



Test report No.: 2340476R-RFUSV03S-A

TEST REPORT (Class II Permissive Change)

Product Name	xPico® 200 Series Wi-Fi® IoT Gateway Module
Trademark	Lantronix
Model and /or type reference	xPico 270
FCC ID	R68XPICO200
Applicant's name / address	Lantronix, Inc. 48 Discovery, Suite 250, Irvine, California, United States 92618
Manufacturer's name	Lantronix, Inc.
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart E ANSI C63.4: 2014, ANSI C63.10: 2013 KDB Publication 789033
Verdict Summary	IN COMPLIANCE
Documented By (Supervisor / Jinn Chen)	Jim Chen
Tested By (Senior Engineer / Bill Lin)	Bill Lin Man Chen
Approved By (Senior Engineer / Alan Chen)	Ban Chen
Date of Receipt	2023/04/18
Date of Issue	2023/11/02
Report Version	V1.0

DEKRA

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Appendix 1: EUT Test Photographs

Appendix 2: Product Photos-Please refer to the file: 2340476R-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.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

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
2340476R-RFUSV03S-A	V1.0	Initial issue of report.	2023/11/02



1. General Information

1.1. EUT Description

Product Name	xPico® 200 Series Wi-Fi® IoT Gateway Module
Trademark	Lantronix
Model and /or type	xPico 270
reference	
EUT Rated Voltage	DC 3.3V (Power by Test Fixture)
EUT Test Voltage	AC 120V, 60Hz
Frequency Range	802.11a/n/ac-20 MHz: 5180-5320 MHz, 5500-5700 MHz, 5745-5825 MHz
	802.11n/ac-40 MHz: 5190-5310 MHz, 5510-5670MHz, 5755-5795 MHz
	802.11ac-80 MHz: 5210-5290 MHz, 5530-5610 MHz, 5775 MHz
Number of Channels	802.11a/n/ac-20 MHz: 24, 802.11n/ac-40 MHz: 11
	802.11ac-80 MHz: 5
Data Rate	802.11a: 6 - 54 Mbps
	802.11n: up to 150 Mbps
	802.11ac: up to 433.3 Mbps
Type of Modulation	802.11a/n/ac: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Channel Control	Auto

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	WHA YU INDUSTRIAL CO.,	C056-511080-A	PIFA	4.60 dBi for 5150-5250 MHz
	LTD.			4.60 dBi for 5250-5350 MHz
				5.20 dBi for 5470-5725 MHz
				5.20 dBi for 5725~5850 MHz

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



Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
	(MHz)		(MHz)		(MHz)		(MHz)
36	5180	40	5200	44	5220	48	5240
52	5260	56	5280	60	5300	64	5320
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700	149	5745
153	5765	157	5785	161	5805	165	5825

802.11a/n/ac-20 MHz Center Working Frequency of Each Channel:

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
	(MHz)		(MHz)		(MHz)		(MHz)
38	5190	46	5230	54	5270	62	5310
102	5510	110	5550	118	5590	126	5630
134	5670	151	5755	159	5795		

802.11ac-80 MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
	(MHz)		(MHz)		(MHz)		(MHz)
42	5210	58	5290	106	5530	122	5610
155	5775						

Note:

- 1. This device is a xPico® 200 Series Wi-Fi® IoT Gateway Module with built-in WLAN and Bluetooth transceiver, this report for 5GHz WLAN.
- 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. This is to request a Class II permissive change.

The major change filed under this application is:

Change #1: Addition a PIFA Antenna, the antenna type is different with the original application.

Change #2: Reduce the BT & WLAN 2.4GHz/5GHz output power through firmware

(SW Version: 5.4).

5. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance of transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

Test Mode Mode 1		Transmit (802.11a)
	Transmit (802.11n-20MHz)	
	Mode 1	Transmit (802.11n-40MHz)
	Widde I	Transmit (802.11ac-20MHz)
		Transmit (802.11ac-40MHz)
		Transmit (802.11ac-80MHz)

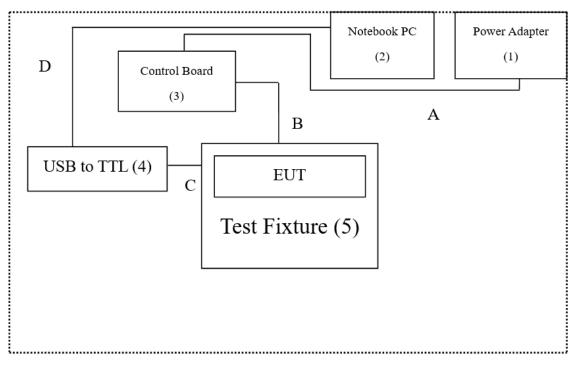
1.2. Tested System Datails

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

Pro	duct	Manufacturer	Model No.	Serial No.	Power Cord
1	Power Adapter	EDAC	EA11013C-2400	N/A	N/A
2	Notebook PC	DELL	Latitude 5501	4H94P13	N/A
3	Control Board	TSC	40-2250001	N/A	N/A
4	USB to TTL	TSC	CP2102	N/A	N/A
5	Test Fixture	TSC	RF-WX27N	N/A	N/A

Cab	le Туре	Cable Description
А	Power Cable	Non-shielded, 1.2m, with one ferrite core bonded.
В	WiFi & BT Cable	Non-shielded, 0.06m
С	Jumper Wire	Non-shielded, 0.3m
D	USB Cable	Shielded, 1m

1.3. Configuration of Tested System



1.4. EUT Exercise Software

1.	Setup the EUT as shown in Section 1.3.
2.	Execute software 'Tera Term Version 4.105' 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						
	Temperature (°C)	10~40 °C	22.5 °C						
Radiated Emission	Humidity (%RH)	10~90 %	63.4 %						
	Temperature (°C)	10~40 °C	22.0 °C						
Conductive	Humidity (%RH)	10~90 %	55.0 %						

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 Equipment

For Conduction Measurements / HY-SR01

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
EMI Test Receiver	R&S	ESR7	101601	2022/06/23	2023/06/22
Two-Line V-Network	R&S	ENV216	101306	2023/03/16	2024/03/15
Two-Line V-Network	R&S	ENV216	101307	2022/07/04	2023/07/03
Coaxial Cable	SUHNER	RG400_BNC	RF001	2022/05/24	2023/05/23

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: e3 230303 dekra V9.

For Conducted Measurements / HY-SR02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Spectrum Analyzer	R&S	FSV30	103466	2022/12/22	2023/12/21
V	Peak Power Analyzer	KEYSIGHT	8990B	MY51000410	2022/08/06	2023/08/05
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY56080003	2022/08/05	2023/08/04
V	Wideband Power Sensor	KEYSIGHT	N1923A	MY56080004	2022/08/05	2023/08/04

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 V3.0.1.14.

For Radiated Measurements / HY-CB01

	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	SCHWARZBECK	VULB9168	9168-675	2021/08/11	2023/08/10
v	Antenna					
V	Horn Antenna	RF SPIN	DRH18-E	210802A18ES	2023/03/23	2024/03/22
V	Horn Antenna	Com-Power	AH-840	101101	2021/11/30	2023/11/29
V	Pre-Asmplifier	SGH	0301	20211007-7	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC051845SE	980632	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC05820SE	980361	2023/01/10	2024/01/09
	Pre-Amplifier	EMCI	EMC184045SE	980369	2023/01/10	2024/01/09
V	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314		
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
	Filter	MICRO TRONICS	BRM50702	G269	2023/01/05	2024/01/04
V	Filter	MICRO TRONICS	BRM50716	G196	2023/01/05	2024/01/04
v	EMI Test	R&S	ESR3	102793	2022/12/05	2023/12/04
v	Receiver					
v	Spectrum	R&S	FSV3044	101115	2023/01/06	2024/01/05
v	Analyzer					
	Coaxial Cable	SUHNER	SUCOFLEX 106	25450/6	2023/01/10	2024/01/09
\mathbf{v}	Coaxial Cable	SGH	HA800	GD20110222-8		
V	Coaxial Cable	SGH	SGH18	2021003-8		
	Coaxial Cable	EMCI	EMC106	151113		

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.

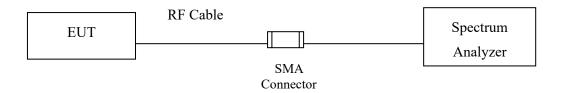
Test item	Uncertainty
Mariana Dana Ordent	Spectrum Analyzer: ±2.14 dB
Maximum Power Output	Power Meter: ±1.05 dB
	9 kHz~30 MHz: ±3.88 dB
De l'ete l Decision	30 MHz~1 GHz: ±4.42 dB
Radiated Emission	1 GHz~18 GHz: ±4.28 dB
	18 GHz~40 GHz: ±3.90 dB
	9 kHz~30 MHz: ±3.88 dB
DendEdee	30 MHz~1 GHz: ±4.42 dB
Band Edge	1 GHz~18 GHz: ±4.28 dB
	18 GHz~40 GHz: ±3.90 dB
Duty Cycle	±0.53 %



2. Maximun conducted output power

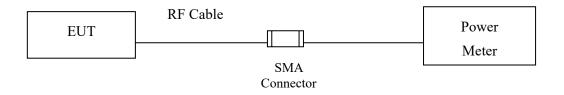
2.1. Test Setup

99% Occupied Bandwidth

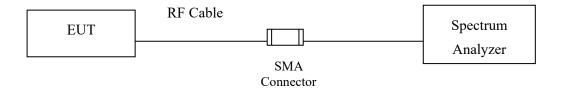


Conduction Power Measurement

Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac)



2.2. Limits

For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-topoint U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 99% emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

2.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11an (BW \leq 40MHz) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter) <u>Note: the power meter have a video bandwidth that is greater than or equal to the measurement</u> <u>bandwidth</u>, (Anritsu/MA2411B video bandwidth: 65MHz)

802.11ac (BW=80MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.



2.4. Test Result of Maximum conducted output power

Product	:	xPico® 200 Series Wi-Fi® IoT Gateway Module
Test Item	:	Maximum conducted output power

Test Mode : Transmit (802.11a)

Test Date : 2023/04/25

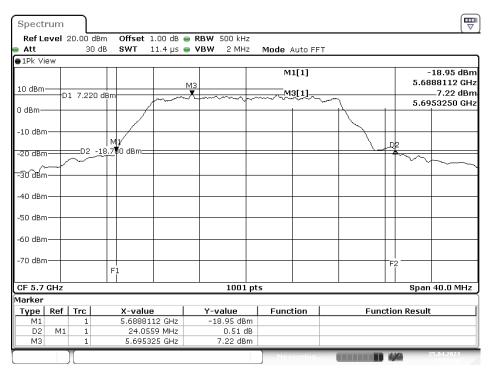
Channel No.	Frequency	26dB Bandwidth	Output Power	Duty factor	Total Output Power	Output	t Power Limit		
	(MHz)	(MHz)	(dBm)	(dB)	(dBm)	(dBm)	dBm+10log(BW)		
36	5180		13.27		13.27	24			
40	5200		18.08		18.08	24			
48	5240		17.70		17.70	24			
52	5260	26.53	17.95		17.95	24	25.24		
60	5300	26.69	18.02		18.02	24	25.26		
64	5320	26.57	14.11		14.11	24	25.24		
100	5500	24.49	12.26		12.26	24	24.89		
116	5580	24.21	15.22		15.22	24	24.84		
140	5700	24.05	12.86		12.86	24	24.81		
149	5745		14.40		14.40	30			
157	5785		14.00		14.00	30			
165	5825		14.57		14.57	30			

Note:

1. 26dB Bandwidth is the bandwidth of chain A whichever is less bandwidth, output power limitation is more stringent.



Channel 140



Date: 25.APR.2023 15:52:47



- Product : xPico® 200 Series Wi-Fi® IoT Gateway Module
- Test Item : Maximum conducted output power
- Test Mode : Transmit (802.11n-20MHz)

Test Date : 2023/04/25

Channel No.	Frequency	26dBOutputBandwidthPower		Duty factor	Total Output Power	Output Power Limit		
	(MHz)	(MHz)	(dBm)	(dB)	(dBm)	(dBm)	dBm+10log(BW)	
36	5180		13.37		13.37	24		
40	5200		17.85		17.85	24		
48	5240		15.05		15.05	24		
52	5260	29.69	17.81		17.81	24	25.73	
60	5300	27.53	17.90		17.90	24	25.40	
64	5320	28.41	13.20		13.20	24	25.53	
100	5500	27.41	11.33		11.33	24	25.38	
116	5580	25.41	15.70		15.70	24	25.05	
140	5700	23.93	12.28		12.28	24	24.79	
149	5745		14.50		14.50	30		
157	5785		14.02		14.02	30		
165	5825		14.42		14.42	30		

Note:

1. 26dB Bandwidth is the bandwidth of chain A whichever is less bandwidth, output power limitation is more stringent.



Channel 140

Spectr	um)														[₩
Ref Le	vel :				1.00 dB											
Att 🛛		31	0 dB	SWT	11.4 µs	● VBW	/ 2 MH	z	Mode /	\uto FF	Т					
●1Pk Vie	W.															
									M:	1[1]						18.63 dBm
10 dBm-					MЗ										5.68	88112 GHz
10 abiii	-p	1 7.50)0 dŖm				nm_		Mi	<u>)(1)</u>						_7.50 dBm
0 dBm—				/			-	ř—				<u> </u>		+	5.65	28470 GHz
-10 dBm·			M	11/												
-20 dBm-		D2		0 dBm									~	RP R		
-20 000	$\sim -$	$\overline{\sim}$	\neg											$\Box T$	\sim	\sim
-30 dBm-																
00 00111																
-40 dBm·																
-50 dBm-	-		_													
-60 dBm·	-		_													
-70 dBm·														F2		
			F	ľ												
CF 5.7 (GHŻ						1001	pts							Span	40.0 MHz
Marker																
	Ref	Trc		X-valu			value		Funct	tion			Fund	ction	n Result	
M1		1			112 GHz	-	18.63 dB									
D2	M1	1			61 MHz		0.33 0									
М3		1		5.6928	347 GHz		7.50 dB	m						_		
		Л							Mea	suring.	1			4	A .	25.04.2023

Date: 25.APR.2023 16:07:25



Output Power Limit

- Product xPico® 200 Series Wi-Fi® IoT Gateway Module :
- Test Item Maximum conducted output power :
- Test Mode : Transmit (802.11n-40MHz)
- Test Date :

2023/04/25 26dB **Total Output** Output Duty Frequency dwidth 1 N Pc fact

Channel No.	Frequency	Bandwidth	Power	factor	Power	Outp	ut Power Limit
	(MHz)	(MHz)	(dBm)	(dB)	(dBm)	(dBm)	dBm+10log(BW)
38	5190		11.44		11.44	24	
46	5230		17.12		17.12	24	
54	5270	52.98	17.73		17.73	24	28.24
62	5310	53.14	10.78		10.78	24	28.25
102	5510	53.14	10.30		10.30	24	28.25
110	5550	52.10	15.56		15.56	24	28.17
134	5670	48.43	13.32		13.32	24	27.85
151	5755		17.22		17.22	30	
159	5795		17.05		17.05	30	

Note:

26dB Bandwidth is the bandwidth of chain A whichever is less bandwidth, output power 1. limitation is more stringent.



Channel 134

Spectr	um												
	evel	20.00	dBm	Offse	t 1.00 dB	e RBV	V 500 kHz	2					
🛛 Att		30) dB	SWT	18.9 µs	👄 VBV	V 2 MHz	: 1	Mode Auto FFT				
●1Pk Vie	ЭW												
									M1[1]				22.85 dBm
10 dBm-												5.64	97802 GHz
to ubiii							МЗ		M3[1]				3.56 dBm
0 dBm—		1 3.56	0 dBm			man	when	\sim	mayness	my my		-5.66	60040 GHz
o abiii				- 17			Ϋ́						
-10 dBm	_			-+									
-20 dBm				_ <u>M</u> /						\rightarrow	C	<u>e</u>	
-20 dBm ഹം ഷിന് dBm	<u>م</u> لہ	<u>. R</u> 2	-22.4·	40 ඕBm - යැථ	-					$-\infty$		ቅላሳፖ	Mar
,⊿\$0 dBm			<u>~~</u> ~~	_ •							Ĭ		phi conservence
-40 dBm	-												
-50 dBm	-												
-60 dBm	-												
-70 dBm				F1							F	2	
				Γ1 Ι									
CF 5.67	GHz	2					1001	pts		·		Span	80.0 MHz
Marker													
Туре	Ref	Trc		X-va	lue	Y	-value		Function	Fun	ction F	tesult	
M1		1			7802 GHz	-	-22.85 dBr						
D2	M1	1			4316 MHz		0.49 d						
M3		1		5.66	6004 GHz	<u> </u>	3.56 dBr	n					
		\prod							Measuring				25.04.2023

Date: 25.APR.2023 16:40:06



- Product : xPico® 200 Series Wi-Fi® IoT Gateway Module
- Test Item : Maximum conducted output power
- Test Mode : Transmit (802.11ac-20MHz)
- Test Date

: 2023/04/25

Channel No.	Frequency (MHz)	26dBOutputBandwidthPower(MHz)(dBm)		Duty factor (dB)	Total Output Power (dBm)		out Power Limit dBm+10log(BW)
		(МПZ)		(UD)		· · ·	dbIII+10l0g(bw)
36	5180		13.40		13.40	24	
40	5200		17.88		17.88	24	
48	5240		15.14		15.14	24	
52	5260	27.69	17.63		17.63	24	25.42
60	5300	24.97	17.85		17.85	24	24.97
64	5320	27.37	13.52		13.52	24	25.37
100	5500	22.49	12.30		12.30	24	24.52
116	5580	22.33	15.22		15.22	24	24.49
140	5700	22.33	11.67		11.67	24	24.49
149	5745		14.46		14.46	30	
157	5785		13.92		13.92	30	
165	5825		14.40		14.40	30	

Note:

1. 26dB Bandwidth is the bandwidth of chain A whichever is less bandwidth, output power limitation is more stringent.



Channel 116

Spectrur	n											
Ref Leve				1.00 dB								
Att 🛛		30 dB	SWT	11.4 µs	VBW	2 MHz	Mode /	Auto FF	T			
●1Pk View												
							M	1[1]				18.77 dBm
10 dBm							M				5.56	88911 GHz
to abiii	D1 7.3	340 dÅm		An of	\sim h~	mt	~~~M	હાંમ—				_7.34 dBm
0 dBm				~~~~		· · · ~			<u>~~</u>		5.58	39160 GHz
-10 dBm—		N	11/							_		
00 -0	<u> </u>	יין 2 -18.6							2	2		
-20 dBm-	. ~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	10 00								$\sim\sim$	\wedge
-30 dBm—	<u>۲</u>	v -										$\sim\sim\sim$
-30 ubiii												
-40 dBm												
10 abili												
-50 dBm				_								
-60 dBm												
-70 dBm—									F	;⊢		
		F	1							Ī		
CF 5.58 G	Hz		1	1		1001 p	ts	1	I		Span	40.0 MHz
Marker												
Type Re	ef Trc	1	X-valu	ie	Y-۱	/alue	Func	tion	Fu	nction	Result	
M1	-	L		911 GHz	-1	8.77 dBm						
	11 :	-		377 MHz		0.85 dB						
M3		L	5.583	916 GHz		7.34 dBm						
	$\left \right $						Mea	suring.		1 4/4	2	5.04.2023

Date: 25.APR.2023 16:54:25



- Product : xPico® 200 Series Wi-Fi® IoT Gateway Module
- Test Item : Maximum conducted output power
- Test Mode : Transmit (802.11ac-40MHz)

Test Date : 2023/04/25

Channel No.	Frequency	26dB Bandwidth			Outp	ut Power Limit	
	(MHz)	(MHz)	(dBm)	(dB)	(dBm)	(dBm)	dBm+10log(BW)
38	5190		11.33		11.33	24	
46	5230		17.21		17.21	24	
54	5270	40.19	17.54		17.54	24	27.04
62	5310	43.87	10.95		10.95	24	27.42
102	5510	43.47	10.50		10.50	24	27.38
110	5550	50.34	15.70		15.70	24	28.02
134	5670	50.82	13.50		13.50	24	28.06
151	5755		16.74		16.74	30	
159	5795		16.40		16.40	30	

Note:

1. 26dB Bandwidth is the bandwidth of chain A whichever is less bandwidth, output power limitation is more stringent.



Channel 54

Spectr	um											
Ref Le	vel :	20.00 0	iBm Of	fset	1.00 dB (RBW	500 kHz					
🗎 Att		30	dB SV	/T	18.9 µs (∎ VBW	2 MHz	Mode Aut	o FFT			
●1Pk Vie	W											
								M1[1	.]		-	23.88 dBm
10 dBm-											5.24	97003 GHz
TO OPIU-								M3[1	.]			2.67 dBm
0 dBm—	D	1 2.67) dġm—	يداري	m	man	m	mmtur	Langer Are	<u> </u>	5.27	53550 GHz
o ubiii						Ĩ	Ψ	1	11			
-10 dBm-												
				1					1			
-20 dBm-			— м	<u></u>						1e		
		—D2	-23,330	Bm-						m	M WWY	mm
-30 dBm-		~ ~	m/v'							+ 1	· ·	4 ° \~\~~
$\sim\sim\sim$	~y~	~~ ~ ·	Y									
-40 dBm-												
-50 dBm-												
-60 dBm-												
-00 ubiii-												
-70 dBm-										2		
, o abiii			F	1						1		
								_				
CF 5.27	GHz						1001	ots			Span	80.0 MHz
Marker							_					
	Ref	Trc		value	e O3 GHz		<mark>zalue</mark> 3.88 dBm	Function	n	Func	tion Result	
M1 D2	M1	1			98 MHz	-2	3.88 aBm 1.19 dE					
M3	TIME	1			55 GHz		2.67 dBm					
		1			she				-		14.5425	25.04.2023
		Л						Measur	ing			

Date: 25.APR.2023 17:58:10



- Product : xPico® 200 Series Wi-Fi® IoT Gateway Module
- Test Item : Maximum conducted output power
- Test Mode : Transmit (802.11ac-80MHz)

2023/04/25

Test Date :

Channel No.	Frequency	26dB Bandwidth	Output Power	Duty factor	Total Output Power	Outp	out Power Limit
	(MHz)	(MHz)	(dBm)	(dB)	(dBm)	(dBm)	dBm+10log(BW)
42	5210		12.16		12.16	24	
58	5290	93.50	10.66		10.66	24	30.71
106	5530	81.67	12.01		12.01	24	30.12
122	5610	80.87	12.51		12.51	24	30.08
155	5775		14.12		14.12	30	

Note:

1. 26dB Bandwidth is the bandwidth of chain A whichever is less bandwidth, output power limitation is more stringent.



Channel 122

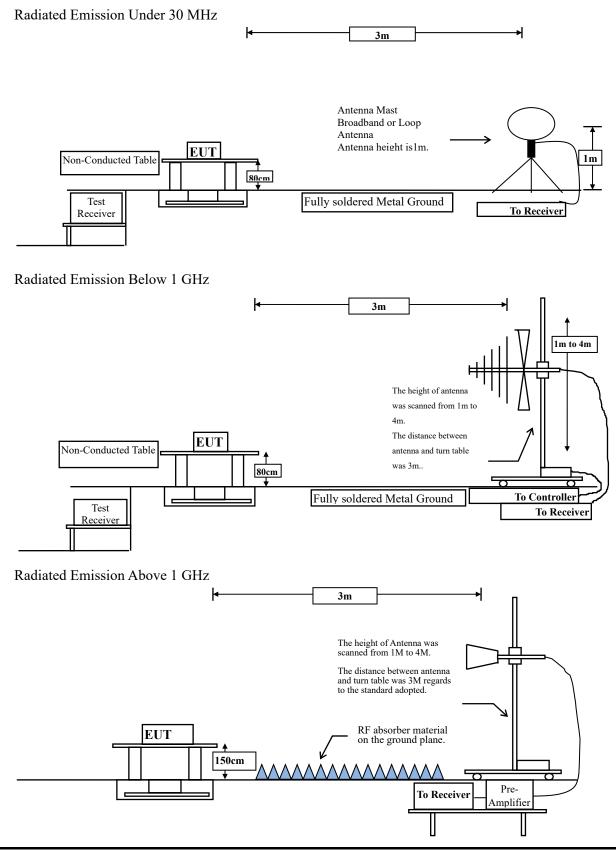
Specti	um											
Ref Le	evel :	20.00 0	iBm Offs	et 1.00 dB	■ RBW 11	ИНz						
Att 🛛		30	dB SW1	Γ 22.9 µs	● VBW 31	MHz M	lode Au	ito FFT				
●1Pk Vie	∋w											
							М	1[1]				-23.46 dBm
10 dBm-								1+10			5	.568921 GHz 2.96 dBm
		1 2.96			МЗ			3[1]				2.96 aBM .596090 GHz
0 dBm—		1 2.90			motor	\sim	<u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>		portor!			
-10 dBm			+						\rightarrow			
-20 dBm		D2	M	m						2		
-30 dBm	w.h	ᡔᡘᡃᡨ								Sura	h	-
		-										, , , c., .
-40 dBm												
-50 dBm												
-60 dBm												
-70 dBm			F1						F	2		
			1									
CF 5.61	l GHz				1	1001 pts	\$				Spar	160.0 MHz
Marker												
Type M1	Ref	Trc 1		alue 68921 GHz	<u>Y-val</u>	ue 6 dBm	Func	tion		Fund	tion Resu	ılt
D2	M1	1		30.879 MHz		.07 dB						
МЗ		1		.59609 GHz		6 dBm						
)(Mea	suring			4,70	25.04.2023

Date: 25.APR.2023 18:10:03



3. Radiated Emission

3.1. Test Setup



3.2. 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 Par	FCC Part 15 Subpart C Paragraph 15.209(a) Limits									
Frequency	Field strength	Measurement distance (meter)								
MHz	(microvolts/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: E field strength $(dB\mu V/m) = 20 \log E$ field strength (uV/m)

- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Based on ANSI C63.10-2013 Section 12.7.3 d) provides the conversion formula between field strength and EIRP, if distance is 3m, -27dBm is equivalent to 68.22dBuV/m.



3.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 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 1 GHz, 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 9kHz and 30 MHz \sim 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 form 9 kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz. $VBW \ge 3 MHz.$

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

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

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

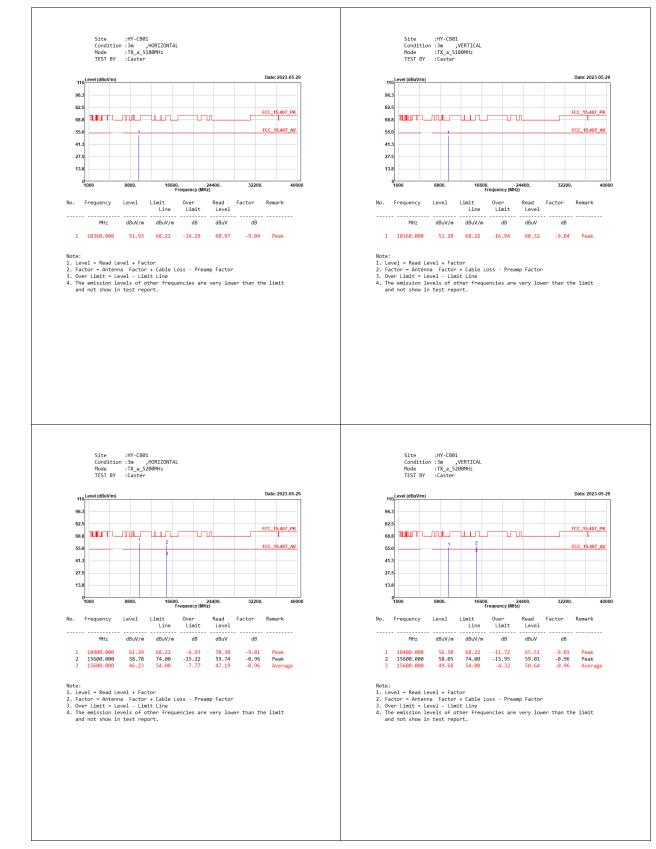
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

5 GHz band	Duty Cycle	Т	1/T	VBW
	(%)	(ms)	(Hz)	(Hz)
802.11 a	98.35	1.4280	700	10
802.11 n20	95.56	2.5800	388	500
802.11 n40	92.11	1.2600	794	1000
802.11 ac20	95.57	2.5900	386	500
802.11 ac40	96.59	1.2750	784	1000
802.11 ac80	93.55	0.6090	1642	2000

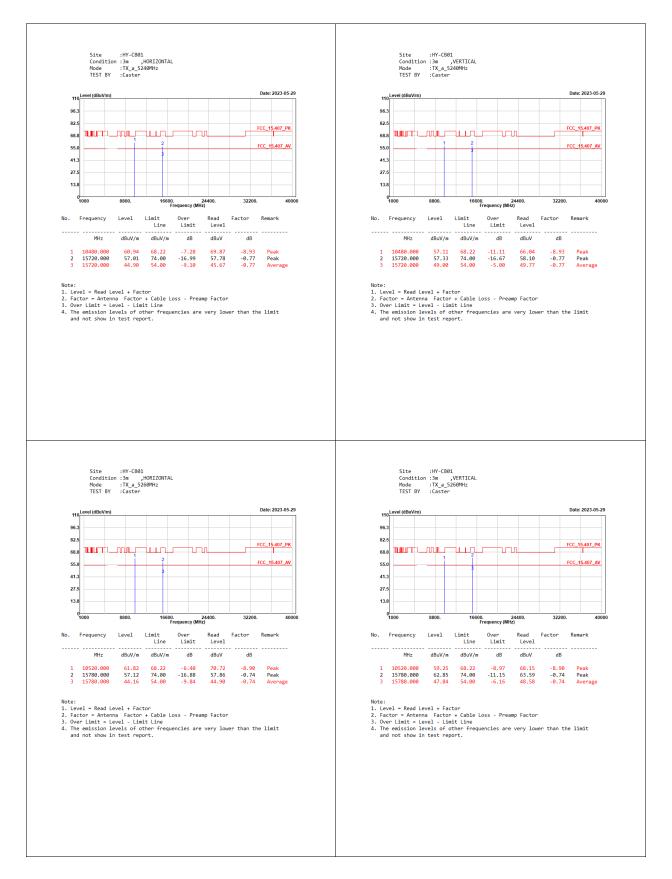
Note: Duty Cycle Refer to Section 5.



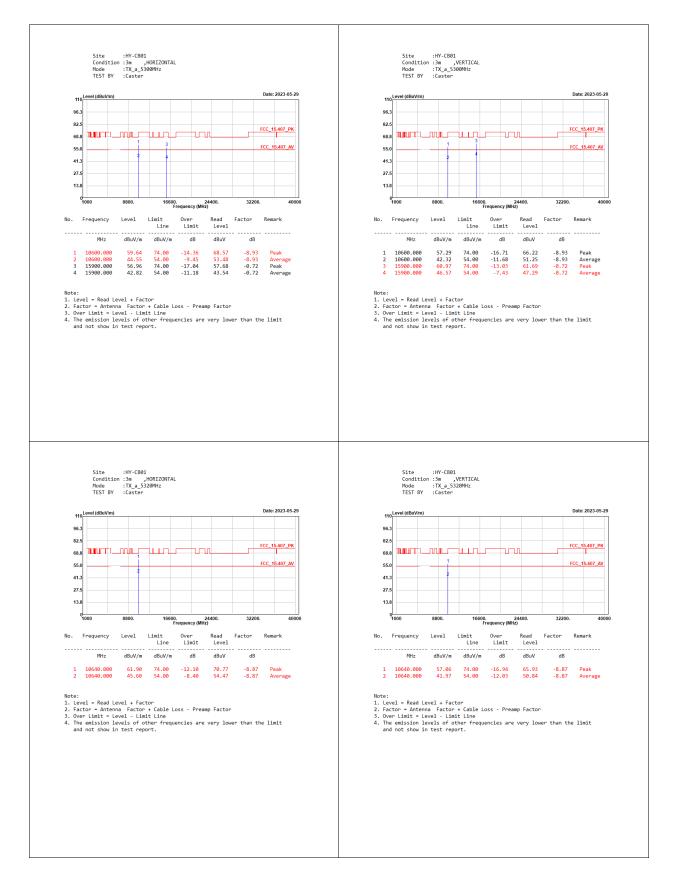
3.4. Test Result of Radiated Emission



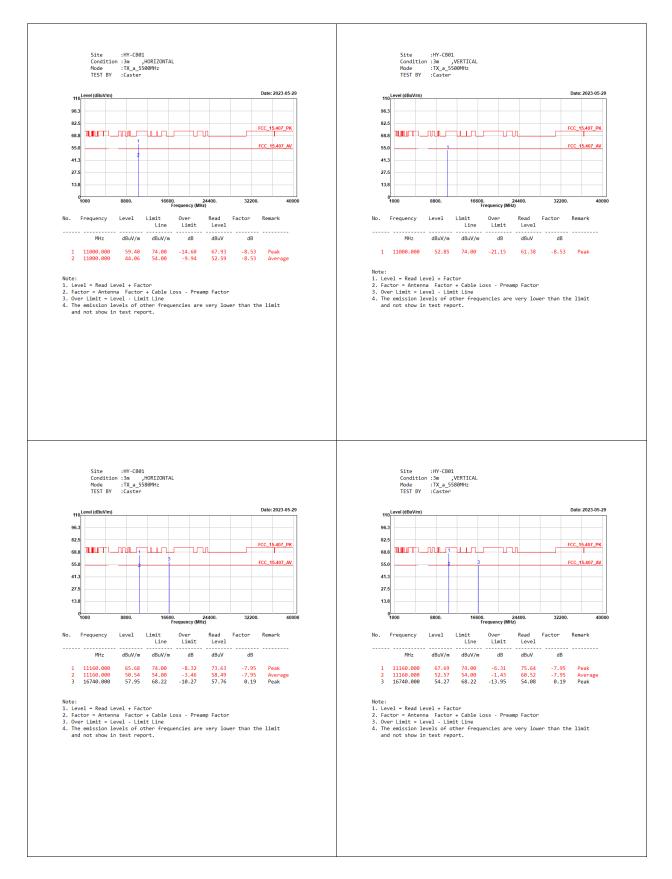




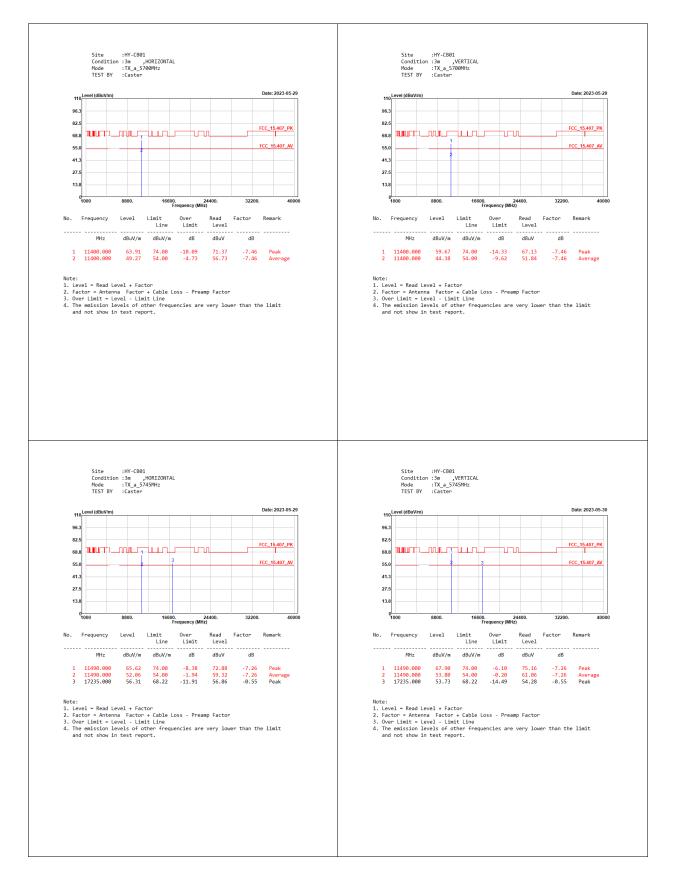




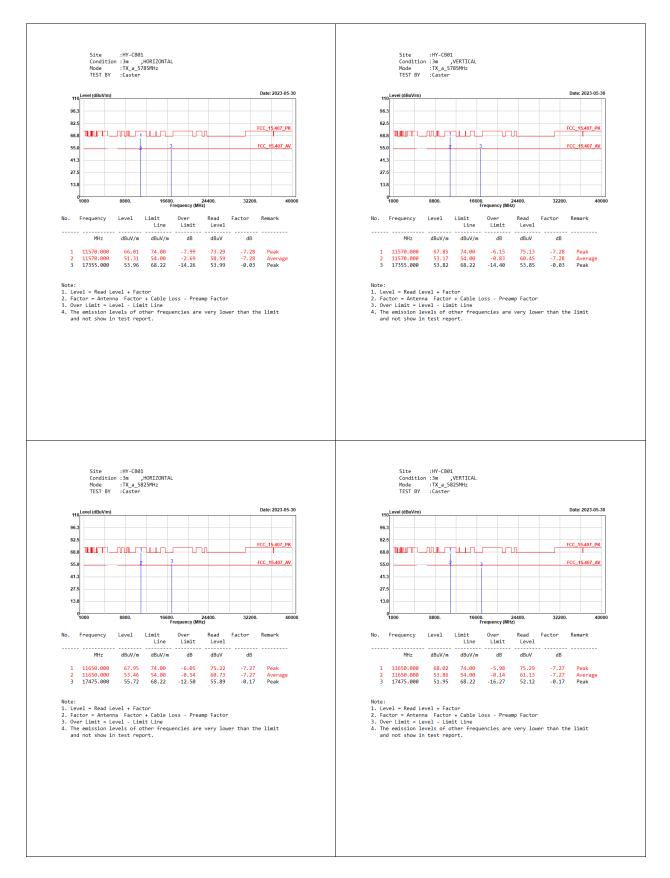




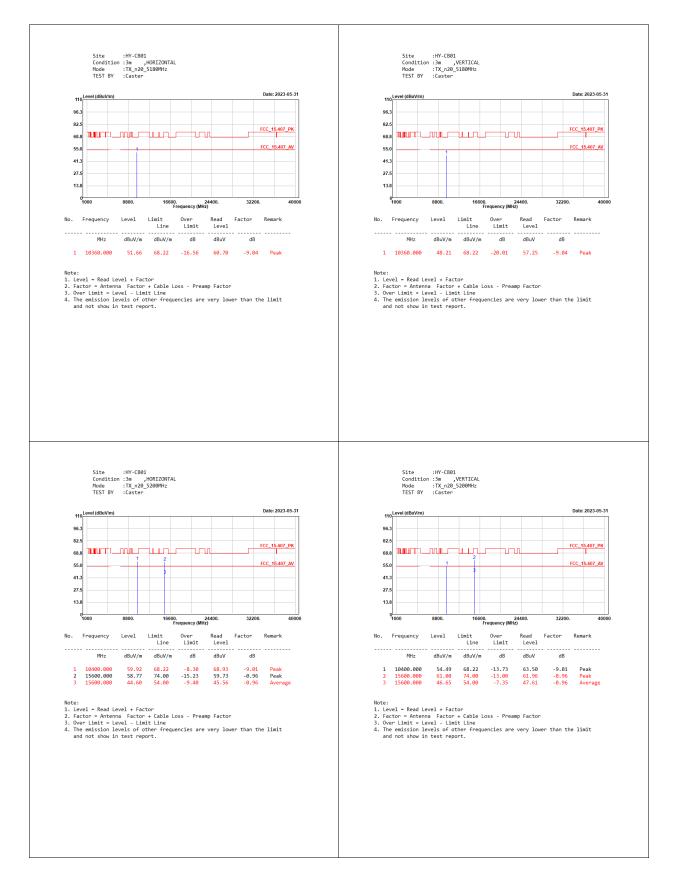




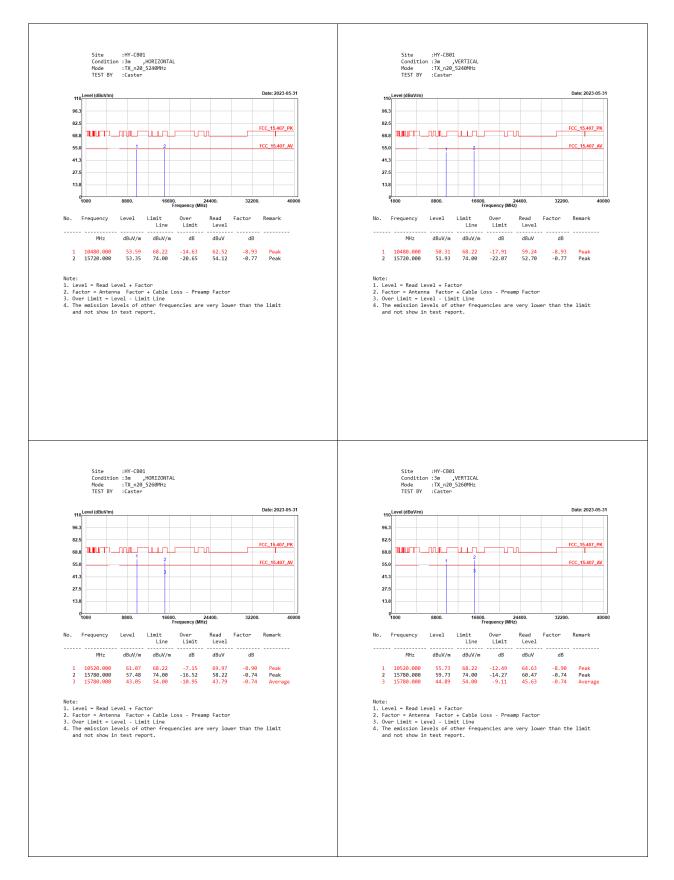




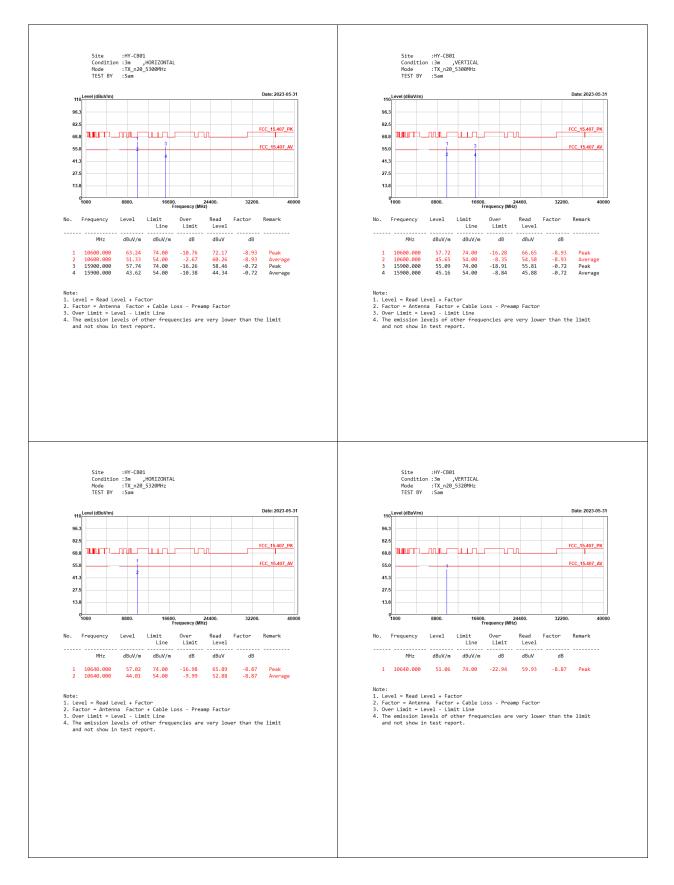




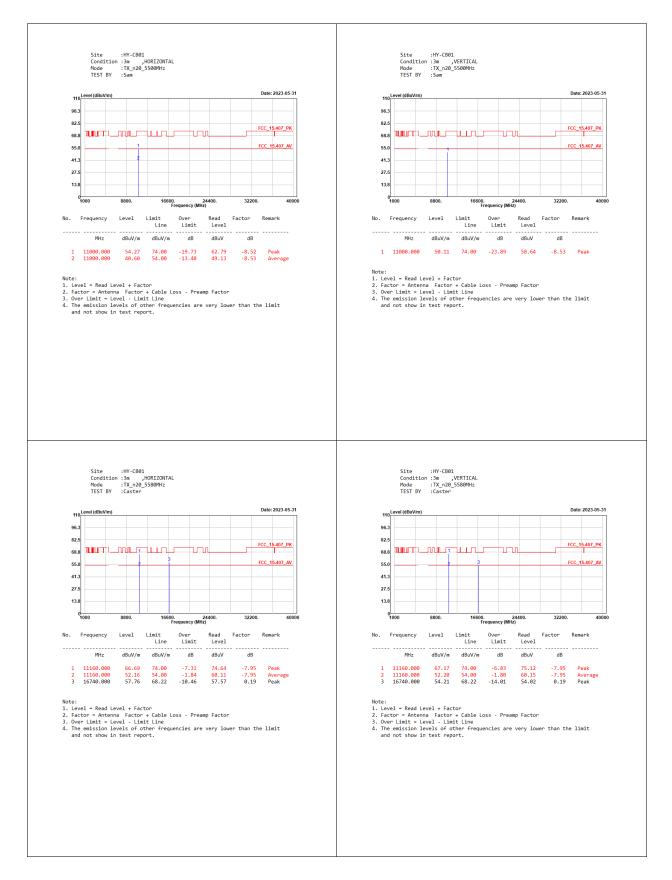




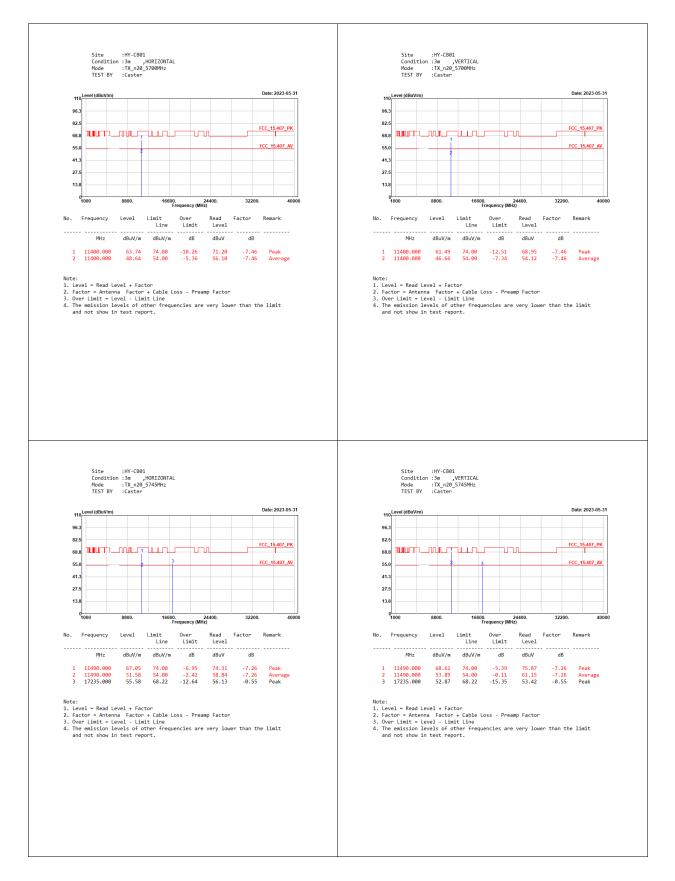




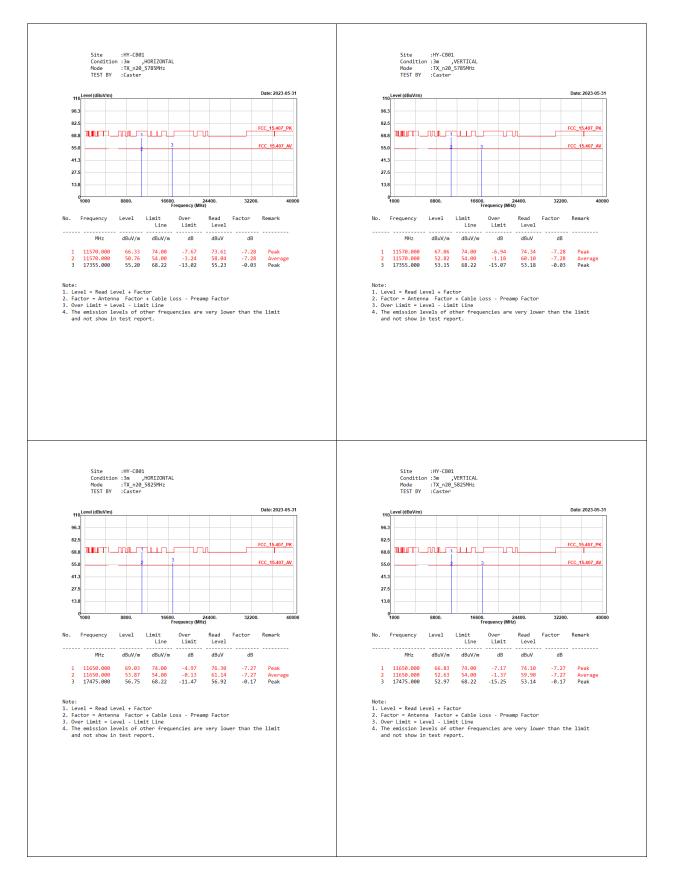




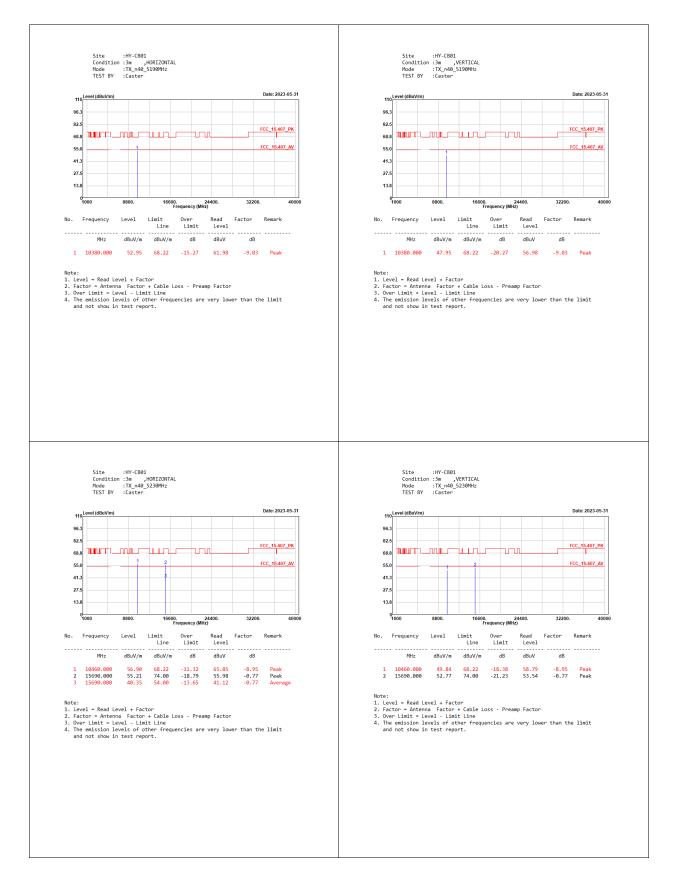




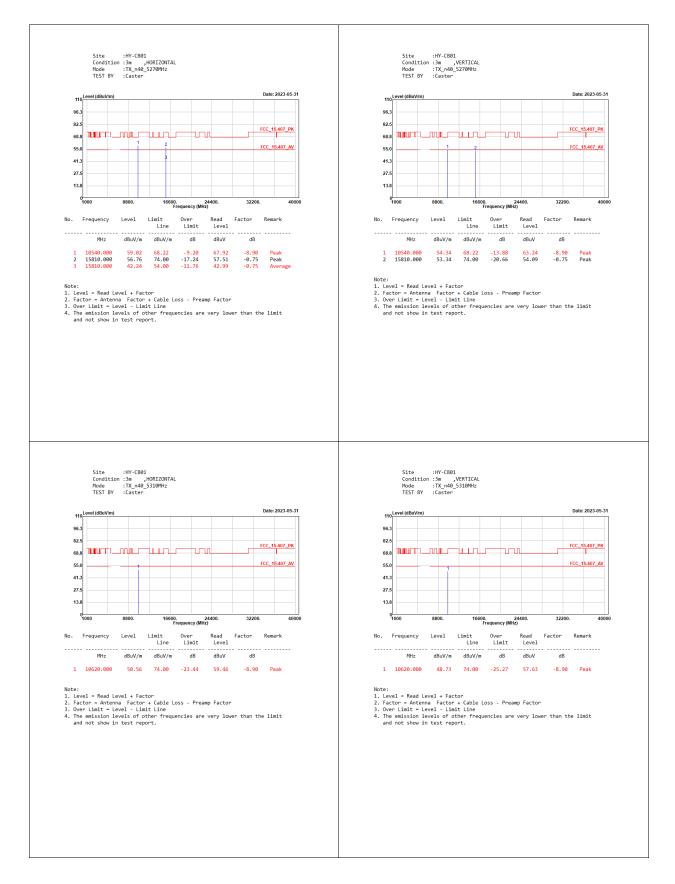




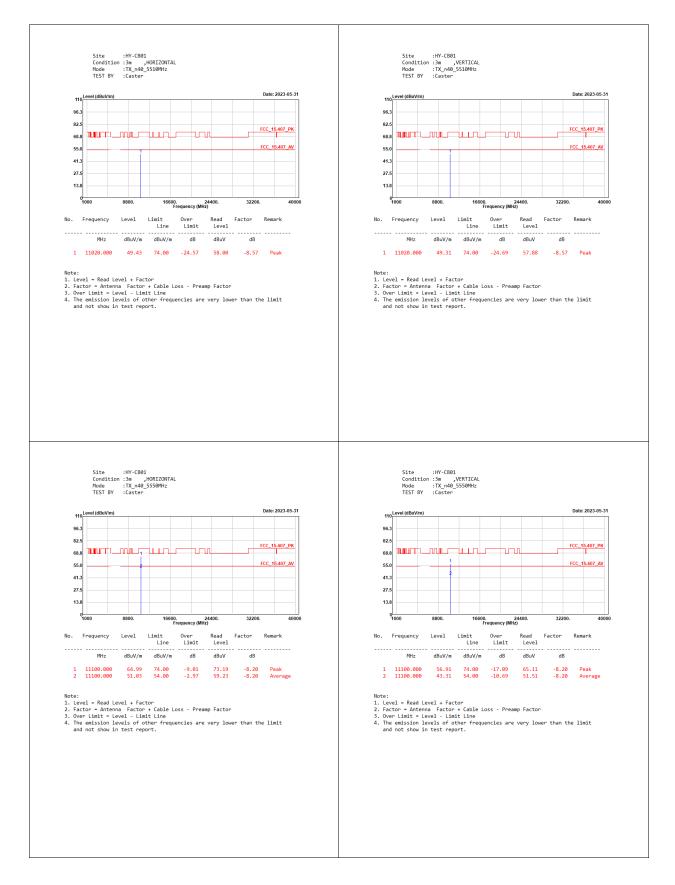




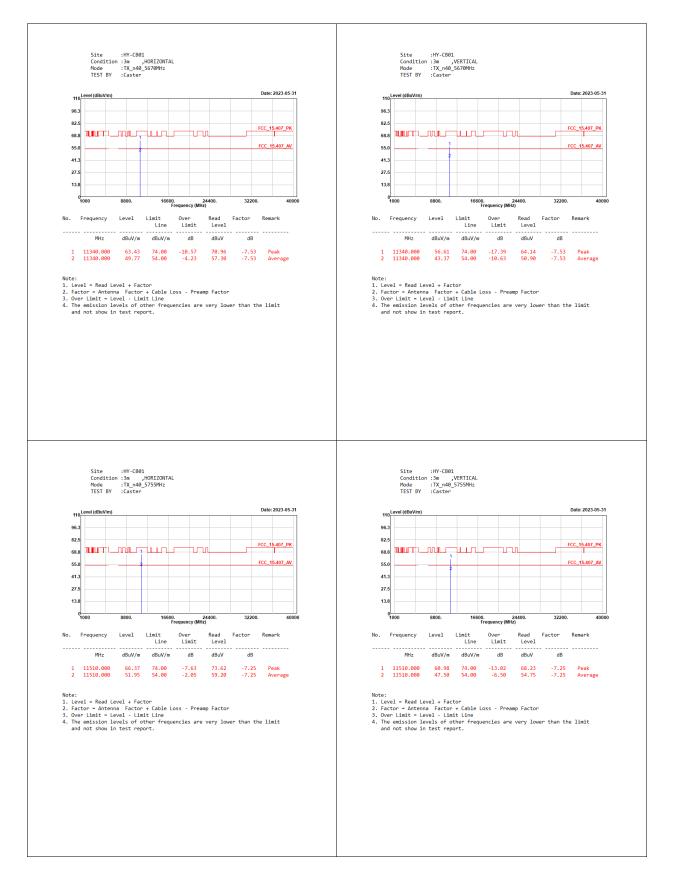




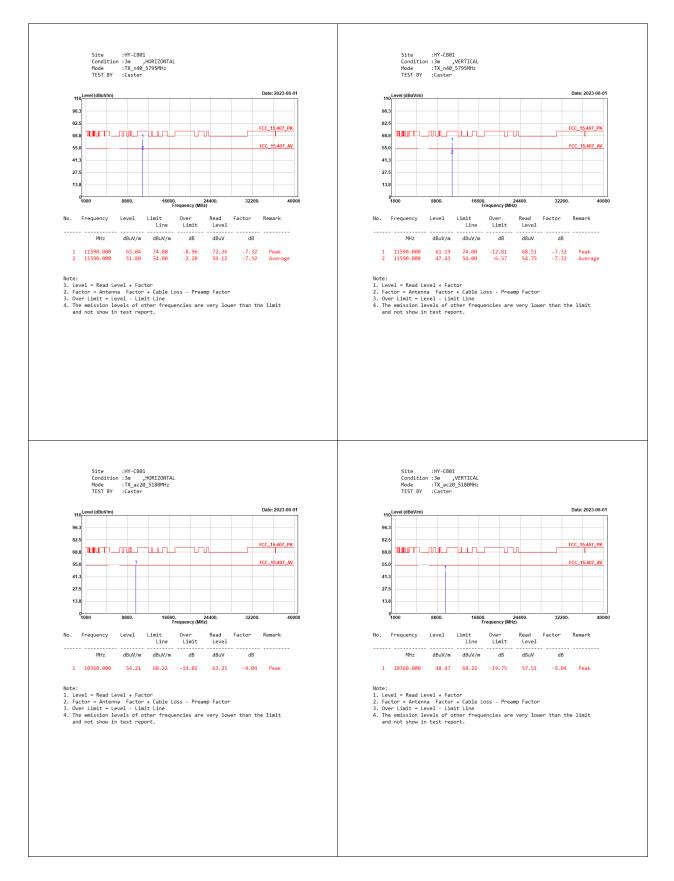




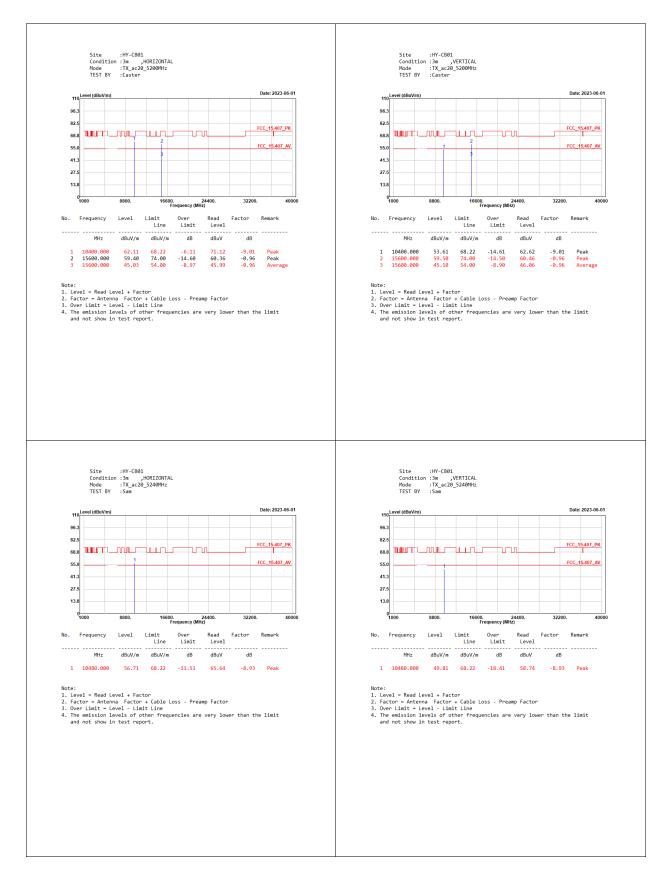




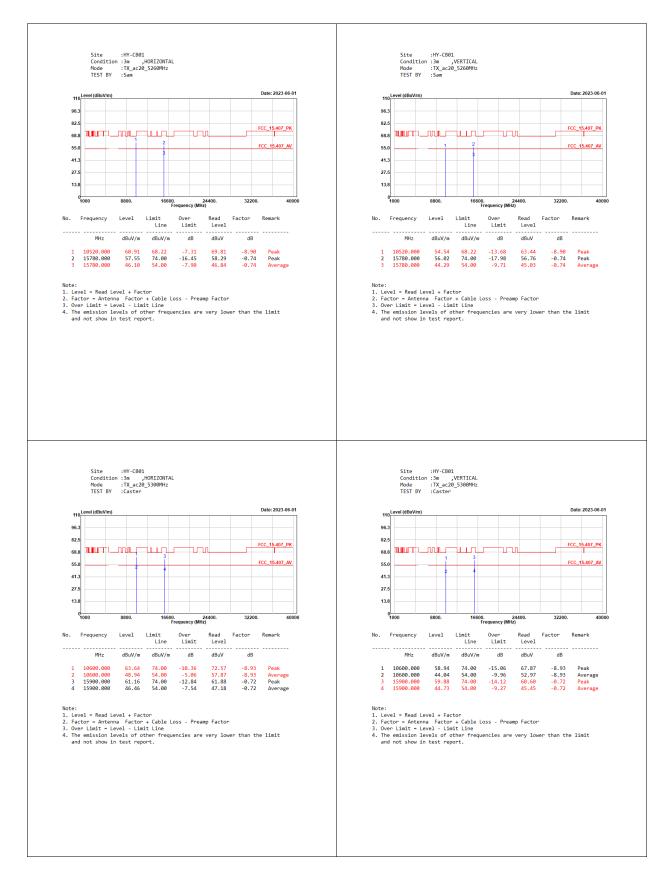




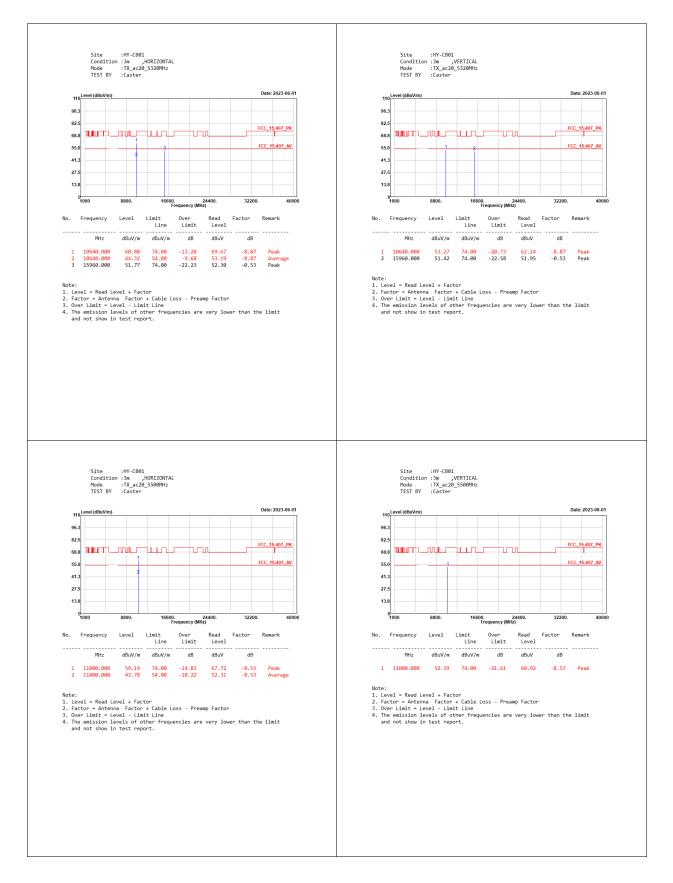




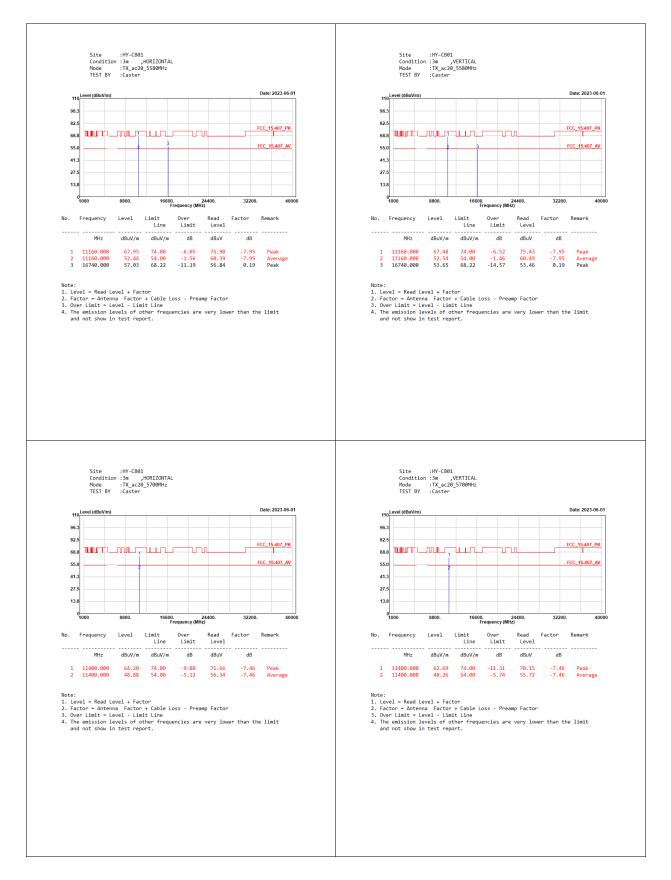




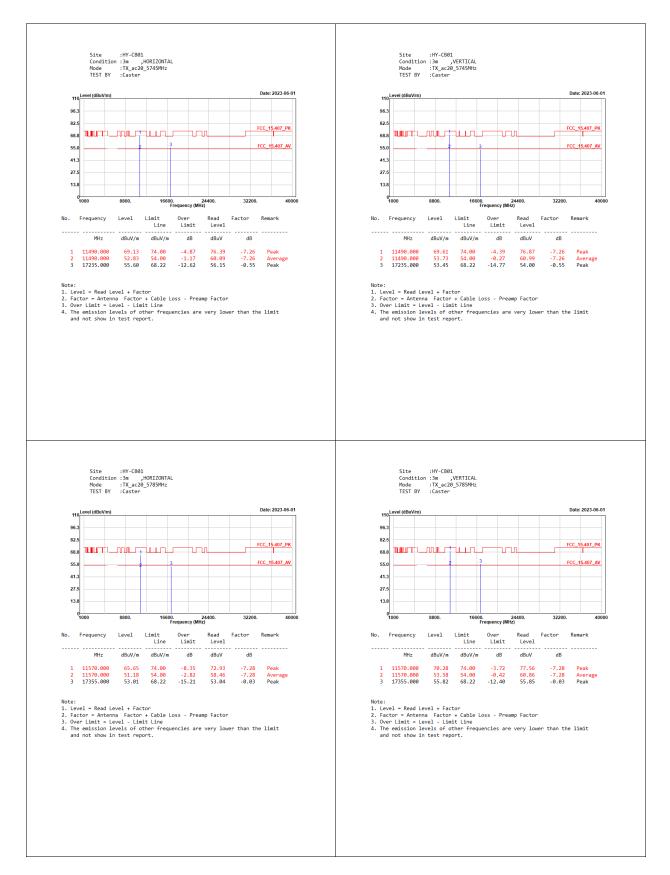




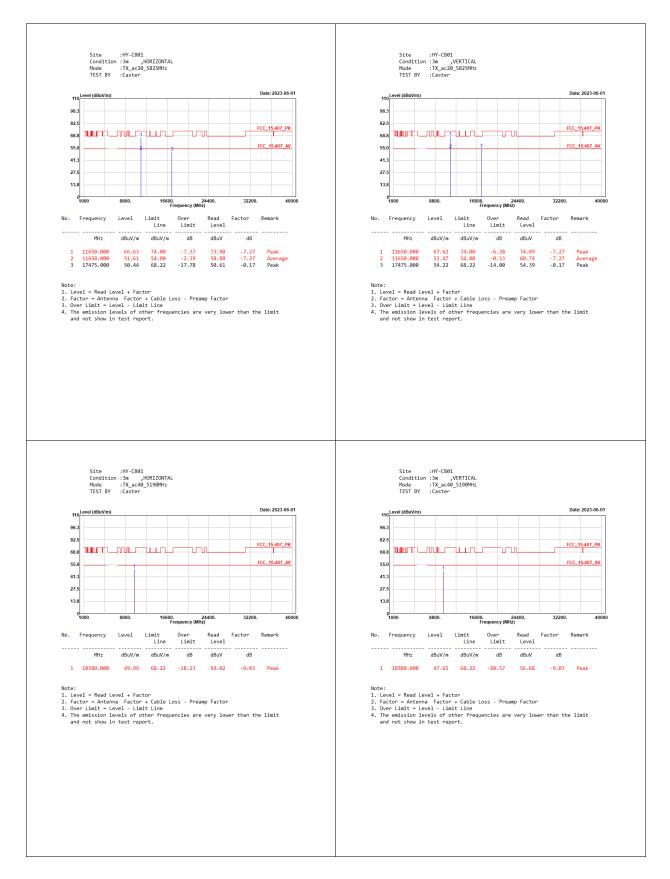




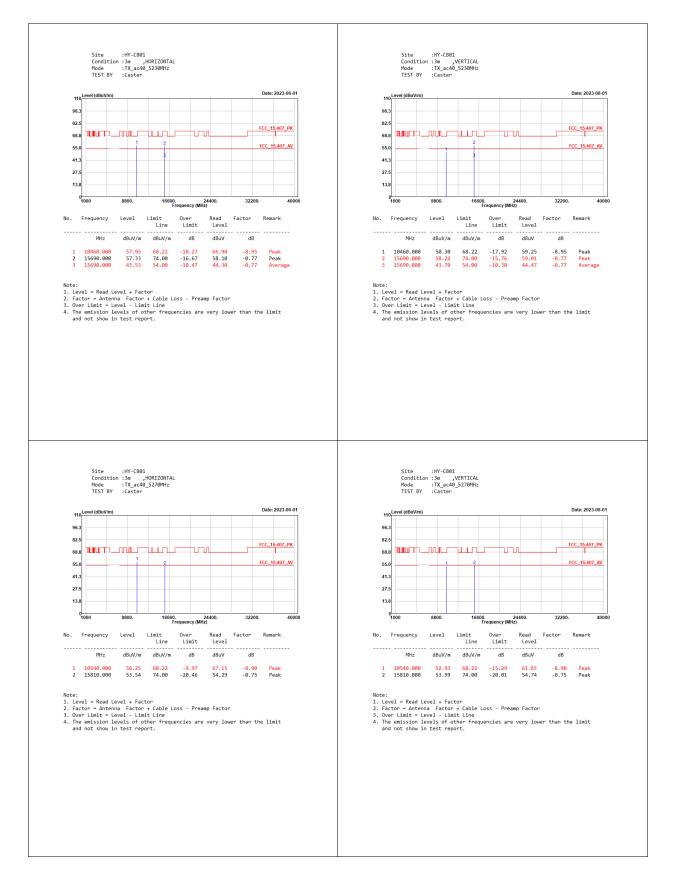




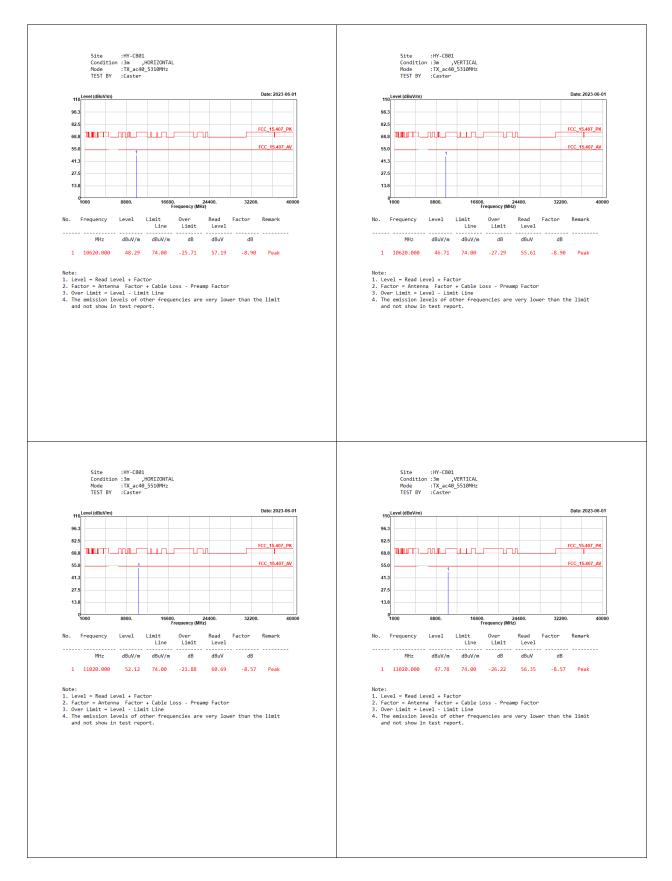




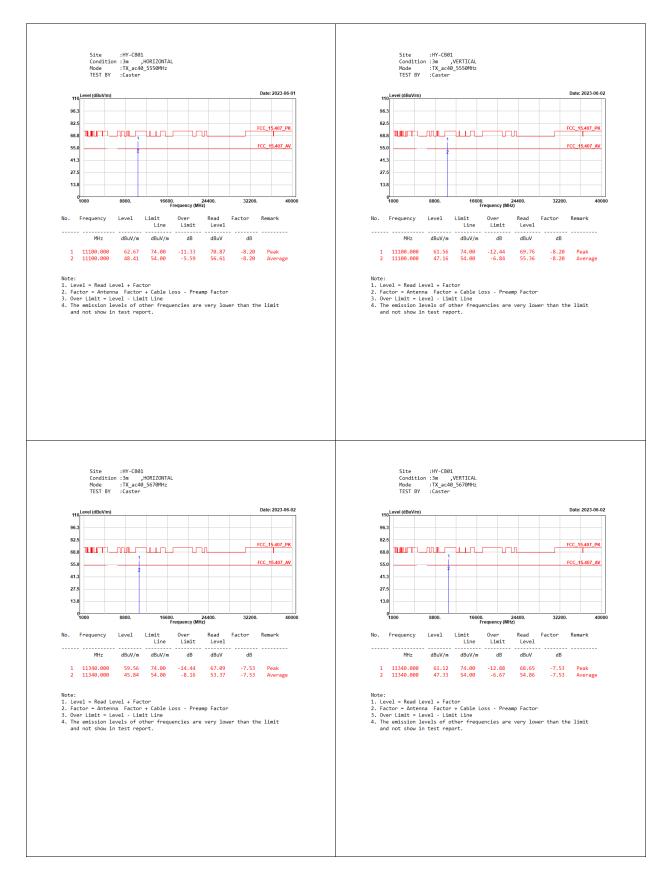




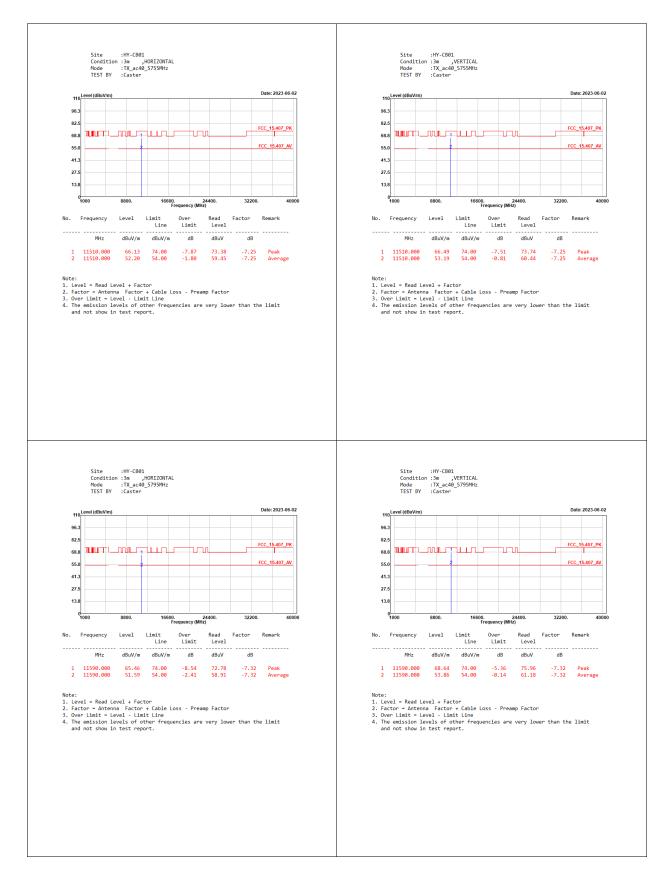




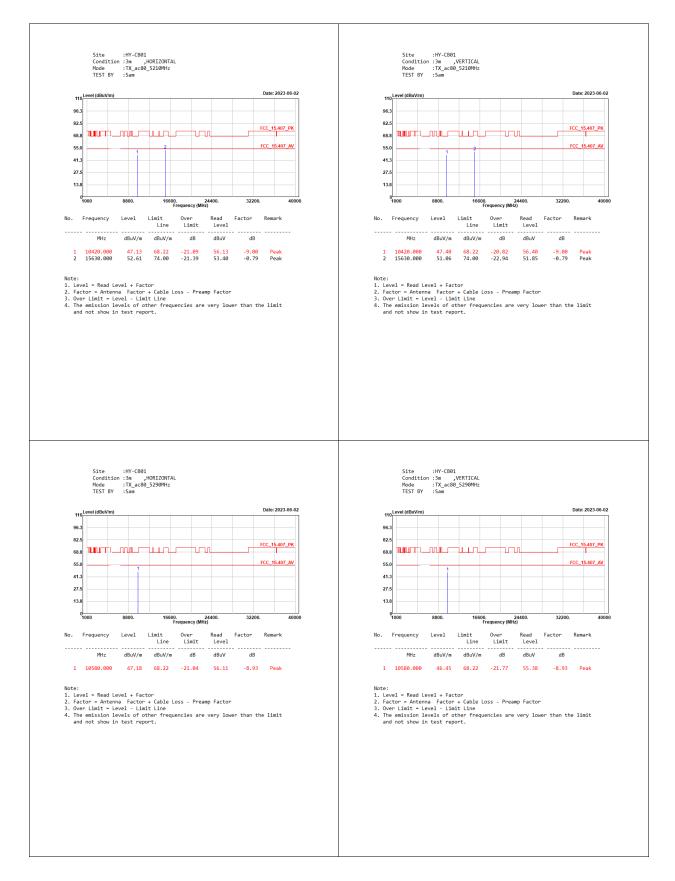




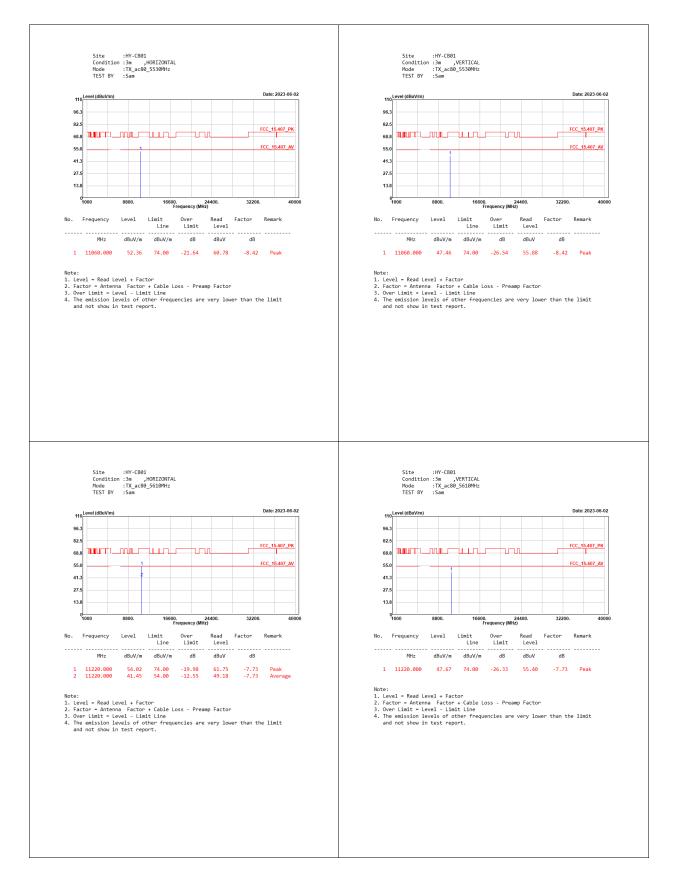




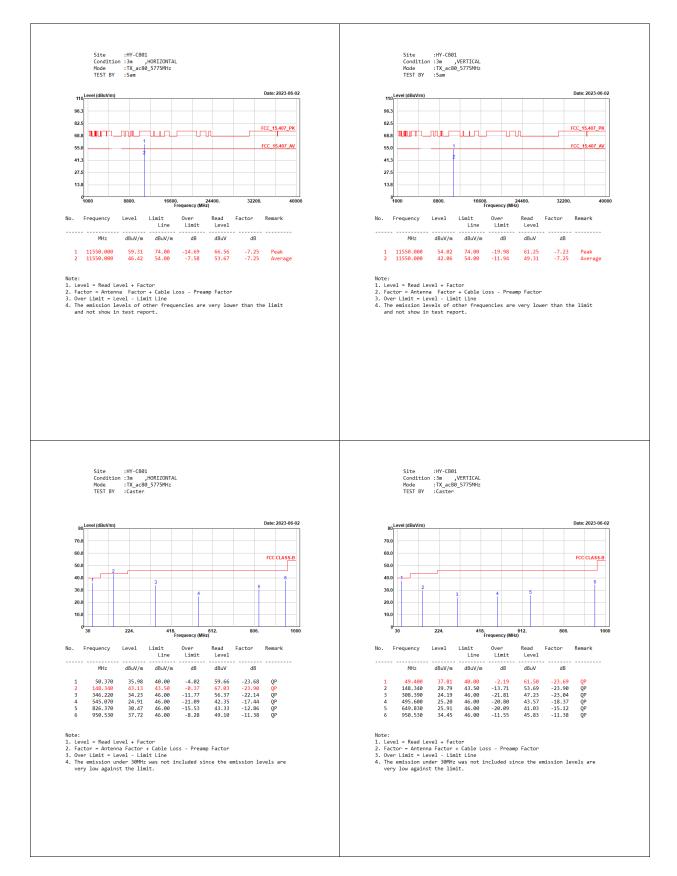










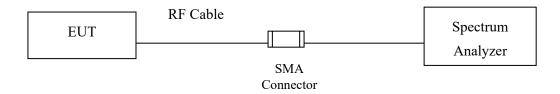




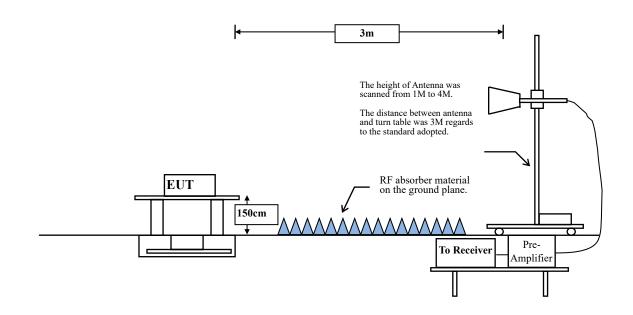
4. Band Edge

4.1. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



4.2. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

FCC Part 15 Subpart C Paragraph 15.209 Limits					
Frequency MHz	uV/m @3m	dBµV/m@3m			
30-88	100	40			
88-216	150	43.5			
216-960	200	46			
Above 960	500	54			

Remarks : 1. RF Voltage $(dB\mu V) = 20 \log RF$ 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.
- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Based on ANSI C63.10-2013 Section 12.7.3 d) provides the conversion formula between field strength and EIRP, if distance is 3m, -27dBm is equivalent to 68.22dBuV/m.

4.3. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 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 can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

The bandwidth below 1 GHz setting on the field strength meter is 120 kHz, above 1 GHz are 1 MHz. The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW \geq 3 MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

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

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

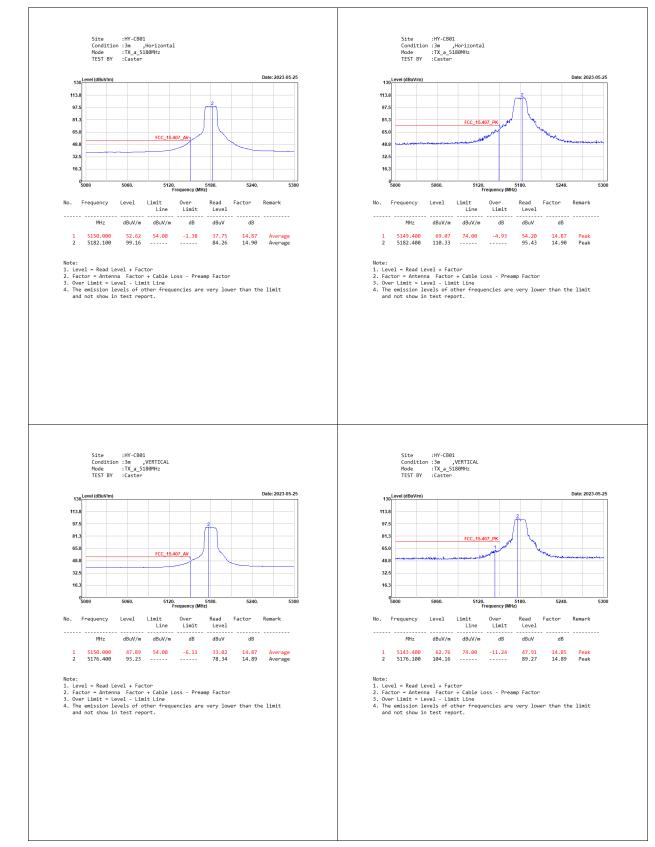
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

5 GHz band	Duty Cycle	Т	1/T	VBW
	(%)	(ms)	(Hz)	(Hz)
802.11 a	98.35	1.4280	700	10
802.11 n20	95.56	2.5800	388	500
802.11 n40	92.11	1.2600	794	1000
802.11 ac20	95.57	2.5900	386	500
802.11 ac40	96.59	1.2750	784	1000
802.11 ac80	93.55	0.6090	1642	2000

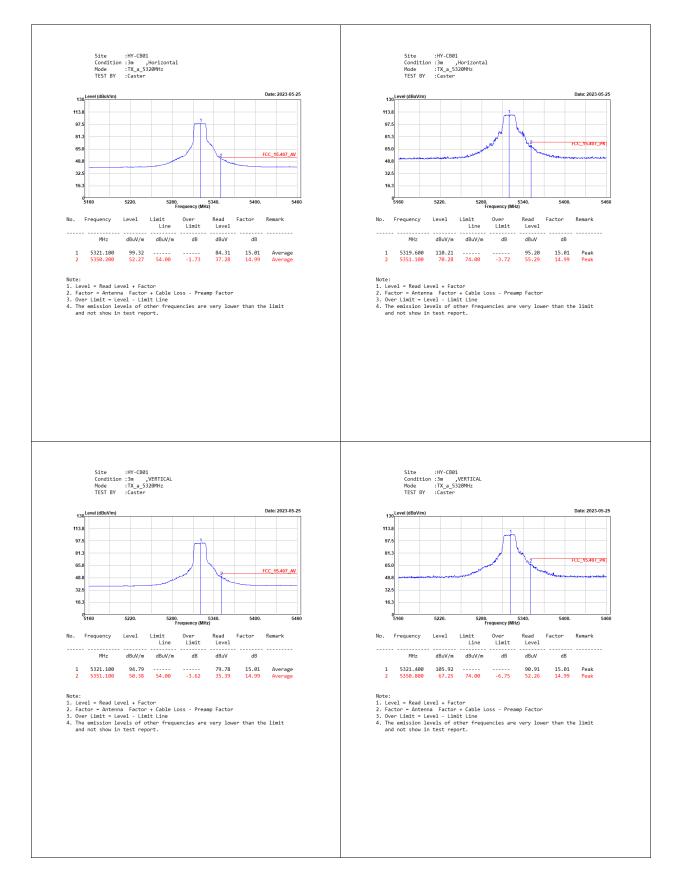
Note: Duty Cycle Refer to Section 5.



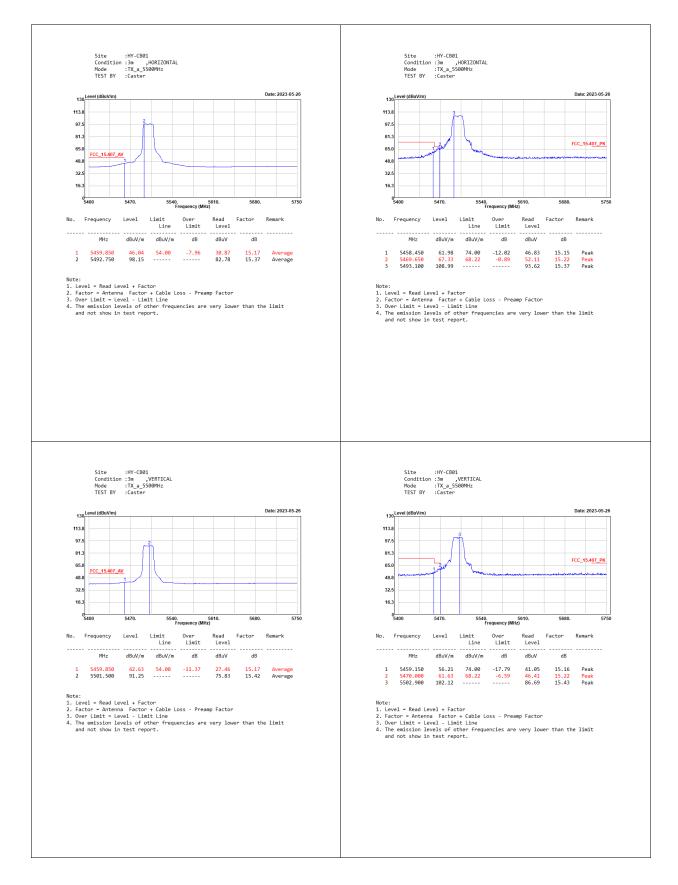
4.4. Test Result of Band Edge



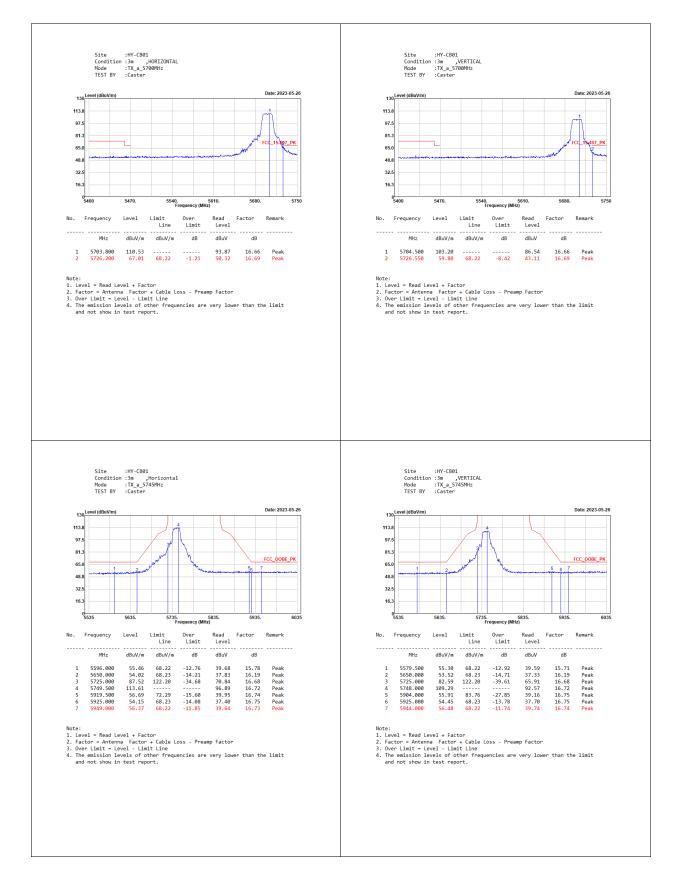




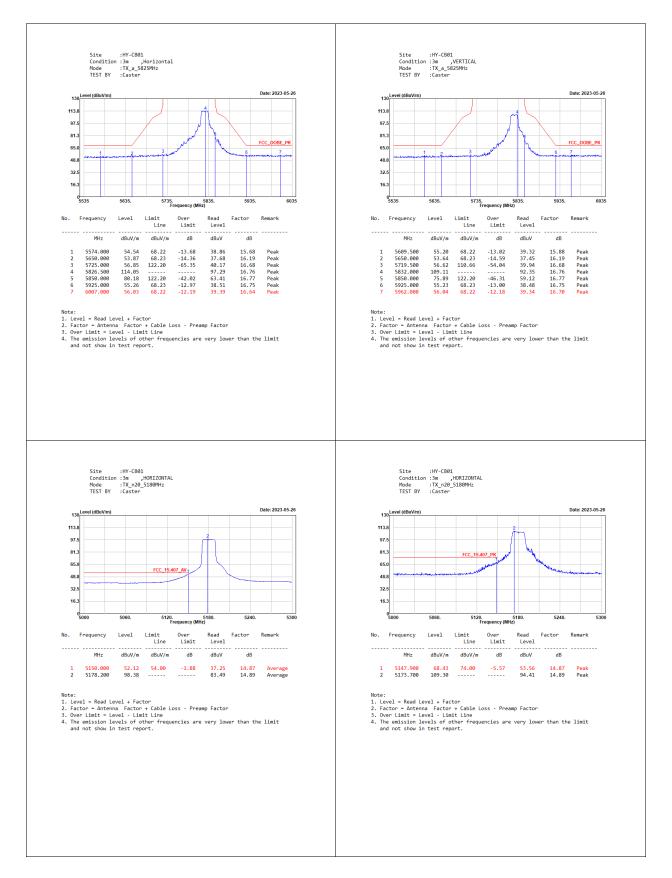




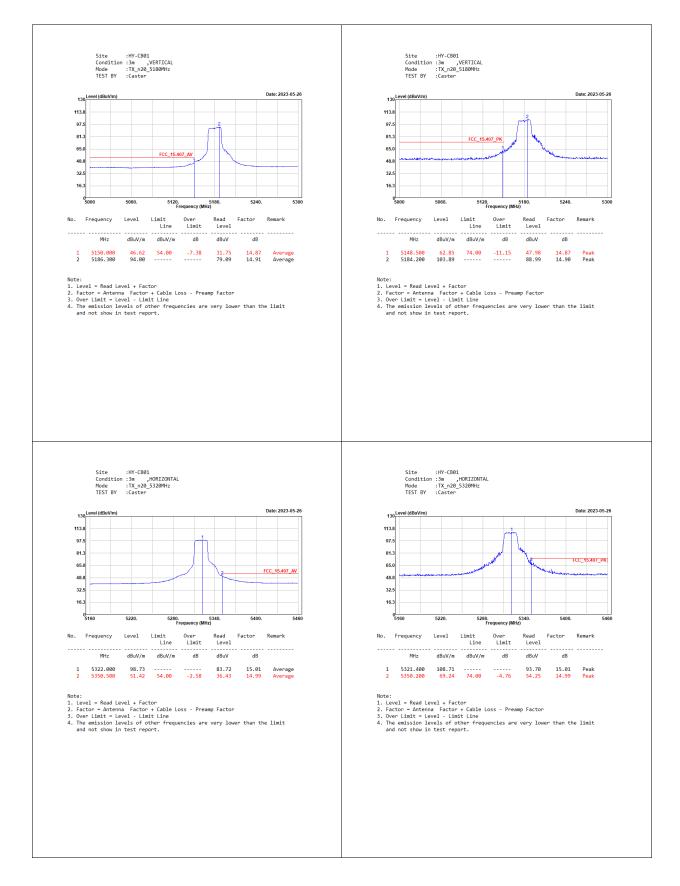




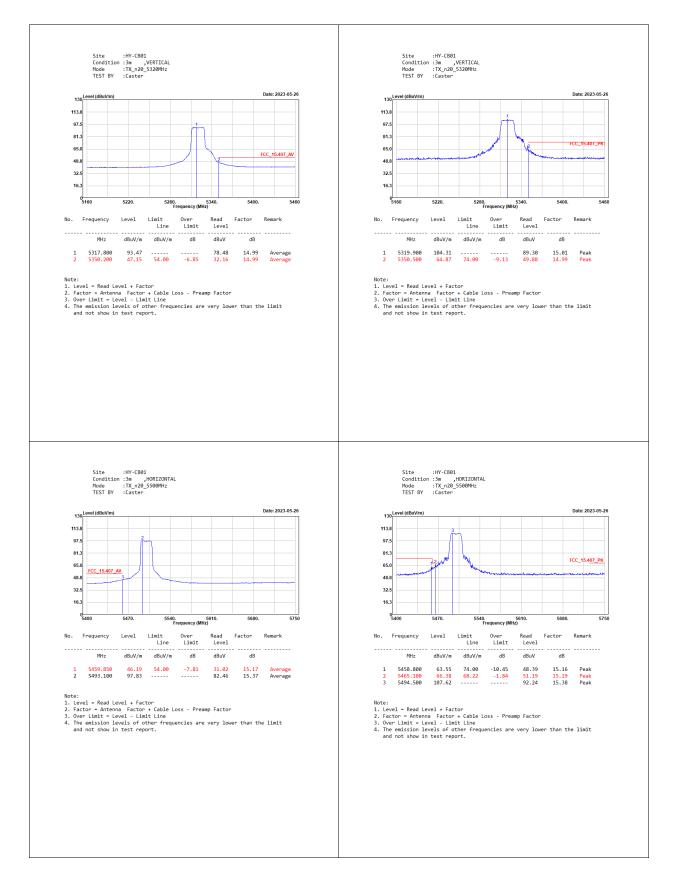




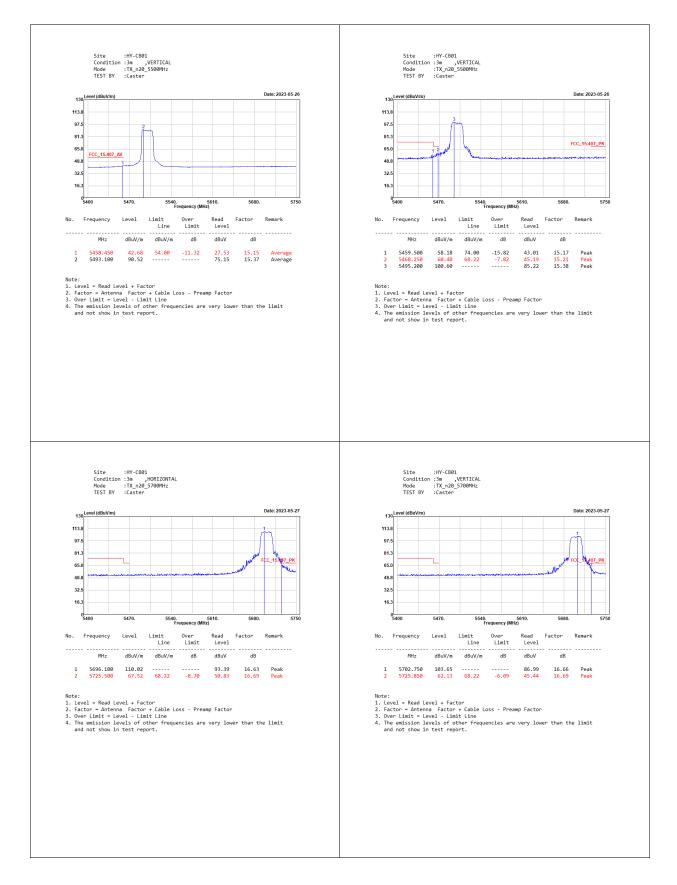




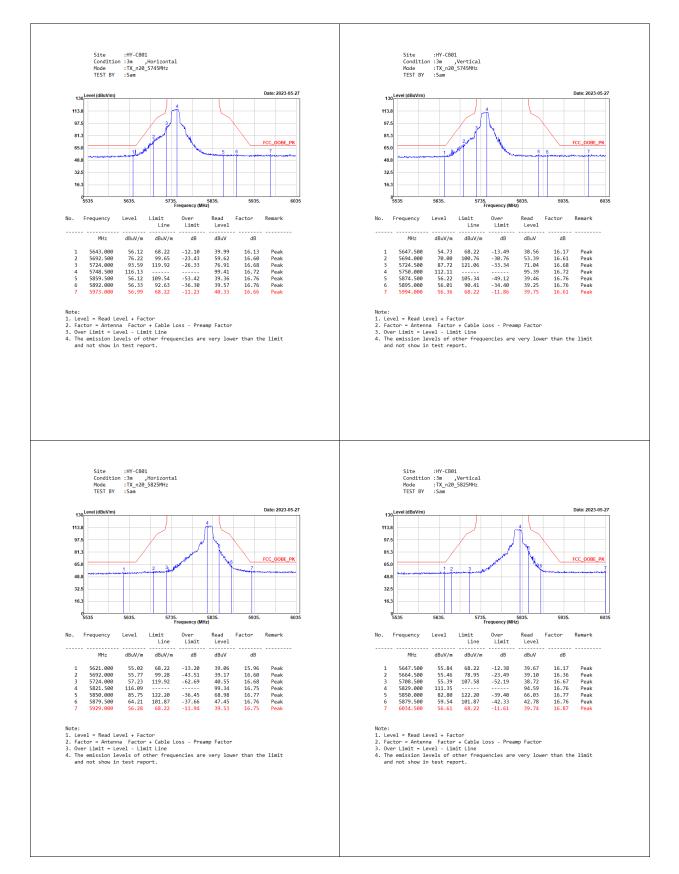




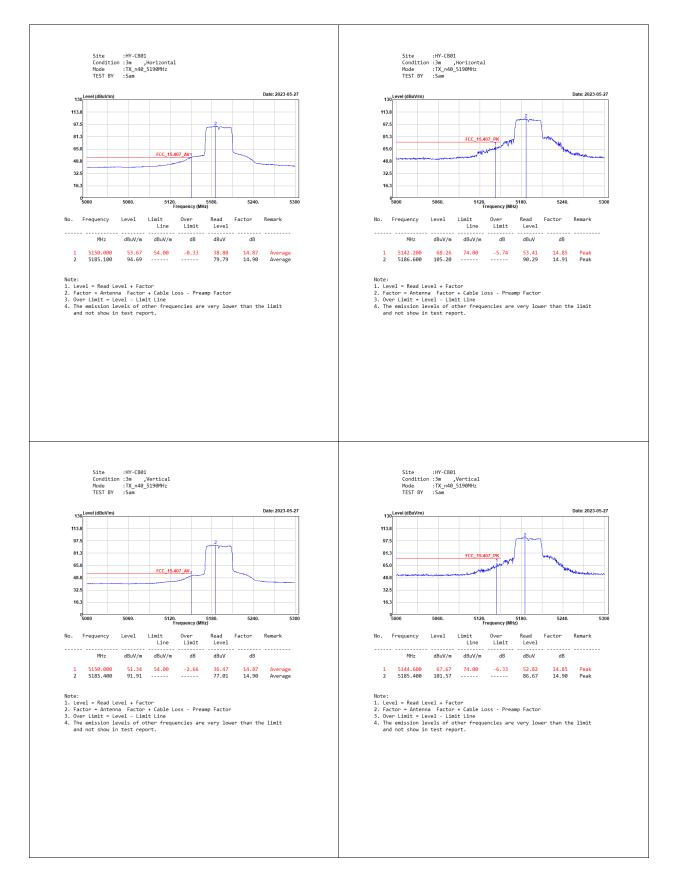




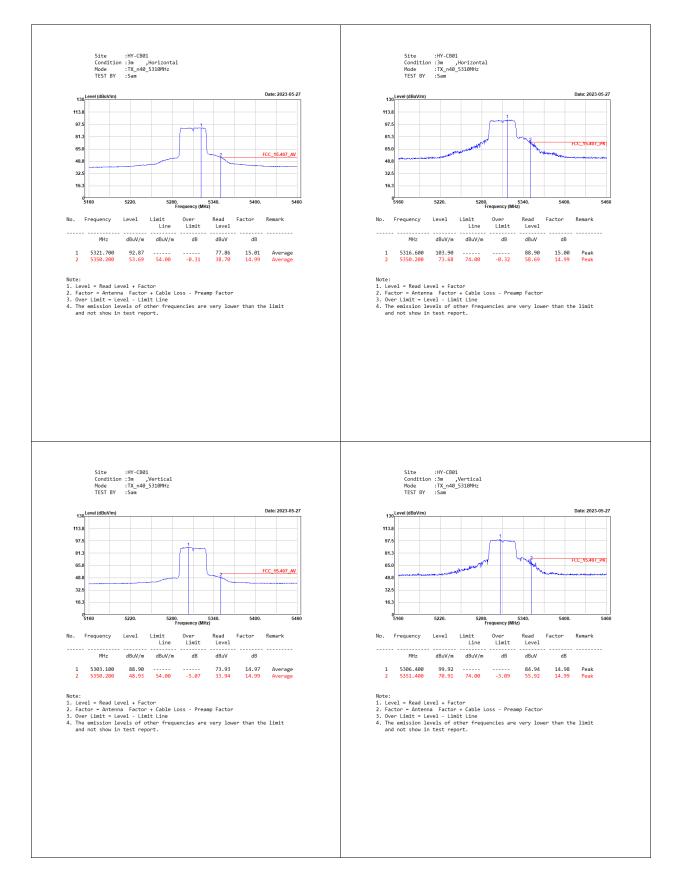




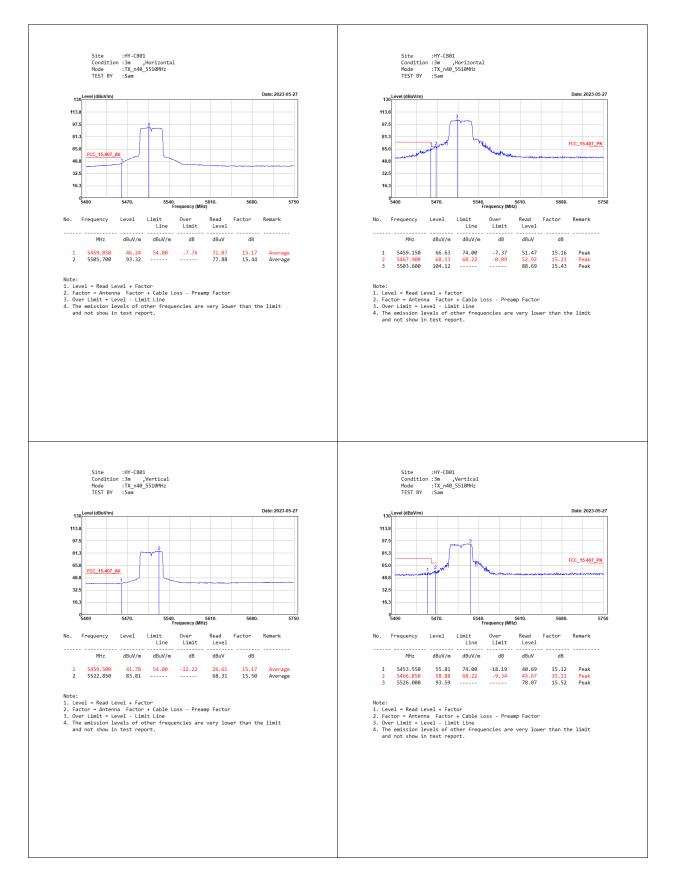




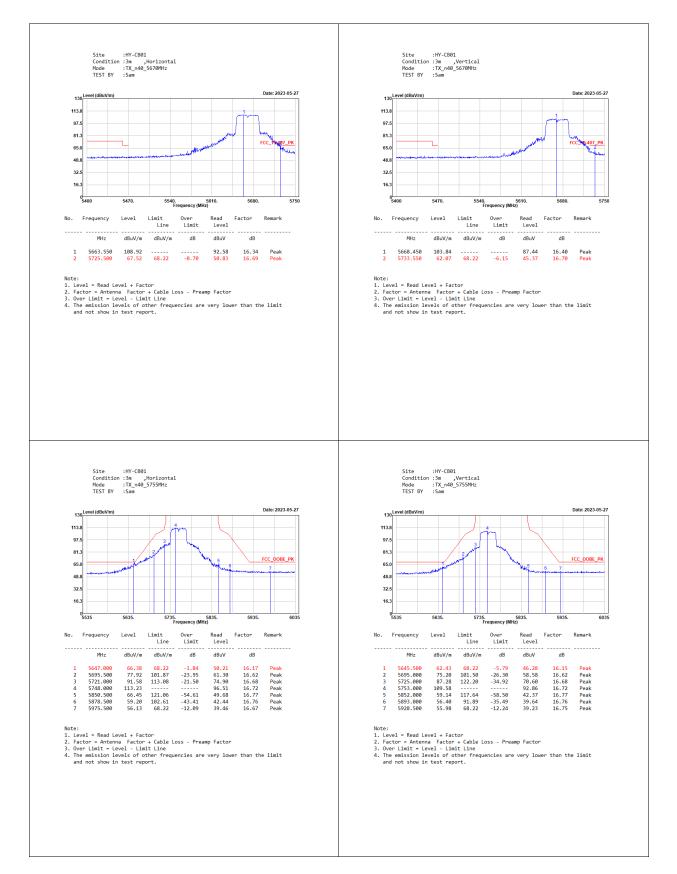




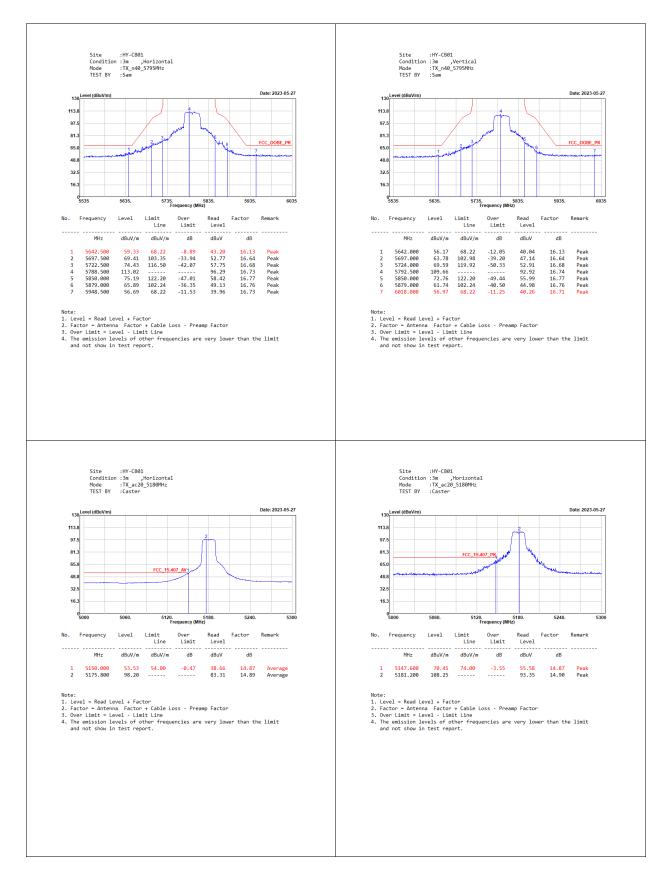




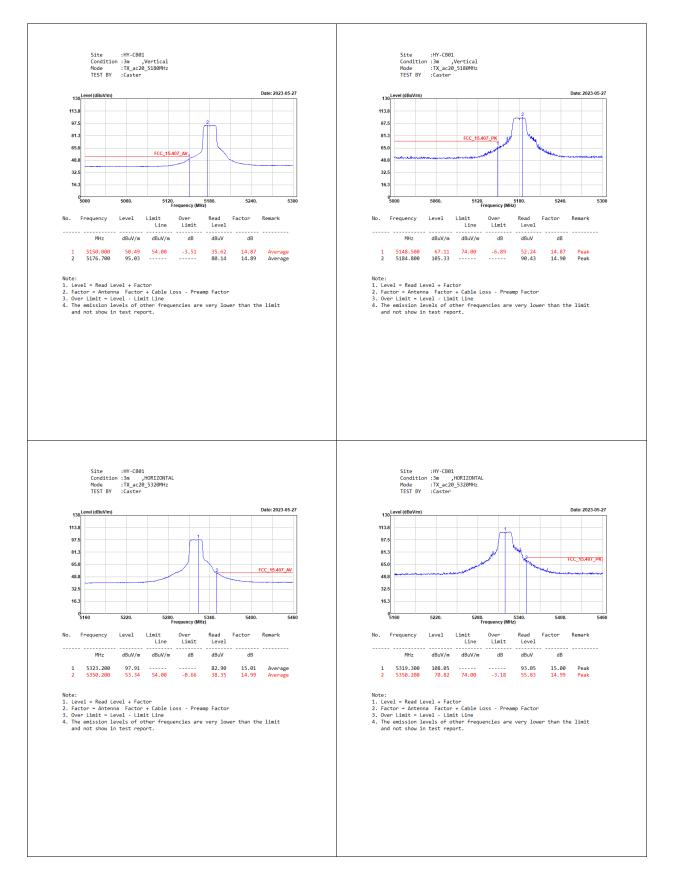




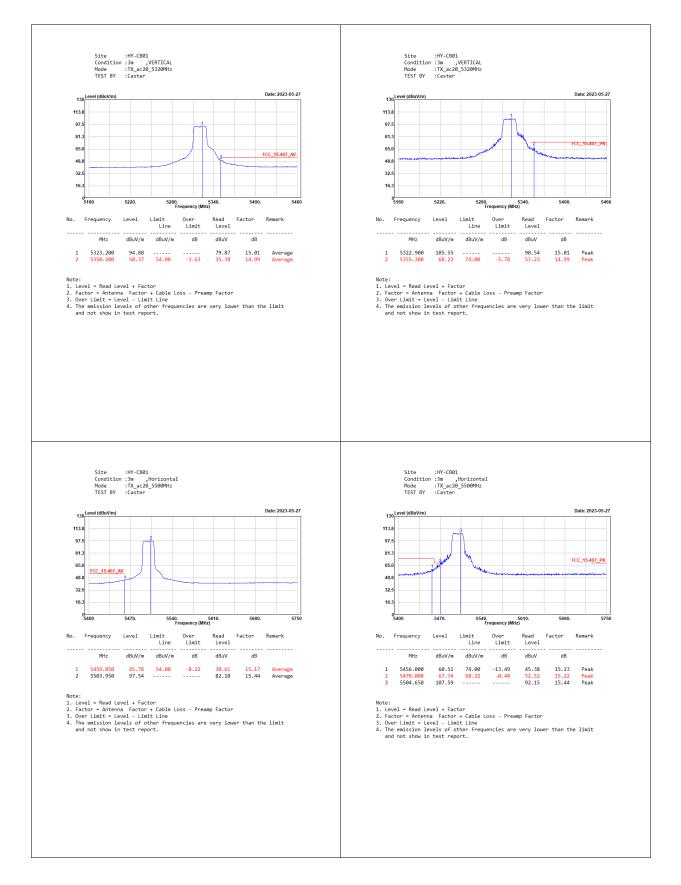




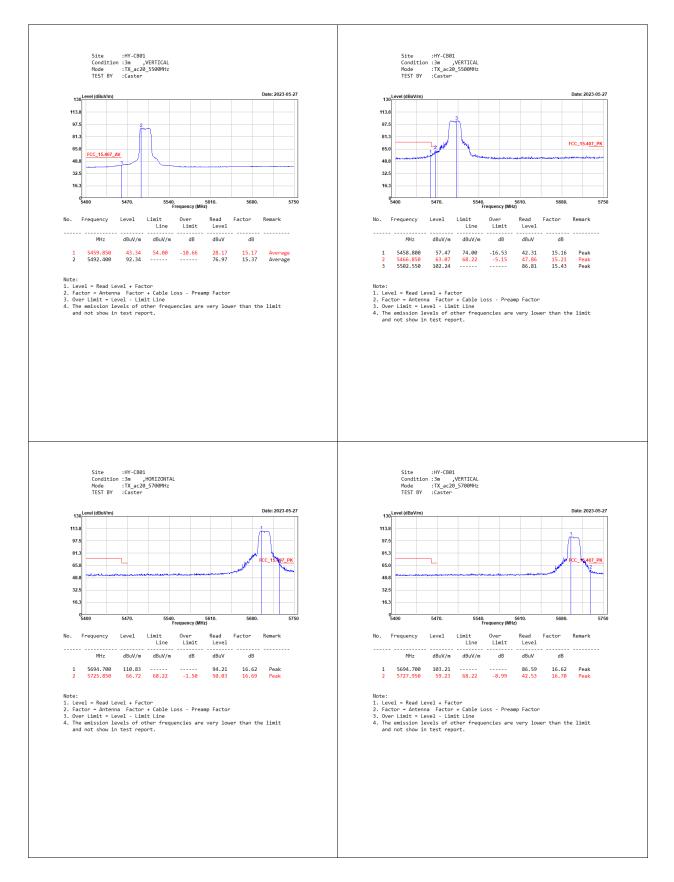




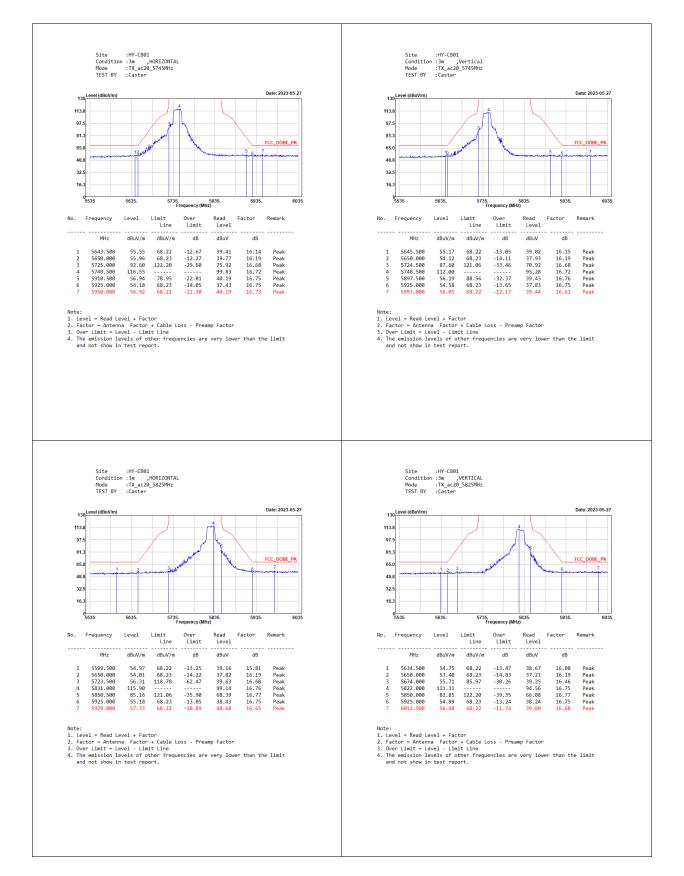




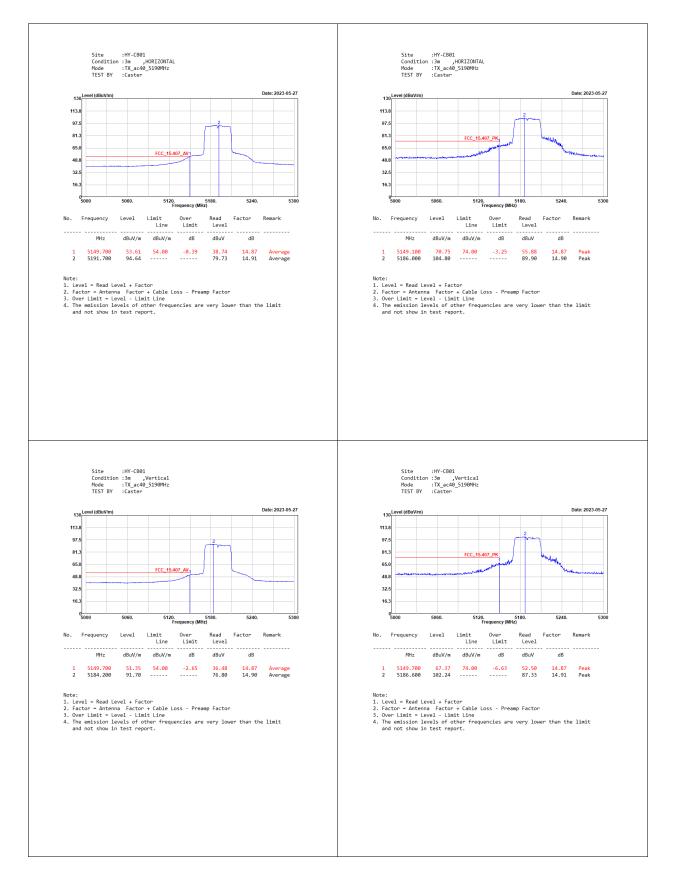




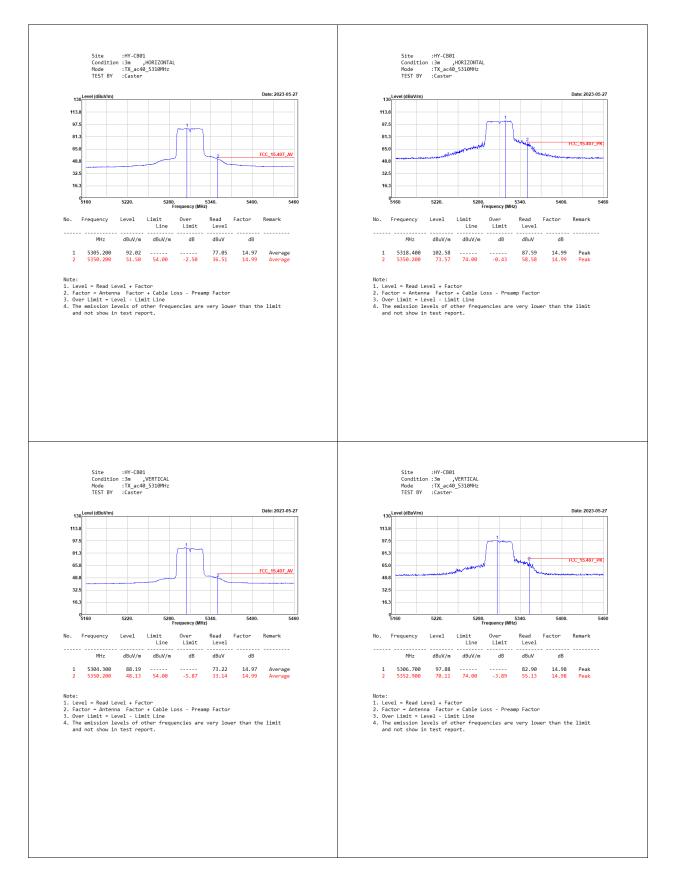




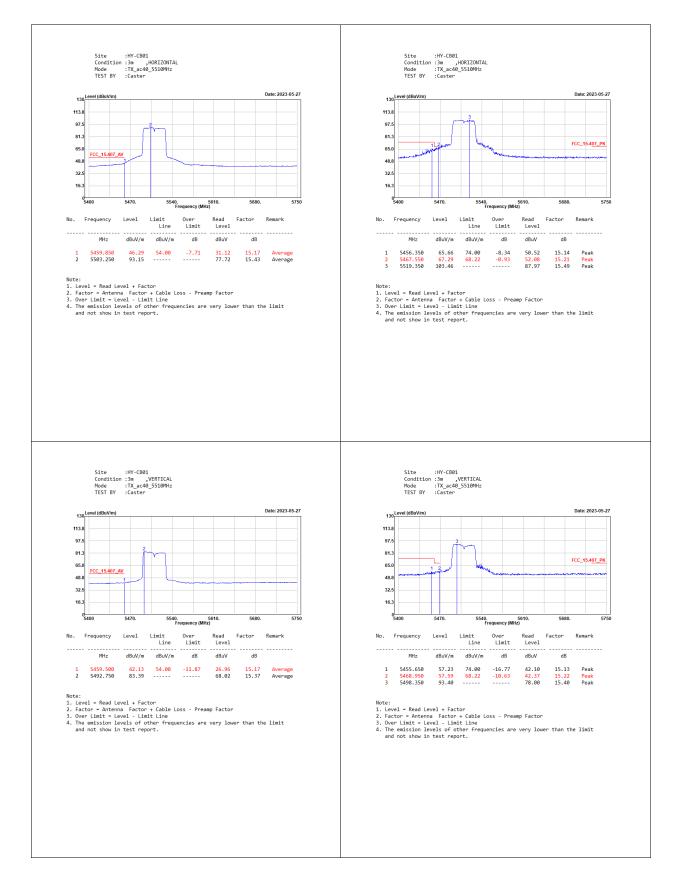




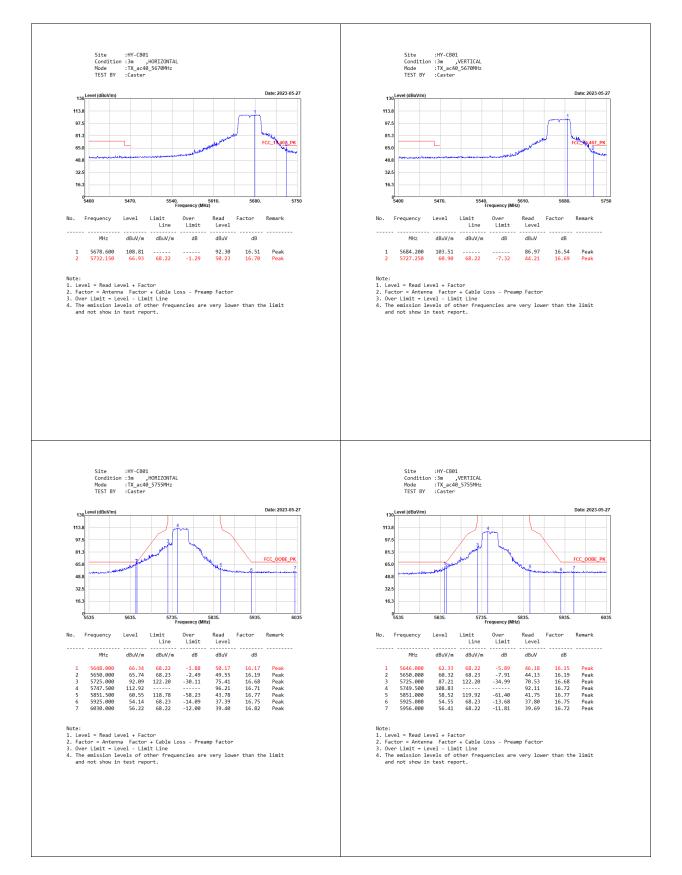




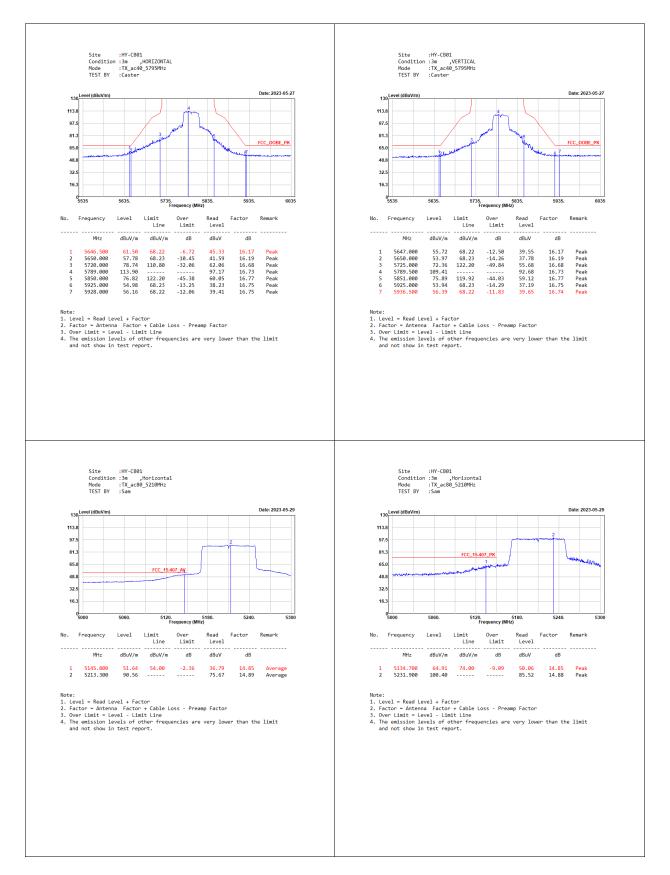




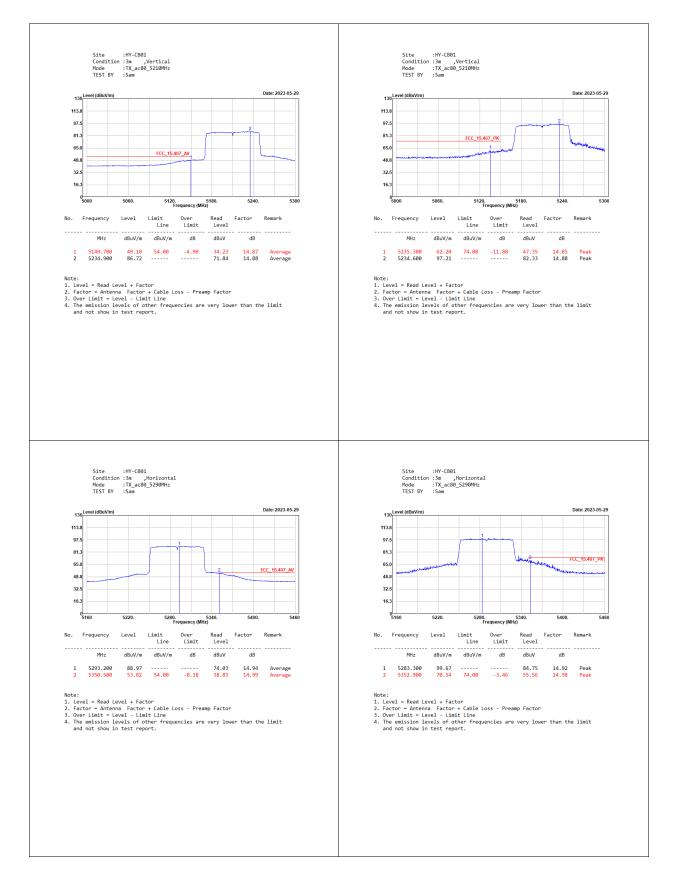




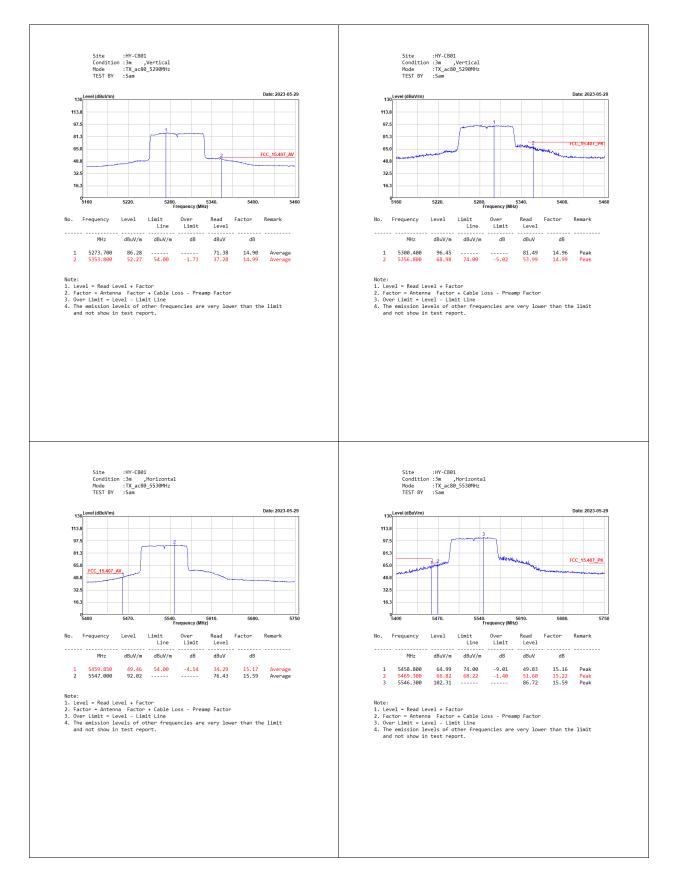




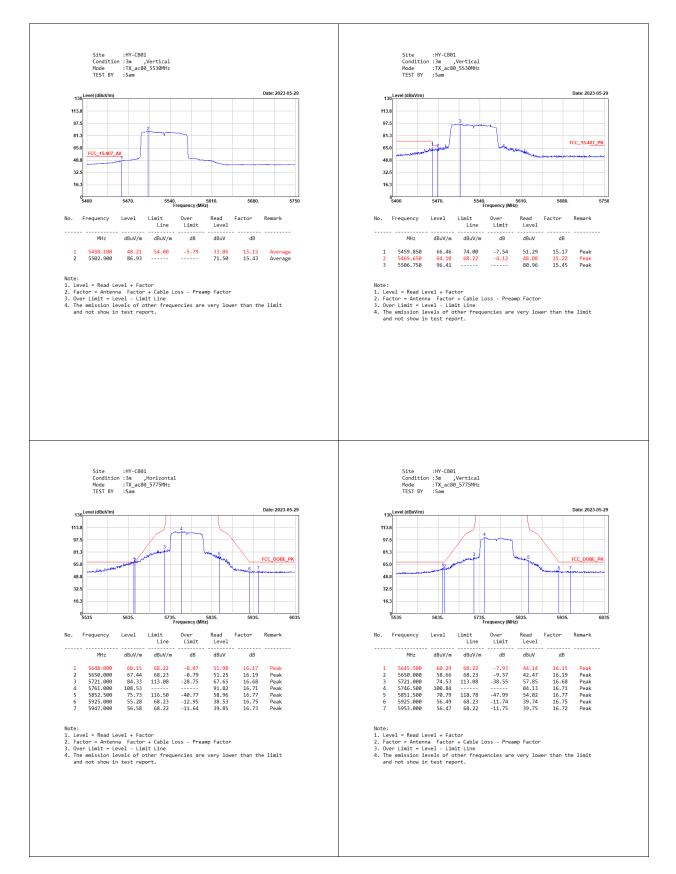








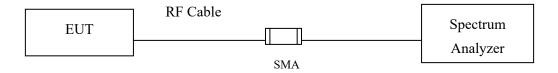






5. Duty Cycle

5.1. Test Setup



5.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to U-NII test procedure of KDB789033 for compliance to FCC 47CFR 15.407 requirements.



5.3. Test Result of Duty Cycle

Product	:	xPico® 200 Series Wi-Fi® IoT Gateway Module
Test Item	:	Duty Cycle
Test Mode	:	Transmit

Duty Cycle Formula:

Duty Cycle = Ton / (Ton + Toff)

Duty Factor = 10 Log (1/Duty Cycle)

Results:

5 GHz band	Ton	Ton + Toff	Duty Cycle	Duty Factor
	(ms)	(ms)	(%)	(dB)
802.11 a	1.4280	1.4520	98.35	0.07
802.11 n20	2.5800	2.7000	95.56	0.20
802.11 n40	1.2600	1.3680	92.11	0.36
802.11 ac20	2.5900	2.7100	95.57	0.20
802.11 ac40	1.2750	1.3200	96.59	0.15
802.11 ac80	0.6090	0.6510	93.55	0.29



802.11a

Spectr	um										
Ref Le	vel 3	25.00 di	Bm Offset	: 1.00 dB	RBW	10 MHz					
🗕 Att		35	dB 👄 SWT	6 ms	o vbw	10 MHz					
●1Pk Vie	W										
\20°¢BAA≁	~	Mi	· · · · · · · · · · · · · · · · · · ·						 rainstrukationsi	ug gor we we	19.12 dBm 612.00 μs
10 dBm-					_		P	2[1]			0.70 dB 1.42800 ms
0 dBm—											
-10 dBm-	_								 		
-20 dBm-											
-30 dBm-	-								 	-	
-40 dBm-	+										
-50 dBm-	+										
-60 dBm-	+								 		
-70 dBm-	_										
CF 5.18	GHz					1001 pt	is				600.0 µs/
Marker											
	Ref	Trc	X-valı			alue	Func	tion	 Funct	ion Resu	lt
M1	641	1		512.0 μs	19	9.12 dBm					
D2 D3	M1 M1	1		.428 ms .452 ms		0.70 dB 0.03 dB					
							Mea	suring.		i ya	25.04.2023 15:43:55

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802.11n20

Specti	rum											
Ref Le	evel :	25.00	dBm Offset 1.00) dB 🔵 RBW	10 MHz							
🗕 Att		3!	5 dB 😑 SWT 🛛 10) ms 👄 VBW	10 MHz							
●1Pk Vie	вw											
requidenq:	m	M1]♥ ^{₩₩₩₩}	น่างปฏิบารณาแห่งหน่างการเป	ana ang pang pang pang pang pang pang pa	or a stand with the set	M1 Martinet	1[1] *******	pun	waallabellooda	ertraggitztaareitettaati	^{~~} 1.32	
10 dBm-				T		D2	2[1]					1.36 dB 000 ms
0 dBm—	_											
-10 dBm												
-20 dBm												
-30 dBm	-	ų—						,				
-40 dBm	-											
-50 dBm	-							_				
-60 dBm	-											
-70 dBm								_				
CF 5.18	3 GHz				1001 pt	s .				•	1.	0 ms/
Marker												
Туре	Ref	Trc	X-value	Y-Va		Funct	ion		Fur	nction Res	sult	
M1 D2	M1	1	1.32 2.58		.05 dBm 1.36 dB							
D2	M1	1	2.58		0.01 dB							
						Meas	suring	1			25.04. 16:0	2023

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802.11n40

Spect	rum																ĺ	₩
Ref Le	evel :	25.00 0	dBm O	ffset	1.00 dB	•	RBW	10 MH	lz									
🛛 Att		35	5 dB 👄 S	WT	6 ms	•	VBW	10 MH	Ηz									
●1Pk Vi	ew																	
,29.dBm	41.A.M.Au	1 ^M ↓~~	ahrud rababled	,-hanauk	ա ^{տատիս} ֆ2 ֆԸ)\$ ^[]	***vefebr	tu prveskiji	the start	kunska juli y		je mense de la	paradad da Montal Manager	tuqtur	Ą	limentuarto	14.06 d ///984.00	Neks
10 dBm·						Í.					2[1]		1				3.00 1.26000	
0 dBm—															+			
-10 dBm	-														+		+	
-20 dBm	<u>ا</u>		_														+	
-30 dBm	۱ 	(p)			ես	,				-4				l	u -		+	
-40 dBm																	-	
-50 dBm																		
-60 dBm	<u>+</u>						-											
-70 dBm	<u>ا</u> ل-۱						-						-					
CF 5.23	3 GHz		1				1	1001	pts				1				600.0 μ	s/
Marker																		
Туре	Ref		х-	value				alue		Func	tion		F	uncti	ion	Resul	t	
M1		1			4.0 µs		14	1.06 dB										
D2 D3	M1 M1	1			.26 ms 368 ms	-		3.00 (-0.22 (_						
										Mela	surin	a			y		25.04.2023	

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802.11ac20

Spect	rum									
	evel	25.00		ffset 1.00 dB						
Att		3:	5 dB 👄 S	WT 10 ms	VBW	10 MHz				
●1Pk Vi										
.20.dBm	www	~JH.orahb	MI MI	utritation of the state of the	لماليهم والمحالية	D2 www.ppparen	M1[1 مەرىپايلىكىمىيەرمىيە] สุนครณหาสุขายและอยู่ป	hourself	16.86 dBm
10 dBm							D2[1]]		2.56 dB 2.59000 ms
0 dBm—										
-10 dBn	1									
-20 dBn	-									
-30 dBm	י				_					
-40 dBm	۰ 									
-50 dBm										
-60 dBm										
-70 dBn										
CF 5.1	B GHz					1001 pt	5			1.0 ms/
Marker										
Туре	Ref		X-	value		alue	Functior	<u>۱</u>	Funct	ion Result
M1 D2	M1	1		2.25 ms 2.59 ms	16	.86 dBm 2.56 dB				
D2 D3	M1 M1	1		2.39 ms 2.71 ms		0.07 dB				
) Measuri	ing		25.04.2023

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802.11ac40

Spect	rum															ĺ	₩
	evel	25.00 d				1.00 dB 🧲											
Att		35	dB 🧉	sw1	-	5 m s 🧉	VBW	/ 10 Mł	łz								
í⊜1Pk Vi	ew																
20 dBm											1[1]					11.48 d	
unit indu	where	yulyillabou	, Traffellan	unitrophyle	~R ₂ 2	gienwijil.Wolfreyfi	rother	hill all the light	www.huhyy	J ^{rra} tion D	ղուն այն այն այն այն այն այն այն այն այն այ	e-luna	⊧Kyþah ^a ttikkontren	qdly	population	165,00 44,00 3.68	器
10 HBm					1											1.27500	ms
0 dBm—	_																
-10 dBm	-																
-20 dBm	-																
-30 dBm	-				Ĥ		_			-					1		
-40 dBm	-																
-50 dBm	-																
-60 dBm	-						_										
-70 dBm	-																
CF 5.19	9 GH:	z					1	1001	pts				1	-		500.0 μ	s/
Marker																	
Туре	Ref	Trc		X-va	lue	.		zalue		Func	tion		Fun	cti	on Resu	lt	
M1		1				65.0 μs	1	1.48 dE									
D2 D3	M1 M1					275 ms .32 ms		3.68									_
)								Mea	suring.	1		1	X	25.04.2023	

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802.11ac80

					v		•••						
Spect	rum												
Ref L	evel	25.00	dBm Offset	1.00 dB	RBW	10 MHz							
Att		3!	idB 👄 SWT	3.5 ms	VBW	10 MHz							
●1Pk Vi	iew												
20 dBm	_							M	1[1]				5.07 dBn 542.50 μ
-rolpatelya	Janderand and	\ ₽	enter the second	μnΩ2_μμ Άρ≱μμ	paraparte	therwork	٦,	n Bi	2[1] ՄԿԿ-Ռ-թ-մե	Annt	, where here	the half and a start	
0 dBm–							+						
-10 dBr	n												
-20 dBr	n												
-30 dBr	n	-					Y				N		
-40 dBr	n												
-50 dBr	n												
-60 dBr	n												
-70 dBr	n												
CF 5.2	1 GHz					1001	pts	5					
Marker													
Туре	Ref	Trc	X-value			alue		Funct	tion		Fur	nction Resul	t
M1 D2	M1	1		42.5 μs)9.0 μs	5	5.07 dBm 3.44 dB							
D2	M1 M1	1		51.0 µs		3.44 ae -0.06 de	-						
) [Mea	surina.	1		1.420	25.04.2023
)					

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