



TEST REPORT

Report No. : **CTC2025421001**
FCC ID : **2BM6KT2**
Applicant : **Shenzhen Ningxin Juli Technical Service Co., Ltd.**
Address : Floor 3, Building C, Shenli Industrial Park, Huaqing Avenue,
Tsinghua Community, Longhua Street, Longhua District,
Shenzhen China
Manufacturer : Shenzhen Aoni Electronics Co., LTD
Address : Building 5, Honghui Industrial Park, Liuxian Second Road, Xin
'an Street, Bao 'an District, Shenzhen China
Product Name : **DASHCAM**
Trade Mark : OMBAR
Model/Type reference : T2
Listed Model(s) : /
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 : Jul. 4, 2025
Date of testing : Jul. 4, 2025 ~ Jul. 31, 2025
Date of issue : Aug. 18, 2025
Result : **PASS**

Compiled by:

(Printed name+signature) Jim Jiang

Jim Jiang

Supervised by:

(Printed name+signature) Eric Zhang

Eric Zhang

Approved by:

(Printed name+signature) Totti Zhao

Totti Zhao

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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.

[RSS-247 Issue 3](#): Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices.

[RSS-Gen Issue 5](#): General Requirements for Compliance of Radio Apparatus.

[ANSI C63.10-2013](#): American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

1.2. Report Version

Revised No.	Report No.	Date of issue	Description
01	CTC2025421001	Aug. 18, 2025	Original

1.3. Test Description

FCC Part 15 Subpart C (15.247) / RSS-247 Issue 3				
Test Item	Standard Section		Result	Test Engineer
	FCC	ISED		
Antenna Requirement	15.203	RSS-Gen 6.8	Pass	Jim Jiang
Conducted Emission	15.207	RSS-Gen 8.8	Pass	Jim Jiang
Conducted Band Edge and Spurious Emissions	15.247(d)	RSS-247 5.5	Pass	Jim Jiang
Radiated Band Edge and Spurious Emissions	15.205&15.209&15.247(d)	RSS-247 5.5	Pass	Jim Jiang
6dB Bandwidth	15.247(a)(2)	RSS-247 5.2 (a)	Pass	Jim Jiang
Occupied Bandwidth	/	RSS-Gen 6.7	Pass	Jim Jiang
Conducted Max Output Power	15.247(b)(3)	RSS-247 5.4 (d)	Pass	Jim Jiang
Power Spectral Density	15.247(e)	RSS-247 5.2 (b)	Pass	Jim Jiang
Transmitter Radiated Spurious	15.209&15.247(d)	RSS-247 5.5&RSS-Gen 8.9	Pass	Jim Jiang

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, Luh 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.

Innovation, Science and Economic Development 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.



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



2. GENERAL INFORMATION

2.1. Client Information

Applicant:	Shenzhen Ningxin Juli Technical Service Co., Ltd.
Address:	Floor 3, Building C, Shenli Industrial Park, Huaqing Avenue, Tsinghua Community, Longhua Street, Longhua District, Shenzhen China
Manufacturer/ Factory:	Shenzhen Aoni Electronics Co., LTD
Address:	Building 5, Honghui Industrial Park, Liuxian Second Road, Xin 'an Street, Bao 'an District, Shenzhen China

2.2. General Description of EUT

Product Name:	DASHCAM
Trade Mark:	OMBAR
Model/Type reference:	T2
Listed Model(s):	/
Model Difference:	/
Sample ID:	CTC250704-002-S002, CTC250704-002-S003
Power Supply:	Type-C Input: DC5V 2.5A
Hardware Version:	/
Software Version:	/
2.4G Wi-Fi	
Modulation:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/ n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
Operation Frequency:	802.11b/ g/ n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
Channel Number:	802.11b/ g/ n(HT20): 11 channels 802.11n(HT40): 7 channels
Channel Separation:	5MHz
Antenna Type:	Chip Antenna
Antenna Gain:	1.5dBi



2.3. Accessory Equipment Information

Equipment Information			
Name	Model	S/N	Manufacturer
Notebook	ThinkPad T460s	MP246QDR	Lenovo
Adapter	A2244	/	Apple
Cable Information			
Name	Shielded Type	Ferrite Core	Length
USB Cable	Unshielded	NO	100cm
Test Software Information			
Name	Version	/	/
SecureCRTPortable	7.1.1	/	/

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), CH 03~CH 09 for 802.11n(HT40).

**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 worst case mode.

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

Test Mode:

For RF test items:
The engineering test program was provided and enabled to make EUT continuous transmit.
For AC power line conducted emissions:
The EUT is powered by an adapter, and the phone is connected to the EUT using the RoadRec app.
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.



2.5. Measurement Instruments List

RF Test System – SRD						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Calibrated Until
1	MXA Signal Analyzer	Keysight	N9020A	MY52091402	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	102414	Dec. 13, 2024	Dec. 12, 2025
7	RF Control Unit	Tonscend	JS0806-2	/	Aug. 22, 2024	Aug. 21, 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. 15, 2025	Apr. 16, 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	Calibrated 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	Microwave 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

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14	Low noise Amplifier	Tonscend	TAP180040048	AP24C8060348	Dec. 13, 2024	Dec. 12, 2025
Test Software						
Name		Manufacturer		Software Version		
EZ-EMC		FARA		FA-03A2		

Conducted emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Calibrated 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

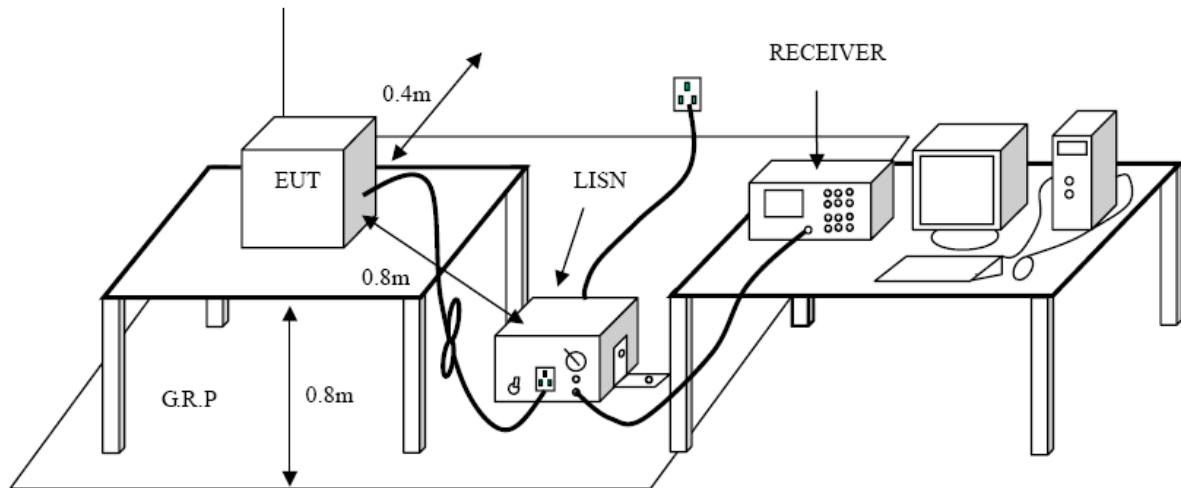
Limit

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

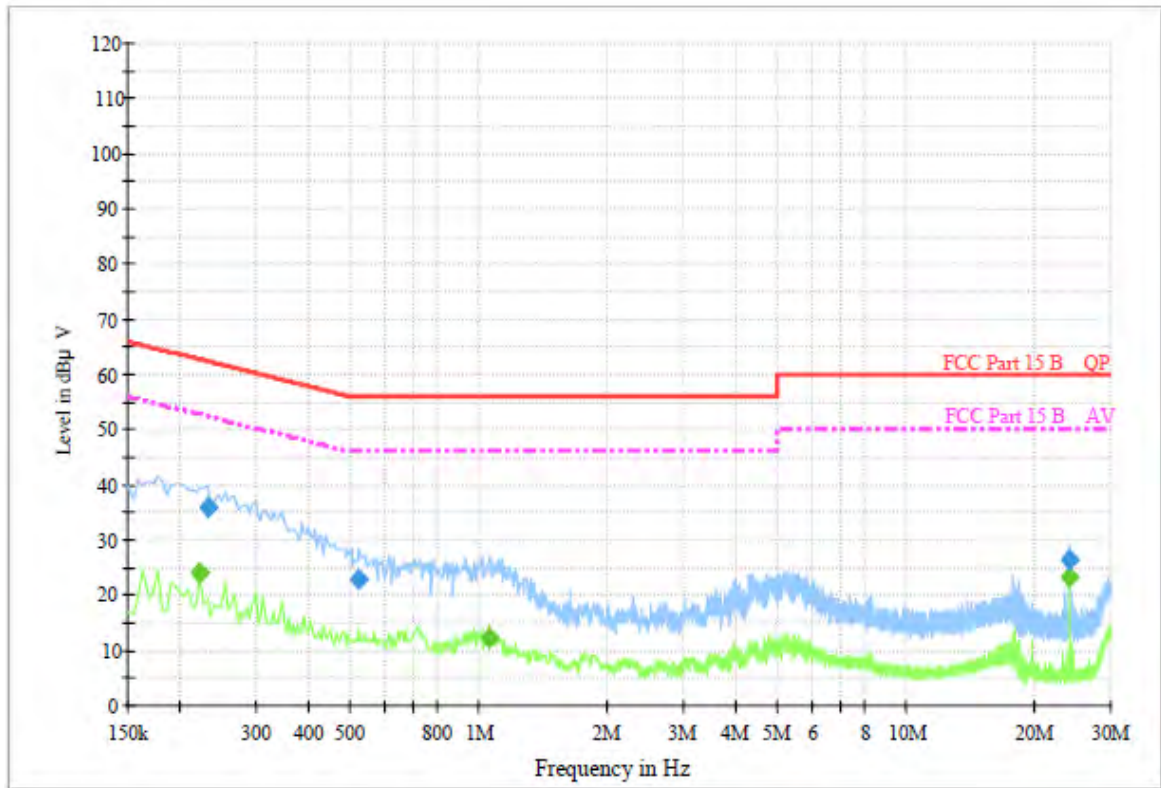
1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from 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.

**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
0.231000	35.9	1000.00	9.000	On	L1	9.5	26.5	62.4	
0.523500	22.9	1000.00	9.000	On	L1	9.4	33.1	56.0	
24.013500	26.3	1000.00	9.000	On	L1	9.6	33.7	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
0.222000	24.2	1000.00	9.000	On	L1	9.5	28.5	52.7	
1.050000	12.3	1000.00	9.000	On	L1	9.6	33.7	46.0	
24.013500	23.3	1000.00	9.000	On	L1	9.6	26.7	50.0	

Emission Level = Read Level + Correct Factor

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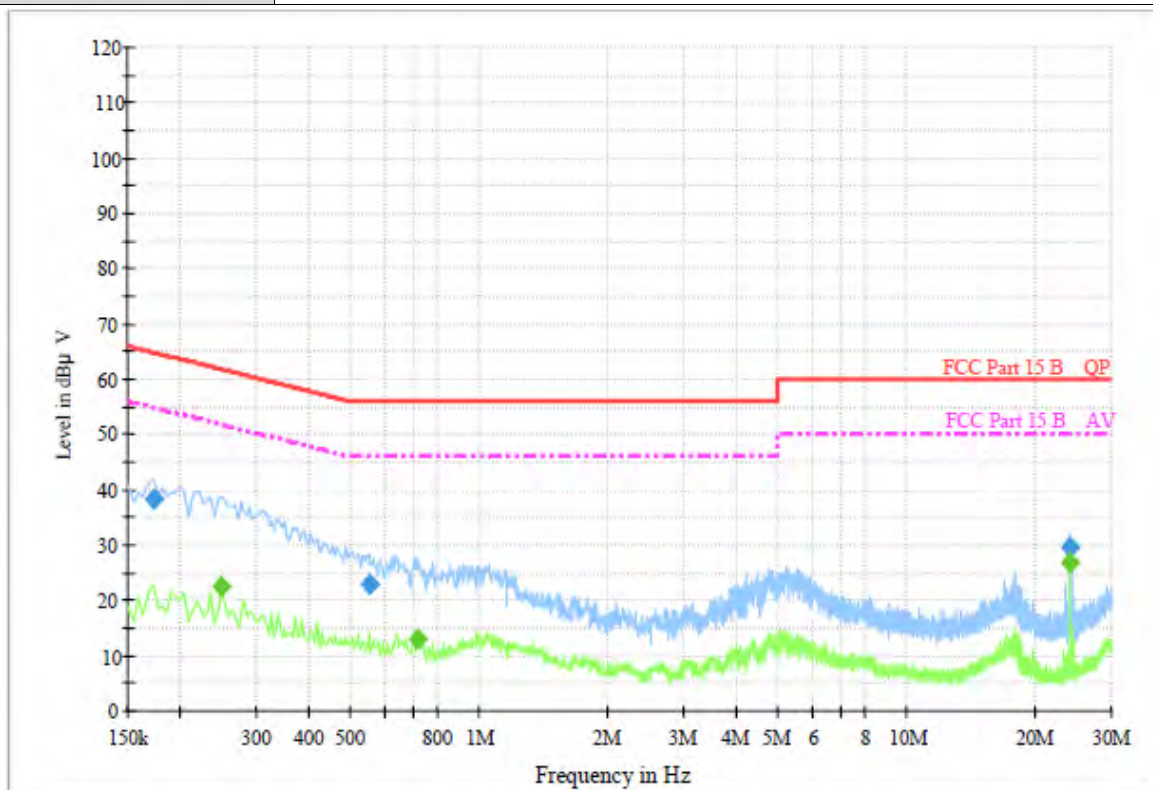
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

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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
0.172500	38.1	1000.00	9.000	On	N	9.4	26.7	64.8	
0.550500	22.9	1000.00	9.000	On	N	9.5	33.1	56.0	
24.013500	29.5	1000.00	9.000	On	N	9.6	30.5	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
0.249000	22.5	1000.00	9.000	On	N	9.4	29.3	51.8	
0.717000	13.0	1000.00	9.000	On	N	9.3	33.0	46.0	
24.013500	26.9	1000.00	9.000	On	N	9.6	23.1	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

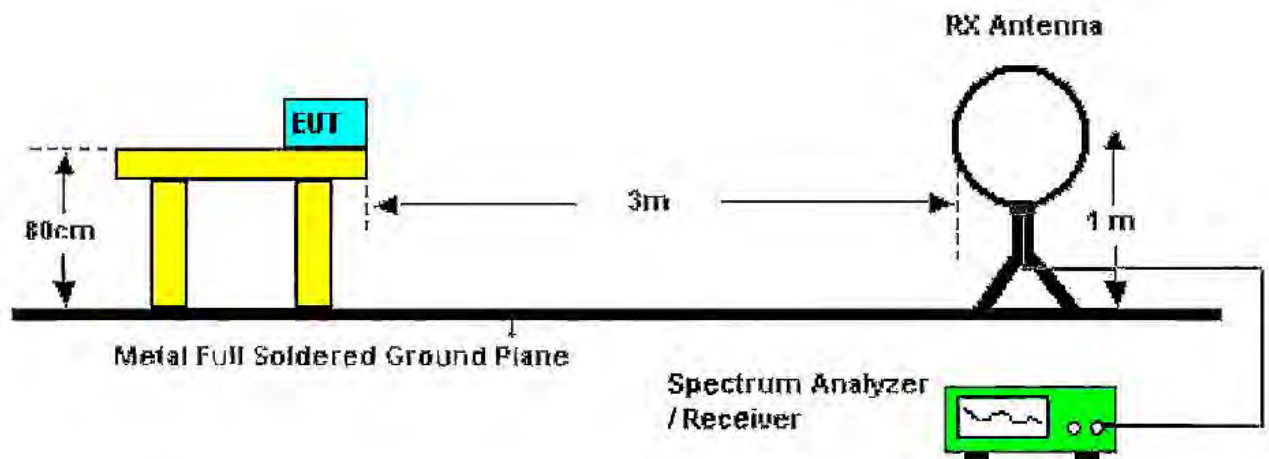
Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F (kHz)	300
0.490~1.705	24000/F (kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

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

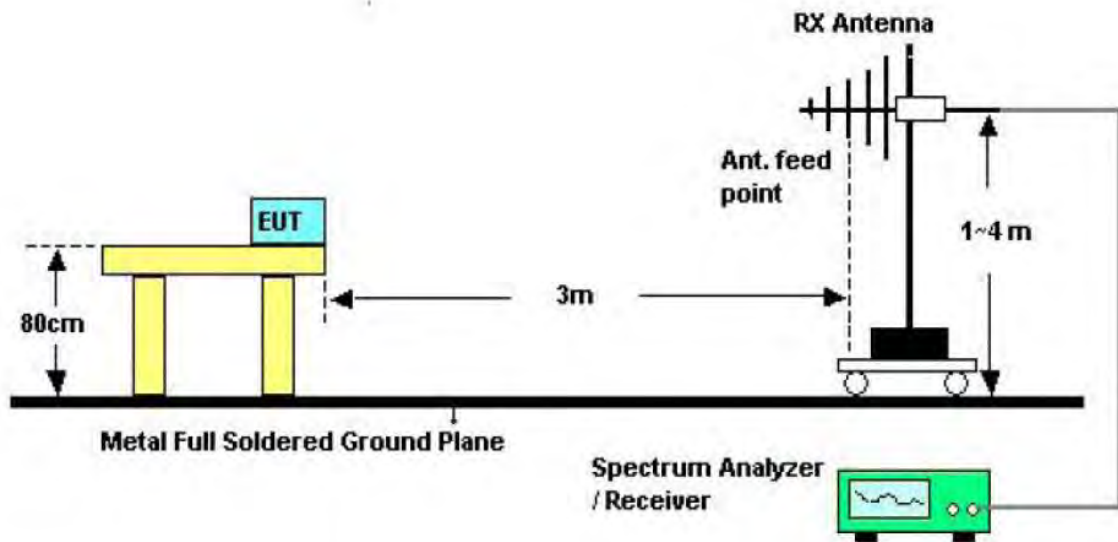
Note:

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

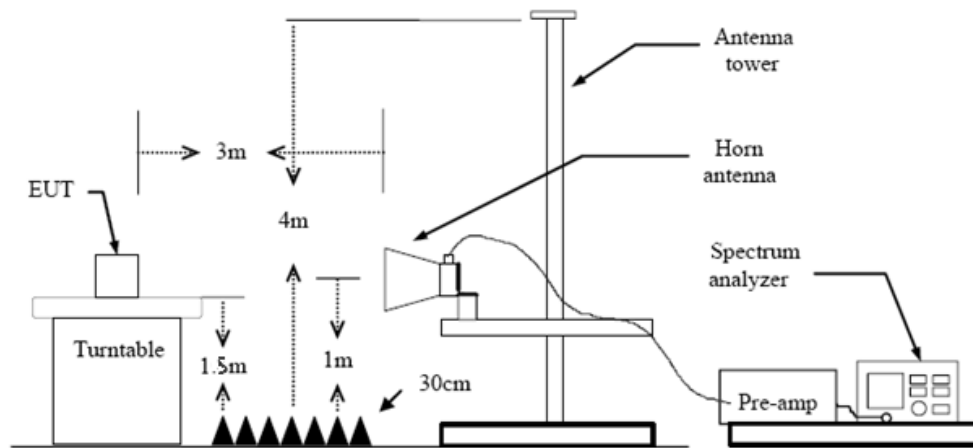
Test Configuration



Below 30MHz Test Setup



30-1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013.
 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

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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

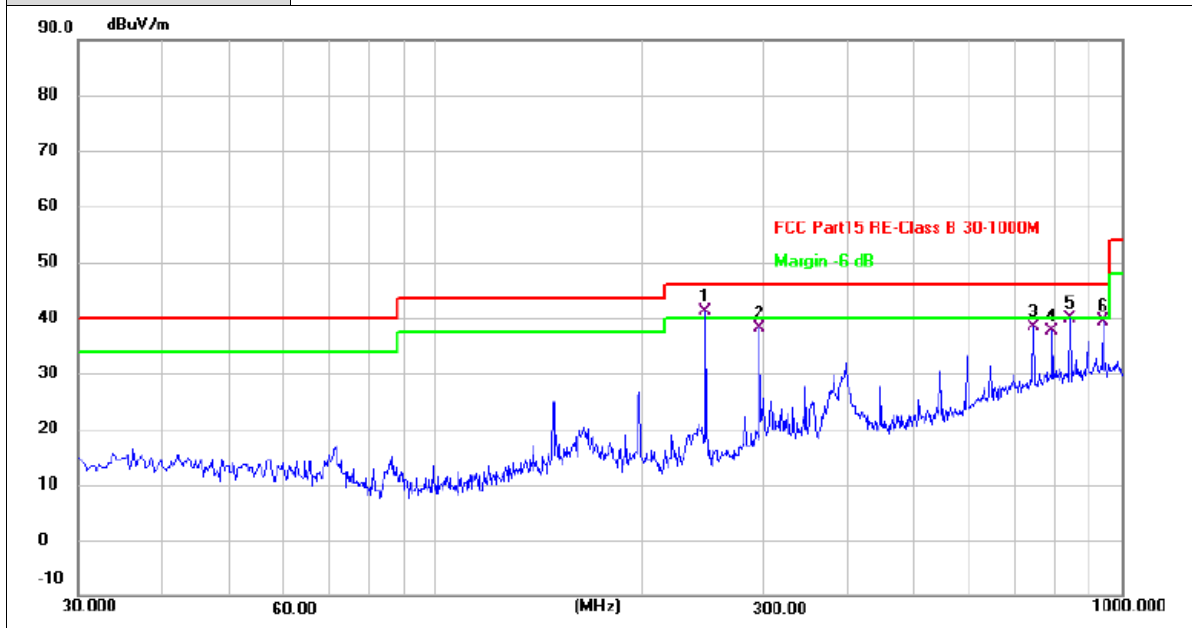
From 9 kHz to 30 MHz: The conclusion is PASS.

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

Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2412MHz
Remark:	Only worse case is reported.



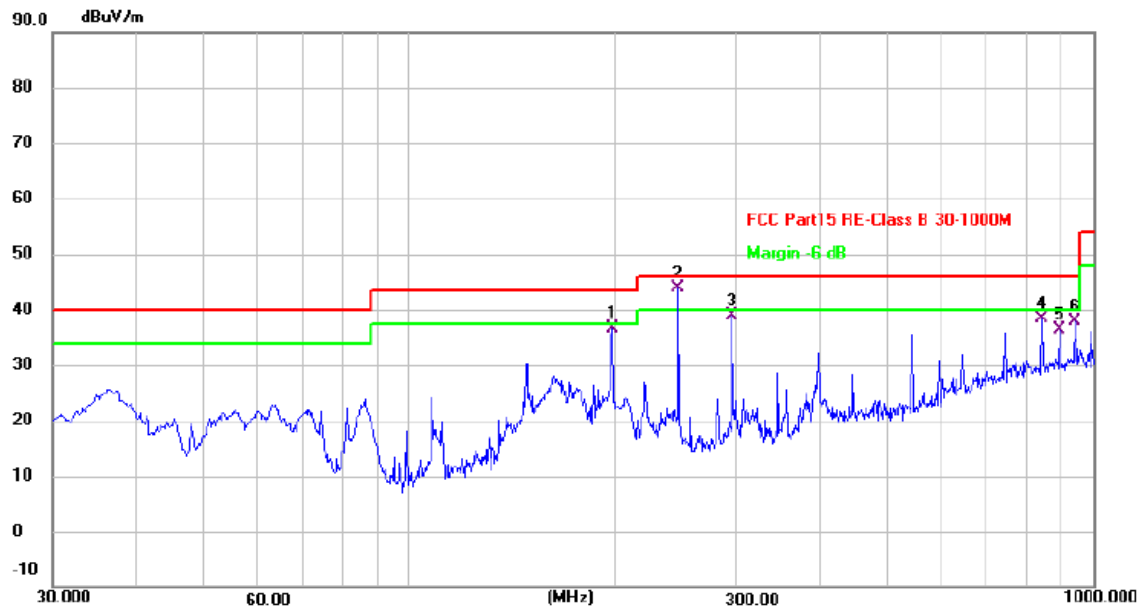
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	247.6033	58.90	-17.67	41.23	46.00	-4.77	QP
2	297.0733	53.67	-15.61	38.06	46.00	-7.94	QP
3	742.6266	43.19	-4.80	38.39	46.00	-7.61	QP
4	792.0966	41.03	-3.42	37.61	46.00	-8.39	QP
5	841.5666	42.95	-3.03	39.92	46.00	-6.08	QP
6	940.5066	40.95	-1.53	39.42	46.00	-6.58	QP

Remarks:

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



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	198.1333	55.51	-18.89	36.62	43.50	-6.88	QP
2 *	247.6033	61.65	-17.67	43.98	46.00	-2.02	QP
3	297.0733	54.37	-15.61	38.76	46.00	-7.24	QP
4	841.5666	41.36	-3.03	38.33	46.00	-7.67	QP
5	891.0366	38.85	-2.54	36.31	46.00	-9.69	QP
6	940.5066	39.33	-1.53	37.80	46.00	-8.20	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. 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. Pol.	Vertical						
Test Mode:	TX 802.11b Mode 2412MHz						
Remark:	No report for the emission which more than 20 dB below the prescribed limit.						



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



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.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4923.775	45.44	2.04	47.48	74.00	-26.52	peak
2 *	4923.892	34.75	2.04	36.79	54.00	-17.21	AVG

Remarks:

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

2.Margin value = Level -Limit value

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.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4923.819	44.39	2.04	46.43	74.00	-27.57	peak
2 *	4923.903	33.25	2.04	35.29	54.00	-18.71	AVG

Remarks:

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

2.Margin value = Level -Limit value



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.																														
<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>4823.964</td><td>44.69</td><td>1.87</td><td>46.56</td><td>74.00</td><td>-27.44</td><td>peak</td></tr><tr><td>2 *</td><td>4824.102</td><td>32.99</td><td>1.87</td><td>34.86</td><td>54.00</td><td>-19.14</td><td>AVG</td></tr></table>								No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	1	4823.964	44.69	1.87	46.56	74.00	-27.44	peak	2 *	4824.102	32.99	1.87	34.86	54.00	-19.14	AVG
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector																								
1	4823.964	44.69	1.87	46.56	74.00	-27.44	peak																								
2 *	4824.102	32.99	1.87	34.86	54.00	-19.14	AVG																								
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value																															

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. Pol.	Horizontal
Test Mode:	TX 802.11g Mode 2437MHz
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 *	4874.224	32.61	1.95	34.56	54.00	-19.44	AVG
2	4874.312	43.31	1.95	45.26	74.00	-28.74	peak

Remarks:

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

2.Margin value = Level -Limit value

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.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4873.818	43.80	1.95	45.75	74.00	-28.25	peak
2 *	4874.104	33.17	1.95	35.12	54.00	-18.88	AVG

Remarks:

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

2.Margin value = Level -Limit value



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. Pol.	Vertical
Test Mode:	TX 802.11g Mode 2462MHz
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	4923.872	45.48	2.04	47.52	74.00	-26.48	peak
2 *	4924.210	33.37	2.04	35.41	54.00	-18.59	AVG

Remarks:

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

2.Margin value = Level -Limit value



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. 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. 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.						

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. 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. 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.						
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4923.798	33.27	2.04	35.31	54.00	-18.69	AVG
2	4924.021	44.57	2.04	46.61	74.00	-27.39	peak
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value							



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.						

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.						



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.						

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. 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.						

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.						

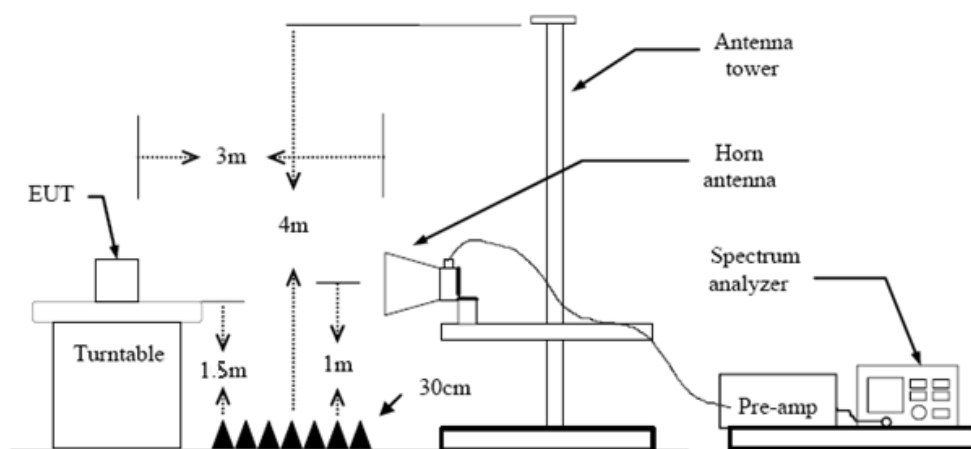
3.3. Band Edge Emissions (Radiated)

Limit

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

Restricted Frequency Band (MHz)	(dBμV/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 C63.10:2013 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 C63.10:2013 on radiated measurement.
5. The receiver set as follow:

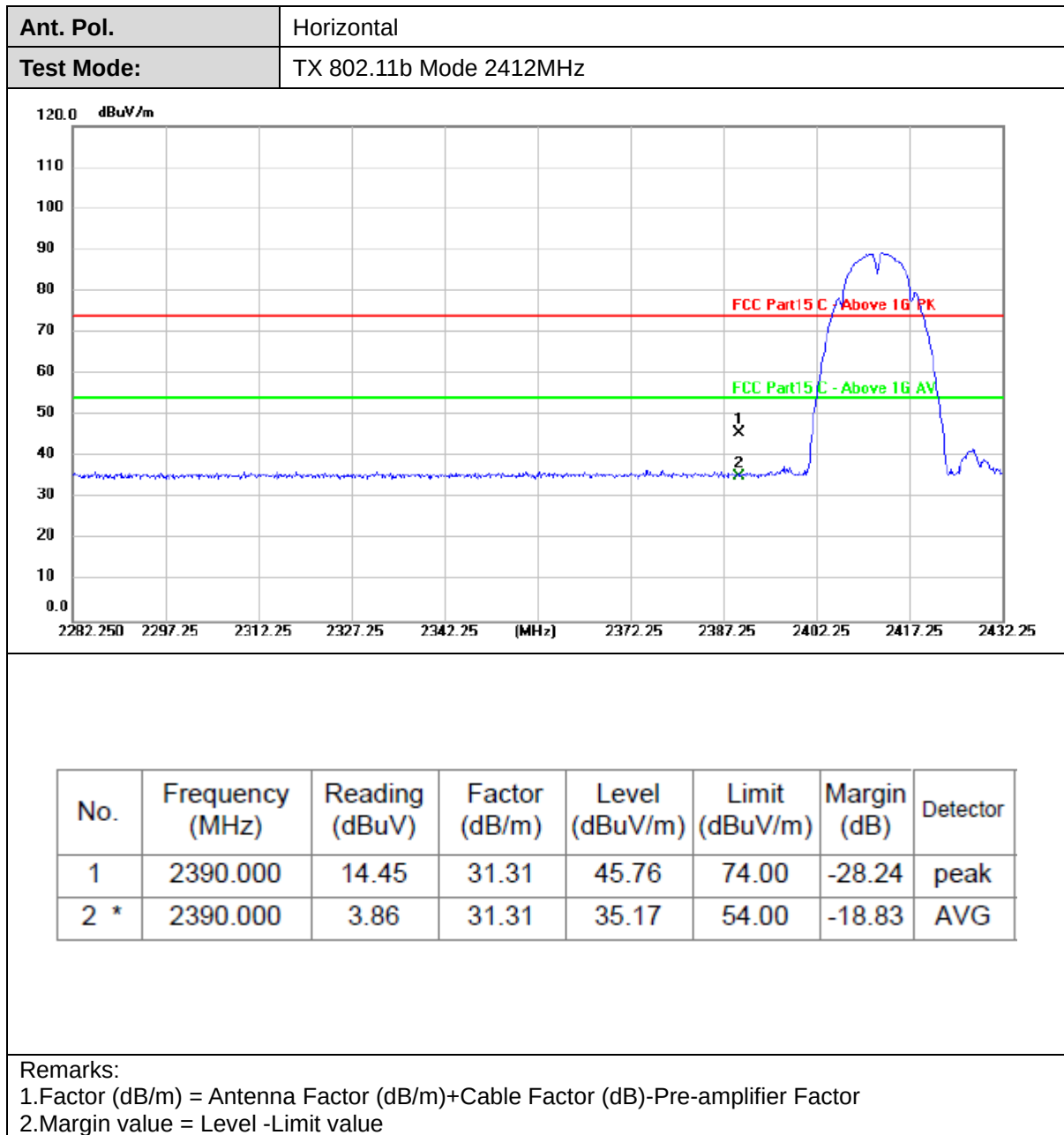
RBW=1MHz, VBW=3MHz Peak detector for Peak value.

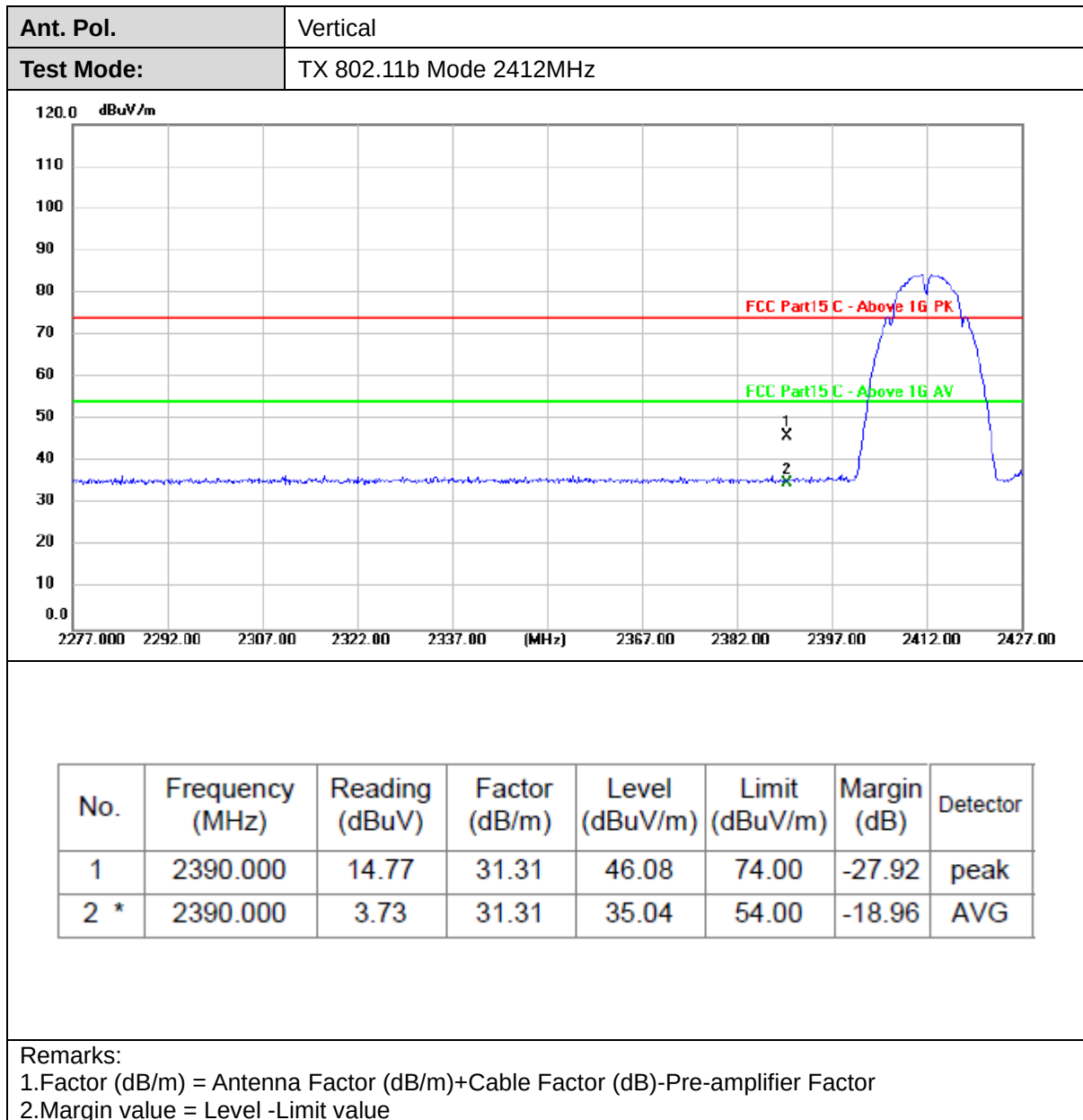
RBW=1MHz, VBW see note 1 with Peak Detector for Average Value.

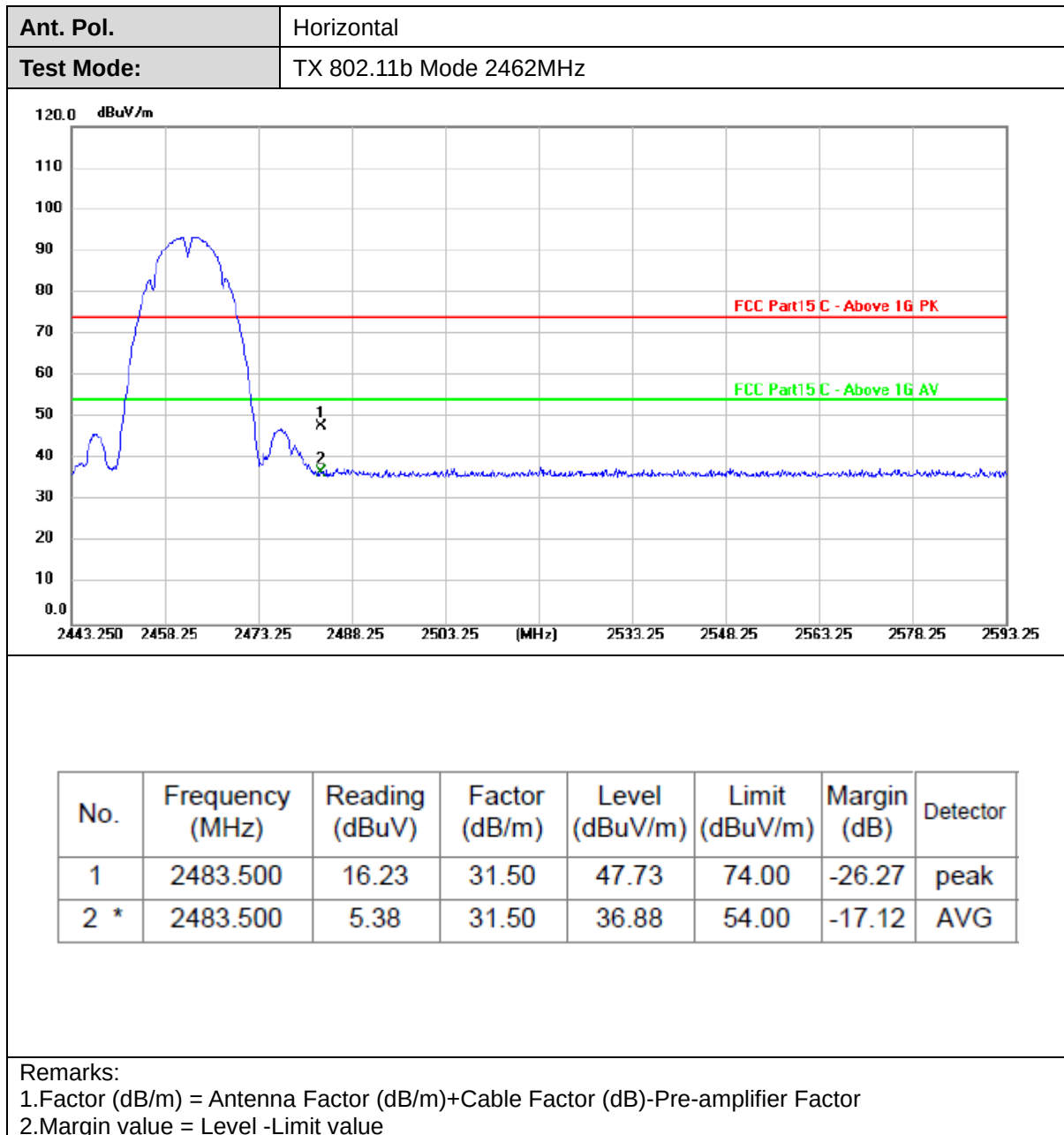
Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 3.8 Duty Cycle.

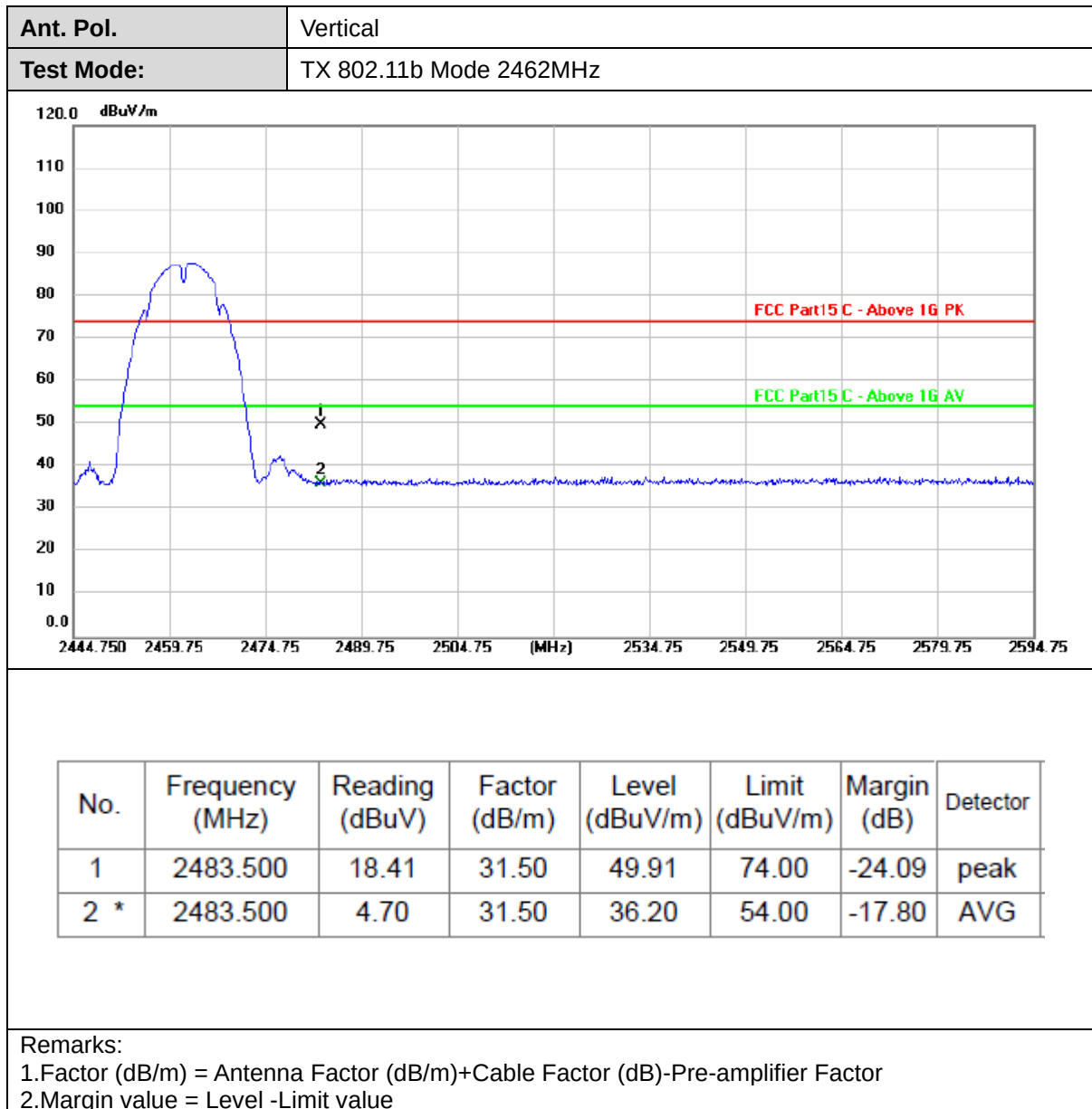
Test Mode

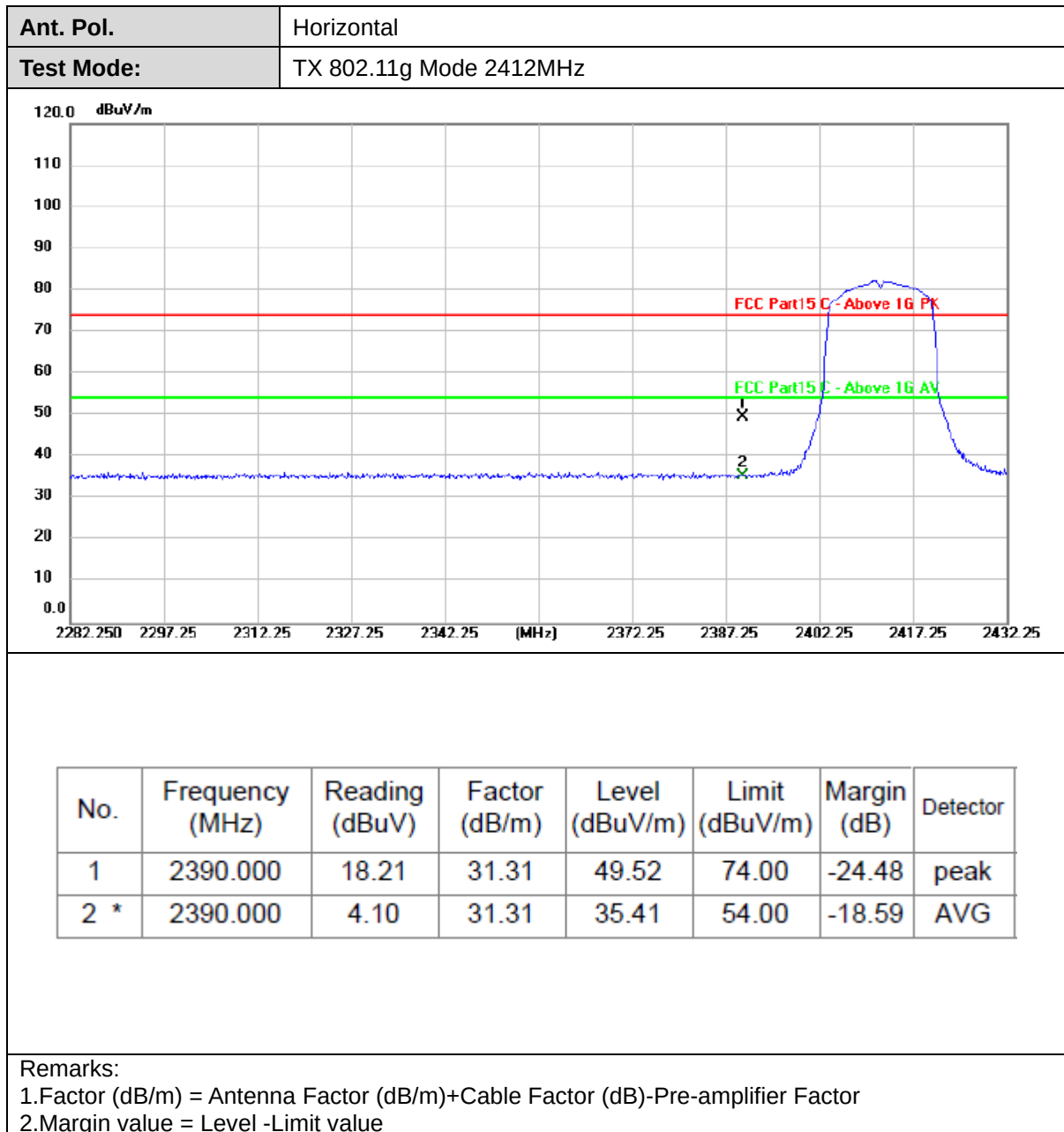
Please refer to the clause 2.4.

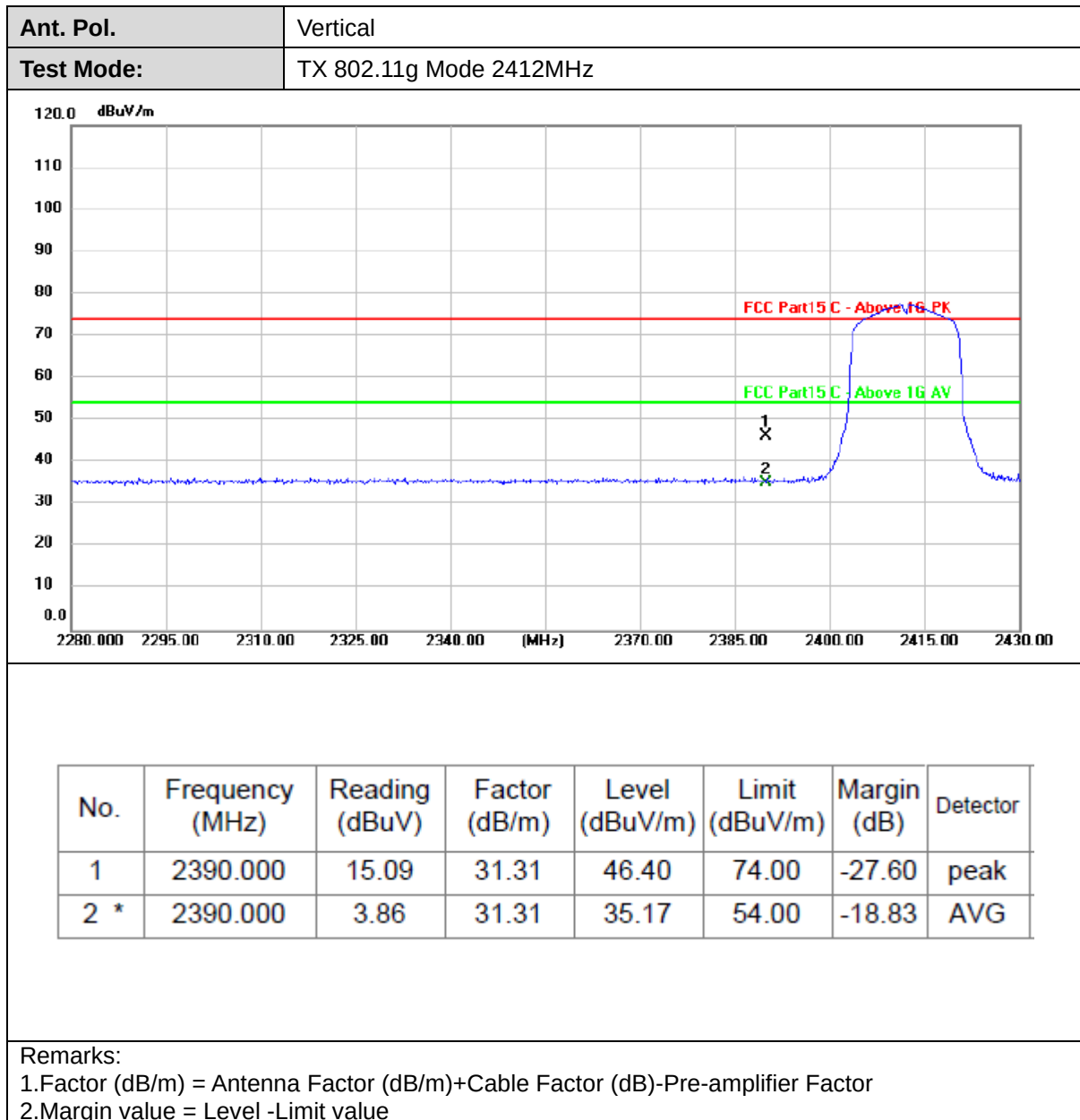
**Test Result**

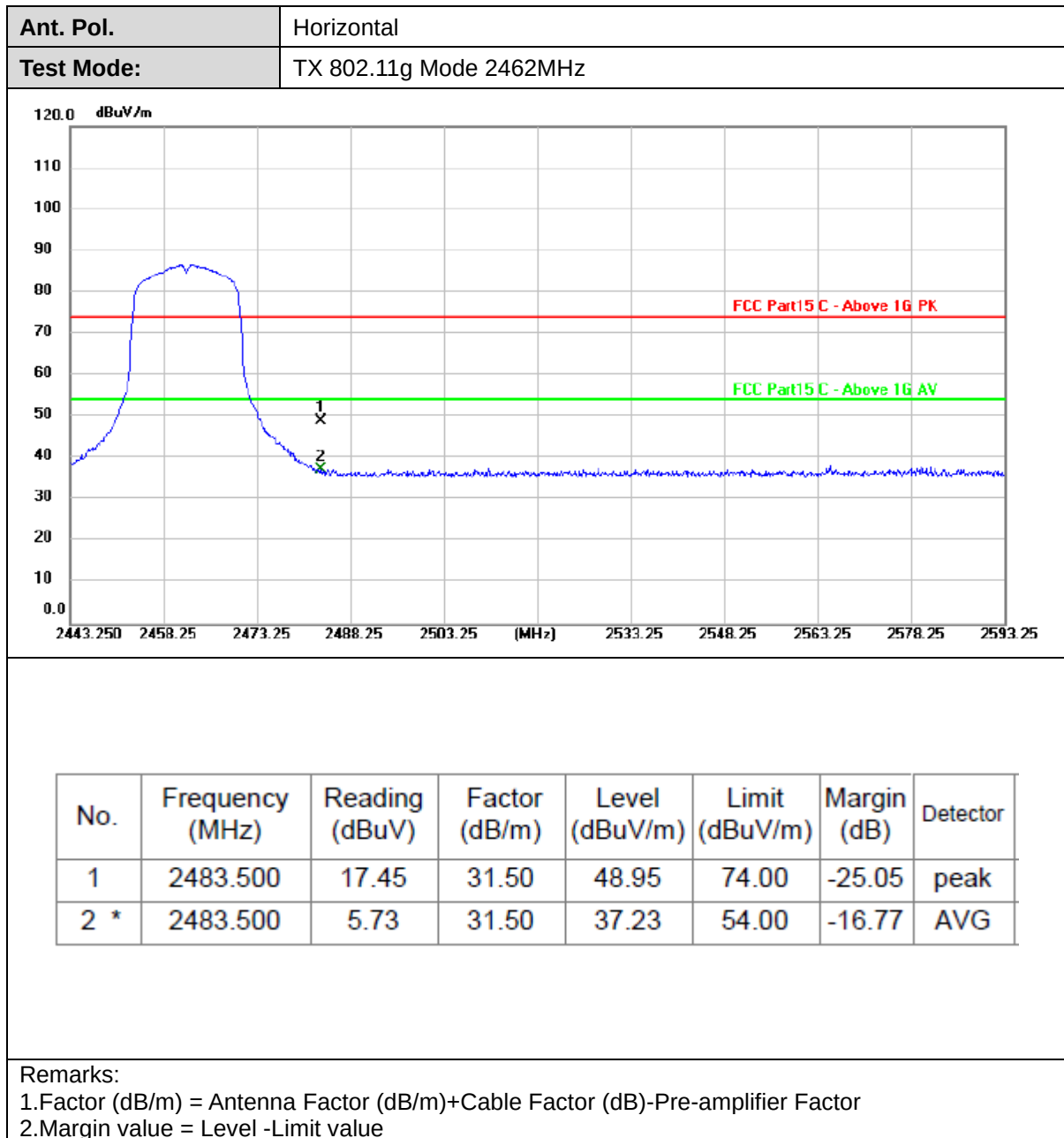


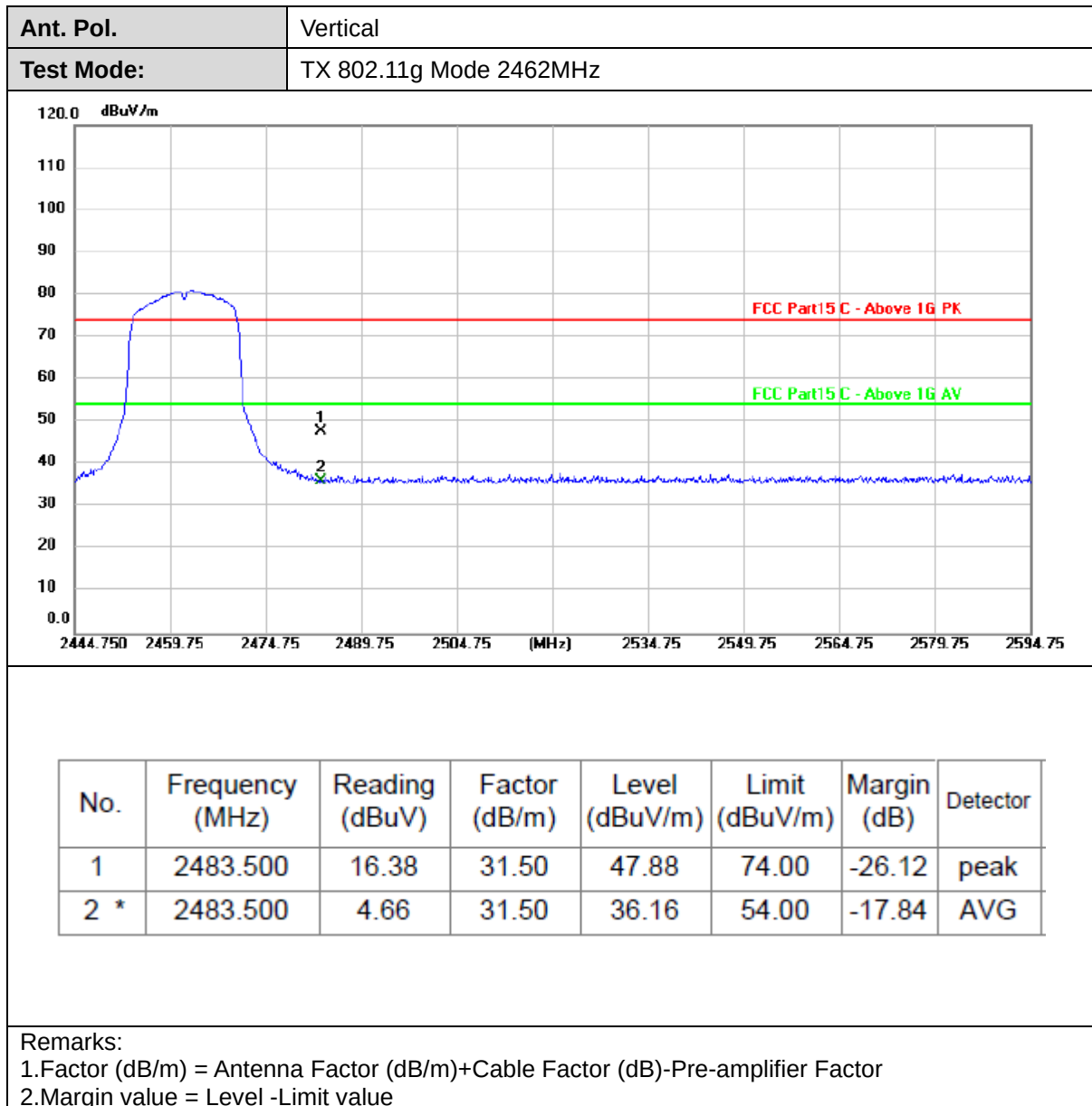


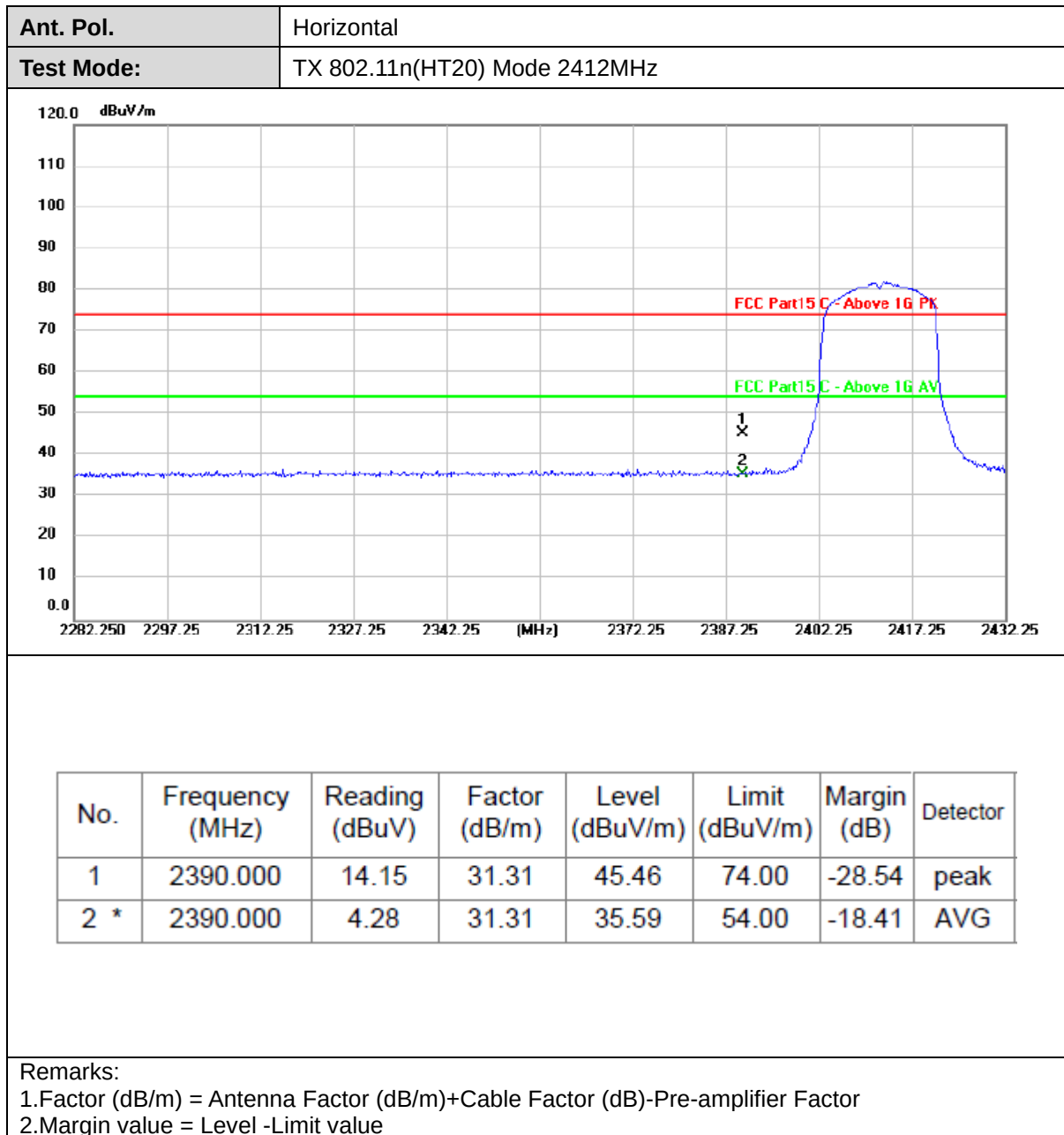


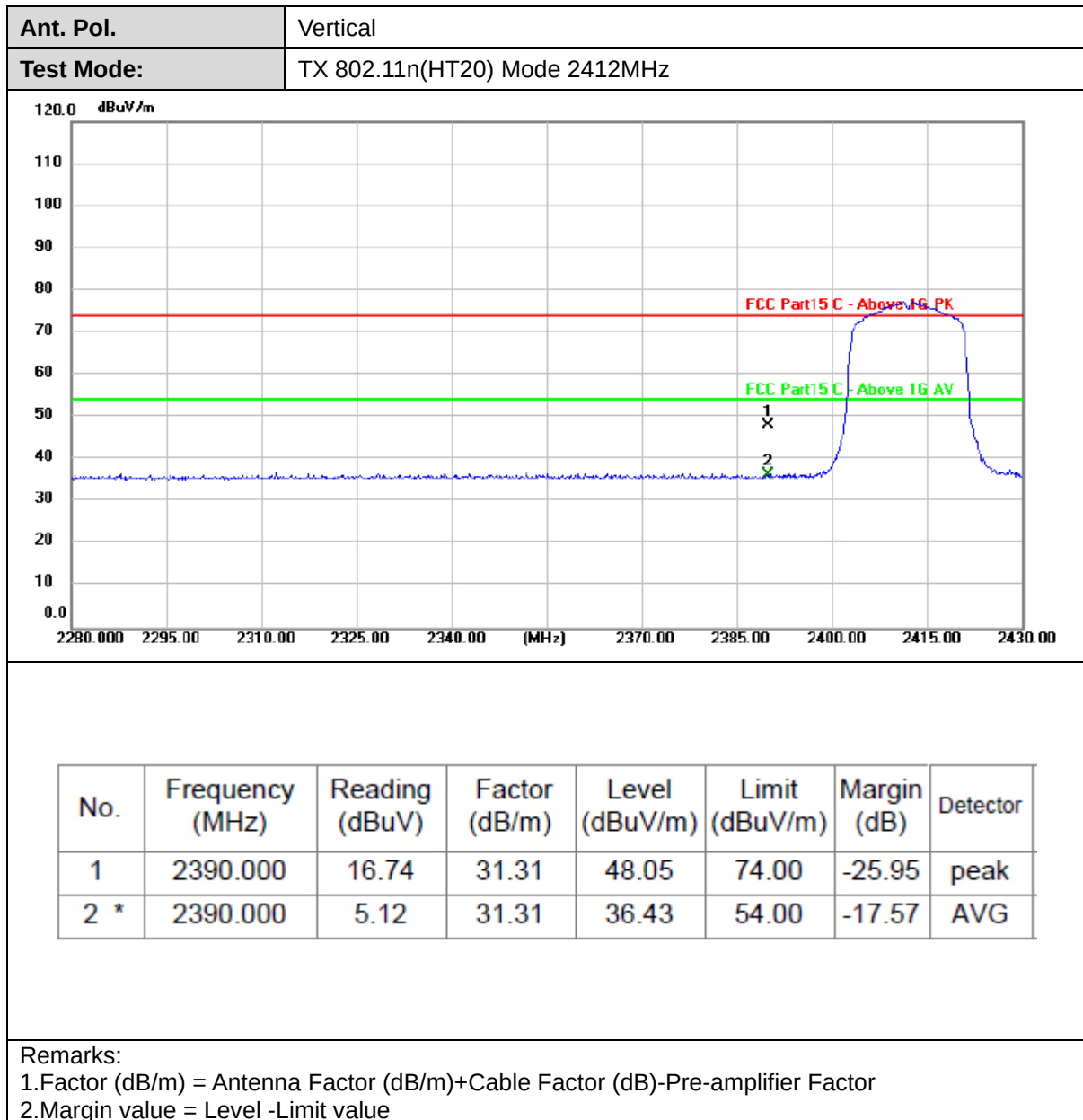


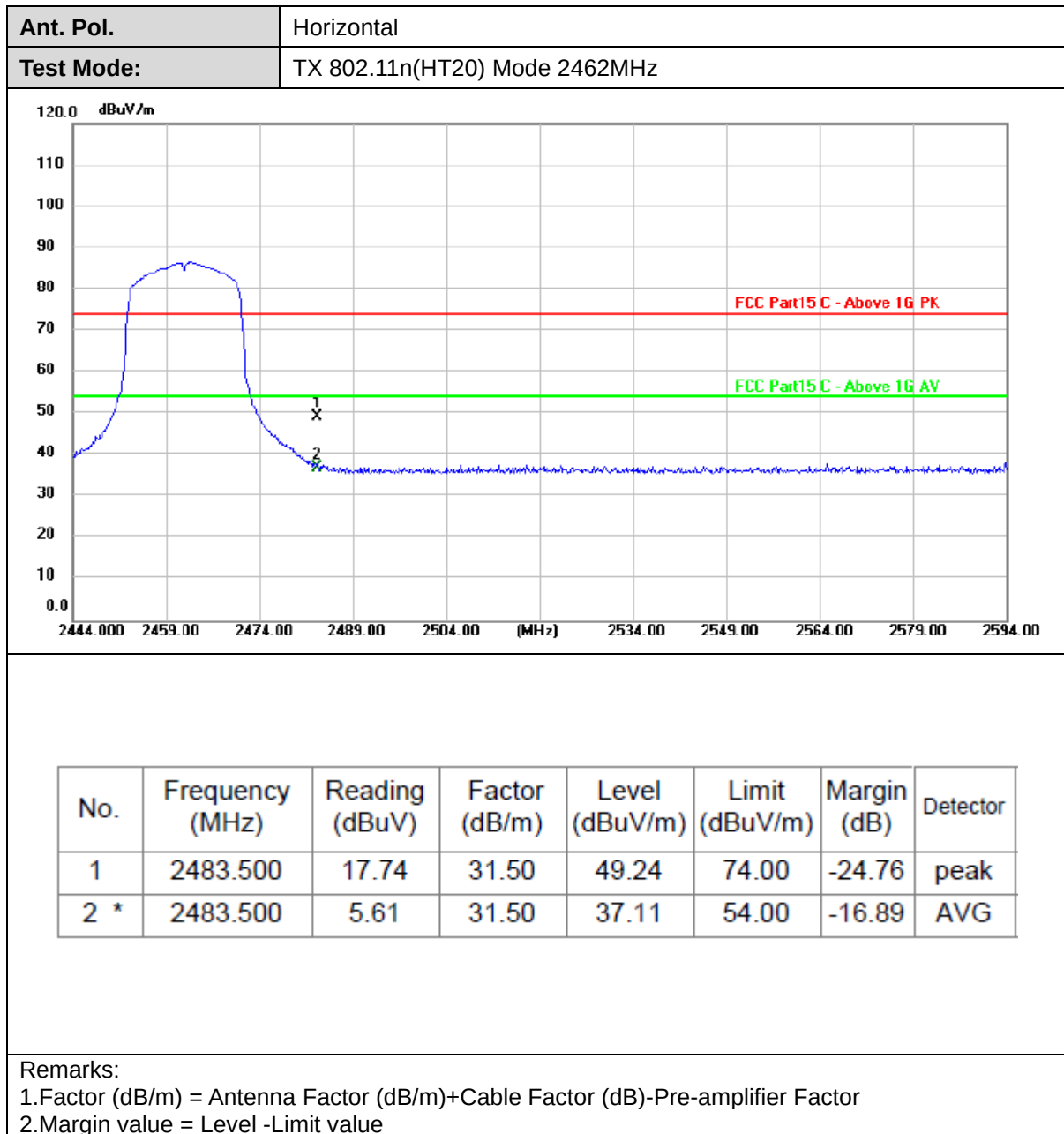


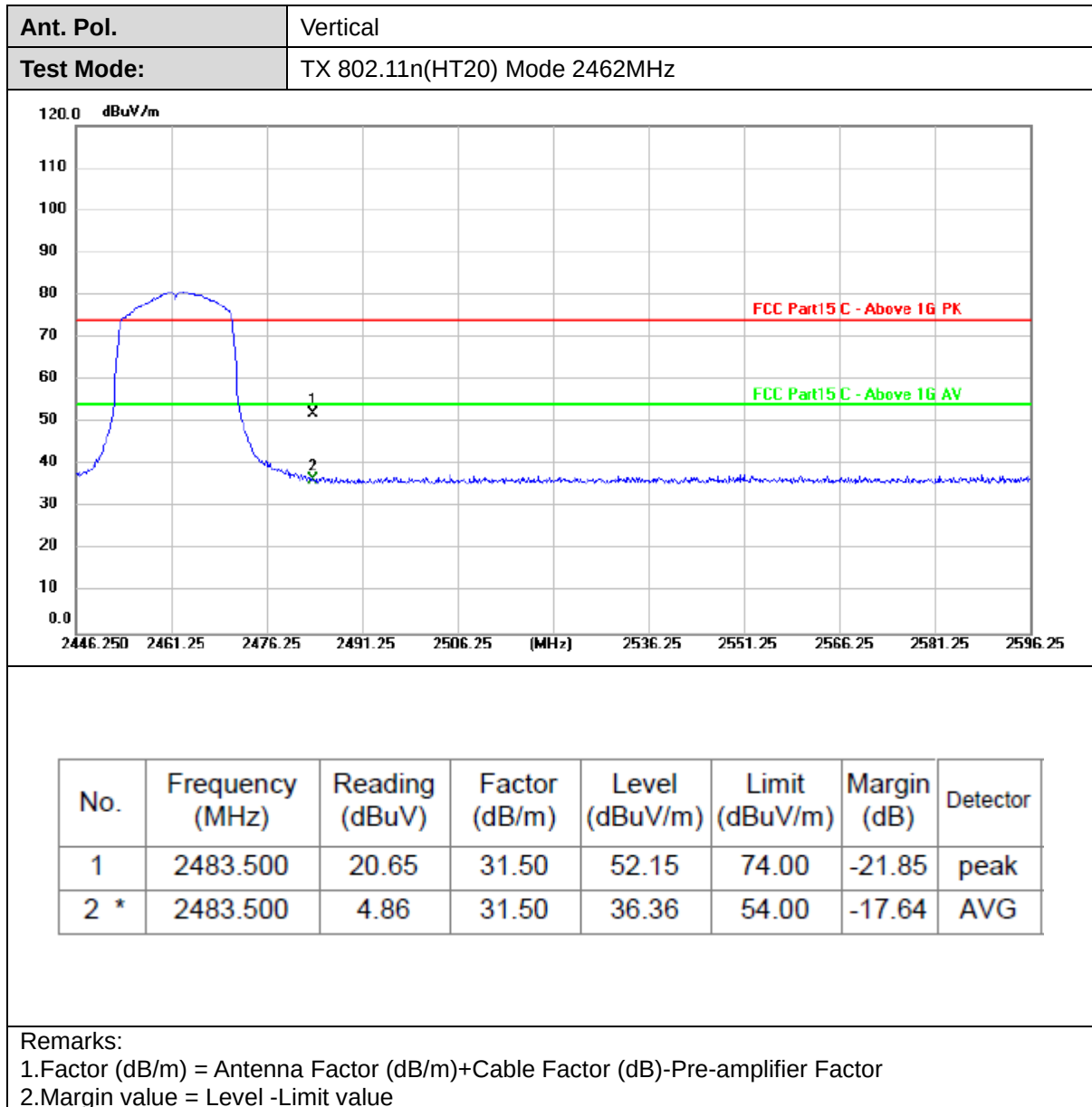


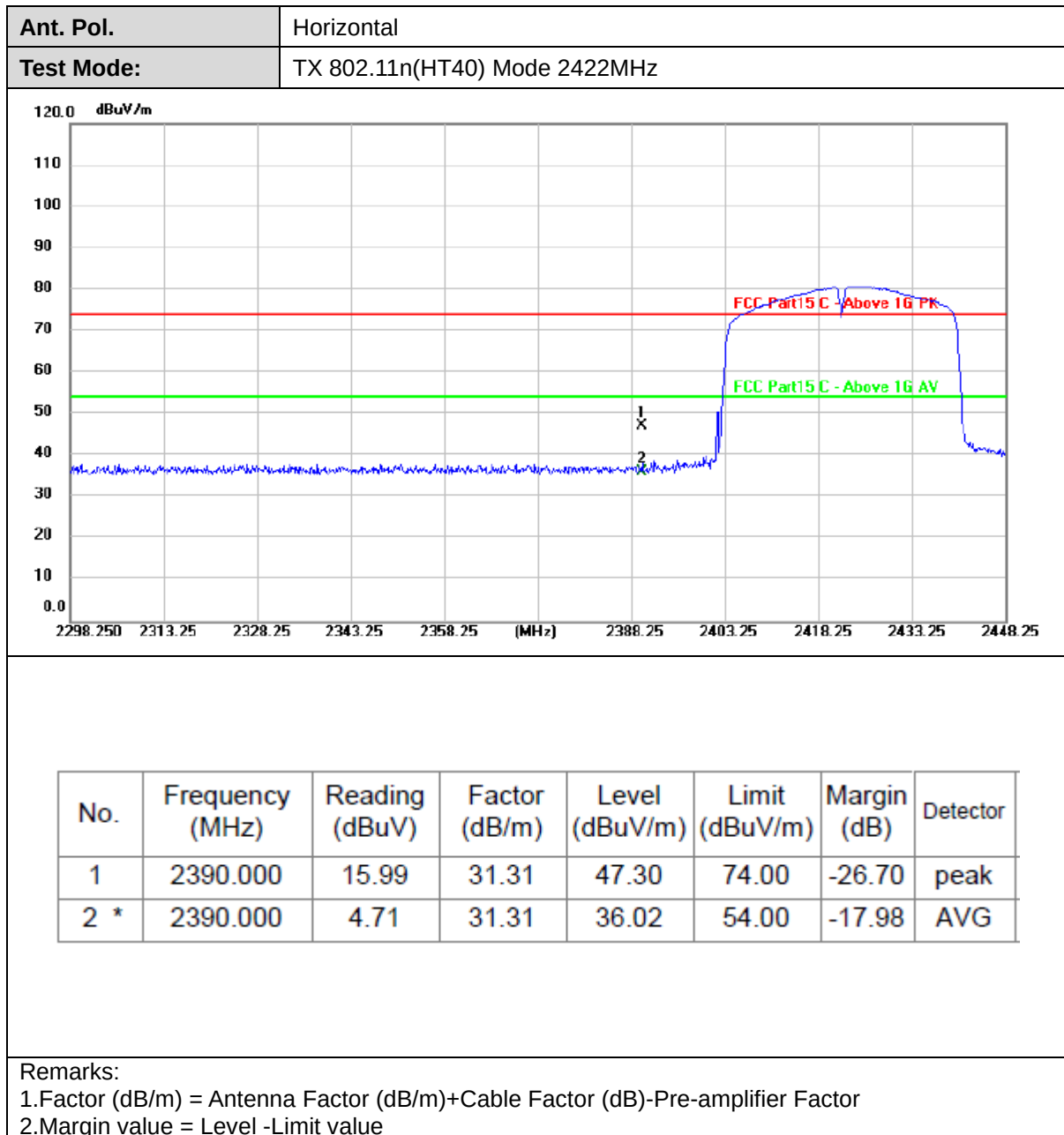


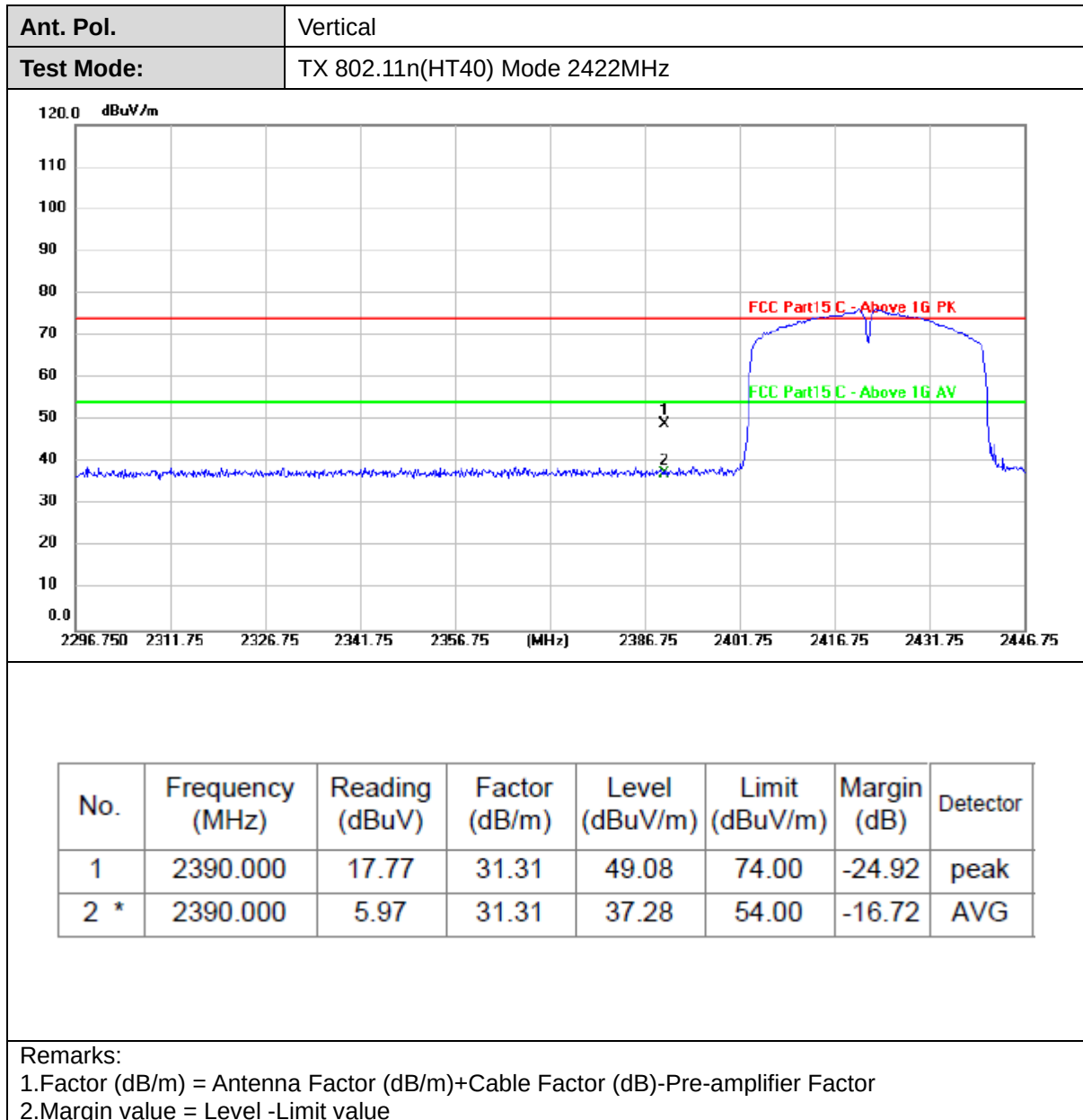


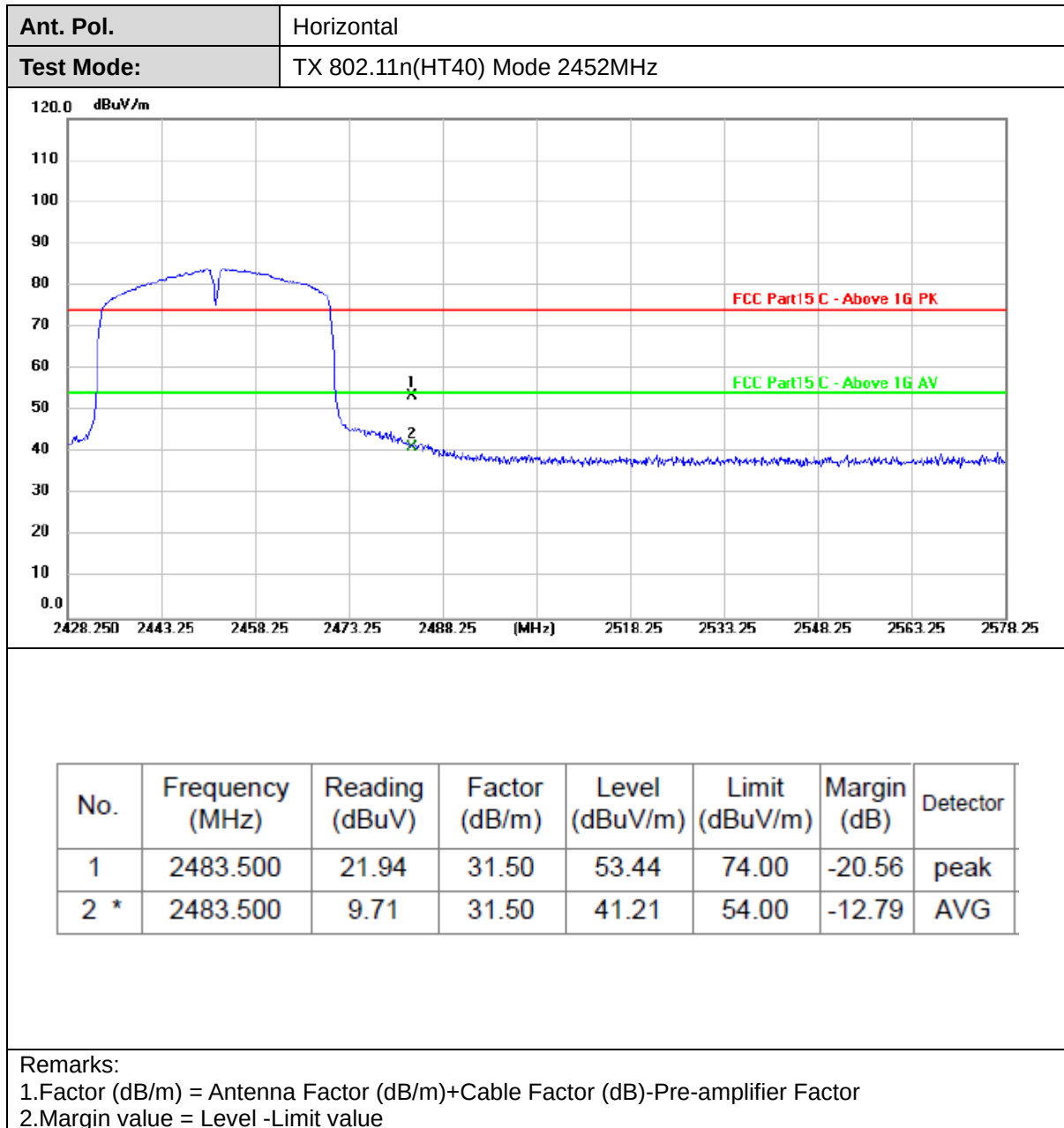


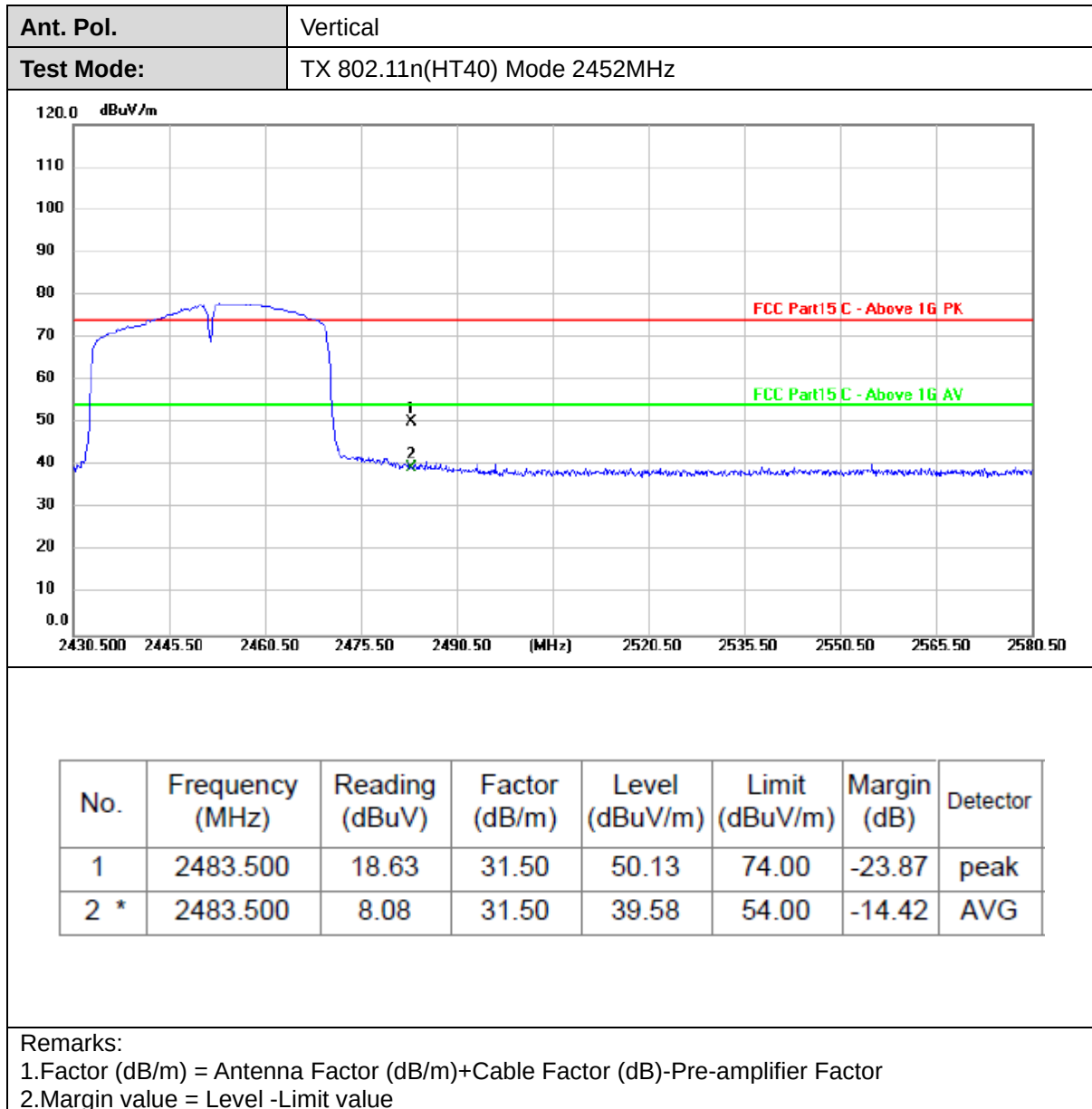














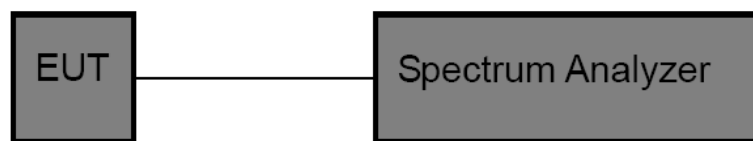
3.4. Band Edge and Spurious Emissions (Conducted)

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

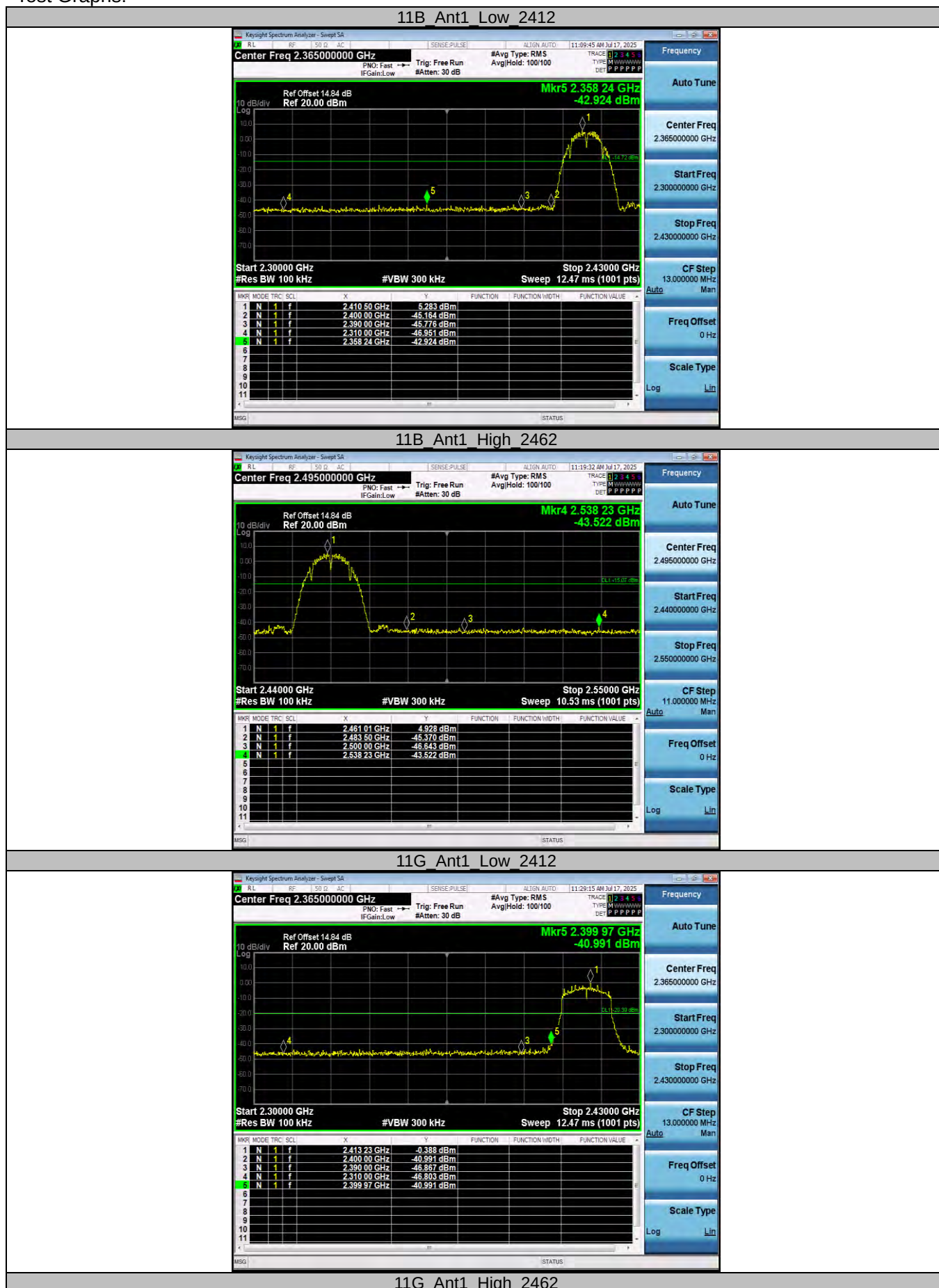
Please refer to the clause 2.4.

**Test Result****Band edge measurements**

Test Mode	Antenna	Ch Name	Frequency[MHz]	Ref Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	5.28	-42.92	≤ -14.72	PASS
		High	2462	4.93	-43.52	≤ -15.07	PASS
11G	Ant1	Low	2412	-0.39	-40.99	≤ -20.39	PASS
		High	2462	-1.06	-42.86	≤ -21.06	PASS
11N20SISO	Ant1	Low	2412	-0.11	-40.13	≤ -20.11	PASS
		High	2462	-1.09	-42.79	≤ -21.09	PASS
11N40SISO	Ant1	Low	2422	-2.97	-42.05	≤ -22.97	PASS
		High	2452	-3.38	-43.05	≤ -23.38	PASS



Test Graphs:



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

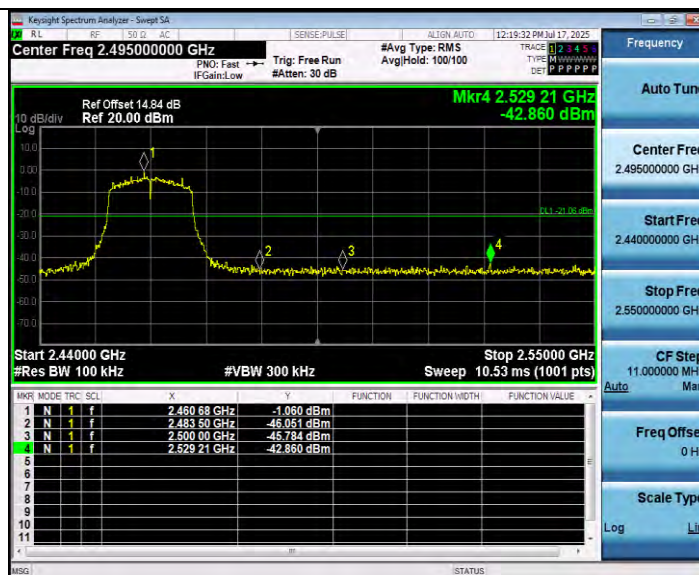
Tel.: (86)755-27521059

Fax: (86)755-27521011

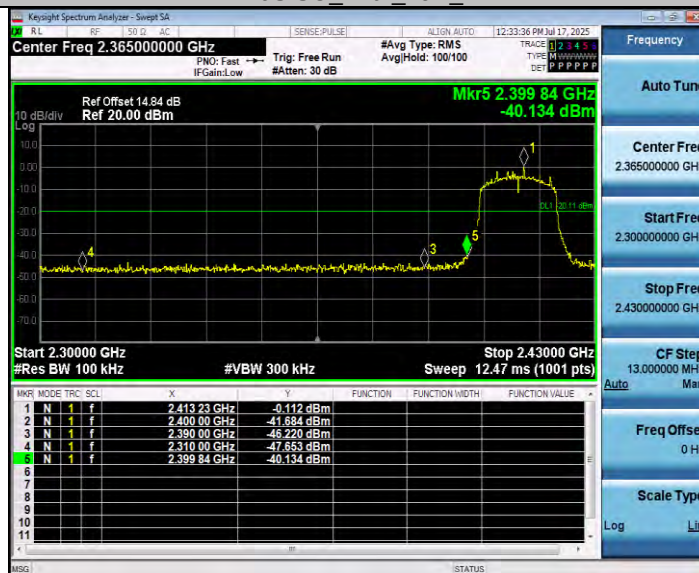
Http://www.sz-ctc.org.cn

For anti-fake verification, please visit the official website of China Inspection And Testing Society : [yz.cncqa.com](http://www.yz.cncqa.com)

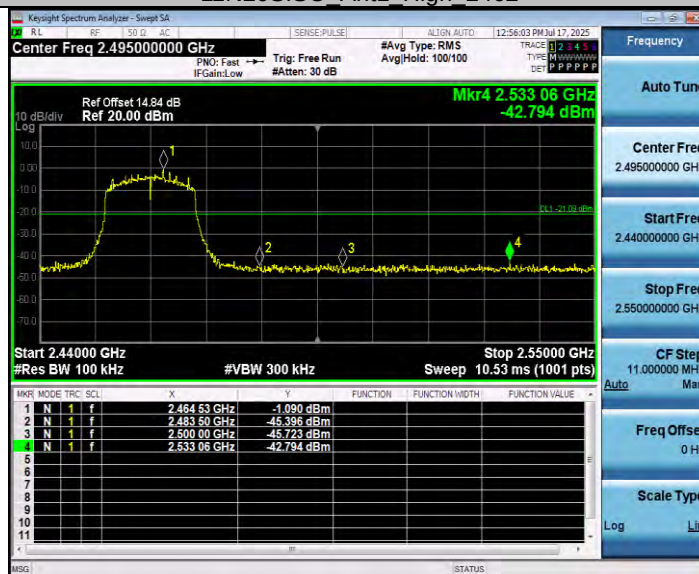
TRF No: CTC-TR-057_A2



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422

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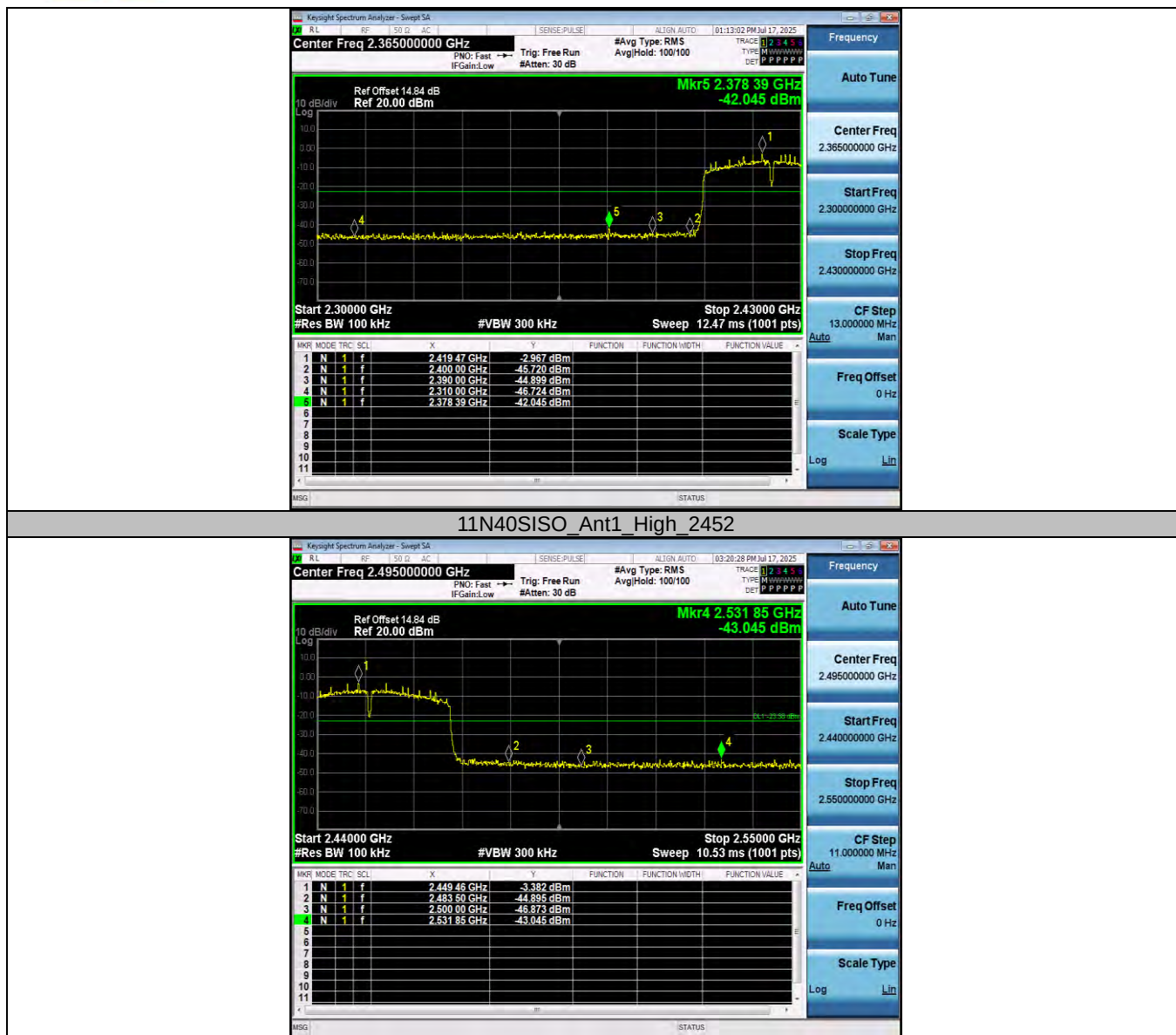
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China

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