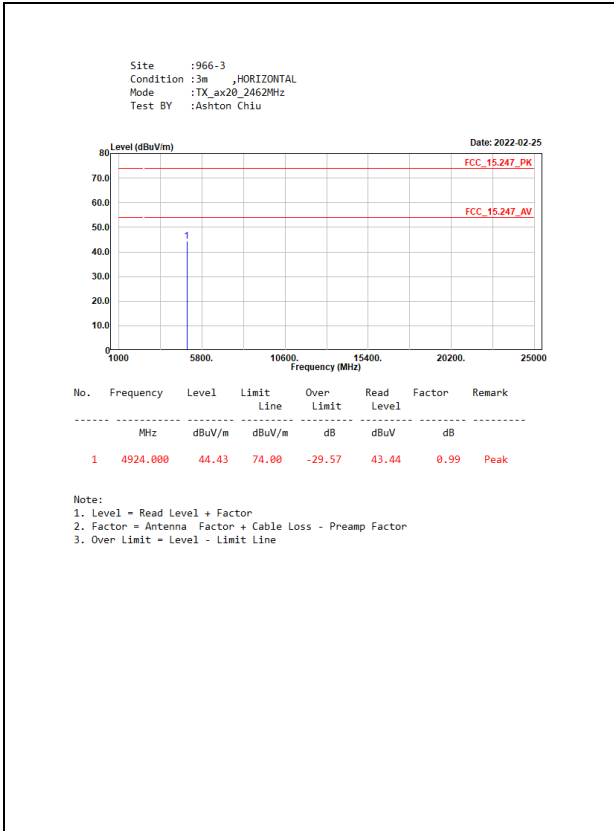


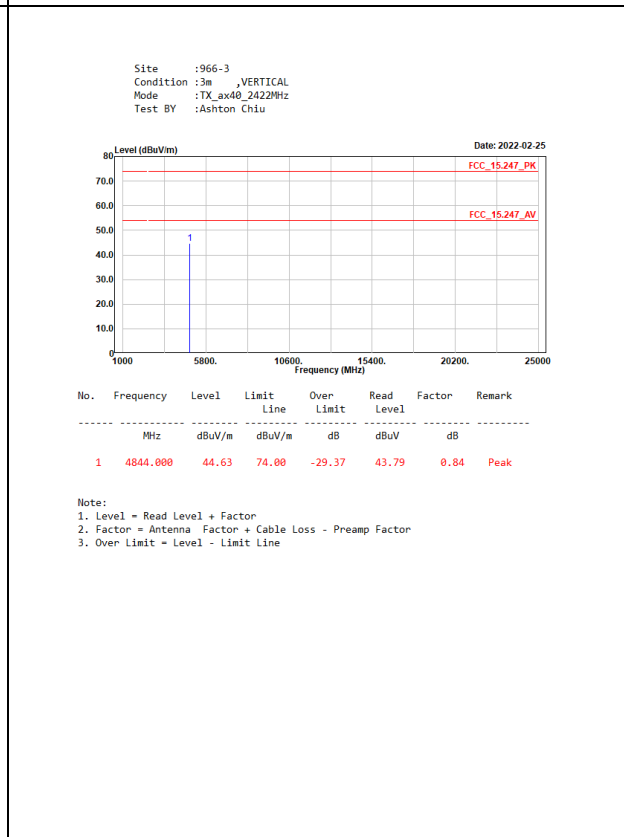
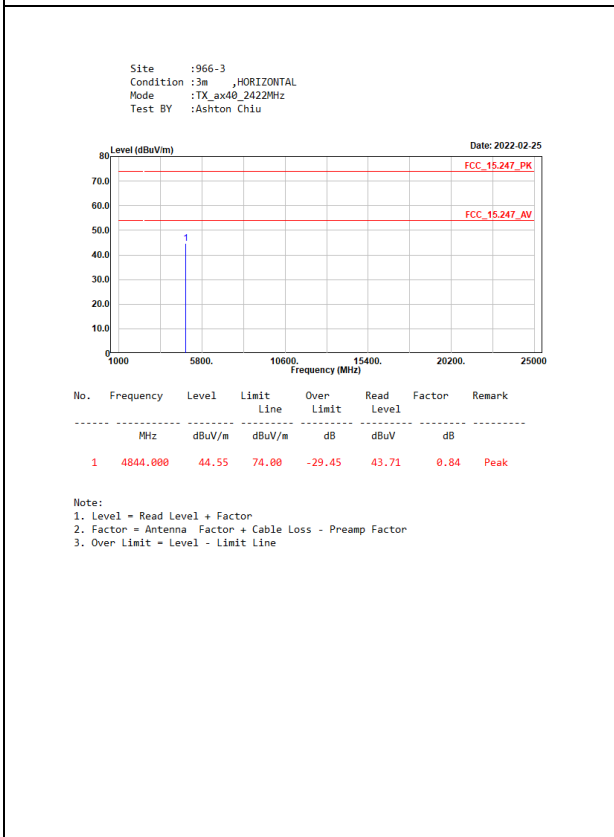
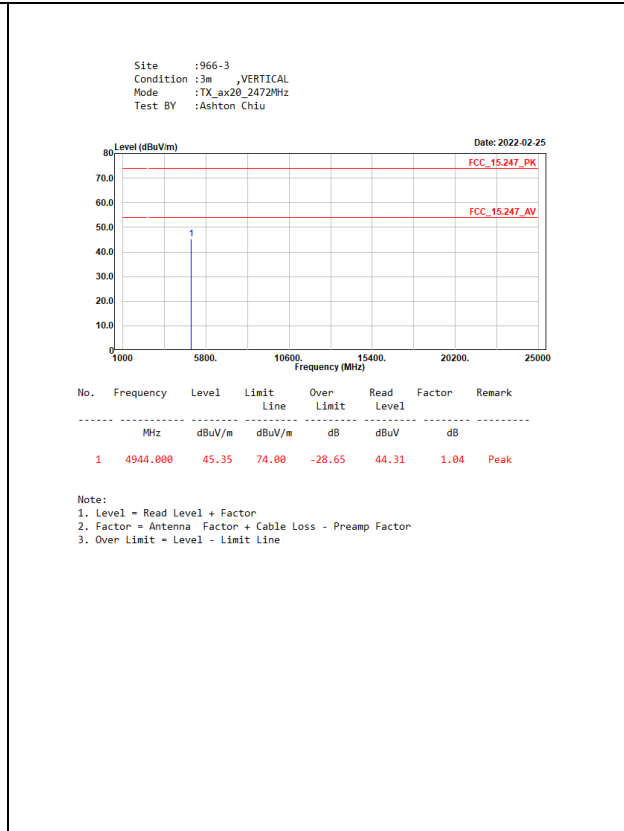
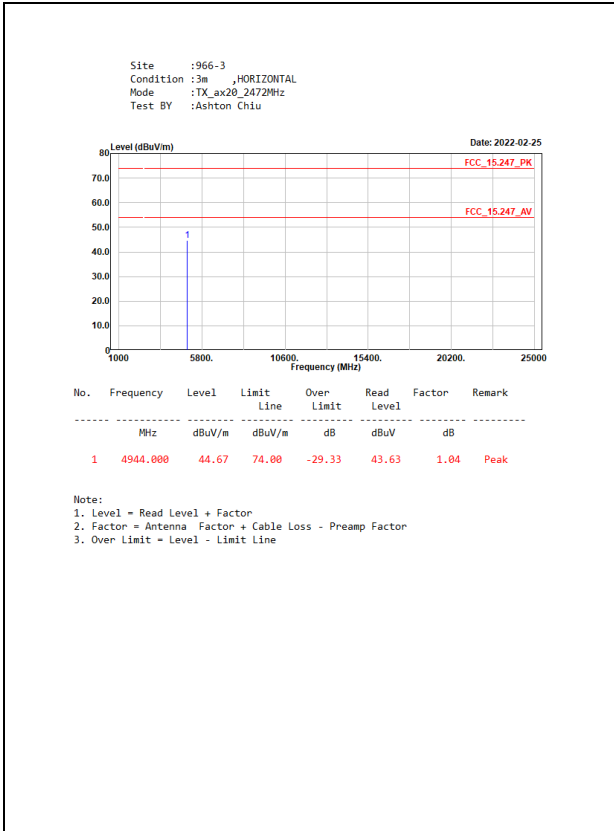


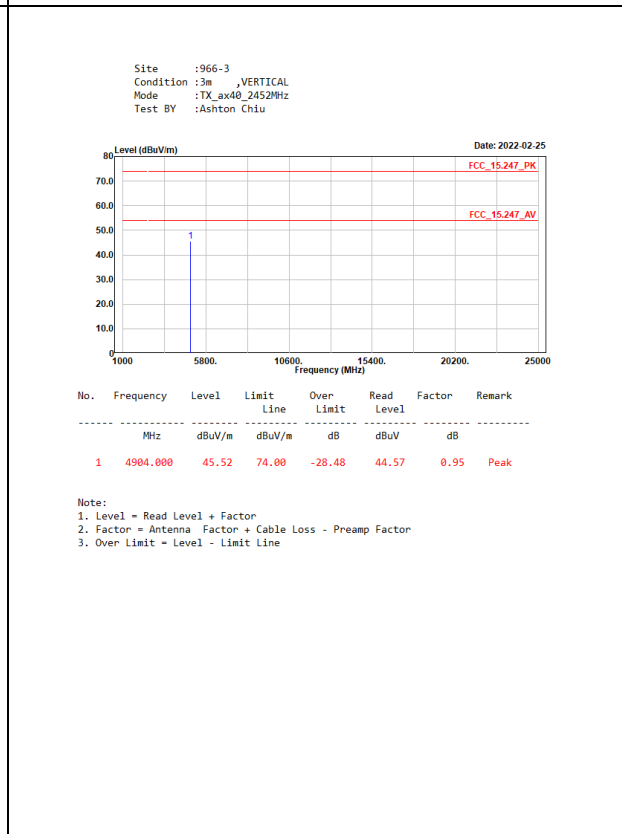
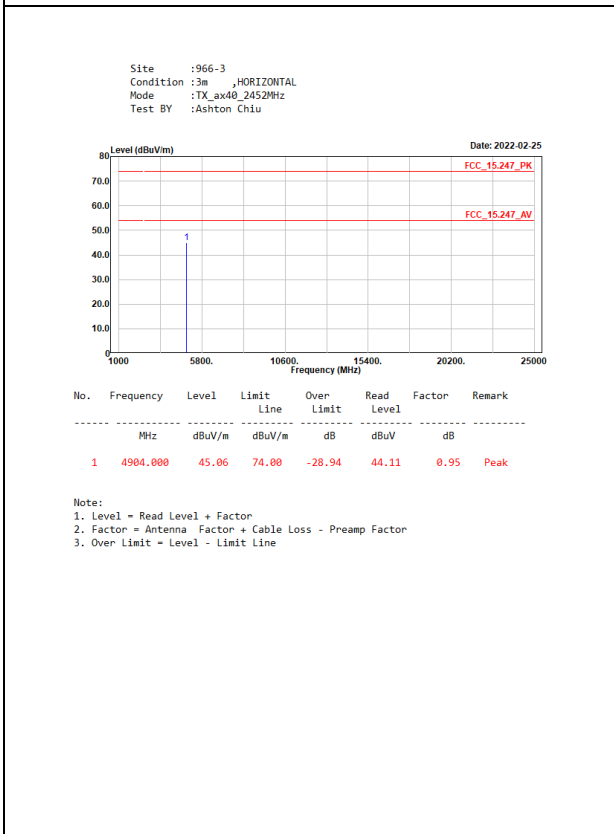
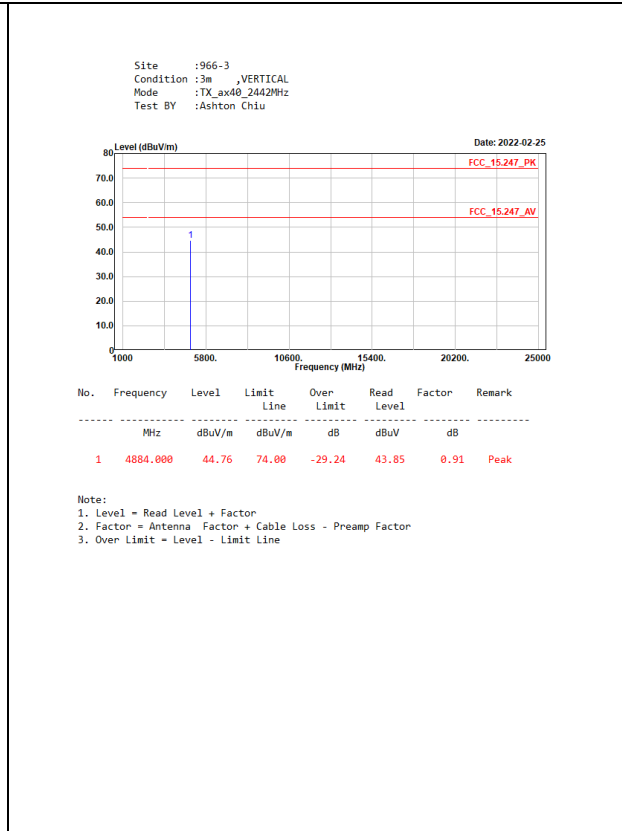
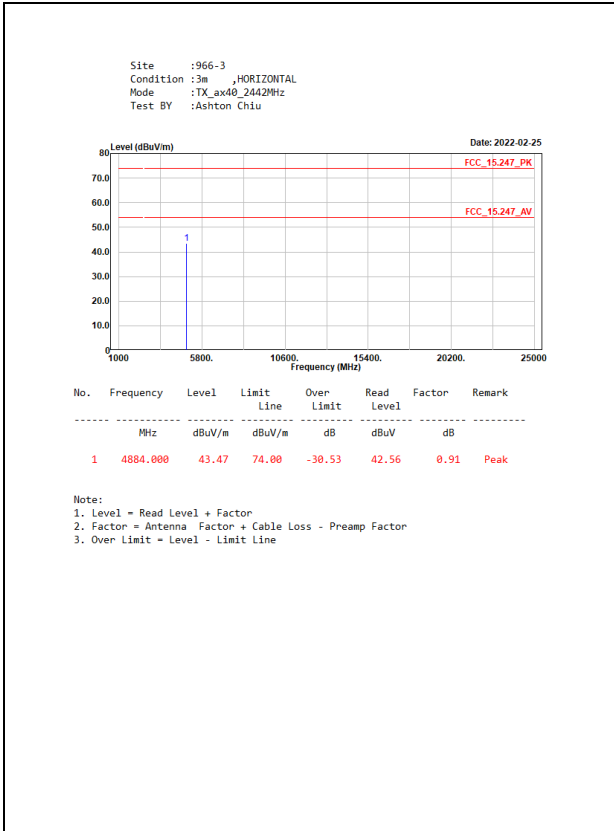


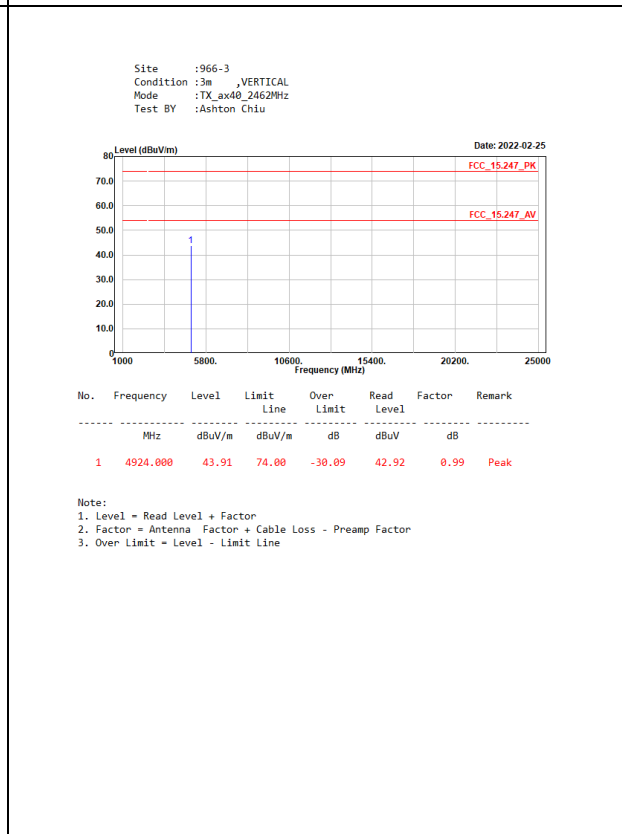
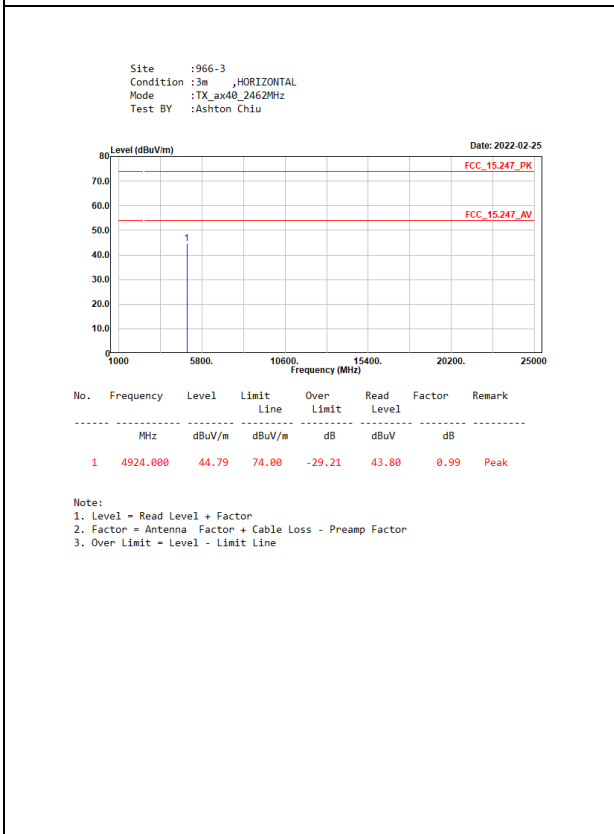
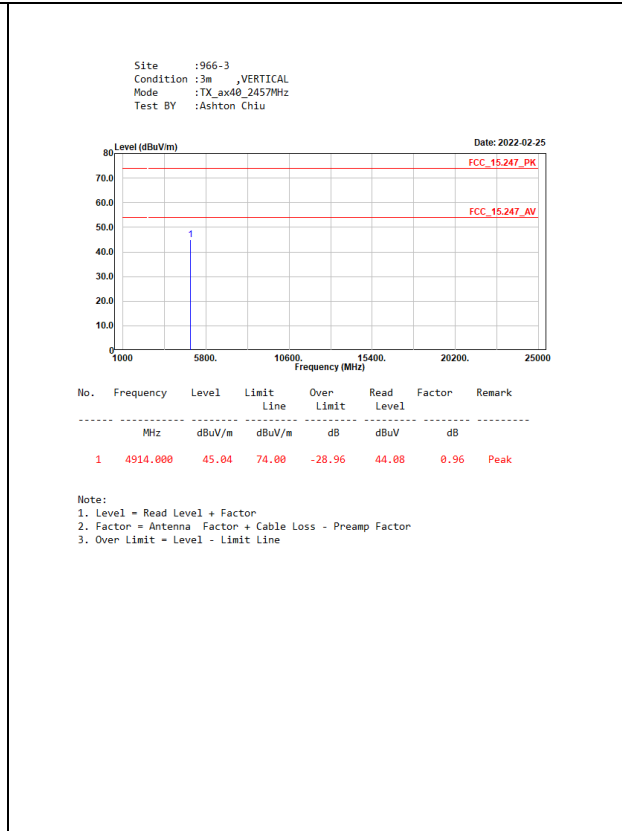
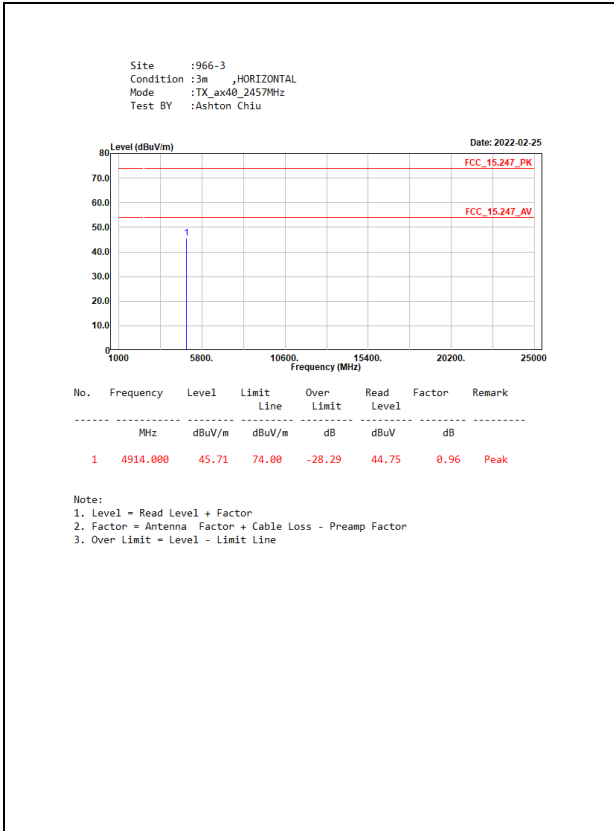


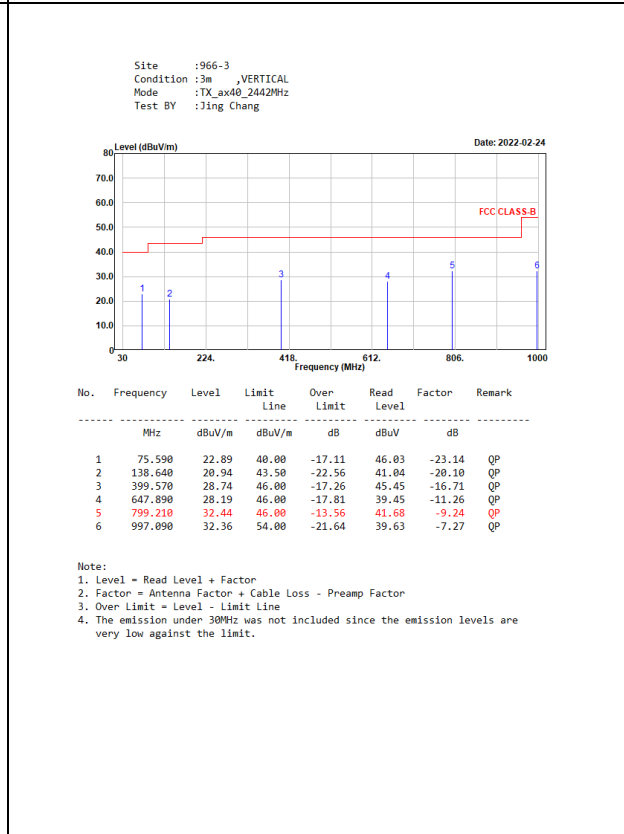
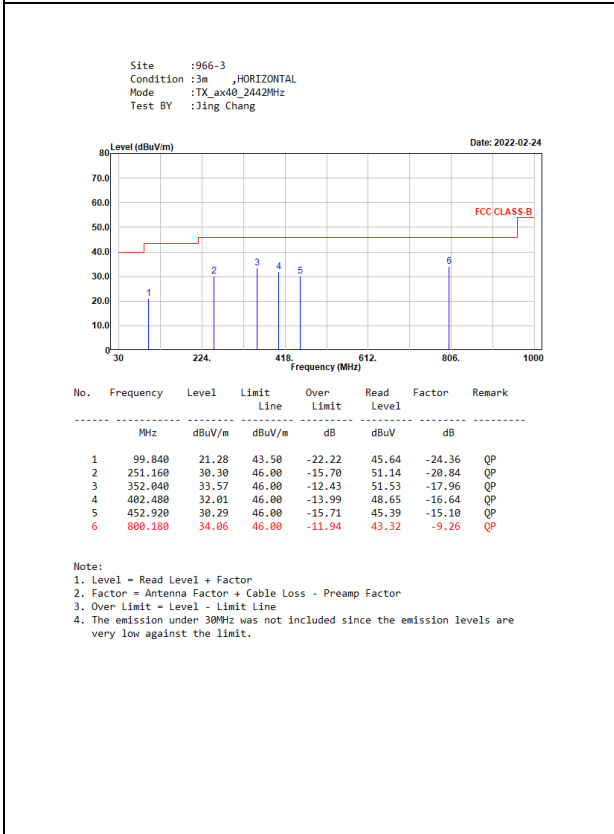
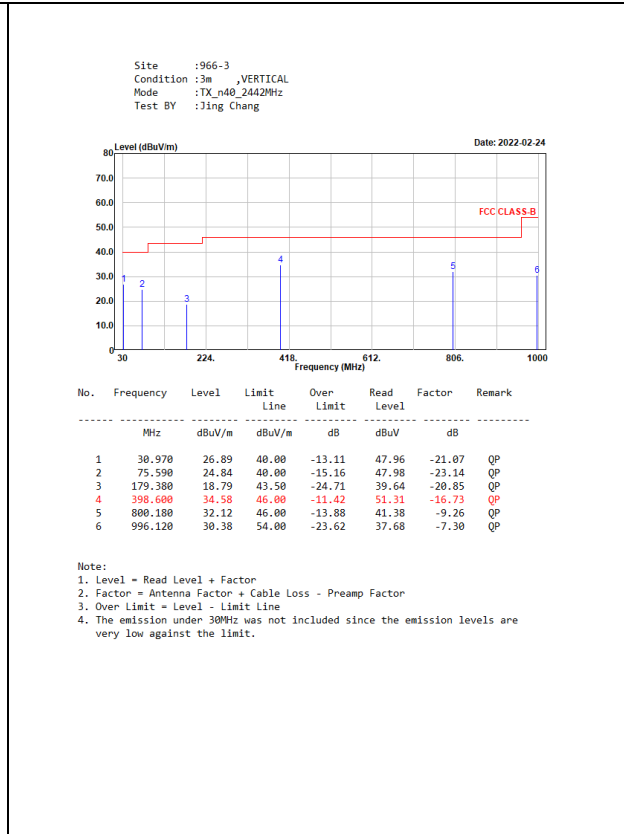
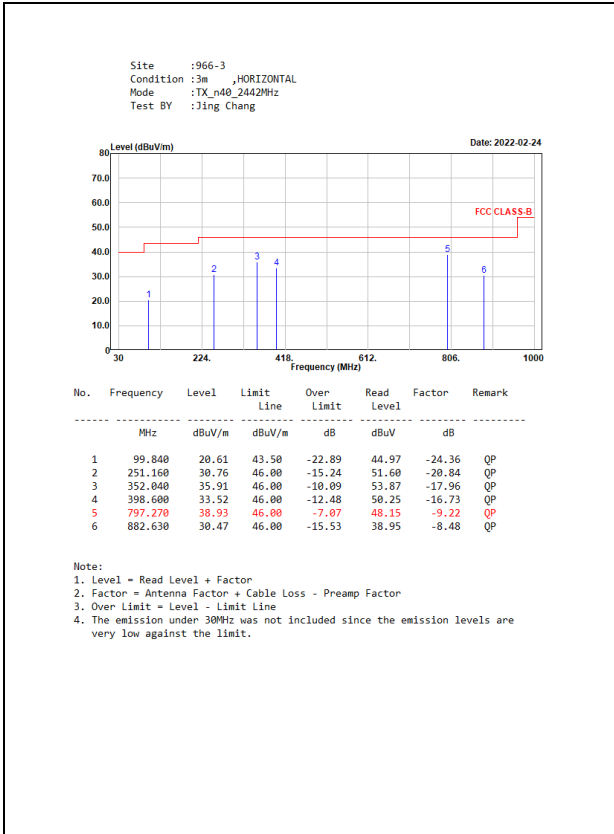








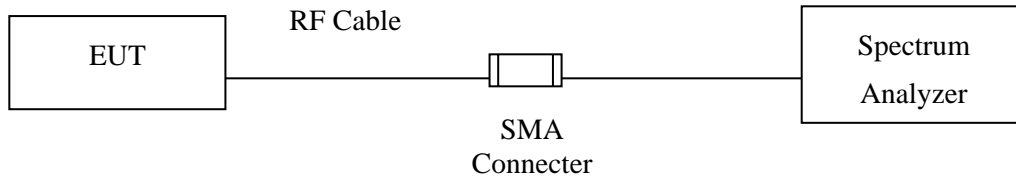




4. Band Edge

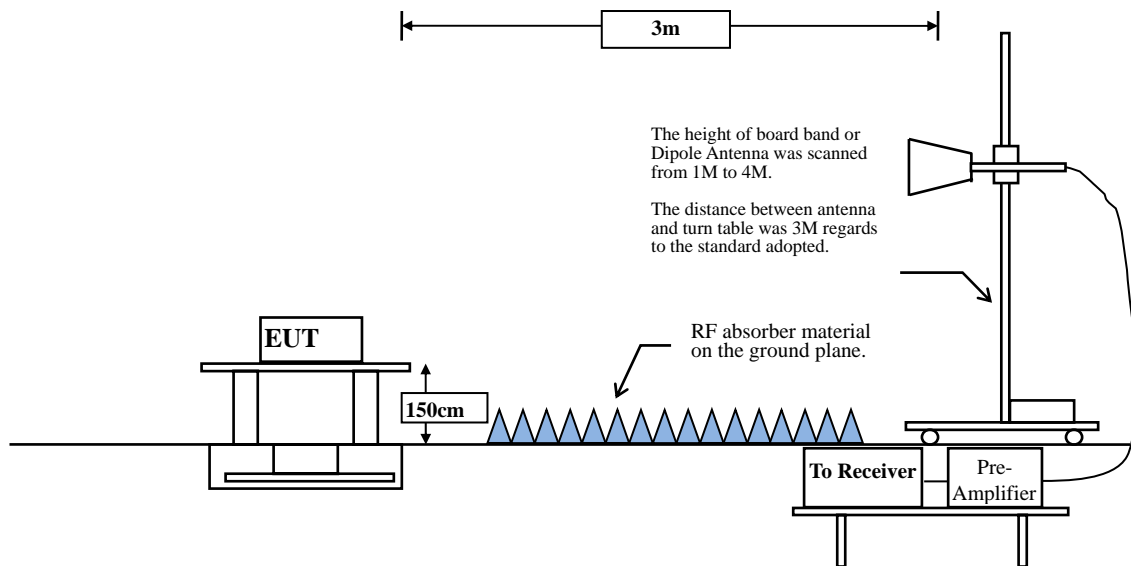
4.1. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1GHz



4.2. Limits

According to FCC Section 15.247(d). 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 measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, 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)).

4.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

RBW and VBW Parameter setting:

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

$VBW \geq 3 \times RBW$.

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle $\geq 98 \%$

$VBW \geq 1/T$, when duty cycle $< 98 \%$

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

SISO A

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 b	99.05	8.3600	120	10
802.11 g	97.89	2.0900	478	500
802.11 n20	98.66	3.9840	251	10
802.11 n40	99.03	17.7470	56	10
802.11ax20	98.73	4.6500	215	10
802.11 ax40	99.15	18.6200	54	10

Note: Duty Cycle Refer to Section 5.

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2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 b	99.17	8.3570	120	10
802.11 g	97.89	2.0920	478	500
802.11 n20	98.66	3.9730	252	10
802.11 n40	98.66	3.9640	252	10
802.11ax20	98.40	2.5900	386	10
802.11 ax40	98.93	18.6700	54	10

Note: Duty Cycle Refer to Section 5.

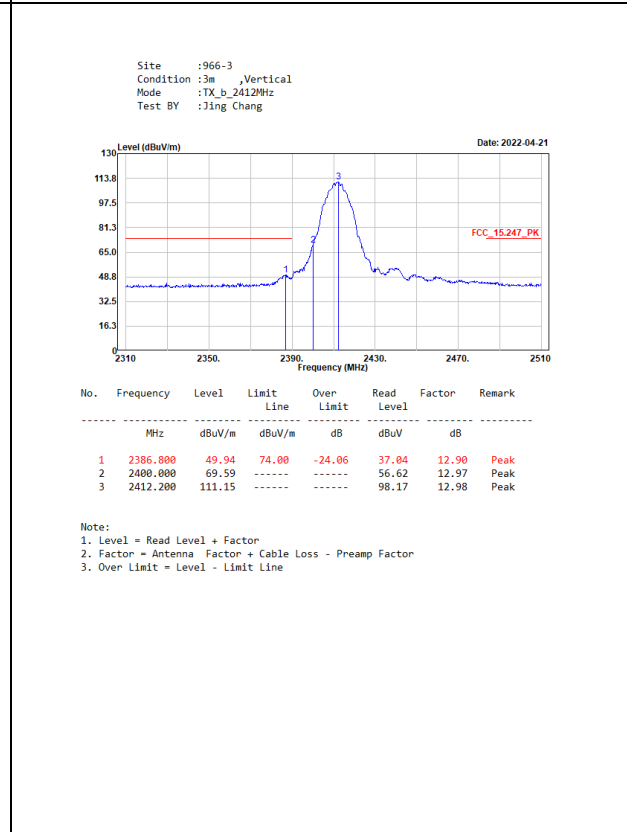
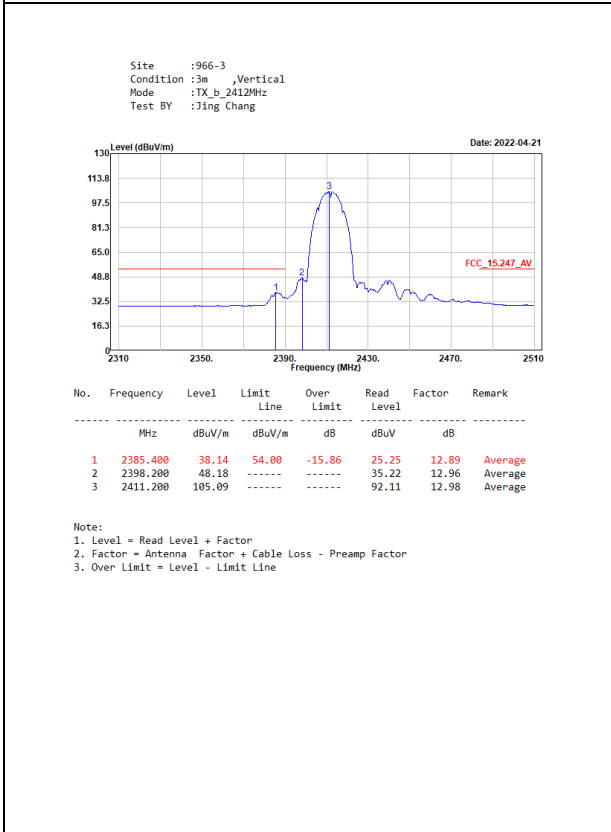
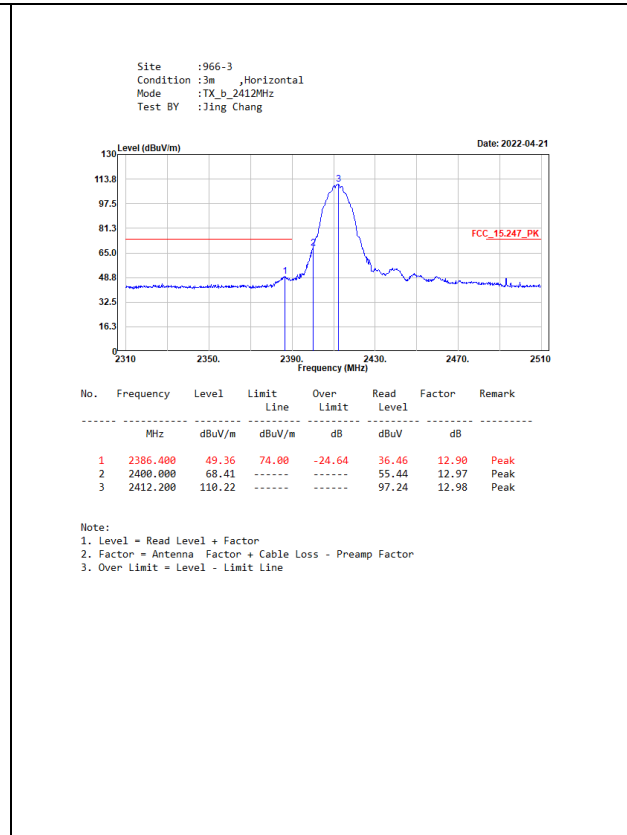
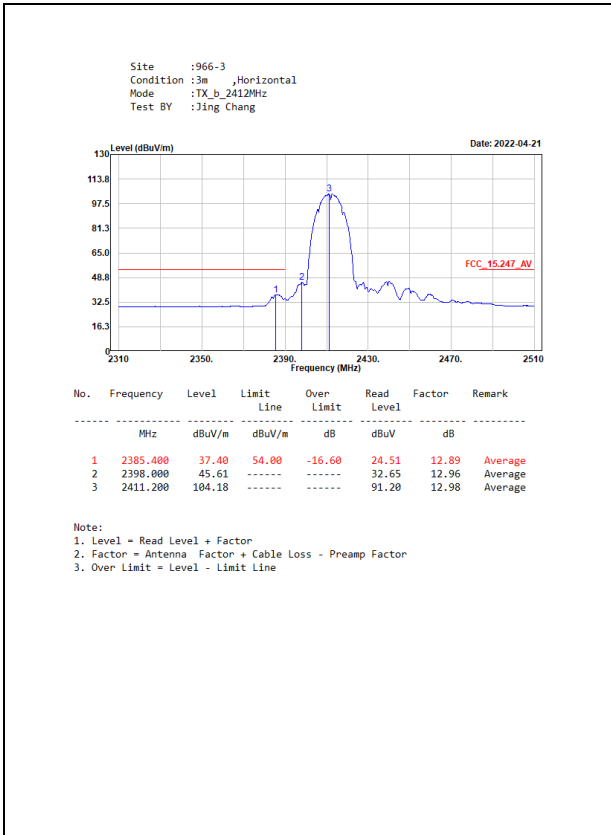
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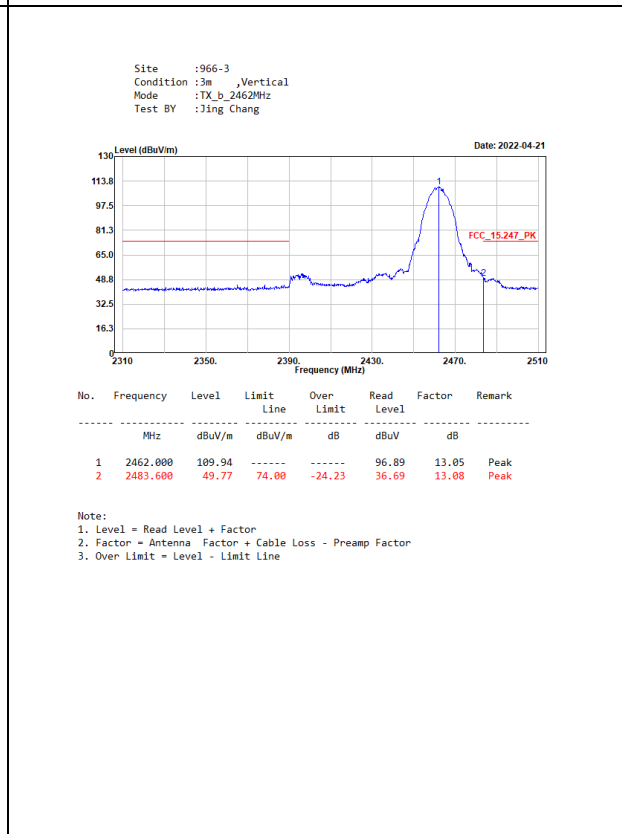
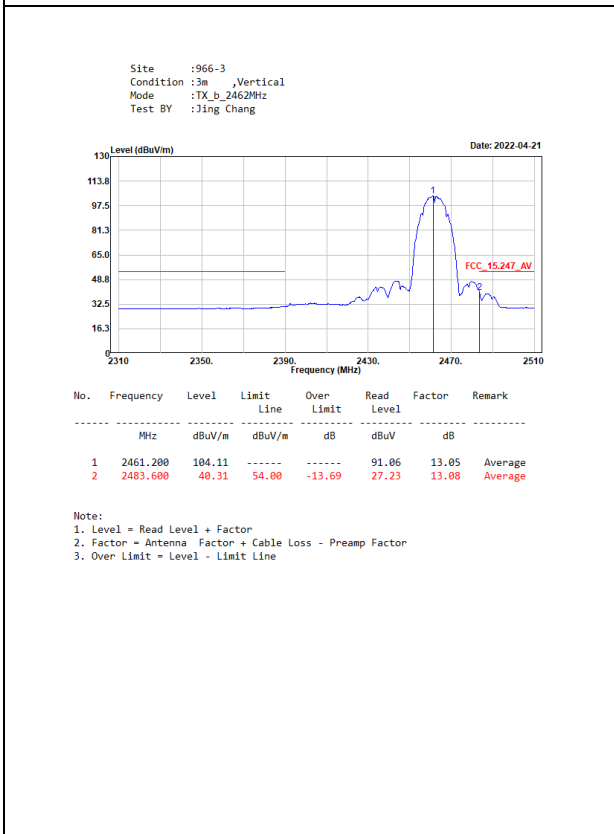
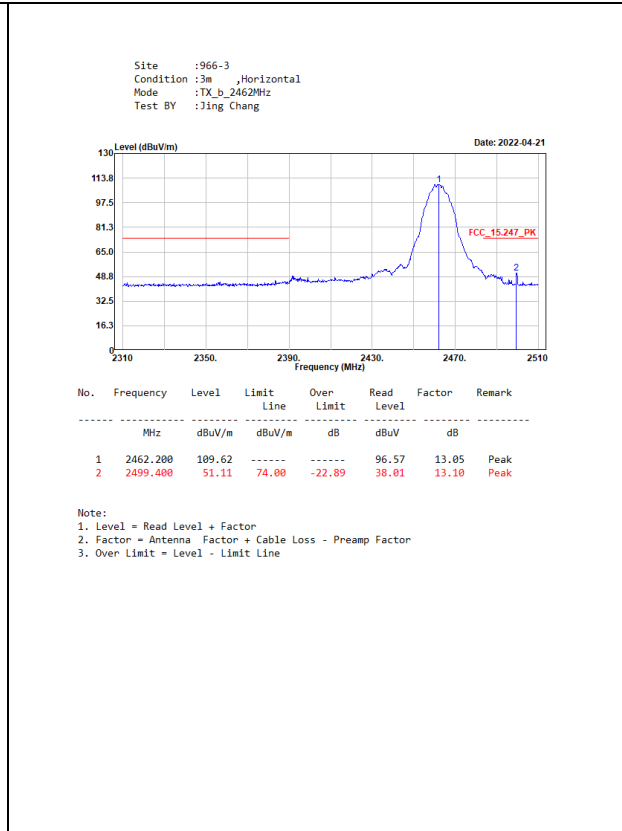
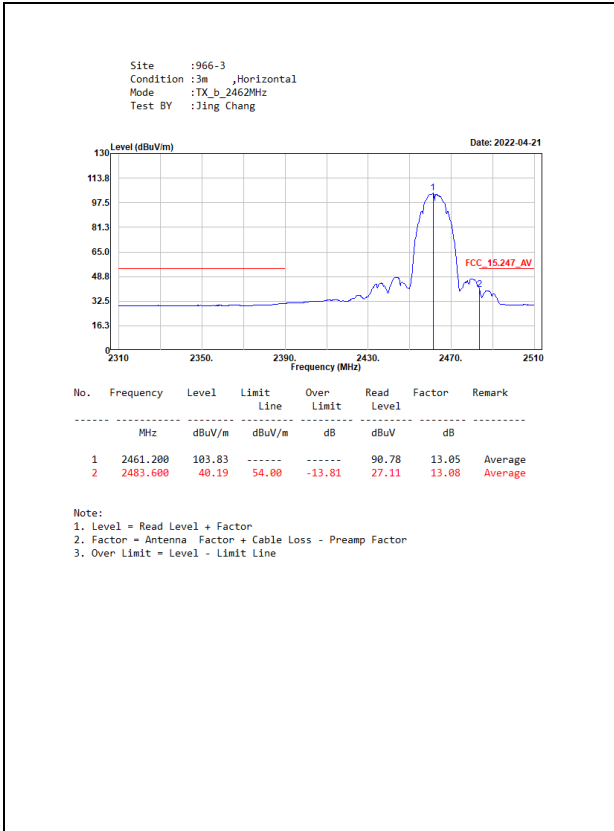
2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 n20	99.12	18.4900	54	10
802.11 n40	98.89	8.9400	112	10
802.11ax20	99.04	18.6500	54	10
802.11 ax40	98.94	9.3000	108	10

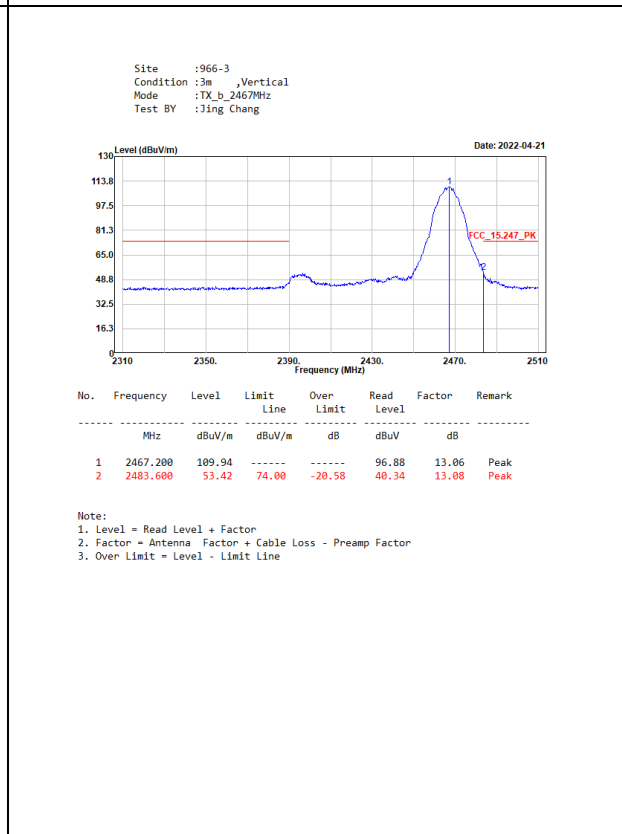
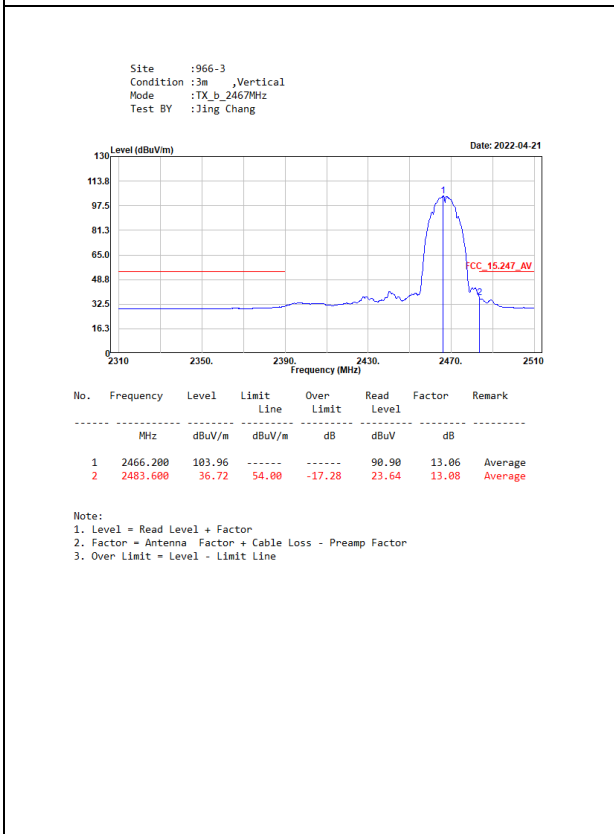
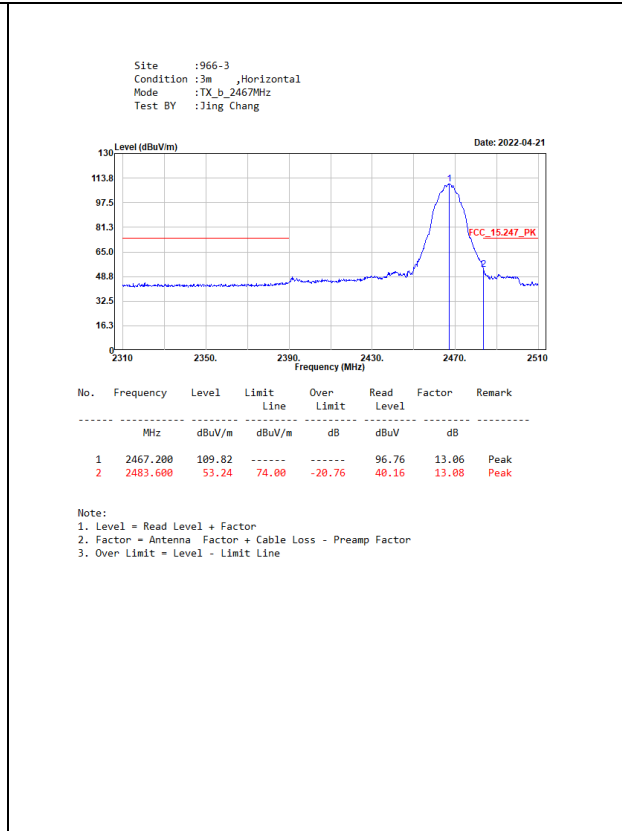
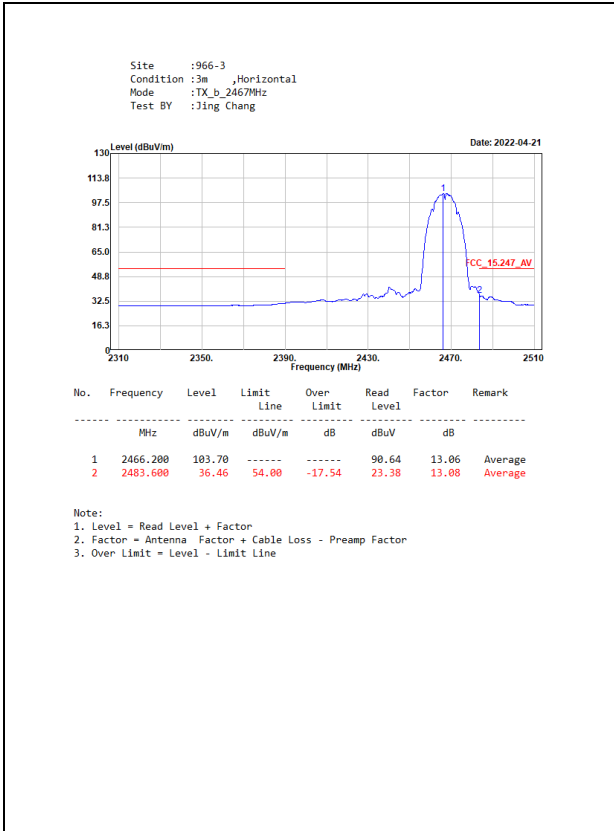
Note: Duty Cycle Refer to Section 5.

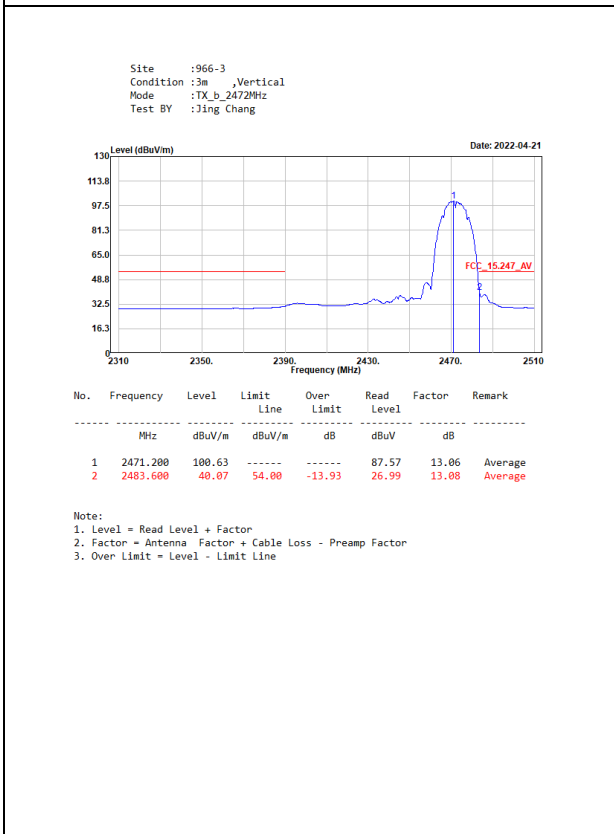
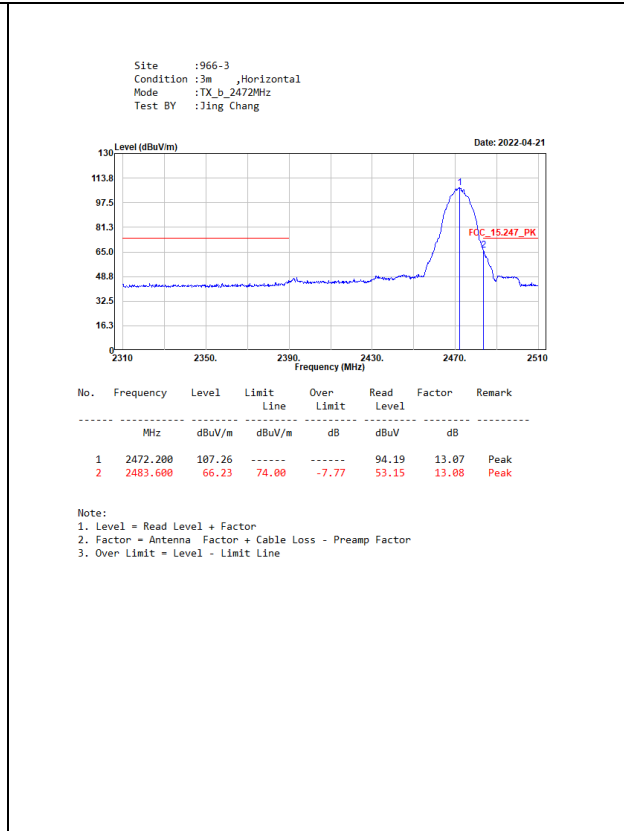
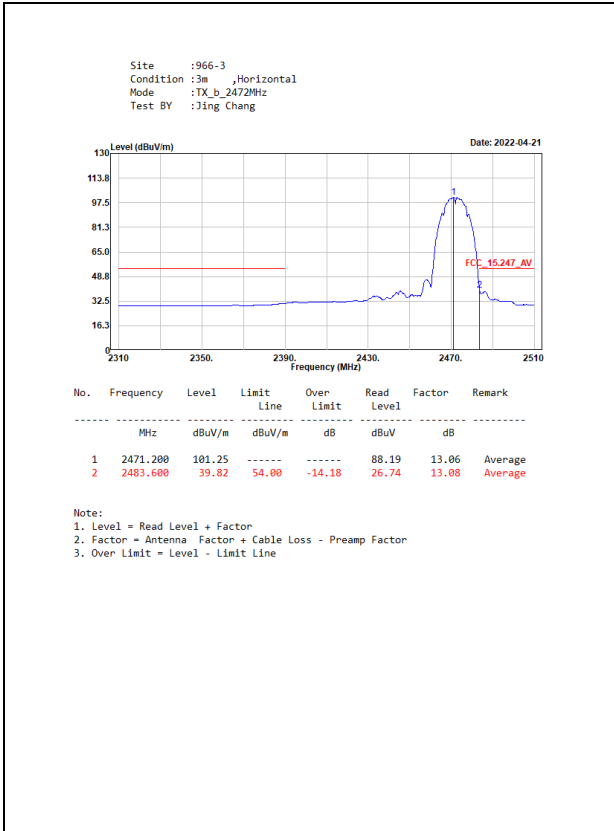
4.4. Test Result of Band Edge

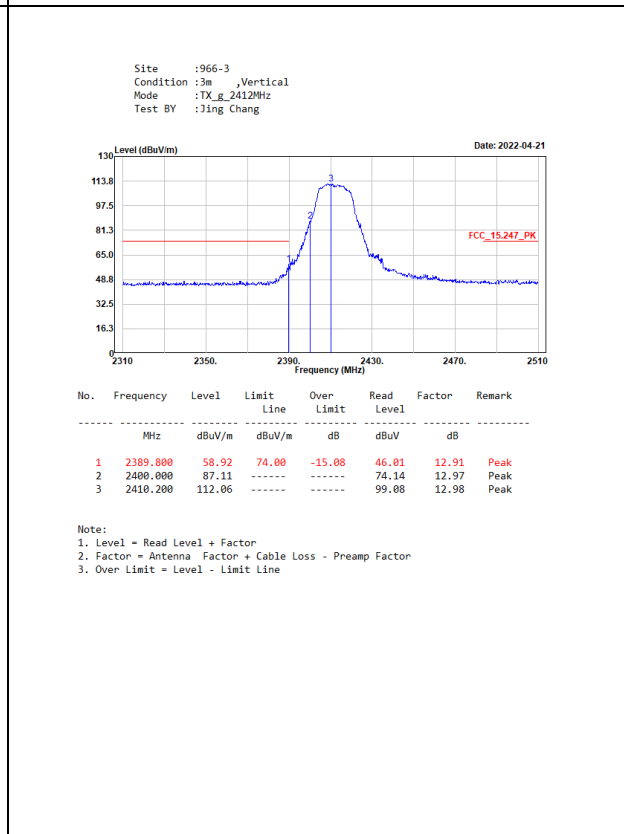
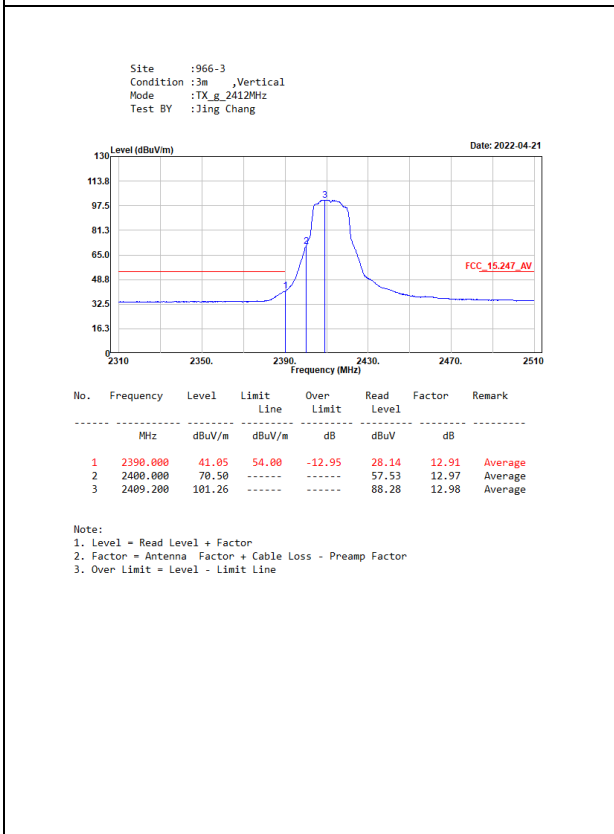
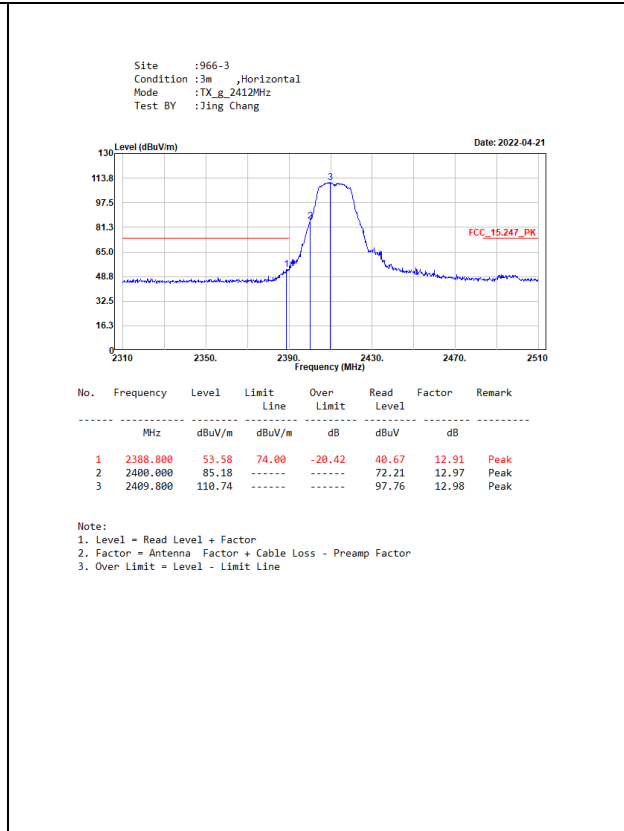
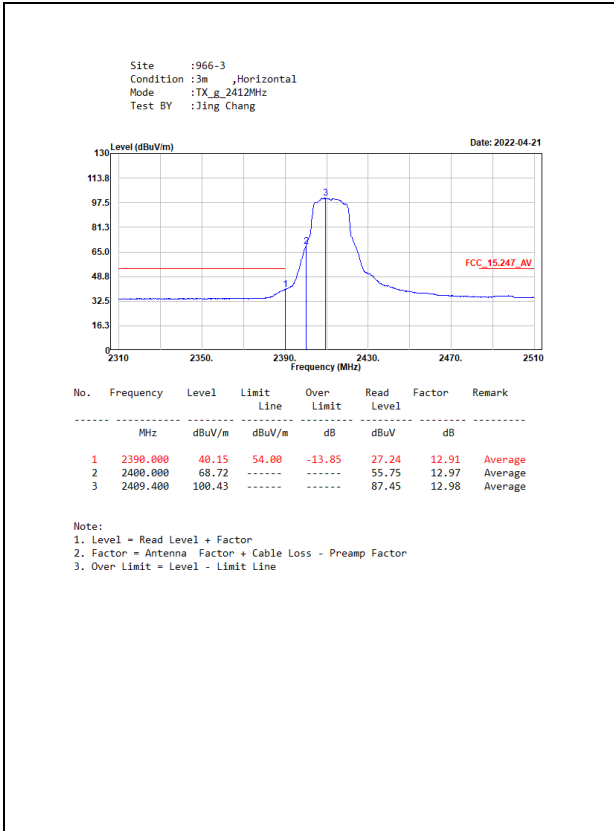
SISO A

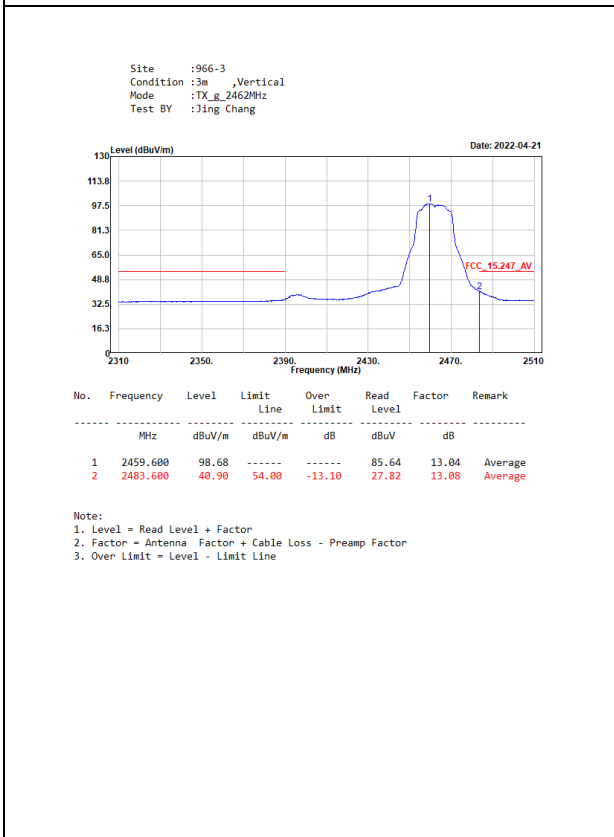
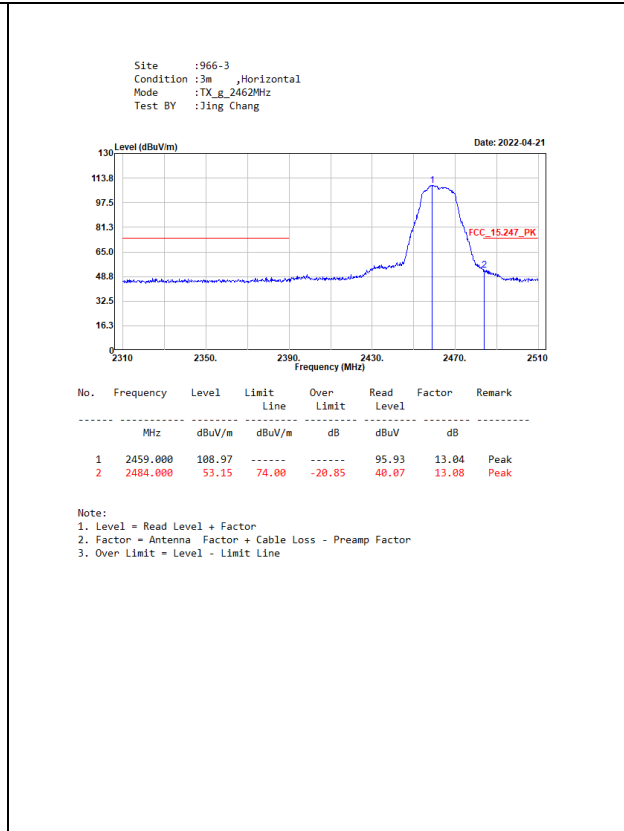
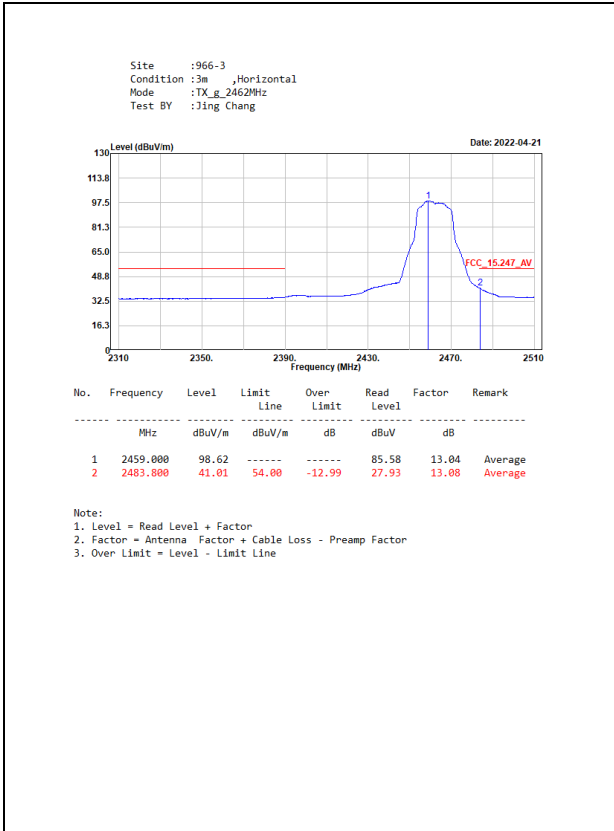


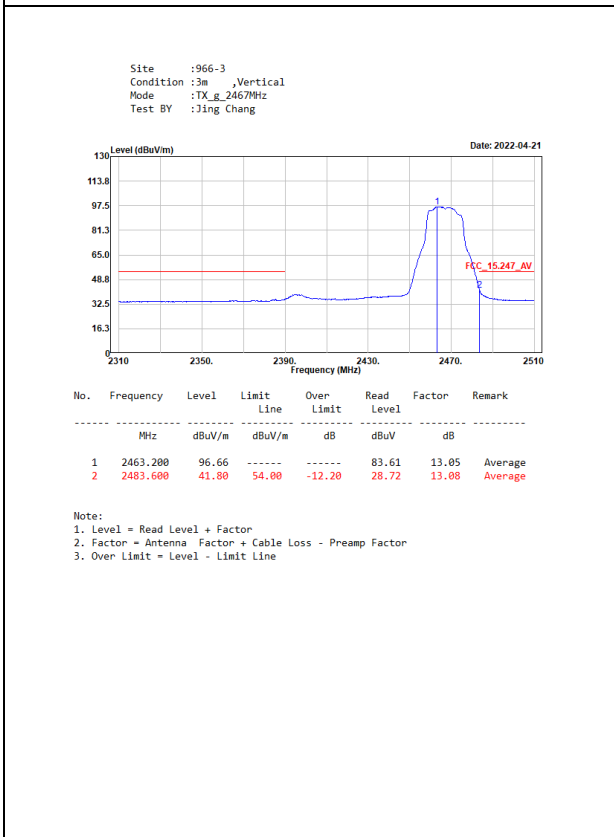
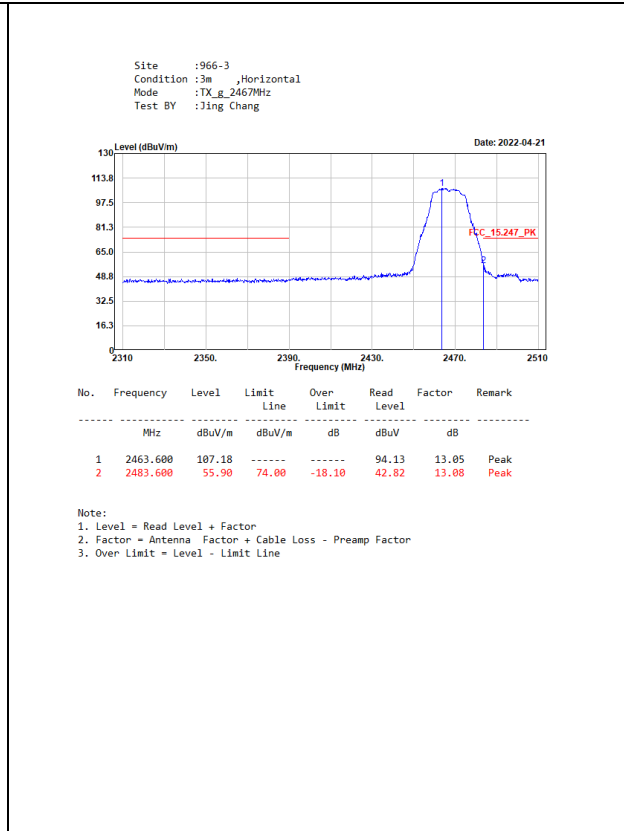
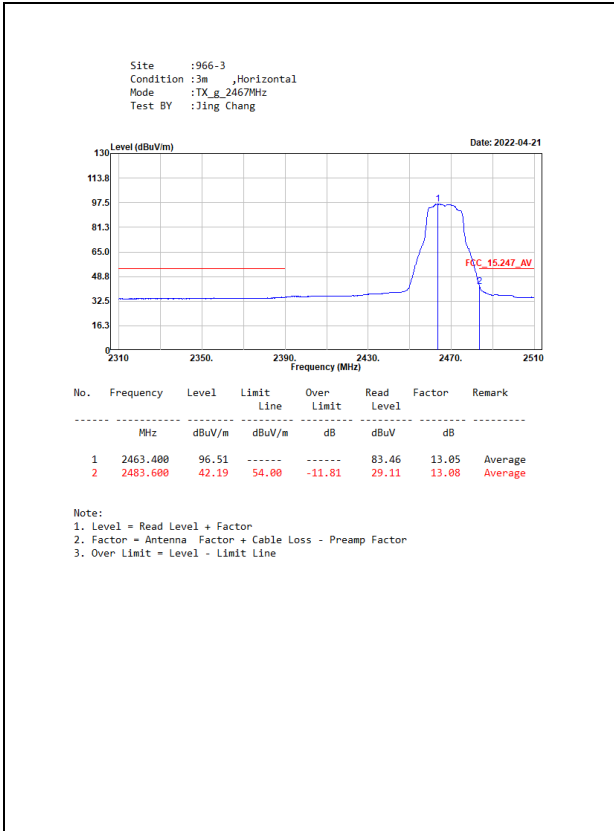


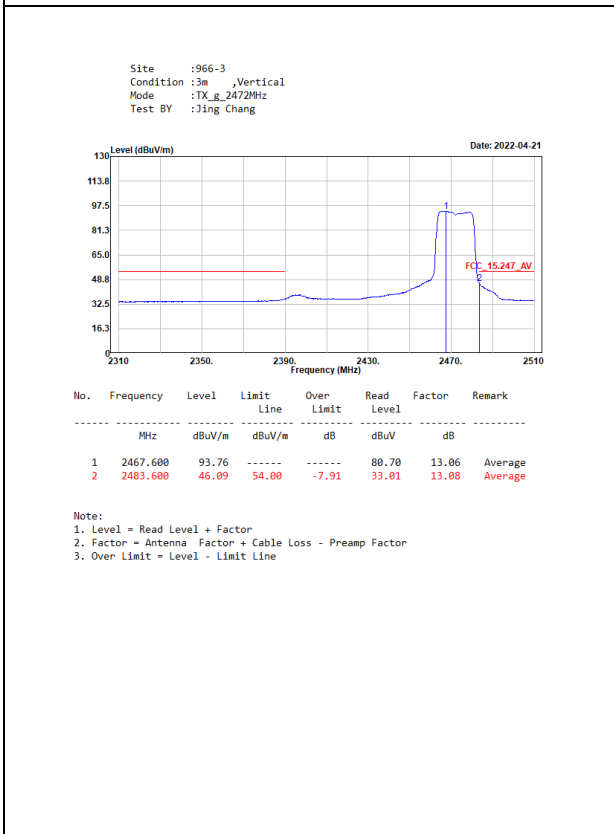
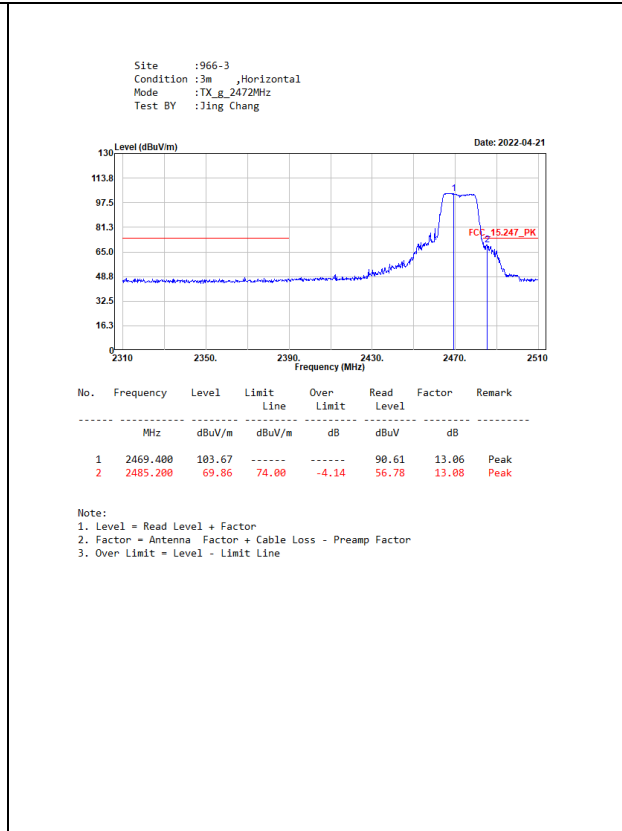
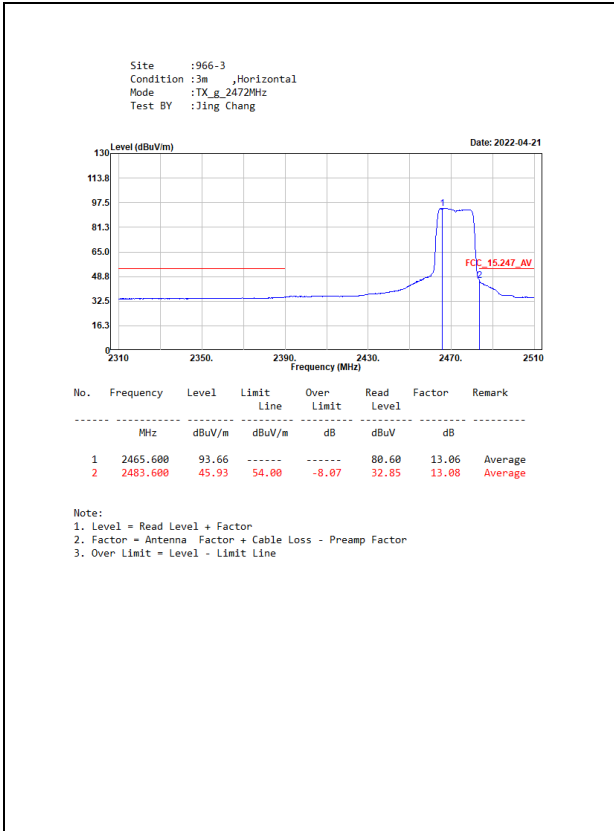


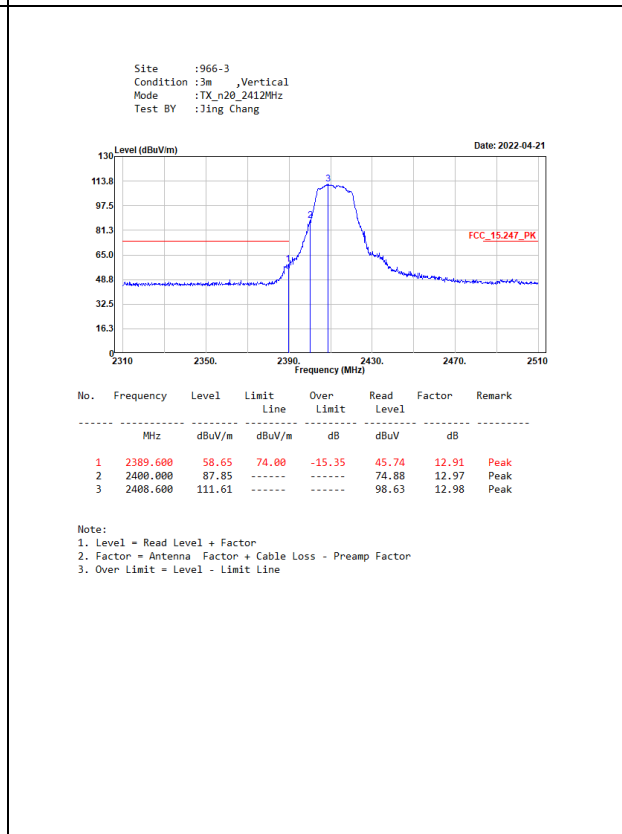
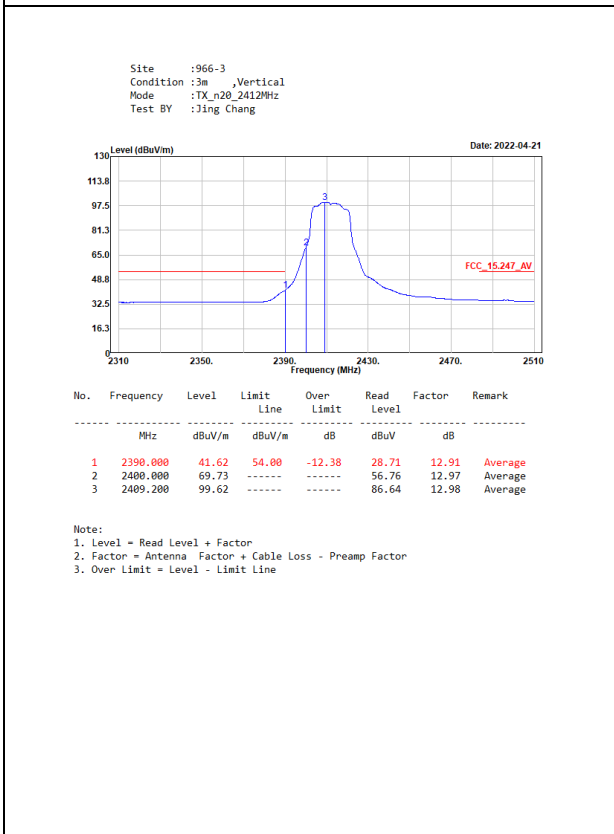
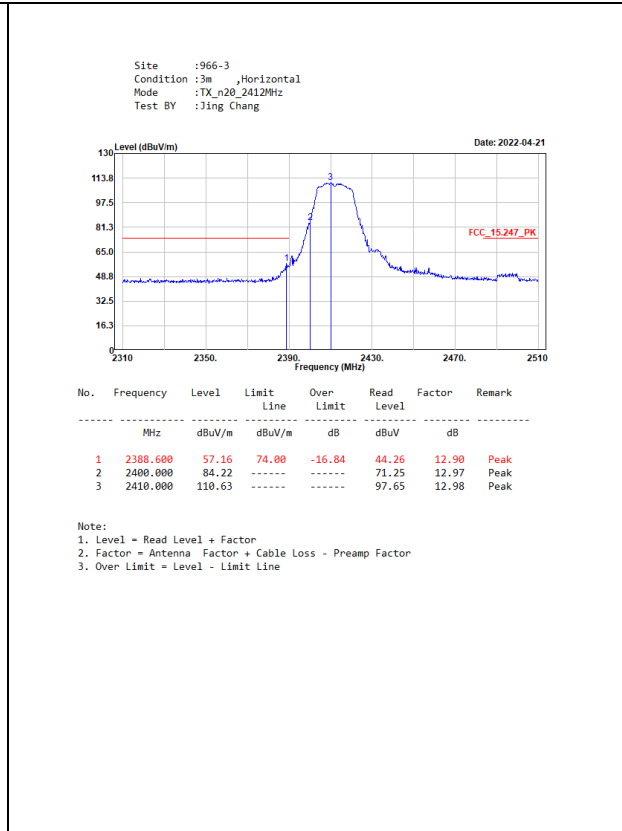
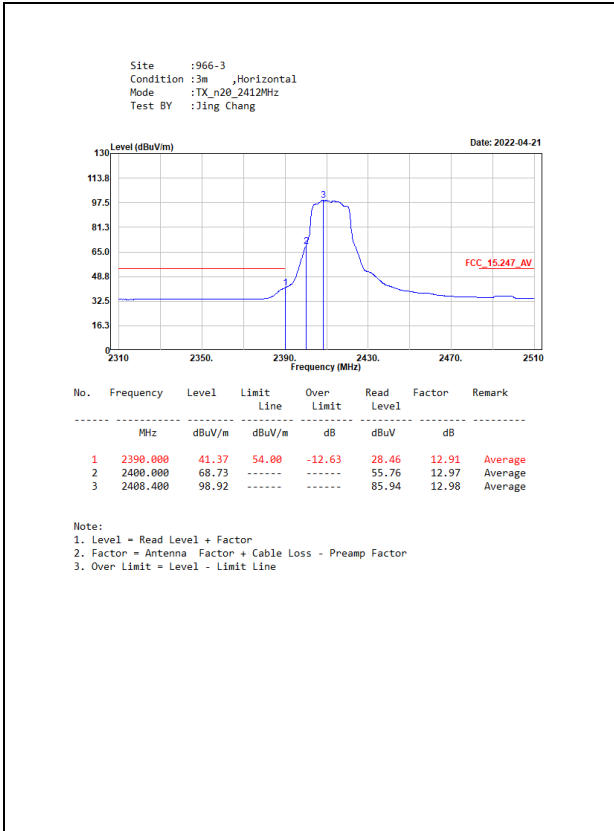


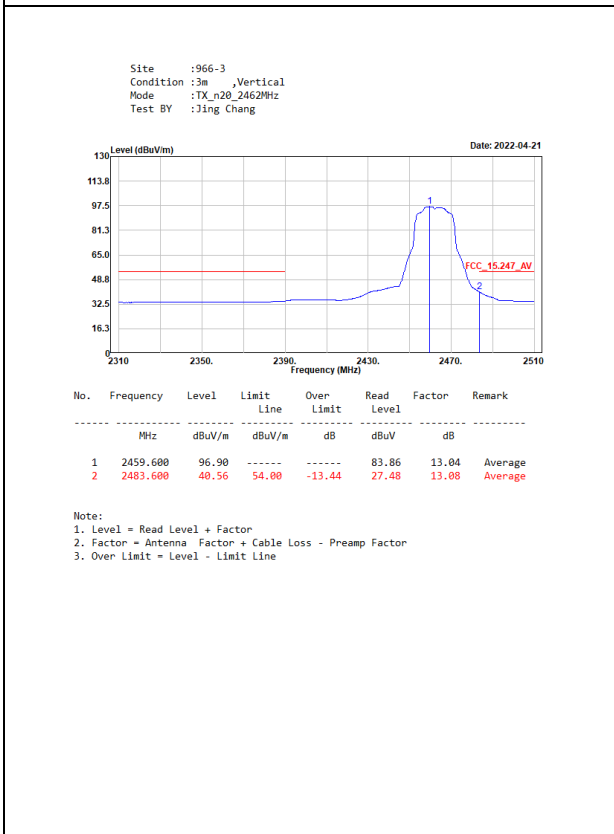
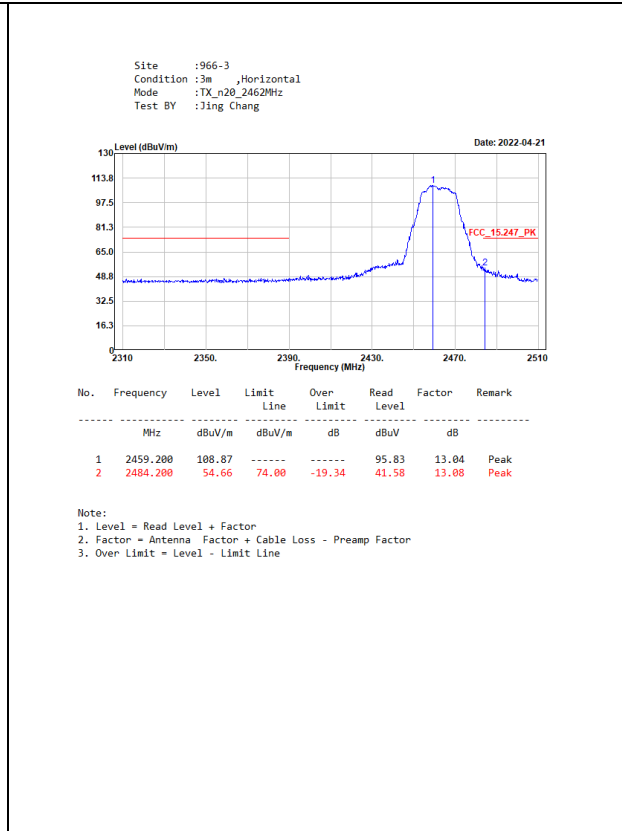
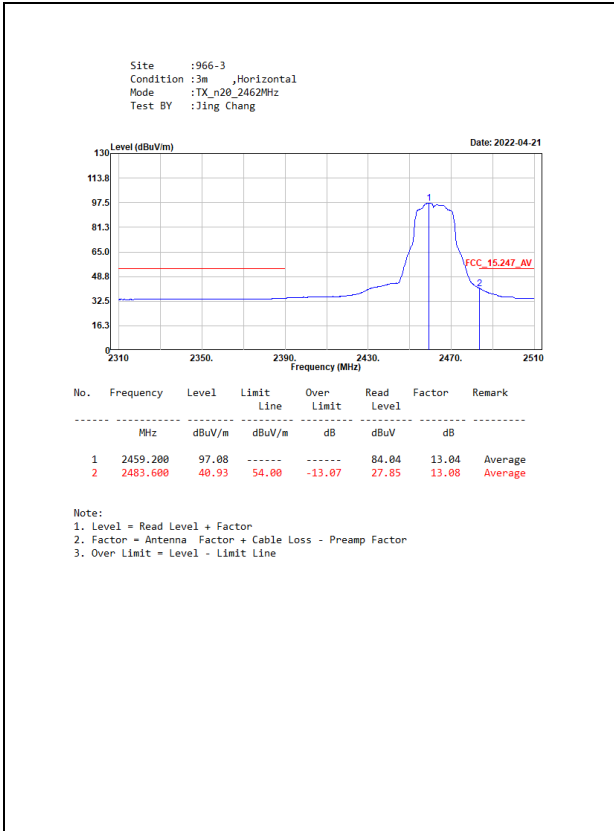


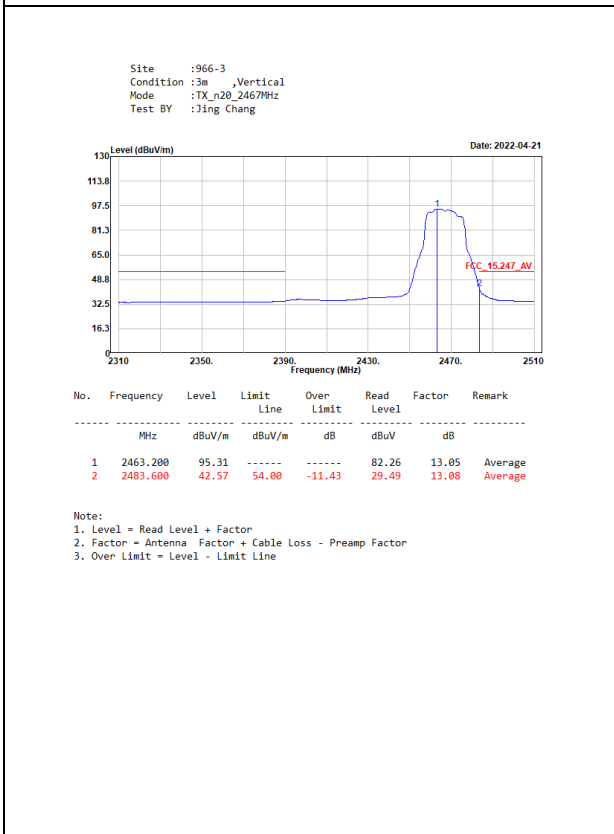
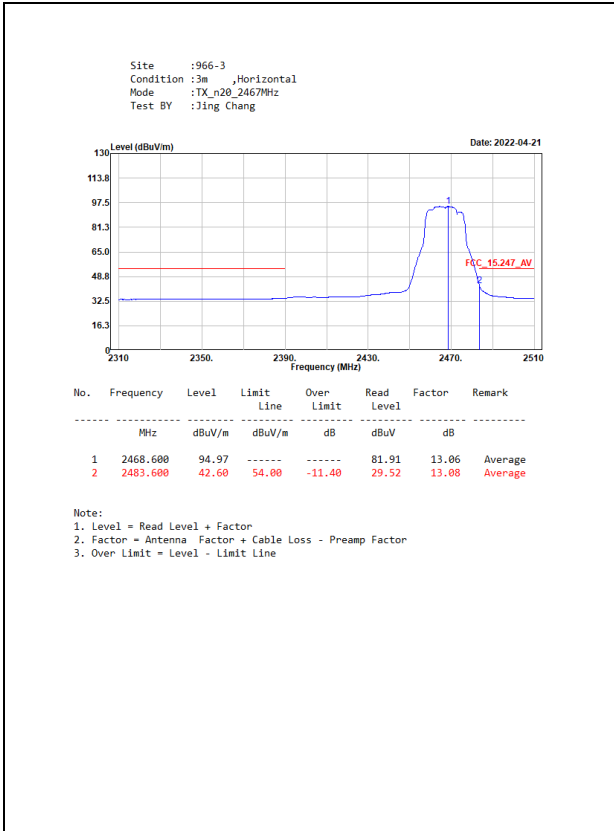


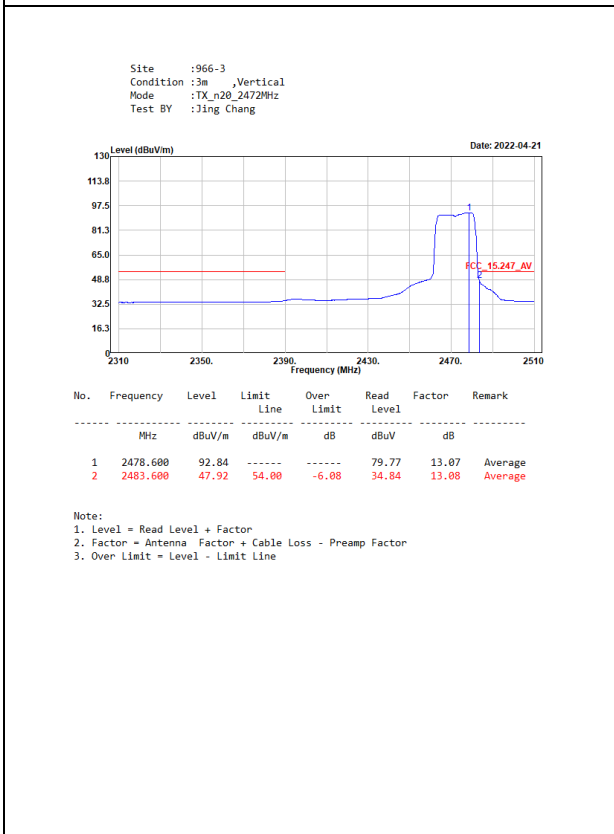
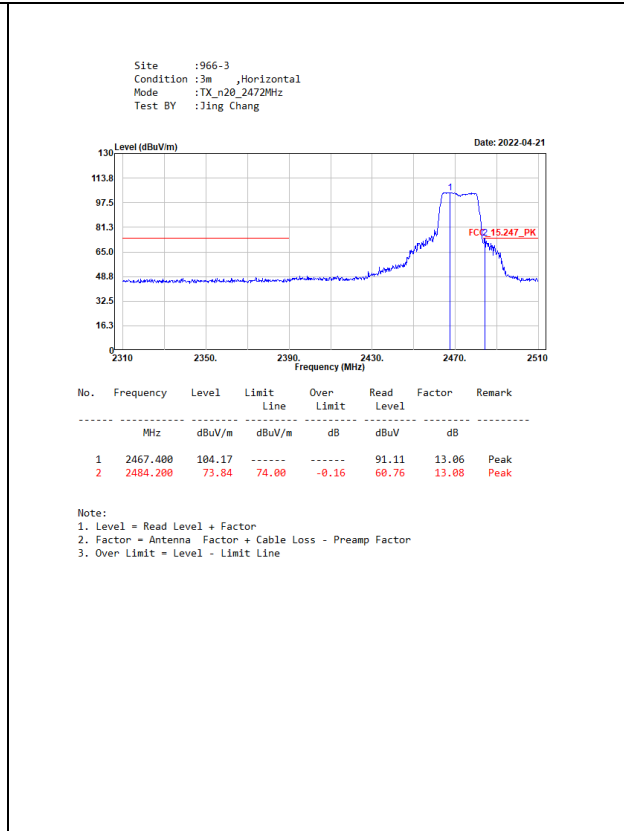
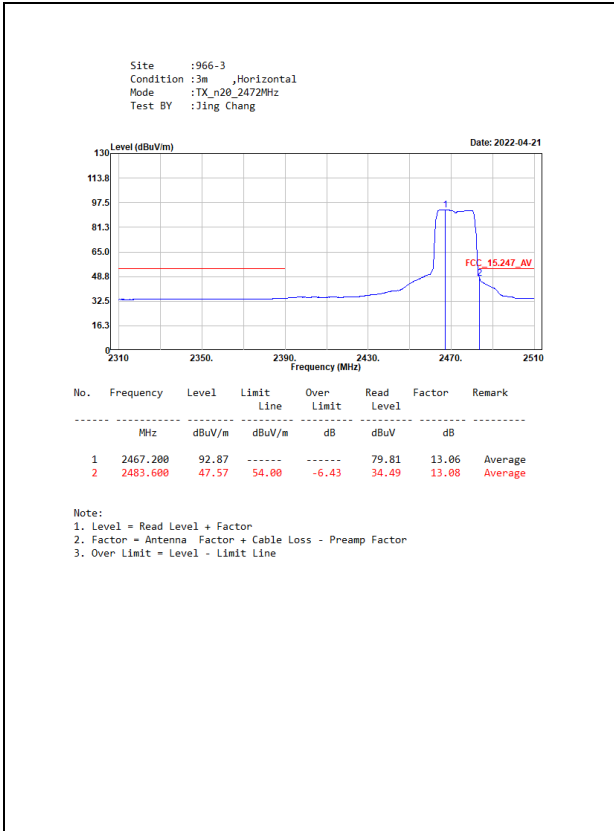


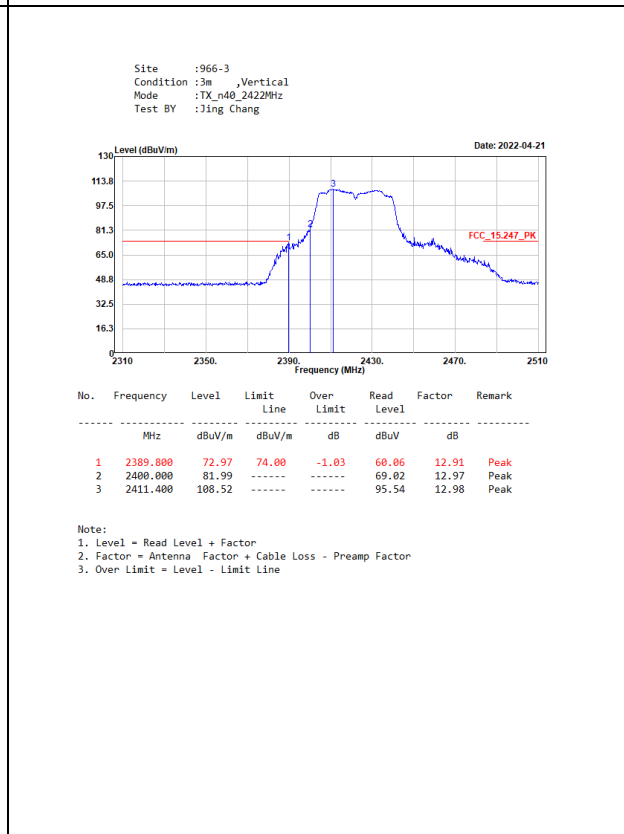
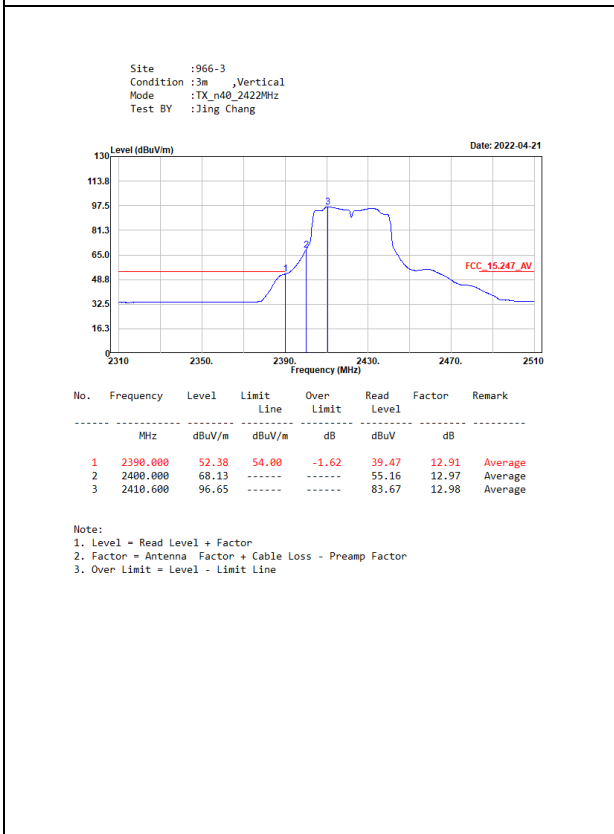
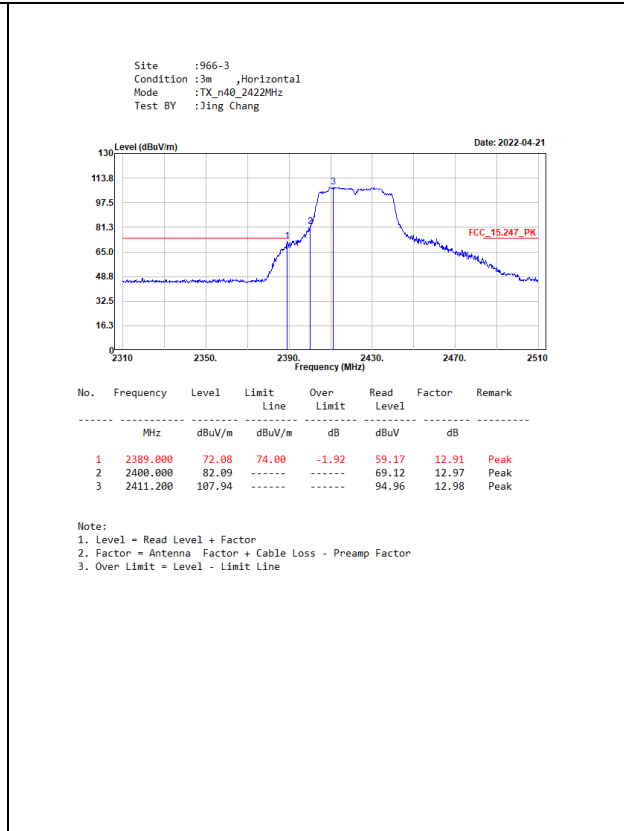
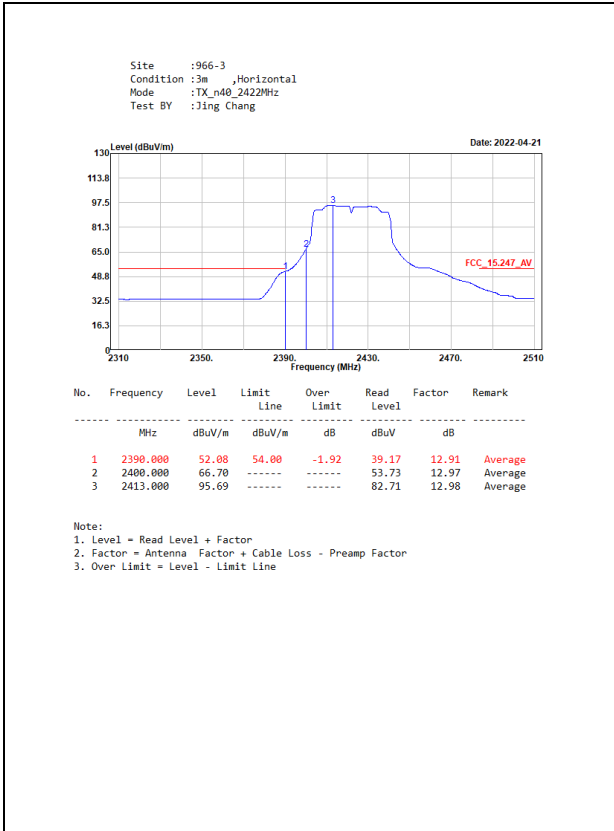


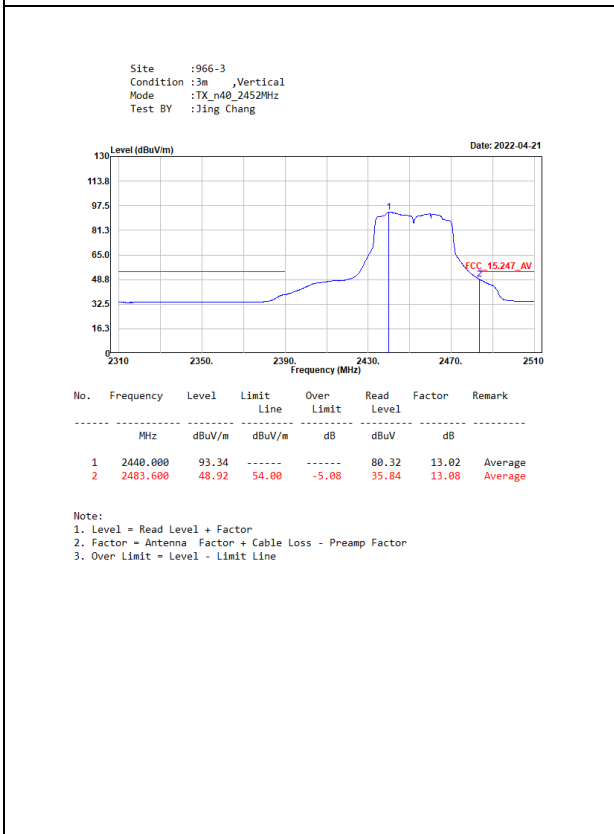
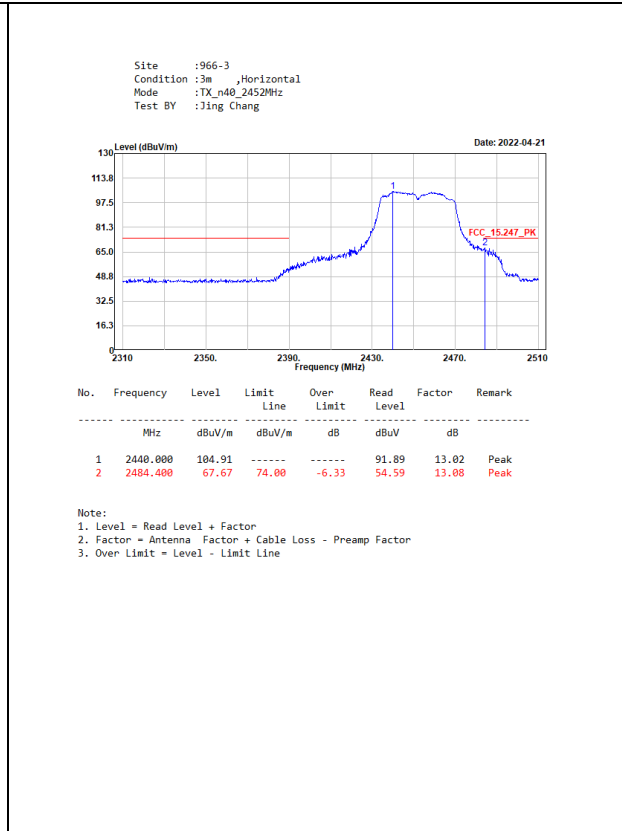
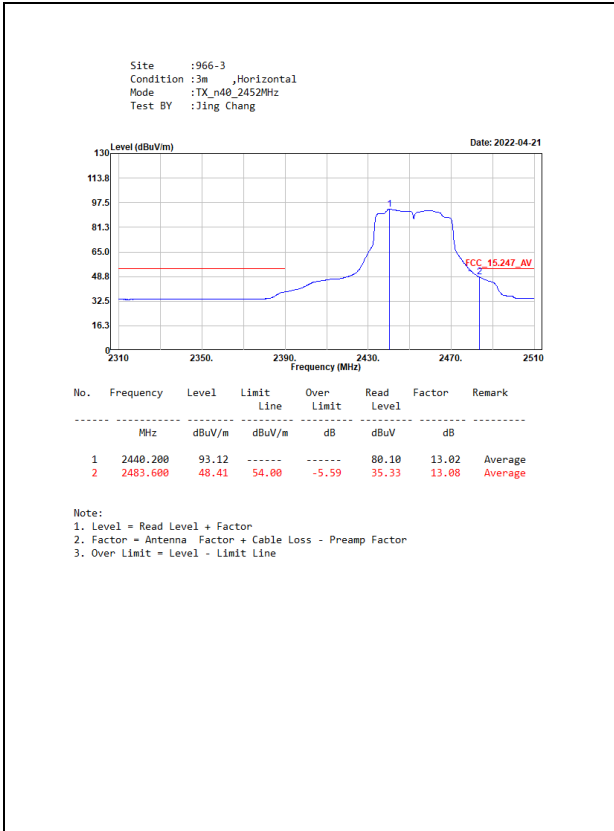


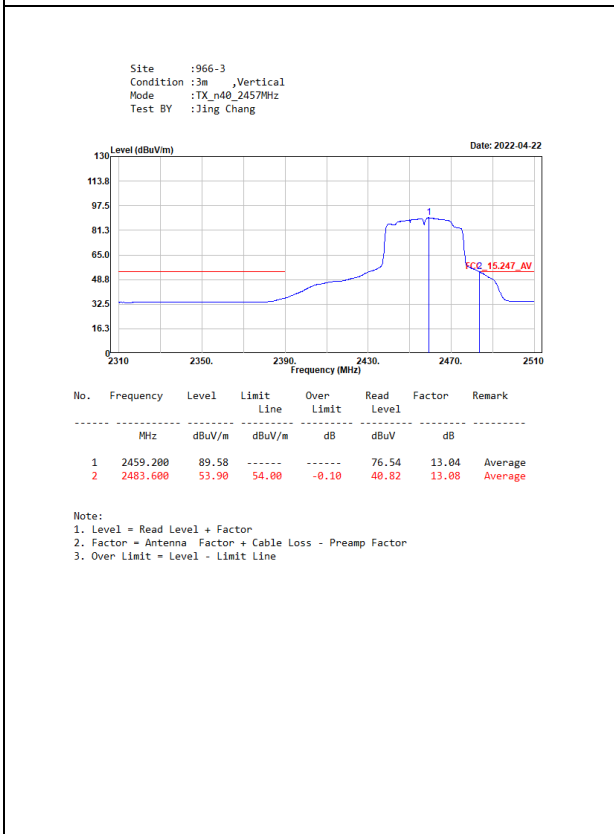
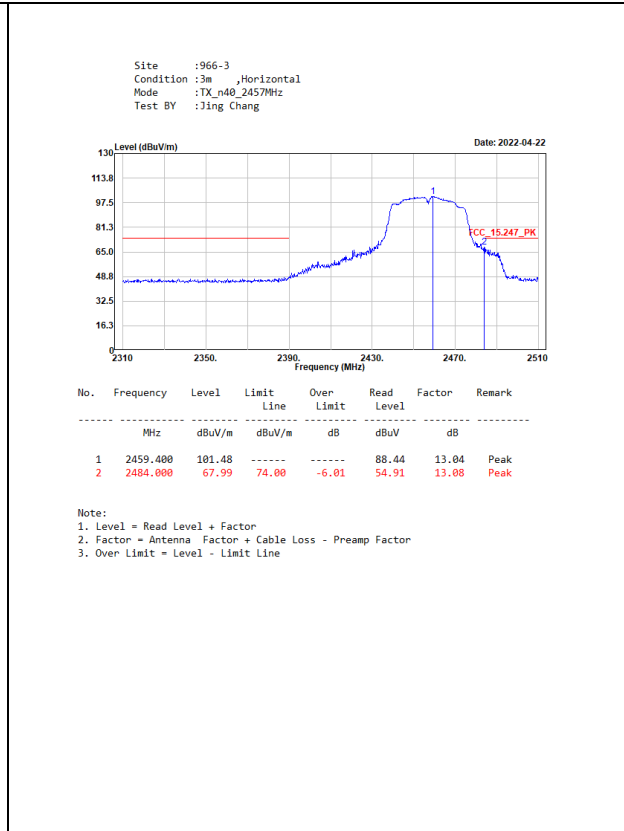
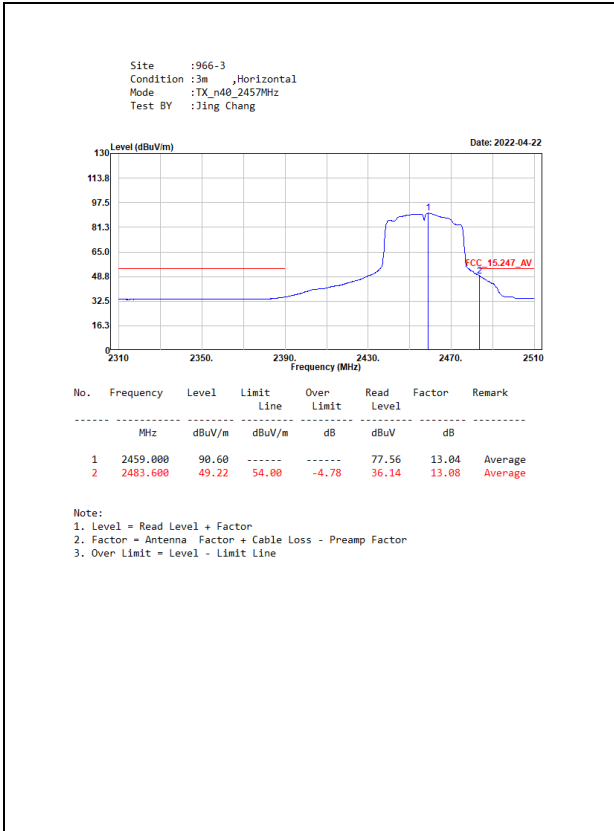


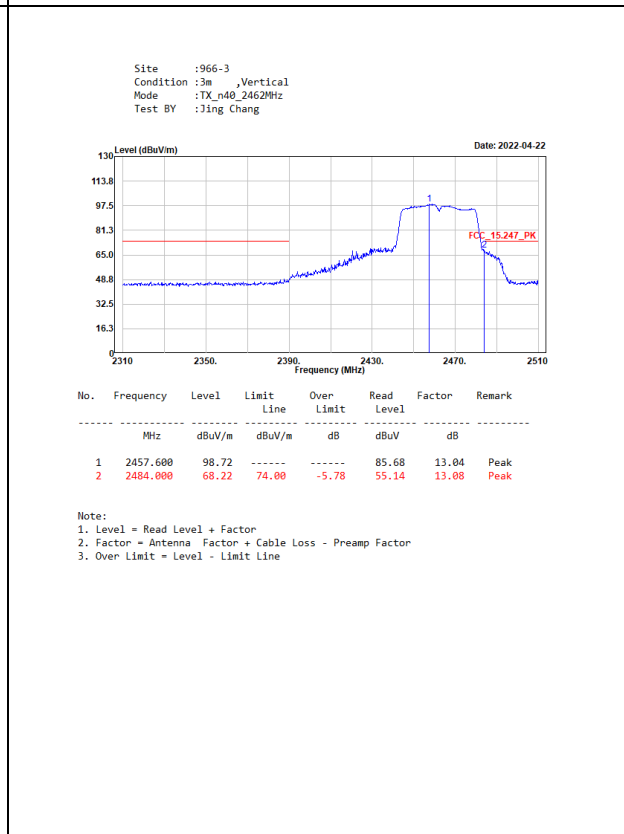
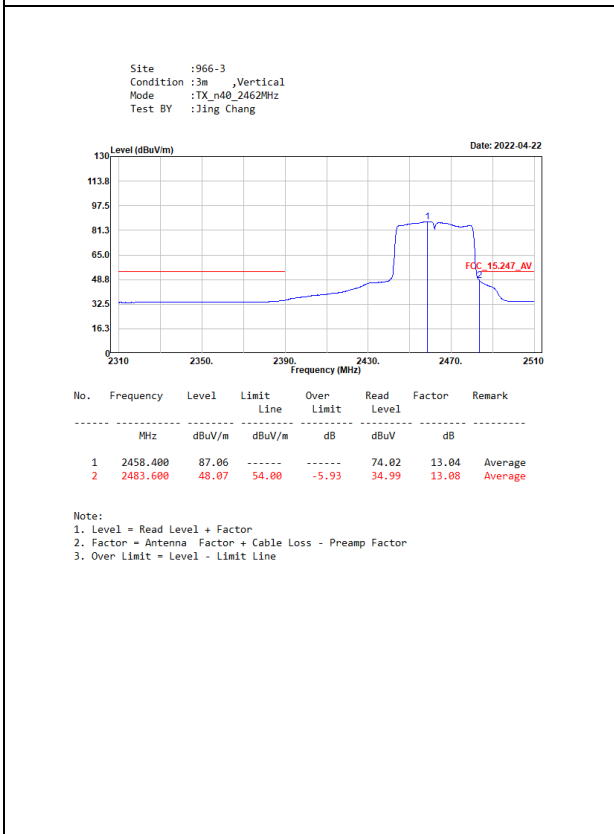
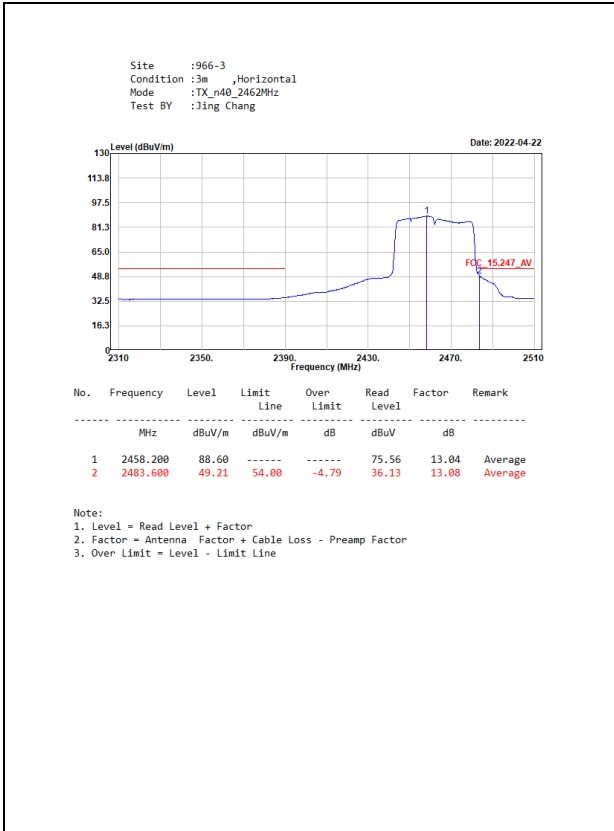


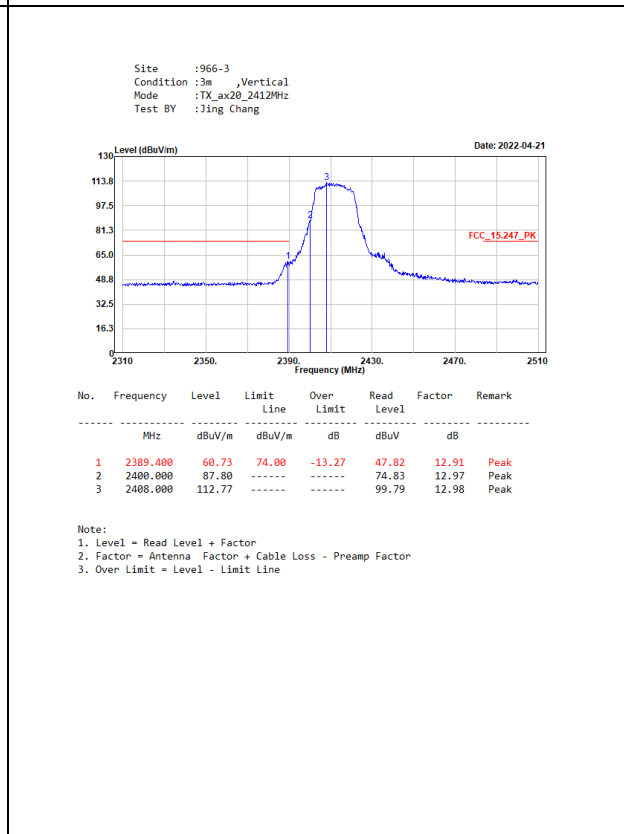
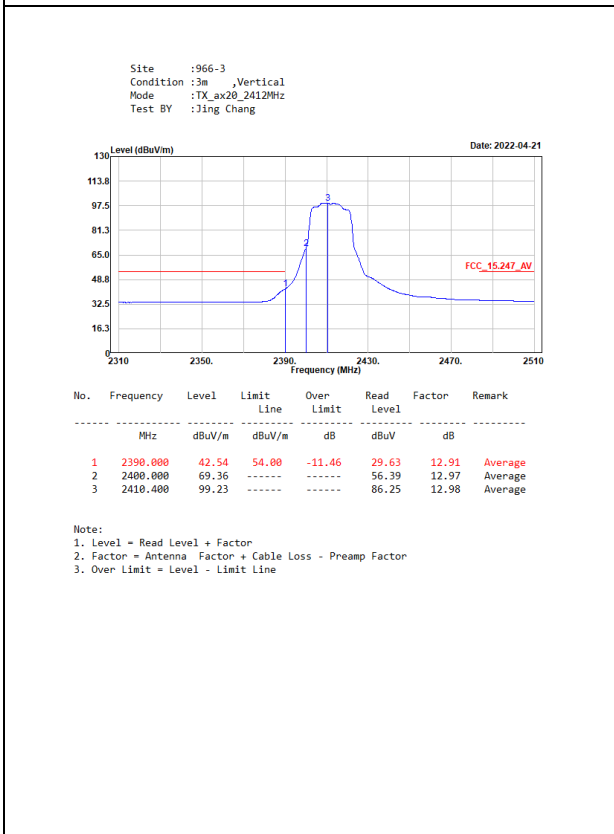
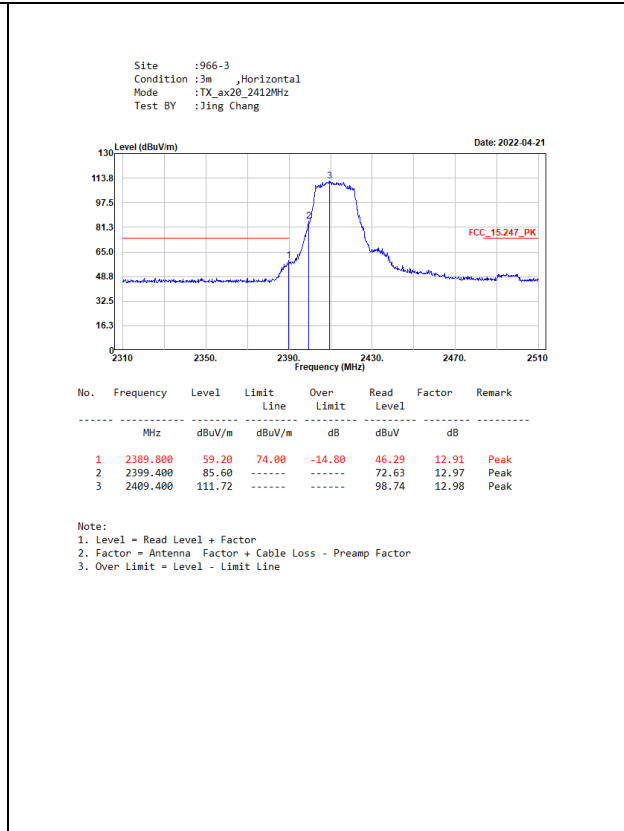
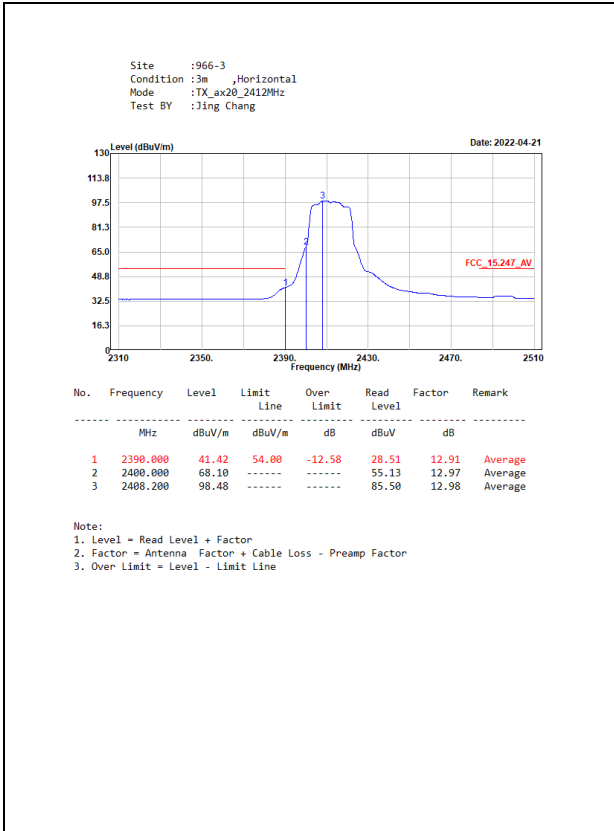


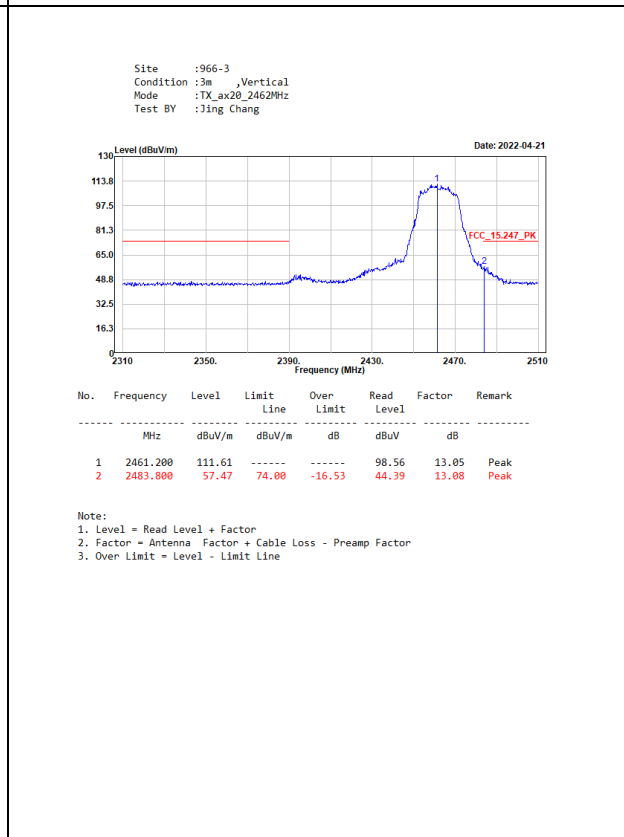
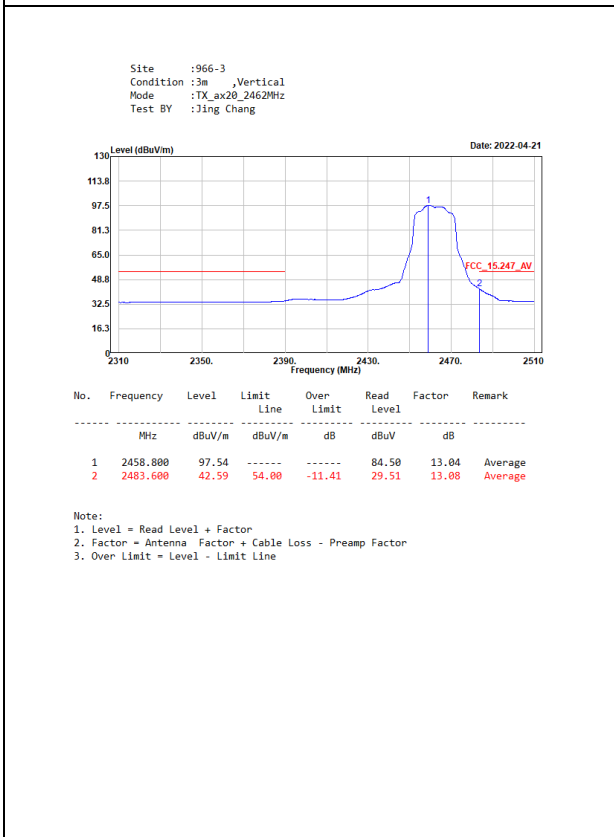
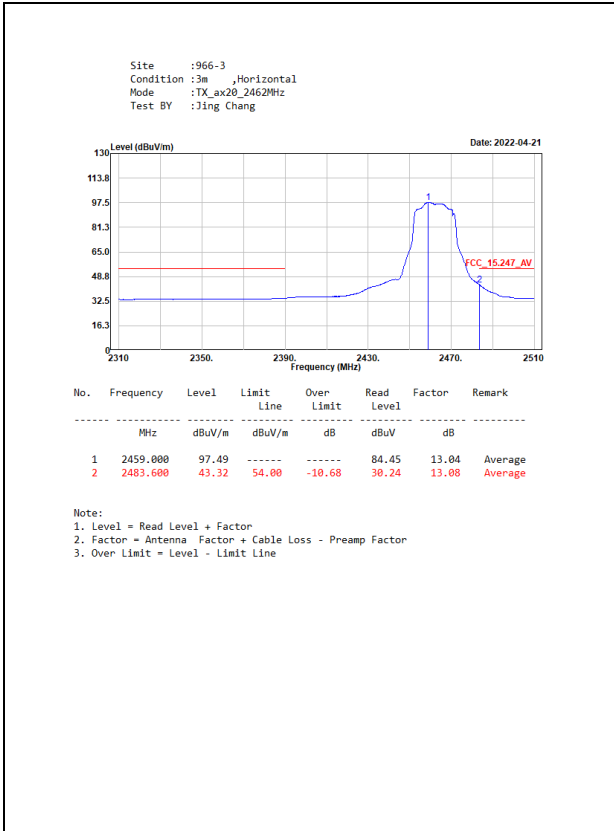


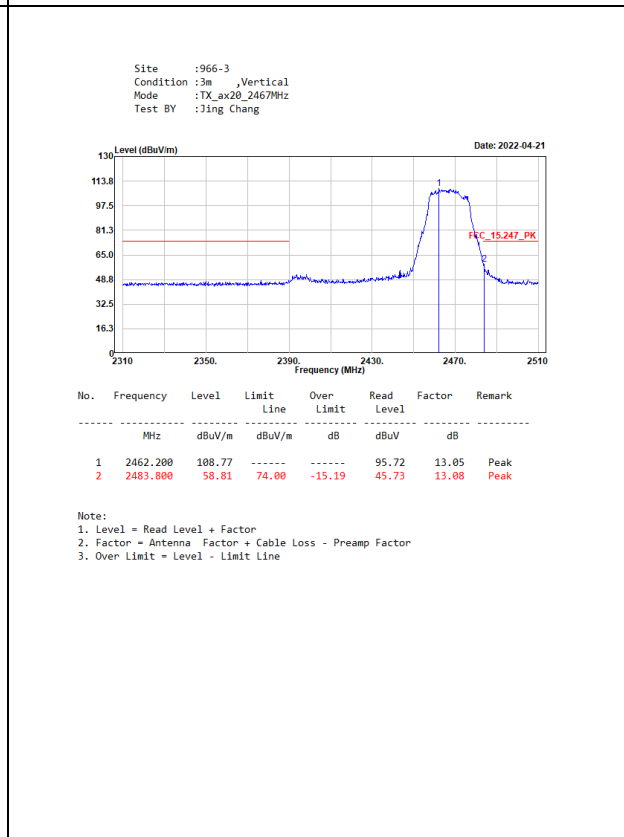
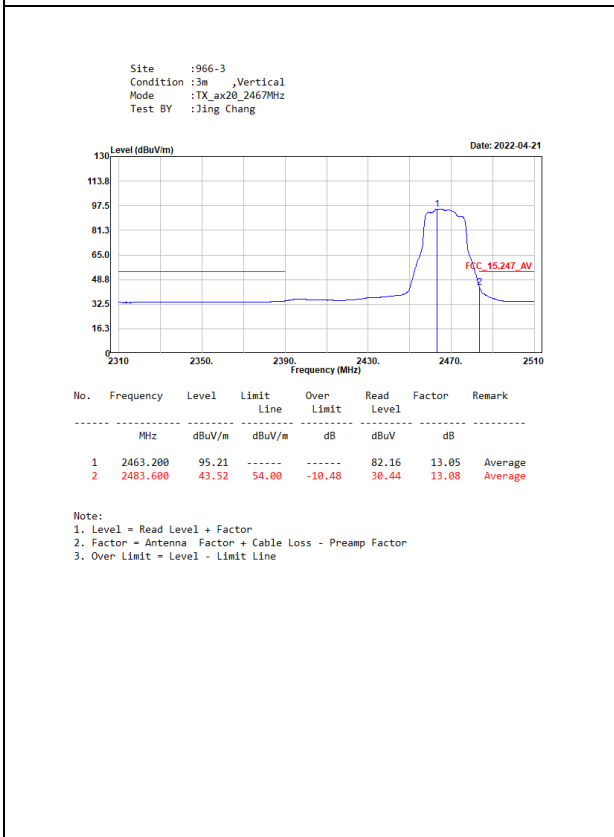
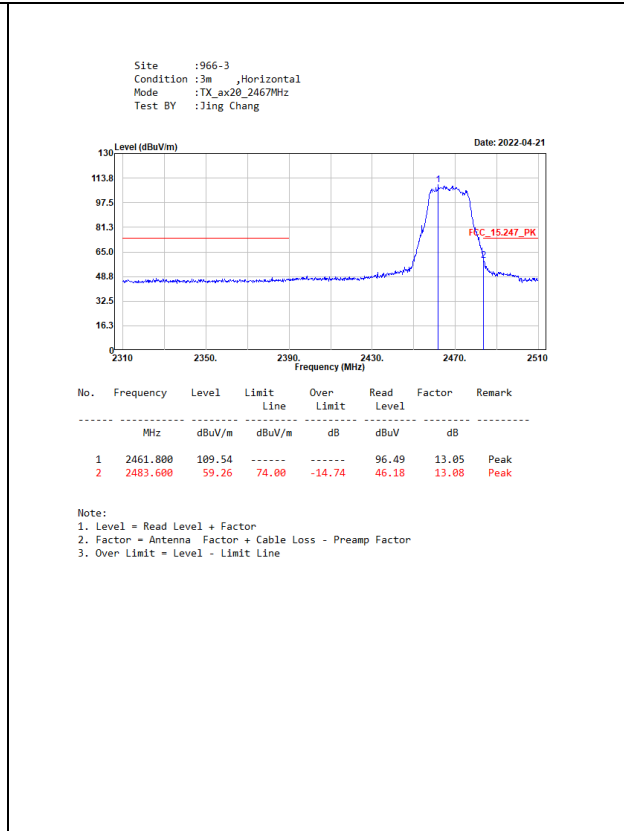
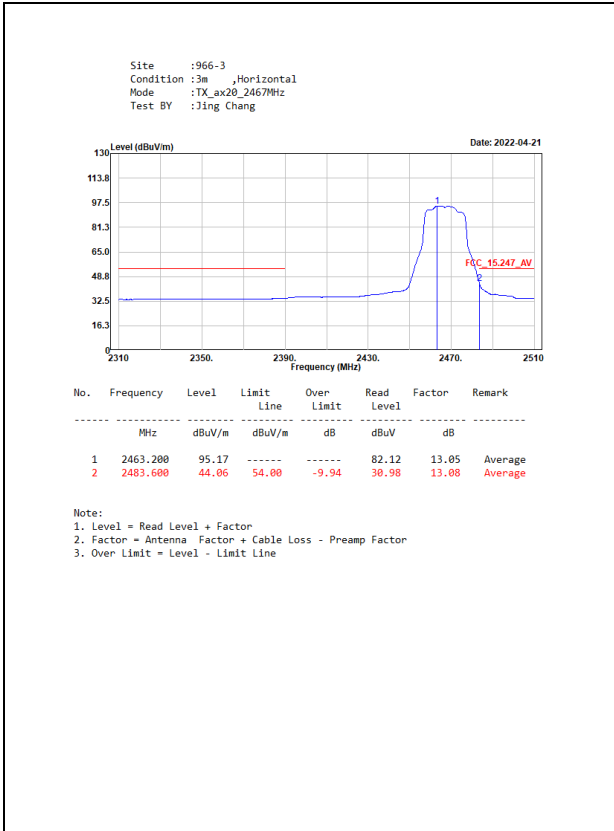


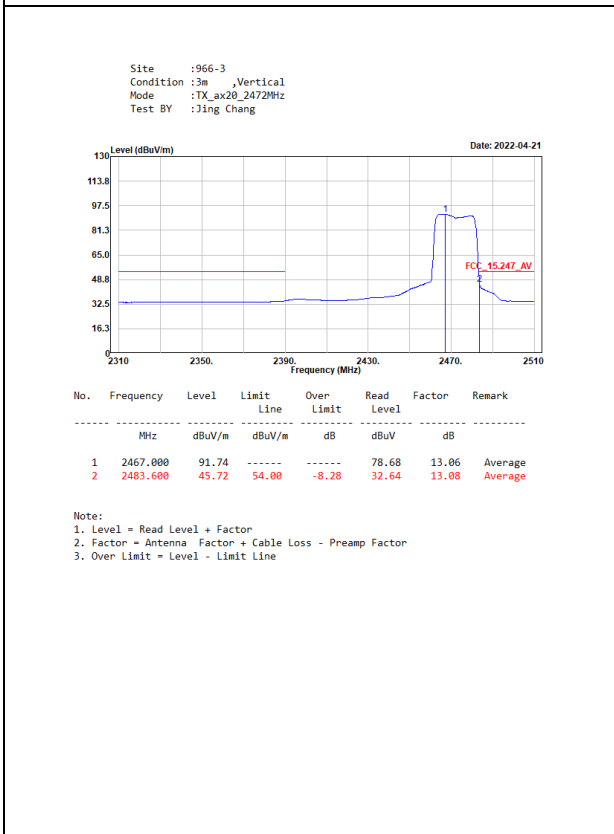
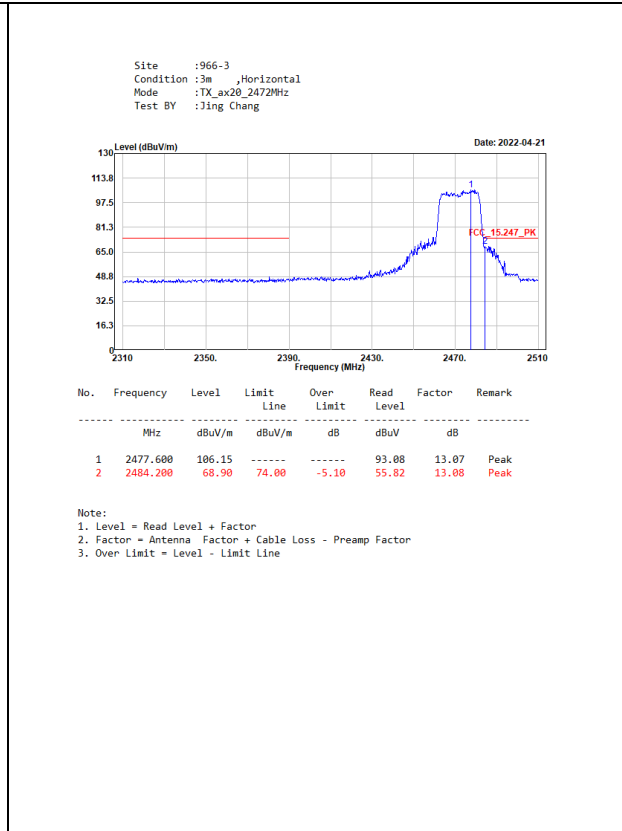
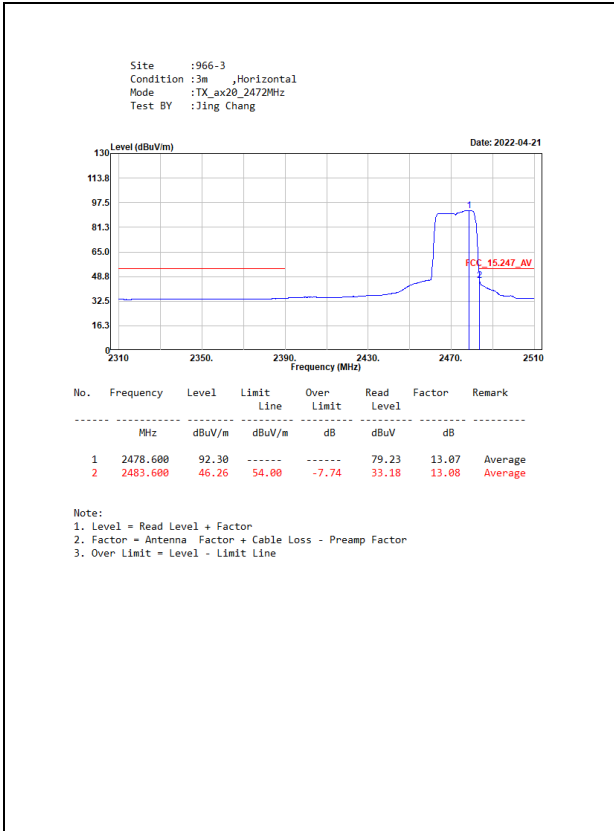


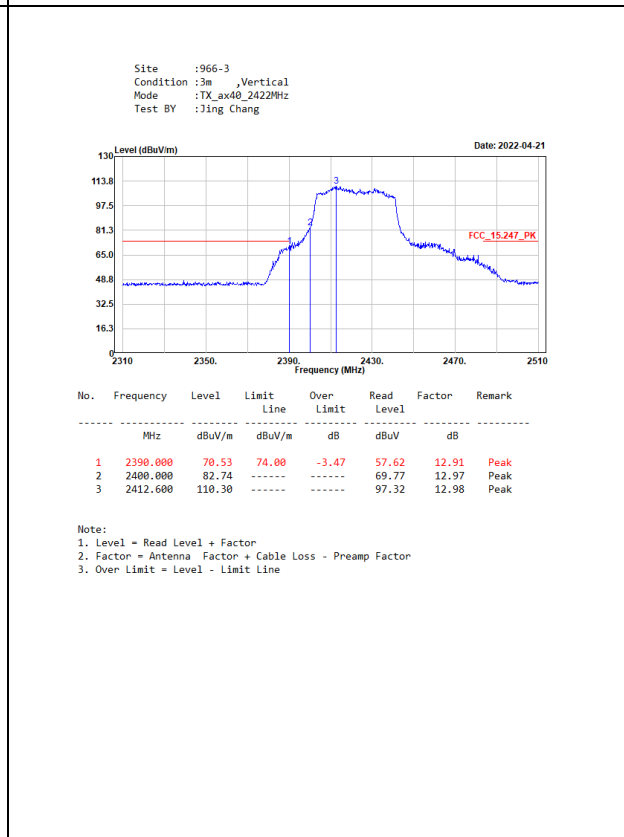
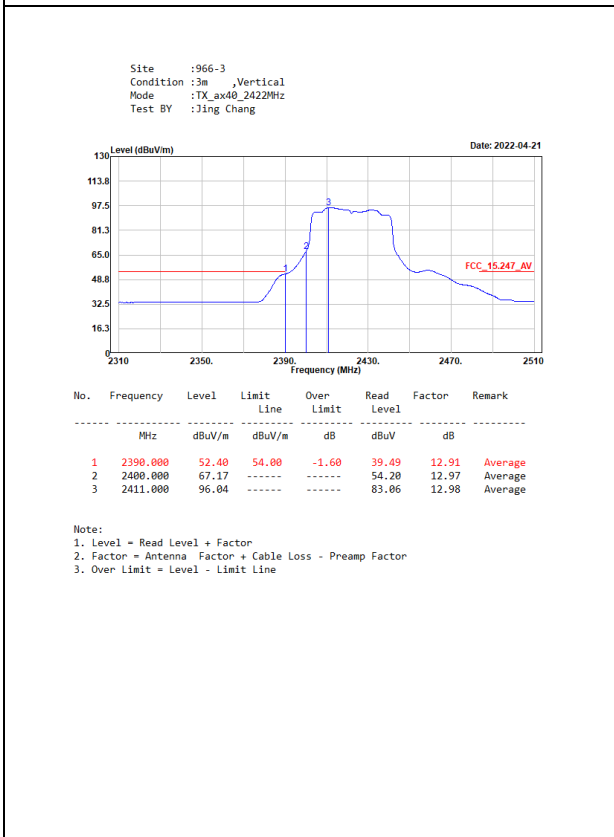
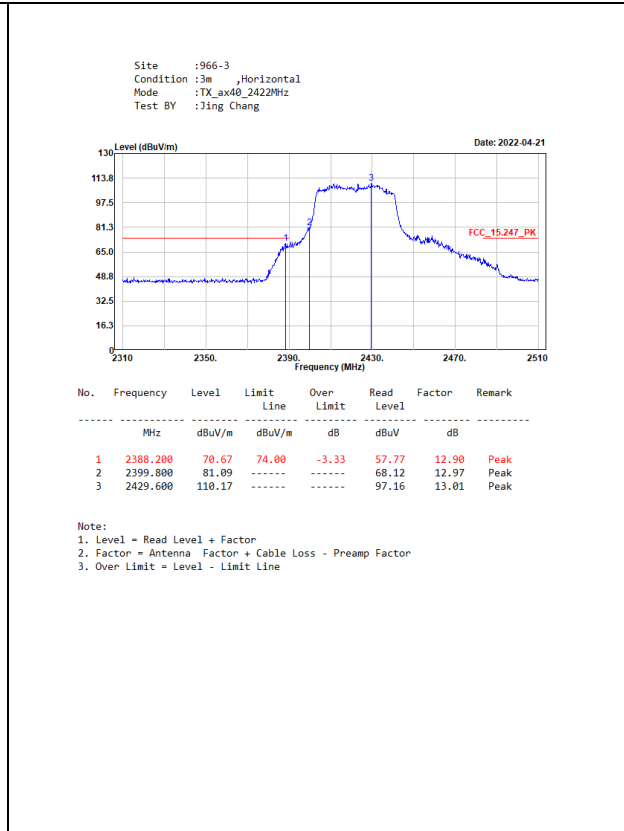
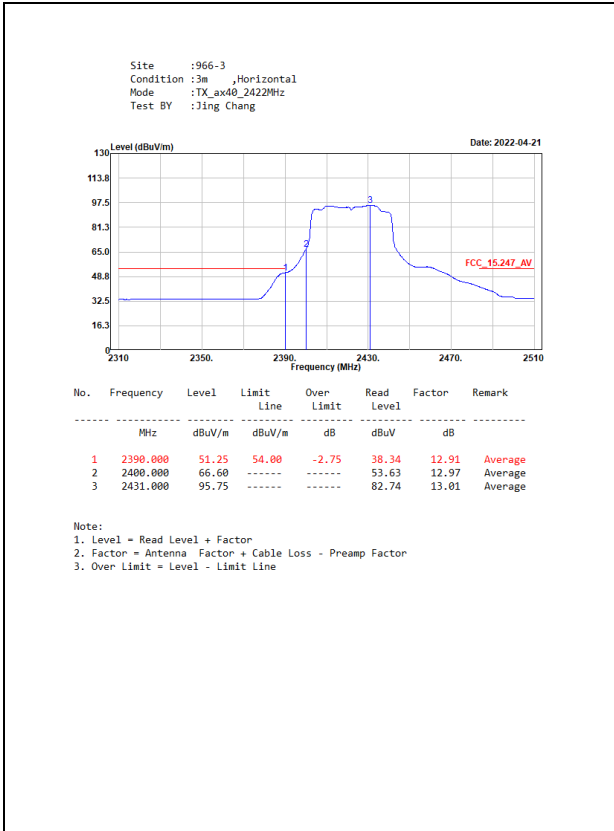


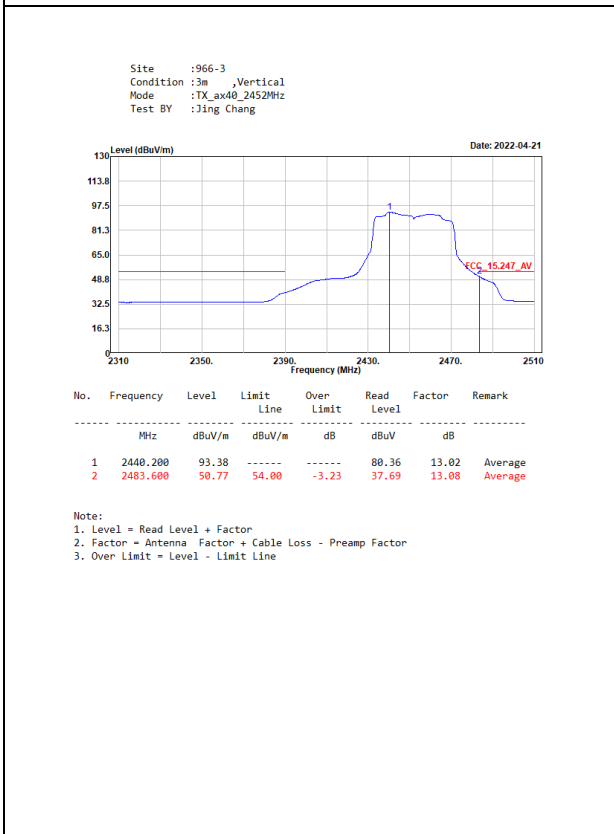
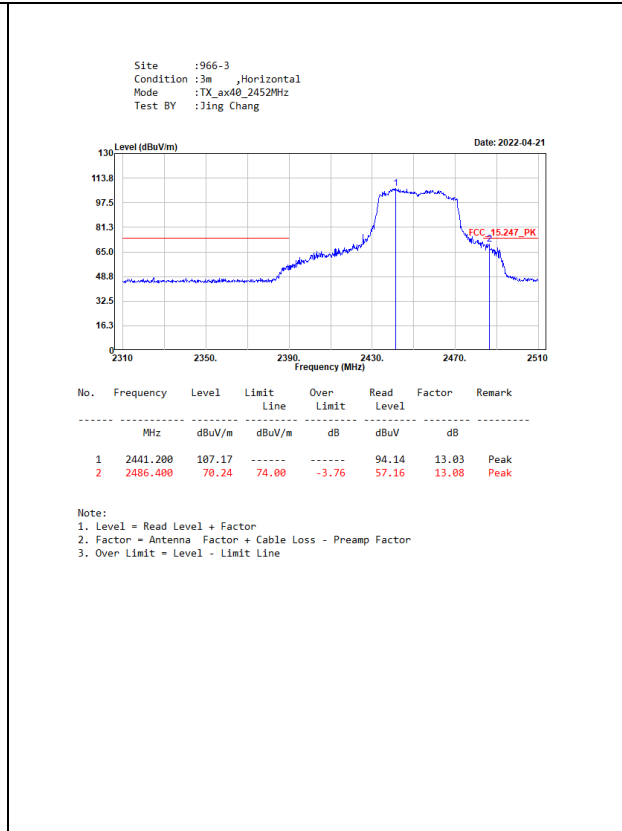
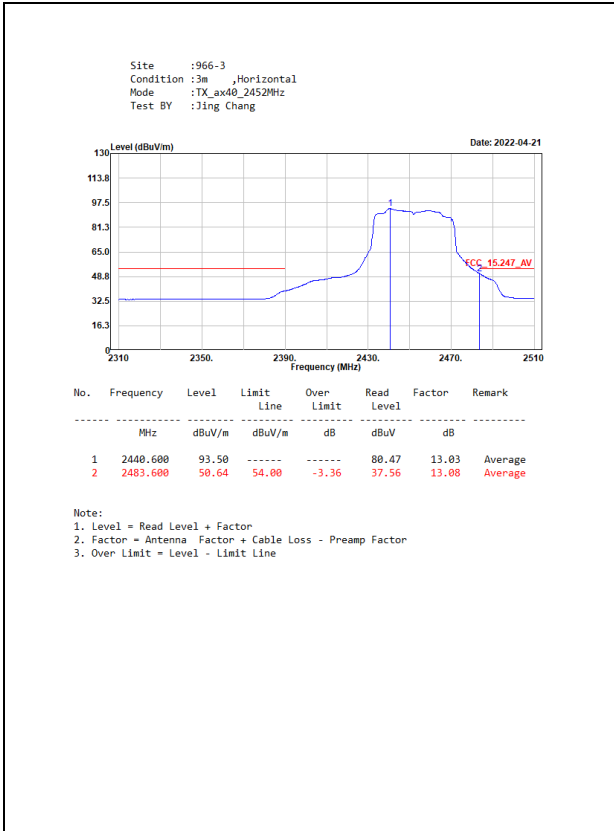


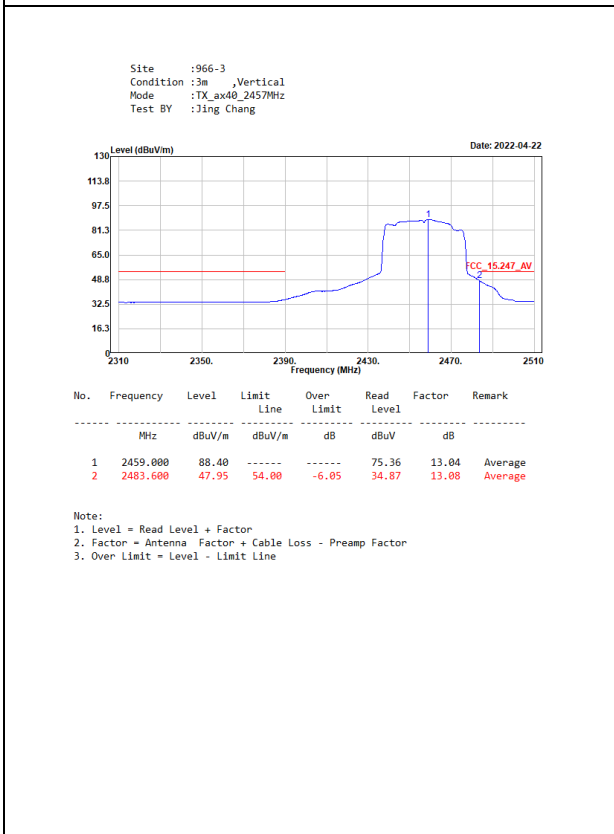
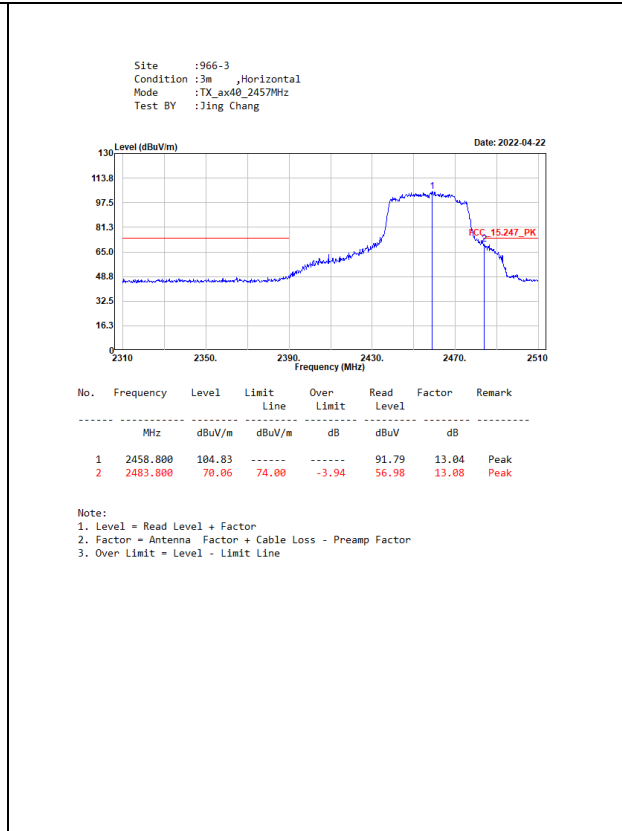
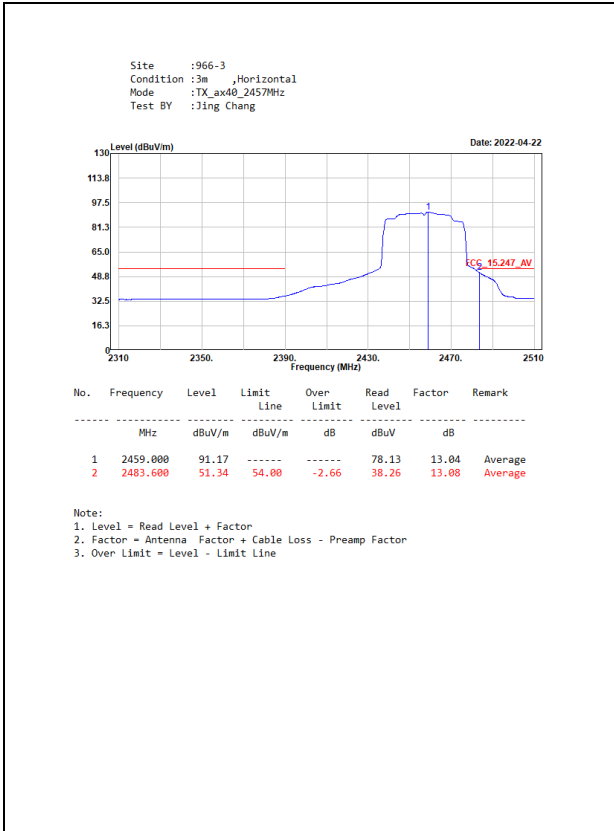


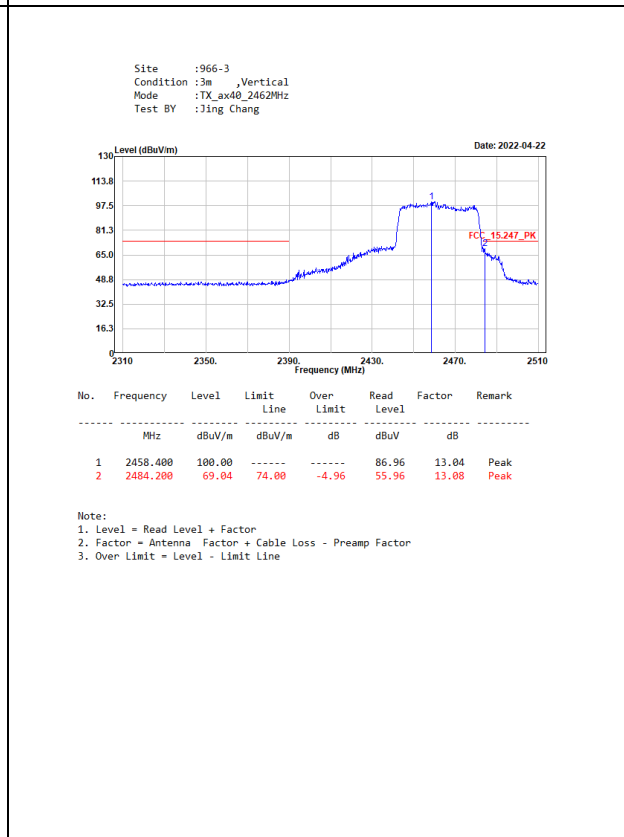
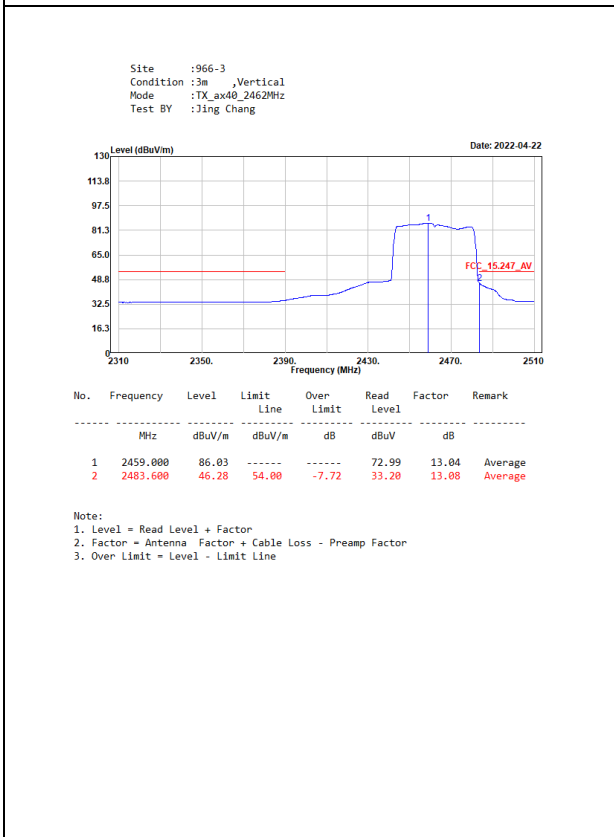
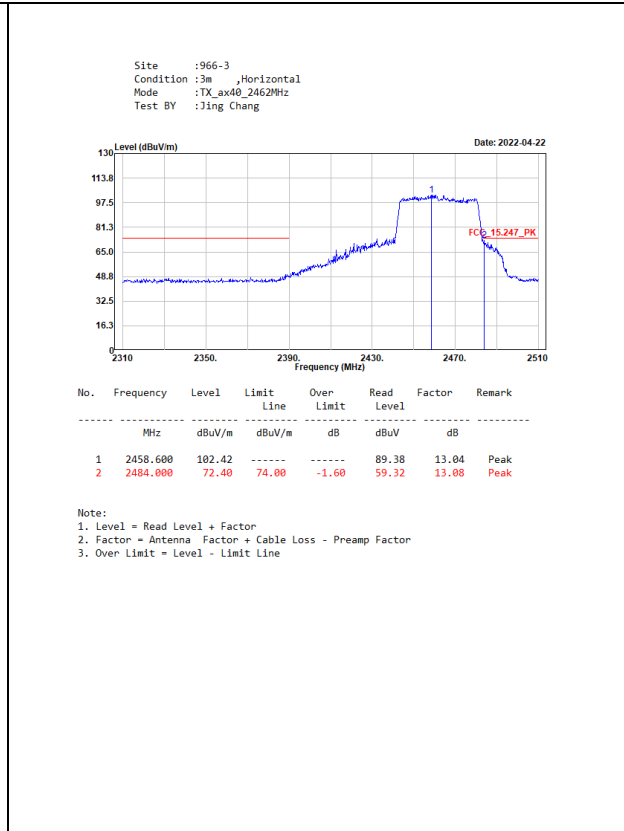
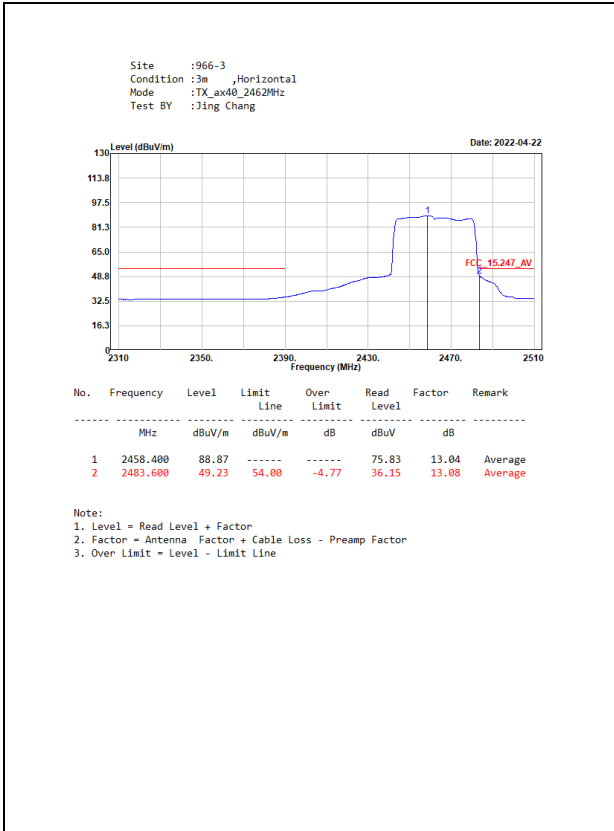












SISO B

