



FCC TEST REPORT

Test report
On Behalf of
Libitum Group
For
Tablet PC

Model No.: RVPVK808, T801

FCC ID: 2A2J8-RVPVK808

Prepared for: Libitum Group

Ave. Tiradentes No. 40, esq. Presidente Gonzalez, Edificio La Isal, Primer Piso.

Ens. Naco. Santo Domingo, Dominican Republic

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Date of Test: Jun. 03, 2021 ~ Jun. 29, 2021

Date of Report: Jun. 29, 2021

Report Number: HK2106031728-2E





TEST RESULT CERTIFICATION

Applicant's name Libitum Group

Ave. Tiradentes No. 40, esq. Presidente Gonzalez, Edificio La

Address Isal, Primer Piso. Ens. Naco. Santo Domingo, Dominican

Republic

Manufacture's Name..... WEIHENG DIGITAL COMPANY LIMITED

Address UNIT 1111 DELTA HOUSE 3 ON YIU STREET SHATIN KL

Product description

Trade Mark: RVP

Product name.....: Tablet PC

Model and/or type reference .: RVPVK808, T801

Standards FCC Rules and Regulations Part 15 Subpart E Section 15.407

ANSI C63.10: 2013

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Date of Test

Date (s) of performance of tests Jun. 03, 2021 ~ Jun. 29, 2021

Date of Issue...... Jun. 29, 2021

Test Result..... Pass

Prepared by:

Project Engineer

Reviewed by:

Approved by:

Technical Director

Project Superv



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** Modified History **

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Jun. 29, 2021	Jason Zhou
	ESTINE TESTINE	ESTINE	ESTINE



1. Test Result Summary

1.1. TEST PROCEDURES AND RESULTS

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Maximum Conducted Output Power	§15.407(a)	PASS
6dB Emission Bandwidth	§15.407(e)	N/A
26dB Emission Bandwidth& 99% Occupied Bandwidth	§15.407(a)	PASS
Power Spectral Density	§15.407(a)	PASS
Band edge	§15.407(b)/15.209/15.205	PASS
Radiated Emission	§15.407(b)/15.209/15.205	PASS
Frequency Stability	§15.407(g)	PASS

Note:

- 1. PASS: Test item meets the requirement.
- 2. Fail: Test item does not meet the requirement.
- 3. N/A: Test case does not apply to the test object.
- 4. The test result judgment is decided by the limit of test standard.

1.2. TEST FACILITY

Test Firm : Shenzhen HUAK Testing Technology Co., Ltd.

Address 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park,

Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China





1.3. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, 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	MU	
1	Conducted Emission	±2.71dB	
2	RF power, conducted	±0.37dB	
3	Spurious emissions, conducted	±2.2dB	
4	All emissions, radiated(<1G)	±3.90dB	
5	All emissions, radiated(>1G)	±4.28dB	



2. EUT Description

2.1. GENERAL DESCRIPTION OF EUT

Equipment	Tablet PC
Model Name	RVPVK808
Serial No.	T801
Trade Mark	RVP
Model Difference	All model's the function, software and electric circuit are the same, only with a product color, appearance and model named different. Test sample model: RVPVK808.
FCC ID	2A2J8-RVPVK808
Operation Frequency:	IEEE 802.11a/n/ac(HT20) 5.180GHz-5.240GHz IEEE 802.11n/ac(HT40) 5.190GHz-5.230GHz IEEE 802.11ac(HT80) 5.210GHz
Modulation Technology:	IEEE 802.11a/n/ac
Modulation Type	OFDM WITH THE THIS CONTROL OF THE THIS CONTROL
Antenna Type	Internal Antenna
Antenna Gain	3dBi
Power Source	DC 3.8V from battery or DC 5V from Type-C
Power Supply:	DC 3.8V from battery or DC 5V from Type-C



2.2. Operation Frequency each of channel

802.11a/802.11n(HT20) 802.11ac(HT20)		802.11n(HT40)/ 802.11ac(HT40)		802.11ac(HT80)	
Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180	38	5190	42	5210
4 0	5200	46	5230	STING	
44	5220	I AK	TESTING	HUAK	TESTING
48	5240	0	HUAR		HUAR
	~e ^e	ING		ESTING	
	MIG HUAK		mig MH	Par.	Olon S
NY TESTING	IAK TEST	NX TESTING	MAKTESIN	NY TEST	MAKTES
. O.		O Ho.	(i)	(ii)	(a)

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

2.3. Operation of EUT during testing

For 802.11a/n (HT20)/ac (HT20)

, ao (11120)		Thu.			
Band I (5150 - 5250 MHz)					
Channel Number Channe		Frequency (MHz)			
36	Low	5180			
40	Mid	5200			
48	High	5240			

For 802.11n (HT40)/ ac (HT40)

Band I (5150 - 5250 MHz)					
Channel Number	Channel	Frequency (MHz)			
38	Low	5190			
46	High	5230			

For 802.11ac (HT80)

Band I (5150 - 5250 MHz)			
Channel Number	Frequency (MHz)		
42	5210		



2.4. DESCRIPTION OF TEST SETUP

Operation of EUT during conducted testing and radiation below 1GHz testing:



Operation of EUT during radiation above 1GHz testing:



Adapter information

Model: HW-059200CHQ Input: 100-240V, 50/60Hz, 0.5A

Output: 5VDC, 2A

The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is Z position



3. Genera Information

3.1. Test environment and mode

Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
Test Mode:	
Engineering mode:	Keep the EUT in continuous transmitting by select channel and modulations(The value of duty cycle is 100%)

The sample was placed 0.8m/1.5m for blow/above 1GHz above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	Data rate
802.11a	6 Mbps
802.11n(HT20)	MCS0
802.11n(HT40)	MCS0
802.11ac(HT20)/ac(HT40)/ac(HT80)	MCS0
Final Test Mode:	

Operation mode: Keep the EUT in continuous transmitting with modulation





3.2. Description of Support Units

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.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
1	S / HUANTES!	/ TESTING	HIAKTESIA	/ TESTING

Note:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
- 3. For conducted measurements (Output Power, Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.



4. Test Results and Measurement Data

4.1. Conducted Emission

4.1.1. Test Specification

Test Requirement:	FCC Part15 C Section	15.207	Why.
Test Method:	ANSI C63.10:2013	TESTING	
Frequency Range:	150kHz to 30MHz	O HOME	HUAKTESTING
Receiver setup:	RBW=9 kHz, VBW=30	kHz, Sweep time	=auto
Limits:	Frequency range (MHz) 0.15-0.5 0.5-5 5-30	Limit (c Quasi-peak 66 to 56* 56 60	Average 56 to 46* 46 50
Test Setup:	Reference 40cm 40cm E.U.T AC power Test table/Insulation plane Remark: E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Ne Test table height=0.8m	Filter EMI Receiver	— AC power
Test Mode:	Tx Mode	NKTEST	ING LAKTESTIN
Test Procedure:	1. The E.U.T and simulation power through a line (L.I.S.N.). This proimpedance for the magnetic power through a List coupling impedance refer to the block photographs). 3. Both sides of A.C. conducted interferent emission, the relative the interface cables ANSI C63.10: 2013 of the conducted interface.	e impedance stabelides a 50 ohme easuring equipment es are also connects. With 50 ohm term diagram of the line are checked ice. In order to fire positions of equipment end in the line are changes must be changed.	ilization network i/50uH coupling ent. ected to the main a 50ohm/50uH nination. (Please test setup and ed for maximum and the maximum ipment and all of ed according to
Test Result:	PASS	TESTING	





4.1.2. Test Instruments

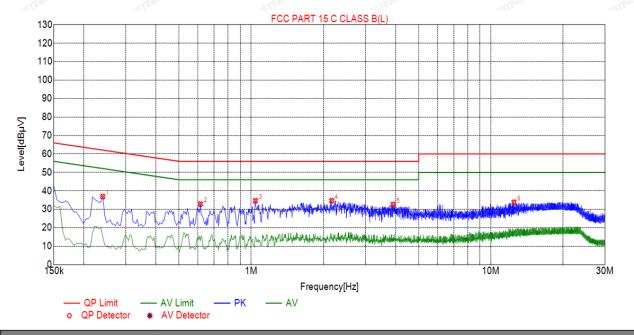
Conducted Emission Shielding Room Test Site (843)					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Receiver	R&S	ESCI 7	HKE-010	Dec. 10, 2020	Dec. 09, 2021
LISN	R&S	ENV216	HKE-002	Dec. 10, 2020	Dec. 09, 2021
Coax cable (9KHz-30MHz)	Times	381806-002	N/A	Dec. 10, 2020	Dec. 09, 2021
Conducted test software	Tonscend	TS+ Rev 2.5.0.0	HKE-081	N/A	N/A

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

Test data

All the test modes completed for test. only the worst result of (802.11a at 5180MHz) was reported

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



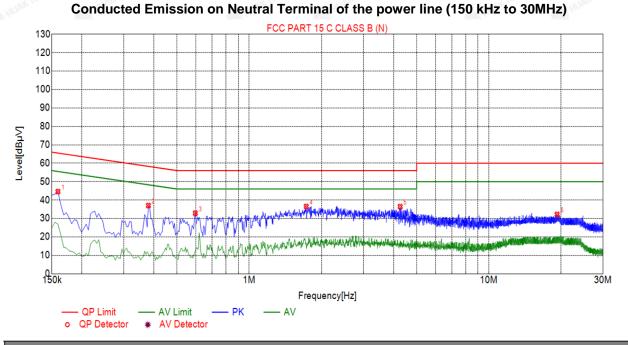
Sus	spected	l List						
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Туре
1	0.2400	36.90	20.03	62.10	25.20	16.87	PK	L
2	0.6135	32.85	20.05	56.00	23.15	12.80	PK	L
3	1.0410	34.65	20.07	56.00	21.35	14.58	PK	L
4	2.1660	34.66	20.16	56.00	21.34	14.50	PK	L
5	3.9120	32.60	20.25	56.00	23.40	12.35	PK	L
6	12.4935	33.81	19.98	60.00	26.19	13.83	PK	L

Remark: Margin = Limit - Level

Correction factor = Cable lose + LISN insertion loss Level=Test receiver reading + correction factor

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Suspected List Reading Freq. Level Factor Limit Margin NO. Detector Type [dBµV] [dBµV] [dB] [MHz] [dB] [dBµV] 20.92 0.1590 44.60 20.01 65.52 24.59 PΚ 1 Ν 21.26 2 0.3795 37.03 20.05 58.29 16.98 PK Ν 3 32.87 20.05 56.00 23.13 12.82 PΚ 0.5955 Ν 4 1.7295 36.52 20.13 56.00 19.48 16.39 PΚ Ν 5 4.2675 36.45 20.25 56.00 19.55 16.20 PK Ν 19.2885 32.20 20.08 60.00 27.80 12.12 PK

Remark: Margin = Limit - Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor





WANTED.

4.2. Maximum Conducted Output Power

4.2.1. Test Specification

Test Requirement:	FCC Part15 E Section 15.407(a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02.r01 Section E
Limit:	Frequency Band (MHz) Limit
	5150-5250 250mW for client devices
Test Setup:	Power meter EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	 The testing follows the Measurement Procedure of KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section E, 3, a The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Measure the conducted output power and record the results in the test report.
Test Result:	PASS
Remark:	Conducted output power= measurement power +10log(1/x) X is duty cycle=1, so 10log(1/1)=0 Conducted output power= measurement power





4.2.2. Test Instruments

	RF Test Room				
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 10, 2020	Dec. 09, 2021
Power meter	Agilent	E4419B	HKE-085	Dec. 10, 2020	Dec. 09, 2021
Power Sensor	Agilent	E9300A	HKE-086	Dec. 10, 2020	Dec. 09, 2021
RF cable	Times	1-40G	HKE-034	Dec. 10, 2020	Dec. 09, 2021
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Dec. 10, 2020	Dec. 09, 2021

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).





Test Data

Test Data	1		- 462	- 1
Configuration B	and I (5150 - 52	250 MHz)		
Mode	Test channel	Maximum Conducted Output Power (dBm)	FCC Limit (dBm)	Result
11a	CH36	4.49	24	PASS
₅ 11a	CH40	4.66	24	PASS
11a	CH48	4.96	24	PASS
11n(HT20)	CH36	5.14	24	PASS
11n(HT20)	CH40	5.20	24	PASS
11n(HT20)	CH48	5.18	24	PASS
11n(HT40)	CH38	5.06	24	PASS
11n(HT40)	CH46	5.33	24	PASS
11ac(HT20)	CH36	3.14	24	PASS
11ac(HT20)	CH40	3.21	24	PASS
11ac(HT20)	CH48	3.47	24	PASS
11ac(HT40)	CH38	3.03	24	PASS
11ac(HT40)	CH46	3.50	24	PASS
11ac(HT80)	CH42	3.59	24	PASS



4.3. 6dB Emission Bandwidth

4.3.1. Test Specification

Test Method:	KDB789033 D02 G Rules v02r01 Section >500kHz		t Procedure	s New
Limit:	>500kHz	, art	E2	
				Y TESTING
Test Setup:			EUT	u TESTNE
Test Mode:	Transmitting mode			HUAIT
Test Procedure:	1. KDB789033 D02 Rules v02r01 Sec 2. Set to the maxim EUT transmit con 3. Make the measur resolution bandv Video bandwidth an accurate mea be greater than 4 4. Measure and rec	General UNII Totion Coum power setting tinuously. The ment with the width (RBW) = 1 to (VBW) = 300 kesurement. The	est Procedung and enab spectrum a 100 kHz. Se kHz. In orde 6dB bandw	nalyzer's t the r to make ridth must
Test Result:	PASS	5711	MAKTESTING	HUAKTESTIL

4.3.2. Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 10, 2020	Dec. 09, 2021
RF cable	Times	1-40G	HKE-034	Dec. 10, 2020	Dec. 09, 2021
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Dec. 10, 2020	Dec. 09, 2021

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

4.3.3Test data

N/A



4.4. 26dB Bandwidth and 99% Occupied Bandwidth

4.4.1. Test Specification

Test Requirement:	47 CFR Part 15C Section 15.407
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C
Limit:	No restriction limits
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	 KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C Set to the maximum power setting and enable the EUT transmit continuously. Make the measurement with the spectrum analyzer's resolution bandwidth RBW = 1% EBW, VBW≥3RBW, In order to make an accurate measurement. Measure and record the results in the test report.
Test Result:	PASS

4.4.2. Test Instruments

	RF Test Room				
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 10, 2020	Dec. 09, 2021
RF cable	Times	1-40G	HKE-034	Dec. 10, 2020	Dec. 09, 2021
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Dec. 10, 2020	Dec. 09, 2021

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).





Test data Band I

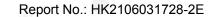
Mode	Test channel	Frequency (MHz)	26 dB Bandwidth (MHz)	Verdict
11a	CH36	5180	25.240	PASS
11a	CH40	5200	24.880	PASS
روس ^{ان} 11a	CH48	5240	25.960	PASS
11n(HT20)	CH36	5180	28.520	PASS
11n(HT20)	CH40	5200	26.880	PASS
11n(HT20)	CH48	5240	25.360	PASS
11n(HT40)	CH38	5190	46.240	PASS
11n(HT40)	CH46	5230	43.520	PASS
11ac(HT20)	CH36	5180	31.040	PASS
11ac(HT20)	CH40	5200	29.880	PASS
11ac(HT20)	CH48	5240	26.800	PASS
11ac(HT40)	CH38	5190	47.120	PASS
11ac(HT40)	CH46	5230	41.600	PASS
11ac(HT80)	CH42	5210	88.320	PASS

Test plots as follows:



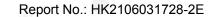
Band I (5150 - 5250 MHz)



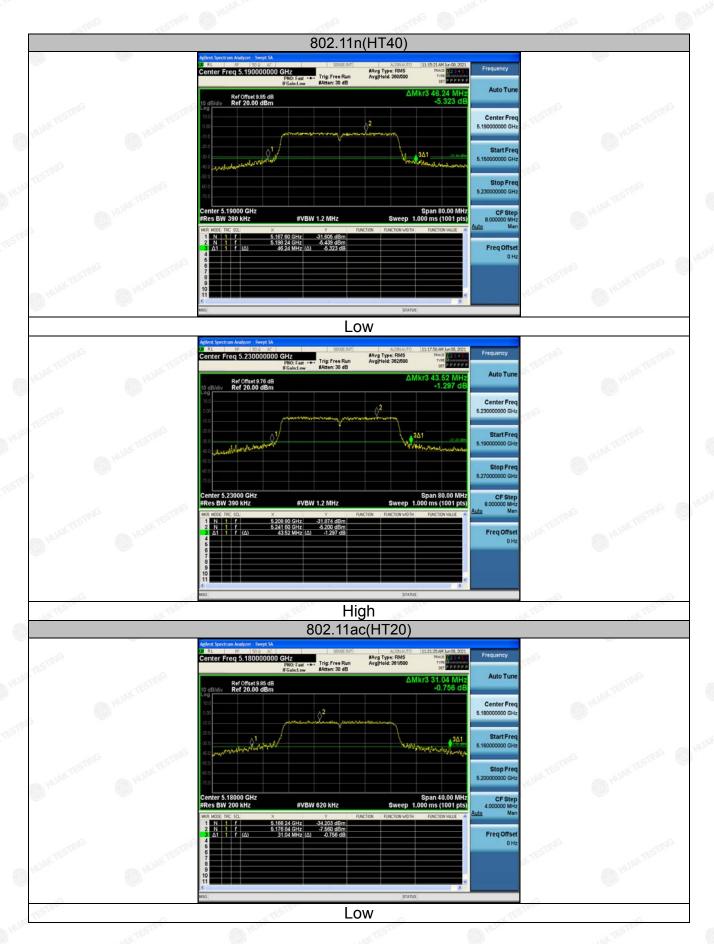












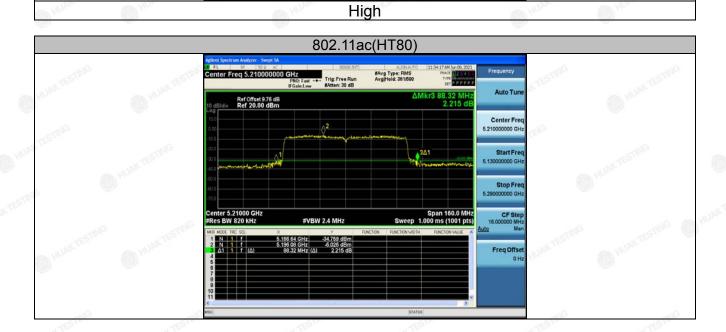




The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by HUAK, this document cannont be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at http://www.cer-mark.com.

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4.5. Power Spectral Density

4.5.1. Test Specification

Test Requirement:	FCC Part15 E Section 15.407 (a)				
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section F				
Limit:	≤11.00dBm/MHz for Band I 5150MHz-5250MHz				
Test Setup:					
	Spectrum Analyzer EUT				
Test Mode:	Transmitting mode with modulation				
Test Procedure:	 Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth. Set RBW = 1 MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS. Allow the sweeps to continue until the trace stabilizes Use the peak marker function to determine the maximum amplitude level. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment. 				
Test Result:	PASS				

4.5.2. Test Instruments

RF Test Room						
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due	
Spectrum analyzer	Agilent 6	N9020A	HKE-048	Dec. 10, 2020	Dec. 09, 2021	
RF cable	Times	1-40G	HKE-034	Dec. 10, 2020	Dec. 09, 2021	
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Dec. 10, 2020	Dec. 09, 2021	

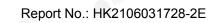
Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).





4.5.3. Test data

Configuration Band I (5150 - 5250 MHz)					
Mode	Test channel	Level [dBm/MHz]	Limit (dBm/MHz)	Result	
11a	CH36	-0.83	11	PASS	
11a	CH40	-0.86	11	PASS	
11a	CH48	0.49	11	PASS	
11n(HT20)	CH36	1.08	11	PASS	
11n(HT20)	CH40	0.69	11	PASS	
11n(HT20)	CH48	0.86	11	PASS	
11n(HT40)	CH38	-1.94	11	PASS	
11n(HT40)	CH46	-1.29	11	PASS	
11ac(HT20)	CH36	-1.17	11 TESTIN	PASS	
11ac(HT20)	CH40	-1.2	11	PASS	
11ac(HT20)	CH48	-1	11	PASS	
11ac(HT40)	CH38	-3.3	11	PASS	
11ac(HT40)	CH46	-3.4	11	PASS	
11ac(HT80)	CH42	-5.86	11	PASS	

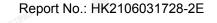




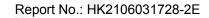




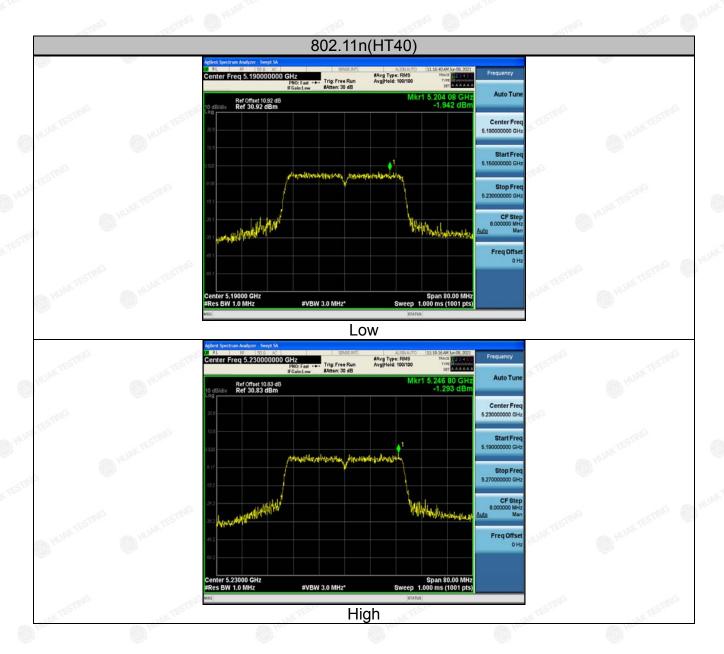


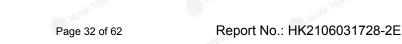






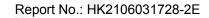






HUAK TESTING











4.6. Band edge

4.6.1. Test Specification

Test Requirement:	FCC CFR47 Part 15E Section 15.407
Test Method:	ANSI C63.10 2013
	(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
	(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
	(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
Limit:	(4) For transmitters operating in the 5.725-5.85 GHz band:
	(i) 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 10 dBm/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.
	The limit of frequency below 1GHz and which fall in restricted bands should complies 15.209.
Test Setup:	Ant. feed point 1-4 m Ground Plane
	Receiver Amp.
Test Mode:	Transmitting mode with modulation
Test Procedure:	 The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.



HUAK TESTING

3. 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. 4. 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 and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold 6. 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, quasipeak or average method as specified and then reported in a data sheet. **PASS** Test Result:



4.6.2. Test Instruments

Radiated Emission Test Site (966)						
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due	
Receiver	R&S	ESRP3	HKE-005	Dec. 10, 2020	Dec. 09, 2021	
Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 10, 2020	Dec. 09, 2021	
Preamplifier	EMCI	EMC051845S E	HKE-015	Dec. 10, 2020	Dec. 09, 2021	
Preamplifier	Agilent	83051A	HKE-016	Dec. 10, 2020	Dec. 09, 2021	
Loop antenna	Schwarzbeck	FMZB 1519 B	HKE-014	Dec. 10, 2020	Dec. 09, 2021	
Broadband antenna	Schwarzbeck	VULB 9163	HKE-012	Dec. 10, 2020	Dec. 09, 2021	
Horn antenna	Schwarzbeck	9120D	HKE-013	Dec. 10, 2020	Dec. 09, 2021	
Antenna Mast	Keleto	CC-A-4M	N/A	N/A	N/A	
Position controller	Taiwan MF	MF7802	HKE-011	Dec. 10, 2020	Dec. 09, 2021	
Radiated test software	Tonscend	TS+ Rev 2.5.0.0	HKE-082	N/A	N/A	
RF cable (9KHz-1GHz)	Times	381806-001	N/A	N/A	N/A	
Hf antenna	Schwarzbeck	LB-180400-KF	HKE-031	Dec. 10, 2020	Dec. 09, 2021	
RF cable	Tonscend	1-18G	HKE-099	Dec. 10, 2020	Dec. 09, 2021	
RF cable	Times	1-40G	HKE-034	Dec. 10, 2020	Dec. 09, 2021	

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).





4.6.3. Test Data

Radiated Band Edge Test:

Operation Mode: 802.11a Mode with 5.2G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	52.16	-2.49	49.67	74	-24.33	peak
5150	STINE WHI	-2.49	1	54	1	AVG
- ak Testill	"IAK T	T XX	- HAK FEE		W TEST	LAKTE

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	53.26	-2.49	50.77	74	-23.23	peak
5150	AKTESTING 1	-2.49	WG THAN TESTING	54	JAK TO TING	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Datastas Tura
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	51.15	-2.11	49.04	74	-24.96	peak
5350	TIME 1	-2.11	1 TING	54	IK TES	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotostor Tyro
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	52.33	-2.11	50.22	74	-23.78	peak
5350	1	-2.11	I	54	1	AVG
,	•	TEST	•		165	

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: 802.11n20 Mode with 5.2G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	54.41	-2.49	51.92	74	-22.08	peak
5150	1	-2.49	M HUAK TO	54	1	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Datastar Tyro
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	51.56	-2.49	49.07	74	-24.93	peak
5150	TESTING /	-2.49	AND A TESTINE	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	52.86	-2.11	50.75	74	-23.25	peak
5350	TING /	-2.11	1 TING	54	1	AVG

Vertical:

100000		60000	100,000			100101
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotoctor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	52.07	-2.11	49.96	74	-24.04	peak
5350	1	-2.11	1	54	1	AVG
		-CS111	<u> </u>		K5111	

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: 802.11 n40 Mode with 5.2G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	52.85	-2.49	50.36	74	-23.64	peak
5150	1	-2.49	HILPH I	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	53.52	-2.49	51.03	74	-22.97	peak
5150	1	-2.49	(I) HUAN	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	51.46	-2.11	49.35	74	-24.65	peak
5350	TING /	-2.11	1 TING	54	1	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	53.16	-2.11	51.05	74	-22.95	peak
5350	1	-2.11	1	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: 802.11 ac20 Mode with 5.2G TX CH Low

Horizontal

Frequency	y Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	54.57	-2.49	52.08	74	-21.92	peak
5150	OKTESTING /	-2.49	NY ESTING	54	1	AVG

Vertical:

-e51	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
NG.	5150	52.63	-2.49	50.14	74	-23.86	peak
	5150	STITULE /	-2.49	LAYTESTINE	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Time
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	52.71	-2.11	50.6	74	-23.4	peak
5350	TING /	-2.11	1 TING	54	1	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Data atau Tura
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	51.22	-2.11	49.11	74	-24.89	peak
5350	1	-2.11	1	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: 802.11 ac40 Mode with 5.2G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Tyre
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	52.15	-2.49	49.66	74	-24.34	peak
5150	1	-2.49	1	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
53.74	-2.49	51.25	74	-22.75	peak
1	-2.49	1	54	1	AVG
	(dBµV)	(dBµV) (dB) 53.74 -2.49	(dBµV) (dB) (dBµV/m) 53.74 -2.49 51.25	(dBμV) (dB) (dBμV/m) (dBμV/m) 53.74 -2.49 51.25 74	(dBμV) (dB) (dBμV/m) (dBμV/m) (dBμV/m) 53.74 -2.49 51.25 74 -22.75

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	54.19	-2.11	52.08	74	-21.92	peak
5350	TING /	-2.11	1 TING	54	1	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	52.55	-2.11	50.44	74	-23.56	peak
5350	1	-2.11	1	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: 802.11 ac80 Mode with 5.2G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	53.74	-2.49	51.25	74	-22.75	peak
5150	1	-2.49	1	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5150	52.63	-2.49	50.14	74	-23.86	peak
5150	1	-2.49	1	54	1	AVG
5150	1	-2.49	1	54	1	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	53.17	-2.11	51.06	74	-22.94	peak
5350	1	-2.11	MAN TEST	54	1	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
5350	53.05	-2.11	50.94	74	-23.06	peak
5350	1	-2.11	1	54	ESTING /	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



4.7. Spurious Emission

4.7.1.1. Test Specification

Test Requirement:	FCC CFR47 Part 15 Section 15.407						
Test Method:	KDB 789033 D02 v02r01						
Frequency Range:	9kHz to 40GHz						
Measurement Distance:	3 m						
Antenna Polarization:	Horizontal &	Vertical		IN ^G			
Operation mode:	Transmitting	mode with	modulat	ion	ale TING		
Receiver Setup:	Frequency 9kHz- 150kHz 150kHz- 30MHz 30MHz-1GHz Above 1GHz	Detector Quasi-peak Quasi-peak Quasi-peak Peak Peak	RBW 200Hz 9kHz 120KHz 1MHz 1MHz	VBW 1kHz 30kHz 300KHz 3MHz 10Hz	Remark Quasi-peak Value Quasi-peak Value Quasi-peak Value Peak Value Average Value		
Limit:	emissions outs an e.i.r.p. of -2 (i) All emission MHz or more a to 10 dBm/MH from 25 MHz a to a level of 15 edge, and from linearly to a lev	side of the 5 27 dBm/MHz s shall be limed above or below z at 25 MHz above or below 5.6 dBm/MHz to 5 MHz abovel of 27 dBn quency below	.15-5.35 (nited to a low the ba above or ow the ba at 5 MH we or below n/MHz at the	evel of -2 nd edge is below the nd edge is z above ow the band edge is the band edge is the band edge.	25 GHz band: All I shall not exceed 27 dBm/MHz at 75 increasing linearly e band edge, and increasing linearly or below the band d edge increasing edge. fall in restricted b		
Test setup:	For radiated 30MHz to 10	Turn Table Ground	m —	RX Ante			



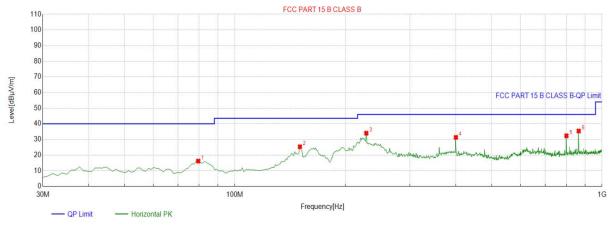
Ant. feed point EUT **Ground Plane** Receiver Amp Above 1GHz Receiver 1. The EUT was placed on the top of a rotating table 0.8 meters above the groundat a 3 meter camber. The table was rotated 360 degrees todetermine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, whichwas mounted on the top of a variable-height antenna tower. 3. 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. 4. For each suspected emission, the EUT was arranged to its **Test Procedure:** worst case and thenthe antenna was tuned to heights from 1 meter to 4 meters and the rotatablewas turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and SpecifiedBandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limitspecified, then testing could be stopped and the peak values of the EUT wouldbe reported. Otherwise the emissions that did not have 10dB margin would bere-tested one by one using peak, quasi-peak or average method as specified andthen reported in a data sheet. Test results: **PASS**



4.7.2. Test Data

All the test modes completed for test. only the worst result of (802.11a at 5180MHz) was reported Below 1GHz

Horizontal

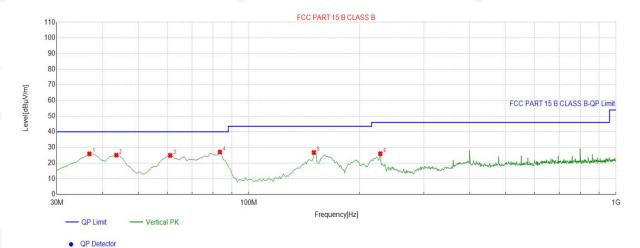


QP Detector

Suspe	cted List								
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	79.5195	-19.38	35.54	16.16	40.00	23.84	100	333	Horizontal
2	150.4004	-18.91	44.23	25.32	43.50	18.18	100	0	Horizontal
3	228.0781	-14.37	48.37	34.00	46.00	12.00	100	2	Horizontal
4	399.9399	-10.41	41.74	31.33	46.00	14.67	100	83	Horizontal
5	799.9800	-3.12	35.44	32.32	46.00	13.68	100	203	Horizontal
6	864.0641	-2.37	37.75	35.38	46.00	10.62	100	296	Horizontal

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;

Vertical



Suspected List Factor Level Limit Margin Freq. Reading Height Angle NO. Polarity [MHz] [dB] [dBµV/m] $[dB\mu V/m]$ [dBµV/m] [dB] [cm] [°] 36.7968 25.87 1 -15.57 41.44 40.00 14.13 100 27 Vertical 43.5936 -13.90 38.96 25.06 40.00 14.94 55 Vertical 100 3 61.0711 -15.43 40.33 24.90 40.00 15.10 100 310 Vertical 83.4034 -18.65 45.68 27.03 40.00 12.97 100 Vertical 4 5 5 150.4004 -18.91 45.66 16.75 120 26.75 43.50 100 Vertical 228.0781 -14.37 26.02 40.39 46.00 19.98 100 50 Vertical

Remark: Factor = Cable loss + Antenna factor - Preamplifier; Level = Reading + Factor; Margin = Limit - Level;



Above 1GHz

LOW CH 36 (802.11 a Mode with 5.2G)/5180

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detailer Tune
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
3647	60.66	-4.59	56.07	74	-17.93	peak
3647	45.81	-4.59	41.22	54	-12.78	AVG
10360	48.62	3.74	52.36	74	-21.64	peak
10360	41.16	3.74	44.9	54	-9.1	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
3647	59.76	-4.59	55.17	74	-18.83	peak
3647	44.44	-4.59	39.85	54	-14.15	AVG
10360	50.14	3.74	53.88	74	-20.12	peak
10360	36.41	3.74	40.15	54	-13.85	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



MID CH40 (802.11 a Mode with 5.2G)/5200 Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Simits Limits	Margin	Data atan Tuma
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
3647	58.68	-4.59	54.09	74	-19.91	peak
3647	43.48	-4.59	38.89	54	-15.11	AVG
10400	52.51	3.74	56.25	74	-17.75	peak
10400	38.77	3.74	42.51	54	-11.49	AVG

Vertical:

	630 V	100 M	(S)(A)		ASSET A	A200A
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
3647	61	-4.59	56.41	74	-17.59	peak
3647	44.48	-4.59	39.89	54	-14.11	AVG
10400	51.63	3.74	55.37	74	-18.63	peak
10400	39.56	3.74	43.3	54	-10.7	AVG



HIGH CH 48 (802.11a Mode with 5.2G)/5240 Horizontal:

Meter Reading	Factor	Emission Level	Limits	Margin	Detector Tune
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
57.79	-4.59	53.2	74	-20.8	peak
47.24	-4.59	42.65	54	-11.35	AVG
50.73	3.75	54.48	74	-19.52	peak
39.78	3.75	43.53	54	-10.47	AVG
	(dBµV) 57.79 47.24 50.73	(dBµV) (dB) 57.79 -4.59 47.24 -4.59 50.73 3.75	(dBμV) (dB) (dBμV/m) 57.79 -4.59 53.2 47.24 -4.59 42.65 50.73 3.75 54.48	(dBμV) (dB) (dBμV/m) (dBμV/m) 57.79 -4.59 53.2 74 47.24 -4.59 42.65 54 50.73 3.75 54.48 74	(dBμV) (dB) (dBμV/m) (dBμV/m) (dBμV/m) 57.79 -4.59 53.2 74 -20.8 47.24 -4.59 42.65 54 -11.35 50.73 3.75 54.48 74 -19.52

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Meter Reading	Factor	Emission Level	Limits	Margin	HUAN
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
58.81	-4.59	54.22	74	-19.78	peak
43.78	-4.59	39.19	54	-14.81	AVG
47.89	3.75	51.64	74	-22.36	peak
35.66	3.75	39.41	54	-14.59	AVG
	(dBµV) 58.81 43.78 47.89	(dBµV) (dB) 58.81 -4.59 43.78 -4.59 47.89 3.75	(dBμV) (dB) (dBμV/m) 58.81 -4.59 54.22 43.78 -4.59 39.19 47.89 3.75 51.64	(dBμV) (dB) (dBμV/m) (dBμV/m) 58.81 -4.59 54.22 74 43.78 -4.59 39.19 54 47.89 3.75 51.64 74	(dBμV) (dB) (dBμV/m) (dBμV/m) (dBμV/m) 58.81 -4.59 54.22 74 -19.78 43.78 -4.59 39.19 54 -14.81 47.89 3.75 51.64 74 -22.36

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Remark:

- (1) Measuring frequencies from 1 GHz to the 40 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) The emissions are attenuated more than 20dB below the permissible limits are not recorded in the report.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed. (7)All modes of operation were investigated and the worst-case of 802.11a are reported.



4.8. Frequency Stability Measurement

4.8.1. Test Specification

Test Requirement:	FCC Part15 Section 15.407(g)
Test Method:	ANSI C63.10: 2013
Limit:	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of 0 degrees to 35 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.
Test Setup:	Spectrum Analyzer EUT AC/DC Power supply
Test Procedure:	The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
Test Result:	PASS OF THE TOTAL PASS
Remark:	N/A





4.8.2. Test Instruments

	RF Test Room									
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due					
Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 10, 2020	Dec. 09, 2021					
Temperature and humidity meter	Boyang	HTC-1	HKE-077	Dec. 10, 2020	Dec. 09, 2021					
programmable power supply	Agilent	E3646A	HKE-092	Dec. 10, 2020	Dec. 09, 2021					

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).





4.8.3.
Test Result as follows:

Mode	Voltage (V)	FHL (5180MHz)	Deviation (KHz)	FHH (5240MHz)	Deviation (KHz)
MAKTES!	4.25V	5180.034	34	5240.022	22
5.2G Band	5.0V	5179.985	-15	5240.017	17
TESTI. MAKTES	5.75V	5180.024	24	5240.019	19

Mode	Temperature (°C)	FHL (5180MHz)	Deviation (KHz)	FHH (5240MHz)	Deviation (KHz)
3	-30	5180.031	31	5240.016	16
HUAKTESTIN	-20	5180.026	26	5239.998	-2
	-10	5179.994	-6	5239.988	-12
W TESTING	0	5180.013	13	5239.991	-9
5.2G Band	10	5180.027	27	5240.008	8
, NG	20	5179.979	-21	5240.022	22
SI" HUAK	30	5179.989	-11	5239.996	-4
5	40	5180.022	22	5239.997	-3
HUAKTESTING	50	5180.011	11	5240.006	6



4.9. ANTENNA REQUIREMENT

Standard Applicable

For intentional device, according to FCC 47 CFR Section 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.

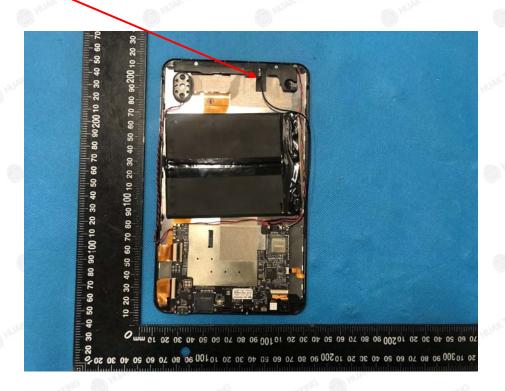
Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

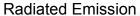
The antenna used in this product is a Internal Antenna, need professional installation, not easy to remove. It conforms to the standard requirements. The directional gains of antenna used for transmitting is 3dBi.

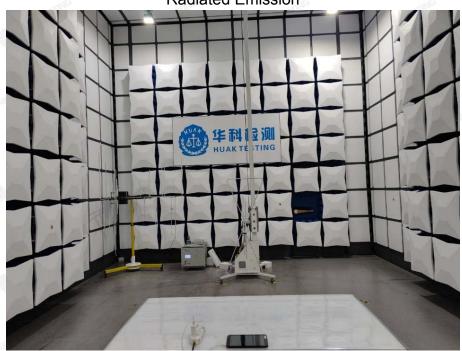
WIFI ANTENNA

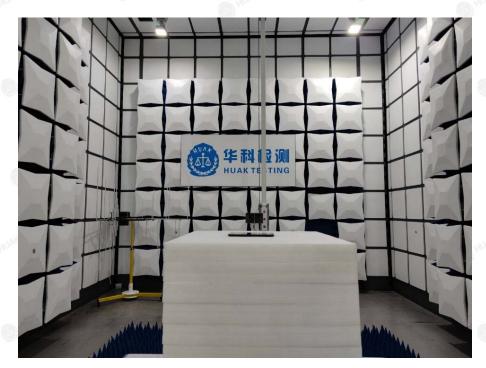




4.10. Photographs of Test Setup















5. PHOTOS OF THE EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos

-----End of test report-----