



Test report No.: 23C0510R-RFUSV01S-C

TEST REPORT

Product Name	Car Infotainment Unit
Trademark	APTIV
Model and /or type reference	IHP
FCC ID	LTQIHP
Applicant's name / address	Aptiv Services Deutschland GmbH Am Technologiepark 1 D-42119 Wuppertal Germany
Manufacturer's name	Aptiv Services Deutschland GmbH
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.4: 2014, ANSI C63.10: 2013
Verdict Summary	IN COMPLIANCE
Documented By (Senior Project Specialist / April Chen)	<i>April Chen</i>
Tested By (Senior Engineer / Ivan Chuang)	<i>Ivan Chuang</i>
Approved By (Senior Engineer / Steven Tsai)	<i>Steven Tsai</i>
Date of Receipt	2023/12/14
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Report Version	V1.0

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Appendix 1: EUT Test Photographs

Appendix 2: Product Photos-Please refer to the file: 23C0510R-Product Photos

Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions


1. The test results relate only to the samples tested.
2. 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.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. 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.

Revision History

Report No.	Version	Description	Issued Date
23C0510R-RFUSV01S-C	V1.0	Initial issue of report.	2024/01/26

1. General Information

1.1. EUT Description

Product Name	Car Infotainment Unit
Trademark	APTIV
Model and /or type reference	IHP
EUT Rated Voltage	DC 12V by Battery
EUT Test Voltage	DC 12V by Battery
Frequency Range	802.11b/g/n/ac/ax-20 MHz: 2412-2472 MHz 802.11n/ac/ax-40 MHz: 2422-2462 MHz
Number of Channels	802.11b/g/n/ac/ax-20 MHz: 13 CH 802.11n/ac/ax-40 MHz: 9 CH
Data Rate	802.11b: 1-11 Mbps, 802.11g: 6-54 Mbps, 802.11n: up to 150 Mbps 802.11ac: up to 200 Mbps, 802.11ax: up to 286.8 Mbps
Channel separation	802.11b/g/n/ac/ax: 5 MHz
Type of Modulation	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n/ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Channel Control	Auto
Blockchain verified QR code	

Antenna List

No.	Brand	Part No.	Antenna Type	Peak Gain
1	AMOTECH	AMO-PHA-AP001	PIFA	1.95 dBi for 2400 MHz

Note:

- 1.The antenna of EUT conforms to FCC 15.203.
2. The antenna gain as by the manufacturer provided.

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

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

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

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

Note:

1. The EUT is a Car Infotainment Unit with a built-in WLAN and Bluetooth transceiver, this report for 2.4GHz WLAN.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test. The other channels are for reference only.
3. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
4. This device does not support partial RU function.
5. The spectrum plot against conducted item only shows the worst case.
6. DEKRA has evaluated each test mode. Only the worst case is shown in the report
7. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1 Mbps, 802.11g is 6 Mbps, 802.11ac is VHT0, 802.11ax is MCS0)
8. These tests are conducted on a sample for the purpose of demonstrating compliance of transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

Test Mode	Mode 1	Transmit (802.11b)
		Transmit (802.11g)
		Transmit (802.11ac-20 MHz)
		Transmit (802.11ac-40 MHz)
		Transmit (802.11ax-20 MHz)
		Transmit (802.11ax-40 MHz)

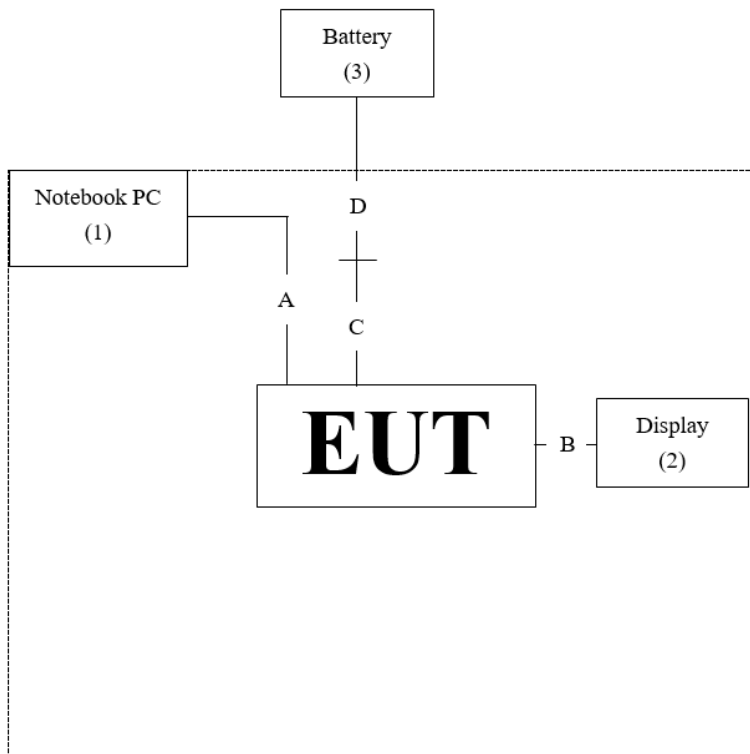
1.2. Tested System Details

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 Notebook PC	Lenovo	TP00067C	PF-0EW0C3	N/A
2 Display	N/A	IHP DISPLAY	N/A	N/A
3 Battery	BOSCH	60044	N/A	N/A

Cable Type	Cable Description
A USB Cable	Shielded, 1m
B 4 Pin cable	Non-shielded, 1m
C Power Cable	Non-shielded, 2m
D Power Cable	Non-shielded, 2m

1.3. Configuration of Tested System



1.4. EUT Exercise Software

1	Setup the EUT as shown in Section 1.3.
2	Execute software ‘cmd Ver. 10.0.19045.3803’ on the Notebook PC.
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	23.7 °C
	Humidity (%RH)	10~90 %	34.0 %
Conductive	Temperature (°C)	10~40 °C	27.5 °C
	Humidity (%RH)	10~90 %	58.0 %

USA	FCC Registration Number: TW0033
Canada	CAB Identifier Number: TW3023 / Company Number: 26930

Site Description	Accredited by TAF
	Accredited Number: 3023

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
	Linkou Laboratory
Address	No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C.
Performed Location	No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan, R.O.C.
Phone Number	+886-3-275-7255
Fax Number	+886-3-327-8031

1.6. List of Test Item and Equipment

For Conducted Measurements / HY-SR02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Spectrum Analyzer	R&S	FSV30	103465	2023/06/14	2024/06/13
V	Peak Power Analyzer	KEYSIGHT	8990B	MY51000539	2023/05/15	2024/05/14
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY59240002	2023/05/18	2024/05/17
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY59240003	2023/05/18	2024/05/17

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with “V” are used to measure the final test results.
3. Test Software Version: RF Conducted Test Tools R3 V3.0.0.14.

For Radiated Measurements /HY-CB03

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Loop Antenna	AMETEK	HLA6121	49611	2023/02/21	2024/02/20
V	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-0675	2023/08/09	2025/08/08
V	Horn Antenna	Com-Power	AH-840	101100	2023/10/02	2025/10/01
V	Horn Antenna	RF SPIN	DRH18-E	210507A18ES	2023/05/11	2024/05/10
V	Pre-Amplifier	SGH	SGH0301-9	20211007-11	2023/01/10	2024/01/09
V	Pre-Amplifier	SGH	PRAMP118	20200701	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC05820SE	980310	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC184045SE	980369	2023/01/10	2024/01/09
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314		
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
V	Filter	MICRO TRONICS	BRM50702	G269	2023/01/05	2024/01/04
	Filter	MICRO TRONICS	BRM50716	G196	2023/01/05	2024/01/04
V	EMI Test Receiver	R&S	ESR3	102793	2023/12/11	2024/12/10
V	Spectrum Analyzer	R&S	FSV3044	101113	2023/02/04	2024/02/03
V	Coaxial Cable	SGH	SGH18	2021005-1	2023/01/10	2024/01/09
	Coaxial Cable	SGH	SGH18	202108-4		
V	Coaxial Cable	SGH	HA800	GD20110223-1		
V	Coaxial Cable	SGH	HA800	GD20110222-3		

Note:

1. Bi-Log Antenna and Horn Antenna (AH-840) is calibrated every two years, the other equipments are calibrated every one year.
2. The test instruments marked with “V” are used to measure the final test results.
3. Test Software Version: e3 230303 dekra V9.

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.

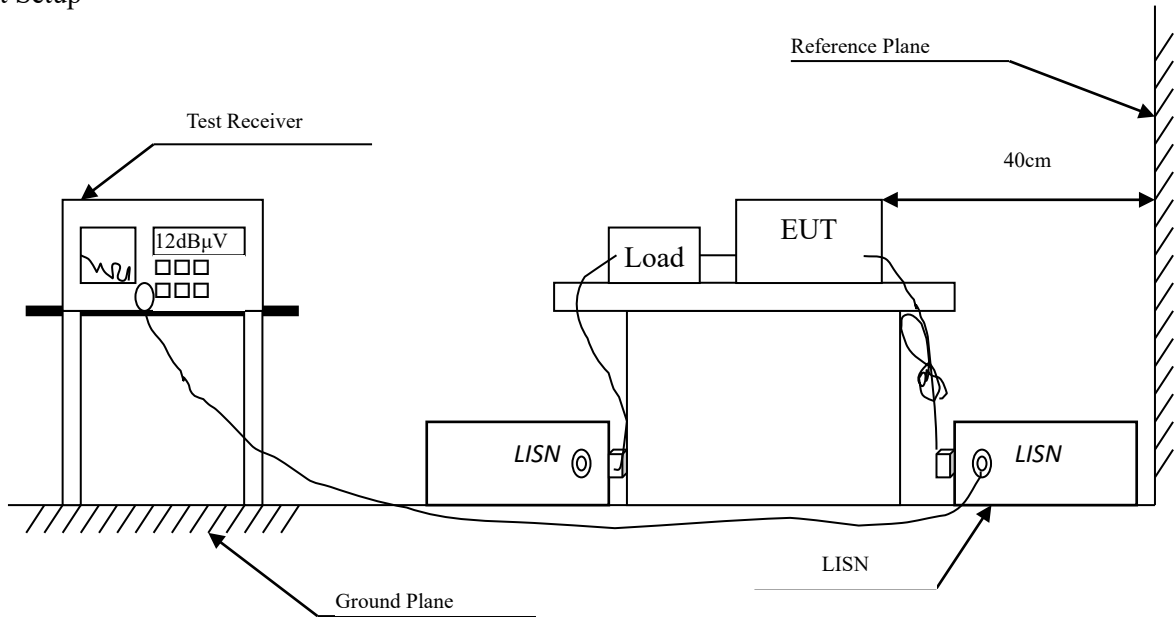
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

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
Conducted Emission	± 3.50 dB
Peak Power Output	Spectrum Analyzer: ± 2.14 dB Power Meter: ± 1.05 dB
Radiated Emission	9 kHz~30 MHz: ± 3.88 dB 30 MHz~1 GHz: ± 4.42 dB 1 GHz~18 GHz: ± 4.28 dB 18 GHz~40 GHz: ± 3.90 dB
RF Antenna Conducted Test	± 2.14 dB
Band Edge	For Radiated: 9 kHz~30 MHz: ± 3.88 dB 30 MHz~1 GHz: ± 4.42 dB 1 GHz~18 GHz: ± 4.28 dB 18 GHz~40 GHz: ± 3.90 dB For Conducted: ± 2.14 dB
6dB Bandwidth	± 1580.61 Hz
Power Density	± 2.14 dB
Duty Cycle	± 0.53 %

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dB μ V) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.

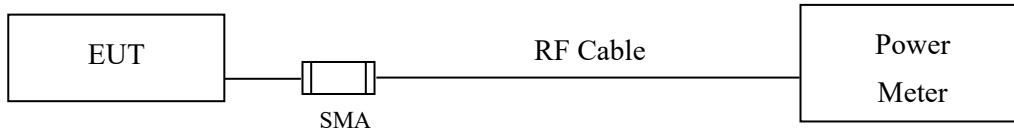
Conducted emissions were invested over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz.

2.4. Test Result of Conducted Emission

Owing to the DC operation of EUT, this test item is not performed.

3. Maximum Power Output

3.1. Test Setup



3.2. Limits

The maximum peak power shall be less 1 Watt.

3.3. 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).

3.4. Test Result of Peak Power Output

Product : Car Infotainment Unit
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11b)
Test Date : 2023/12/20

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Average Power (dBm)	Limit (dBm)	Result
01	2412	1	14.62	<30	Pass
07	2442	1	14.86	<30	Pass
11	2462	1	14.71	<30	Pass
12	2467	1	14.75	<30	Pass
13	2472	1	14.73	<30	Pass

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Peak Power (dBm)	Limit (dBm)	Result
01	2412	1	17.32	<30	Pass
07	2442	1	17.46	<30	Pass
11	2462	1	17.12	<30	Pass
12	2467	1	17.21	<30	Pass
13	2472	1	17.14	<30	Pass

Product : Car Infotainment Unit
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11g)
Test Date : 2023/12/20

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Average Power (dBm)	Limit (dBm)	Result
01	2412	6	14.75	<30	Pass
07	2442	6	14.68	<30	Pass
11	2462	6	13.61	<30	Pass
12	2467	6	12.09	<30	Pass
13	2472	6	12.19	<30	Pass

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Peak Power (dBm)	Limit (dBm)	Result
01	2412	6	22.41	<30	Pass
07	2442	6	22.18	<30	Pass
11	2462	6	21.92	<30	Pass
12	2467	6	22.29	<30	Pass
13	2472	6	22.47	<30	Pass

Product : Car Infotainment Unit
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11ac-20 MHz)
Test Date : 2023/12/20

Channel No.	Frequency (MHz)	Data Rate	Average Power (dBm)	Limit (dBm)	Result
01	2412	VHT0	12.35	<30	Pass
07	2442	VHT0	14.81	<30	Pass
11	2462	VHT0	13.67	<30	Pass
12	2467	VHT0	11.17	<30	Pass
13	2472	VHT0	9.07	<30	Pass

Channel No.	Frequency (MHz)	Data Rate	Peak Power (dBm)	Limit (dBm)	Result
01	2412	VHT0	22.51	<30	Pass
07	2442	VHT0	22.09	<30	Pass
11	2462	VHT0	22.32	<30	Pass
12	2467	VHT0	22.24	<30	Pass
13	2472	VHT0	22.25	<30	Pass

Product : Car Infotainment Unit
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11ac-40 MHz)
Test Date : 2023/12/20

Channel No.	Frequency (MHz)	Data Rate	Average Power (dBm)	Limit (dBm)	Result
03	2422	VHT0	12.04	<30	Pass
07	2442	VHT0	14.73	<30	Pass
09	2452	VHT0	12.79	<30	Pass
10	2457	VHT0	12.98	<30	Pass
11	2462	VHT0	10.51	<30	Pass

Channel No.	Frequency (MHz)	Data Rate	Peak Power (dBm)	Limit (dBm)	Result
03	2422	VHT0	22.49	<30	Pass
07	2442	VHT0	22.45	<30	Pass
09	2452	VHT0	22.34	<30	Pass
10	2457	VHT0	22.41	<30	Pass
11	2462	VHT0	22.44	<30	Pass

Product : Car Infotainment Unit
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11ax-20 MHz)
Test Date : 2023/12/20

Channel No.	Frequency (MHz)	Data Rate	Average Power (dBm)	Limit (dBm)	Result
01	2412	MCS0	12.66	<30	Pass
07	2442	MCS0	14.59	<30	Pass
11	2462	MCS0	13.37	<30	Pass
12	2467	MCS0	12.87	<30	Pass
13	2472	MCS0	11.34	<30	Pass

Channel No.	Frequency (MHz)	Data Rate	Peak Power (dBm)	Limit (dBm)	Result
01	2412	MCS0	22.46	<30	Pass
07	2442	MCS0	21.89	<30	Pass
11	2462	MCS0	21.97	<30	Pass
12	2467	MCS0	22.37	<30	Pass
13	2472	MCS0	21.62	<30	Pass

Product : Car Infotainment Unit
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11ax-40 MHz)
Test Date : 2023/12/20

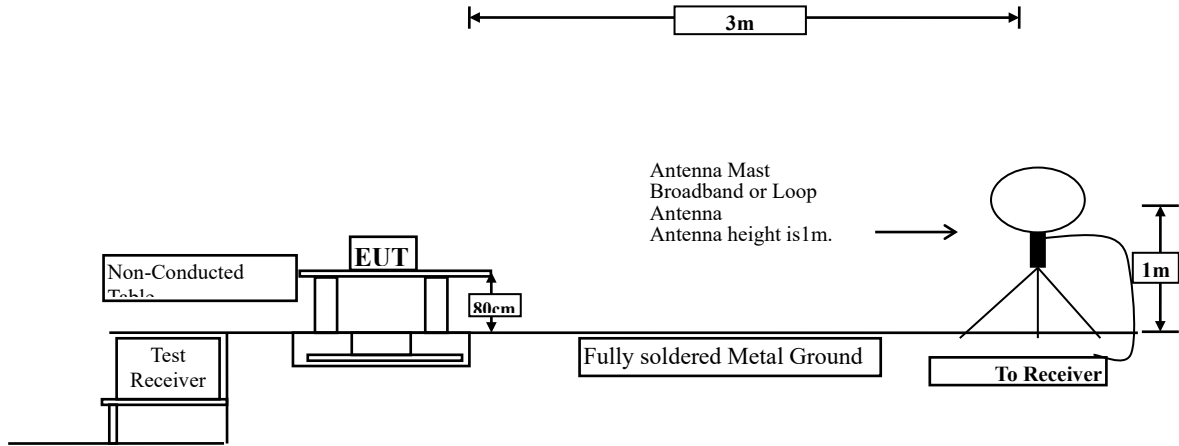
Channel No.	Frequency (MHz)	Data Rate	Average Power (dBm)	Limit (dBm)	Result
03	2422	MCS0	12.33	<30	Pass
07	2442	MCS0	14.64	<30	Pass
09	2452	MCS0	13.22	<30	Pass
10	2457	MCS0	12.03	<30	Pass
11	2462	MCS0	9.29	<30	Pass

Channel No.	Frequency (MHz)	Data Rate	Peak Power (dBm)	Limit (dBm)	Result
03	2422	MCS0	22.47	<30	Pass
07	2442	MCS0	22.04	<30	Pass
09	2452	MCS0	21.78	<30	Pass
10	2457	MCS0	22.40	<30	Pass
11	2462	MCS0	22.33	<30	Pass

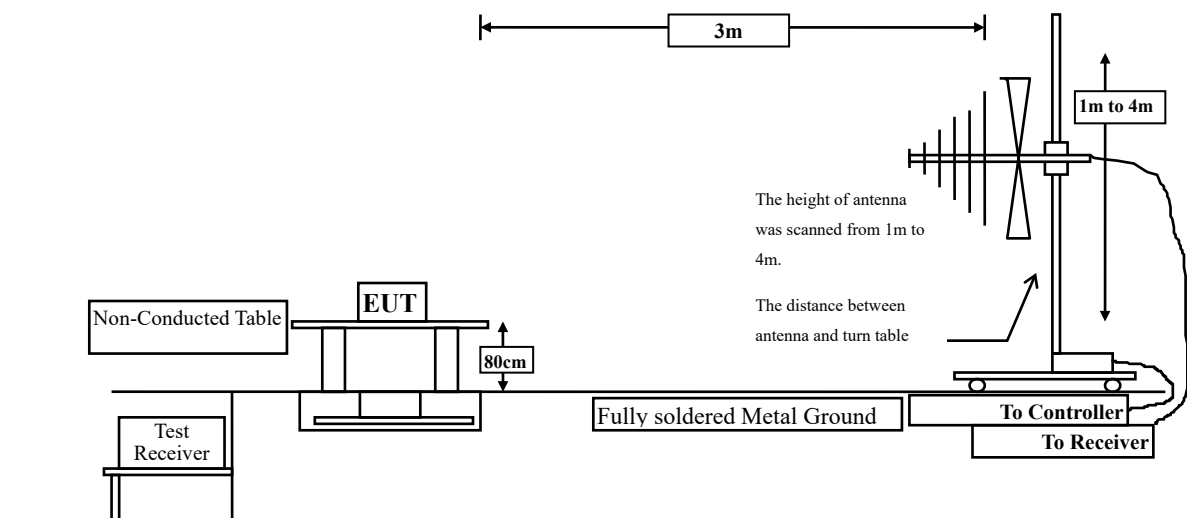
4. Radiated Emission

4.1. Test Setup

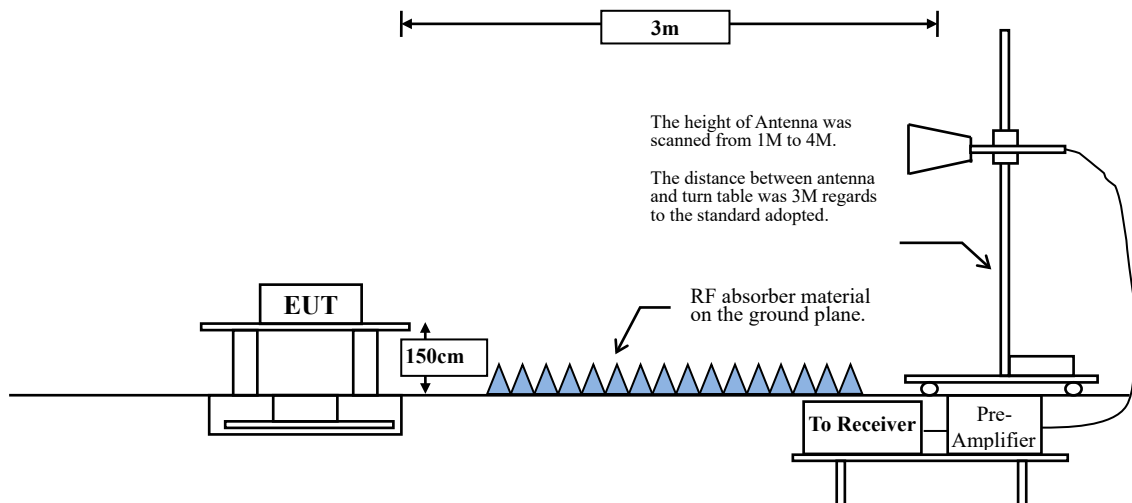
Radiated Emission Under 30 MHz



Radiated Emission Below 1 GHz



Radiated Emission Above 1 GHz



4.2. Limits

➤ **General Radiated Emission Limits**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20 dB 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 (dB μ V) = 20 log RF Voltage (μ V)
 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.

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.

Measuring the frequency range below 1 GHz, 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 30 MHz setting on the field strength meter is 9 kHz and 30 MHz~1 GHz is 120 kHz and above 1 GHz is 1 MHz.

Radiated emission measurements below 30 MHz are made using Loop Antenna and 30 MHz~1 GHz are made using broadband Bilog antenna and above 1 GHz 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 9 kHz - 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 ≥ 3 x 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 ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

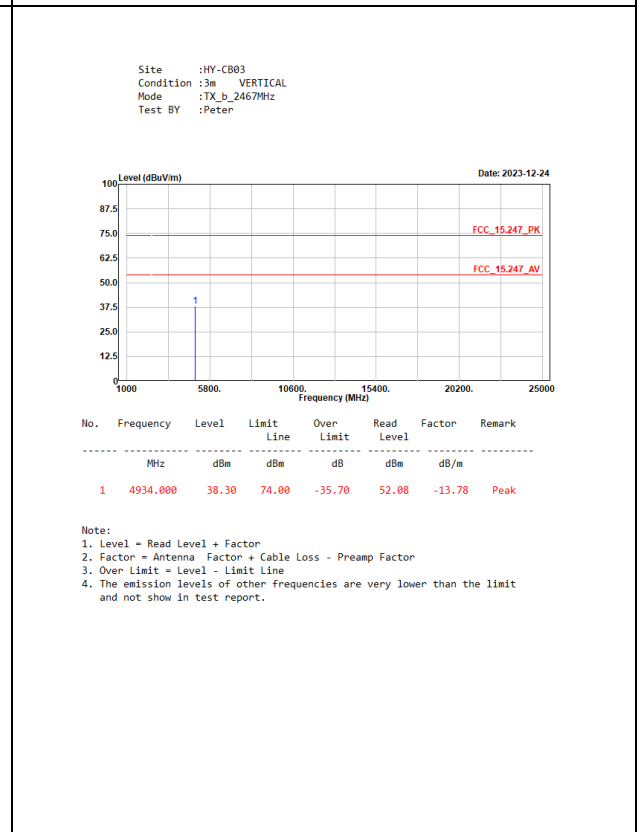
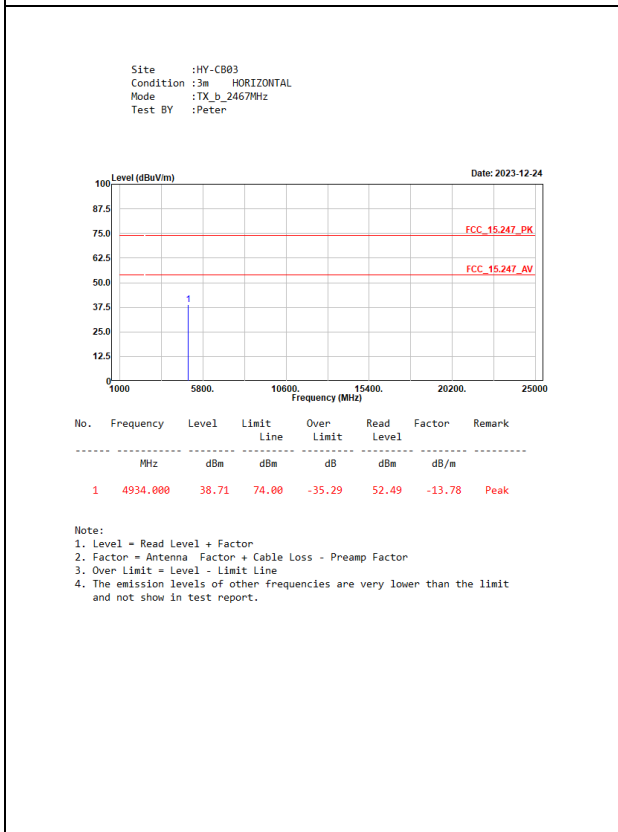
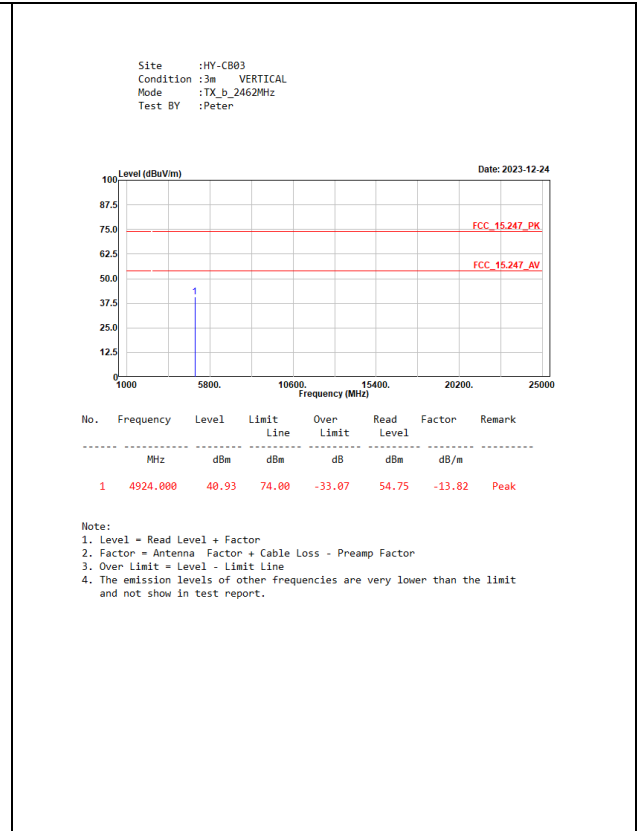
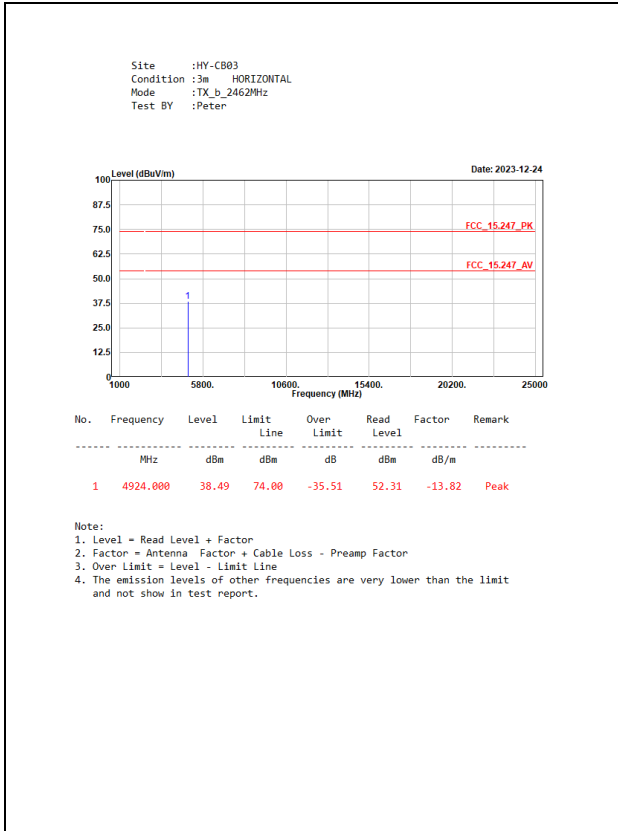
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

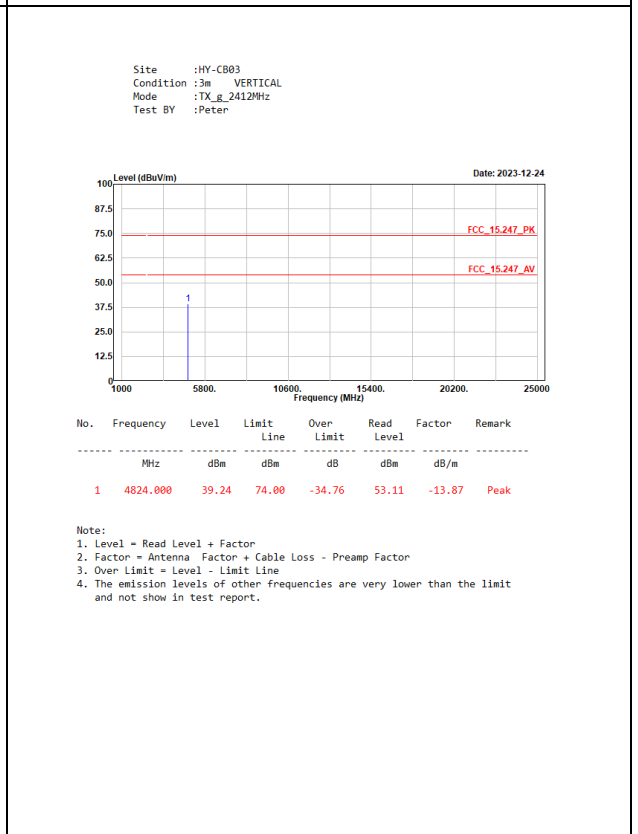
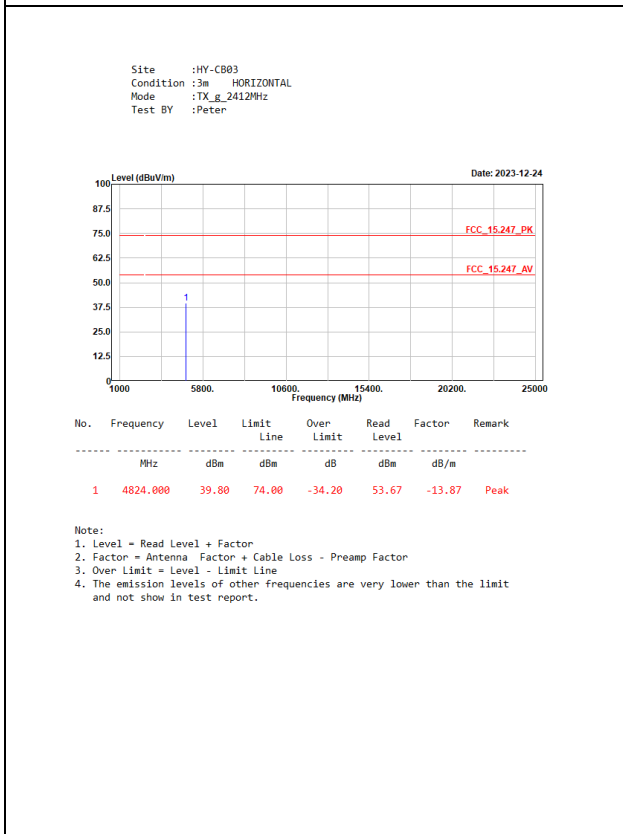
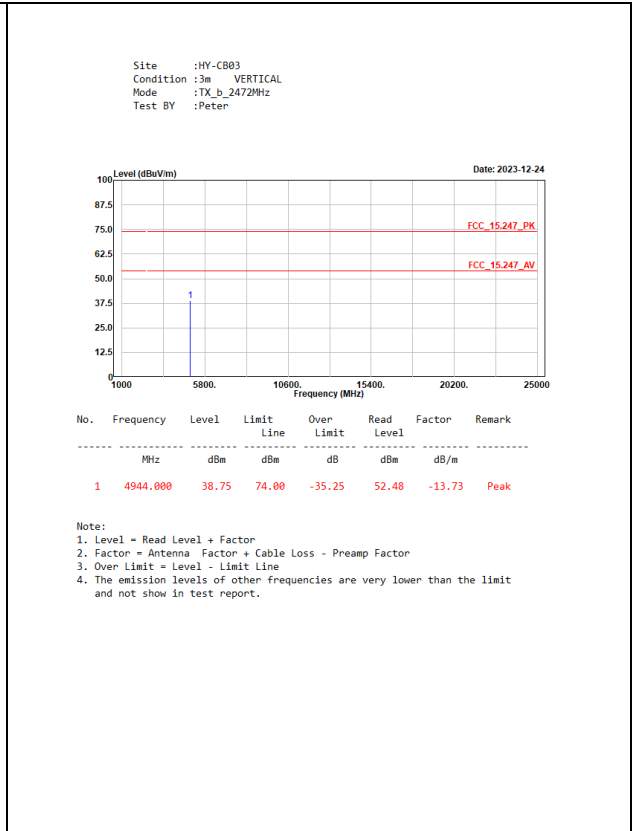
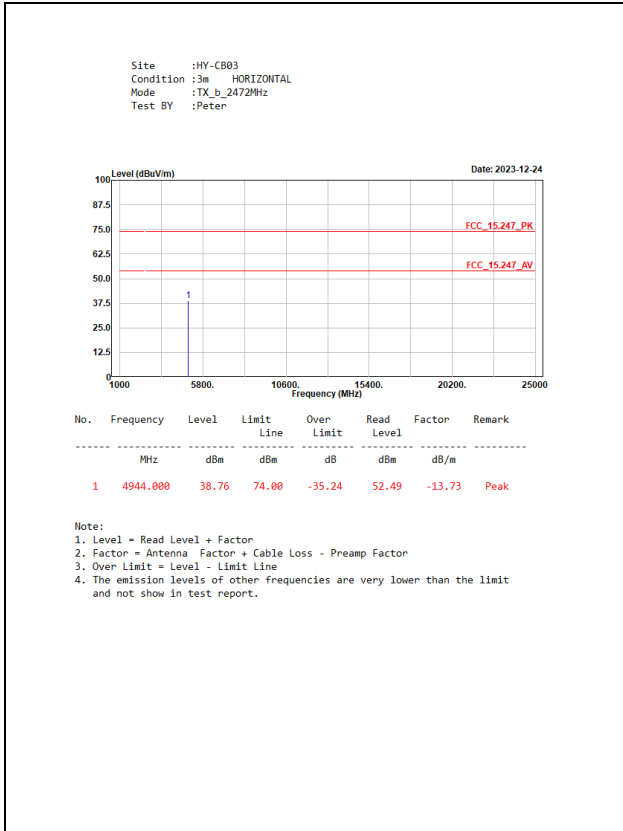
2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 b	100.00	--	--	10
802.11 g	98.62	1.4300	699	10
802.11 ac20 MHz	98.53	1.3450	743	10
802.11 ac40 MHz	97.08	0.6650	1504	2000
802.11 ax20 MHz	98.12	1.0450	957	10
802.11 ax40 MHz	96.49	0.5500	1818	2000

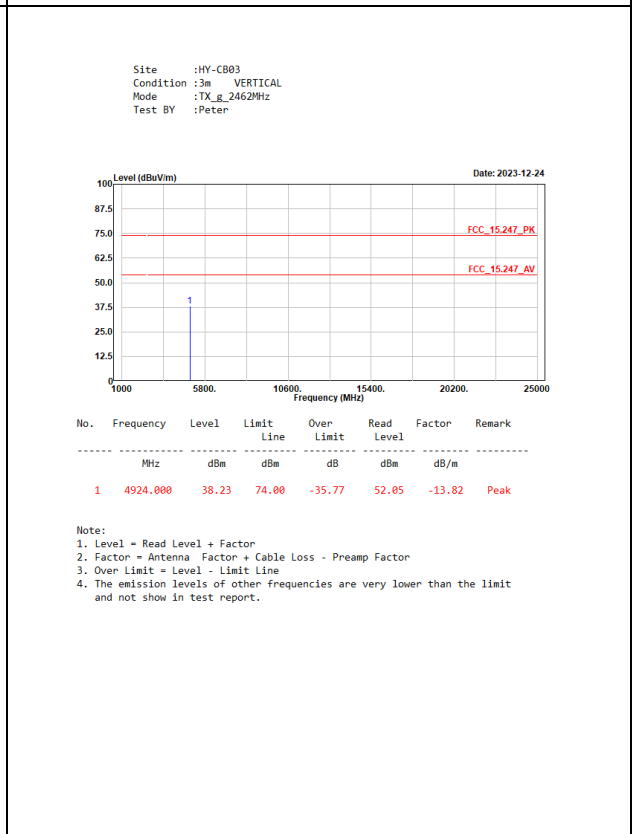
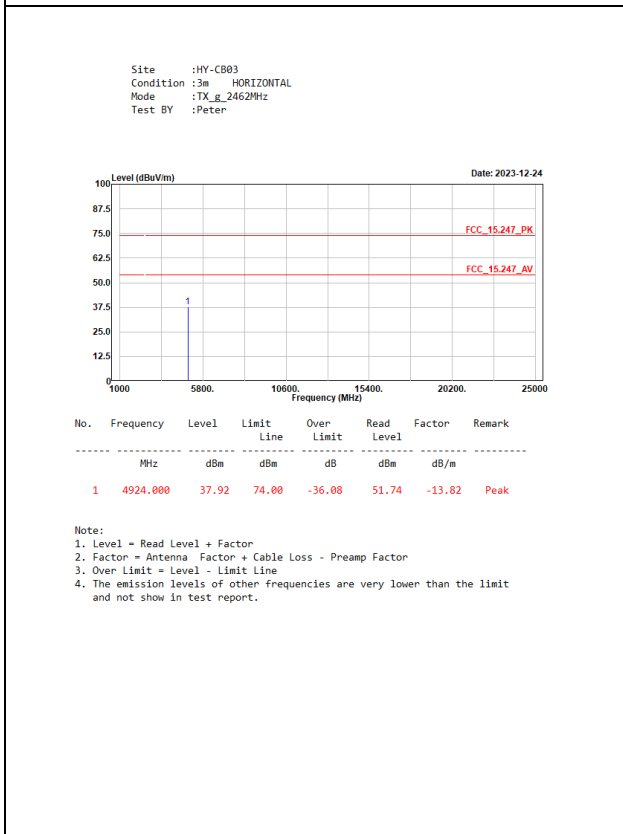
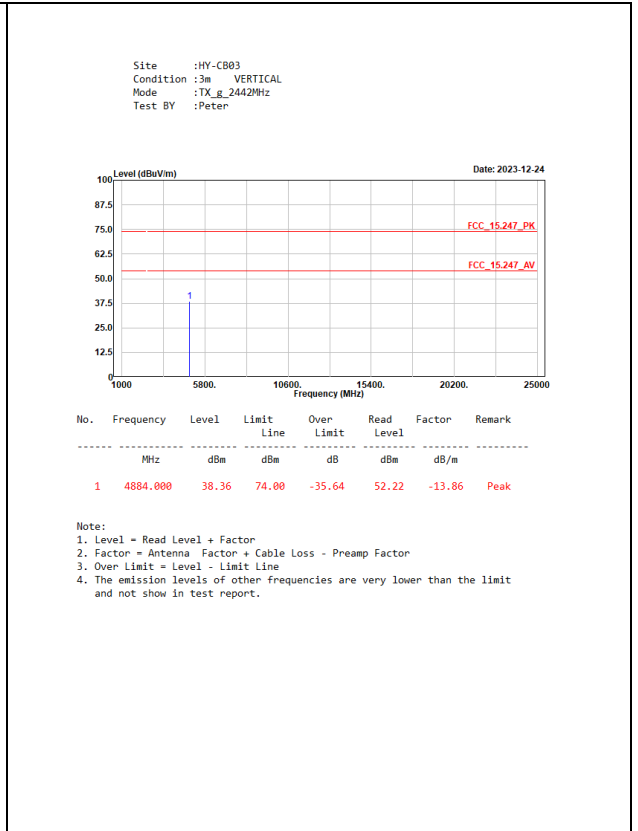
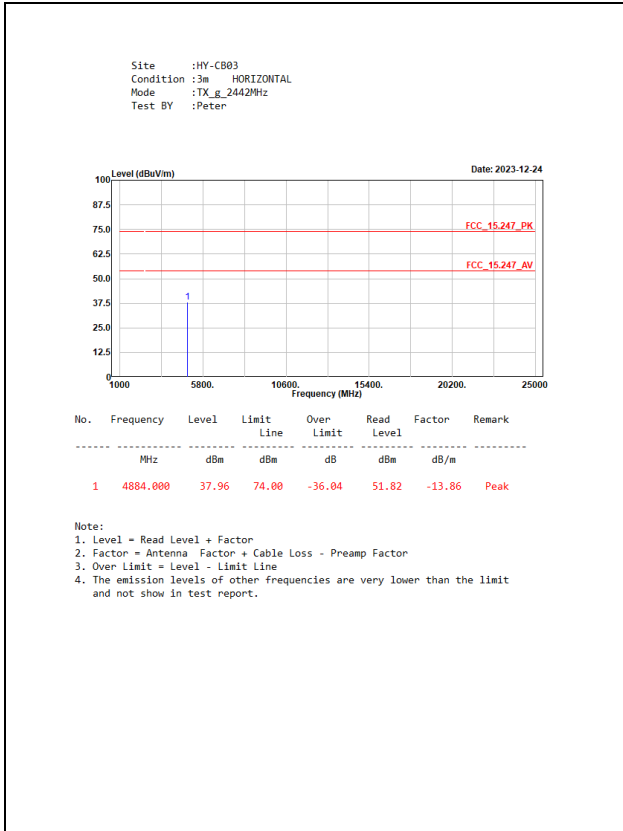
Note: Duty Cycle Refer to Section 9.

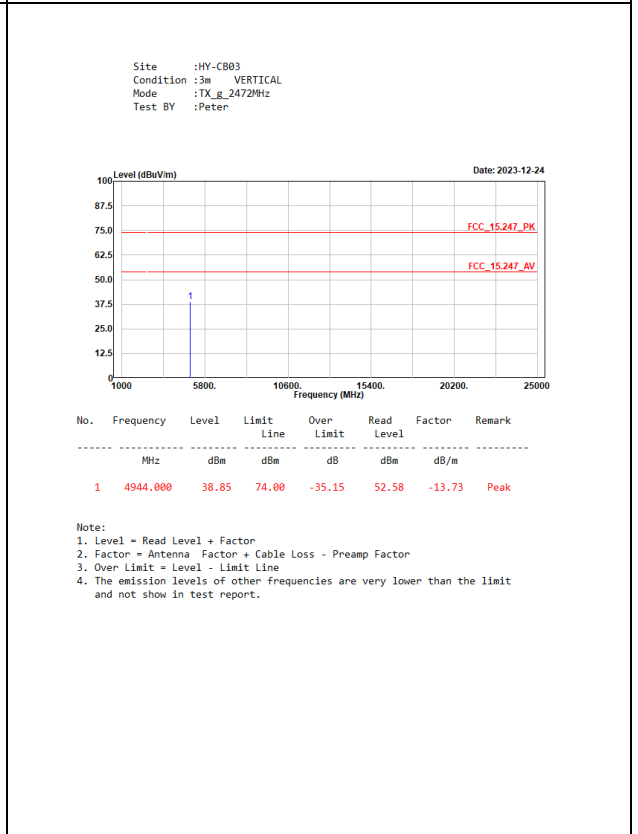
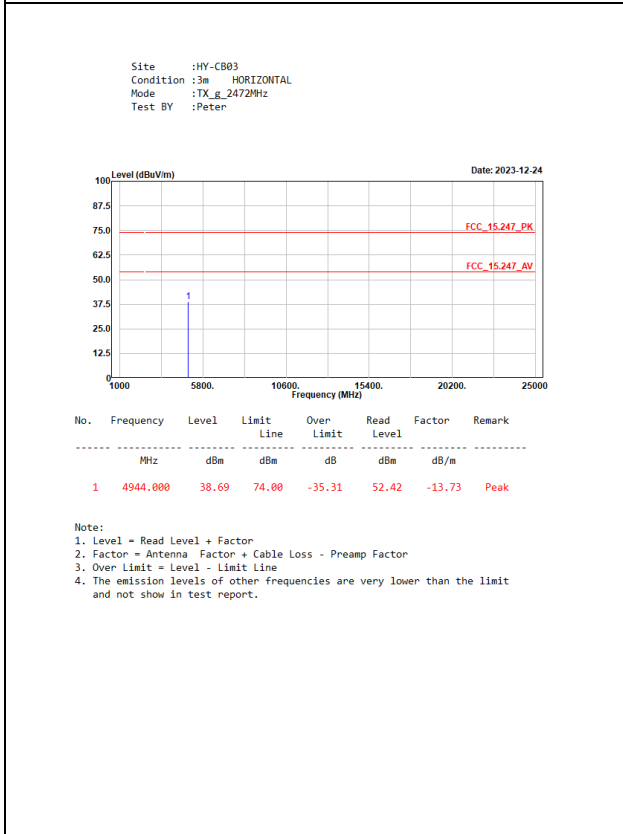
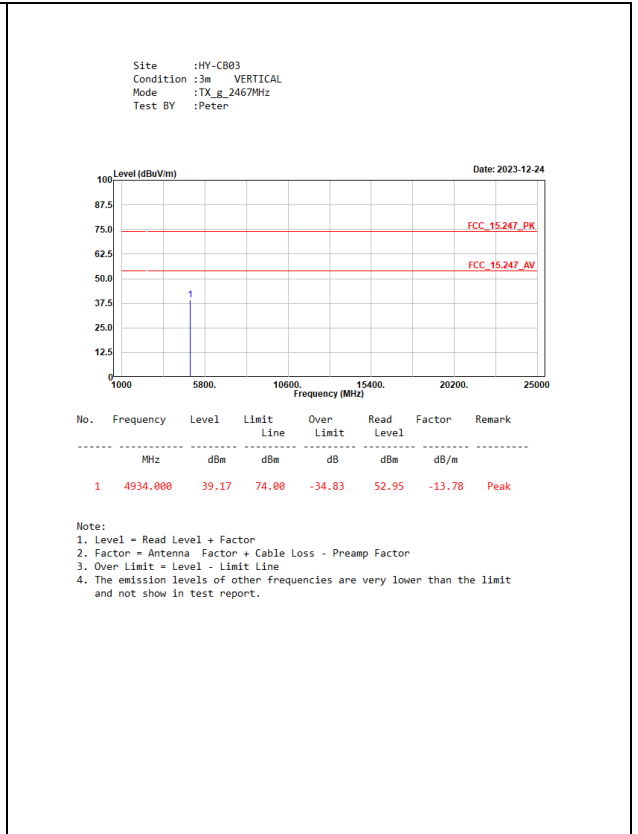
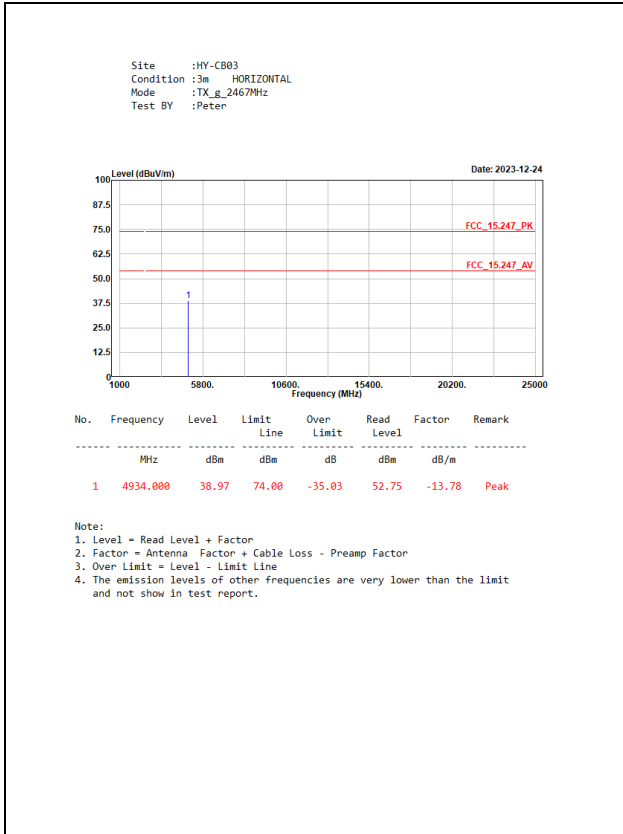
4.4. Test Result of Radiated Emission

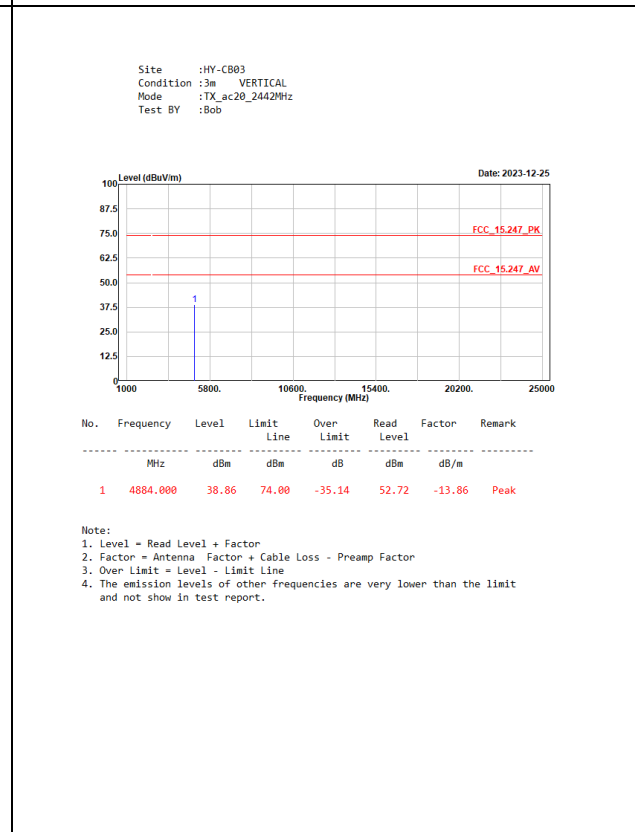
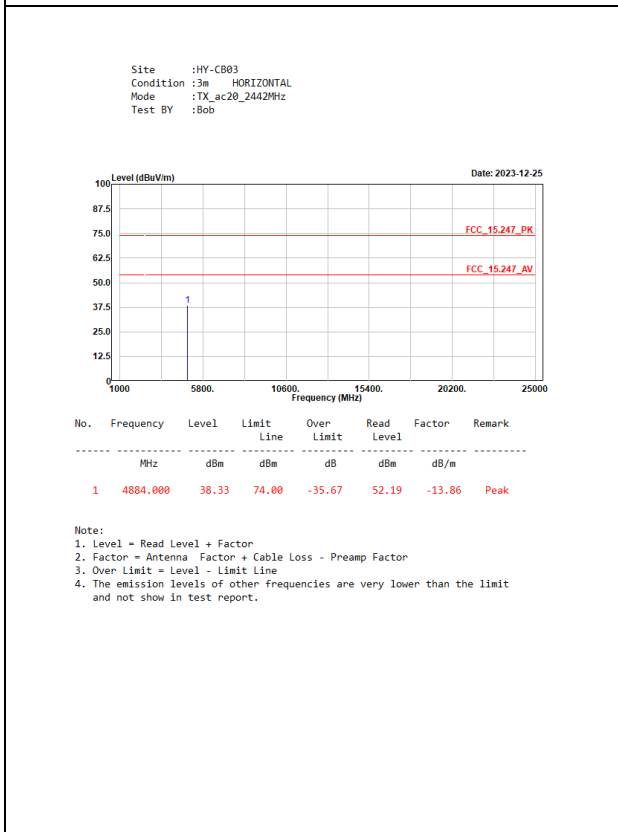
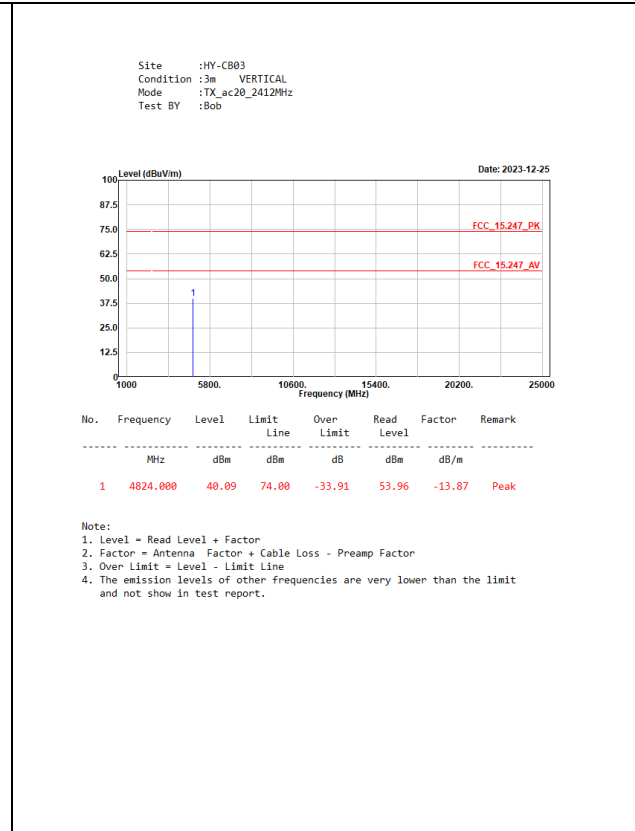
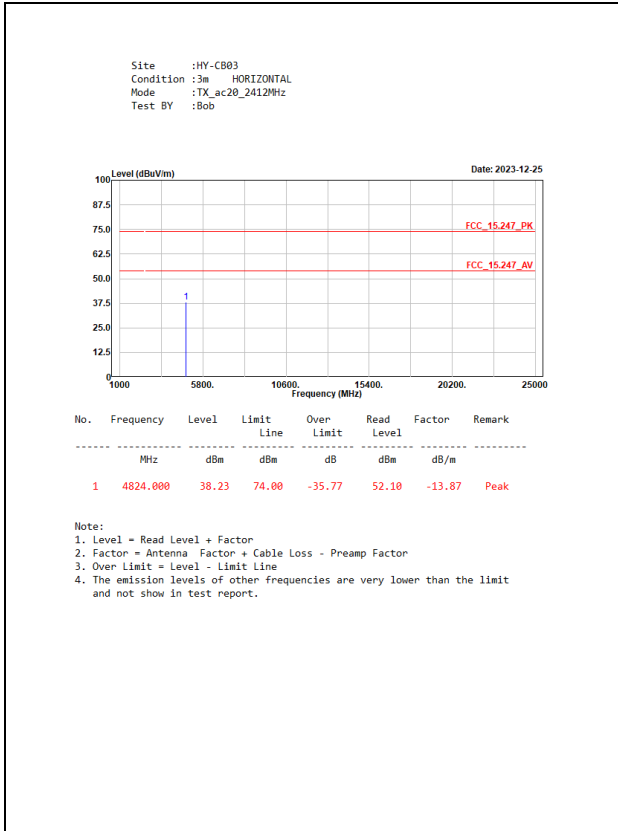
<p>Site :HY-CB03 Condition :3m HORIZONTAL Mode :TX_b_2412MHz Test BY :Peter</p> <p style="text-align: right;">Date: 2023-12-24</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Frequency MHz</th> <th>Level dBm</th> <th>Limit Line dBm</th> <th>Over Limit dB</th> <th>Read Level dBm</th> <th>Factor dB/m</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4824.000</td> <td>39.63</td> <td>74.00</td> <td>-34.37</td> <td>53.50</td> <td>-13.87</td> <td>Peak</td> </tr> </tbody> </table> <p>Note: 1. Level = Read Level + Factor 2. Factor = Antenna Factor + Cable Loss - Preamp Factor 3. Over Limit = Level - Limit Line 4. The emission levels of other frequencies are very lower than the limit and not show in test report.</p>	No.	Frequency MHz	Level dBm	Limit Line dBm	Over Limit dB	Read Level dBm	Factor dB/m	Remark	1	4824.000	39.63	74.00	-34.37	53.50	-13.87	Peak	<p>Site :HY-CB03 Condition :3m VERTICAL Mode :TX_b_2412MHz Test BY :Peter</p> <p style="text-align: right;">Date: 2023-12-24</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Frequency MHz</th> <th>Level dBm</th> <th>Limit Line dBm</th> <th>Over Limit dB</th> <th>Read Level dBm</th> <th>Factor dB/m</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4824.000</td> <td>40.23</td> <td>74.00</td> <td>-33.77</td> <td>54.10</td> <td>-13.87</td> <td>Peak</td> </tr> </tbody> </table> <p>Note: 1. Level = Read Level + Factor 2. Factor = Antenna Factor + Cable Loss - Preamp Factor 3. Over Limit = Level - Limit Line 4. The emission levels of other frequencies are very lower than the limit and not show in test report.</p>	No.	Frequency MHz	Level dBm	Limit Line dBm	Over Limit dB	Read Level dBm	Factor dB/m	Remark	1	4824.000	40.23	74.00	-33.77	54.10	-13.87	Peak
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1	4824.000	40.23	74.00	-33.77	54.10	-13.87	Peak																										
<p>Site :HY-CB03 Condition :3m HORIZONTAL Mode :TX_b_2442MHz Test BY :Peter</p> <p style="text-align: right;">Date: 2023-12-24</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Frequency MHz</th> <th>Level dBm</th> <th>Limit Line dBm</th> <th>Over Limit dB</th> <th>Read Level dBm</th> <th>Factor dB/m</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4884.000</td> <td>39.27</td> <td>74.00</td> <td>-34.73</td> <td>53.13</td> <td>-13.86</td> <td>Peak</td> </tr> </tbody> </table> <p>Note: 1. Level = Read Level + Factor 2. Factor = Antenna Factor + Cable Loss - Preamp Factor 3. Over Limit = Level - Limit Line 4. The emission levels of other frequencies are very lower than the limit and not show in test report.</p>	No.	Frequency MHz	Level dBm	Limit Line dBm	Over Limit dB	Read Level dBm	Factor dB/m	Remark	1	4884.000	39.27	74.00	-34.73	53.13	-13.86	Peak	<p>Site :HY-CB03 Condition :3m VERTICAL Mode :TX_b_2442MHz Test BY :Peter</p> <p style="text-align: right;">Date: 2023-12-24</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Frequency MHz</th> <th>Level dBm</th> <th>Limit Line dBm</th> <th>Over Limit dB</th> <th>Read Level dBm</th> <th>Factor dB/m</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4884.000</td> <td>38.27</td> <td>74.00</td> <td>-35.73</td> <td>52.13</td> <td>-13.86</td> <td>Peak</td> </tr> </tbody> </table> <p>Note: 1. Level = Read Level + Factor 2. Factor = Antenna Factor + Cable Loss - Preamp Factor 3. Over Limit = Level - Limit Line 4. The emission levels of other frequencies are very lower than the limit and not show in test report.</p>	No.	Frequency MHz	Level dBm	Limit Line dBm	Over Limit dB	Read Level dBm	Factor dB/m	Remark	1	4884.000	38.27	74.00	-35.73	52.13	-13.86	Peak
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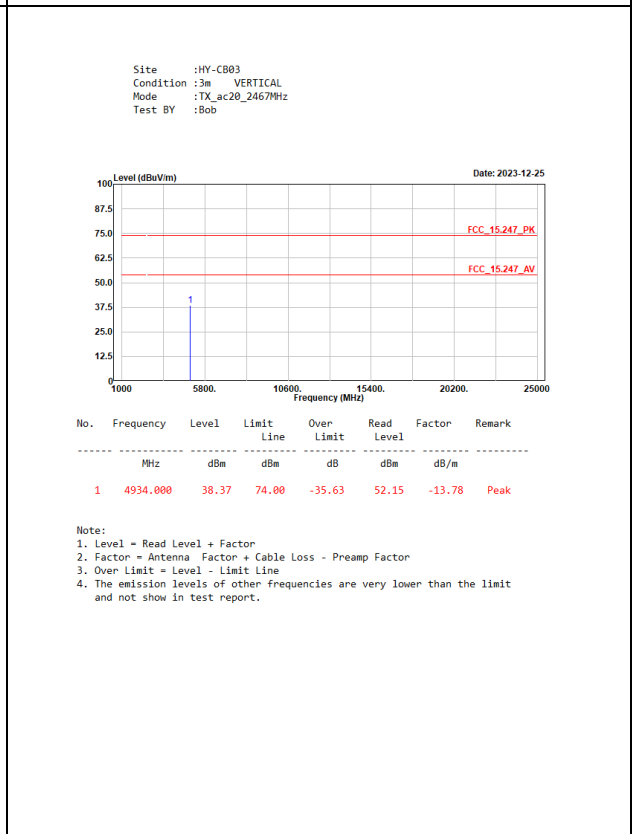
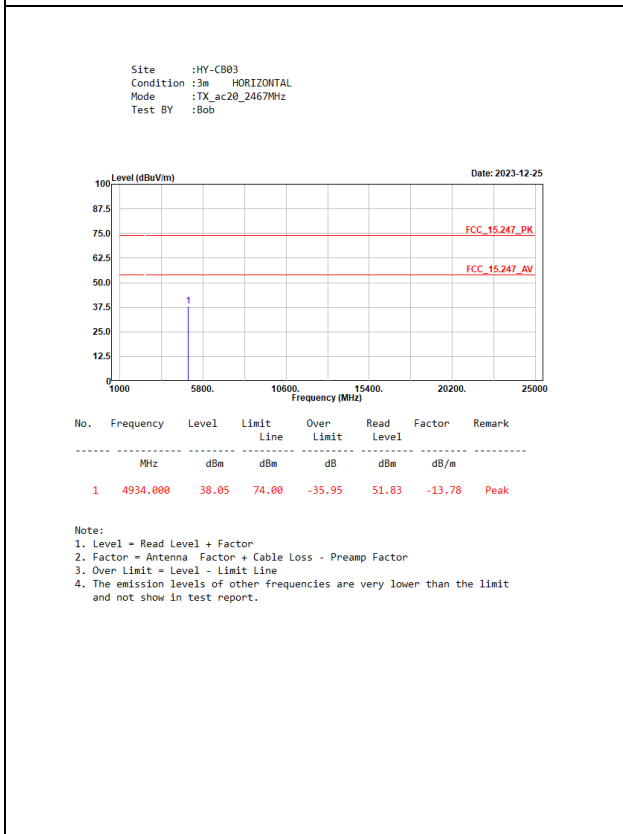
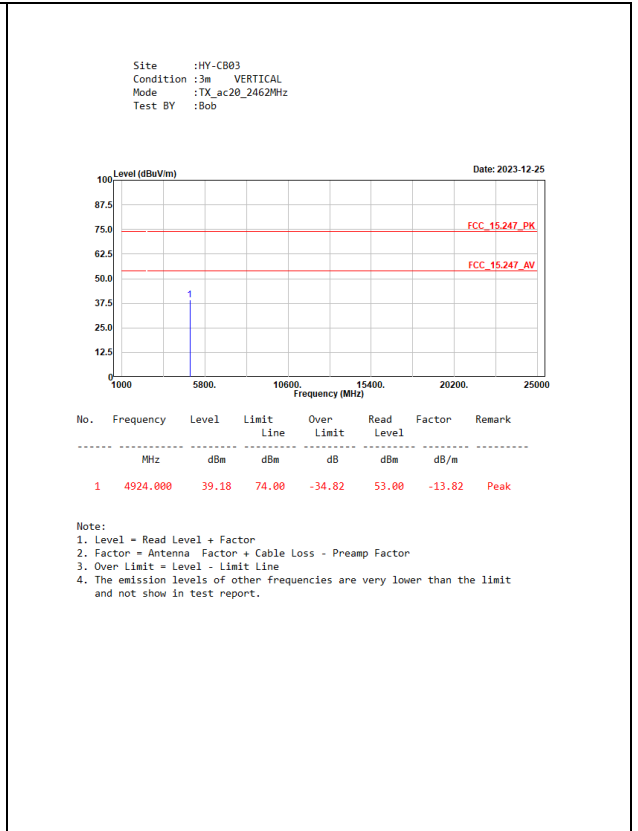
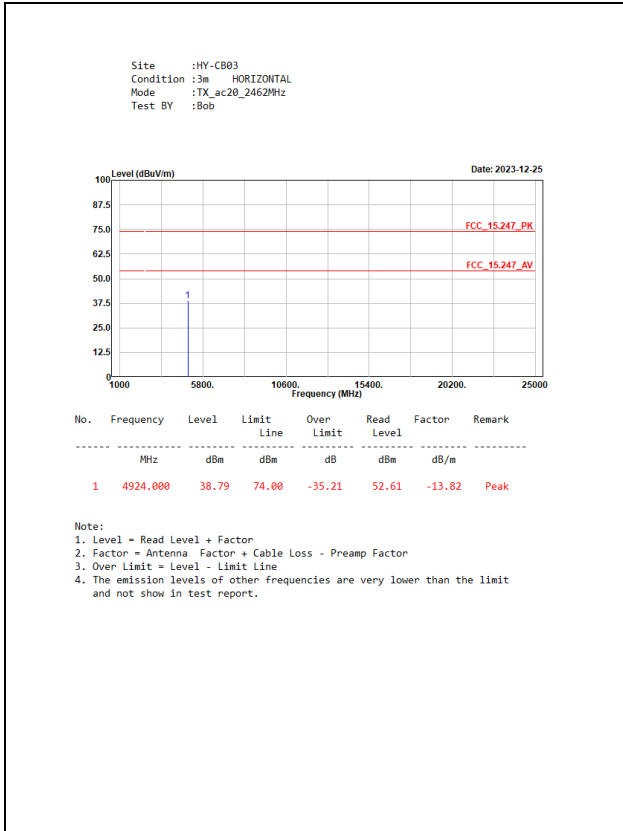


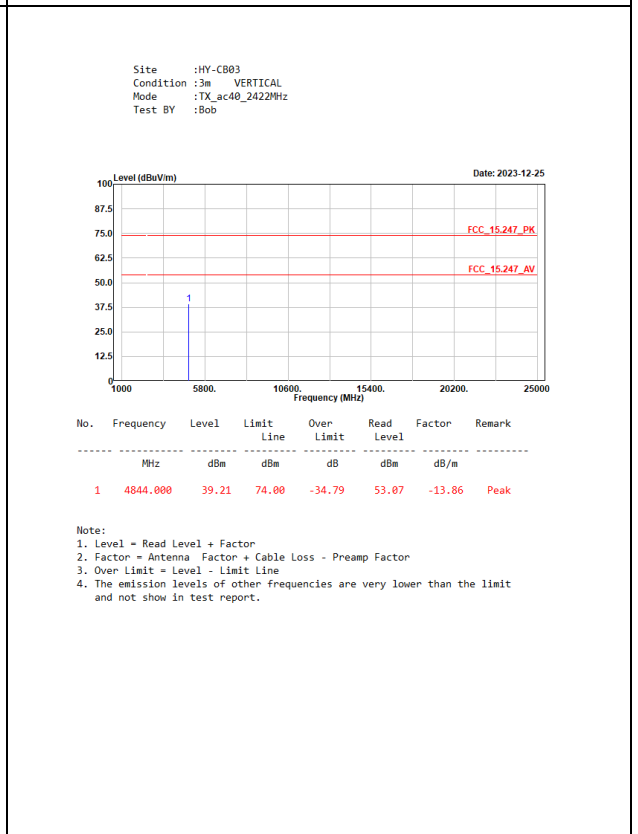
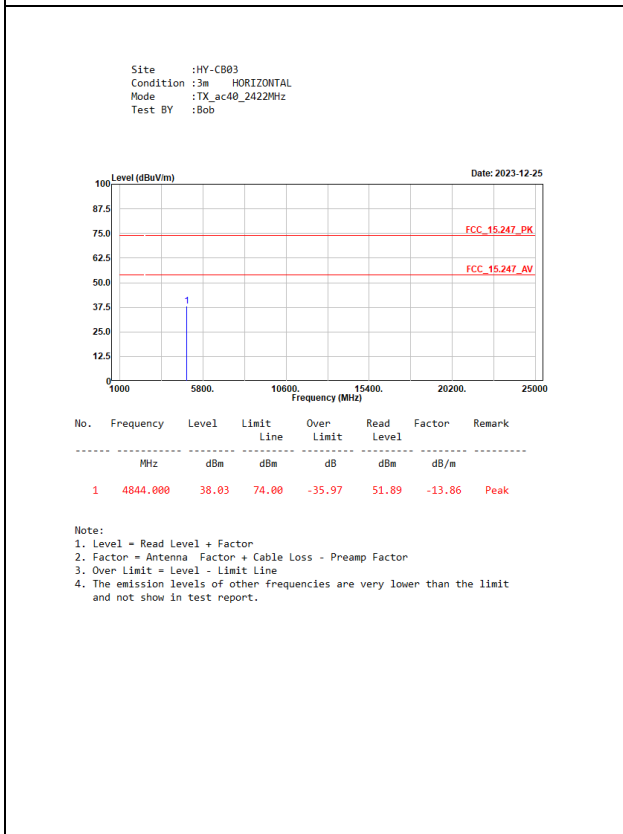
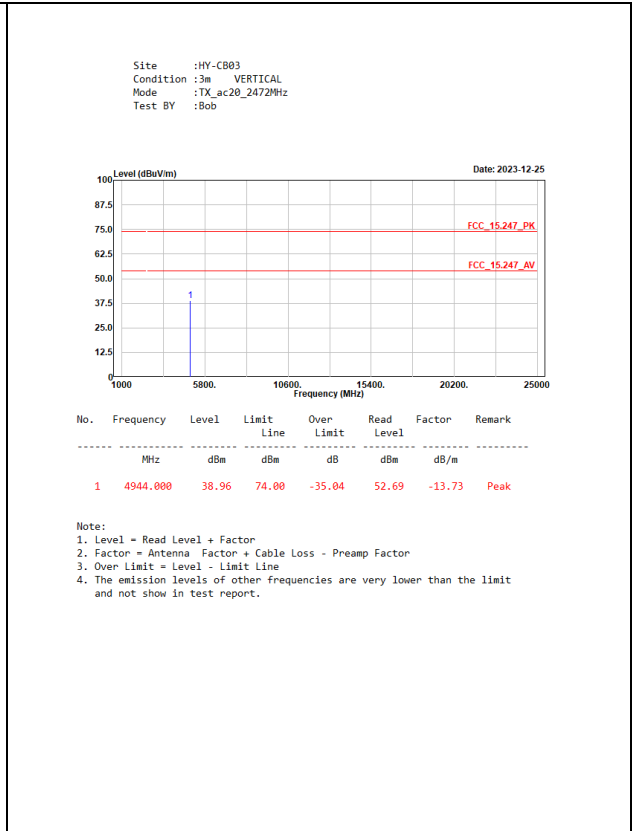
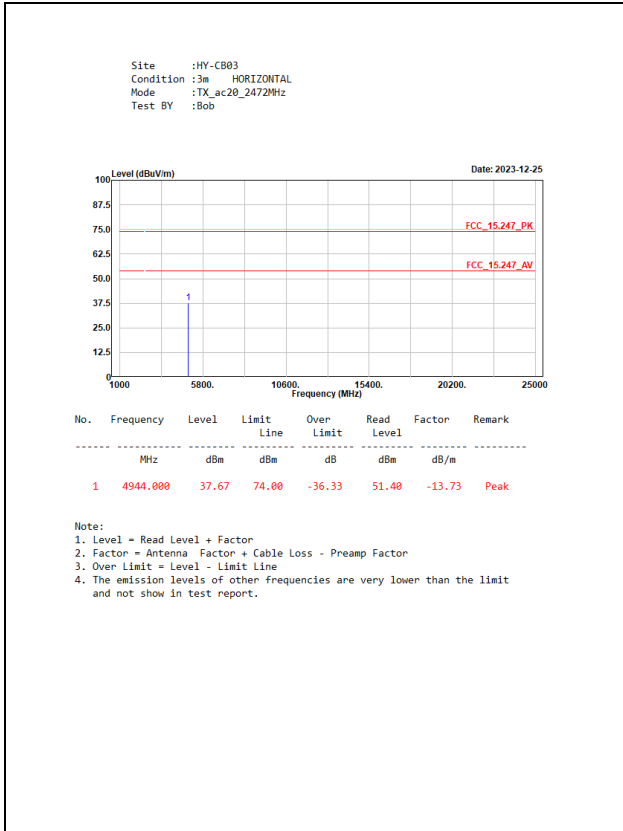


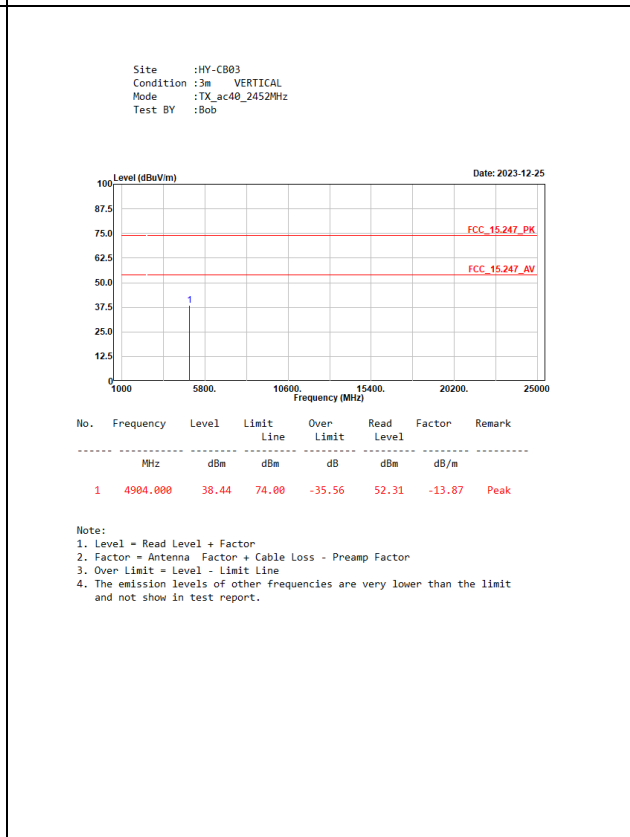
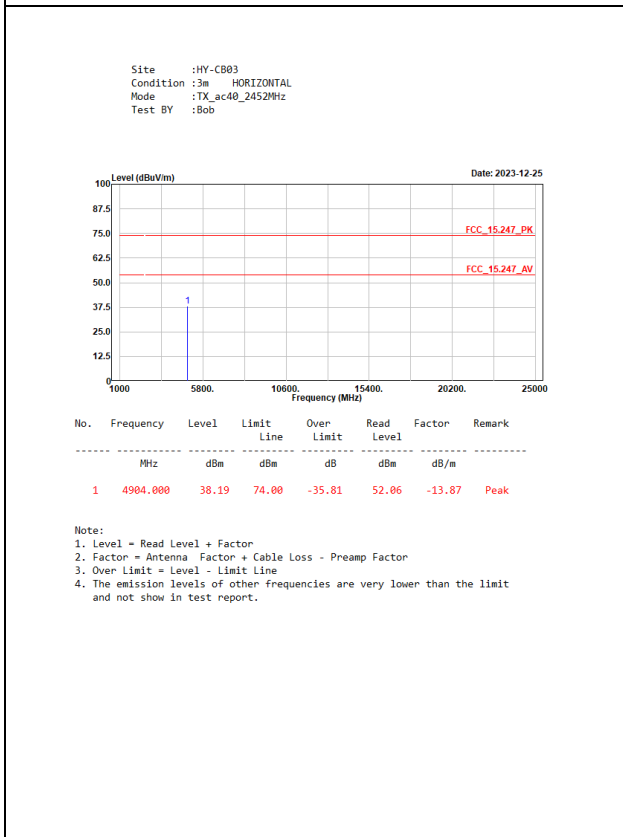
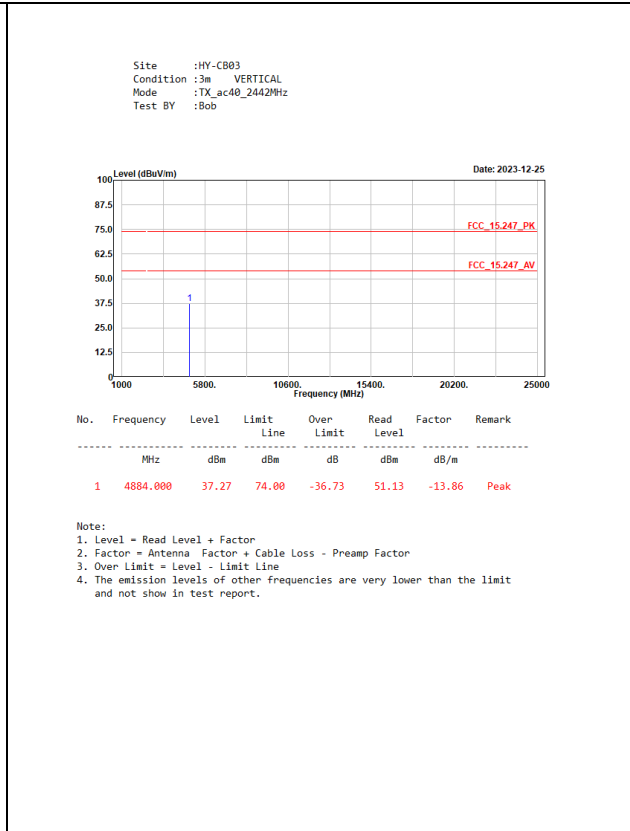
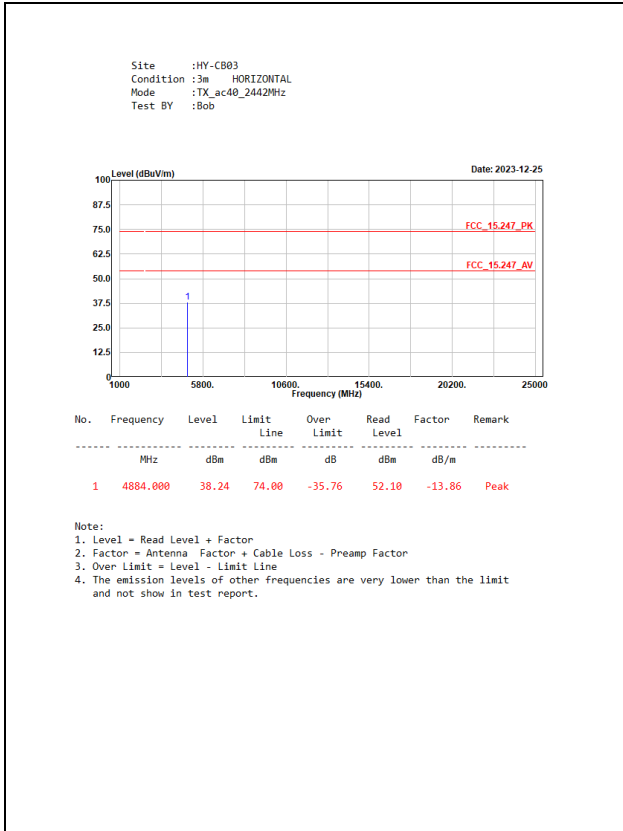


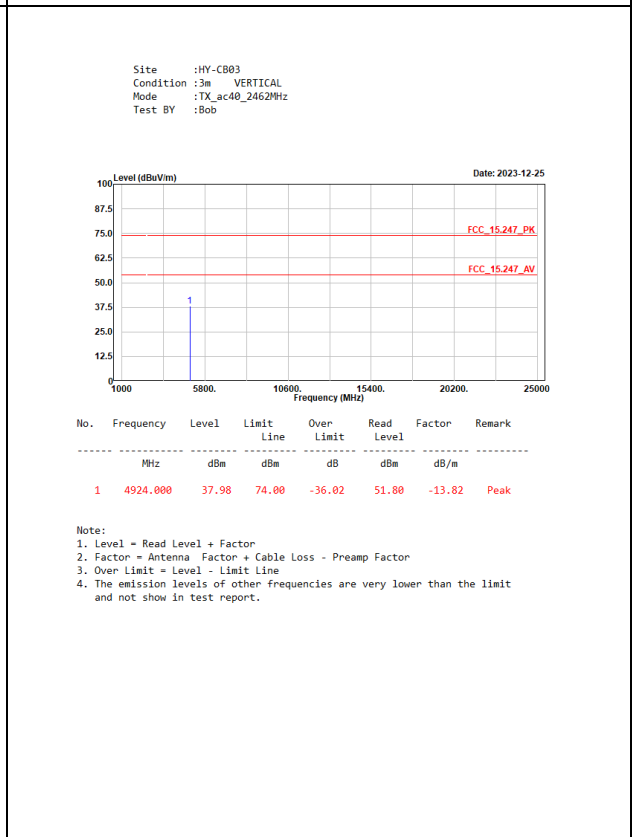
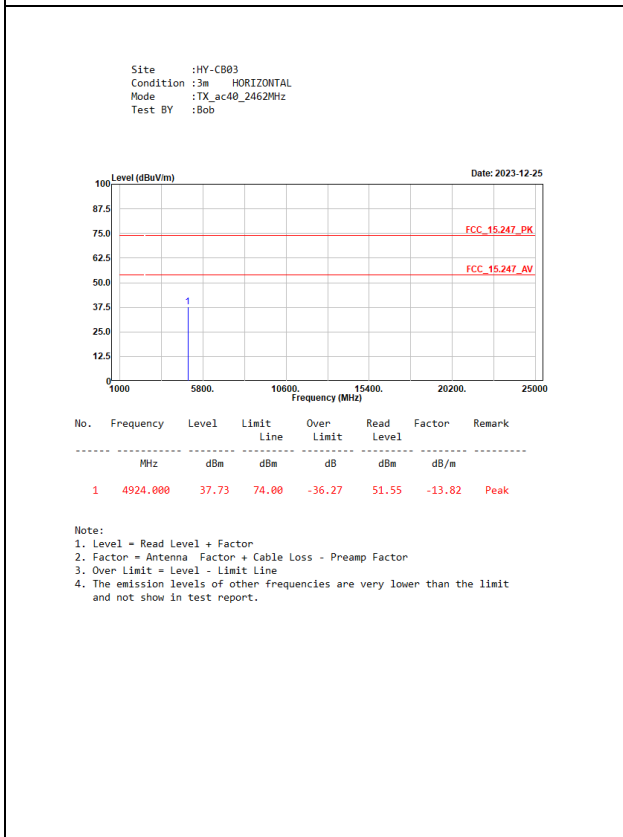
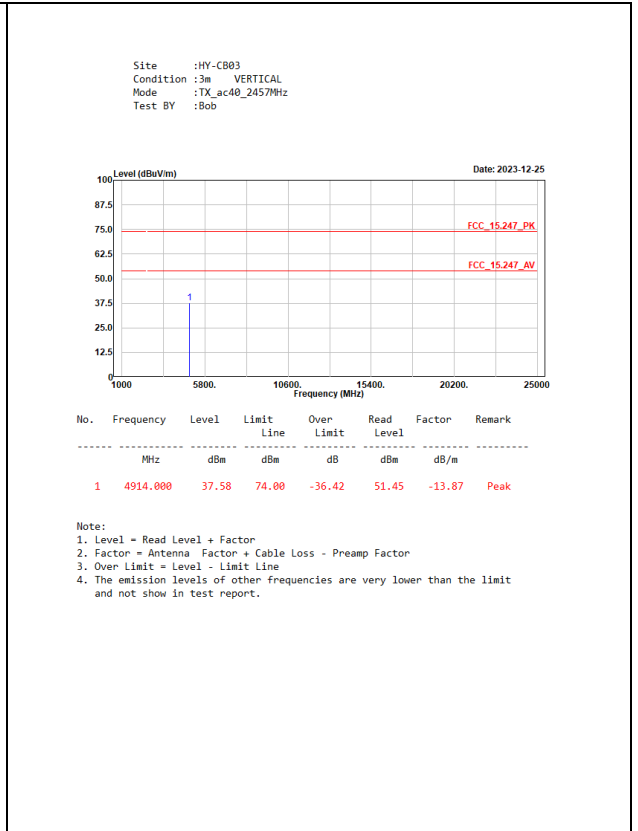
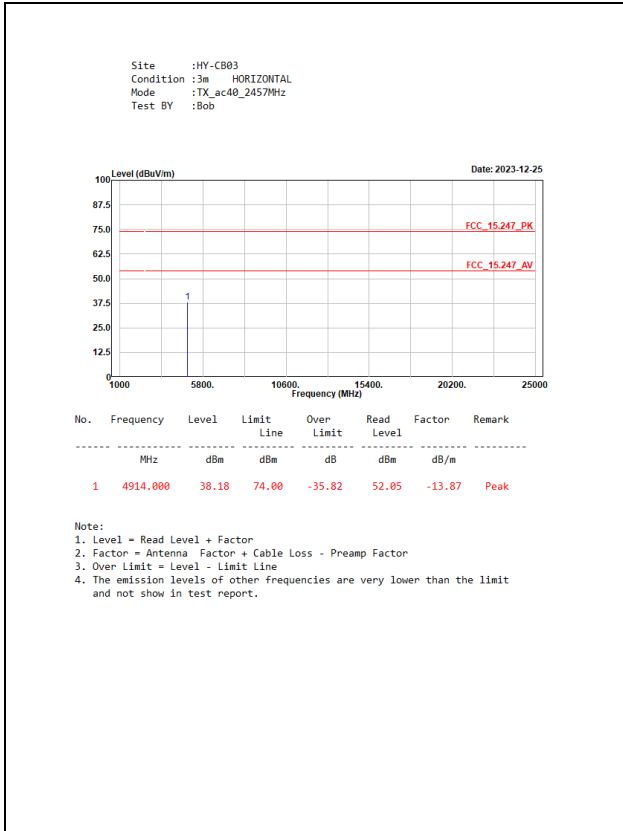


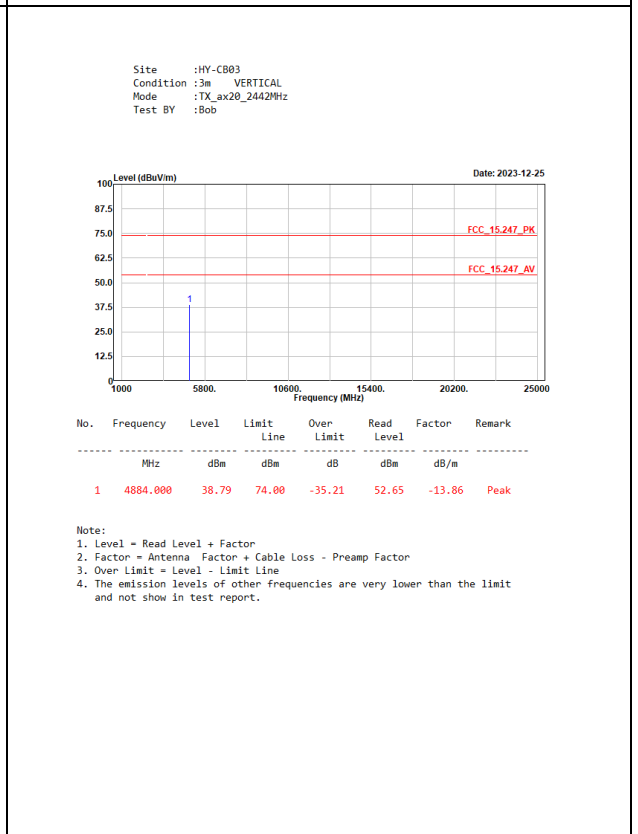
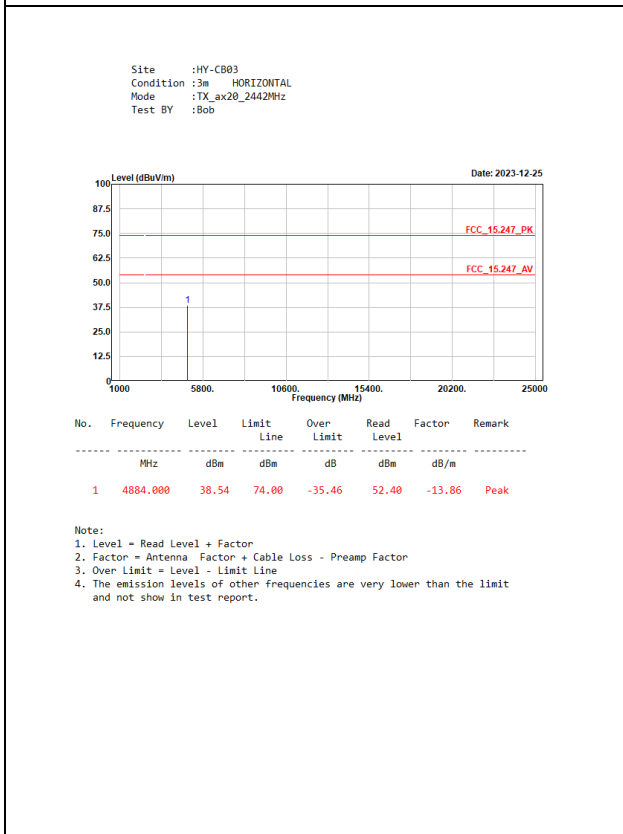
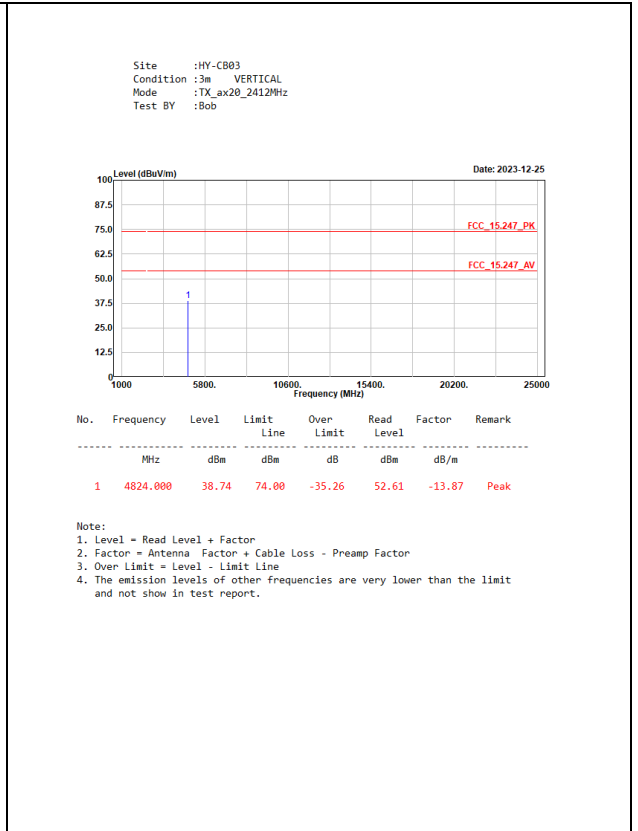
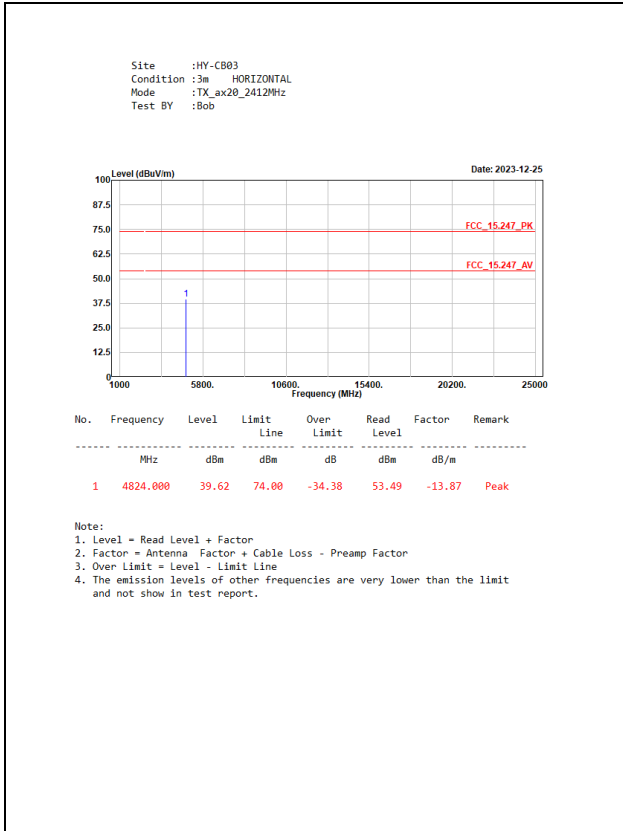


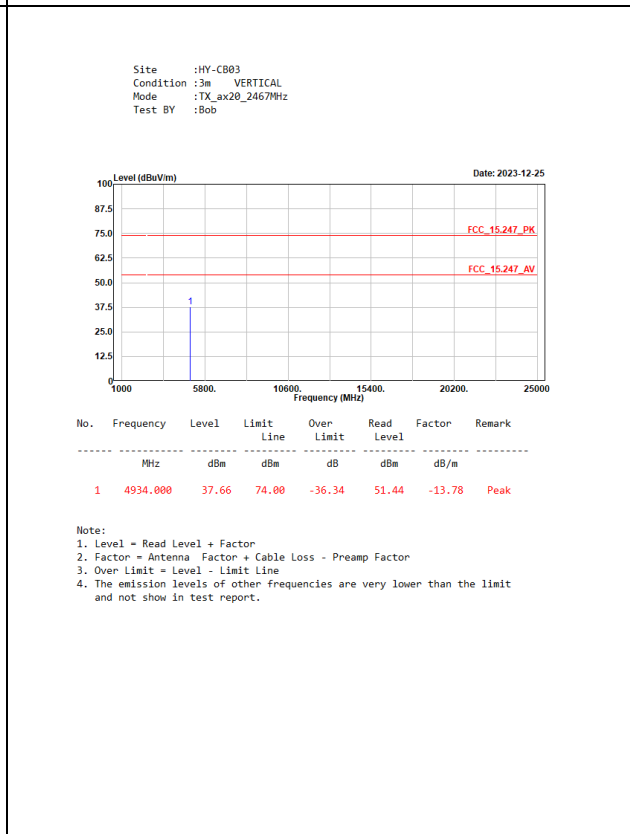
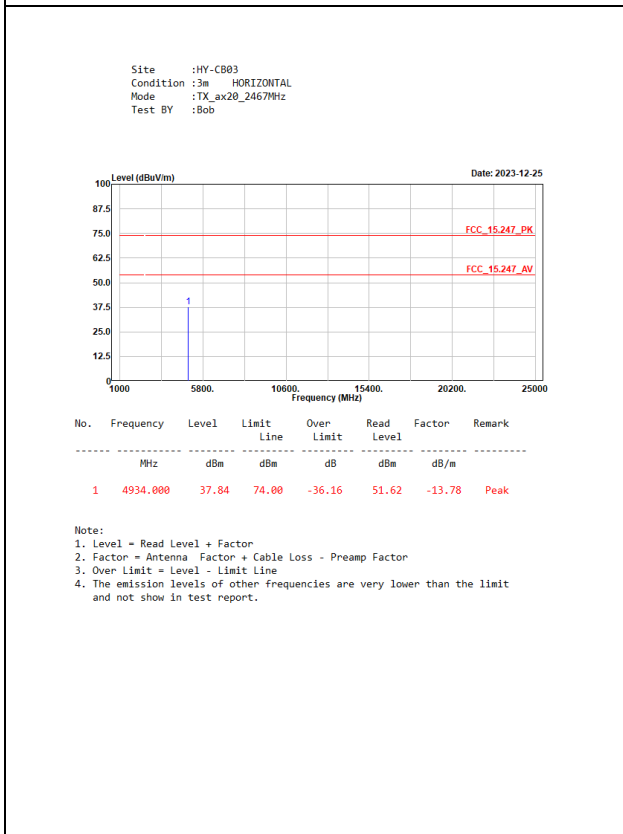
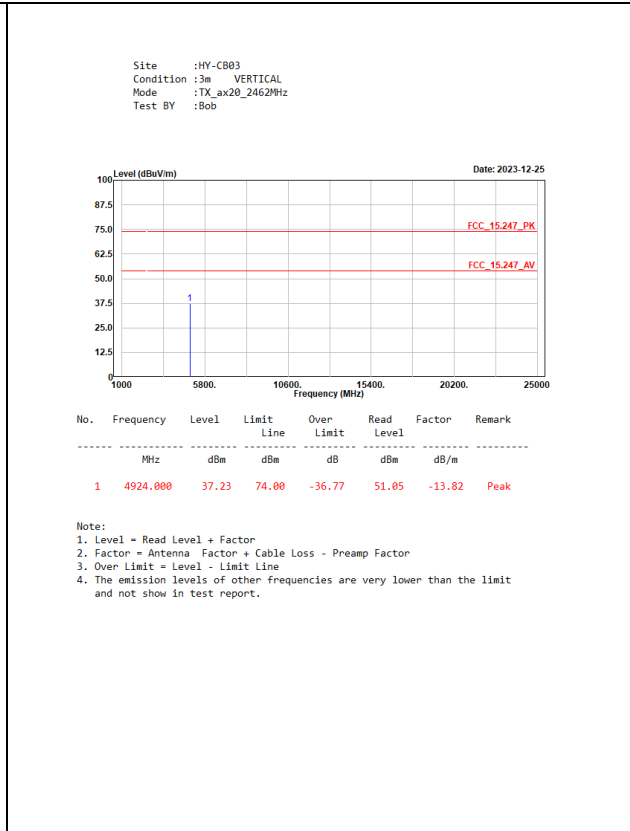
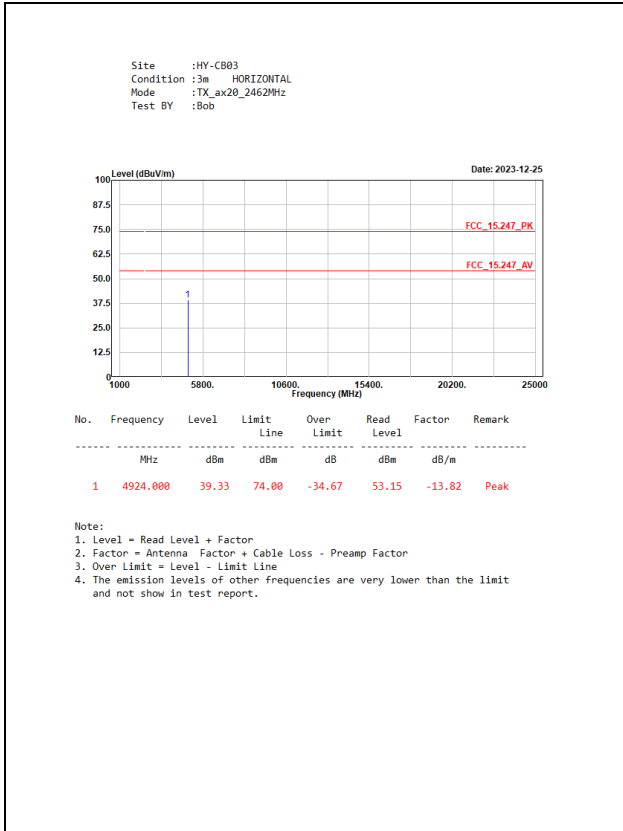


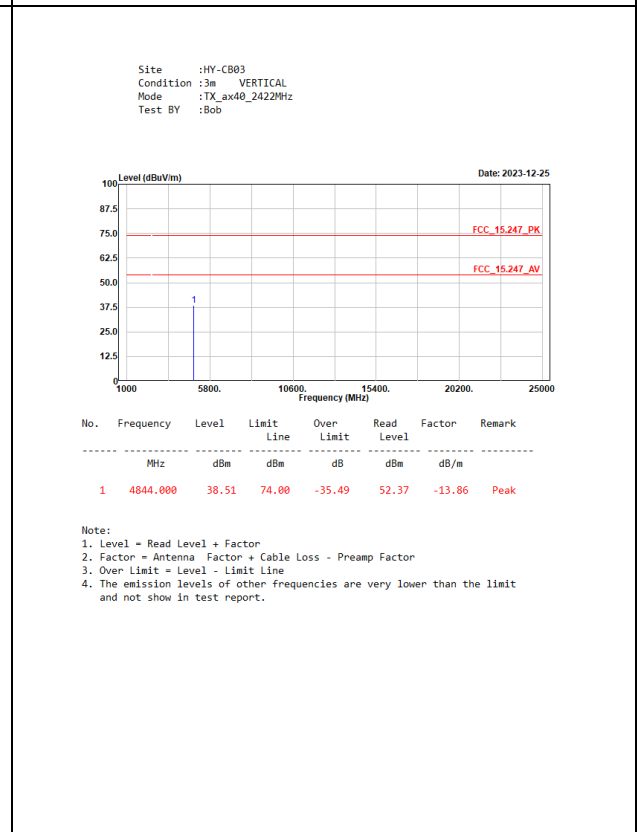
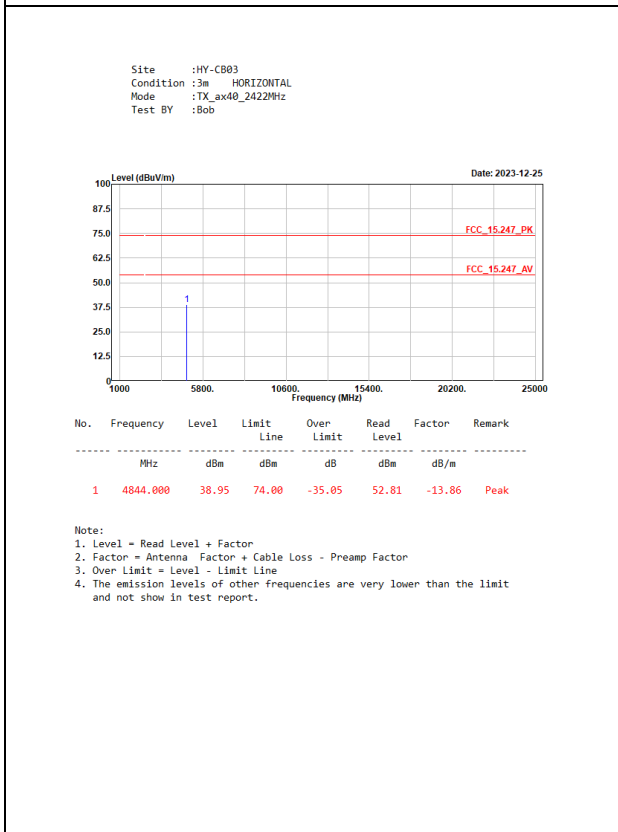
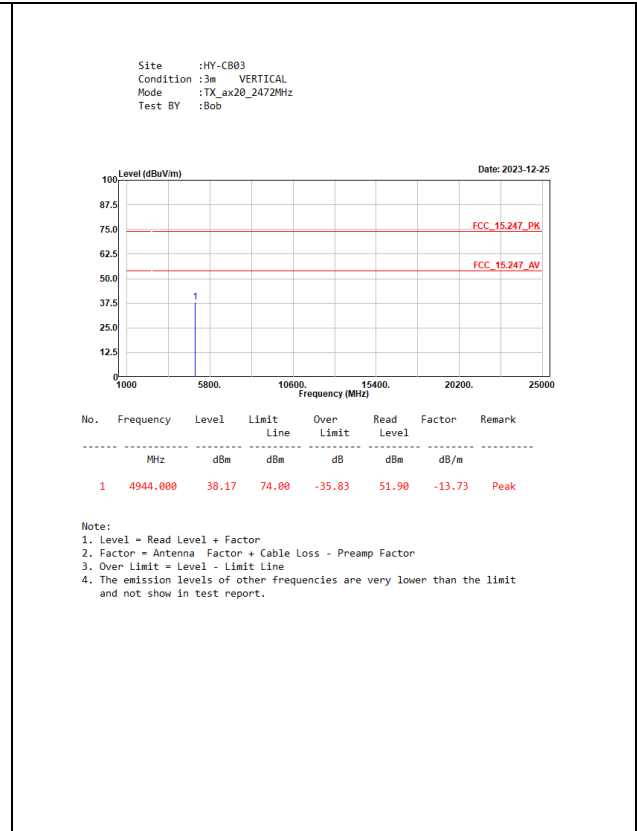
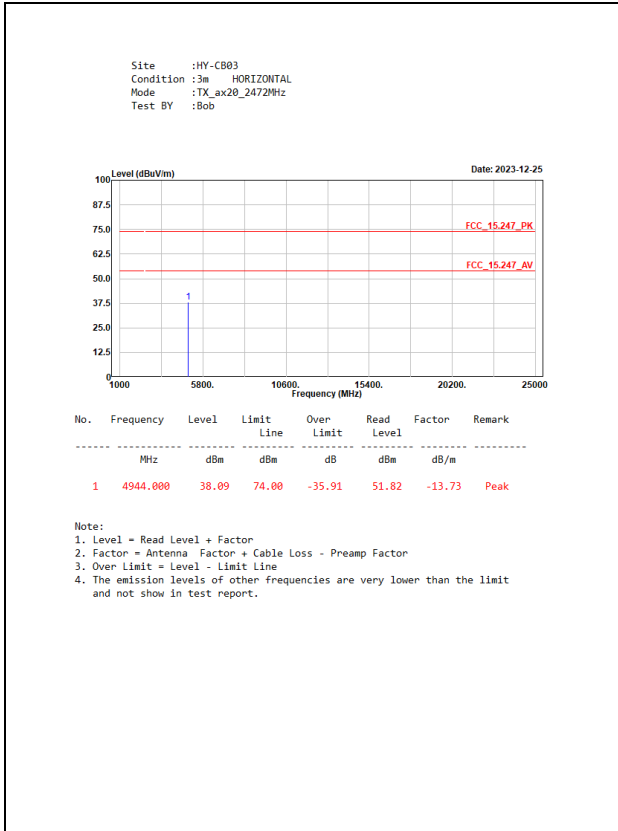


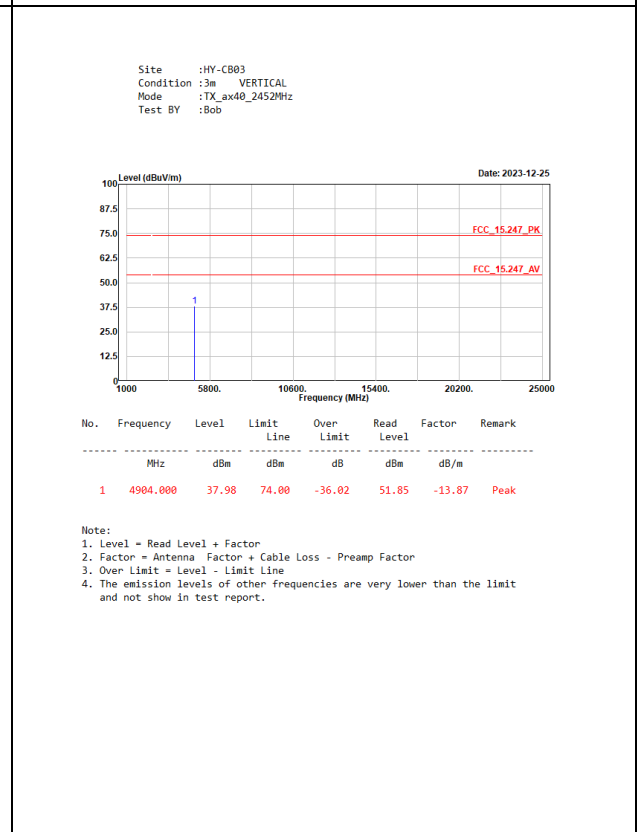
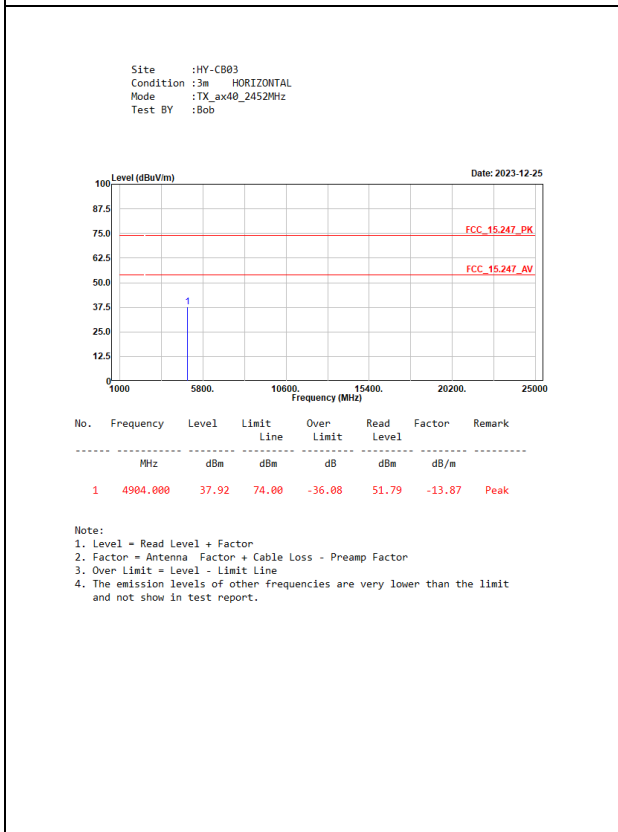
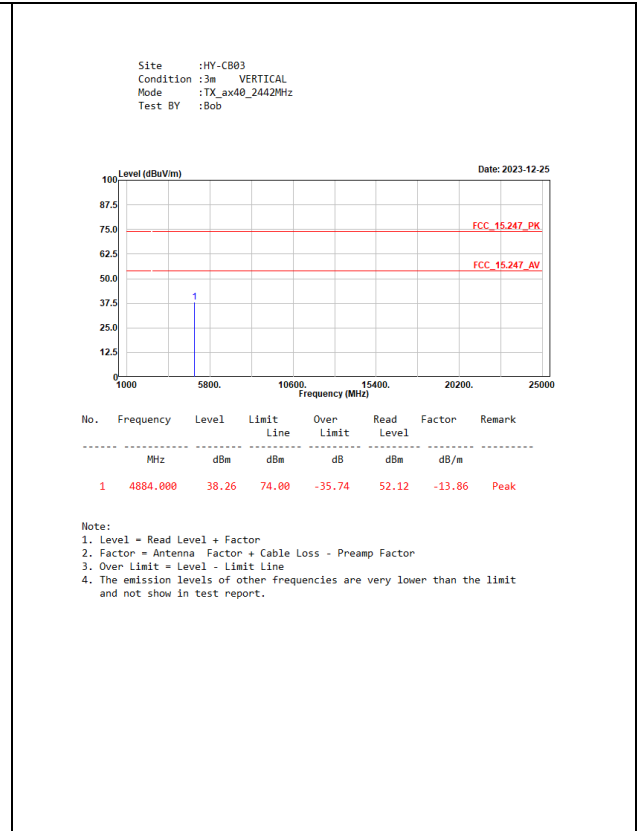
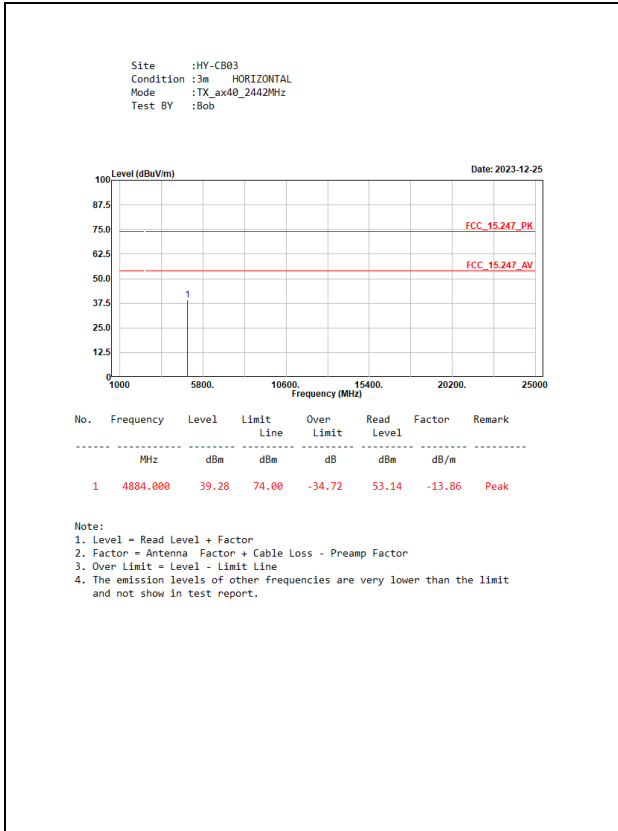


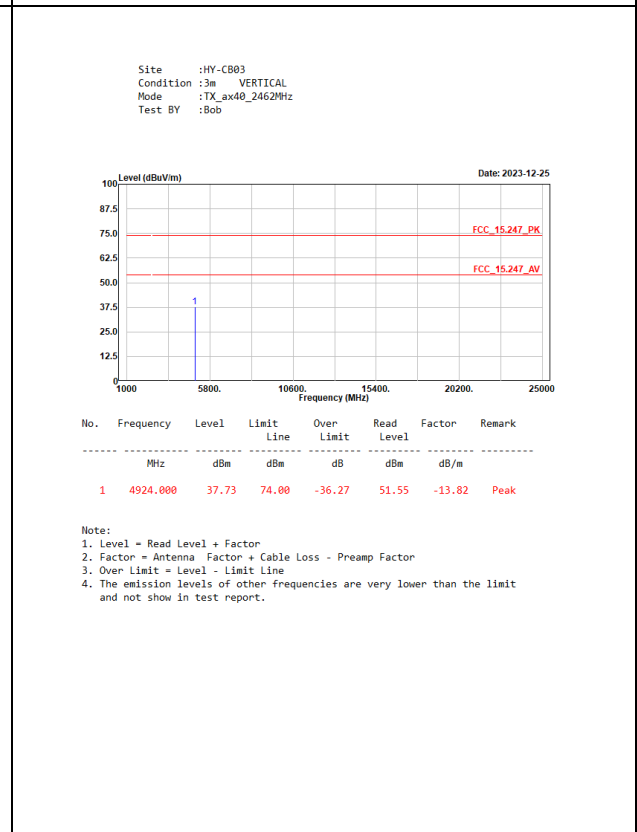
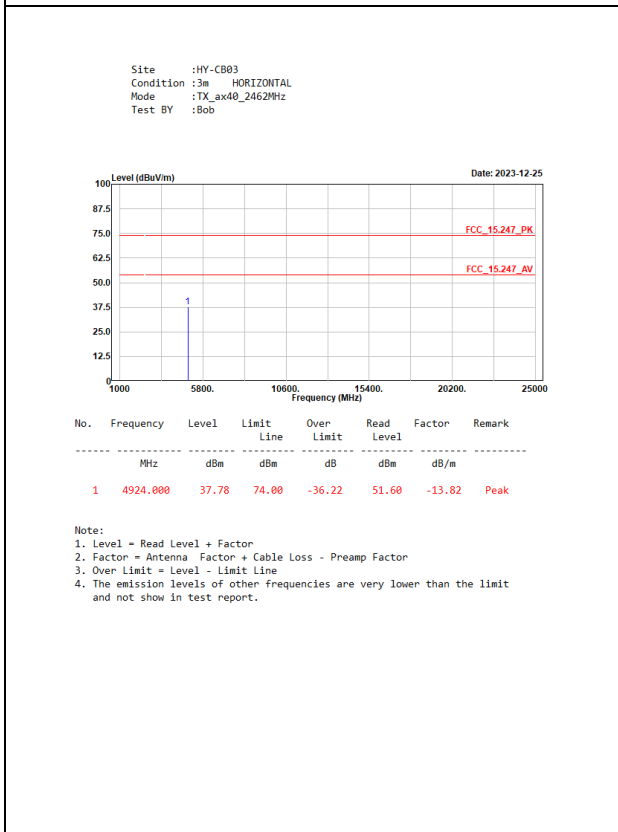
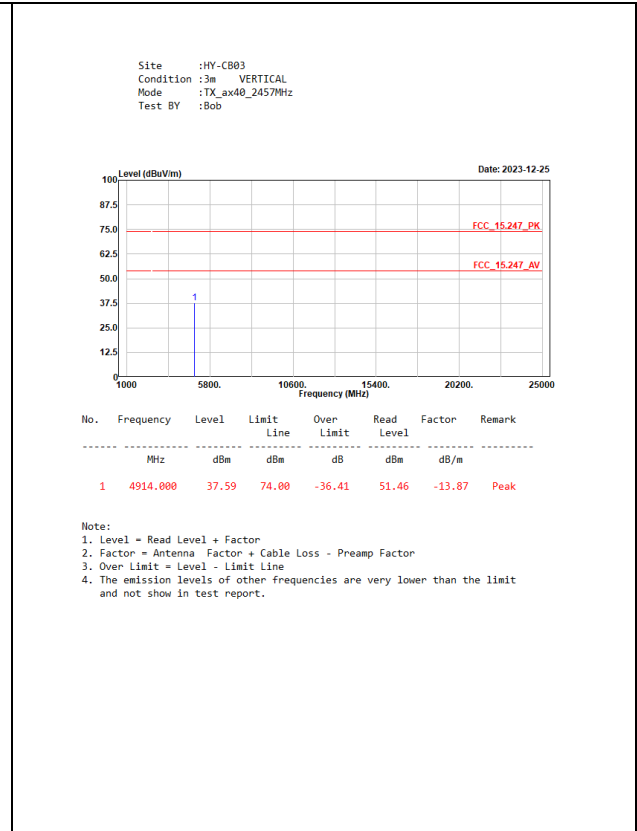
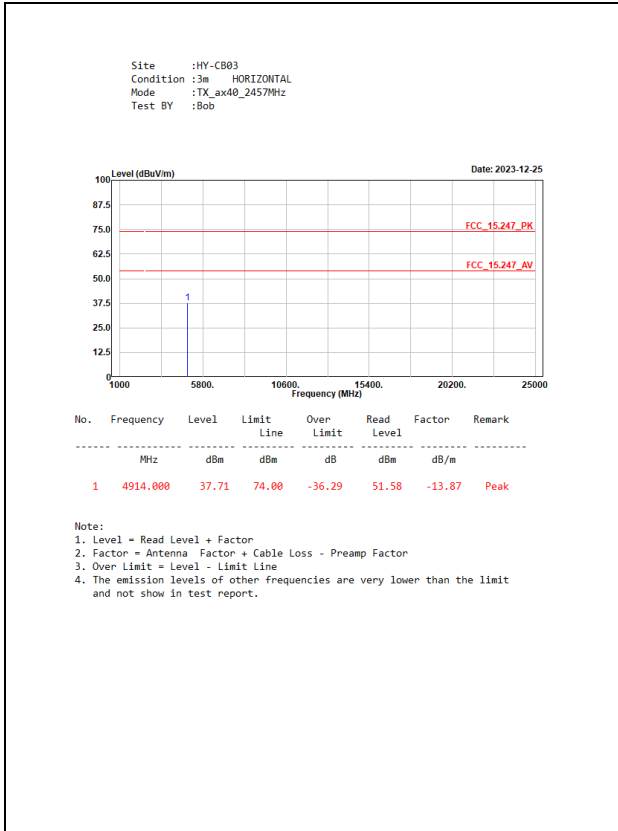


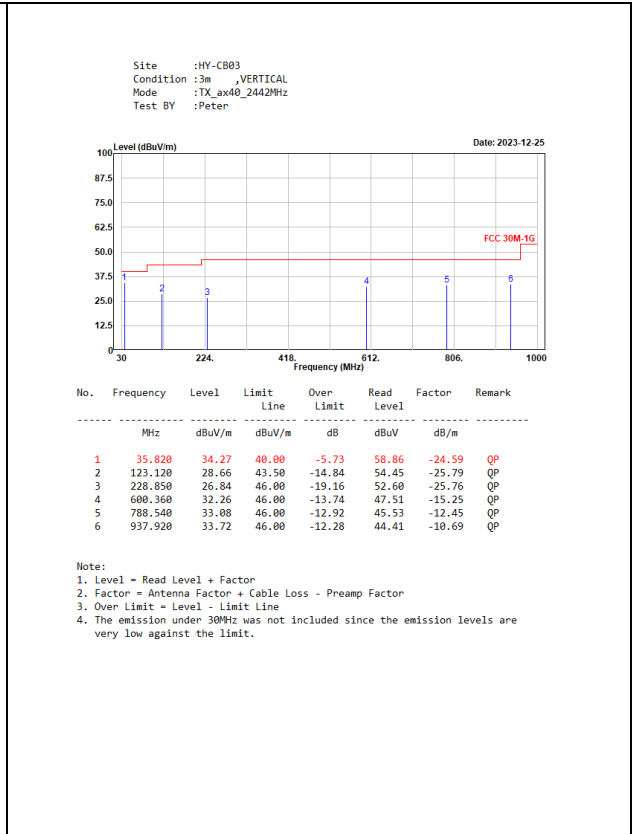
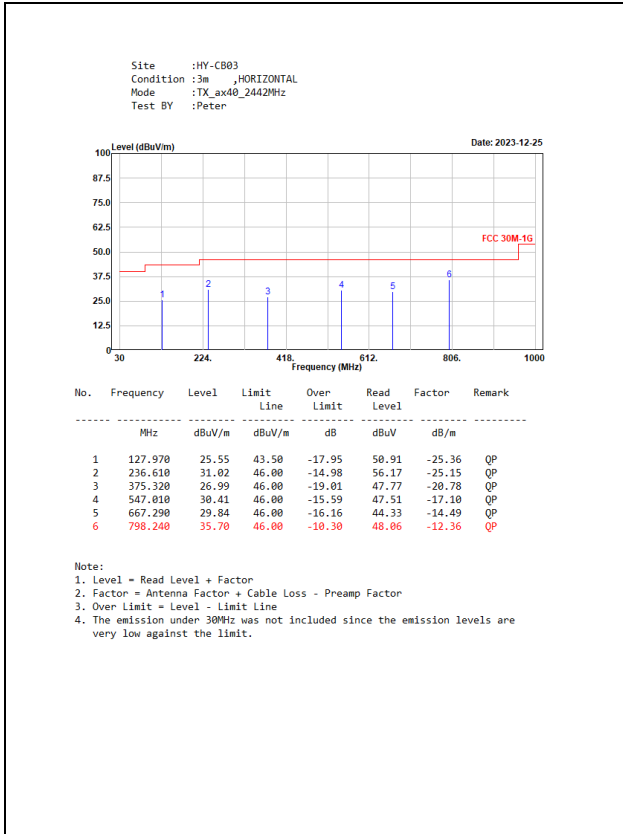








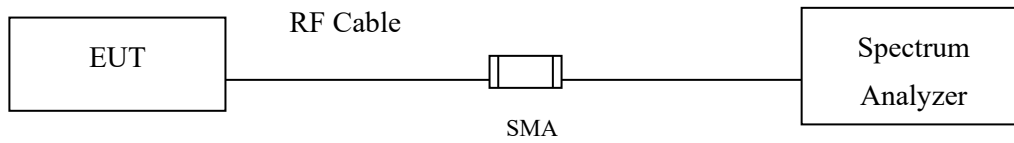




5. RF Antenna Conducted Test

5.1. Test Setup

RF antenna Conducted Measurement:



5.2. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. 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)).

5.3. Test Procedure

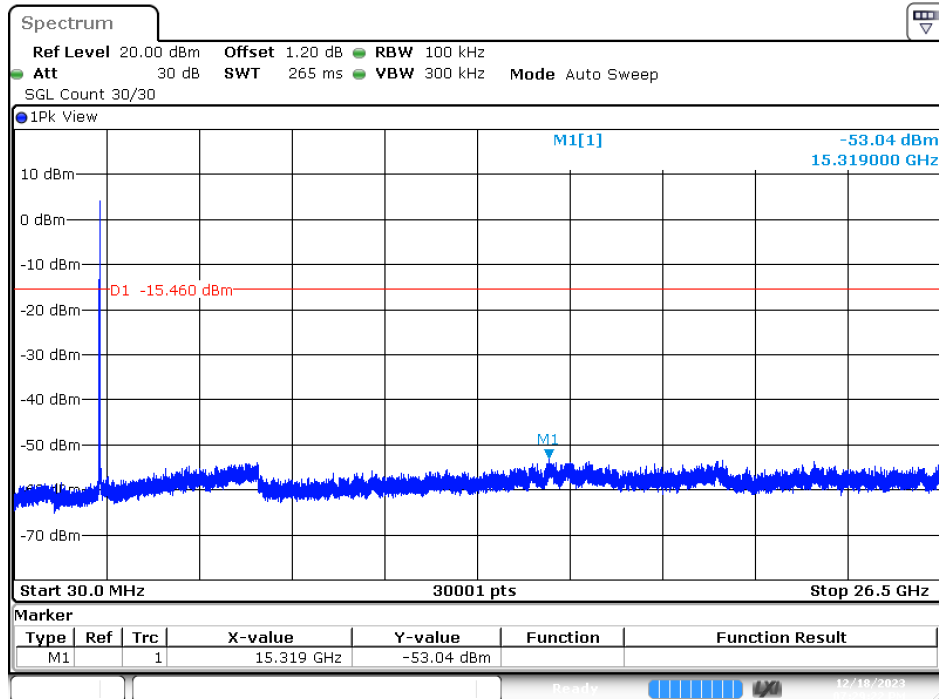
The EUT was tested according to C63.10:2013 Section 11.11 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

5.4. Test Result of RF Antenna Conducted Test

Product : Car Infotainment Unit
 Test Item : RF antenna conducted test
 Test Mode : Transmit (802.11b)
 Test Date : 2023/12/18

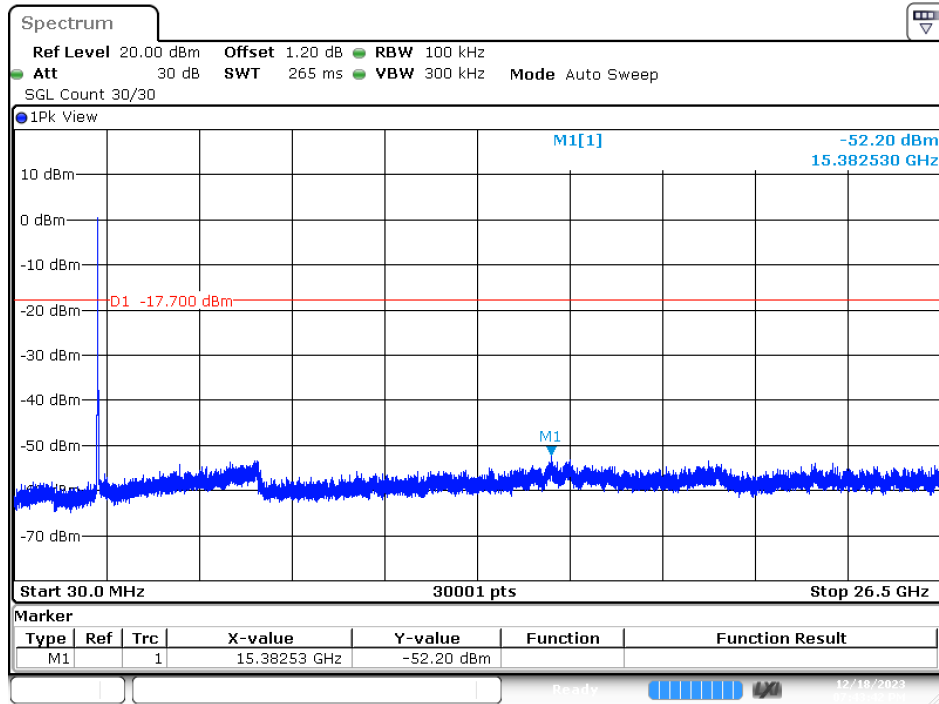
Channel 12 (2467 MHz)



Date: 18.DEC.2023 19:29:22

Product : Car Infotainment Unit
 Test Item : RF Antenna Conducted Spurious
 Test Mode : Transmit (802.11g)
 Test Date : 2023/12/18

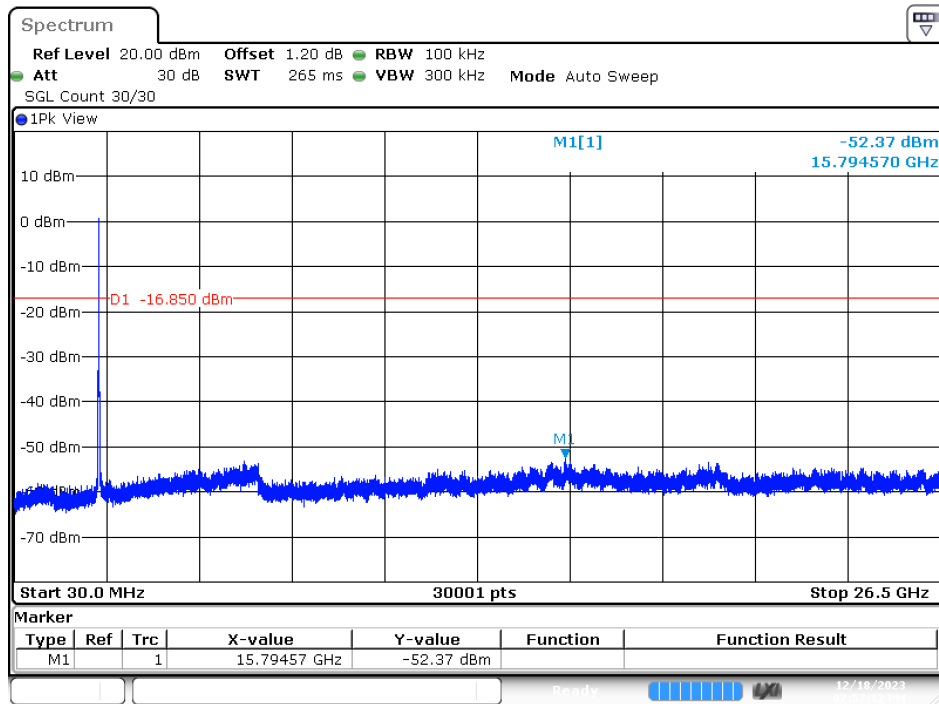
Channel 01 (2412 MHz)



Date: 18.DEC.2023 19:43:42

Product : Car Infotainment Unit
 Test Item : RF Antenna Conducted Spurious
 Test Mode : Transmit (802.11ac-20 MHz)
 Test Date : 2023/12/18

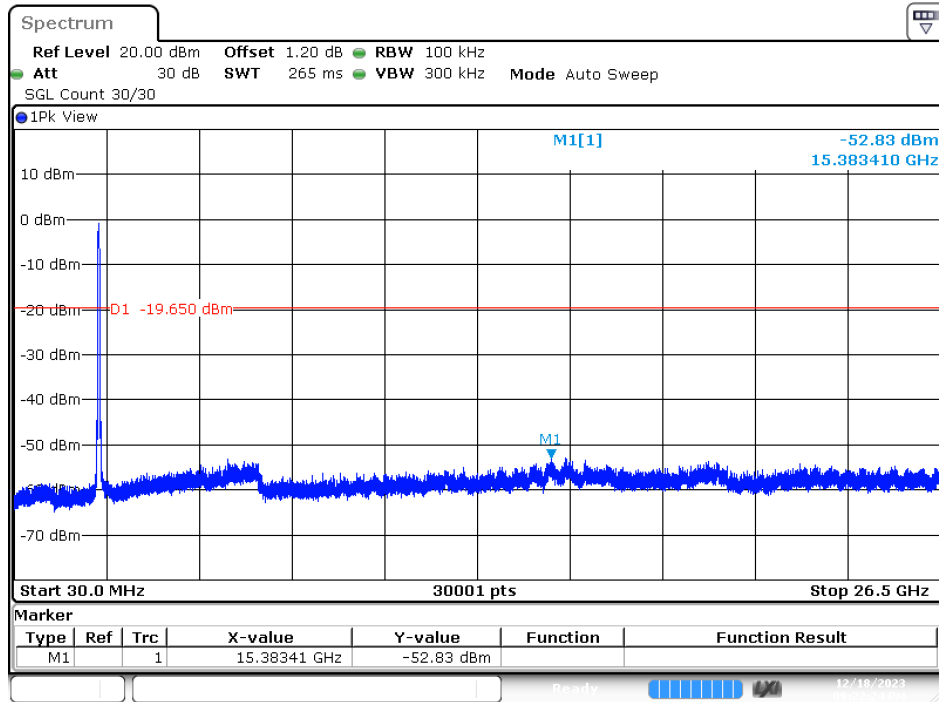
Channel 07 (2442 MHz)



Date: 18.DEC.2023 19:57:12

Product : Car Infotainment Unit
 Test Item : RF Antenna Conducted Spurious
 Test Mode : Transmit (802.11ac-40 MHz)
 Test Date : 2023/12/18

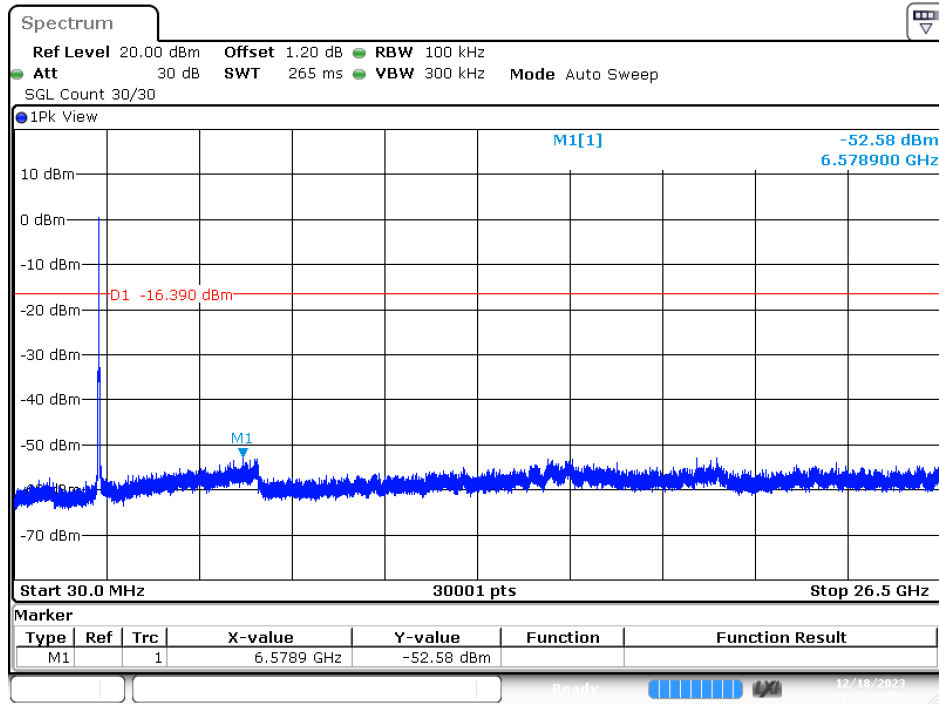
Channel 07 (2442 MHz)



Date: 18.DEC.2023 21:22:24

Product : Car Infotainment Unit
 Test Item : RF Antenna Conducted Spurious
 Test Mode : Transmit (802.11ax-20 MHz)
 Test Date : 2023/12/18

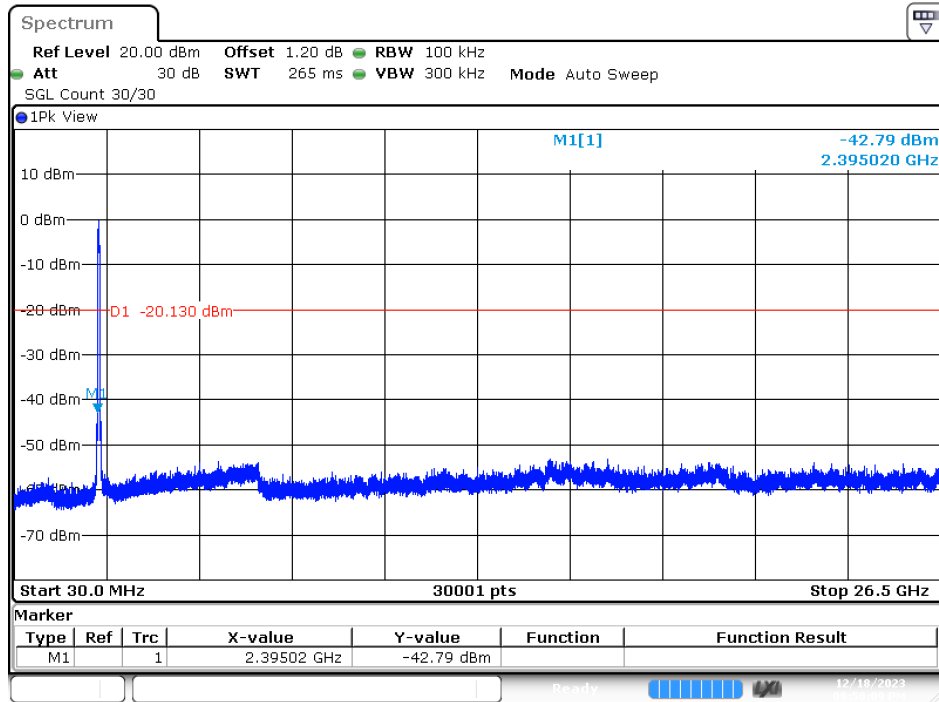
Channel 07 (2442 MHz)



Date: 18.DEC.2023 21:37:38

Product : Car Infotainment Unit
 Test Item : RF Antenna Conducted Spurious
 Test Mode : Transmit (802.11ax-40 MHz)
 Test Date : 2023/12/18

Channel 07 (2442 MHz)

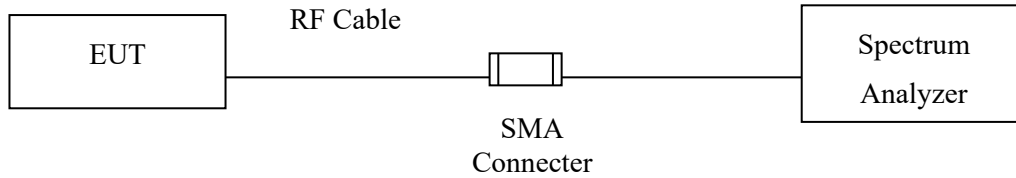


Date: 18.DEC.2023 21:50:09

6. Band Edge

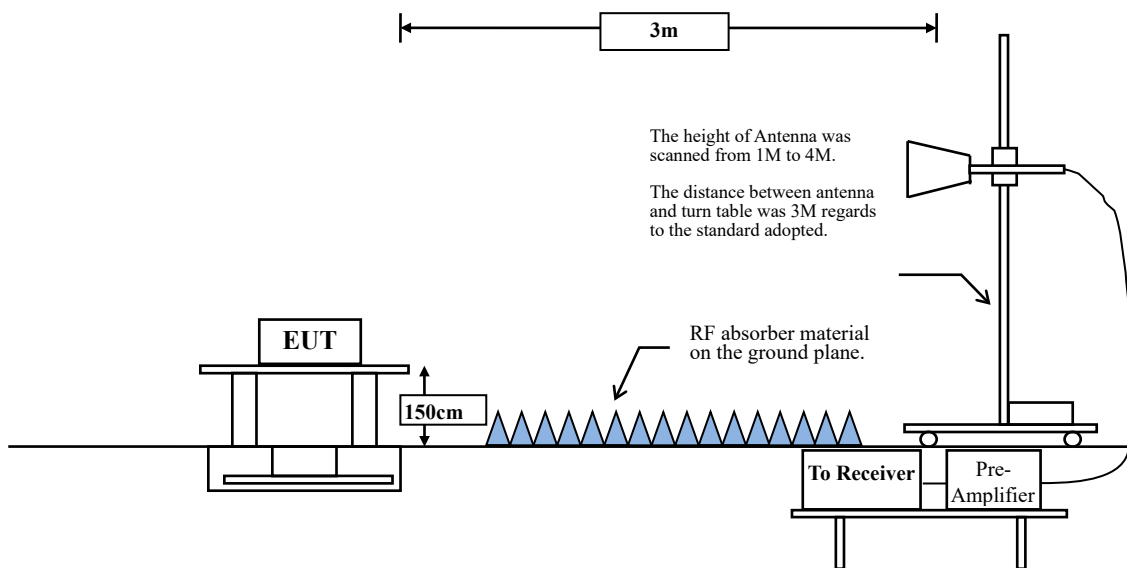
6.1. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1 GHz



6.2. 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)).

6.3. 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 x 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 = 1 MHz.

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

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

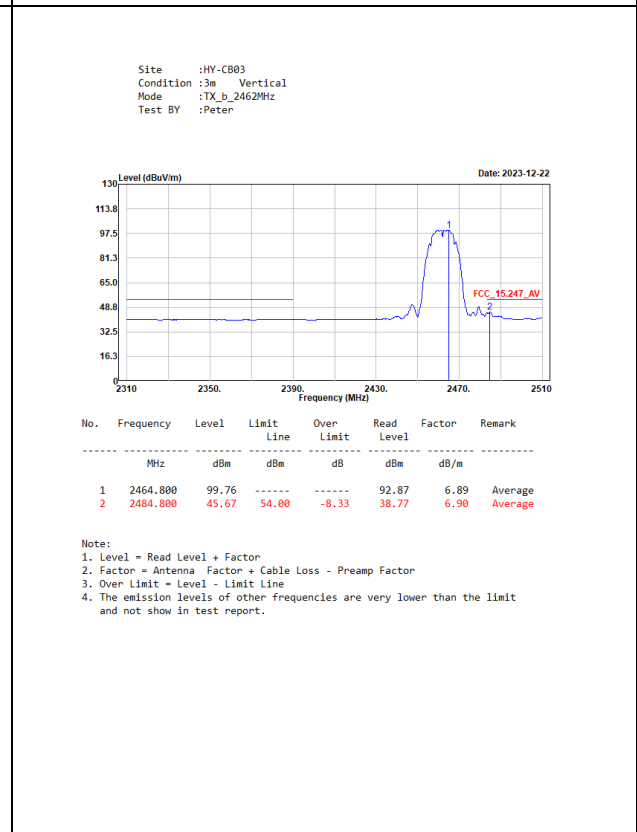
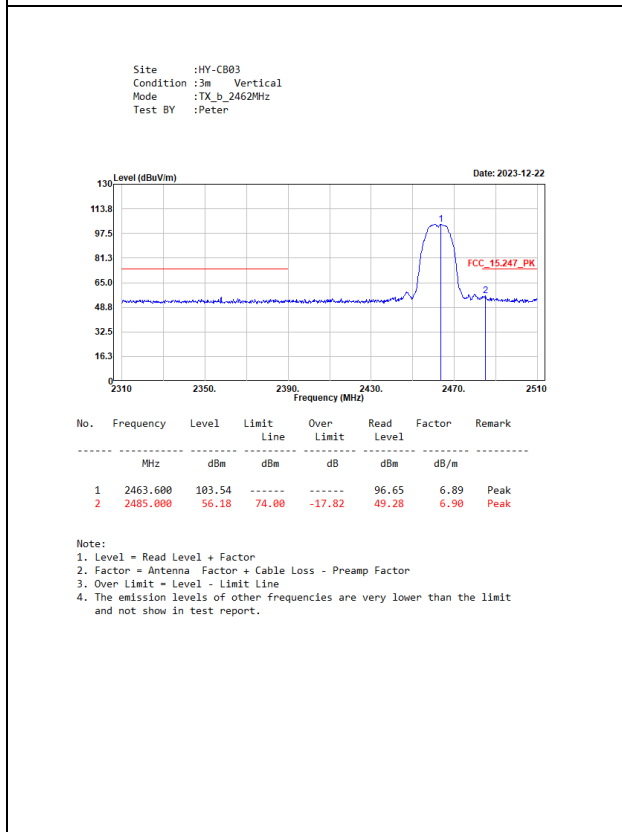
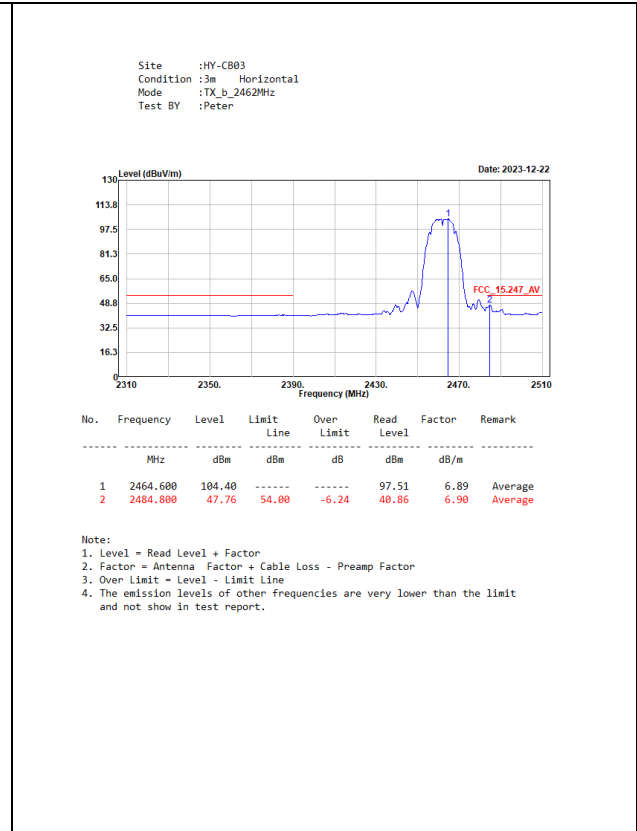
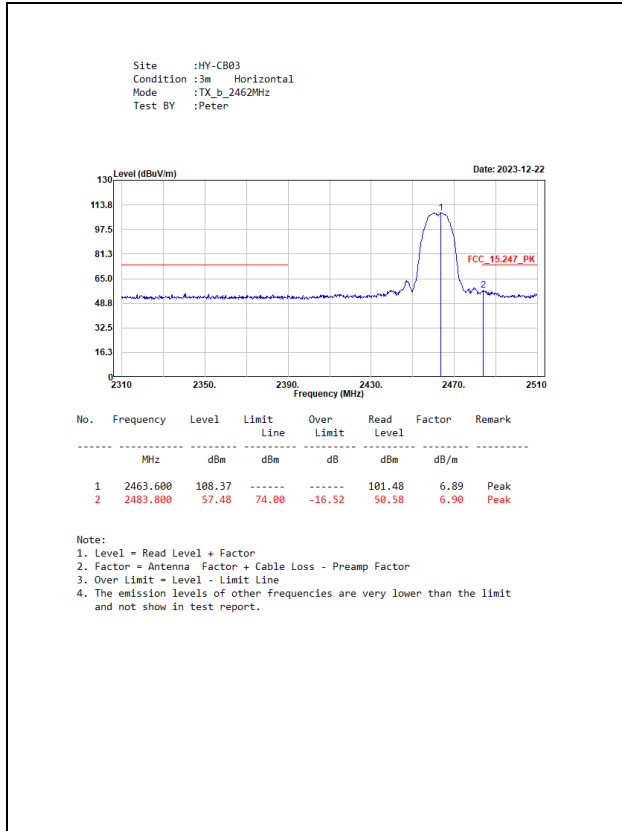
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

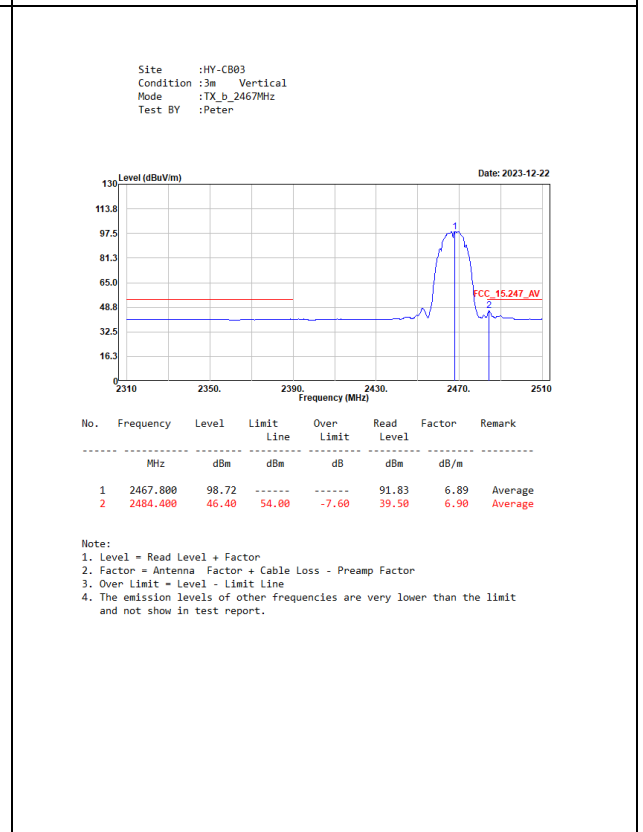
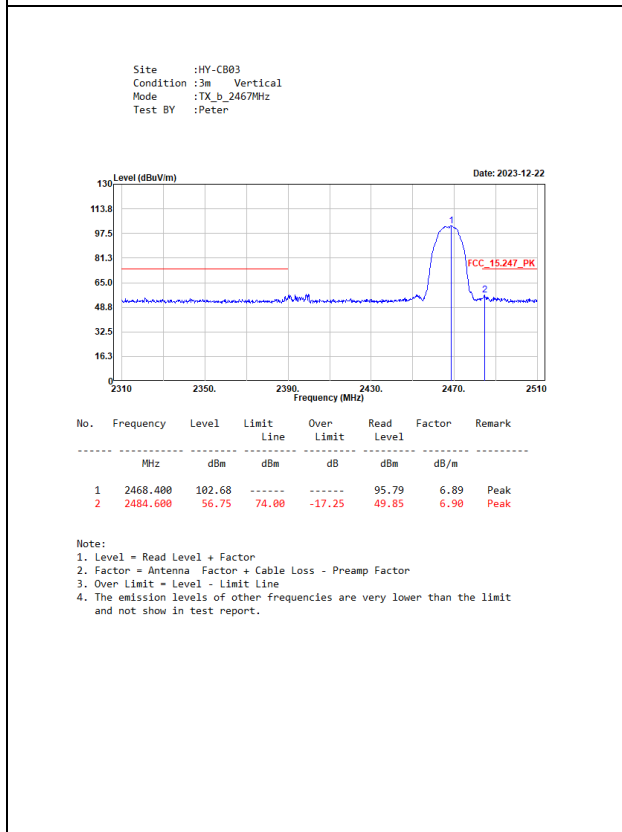
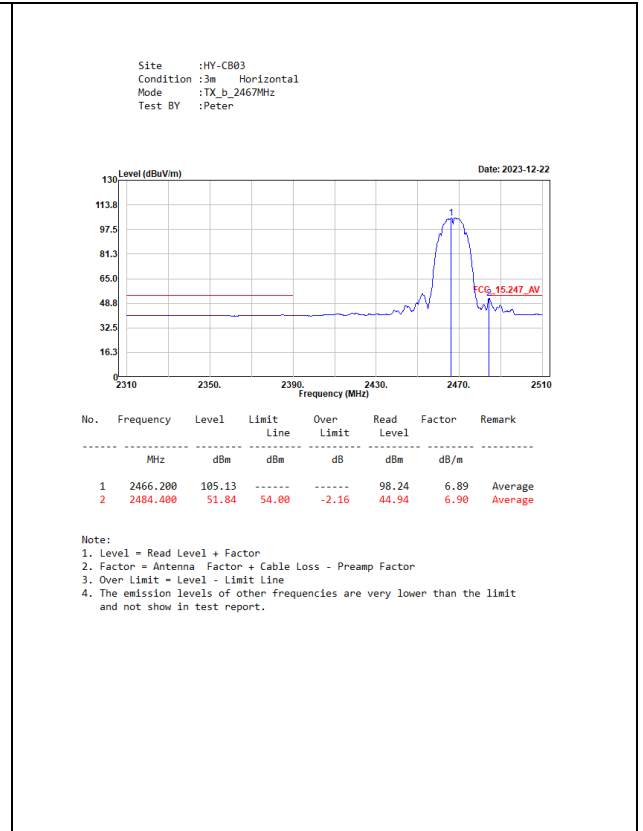
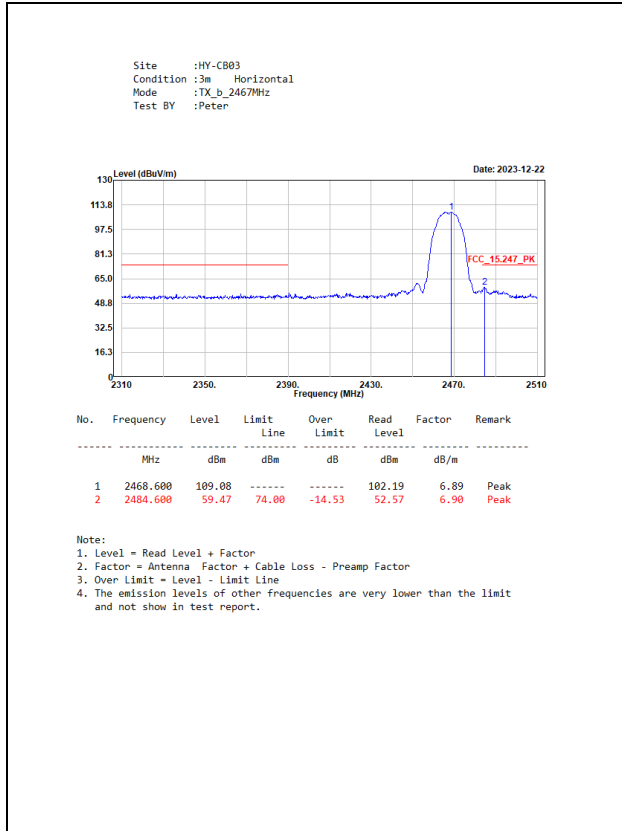
2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 b	100.00	--	--	10
802.11 g	98.62	1.4300	699	10
802.11 ac20 MHz	98.53	1.3450	743	10
802.11 ac40 MHz	97.08	0.6650	1504	2000
802.11 ax20 MHz	98.12	1.0450	957	10
802.11 ax40 MHz	96.49	0.5500	1818	2000

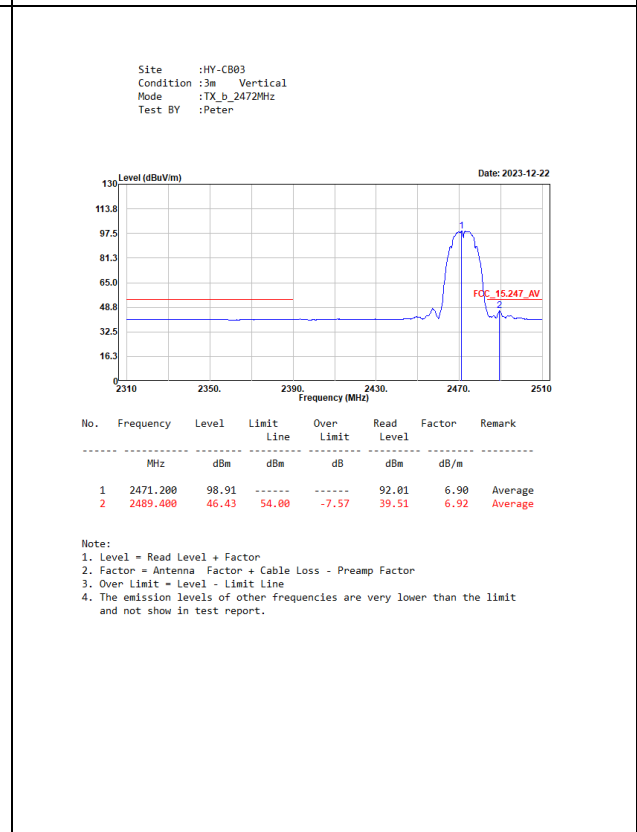
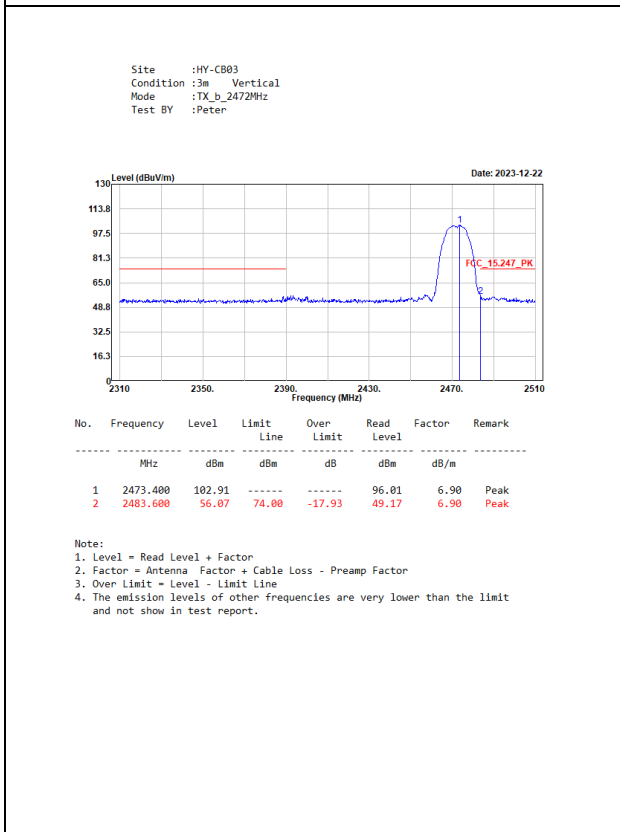
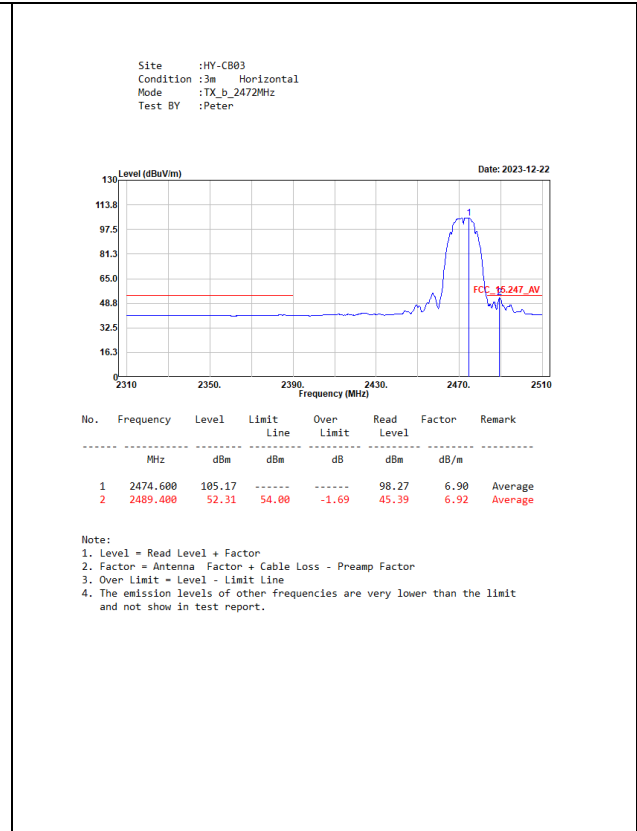
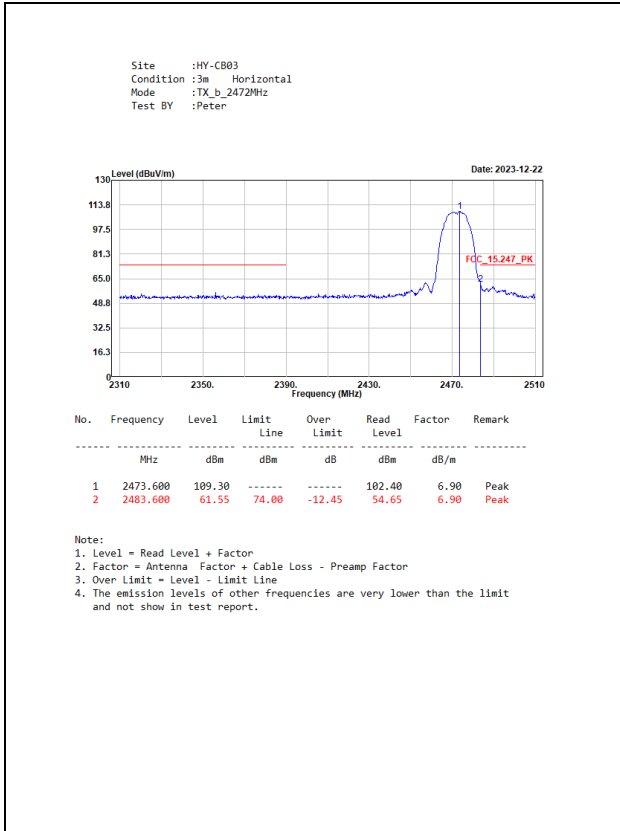
Note: Duty Cycle Refer to Section 9

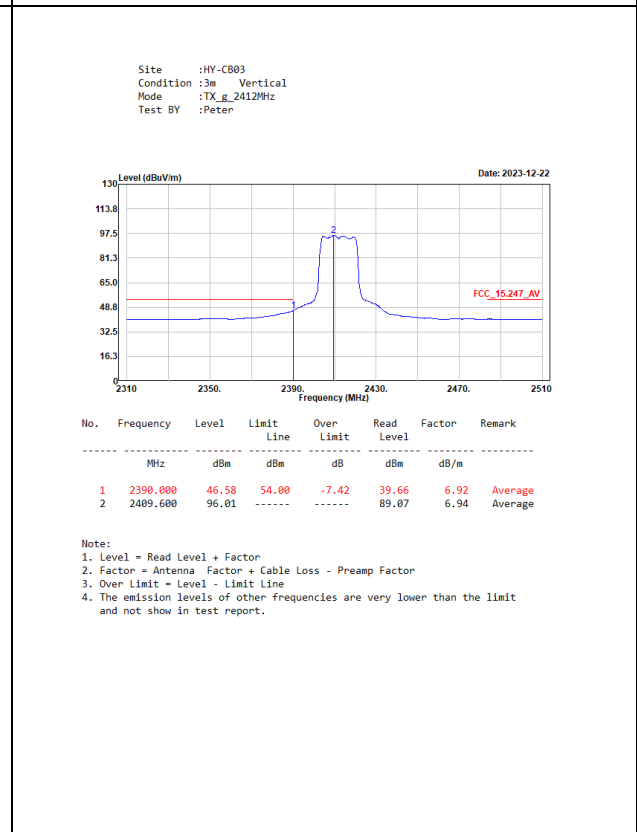
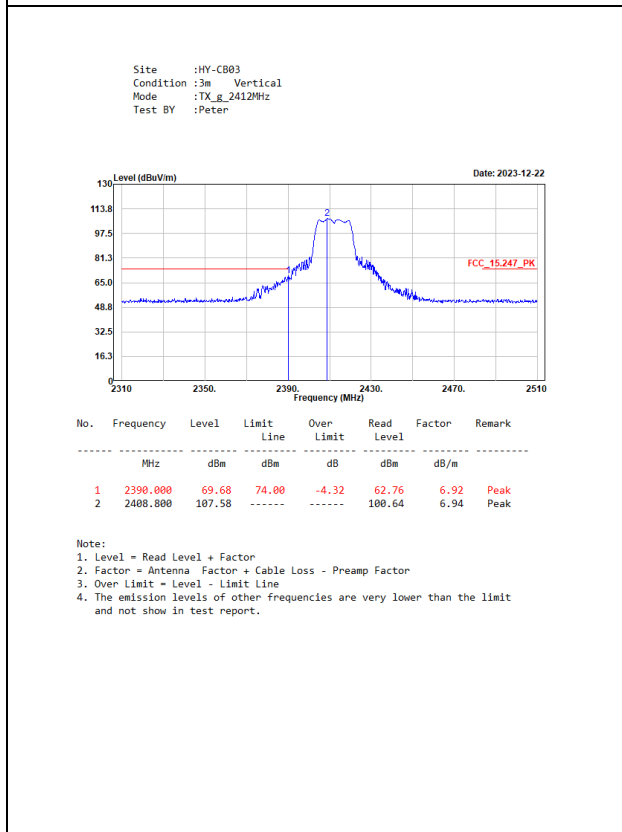
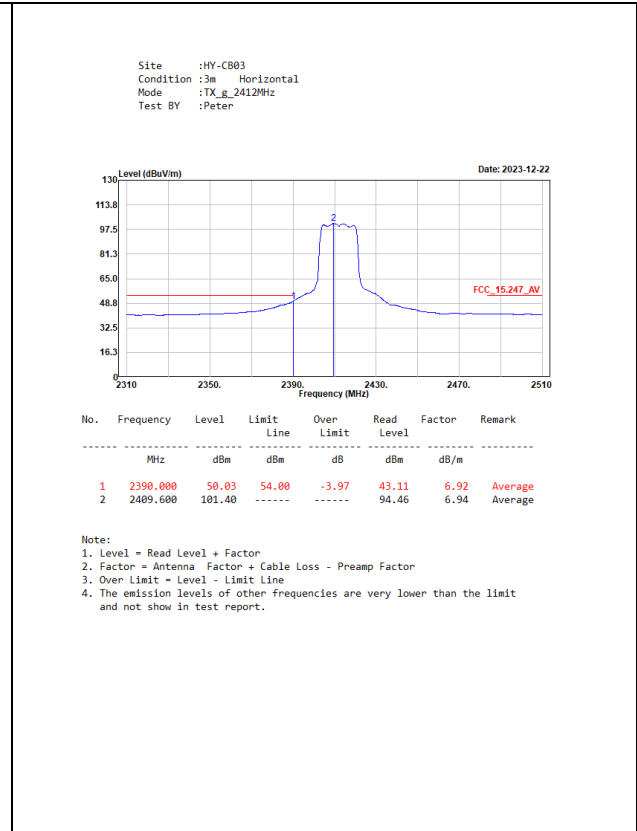
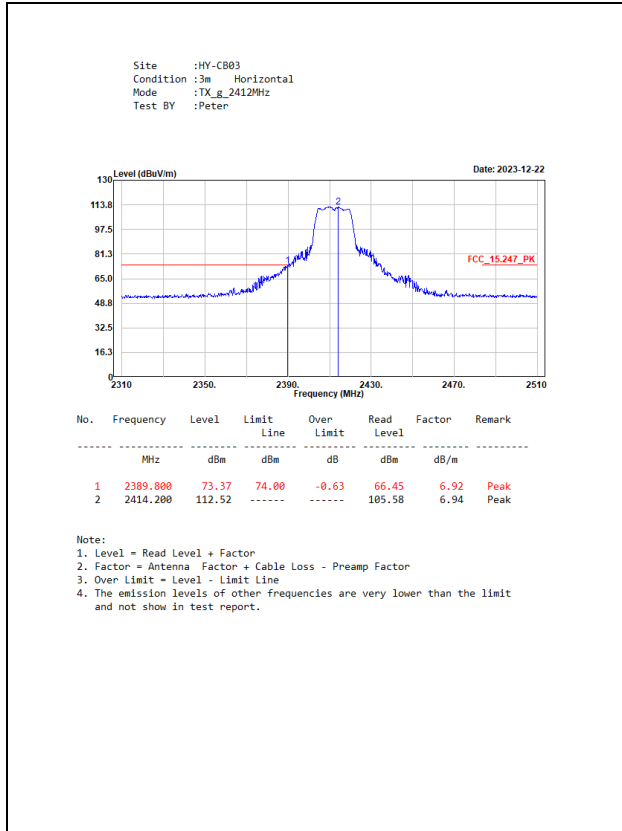
6.4. Test Result of Band Edge

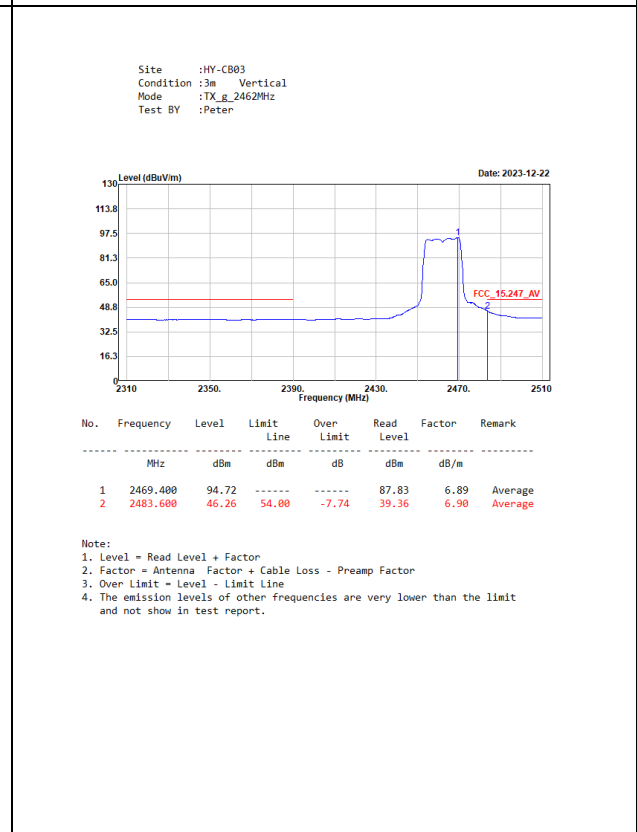
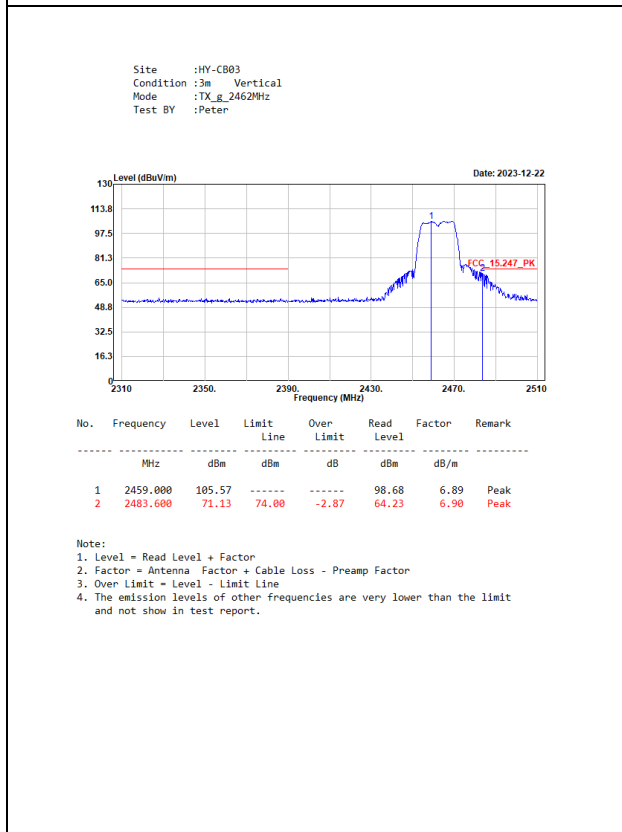
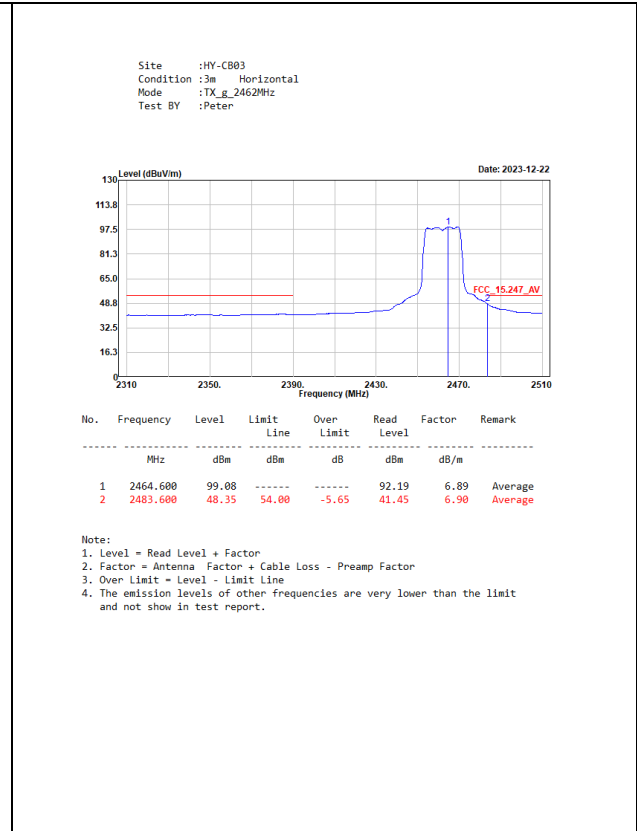
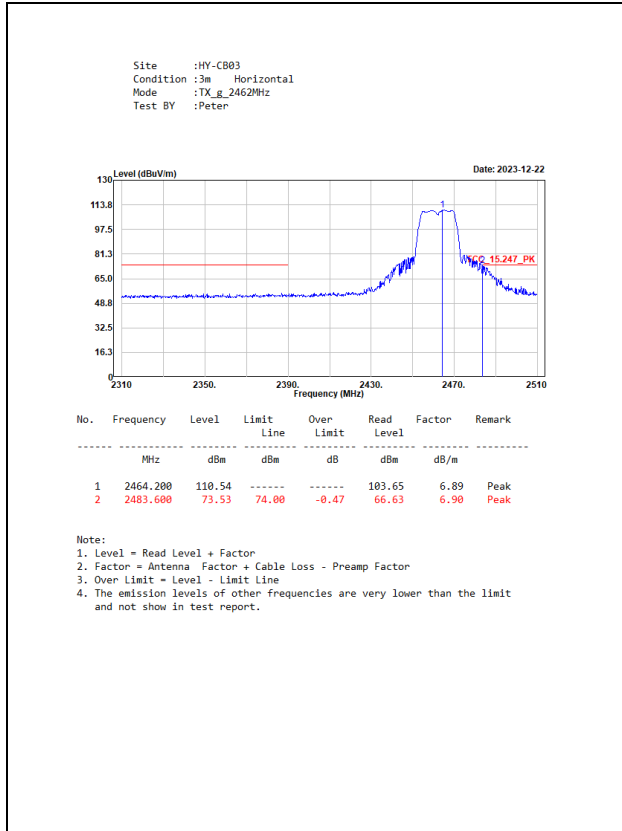
<p>Site :HY-CB03 Condition :3m Horizontal Mode :TX_b_2412MHz Test BY :Peter</p> <p>Date: 2023-12-22</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Frequency</th> <th>Level</th> <th>Limit</th> <th>Over</th> <th>Read</th> <th>Factor</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBm</th> <th>dBm</th> <th>dB</th> <th>dBm</th> <th>dB/m</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2386.200</td> <td>57.05</td> <td>74.00</td> <td>-16.95</td> <td>50.13</td> <td>6.92</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>2410.600</td> <td>109.40</td> <td>-----</td> <td>-----</td> <td>102.46</td> <td>6.94</td> <td>Peak</td> </tr> </tbody> </table> <p>Notes: 1. Level = Read Level + Factor 2. Factor = Antenna Factor + Cable Loss - Preamp Factor 3. Over Limit = Level - Limit Line 4. The emission levels of other frequencies are very lower than the limit and not show in test report.</p>	No.	Frequency	Level	Limit	Over	Read	Factor	Remark		MHz	dBm	dBm	dB	dBm	dB/m		1	2386.200	57.05	74.00	-16.95	50.13	6.92	Peak	2	2410.600	109.40	-----	-----	102.46	6.94	Peak	<p>Site :HY-CB03 Condition :3m Horizontal Mode :TX_b_2412MHz Test BY :Peter</p> <p>Date: 2023-12-22</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Frequency</th> <th>Level</th> <th>Limit</th> <th>Over</th> <th>Read</th> <th>Factor</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBm</th> <th>dBm</th> <th>dB</th> <th>dBm</th> <th>dB/m</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2390.000</td> <td>45.63</td> <td>54.00</td> <td>-8.37</td> <td>38.71</td> <td>6.92</td> <td>Average</td> </tr> <tr> <td>2</td> <td>2411.200</td> <td>105.63</td> <td>-----</td> <td>-----</td> <td>98.69</td> <td>6.94</td> <td>Average</td> </tr> </tbody> </table> <p>Notes: 1. Level = Read Level + Factor 2. Factor = Antenna Factor + Cable Loss - Preamp Factor 3. Over Limit = Level - Limit Line 4. The emission levels of other frequencies are very lower than the limit and not show in test report.</p>	No.	Frequency	Level	Limit	Over	Read	Factor	Remark		MHz	dBm	dBm	dB	dBm	dB/m		1	2390.000	45.63	54.00	-8.37	38.71	6.92	Average	2	2411.200	105.63	-----	-----	98.69	6.94	Average
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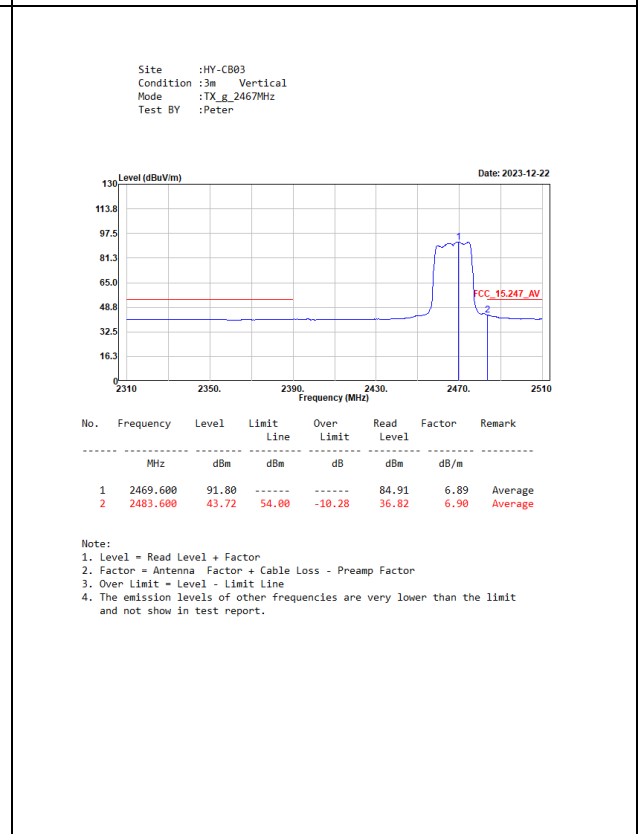
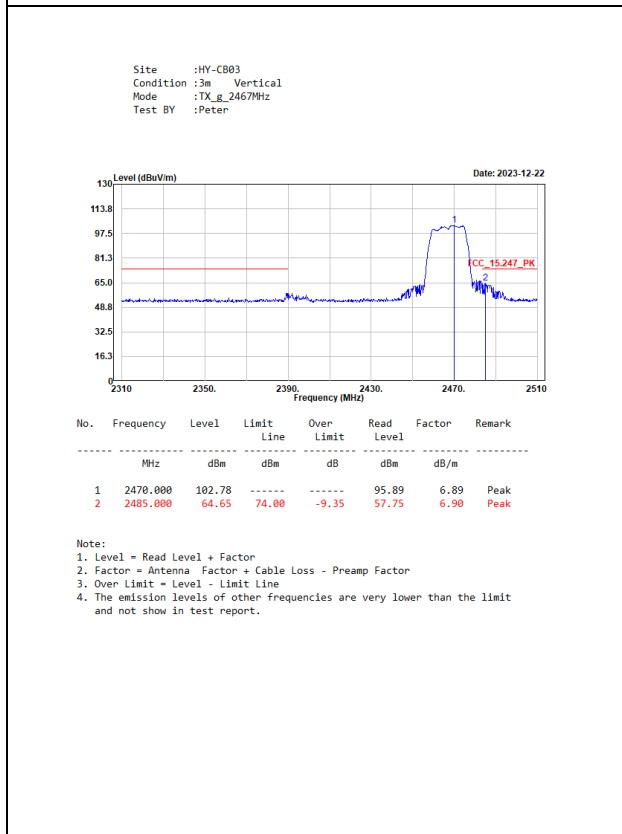
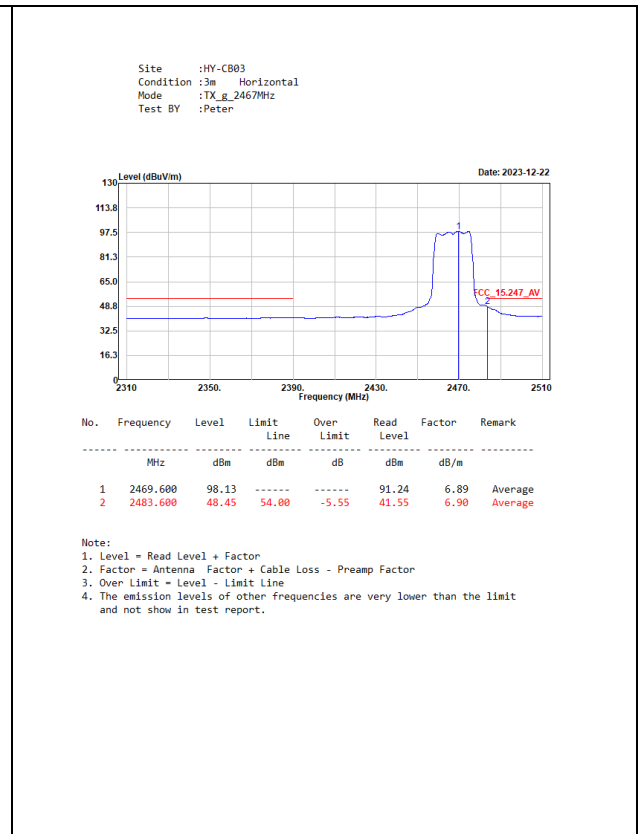
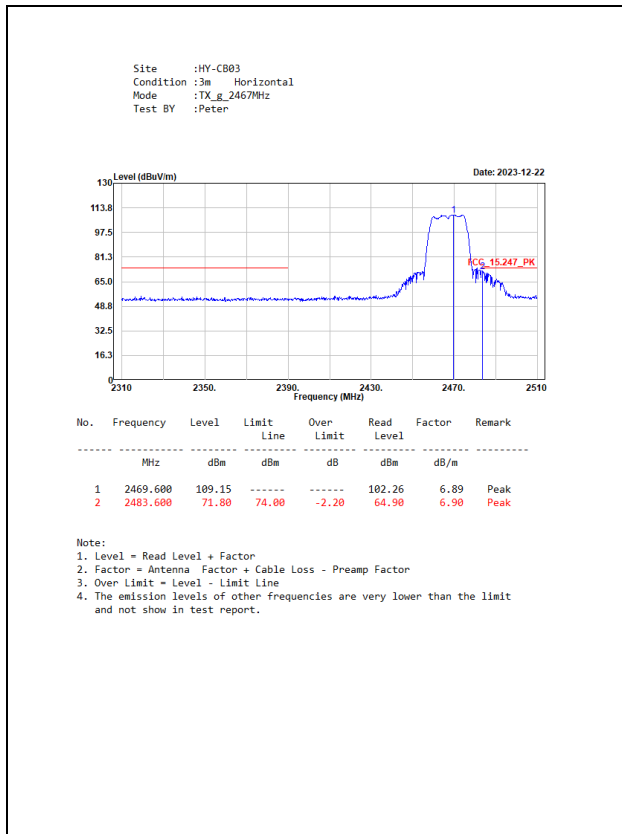


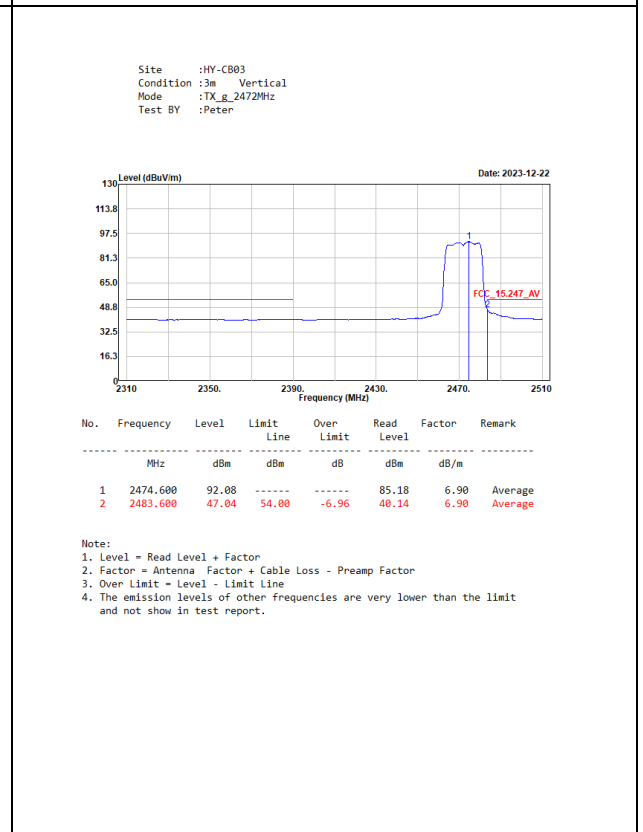
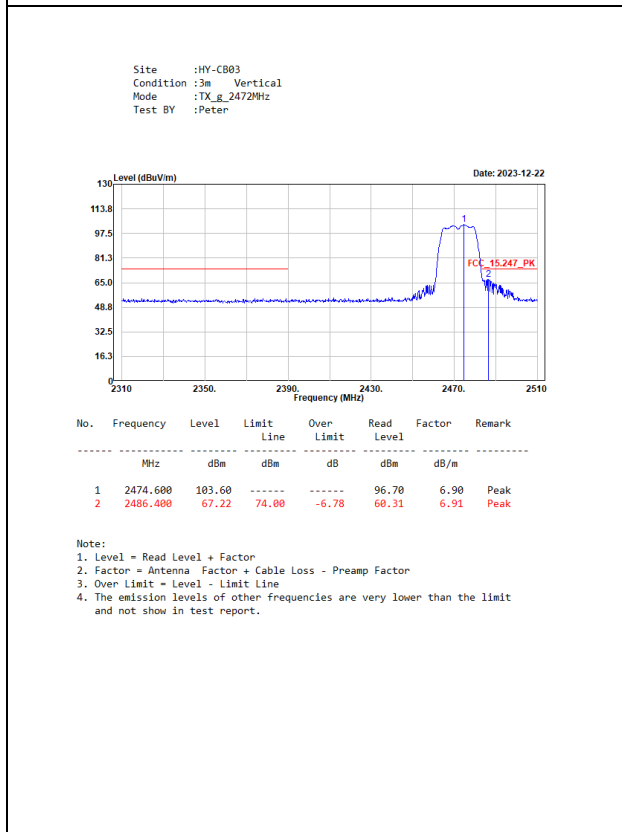
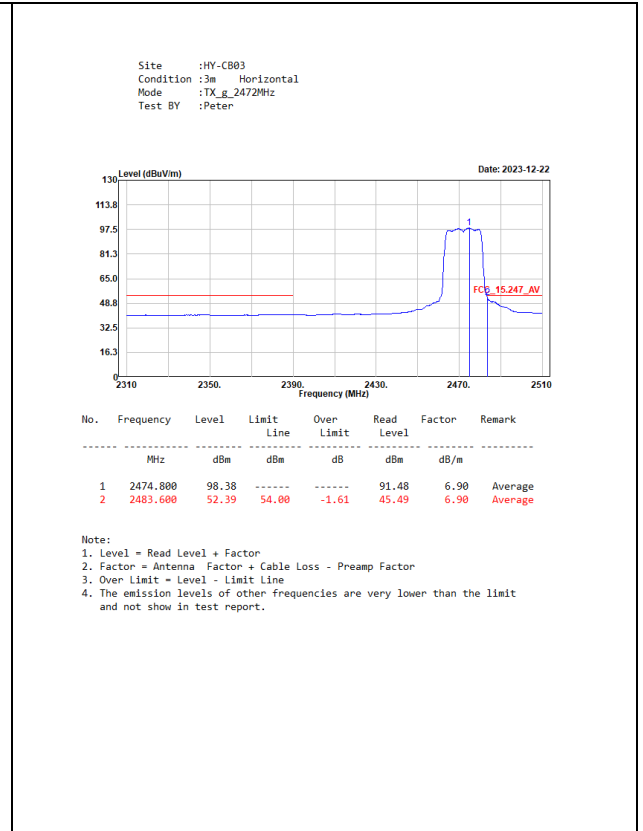
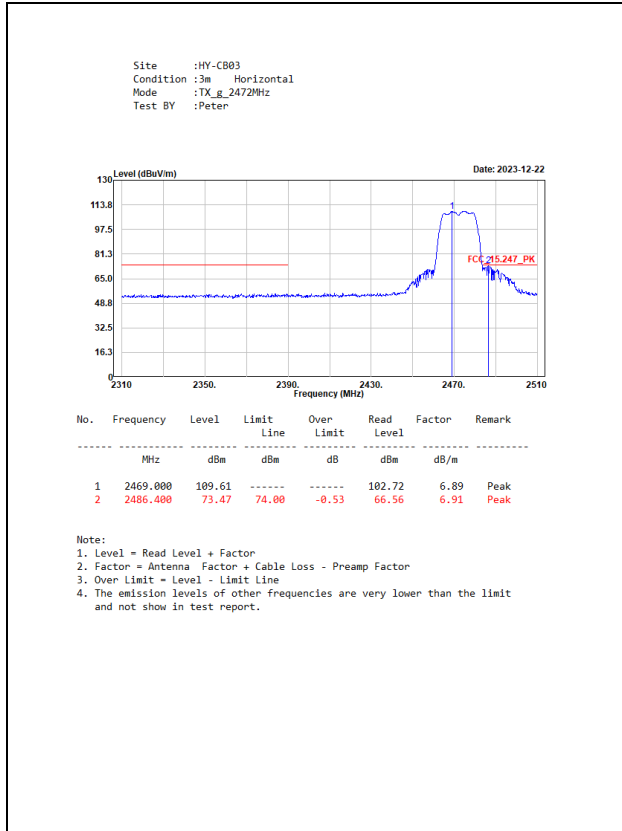


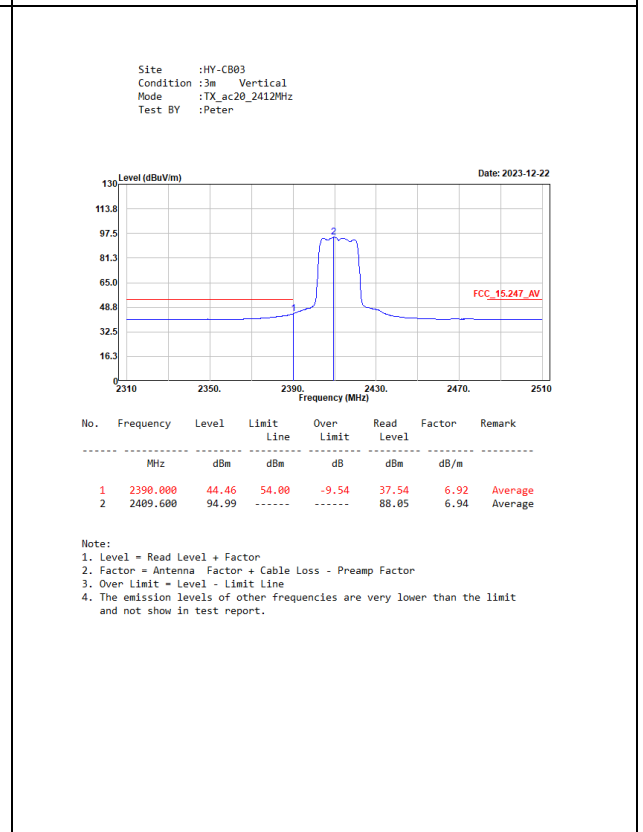
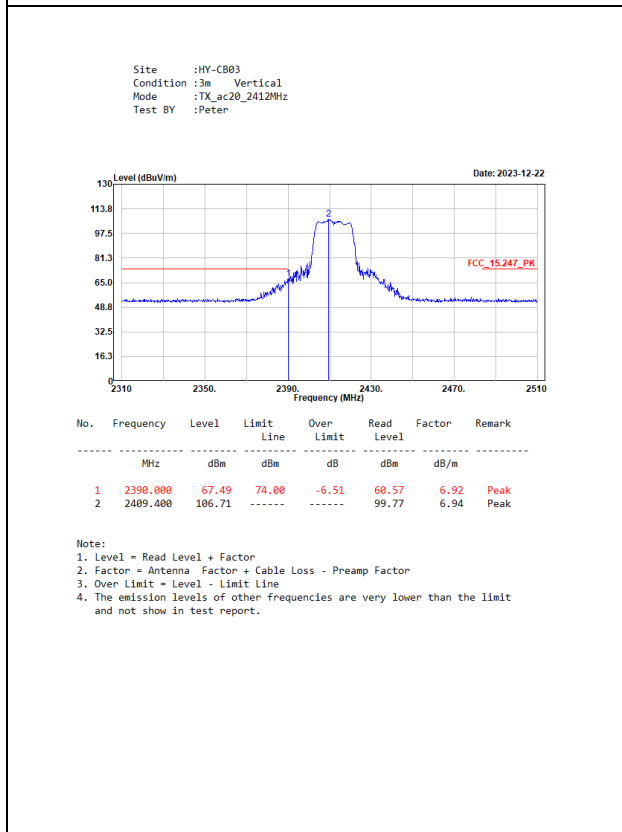
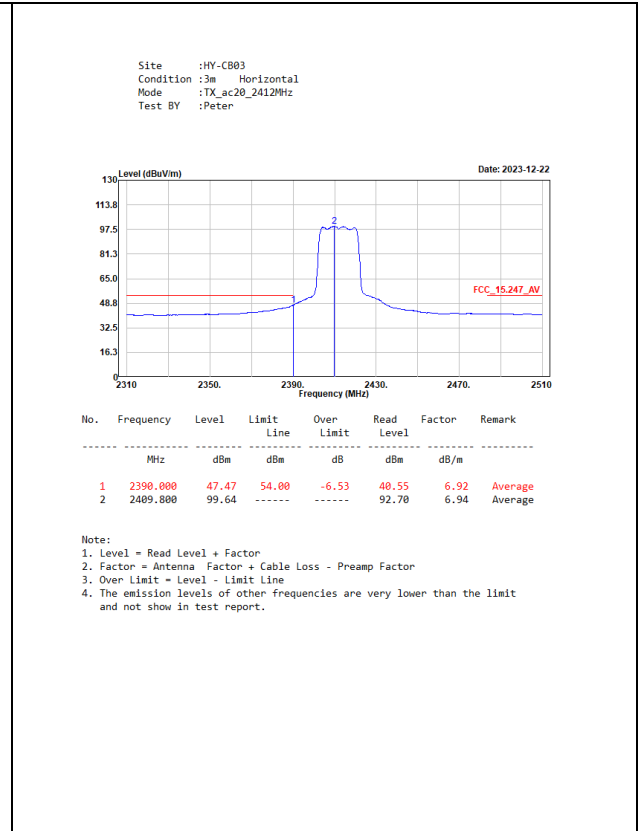
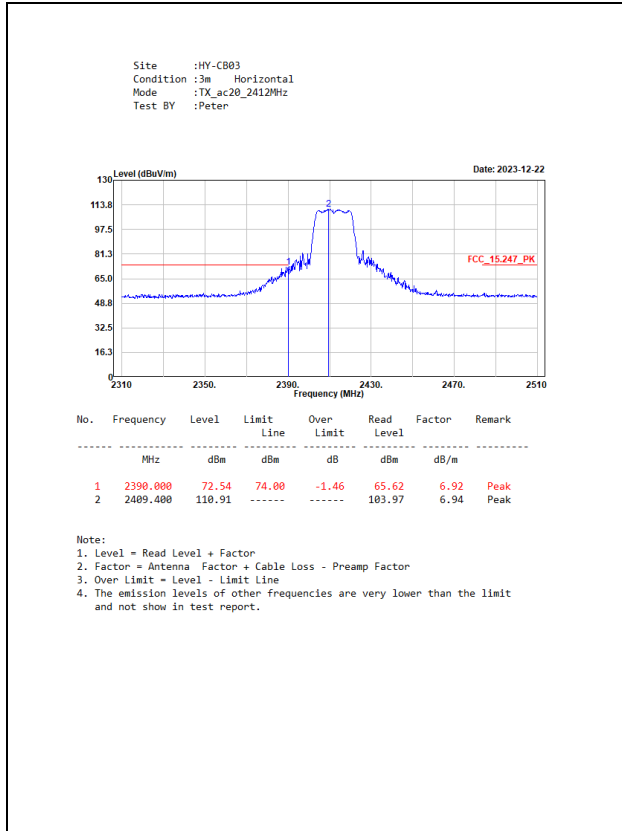


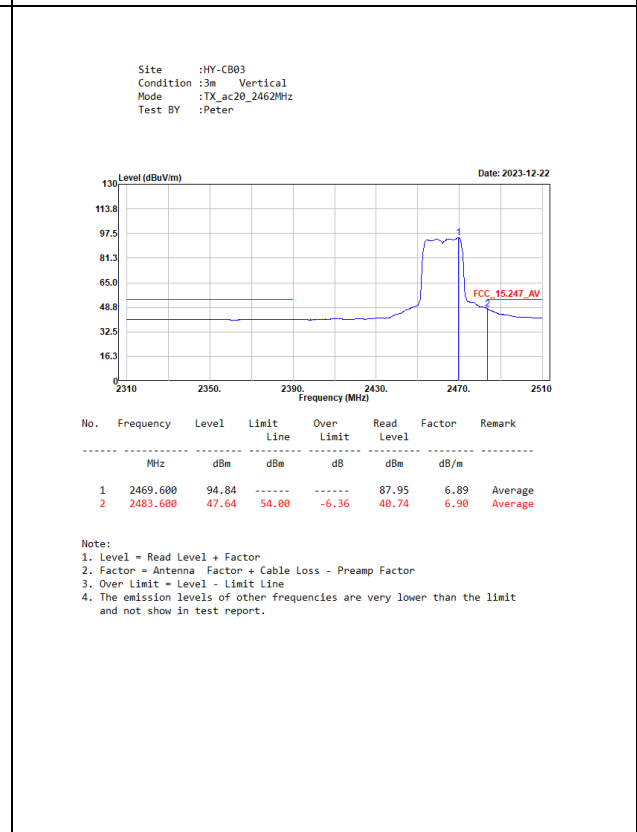
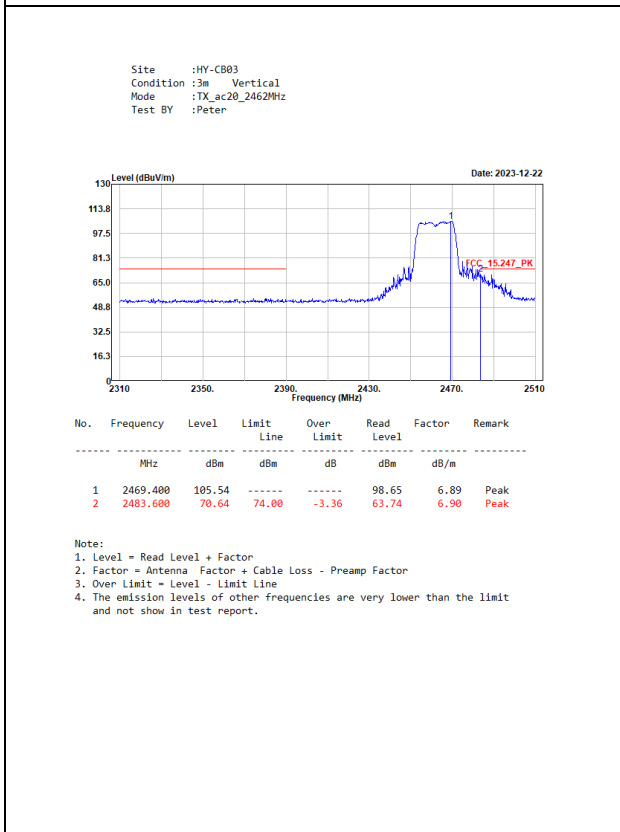
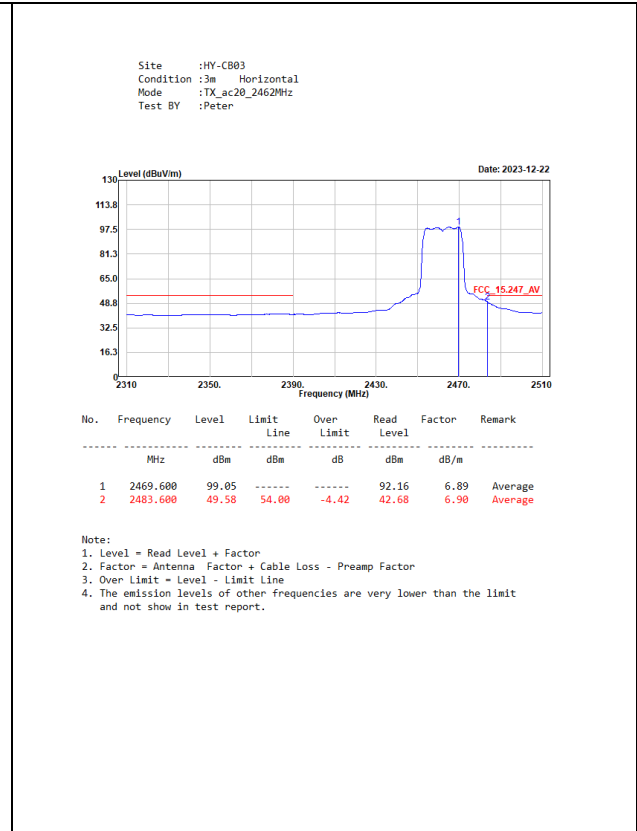
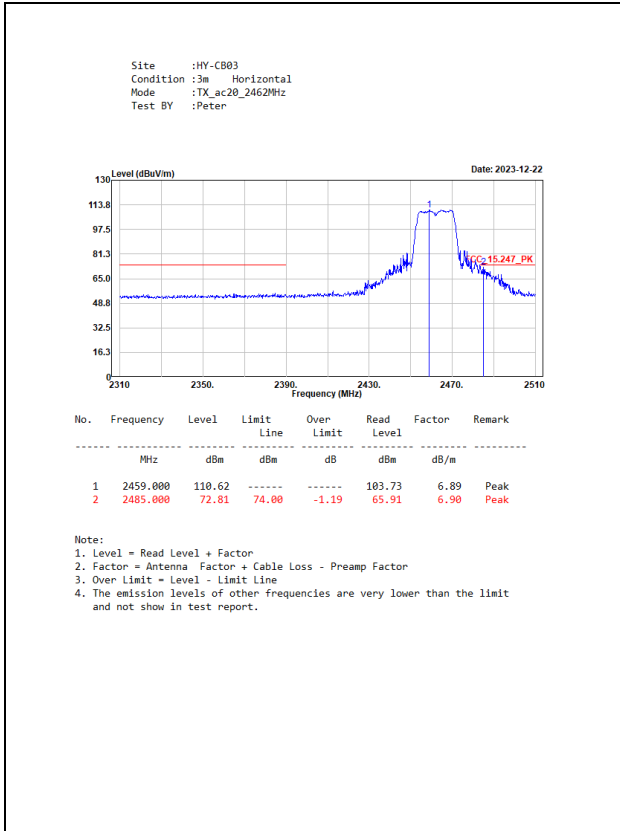


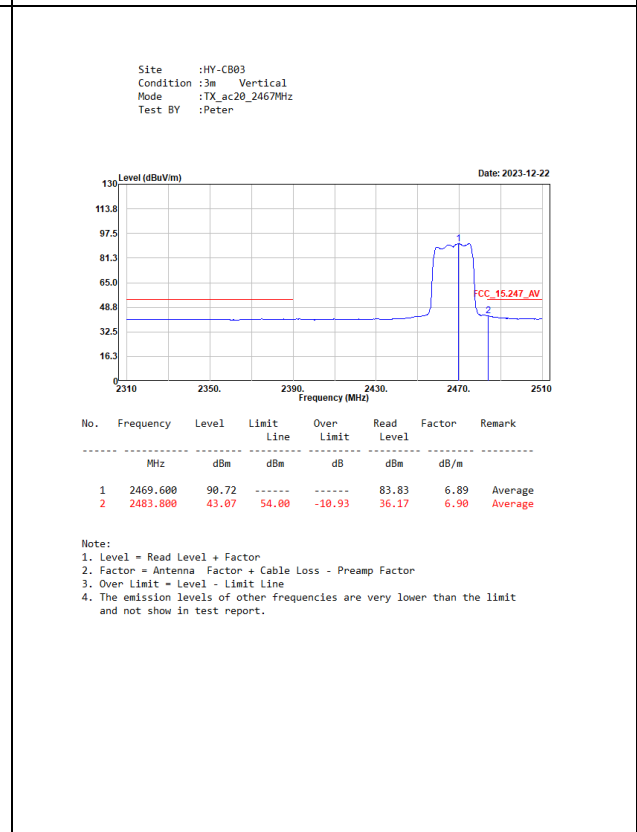
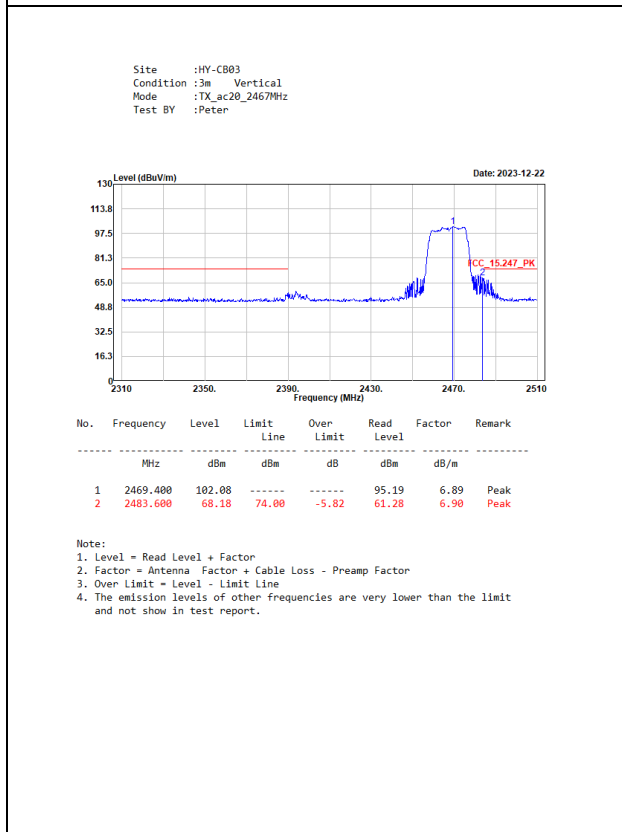
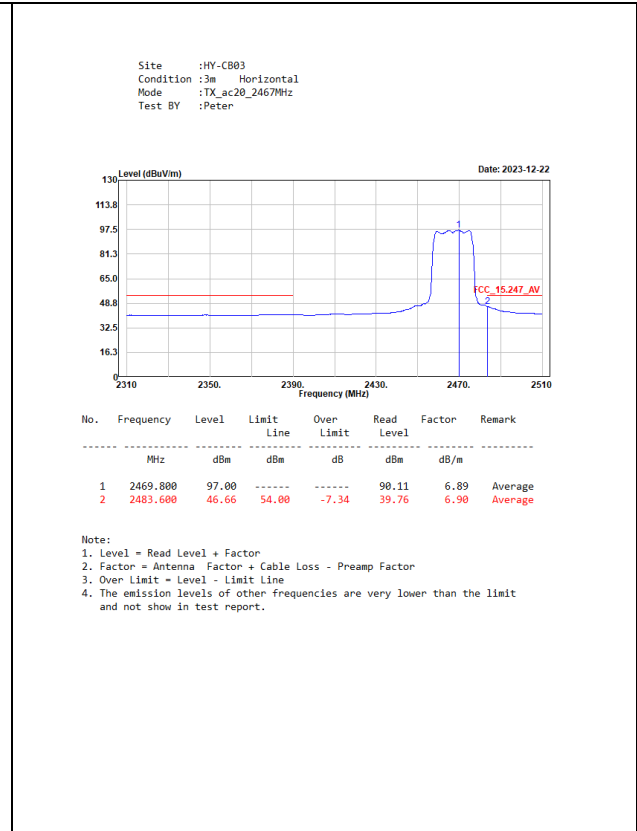
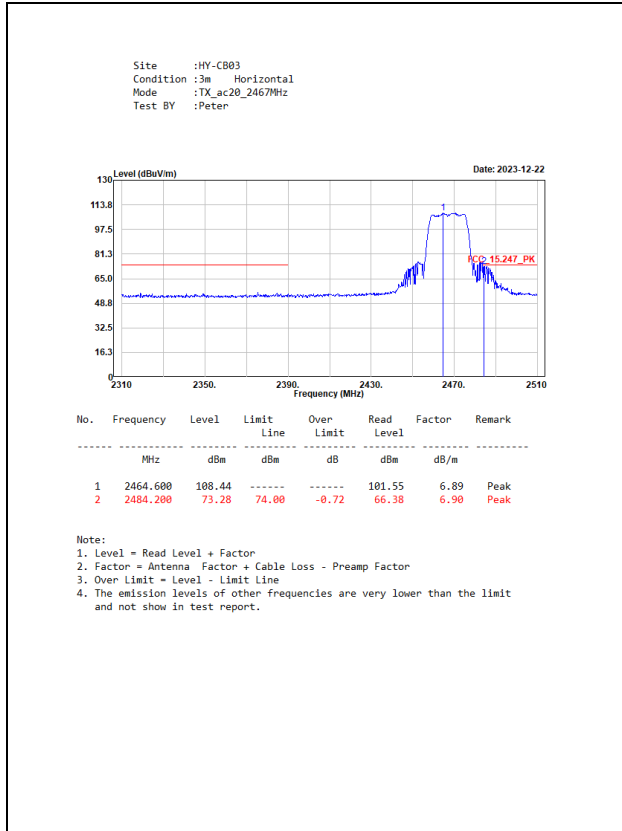


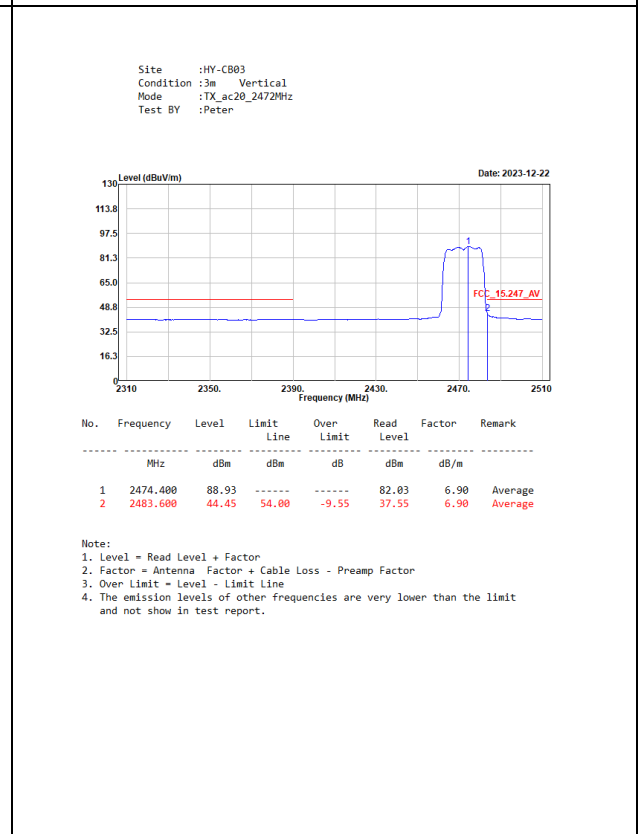
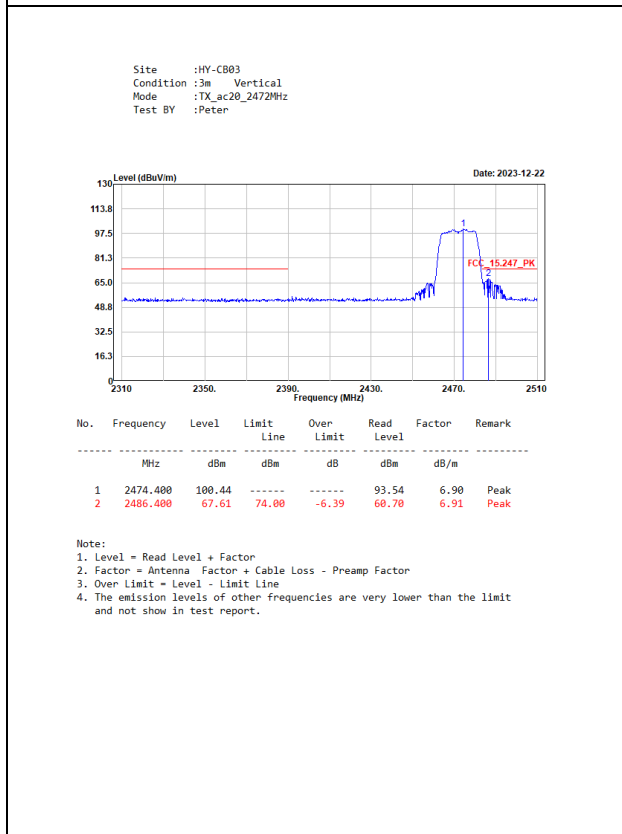
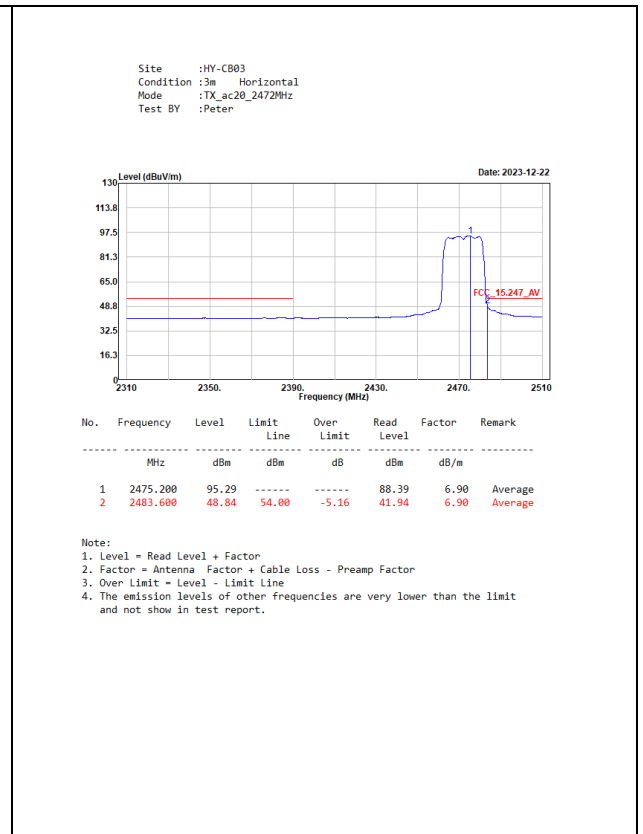
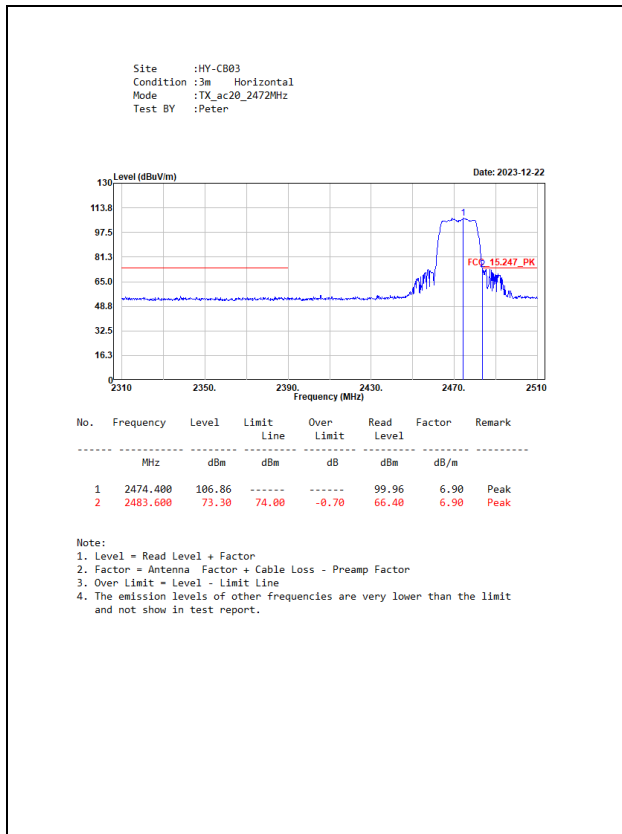


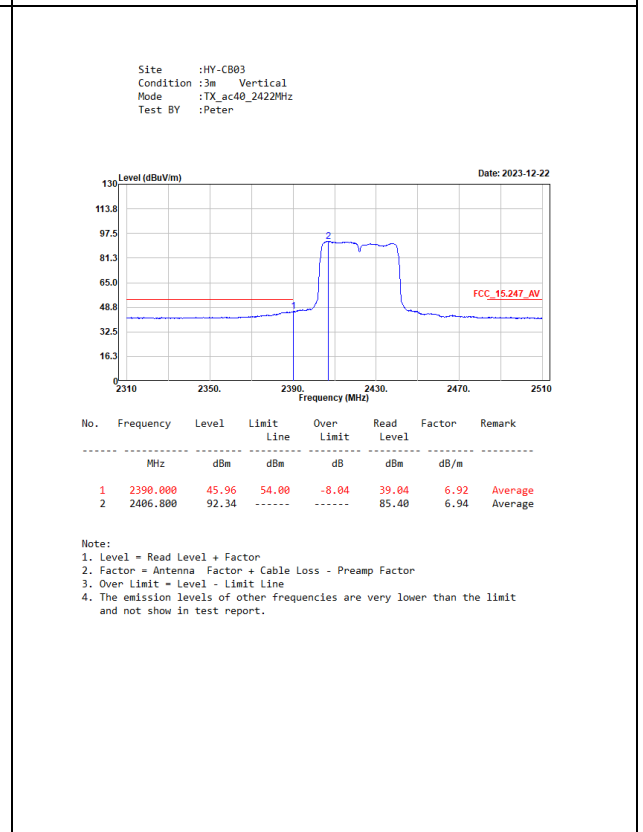
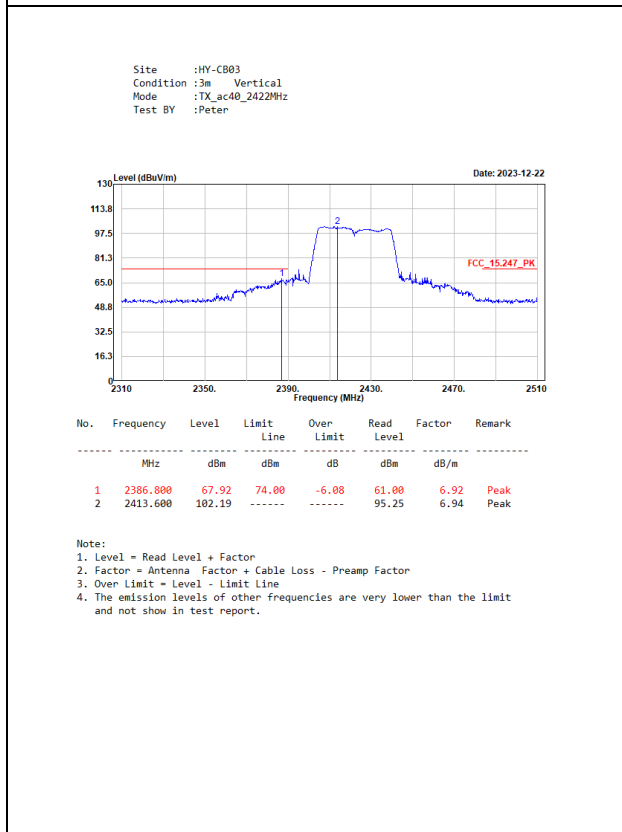
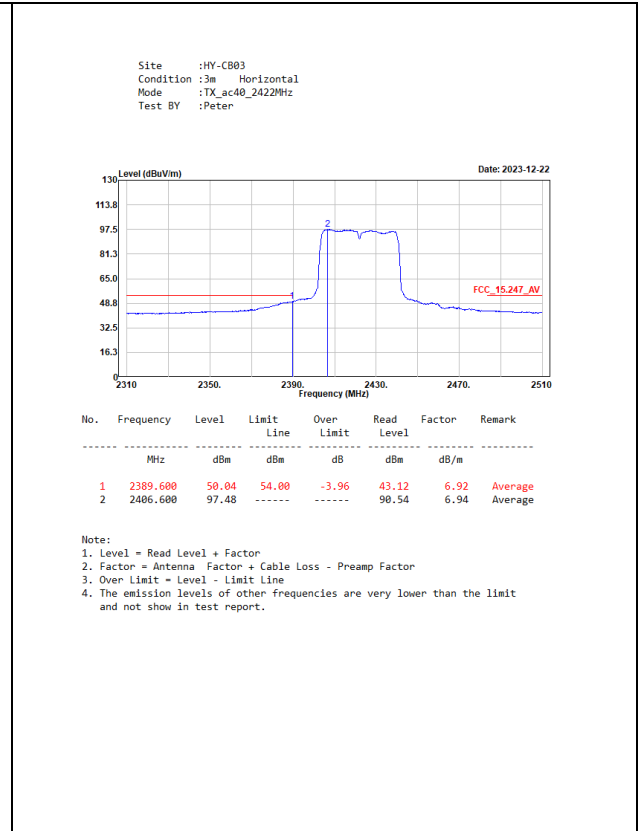
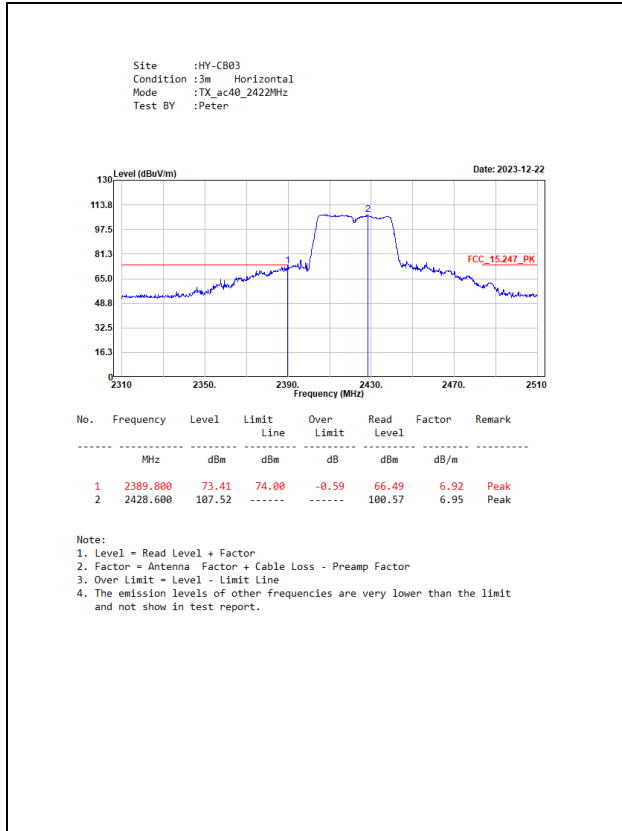


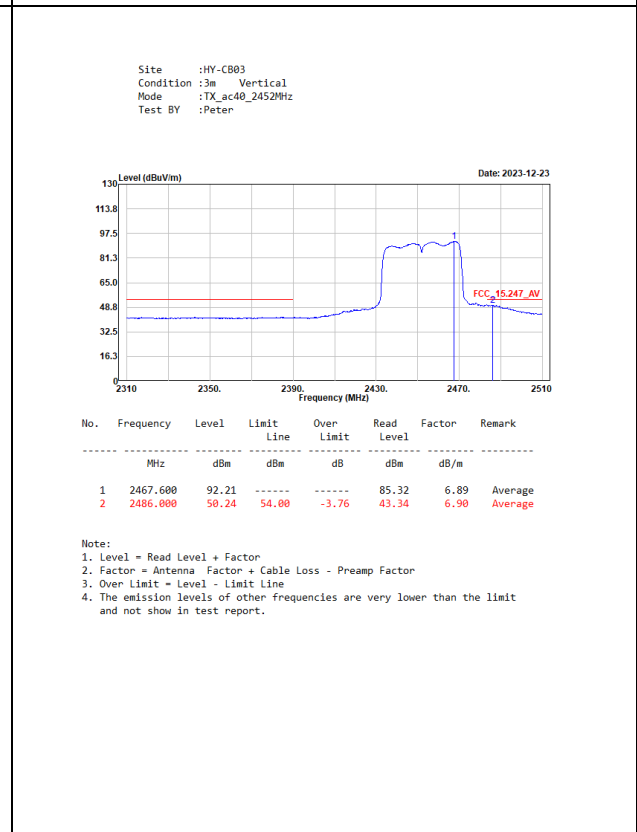
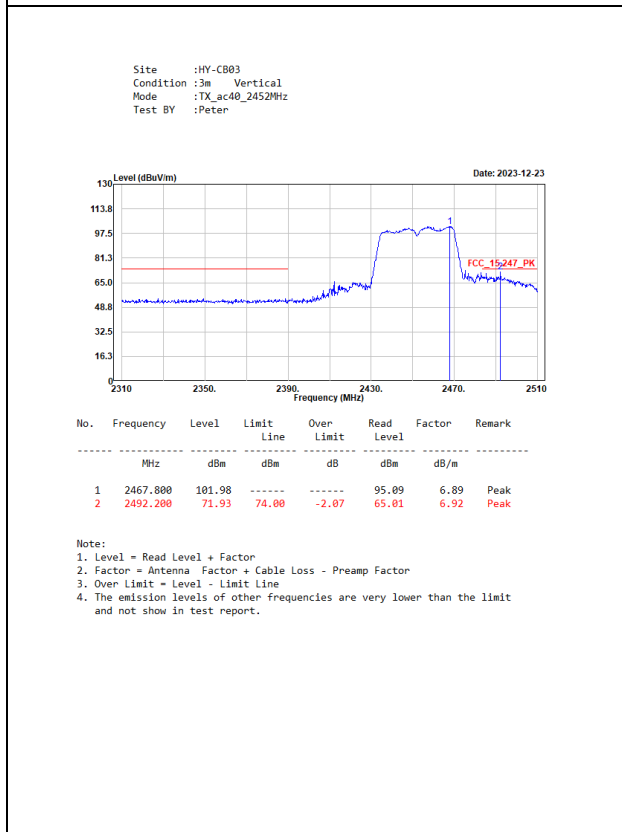
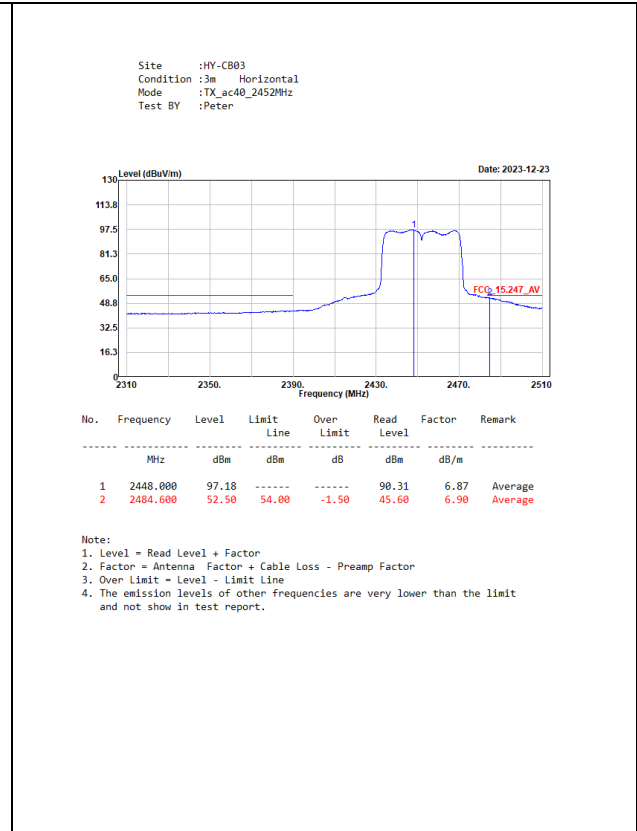
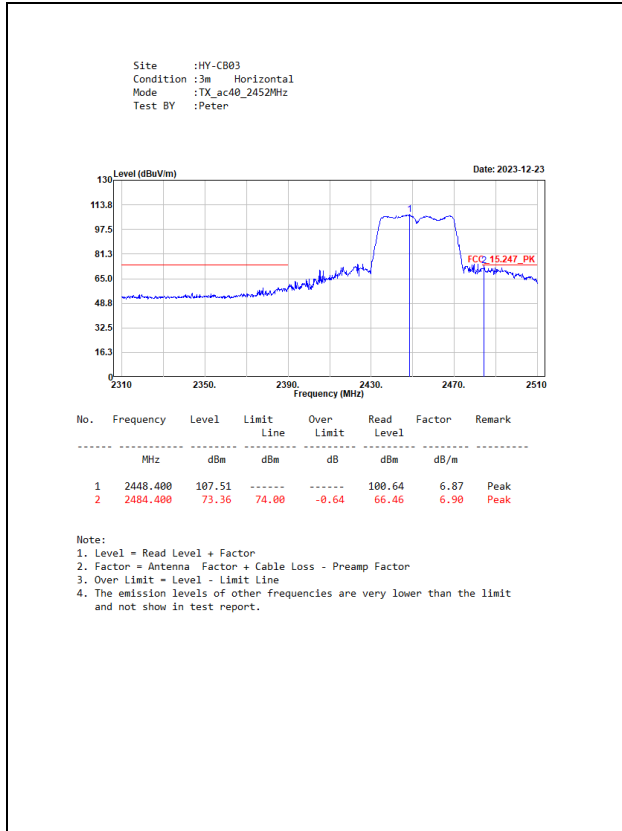


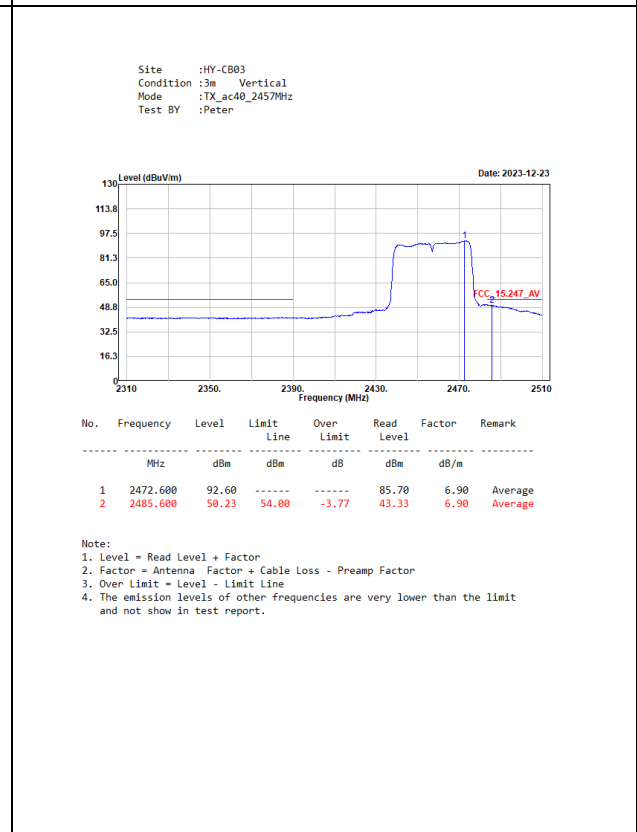
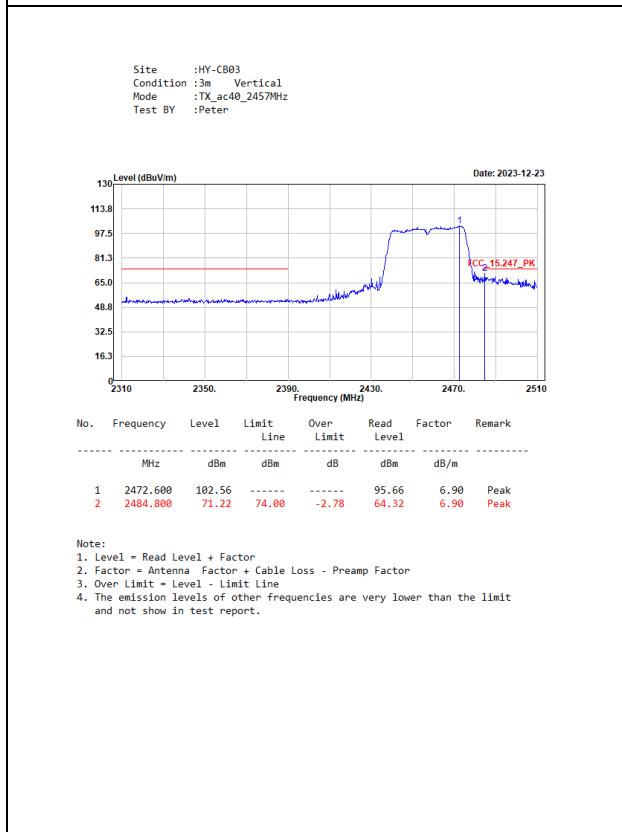
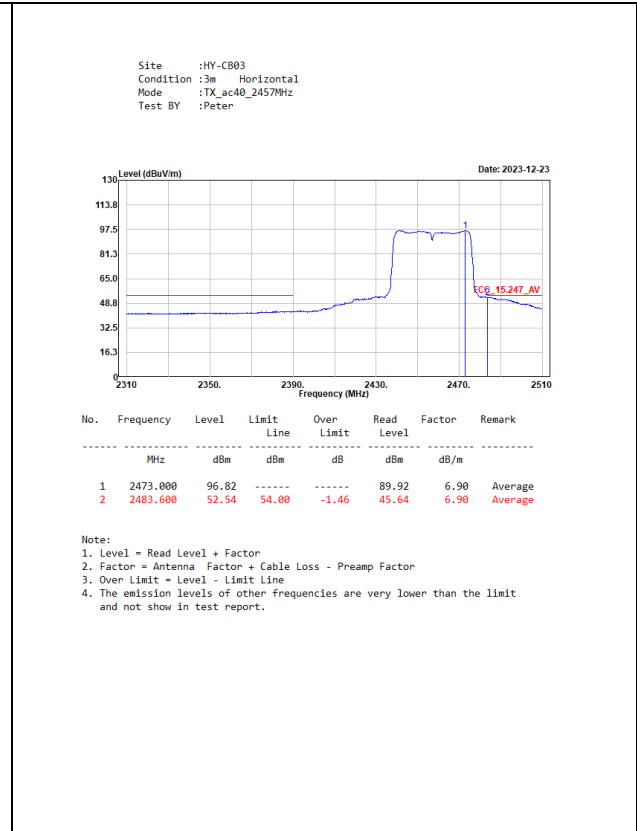
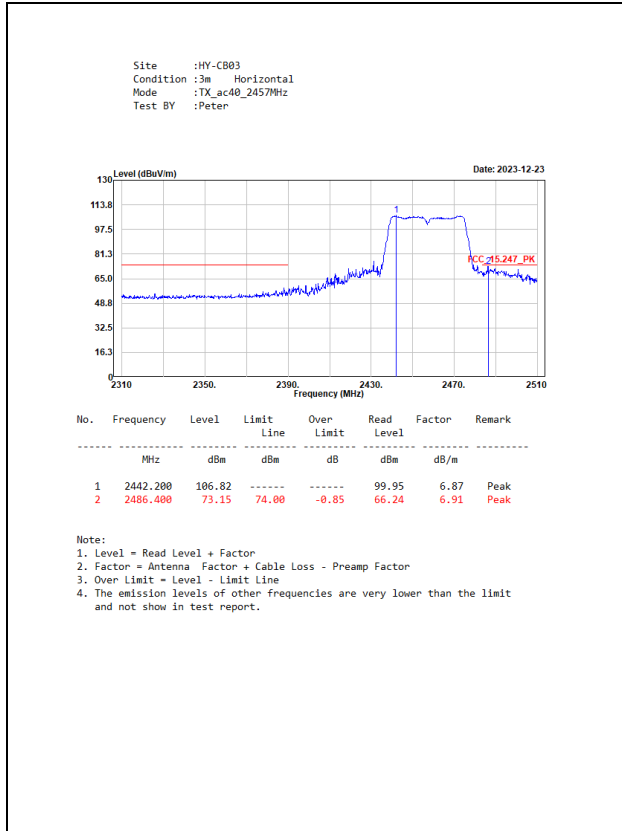


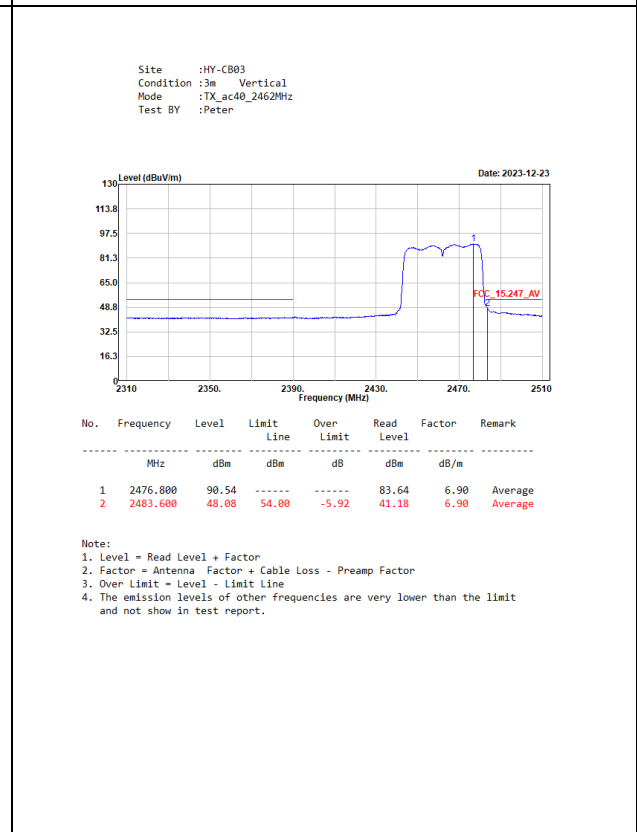
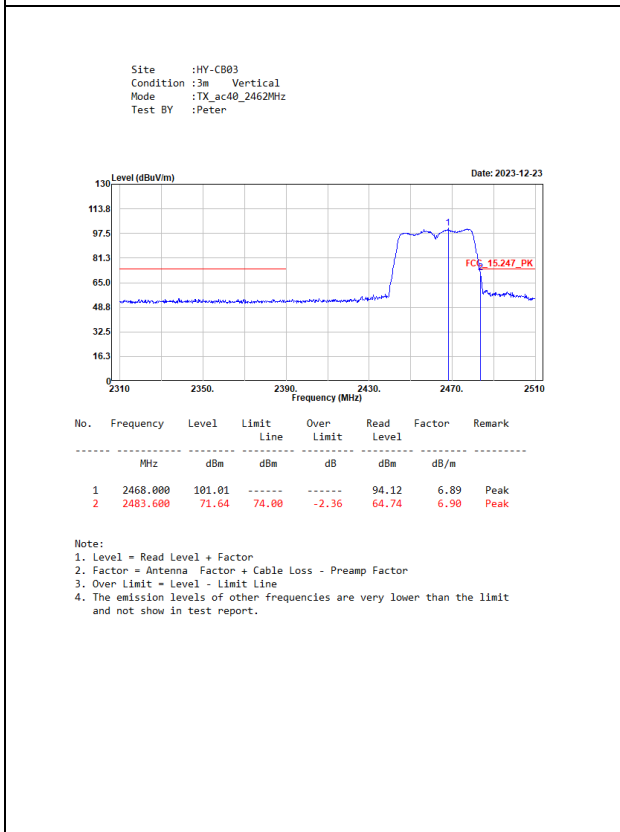
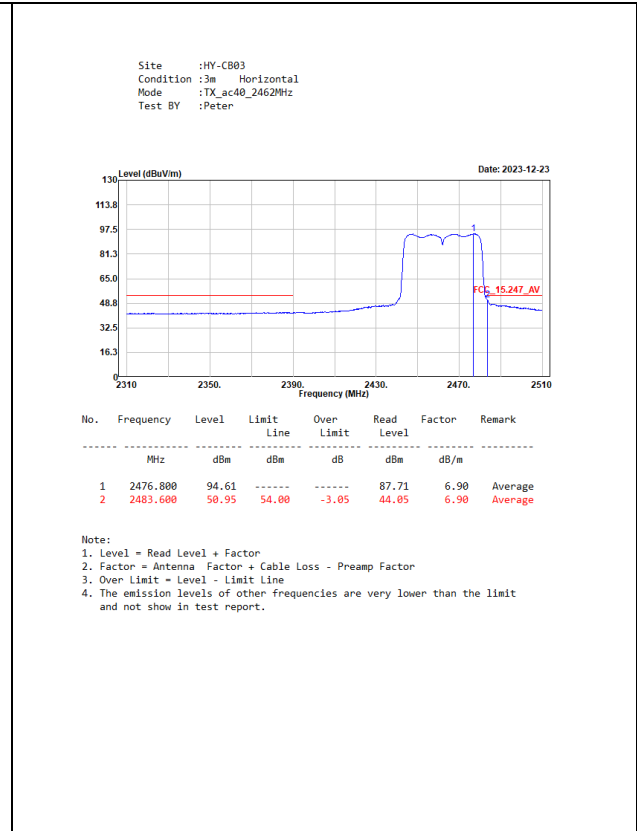
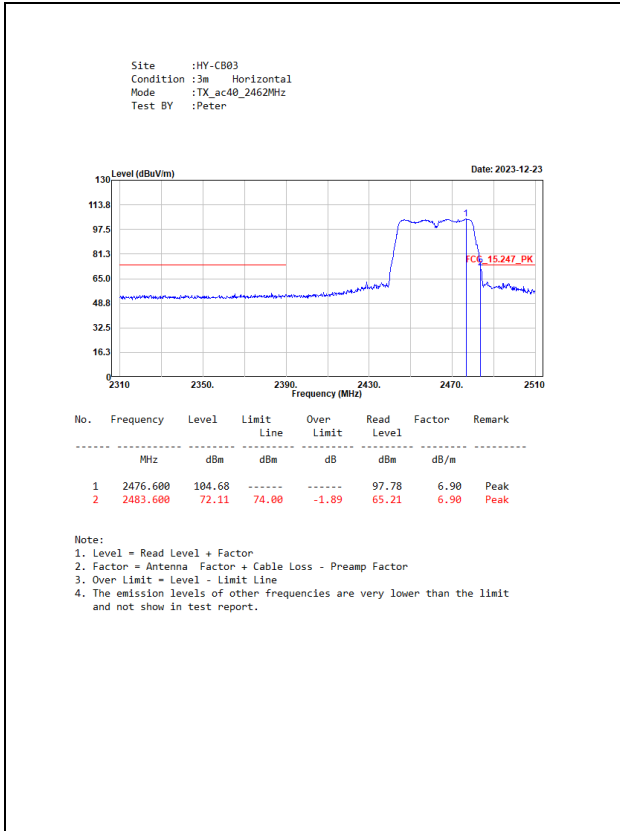


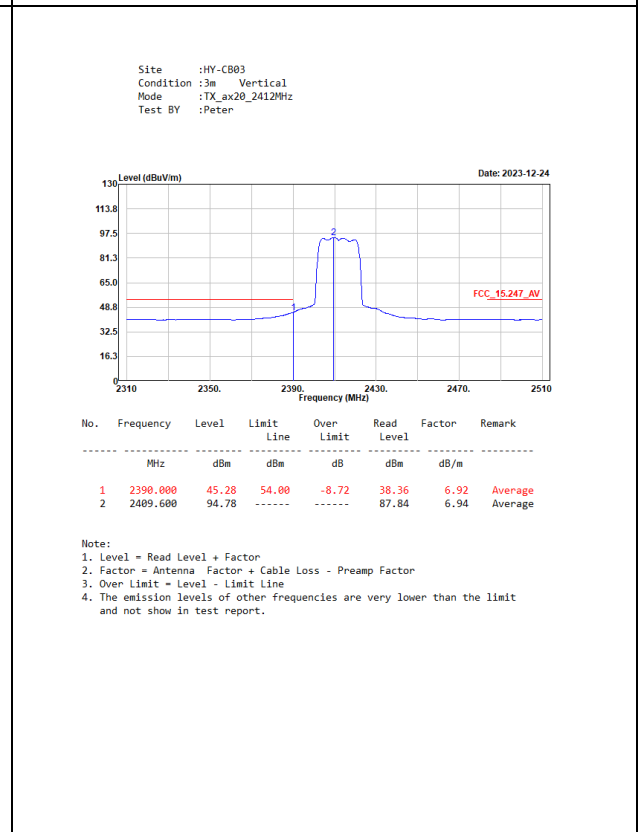
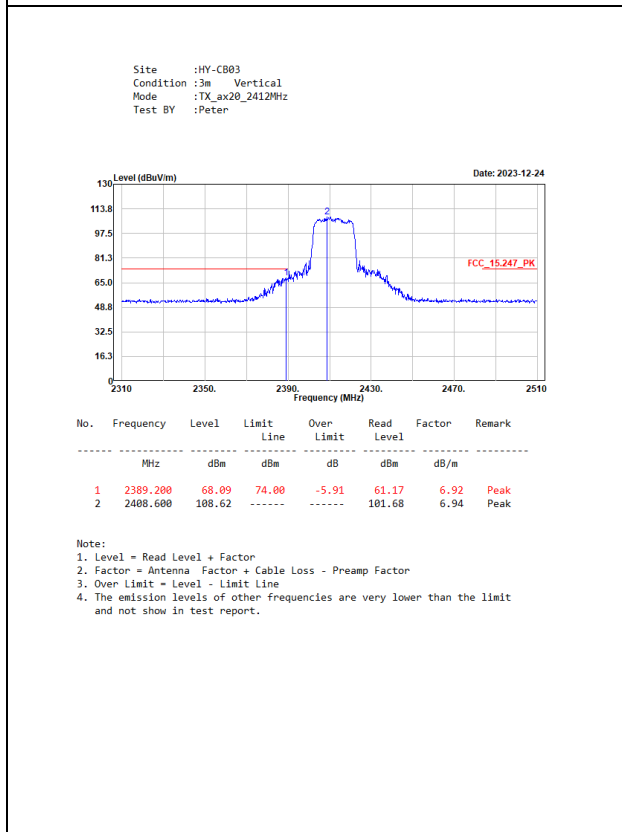
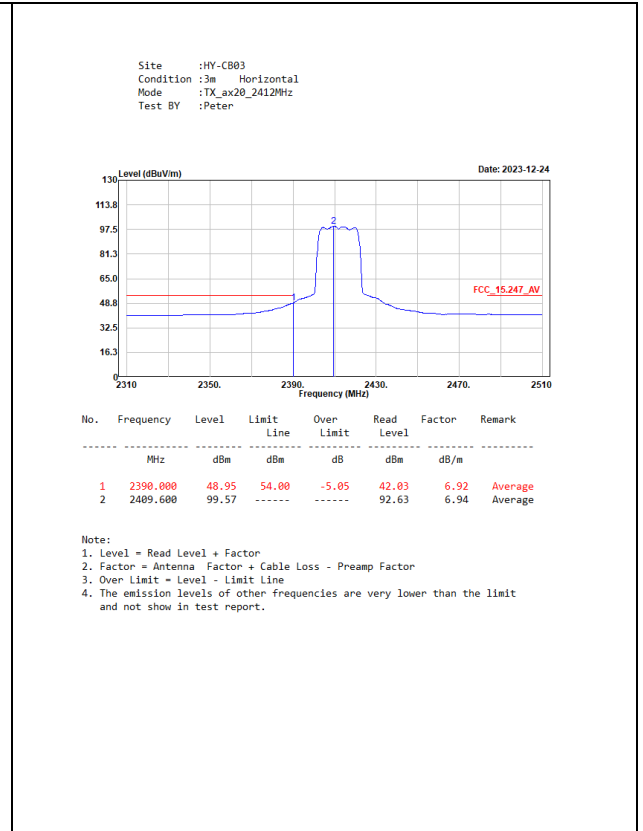
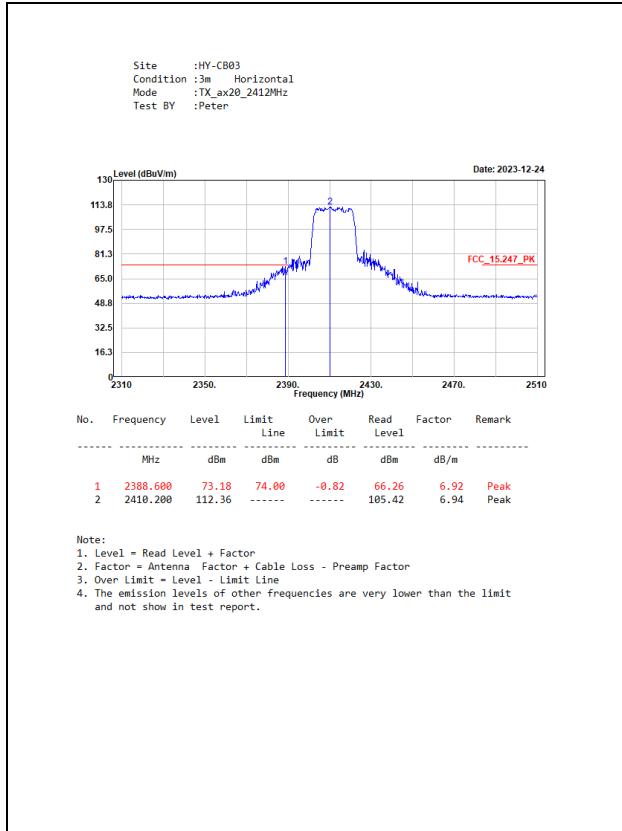


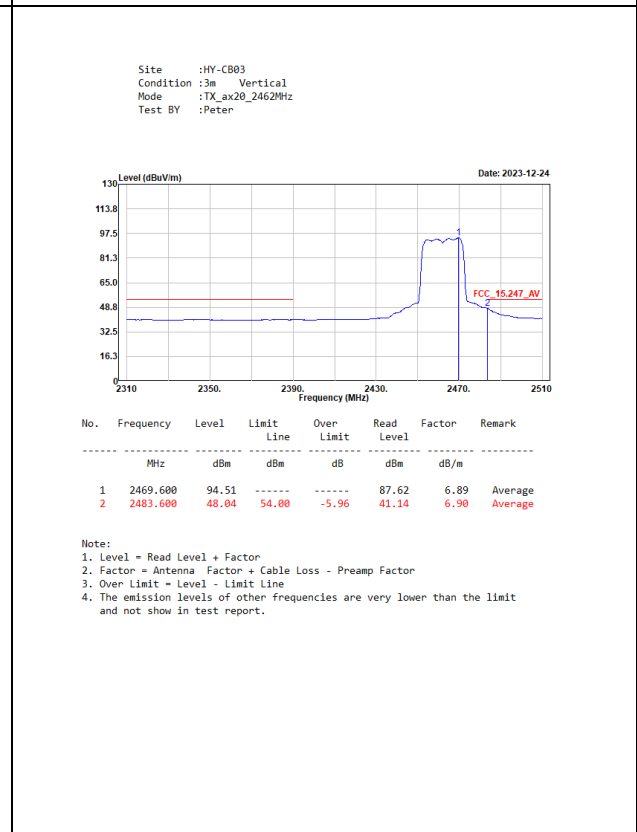
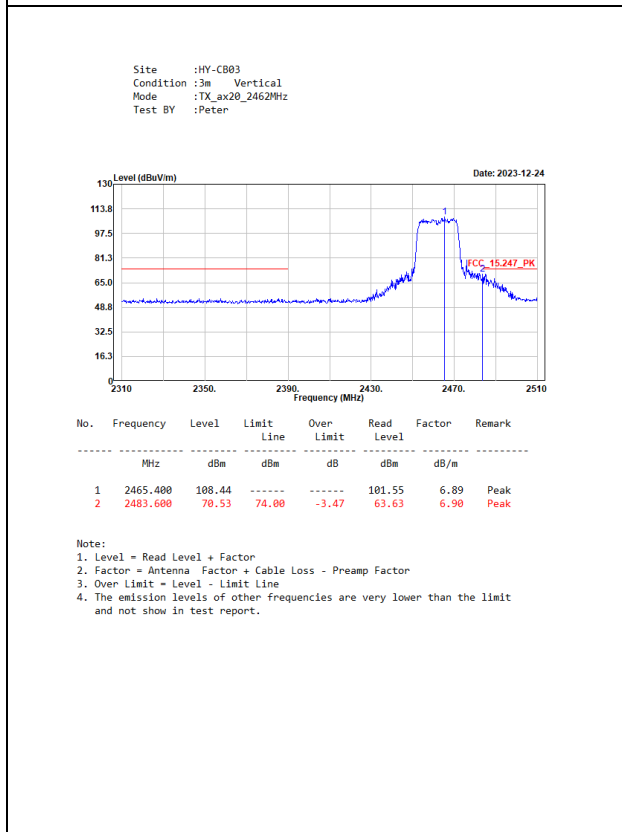
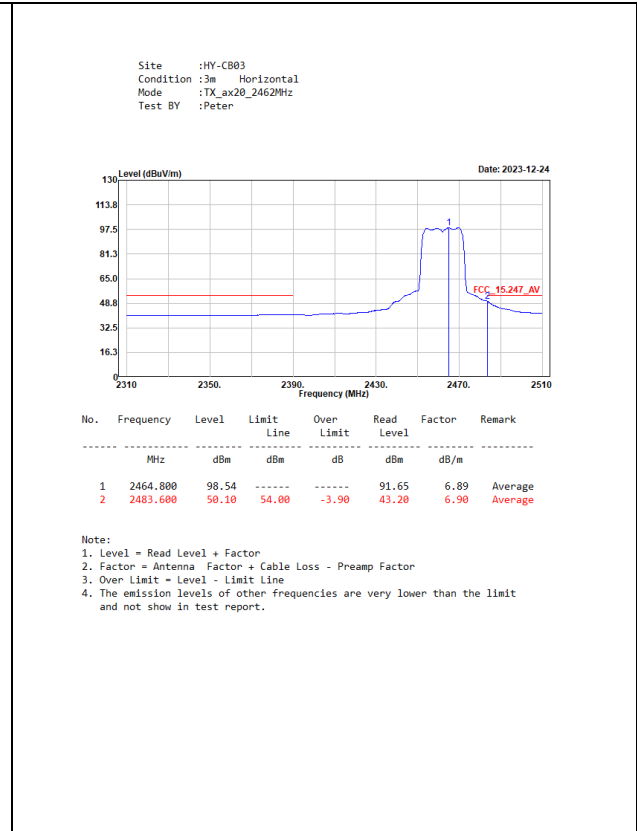
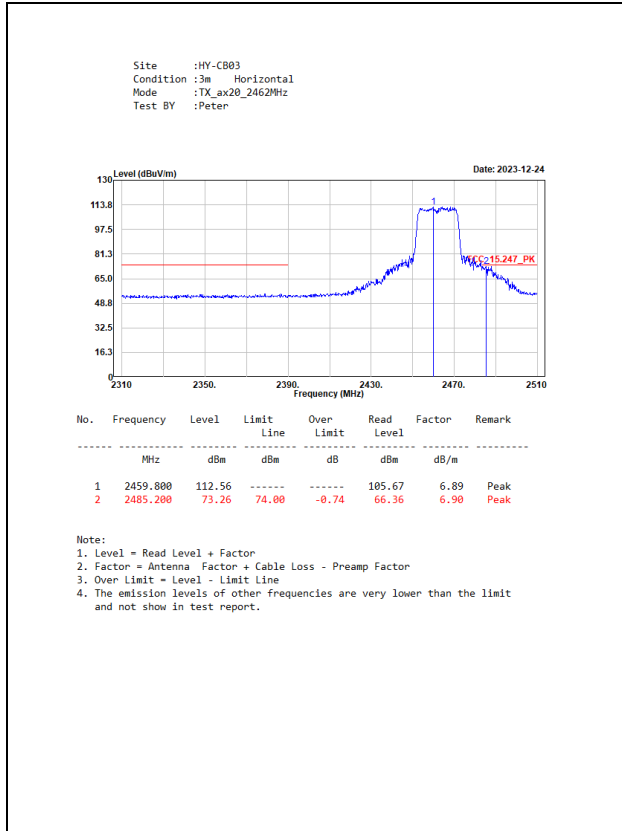


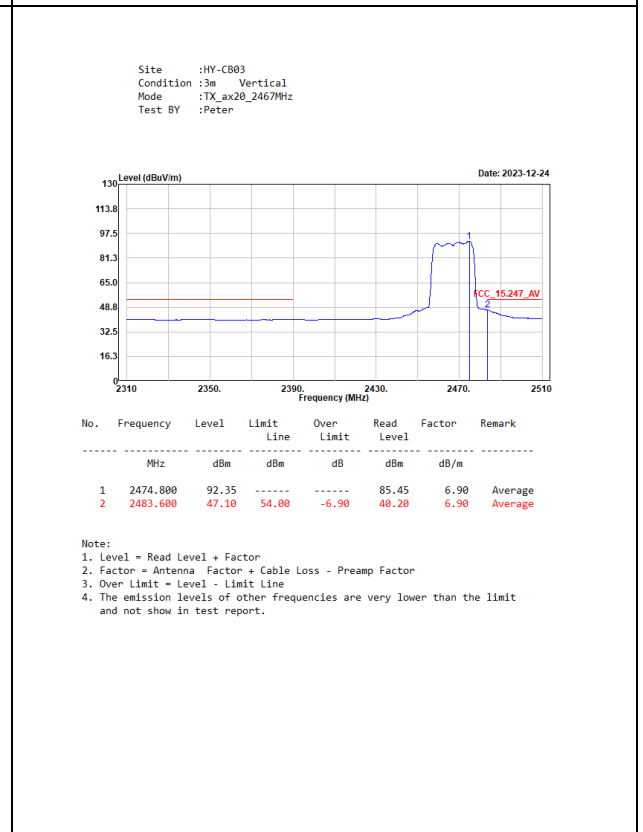
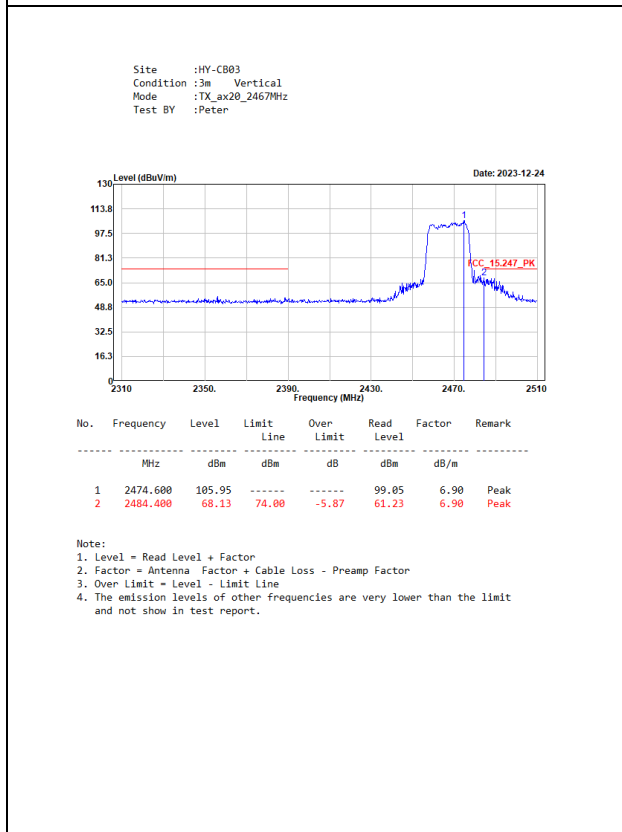
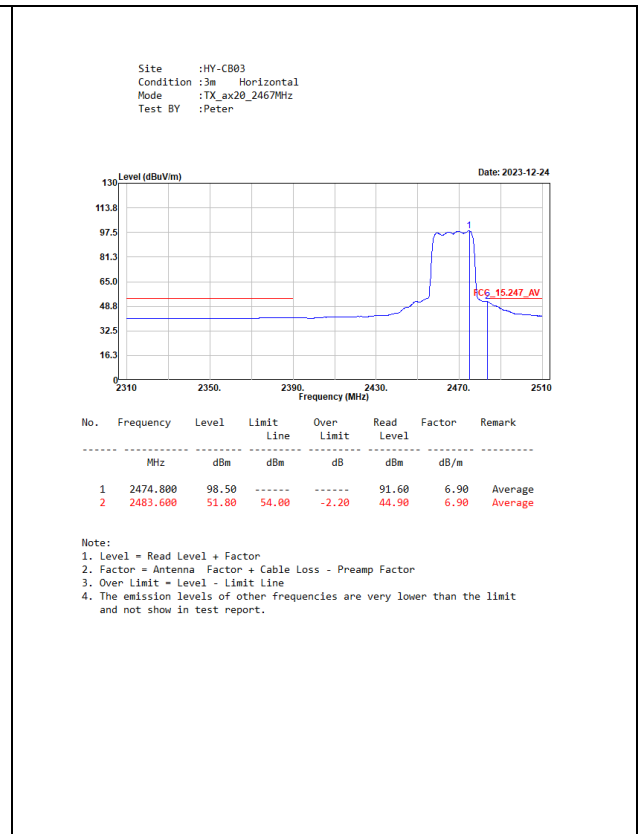
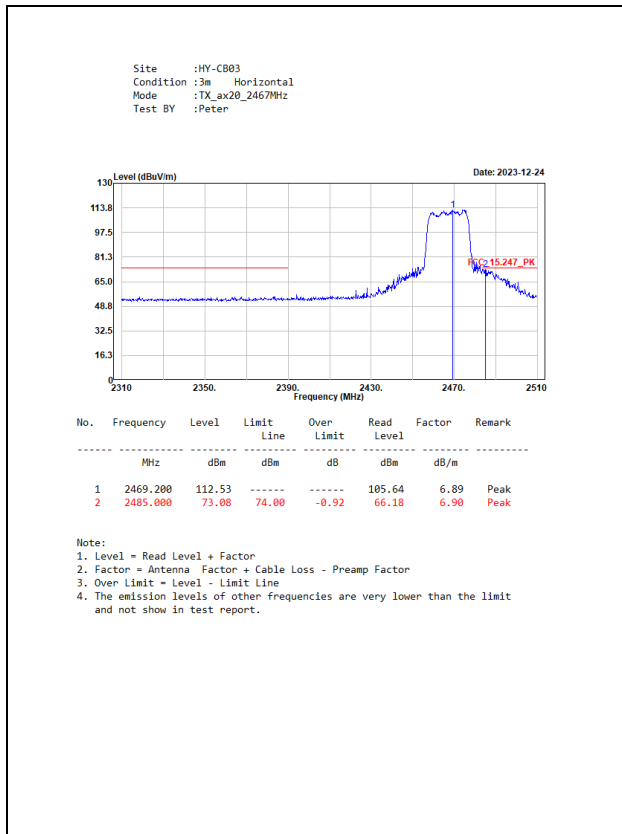


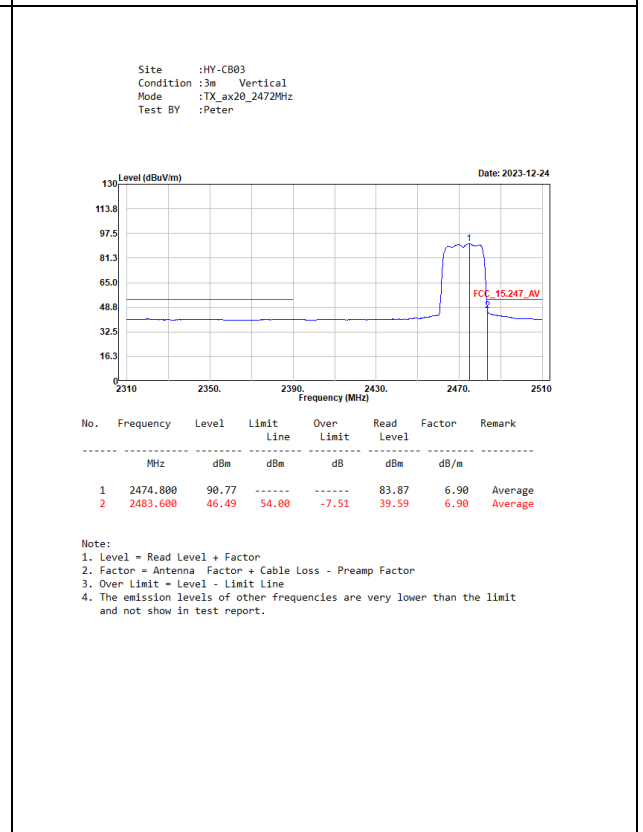
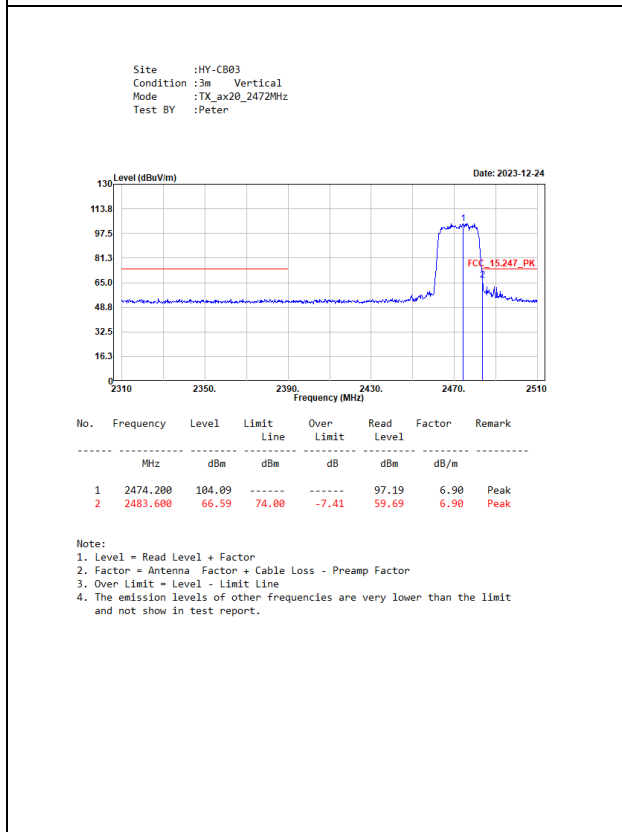
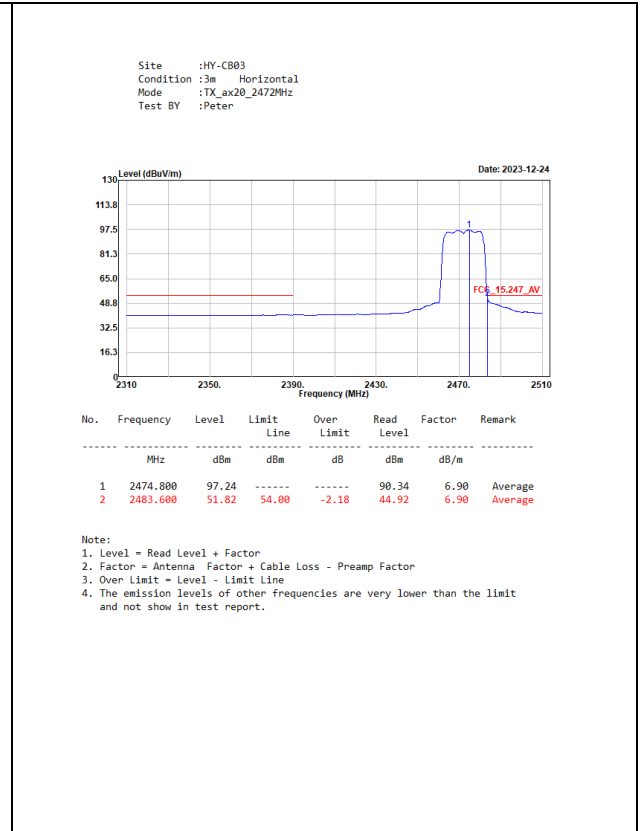
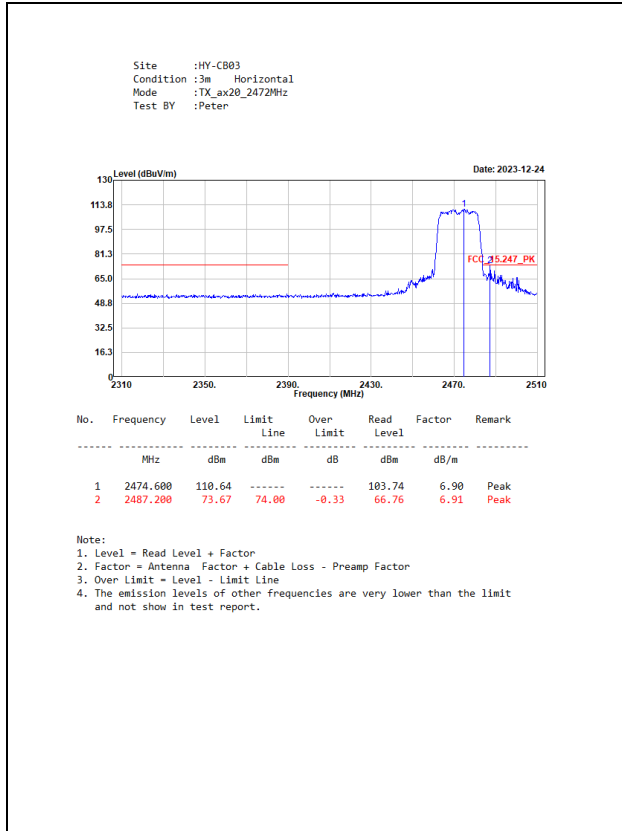


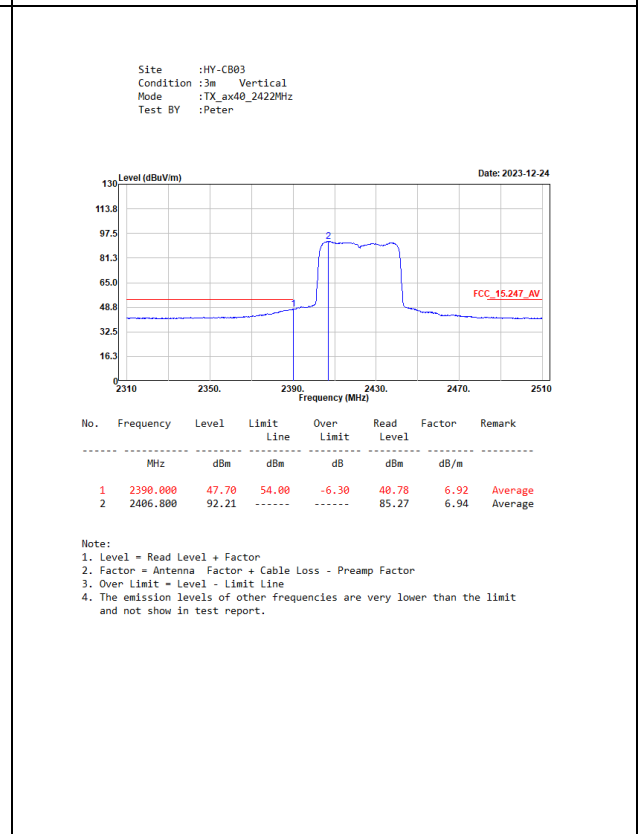
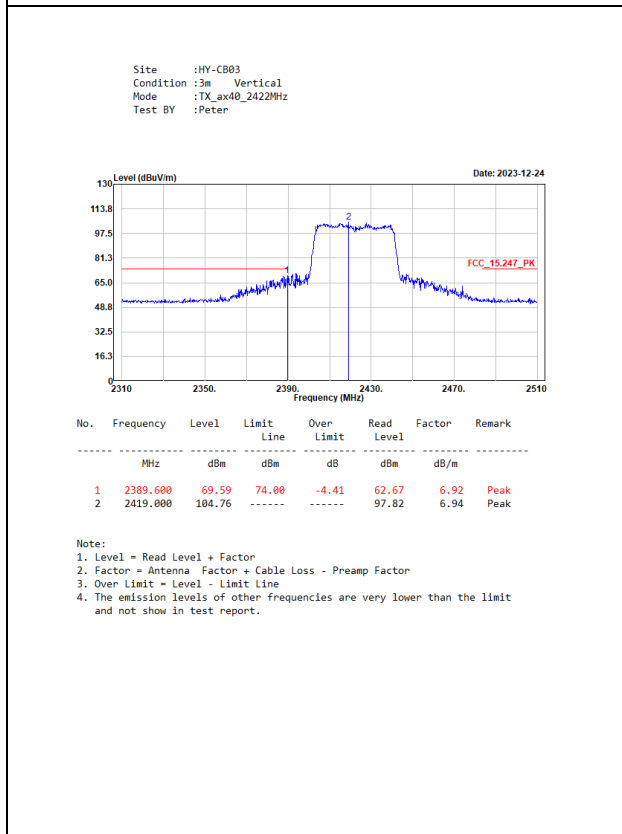
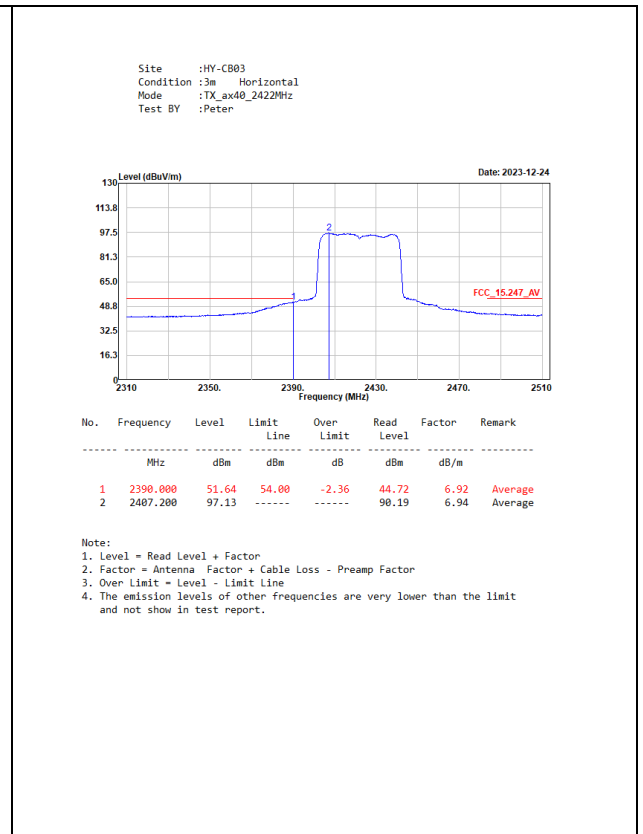
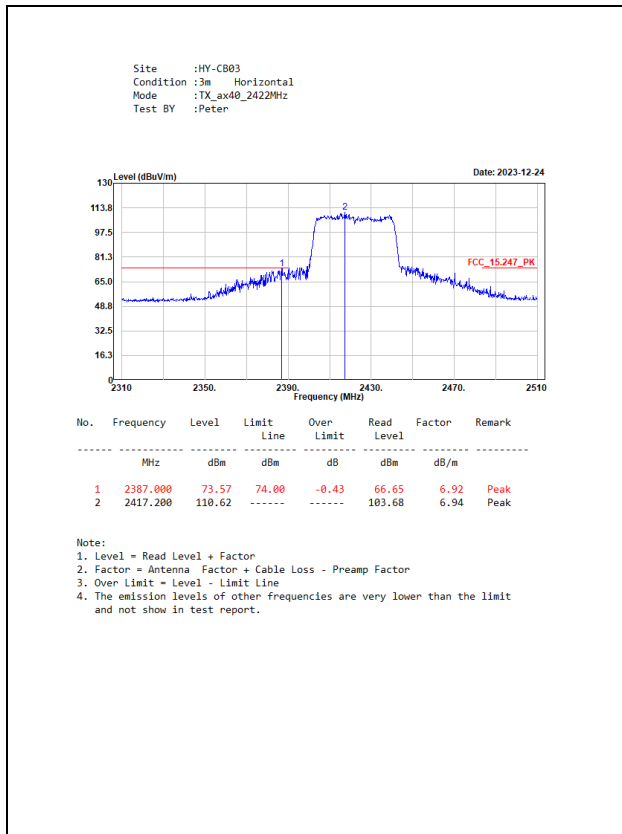


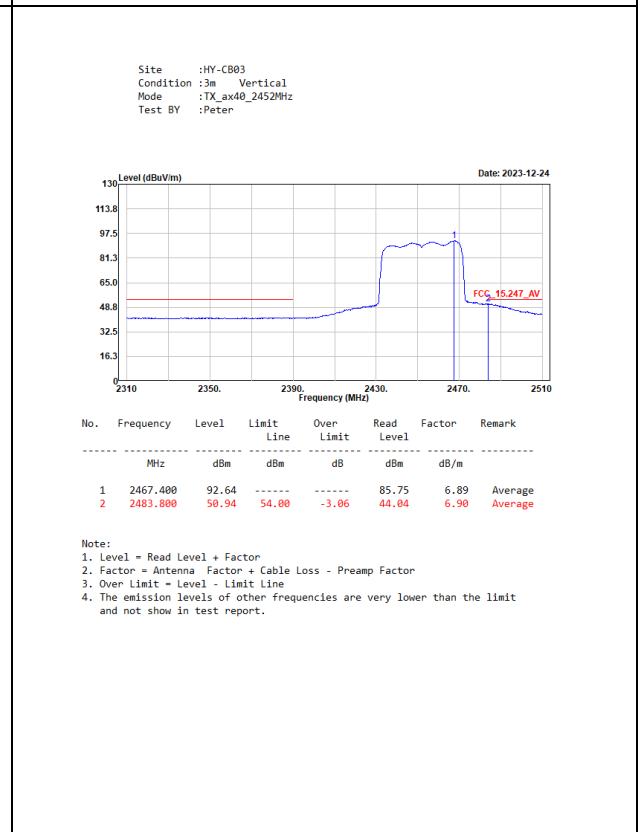
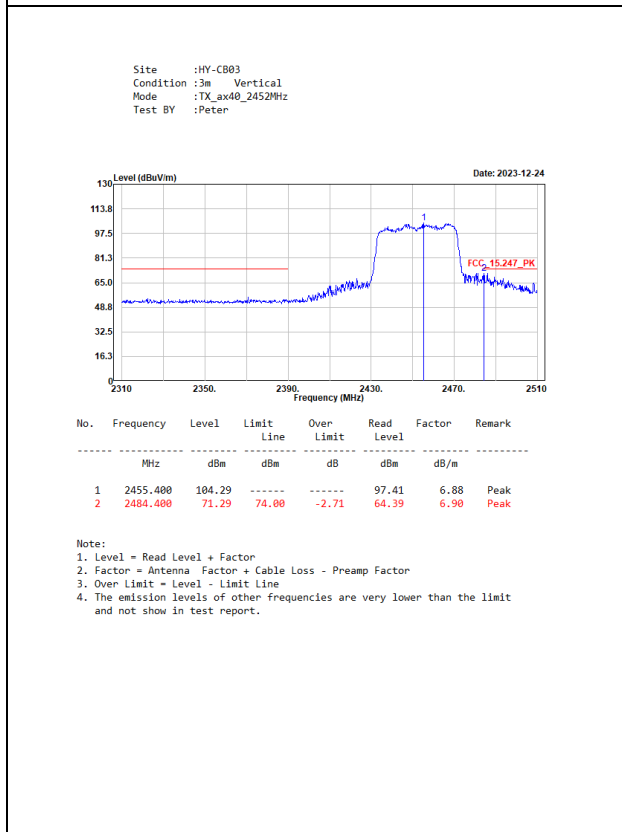
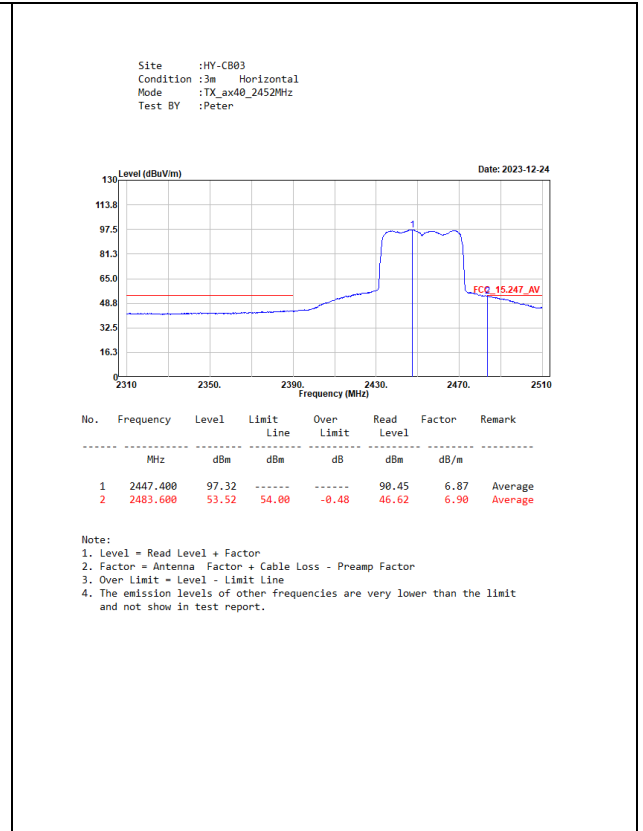
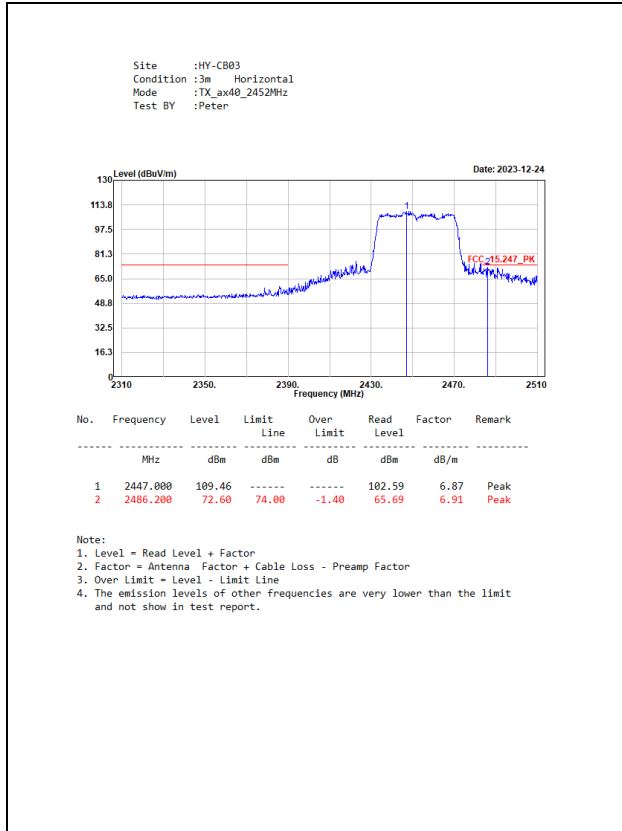


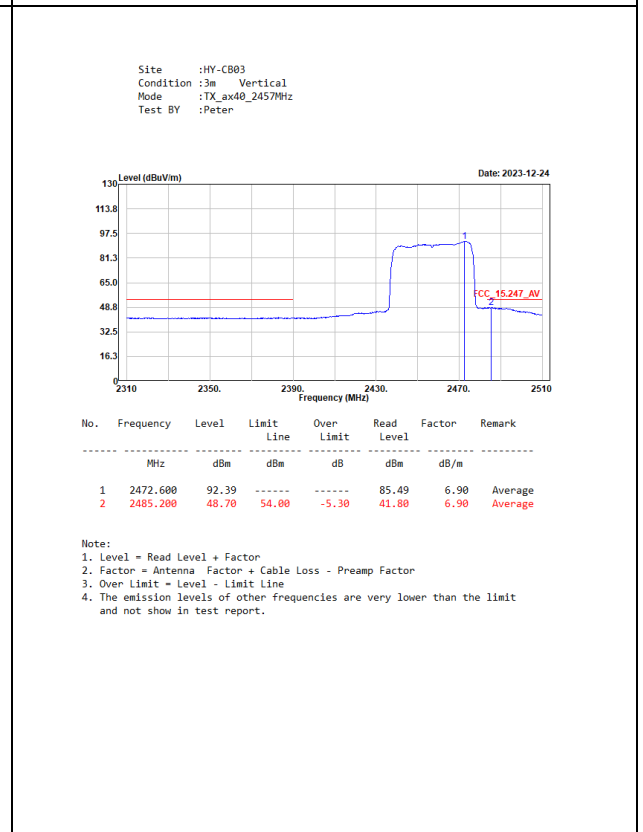
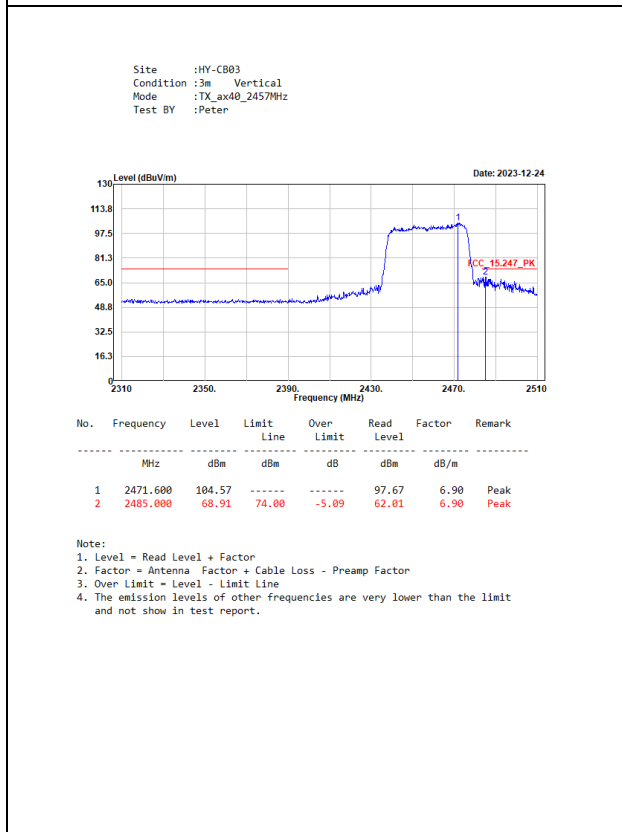
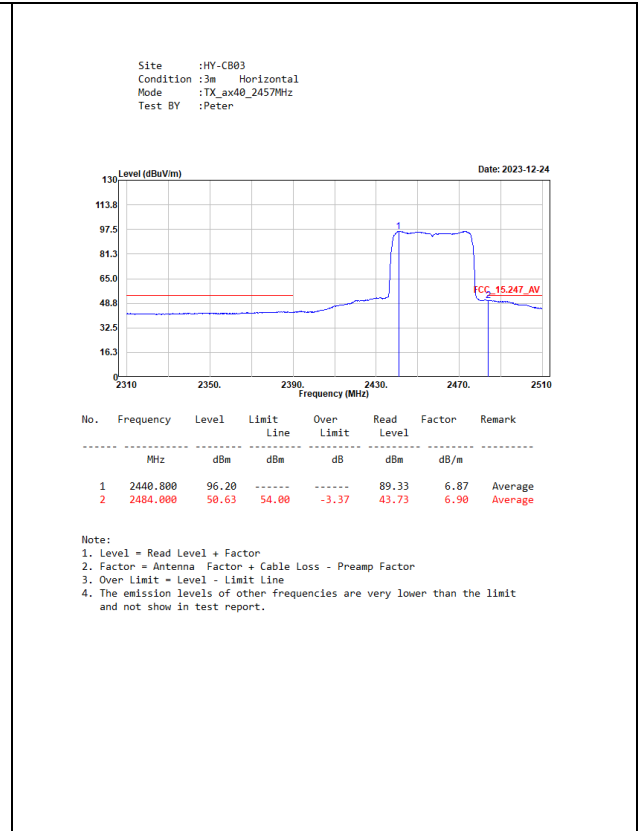
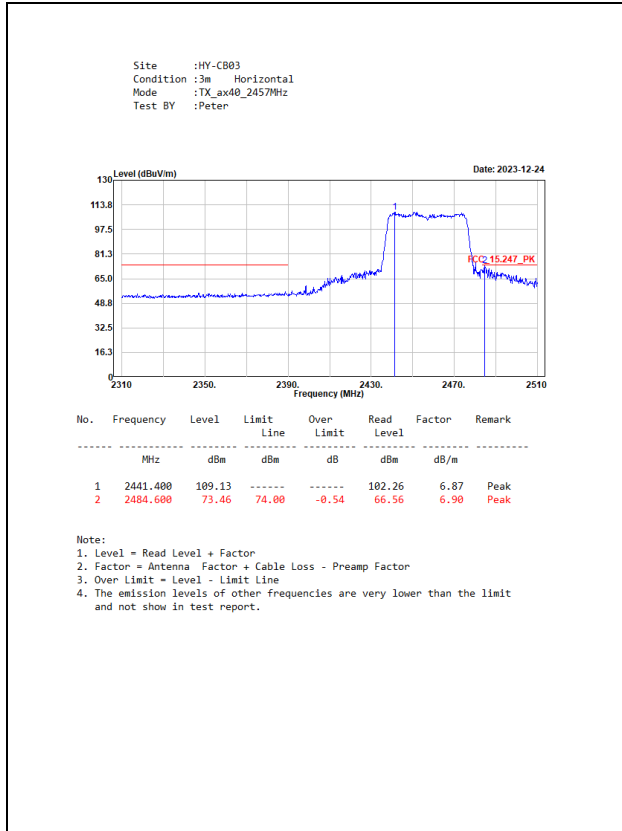


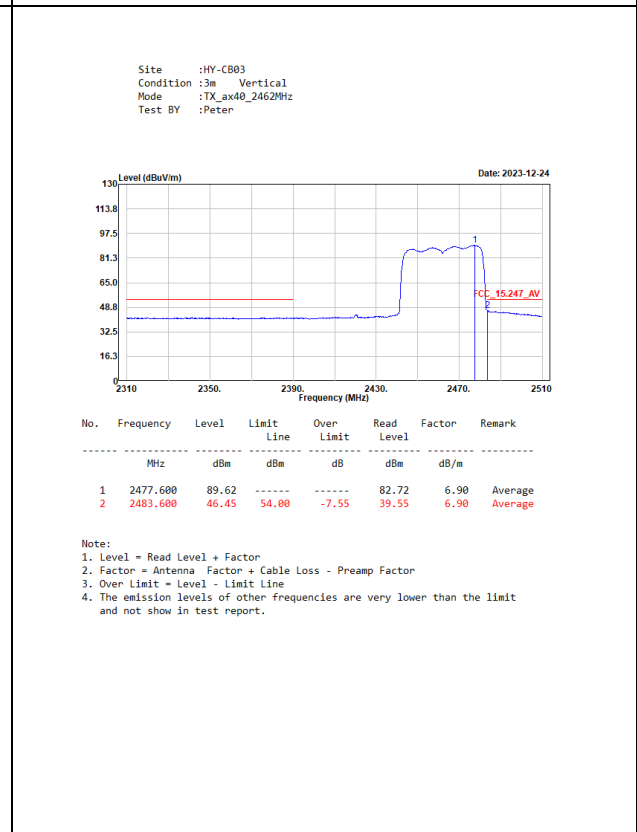
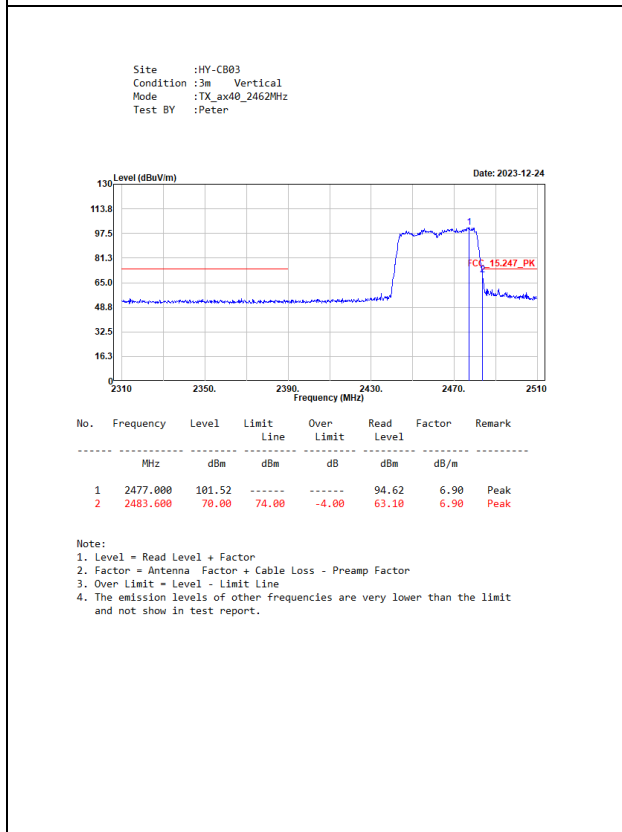
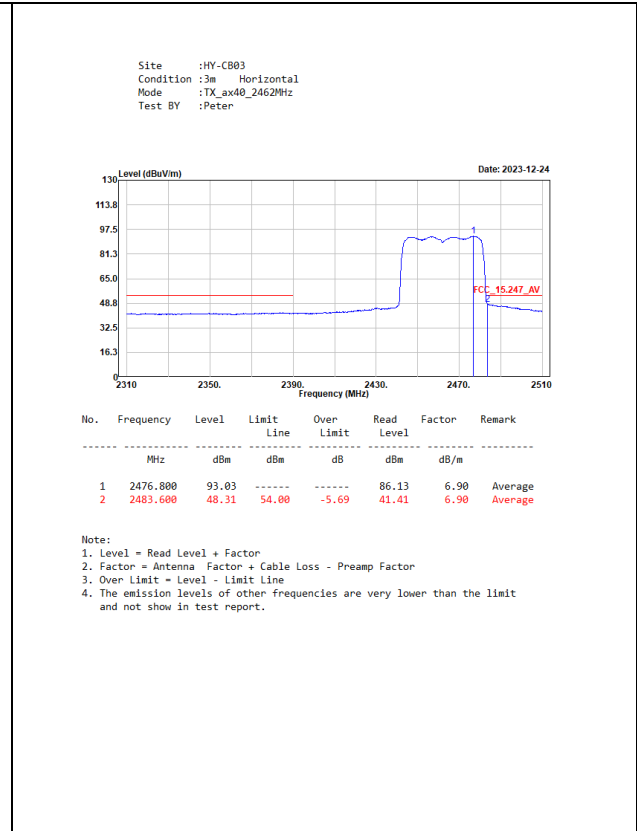
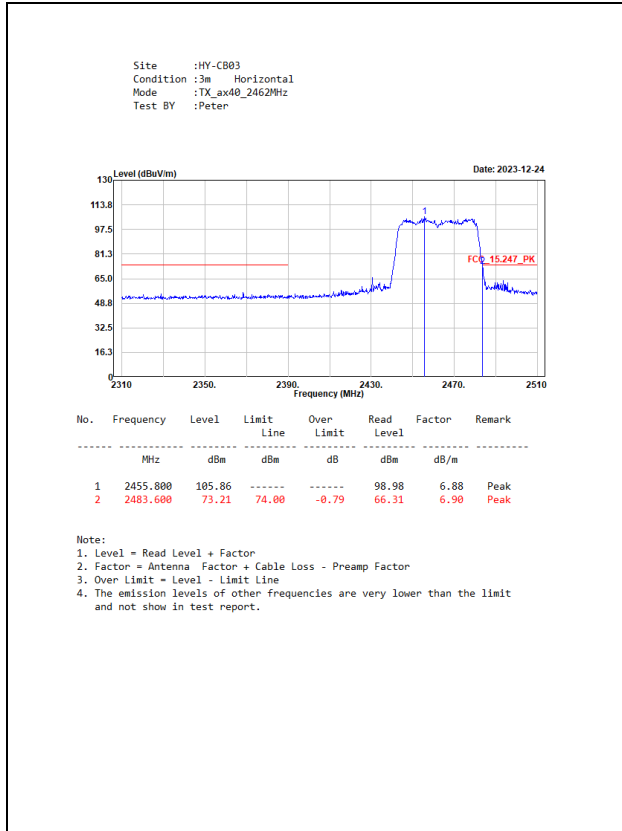






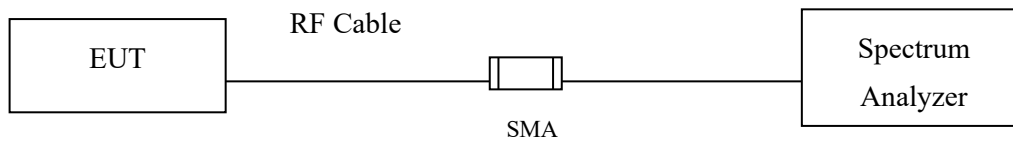






7. 6dB Bandwidth

7.1. Test Setup



7.2. Limits

The minimum bandwidth shall be at least 500 kHz.

7.3. Test Procedure

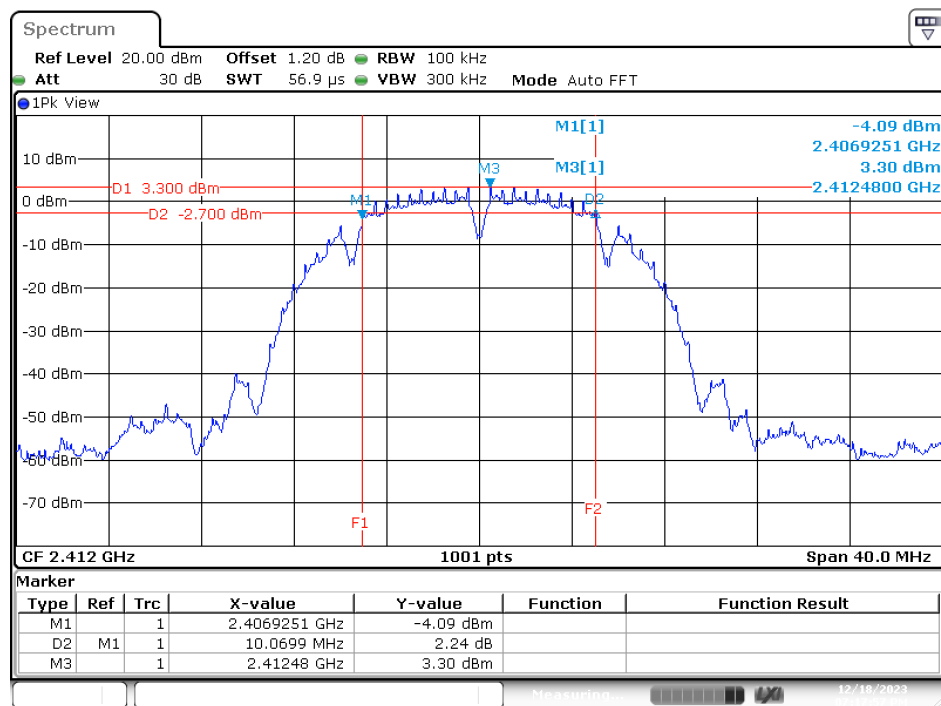
The EUT was tested according to ANSI C63.10 Section 11.8 for compliance to FCC 47CFR 15.247 requirements.

7.4. Test Result of 6dB Bandwidth

Product : Car Infotainment Unit
 Test Item : 6dB Bandwidth Data
 Test Mode : Transmit (802.11b)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	10070	>500	Pass
07	2442	10070	>500	Pass
11	2462	10070	>500	Pass
12	2467	10070	>500	Pass
13	2472	10070	>500	Pass

Figure Channel 01

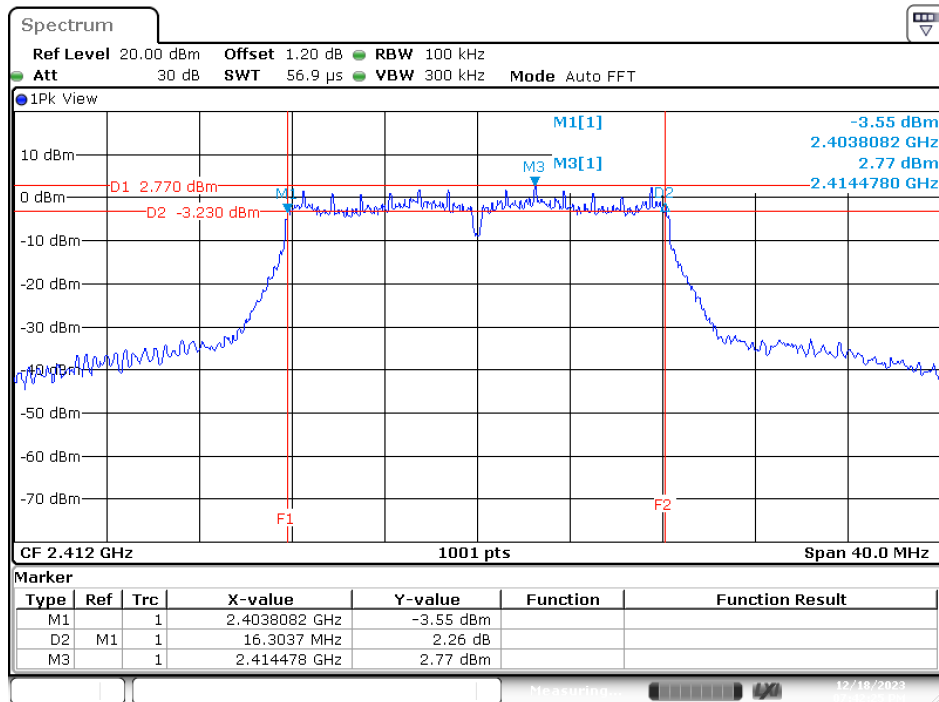


Date: 18.DEC.2023 19:17:58

Product : Car Infotainment Unit
 Test Item : 6dB Bandwidth Data
 Test Mode : Transmit (802.11g)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	16304	>500	Pass
07	2442	16304	>500	Pass
11	2462	16344	>500	Pass
12	2467	16344	>500	Pass
13	2472	16344	>500	Pass

Figure Channel 01

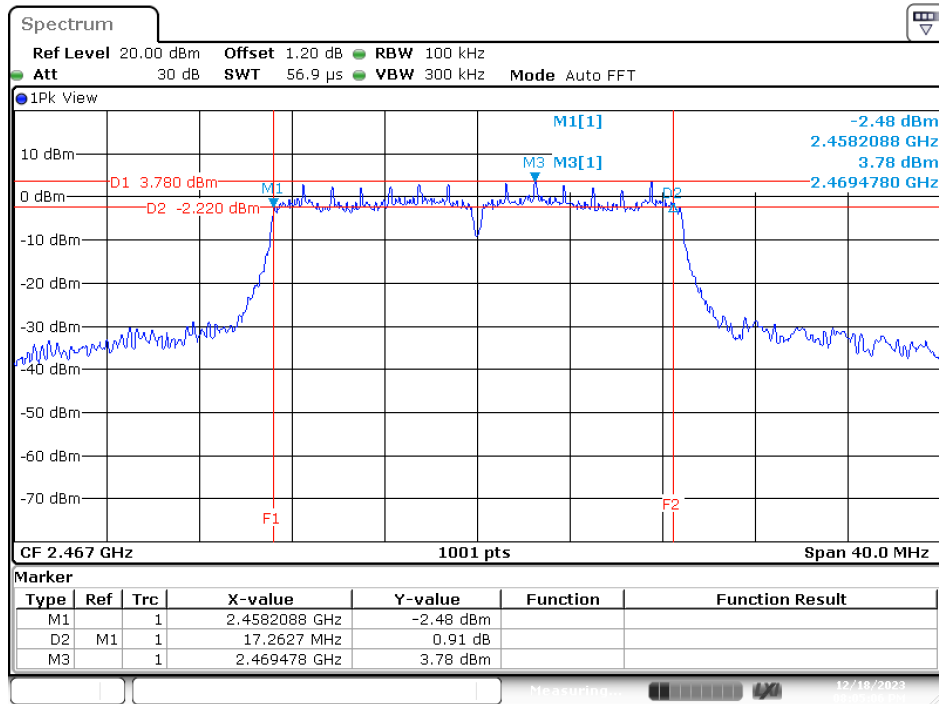


Date: 18.DEC.2023 19:42:25

Product : Car Infotainment Unit
 Test Item : 6dB Bandwidth Data
 Test Mode : Transmit (802.11ac-20 MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	17303	>500	Pass
07	2442	17303	>500	Pass
11	2462	17503	>500	Pass
12	2467	17263	>500	Pass
13	2472	17503	>500	Pass

Figure Channel 12

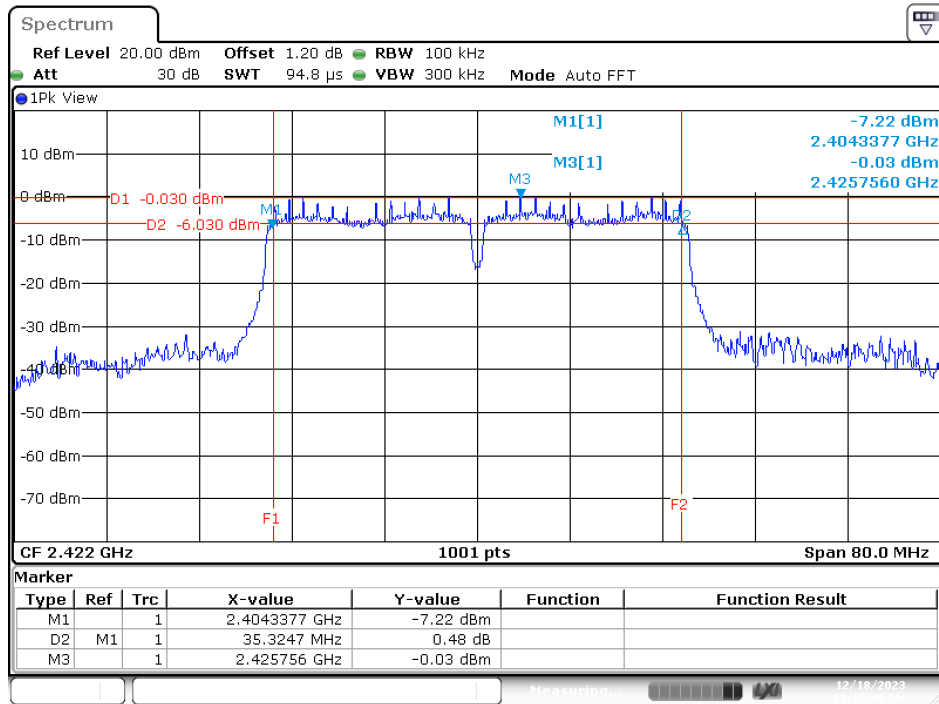


Date: 18.DEC.2023 20:05:06

Product : Car Infotainment Unit
 Test Item : 6dB Bandwidth Data
 Test Mode : Transmit (802.11ac-40 MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	35325	>500	Pass
07	2442	35325	>500	Pass
09	2452	35325	>500	Pass
10	2457	35644	>500	Pass
11	2462	35485	>500	Pass

Figure Channel 03

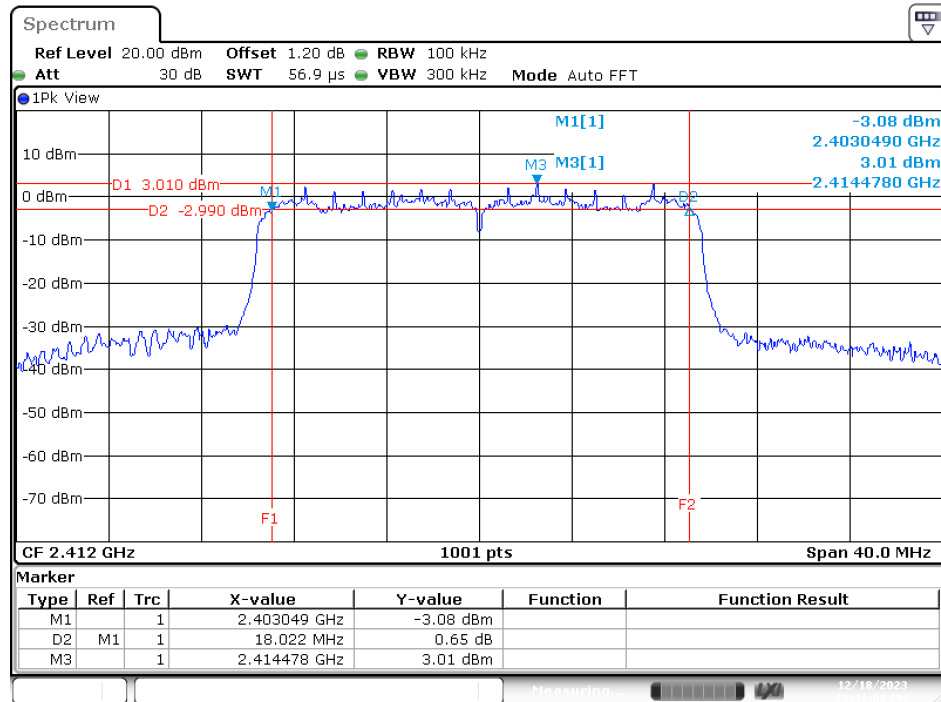


Date: 18.DEC.2023 21:18:41

Product : Car Infotainment Unit
 Test Item : 6dB Bandwidth Data
 Test Mode : Transmit (802.11ax-20 MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	18022	>500	Pass
07	2442	18422	>500	Pass
11	2462	18182	>500	Pass
12	2467	18262	>500	Pass
13	2472	18182	>500	Pass

Figure Channel 01

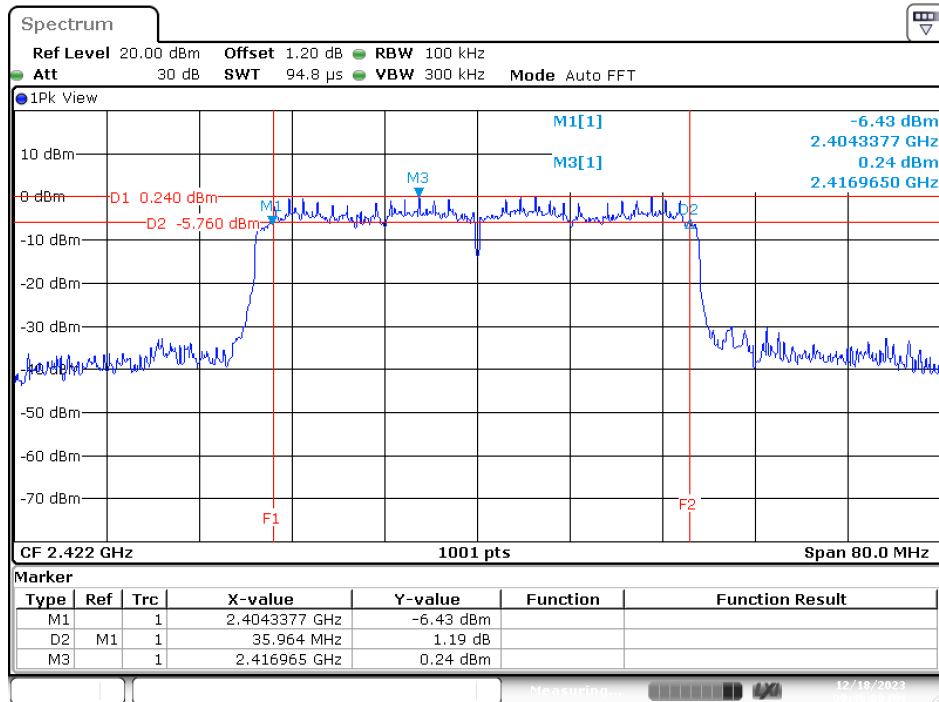


Date: 18.DEC.2023 21:31:09

Product : Car Infotainment Unit
 Test Item : 6dB Bandwidth Data
 Test Mode : Transmit (802.11ax-40 MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	35964	>500	Pass
07	2442	36524	>500	Pass
09	2452	36284	>500	Pass
10	2457	36923	>500	Pass
11	2462	36124	>500	Pass

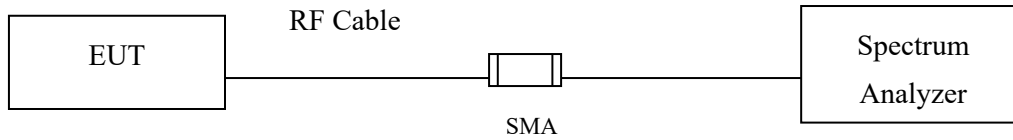
Figure Channel 03



Date: 18.DEC.2023 21:46:09

8. Power Spectral Density

8.1. Test Setup



8.2. Limits

The power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

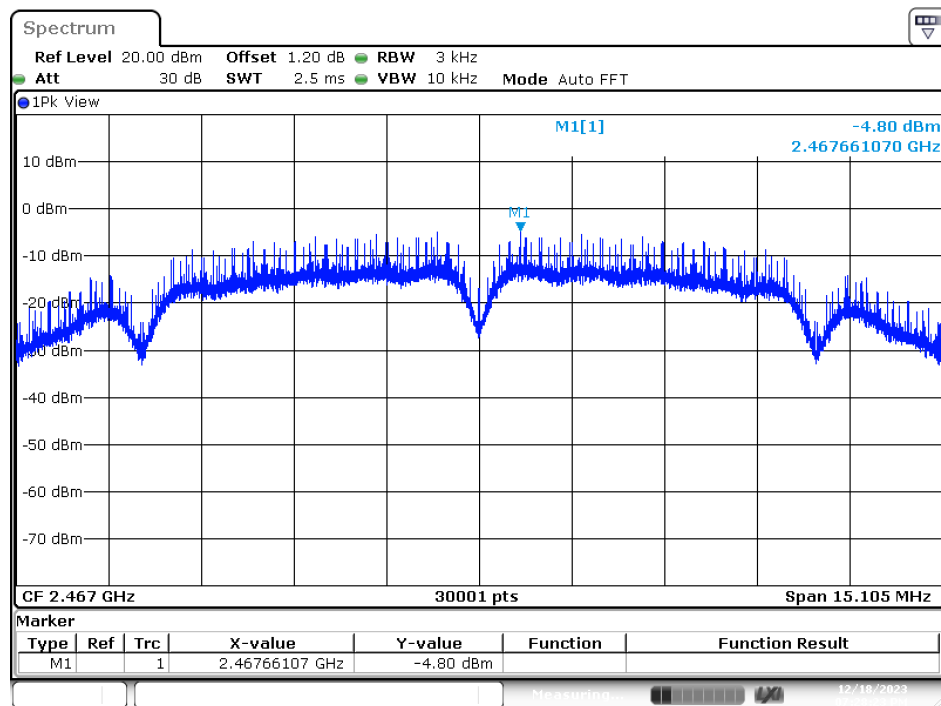
The maximum power spectral density using C63.10 Section 11.10.2 Method PKPSD (peak PSD)

8.4. Test Result of Power Spectral Density

Product : Car Infotainment Unit
 Test Item : Power Spectral Density
 Test Mode : Transmit (802.11b)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-5.980	≤ 8	Pass
07	2442	-5.040	≤ 8	Pass
11	2462	-4.820	≤ 8	Pass
12	2467	-4.800	≤ 8	Pass
13	2472	-4.820	≤ 8	Pass

Figure Channel 12

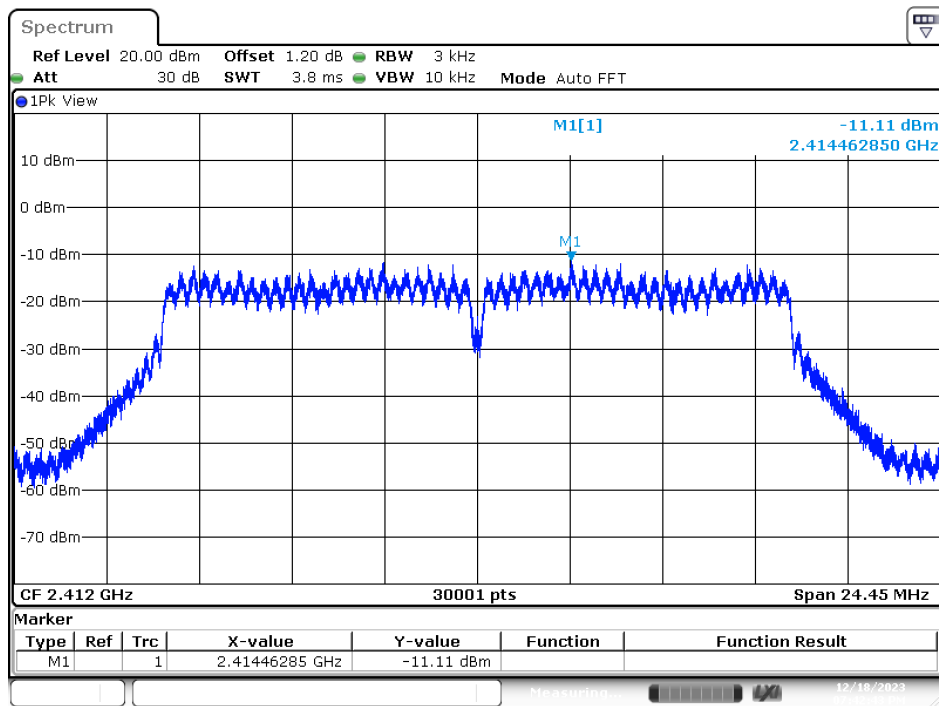


Date: 18.DEC.2023 19:28:23

Product : Car Infotainment Unit
 Test Item : Power Spectral Density
 Test Mode : Transmit (802.11g)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-11.110	≤ 8	Pass
07	2442	-11.440	≤ 8	Pass
11	2462	-13.170	≤ 8	Pass
12	2467	-13.830	≤ 8	Pass
13	2472	-13.350	≤ 8	Pass

Figure Channel 01

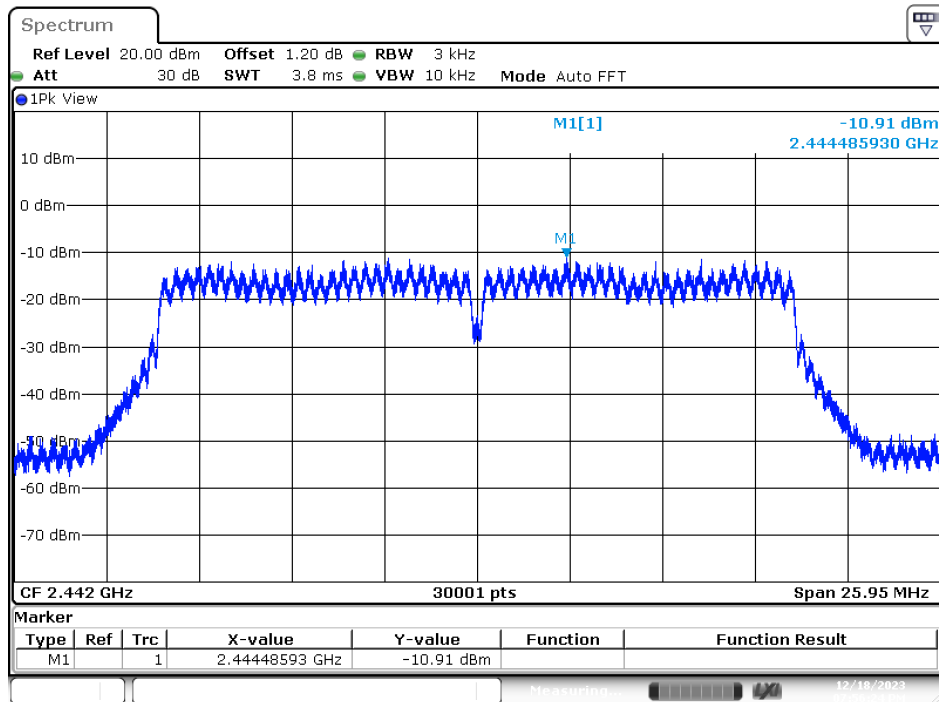


Date: 18.DEC.2023 19:42:44

Product : Car Infotainment Unit
 Test Item : Power Spectral Density
 Test Mode : Transmit (802.11ac-20 MHz)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-12.540	≤ 8	Pass
07	2442	-10.910	≤ 8	Pass
11	2462	-12.660	≤ 8	Pass
12	2467	-14.660	≤ 8	Pass
13	2472	-17.360	≤ 8	Pass

Figure Channel 07

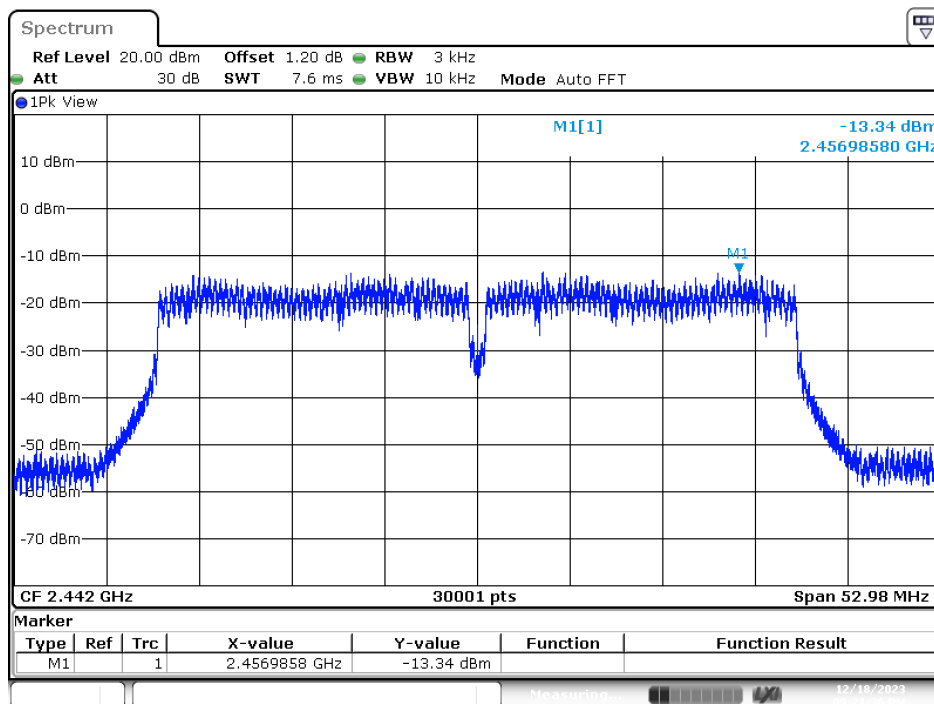


Date: 18.DEC.2023 19:56:24

Product : Car Infotainment Unit
 Test Item : Power Spectral Density
 Test Mode : Transmit (802.11ac-40 MHz)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
03	2422	-14.910	≤ 8	Pass
07	2442	-13.340	≤ 8	Pass
09	2452	-15.690	≤ 8	Pass
10	2457	-15.760	≤ 8	Pass
11	2462	-18.180	≤ 8	Pass

Figure Channel 07

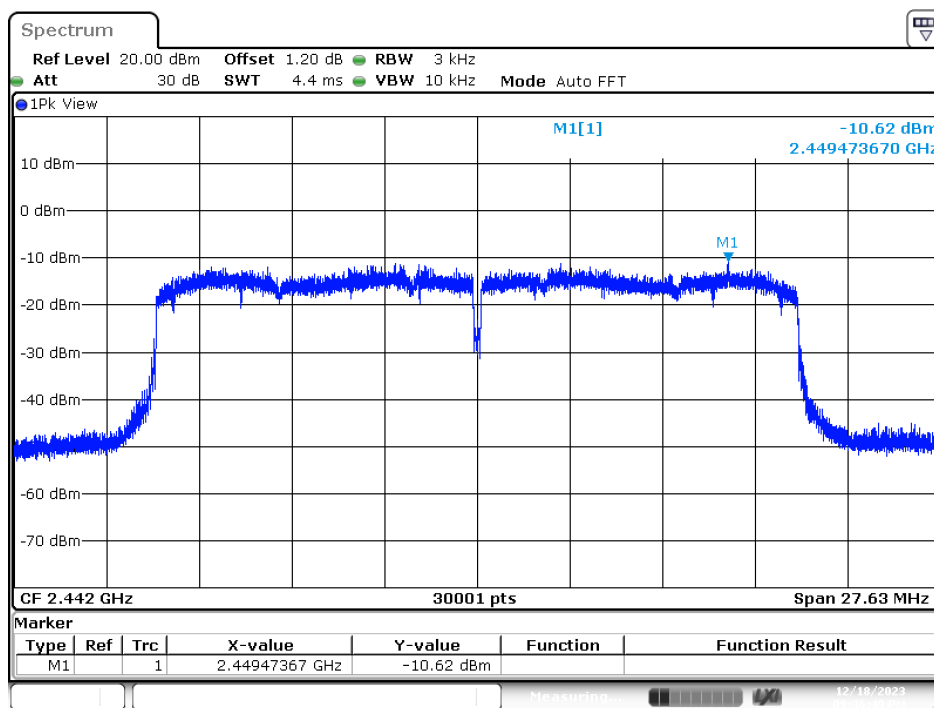


Date: 18.DEC.2023 21:21:36

Product : Car Infotainment Unit
 Test Item : Power Spectral Density
 Test Mode : Transmit (802.11ax-20 MHz)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-13.710	≤ 8	Pass
07	2442	-10.620	≤ 8	Pass
11	2462	-14.240	≤ 8	Pass
12	2467	-14.240	≤ 8	Pass
13	2472	-14.790	≤ 8	Pass

Figure Channel 07

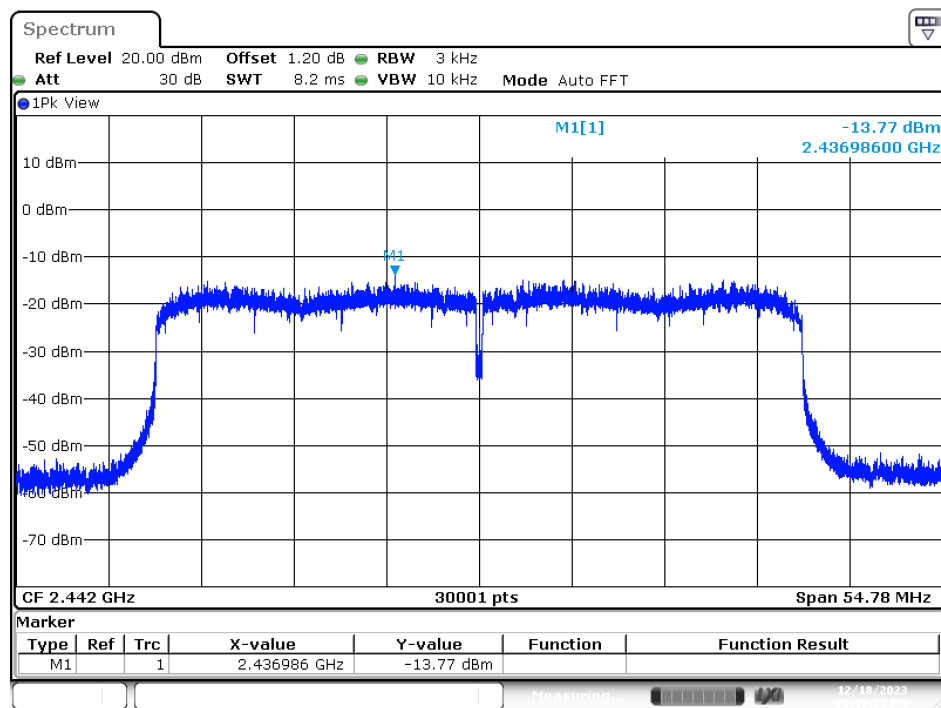


Date: 18, DEC. 2023 21:36:50

Product : Car Infotainment Unit
 Test Item : Power Spectral Density
 Test Mode : Transmit (802.11ax-40 MHz)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
03	2422	-16.040	≤ 8	Pass
07	2442	-13.770	≤ 8	Pass
09	2452	-15.890	≤ 8	Pass
10	2457	-16.220	≤ 8	Pass
11	2462	-19.410	≤ 8	Pass

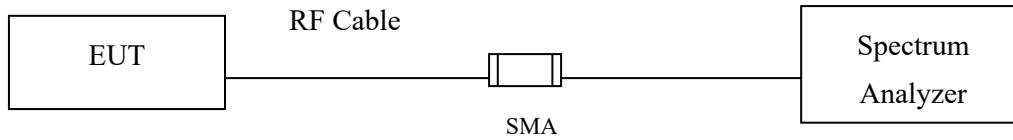
Figure Channel 07



Date: 18.DEC.2023 21:49:21

9. Duty Cycle

9.1. Test Setup



9.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to ANSI C63.10 2013 for compliance to FCC 47CFR 15.247 requirements.

9.3. Test Result of Duty Cycle

Product : Car Infotainment Unit
Test Item : Duty Cycle
Test Mode : Transmit

Duty Cycle Formula:

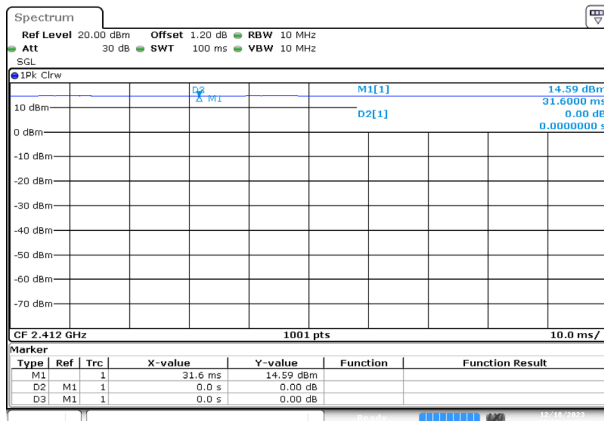
Duty Cycle = Ton / (Ton + Toff)

Duty Factor = 10 Log (1/Duty Cycle)

Results:

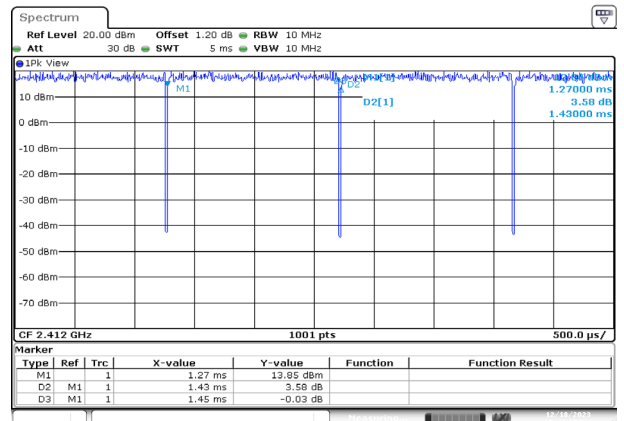
2.4 GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11 b	--	--	100.00	0.00
802.11 g	1.4300	1.4500	98.62	0.06
802.11 ac20 MHz	1.3450	1.3650	98.53	0.06
802.11 ac40 MHz	0.6650	0.6850	97.08	0.13
802.11 ax20 MHz	1.0450	1.0650	98.12	0.08
802.11 ax40 MHz	0.5500	0.5700	96.49	0.16

802.11 b



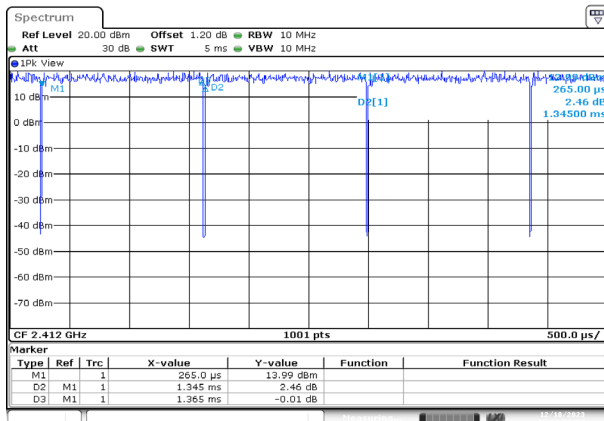
Date: 18 DEC 2023 19:17:33

802.11 g



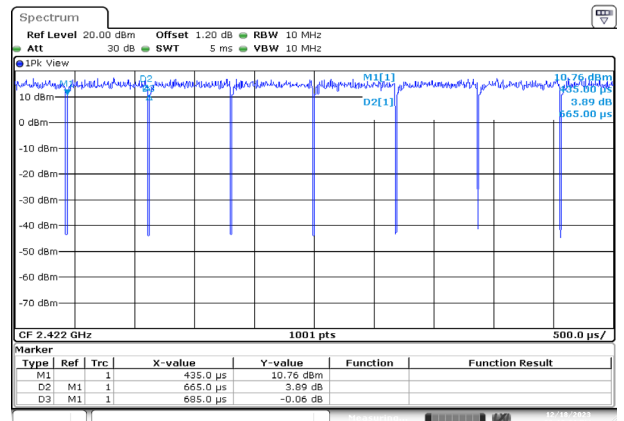
Date: 18 DEC 2023 19:42:04

802.11 ac20 MHz



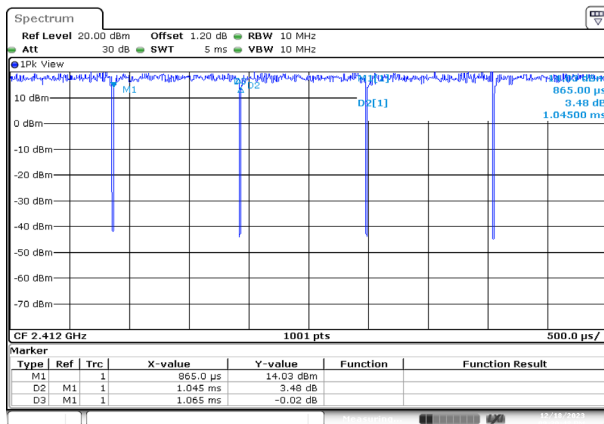
Date: 18 DEC 2023 19:53:53

802.11 ac40 MHz



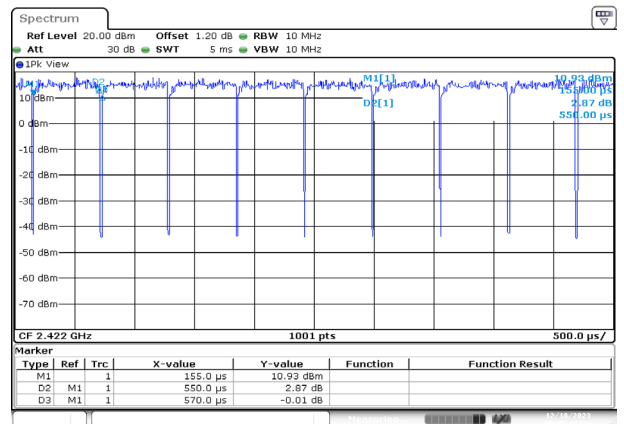
Date: 18 DEC 2023 21:18:21

802.11 ax20 MHz



Date: 18 DEC 2023 21:30:49

802.11 ax40 MHz



Date: 18 DEC 2023 21:45:49