



## CTC Laboratories, Inc.

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# TEST REPORT

**Report No.** .....: **CTC20221757E03**  
**FCC ID**.....: **2A3AB-UNO5**  
**Applicant**.....: **Foxstar Technology Co., Ltd.**  
**Address**.....: No.366, Xincheng West Road, High-tech Zone, Nanyang City, China  
**Manufacturer**.....: Foxstar Technology Co., Ltd.  
**Address**.....: No.366, Xincheng West Road, High-tech Zone, Nanyang City, China  
**Product Name**.....: **LCD PROJECTOR**  
**Trade Mark**.....: COI  
**Model/Type reference**.....: Q1  
**Listed Model(s)** .....: Uno5, Q1 PRO  
**Standard**.....: **FCC CFR Title 47 Part 15 Subpart C Section 15.247**  
**Date of receipt of test sample**...: Aug. 31, 2022  
**Date of testing**.....: Aug. 31, 2022 to Oct. 24, 2022  
**Date of issue**.....: Oct. 25, 2022  
**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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## Table of Contents

## Page

<b>1. TEST SUMMARY .....</b>	<b>3</b>
1.1. TEST STANDARDS.....	3
1.2. REPORT VERSION .....	3
1.3. TEST DESCRIPTION.....	3
1.4. TEST FACILITY .....	4
1.5. MEASUREMENT UNCERTAINTY .....	4
1.6. ENVIRONMENTAL CONDITIONS.....	5
<b>2. GENERAL INFORMATION .....</b>	<b>6</b>
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 .....	9
<b>3. TEST ITEM AND RESULTS .....</b>	<b>11</b>
3.1. CONDUCTED EMISSION.....	11
3.2. RADIATED EMISSION .....	14
3.3. BAND EDGE EMISSIONS (RADIATED) .....	31
3.4. BAND EDGE AND SPURIOUS EMISSIONS (CONDUCTED) .....	48
3.5. BANDWIDTH.....	81
3.6. PEAK OUTPUT POWER .....	99
3.7. POWER SPECTRAL DENSITY .....	101
3.8. DUTY CYCLE .....	111
3.9. ANTENNA REQUIREMENT.....	121



# 1. TEST SUMMARY

## 1.1. Test Standards

The tests were performed according to following standards:

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

[RSS 247 Issue 2](#): Standard Specifications for Frequency Hopping Systems (FHSs) and Digital Transmission Systems (DTSS) Operating in the Bands 902-928MHz, 2400-2483.5MHz and 5725-5850MHz.

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

## 1.2. Report Version

Revised No.	Date of issue	Description
01	Oct. 25, 2022	Original

## 1.3. Test Description

FCC Part 15 Subpart C (15.247) / RSS 247 Issue 2				
Test Item	Standard Section		Result	Test Engineer
	FCC	IC		
Antenna Requirement	15.203	/	Pass	Jim Jiang
Conducted Emission	15.207	RSS-Gen 8.8	Pass	Jim Jiang
Band Edge Emissions	15.247(d)	RSS 247 5.5	Pass	Jim Jiang
6dB Bandwidth	15.247(a)(2)	RSS 247 5.2 (a)	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: The measurement uncertainty is not included in the test result.



## 1.4. Test Facility

### CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, 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.

## 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
Transmitter power conducted	0.42 dB	(1)
Transmitter power Radiated	2.14 dB	(1)
Conducted spurious emissions 9kHz~40GHz	1.60 dB	(1)
Radiated spurious emissions 9kHz~40GHz	2.20 dB	(1)
Conducted Emissions 9kHz~30MHz	3.20 dB	(1)
Radiated Emissions 30~1000MHz	4.70 dB	(1)
Radiated Emissions 1~18GHz	5.00 dB	(1)
Radiated Emissions 18~40GHz	5.54 dB	(1)
Occupied Bandwidth	-----	(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:	21°C~27°C
Relative Humidity:	40%~60%
Atmospheric Pressure:	101kPa



## 2. GENERAL INFORMATION

### 2.1. Client Information

Applicant:	Foxstar Technology Co., Ltd.
Address:	No.366, Xincheng West Road, High-tech Zone, Nanyang City, China
Manufacturer:	Foxstar Technology Co., Ltd.
Address:	No.366, Xincheng West Road, High-tech Zone, Nanyang City, China

### 2.2. General Description of EUT

Product Name:	LCD PROJECTOR
Trade Mark:	COI
Model/Type reference:	Q1
Listed Model(s):	Uno5, Q1 PRO
Model Difference:	All these models are identical in the same PCB, layout, electrical circuit and enclosure. The difference is model name, customer type, sales territory.
Power supply:	DC19.0V 6.32A From AC/DC Adapter
Adapter 1:	Input: 100-240V~ 50/60Hz 2.2A Output: DC19.0V 6.32A 120.0W
Adapter 2:	Input: 100-240V~ 50/60Hz 2.0A Output: DC19.0V 6.32A 120.0W
Hardware version:	V1.0
Software version:	V1.0

#### 2.4G WIFI 802.11b/ g/ n(HT20)/ n(HT40)

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 1 & 2 type:	FPC Antenna
Antenna 1 gain:	3.89dBi
Antenna 2 gain:	4.02dBi
Antenna 1 + 2 Directional gain:	6.97dBi



## 2.3. Accessory Equipment Information

Equipment Information			
Name	Model	S/N	Manufacturer
Notebook	ThinkPad T460s	/	Lenovo
AC/DC ADAPTER	AD120CBM190632	/	Sunward
AC Adapter	NSA120EC-19063200	/	JingQuanHua
Cable Information			
Name	Shielded Type	Ferrite Core	Length
USB Cable	Unshielded	NO	100cm
Test Software Information			
Name	Version	/	/
SecureCRTPortable	7.1.1 build 264	/	/



## 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 a worst case mode.

Mode	Data rate (worst mode)
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	HT-MCS0
802.11n(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 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.





## 2.5. Measurement Instruments List

Tonscend JS0806-2 Test system					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Rohde & Schwarz	FSU26	100105	Dec. 23, 2022
2	Spectrum Analyzer	Rohde & Schwarz	FUV40-N	101331	Mar. 15, 2023
3	MXG Vector Signal Generator	Agilent	N5182A	MY47420864	Dec. 23, 2022
4	Signal Generator	Agilent	E8257D	MY46521908	Dec. 23, 2022
5	Power Sensor	Agilent	U2021XA	MY5365004	Mar. 15, 2023
6	Power Sensor	Agilent	U2021XA	MY5365006	Mar. 15, 2023
7	Simultaneous Sampling DAQ	Agilent	U2531A	TW54493510	Mar. 15, 2023
8	Climate Chamber	TABAI	PR-4G	A8708055	Dec. 23, 2022
9	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	116410	Dec. 23, 2022
10	Climate Chamber	ESPEC	MT3065	/	Dec. 23, 2022
11	300328 v2.2.2 test system	TONSCEND	v2.6	/	/

Radiated emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-759	Nov. 09, 2022
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Dec. 23, 2022
3	Test Receiver	Keysight	N9038A	MY56400071	Dec. 23, 2022
4	Broadband Premplifier	SCHWARZBECK	BBV9743B	259	Dec. 23, 2022
5	Microwave Broadband Amplifier	SCHWARZBECK	BBV9718C	111	Dec. 23, 2022
6	3m chamber 3	YIHENG	EE106	/	Sep. 09, 2023



Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	LISN	R&S	ENV216	101112	Dec. 23, 2022
2	LISN	R&S	ENV216	101113	Dec. 23, 2022
3	EMI Test Receiver	R&S	ESCS30	100353	Dec. 23, 2022
4	ISN CAT6	Schwarzbeck	NTFM 8158	CAT6-8158-0046	Dec. 23, 2022
5	ISN CAT5	Schwarzbeck	NTFM 8158	CAT5-8158-0046	Dec. 23, 2022

## Note:

1. The Cal. Interval was one year.
2. The cable loss has calculated in test result which connection between each test instruments.

### 3. TEST ITEM AND RESULTS

#### 3.1. Conducted Emission

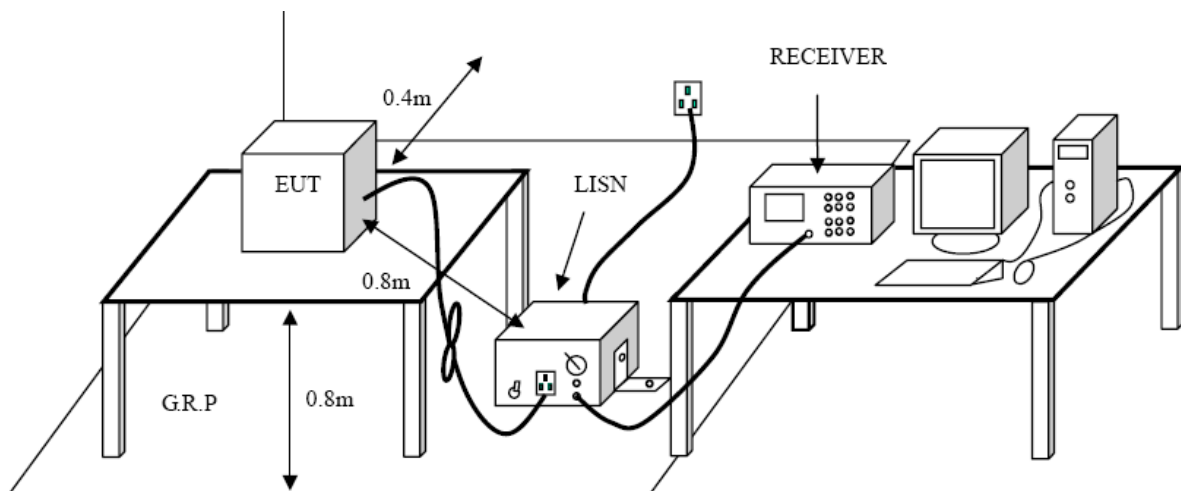
##### Limit

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

Frequency range (MHz)	Limit (dBuV)	
	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

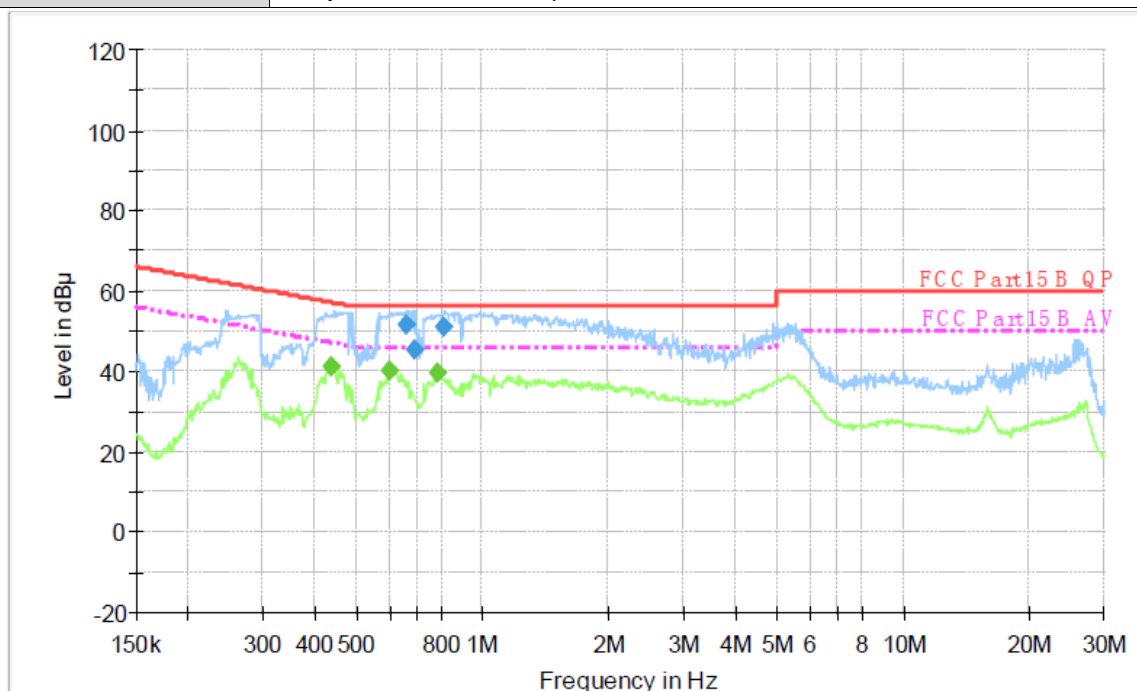
1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment. 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)
4. 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.
5. 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.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
7. During the above scans, the emissions were maximized by cable manipulation.

**Test Mode:**

Please refer to the clause 2.4.

**Test Results**

Test Voltage:	AC 120V/60 Hz
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
0.657000	51.6	1000.00	9.000	On	L1	9.7	4.4	56.0	
0.692000	45.6	1000.00	9.000	On	L1	9.7	10.4	56.0	
0.811810	51.1	1000.00	9.000	On	L1	9.7	4.9	56.0	

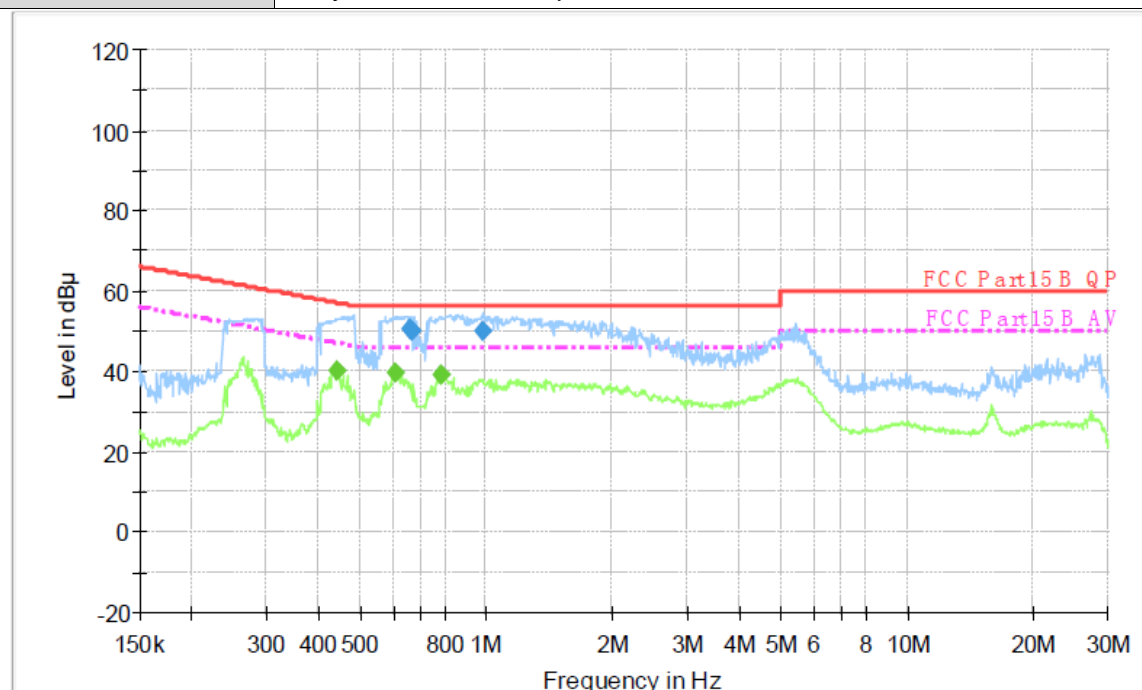
**Final Measurement Detector 2**

Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.435500	41.1	1000.00	9.000	On	L1	9.7	6.0	47.1	
0.601760	40.0	1000.00	9.000	On	L1	9.7	6.0	46.0	
0.780040	39.5	1000.00	9.000	On	L1	9.7	6.5	46.0	

Emission Level= Read Level+ Correct Factor



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



### Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBu V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBu V)	Comment
0.662270	50.5	1000.00	9.000	On	N	10.0	5.6	56.0	
0.670250	49.9	1000.00	9.000	On	N	10.0	6.1	56.0	
0.979350	50.0	1000.00	9.000	On	N	10.0	6.0	56.0	

### Final Measurement Detector 2

Frequency (MHz)	Average (dBu V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBu V)	Comment
0.444280	40.0	1000.00	9.000	On	N	10.0	7.0	47.0	
0.609010	39.7	1000.00	9.000	On	N	10.0	6.3	46.0	
0.786290	39.0	1000.00	9.000	On	N	10.0	7.0	46.0	

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:

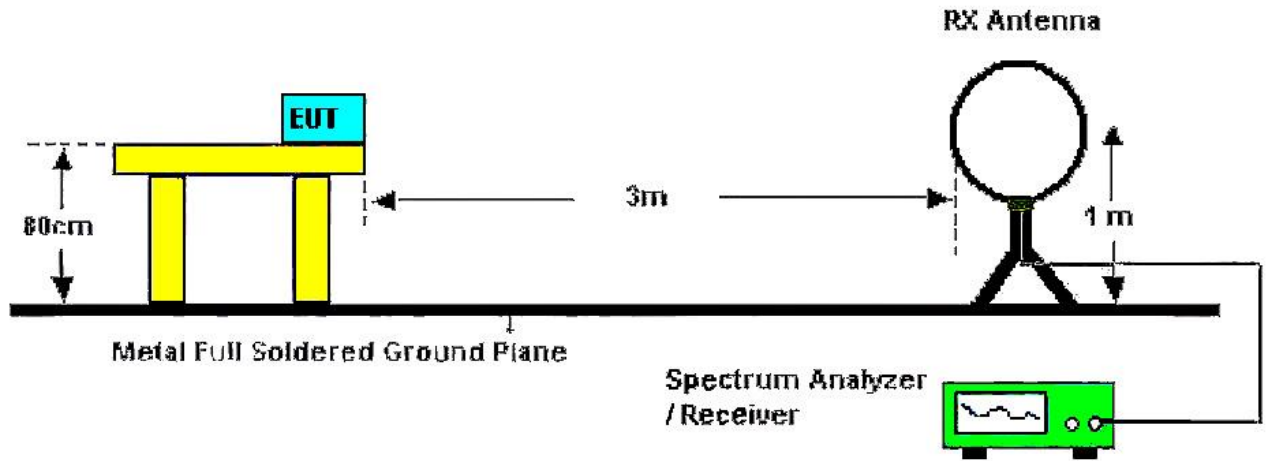
Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

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

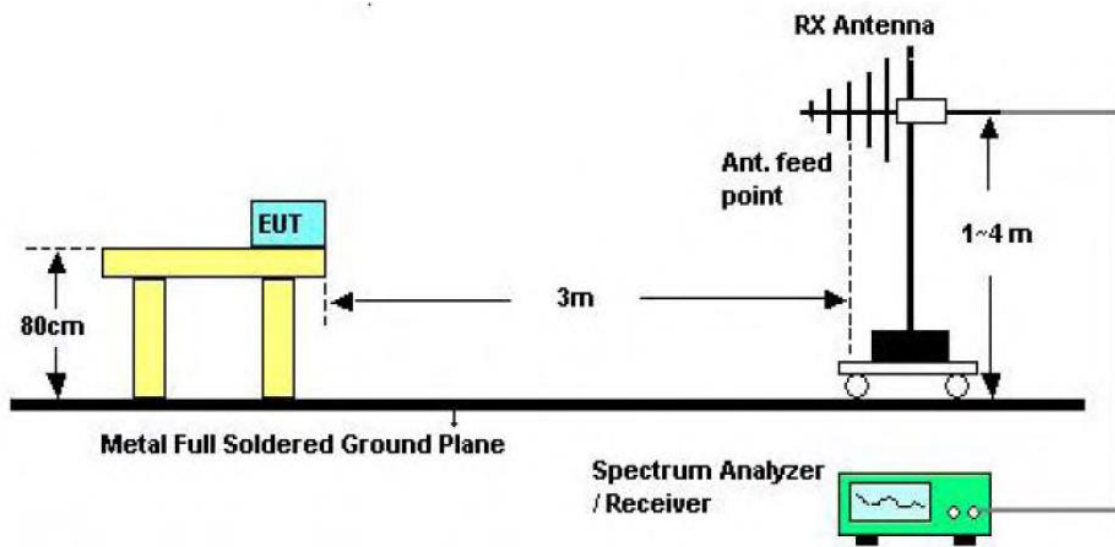
#### **Note:**

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

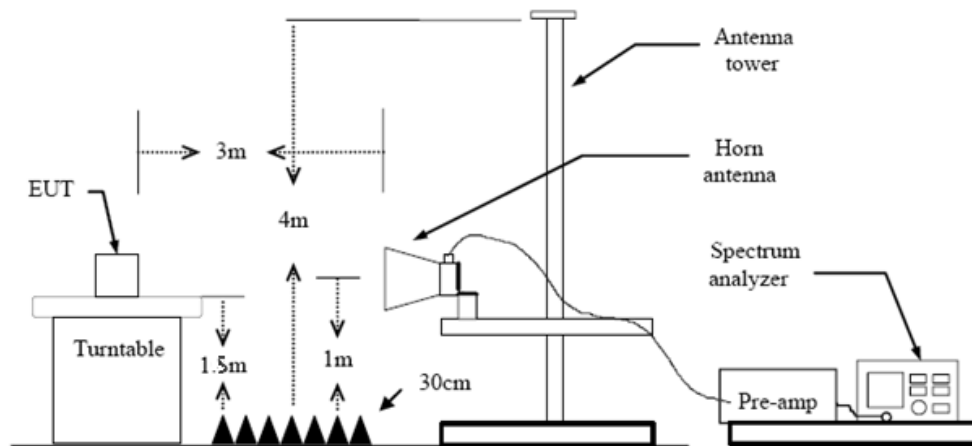
#### Test Configuration



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) Below 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.
  - (3) From 1 GHz to 10<sup>th</sup> harmonic:  
RBW=1MHz, VBW=3MHz Peak detector for Peak value.  
RBW=1MHz, VBW=3MHz RMS detector for Average value.

### Test Mode

Please refer to the clause 2.4.

### Test Result

#### 9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS

Note:

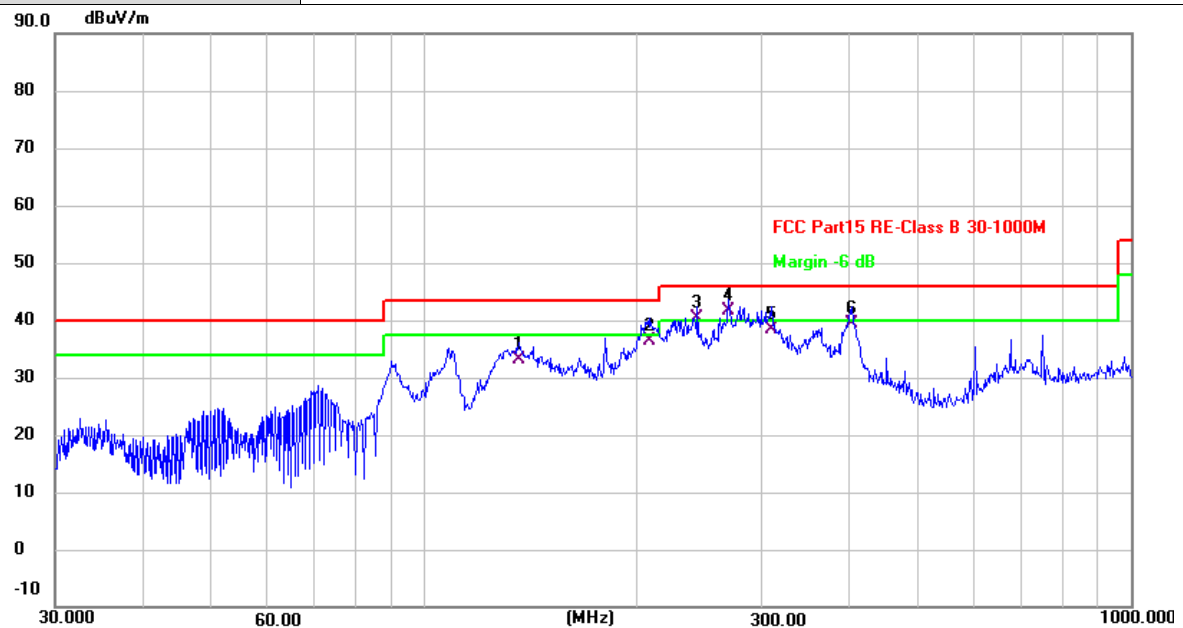
1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Pre-scan all antenna, only show the test data for worse case antenna on the test report.





## 30MHz-1GHz

Ant. Pol.	Horizontal
Test Mode:	ANT1 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	135.9821	52.93	-19.81	33.12	43.50	-10.38	QP
2	208.5801	52.17	-15.83	36.34	43.50	-7.16	QP
3 !	243.3771	55.25	-14.82	40.43	46.00	-5.57	QP
4 *	269.4282	55.90	-14.21	41.69	46.00	-4.31	QP
5	309.9977	51.64	-13.29	38.35	46.00	-7.65	QP
6	401.8384	50.44	-11.02	39.42	46.00	-6.58	QP

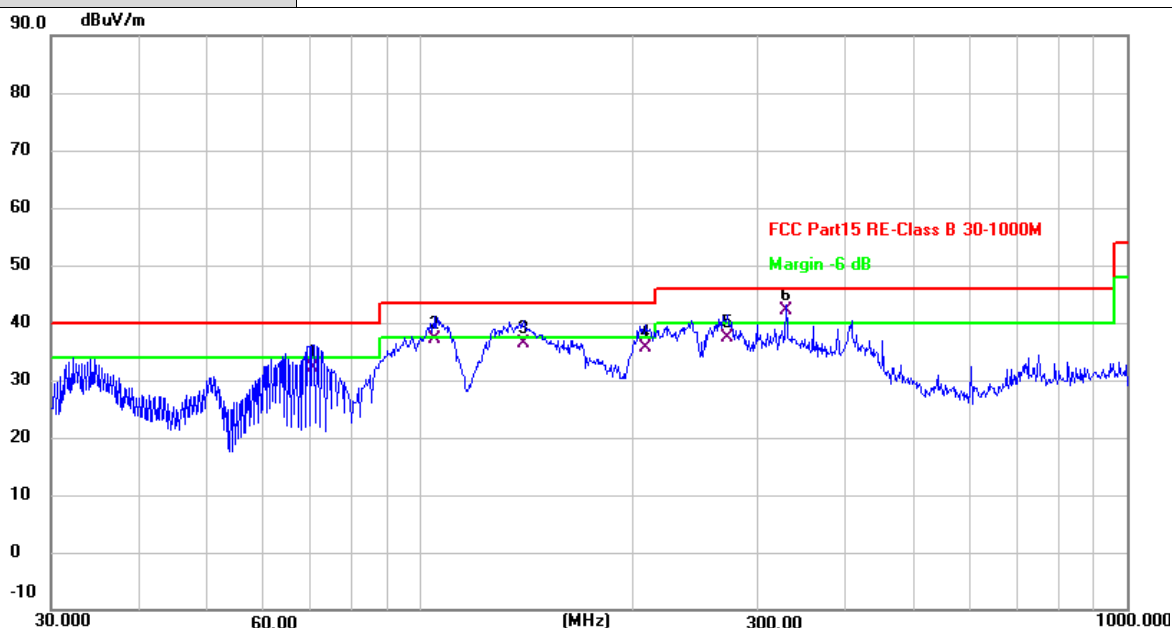
## Remarks:

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:	ANT1 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	70.3365	50.77	-18.55	32.22	40.00	-7.78	QP
2	104.9032	53.51	-16.40	37.11	43.50	-6.39	QP
3	139.8508	56.35	-19.98	36.37	43.50	-7.13	QP
4	208.5801	51.41	-15.83	35.58	43.50	-7.92	QP
5	272.2776	51.48	-14.14	37.34	46.00	-8.66	QP
6 *	329.0390	54.91	-12.82	42.09	46.00	-3.91	QP

## Remarks:

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

2. Margin value = Level - Limit value



## Adobe 1GHz

<b>Ant No.</b>	ANT1
<b>Ant. Pol.</b>	Horizontal
<b>Test Mode:</b>	TX B Mode 2412MHz
<b>Remark:</b>	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 *	4823.952	29.40	2.62	32.02	54.00	-21.98	AVG
2	4824.105	41.36	2.62	43.98	74.00	-30.02	peak

## Remarks:

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

<b>Ant No.</b>	ANT1
<b>Ant. Pol.</b>	Vertical
<b>Test Mode:</b>	TX B Mode 2412MHz
<b>Remark:</b>	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 *	4824.025	29.40	2.62	32.02	54.00	-21.98	AVG
2	4824.079	41.68	2.62	44.30	74.00	-29.70	peak

## Remarks:

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



Ant No.	ANT1
Ant. Pol.	Horizontal
Test Mode:	TX B 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 *	4873.959	28.67	2.78	31.45	54.00	-22.55	AVG
2	4873.985	40.56	2.78	43.34	74.00	-30.66	peak

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1
Ant. Pol.	Vertical
Test Mode:	TX B 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 *	4873.974	29.40	2.78	32.18	54.00	-21.82	AVG
2	4874.016	41.06	2.78	43.84	74.00	-30.16	peak

Remarks:

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

2.Margin value = Level -Limit value



Ant No.	ANT1
Ant. Pol.	Horizontal
Test Mode:	TX B 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 *	4924.029	28.31	2.93	31.24	54.00	-22.76	AVG
2	4924.041	40.49	2.93	43.42	74.00	-30.58	peak

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1
Ant. Pol.	Vertical
Test Mode:	TX B 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 *	4823.917	29.90	2.62	32.52	54.00	-21.48	AVG
2	4823.935	41.46	2.62	44.08	74.00	-29.92	peak

Remarks:

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

2.Margin value = Level -Limit value



Ant No.	ANT1
Ant. Pol.	Horizontal
Test Mode:	TX G 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	4803.914	41.46	2.56	44.02	74.00	-29.98	peak
2 *	4804.067	29.07	2.56	31.63	54.00	-22.37	AVG

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1
Ant. Pol.	Vertical
Test Mode:	TX G 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	4824.159	40.33	2.62	42.95	74.00	-31.05	peak
2 *	4824.231	29.04	2.62	31.66	54.00	-22.34	AVG

Remarks:

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

2.Margin value = Level -Limit value



Ant No.	ANT1
Ant. Pol.	Horizontal
Test Mode:	TX G 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	27.57	2.78	30.35	54.00	-23.65	AVG
2	4874.017	40.53	2.78	43.31	74.00	-30.69	peak

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1
Ant. Pol.	Vertical
Test Mode:	TX G 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 *	4874.008	29.10	2.78	31.88	54.00	-22.12	AVG
2	4874.929	40.88	2.78	43.66	74.00	-30.34	peak

Remarks:

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

2.Margin value = Level -Limit value



Ant No.	ANT1
Ant. Pol.	Horizontal
Test Mode:	TX G 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	4923.928	40.27	2.93	43.20	74.00	-30.80	peak
2 *	4924.039	27.64	2.93	30.57	54.00	-23.43	AVG

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1
Ant. Pol.	Vertical
Test Mode:	TX G 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 *	4923.947	28.89	2.93	31.82	54.00	-22.18	AVG
2	4924.049	40.41	2.93	43.34	74.00	-30.66	peak

Remarks:

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

2.Margin value = Level -Limit value





Ant No.	ANT1 + ANT2
Ant. Pol.	Horizontal
Test Mode:	TX N20 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 *	4824.087	28.82	2.62	31.44	54.00	-22.56	AVG
2	4824.169	40.95	2.62	43.57	74.00	-30.43	peak

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1 + ANT2
Ant. Pol.	Vertical
Test Mode:	TX N20 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	4823.834	40.54	2.62	43.16	74.00	-30.84	peak
2 *	4824.116	28.43	2.62	31.05	54.00	-22.95	AVG

Remarks:

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

2.Margin value = Level -Limit value



Ant No.	ANT1 + ANT2
Ant. Pol.	Horizontal
Test Mode:	TX N20 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 *	4873.927	28.24	2.78	31.02	54.00	-22.98	AVG
2	4874.041	41.08	2.78	43.86	74.00	-30.14	peak

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1 + ANT2
Ant. Pol.	Vertical
Test Mode:	TX N20 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 *	4873.905	29.22	2.78	32.00	54.00	-22.00	AVG
2	4874.062	40.75	2.78	43.53	74.00	-30.47	peak

Remarks:

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

2.Margin value = Level -Limit value



<b>Ant No.</b>	ANT1 + ANT2
<b>Ant. Pol.</b>	Horizontal
<b>Test Mode:</b>	TX N20 Mode 2462MHz
<b>Remark:</b>	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	4924.113	40.27	2.93	43.20	74.00	-30.80	peak
2 *	4924.147	27.74	2.93	30.67	54.00	-23.33	AVG

Remarks:

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

2.Margin value = Level -Limit value

<b>Ant No.</b>	ANT1 + ANT2
<b>Ant. Pol.</b>	Vertical
<b>Test Mode:</b>	TX N20 Mode 2462MHz
<b>Remark:</b>	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 *	4923.930	28.80	2.93	31.73	54.00	-22.27	AVG
2	4923.974	40.77	2.93	43.70	74.00	-30.30	peak

Remarks:

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

2.Margin value = Level -Limit value



Ant No.	ANT1 + ANT2
Ant. Pol.	Horizontal
Test Mode:	TX N40 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	4823.983	41.49	2.62	44.11	74.00	-29.89	peak
2 *	4823.985	29.43	2.62	32.05	54.00	-21.95	AVG

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1 + ANT2
Ant. Pol.	Vertical
Test Mode:	TX N40 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 *	4844.110	28.47	2.68	31.15	54.00	-22.85	AVG
2	4844.117	40.75	2.68	43.43	74.00	-30.57	peak

Remarks:

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

2.Margin value = Level -Limit value



Ant No.	ANT1 + ANT2
Ant. Pol.	Horizontal
Test Mode:	TX N40 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 *	4873.830	28.97	2.78	31.75	54.00	-22.25	AVG
2	4874.027	40.45	2.78	43.23	74.00	-30.77	peak

Remarks:

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

2.Margin value = Level -Limit value

Ant No.	ANT1 + ANT2
Ant. Pol.	Vertical
Test Mode:	TX N40 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 *	4874.024	28.49	2.78	31.27	54.00	-22.73	AVG
2	4874.027	40.38	2.78	43.16	74.00	-30.84	peak

Remarks:

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

2.Margin value = Level -Limit value



<b>Ant No.</b>	ANT1 + ANT2
<b>Ant. Pol.</b>	Horizontal
<b>Test Mode:</b>	TX N40 Mode 2452MHz
<b>Remark:</b>	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 *	4903.974	28.36	2.86	31.22	54.00	-22.78	AVG
2	4904.102	40.13	2.86	42.99	74.00	-31.01	peak

Remarks:

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

2.Margin value = Level -Limit value

<b>Ant No.</b>	ANT1 + ANT2
<b>Ant. Pol.</b>	Vertical
<b>Test Mode:</b>	TX N40 Mode 2452MHz
<b>Remark:</b>	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	4903.953	40.86	2.86	43.72	74.00	-30.28	peak
2 *	4904.026	28.23	2.86	31.09	54.00	-22.91	AVG

Remarks:

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

2.Margin value = Level -Limit value

### 3.3. Band Edge Emissions (Radiated)

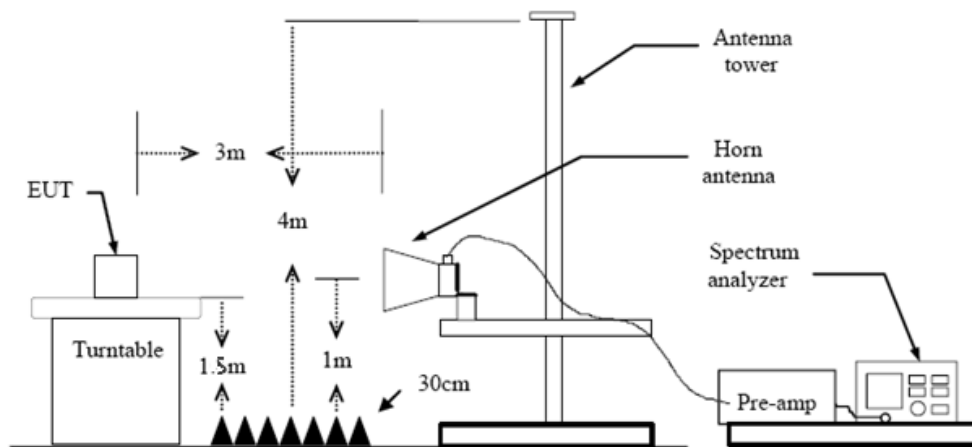
#### Limit

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

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

Conducted band edge limit: The highest point of the operating frequency waveform down 20dB

#### 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.

2: Duty Cycle> 98%, VBW=10Hz.

#### Test Mode

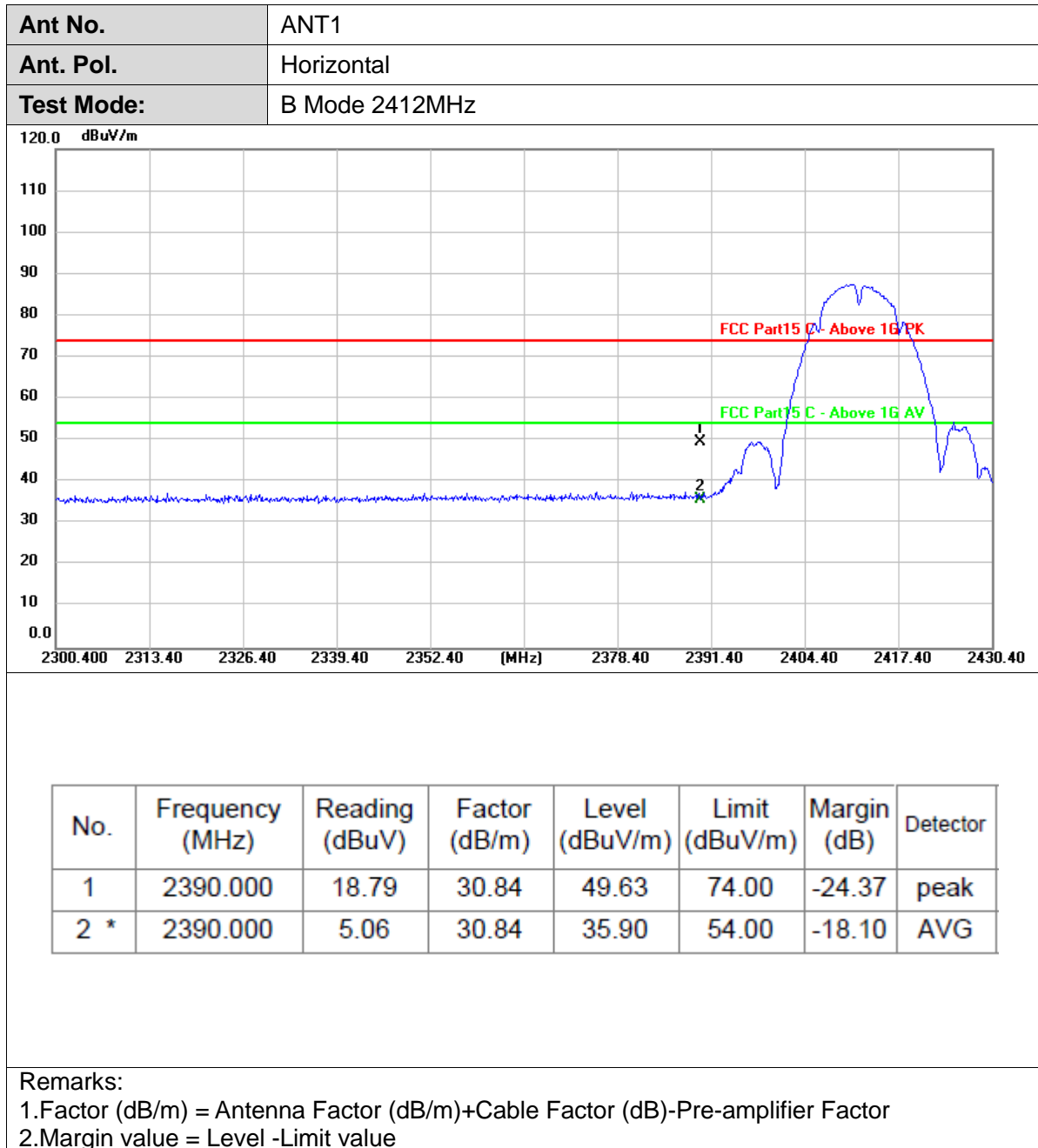
Please refer to the clause 2.4.

#### Test Results

Note: Pre-scan all antenna, only show the test data for worse case antenna on the test report.



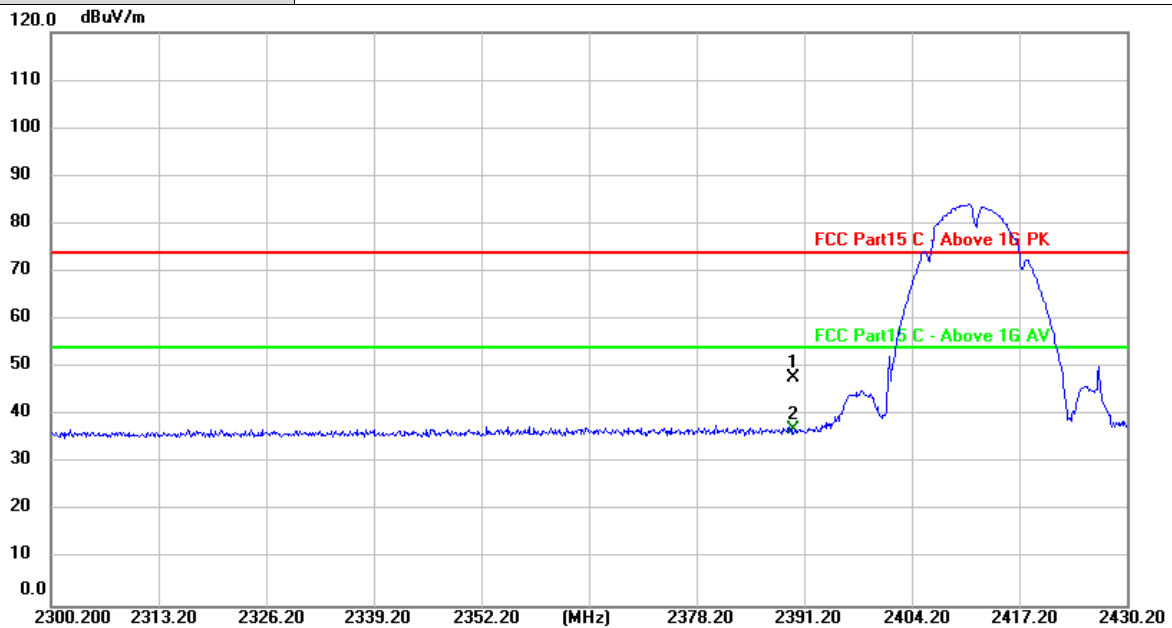
## (1) Radiation Test







Ant No.	ANT1
Ant. Pol.	Vertical
Test Mode:	B Mode 2412MHz



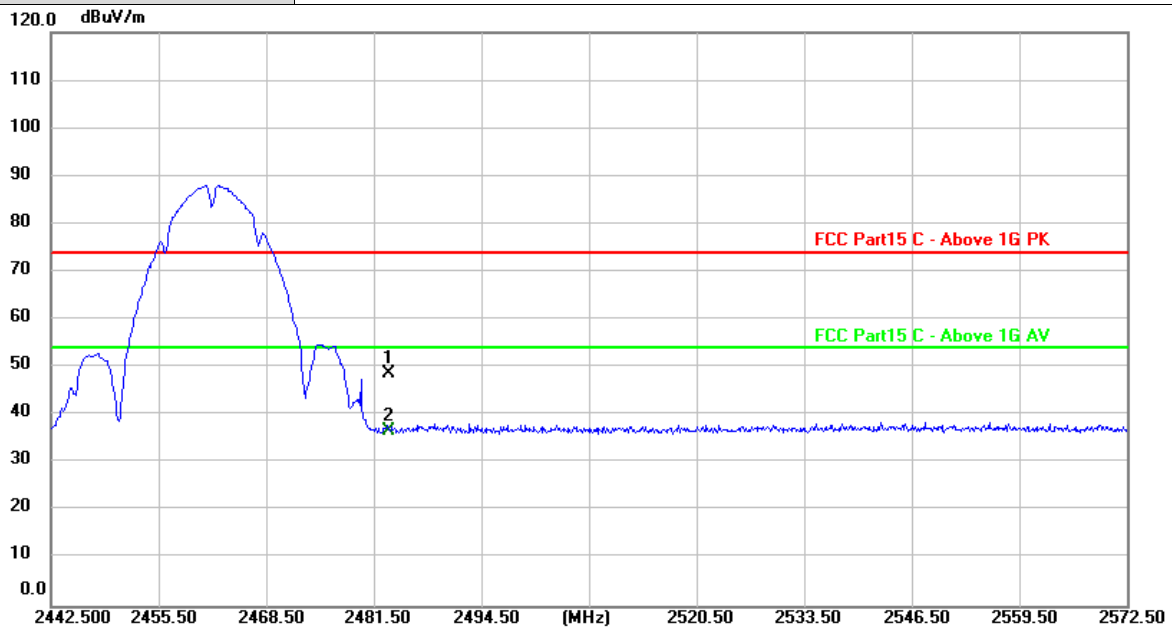
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	17.11	30.84	47.95	74.00	-26.05	peak
2 *	2390.000	6.29	30.84	37.13	54.00	-16.87	AVG

## Remarks:

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



Ant No.	ANT1
Ant. Pol.	Horizontal
Test Mode:	B Mode 2462 MHz

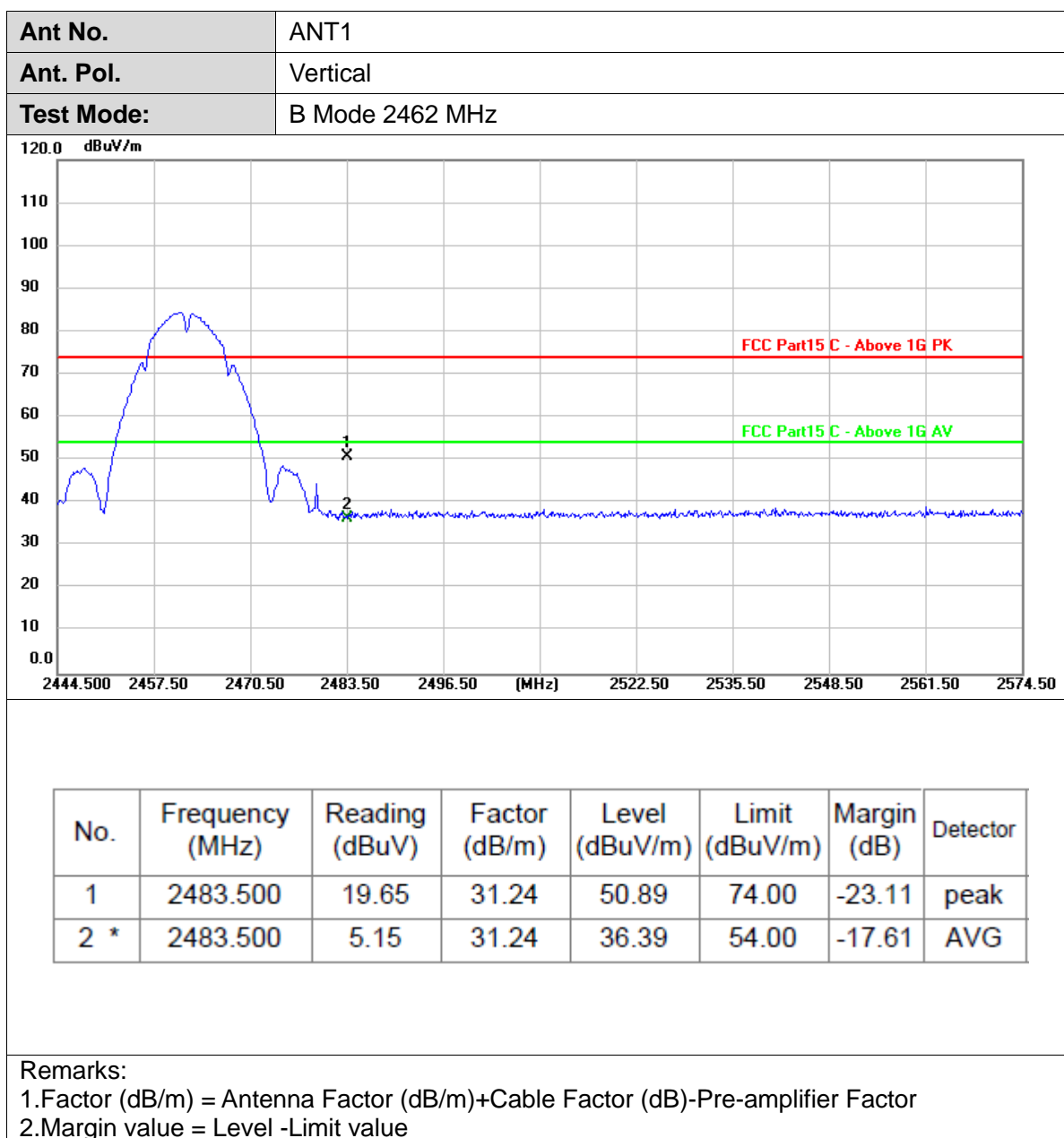


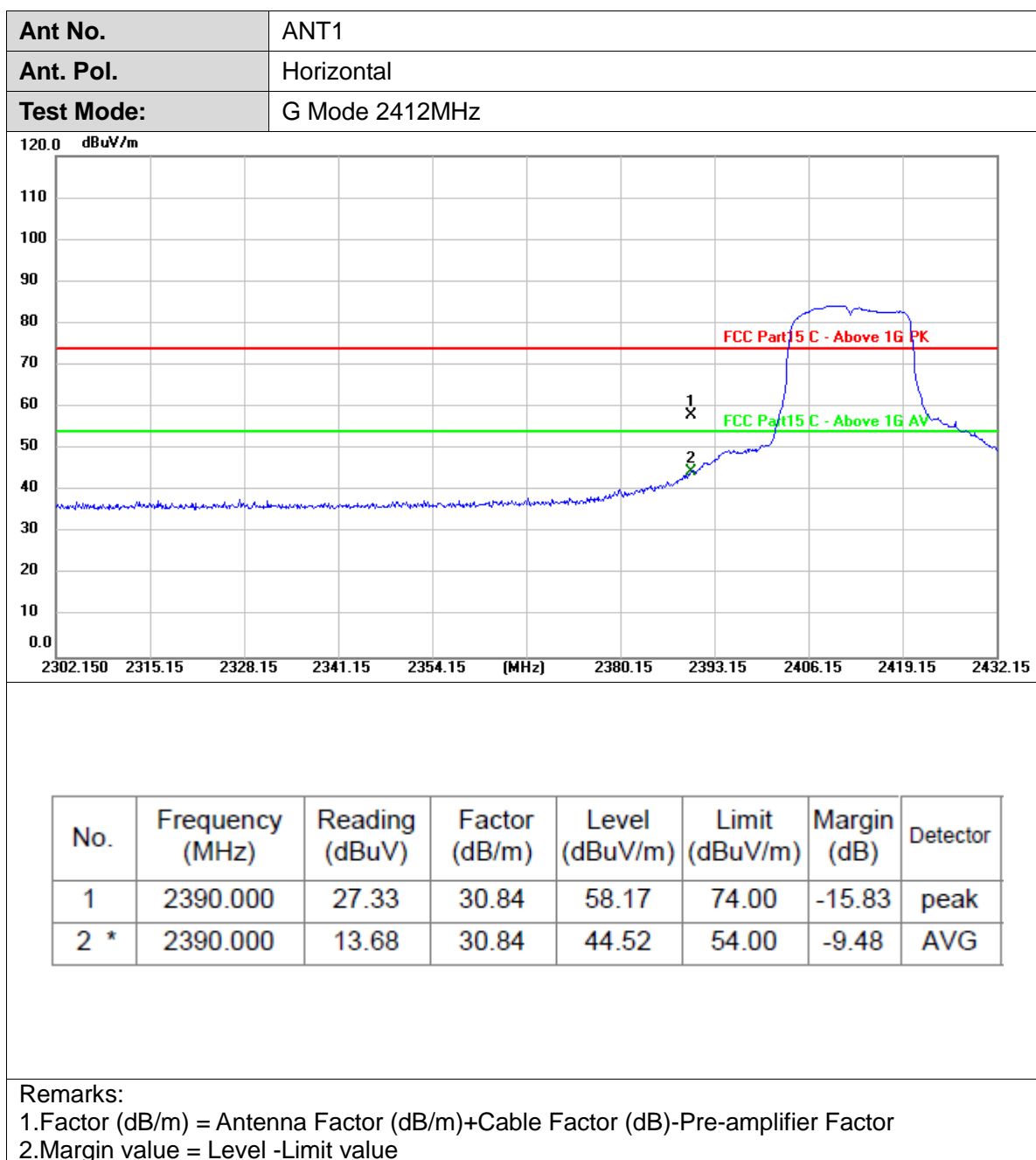
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	17.38	31.24	48.62	74.00	-25.38	peak
2 *	2483.500	5.45	31.24	36.69	54.00	-17.31	AVG

## Remarks:

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

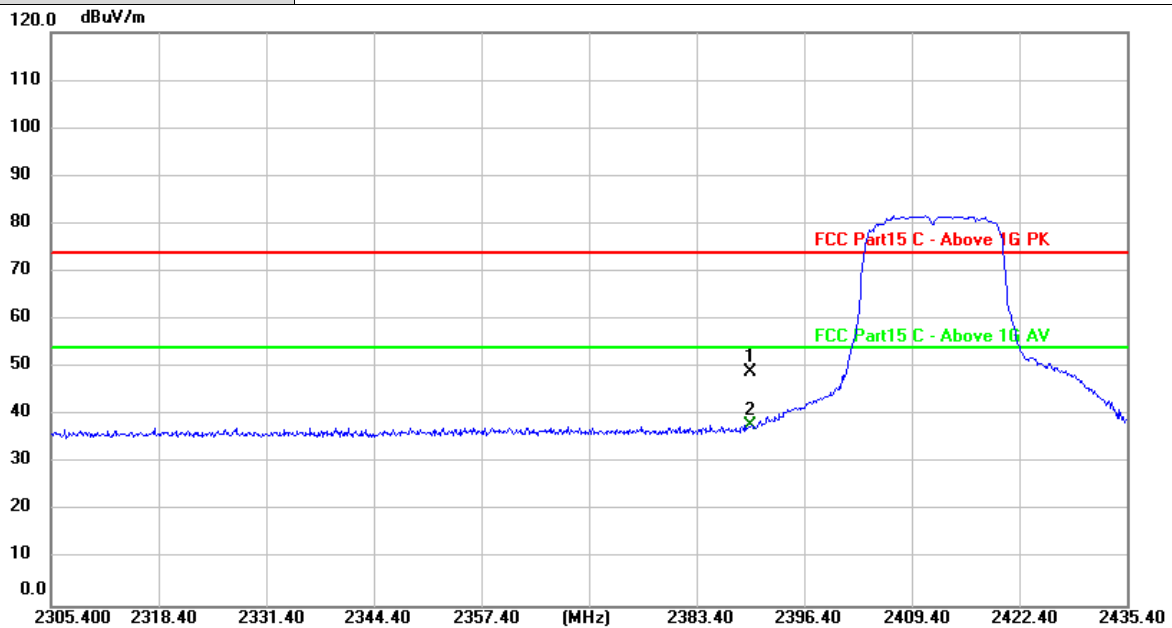
2. Margin value = Level - Limit value







Ant No.	ANT1
Ant. Pol.	Vertical
Test Mode:	G Mode 2412MHz



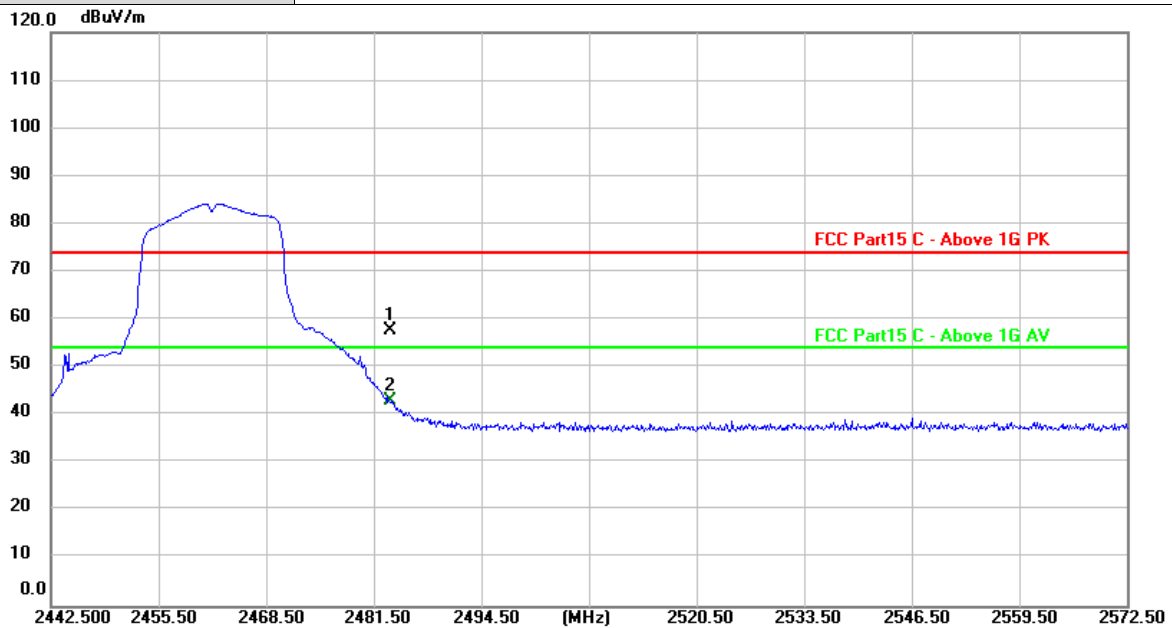
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	18.23	30.84	49.07	74.00	-24.93	peak
2 *	2390.000	7.23	30.84	38.07	54.00	-15.93	AVG

## Remarks:

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



Ant No.	ANT1
Ant. Pol.	Horizontal
Test Mode:	G Mode 2462MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	26.63	31.24	57.87	74.00	-16.13	peak
2 *	2483.500	11.69	31.24	42.93	54.00	-11.07	AVG

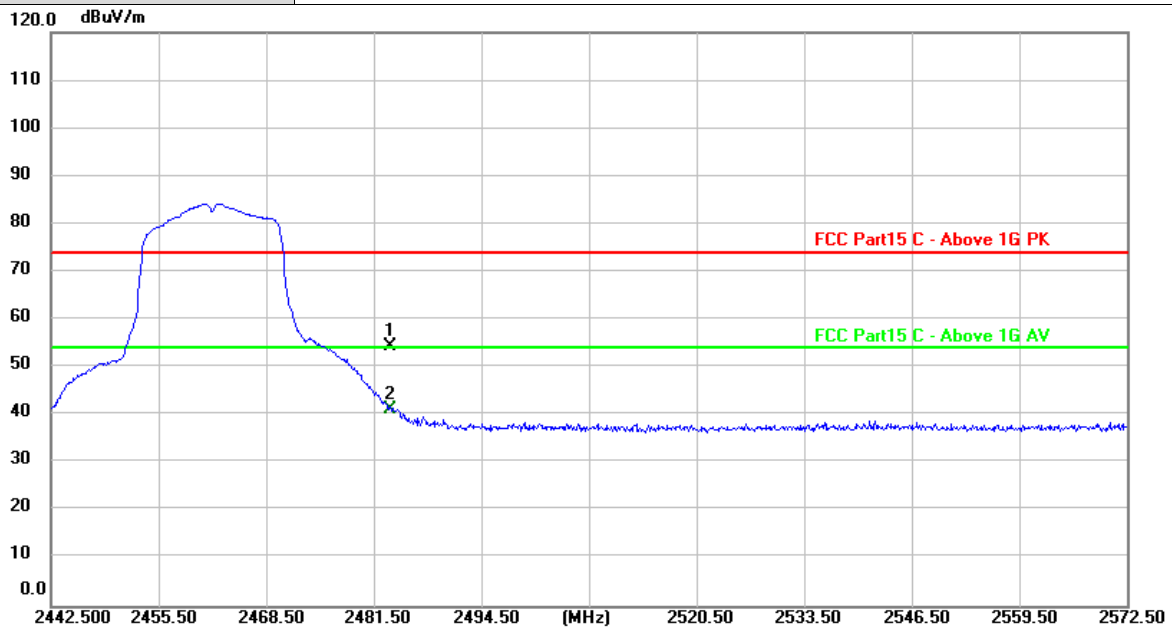
## Remarks:

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

2. Margin value = Level - Limit value



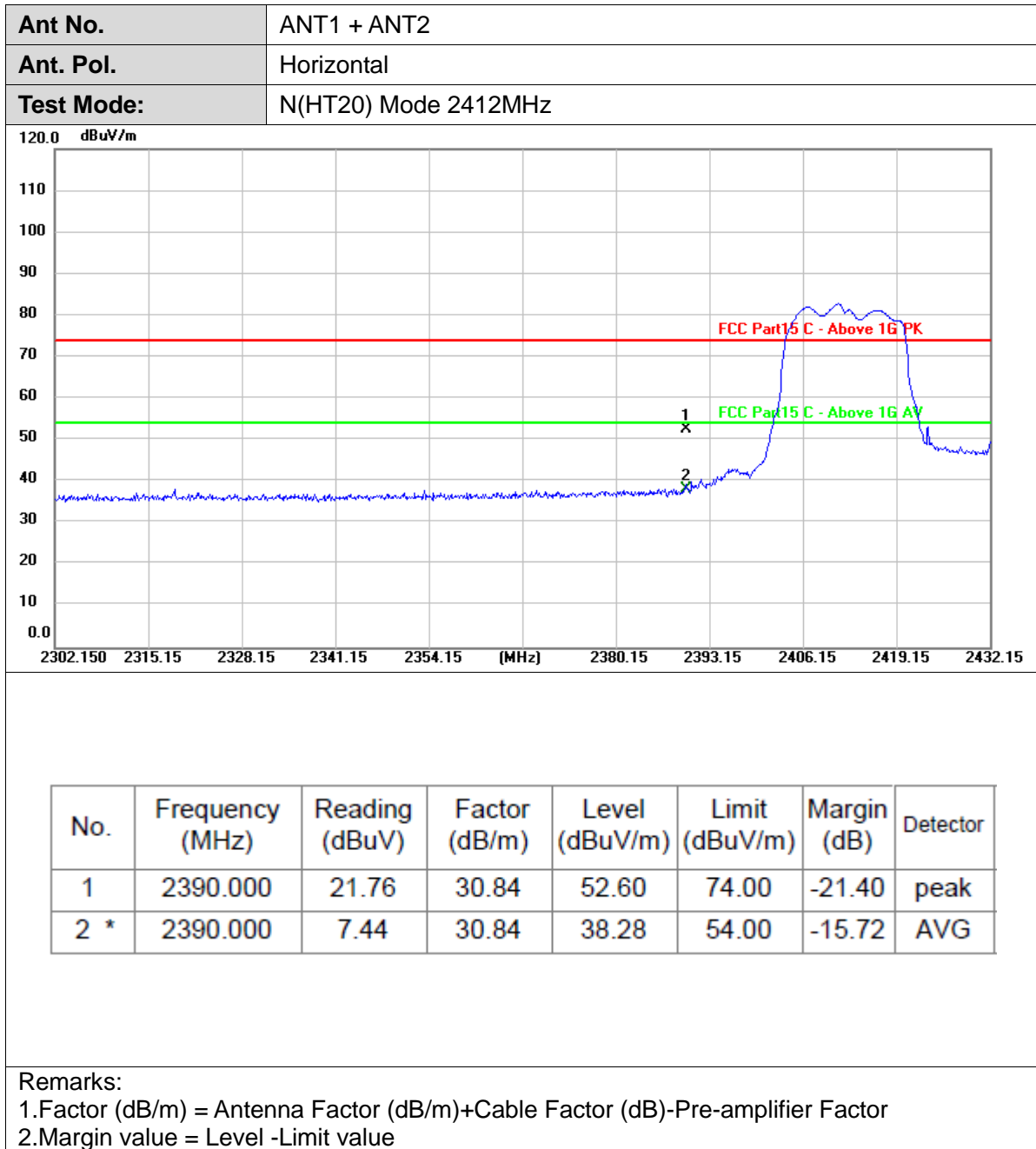
Ant No.	ANT1
Ant. Pol.	Vertical
Test Mode:	G Mode 2462MHz



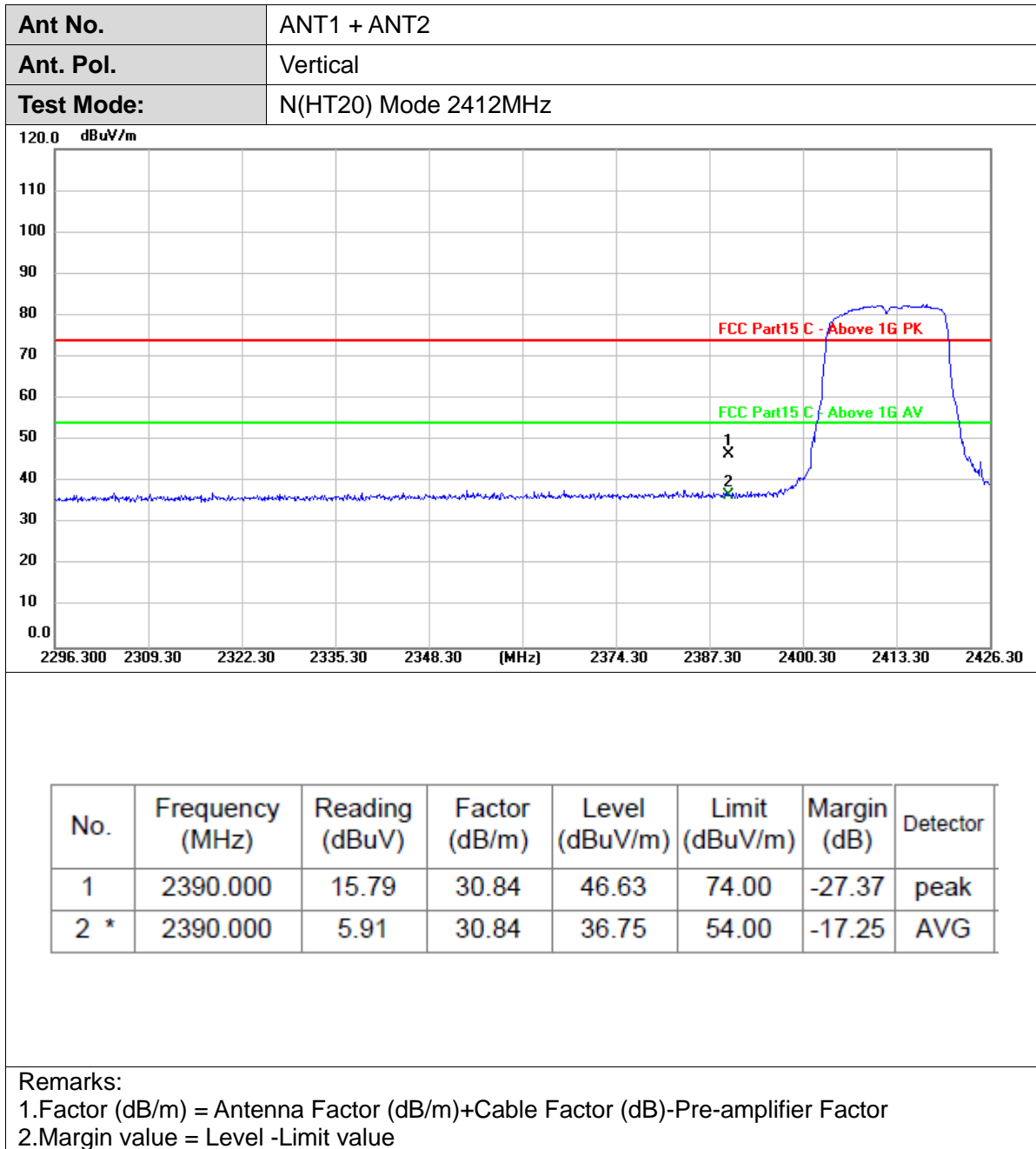
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	23.08	31.24	54.32	74.00	-19.68	peak
2 *	2483.500	10.07	31.24	41.31	54.00	-12.69	AVG

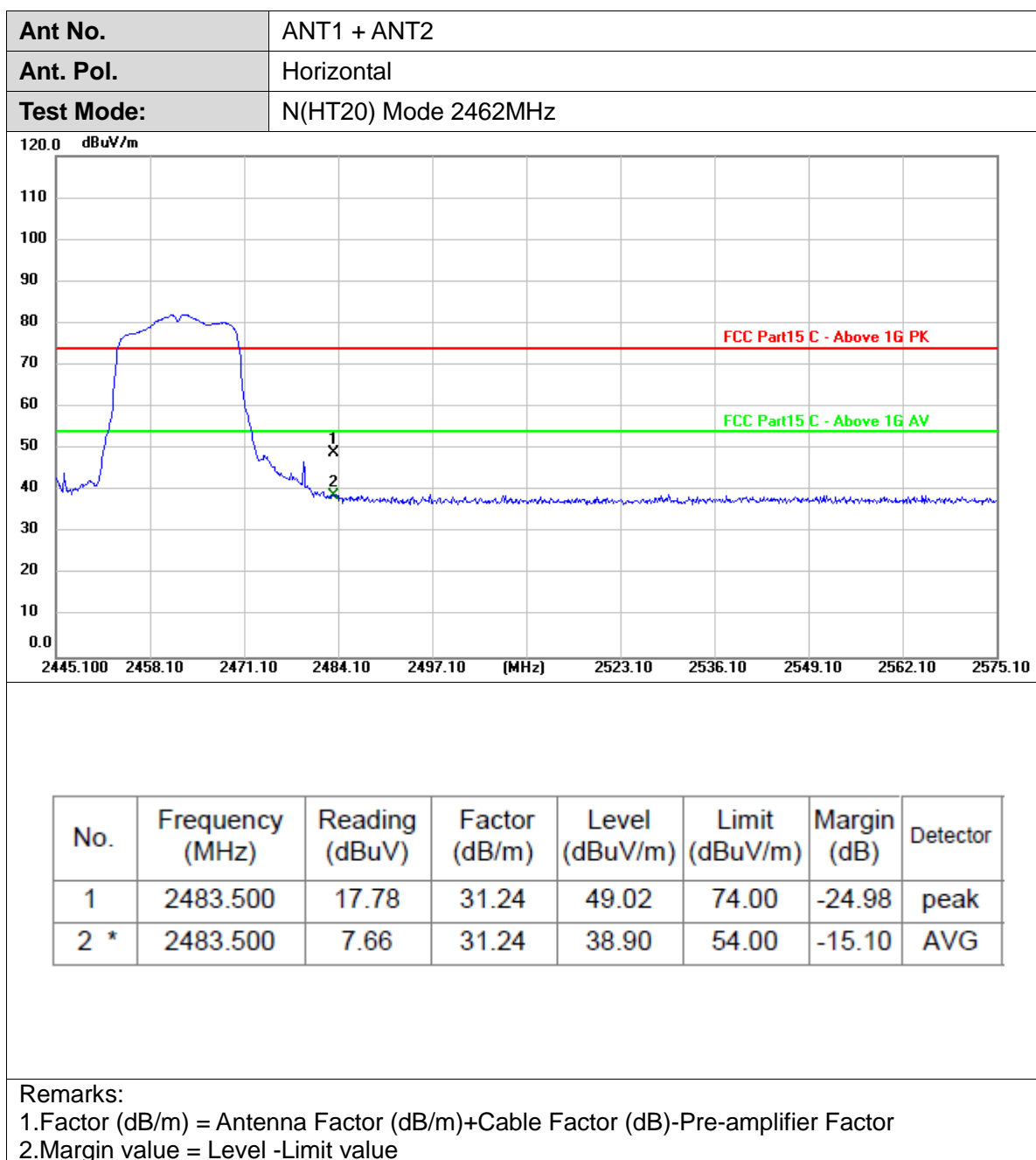
## Remarks:

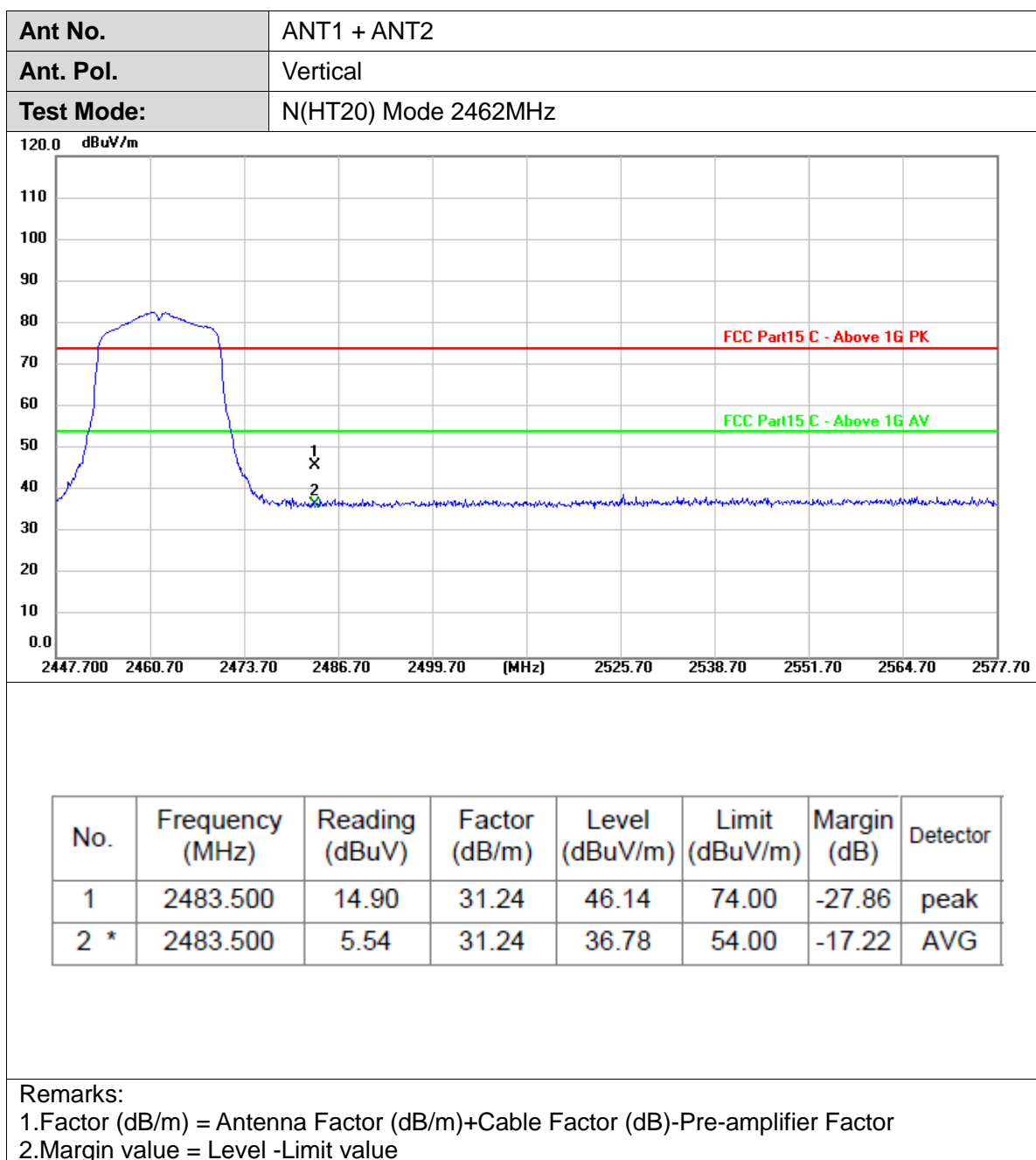
- Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
- Margin value = Level -Limit value





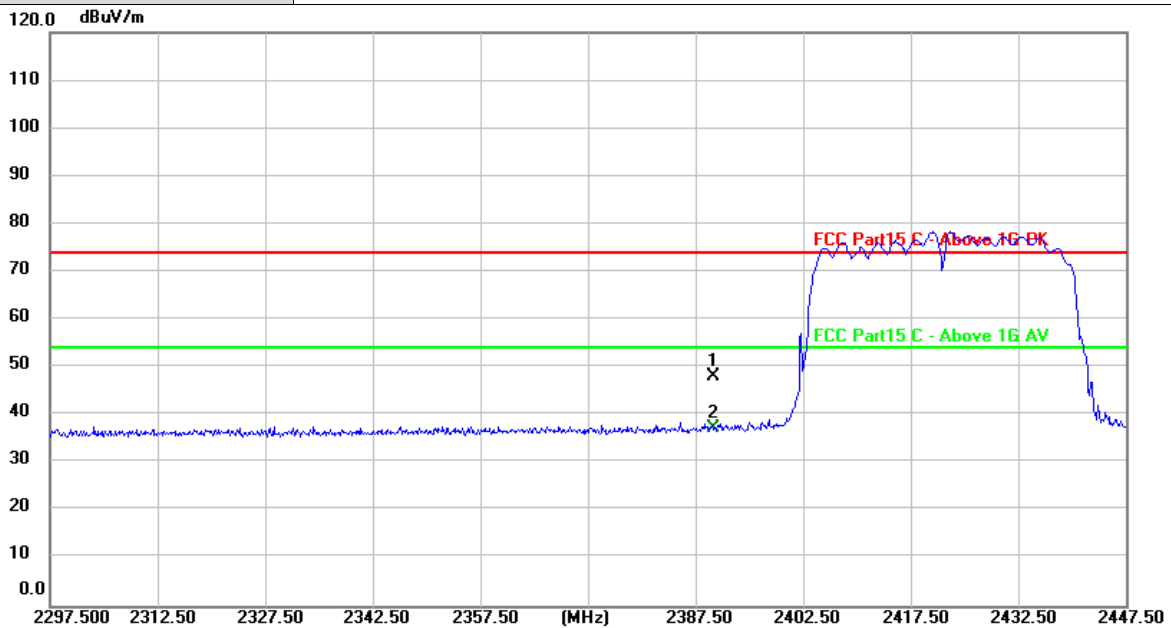








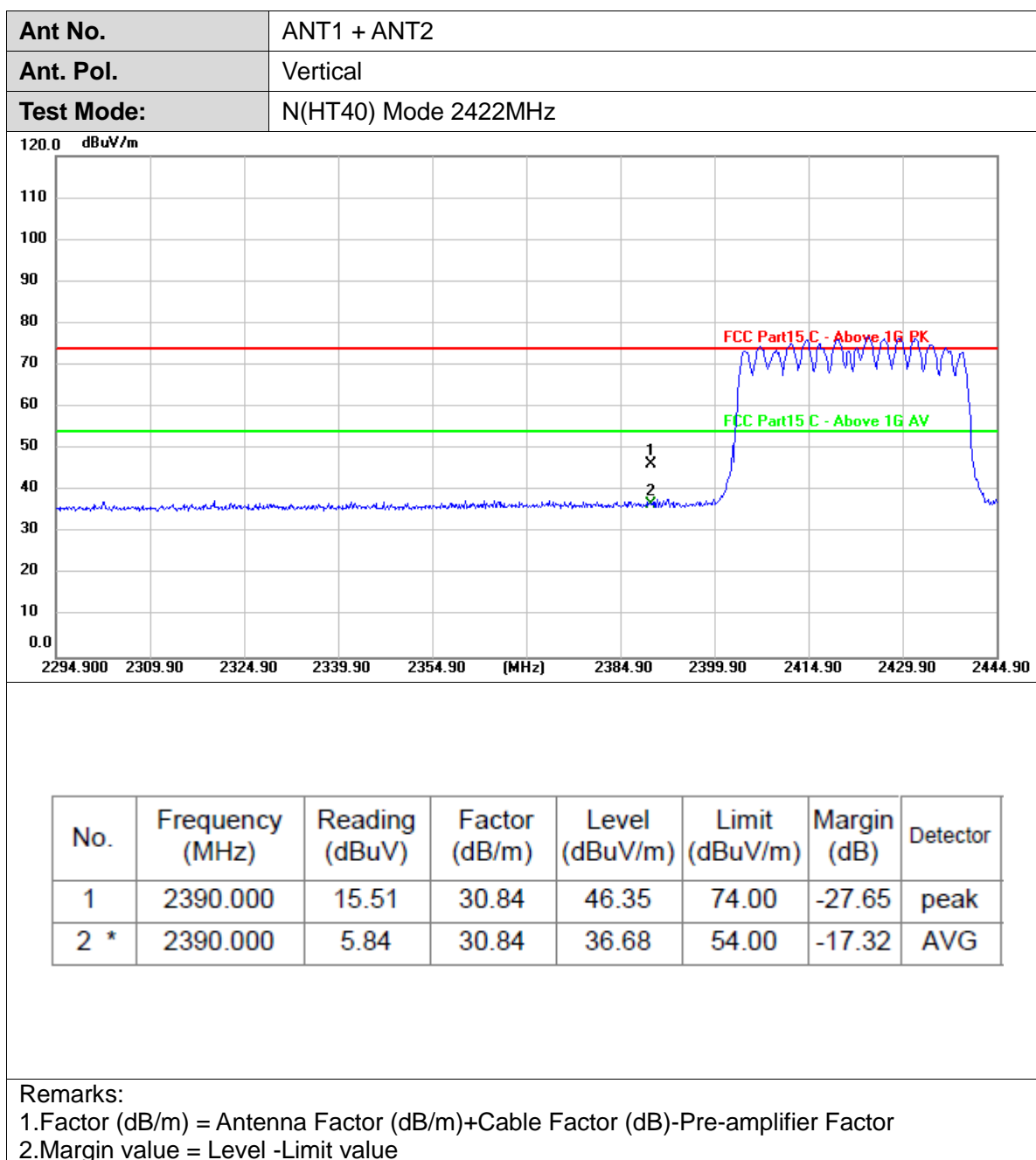
Ant No.	ANT1 + ANT2
Ant. Pol.	Horizontal
Test Mode:	N(HT40) Mode 2422MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	17.33	30.84	48.17	74.00	-25.83	peak
2 *	2390.000	6.48	30.84	37.32	54.00	-16.68	AVG

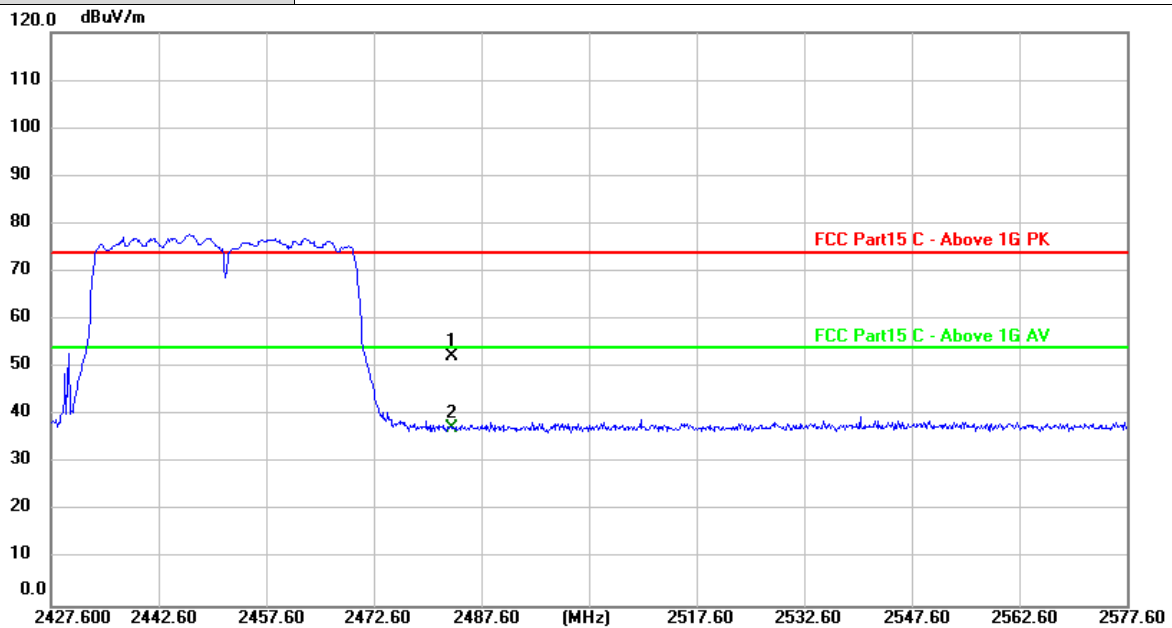
## Remarks:

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





Ant No.	ANT1 + ANT2
Ant. Pol.	Horizontal
Test Mode:	N(HT40) Mode 2452MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	21.18	31.24	52.42	74.00	-21.58	peak
2 *	2483.500	6.05	31.24	37.29	54.00	-16.71	AVG

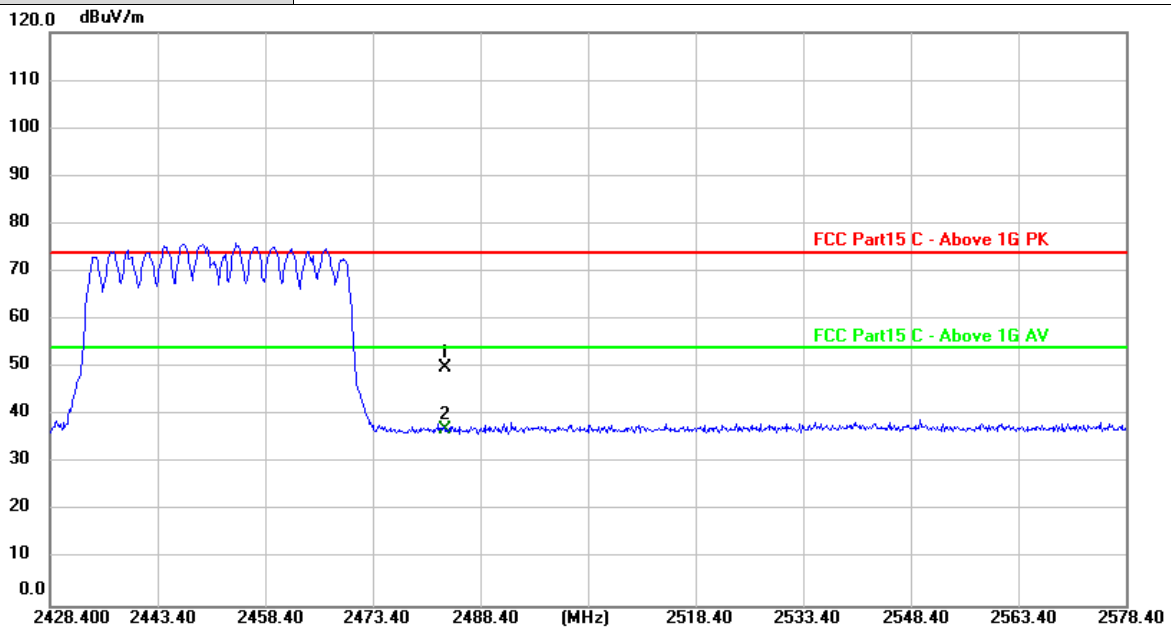
## Remarks:

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

2. Margin value = Level - Limit value



Ant No.	ANT1 + ANT2
Ant. Pol.	Vertical
Test Mode:	N(HT40) Mode 2452MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	18.74	31.24	49.98	74.00	-24.02	peak
2 *	2483.500	5.72	31.24	36.96	54.00	-17.04	AVG

## Remarks:

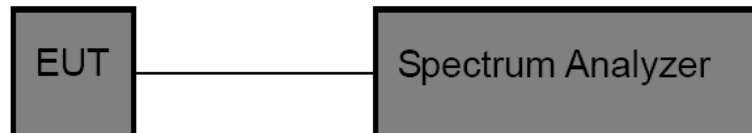
1. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor
2. Margin value = Level - Limit value

### 3.4. Band edge and Spurious Emissions (Conducted)

#### Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d): 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.

#### 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 ≥ RBW, scan up through 10<sup>th</sup> 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 Results

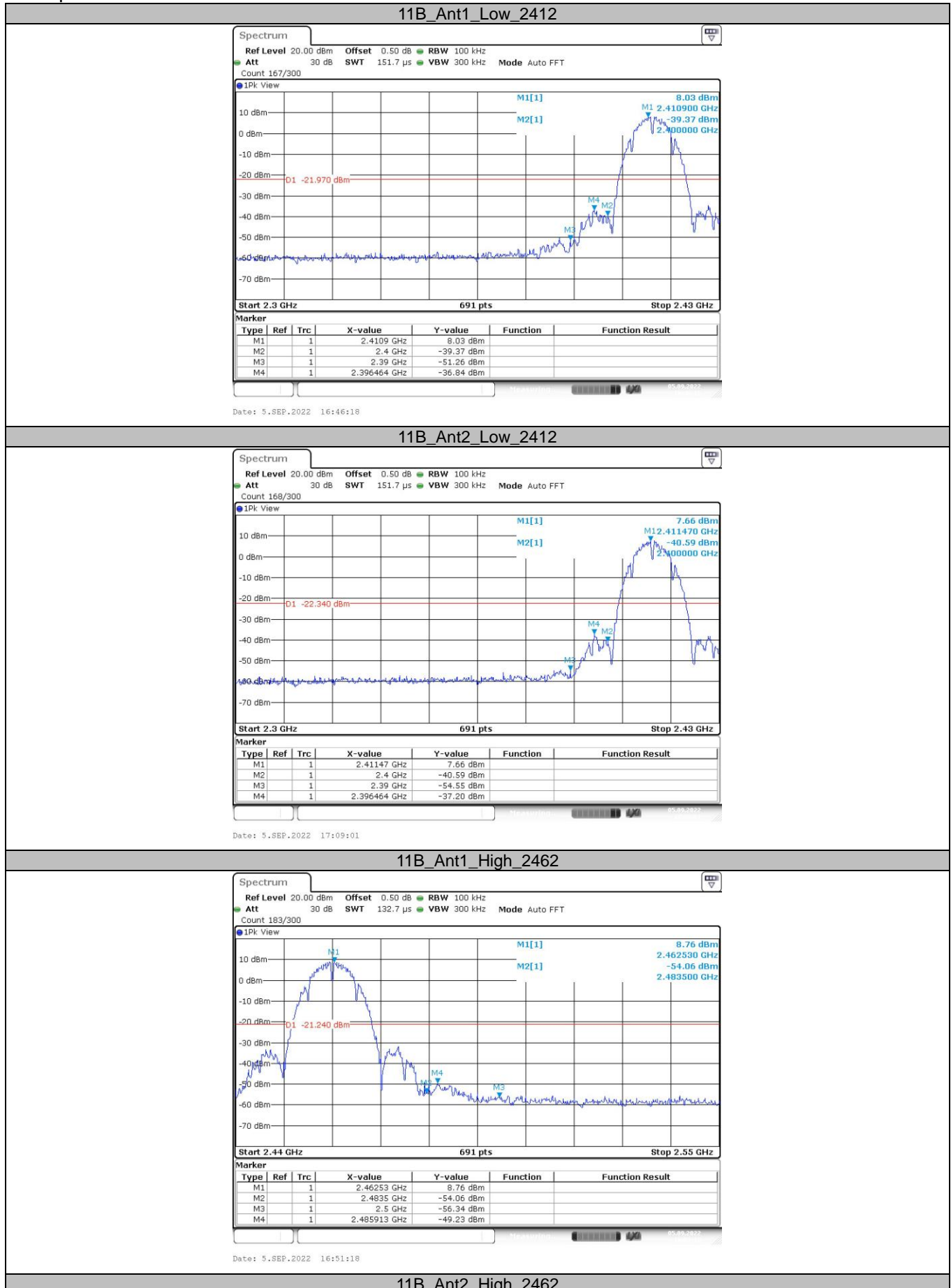
##### (1) Band edge Conducted Test

Test Mode	Antenna	ChName	Frequency (MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	8.03	-36.84	≤-21.97	PASS
	Ant2	Low	2412	7.66	-37.20	≤-22.34	PASS
	Ant1	High	2462	8.76	-49.23	≤-21.24	PASS
	Ant2	High	2462	7.52	-53.90	≤-22.48	PASS
11G	Ant1	Low	2412	4.46	-35.38	≤-25.54	PASS
	Ant2	Low	2412	5.95	-33.28	≤-24.05	PASS
	Ant1	High	2462	4.36	-39.73	≤-25.64	PASS
	Ant2	High	2462	3.68	-41.32	≤-26.32	PASS
11N20MIMO	Ant1	Low	2412	6.29	-27.94	≤-23.71	PASS
	Ant2	Low	2412	5.17	-32.03	≤-24.83	PASS
	Ant1	High	2462	3.97	-36.28	≤-26.03	PASS
	Ant2	High	2462	3.26	-39.44	≤-26.74	PASS
11N40MIMO	Ant1	Low	2422	1.88	-33.33	≤-28.12	PASS
	Ant2	Low	2422	0.18	-37.30	≤-29.82	PASS
	Ant1	High	2452	1.88	-37.31	≤-28.12	PASS
	Ant2	High	2452	1.24	-45.18	≤-28.76	PASS





Test plot as follows:



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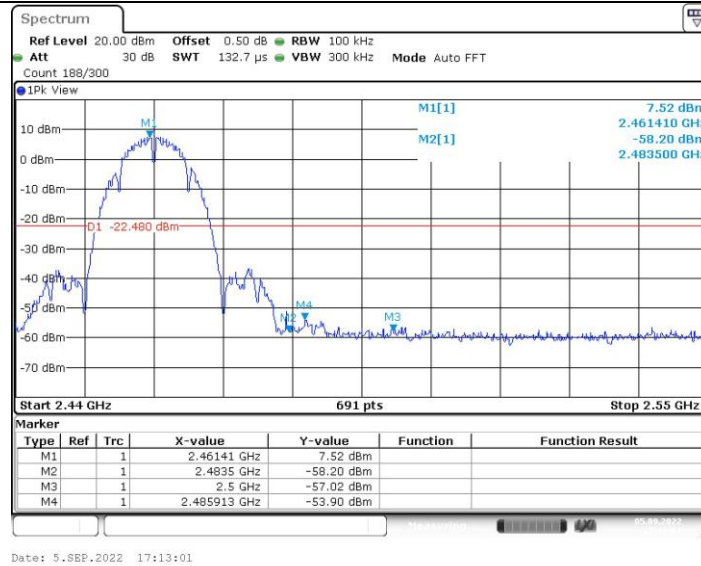
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Tel.: (86)755-27521059

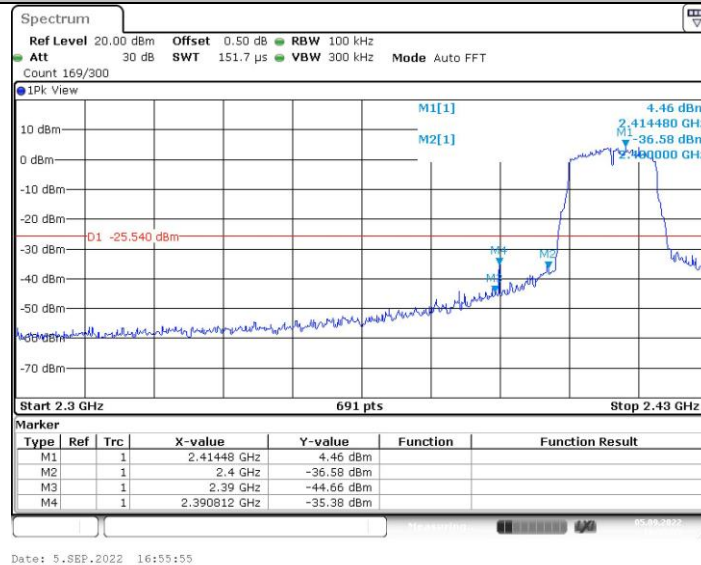
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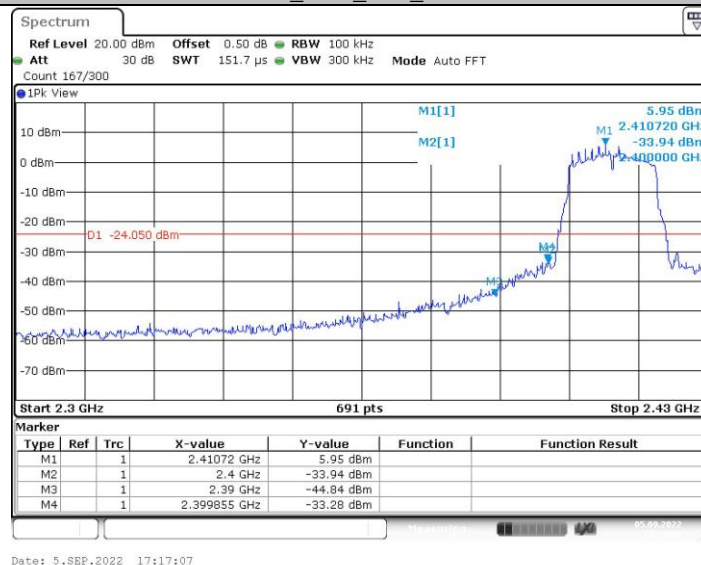
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## 11G\_Ant1\_Low\_2412



## 11G\_Ant2\_Low\_2412



## 11G\_Ant1\_High\_2462

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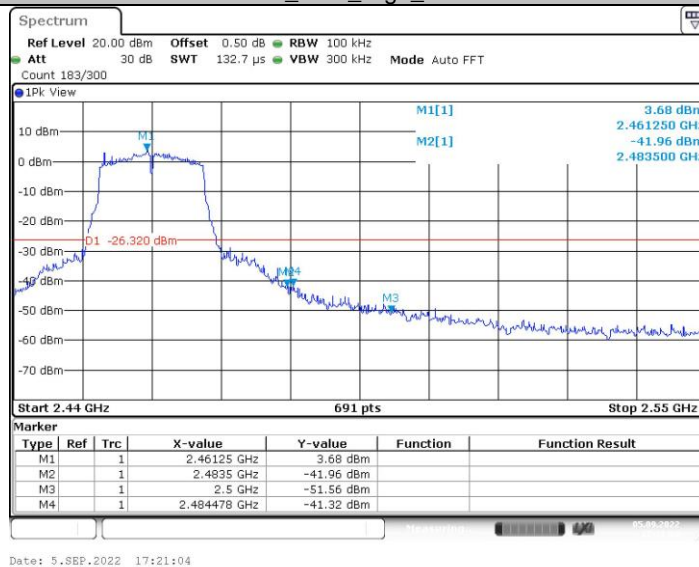
Http://www.sz-ctc.org.cn



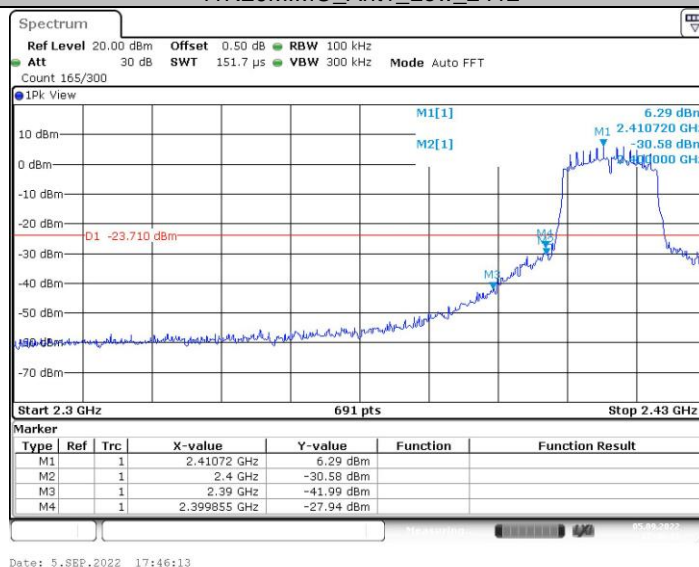
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## 11G\_Ant2\_High\_2462



## 11N20MIMO\_Ant1\_Low\_2412



## 11N20MIMO\_Ant2\_Low\_2412

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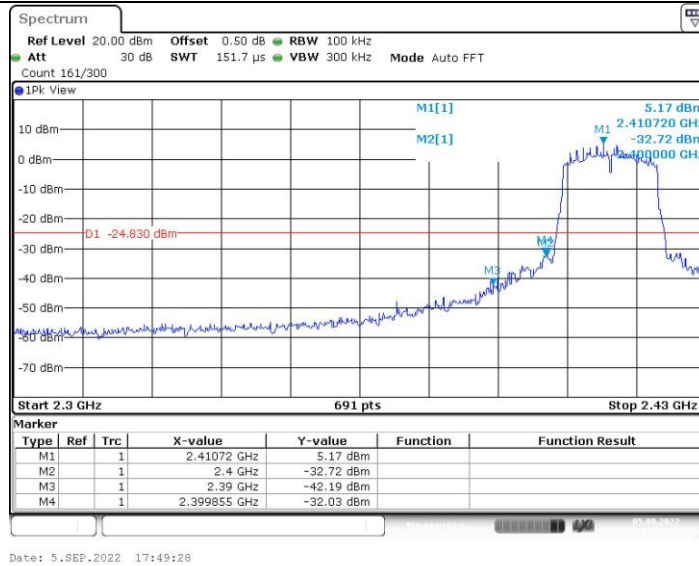
Tel.: (86)755-27521059

Fax: (86)755-27521011

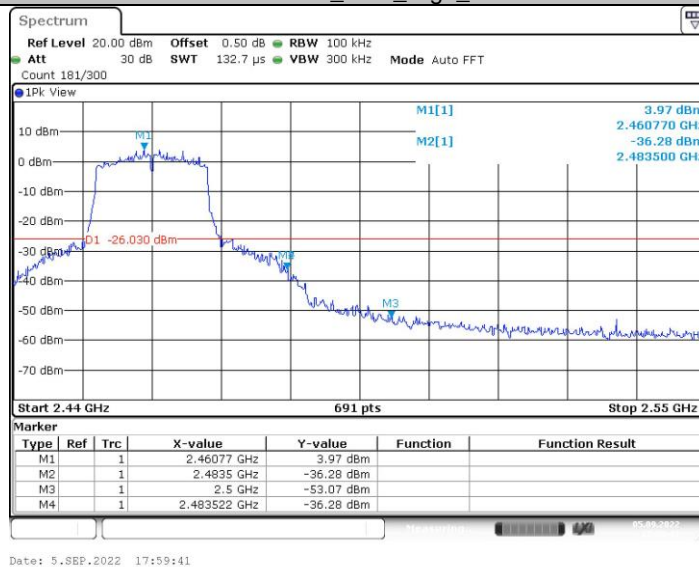
Http://www.sz-ctc.org.cn



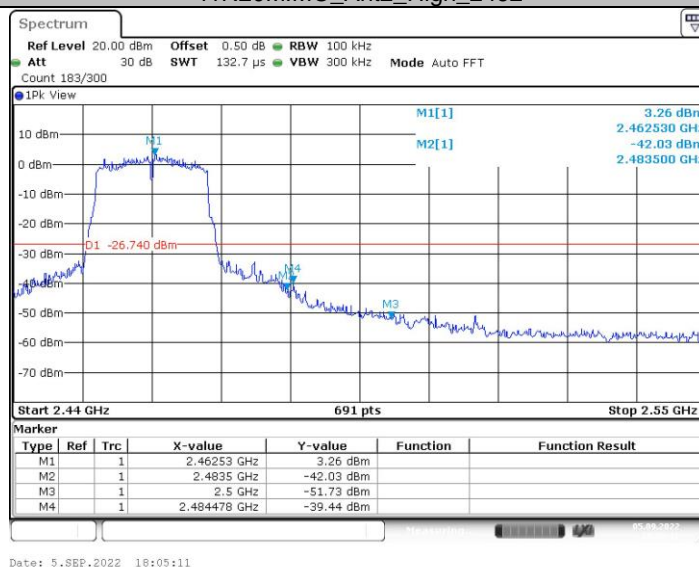
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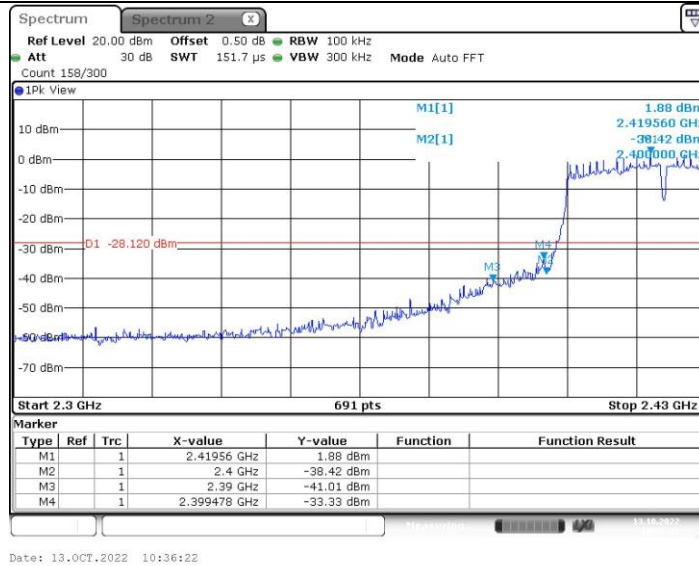
## 11N20MIMO\_Ant1\_High\_2462



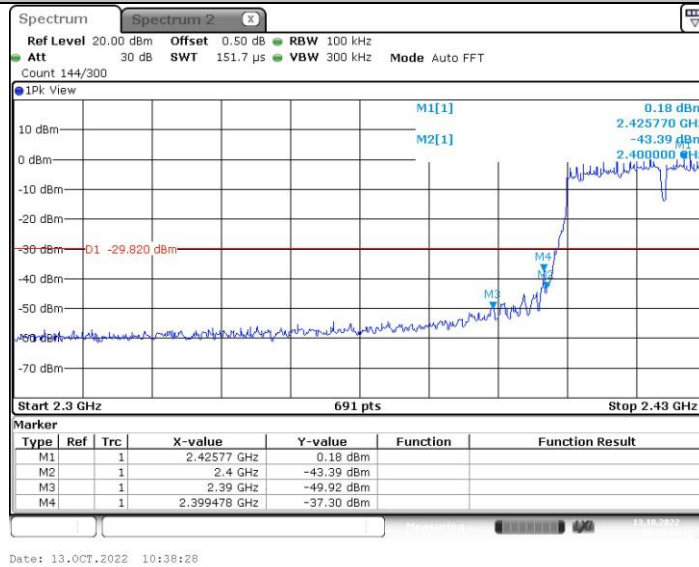
## 11N20MIMO\_Ant2\_High\_2462



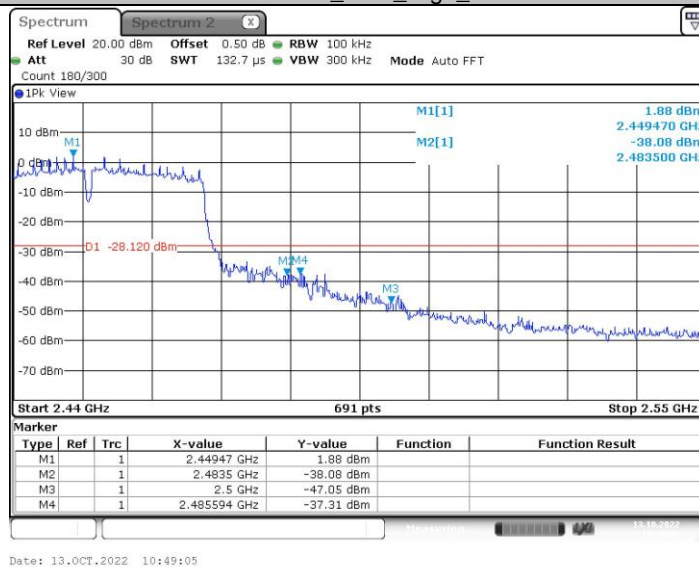
## 11N40MIMO\_Ant1\_Low\_2422



11N40MIMO\_Ant2\_Low\_2422



11N40MIMO\_Ant1\_High\_2452



11N40MIMO\_Ant2\_High\_2452

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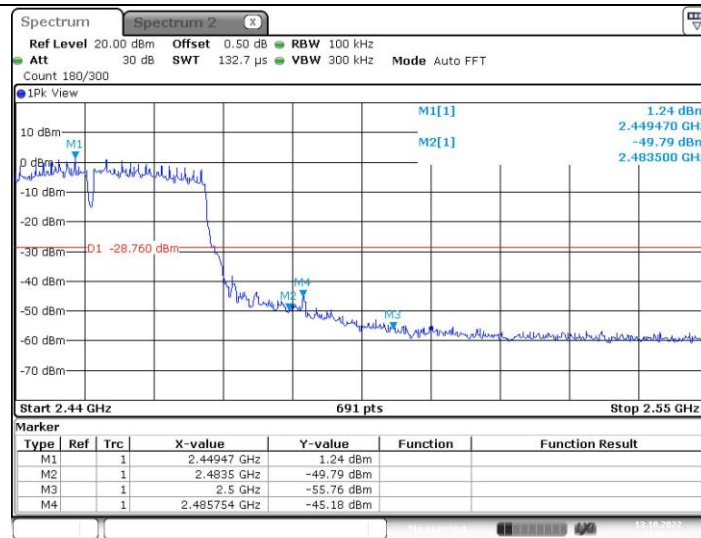
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## (2) Conducted Spurious Emissions Test

Test Mode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	6.24	6.24	---	PASS
			30~1000	6.24	-70.63	≤-23.76	PASS
			1000~26500	6.24	-25.16	≤-23.76	PASS
	Ant2	2412	Reference	8.06	8.06	---	PASS
			30~1000	8.06	-70.19	≤-21.94	PASS
			1000~26500	8.06	-38.35	≤-21.94	PASS
	Ant1	2437	Reference	8.75	8.75	---	PASS
			30~1000	8.75	-70.50	≤-21.25	PASS
			1000~26500	8.75	-28.26	≤-21.25	PASS
	Ant2	2437	Reference	8.49	8.49	---	PASS
			30~1000	8.49	-68.99	≤-21.51	PASS
			1000~26500	8.49	-38.18	≤-21.51	PASS
	Ant1	2462	Reference	8.14	8.14	---	PASS
			30~1000	8.14	-61.90	≤-21.86	PASS
			1000~26500	8.14	-31.06	≤-21.86	PASS
	Ant2	2462	Reference	8.09	8.09	---	PASS
			30~1000	8.09	-62.01	≤-21.91	PASS
			1000~26500	8.09	-38.61	≤-21.91	PASS
11G	Ant1	2412	Reference	7.12	7.12	---	PASS
			30~1000	7.12	-69.84	≤-22.88	PASS
			1000~26500	7.12	-39.76	≤-22.88	PASS
	Ant2	2412	Reference	4.50	4.50	---	PASS
			30~1000	4.50	-70.20	≤-25.50	PASS
			1000~26500	4.50	-49.33	≤-25.50	PASS
	Ant1	2437	Reference	7.65	7.65	---	PASS
			30~1000	7.65	-68.47	≤-22.35	PASS
			1000~26500	7.65	-42.29	≤-22.35	PASS
	Ant2	2437	Reference	6.69	6.69	---	PASS
			30~1000	6.69	-70.63	≤-23.31	PASS
			1000~26500	6.69	-48.15	≤-23.31	PASS
	Ant1	2462	Reference	5.34	5.34	---	PASS
			30~1000	5.34	-65.19	≤-24.66	PASS
			1000~26500	5.34	-43.65	≤-24.66	PASS
	Ant2	2462	Reference	6.21	6.21	---	PASS
			30~1000	6.21	-69.13	≤-23.79	PASS
			1000~26500	6.21	-49.51	≤-23.79	PASS
11N20MIMO	Ant1	2412	Reference	3.89	3.89	---	PASS
			30~1000	3.89	-70.36	≤-26.11	PASS
			1000~26500	3.89	-36.36	≤-26.11	PASS
	Ant2	2412	Reference	6.70	6.70	---	PASS
			30~1000	6.70	-69.80	≤-23.30	PASS
			1000~26500	6.70	-46.00	≤-23.30	PASS
	Ant1	2437	Reference	6.92	6.92	---	PASS
			30~1000	6.92	-69.40	≤-23.08	PASS
			1000~26500	6.92	-41.65	≤-23.08	PASS
	Ant2	2437	Reference	6.79	6.79	---	PASS
			30~1000	6.79	-70.26	≤-23.21	PASS
			1000~26500	6.79	-46.32	≤-23.21	PASS
	Ant1	2462	Reference	7.65	7.65	---	PASS
			30~1000	7.65	-66.95	≤-22.35	PASS
			1000~26500	7.65	-44.52	≤-22.35	PASS
	Ant2	2462	Reference	6.26	6.26	---	PASS
			30~1000	6.26	-70.35	≤-23.74	PASS
			1000~26500	6.26	-48.26	≤-23.74	PASS
11N40MIMO	Ant1	2422	Reference	1.62	1.62	---	PASS
			30~1000	1.62	-69.97	≤-28.38	PASS

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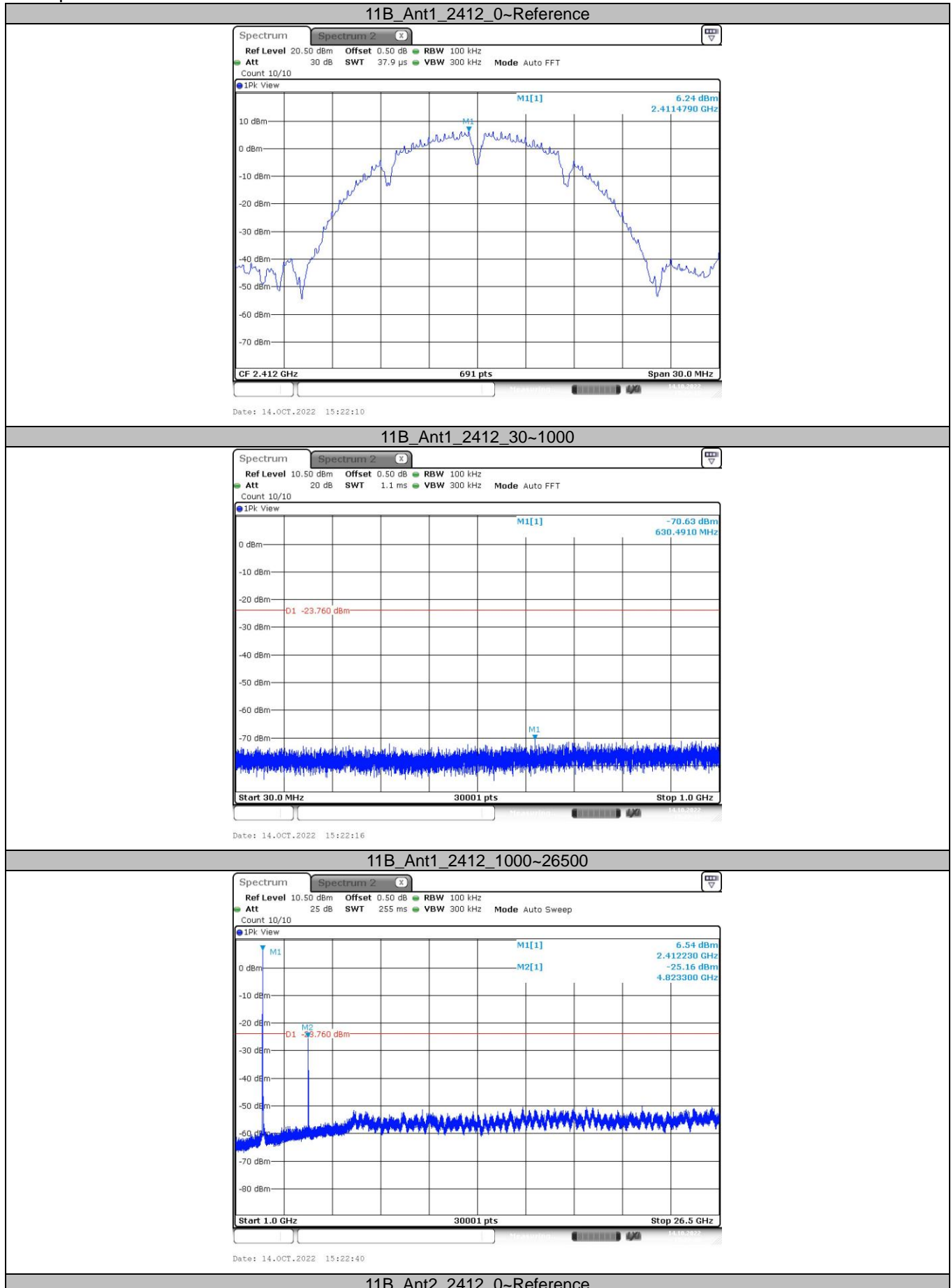


	Ant2	2422	1000~26500	1.62	-44.01	$\leq -28.38$	PASS
			Reference	1.57	1.57	---	PASS
			30~1000	1.57	-70.08	$\leq -28.43$	PASS
			1000~26500	1.57	-49.78	$\leq -28.43$	PASS
	Ant1	2437	Reference	-1.05	-1.05	---	PASS
			30~1000	-1.05	-70.64	$\leq -31.05$	PASS
			1000~26500	-1.05	-46.24	$\leq -31.05$	PASS
			Reference	1.94	1.94	---	PASS
	Ant2	2437	30~1000	1.94	-70.11	$\leq -28.06$	PASS
			1000~26500	1.94	-50.04	$\leq -28.06$	PASS
			Reference	-0.43	-0.43	---	PASS
			30~1000	-0.43	-69.57	$\leq -30.43$	PASS
	Ant1	2452	1000~26500	-0.43	-48.23	$\leq -30.43$	PASS
			Reference	0.96	0.96	---	PASS
			30~1000	0.96	-70.37	$\leq -29.04$	PASS
			1000~26500	0.96	-49.50	$\leq -29.04$	PASS





Test plot as follows:



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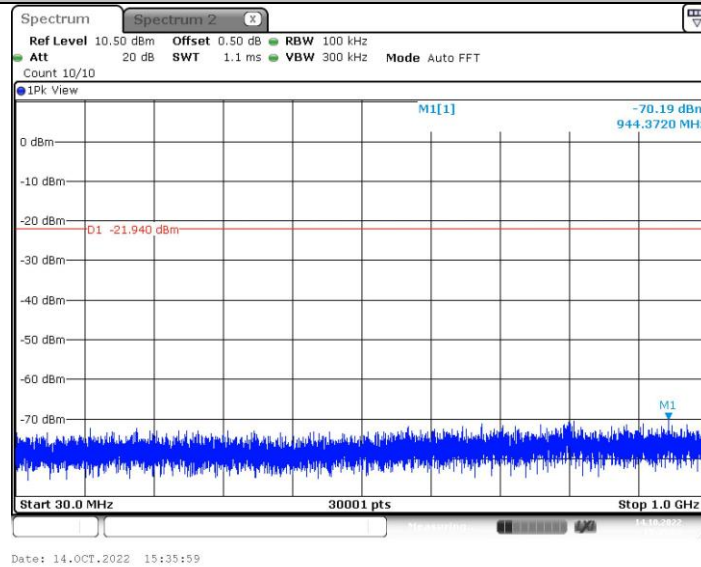
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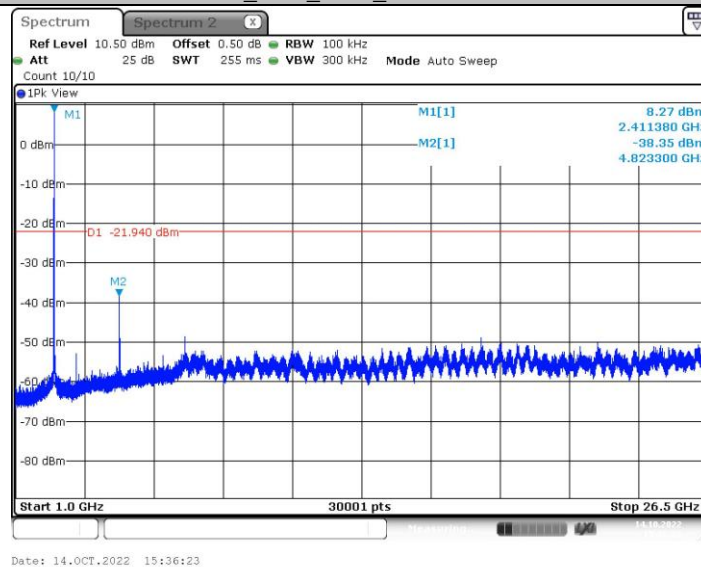
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11B\_Ant2\_2412\_30~1000



11B\_Ant2\_2412\_1000~26500



11B\_Ant1\_2437\_0~Reference

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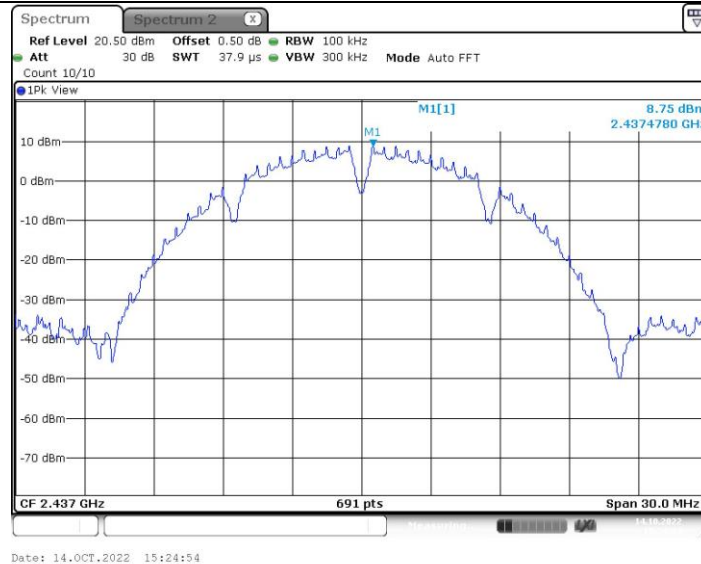
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

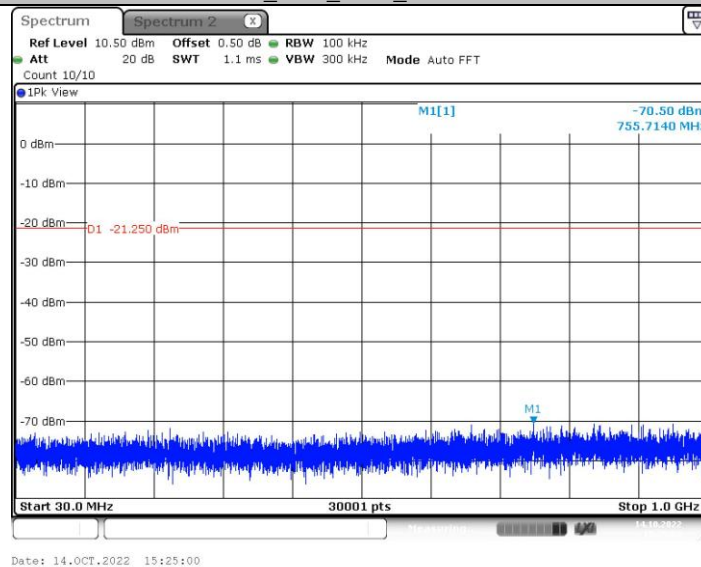
Fax: (86)755-27521011

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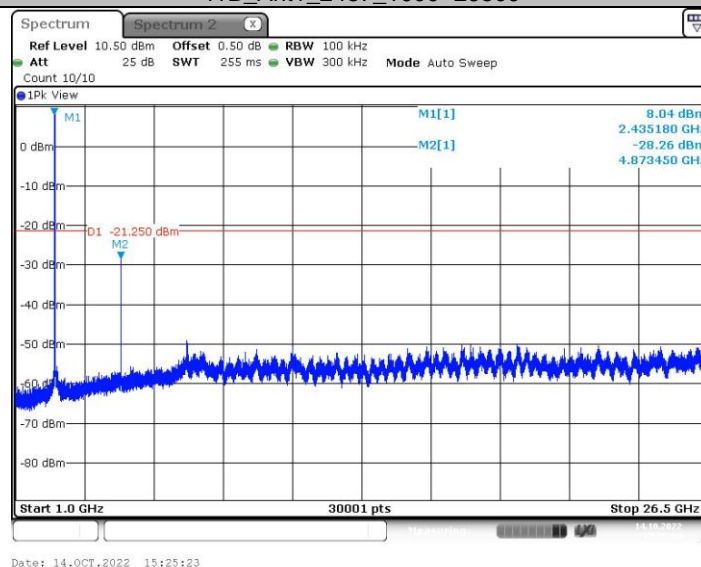
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11B\_Ant1\_2437\_30~1000



11B\_Ant1\_2437\_1000~26500



11B\_Ant2\_2437\_0~Reference

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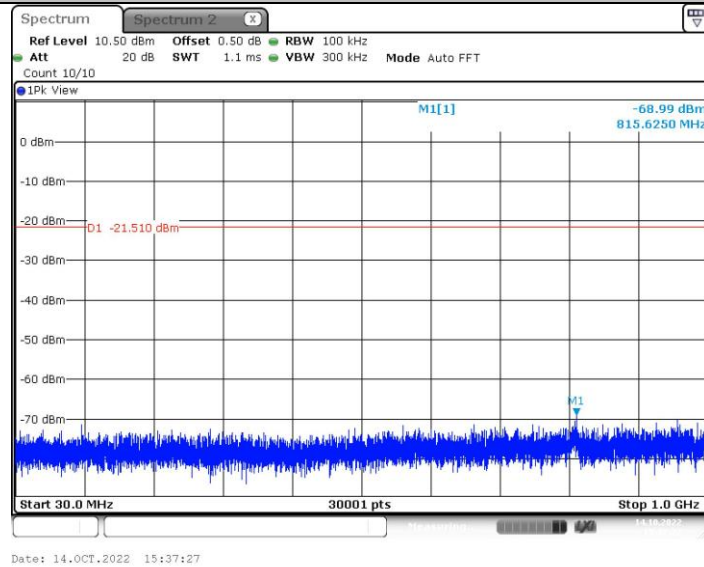
Http://www.sz-ctc.org.cn



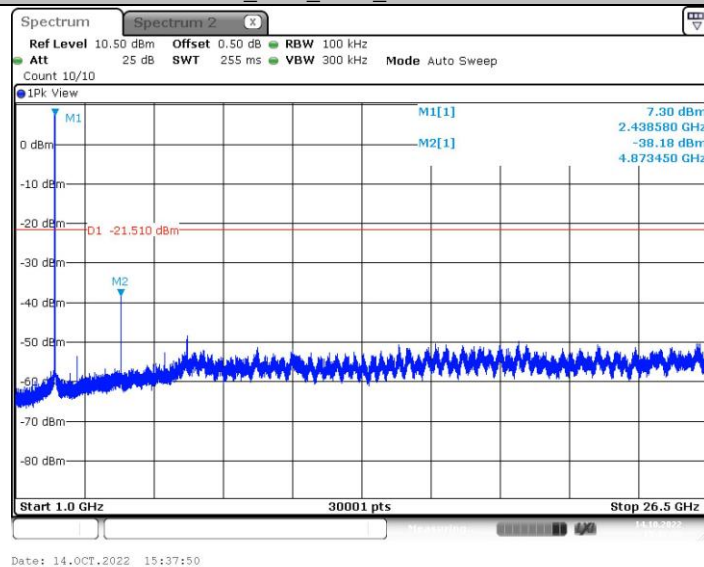
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## 11B\_Ant2\_2437\_30~1000



## 11B\_Ant2\_2437\_1000~26500



## 11B\_Ant1\_2462\_0~Reference

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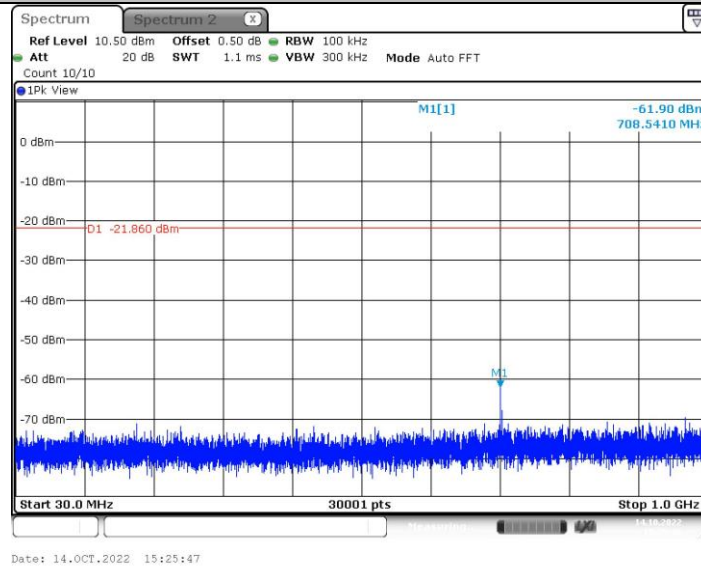
Http://www.sz-ctc.org.cn



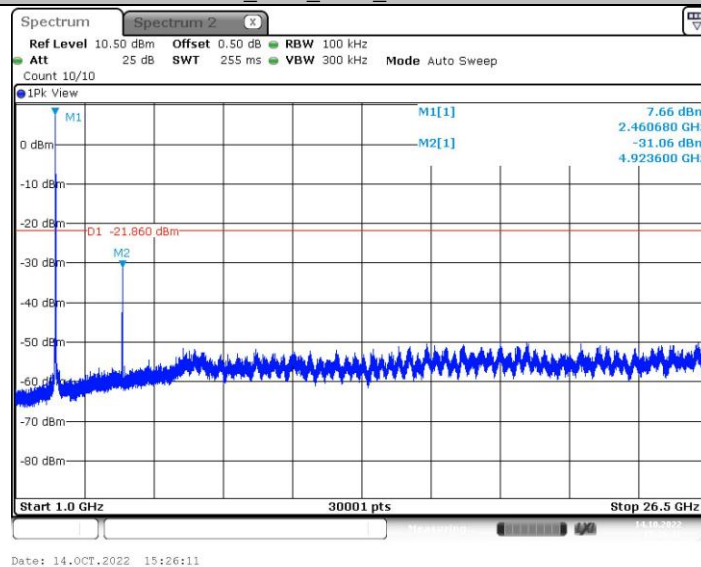
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## 11B\_Ant1\_2462\_30~1000



## 11B\_Ant1\_2462\_1000~26500



## 11B\_Ant2\_2462\_0~Reference

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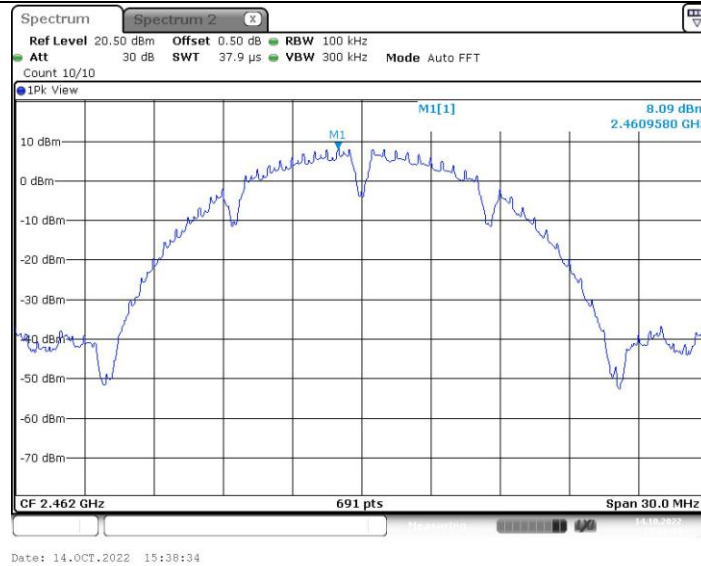
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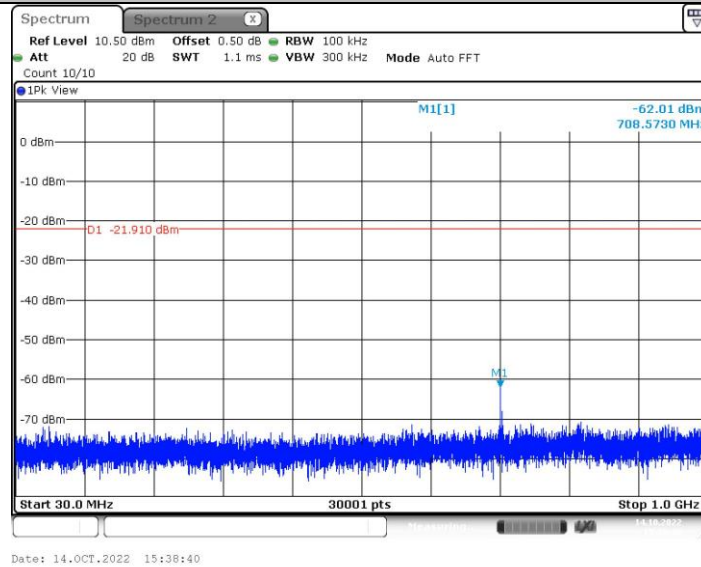


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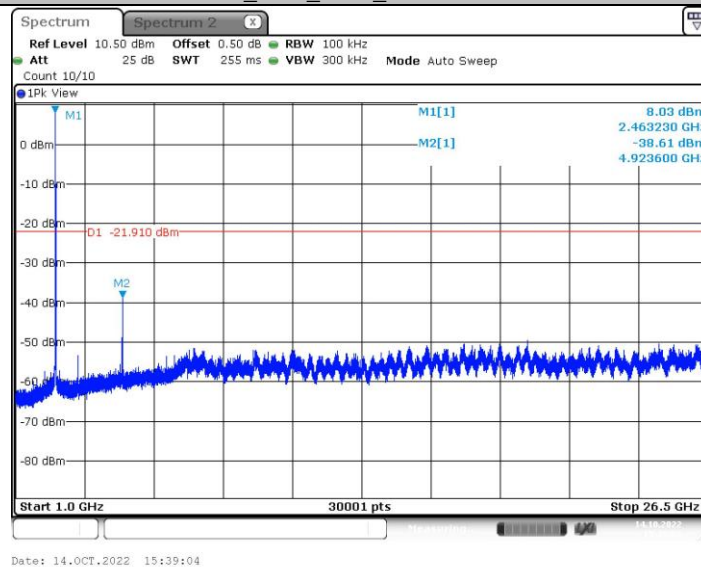




## 11B\_Ant2\_2462\_30~1000



## 11B\_Ant2\_2462\_1000~26500



## 11G\_Ant1\_2412\_0~Reference

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