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TESTING  
CNAS L0446



# Test Report

Verified code: 723457

Report No.: E202111246805-4

Customer: Chengdu Vantron Technology Co., Ltd.

Address: No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, P.R. China

Sample Name: Tablet

Sample Model: VT-TAB55-RK68-DB8

Receive Sample Date: Dec.02,2021

Test Date: Dec.10,2021 ~ Apr.14,2022

Reference Document: CFR 47, FCC Part 15 Subpart C  
RADIO FREQUENCY DEVICES:Subpart C—Intentional Radiators

Test Result: Pass

Prepared by: Yang Zhaoyun Reviewed by: Jiang Tao

Approved by: *Xiao Liang*

**GRGTEST**

GUANGZHOU GRG METROLOGY & TEST CO., LTD.

APPROVED(03)

Issued Date: 2022-06-01

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5. Without the agreement of the laboratory, the client is not authorized to use the test results for unapproved propaganda.

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## Table of Contents

1.	TEST RESULT SUMMARY.....	6
2.	GENERAL DESCRIPTION OF EUT.....	7
2.1	APPLICANT.....	7
2.2	MANUFACTURER.....	7
2.3	FACTORY.....	7
2.4	BASIC DESCRIPTION OF EQUIPMENT UNDER TEST.....	7
2.5	CHANNEL LIST.....	8
2.6	TEST OPERATION MODE.....	8
2.7	LOCAL SUPPORTIVE INSTRUMENTS.....	8
2.8	CONFIGURATION OF SYSTEM UNDER TEST.....	8
2.9	DUTY CYCLE.....	9
3.	LABORATORY AND ACCREDITATIONS.....	10
3.1	LABORATORY.....	10
3.2	ACCREDITATIONS.....	10
3.3	MEASUREMENT UNCERTAINTY.....	11
4.	LIST OF USED TEST EQUIPMENT AT GRGT.....	12
5.	CONDUCTED EMISSION MEASUREMENT.....	13
5.1	LIMITS.....	13
5.2	TEST PROCEDURES.....	13
5.3	TEST SETUP.....	14
5.4	DATA SAMPLE.....	14
5.5	TEST RESULTS.....	15
6.	RADIATED SPURIOUS EMISSIONS.....	17
6.1	LIMITS.....	17
6.2	TEST PROCEDURES.....	17
6.3	TEST SETUP.....	21
6.4	DATA SAMPLE.....	22
6.5	TEST RESULTS.....	23
7.	6DB BANDWIDTH.....	43
7.1	LIMITS.....	43
7.2	TEST PROCEDURES.....	43
7.3	TEST SETUP.....	43
7.4	TEST RESULTS.....	44
8.	MAXIMUM PEAK OUTPUT POWER.....	54
8.1	LIMITS.....	54
8.2	TEST PROCEDURES.....	54
8.3	TEST SETUP.....	54
8.4	TEST RESULT.....	55
9.	POWER SPECTRAL DENSITY.....	56
9.1	LIMITS.....	56
9.2	TEST PROCEDURES.....	56

9.3	TEST SETUP .....	56
9.4	TEST RESULTS .....	57
10.	CONDUCTED BAND EDGES AND SPURIOUS EMISSIONS .....	67
10.1	LIMITS.....	67
10.2	TEST PROCEDURES .....	67
10.3	TEST SETUP .....	67
10.4	TEST RESULTS .....	68
11.	RESTRICTED BANDS OF OPERATION.....	104
11.1	LIMITS.....	104
11.2	TEST PROCEDURES .....	105
11.3	TEST SETUP .....	105
11.4	TEST RESULTS .....	106
	APPENDIX A. PHOTOGRAPH OF THE TEST CONNECTION DIAGRAM .....	126
	APPENDIX B. PHOTOGRAPH OF THE EUT .....	126

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**REPORT ISSUED HISTORY**

Report Version	Report No.	Description	Compile Date
1.0	E202111246805-4	Original Issue	2022-05-26

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**1. TEST RESULT SUMMARY**

Standard	Item	Limit / Severity	Result
CFR 47, FCC Part 15 Subpart C (§15.247)	Antenna Requirement	§15.203	PASS
	Conducted Emissions	§15.207 (a)	PASS
	Radiated Spurious Emission	§15.247(d) §15.205 §15.209	PASS
	6 dB Bandwidth	§15.247 (a)(2)	PASS
	Maximum Peak Output Power	§15.247(b)(3)	PASS
	Power Spectral Density	§15.247(e)	PASS
	Conducted band edges and Spurious Emission	§15.247(d)	PASS
	Restricted bands of operation	§15.205 §15.209 §15.247(d)	PASS

Note: <sup>1)</sup>The EUT have two antenna. The max gain of antenna 1 is 0.87dBi, and that of antenna 2 is -0.41dBi. Both antennas are FPC antennas, which accordance 15.203 is considered sufficient to comply with the provisions of this section.

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## 2. GENERAL DESCRIPTION OF EUT

### 2.1 APPLICANT

Name: Chengdu Vantron Technology Co., Ltd.  
Address: No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, P.R. China


### 2.2 MANUFACTURER

Name: Dolby Laboratories, Inc.  
Address: 1275 Market Street, San Francisco CA 94103, USA

### 2.3 FACTORY

Name: Chengdu Vantron Technology Co., Ltd.  
Address: No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, P.R. China

### 2.4 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Product Name: Tablet  
Product Model: VT-TAB55-RK68-DB8  
Adding Model: /  
Trade Name:   
FCC ID: 2AAGETAB55  
Power Supply: 5Vdc power supplied by adapter  
3.8Vdc power supplied by Rechargeable Lithium-ion Battery  
Adapter Specification: Model:FJ-SW1260502000UN  
Input:100-240V~ 50/60Hz 0.4A Max  
Output:5.0V --- 2.0A 10.0W  
Model:496867-2P1S  
Battery Specification: Voltage:3.8V  
Capacity:7200mAh 27.36Wh  
Frequency Band: 2412MHz-2462MHz for 802.11b/g/n HT20  
Transmit Power: 20.57dBm for 802.11b  
24.52dBm for 802.11g  
27.33dBm for 802.11n HT20  
Modulation Type: DSSS for 802.11b mode;  
OFDM for 802.11g/n mode  
Antenna Specification: FPC antenna  
Antenna 1 with 0.87dBi gain (Max)  
Antenna 2 with -0.41dBi gain (Max)  
Temperature Range: 0°C~40°C  
Hardware Version: V3.0  
Software Version: Android 7

Sample submitting way:  Provided by customer  Sampling

Sample No: E202111246805-0001,E202111246805-0002

Note: /

**2.5 CHANNEL LIST**

CH01 - CH11 for 802.11b, 802.11g, 802.11n HT20							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

**2.6 TEST OPERATION MODE**

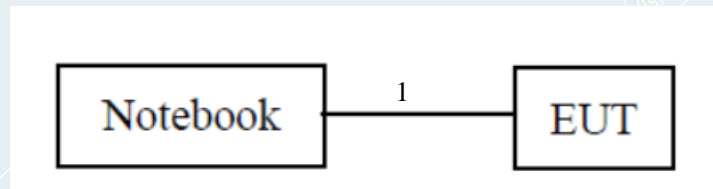
Mode No.	Description of the modes
1	2.4G Wi-Fi TX mode

**2.7 LOCAL SUPPORTIVE INSTRUMENTS**

Name of Equipment	Manufacturer	Model	Serial Number	Note
Adapter	/	/	/	/
Notebook	Dell	Latitude3490	2095LR2	/

No.	Cable Type	Qty.	Shielded Type	Ferrite Core(Qty.)	Length
1	USB Cable	1	No	0	0.5m (unshielded)

**2.8 CONFIGURATION OF SYSTEM UNDER TEST**



Test software:

Software version	Power Setting
RFTestTool	-1

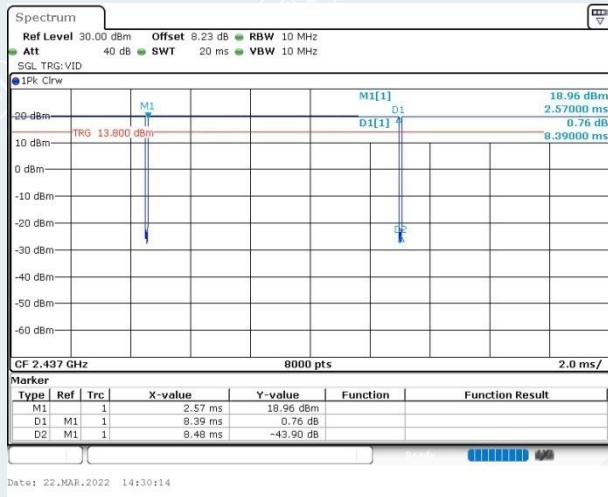


### 2.9 DUTY CYCLE

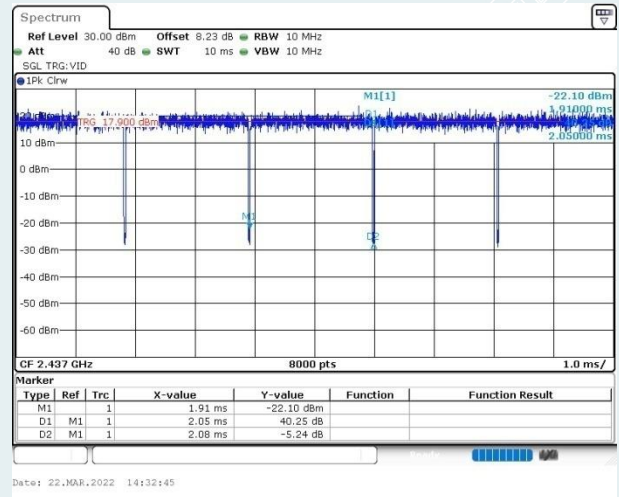
<b>EUT Name</b>	Tablet	<b>Model</b>	VT-TAB55-RK68-DB8
<b>Environmental Conditions</b>	23.6°C/48%RH	<b>Test Voltage</b>	DC 3.8V
<b>Tested By</b>	Lu Wei	<b>Tested Date</b>	2022-3-22

Test Mode	Antenna	Frequency (MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	T [s]
802.11b	Ant1	2437	8.39	8.48	98.94	0.00839
802.11g	Ant1	2437	2.05	2.08	98.56	0.00205
802.11n HT20	Ant1	2437	0.98	1.00	98.00	0.00098

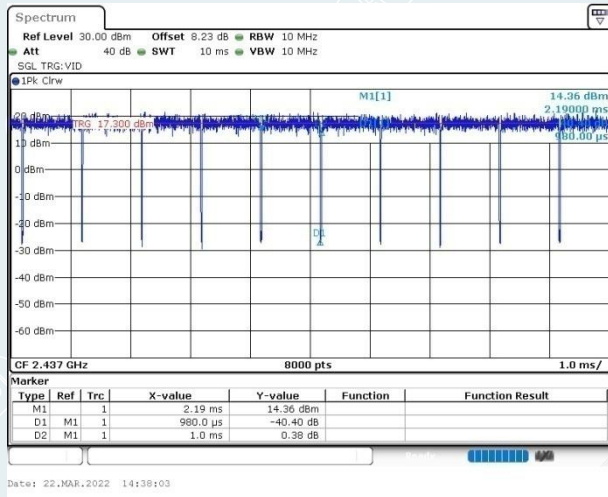
802.11b\_Ant1\_2437MHz



802.11g\_Ant1\_2437MHz



802.11n HT20\_Ant1\_2437MHz



### 3. LABORATORY AND ACCREDITATIONS

#### 3.1 LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of Guangzhou GRG Metrology & Test Co., Ltd.

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#### 3.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

**USA** A2LA(Certificate#:2861.01)

**China** CNAS(L0446)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

**Canada** ISED (Company Number: 24897, CAB identifier:CN0069)

**USA** FCC (Registration Number: 759402, Designation Number:CN1198)

Copies of granted accreditation certificates are available for downloading from our web site,  
<http://www.grgtest.com>

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### 3.3 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement		Frequency	Uncertainty
Radiated Emission	Horizontal	9kHz~30MHz	4.46dB
		30MHz~1000MHz	4.30dB
		1GHz~18GHz	5.60dB
		18GHz~26.5GHz	3.65dB
	Vertical	9kHz~30MHz	4.46dB
		30MHz~1000MHz	4.30dB
		1GHz~18GHz	5.60dB
		18GHz~26.5GHz	3.65dB
Conduction Emission		9kHz~150kHz	2.80dB
		150kHz~10MHz	2.80dB
		10MHz~30MHz	2.20dB

Measurement	Uncertainty
RF frequency	$6.0 \times 10^{-6}$
RF power conducted	0.78 dB
Occupied channel bandwidth	0.4 dB
Unwanted emission, conducted	0.68 dB
Humidity	6 %
Temperature	2 °C

This uncertainty represents an expanded uncertainty factor of  $k=2$ .

----- The following blanks -----

**4. LIST OF USED TEST EQUIPMENT AT GRGT**

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
<b>Conducted Emissions</b>				
EZ-EMC	EZ	CCS-3A1-CE	/	/
EMI Receiver	R&S	ESCI	100783	2022-09-13
LISN(EUT)	R&S	ENV216	101543	2022-09-14
<b>Radiated Spurious Emission&amp;Restricted bands of operation</b>				
Test S/W	EZ	CCS-03A1		
Loop Antenna	TESEQ	HLA6121	52599	2022-04-21
Test Receiver	R&S	ESR7	102444	2022-09-21
Preamplifier	EMEC	EM330	I00426	2022-03-21
Bi-log Antenna	Schwarzbeck	VULB9160	VULB9160-3401	2022-10-27
Spectrum Analyzer	Agilent	N9020B	MY57120179	2022-08-08
Horn Antenna	Schwarzbeck	BBHA9120D(1201)	02143	2022-10-22
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	BBHA 9170-497	2022-10-16
Amplifier	Tonscend	TAP01018048	AP20E8060075	2022-06-07
Amplifier	Tonscend	TAP184050	AP20E806071	2022-05-17
Test S/W	Tonscend	JS32-RE/2.5.1.5		
<b>6 dB Bandwidth</b>				
Spectrum Analyzer	R&S	FSV30	104381	2022-12-10
<b>Output Power</b>				
Pulse power sensor	Anritsu	MA2411B	1126150	2023-03-01
Power meter	Anritsu	ML2495A	1204003	2023-02-28
<b>Conducted band edges and Spurious Emission</b>				
Spectrum Analyzer	R&S	FSV30	104381	2022-12-10
<b>Power Spectral Density</b>				
Spectrum Analyzer	R&S	FSV30	104381	2022-12-10

Note: The calibration interval of the above test instruments is 12 months.

## 5. CONDUCTED EMISSION MEASUREMENT

### 5.1 LIMITS

Frequency range	Limits (dB $\mu$ V)	
	Quasi-peak	Average
150kHz~0.5MHz	66~56	56~46
0.5MHz~5MHz	56	46
5MHz~30MHz	60	50

**NOTE:** (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases in line with the logarithm of the frequency in the range of 150kHz to 0.5MHz.

### 5.2 TEST PROCEDURES

#### Procedure of Preliminary Test

Test procedures follow ANSI C63.10:2013.

For measurement of the disturbance voltage the equipment under test (EUT) is connected to the power supply mains and any other extended network via one or more artificial network(s). An EUT, whether intended to be grounded or not, and which is to be used on a table is configured as follows:

– Either the bottom or the rear of the EUT shall be at a controlled distance of 40 cm from a reference ground plane. This ground plane is normally the wall or floor of a shielded room. It may also be a grounded metal plane of at least 2 m by 2 m. This is physically accomplished as follows:

1) place the EUT on a table of non-conducting material which is at least 80 cm high. Place the EUT so that it is 40 cm from the wall of the shielded room, or

2) place the EUT on a table of non-conducting material which is 40 cm high so that the bottom of the EUT is 40 cm above the ground plane;

– All other conductive surfaces of the EUT shall be at least 80 cm from the reference ground plane;

– The EUT are placed on the floor that one side of the housings is 40 cm from the vertical reference ground plane and other metallic parts;

– Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 cm to 40 cm long, hanging approximately in the middle between the ground plane and the table.

– I/O cables that are connected to a peripheral shall be bundled in the centre. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1 m.

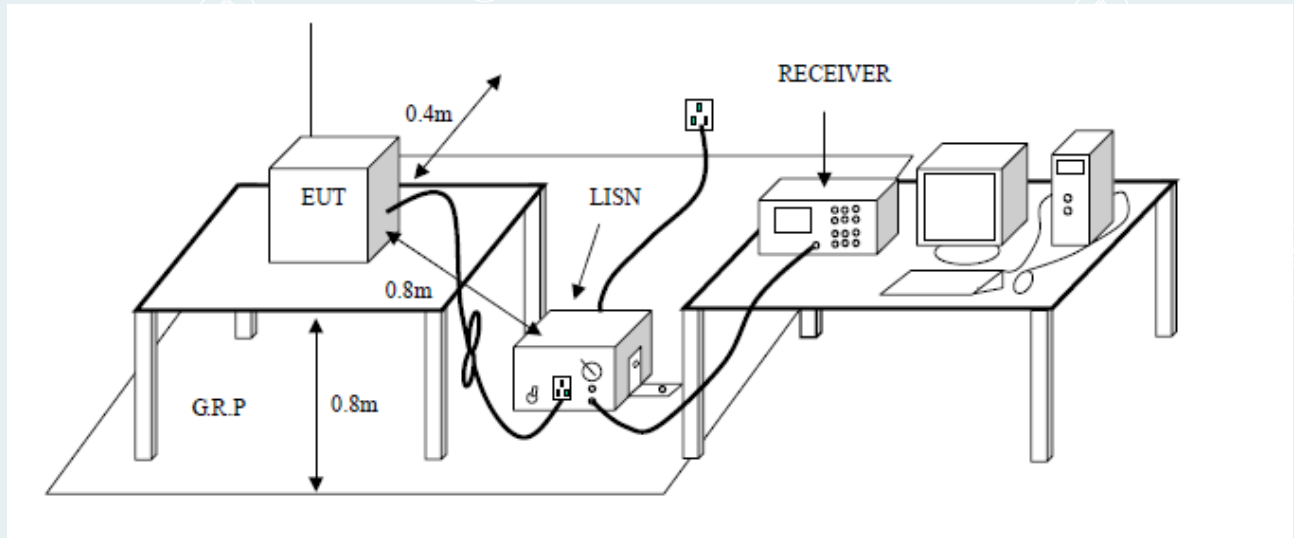
– Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.

The test mode(s) described in Item 2.6 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.6 producing the highest emission level. The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

#### Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

**5.3 TEST SETUP**



**5.4 DATA SAMPLE**

Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XXXX	32.69	25.65	11.52	44.21	37.17	65.78	55.79	-21.57	-18.62	Pass

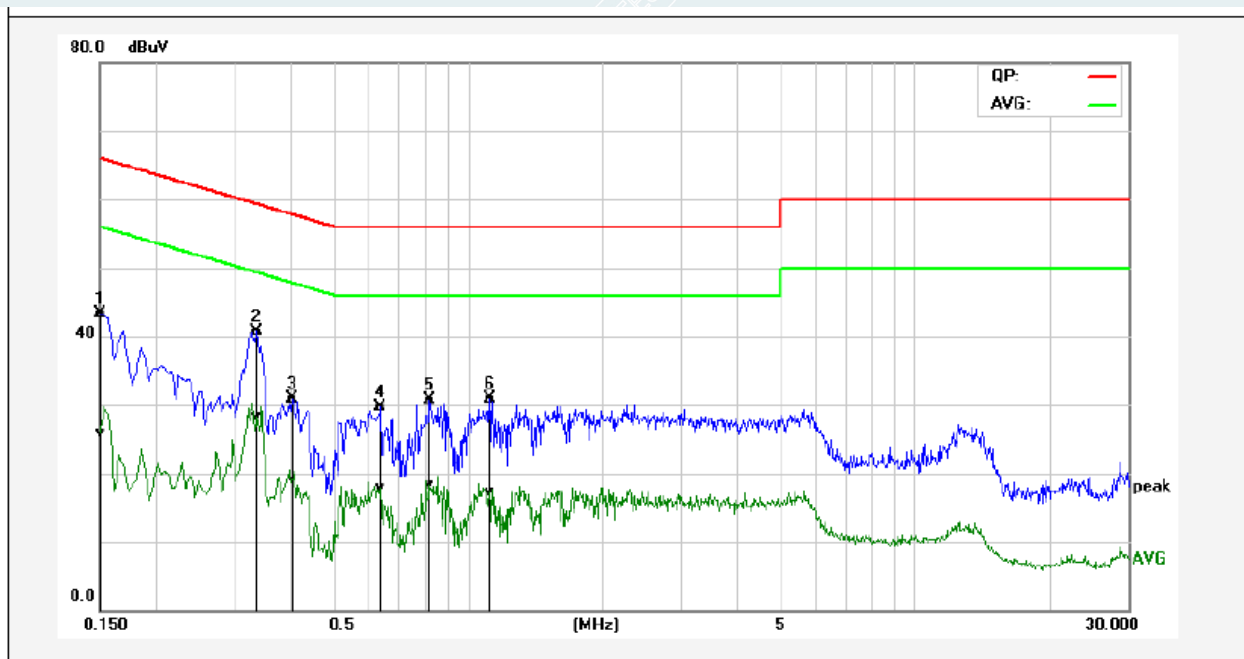
- Factor = Insertion loss of LISN + Cable Loss
- Result = Quasi-peak Reading/ Average Reading + Factor
- Limit = Limit stated in standard
- Margin = Result (dBuV) – Limit (dBuV)

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### 5.5 TEST RESULTS

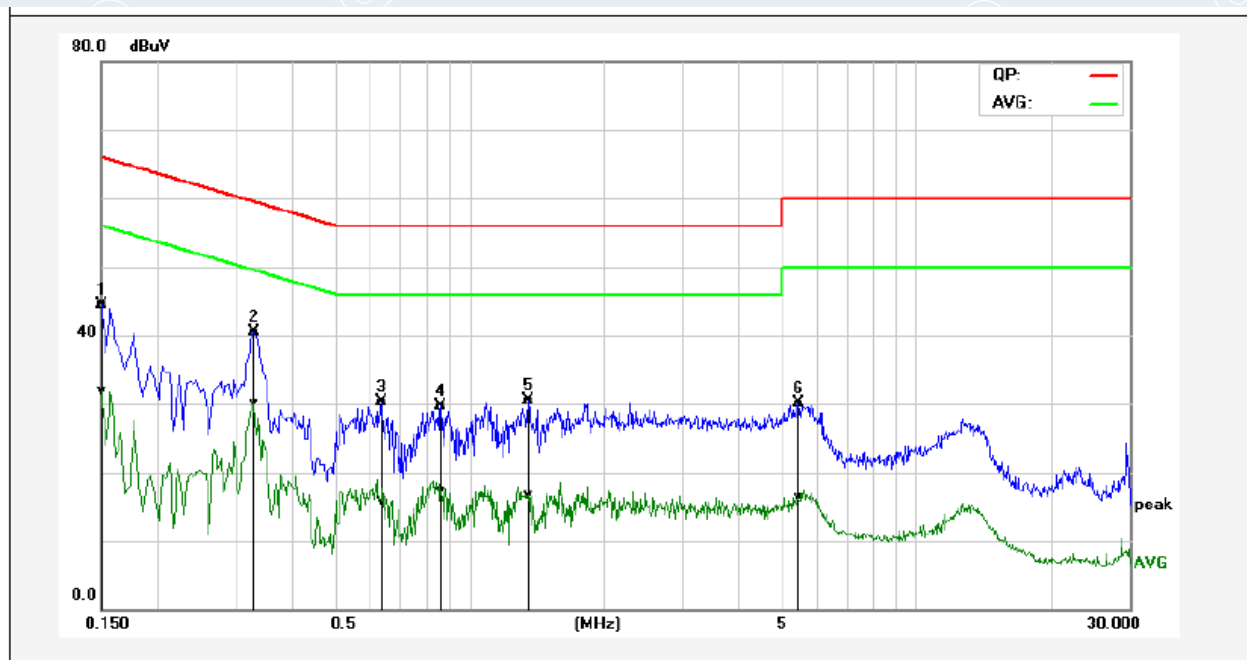
All models were pretested and only the worst modes and channels were recorded in this report. (802.11n HT20 2412MHz)

<b>EUT Name</b>	Tablet	<b>Model</b>	VT-TAB55-RK68-DB8
<b>Environmental Conditions</b>	23.2°C/59%RH	<b>Test Mode</b>	Mode 1
<b>Tested By</b>	Wang Xinyuan	<b>Line</b>	L1
<b>Tested Date</b>	2022-04-14	<b>Test Voltage</b>	AC 120V/60Hz



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.1500	33.82	16.31	9.53	43.35	25.84	65.99	56.00	-22.64	-30.16	Pass
2*	0.3379	31.19	18.70	9.56	40.75	28.26	59.25	49.25	-18.50	-20.99	Pass
3	0.4060	21.29	9.56	9.57	30.86	19.13	57.73	47.73	-26.87	-28.60	Pass
4	0.6380	20.07	8.28	9.57	29.64	17.85	56.00	46.00	-26.36	-28.15	Pass
5	0.8220	21.09	8.70	9.57	30.66	18.27	56.00	46.00	-25.34	-27.73	Pass
6	1.1220	21.39	7.65	9.59	30.98	17.24	56.00	46.00	-25.02	-28.76	Pass

<b>EUT Name</b>	Tablet	<b>Model</b>	VT-TAB55-RK68-DB8
<b>Environmental Conditions</b>	23.2°C/59%RH	<b>Test Mode</b>	Mode 1
<b>Tested By</b>	Wang Xinyuan	<b>Line</b>	N
<b>Tested Date</b>	2022-04-14	<b>Test Voltage</b>	AC 120V/60Hz



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.1500	35.05	22.42	9.53	44.58	31.95	65.99	56.00	-21.41	-24.05	Pass
2*	0.3300	31.02	20.61	9.56	40.58	30.17	59.45	49.45	-18.87	-19.28	Pass
3	0.6340	20.81	6.39	9.57	30.38	15.96	56.00	46.00	-25.62	-30.04	Pass
4	0.8660	20.16	7.80	9.59	29.75	17.39	56.00	46.00	-26.25	-28.61	Pass
5	1.3540	20.97	7.16	9.59	30.56	16.75	56.00	46.00	-25.44	-29.25	Pass
6	5.4620	20.52	6.68	9.68	30.20	16.36	60.00	50.00	-29.80	-33.64	Pass



## 6. RADIATED SPURIOUS EMISSIONS

### 6.1 LIMITS

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100kHz 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 30dB instead of 20dB. Attenuation below the general limits specified in §15.209(a) is not required.

Frequency (MHz)	Quasi-peak( $\mu\text{V}/\text{m}$ )	Measurement distance(m)	Quasi-peak( $\text{dB}\mu\text{V}/\text{m}$ )@distance 3m
0.009-0.490	2400/F(kHz)	300	128.5~93.8
0.490-1.705	24000/F(kHz)	30	73.8~63
1.705-30.0	30	30	69.5
30~88	100	3	40
88~216	150	3	43.5
216~960	200	3	46
Above 960	500	3	54

**NOTE:**

- (1) The emission limits for the ranges 9-90kHz and 110-490kHz are based on measurements employing a linear average detector.
- (2) The lower limit shall apply at the transition frequencies.
- (3) Above 18GHz test distance is 1m, so the PeakLimit= $74+20*\log(3/1)=83.54$  (dB $\mu\text{V}/\text{m}$ ).  
The Avg Limit= $54+20*\log(3/1)=63.54$  (dB $\mu\text{V}/\text{m}$ ).

### 6.2 TEST PROCEDURES

#### 1) Sequence of testing 9kHz to 30MHz

**Setup:**

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.
- The EUT is placed on a desktop position in the center of the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

**Pre measurement:**

- The turntable rotates from 0 ° to 360 °.
- The antenna height is 1.0 meter.
- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

**Final measurement:**

--- Identified emissions during the pre measurement the software maximizes by rotating the turntable position (0 ° to 360 °) and by rotating the elevation axes (0 ° to 360 °).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QP detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

**2) Sequence of testing 30MHz to 1GHz****Setup:**

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.

--- The EUT is placed on a desktop position in the center of the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

**Pre measurement:**

--- The turntable rotates from 0 ° to 360 °.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 4 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

**Final measurement:**

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable rotates from 0 ° to 360 ° and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

### 3) Sequence of testing 1GHz to 18GHz

#### Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.
- The EUT is placed on a desktop position in the center of the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

#### Pre measurement:

- The turntable rotates from 0 ° to 360 °.
- The antenna is polarized vertical and horizontal.
- The antenna height scan range is 1 meter to 4 meter.
- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

#### Final measurement:

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable rotates from 0 ° to 360 ° and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.
- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

### 4) Sequence of testing above 18GHz

#### Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.
- The EUT is placed on a desktop position in the center of the turntable.
- The measurement distance is 1 meter.
- The EUT was set into operation.

**Pre measurement:**

--- The antenna is moved spherical over the EUT in different polarisations of the antenna.

**Final measurement:**

--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

**NOTE:**

(a).The frequency from 9kHz to 150kHz, Set RBW=300Hz(for Peak&AVG), VBW=300Hz(for Peak&AVG).  
the frequency from 150kHz to 30MHz, Set RBW=9kHz, VBW=9kHz,(for QP Detector).

(b).The frequency from 30MHz to 1GHz, Set RBW=120kHz, VBW=300kHz,(for QP Detector).

(c).The frequency above 1GHz, for Peak detector: Set RBW=1MHz, VBW=3MHz.

(d).The frequency above 1GHz, for Avg detector: Set RBW=1MHz, if the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set  $VBW \leq RBW/100$  (i.e.,10kHz) but not less than 10Hz. if the EUT duty cycle is  $< 98\%$ , set  $VBW \geq 1/T$ , Where T is defined in section 2.9.

----- The following blanks -----

### 6.3 TEST SETUP

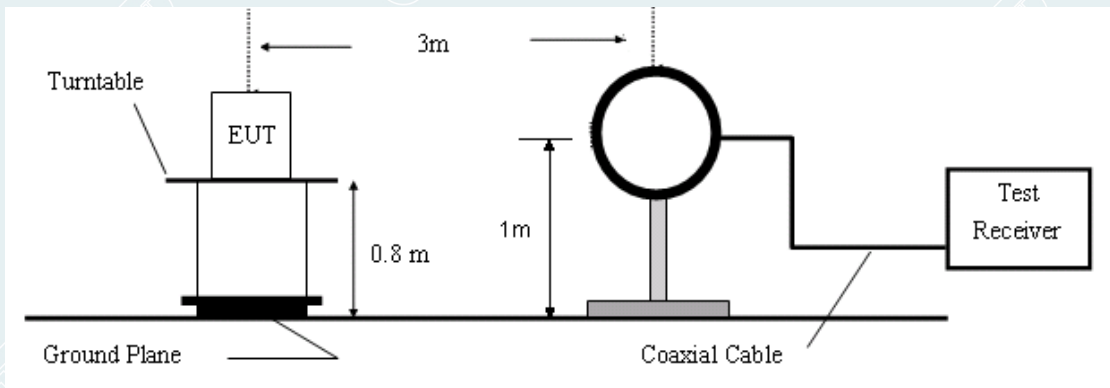


Figure 1. 9kHz to 30MHz radiated emissions test configuration

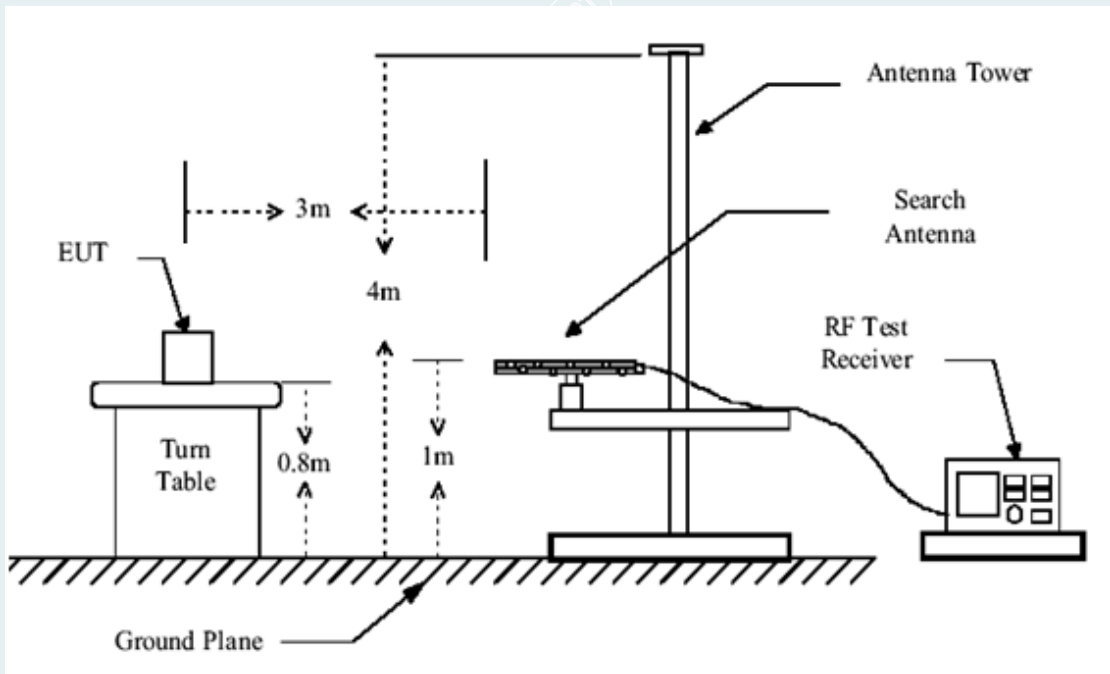


Figure 2. 30MHz to 1GHz radiated emissions test configuration

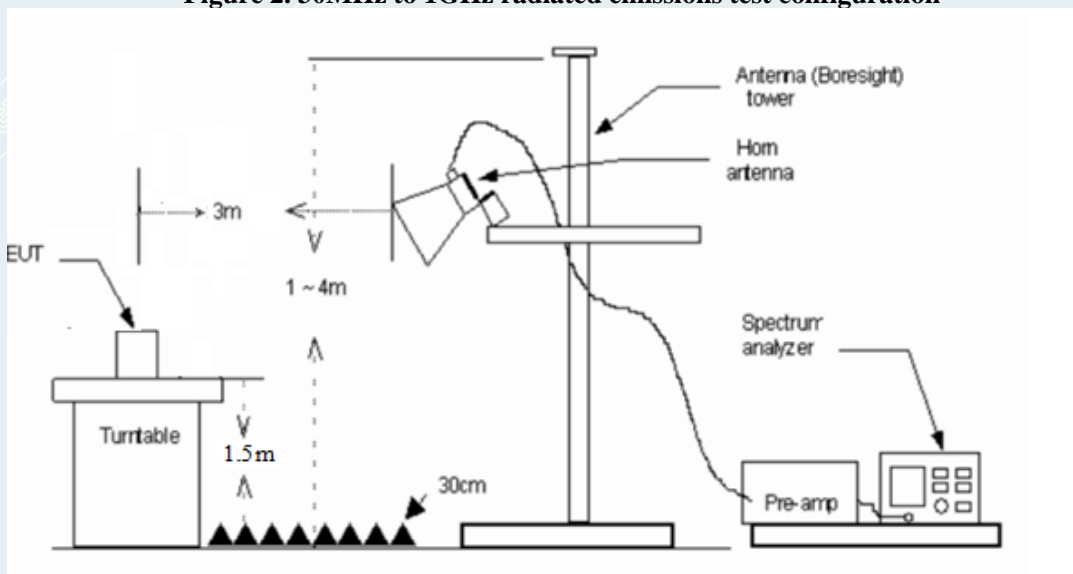


Figure 3. 1GHz to 18GHz radiated emissions test configuration

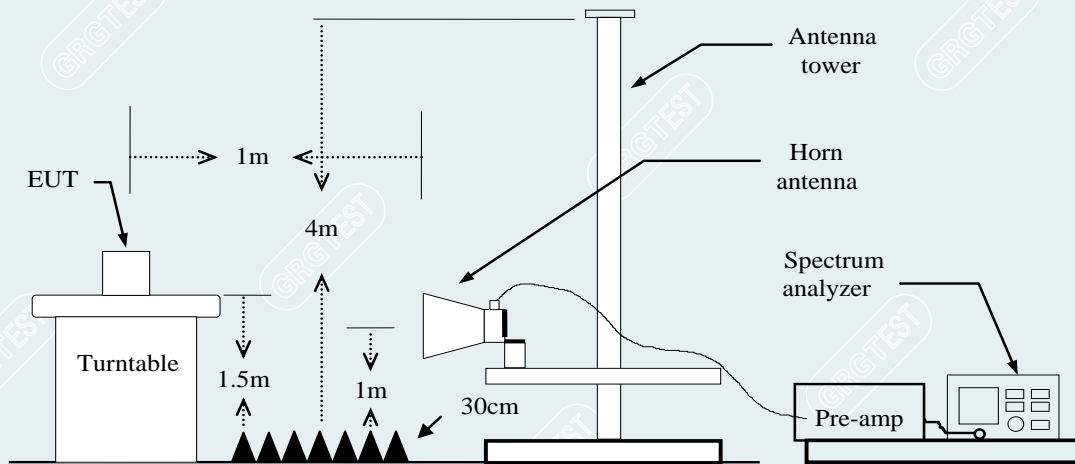


Figure 4.18GHz to 26.5GHz radiated emissions test configuration

6.4 DATA SAMPLE

30MHz to 1GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	37.06	-15.48	21.58	40.00	-18.42	QP	Vertical

1GHz to 18GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	65.45	-11.12	54.33	74.00	-19.67	peak	Vertical
xxx	xxx	63.00	-11.12	51.88	54.00	-2.12	AVG	Vertical

Above 18GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	68.86	57.66	-11.20	83.54	25.88	peak	Vertical
xxx	xxx	68.89	-11.20	57.69	63.54	5.85	AVG	Vertical

- Frequency (MHz) = Emission frequency in MHz
- Ant.Pol. (H/V) = Antenna polarization
- Reading (dBuV) = Uncorrected Analyzer / Receiver reading
- Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
- Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)
- Limit (dBuV/m) = Limit stated in standard
- Margin (dB) = Remark Result (dBuV/m) – Limit (dBuV/m)
- Peak = Peak Reading
- QP = Quasi-peak Reading
- AVG = Average Reading

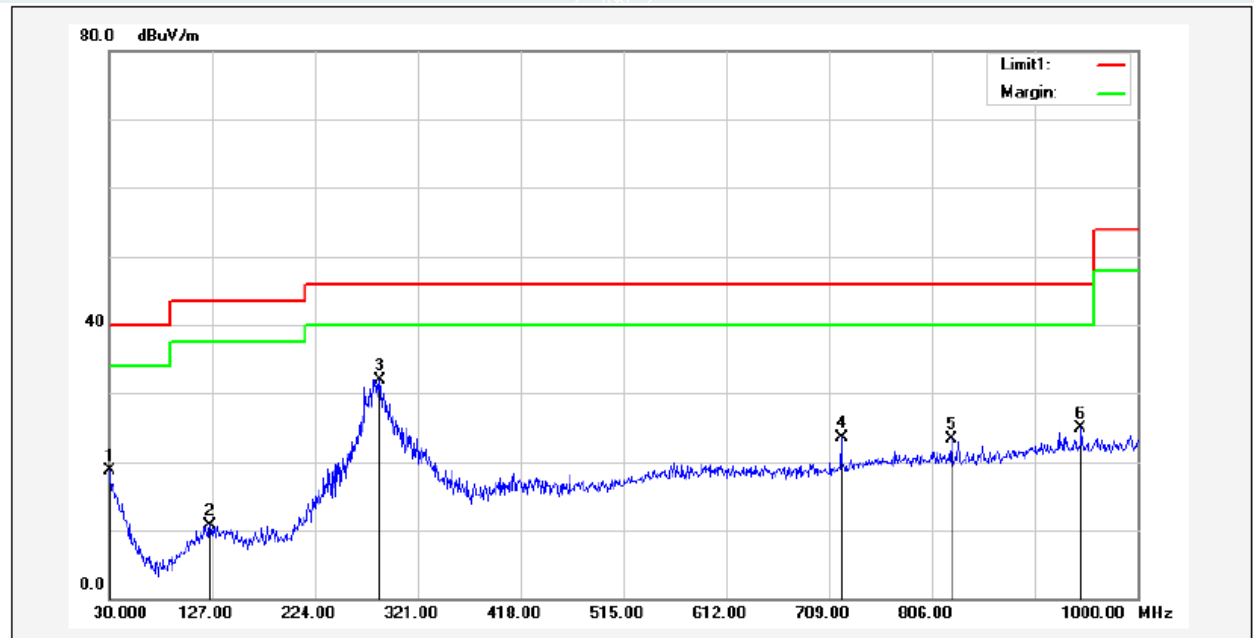
### 6.5 TEST RESULTS

#### Below 1GHz

All models were pretested and only the worst modes and channels were recorded in this report. (802.11n HT20 2412MHz)

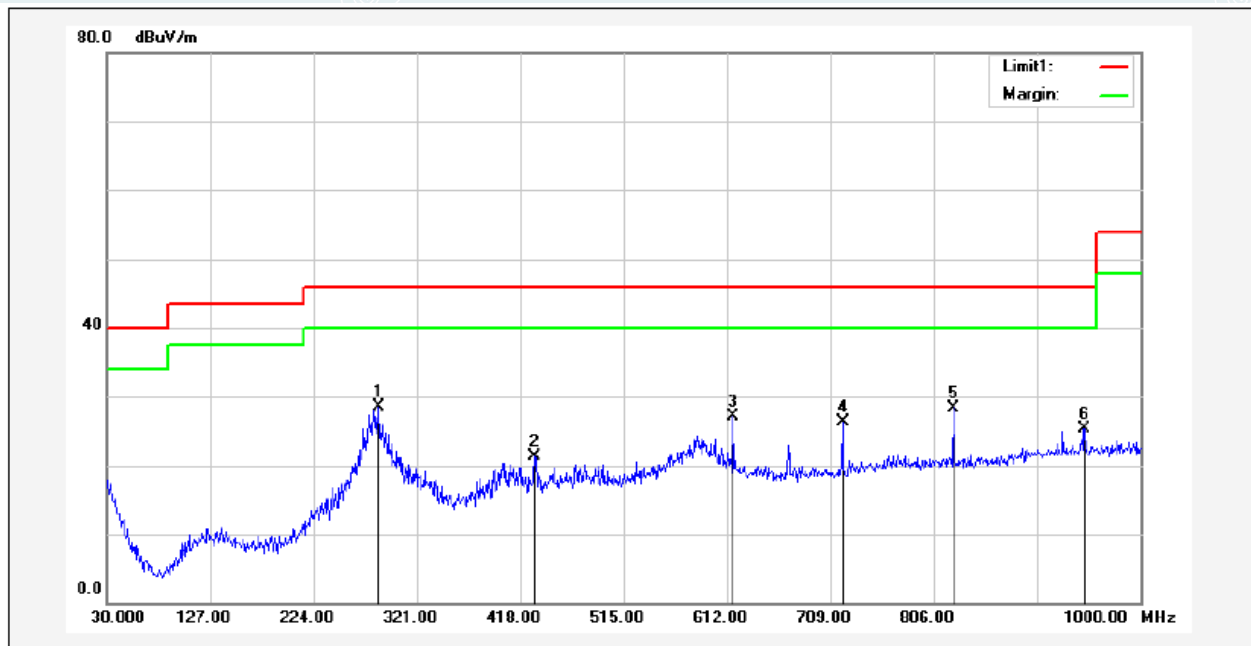
Pre-scanned in three orthogonal panels,X,Y,Z.The worst cases mode (Z plane) were recorded in this report.

<b>EUT Name</b>	Tablet	<b>Model</b>	VT-TAB55-RK68-DB8
<b>Environmental Conditions</b>	24.1°C/51%RH	<b>Test Voltage</b>	AC 120V/60Hz
<b>Test Mode</b>	802.11n HT20 2412MHz	<b>Polarity</b>	Horizontal
<b>Tested By</b>	Tang Shenghui	<b>Tested Date</b>	2022-02-26



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over (dB)	Degree (deg.)	Height (cm)	Remark
1	30.0000	35.12	-16.48	18.64	40.00	-21.36	231	100	QP
2	125.0600	36.50	-25.85	10.65	43.50	-32.85	0	362	QP
3*	285.1100	56.54	-24.60	31.94	46.00	-14.06	113	100	QP
4	720.6400	39.92	-16.37	23.55	46.00	-22.45	103	100	QP
5	824.4300	38.59	-15.19	23.40	46.00	-22.60	234	100	QP
6	946.6500	39.06	-14.23	24.83	46.00	-21.17	356	300	QP

<b>EUT Name</b>	Tablet	<b>Model</b>	VT-TAB55-RK68-DB8
<b>Environmental Conditions</b>	24.1°C/51%RH	<b>Test Voltage</b>	AC 120V/60Hz
<b>Test Mode</b>	802.11n HT20 2412MHz	<b>Polarity</b>	Vertical
<b>Tested By</b>	Tang Shenghui	<b>Tested Date</b>	2022-02-26



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over (dB)	Degree (deg.)	Height (cm)	Remark
1*	285.1100	53.19	-24.60	28.59	46.00	-17.41	198	200	QP
2	431.5800	41.81	-20.44	21.37	46.00	-24.63	134	100	QP
3	617.8200	44.28	-17.26	27.02	46.00	-18.98	360	100	QP
4	720.6400	42.64	-16.37	26.27	46.00	-19.73	1	100	QP
5	824.4300	43.59	-15.19	28.40	46.00	-17.60	0	128	QP
6	947.6200	39.52	-14.23	25.29	46.00	-20.71	259	200	QP

**Remark:**

- 1 No emission found between lowest internal used/generated frequency to 30MHz.
- 2 Radiated emissions measured in frequency range from 9 kHz to 1GHz were made with an instrument using Quasi-peak detector mode.
- 3 Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of Receiver between 30MHz to 1GHz was 120 kHz.



**1GHz-18GHz:**

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Pre-scanned in three orthogonal panels,X,Y,Z.The worst cases mode (Z plane) were recorded in this report.

**SISO**

ANT 1:

Mode: 802.11b

Lowest Frequency (2412MHz)

Environment: 25°C/60%RH

Tested By:Lu Qiang

Date: 2022-02-28

Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1154.7693	56.85	32.27	-24.58	74.00	41.73	100	190	Horizontal
2	1768.5961	61.72	39.42	-22.30	74.00	34.58	200	83	Horizontal
3	3300.0375	63.60	47.78	-15.82	74.00	26.22	200	129	Horizontal
4	4198.2748	55.44	42.35	-13.09	74.00	31.65	100	212	Horizontal
5	4824.6031	55.55	45.84	-9.71	74.00	28.16	100	143	Horizontal
6	7639.3299	47.55	44.99	-2.56	74.00	29.01	200	68	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1007.5009	57.62	32.47	-25.15	74.00	41.53	200	127	Vertical
2	1390.5488	57.57	34.03	-23.54	74.00	39.97	200	152	Vertical
3	1768.5961	61.21	38.91	-22.30	74.00	35.09	200	346	Vertical
4	3300.0375	60.05	44.23	-15.82	74.00	29.77	200	273	Vertical
5	4824.6031	56.05	46.34	-9.71	74.00	27.66	100	320	Vertical
6	7189.2737	49.03	45.88	-3.15	74.00	28.12	200	184	Vertical

Mode: 802.11b  
 Middle Frequency (2437MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-02-28  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1205.0256	57.80	33.31	-24.49	74.00	40.69	100	142	Vertical
2	1769.8462	63.12	40.83	-22.29	74.00	33.17	200	8	Vertical
3	3305.6632	59.50	43.62	-15.88	74.00	30.38	200	109	Vertical
4	4873.3592	57.21	47.39	-9.82	74.00	26.61	100	319	Vertical
5	7202.4003	48.27	45.12	-3.15	74.00	28.88	100	149	Vertical
6	7791.2239	48.13	46.27	-1.86	74.00	27.73	100	88	Vertical

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1035.7545	57.02	31.92	-25.10	74.00	42.08	200	96	Horizontal
2	1367.0459	57.21	33.56	-23.65	74.00	40.44	100	224	Horizontal
3	1767.8460	66.67	44.37	-22.30	74.00	29.63	200	313	Horizontal
4	3298.1623	64.45	48.60	-15.85	74.00	25.40	200	148	Horizontal
5	4873.3592	55.82	46.00	-9.82	74.00	28.00	200	182	Horizontal
6	7744.3430	47.71	45.66	-2.05	74.00	28.34	100	258	Horizontal

Mode: 802.11b  
 Highest Frequency (2462MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-02-28  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1751.0939	66.99	44.56	-22.43	74.00	29.44	100	249	Horizontal
2	3305.6632	56.41	40.53	-15.88	74.00	33.47	200	136	Horizontal
3	4198.2748	54.92	41.83	-13.09	74.00	32.17	200	225	Horizontal
4	4923.9905	54.51	44.44	-10.07	74.00	29.56	100	212	Horizontal
5	7194.8994	47.95	44.82	-3.13	74.00	29.18	200	109	Horizontal
6	10208.4011	43.87	46.36	2.49	74.00	27.64	100	196	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1034.0043	57.42	32.32	-25.10	74.00	41.68	100	279	Vertical
2	1390.5488	56.99	33.45	-23.54	74.00	40.55	200	211	Vertical
3	1767.0959	64.42	42.11	-22.31	74.00	31.89	200	163	Vertical
4	3296.2870	59.62	43.74	-15.88	74.00	30.26	200	285	Vertical
5	4923.9905	54.94	44.87	-10.07	74.00	29.13	100	312	Vertical
6	7176.1470	48.29	45.11	-3.18	74.00	28.89	100	128	Vertical

ANT 2:

Mode: 802.11b

Lowest Frequency (2412MHz)

Environment: 25°C/60%RH

Tested By:Lu Qiang

Date: 2022-03-01

Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1854.1068	59.44	37.57	-21.87	74.00	36.43	200	285	Horizontal
2	2636.2045	64.90	46.15	-18.75	74.00	27.85	200	163	Horizontal
3	3301.9127	65.52	49.68	-15.84	74.00	24.32	200	127	Horizontal
4	4502.0628	53.73	42.04	-11.69	74.00	31.96	200	161	Horizontal
5	4824.6031	59.52	49.81	-9.71	74.00	24.19	200	155	Horizontal
6	7238.0298	48.98	45.43	-3.55	74.00	28.57	100	149	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4824.0241	-9.71	59.49	49.78	54.00	4.22	164	163	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1854.1068	62.02	40.15	-21.87	74.00	33.85	100	335	Vertical
2	2410.6763	73.23	53.38	-19.85	74.00	20.62	200	170	Vertical
3	2637.2047	59.52	40.78	-18.74	74.00	33.22	200	164	Vertical
4	3300.0375	58.40	42.58	-15.82	74.00	31.42	200	299	Vertical
5	4202.0253	53.87	40.77	-13.10	74.00	33.23	200	183	Vertical
6	4824.6031	61.82	52.11	-9.71	74.00	21.89	200	163	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4824.0724	-9.71	61.70	51.99	54.00	2.01	179	171	Vertical

Mode: 802.11b  
 Middle Frequency (2437MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-01  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1854.1068	59.30	37.43	-21.87	74.00	36.57	200	285	Horizontal
2	2211.6515	59.62	38.95	-20.67	74.00	35.05	200	183	Horizontal
3	2664.9581	59.83	41.33	-18.50	74.00	32.67	200	149	Horizontal
4	3298.1623	64.80	48.95	-15.85	74.00	25.05	200	135	Horizontal
5	4200.1500	54.58	41.50	-13.08	74.00	32.50	200	231	Horizontal
6	4873.3592	58.44	48.62	-9.82	74.00	25.38	200	148	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4873.9927	-9.83	57.37	47.54	54.00	6.46	200	158	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1854.1068	61.25	39.38	-21.87	74.00	34.62	100	333	Vertical
2	2660.9576	57.91	39.40	-18.51	74.00	34.60	200	136	Vertical
3	3301.9127	58.14	42.30	-15.84	74.00	31.70	100	101	Vertical
4	4873.3592	60.50	50.68	-9.82	74.00	23.32	200	162	Vertical
5	6654.8319	48.37	42.70	-5.67	74.00	31.30	100	74	Vertical
6	7733.0916	47.75	45.50	-2.25	74.00	28.50	100	7	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4873.8953	-9.83	60.23	50.40	54.00	3.60	198	167	Vertical

Mode: 802.11b  
 Highest Frequency (2462MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-01  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1214.2768	57.07	32.65	-24.42	74.00	41.35	100	246	Horizontal
2	1854.1068	59.10	37.23	-21.87	74.00	36.77	100	55	Horizontal
3	2685.4607	64.16	45.73	-18.43	74.00	28.27	200	164	Horizontal
4	4198.2748	55.21	42.12	-13.09	74.00	31.88	200	218	Horizontal
5	4923.9905	57.28	47.21	-10.07	74.00	26.79	200	157	Horizontal
6	7725.5907	47.85	45.47	-2.38	74.00	28.53	200	33	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4923.9413	-10.07	55.63	45.56	54.00	8.44	200	156	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1080.2600	57.25	32.29	-24.96	74.00	41.71	100	204	Vertical
2	1338.7923	58.42	34.63	-23.79	74.00	39.37	200	163	Vertical
3	1854.1068	61.62	39.75	-21.87	74.00	34.25	100	333	Vertical
4	3298.1623	57.65	41.80	-15.85	74.00	32.20	200	96	Vertical
5	4923.9905	60.12	50.05	-10.07	74.00	23.95	200	164	Vertical
6	7727.4659	47.97	45.62	-2.35	74.00	28.38	200	123	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4923.9413	-10.07	59.21	49.14	54.00	4.86	186	171	Vertical

ANT 1:

Mode: 802.11g  
 Lowest Frequency (2412MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-01  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1078.0098	57.63	32.67	-24.96	74.00	41.33	200	190	Horizontal
2	1452.0565	56.23	33.08	-23.15	74.00	40.92	100	272	Horizontal
3	1767.0959	60.62	38.31	-22.31	74.00	35.69	200	293	Horizontal
4	3600.0750	55.12	40.85	-14.27	74.00	33.15	200	238	Horizontal
5	4203.9005	55.64	42.52	-13.12	74.00	31.48	200	231	Horizontal
6	7712.4641	47.62	45.00	-2.62	74.00	29.00	100	156	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1071.5089	57.38	32.39	-24.99	74.00	41.61	200	82	Vertical
2	1499.8125	59.96	37.07	-22.89	74.00	36.93	200	197	Vertical
3	1853.8567	61.45	39.58	-21.87	74.00	34.42	100	334	Vertical
4	2380.6726	76.61	56.48	-20.13	74.00	17.52	100	14	Vertical
5	2419.4274	72.23	52.43	-19.80	74.00	21.57	100	41	Vertical
6	3301.9127	58.94	43.10	-15.84	74.00	30.90	200	123	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2378.1491	-20.13	55.45	35.32	54.00	18.68	100	43	Vertical

Mode: 802.11g  
 Middle Frequency (2437MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-01  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1081.2602	57.29	32.34	-24.95	74.00	41.66	100	1	Horizontal
2	1548.3185	56.51	33.66	-22.85	74.00	40.34	200	149	Horizontal
3	1854.1068	60.12	38.25	-21.87	74.00	35.75	200	286	Horizontal
4	4498.3123	55.78	44.08	-11.70	74.00	29.92	100	69	Horizontal
5	6634.2043	48.93	43.34	-5.59	74.00	30.66	200	6	Horizontal
6	7725.5907	47.72	45.34	-2.38	74.00	28.66	200	285	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1000.2500	57.71	32.55	-25.16	74.00	41.45	100	95	Vertical
2	1854.1068	61.92	40.05	-21.87	74.00	33.95	100	334	Vertical
3	3300.0375	58.74	42.92	-15.82	74.00	31.08	200	130	Vertical
4	4500.1875	52.69	41.01	-11.68	74.00	32.99	100	184	Vertical
5	4865.8582	52.18	42.42	-9.76	74.00	31.58	100	61	Vertical
6	7716.2145	47.45	44.90	-2.55	74.00	29.10	200	266	Vertical



Mode: 802.11g  
 Highest Frequency (2462MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-01  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1085.5107	57.86	32.92	-24.94	74.00	41.08	100	34	Horizontal
2	1503.3129	56.83	33.94	-22.89	74.00	40.06	200	197	Horizontal
3	1854.1068	59.72	37.85	-21.87	74.00	36.15	200	285	Horizontal
4	3601.9502	54.11	39.82	-14.29	74.00	34.18	200	210	Horizontal
5	4500.1875	54.01	42.33	-11.68	74.00	31.67	200	210	Horizontal
6	7781.8477	47.28	45.40	-1.88	74.00	28.60	200	115	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1029.5037	57.07	31.96	-25.11	74.00	42.04	200	360	Vertical
2	1390.5488	58.25	34.71	-23.54	74.00	39.29	200	158	Vertical
3	1853.8567	61.47	39.60	-21.87	74.00	34.40	100	333	Vertical
4	3300.0375	58.28	42.46	-15.82	74.00	31.54	200	116	Vertical
5	4721.4652	51.62	42.07	-9.55	74.00	31.93	100	143	Vertical
6	7789.3487	46.86	45.00	-1.86	74.00	29.00	200	197	Vertical

ANT 2:

Mode: 802.11g  
 Lowest Frequency (2412MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-01  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1854.1068	60.32	38.45	-21.87	74.00	35.55	200	244	Horizontal
2	2561.4452	61.77	42.89	-18.88	74.00	31.11	200	163	Horizontal
3	3301.9127	65.79	49.95	-15.84	74.00	24.05	200	150	Horizontal
4	4200.1500	56.11	43.03	-13.08	74.00	30.97	200	205	Horizontal
5	4826.4783	54.81	45.11	-9.70	74.00	28.89	100	155	Horizontal
6	6626.7033	48.98	43.40	-5.58	74.00	30.60	200	246	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3301.9127	-15.84	54.87	39.03	54.00	14.97	200	150	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1853.8567	62.66	40.79	-21.87	74.00	33.21	100	292	Vertical
2	2636.7046	57.64	38.90	-18.74	74.00	35.10	200	163	Vertical
3	3301.9127	58.52	42.68	-15.84	74.00	31.32	200	278	Vertical
4	4194.5243	52.82	39.70	-13.12	74.00	34.30	200	183	Vertical
5	4824.6031	58.68	48.97	-9.71	74.00	25.03	200	169	Vertical
6	6634.2043	48.74	43.15	-5.59	74.00	30.85	100	27	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4824.6031	-9.71	52.49	42.78	54.00	11.22	200	169	Vertical

Mode: 802.11g  
 Middle Frequency (2437MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-01  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1853.8567	60.71	38.84	-21.87	74.00	35.16	200	246	Horizontal
2	3298.1623	66.01	50.16	-15.85	74.00	23.84	200	136	Horizontal
3	4496.4371	56.47	44.75	-11.72	74.00	29.25	200	217	Horizontal
4	6802.9754	47.89	43.68	-4.21	74.00	30.32	200	122	Horizontal
5	8826.3533	46.31	45.69	-0.62	74.00	28.31	200	265	Horizontal
6	10583.4479	43.80	47.36	3.56	74.00	26.64	100	195	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3298.1623	-15.85	54.86	39.01	54.00	14.99	200	136	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1854.1068	62.35	40.48	-21.87	74.00	33.52	100	299	Vertical
2	3301.9127	58.67	42.83	-15.84	74.00	31.17	200	258	Vertical
3	4194.5243	52.78	39.66	-13.12	74.00	34.34	200	176	Vertical
4	4867.7335	56.93	47.16	-9.77	74.00	26.84	200	162	Vertical
5	7196.7746	47.79	44.66	-3.13	74.00	29.34	100	312	Vertical
6	7802.4753	46.99	45.08	-1.91	74.00	28.92	200	326	Vertical

Mode: 802.11g  
 Highest Frequency (2462MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-01  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1853.8567	61.47	39.60	-21.87	74.00	34.40	200	245	Horizontal
2	3300.0375	65.49	49.67	-15.82	74.00	24.33	200	150	Horizontal
3	4200.1500	56.77	43.69	-13.08	74.00	30.31	200	211	Horizontal
4	6191.6490	49.36	42.49	-6.87	74.00	31.51	200	14	Horizontal
5	7172.3966	48.12	44.93	-3.19	74.00	29.07	100	41	Horizontal
6	8906.9884	45.95	45.52	-0.43	74.00	28.48	200	41	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3300.0375	-15.82	54.89	39.07	54.00	14.93	200	150	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1854.1068	62.35	40.48	-21.87	74.00	33.52	100	293	Vertical
2	3301.9127	58.16	42.32	-15.84	74.00	31.68	200	102	Vertical
3	4925.8657	54.49	44.42	-10.07	74.00	29.58	200	176	Vertical
4	7226.7783	48.45	45.02	-3.43	74.00	28.98	200	67	Vertical
5	9527.6910	46.13	46.72	0.59	74.00	27.28	200	292	Vertical
6	10829.1036	44.17	48.05	3.88	74.00	25.95	100	109	Vertical

**MIMO**

Mode: 802.11n HT20

Lowest Frequency (2412MHz)

Environment: 25°C/60%RH

Tested By: Zhang Zishan

Date: 2022-03-01

Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1751.3439	63.39	40.96	-22.43	74.00	33.04	100	320	Horizontal
2	2637.2047	62.18	43.44	-18.74	74.00	30.56	100	164	Horizontal
3	3300.0375	66.89	51.07	-15.82	74.00	22.93	200	142	Horizontal
4	4500.1875	53.57	41.89	-11.68	74.00	32.11	200	74	Horizontal
5	4822.7278	53.21	43.50	-9.71	74.00	30.50	100	150	Horizontal
6	7234.2793	49.25	45.74	-3.51	74.00	28.26	100	156	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3300.0375	-15.82	54.89	39.07	54.00	14.93	200	142	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1853.8567	62.46	40.59	-21.87	74.00	33.41	100	293	Vertical
2	2638.4548	57.19	38.47	-18.72	74.00	35.53	200	144	Vertical
3	3300.0375	59.50	43.68	-15.82	74.00	30.32	100	135	Vertical
4	4500.1875	53.84	42.16	-11.68	74.00	31.84	200	191	Vertical
5	4822.7278	58.43	48.72	-9.71	74.00	25.28	200	149	Vertical
6	7172.3966	48.19	45.00	-3.19	74.00	29.00	200	27	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4822.7278	-9.71	52.47	42.76	54.00	11.24	200	149	Vertical

Mode: 802.11n HT20  
 Middle Frequency (2437 MHz)  
 Environment: 25°C/60%RH  
 Tested By: Zhang Zishan

Date: 2022-02-28  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1499.5624	60.80	37.91	-22.89	74.00	36.09	200	244	Horizontal
2	1854.1068	60.63	38.76	-21.87	74.00	35.24	200	244	Horizontal
3	3296.2870	65.17	49.29	-15.88	74.00	24.71	200	149	Horizontal
4	4200.1500	54.86	41.78	-13.08	74.00	32.22	200	210	Horizontal
5	4863.9830	51.90	42.16	-9.74	74.00	31.84	100	129	Horizontal
6	6165.3957	49.78	43.11	-6.67	74.00	30.89	200	87	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3296.2870	-15.88	54.89	39.01	54.00	14.99	200	149	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1751.5939	61.23	38.80	-22.43	74.00	35.20	200	142	Vertical
2	1853.8567	62.39	40.52	-21.87	74.00	33.48	100	293	Vertical
3	3301.9127	59.55	43.71	-15.84	74.00	30.29	100	115	Vertical
4	4200.1500	52.83	39.75	-13.08	74.00	34.25	200	162	Vertical
5	4869.6087	54.19	44.40	-9.79	74.00	29.60	100	149	Vertical
6	7198.6498	47.90	44.78	-3.12	74.00	29.22	200	359	Vertical

Mode: 802.11n HT20  
 Highest Frequency (2462MHz)  
 Environment: 25°C/60%RH  
 Tested By: Zhang Zishan

Date: 2022-02-28  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1854.1068	60.47	38.60	-21.87	74.00	35.40	200	238	Horizontal
2	3298.1623	66.59	50.74	-15.85	74.00	23.26	200	150	Horizontal
3	4202.0253	56.71	43.61	-13.10	74.00	30.39	200	218	Horizontal
4	6171.0214	48.96	42.24	-6.72	74.00	31.76	200	294	Horizontal
5	7204.2755	47.93	44.76	-3.17	74.00	29.24	100	54	Horizontal
6	7727.4659	47.96	45.61	-2.35	74.00	28.39	200	41	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB $\mu$ V/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3298.1623	-15.85	54.88	39.03	54.00	14.97	200	150	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1747.5934	62.85	40.41	-22.44	74.00	33.59	100	243	Vertical
2	1854.1068	63.41	41.54	-21.87	74.00	32.46	100	292	Vertical
3	3298.1623	59.38	43.53	-15.85	74.00	30.47	100	42	Vertical
4	4927.7410	53.62	43.55	-10.07	74.00	30.45	200	171	Vertical
5	7249.2812	48.60	44.92	-3.68	74.00	29.08	100	322	Vertical
6	9403.9255	44.95	46.65	1.70	74.00	27.35	200	116	Vertical

**18GHz-26.5GHz:**

Pre-scan all modes and recorded the worst case results in this report (802.11n HT20)

The peak test results is less than the average limits, so the average test results had not reported.

Pre-scanned in three orthogonal panels,X,Y,Z.The worst cases mode (Z plane) were recorded in this report.

Mode: 802.11n HT20

Lowest Frequency (2412MHz)

Environment: 25°C/60%RH

Tested By:Lu Qiang

Date: 2022-03-26

Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18179.3500	57.60	46.00	-11.60	83.54	37.54	150	348	Horizontal
2	19507.9000	55.90	44.98	-10.92	83.54	38.56	150	20	Horizontal
3	21711.9500	55.11	45.18	-9.93	83.54	38.36	150	136	Horizontal
4	22819.0750	54.09	45.03	-9.06	83.54	38.51	150	263	Horizontal
5	24523.7500	53.68	45.54	-8.14	83.54	38.00	150	161	Horizontal
6	25703.5500	54.67	46.66	-8.01	83.54	36.88	150	231	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18413.9500	56.99	45.47	-11.52	83.54	38.07	150	5	Vertical
2	19912.0750	55.86	45.00	-10.86	83.54	38.54	150	321	Vertical
3	21638.4250	55.08	45.16	-9.92	83.54	38.38	150	11	Vertical
4	23359.6750	54.28	45.51	-8.77	83.54	38.03	150	44	Vertical
5	24917.3000	53.71	45.74	-7.97	83.54	37.80	150	178	Vertical
6	26442.2000	53.16	45.67	-7.49	83.54	37.87	150	347	Vertical

Note:

Above 18G test distance is 1m, so the Peak Limit= $74+20*\log(3/1)=83.54$  (dBμV/m).



Mode: 802.11n HT20  
 Middle Frequency (2437MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-26  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18285.1750	57.15	45.58	-11.57	83.54	37.96	150	231	Horizontal
2	19968.6000	55.95	45.09	-10.86	83.54	38.45	150	308	Horizontal
3	21615.0500	54.96	45.04	-9.92	83.54	38.50	150	6	Horizontal
4	22374.1000	54.57	45.06	-9.51	83.54	38.48	150	122	Horizontal
5	24344.4000	53.63	45.46	-8.17	83.54	38.08	150	295	Horizontal
6	26298.5500	53.36	45.66	-7.70	83.54	37.88	150	199	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18599.6750	57.17	45.76	-11.41	83.54	37.78	150	316	Vertical
2	19628.1750	55.29	44.42	-10.87	83.54	39.12	150	342	Vertical
3	21645.6500	54.91	44.98	-9.93	83.54	38.56	150	270	Vertical
4	22998.4250	54.25	45.31	-8.94	83.54	38.23	150	161	Vertical
5	24398.3750	53.88	45.72	-8.16	83.54	37.82	150	103	Vertical
6	26300.6750	53.75	46.06	-7.69	83.54	37.48	150	7	Vertical

Note:

Above 18G test distance is 1m, so the Peak Limit=74+20\*log(3/1)=83.54 (dBμV/m).

Mode: 802.11n HT20  
 Highest Frequency (2462MHz)  
 Environment: 25°C/60%RH  
 Tested By:Lu Qiang

Date: 2022-03-26  
 Voltage: AC 120V/60Hz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18456.8750	56.63	45.13	-11.50	83.54	38.41	150	92	Horizontal
2	20007.2750	55.54	44.69	-10.85	83.54	38.85	150	60	Horizontal
3	20957.1500	54.86	44.55	-10.31	83.54	38.99	150	66	Horizontal
4	22853.0750	53.97	44.94	-9.03	83.54	38.60	150	8	Horizontal
5	23803.8000	55.00	46.54	-8.46	83.54	37.00	150	2	Horizontal
6	26232.2500	53.58	45.73	-7.85	83.54	37.81	150	277	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18053.1250	56.54	44.90	-11.64	83.54	38.64	150	32	Vertical
2	19043.8000	56.18	45.09	-11.09	83.54	38.45	150	297	Vertical
3	21326.4750	54.53	44.36	-10.17	83.54	39.18	150	32	Vertical
4	23417.0500	54.40	45.65	-8.75	83.54	37.89	150	141	Vertical
5	25542.0500	54.00	46.15	-7.85	83.54	37.39	150	13	Vertical
6	26249.2500	53.47	45.66	-7.81	83.54	37.88	150	206	Vertical

Note:

Above 18G test distance is 1m, so the Peak Limit=74+20\*log(3/1)=83.54 (dBμV/m).

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## 7. 6DB BANDWIDTH

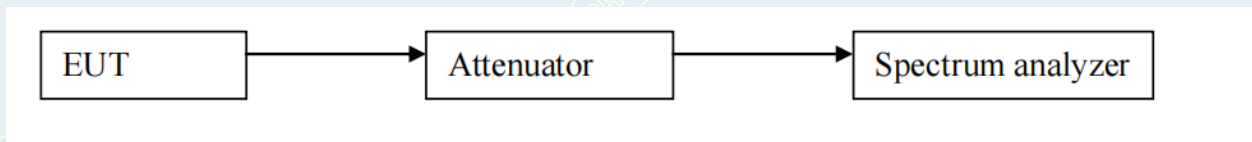
### 7.1 LIMITS

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 7.2 TEST PROCEDURES

- 1) Remove the antenna from the EUT, and then connect a low loss RF cable from antenna port to the spectrum analyzer.
- 2) Set resolution bandwidth (RBW) = 100kHz. Set the video bandwidth (VBW)  $\geq 3 \times$  RBW. Detector = Peak. Trace mode = max hold. Sweep = auto couple. Allow the trace to stabilize, record 6dB bandwidth value.
- 3) Repeat above procedures until all frequencies measured were complete.

### 7.3 TEST SETUP



----- The following blanks -----

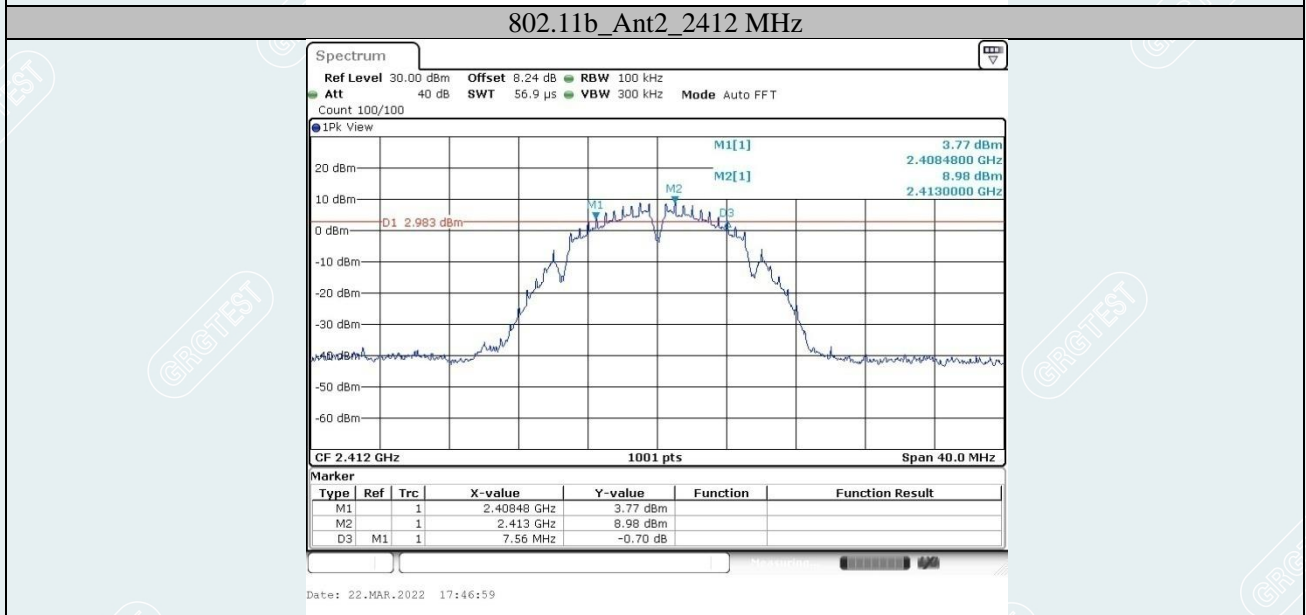
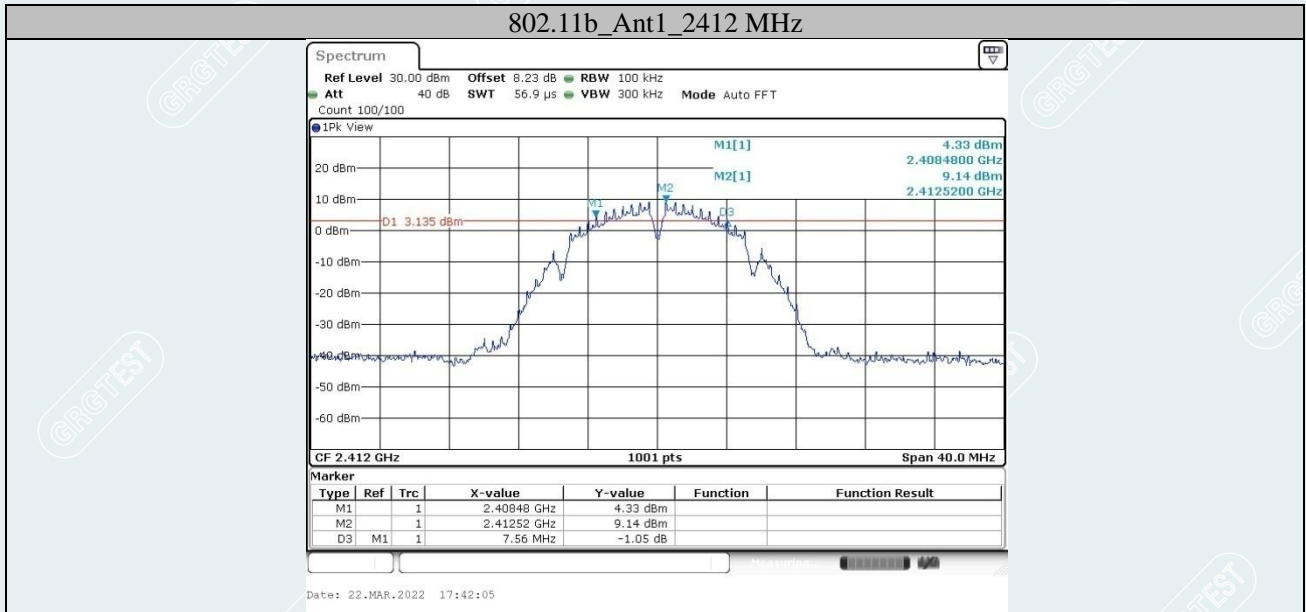
**7.4 TEST RESULTS**

Environment: 23.6°C/48%RH  
 Tested By:Lu Wei

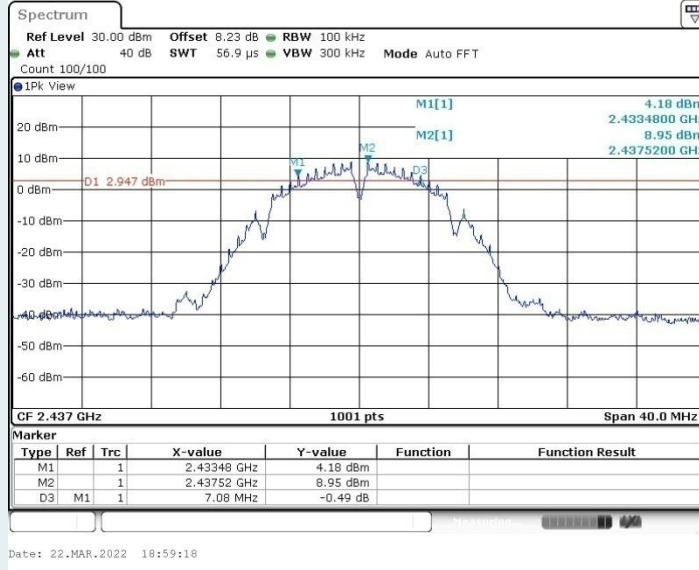
Voltage:DC 3.8V  
 Date: 2022-03-22

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	Limit[MHz]	Verdict
802.11b	Ant1	2412	7.560	≥0.5	PASS
	Ant2	2412	7.560	≥0.5	PASS
	Ant1	2437	7.080	≥0.5	PASS
	Ant2	2437	7.560	≥0.5	PASS
	Ant1	2462	7.080	≥0.5	PASS
	Ant2	2462	7.560	≥0.5	PASS
802.11g	Ant1	2412	16.360	≥0.5	PASS
	Ant2	2412	16.360	≥0.5	PASS
	Ant1	2437	16.360	≥0.5	PASS
	Ant2	2437	16.360	≥0.5	PASS
	Ant1	2462	16.360	≥0.5	PASS
	Ant2	2462	16.360	≥0.5	PASS
802.11n HT20	Ant1	2412	17.560	≥0.5	PASS
	Ant2	2412	17.600	≥0.5	PASS
	Ant1	2437	17.560	≥0.5	PASS
	Ant2	2437	17.560	≥0.5	PASS
	Ant1	2462	17.560	≥0.5	PASS
	Ant2	2462	17.560	≥0.5	PASS

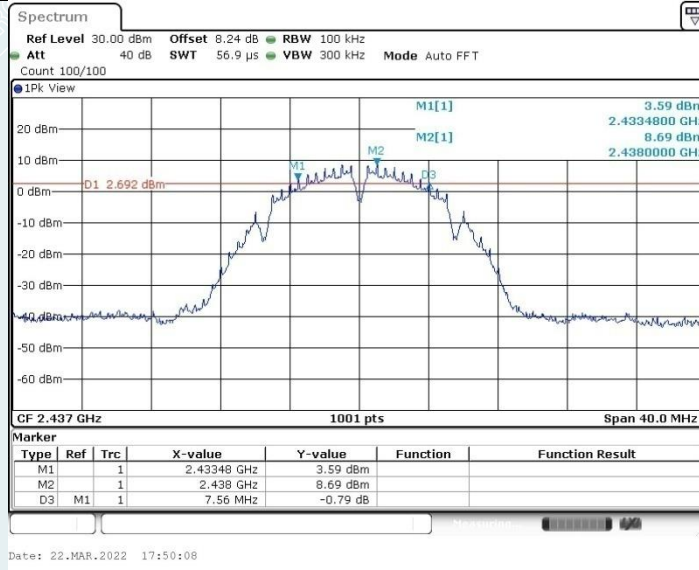
----- The following blanks -----



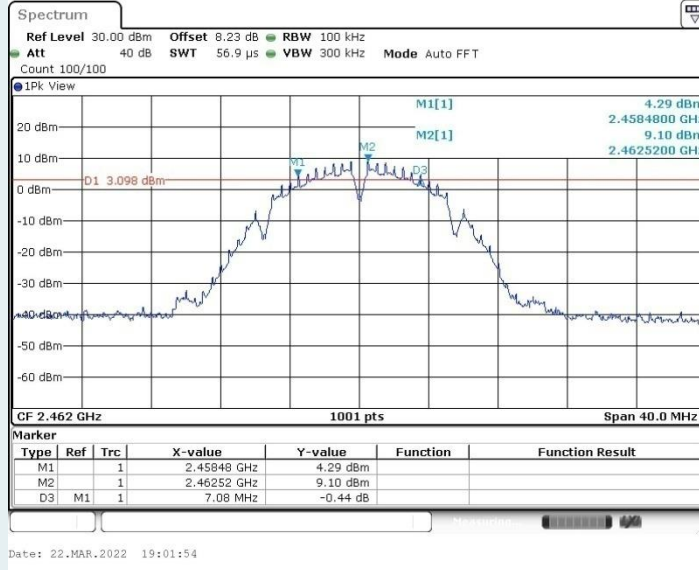
### 802.11b\_Ant1\_2437 MHz



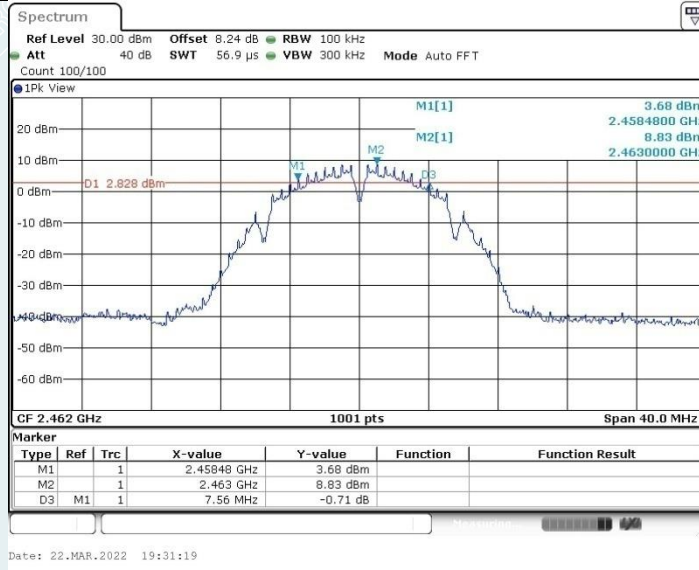
### 802.11b\_Ant2\_2437 MHz



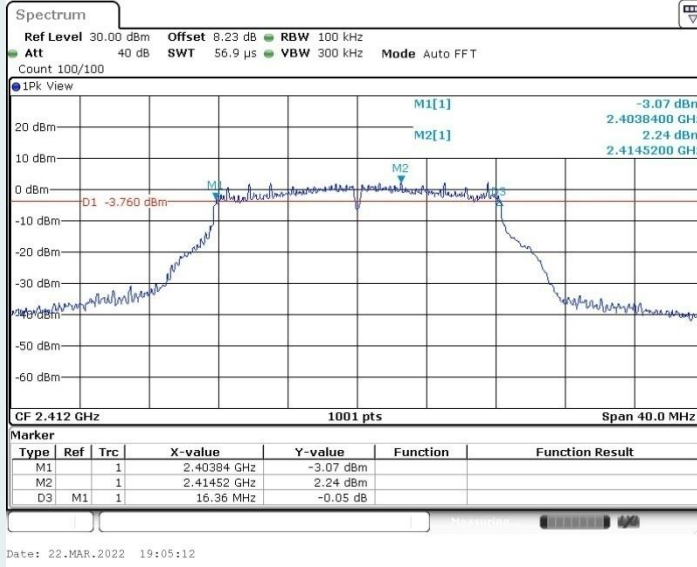
### 802.11b\_Ant1\_2462 MHz



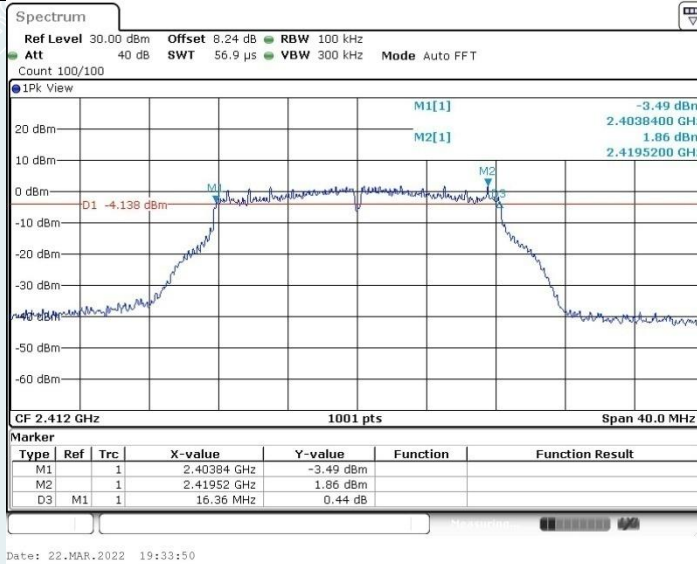
### 802.11b\_Ant2\_2462 MHz



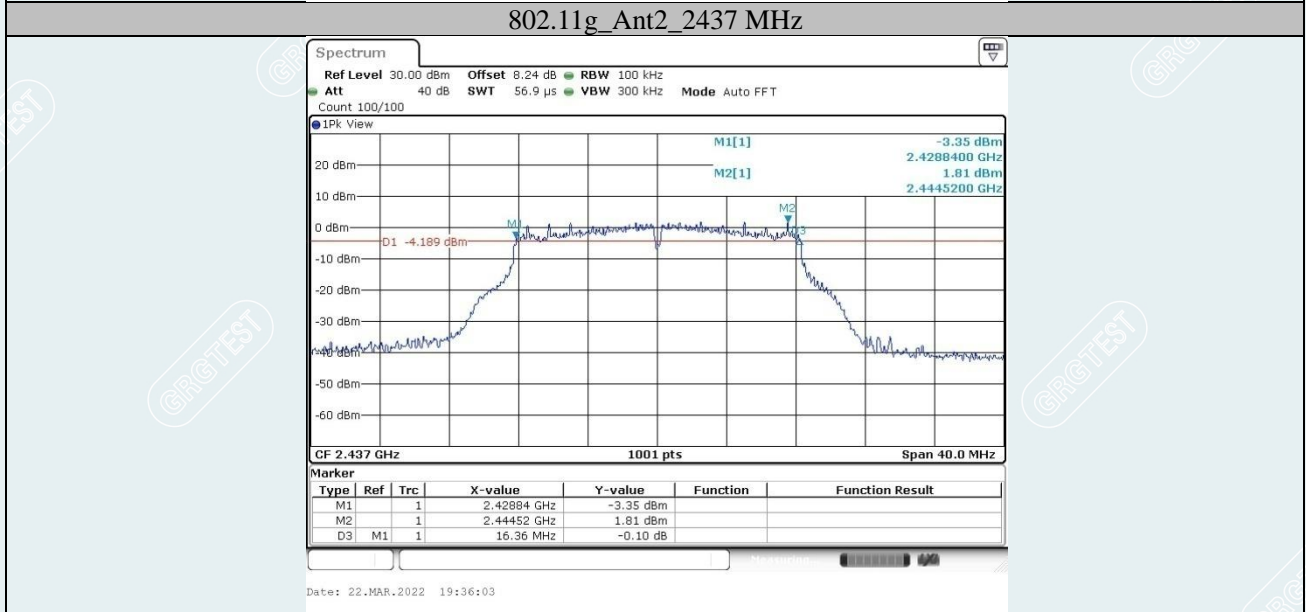
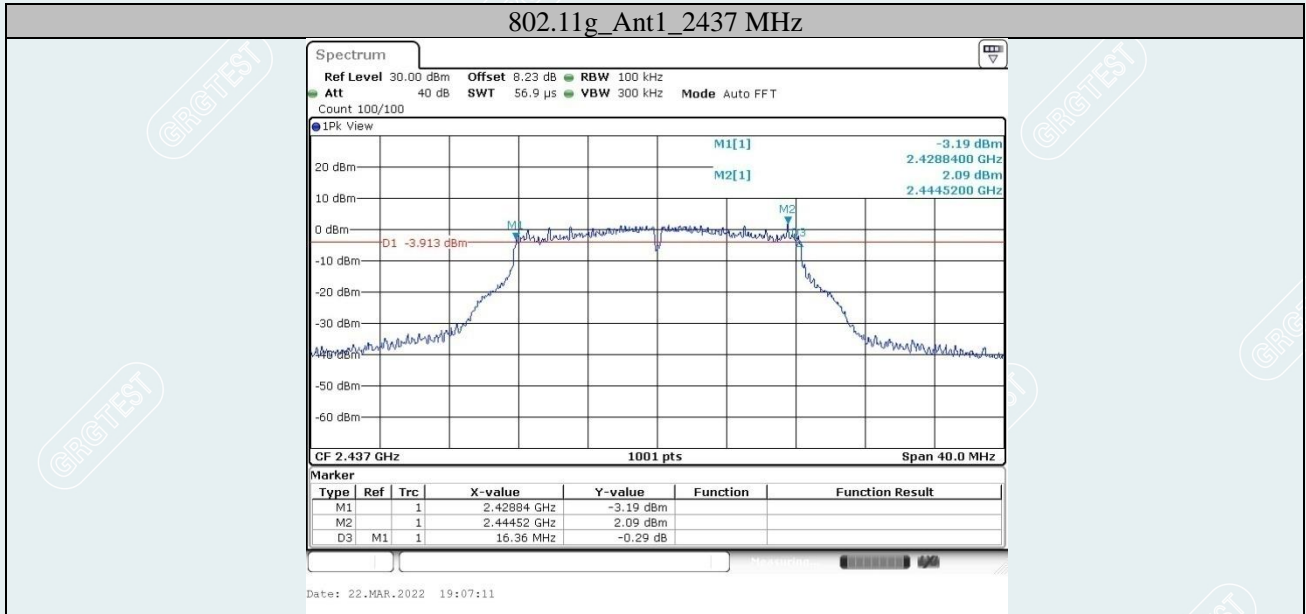
### 802.11g\_Ant1\_2412 MHz



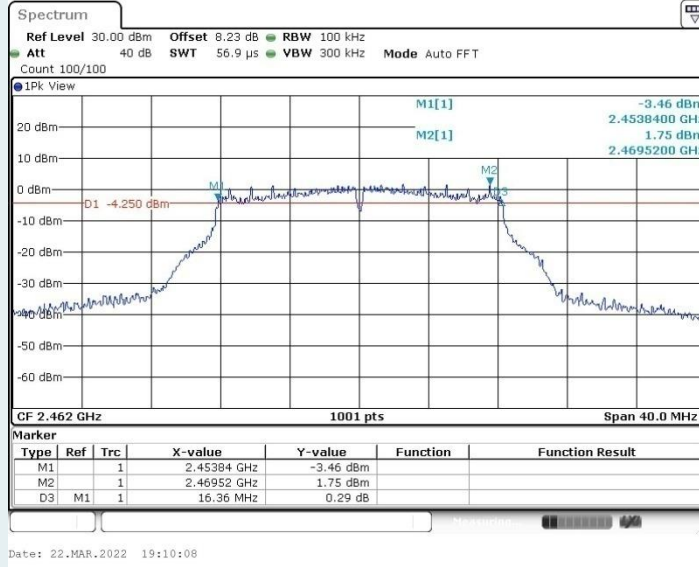
### 802.11g\_Ant2\_2412 MHz



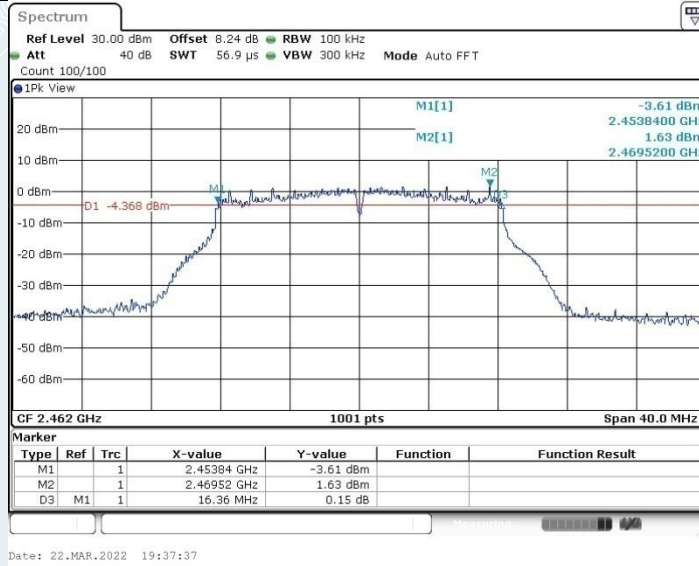




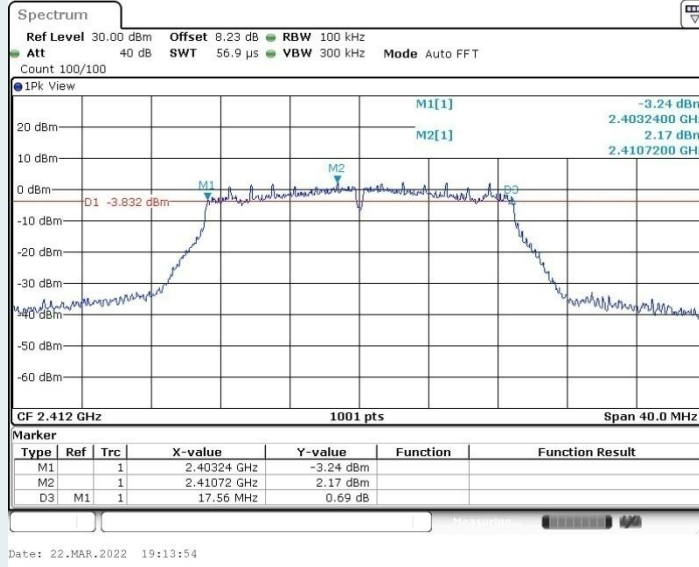
### 802.11g\_Ant1\_2462 MHz



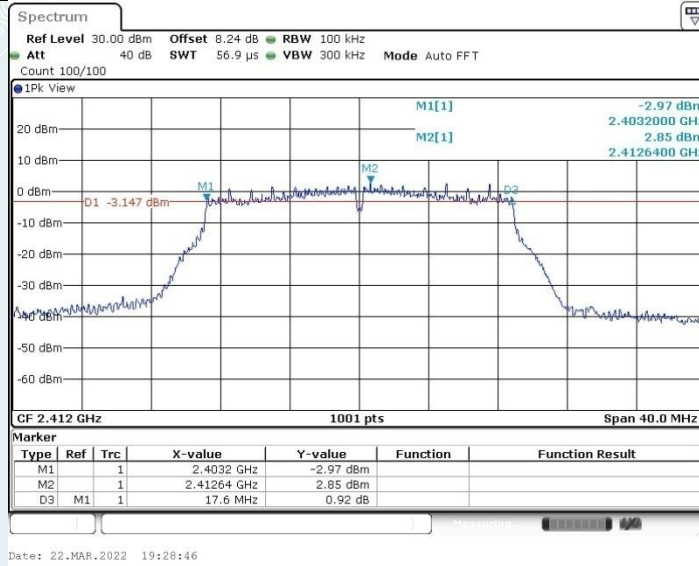
### 802.11g\_Ant2\_2462 MHz



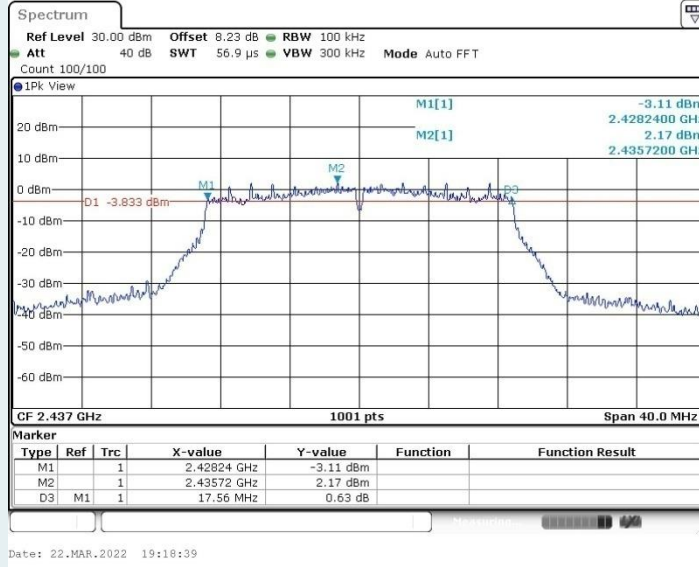
### 802.11n HT20\_Ant1\_2412 MHz



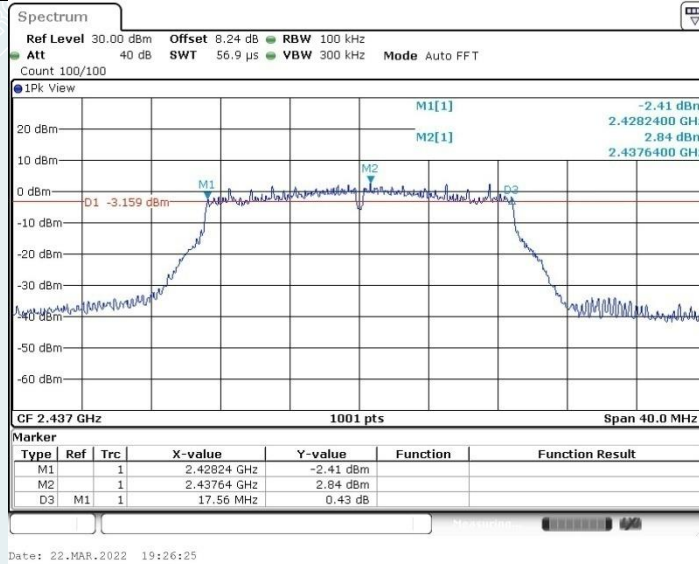
### 802.11n HT20\_Ant2\_2412 MHz

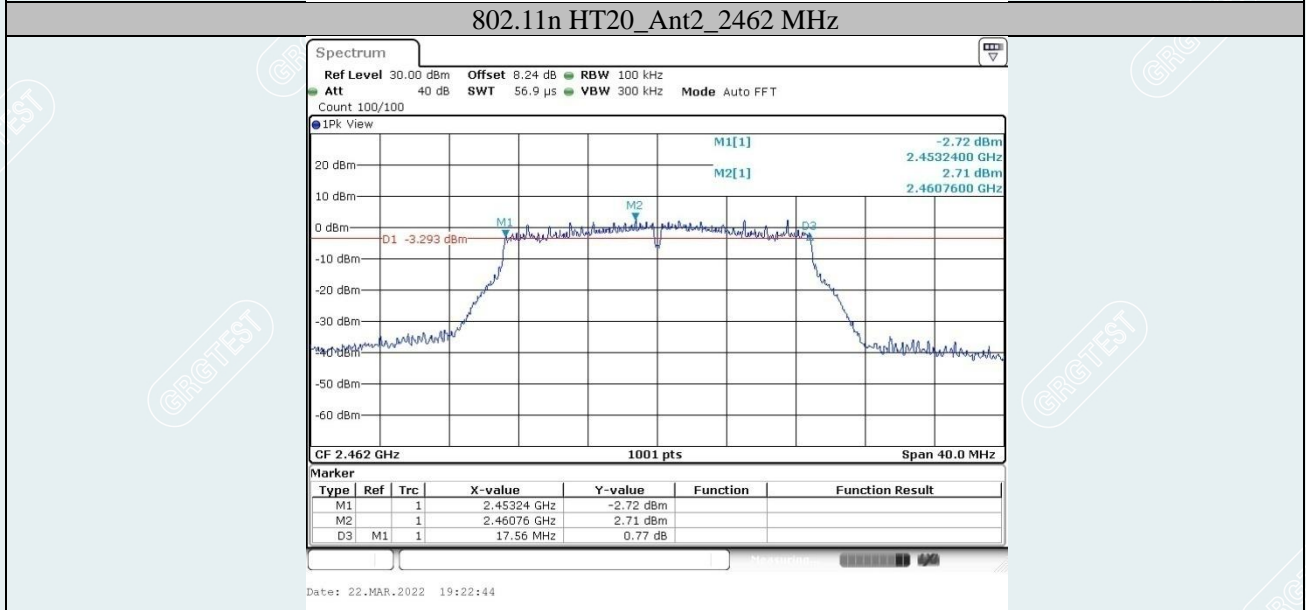
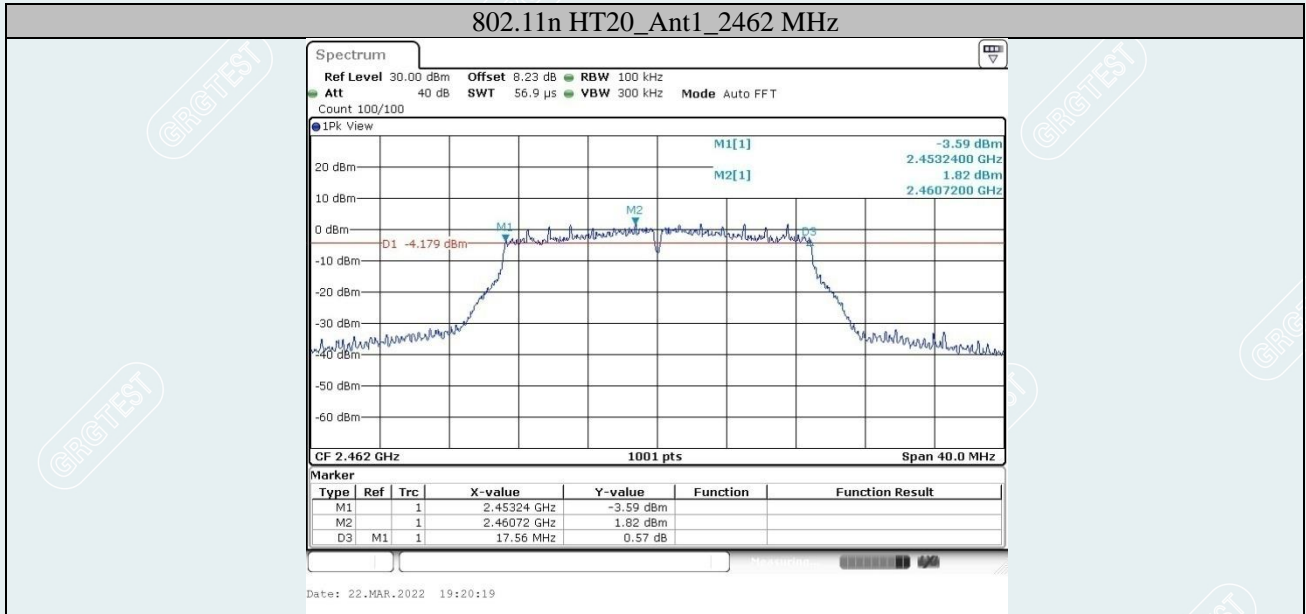


### 802.11n HT20\_Ant1\_2437 MHz



### 802.11n HT20\_Ant2\_2437 MHz





## 8. MAXIMUM PEAK OUTPUT POWER

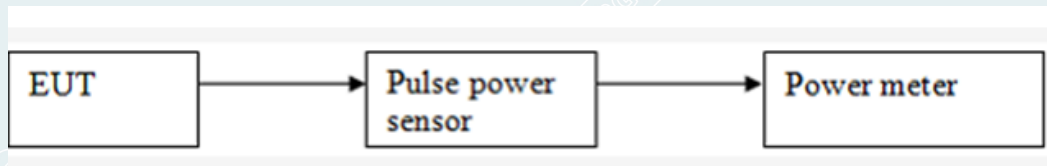
### 8.1 LIMITS

The maximum Peak output power measurement is 1W

### 8.2 TEST PROCEDURES

- 1) RF output of EUT was connected to the broadband peak RF power meter by RF cable. 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) Measure the conducted output power and record the results in the test report.

### 8.3 TEST SETUP



----- The following blanks -----

## 8.4 TEST RESULT

Environment: 24.2°C/46%RH  
Tested By:Lu Wei

Voltage:DC 3.8V  
Date: 2022-02-20

### 802.11b Mode:

Channel No.	Antenna	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Verdict
1	Ant1	2412	20.57	Peak	30dBm	PASS
	Ant2	2412	20.34			PASS
6	Ant1	2437	20.41			PASS
	Ant2	2437	20.21			PASS
11	Ant1	2462	20.34			PASS
	Ant2	2462	20.23			PASS

### 802.11g Mode:

Channel No.	Antenna	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Verdict
1	Ant1	2412	24.47	Peak	30dBm	PASS
	Ant2	2412	24.50			PASS
6	Ant1	2437	24.45			PASS
	Ant2	2437	24.45			PASS
11	Ant1	2462	24.30			PASS
	Ant2	2462	24.52			PASS

### 802.11n HT20 Mode:

Channel No.	Antenna	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Verdict
1	Ant1	2412	24.08	Peak	30dBm	PASS
	Ant2	2412	24.38			PASS
	total	2412	27.24			PASS
6	Ant1	2437	24.15			PASS
	Ant2	2437	24.49			PASS
	total	2437	27.33			PASS
11	Ant1	2462	24.04			PASS
	Ant2	2462	24.48			PASS
	total	2462	27.28			PASS

Note: 1.This EUT supports MIMO 2X2, the antenna gains are not equal and any transmit signals are correlated with each other.

2.For power measurements on 802.11 devices, Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$  dBi.

The Directional gain =  $10 \log[(10^{0.87/20} + 10^{-0.41/20})^2 / 2] = 3.26$  dBi, Directional gain is not greater than 6dBi and the power limit does not need to be reversed.

## 9. POWER SPECTRAL DENSITY

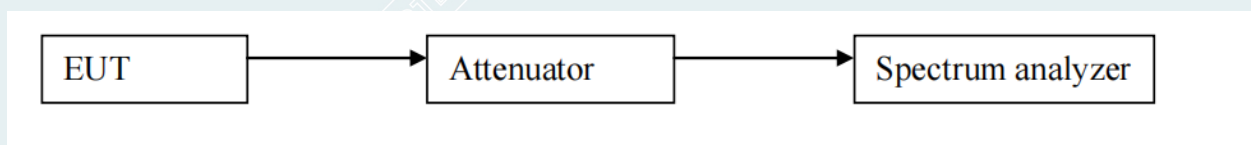
### 9.1 LIMITS

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### 9.2 TEST PROCEDURES

- 1) Remove the antenna from the EUT, and then connect a low loss RF cable from antenna port to the spectrum analyzer.
- 2) Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- 3) The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:
  - a) Set analyzer center frequency to DTS channel center frequency.
  - b) Set the span to 1.5 times the DTS bandwidth.
  - c) Set the RBW to  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
  - d) Set the VBW  $\geq [3 \times \text{RBW}]$ .
  - e) Detector = peak
  - f) Sweep time = auto couple.
  - g) Trace mode = max hold.
  - h) Allow trace to fully stabilize.
  - i) Use the peak marker function to determine the maximum amplitude level within the RBW.
  - j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.
- 4) Repeat above procedures until all frequencies measured were complete.

### 9.3 TEST SETUP



----- The following blanks -----



#### 9.4 TEST RESULTS

Environment: 23.6°C/48%RH

Tested By:Lu Wei

Voltage:DC 3.8V

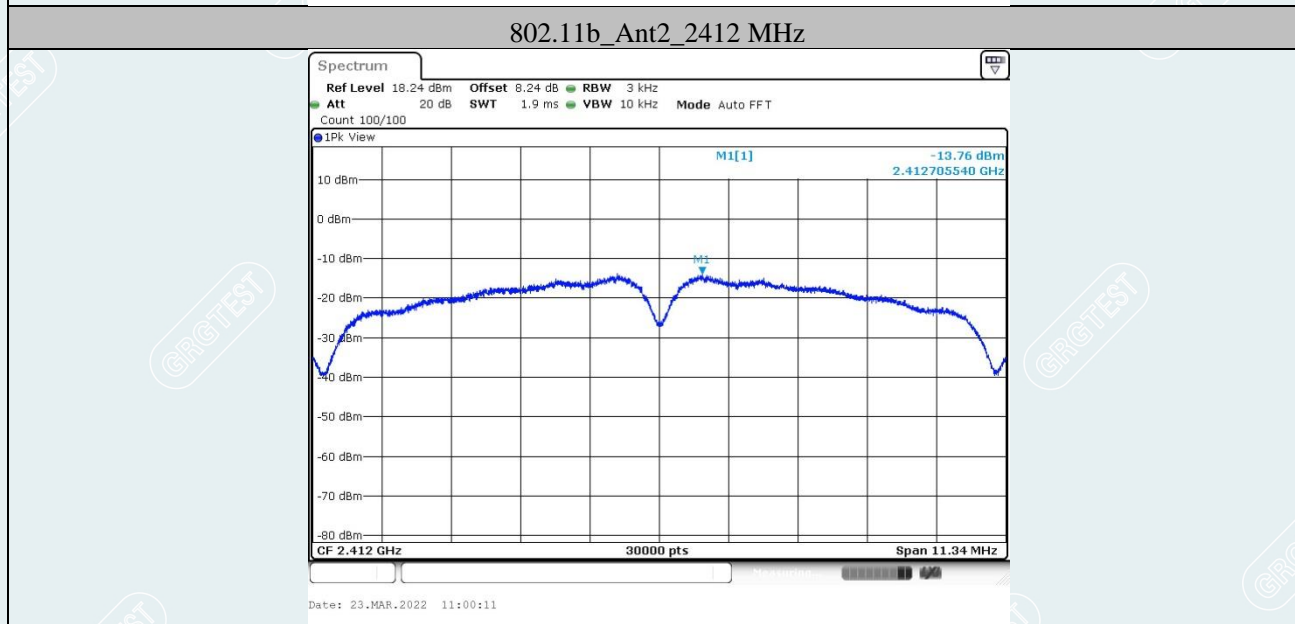
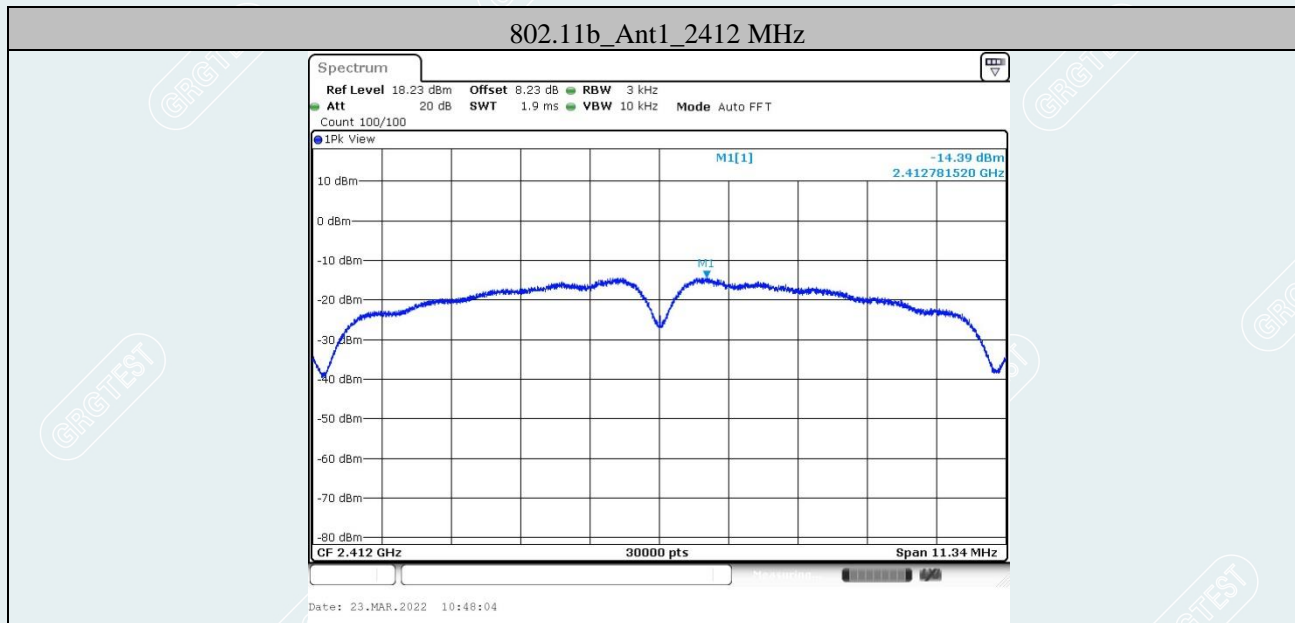
Date: 2022-03-23

Test Mode	Channel No.	Antenna	Frequency (MHz)	PSD (dBm/3kHz)	Limit[dBm/3kHz]	Result
802.11b	1	Ant1	2412	-14.39	≤8.00	PASS
		Ant2	2412	-13.76	≤8.00	PASS
	6	Ant1	2437	-14.06	≤8.00	PASS
		Ant2	2437	-14.24	≤8.00	PASS
	11	Ant1	2462	-14.56	≤8.00	PASS
		Ant2	2462	-14.17	≤8.00	PASS
802.11g	1	Ant1	2412	-18.08	≤8.00	PASS
		Ant2	2412	-18.23	≤8.00	PASS
	6	Ant1	2437	-18.32	≤8.00	PASS
		Ant2	2437	-18.46	≤8.00	PASS
	11	Ant1	2462	-18.44	≤8.00	PASS
		Ant2	2462	-18.27	≤8.00	PASS
802.11n HT20	1	Ant1	2412	-18.39	≤8.00	PASS
		Ant2	2412	-18.01	≤8.00	PASS
		total	2412	-15.19	≤8.00	PASS
	6	Ant1	2437	-18.68	≤8.00	PASS
		Ant2	2437	-17.21	≤8.00	PASS
		total	2437	-14.87	≤8.00	PASS
	11	Ant1	2462	-18.54	≤8.00	PASS
		Ant2	2462	-17.12	≤8.00	PASS
		total	2462	-14.76	≤8.00	PASS

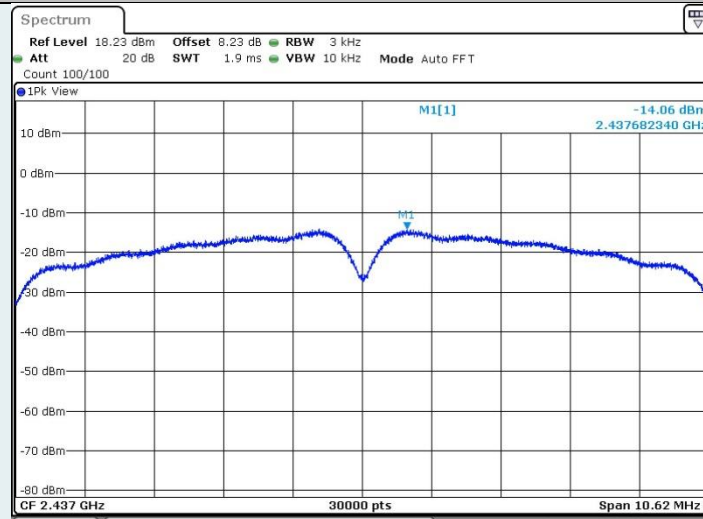
Note: 1.This EUT supports MIMO 2X2, the antenna gains are not equal and any transmit signals are correlated with each other.

2.For power measurements on 802.11 devices, Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$  dBi.

The Directional gain =  $10 \log[(10^{0.87/20} + 10^{-0.41/20})^2 / 2] = 3.26$  dBi, Directional gain is not greater than 6dBi and the power limit does not need to be reversed.

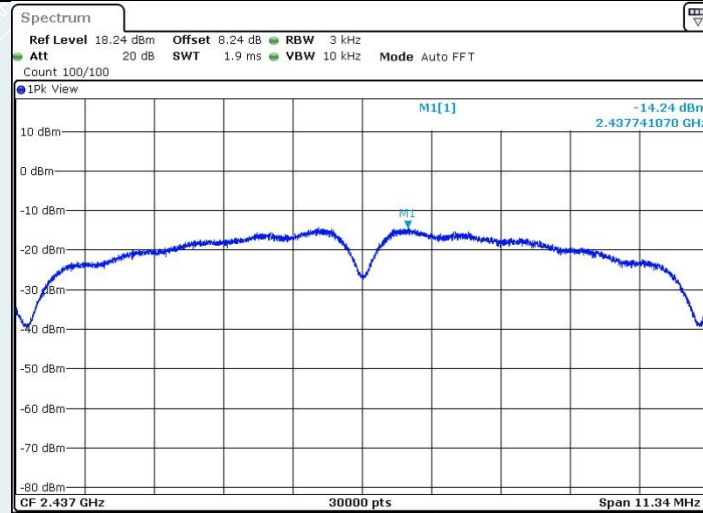


### 802.11b\_Ant1\_2437 MHz



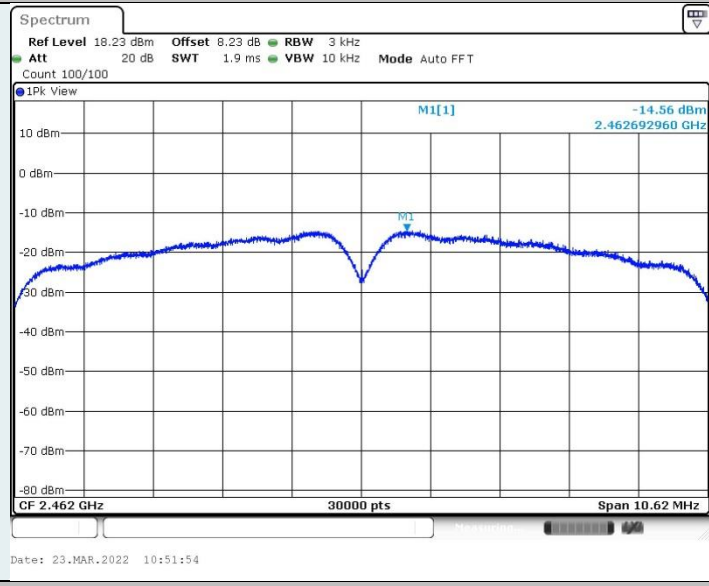
Date: 23.MAR.2022 10:51:22

### 802.11b\_Ant2\_2437 MHz



Date: 23.MAR.2022 11:00:53

### 802.11b\_Ant1\_2462 MHz



### 802.11b\_Ant2\_2462 MHz

