



TEST REPORT

Report No. : **CTC2025343006**

FCC ID..... : **PX9M133WK002**

Applicant : **Winmate Inc.**

Address..... : 9F, No.111-6, Shing-De Rd., San-Chung District, New Taipei City, 241, Taiwan

Manufacturer..... : Winmate Inc.

Address..... : 9F, No.111-6, Shing-De Rd., San-Chung District, New Taipei City, 241, Taiwan

Product Name : **Rugged Tablet PC**

Trade Mark : WINMATE

Model/Type reference..... : M133WK-5

Listed Model(s) : M133xxxxxxxxxx, D140, D140xxxxxxxxxx ("x" can be A~Z, a~z, 0~9, Blank, Dash or Slash for marketing purpose only)

Standard : **FCC CFR Title 47 Part 15 Subpart C Section 15.247**

Test Report Form No : CTC-TR-057_A2

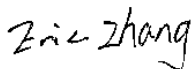
Master TRF : Dated 2025-05-12

Date of receipt of test sample..... : May 30, 2025

Date of testing..... : May 30, 2025 ~ Jul. 31, 2025

Date of issue..... : Oct. 09, 2025

Result..... : **PASS**

Compiled by:		
(Printed name+signature)	Lucy Lan	
Supervised by:		
(Printed name+signature)	Eric Zhang	
Approved by:		
(Printed name+signature)	Totti Zhao	

This test report may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CTC. The Test Result in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to CTC within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit.

**Table of Contents****Page**

1. TEST SUMMARY	3
1.1. TEST STANDARDS.....	3
1.2. REPORT VERSION	3
1.3. TEST DESCRIPTION.....	3
1.4. TEST FACILITY	4
1.5. MEASUREMENT UNCERTAINTY	5
1.6. ENVIRONMENTAL CONDITIONS.....	5
2. GENERAL INFORMATION	6
2.1. CLIENT INFORMATION	6
2.2. GENERAL DESCRIPTION OF EUT	6
2.3. ACCESSORY EQUIPMENT INFORMATION	7
2.4. OPERATION STATE	8
2.5. MEASUREMENT INSTRUMENTS LIST	10
3. TEST ITEM AND RESULTS	12
3.1. CONDUCTED EMISSION.....	12
3.2. RADIATED EMISSION.....	15
3.3. BAND EDGE EMISSIONS (RADIATED)	38
3.4. BAND EDGE AND SPURIOUS EMISSIONS (CONDUCTED)	63
3.5. DTS BANDWIDTH.....	111
3.6. PEAK OUTPUT POWER	137
3.7. POWER SPECTRAL DENSITY	139
3.8. DUTY CYCLE	153
3.9. ANTENNA REQUIREMENT.....	167



1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

[FCC Rules Part 15.247](#): Operation within the bands 902–928MHz, 2400–2483.5MHz, and 5725–5850MHz.

[ANSI C63.10-2020](#): American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

[FCC KDB 558074 D01 15.247 Meas Guidance v05r02](#)

[FCC KDB 662911 D01 Multiple Transmitter Output v02r01](#)

1.2. Report Version

Revised No.	Report No.	Date of issue	Description
01	CTC2025343006	Oct. 09, 2025	Original

1.3. Test Description

FCC Part 15 Subpart C (15.247)			
Test Item	Standard Section	Result	Test Engineer
Antenna Requirement	15.203	Pass	Marrow
Conducted Emission	15.207	Pass	Marrow
Conducted Band Edge and Spurious Emissions	15.247(d)	Pass	Marrow
Radiated Band Edge and Spurious Emissions	15.205&15.209&15.247(d)	Pass	Marrow
6dB Bandwidth	15.247(a)(2)	Pass	Marrow
Conducted Max Output Power	15.247(b)(3)	Pass	Marrow
Power Spectral Density	15.247(e)	Pass	Marrow
Transmitter Radiated Spurious	15.209&15.247(d)	Pass	Marrow

Note:

1. The measurement uncertainty is not included in the test result.
2. N/A: means this test item is not applicable for this device according to the technology characteristic of device.



1.4. Test Facility

Address of the report laboratory

CTC Laboratories, Inc.

Add: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China

Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017.

CTC Laboratories, Inc.

Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for CTC Laboratories, Inc.

Test Items	Measurement Uncertainty	Notes
DTS Bandwidth	$\pm 0.0196\%$	(1)
Maximum Conducted Output Power	± 0.686 dB	(1)
Maximum Power Spectral Density Level	± 0.743 dB	(1)
Band-edge Compliance	± 1.328 dB	(1)
Unwanted Emissions In Non-restricted Freq Bands	9kHz-1GHz: ± 0.746 dB 1GHz-26GHz: ± 1.328 dB	(1)
Conducted Emissions 9kHz~30MHz	± 3.08 dB	(1)
Radiated Emissions 30~1000MHz	± 4.51 dB	(1)
Radiated Emissions 1~18GHz	± 5.84 dB	(1)
Radiated Emissions 18~40GHz	± 6.12 dB	(1)

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

1.6. Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15 °C to 35 °C
Relative Humidity:	20 % to 75 %
Air Pressure:	101 kPa

CTC Laboratories, Inc.

Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhui Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



2. GENERAL INFORMATION

2.1. Client Information

Applicant:	Winmate Inc.
Address:	9F, No.111-6, Shing-De Rd., San-Chung District, New Taipei City, 241, Taiwan
Manufacturer:	Winmate Inc.
Address:	9F, No.111-6, Shing-De Rd., San-Chung District, New Taipei City, 241, Taiwan
Factory:	Winmate Inc.
Address:	9F, No.111-6, Shing-De Rd., San-Chung District, New Taipei City, 241, Taiwan

2.2. General Description of EUT

Product Name:	Rugged Tablet PC
Trade Mark:	WINMATE
Model/Type reference:	M133WK-5
Listed Model(s):	M133xxxxxxxx, D140, D140xxxxxxxx ("x" can be A~Z, a~z, 0~9, Blank, Dash or Slash for marketing purpose only)
Model Difference:	Difference is only model name, trademark, and colour (for marketing).
Sample ID:	CTC250521-005-S004
RF Module	AX210NGW
Power Supply:	DC 20V 3.5A from AC/DC Adapter DC 10.9V 6700mAh 73.03Wh from Rechargeable Li-ion Battery Pack
Adapter Model	A20-065N3A Input: 100-240V~ 50/60Hz 1.6A Output: 5V=3A 15W/ 9V=3A/ 12V=3A/ 15V=3A/ 20V=3.25A 65W
Hardware Version:	M133DRT
Software Version:	V250428
2.4G Wi-Fi	
Modulation:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/ n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Operation Frequency:	802.11b/ g/ n(HT20)/ ax(HE20): 2412MHz~2462MHz 802.11n(HT40)/ ax(HE40): 2422MHz~2452MHz
Channel Number:	802.11b/ g/ n(HT20)/ ax(HE20): 11 channels 802.11n(HT40)/ ax(HE40): 7 channels
Channel Separation:	5MHz
Antenna Type:	Monopole Antenna



Antenna Gain:	Ant1: 2.46dBi; Ant2: 2.33dBi
---------------	------------------------------

2.3. Accessory Equipment Information

Equipment Information			
Name	Model	S/N	Manufacturer
/	/	/	/
Cable Information			
Name	Shielded Type	Ferrite Core	Length
/	/	/	/
Test Software Information			
Name	Version	/	/
DRTU	DRTU.06931.23.70.0	/	/



2.4. Operation State

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

Operation Frequency List:

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

Note: CH 01~CH 11 for 802.11b/g/n(HT20)/ax(HE20), CH 03~CH 09 for 802.11n(HT40)/ax(HE40).

Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	NA	NA	Monopole Antenna	IPEX	2.46
2	NA	NA	Monopole Antenna	IPEX	2.33

For 2.4G, this EUT supports MIMO 2X2 with the unequal antenna gain, and any transmit signals are correlated with each other.

According to KDB 662911 D01, Directional Gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N]$ dBi, that is Directional Gain = $10 \log[((10^{(2.46/20)} + 10^{(2.33/20)})^2) / 2] = 5.41$ dBi.

Data Rated:

Preliminary tests were performed in different data rate, and found which the below bit rate is worst case mode, so only show data which it is the worsted case mode.

Test Mode	Data Rate (worst mode)
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)/ (HT40)	HT-MCS0
802.11ax(HE20)/ (HE40)	HE-MCS0

CTC Laboratories, Inc.

Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhui Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



Test Mode:

For RF test items:
1. The engineering test program was provided and enabled to make EUT continuous transmit. 2. IEEE 802.11ax mode only supports full RU, so only the full RU is evaluated and measured inside report
For AC power line conducted emissions:
The EUT was set to connect with the WLAN AP under large package sizes transmission.
For Radiated spurious emissions test item:
The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

power setting:

mode	channel	ANT 1	ANT 2	MIMO
B	2412	14.5	14	/
	2437	14.5	14	/
	2462	14.5	14	/
G	2412	14.5	14	/
	2437	14.5	14	/
	2462	14.5	14	/
N20	2412	/	/	11.25
	2437	/	/	11.25
	2462	/	/	11.25
N40	2422	/	/	11.25
	2437	/	/	11.25
	2452	/	/	11.25
AX20	2412	/	/	11.25
	2437	/	/	11.25
	2462	/	/	11.25
AX40	2422	/	/	11.25
	2437	/	/	11.25
	2452	/	/	11.25



2.5. Measurement Instruments List

RF Test System – SRD						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	Spectrum Analyzer	R&S	FSV40-N	101654	Dec. 13, 2024	Dec. 12, 2025
2	MXG Vector Signal Generator	Agilent	N5182A	MY47420864	Dec. 13, 2024	Dec. 12, 2025
3	PSG Analog Signal Generator	Agilent	E8257D	MY46521908	Dec. 13, 2024	Dec. 12, 2025
4	USB Wideband Power Sensor	Keysight	U2021XA	MY55130004	Mar. 25, 2025	Mar. 24, 2026
5	USB Wideband Power Sensor	Keysight	U2021XA	MY55130006	Mar. 25, 2025	Mar. 24, 2026
6	Wideband Radio Communication Tester	R&S	CMW500	102257	Oct. 24, 2024	Oct. 23, 2025
7	RF Control Unit	Tonscend	JS0806-2	/	Dec. 13, 2024	Dec. 12, 2025
8	High and low temperature test chamber	ESPEC	MT3035	/	Mar. 25, 2025	Mar. 24, 2026
9	RF Cable	HUBER+SUHNER	SUCOFLEX101PE	RF-08	Apr. 16, 2025	Apr. 15, 2026
Test Software						
Name		Manufacturer		Software Version		
JS1120-3		Tonscend		V2.6.88.0346		

Radiated emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9163	01026	Dec. 25, 2024	Dec. 24, 2025
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Sep. 26, 2024	Sep. 25, 2025
3	Test Receiver	Keysight	N9038A	MY56400071	Dec. 13, 2024	Dec. 12, 2025
4	Broadband Amplifier	Schwarzbeck	BBV9743B	259	Dec. 13, 2024	Dec. 12, 2025
5	Mirowave Broadband Amplifier	Schwarzbeck	BBV9718C	111	Dec. 13, 2024	Dec. 12, 2025
6	RE33L-001	COMM	/	014 (9kHz-1GHz)	Feb. 09, 2025	Feb. 08, 2026
7	RE33L-002	COMM	/	015 (9kHz-1GHz)	Feb. 09, 2025	Feb. 08, 2026
8	RE33H-001	SUHB SUCOFLEX	/	016 (1GHz-18GHz)	Feb. 09, 2025	Feb. 08, 2026
9	RE33H-002	HUBENR	/	017 (1GHz-18GHz)	Feb. 09, 2025	Feb. 08, 2026
10	RE33H-003	HUBENR	/	018 (1GHz-18GHz)	Feb. 09, 2025	Feb. 08, 2026
11	RE33H-003	HUBENR	/	019 (18GHz-40GHz)	Feb. 09, 2025	Feb. 08, 2026
12	3m chamber 3	YIHENG	EE106	/	Aug. 29, 2023	Aug. 28, 2026
13	SHF-EHF Horn Antenna	Schwarzbeck	BBHA 9170	013551	Dec. 13, 2024	Dec. 12, 2025
14	Low noise Amplifier	Tonscend	TAP180040048	AP24C8060348	Dec. 13, 2024	Dec. 12, 2025

CTC Laboratories, Inc.

Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



Test Software		
Name	Manufacturer	Software Version
EZ-EMC	FARA	FA-03A2

Conducted emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	LISN	R&S	ENV216	101112	Dec. 13, 2024	Dec. 12, 2025
2	LISN	R&S	ENV216	101113	Dec. 13, 2024	Dec. 12, 2025
3	EMI Test Receiver	R&S	ESCI	100524	Dec. 13, 2024	Dec. 12, 2025
4	ISN CAT6	Schwarzbeck	NTFM 8158	CAT6-8158-0046	Dec. 13, 2024	Dec. 12, 2025
5	ISN CAT5	Schwarzbeck	NTFM 8158	CAT5-8158-0046	Dec. 13, 2024	Dec. 12, 2025
6	CE-001	COMM	/	001	Feb. 09, 2025	Feb. 08, 2026
Test Software						
Name		Manufacturer		Software Version		
EMC32		R&S		6.10.10		

Note: 1. The Cal. Interval was one year.

2. The Cal. Interval was three years of the antenna.

3. The cable loss has been calculated in test result which connection between each test instruments.

3. TEST ITEM AND RESULTS

3.1. Conducted Emission

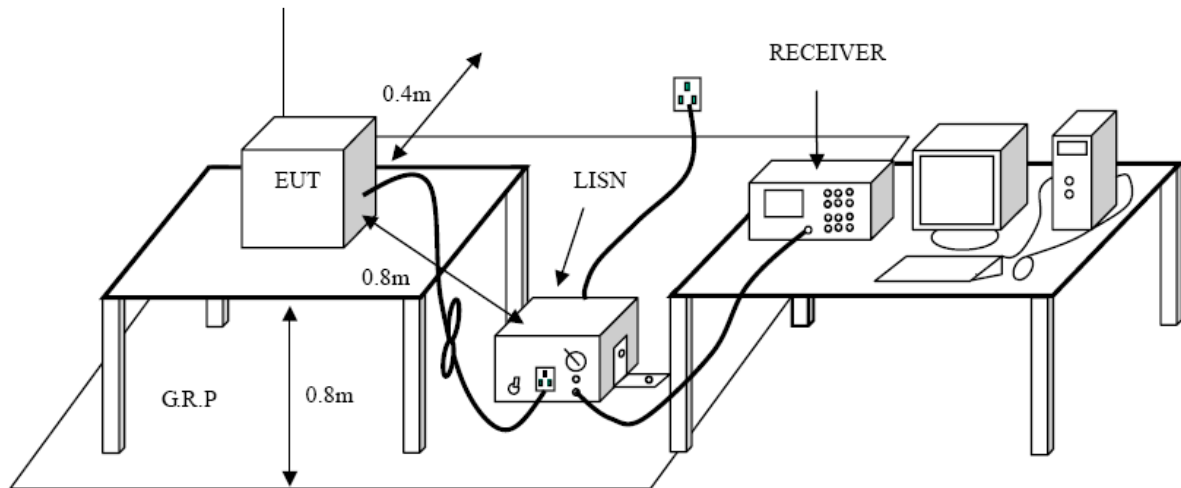
Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.207 / RSS-Gen 8.8

Frequency (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46 *
0.5 - 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency.

Test Configuration



Test Procedure

1. The EUT was setup according to ANSI C63.10:2020 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm / 50 μH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

Test Mode

Please refer to the clause 2.4.

CTC Laboratories, Inc.

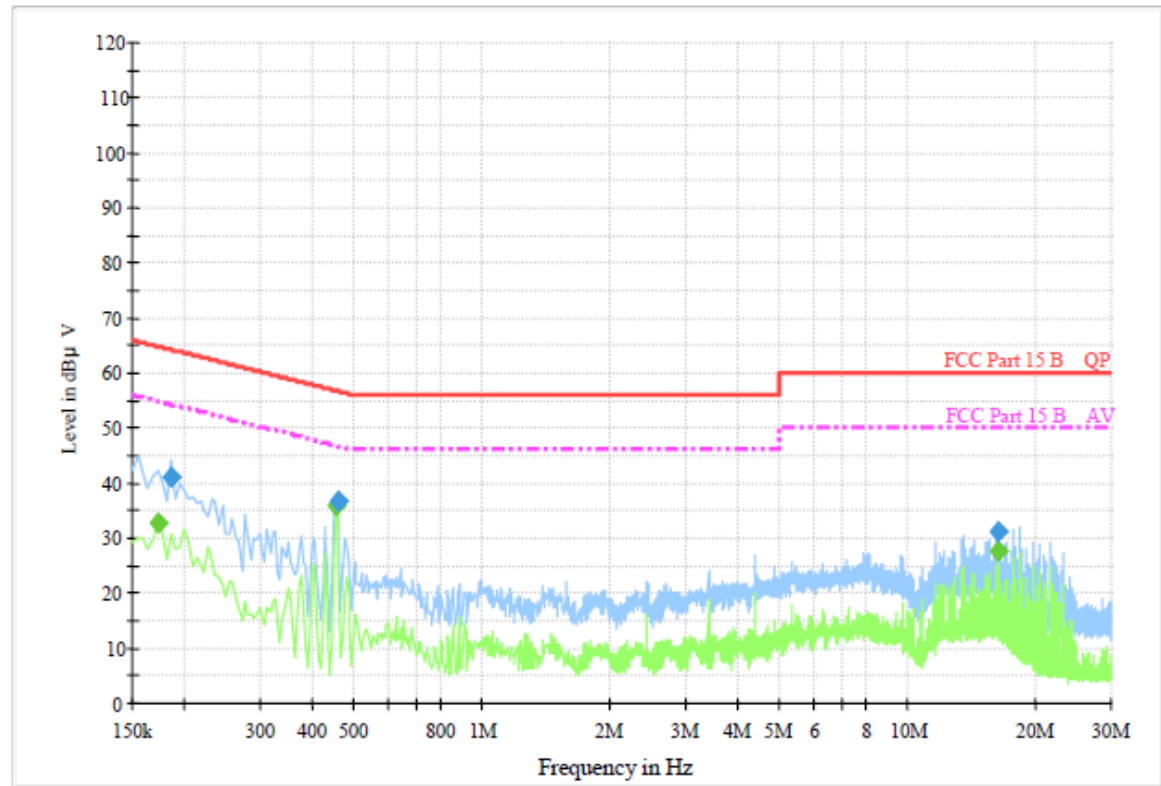
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

**Test Result**

Test Voltage:	AC 120V/60Hz
Terminal:	Line
Remark:	Only worse case is reported

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.186000	41.1	1000.00	9.000	On	L1	9.5	23.1	64.2	
0.456000	36.7	1000.00	9.000	On	L1	9.4	20.1	56.8	
16.228500	31.3	1000.00	9.000	On	L1	9.7	28.7	60.0	

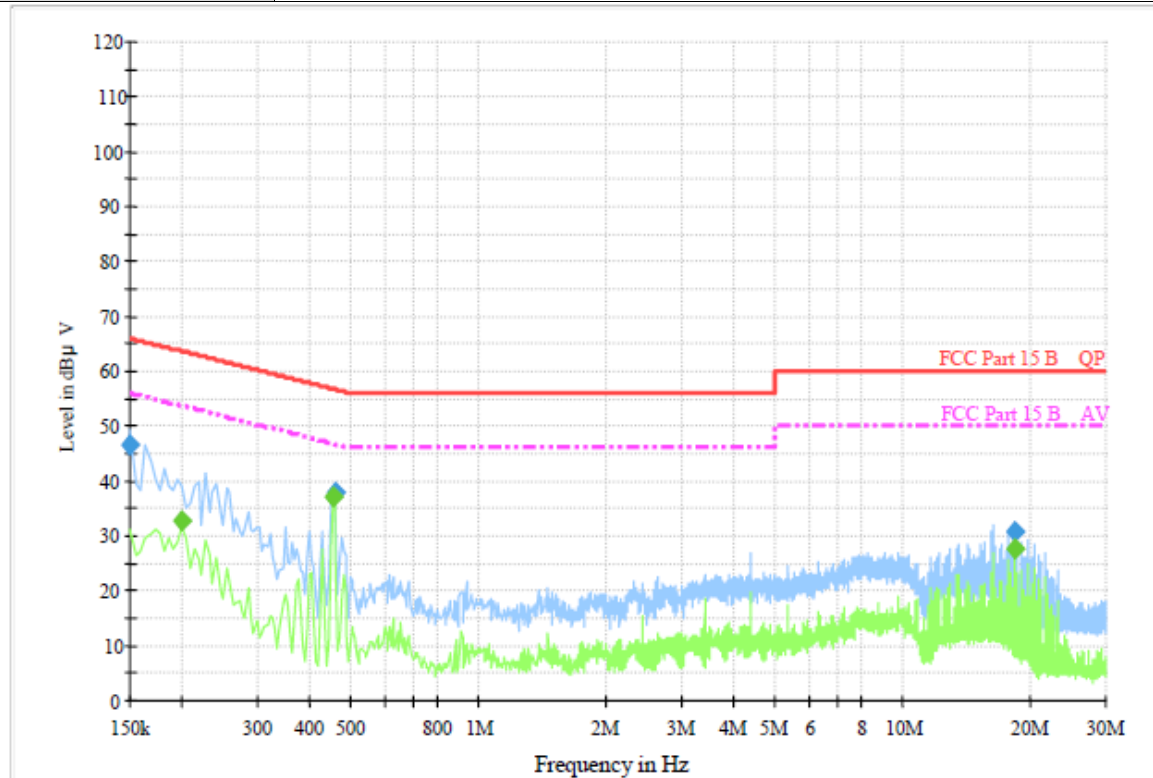
Final Measurement Detector 2

Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.172500	32.7	1000.00	9.000	On	L1	9.5	22.1	54.8	
0.451500	35.7	1000.00	9.000	On	L1	9.4	11.1	46.8	
16.228500	27.7	1000.00	9.000	On	L1	9.7	22.3	50.0	

Emission Level = Read Level + Correct Factor



Test Voltage:	AC 120V/60Hz
Terminal:	Neutral
Remark:	Only worse case is reported



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.150000	46.6	1000.00	9.000	On	N	9.4	19.4	66.0	
0.456000	38.1	1000.00	9.000	On	N	9.6	18.7	56.8	
18.244500	30.9	1000.00	9.000	On	N	9.6	29.1	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.199500	32.7	1000.00	9.000	On	N	9.3	20.9	53.6	
0.451500	37.1	1000.00	9.000	On	N	9.6	9.7	46.8	
18.244500	27.8	1000.00	9.000	On	N	9.6	22.2	50.0	

Emission Level = Read Level + Correct Factor

3.2. Radiated Emission

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.209 / RSS-Gen 8.9

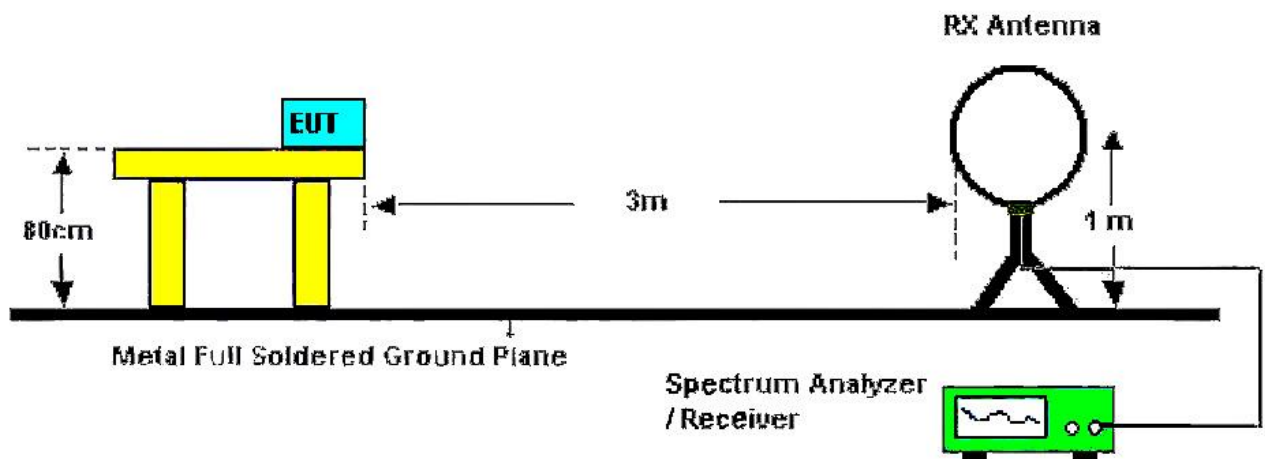
Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F (kHz)	300
0.490~1.705	24000/F (kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Frequency Range (MHz)	dBμV/m (at 3 meters)	
	Peak	Average
Above 1000	74	54

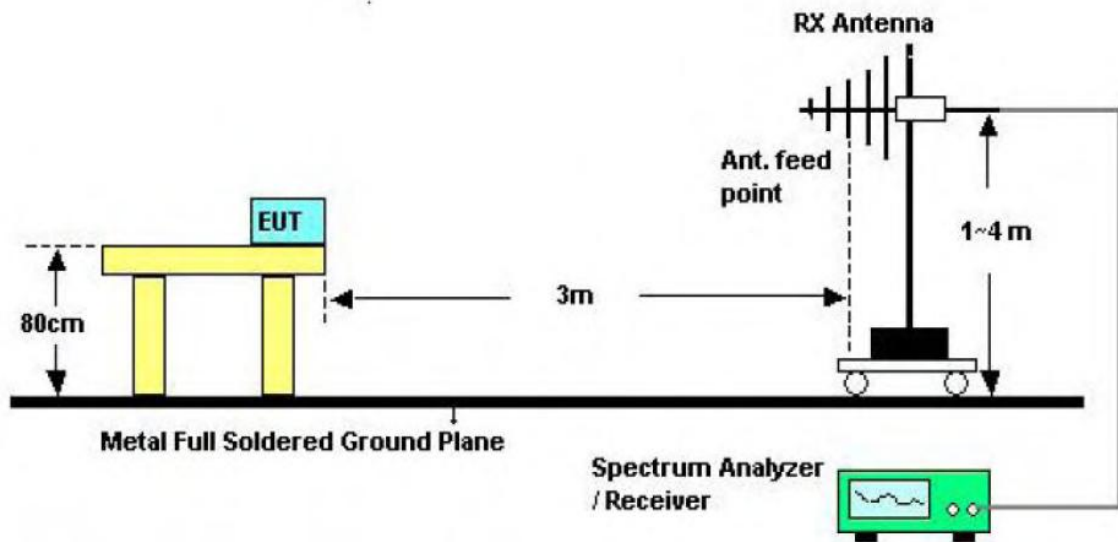
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBμV/m)=20log Emission Level (μV/m).

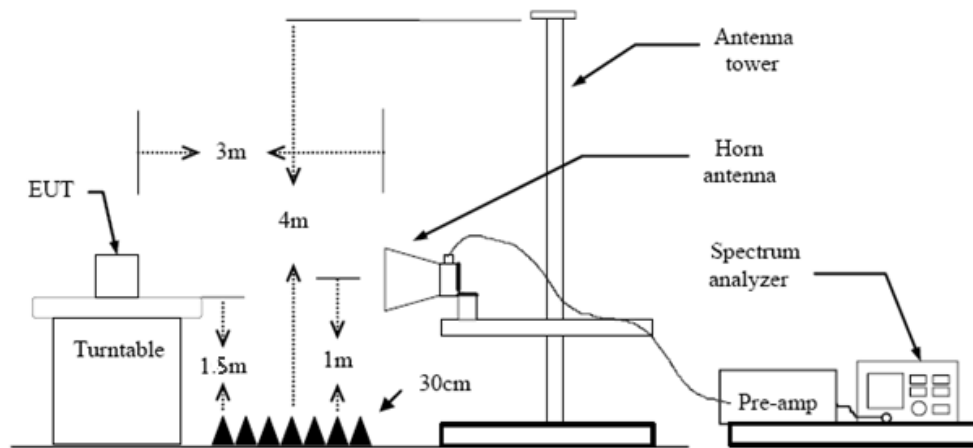
Test Configuration



Below 30MHz Test Setup



30-1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2020.
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) 9k – 150kHz:
RBW=300 Hz, VBW=1 kHz, Sweep=auto, Detector function=peak, Trace=max hold
 - (3) 0.15M – 30MHz:
RBW=10 kHz, VBW=30 kHz, Sweep=auto, Detector function=peak, Trace=max hold
 - (4) 30M - 1 GHz:
RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold



If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(5) From 1 GHz to 10th harmonic:

RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW see note 1 with Peak Detector for Average Value.

Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 3.8 Duty Cycle.

Test Mode

Please refer to the clause 2.4.

Test Result

9 kHz~30 MHz

From 9 kHz to 30 MHz: The conclusion is PASS.

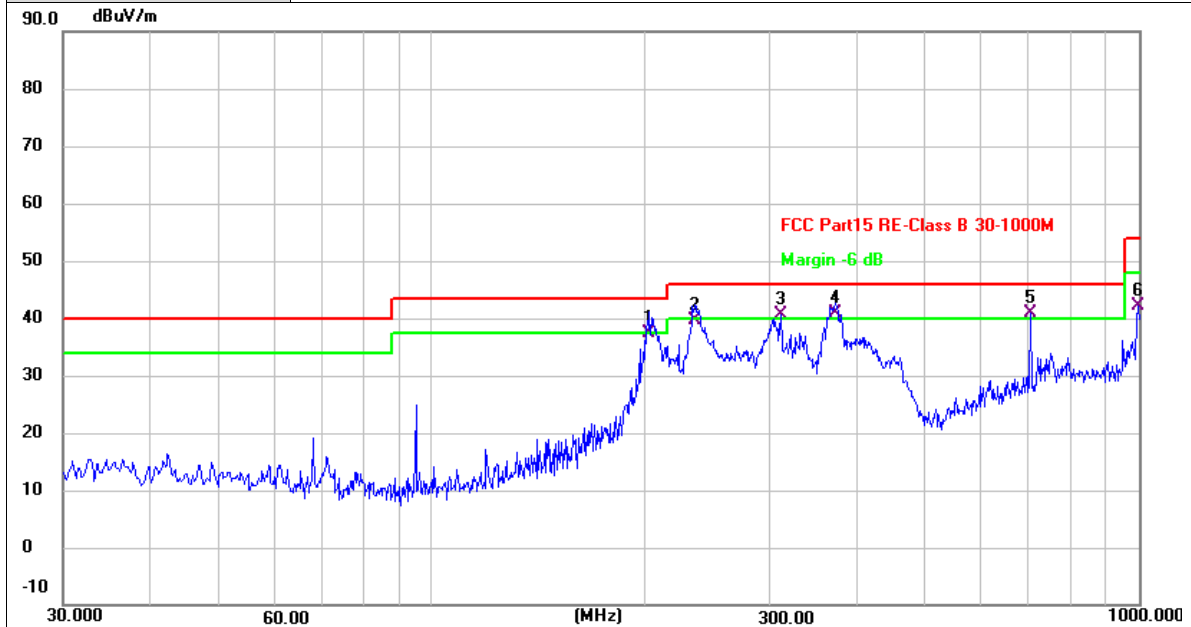
Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



30MHz-1GHz

Test Voltage:	DC 10.9V 6700mAh 73.03Wh from Rechargeable Li-ion Battery Pack
---------------	--

Ant. No.	Ant 1
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2412MHz
Remark:	Only worse case is reported.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	203.3067	56.14	-18.85	37.29	43.50	-6.21	QP
2	234.9933	57.88	-18.18	39.70	46.00	-6.30	QP
3 !	311.3000	55.88	-15.29	40.59	46.00	-5.41	QP
4 *	373.0567	54.56	-13.73	40.83	46.00	-5.17	QP
5 !	703.1800	46.36	-5.56	40.80	46.00	-5.20	QP
6	996.7667	42.91	-0.75	42.16	54.00	-11.84	QP

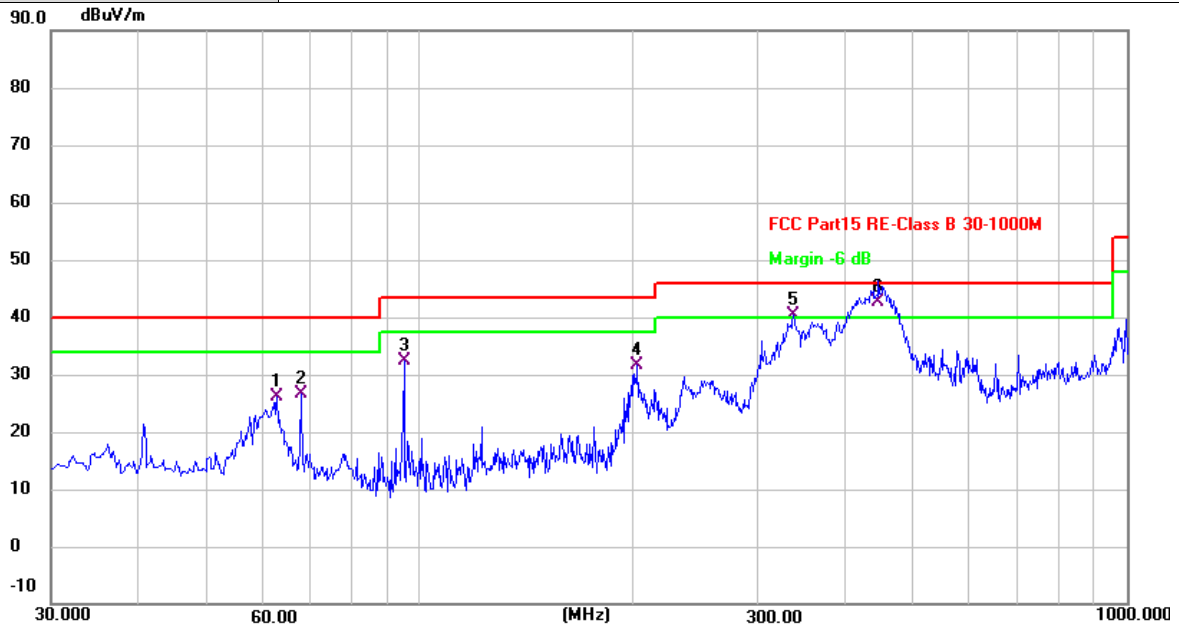
Remarks:

1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor

2.Margin value = Level -Limit value



Ant. No.	Ant 1
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2412MHz
Remark:	Only worse case is reported.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	62.6566	44.28	-18.10	26.18	40.00	-13.82	QP
2	67.8300	45.56	-18.81	26.75	40.00	-13.25	QP
3	94.9900	52.79	-20.37	32.42	43.50	-11.08	QP
4	202.9832	50.53	-18.86	31.67	43.50	-11.83	QP
5 !	338.1366	55.25	-14.90	40.35	46.00	-5.65	QP
6 *	446.1300	53.73	-11.20	42.53	46.00	-3.47	QP

Remarks:

1. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor

2. Margin value = Level - Limit value



Above 1GHz

Ant. No.	Ant 1						
Ant. Pol.	Horizontal						
Test Mode:	TX 802.11b Mode 2412MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						

Ant. No.	Ant 1																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11b Mode 2412MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4824.021</td><td>34.52</td><td>1.87</td><td>36.39</td><td>54.00</td><td>-17.61</td><td>AVG</td></tr><tr><td>2</td><td>4824.109</td><td>43.03</td><td>1.87</td><td>44.90</td><td>74.00</td><td>-29.10</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1 *	4824.021	34.52	1.87	36.39	54.00	-17.61	AVG	2	4824.109	43.03	1.87	44.90	74.00	-29.10	peak
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1 *	4824.021	34.52	1.87	36.39	54.00	-17.61	AVG																								
2	4824.109	43.03	1.87	44.90	74.00	-29.10	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1						
Ant. Pol.	Horizontal						
Test Mode:	TX 802.11b Mode 2437MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						

Ant. No.	Ant 1																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11b Mode 2437MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBuV)</th><th>Factor (dB/m)</th><th>Level (dBuV/m)</th><th>Limit (dBuV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1</td><td>4873.808</td><td>43.44</td><td>1.95</td><td>45.39</td><td>74.00</td><td>-28.61</td><td>peak</td></tr><tr><td>2 *</td><td>4873.987</td><td>33.43</td><td>1.95</td><td>35.38</td><td>54.00</td><td>-18.62</td><td>AVG</td></tr></table>								No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	1	4873.808	43.44	1.95	45.39	74.00	-28.61	peak	2 *	4873.987	33.43	1.95	35.38	54.00	-18.62	AVG
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector																								
1	4873.808	43.44	1.95	45.39	74.00	-28.61	peak																								
2 *	4873.987	33.43	1.95	35.38	54.00	-18.62	AVG																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11b Mode 2462MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBuV)</th><th>Factor (dB/m)</th><th>Level (dBuV/m)</th><th>Limit (dBuV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1</td><td>4923.245</td><td>39.20</td><td>2.04</td><td>41.24</td><td>74.00</td><td>-32.76</td><td>peak</td></tr><tr><td>2 *</td><td>4923.757</td><td>24.51</td><td>2.04</td><td>26.55</td><td>54.00</td><td>-27.45</td><td>AVG</td></tr></table>								No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	1	4923.245	39.20	2.04	41.24	74.00	-32.76	peak	2 *	4923.757	24.51	2.04	26.55	54.00	-27.45	AVG
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector																								
1	4923.245	39.20	2.04	41.24	74.00	-32.76	peak																								
2 *	4923.757	24.51	2.04	26.55	54.00	-27.45	AVG																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11b Mode 2462MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1</td><td>4923.976</td><td>41.85</td><td>2.04</td><td>43.89</td><td>74.00</td><td>-30.11</td><td>peak</td></tr><tr><td>2 *</td><td>4924.027</td><td>32.18</td><td>2.04</td><td>34.22</td><td>54.00</td><td>-19.78</td><td>AVG</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1	4923.976	41.85	2.04	43.89	74.00	-30.11	peak	2 *	4924.027	32.18	2.04	34.22	54.00	-19.78	AVG
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1	4923.976	41.85	2.04	43.89	74.00	-30.11	peak																								
2 *	4924.027	32.18	2.04	34.22	54.00	-19.78	AVG																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1						
Ant. Pol.	Horizontal						
Test Mode:	TX 802.11g Mode 2412MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						

Ant. No.	Ant 1						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11g Mode 2412MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						



Ant. No.	Ant 1																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11g Mode 2437MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBuV)</th><th>Factor (dB/m)</th><th>Level (dBuV/m)</th><th>Limit (dBuV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4873.486</td><td>25.77</td><td>1.95</td><td>27.72</td><td>54.00</td><td>-26.28</td><td>AVG</td></tr><tr><td>2</td><td>4873.770</td><td>39.78</td><td>1.95</td><td>41.73</td><td>74.00</td><td>-32.27</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	1 *	4873.486	25.77	1.95	27.72	54.00	-26.28	AVG	2	4873.770	39.78	1.95	41.73	74.00	-32.27	peak
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector																								
1 *	4873.486	25.77	1.95	27.72	54.00	-26.28	AVG																								
2	4873.770	39.78	1.95	41.73	74.00	-32.27	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11g Mode 2437MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1</td><td>4873.828</td><td>39.47</td><td>1.95</td><td>41.42</td><td>74.00</td><td>-32.58</td><td>peak</td></tr><tr><td>2 *</td><td>4874.909</td><td>25.19</td><td>1.95</td><td>27.14</td><td>54.00</td><td>-26.86</td><td>AVG</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1	4873.828	39.47	1.95	41.42	74.00	-32.58	peak	2 *	4874.909	25.19	1.95	27.14	54.00	-26.86	AVG
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1	4873.828	39.47	1.95	41.42	74.00	-32.58	peak																								
2 *	4874.909	25.19	1.95	27.14	54.00	-26.86	AVG																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1						
Ant. Pol.	Horizontal						
Test Mode:	TX 802.11g Mode 2462MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						

Ant. No.	Ant 1																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11g Mode 2462MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4924.635</td><td>25.17</td><td>2.04</td><td>27.21</td><td>54.00</td><td>-26.79</td><td>AVG</td></tr><tr><td>2</td><td>4924.895</td><td>39.91</td><td>2.04</td><td>41.95</td><td>74.00</td><td>-32.05</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1 *	4924.635	25.17	2.04	27.21	54.00	-26.79	AVG	2	4924.895	39.91	2.04	41.95	74.00	-32.05	peak
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1 *	4924.635	25.17	2.04	27.21	54.00	-26.79	AVG																								
2	4924.895	39.91	2.04	41.95	74.00	-32.05	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Horizontal						
Test Mode:	TX 802.11n(HT20) Mode 2412MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						

Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11n(HT20) Mode 2412MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						



Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11n(HT20) Mode 2437MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBuV)</th><th>Factor (dB/m)</th><th>Level (dBuV/m)</th><th>Limit (dBuV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4873.182</td><td>25.30</td><td>1.95</td><td>27.25</td><td>54.00</td><td>-26.75</td><td>AVG</td></tr><tr><td>2</td><td>4874.723</td><td>39.18</td><td>1.95</td><td>41.13</td><td>74.00</td><td>-32.87</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	1 *	4873.182	25.30	1.95	27.25	54.00	-26.75	AVG	2	4874.723	39.18	1.95	41.13	74.00	-32.87	peak
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector																								
1 *	4873.182	25.30	1.95	27.25	54.00	-26.75	AVG																								
2	4874.723	39.18	1.95	41.13	74.00	-32.87	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11n(HT20) Mode 2437MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						



Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Horizontal						
Test Mode:	TX 802.11n(HT20) Mode 2462MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						

Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11n(HT20) Mode 2462MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1</td><td>4923.295</td><td>38.49</td><td>2.04</td><td>40.53</td><td>74.00</td><td>-33.47</td><td>peak</td></tr><tr><td>2 *</td><td>4924.997</td><td>24.62</td><td>2.04</td><td>26.66</td><td>54.00</td><td>-27.34</td><td>AVG</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1	4923.295	38.49	2.04	40.53	74.00	-33.47	peak	2 *	4924.997	24.62	2.04	26.66	54.00	-27.34	AVG
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1	4923.295	38.49	2.04	40.53	74.00	-33.47	peak																								
2 *	4924.997	24.62	2.04	26.66	54.00	-27.34	AVG																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11n(HT40) Mode 2422MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBuV)</th><th>Factor (dB/m)</th><th>Level (dBuV/m)</th><th>Limit (dBuV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4843.609</td><td>25.14</td><td>1.90</td><td>27.04</td><td>54.00</td><td>-26.96</td><td>AVG</td></tr><tr><td>2</td><td>4843.883</td><td>40.33</td><td>1.90</td><td>42.23</td><td>74.00</td><td>-31.77</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	1 *	4843.609	25.14	1.90	27.04	54.00	-26.96	AVG	2	4843.883	40.33	1.90	42.23	74.00	-31.77	peak
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector																								
1 *	4843.609	25.14	1.90	27.04	54.00	-26.96	AVG																								
2	4843.883	40.33	1.90	42.23	74.00	-31.77	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11n(HT40) Mode 2422MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4843.165</td><td>25.03</td><td>1.90</td><td>26.93</td><td>54.00</td><td>-27.07</td><td>AVG</td></tr><tr><td>2</td><td>4843.604</td><td>39.86</td><td>1.90</td><td>41.76</td><td>74.00</td><td>-32.24</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1 *	4843.165	25.03	1.90	26.93	54.00	-27.07	AVG	2	4843.604	39.86	1.90	41.76	74.00	-32.24	peak
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1 *	4843.165	25.03	1.90	26.93	54.00	-27.07	AVG																								
2	4843.604	39.86	1.90	41.76	74.00	-32.24	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11n(HT40) Mode 2437MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4873.015</td><td>25.21</td><td>1.95</td><td>27.16</td><td>54.00</td><td>-26.84</td><td>AVG</td></tr><tr><td>2</td><td>4873.376</td><td>39.78</td><td>1.95</td><td>41.73</td><td>74.00</td><td>-32.27</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1 *	4873.015	25.21	1.95	27.16	54.00	-26.84	AVG	2	4873.376	39.78	1.95	41.73	74.00	-32.27	peak
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1 *	4873.015	25.21	1.95	27.16	54.00	-26.84	AVG																								
2	4873.376	39.78	1.95	41.73	74.00	-32.27	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11n(HT40) Mode 2437MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						



Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11n(HT40) Mode 2452MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1</td><td>4904.012</td><td>39.40</td><td>2.00</td><td>41.40</td><td>74.00</td><td>-32.60</td><td>peak</td></tr><tr><td>2 *</td><td>4904.602</td><td>24.90</td><td>2.00</td><td>26.90</td><td>54.00</td><td>-27.10</td><td>AVG</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1	4904.012	39.40	2.00	41.40	74.00	-32.60	peak	2 *	4904.602	24.90	2.00	26.90	54.00	-27.10	AVG
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1	4904.012	39.40	2.00	41.40	74.00	-32.60	peak																								
2 *	4904.602	24.90	2.00	26.90	54.00	-27.10	AVG																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11n(HT40) Mode 2452MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						



Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Horizontal						
Test Mode:	TX 802.11ax(HE20) Mode 2412MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1 *	4823.030	25.84	1.87	27.71	54.00	-26.29	AVG
2	4823.546	40.52	1.87	42.39	74.00	-31.61	peak
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value							

Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11ax(HE20) Mode 2412MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4823.303</td><td>25.52</td><td>1.87</td><td>27.39</td><td>54.00</td><td>-26.61</td><td>AVG</td></tr><tr><td>2</td><td>4824.515</td><td>40.10</td><td>1.87</td><td>41.97</td><td>74.00</td><td>-32.03</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1 *	4823.303	25.52	1.87	27.39	54.00	-26.61	AVG	2	4824.515	40.10	1.87	41.97	74.00	-32.03	peak
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1 *	4823.303	25.52	1.87	27.39	54.00	-26.61	AVG																								
2	4824.515	40.10	1.87	41.97	74.00	-32.03	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11ax(HE20) Mode 2437MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1</td><td>4874.665</td><td>39.23</td><td>1.95</td><td>41.18</td><td>74.00</td><td>-32.82</td><td>peak</td></tr><tr><td>2 *</td><td>4874.705</td><td>25.07</td><td>1.95</td><td>27.02</td><td>54.00</td><td>-26.98</td><td>AVG</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1	4874.665	39.23	1.95	41.18	74.00	-32.82	peak	2 *	4874.705	25.07	1.95	27.02	54.00	-26.98	AVG
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1	4874.665	39.23	1.95	41.18	74.00	-32.82	peak																								
2 *	4874.705	25.07	1.95	27.02	54.00	-26.98	AVG																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11ax(HE20) Mode 2437MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						



Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11ax(HE20) Mode 2462MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBuV)</th><th>Factor (dB/m)</th><th>Level (dBuV/m)</th><th>Limit (dBuV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4924.113</td><td>25.00</td><td>2.04</td><td>27.04</td><td>54.00</td><td>-26.96</td><td>AVG</td></tr><tr><td>2</td><td>4924.275</td><td>38.62</td><td>2.04</td><td>40.66</td><td>74.00</td><td>-33.34</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	1 *	4924.113	25.00	2.04	27.04	54.00	-26.96	AVG	2	4924.275	38.62	2.04	40.66	74.00	-33.34	peak
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector																								
1 *	4924.113	25.00	2.04	27.04	54.00	-26.96	AVG																								
2	4924.275	38.62	2.04	40.66	74.00	-33.34	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Vertical																														
Test Mode:	TX 802.11ax(HE20) Mode 2462MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4924.491</td><td>24.52</td><td>2.04</td><td>26.56</td><td>54.00</td><td>-27.44</td><td>AVG</td></tr><tr><td>2</td><td>4924.976</td><td>38.84</td><td>2.04</td><td>40.88</td><td>74.00</td><td>-33.12</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1 *	4924.491	24.52	2.04	26.56	54.00	-27.44	AVG	2	4924.976	38.84	2.04	40.88	74.00	-33.12	peak
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1 *	4924.491	24.52	2.04	26.56	54.00	-27.44	AVG																								
2	4924.976	38.84	2.04	40.88	74.00	-33.12	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															



Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Horizontal						
Test Mode:	TX 802.11ax(HE40) Mode 2422MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1 *	4844.082	25.17	1.90	27.07	54.00	-26.93	AVG
2	4844.143	39.62	1.90	41.52	74.00	-32.48	peak
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value							

Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11ax(HE40) Mode 2422MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	4843.142	38.95	1.90	40.85	74.00	-33.15	peak
2 *	4844.709	25.09	1.90	26.99	54.00	-27.01	AVG
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value							



Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11ax(HE40) Mode 2437MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4873.167</td><td>25.17</td><td>1.95</td><td>27.12</td><td>54.00</td><td>-26.88</td><td>AVG</td></tr><tr><td>2</td><td>4874.553</td><td>39.80</td><td>1.95</td><td>41.75</td><td>74.00</td><td>-32.25</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1 *	4873.167	25.17	1.95	27.12	54.00	-26.88	AVG	2	4874.553	39.80	1.95	41.75	74.00	-32.25	peak
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1 *	4873.167	25.17	1.95	27.12	54.00	-26.88	AVG																								
2	4874.553	39.80	1.95	41.75	74.00	-32.25	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11ax(HE40) Mode 2437MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						



Ant. No.	Ant 1 + Ant 2																														
Ant. Pol.	Horizontal																														
Test Mode:	TX 802.11ax(HE40) Mode 2452MHz																														
Remark:	No report for the emission which more than 20 dB below the prescribed limit.																														
<table><tr><th>No.</th><th>Frequency (MHz)</th><th>Reading (dBUV)</th><th>Factor (dB/m)</th><th>Level (dBUV/m)</th><th>Limit (dBUV/m)</th><th>Margin (dB)</th><th>Detector</th></tr><tr><td>1 *</td><td>4904.293</td><td>24.86</td><td>2.00</td><td>26.86</td><td>54.00</td><td>-27.14</td><td>AVG</td></tr><tr><td>2</td><td>4904.509</td><td>39.17</td><td>2.00</td><td>41.17</td><td>74.00</td><td>-32.83</td><td>peak</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1 *	4904.293	24.86	2.00	26.86	54.00	-27.14	AVG	2	4904.509	39.17	2.00	41.17	74.00	-32.83	peak
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1 *	4904.293	24.86	2.00	26.86	54.00	-27.14	AVG																								
2	4904.509	39.17	2.00	41.17	74.00	-32.83	peak																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

Ant. No.	Ant 1 + Ant 2						
Ant. Pol.	Vertical						
Test Mode:	TX 802.11ax(HE40) Mode 2452MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						

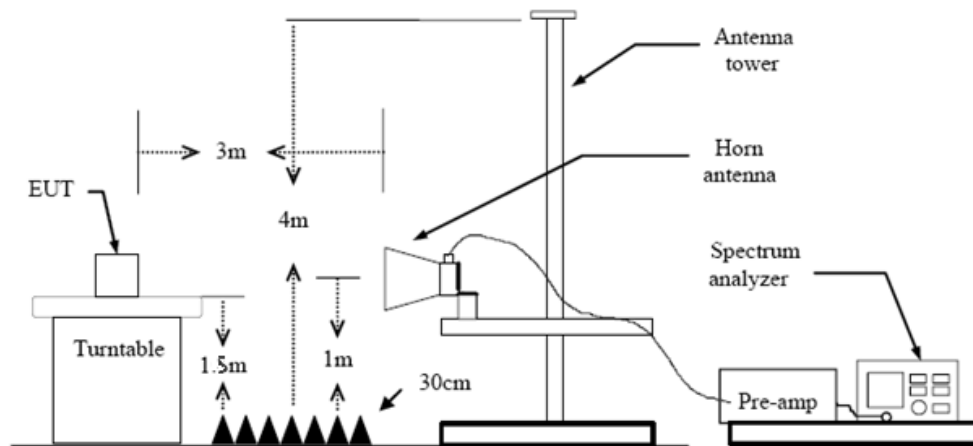
3.3. Band Edge Emissions (Radiated)

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d) / RSS-247 5.5

Restricted Frequency Band (MHz)	(dB μ V/m) (at 3m)	
	Peak	Average
2310 ~ 2390	74	54
2483.5 ~ 2500	74	54

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2020 requirements.
2. 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.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. 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 C63.10:2020 on radiated measurement.
5. The receiver set as follow:
RBW=1MHz, VBW=3MHz Peak detector for Peak value.
RBW=1MHz, VBW see note 1 with Peak Detector for Average Value.

Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 3.8 Duty Cycle.

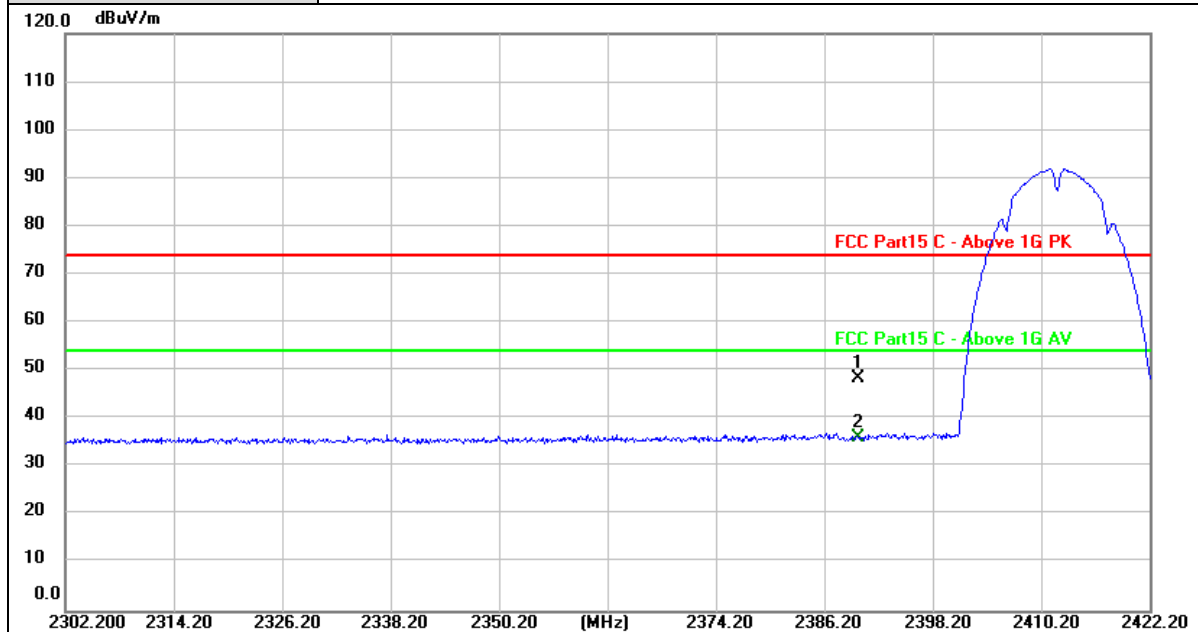
Test Mode

Please refer to the clause 2.4.

**Test Result**

Test Voltage:	DC 10.9V 6700mAh 73.03Wh from Rechargeable Li-ion Battery Pack
----------------------	--

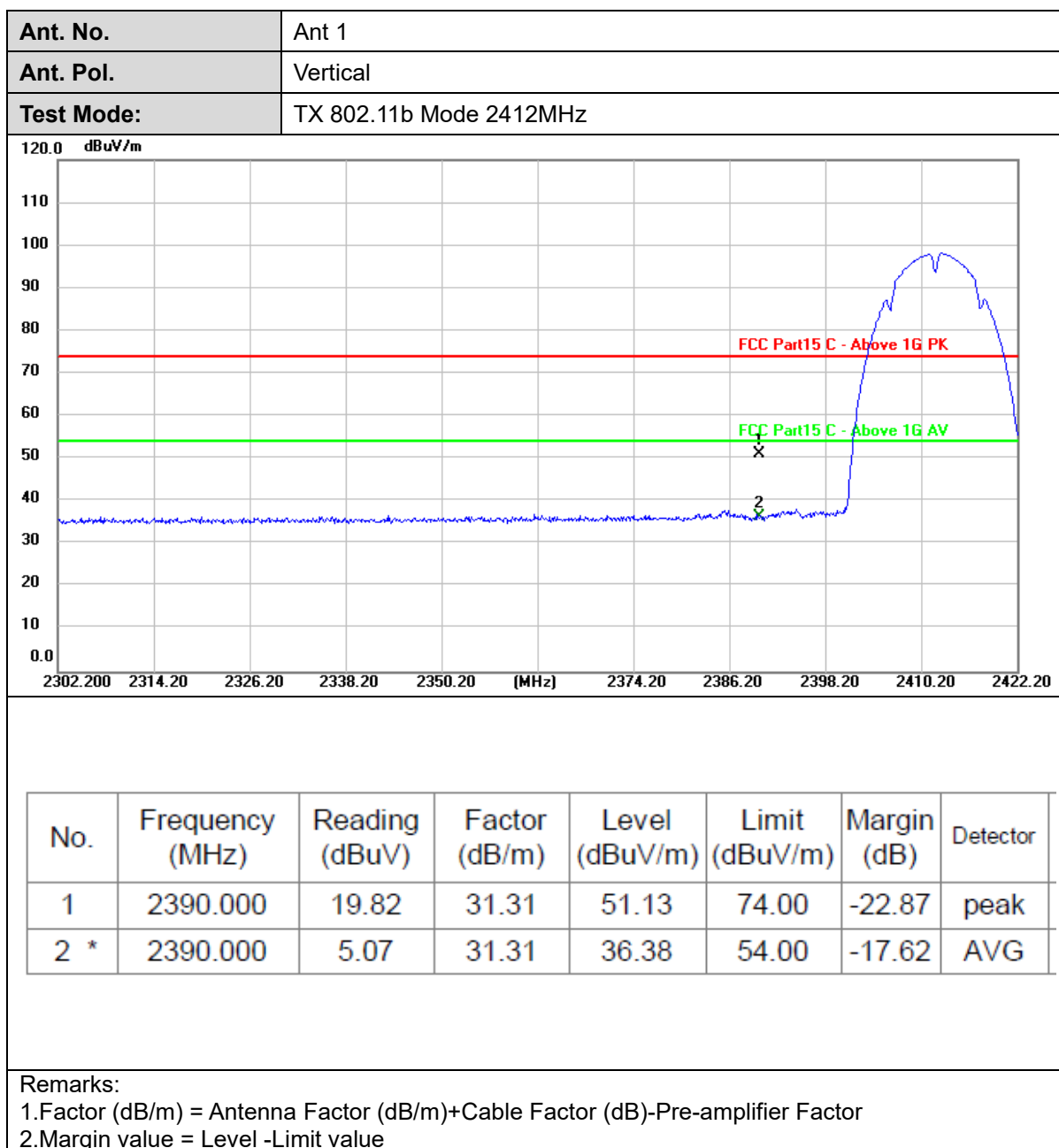
Ant. No.	Ant 1
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2412MHz

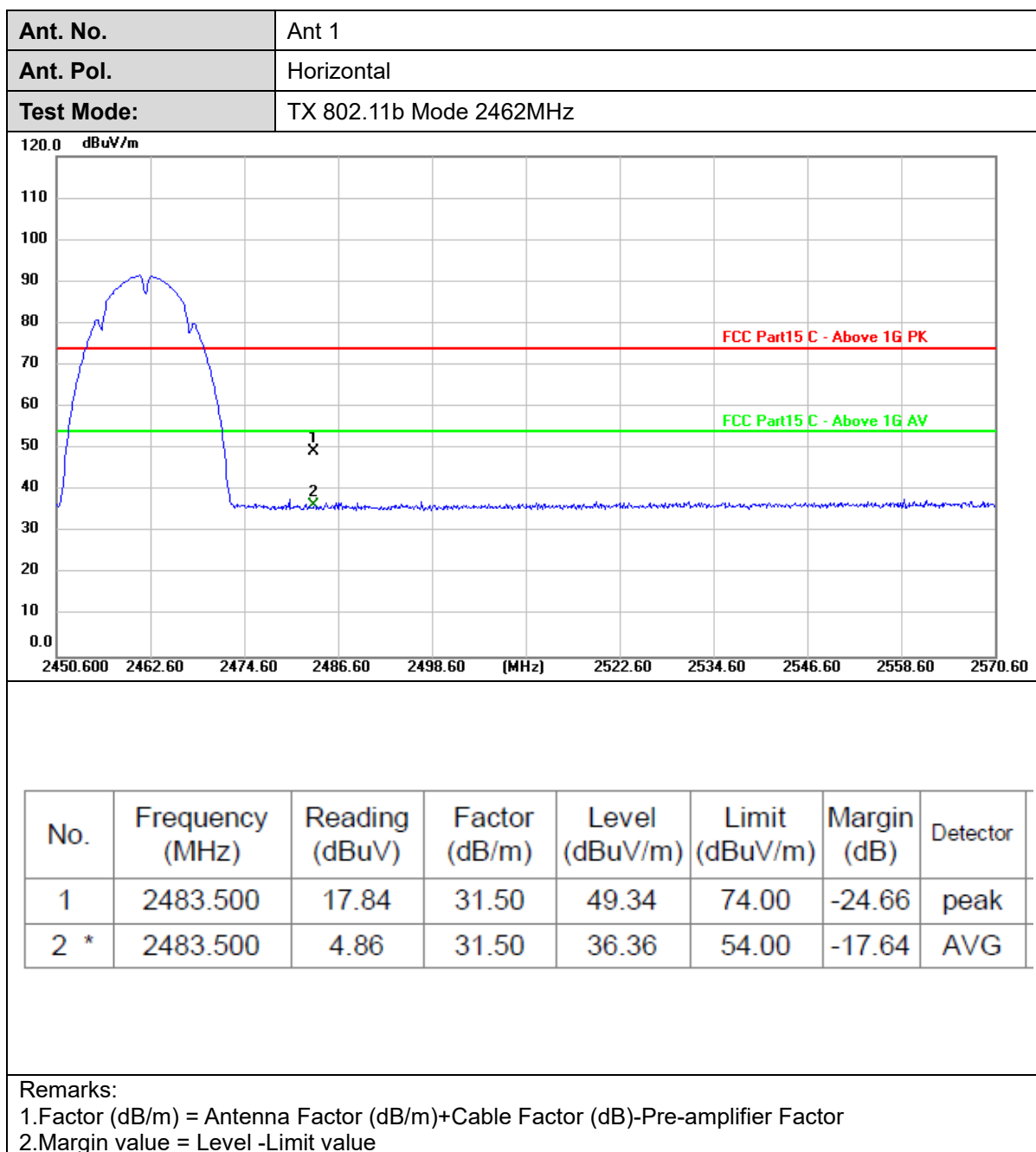


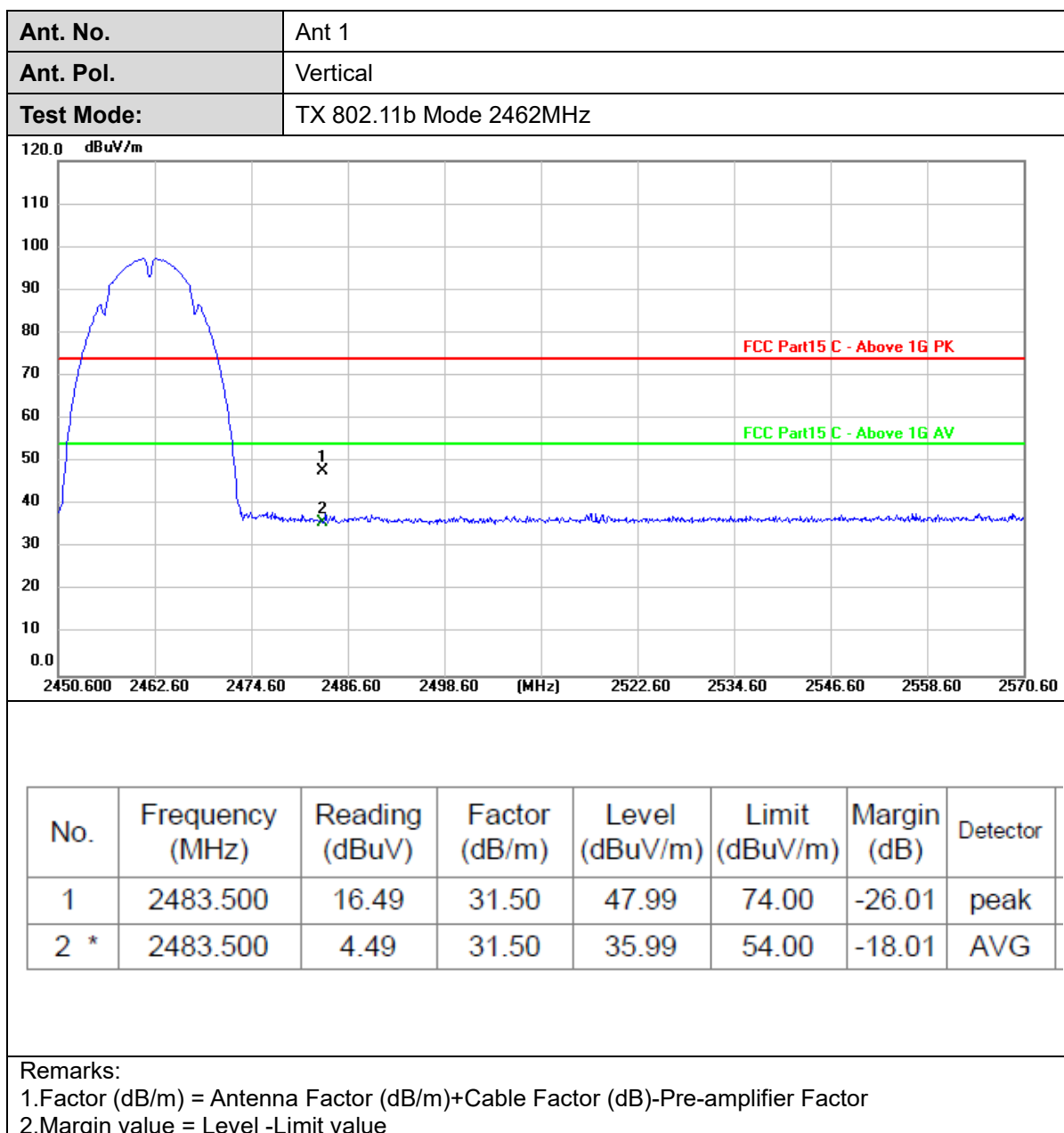
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	17.10	31.31	48.41	74.00	-25.59	peak
2 *	2390.000	4.83	31.31	36.14	54.00	-17.86	AVG

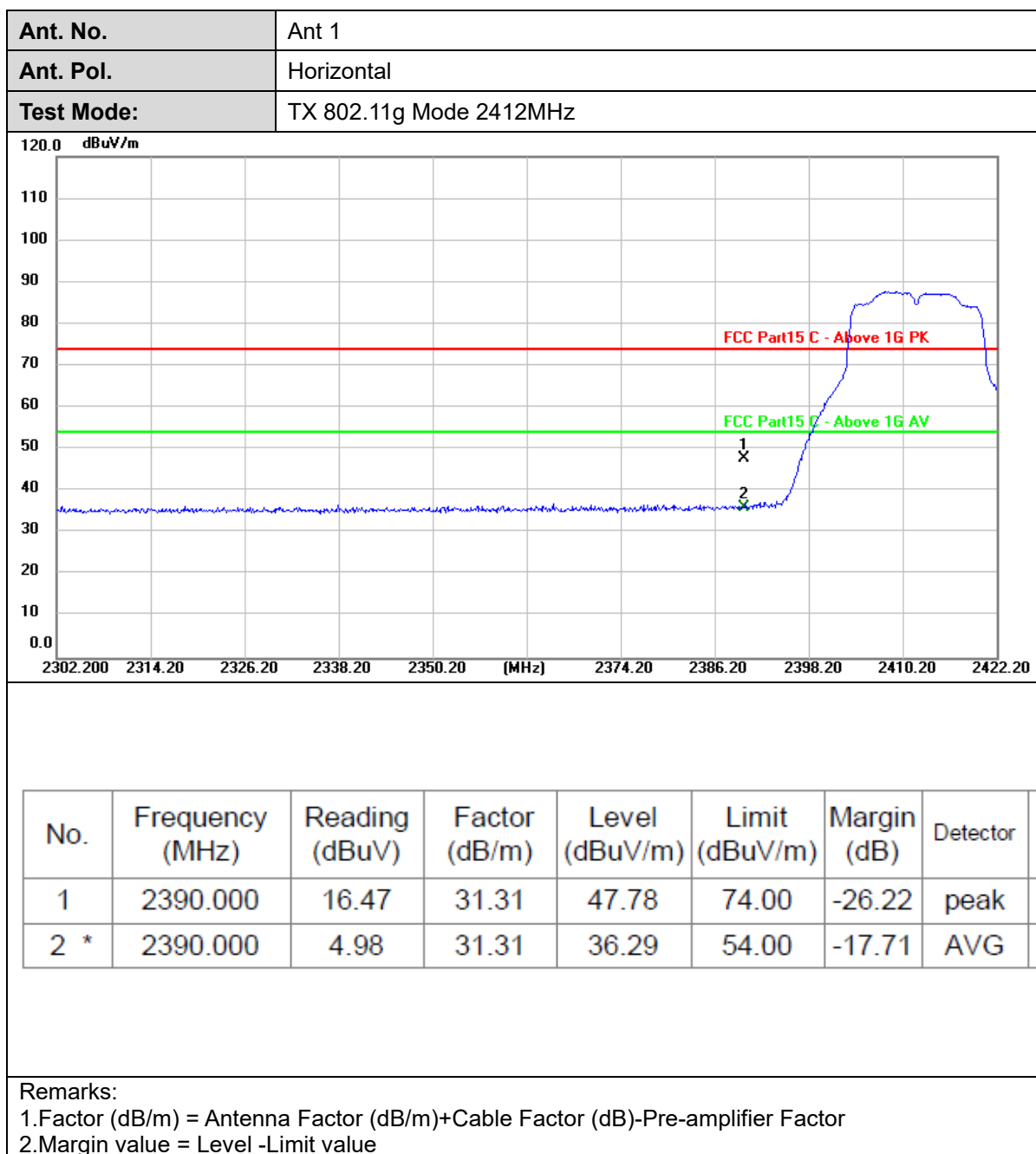
Remarks:

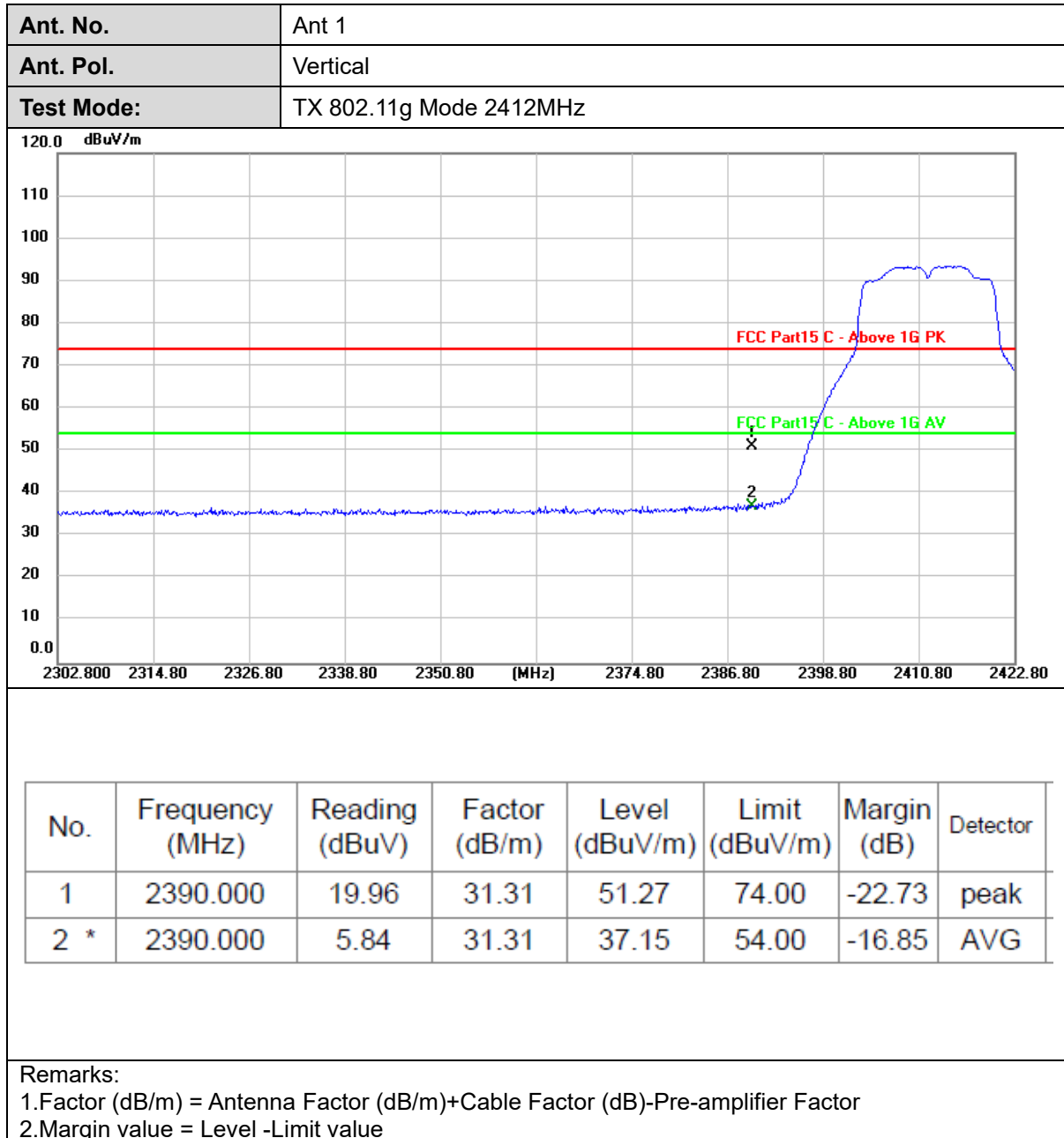
- 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

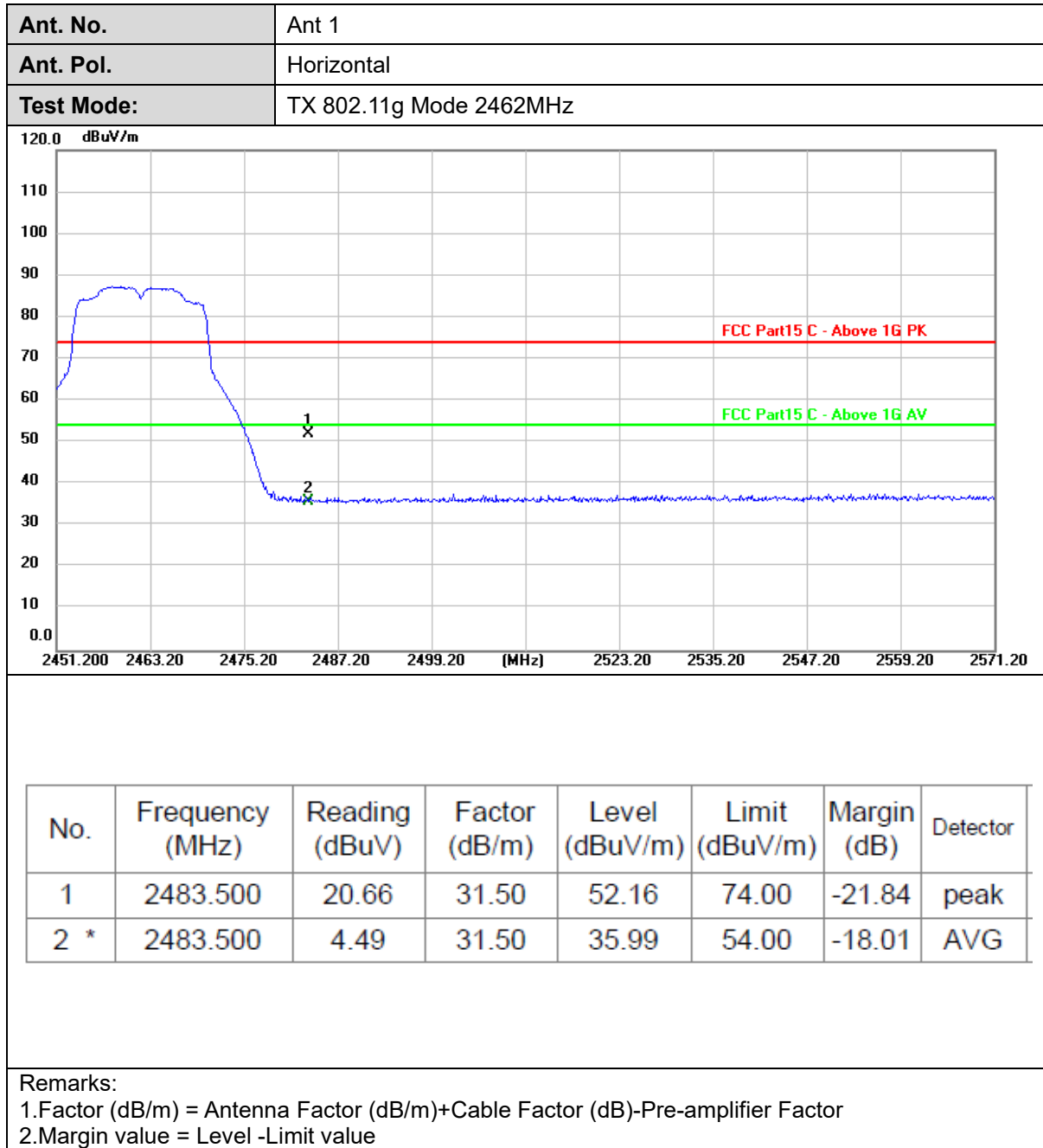


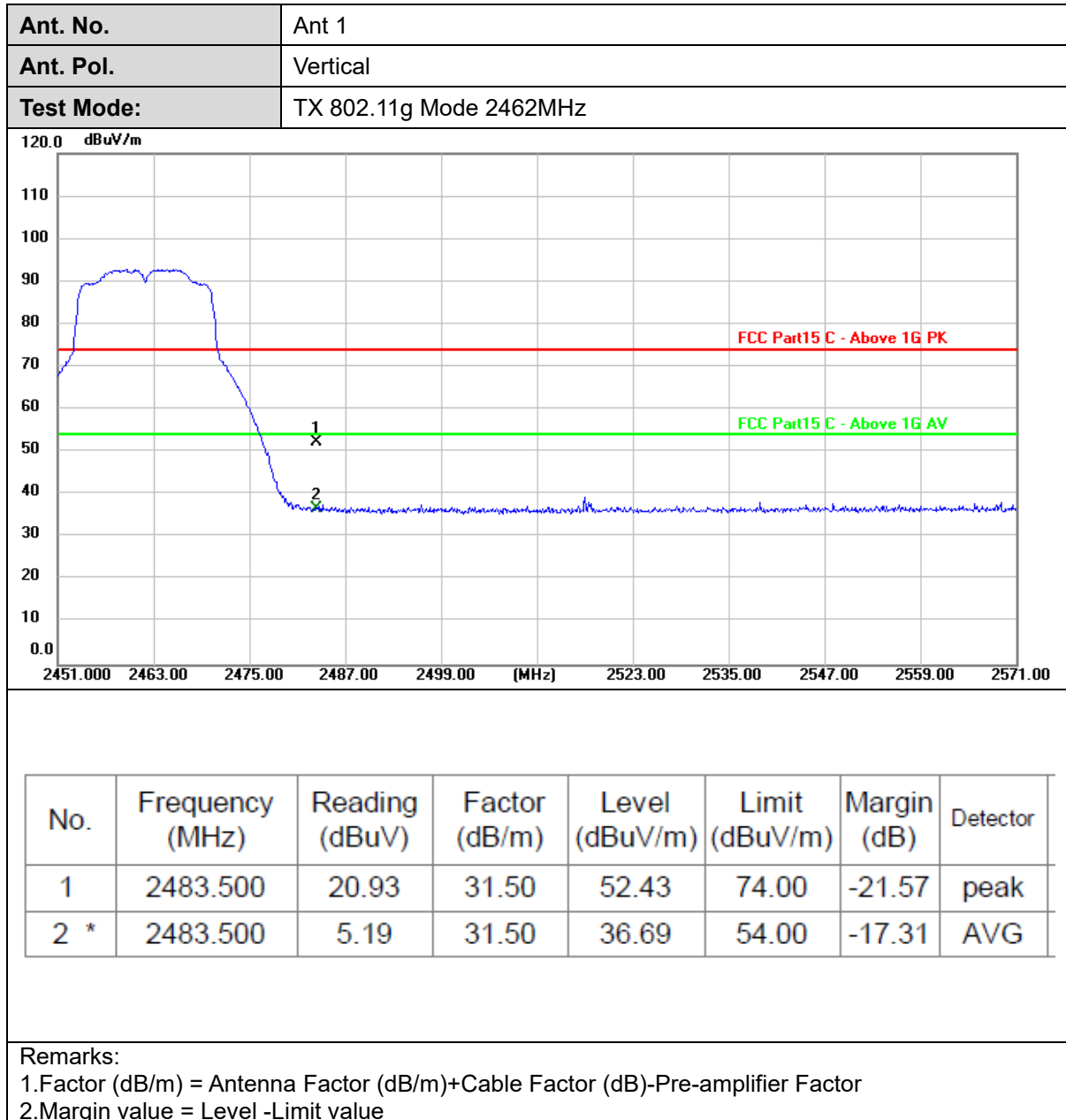


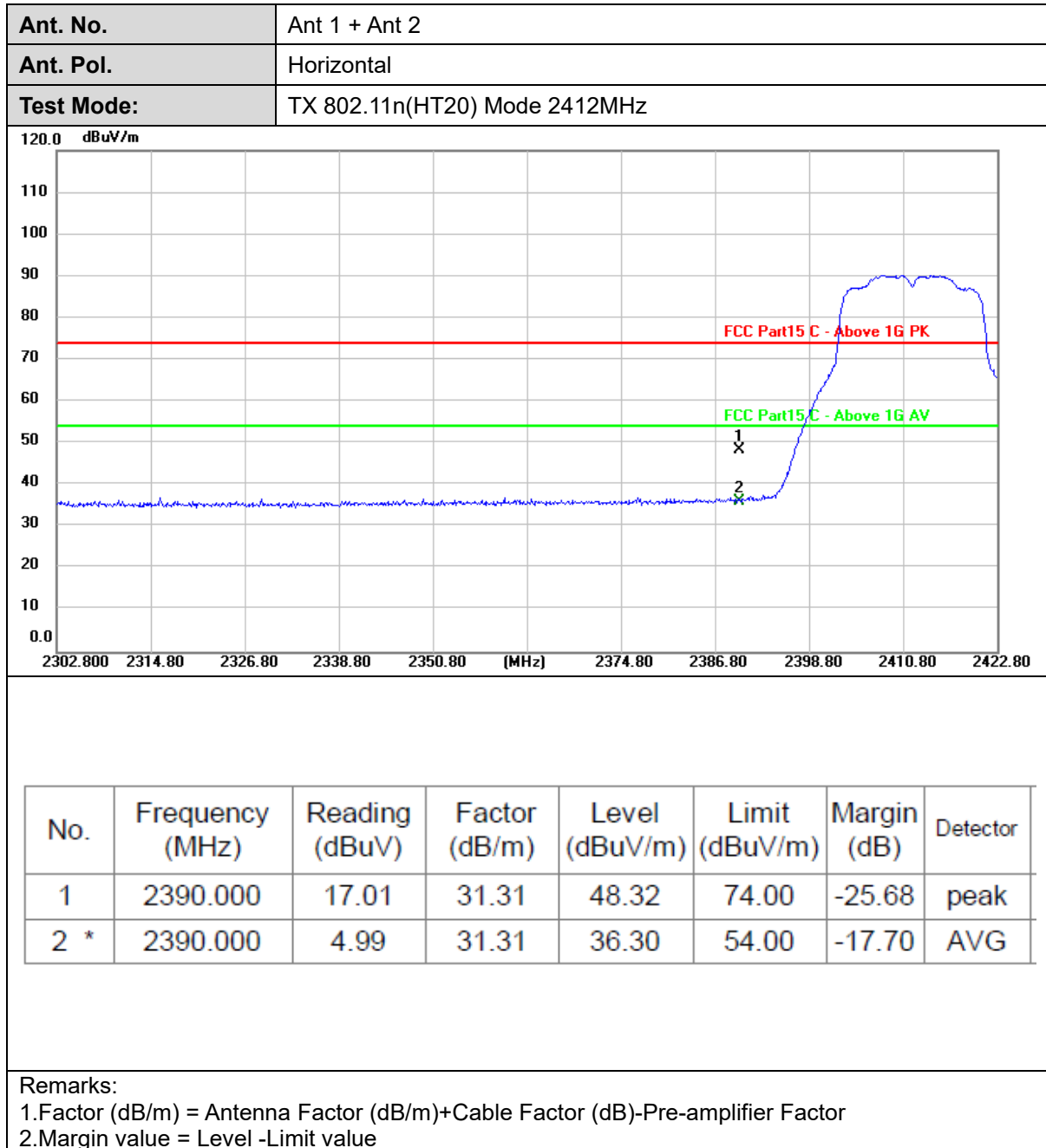


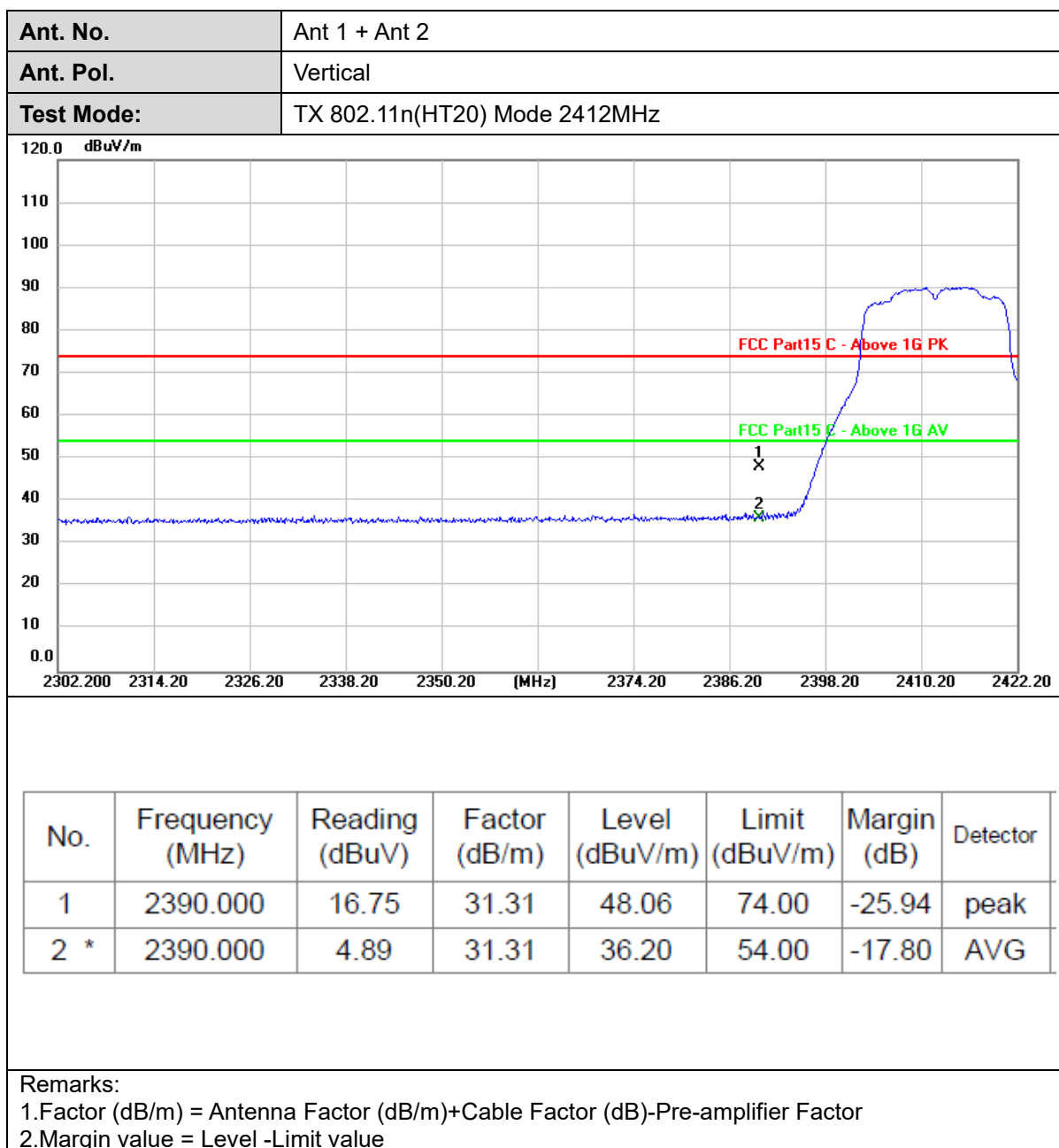


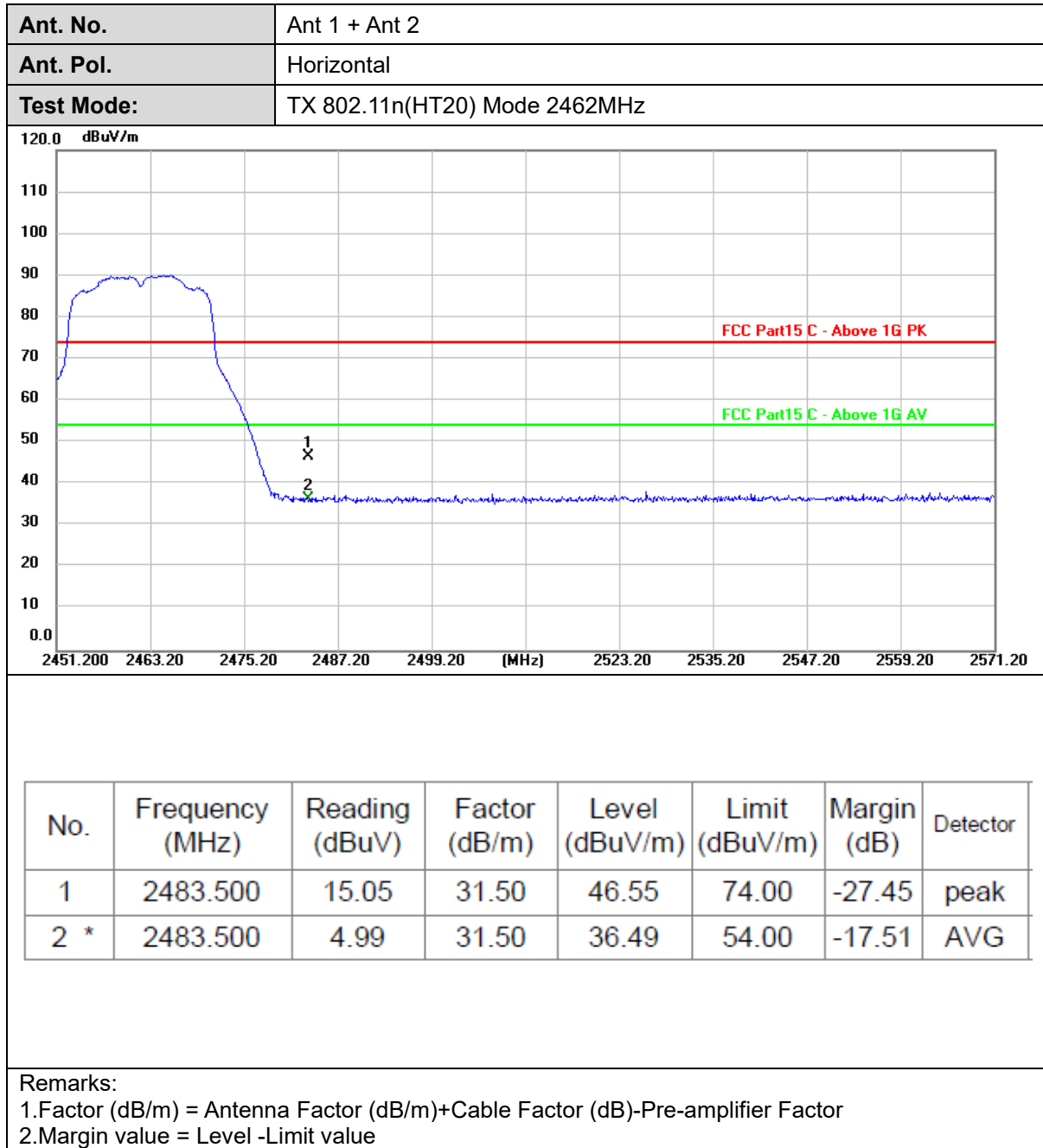


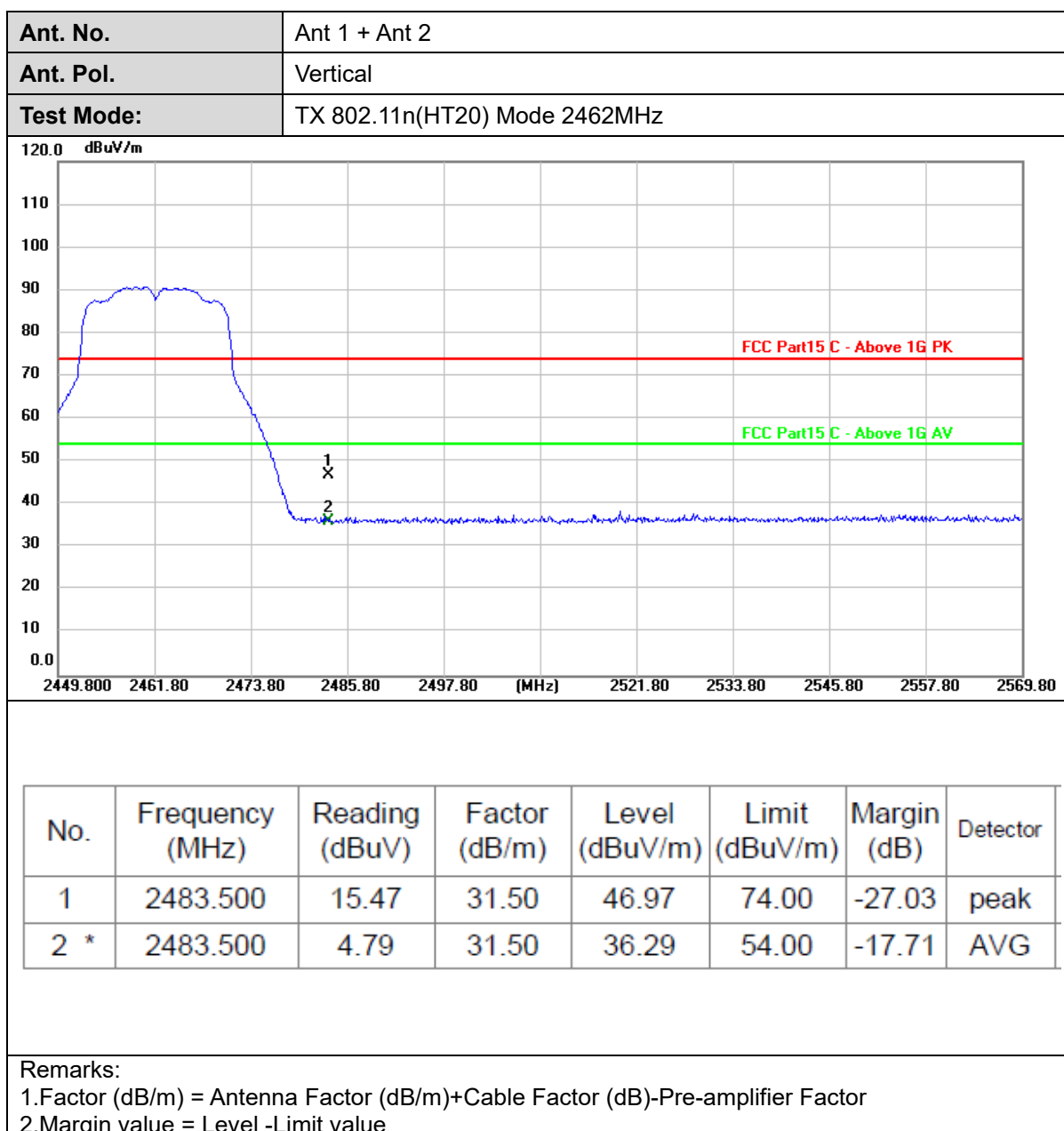


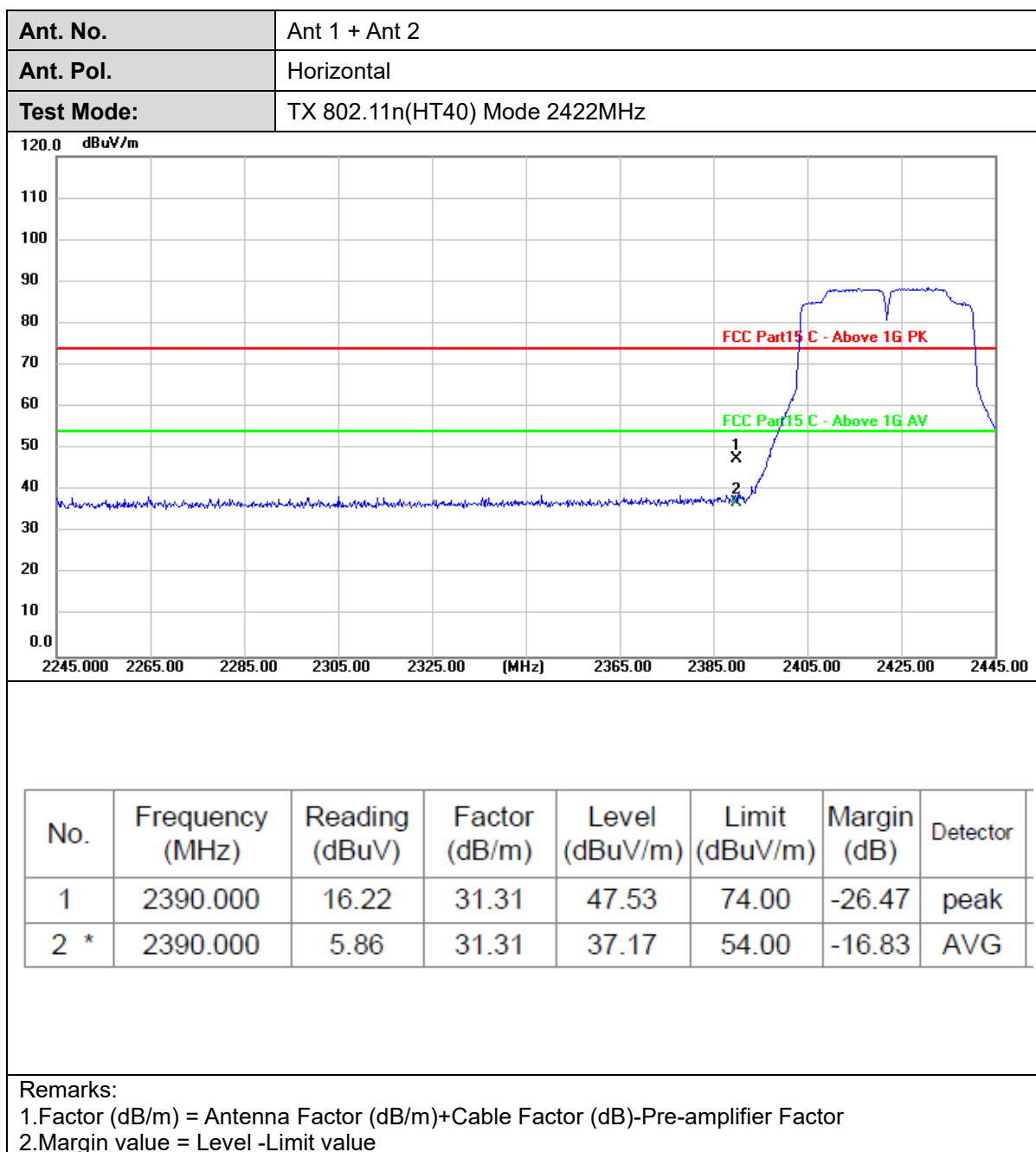


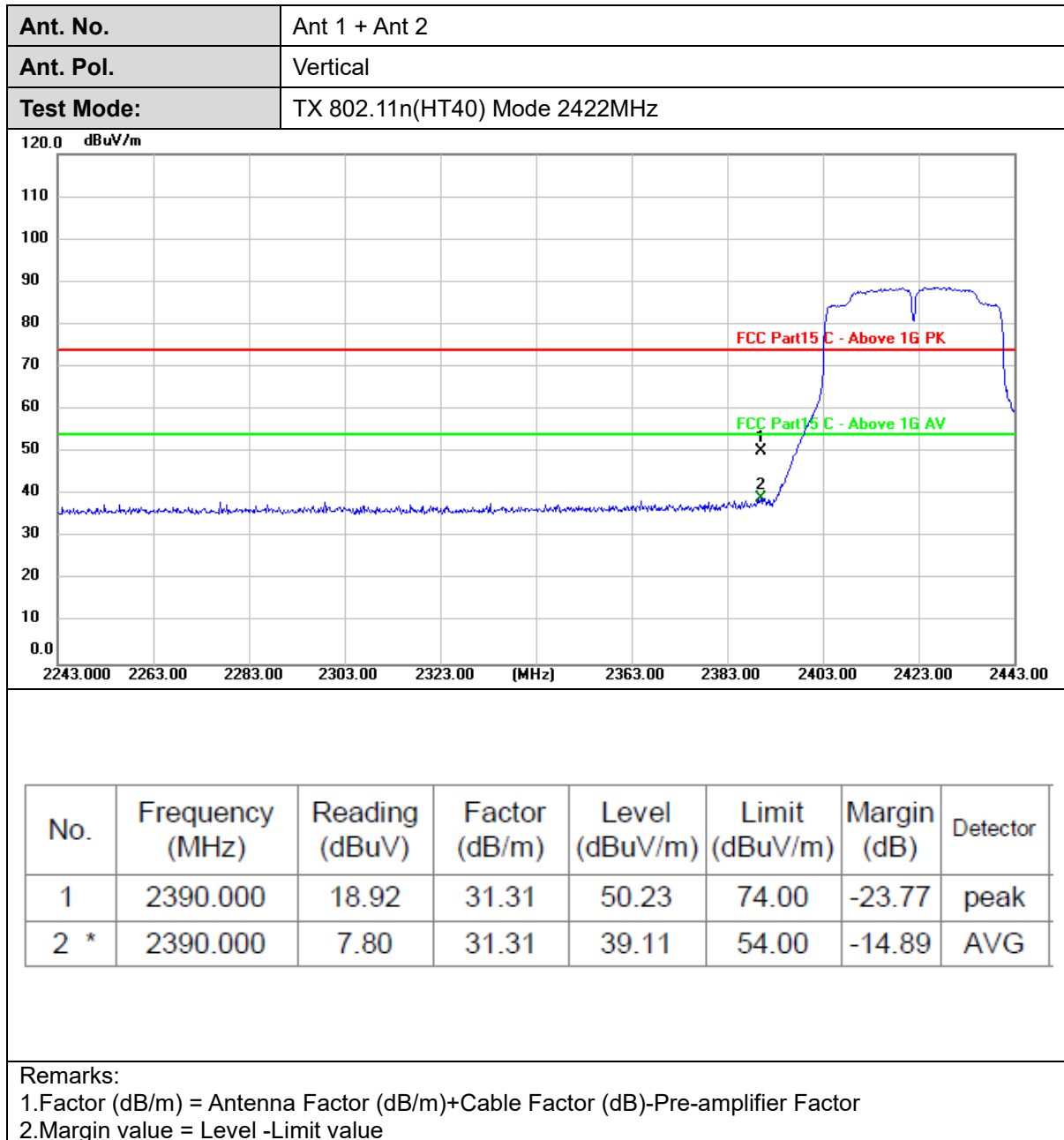


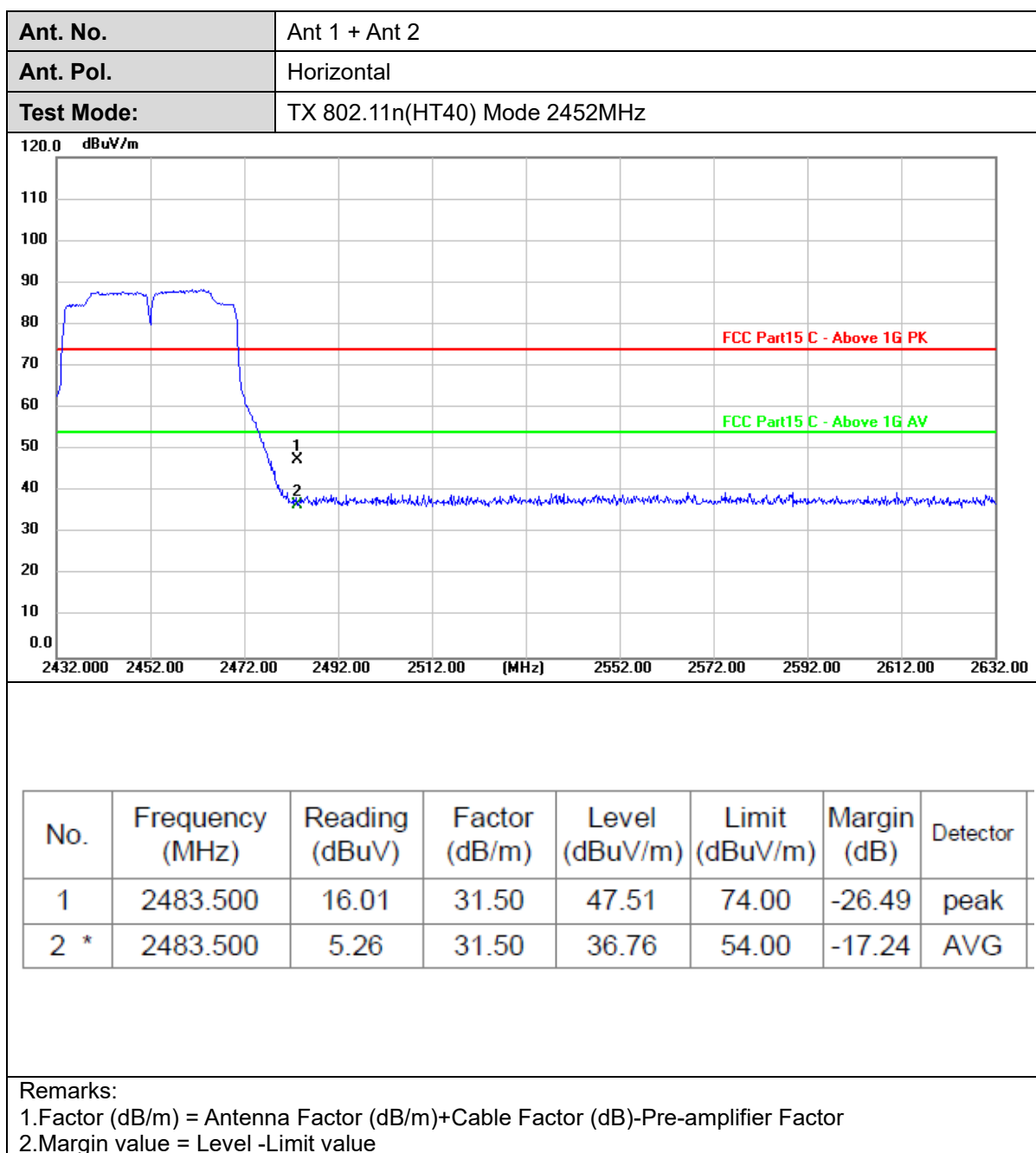


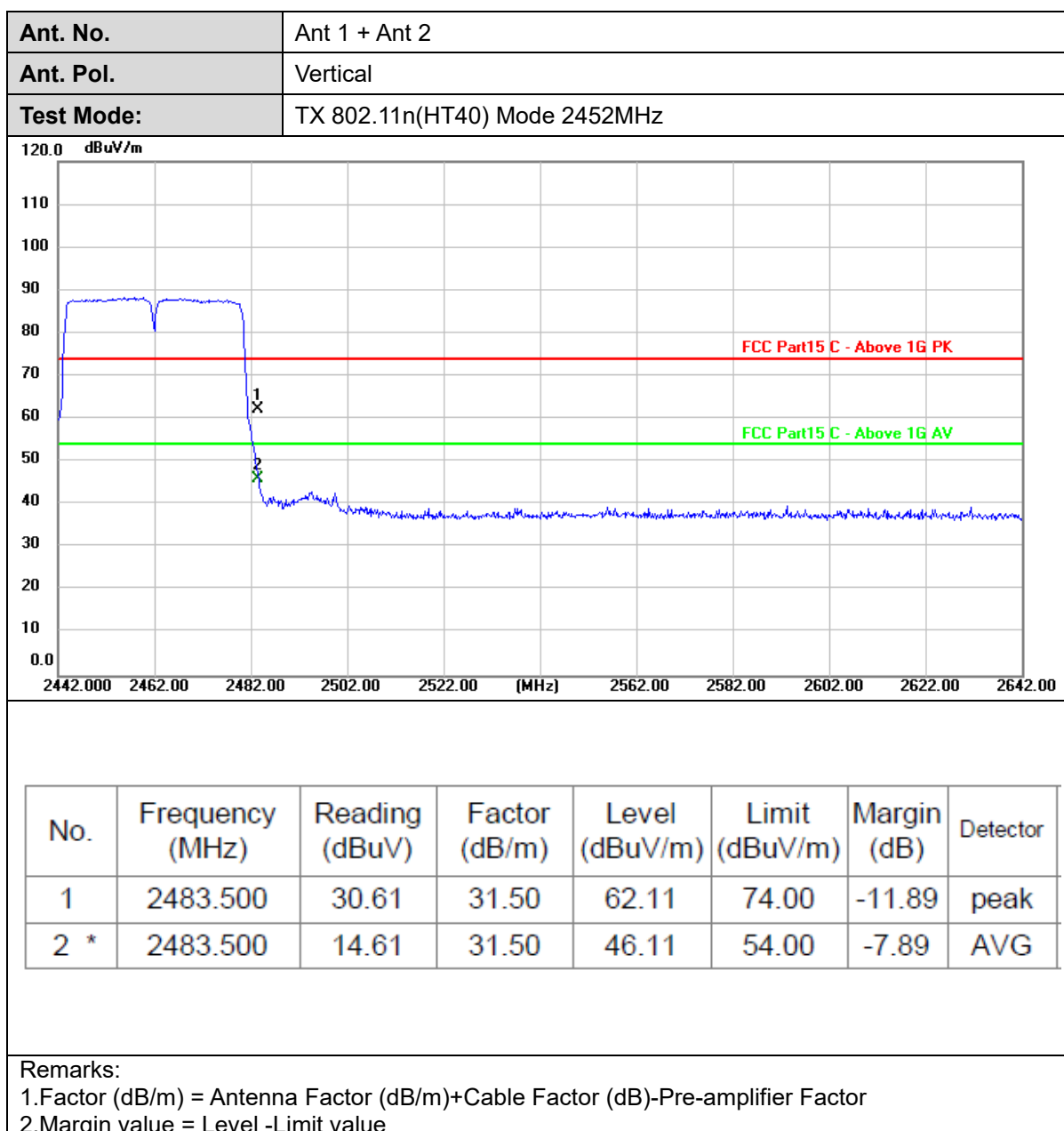


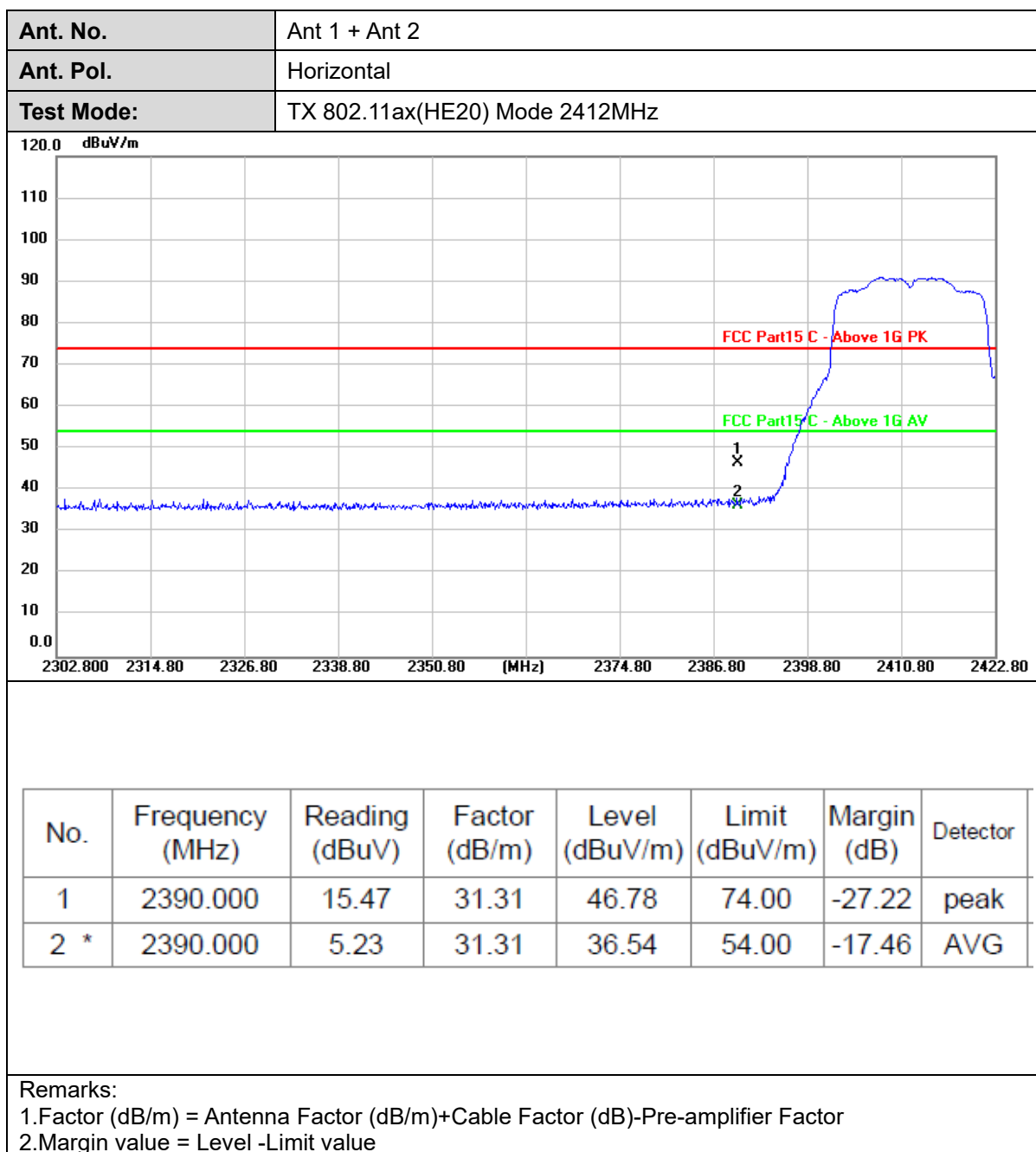


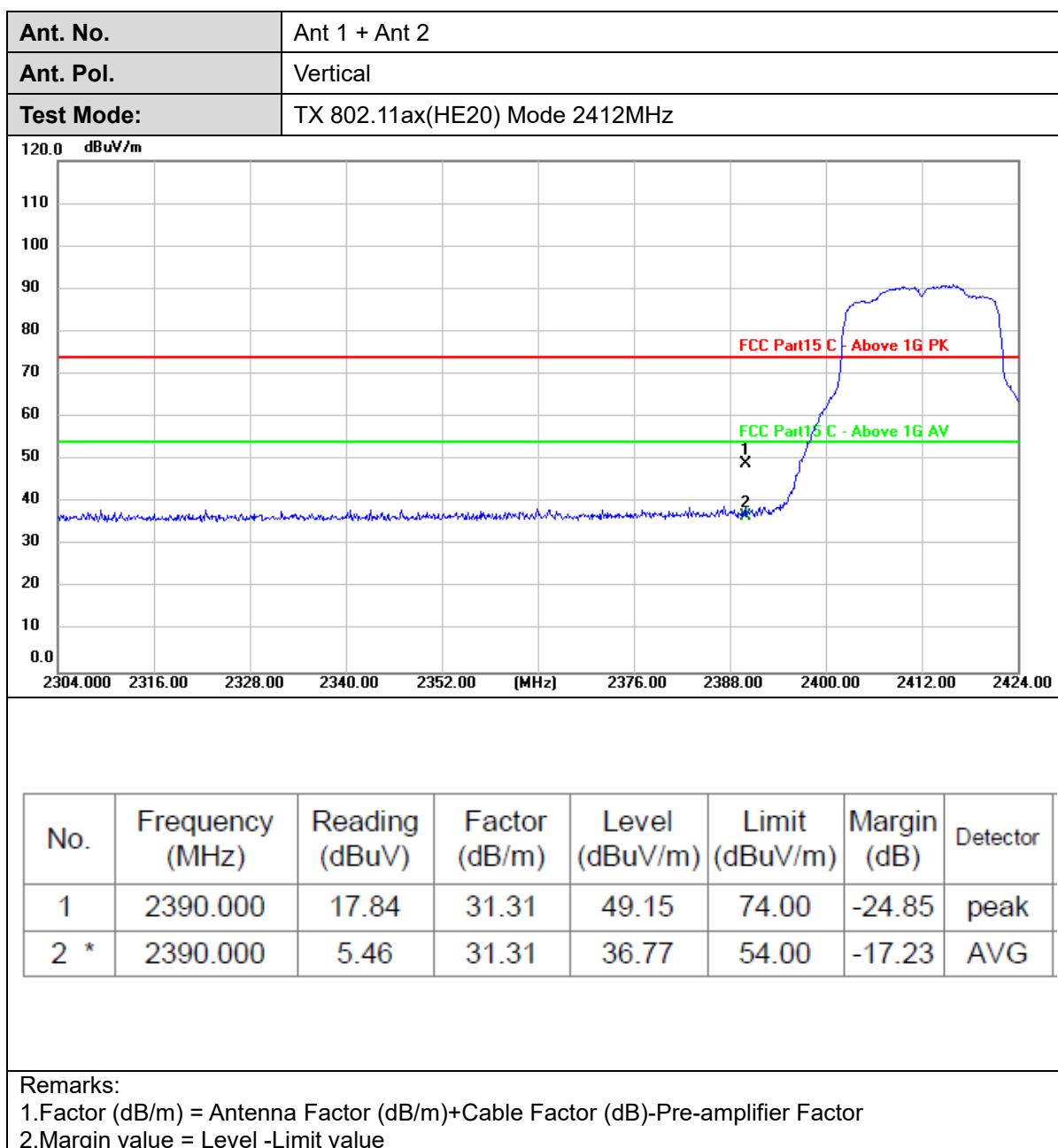


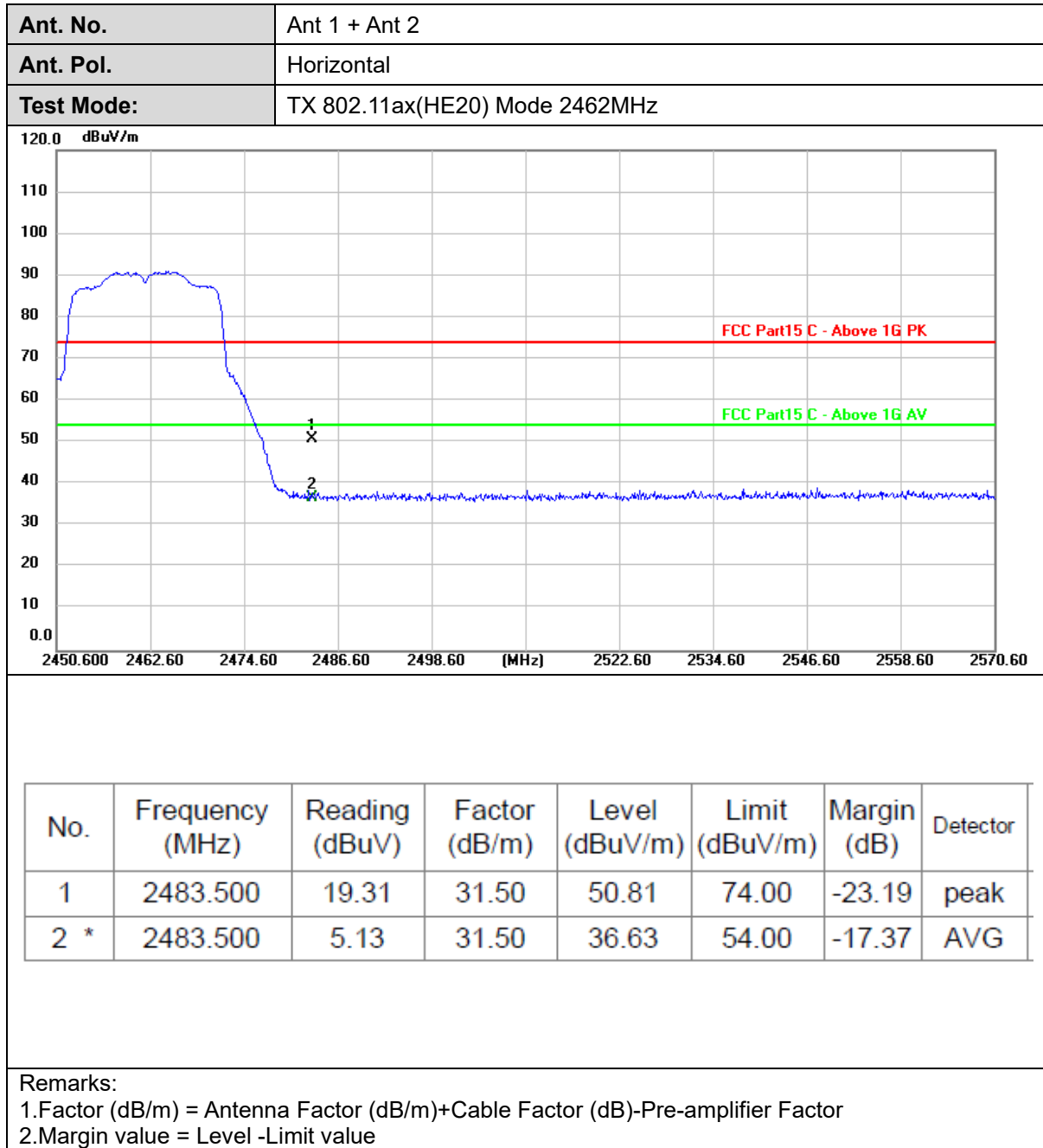


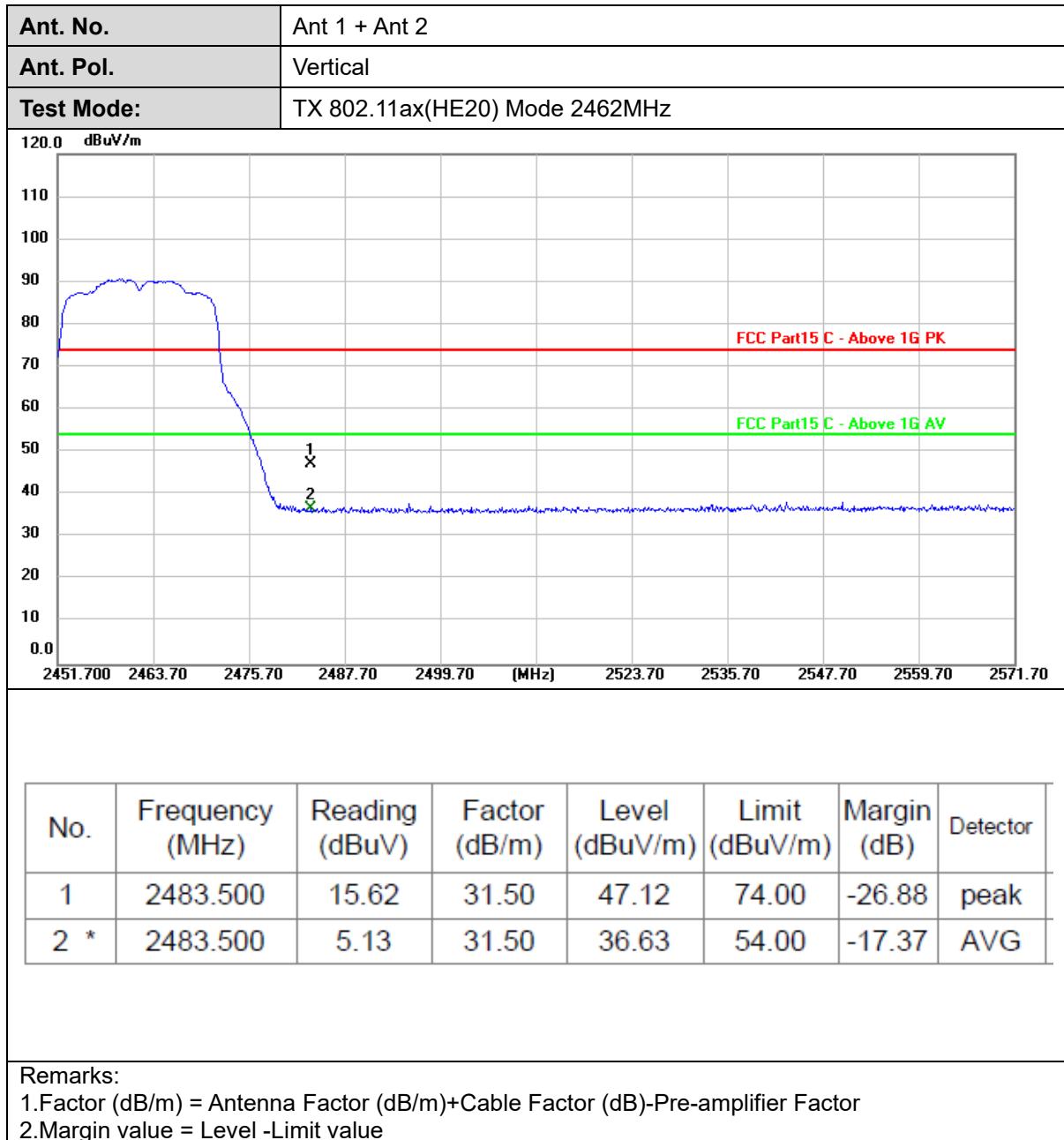


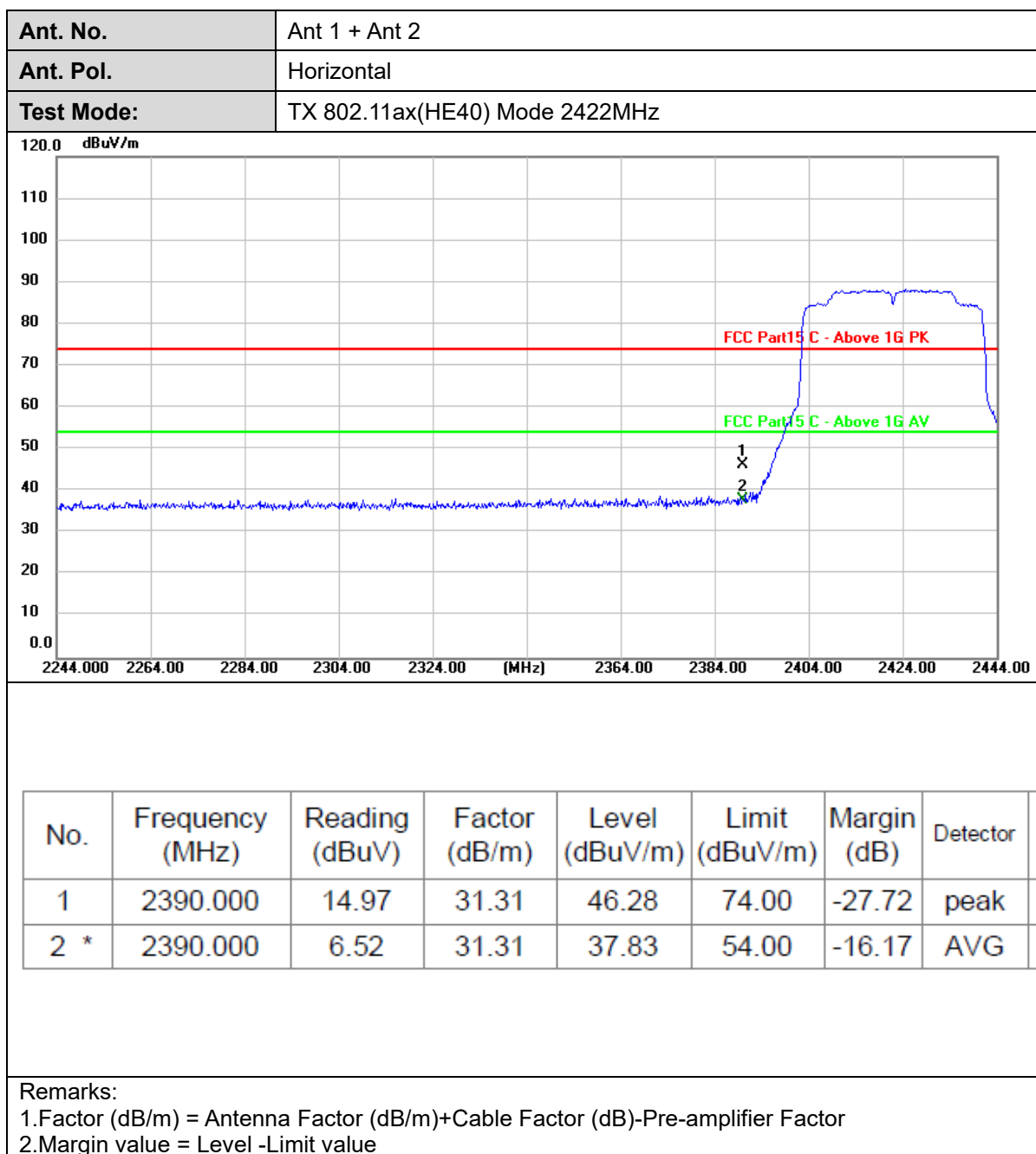


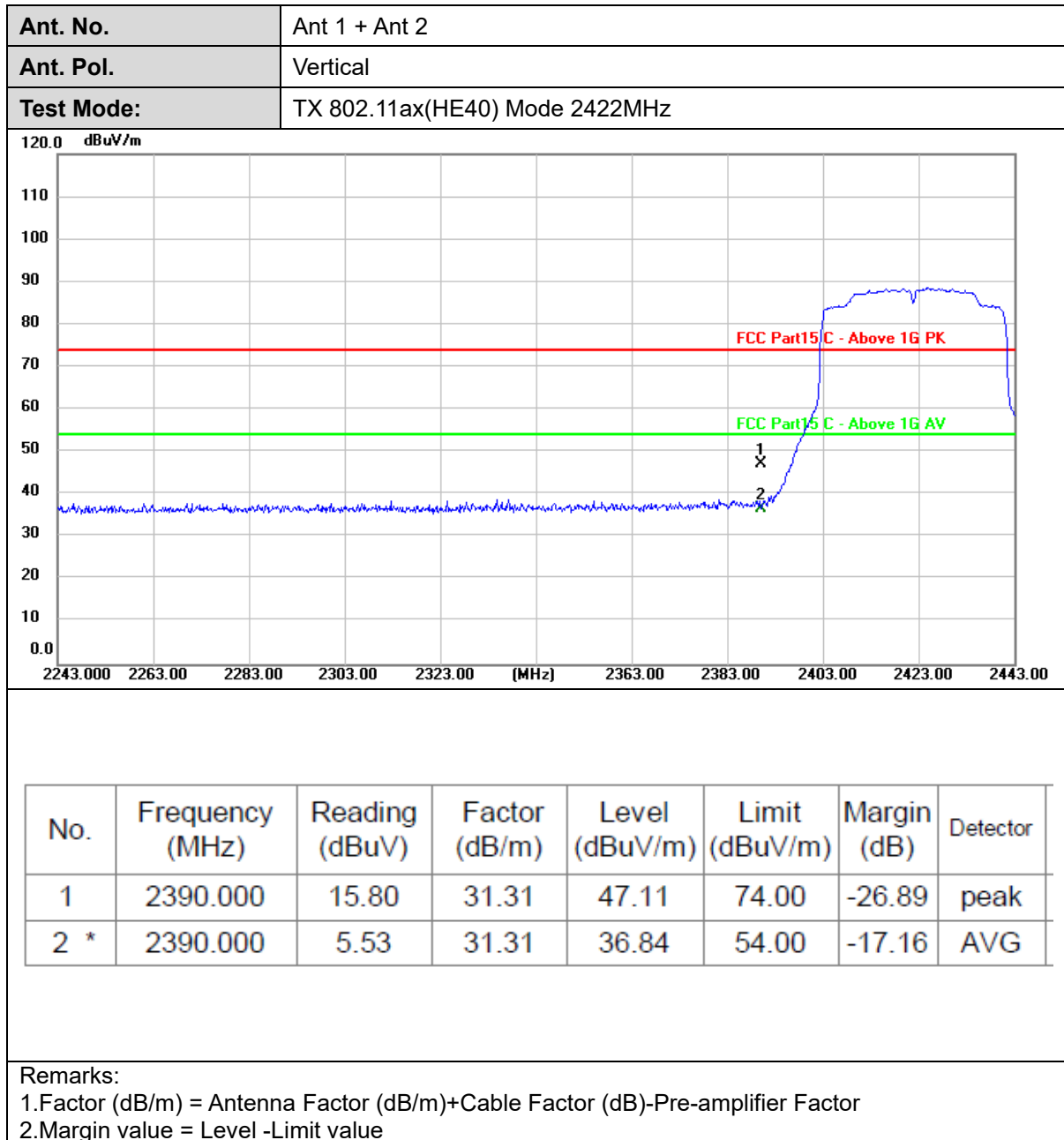


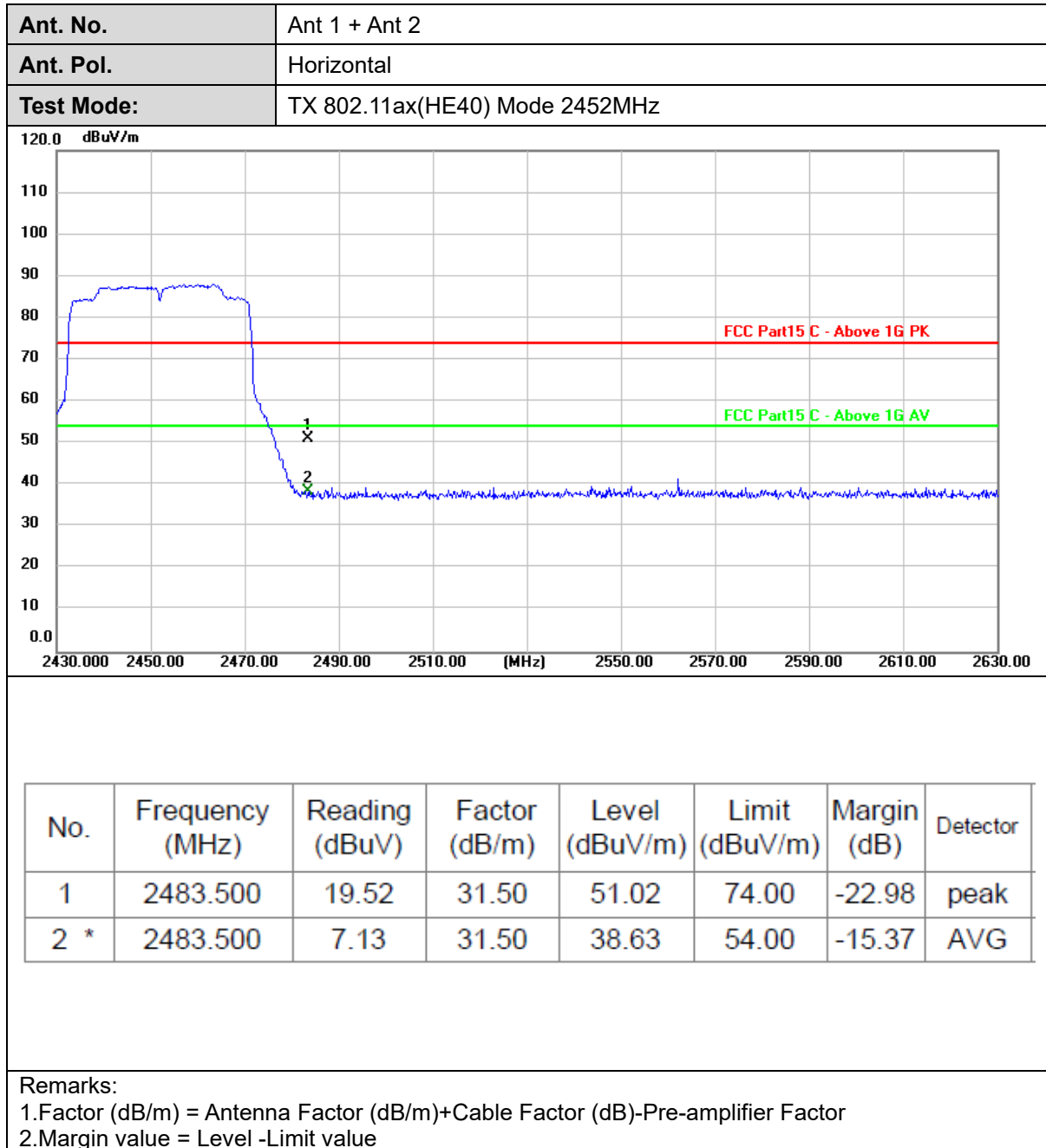


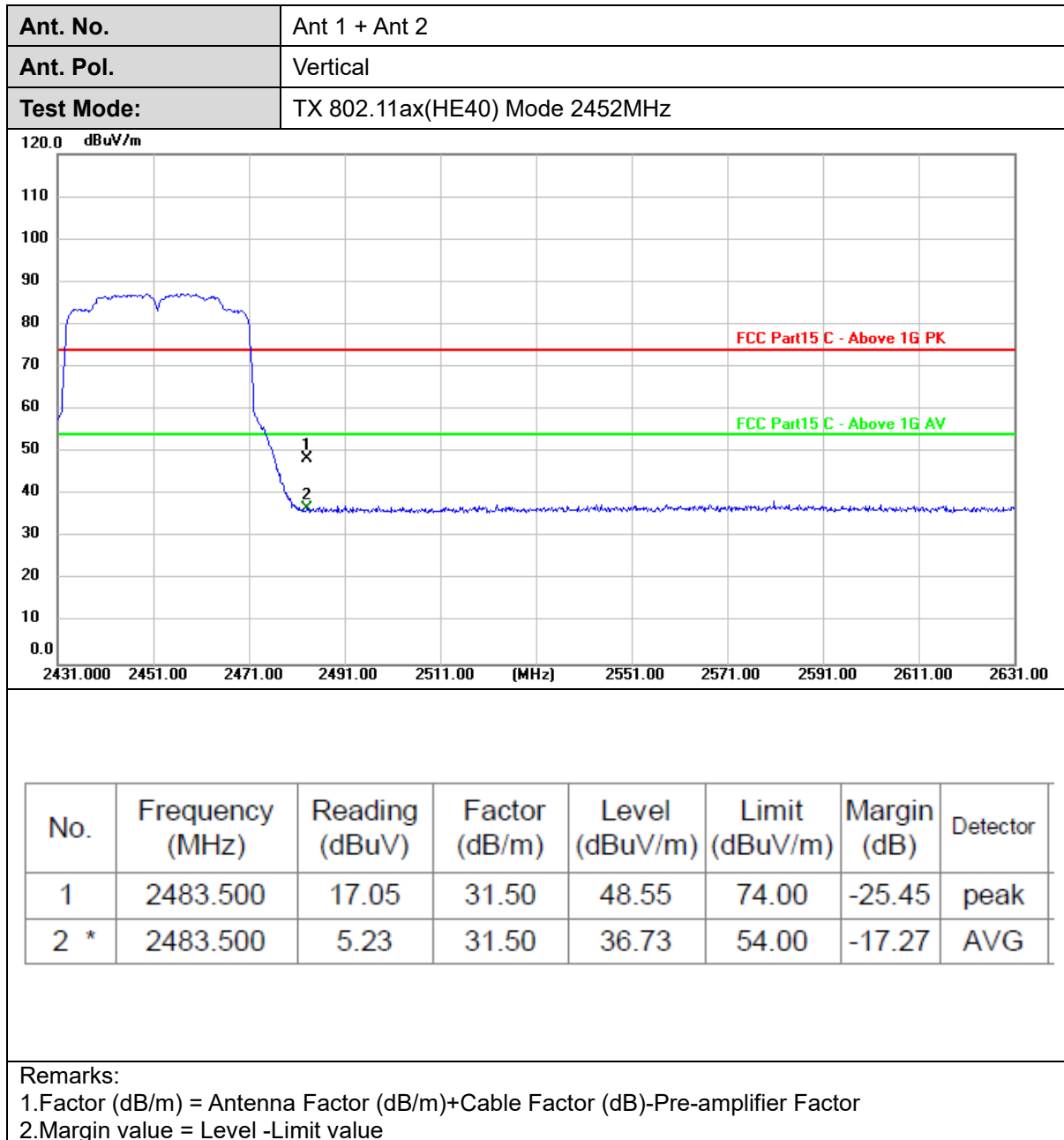














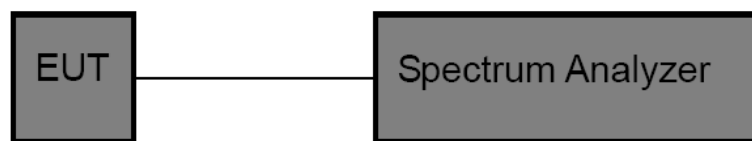
3.4. Band Edge and Spurious Emissions (Conducted)

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d) / RSS-247 5.5

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, 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, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Test Configuration



Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
RBW = 100 kHz, VBW $\geq$ RBW, scan up through 10th harmonic.
Sweep = auto, Detector function = peak, Trace = max hold.
4. Measure and record the results in the test report.

Test Mode

Please refer to the clause 2.4.

**Test Result****(1) Band Edge Conducted Test**

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.53	-45.35	≤-15.47	PASS
	Ant2	Low	2412	5.25	-44.53	≤-14.75	PASS
	Ant1	High	2462	5.52	-44.32	≤-14.48	PASS
	Ant2	High	2462	4.85	-43.91	≤-15.15	PASS
11G	Ant1	Low	2412	3.84	-25.68	≤-16.16	PASS
	Ant2	Low	2412	3.75	-24.32	≤-16.25	PASS
	Ant1	High	2462	4.03	-44.39	≤-15.97	PASS
	Ant2	High	2462	3.48	-43.85	≤-16.52	PASS
11N20MIMO	Ant1	Low	2412	0.58	-30.45	≤-19.42	PASS
	Ant2	Low	2412	0.90	-29.06	≤-19.1	PASS
	Ant1	High	2462	0.25	-44.57	≤-19.75	PASS
	Ant2	High	2462	0.65	-43.28	≤-19.35	PASS
11N40MIMO	Ant1	Low	2422	-2.70	-35.85	≤-22.7	PASS
	Ant2	Low	2422	-0.78	-40.38	≤-20.78	PASS
	Ant1	High	2452	-1.42	-31.04	≤-21.42	PASS
	Ant2	High	2452	-2.53	-43.7	≤-22.53	PASS
11AX20MIMO	Ant1	Low	2412	0.63	-29.43	≤-19.37	PASS
	Ant2	Low	2412	0.99	-28.25	≤-19.01	PASS
	Ant1	High	2462	0.49	-44.49	≤-19.51	PASS
	Ant2	High	2462	0.46	-43.65	≤-19.54	PASS
11AX40MIMO	Ant1	Low	2422	-1.25	-39.86	≤-21.25	PASS
	Ant2	Low	2422	-2.87	-33.18	≤-22.87	PASS
	Ant1	High	2452	-2.93	-44.3	≤-22.93	PASS
	Ant2	High	2452	-1.13	-39.45	≤-21.13	PASS

Conducted Spurious Emissions Test

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	5.72	5.72	---	PASS
			30~1000	5.72	-45.01	≤-14.28	PASS
			1000~26500	5.72	-37.99	≤-14.28	PASS
	Ant2	2412	Reference	6.08	6.08	---	PASS
			30~1000	6.08	-45.61	≤-13.92	PASS
			1000~26500	6.08	-37.36	≤-13.92	PASS
	Ant1	2437	Reference	5.49	5.49	---	PASS
			30~1000	5.49	-45.89	≤-14.51	PASS
			1000~26500	5.49	-37.5	≤-14.51	PASS
	Ant2	2437	Reference	5.90	5.90	---	PASS
			30~1000	5.90	-44.32	≤-14.1	PASS
			1000~26500	5.90	-37.21	≤-14.1	PASS
	Ant1	2462	Reference	5.62	5.62	---	PASS
			30~1000	5.62	-45.58	≤-14.38	PASS
			1000~26500	5.62	-38.3	≤-14.38	PASS
	Ant2	2462	Reference	5.59	5.59	---	PASS
			30~1000	5.59	-45.32	≤-14.41	PASS
			1000~26500	5.59	-36.32	≤-14.41	PASS
11G	Ant1	2412	Reference	4.16	4.16	---	PASS
			30~1000	4.16	-46.28	≤-15.84	PASS
			1000~26500	4.16	-37.47	≤-15.84	PASS
	Ant2	2412	Reference	4.44	4.44	---	PASS
			30~1000	4.44	-44.98	≤-15.56	PASS
			1000~26500	4.44	-36.51	≤-15.56	PASS
	Ant1	2437	Reference	4.30	4.30	---	PASS
			30~1000	4.30	-45.96	≤-15.7	PASS
			1000~26500	4.30	-37.74	≤-15.7	PASS
	Ant2	2437	Reference	4.41	4.41	---	PASS
			30~1000	4.41	-45.06	≤-15.59	PASS
			1000~26500	4.41	-37.99	≤-15.59	PASS

CTC Laboratories, Inc.

Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



	Ant1	2462	Reference	4.07	4.07	---	PASS
			30~1000	4.07	-45.38	≤-15.93	PASS
			1000~26500	4.07	-37.95	≤-15.93	PASS
	Ant2	2462	Reference	3.96	3.96	---	PASS
			30~1000	3.96	-45.92	≤-16.04	PASS
			1000~26500	3.96	-38.2	≤-16.04	PASS
11N20MIMO	Ant1	2412	Reference	0.92	0.92	---	PASS
			30~1000	0.92	-45.07	≤-19.08	PASS
			1000~26500	0.92	-38.04	≤-19.08	PASS
	Ant2	2412	Reference	1.58	1.58	---	PASS
			30~1000	1.58	-46.01	≤-18.42	PASS
			1000~26500	1.58	-37.94	≤-18.42	PASS
	Ant1	2437	Reference	1.12	1.12	---	PASS
			30~1000	1.12	-45.94	≤-18.88	PASS
			1000~26500	1.12	-37.91	≤-18.88	PASS
	Ant2	2437	Reference	1.42	1.42	---	PASS
			30~1000	1.42	-45.15	≤-18.58	PASS
			1000~26500	1.42	-37.4	≤-18.58	PASS
	Ant1	2462	Reference	0.69	0.69	---	PASS
			30~1000	0.69	-44.77	≤-19.31	PASS
			1000~26500	0.69	-37.85	≤-19.31	PASS
	Ant2	2462	Reference	0.87	0.87	---	PASS
			30~1000	0.87	-46.04	≤-19.13	PASS
			1000~26500	0.87	-37.5	≤-19.13	PASS
11N40MIMO	Ant1	2422	Reference	-2.31	-2.31	---	PASS
			30~1000	-2.31	-44.39	≤-22.31	PASS
			1000~26500	-2.31	-37.72	≤-22.31	PASS
	Ant2	2422	Reference	-0.13	-0.13	---	PASS
			30~1000	-0.13	-45.59	≤-20.13	PASS
			1000~26500	-0.13	-37.5	≤-20.13	PASS
	Ant1	2437	Reference	-2.17	-2.17	---	PASS
			30~1000	-2.17	-46.18	≤-22.17	PASS
			1000~26500	-2.17	-38.16	≤-22.17	PASS
	Ant2	2437	Reference	-0.99	-0.99	---	PASS
			30~1000	-0.99	-44.69	≤-20.99	PASS
			1000~26500	-0.99	-37.92	≤-20.99	PASS
	Ant1	2452	Reference	-2.24	-2.24	---	PASS
			30~1000	-2.24	-45.99	≤-22.24	PASS
			1000~26500	-2.24	-37.73	≤-22.24	PASS
	Ant2	2452	Reference	-0.10	-0.10	---	PASS
			30~1000	-0.10	-45.91	≤-20.1	PASS
			1000~26500	-0.10	-38.01	≤-20.1	PASS
11AX20MIMO	Ant1	2412	Reference	0.73	0.73	---	PASS
			30~1000	0.73	-45.27	≤-19.27	PASS
			1000~26500	0.73	-37.38	≤-19.27	PASS
	Ant2	2412	Reference	1.27	1.27	---	PASS
			30~1000	1.27	-44.54	≤-18.73	PASS
			1000~26500	1.27	-37.48	≤-18.73	PASS
	Ant1	2437	Reference	0.91	0.91	---	PASS
			30~1000	0.91	-45.73	≤-19.09	PASS
			1000~26500	0.91	-38.94	≤-19.09	PASS
	Ant2	2437	Reference	1.24	1.24	---	PASS
			30~1000	1.24	-45.12	≤-18.76	PASS
			1000~26500	1.24	-37.99	≤-18.76	PASS
	Ant1	2462	Reference	0.56	0.56	---	PASS
			30~1000	0.56	-45.9	≤-19.44	PASS
			1000~26500	0.56	-37.78	≤-19.44	PASS
	Ant2	2462	Reference	0.81	0.81	---	PASS
			30~1000	0.81	-45.42	≤-19.19	PASS
			1000~26500	0.81	-37.84	≤-19.19	PASS
11AX40MIMO	Ant1	2422	Reference	-3.03	-3.03	---	PASS
			30~1000	-3.03	-45.78	≤-23.03	PASS
			1000~26500	-3.03	-37.95	≤-23.03	PASS
	Ant2	2422	Reference	-0.61	-0.61	---	PASS
			30~1000	-0.61	-45.72	≤-20.61	PASS
			1000~26500	-0.61	-45.72	≤-20.61	PASS

CTC Laboratories, Inc.

Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luh Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

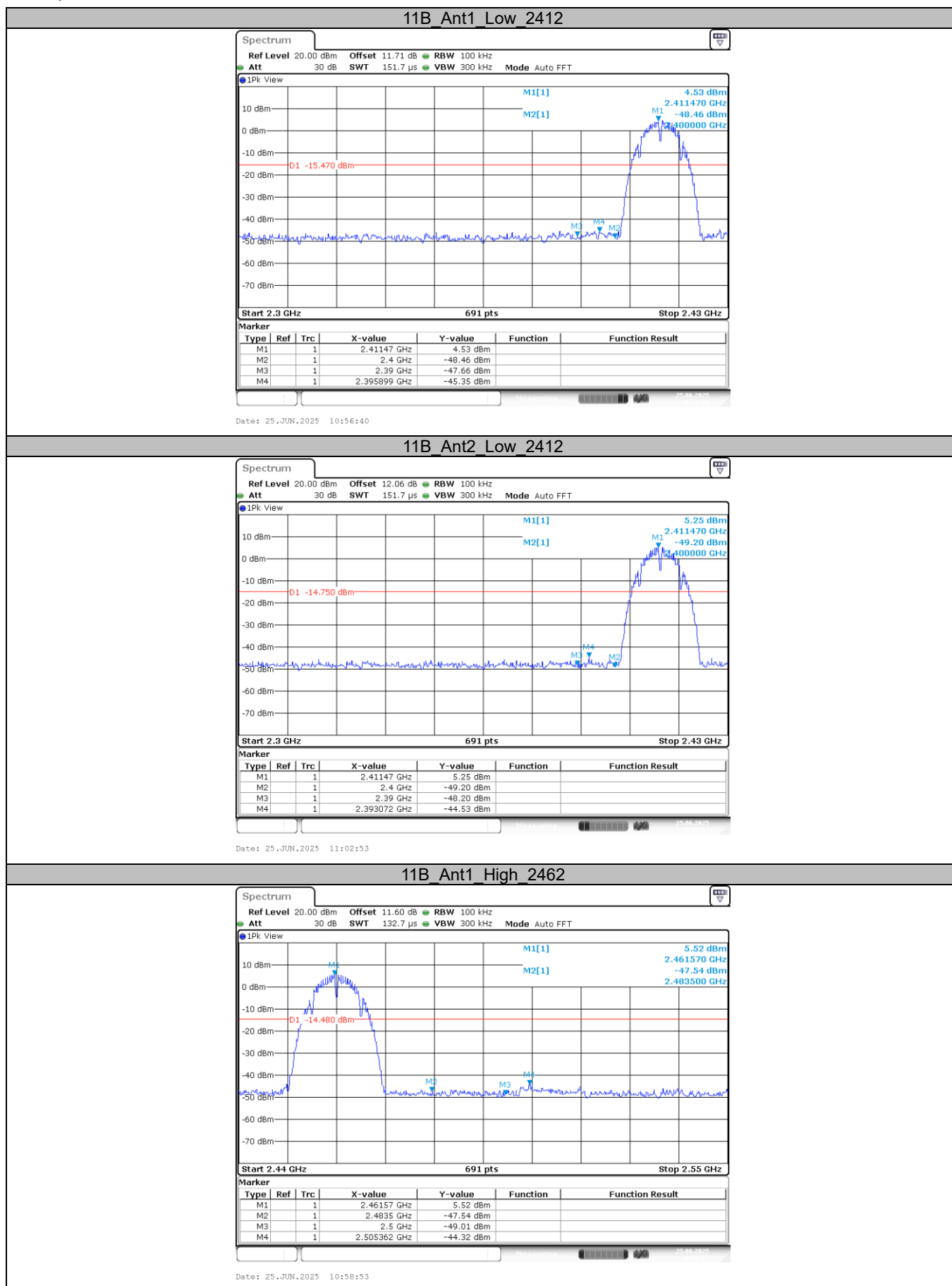
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



	Ant1	2437	1000~26500	-0.61	-36.89	≤ -20.61	PASS
			Reference	-2.76	-2.76	---	PASS
			30~1000	-2.76	-45.89	≤ -22.76	PASS
	Ant2	2437	1000~26500	-2.76	-37.97	≤ -22.76	PASS
			Reference	-1.43	-1.43	---	PASS
			30~1000	-1.43	-45.74	≤ -21.43	PASS
	Ant1	2452	1000~26500	-1.43	-38.17	≤ -21.43	PASS
			Reference	-2.70	-2.70	---	PASS
			30~1000	-2.70	-43.03	≤ -22.7	PASS
	Ant2	2452	1000~26500	-2.70	-38.35	≤ -22.7	PASS
			Reference	-0.57	-0.57	---	PASS
			30~1000	-0.57	-45.54	≤ -20.57	PASS
	Ant2	2452	1000~26500	-0.57	-36.61	≤ -20.57	PASS



Test plot as follows:



CTC Laboratories, Inc.

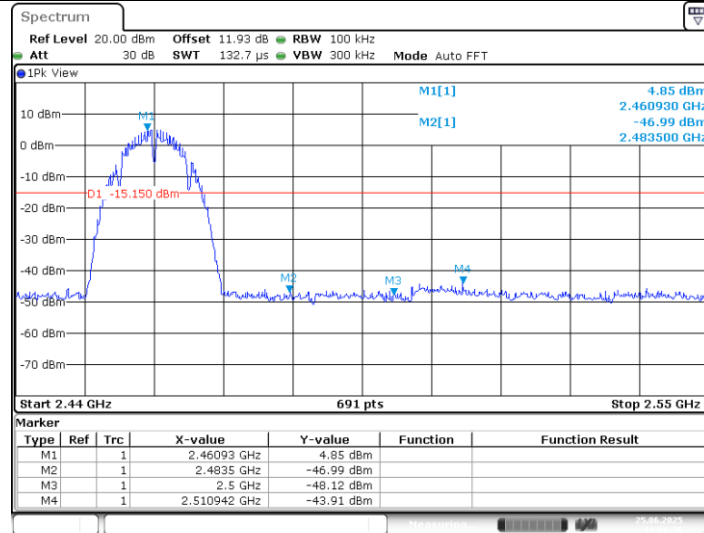
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict,
Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

For anti-fake verification, please visit the official website of China Inspection And Testing
Society : yz.cncaq.com

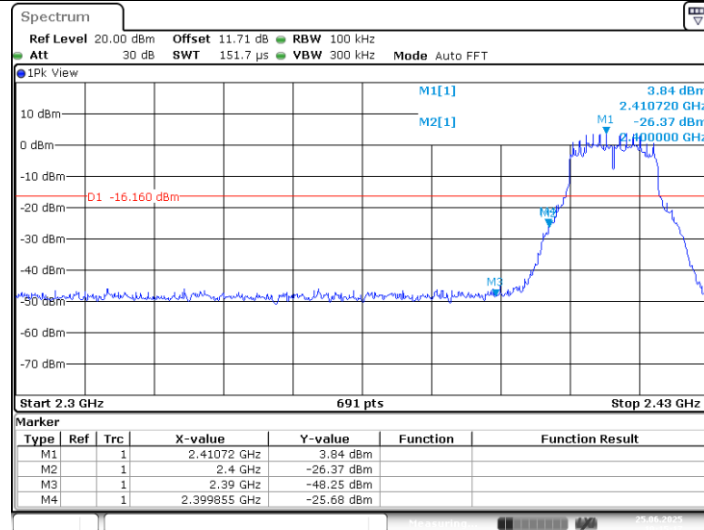


11B Ant2 High 2462



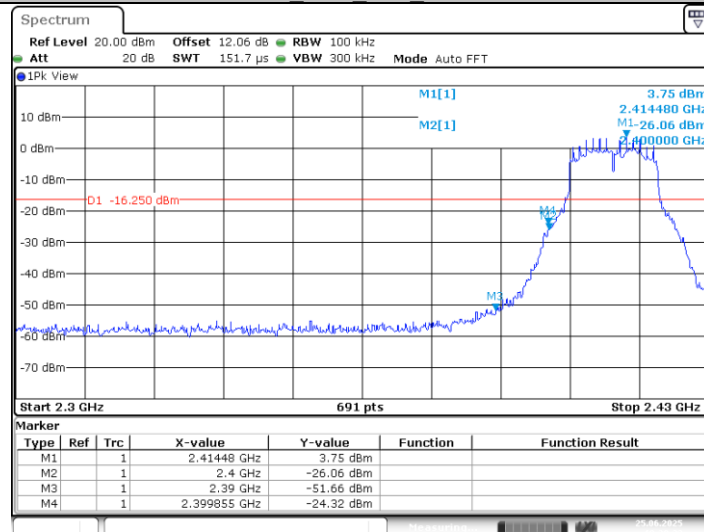
Date: 25.JUN.2025 11:06:26

11G Ant1 Low 2412



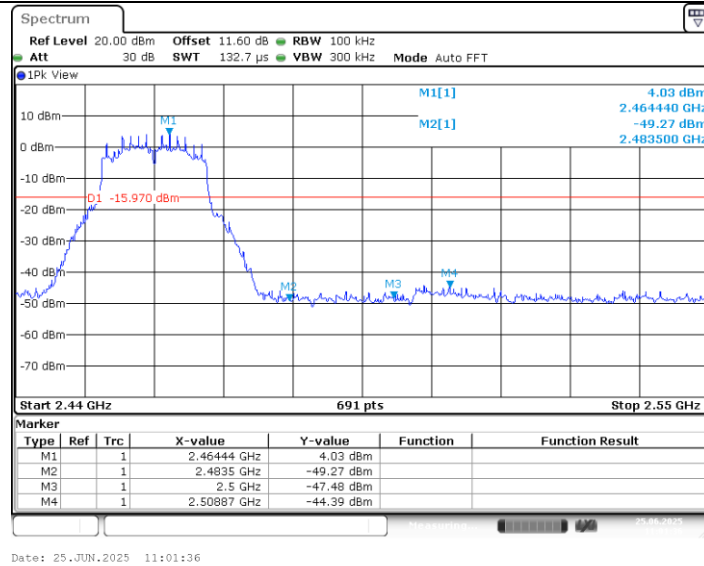
Date: 25.JUN.2025 10:15:17

11G Ant2 Low 2412

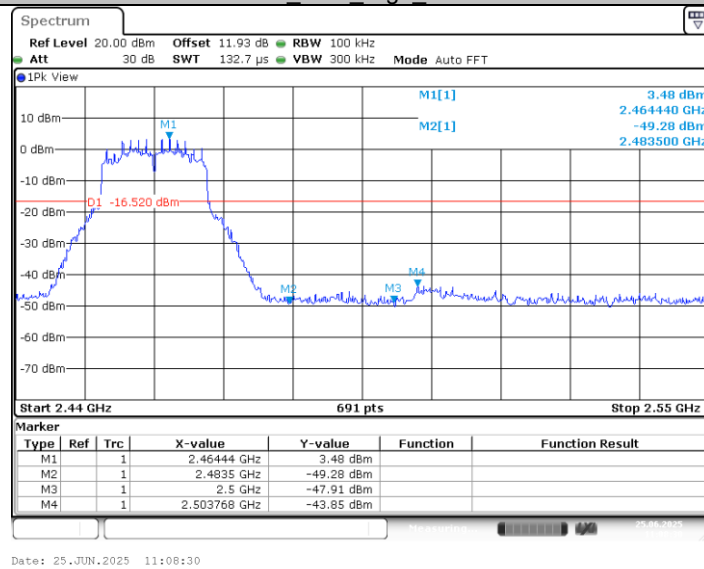


Date: 25.JUN.2025 10:20:32

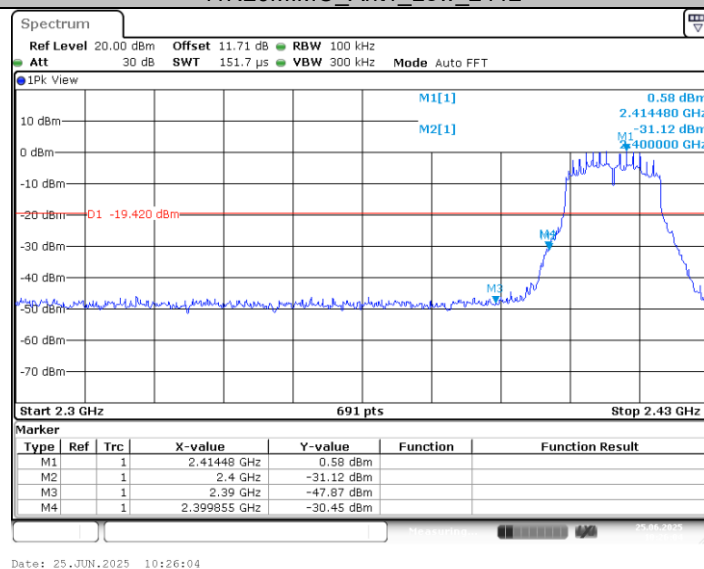
11G Ant1 High 2462



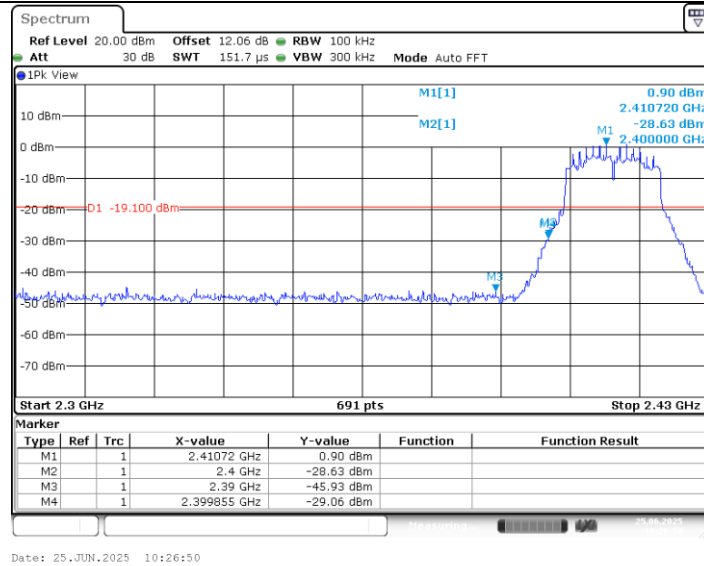
11G_Ant2_High_2462



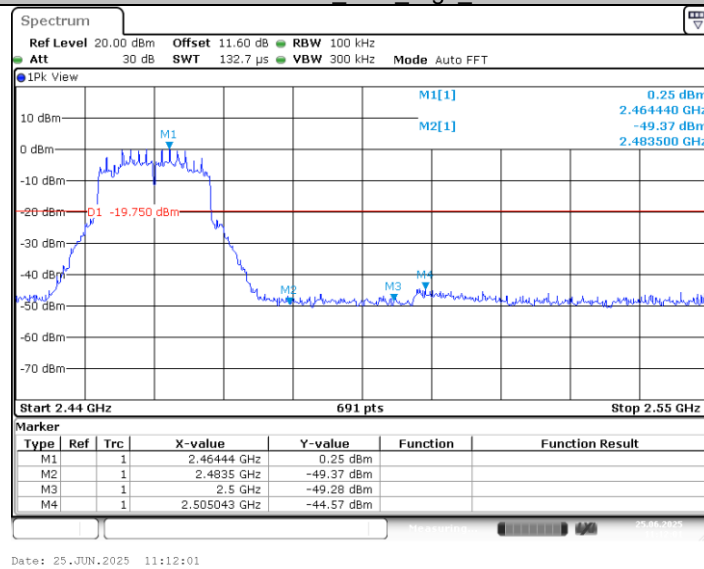
11N20MIMO_Ant1_Low_2412



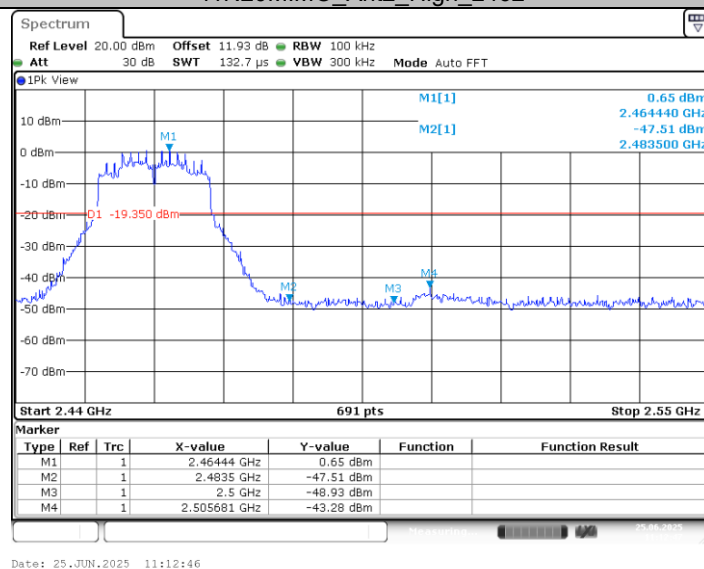
11N20MIMO_Ant2_Low_2412



11N20MIMO_Ant1_High_2462



11N20MIMO_Ant2_High_2462



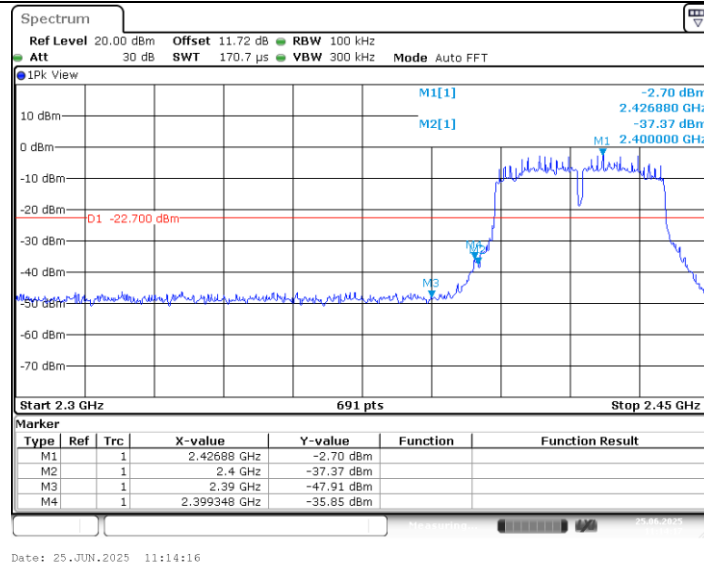
11N40MIMO_Ant1_Low_2422

CTC Laboratories, Inc.

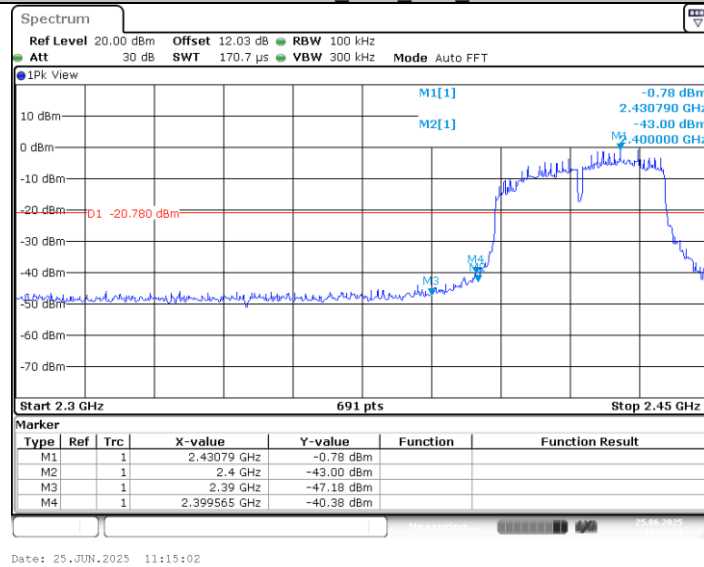
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luh Community, Guanhu Subdistrict,
Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

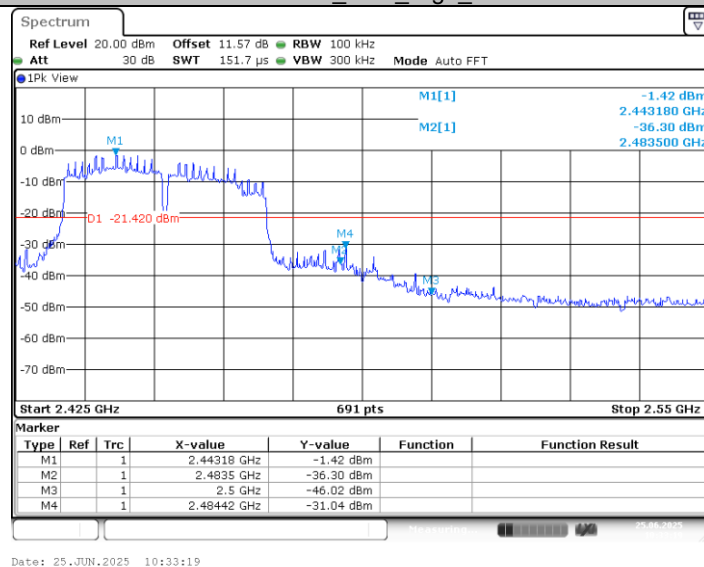
For anti-fake verification, please visit the official website of China Inspection And Testing
Society : yz.cncaq.com



11N40MIMO_Ant2_Low_2422



11N40MIMO_Ant1_High_2452



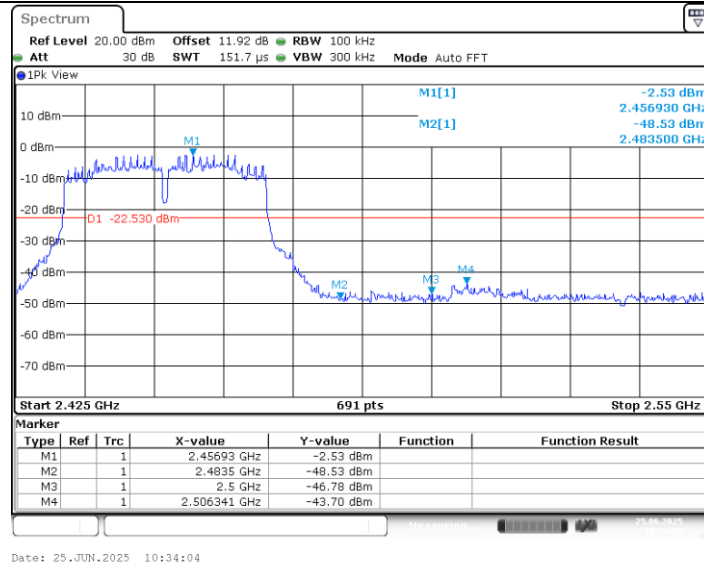
11N40MIMO_Ant2_High_2452

CTC Laboratories, Inc.

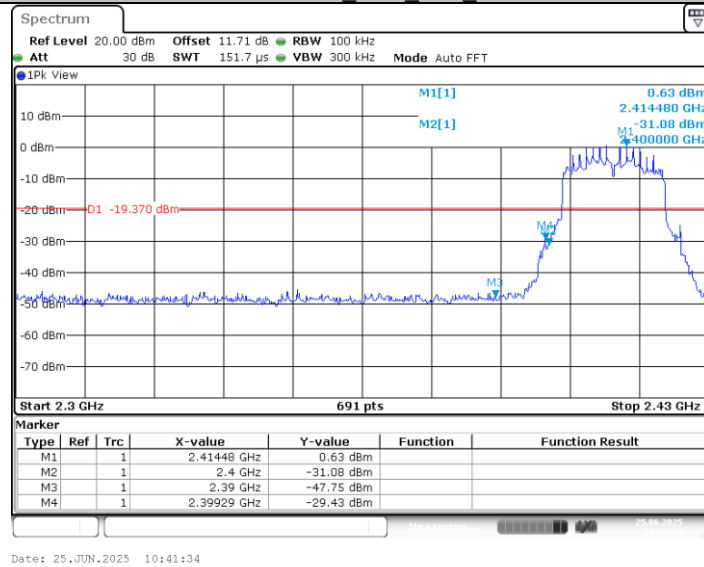
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict,
Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

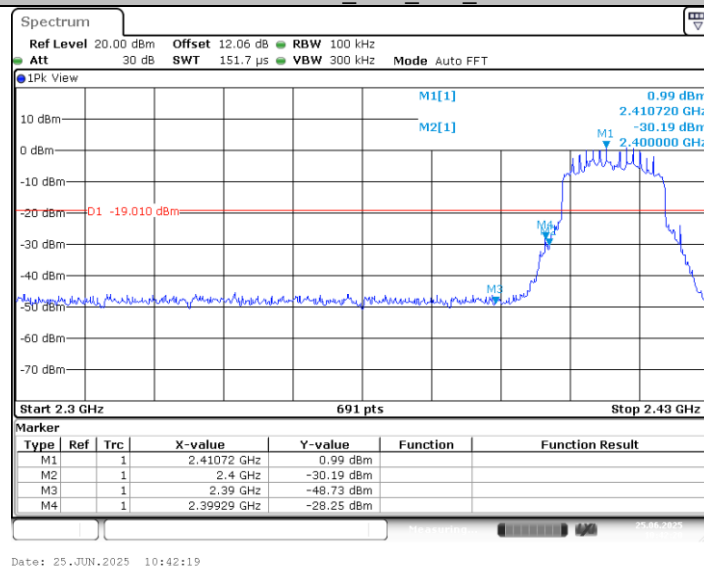
For anti-fake verification, please visit the official website of China Inspection And Testing
Society : yz.cncaq.com



11AX20MIMO_Ant1_Low_2412



11AX20MIMO_Ant2_Low_2412



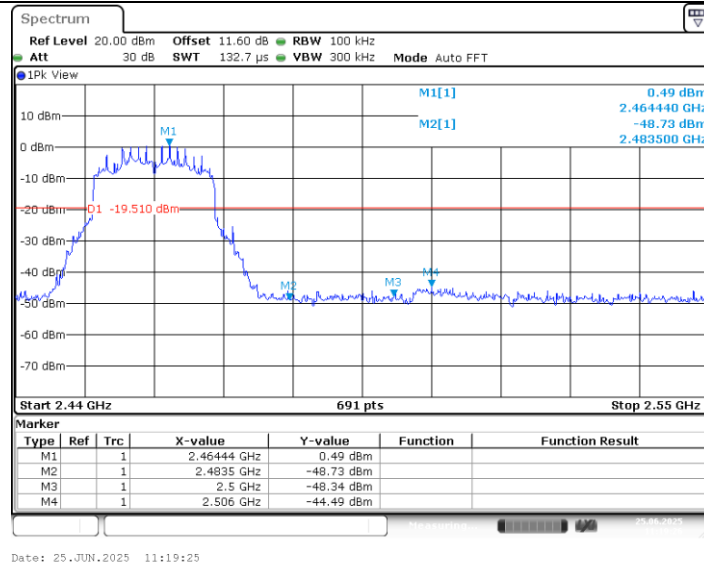
11AX20MIMO_Ant1_High_2462

CTC Laboratories, Inc.

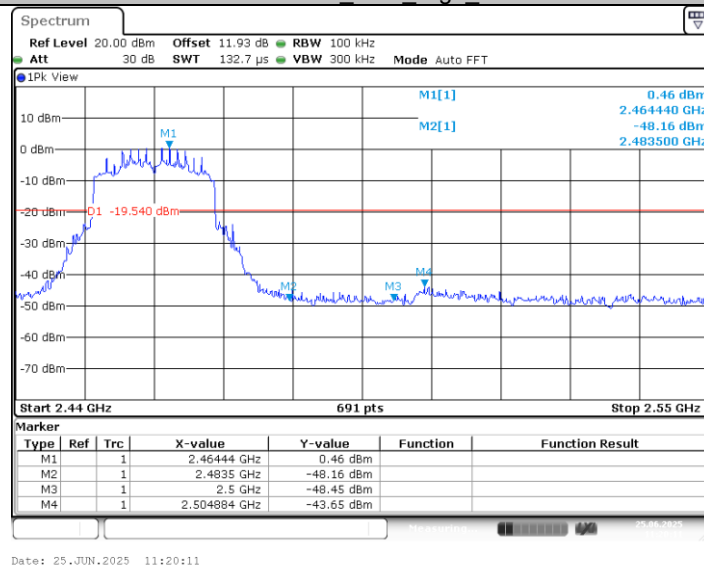
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

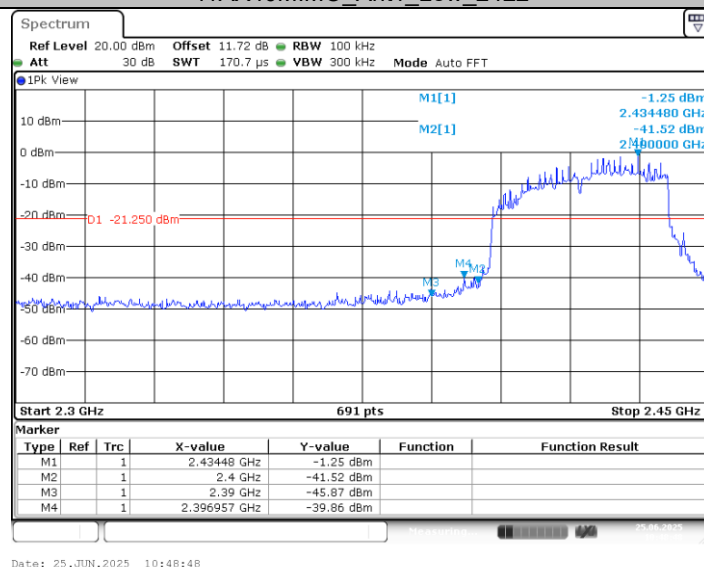
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



11AX20MIMO_Ant2_High_2462



11AX40MIMO_Ant1_Low_2422



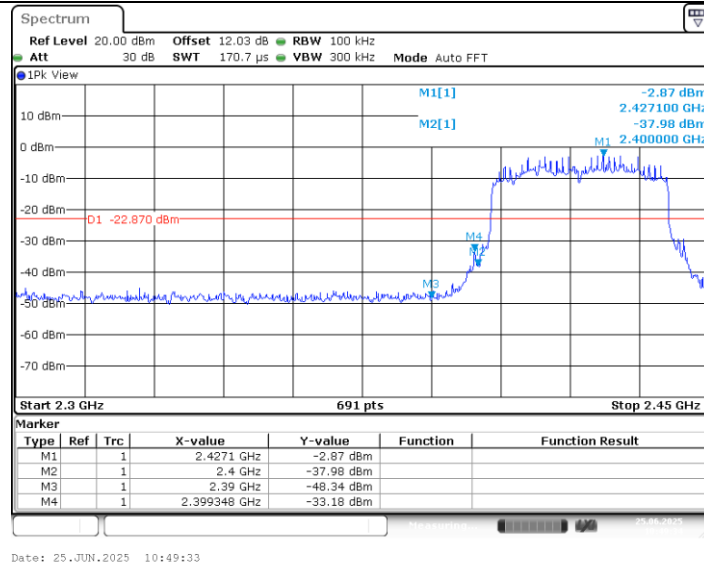
11AX40MIMO_Ant2_Low_2422

CTC Laboratories, Inc.

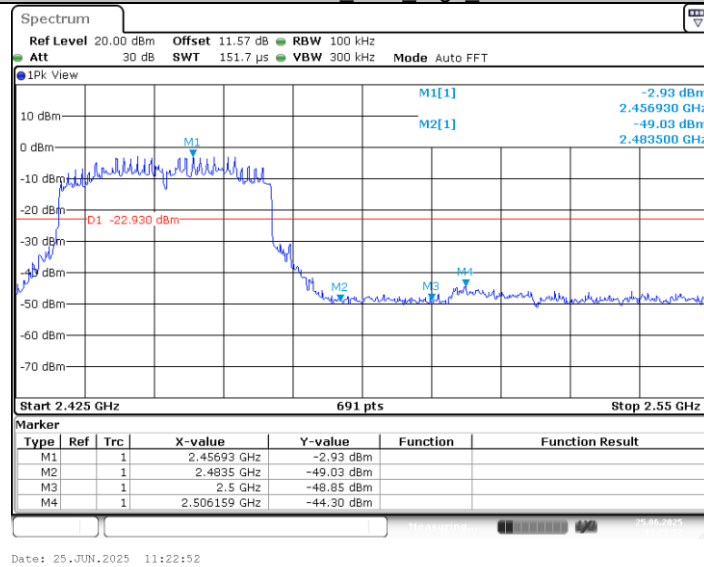
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

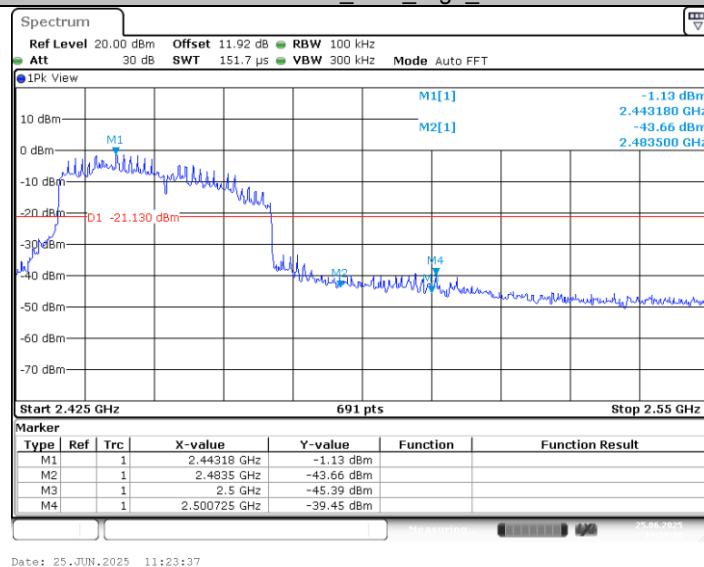
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



11AX40MIMO_Ant1_High_2452



11AX40MIMO_Ant2_High_2452



CTC Laboratories, Inc.

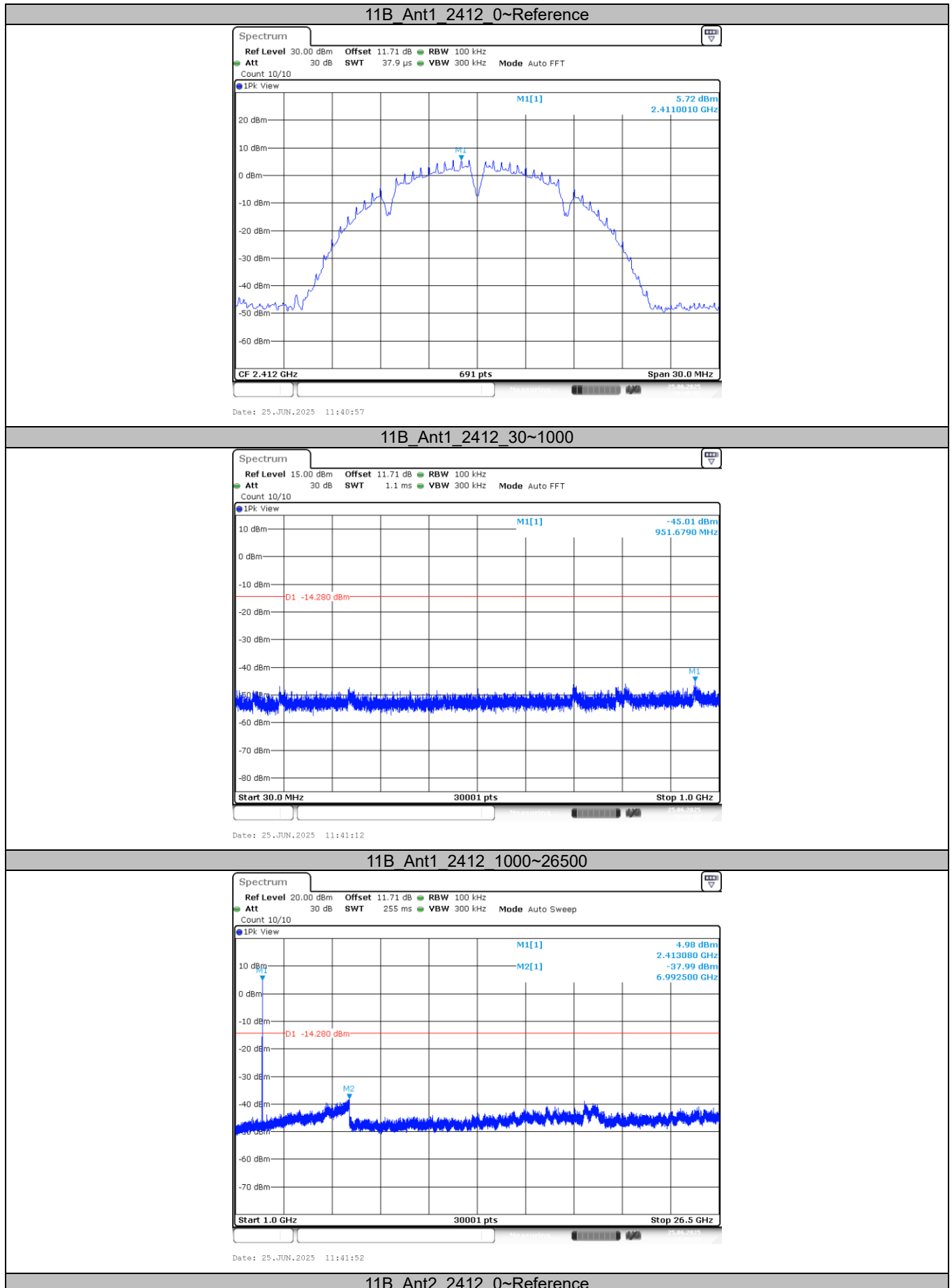
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



Test plot as follows:

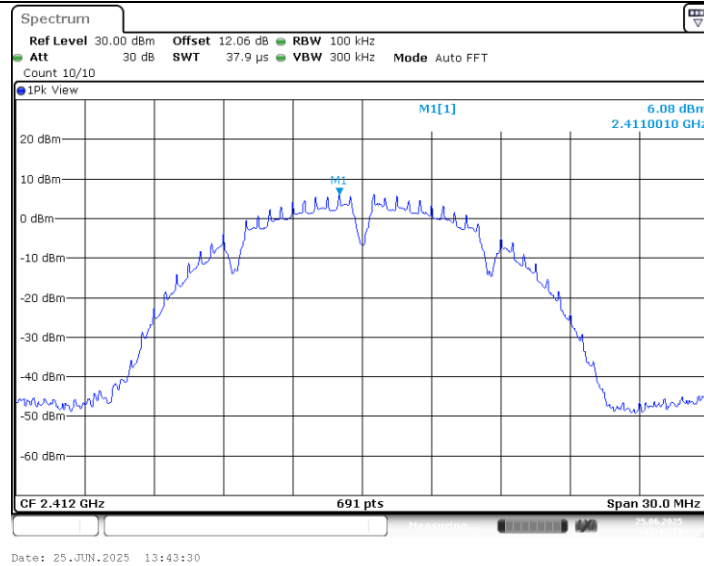


CTC Laboratories, Inc.

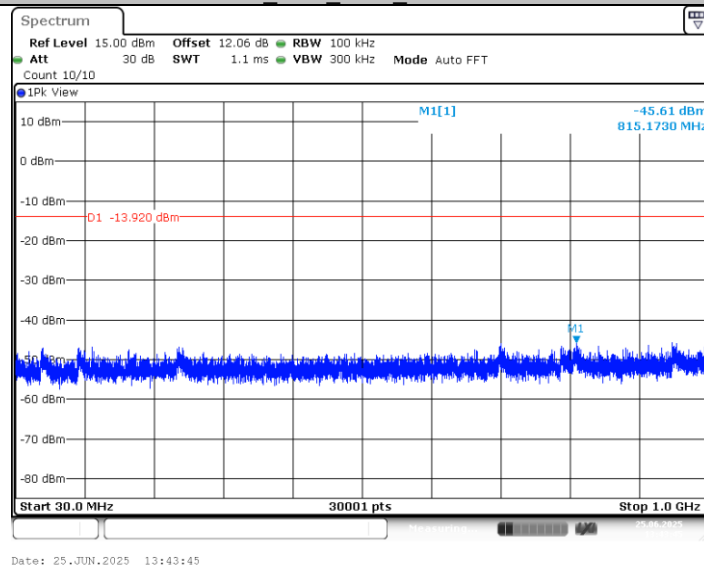
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luh Community, Guanhu Subdistrict,
Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

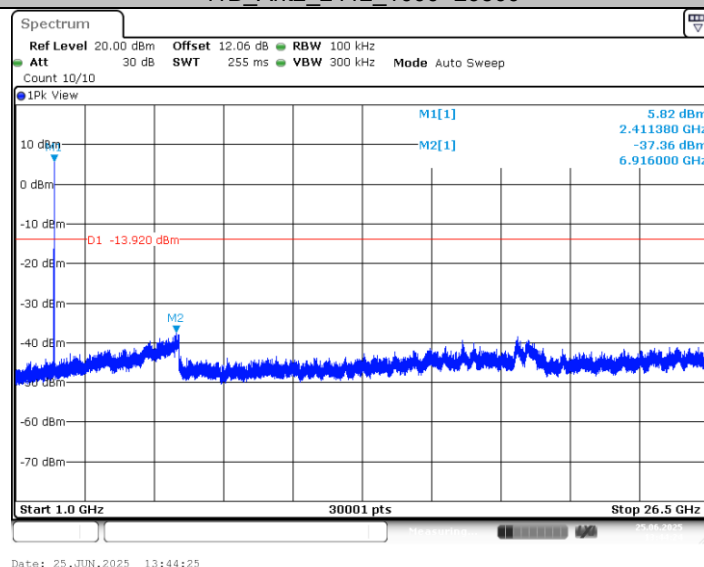
For anti-fake verification, please visit the official website of China Inspection And Testing
Society : yz.cncaq.com



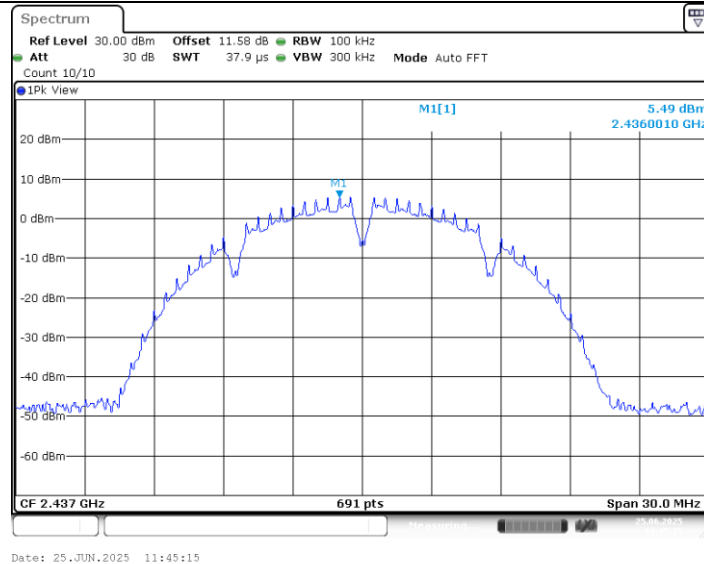
11B_Ant2_2412_30~1000



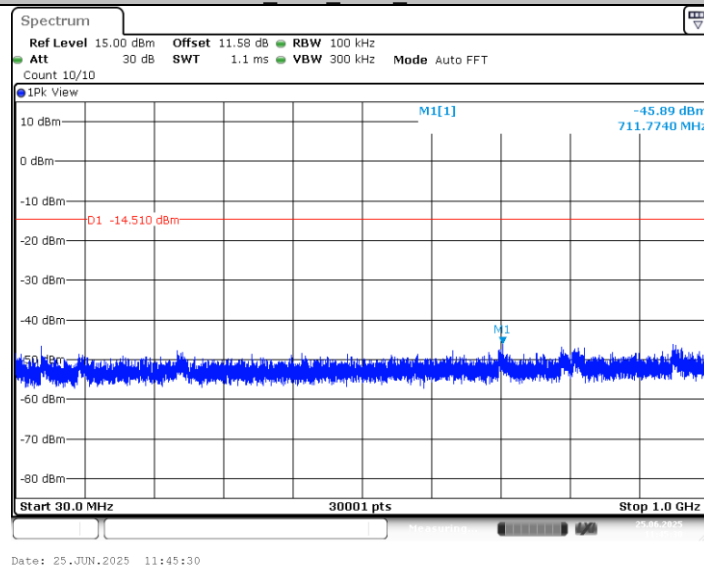
11B_Ant2_2412_1000~26500



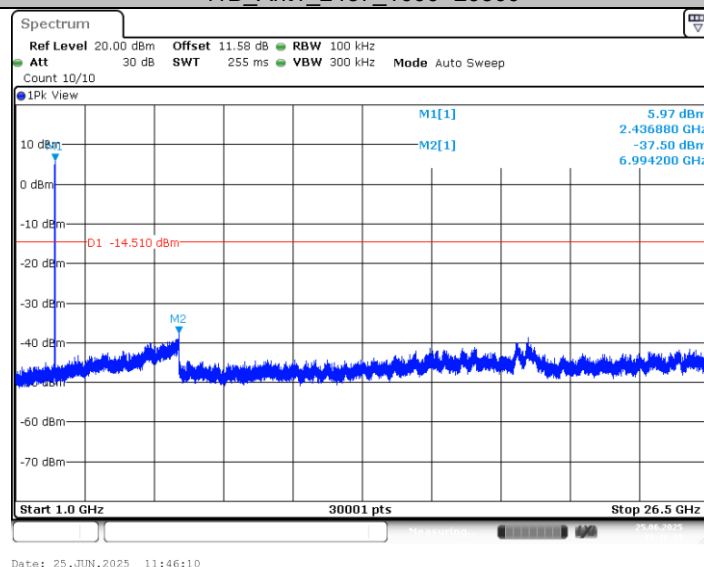
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



11B_Ant1_2437_1000~26500



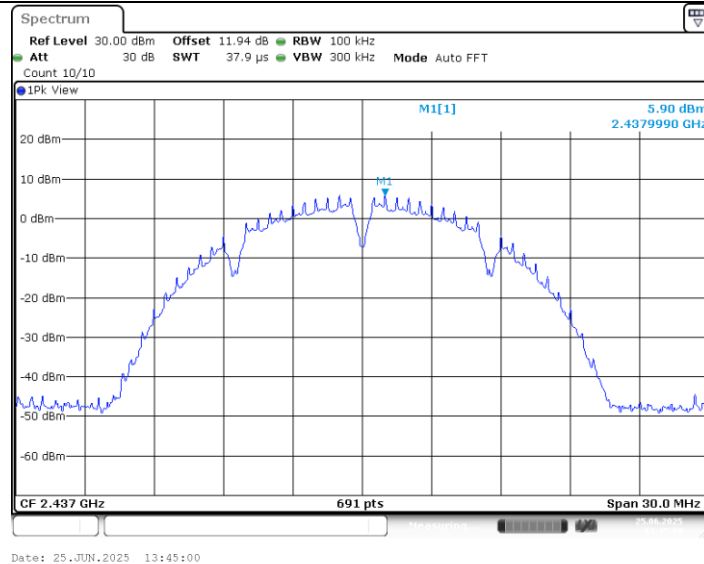
11B_Ant2_2437_0~Reference

CTC Laboratories, Inc.

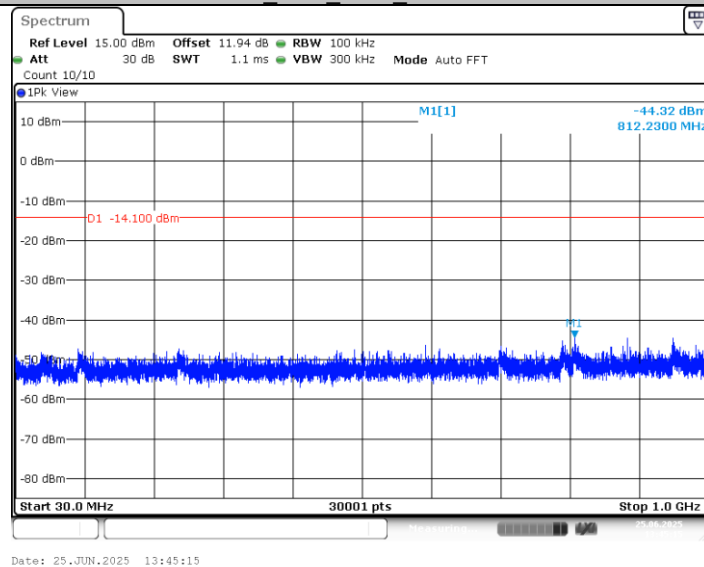
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

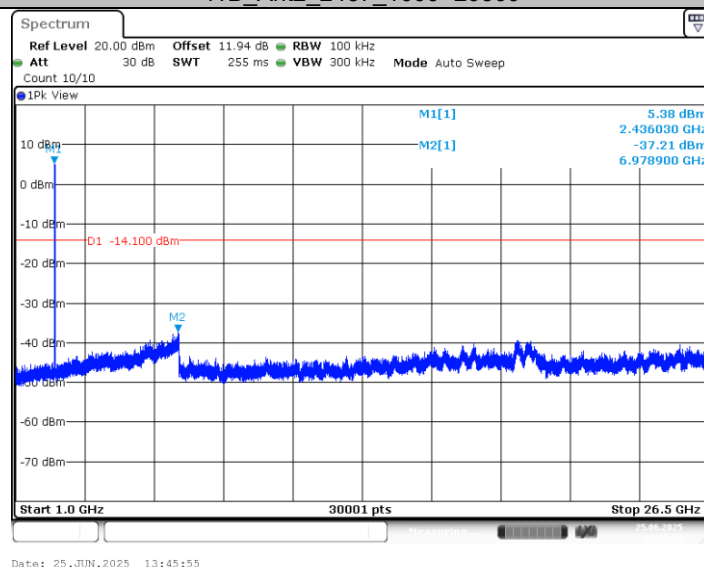
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



11B_Ant2_2437_30~1000



11B_Ant2_2437_1000~26500



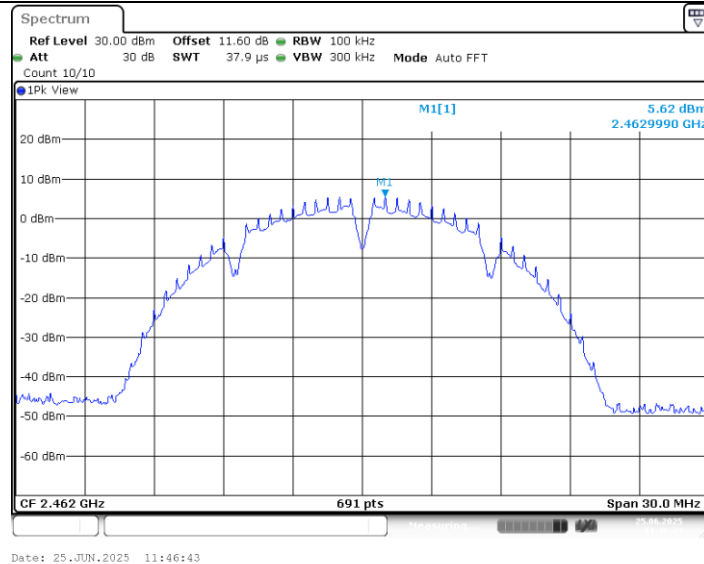
11B_Ant1_2462_0~Reference

CTC Laboratories, Inc.

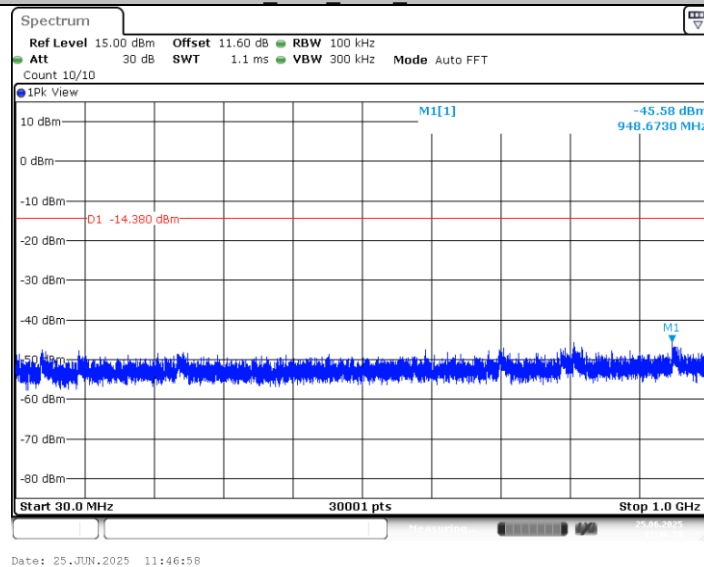
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict,
Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

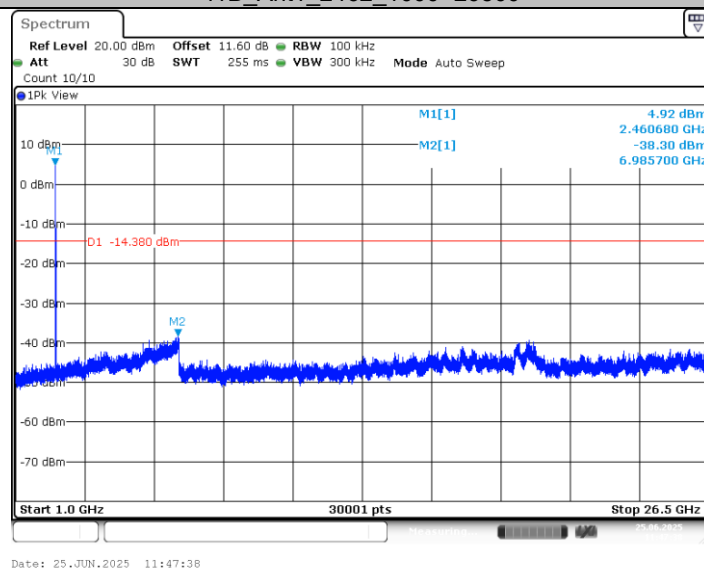
For anti-fake verification, please visit the official website of China Inspection And Testing
Society : yz.cncaq.com



11B_Ant1_2462_30~1000



11B_Ant1_2462_1000~26500



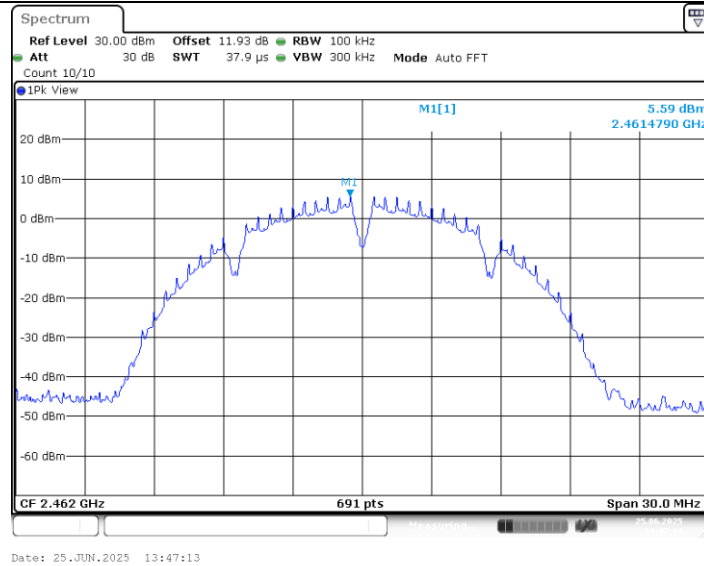
11B_Ant2_2462_0~Reference

CTC Laboratories, Inc.

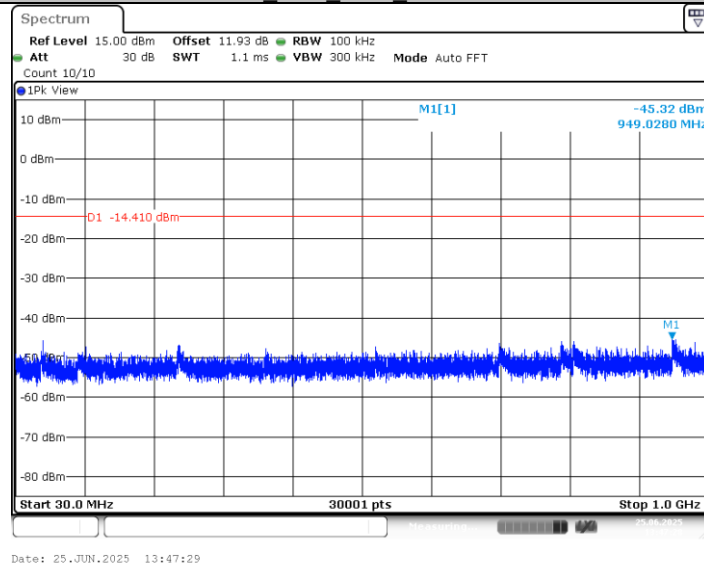
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict,
Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-057_A2

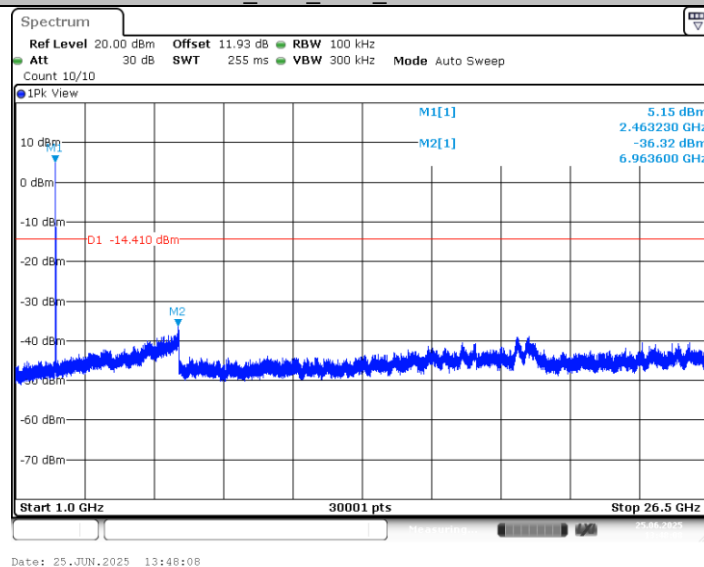
For anti-fake verification, please visit the official website of China Inspection And Testing
Society : yz.cncaq.com



11B_Ant2_2462_30~1000



11B_Ant2_2462_1000~26500



11G_Ant1_2412_0~Reference