

Test Report

Verified code: 816695

Report No.: E202112276794-9

Customer: NunoErin, LLC

Address: 533 Commerce Street, Jackson MS 39201 USA

Sample Name: Tablet

Sample Model: UCTB-27

Receive Sample Date: Dec.29,2021

Test Date: Dec.31,2021 ~ Apr.21,2022

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

Test Result: Pass

Prepared by: *Wen. Wen*

Reviewed by: *Jiang Tao*

Approved by: *Liao Liang*

GUANGZHOU GRG METROLOGY & TEST CO., LTD


Issued Date: 2022-06-01

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REPORT ISSUED HISTORY

Report Version	Report No.	Description	Compile Date
1.0	E202112276794-9	Original Issue	2022/04/27

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1. TEST RESULT SUMMARY

Standard	Item	Limit / Severity	Result
CFR 47, FCC Part 15 Subpart C (§15.247) ANSI C63.10-2013 KDB 558074 D01 15.247 measurement guidance v05r02	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

The EUT have one antenna. The antenna is Internal antenna. The max gain of Antenna is 1.08dBi, 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: NunoErin, LLC
Address: 533 Commerce Street, Jackson MS 39201 USA

2.2 MANUFACTURER

Name: Chengdu Vantron Technology Co., Ltd.
Address: No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, P.R. China 610045

2.3 FACTORY

Name: Chengdu Vantron Technology Co., Ltd.
Address: No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, P.R. China 610045

2.4 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Product Name: Tablet
Product Model: UCTB-27
Adding Model: /
Trade Name: NunoErin
FCC ID: 2A5VA-UCTB27
Rating: Input: 100-240V~ 50/60Hz 1.2A
Frequency Band: 2412MHz-2462MHz for 802.11b/g/n HT20
Modulation Type: DSSS for IEEE 802.11b mode;
OFDM for IEEE 802.11g/n mode
Antenna Specification: Internal antenna with 1.08dBi gain (Max)
Transmit Power: IEEE 802.11b: 16.32dBm
IEEE 802.11g: 15.45dBm
IEEE 802.11n HT20: 15.53dBm
Temperature Range: 0°C ~ 50°C
Hardware Version: V 2.0
Software Version: Android 10
Sample submitting way: ☒ Provided by customer ☐ Sampling
Sample No: E202112276794-0002

2.5 CHANNEL LIST

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 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

Name of Equipment	Manufacturer	Model	Serial Number	Note
/	/	/	/	/
Cable				
1	AC cable	/	/	Unshield 0.40m

2.8 CONFIGURATION OF SYSTEM UNDER TEST



Test software:

Software version	Test level
Ampak RF testTool	Default

Power Setting:

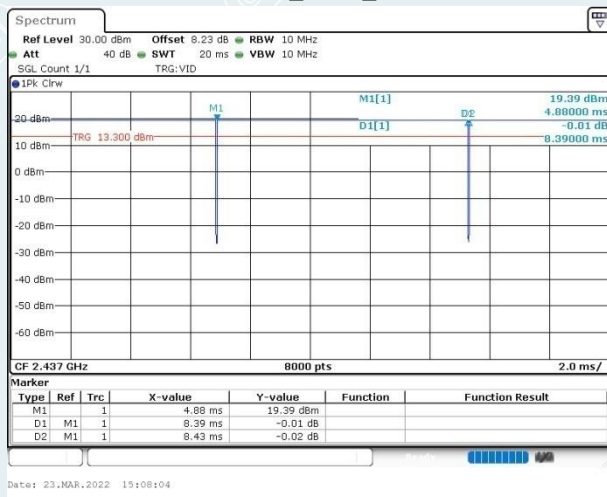
Mode	Date Rate	Frequency (MHz)	Power Setting
IEEE 802.11b	1M	2412	Default
		2437	Default
		2462	Default
IEEE 802.11g	6M	2412	Default
		2437	Default
		2462	Default
IEEE 802.11n HT20	MCS0	2412	Default
		2437	Default
		2462	Default

2.9 DUTY CYCLE

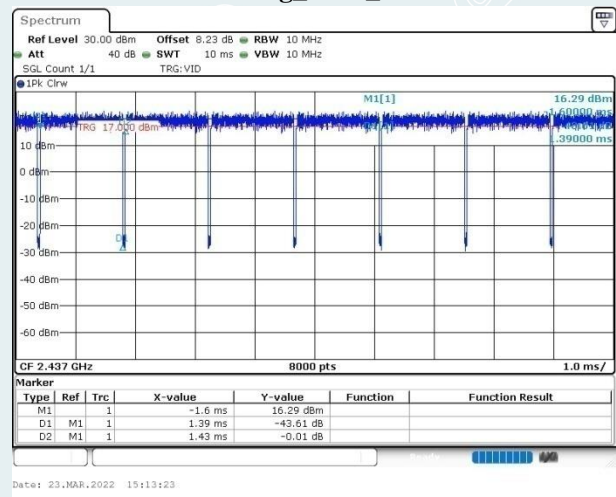
EUT Name	Tablet	Model	UCTB-27
Environmental Conditions	23.1 °C/53%RH	Test Voltage	AC 120V/60Hz
Tested By	Deng Weihao	Tested Date	2022-03-23

TestMode	Antenna	Frequency (MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	T [s]
IEEE 802.11b	Ant1	2437	8.39	8.43	99.53	0.00839
IEEE 802.11g	Ant1	2437	1.39	1.43	97.20	0.00139
IEEE 802.11n HT20	Ant1	2437	1.30	1.34	97.01	0.00130

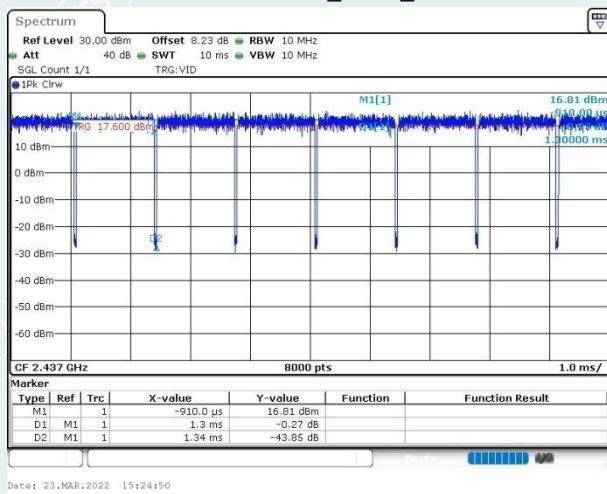
IEEE 802.11b_Ant1_2437MHz



IEEE 802.11g_Ant1_2437MHz



IEEE 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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P.C. : 518110

Tel : 0755-61180008

Fax : 0755-61180008

3.2 ACCREDITATIONS

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

USA A2LA(Certificate#:2861.01)

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,
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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		9 kHz~150kHz	2.80dB
		150kHz~10MHz	2.80dB
		10MHz~30MHz	2.20dB

Measurement	Uncertainty
RF frequency	6.0×10^{-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 $k=2$.

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4. LIST OF USED TEST EQUIPMENT AT GRGT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Conducted Emissions				
EZ-EMC	EZ	CCS-3A1-CE	/	/
EMI Receiver	R&S	ESCI	100783	2022-09-13
LISN(EUT)	R&S	ENV216	101543	2022-09-14
Radiated Spurious Emission&Restricted bands of operation				
Test S/W	EZ	CCS-03A1		
Loop Antenna	TESEQ	HLA6121	52599	2023-04-02
Test Receiver	R&S	ESR7	102444	2022-09-21
Preamplifier	EMEC	EM330	I00426	2023-03-05
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	2022-05-09
Amplifier	Tonscend	TAP184050	AP20E806071	2022-05-17
Test S/W	Tonscend	JS32-RE/2.5.1.5		
6 dB Bandwidth				
Spectrum Analyzer	R&S	FSV30	104381	2022-12-10
Output Power				
Pulse power sensor	Anristu	MA2411B	1126150	2023-03-01
Power meter	Anristu	ML2495A	1204003	2023-02-28
Conducted band edges and Spurious Emission				
Spectrum Analyzer	R&S	FSV30	104381	2022-12-10
Power Spectral Density				
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 μ 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 150 kHz 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.

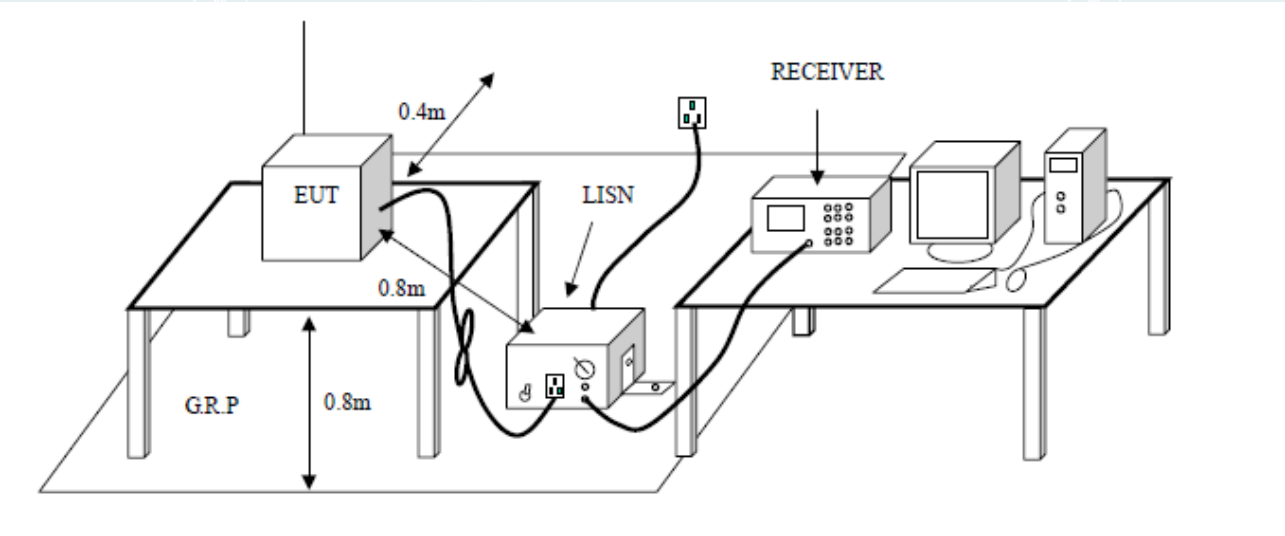
– Use serial board or connecting line to make EUT and notebook to communicate, according to the actual need to make EUT send constant frequency signal continuously.

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

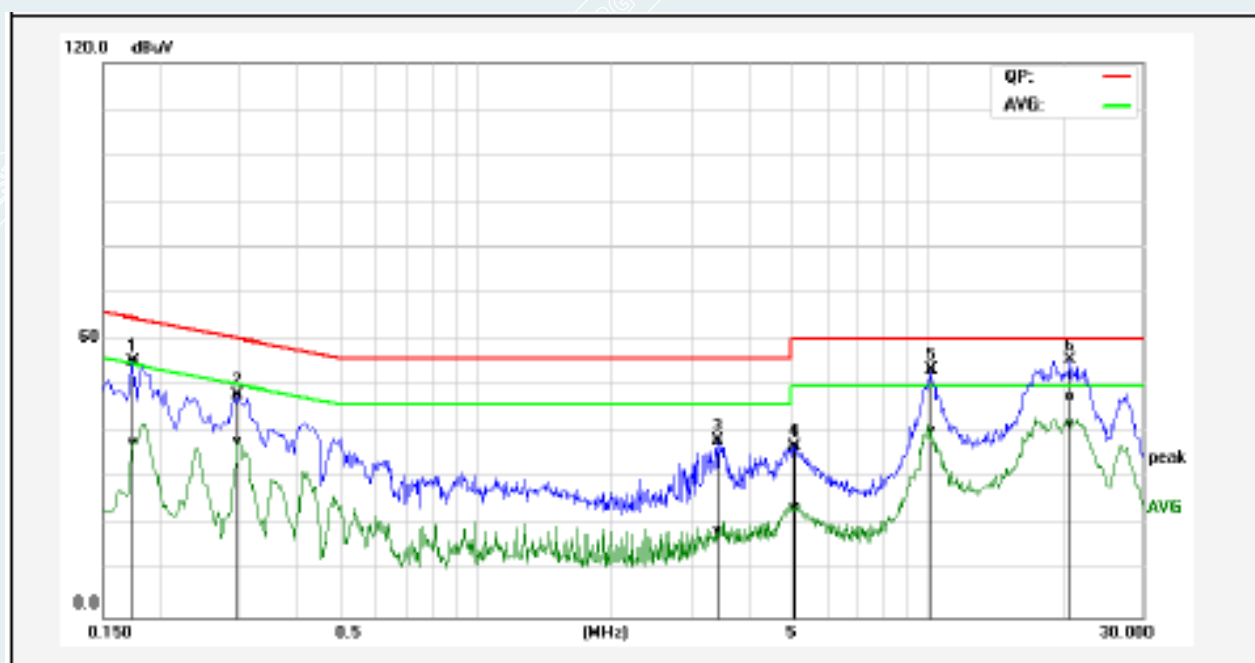
- Factor = Insertion loss of LISN + Cable Loss
- Result = Quasi-peak Reading/ Average Reading + Factor
- Limit = Limit stated in standard
- Margin = Result (dBuV) – Limit (dBuV)

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5.5 TEST RESULTS

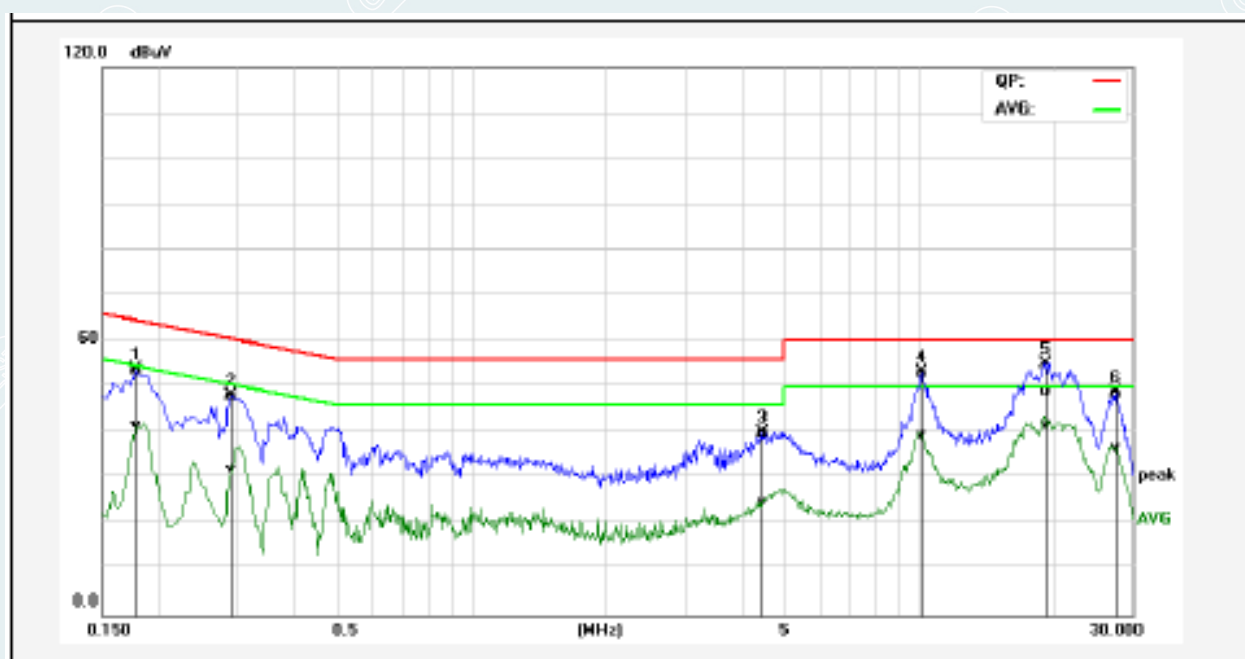
All models were pretested and the worst modes and channels were recorded in this report. (IEEE 802.11b 2437MHz).

EUT Name	Tablet	Model	UCTB-27
Environmental Conditions	22.5°C/45%RH	Test Mode	Mode 1
Tested By	Zeng Xianglong	Line	L
Tested Date	2022-02-14	Test Voltage	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	0.1740	45.73	28.42	9.53	55.26	37.95	64.76	54.77	-9.50	-16.82	Pass
2	0.2980	38.70	28.57	9.56	48.26	38.13	60.30	50.30	-12.04	-12.17	Pass
3	3.4380	28.64	8.99	9.63	38.27	18.62	56.00	46.00	-17.73	-27.38	Pass
4	5.0620	27.25	14.15	9.67	36.92	23.82	60.00	50.00	-23.08	-26.18	Pass
5*	10.2180	43.69	30.42	9.79	53.48	40.21	60.00	50.00	-6.52	-9.79	Pass
6	20.7180	37.97	32.07	9.93	47.90	42.00	60.00	50.00	-12.10	-8.00	Pass

EUT Name	Tablet	Model	UCTB-27
Environmental Conditions	22.5°C/45%RH	Test Mode	Mode 1
Tested By	Zeng Xianglong	Line	N
Tested Date	2022-02-14	Test Voltage	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	0.1780	44.25	31.99	9.54	53.79	41.53	64.57	54.58	-10.78	-13.05	Pass
2	0.2900	38.62	22.25	9.61	48.23	31.86	60.52	50.52	-12.29	-18.66	Pass
3	4.4880	30.46	14.96	9.65	40.11	24.61	56.00	46.00	-15.89	-21.39	Pass
4*	10.1580	43.32	29.73	9.80	53.12	39.53	60.00	50.00	-6.88	-10.47	Pass
5	19.1380	39.07	31.87	9.93	49.00	41.80	60.00	50.00	-11.00	-8.20	Pass
6	27.5460	38.61	26.75	10.02	48.63	36.77	60.00	50.00	-11.37	-13.23	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($\mu\text{V/m}$)	Measurement distance(m)	Quasi-peak($\text{dB}\mu\text{V/m}$)@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 $\mu\text{V/m}$).
The Avg Limit=54+20*log(3/1)=63.54 (dB $\mu\text{V/m}$).

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

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

(c).The frequency above 1GHz, for Peak detector: Set RBW=1MHz, RBW=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. Where duty cycle is defined in section 2.9. 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

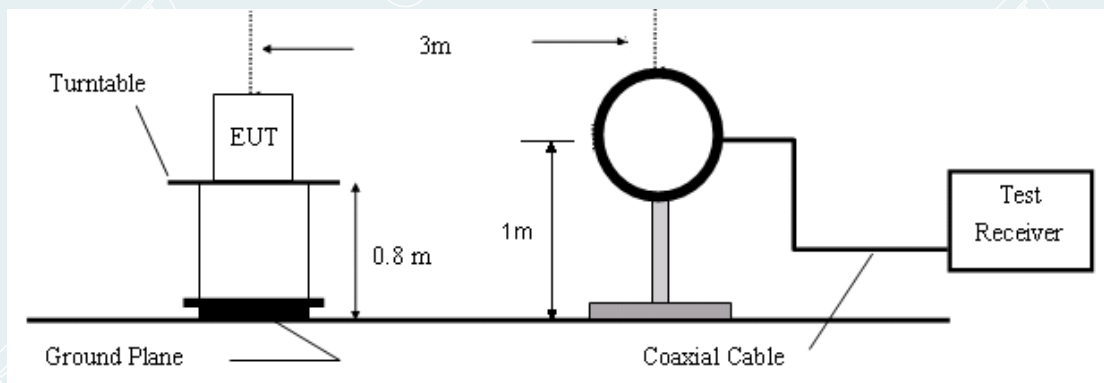


Figure 1. 9kHz to 30MHz radiated emissions test configuration

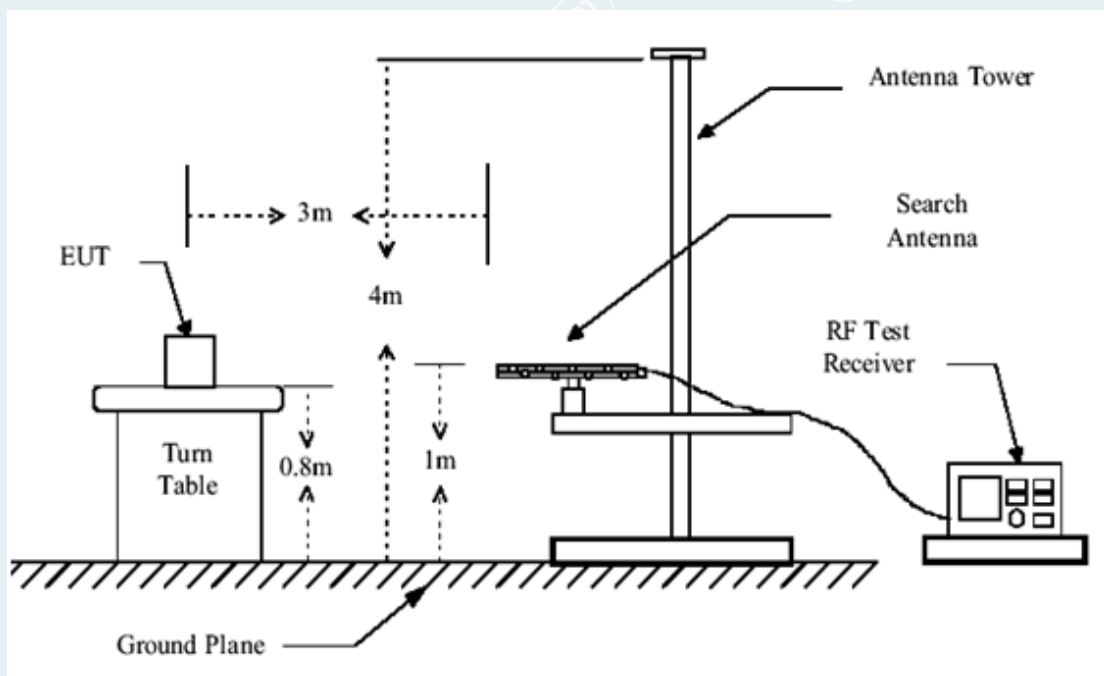


Figure 2. 30MHz to 1GHz radiated emissions test configuration

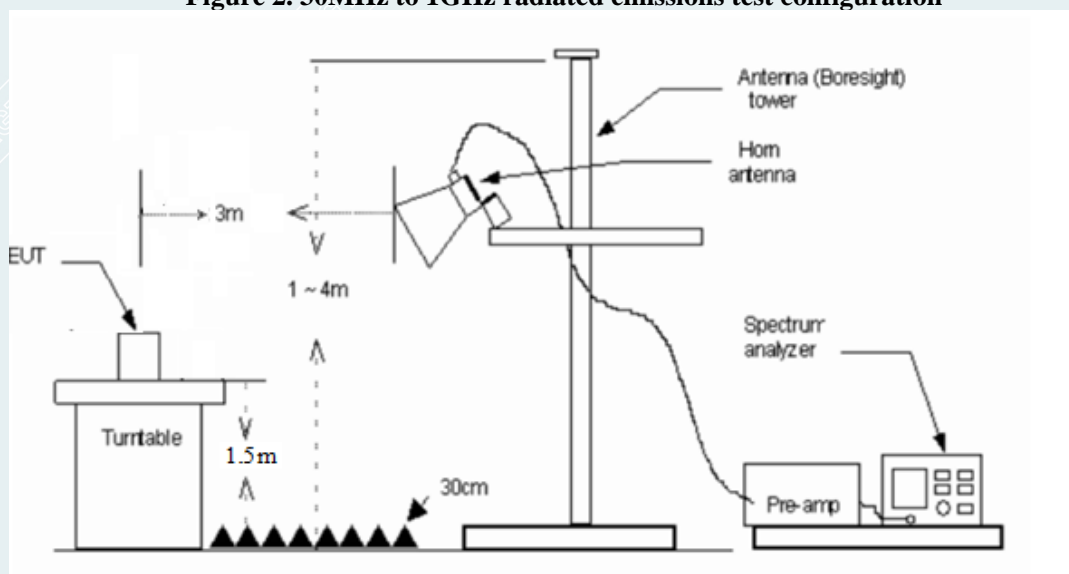


Figure 3. 1GHz to 18GHz radiated emissions test configuration

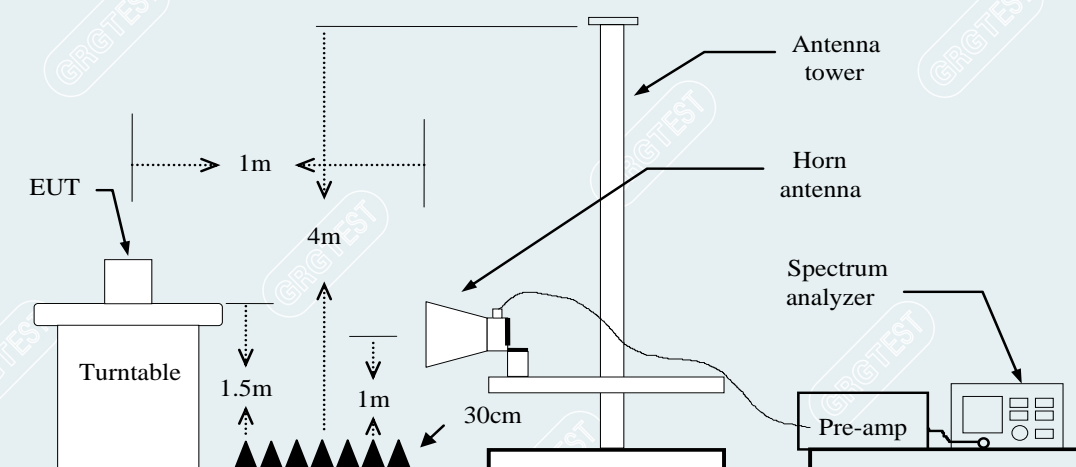


Figure 4.18GHz to 26.5GHz radiated emissions test configuration

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-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

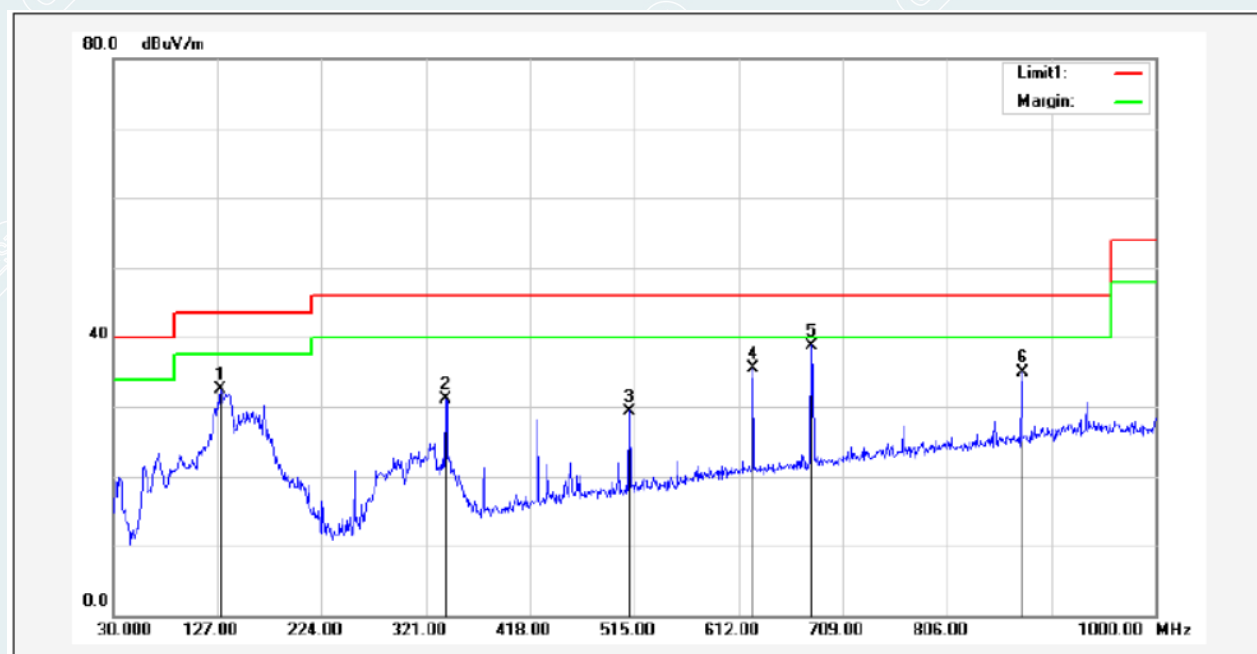
AVG = Average Reading

6.5 TEST RESULTS

Below 1GHz

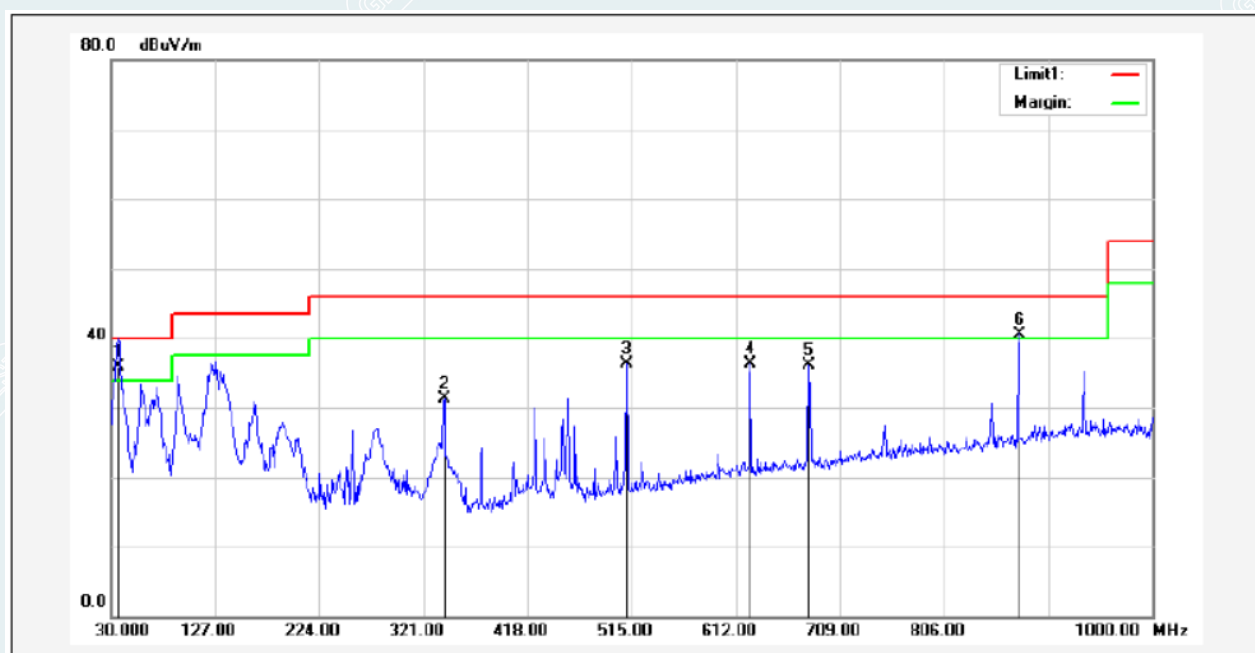
All models were pretested and the worst case (IEEE 802.11b 2412MHz) were recorded in this report.

EUT Name	Tablet	Model	UCTB-27
Environmental Conditions	23.7°C / 54 %RH	Test Voltage	AC 120V/60Hz
Test Mode	IEEE 802.11b (2412MHz)	Polarity	Horizontal
Tested By	Zeng Xianglong	Tested Date	2022-03-30



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over (dB)	Degree (deg.)	Height (cm)	Remark
1	129.9100	58.60	-26.17	32.43	43.50	-11.07	131	299	QP
2	339.4300	53.63	-22.60	31.03	46.00	-14.97	226	100	QP
3	510.1500	47.05	-17.65	29.40	46.00	-16.60	67	299	QP
4	625.5800	50.09	-14.65	35.44	46.00	-10.56	322	100	QP
5*	679.9000	52.50	-13.70	38.80	46.00	-7.20	353	100	QP
6	875.8400	45.44	-10.50	34.94	46.00	-11.06	318	100	QP

EUT Name	Tablet	Model	UCTB-27
Environmental Conditions	23.7°C / 54 %RH	Test Voltage	AC 120V/60Hz
Test Mode	IEEE 802.11b (2412MHz)	Polarity	Vertical
Tested By	Zeng Xianglong	Tested Date	2022-03-30



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over (dB)	Degree (deg.)	Height (cm)	Remark
1*	36.7900	63.66	-27.66	36.00	40.00	-4.00	342	100	QP
2	340.4000	53.94	-22.58	31.36	46.00	-14.64	180	100	QP
3	510.1500	54.03	-17.65	36.38	46.00	-9.62	0	111	QP
4	625.5800	50.97	-14.65	36.32	46.00	-9.68	0	188	QP
5	679.9000	49.88	-13.70	36.18	46.00	-9.82	355	100	QP
6l	875.8400	51.10	-10.50	40.60	46.00	-5.40	355	100	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.

Mode: IEEE 802.11b

Lowest Frequency (2412MHz)

Environment: 25°C/60%RH

Tested By:Lu Qiang

Date: 2022-01-11

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	1373.7967	60.20	36.58	-23.62	74.00	37.42	200	291	Horizontal
2	1860.6076	56.00	34.13	-21.87	74.00	39.87	100	54	Horizontal
3	2274.9094	63.47	43.18	-20.29	74.00	30.82	200	160	Horizontal
4	3187.5234	56.89	40.78	-16.11	74.00	33.22	200	241	Horizontal
5	4642.7053	51.83	41.40	-10.43	74.00	32.60	200	128	Horizontal
6	7234.2793	51.96	48.45	-3.51	74.00	25.55	100	62	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	1368.0460	63.79	40.14	-23.65	74.00	33.86	200	360	Vertical
2	2274.9094	66.82	46.53	-20.29	74.00	27.47	200	14	Vertical
3	3193.1491	61.24	45.26	-15.98	74.00	28.74	200	37	Vertical
4	4106.3883	55.06	41.23	-13.83	74.00	32.77	200	4	Vertical
5	5929.1161	52.13	44.32	-7.81	74.00	29.68	200	356	Vertical
6	7234.2793	49.82	46.31	-3.51	74.00	27.69	100	86	Vertical

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

Date: 2022-01-11
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	1186.2733	57.03	32.48	-24.55	74.00	41.52	200	136	Horizontal
2	1373.2967	59.86	36.24	-23.62	74.00	37.76	200	290	Horizontal
3	2285.6607	62.64	42.44	-20.20	74.00	31.56	200	160	Horizontal
4	3193.1491	58.08	42.10	-15.98	74.00	31.90	200	209	Horizontal
5	4642.7053	51.18	40.75	-10.43	74.00	33.25	200	1	Horizontal
6	7313.0391	50.71	46.44	-4.27	74.00	27.56	100	71	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	1373.5467	62.69	39.07	-23.62	74.00	34.93	100	176	Vertical
2	2274.9094	67.01	46.72	-20.29	74.00	27.28	200	339	Vertical
3	3193.1491	60.39	44.41	-15.98	74.00	29.59	200	37	Vertical
4	4106.3883	55.74	41.91	-13.83	74.00	32.09	200	159	Vertical
5	5930.9914	52.62	44.80	-7.82	74.00	29.20	200	356	Vertical
6	7714.3393	49.09	46.51	-2.58	74.00	27.49	100	103	Vertical

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

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

Date: 2022-01-11
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	1373.7967	60.40	36.78	-23.62	74.00	37.22	200	282	Horizontal
2	2274.9094	60.79	40.50	-20.29	74.00	33.50	200	160	Horizontal
3	3195.0244	57.58	41.64	-15.94	74.00	32.36	200	241	Horizontal
4	4655.8320	51.84	41.59	-10.25	74.00	32.41	100	45	Horizontal
5	6859.2324	49.89	44.86	-5.03	74.00	29.14	200	249	Horizontal
6	7388.0485	51.49	47.99	-3.50	74.00	26.01	100	78	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	1020.0025	59.88	34.76	-25.12	74.00	39.24	200	8	Vertical
2	1373.5467	62.44	38.82	-23.62	74.00	35.18	100	176	Vertical
3	1700.5876	58.83	36.47	-22.36	74.00	37.53	100	332	Vertical
4	2274.9094	66.85	46.56	-20.29	74.00	27.44	200	339	Vertical
5	3193.1491	60.01	44.03	-15.98	74.00	29.97	200	306	Vertical
6	5927.2409	51.91	44.11	-7.80	74.00	29.89	100	359	Vertical

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

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

Date: 2022-01-11
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	1069.7587	56.73	31.74	-24.99	74.00	42.26	200	234	Horizontal
2	1373.7967	59.56	35.94	-23.62	74.00	38.06	200	282	Horizontal
3	2275.4094	62.20	41.91	-20.29	74.00	32.09	100	127	Horizontal
4	3195.0244	57.40	41.46	-15.94	74.00	32.54	200	241	Horizontal
5	4672.7091	51.25	41.24	-10.01	74.00	32.76	100	249	Horizontal
6	7228.6536	51.69	48.24	-3.45	74.00	25.76	100	77	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	1373.5467	63.85	40.23	-23.62	74.00	33.77	100	168	Vertical
2	2125.6407	62.57	41.12	-21.45	74.00	32.88	100	339	Vertical
3	2275.1594	67.17	46.88	-20.29	74.00	27.12	200	14	Vertical
4	3193.1491	60.33	44.35	-15.98	74.00	29.65	200	46	Vertical
5	4110.1388	56.38	42.59	-13.79	74.00	31.41	200	339	Vertical
6	7228.6536	51.64	48.19	-3.45	74.00	25.81	100	102	Vertical

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

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

Date: 2022-01-11
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	1076.2595	56.75	31.78	-24.97	74.00	42.22	100	225	Horizontal
2	1373.5467	60.89	37.27	-23.62	74.00	36.73	200	290	Horizontal
3	2274.9094	62.49	42.20	-20.29	74.00	31.80	200	176	Horizontal
4	3193.1491	57.09	41.11	-15.98	74.00	32.89	200	241	Horizontal
5	4642.7053	51.67	41.24	-10.43	74.00	32.76	100	209	Horizontal
6	7740.5926	48.96	46.84	-2.12	74.00	27.16	200	53	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	1368.0460	62.53	38.88	-23.65	74.00	35.12	100	168	Vertical
2	2285.9107	65.94	45.74	-20.20	74.00	28.26	200	331	Vertical
3	3193.1491	61.01	45.03	-15.98	74.00	28.97	200	143	Vertical
4	3806.3508	55.46	41.14	-14.32	74.00	32.86	200	359	Vertical
5	5344.0430	50.65	41.07	-9.58	74.00	32.93	100	346	Vertical
6	8831.9790	47.59	46.95	-0.64	74.00	27.05	200	290	Vertical

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

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

Date: 2022-01-11
 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	1373.7967	59.73	36.11	-23.62	74.00	37.89	200	288	Horizontal
2	2275.1594	61.67	41.38	-20.29	74.00	32.62	200	158	Horizontal
3	3187.5234	57.92	41.81	-16.11	74.00	32.19	200	241	Horizontal
4	4196.3996	52.80	39.69	-13.11	74.00	34.31	200	359	Horizontal
5	4751.4689	50.32	40.86	-9.46	74.00	33.14	200	306	Horizontal
6	7382.4228	50.64	47.11	-3.53	74.00	26.89	100	86	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	1373.2967	62.49	38.87	-23.62	74.00	35.13	100	167	Vertical
2	2275.1594	66.69	46.40	-20.29	74.00	27.60	200	14	Vertical
3	3193.1491	59.76	43.78	-15.98	74.00	30.22	200	38	Vertical
4	4104.5131	56.82	42.98	-13.84	74.00	31.02	200	1	Vertical
5	5921.6152	52.21	44.44	-7.77	74.00	29.56	200	1	Vertical
6	7749.9687	47.94	45.99	-1.95	74.00	28.01	200	266	Vertical

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

Mode: IEEE 802.11n HT20
 Lowest Frequency (2412MHz)
 Environment: 25°C/60%RH
 Tested By:Lu Qiang

Date: 2022-01-11
 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	1125.5157	57.37	32.64	-24.73	74.00	41.36	200	346	Horizontal
2	1373.7967	59.92	36.30	-23.62	74.00	37.70	200	289	Horizontal
3	2274.9094	61.49	41.20	-20.29	74.00	32.80	200	159	Horizontal
4	3193.1491	57.73	41.75	-15.98	74.00	32.25	200	241	Horizontal
5	4545.1931	52.56	40.74	-11.82	74.00	33.26	100	111	Horizontal
6	7238.0298	52.80	49.25	-3.55	74.00	24.75	100	62	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	1019.7525	60.28	35.16	-25.12	74.00	38.84	200	14	Vertical
2	1373.7967	62.67	39.05	-23.62	74.00	34.95	100	175	Vertical
3	2275.4094	66.77	46.48	-20.29	74.00	27.52	200	338	Vertical
4	3196.8996	59.92	44.02	-15.90	74.00	29.98	200	323	Vertical
5	4106.3883	55.09	41.26	-13.83	74.00	32.74	200	323	Vertical
6	7991.8740	49.08	47.57	-1.51	74.00	26.43	200	298	Vertical

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

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

Date: 2022-01-11
 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	1373.5467	60.00	36.38	-23.62	74.00	37.62	200	289	Horizontal
2	2275.4094	61.56	41.27	-20.29	74.00	32.73	200	159	Horizontal
3	3196.8996	57.36	41.46	-15.90	74.00	32.54	200	208	Horizontal
4	4196.3996	52.51	39.40	-13.11	74.00	34.60	100	352	Horizontal
5	4760.8451	50.62	41.09	-9.53	74.00	32.91	100	306	Horizontal
6	7144.2680	50.14	46.73	-3.41	74.00	27.27	200	208	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	1368.5461	64.47	40.82	-23.65	74.00	33.18	200	1	Vertical
2	2285.9107	67.55	47.35	-20.20	74.00	26.65	200	338	Vertical
3	3193.1491	60.59	44.61	-15.98	74.00	29.39	200	323	Vertical
4	4098.8874	56.14	42.25	-13.89	74.00	31.75	200	8	Vertical
5	5927.2409	51.94	44.14	-7.80	74.00	29.86	200	352	Vertical
6	7224.9031	49.29	45.89	-3.40	74.00	28.11	200	54	Vertical

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

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

Date: 2022-01-11
 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	1374.0468	60.27	36.65	-23.62	74.00	37.35	200	291	Horizontal
2	2286.1608	62.59	42.39	-20.20	74.00	31.61	200	168	Horizontal
3	3193.1491	58.42	42.44	-15.98	74.00	31.56	200	234	Horizontal
4	3485.6857	54.56	39.14	-15.42	74.00	34.86	200	193	Horizontal
5	4646.4558	50.98	40.60	-10.38	74.00	33.40	200	201	Horizontal
6	7389.9237	50.48	46.99	-3.49	74.00	27.01	100	71	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	1373.7967	64.36	40.74	-23.62	74.00	33.26	100	176	Vertical
2	2124.8906	60.44	38.99	-21.45	74.00	35.01	200	45	Vertical
3	2285.4107	66.65	46.45	-20.20	74.00	27.55	200	14	Vertical
4	3195.0244	60.14	44.20	-15.94	74.00	29.80	200	315	Vertical
5	4100.7626	55.65	41.78	-13.87	74.00	32.22	200	323	Vertical
6	7148.0185	48.98	45.68	-3.30	74.00	28.32	100	356	Vertical

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

18GHz-26.5GHz:

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-scan all modes and recorded the worst case results in this report (IEEE 802.11b)

Mode: IEEE 802.11b

Lowest Frequency (2412MHz)

Environment: 25°C/60%RH

Tested By:Lu Qiang

Date: 2022-01-18

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	18323.0000	57.20	45.64	-11.56	83.54	37.90	150	250	Horizontal
2	20549.1500	55.90	45.44	-10.46	83.54	38.10	150	270	Horizontal
3	21744.2500	54.92	44.98	-9.94	83.54	38.56	150	350	Horizontal
4	23250.8750	55.11	46.29	-8.82	83.54	37.25	150	320	Horizontal
5	24661.0250	54.40	46.29	-8.11	83.54	37.25	150	350	Horizontal
6	26300.6750	53.97	46.28	-7.69	83.54	37.26	150	330	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	18151.3000	57.10	45.49	-11.61	83.54	38.05	150	40	Vertical
2	18945.2000	57.21	46.06	-11.15	83.54	37.48	150	360	Vertical
3	20666.0250	56.61	46.22	-10.39	83.54	37.32	150	70	Vertical
4	23268.3000	55.81	47.00	-8.81	83.54	36.54	150	260	Vertical
5	25256.4500	54.41	46.74	-7.67	83.54	36.80	150	50	Vertical
6	26235.6500	54.70	46.86	-7.84	83.54	36.68	150	140	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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Mode: IEEE 802.11b
 Middle Frequency (2437MHz)
 Environment: 25°C/60%RH
 Tested By:Lu Qiang

Date: 2022-01-18
 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	18078.2000	56.35	44.72	-11.63	83.54	38.82	150	320	Horizontal
2	20553.4000	56.29	45.83	-10.46	83.54	37.71	150	180	Horizontal
3	21762.5250	54.89	44.95	-9.94	83.54	38.59	150	330	Horizontal
4	23240.6750	55.28	46.46	-8.82	83.54	37.08	150	350	Horizontal
5	25008.6750	54.24	46.36	-7.88	83.54	37.18	150	80	Horizontal
6	26364.0000	53.09	45.54	-7.55	83.54	38.00	150	250	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	18137.7000	56.94	45.32	-11.62	83.54	38.22	150	237	Vertical
2	20581.4500	55.94	45.50	-10.44	83.54	38.04	150	94	Vertical
3	21190.4750	56.40	46.12	-10.28	83.54	37.42	150	71	Vertical
4	23251.3000	55.69	46.87	-8.82	83.54	36.67	150	38	Vertical
5	25084.7500	54.16	46.38	-7.78	83.54	37.16	150	270	Vertical
6	26311.7250	53.95	46.28	-7.67	83.54	37.26	150	149	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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Mode: IEEE 802.11b
 Highest Frequency (2462MHz)
 Environment: 25°C/60%RH
 Tested By:Lu Qiang

Date: 2022-01-18
 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	18319.6000	57.90	46.34	-11.56	83.54	37.20	150	7	Horizontal
2	20535.5500	57.94	47.47	-10.47	83.54	36.07	150	355	Horizontal
3	21237.2250	57.82	47.57	-10.25	83.54	35.97	150	213	Horizontal
4	23203.2750	55.10	46.26	-8.84	83.54	37.28	150	301	Horizontal
5	24695.8750	54.36	46.26	-8.10	83.54	37.28	150	224	Horizontal
6	25426.0250	54.17	46.39	-7.78	83.54	37.15	150	224	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	18028.9000	57.23	45.58	-11.65	83.54	37.96	150	5	Vertical
2	19443.3000	56.63	45.68	-10.95	83.54	37.86	150	189	Vertical
3	20568.2750	56.03	45.58	-10.45	83.54	37.96	150	177	Vertical
4	21618.0250	55.05	45.13	-9.92	83.54	38.41	150	5	Vertical
5	23879.0250	54.20	45.82	-8.38	83.54	37.72	150	299	Vertical
6	25843.8000	53.61	45.43	-8.18	83.54	38.11	150	177	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

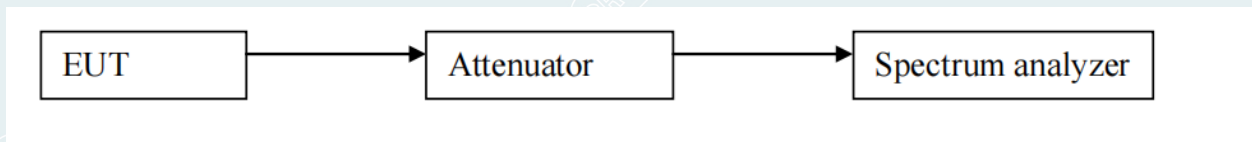
7.1 LIMITS

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



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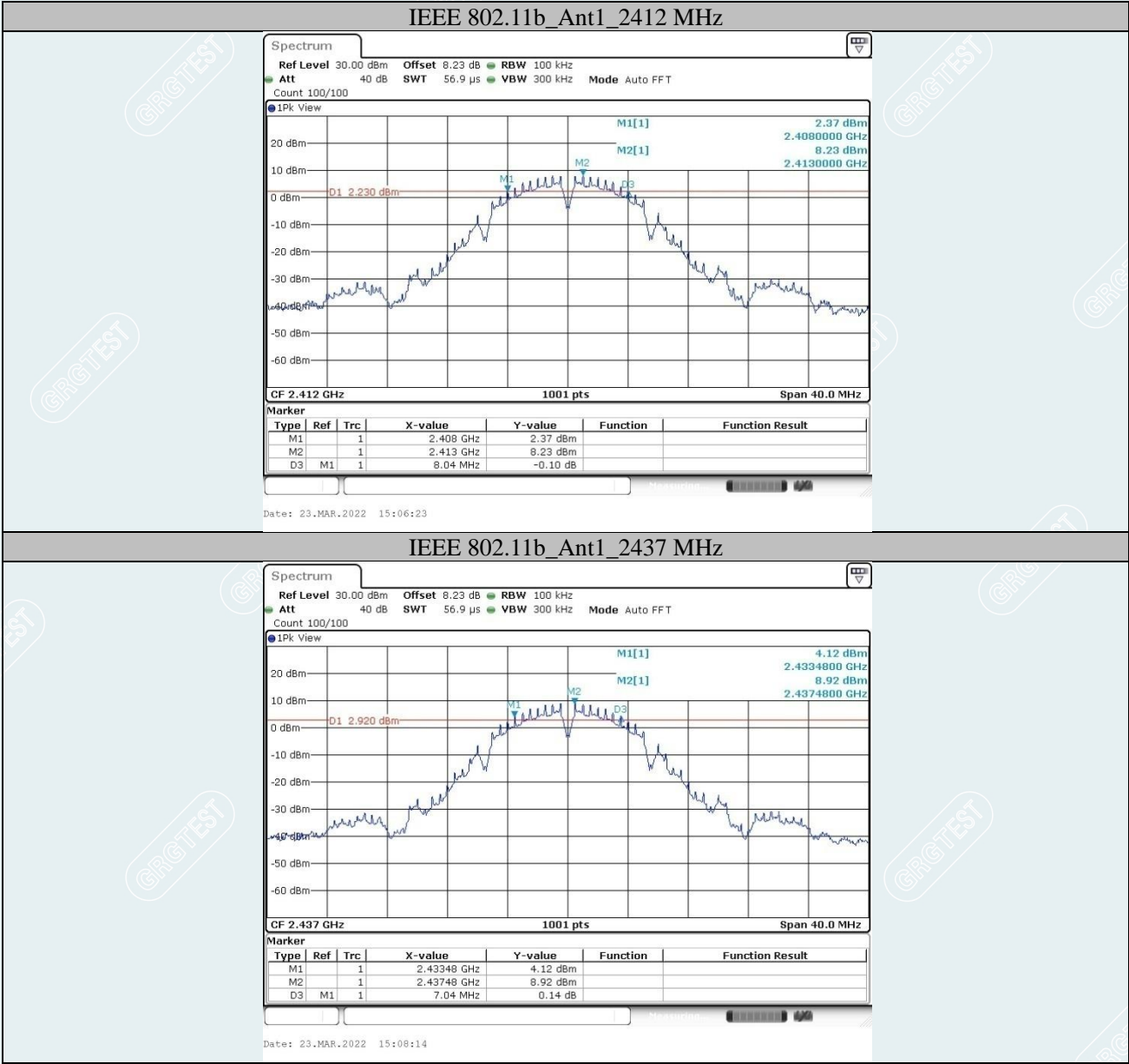
7.4 TEST RESULTS

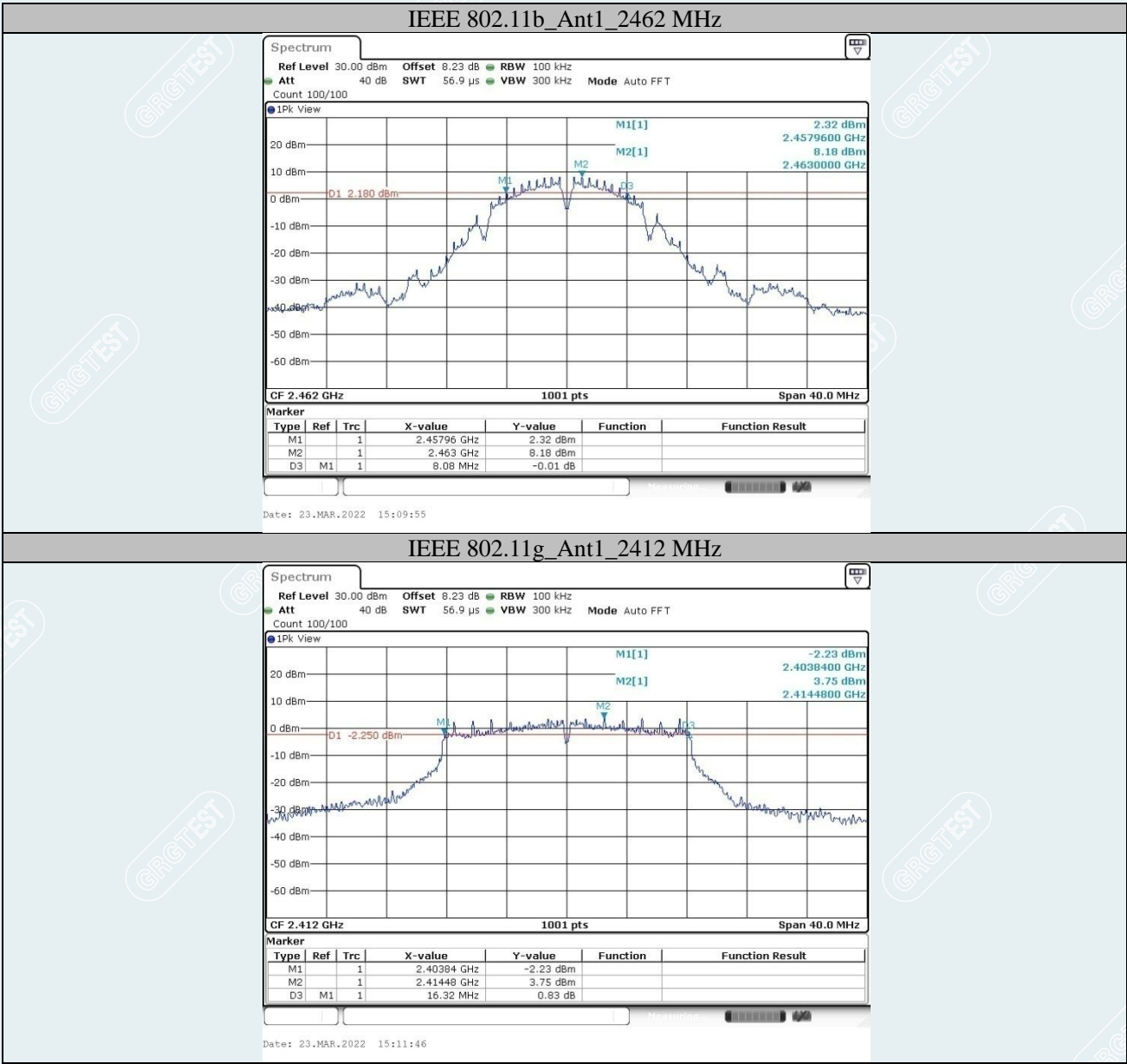
Environment: 23.1℃/53%RH
Tested By:Deng Weihao

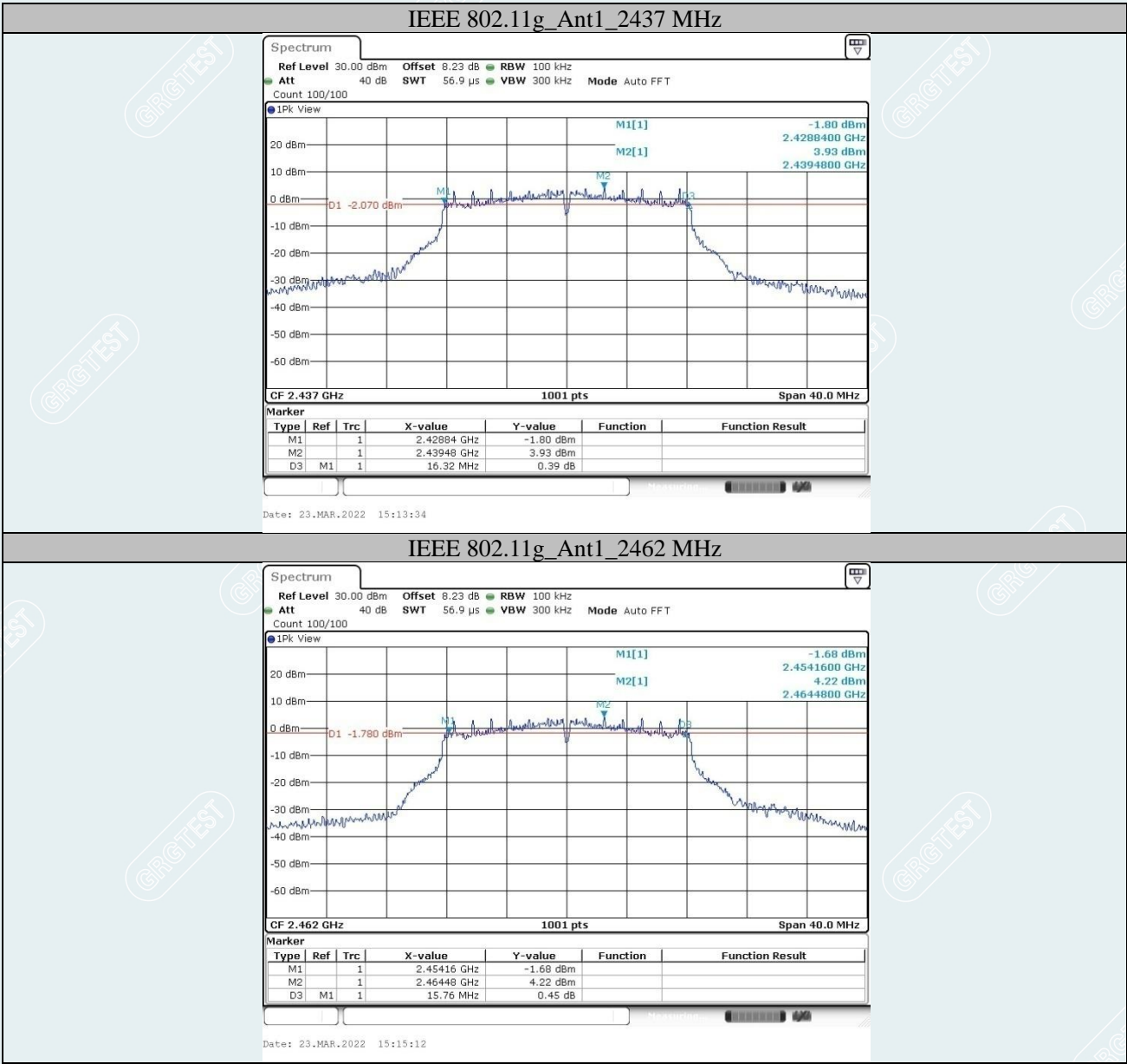
Voltage:AC 120V/60Hz
Date: 2022-03-23

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	Limit[MHz]	Verdict
IEEE 802.11b	Ant1	2412	8.04	≥0.5	PASS
		2437	7.04	≥0.5	PASS
		2462	8.08	≥0.5	PASS
IEEE 802.11g	Ant1	2412	16.32	≥0.5	PASS
		2437	16.32	≥0.5	PASS
		2462	15.76	≥0.5	PASS
IEEE 802.11n HT20	Ant1	2412	17.28	≥0.5	PASS
		2437	17.28	≥0.5	PASS
		2462	16.44	≥0.5	PASS

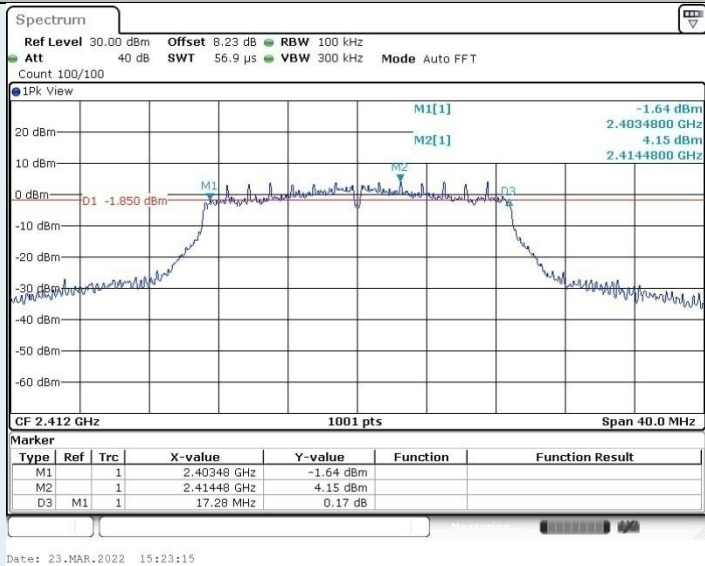
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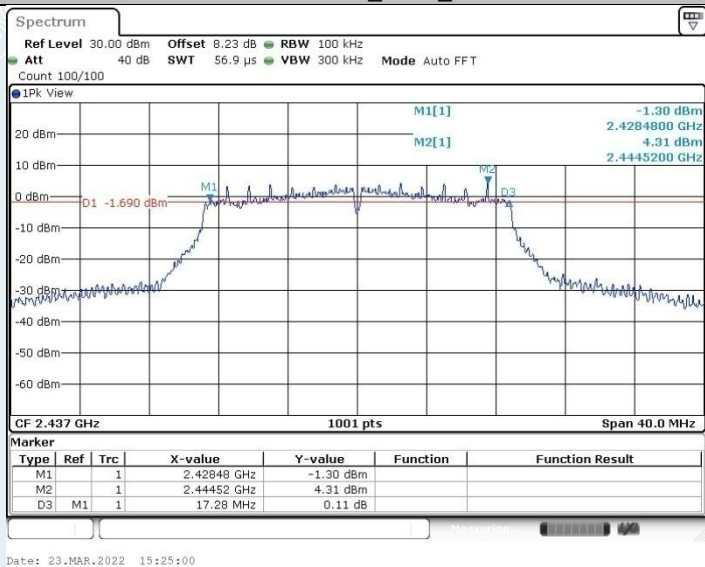


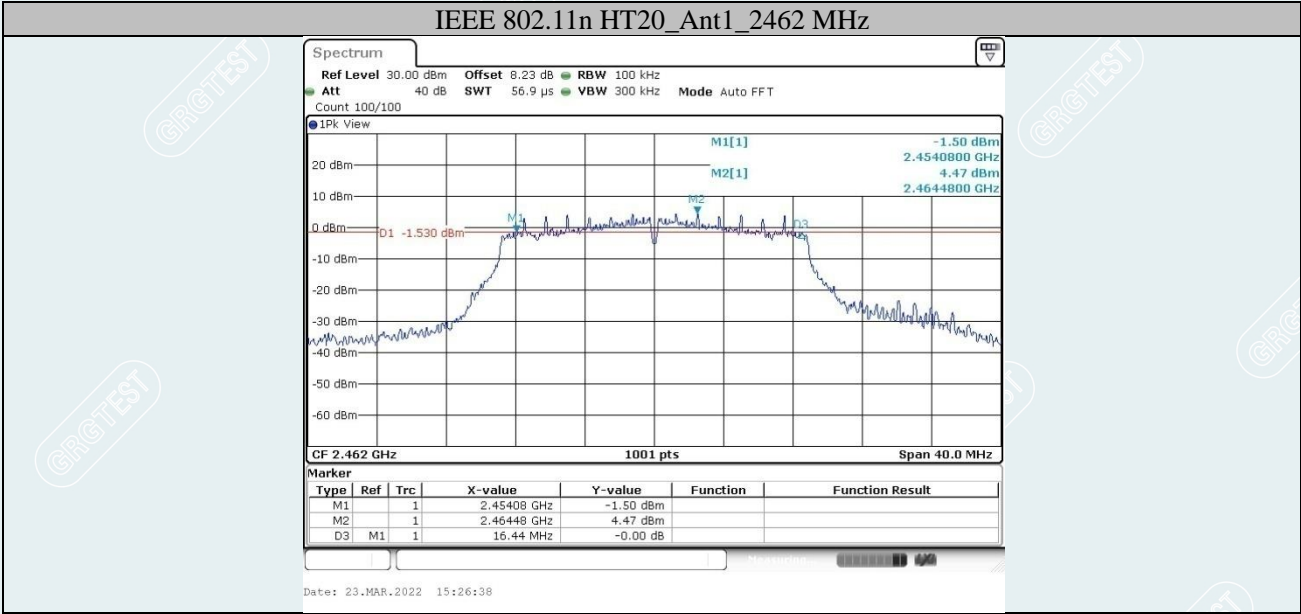


IEEE 802.11n HT20_Ant1_2412 MHz



IEEE 802.11n HT20_Ant1_2437 MHz





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8. MAXIMUM PEAK OUTPUT POWER

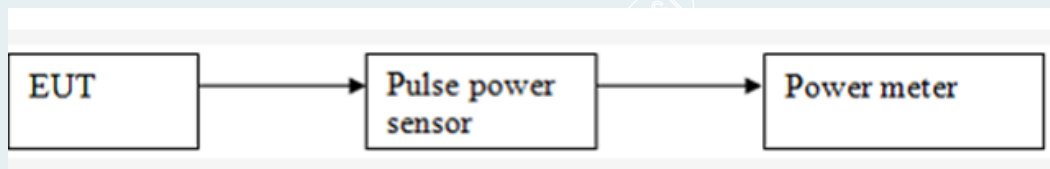
8.1 LIMITS

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: 23.1°C/53%RH
Tested By:Deng Weihao

Voltage:AC 120V/60Hz
Date: 2022-03-23

IEEE 802.11b Mode:

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Result
1	2412	15.96	Peak	30dBm	Pass
6	2437	16.32			Pass
11	2462	16.24			Pass

IEEE 802.11g Mode:

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)	Peak / AVG	Limit	Result
1	2412	15.23	Peak	30dBm	Pass
6	2437	15.42			Pass
11	2462	15.45			Pass

IEEE 802.11n HT20 Mode:

Channel No.	Frequency (MHz)	Measured Channel Power (dBm)	Peak/ AVG	Limit	Result
1	2412	15.26	Peak	30dBm	Pass
6	2437	15.53			Pass
11	2462	15.47			Pass

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9. POWER SPECTRAL DENSITY

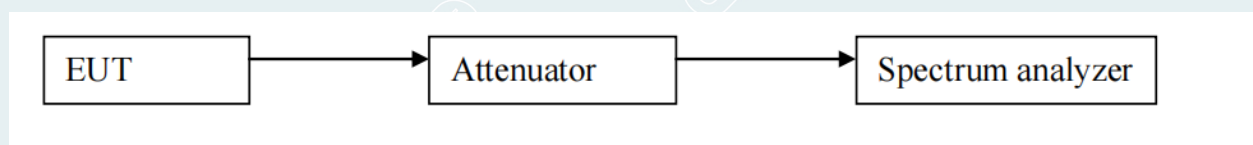
9.1 LIMITS

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: 23.1℃/53%RH

Tested By:Deng Weihao

Voltage:AC 120V/60Hz

Date: 2022-03-23

IEEE 802.11b Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	2412	-14.93	8.00	Pass
6	2437	-14.28	8.00	Pass
11	2462	-14.50	8.00	Pass

IEEE 802.11g Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	2412	-13.04	8.00	Pass
6	2437	-13.09	8.00	Pass
11	2462	-12.87	8.00	Pass

IEEE 802.11n HT20 Mode:

Channel No.	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	2412	-16.58	8.00	Pass
6	2437	-16.50	8.00	Pass
11	2462	-16.09	8.00	Pass

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

