FCC Part 15.407 Test Report
FCC ID: 2A7RV-DPVRULTRA

Applicant:	Lexiang Technology Co.,LTD
Address:	Room 201, East Wing C, No.23 East Guangfu Street, Houtang Community, Jiangbei Street, Dongyang, Jinhua, Zhejiang
Manufacturer:	Lexiang Technology Co.,LTD
Address:	Room 201, East Wing C, No.23 East Guangfu Street, Houtang Community, Jiangbei Street, Dongyang, Jinhua, Zhejiang
EUT:	DPVR VR All-in-one Headset
Trade Mark:	N/A
Model Number:	DPVR P1 PRO-4K(ULTRA)
Date of Receipt:	Jun. 20, 2022
Test Date:	Jun. 20, 2022 – Jul. 05, 2022
Date of Report:	Jul. 05, 2022
Prepared By:	Shenzhen DL Testing Technology Co., Ltd.
Address:	101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
Applicable Standards:	FCC PART 15.407 ANSI C63.10:2013
Test Result:	Pass
Report Number:	DL-20220702034E

Prepared (Test Engineer):	Pxing Huang
Reviewer (Supervisor):	Jack Bu
Approved (Manager):	Jade Yang

This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.407) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.407(b), 15.209	Radiated Spurious Emission	PASS	
15.407 (b)	Band Edge Emission	PASS	
15.407 (a)	Average Output Power	PASS	
15.407 (a)	Power Spectral Density	PASS	
15.407(a) 15.407(e)	6dB bandwidth and 99%dB Bandwidth	PASS	
15.407(g)	Frequency Stability	PASS	
15.407(c)	Transmission in case of Absence of Information	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

1.1 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±2.56dB
2	RF power,conducted	±0.42dB
3	Spurious emissions,conducted	±2.76dB
4	All emissions,radiated(<1G)	±3.65dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5℃
7	Humidity	±2%
8	Frequency Tolerance	±2.49dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product Name:	DPVR VR All-in-one Headset
Trademark	N/A
Model No.:	DPVR P1 PRO-4K(ULTRA)
Model Difference	N/A
Operation Frequency:	5745-5825MHz(802.11a/n/ac(HT20)) 5755-5795MHz(802.11n/ac(HT40)) 5775MHz (802.11ac(HT80))
Channel numbers:	See channel list
Channel separation:	20MHz/40MHz/80MHz
Modulation technology:	64QAM, 16QAM, QPSK, BPSK for OFDM
Rate of Transmitter	802.11a: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps 802.11n: Up to 500Mbps
Antenna Type:	Internal antenna
Antenna gain:	1.2dBi
Power supply:	DC 5V from charger DC 3.8V from battery

Note:

1.For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.The EUT's all information provided by client.

2. Channel List

Channel List for 802.11a/n(HT20)/ac(HT20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

Channel List for 802.11n(HT40)/ac(HT40)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

Channel List for 802.11ac(HT80)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
155	5775	/	/

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

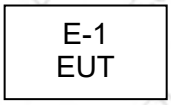
Description		
Pretest Mode	Channel	Band 4
Mode 1	802.11a/n/acHT20	CH149, CH157, CH165
Mode 2	802.11n/acHT40	CH151, CH159
Mode 3	802.11acHT80	CH155
Mode 4	Link Mode	

For Radiated Emission		
Pretest Mode	Channel	Band 4
Mode 1	802.11a/n/acHT20	CH149, CH157, CH165
Mode 2	802.11n/acHT40	CH151, CH159
Mode 3	802.11acHT80	CH155
Mode 4	Link Mode	

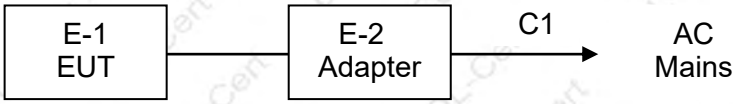
Note: 1. The measurements are performed at the highest, middle, lowest available channels.
2. During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.
3. A new fully charged battery was used for testing during the test.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Spurious Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Model/Type No.	Series No.	Note
E-1	DPVR VR All-in-one Headset	DPVR P1 PRO-4K(ULTRA)	N/A	EUT
E-2	Adapter	HW-0502000E	N/A	

Item	Shielded Type	Ferrite Core	Length	Note

Note:
(1) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the end product.

Max output power Setting				
Test software Version	Test program: AXDN-0002.0			
Mode	802.11a	802.11n HT20	802.11n HT40	802.11ac HT20/HT40/HT80
Data Rate	6Mbps	MSC0	MSC0	MSC0
Power Setting of Softwave	60	60	66	66

2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation test, Band-edge test and 6db bandwidth test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4408B	MY50140780	Nov. 06, 2021	Nov. 05, 2022
2	Test Receiver (9kHz-7GHz)	R&S	ESRP7	101393	Nov. 06, 2021	Nov. 05, 2022
3	Bilog Antenna (30MHz-1GHz)	R&S	VULB9162	00306	Nov. 06, 2021	Nov. 05, 2022
4	Horn Antenna (1GHz-18GHz)	Schwarzbeck	BBHA9120D	02139	Nov. 06, 2021	Nov. 05, 2022
5	Horn Antenna (18GHz-40GHz)	A.H. Systems	SAS-574	588	Nov. 06, 2021	Nov. 05, 2022
6	Amplifier (9KHz-6GHz)	Schwarzbeck	BBV9743B	00153	Nov. 06, 2021	Nov. 05, 2022
7	Amplifier (1GHz-18GHz)	EMEC	EM01G8GA	00270	Nov. 06, 2021	Nov. 05, 2022
8	Amplifier (18GHz-40GHz)	Quanjuda	DLE-161	97	Nov. 06, 2021	Nov. 05, 2022
9	Loop Antenna (9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Nov. 06, 2021	Nov. 05, 2022
10	RF cables1 (9kHz-1GHz)	ChengYu	966	004	Nov. 06, 2021	Nov. 05, 2022
11	RF cables2 (1GHz-40GHz)	ChengYu	966	003	Nov. 06, 2021	Nov. 05, 2022
12	Antenna connector	Florida RF Labs	N/A	RF 01#	Nov. 06, 2021	Nov. 05, 2022
13	Power probe	KEYSIGHT	U2021XA	MY55210018	Nov. 06, 2021	Nov. 05, 2022
14	Signal Analyzer 9kHz-26.5GHz	Agilent	N9020A	MY55370280	Nov. 06, 2021	Nov. 05, 2022
15	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	Nov. 06, 2021	Nov. 05, 2022
16	D.C. Power Supply	LongWei	PS-305D	010964729	Nov. 06, 2021	Nov. 05, 2022

Conduction Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	843 Shielded Room	ChengYu	843 Room	843	Nov. 25, 2019	Nov. 24, 2022
2	EMI Receiver	R&S	ESR	101421	Nov. 06, 2021	Nov. 05, 2022
3	LISN	R&S	ENV216	102417	Nov. 06, 2021	Nov. 05, 2022
4	843 Cable 1#	ChengYu	CE Cable	001	Nov. 06, 2021	Nov. 05, 2022

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ_EMC	EMC-CON 3A1.1
2	EMC radiation test system	FALA	EZ_EMC	FA-03A2
3	RF test system	MAIWEI	MTS8310	2.0.0.0
4	RF communication test system	MAIWEI	MTS8200	2.0.0.0

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz	Limit (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0 5	66 - 56 *	56 - 46 *	FCC
0.5 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

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

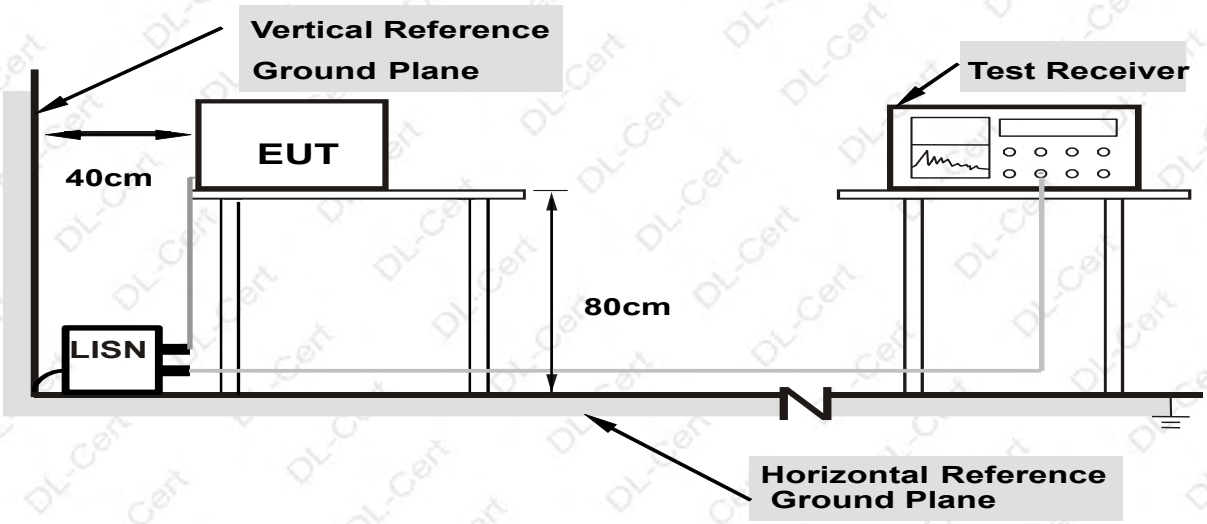
d. LISN at least 80 cm from nearest part of EUT chassis.

e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



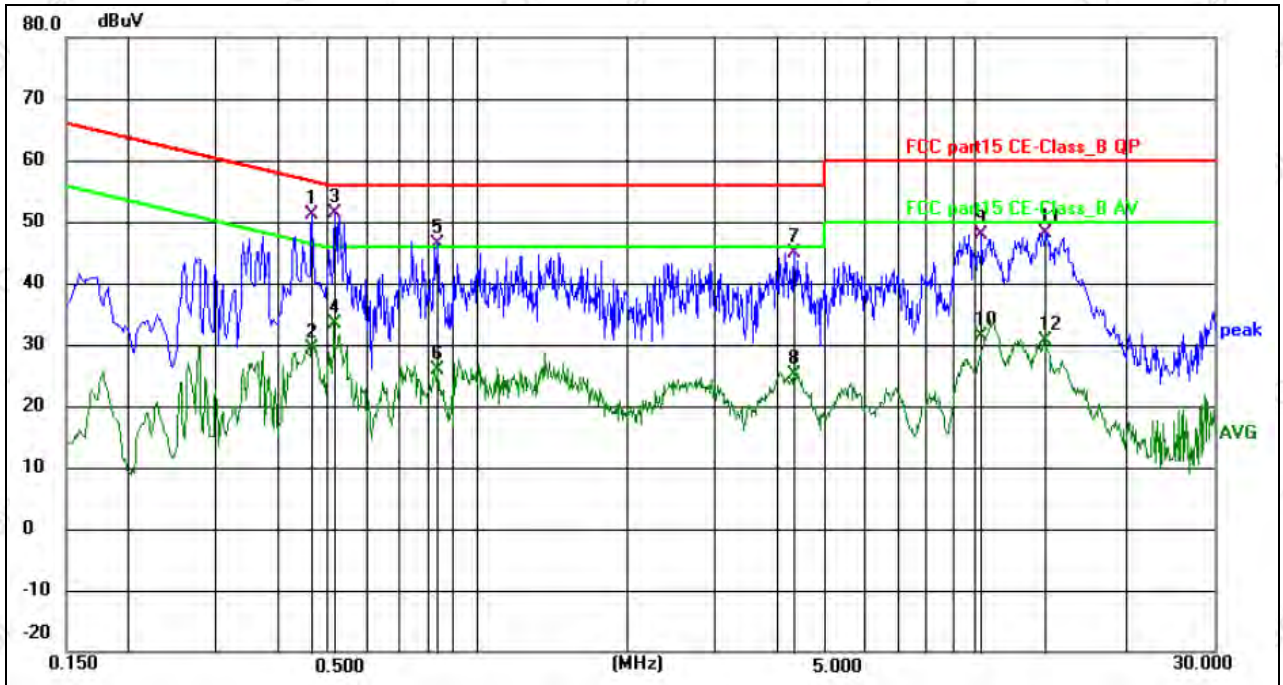
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.
We pretest AC 120V and AC 230V, the worst voltage was AC 120V and the data recording in the report.

3.1.6 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 4

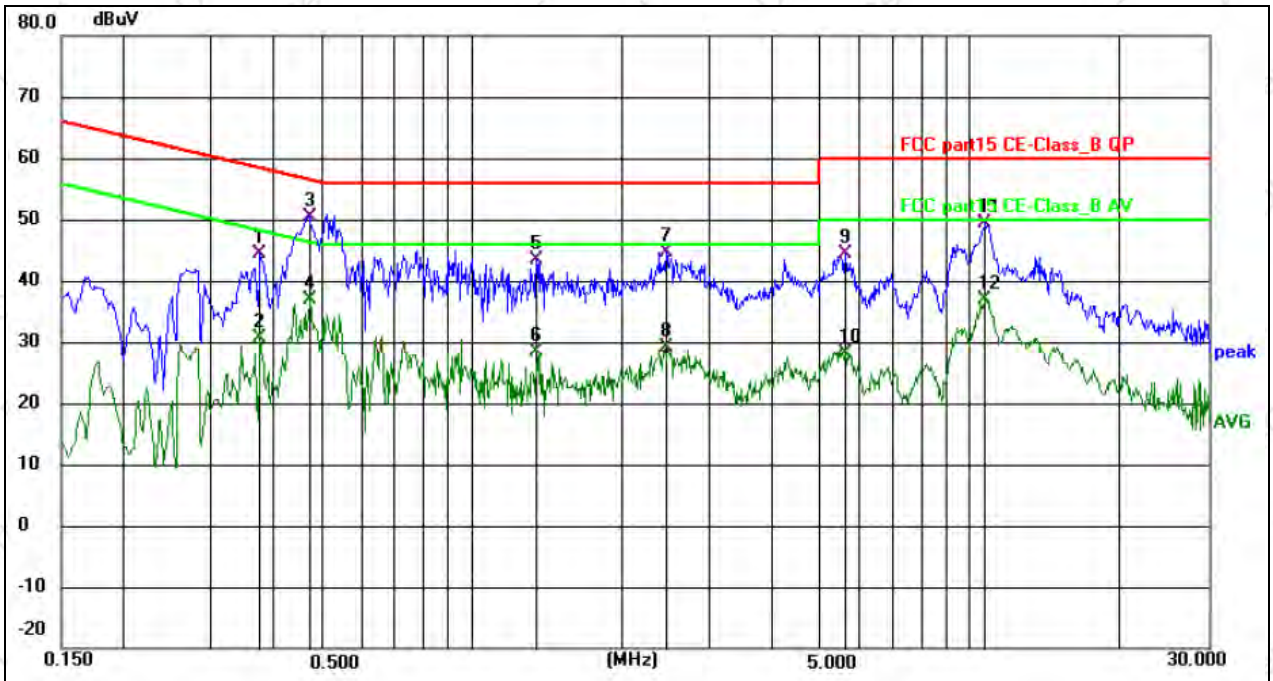


Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.465000	41.96	9.17	51.13	56.60	-5.47	QP	P	
2	0.465000	20.15	9.17	29.32	46.60	-17.28	AVG	P	
3 *	0.519000	42.16	9.21	51.37	56.00	-4.63	QP	P	
4	0.519000	24.28	9.21	33.49	46.00	-12.51	AVG	P	
5	0.833600	36.98	9.34	46.32	56.00	-9.68	QP	P	
6	0.833600	16.53	9.34	25.87	46.00	-20.13	AVG	P	
7	4.317000	35.24	9.63	44.87	56.00	-11.13	QP	P	
8	4.317000	15.58	9.63	25.21	46.00	-20.79	AVG	P	
9	10.275000	37.88	9.89	47.77	60.00	-12.23	QP	P	
10	10.275000	21.40	9.89	31.29	50.00	-18.71	AVG	P	
11	13.798500	38.15	10.07	48.22	60.00	-11.78	QP	P	
12	13.798500	20.60	10.07	30.67	50.00	-19.33	AVG	P	

Temperature:	25 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 4



Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.375000	35.12	9.19	44.31	58.39	-14.08	QP	P	
2	0.375000	21.39	9.19	30.58	48.39	-17.81	AVG	P	
3 *	0.469200	41.16	9.34	50.50	56.53	-6.03	QP	P	
4	0.469200	27.42	9.34	36.76	46.53	-9.77	AVG	P	
5	1.346700	33.73	9.56	43.29	56.00	-12.71	QP	P	
6	1.346700	18.93	9.56	28.49	46.00	-17.51	AVG	P	
7	2.449500	34.86	9.83	44.69	56.00	-11.31	QP	P	
8	2.449500	19.38	9.83	29.21	46.00	-16.79	AVG	P	
9	5.599400	34.65	9.82	44.47	60.00	-15.53	QP	P	
10	5.599400	18.28	9.82	28.10	50.00	-21.90	AVG	P	
11	10.680000	39.36	10.10	49.46	60.00	-10.54	QP	P	
12	10.680000	26.81	10.10	36.91	50.00	-13.09	AVG	P	

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40GHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
h. Test the EUT in the lowest channel, the middle channel, the Highest channel

Note:

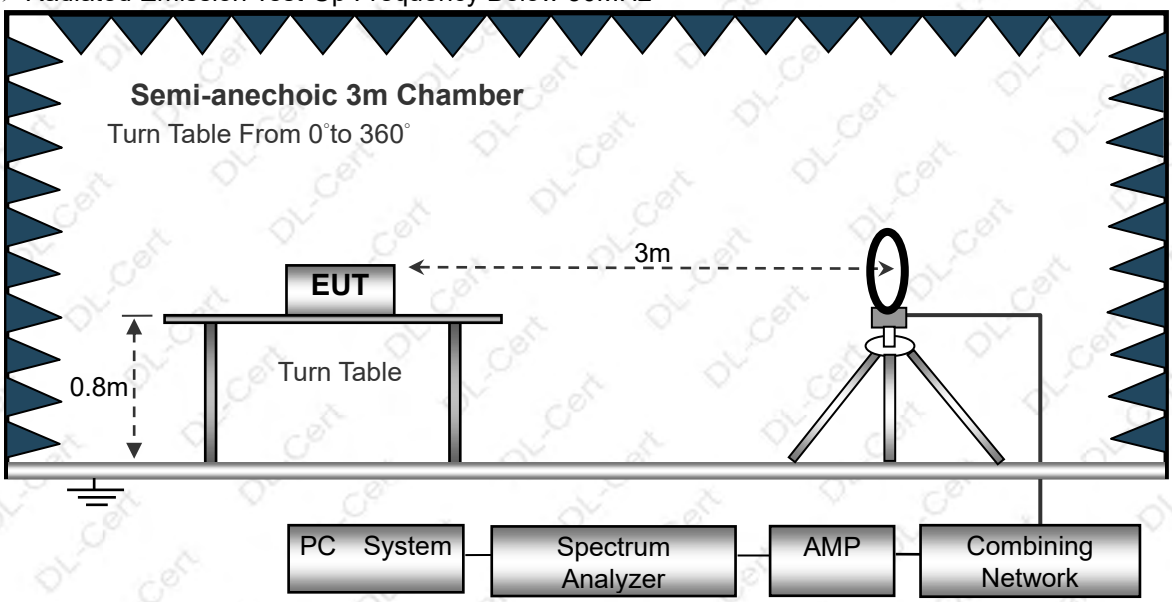
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

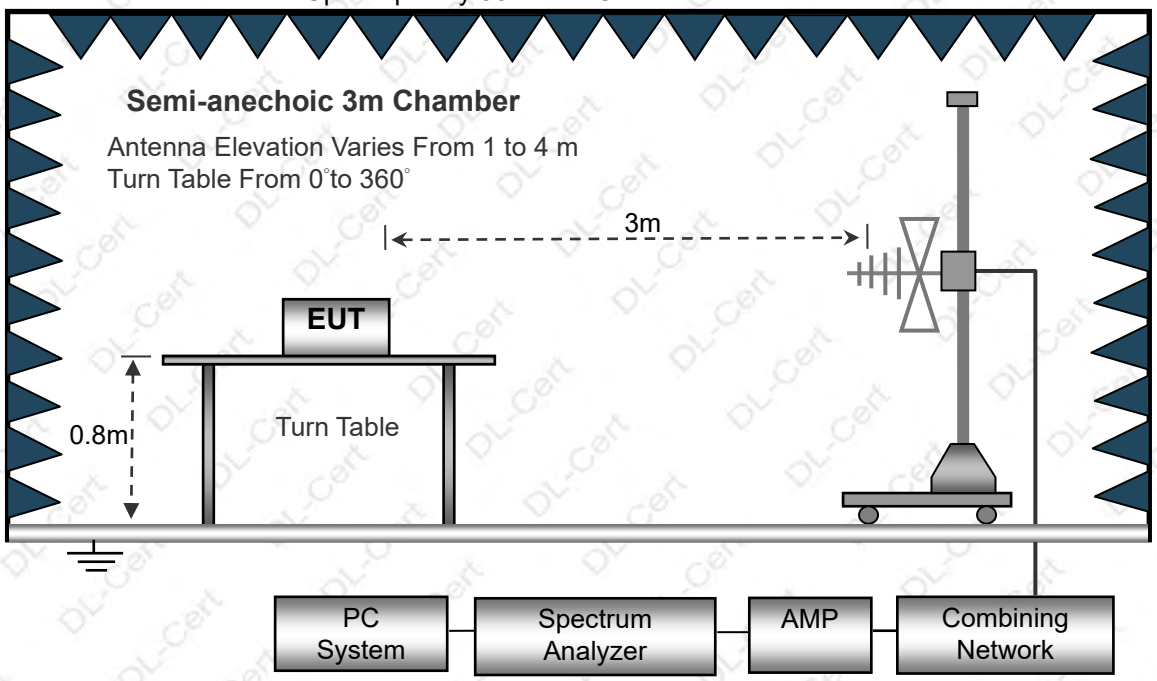
No deviation

3.2.4 TEST SETUP

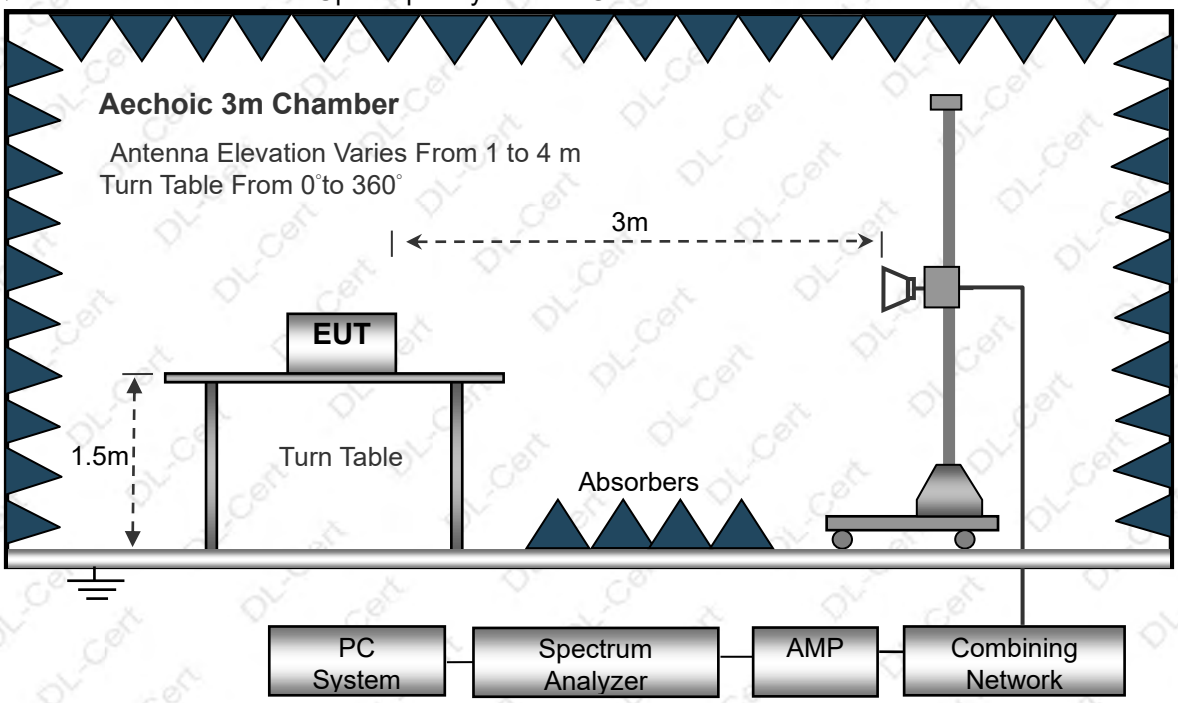
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (Between 9KHz – 30 MHz)

Temperature:	20℃	Relative Humidtity:	48%
Pressure:	1010 hPa	Test Voltage :	DC 3.8V
Test Mode :	Mode 4	Polarization :	--

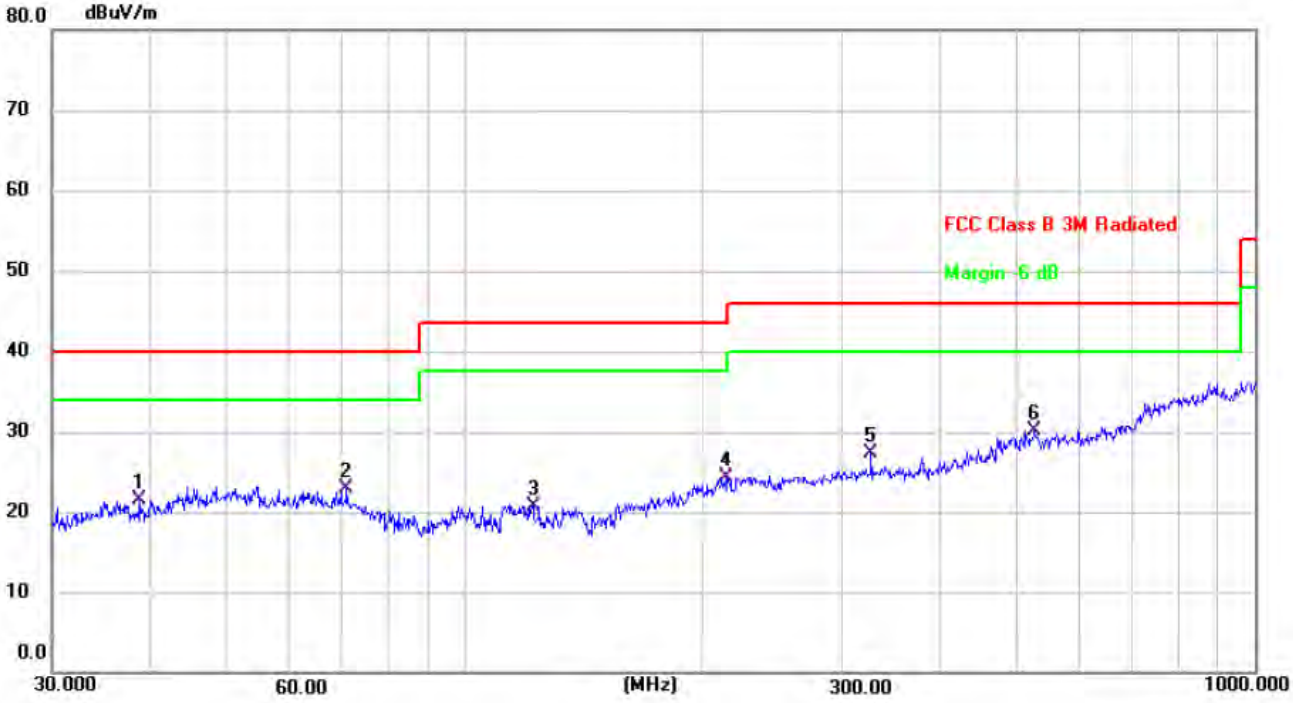
Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (Between 30MHz – 1GHz)

Temperature:	26℃	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC 3.8V		
Test Mode :	Mode 4		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	38.7516	33.99	-12.42	21.57	40.00	-18.43	QP
2	70.8315	37.08	-14.13	22.95	40.00	-17.05	QP
3	121.9754	36.48	-15.77	20.71	43.50	-22.79	QP
4	214.5141	37.17	-12.85	24.32	43.50	-19.18	QP
5	326.7395	37.69	-10.33	27.36	46.00	-18.64	QP
6 *	526.3967	36.58	-6.47	30.11	46.00	-15.89	QP

Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Level = Reading Level + Correct Factor; Margin = Level - Limit;

Temperature:	26℃	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Vertical
test voltage :	DC 3.8V		
Test Mode :	Mode 4		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	47.9940	36.32	-11.40	24.92	40.00	-15.08	QP
2	62.2128	38.39	-12.64	25.75	40.00	-14.25	QP
3	119.4360	38.14	-15.53	22.61	43.50	-20.89	QP
4	213.7632	35.93	-12.44	23.49	43.50	-20.01	QP
5	443.2941	36.85	-7.23	29.62	46.00	-16.38	QP
6 *	821.7103	36.89	-0.99	35.90	46.00	-10.10	QP

Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Level = Reading Level + Correct Factor; Margin = Level - Limit;

3.2.8 TEST RESULTS (1ghz~40ghZ)

802.11a band 4

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5745									
V	11490	53.22	49.05	15.3	37.39	56.86	74	-17.14	PK
V	11490	41.35	49.05	15.3	37.39	44.99	54	-9.01	AV
V	17235	51.57	49.16	15.27	40.45	58.13	68.2	-10.07	PK
V	17235	40.86	49.16	15.27	40.45	47.42	54	-6.58	AV
H	11490	50.32	49.05	15.3	37.39	53.96	74	-20.04	PK
H	11490	42.28	49.05	15.3	37.39	45.92	54	-8.08	AV
H	17235	50.34	49.16	15.27	40.45	56.9	68.2	-11.30	PK
H	17235	40.51	49.16	15.27	40.45	47.07	54	-6.93	AV
operation frequency:5785									
V	11570	51.35	49.09	15.34	37.42	55.02	74	-18.98	PK
V	11570	41.76	49.09	15.34	37.42	45.43	54	-8.57	AV
V	17355	50.29	49.18	15.29	40.47	56.87	68.2	-11.33	PK
V	17355	40.35	49.18	15.29	40.47	46.93	54	-7.07	AV
H	11570	50.67	49.09	15.34	37.42	54.34	74	-19.66	PK
H	11570	42.23	49.09	15.34	37.42	45.9	54	-8.10	AV
H	17355	48.27	49.18	15.29	40.47	54.85	68.2	-13.35	PK
H	17355	40.65	49.18	15.29	40.47	47.23	54	-6.77	AV
operation frequency:5825									
V	11650	52.15	49.11	15.37	37.46	55.87	74	-18.13	PK
V	11650	41.57	49.11	15.37	37.46	45.29	54	-8.71	AV
V	17475	49.13	49.21	15.34	40.51	55.77	68.2	-12.43	PK
V	17475	40.68	49.21	15.34	40.51	47.32	54	-6.68	AV
H	11650	57.17	49.11	15.37	31.31	54.74	74	-19.26	PK
H	11650	48.35	49.11	15.37	31.31	45.92	54	-8.08	AV
H	17475	49.16	49.21	15.34	40.51	55.8	68.2	-12.40	PK
H	17475	40.17	49.21	15.34	40.51	46.81	54	-7.19	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
   Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11n HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5745									
V	11490	49.62	49.05	15.3	37.39	53.26	74	-20.74	PK
V	11490	42.42	49.05	15.3	37.39	46.06	54	-7.94	AV
V	17235	48.69	49.16	15.27	40.45	55.25	68.2	-12.95	PK
V	17235	40.72	49.16	15.27	40.45	47.28	54	-6.72	AV
H	11490	49.35	49.05	15.3	37.39	52.99	74	-21.01	PK
H	11490	41.86	49.05	15.3	37.39	45.5	54	-8.50	AV
H	17235	48.31	49.16	15.27	40.45	54.87	68.2	-13.33	PK
H	17235	40.67	49.16	15.27	40.45	47.23	54	-6.77	AV
operation frequency:5785									
V	11570	52.44	49.09	15.34	37.42	56.11	74	-17.89	PK
V	11570	42.16	49.09	15.34	37.42	45.83	54	-8.17	AV
V	17355	49.38	49.18	15.29	40.47	55.96	68.2	-12.24	PK
V	17355	40.22	49.18	15.29	40.47	46.8	54	-7.20	AV
H	11570	49.23	49.09	15.34	37.42	52.9	74	-21.10	PK
H	11570	43.48	49.09	15.34	37.42	47.15	54	-6.85	AV
H	17355	49.54	49.18	15.29	40.47	56.12	68.2	-12.08	PK
H	17355	40.07	49.18	15.29	40.47	46.65	54	-7.35	AV
operation frequency:5825									
V	11650	51.15	49.11	15.37	37.46	54.87	74	-19.13	PK
V	11650	41.62	49.11	15.37	37.46	45.34	54	-8.66	AV
V	17475	48.17	49.21	15.34	40.51	54.81	68.2	-13.39	PK
V	17475	40.46	49.21	15.34	40.51	47.1	54	-6.90	AV
H	11650	57.62	49.11	15.37	31.31	55.19	74	-18.81	PK
H	11650	44.24	49.11	15.37	31.31	41.81	54	-12.19	AV
H	17475	49.35	49.21	15.34	40.51	55.99	68.2	-12.21	PK
H	17475	40.48	49.21	15.34	40.51	47.12	54	-6.88	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
   Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11n HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5755									
V	11510	49.15	49.07	15.33	37.41	52.82	74	-21.18	PK
V	11510	41.54	49.07	15.33	37.41	45.21	54	-8.79	AV
V	17265	49.16	49.17	15.28	40.46	55.73	68.2	-12.47	PK
V	17265	40.78	49.17	15.28	40.46	47.35	54	-6.65	AV
H	11510	48.55	49.07	15.33	37.41	52.22	74	-21.78	PK
H	11510	41.34	49.07	15.33	37.41	45.01	54	-8.99	AV
H	17265	49.23	49.17	15.28	40.46	55.8	68.2	-12.40	PK
H	17265	40.58	49.17	15.28	40.46	47.15	54	-6.85	AV
operation frequency:5795									
V	11590	49.45	49.11	15.37	37.46	53.17	74	-20.83	PK
V	11590	41.67	49.11	15.37	37.46	45.39	54	-8.61	AV
V	17385	48.56	49.21	15.34	40.51	55.2	68.2	-13.00	PK
V	17385	40.43	49.21	15.34	40.51	47.07	54	-6.93	AV
H	11590	57.37	49.11	15.37	31.31	54.94	74	-19.06	PK
H	11590	44.54	49.11	15.37	31.31	42.11	54	-11.89	AV
H	17385	48.06	49.21	15.34	40.51	54.7	68.2	-13.50	PK
H	17385	40.55	49.21	15.34	40.51	47.19	54	-6.81	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
   Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11ac HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5745									
V	11490	49.42	49.05	15.3	37.39	53.06	74	-20.94	PK
V	11490	42.67	49.05	15.3	37.39	46.31	54	-7.69	AV
V	17235	48.04	49.16	15.27	40.45	54.6	68.2	-13.60	PK
V	17235	40.16	49.16	15.27	40.45	46.72	54	-7.28	AV
H	11490	48.28	49.05	15.3	37.39	51.92	74	-22.08	PK
H	11490	41.61	49.05	15.3	37.39	45.25	54	-8.75	AV
H	17235	48.56	49.16	15.27	40.45	55.12	68.2	-13.08	PK
H	17235	40.65	49.16	15.27	40.45	47.21	54	-6.79	AV
operation frequency:5785									
V	11570	48.27	49.09	15.34	37.42	51.94	74	-22.06	PK
V	11570	41.75	49.09	15.34	37.42	45.42	54	-8.58	AV
V	17355	49.32	49.18	15.29	40.47	55.9	68.2	-12.30	PK
V	17355	40.66	49.18	15.29	40.47	47.24	54	-6.76	AV
H	11570	49.47	49.09	15.34	37.42	53.14	74	-20.86	PK
H	11570	43.35	49.09	15.34	37.42	47.02	54	-6.98	AV
H	17355	49.33	49.18	15.29	40.47	55.91	68.2	-12.29	PK
H	17355	40.48	49.18	15.29	40.47	47.06	54	-6.94	AV
operation frequency:5825									
V	11650	49.27	49.11	15.37	37.46	52.99	74	-21.01	PK
V	11650	41.44	49.11	15.37	37.46	45.16	54	-8.84	AV
V	17475	48.14	49.21	15.34	40.51	54.78	68.2	-13.42	PK
V	17475	40.58	49.21	15.34	40.51	47.22	54	-6.78	AV
H	11650	57.66	49.11	15.37	31.31	55.23	74	-18.77	PK
H	11650	44.11	49.11	15.37	31.31	41.68	54	-12.32	AV
H	17475	48.57	49.21	15.34	40.51	55.21	68.2	-12.99	PK
H	17475	40.25	49.21	15.34	40.51	46.89	54	-7.11	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
   Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11ac HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5755									
V	11510	49.32	49.07	15.33	37.41	52.99	74	-21.01	PK
V	11510	42.17	49.07	15.33	37.41	45.84	54	-8.16	AV
V	17265	48.69	49.17	15.28	40.46	55.26	68.2	-12.94	PK
V	17265	41.48	49.17	15.28	40.46	48.05	54	-5.95	AV
H	11510	48.52	49.07	15.33	37.41	52.19	74	-21.81	PK
H	11510	42.63	49.07	15.33	37.41	46.3	54	-7.70	AV
H	17265	48.11	49.17	15.28	40.46	54.68	68.2	-13.52	PK
H	17265	40.25	49.17	15.28	40.46	46.82	54	-7.18	AV
operation frequency:5795									
V	11590	49.57	49.11	15.37	37.46	53.29	74	-20.71	PK
V	11590	41.33	49.11	15.37	37.46	45.05	54	-8.95	AV
V	17385	48.12	49.21	15.34	40.51	54.76	68.2	-13.44	PK
V	17385	40.69	49.21	15.34	40.51	47.33	54	-6.67	AV
H	11590	57.14	49.11	15.37	31.31	54.71	74	-19.29	PK
H	11590	44.81	49.11	15.37	31.31	42.38	54	-11.62	AV
H	17385	48.65	49.21	15.34	40.51	55.29	68.2	-12.91	PK
H	17385	40.59	49.21	15.34	40.51	47.23	54	-6.77	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
   Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11ac HT80

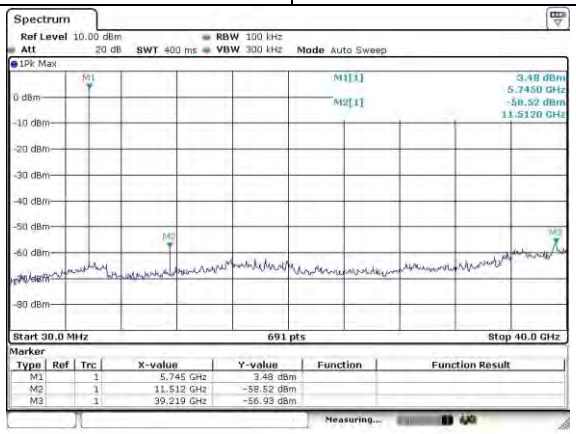
Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5775									
V	11550	48.14	49.07	15.33	37.41	51.81	74	-22.19	PK
V	11550	42.67	49.07	15.33	37.41	46.34	54	-7.66	AV
V	17325	49.18	49.17	15.28	40.46	55.75	68.2	-12.45	PK
V	17325	40.24	49.17	15.28	40.46	46.81	54	-7.19	AV
H	11550	48.43	49.07	15.33	37.41	52.1	74	-21.90	PK
H	11550	41.17	49.07	15.33	37.41	44.84	54	-9.16	AV
H	17325	48.61	49.17	15.28	40.46	55.18	68.2	-13.02	PK
H	17325	40.59	49.17	15.28	40.46	47.16	54	-6.84	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
   Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

For Conducted
During the test, pre-scan the all modulation, the modulation below were found to have the worst test results, as reflected in the report.

Test channel:	Band 4/802.11a Lowest channel

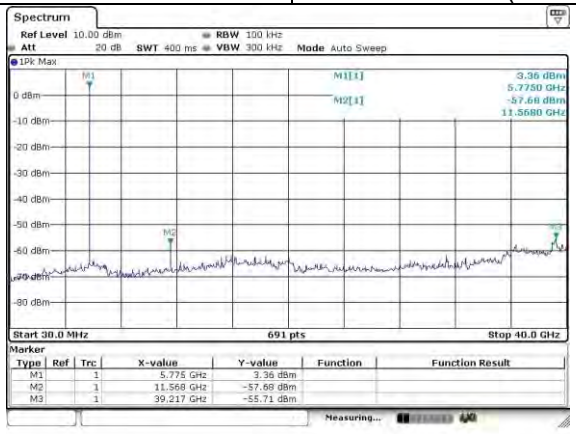


0.03Hz~40GHz

Test channel:	Band 4/802.11n(HT40) Lowest channel

0.03GHz~40GHz

Test channel:	Band 4/802.11ac(HT80)



0.03GHz~40GHz

3.3 CONDUCTED BAND EMISSION MEASUREMENT

3.3.1 TEST REQUIREMENT:

FCC Part15 C Section 15.209 and 15.407

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Spectrum Parameter	Setting	
Attenuation	Auto	
Start Frequency	5150MHz	5725MHz
Stop Frequency	5250MHz	5850MHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average	

3.3.2 TEST PROCEDURE

Test method: FCC KDB 789033 G)& Parts 15.407(b)(4) & 15.209(a)

3.3.3 DEVIATION FROM TEST STANDARD

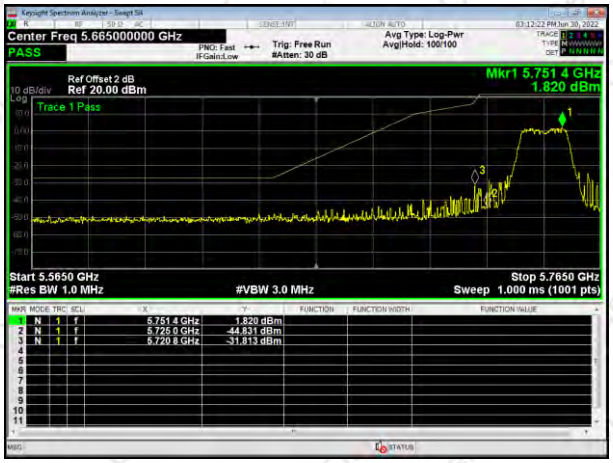
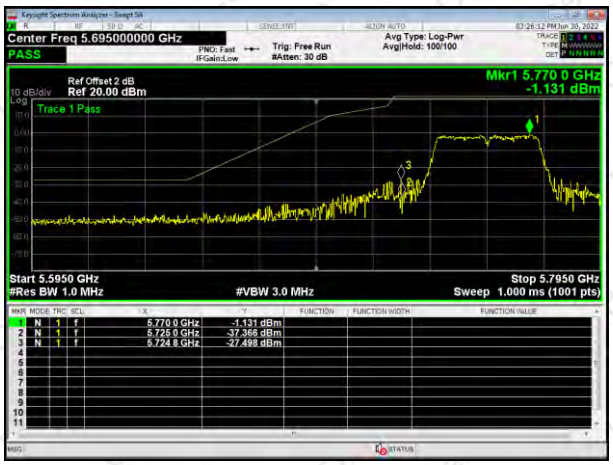
No deviation

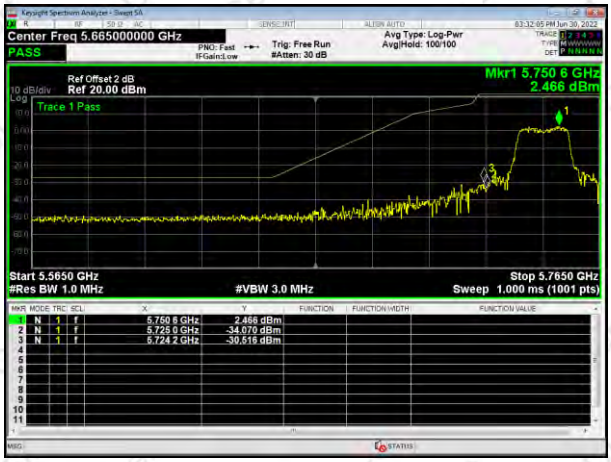
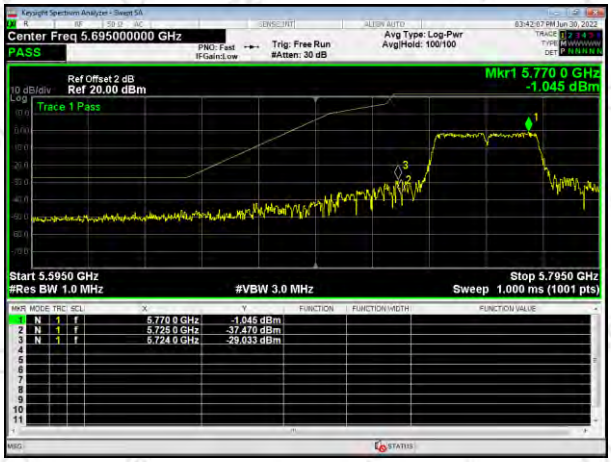
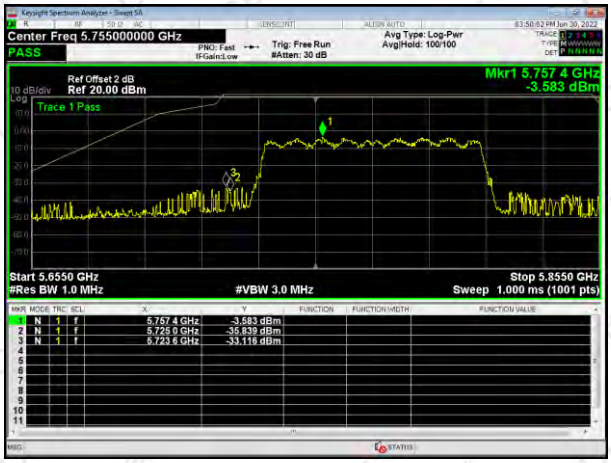
3.3.4 TEST SETUP

3.3.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

3.3.6 TEST RESULT

802.11a	
	
5745MHz	5825MHz
802.11n HT20	
	
5745MHz	5825MHz
802.11n HT40	
	
5755MHz	5795MHz

802.11ac HT20	
	
5745MHz	5825MHz
802.11ac HT40	
	
5755MHz	5795MHz
802.11ac HT80	
	
5775MHz	

4. AVERAGE OUTPUT POWER

4.1 APPLIED PROCEDURES / LIMIT

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

4.1.1 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
b. Measure the duty cycle D of the transmitter output signal as described in 11.6.
Set span to at least 1.5 times the OBW.
Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz.
Set VBW ≥ [3 × RBW].
Number of points in sweep ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
Sweep time = auto.
Detector = RMS (i.e., power averaging), if available. Otherwise, use the sample detector mode.
Do not use sweep triggering. Allow the sweep to “free run.”
Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
Add [10 log (1 / D)], where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is 25%.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP

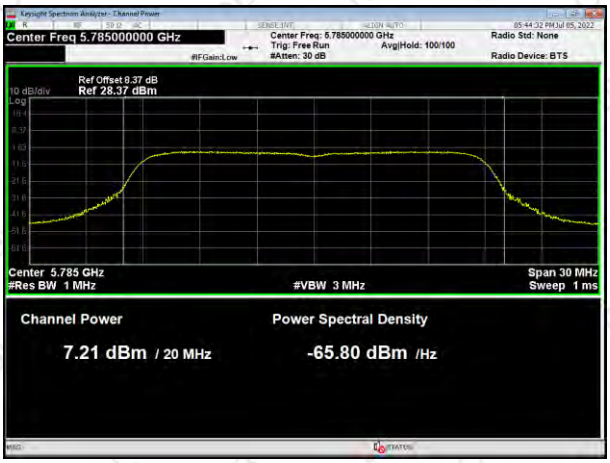
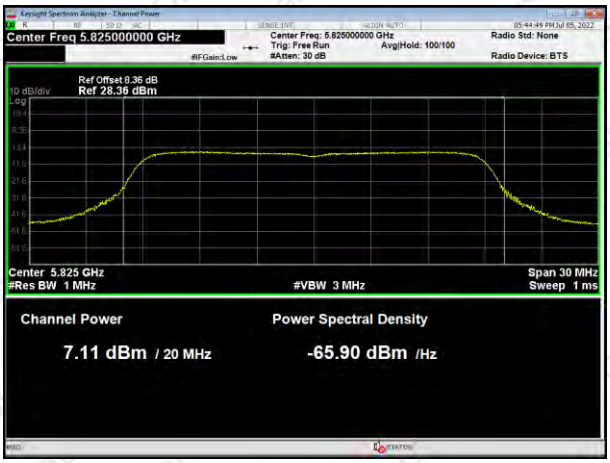
4.1.4 EUT OPERATION CONDITIONS

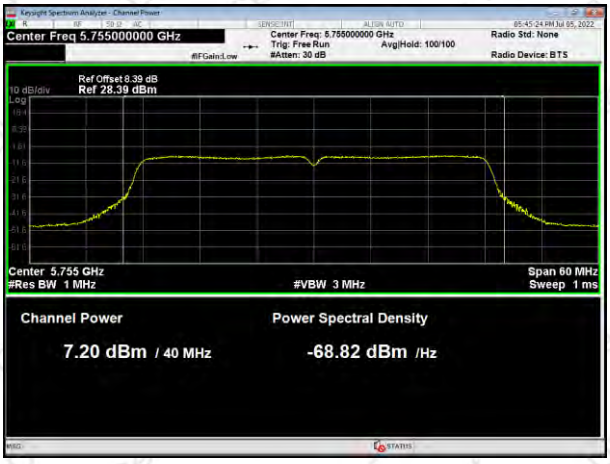
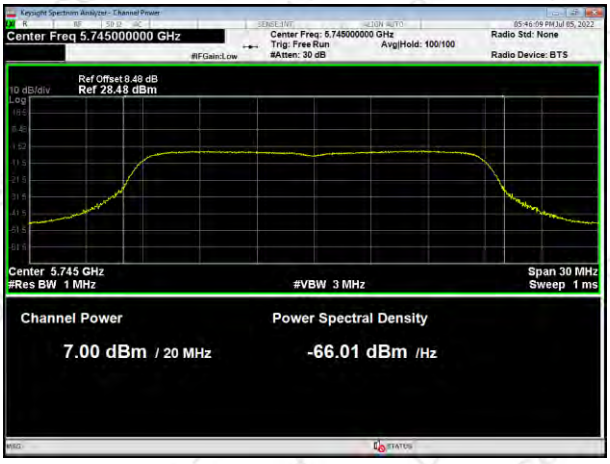
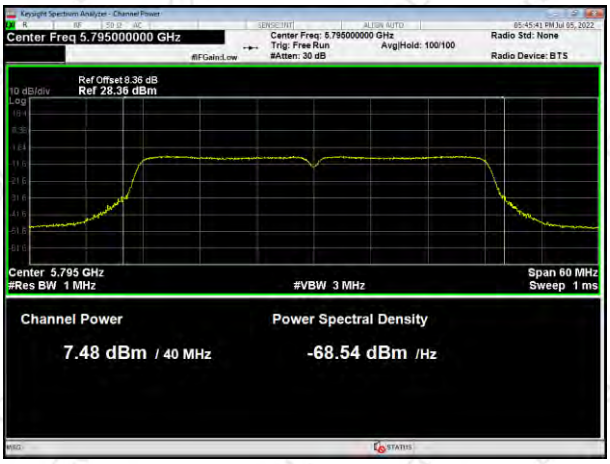
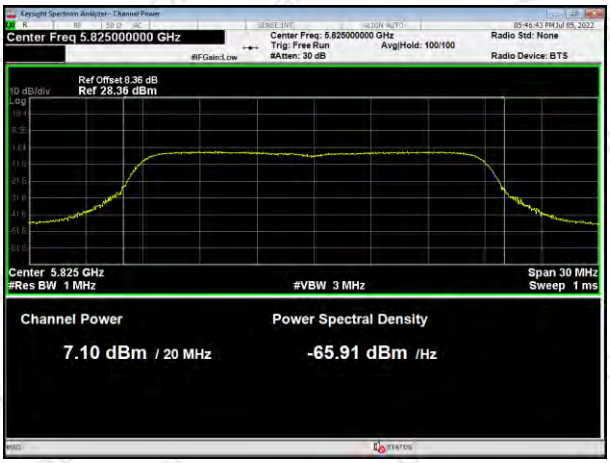
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

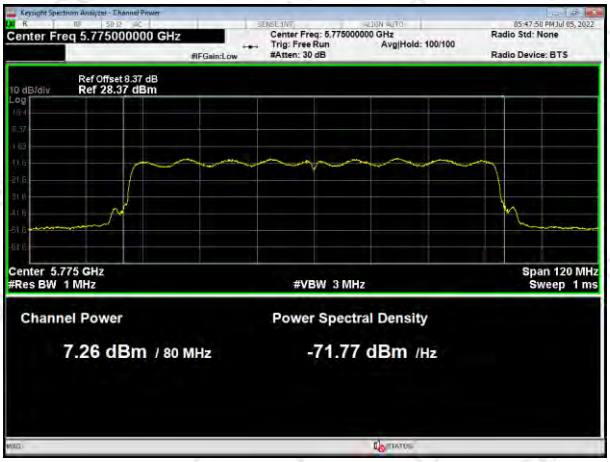
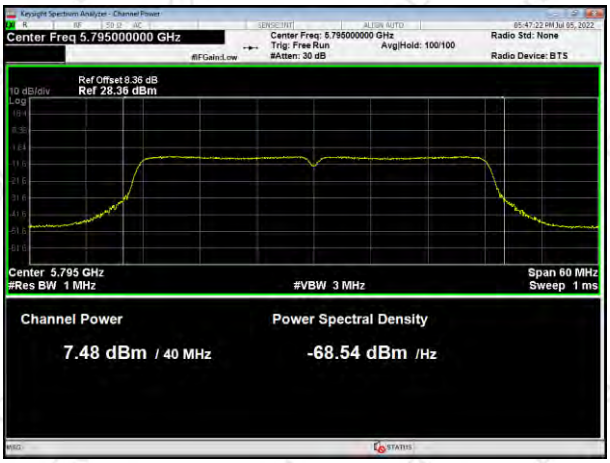
4.1.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	60%
Pressure:	1012 hPa	Test Voltage :	DC 3.8V

Band	Mode	Test Channel	Average Output Power (dBm)	Duty Fator (dB)	Total Output Power(dB)	LIMIT (dBm)
Band 4	802.11a	Low	7.332	0.13	7.462	30
		Middle	7.677	0.13	7.807	30
		High	7.478	0.13	7.608	30
	802.11n HT20	Low	7.679	0.14	7.819	30
		Middle	7.208	0.14	7.348	30
		High	7.111	0.14	7.251	30
	802.11n HT40	Low	7.196	0.26	7.456	30
		High	7.483	0.26	7.743	30
	802.11ac HT20	Low	7.004	0.14	7.144	30
		Middle	7.306	0.14	7.446	30
		High	7.098	0.14	7.238	30
	802.11ac HT40	Low	7.281	0.27	7.551	30
		High	7.478	0.27	7.748	30
	802.11ac HT80	/	7.262	0.51	7.772	30

802.11a	802.11n HT20
	
5745MHz	5745MHz
	
5785MHz	5785MHz
	
5825MHz	5825MHz

802.11n HT40	802.11ac HT20
	
5755MHz	5745MHz
	
5795MHz	5785MHz
	
	5825MHz

802.11ac HT40	802.11ac HT80
	
5755MHz	5775MHz
	
5795MHz	

5. POWER SPECTRAL DENSITY TEST

5.1 APPLIED PROCEDURES / LIMIT

In addition, the maximum power spectral density shall not exceed 30 dBm in any 500 kHz band.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	= the frequency band of operation
RB	RBW ≥ 1MHz for band 1 RBW ≥ 510KHz for band 4
VB	VBW ≥ 3RBW
Detector	RMS (i.e., power averaging).
Trace	Max Hold
Sweep Time	Auto

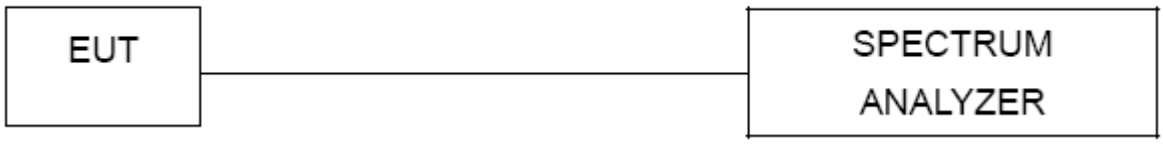
5.1.1 TEST PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
4. For U-NII1, U-NII-2A, U-NII-2C Band:
Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
For U-NII-3 Band:
Set RBW=510 kHz, VBW=3*RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
5. User the cursor on spectrum to peak search the highest level of trace
6. Record the max. reading and add 10 log(1/duty cycle).
we test all antennas, the antenna 1 was worst mode and the data recording in the report.
7. Duty factor Reference is made to the test results in Section 7.1.5.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

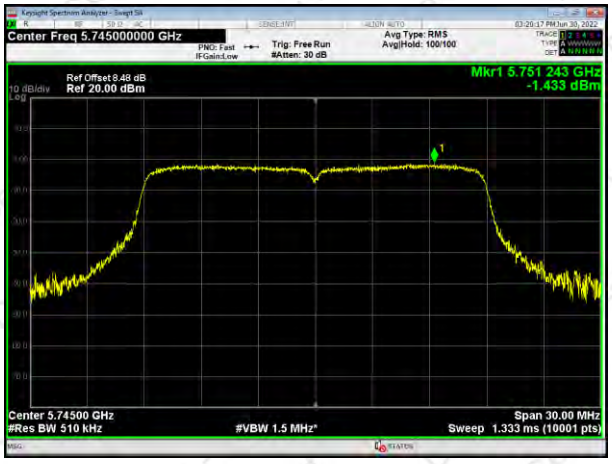
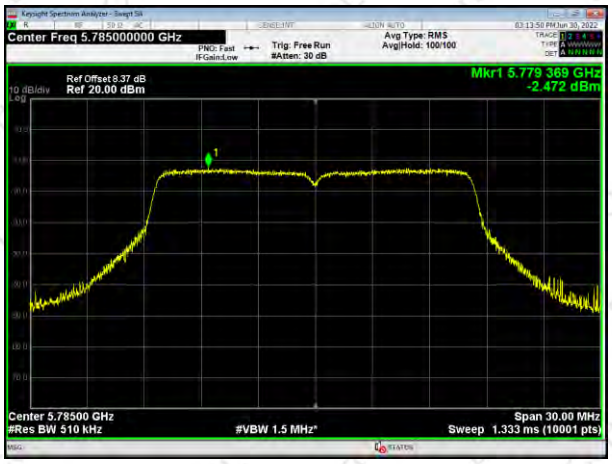
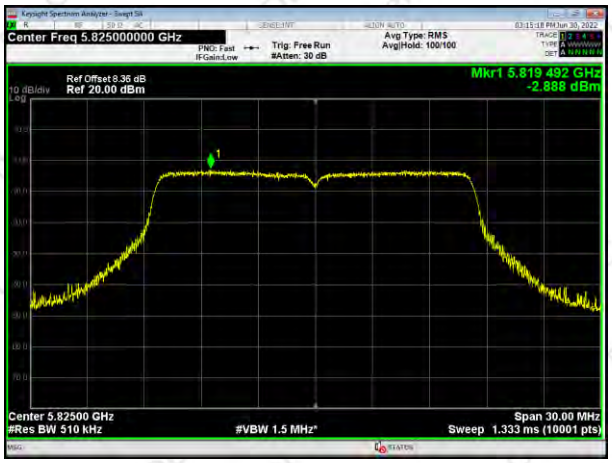
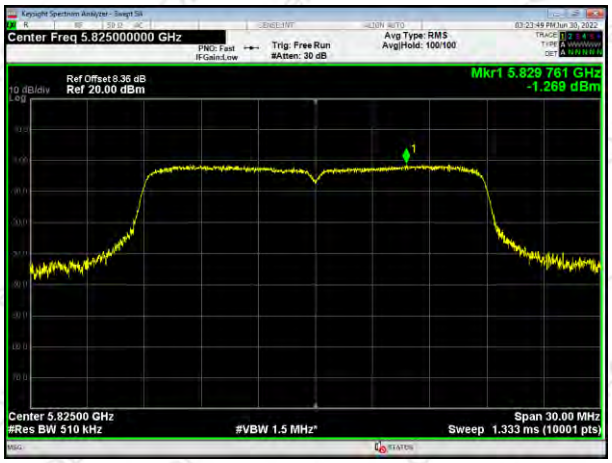


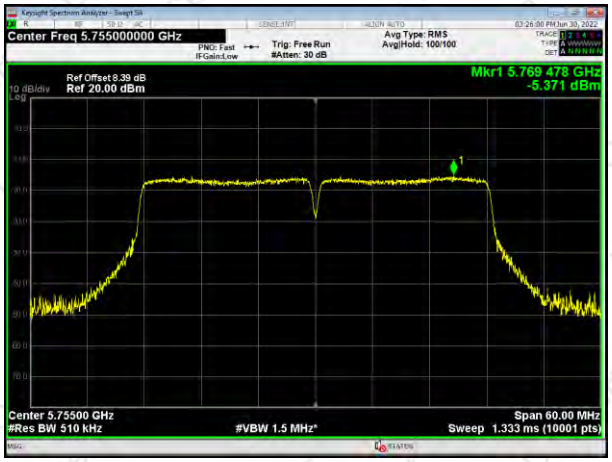
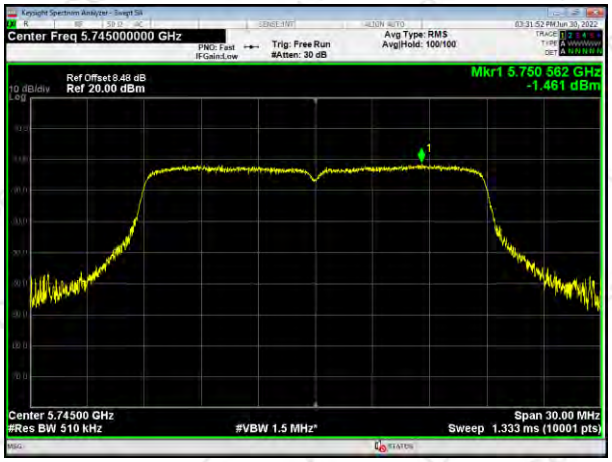
5.1.4 EUT OPERATION CONDITIONS

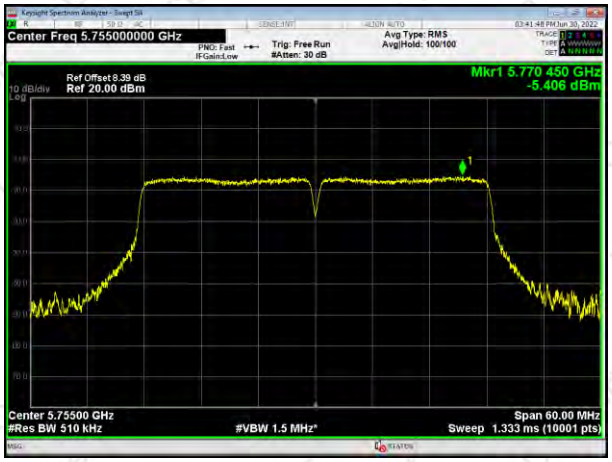
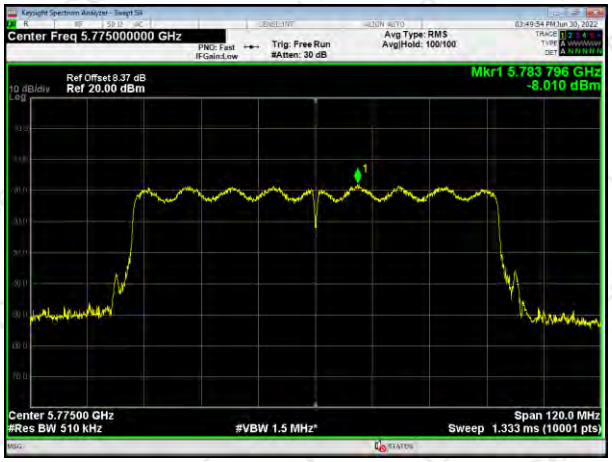
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

	Mode	Test Channel	Reading Level (dBm)	Duty factor (dB)	PSD (dBm/ 500kHz)	Limit (dBm)	Result
Band4	802.11a	Low	-2.051	0.13	-1.921	30.00	PASS
		Middle	-2.472	0.13	-2.342	30.00	PASS
		High	-2.888	0.13	-2.758	30.00	PASS
	802.11n20	Low	-1.433	0.14	-1.293	30.00	PASS
		Middle	-0.687	0.14	-0.547	30.00	PASS
		High	-1.269	0.14	-1.129	30.00	PASS
	802.11n40	Low	-5.371	0.26	-5.111	30.00	PASS
		High	-4.661	0.26	-4.401	30.00	PASS
	802.11ac20	Low	-1.461	0.14	-1.321	30.00	PASS
		Middle	-1.074	0.14	-0.934	30.00	PASS
		High	-1.407	0.14	-1.267	30.00	PASS
	802.11ac40	Low	-5.406	0.27	-5.136	30.00	PASS
		High	-4.524	0.27	-4.254	30.00	PASS
	802.11ac80	/	-8.01	0.51	-7.5	30.00	PASS

802.11a	802.11n HT20
	
5745MHz	5745MHz
	
5785MHz	5785MHz
	
5825MHz	5825MHz

802.11n HT40	802.11ac HT20
	
5755MHz	5745MHz
	
5795MHz	5785MHz
	
	5825MHz

802.11ac HT40	802.11ac HT80
	
5755MHz	5775MHz
	
5795MHz	

6. 6DB&99% BANDWIDTH TEST

6.1 APPLIED PROCEDURES / LIMIT

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

6.1.1 TEST PROCEDURE

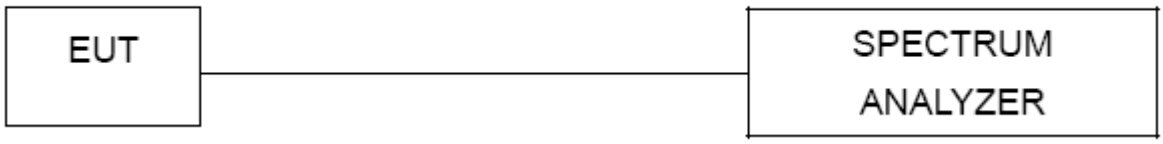
6dB Bandwidth	
Spectrum Parameters	Setting
RBW	100KHz
VBW	300KHz
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

99% Occupied Bandwidth	
Spectrum Parameters	Setting
RBW	1% to 5% of the OBW
VBW	Approximately three times the RBW
Span	between 1.5 times and 5.0 times the OBW
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



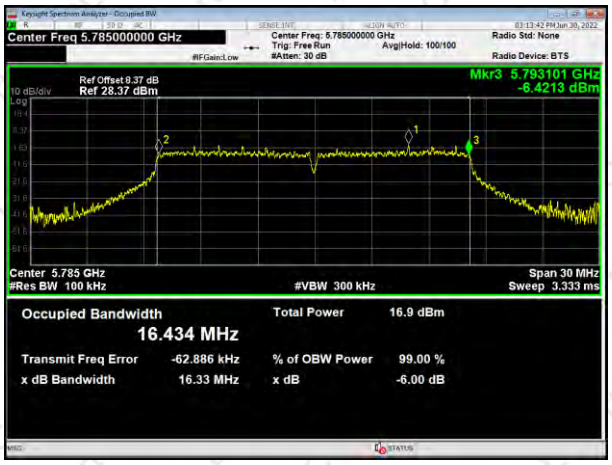
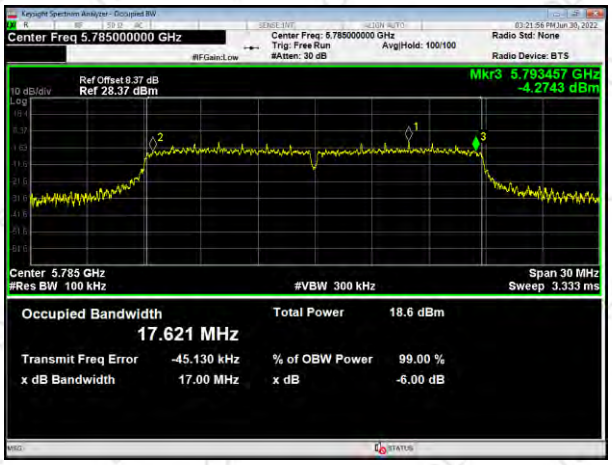
6.1.4 EUT OPERATION CONDITIONS

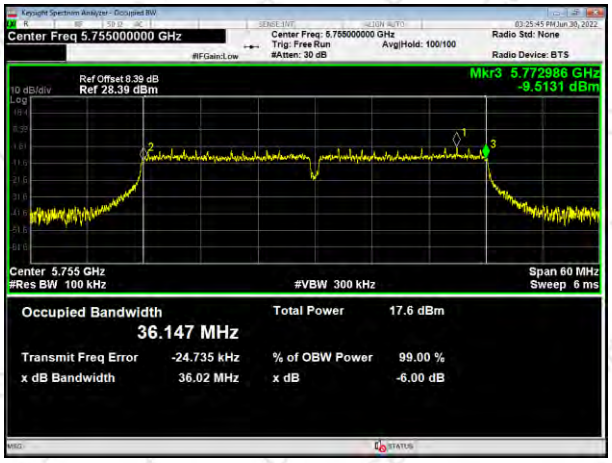
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

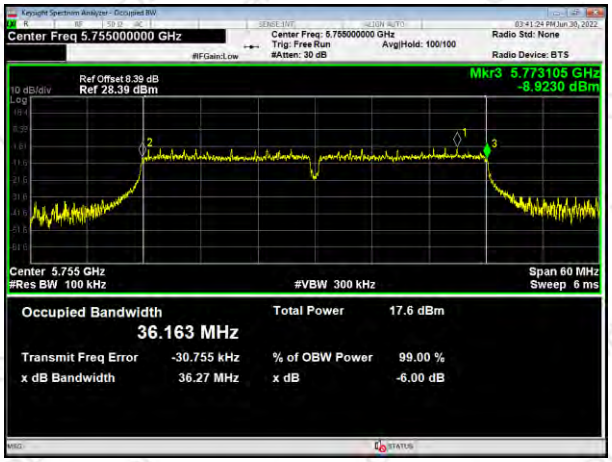
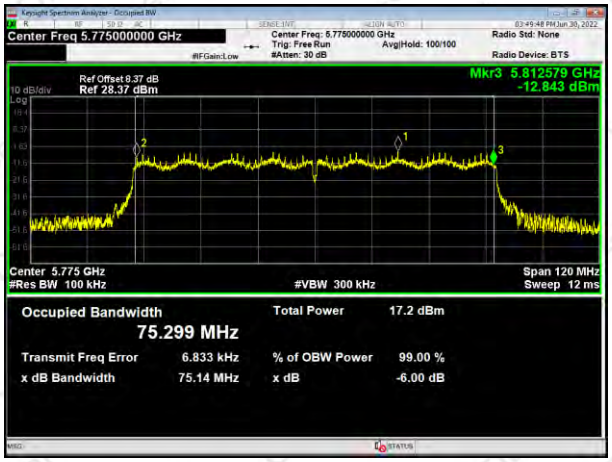
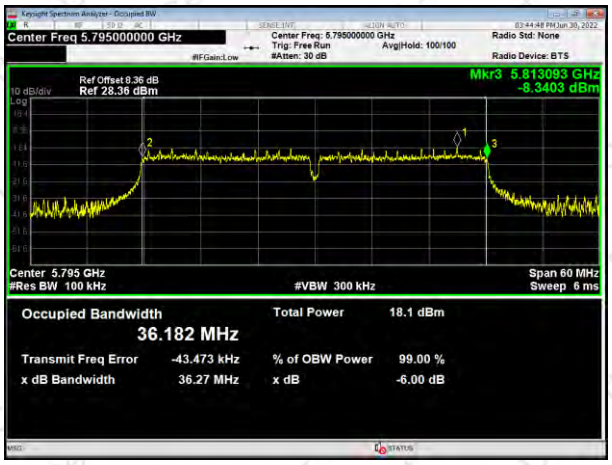
6.1.5 TEST RESULTS

		Test Channel	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	6dB Bandwidth Limit (MHz)	Result
Band 4	802.11a	Low	16.326	16.531	>0.5	Pass
		Middle	16.328	16.520	>0.5	Pass
		High	16.344	16.530	>0.5	Pass
	802.11n HT20	Low	17.294	17.635	>0.5	Pass
		Middle	17.004	17.696	>0.5	Pass
		High	17.276	17.718	>0.5	Pass
	802.11n HT40	Low	36.02	36.405	>0.5	Pass
		High	36.293	36.458	>0.5	Pass
	802.11ac HT20	Low	17.259	17.653	>0.5	Pass
		Middle	17.531	17.694	>0.5	Pass
		High	17.123	17.718	>0.5	Pass
	802.11ac HT40	Low	36.272	36.432	>0.5	Pass
		High	36.273	36.416	>0.5	Pass
	802.11ac HT80	/	75.144	75.480	>0.5	Pass

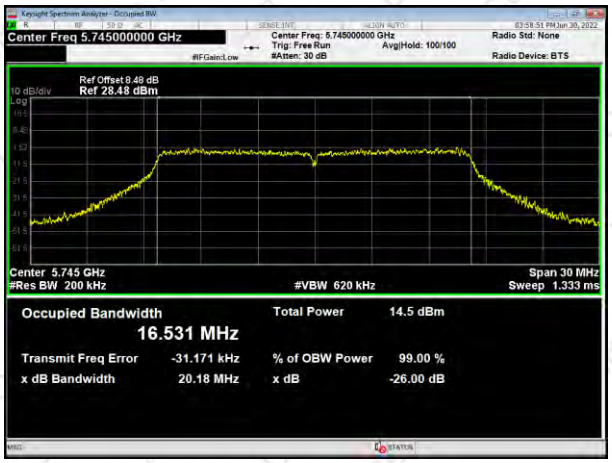
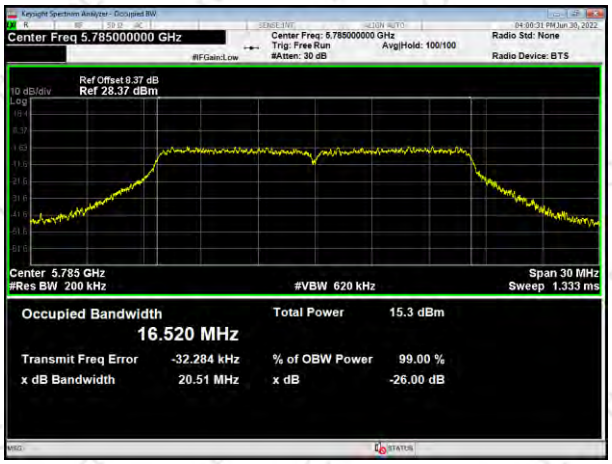
6dB Bandwidth

802.11a	802.11n HT20
	
5745MHz	5745MHz
	
5785MHz	5785MHz
	
5825MHz	5825MHz

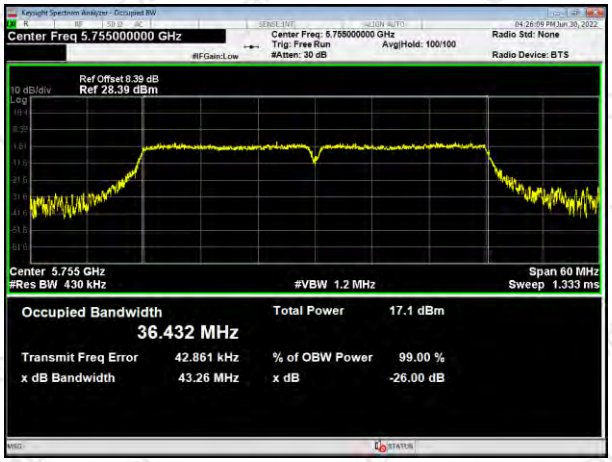
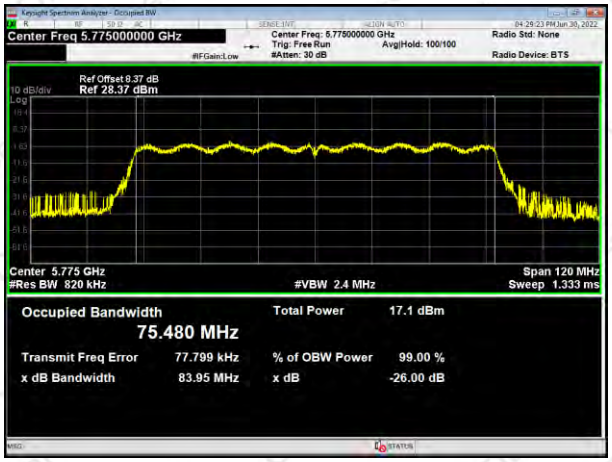
802.11n HT40	802.11ac HT20
	
5755MHz	5745MHz
	
5795MHz	5785MHz
	
	5825MHz

802.11ac HT40	802.11ac HT80
	
5755MHz	5775MHz
	
5795MHz	

99% Bandwidth

802.11a	802.11n HT20
	
5745MHz	5745MHz
	
5785MHz	5785MHz
	
5825MHz	5825MHz

802.11n HT40	802.11ac HT20
	
5755MHz	5745MHz
	
5795MHz	5785MHz
	
	5825MHz

802.11ac HT40	802.11ac HT80
	
5755MHz	5775MHz
	
5795MHz	

7. DUTY CYCLE TEST SIGNAL

7.1 APPLIED PROCEDURES / LIMIT

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

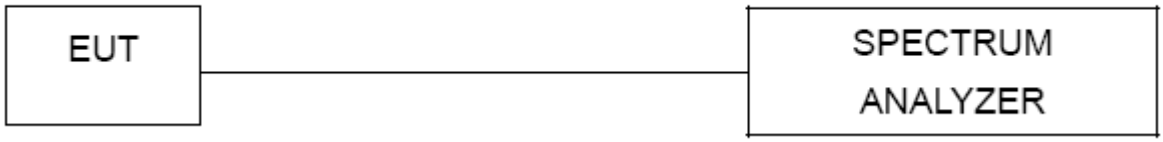
7.1.1 TEST PROCEDURE

1. Set RBW = 1 MHz.
2. Set the video bandwidth (VBW) ≥RBW.
3. Detector = Peak.
4. Sweep = auto couple.
5. Allow the trace to stabilize.
6. Span=0

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP

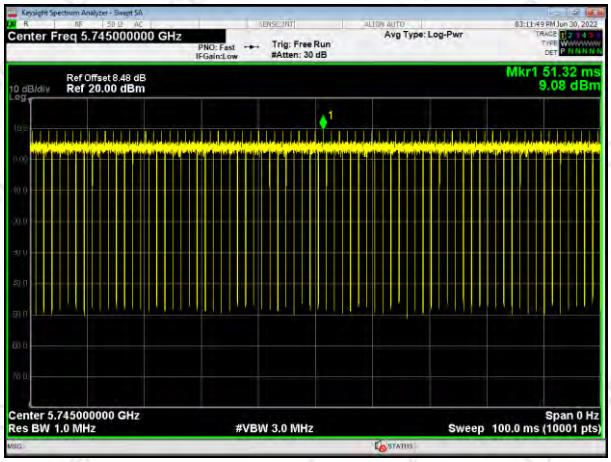
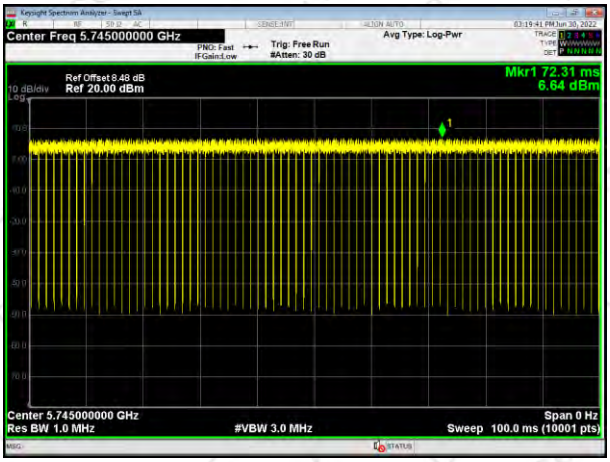
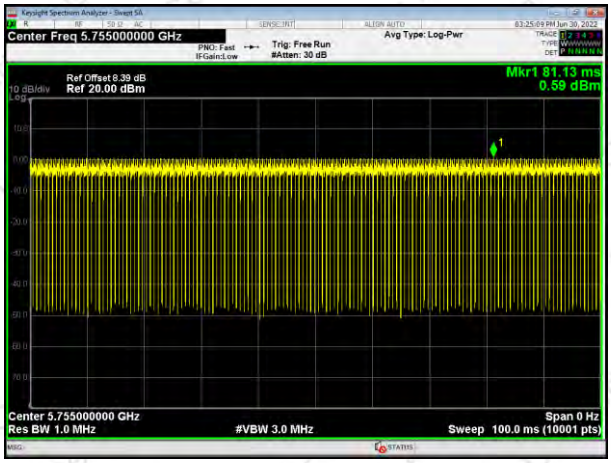
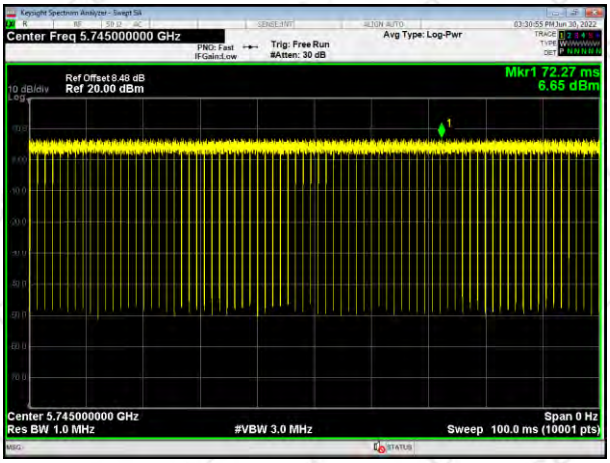
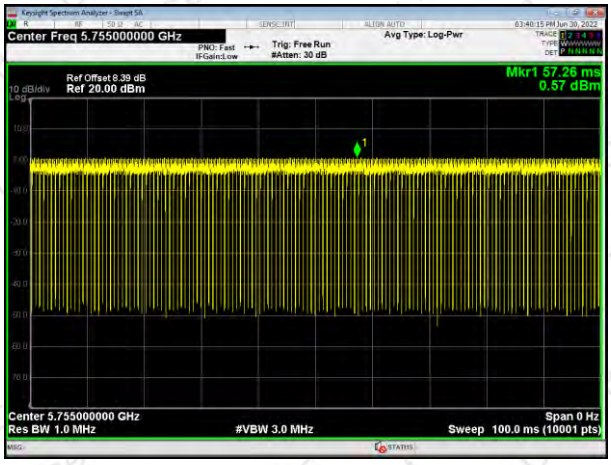
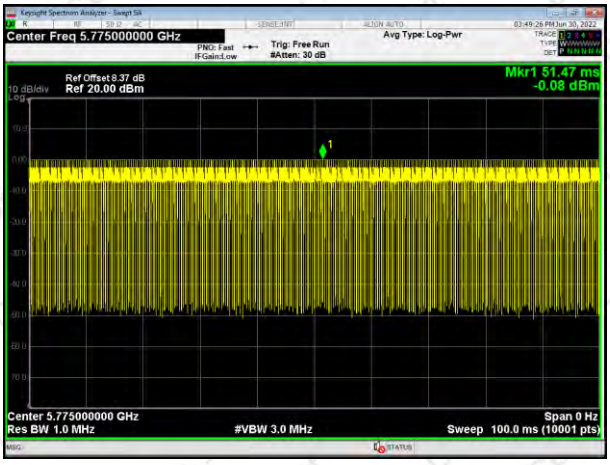


7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 TEST RESULTS

Operation Mode		Duty Cycle(%)	Duty Fator (dB) 10 * log (1/ Duty cycle)
Band 4	802.11a	97.07	0.13
	802.11n(HT20)	96.88	0.14
	802.11n(HT40)	94.16	0.26
	802.11ac(HT20)	96.87	0.14
	802.11ac(HT40)	94.05	0.27
	802.11ac(HT80)	88.84	0.51

802.11a	802.11n HT20
	
802.11n HT40	802.11ac HT20
	
802.11ac HT40	802.11ac HT80
	

8. FREQUENCY STABILITY

8.1 APPLIED PROCEDURES / LIMIT

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

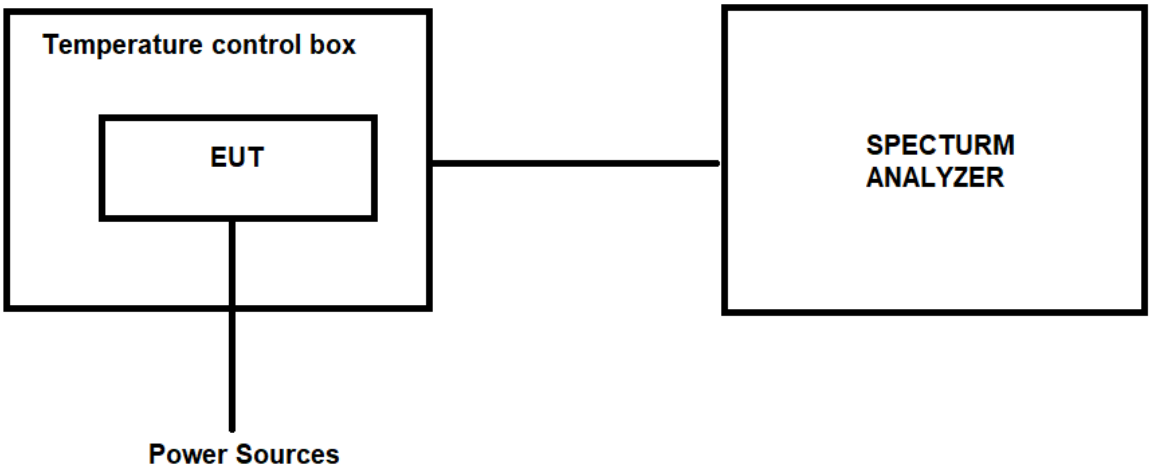
8.1.1 TEST PROCEDURE

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
2. Set EUT as normal operation.
3. Turn the EUT on and couple its output to spectrum.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
6. Repeat step with the temperature chamber set to the lowest temperature.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.5 TEST RESULTS

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)			Δ Frequency (MHz)		
			802.11a	802.11n HT20	802.11ac HT20	802.11a	802.11n HT20	802.11ac HT20
4.18V	-20℃	5745	5745.0359	5745.0342	5745.0364	-0.0359	-0.0342	-0.0364
		5785	5785.0361	5785.0364	5785.0343	-0.0361	-0.0364	-0.0343
		5825	5825.0344	5825.0313	5825.0368	-0.0344	-0.0313	-0.0368
3.42V		5745	5745.0233	5745.0238	5745.0253	-0.0233	-0.0238	-0.0253
		5785	5785.0357	5785.0346	5785.0337	-0.0357	-0.0346	-0.0337
		5825	5825.0445	5825.0467	5825.0413	-0.0445	-0.0467	-0.0413
3.8V	25℃	5745	5745.0386	5745.0379	5745.0322	-0.0386	-0.0379	-0.0322
		5785	5785.0415	5785.0411	5785.0435	-0.0415	-0.0411	-0.0435
		5825	5825.0261	5825.0239	5825.0249	-0.0261	-0.0239	-0.0249
4.18V	50℃	5745	5745.0673	5745.0673	5745.0631	-0.0673	-0.0673	-0.0631
		5785	5785.0438	5785.0458	5785.0448	-0.0438	-0.0458	-0.0448
		5825	5825.0645	5825.0669	5825.0639	-0.0645	-0.0669	-0.0639
3.42V	50℃	5745	5745.0462	5745.0419	5745.0454	-0.0462	-0.0419	-0.0454
		5785	5785.0219	5785.0248	5785.0266	-0.0219	-0.0248	-0.0266
		5825	5825.0758	5825.0752	5825.0775	-0.0758	-0.0752	-0.0775

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)		Δ Frequency (MHz)	
			802.11n HT40	802.11ac HT40	802.11n HT40	802.11ac HT40
4.18V	-20℃	5755	5755.0555	5755.0566	-0.0555	-0.0566
		5795	5795.0614	5795.0678	-0.0614	-0.0678
3.42V		5755	5755.0233	5755.0643	-0.0233	-0.0643
		5795	5795.0475	5795.0467	-0.0475	-0.0467
3.8V	25℃	5755	5755.0264	5755.0276	-0.0264	-0.0276
		5795	5795.0549	5795.0536	-0.0549	-0.0536
4.18V	50℃	5755	5755.0461	5755.0453	-0.0461	-0.0453
		5795	5795.0388	5795.0368	-0.0388	-0.0368
3.42V	50℃	5755	5755.0333	5755.0372	-0.0333	-0.0372
		5795	5795.0445	5795.0476	-0.0445	-0.0476

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
			802.11ac HT80	802.11ac HT80
4.18V	-20℃	5775	5775.0165	-0.0165
3.42V		5775	5775.0374	-0.0374
3.8V	25℃	5775	5775.0448	-0.0448
4.18V	50℃	5775	5775.0259	-0.0259
3.42V	50℃	5775	5775.0567	-0.0567

9. TRANSMISSION IN THE ABSENCE OF DATA

9.1 STANDARD REQUIREMENT

According to §15.407(c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

9.2 TEST RESULT

No non-compliance noted:
Refer to the theory of operation.

10. ANTENNA REQUIREMENT

10.1 STANDARD REQUIREMENT

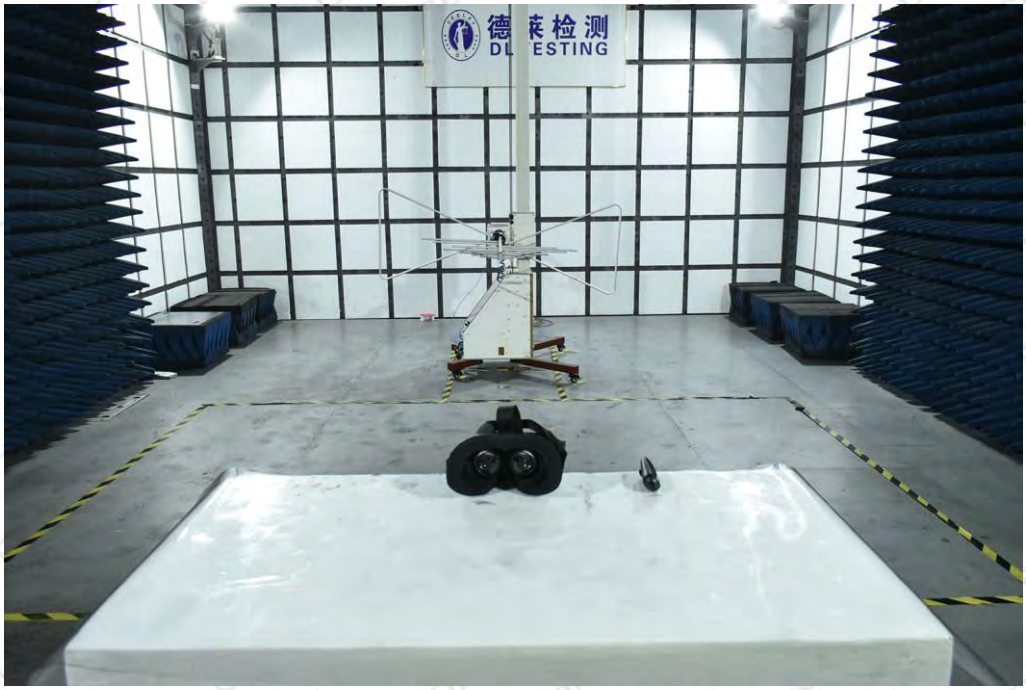
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

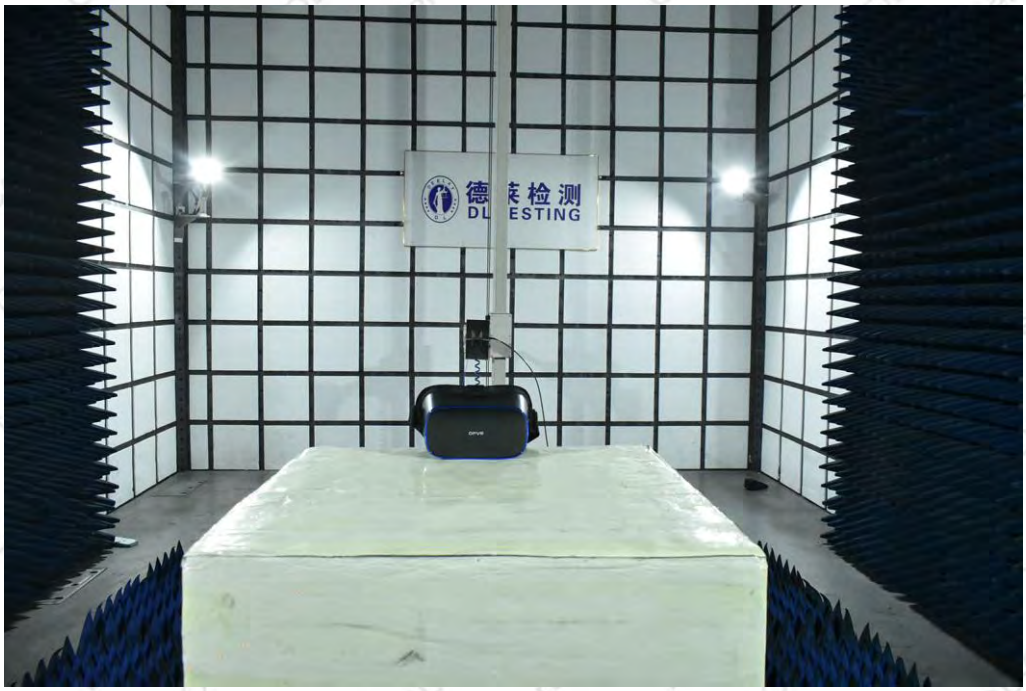
10.2 EUT ANTENNA

The EUT antenna is internal antenna, It comply with the standard requirement.

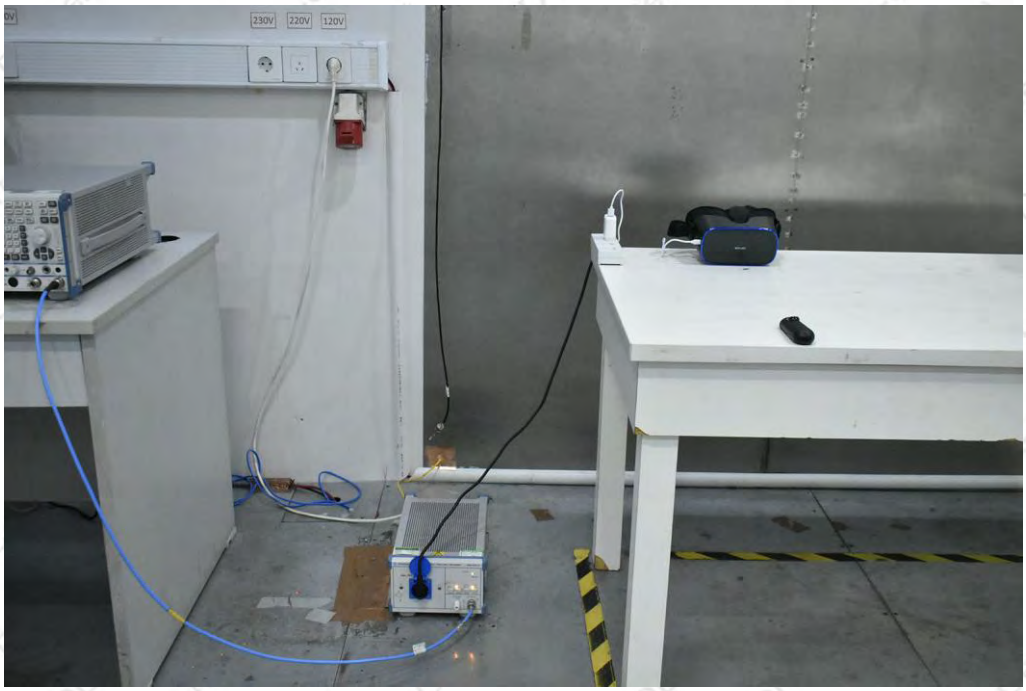
11. TEST SEUUP PHOTO

Radiated Measurement Photos



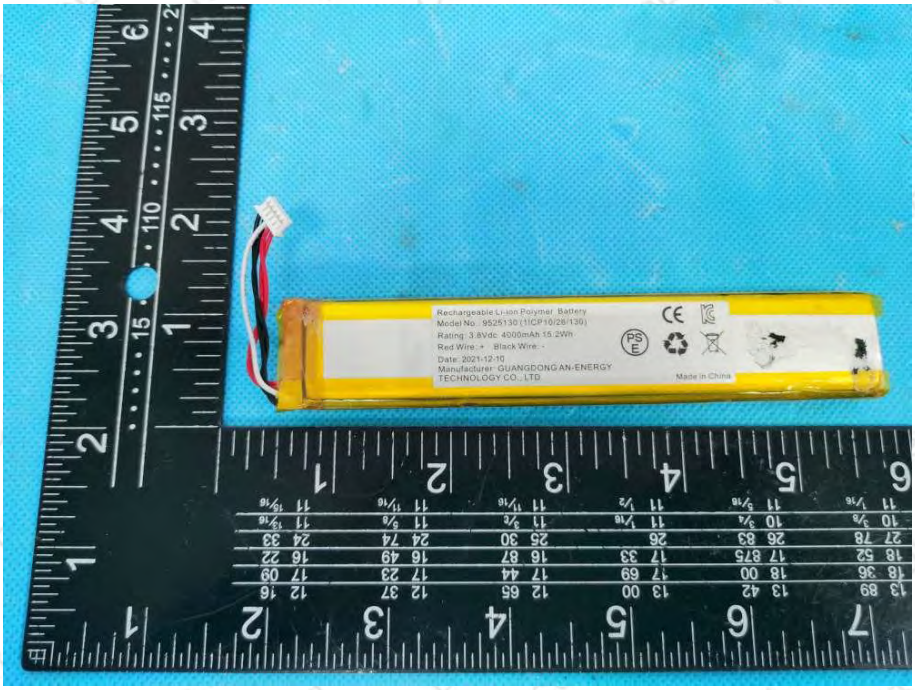


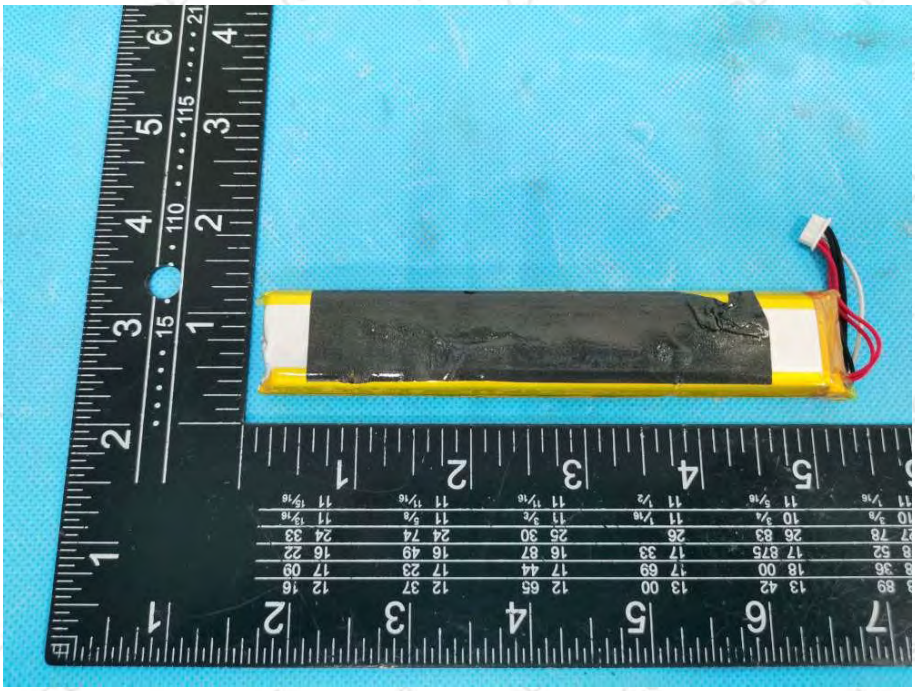
Conducted Measurement Photos

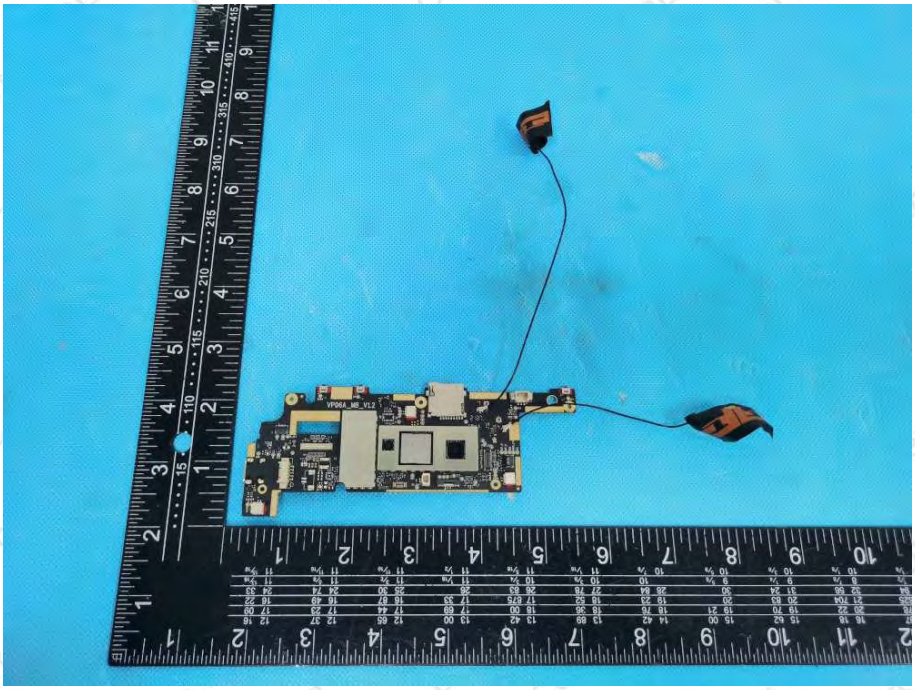


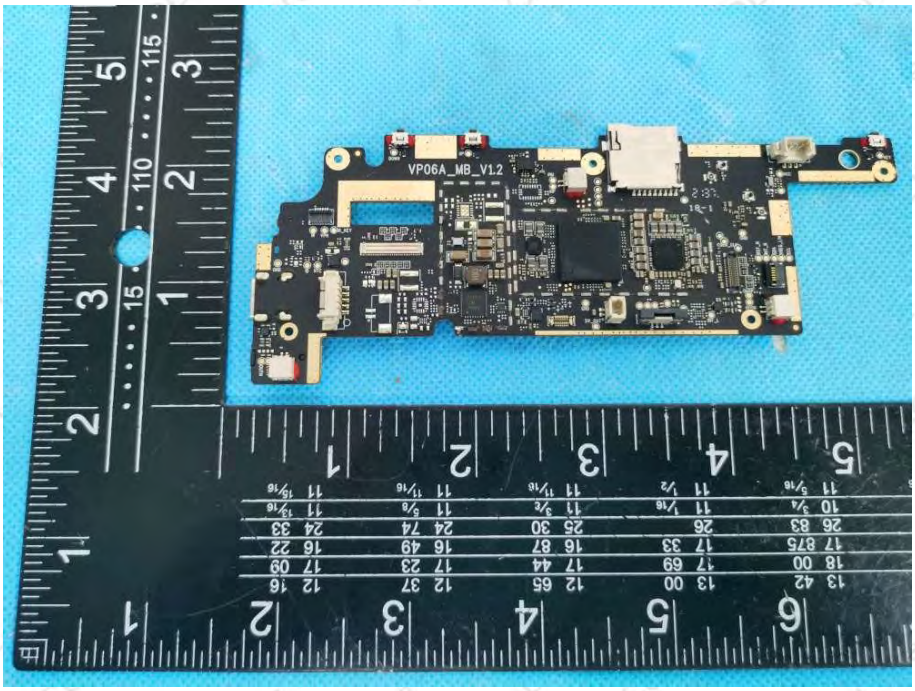
12. EUT PHOTO

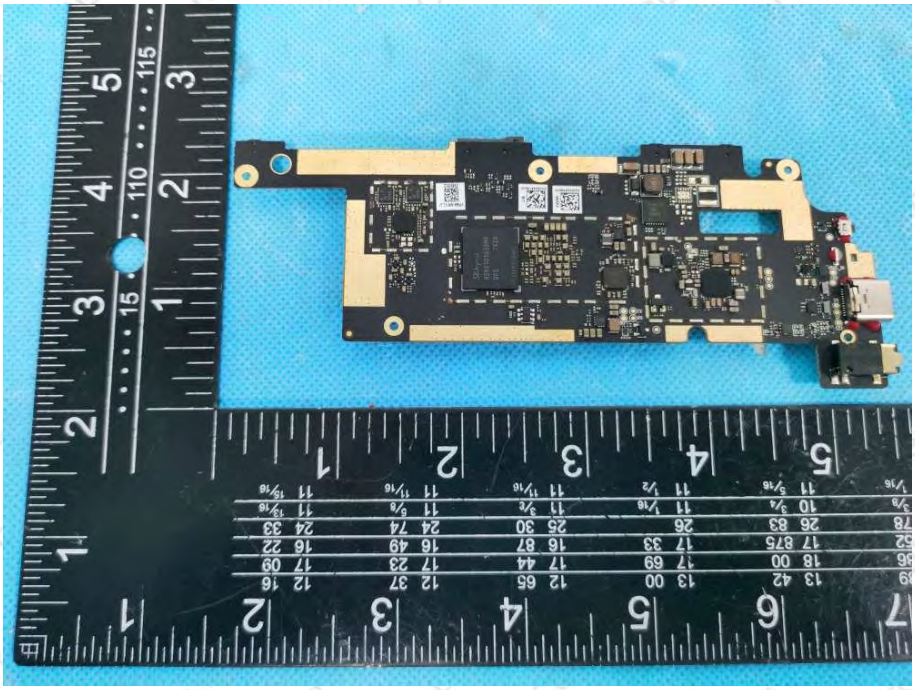

DPVR

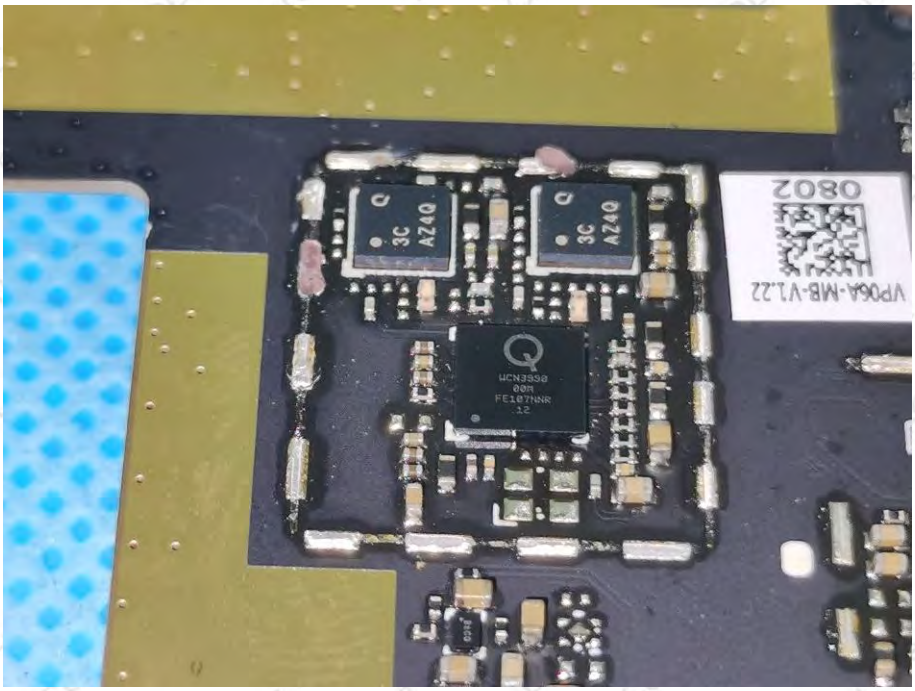

Rechargeable Li-ion Polymer Battery
Model No.: 9525130 (1ICP10/26/130)
Rating: 3.8Vdc 4000mAh 15.2Wh
Red Wire: + Black Wire: -
Date: 2021-12-10
Manufacturer: GUANGDONG AN-ENERGY TECHNOLOGY CO., LTD
Made in China






VP06A_MB_V1.2





※※※※※ **END OF REPORT** ※※※※※