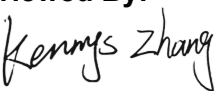
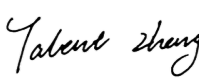


FCC AND ISCED CERTIFICATION TEST REPORT

Applicant:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road, Huangpu District, Guangzhou, China
Manufacturer:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road, Huangpu District, Guangzhou, China
Product Description:	IEEE802.11a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated Bluetooth 2.1/3.0/4.2/5.0
Brand Name:	NA
Tested Model:	SKI.WB822CU.2
FCC ID:	2AR82-SKIWB822CU2
IC:	24728-SKIWB822CU2
Report No.:	JCF240223021-004
Received Date:	Feb. 23, 2024
Tested Date:	Feb. 23, 2024 ~ Mar. 22, 2024
Issued Date:	Mar. 22, 2024
Test Standards:	FCC Rules and Regulations Part 15 Subpart E, RSS-247 Issue 3 August 2023
Test Procedure:	ANSI C63.10:2013, 789033 D02 General U-NII Test Procedures New Rules v02r01, 662911 D01 Multiple Transmitter Output v02r01
Test Result:	Pass

Prepared By:  <u>Roger Li/Engineer</u>	Date: Mar. 22, 2024
--	----------------------------

Reviewed By:  <u>Kennys Zhang/Engineer</u>	Date: Mar. 22, 2024
--	----------------------------

Approved By:  <u>Talent Zhang/Engineer</u>	Date: Mar. 22, 2024
--	----------------------------

Note: The test results in this report apply exclusively to the tested model / sample. Without written approval of Guangzhou Jingce Testing Technology Co., Ltd. the test report shall not be reproduced except in full.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Mar. 22, 2024	Original Report	/

Table of Contents

1. Test Report Declare	4
2. Summary of test results	5
3. Test Laboratory	5
4. Equipment Under Test	6
4.1. Description of EUT	6
4.2. Channel List	6
4.3. Test Channel Configuration	8
4.4. Test Environment Conditions	9
4.5. The Worse Case Power Setting Parameter	9
4.6. Description of Available Antennas	11
5. Description of Test Setup	12
5.1. Accessory	12
5.2. Support Equipment	12
5.3. Test Setup	12
5.4. Setup Diagram for Tests	12
6. Measurement uncertainty	12
7. Measuring Instrument and Software Used	13
8. Maximum Output Power	15
8.1. Block Diagram of Test Setup	15
8.2. Limits	15
8.3. Test Procedure	15
8.4. Test Result	16
9. Radiated Emission	18
9.1. Block Diagram of Test Setup	18
9.2. Limit	19
9.3. Test Procedure	20
9.4. Test Result	22
9.5. Original Test Data	22
10. Antenna Requirements	32
10.1. Applicable Requirements	32
10.2. Result	32
APPENDIX A - Radiated Emission Below 1GHz Test Data	33
APPENDIX B - Radiated Emission Above 1GHz Test Data	35

1. Test Report Declare

Applicant:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road, Huangpu District, Guangzhou, China
Manufacturer:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road, Huangpu District, Guangzhou, China
Product Name:	IEEE802.11a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated Bluetooth 2.1/3.0/4.2/5.0
Brand Name:	NA
Model Name:	SKI.WB822CU.2
Difference Description:	NA

We Declare:

The equipment described above is tested by Guangzhou Jingce Testing Technology Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangzhou Jingce Testing Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests except as provided information by clients.

2. Summary of test results

The EUT have been tested according to the applicable standards as referenced below.

Clause	Description of Test Item	Standard	Verdict
1	6/26dB Bandwidth	FCC 15.407 (a)&(e) RSS-247 Clause 6.2	NA
2	99% Occupied Bandwidth	RSS-Gen Clause 6.6	NA
3	Maximum Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	Pass
4	Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	NA
5	Frequency Stability Measurement	FCC 15.407 (g)	NA
6	Radiated Band edge and Spurious Emission	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	Pass
7	Power Line Conducted Emission	FCC 15.207 RSS-GEN Clause 8.8	NA
8	Antenna requirement	FCC 15.203 RSS-GEN Clause 8.3	Pass
9	Dynamic Frequency Selection	FCC 15.407 (h) RSS-247 Clause 6.3	NA

Note: The EUT has only added antenna to the original report. So above test items except clause 2&6&8 need to be retest, the other test items reference report "ESTE-R2112275&6" and "ESTE-R2112281&2"

3. Test Laboratory

Guangzhou Jingce Testing Technology Co., Ltd.

Add.: No.192, Kezhu Road, Huangpu District, Guangzhou, Guangdong, China

Association for Laboratory Accreditation(A2LA). Certificate Number: 6594.01

FCC Designation Number: CN1331. Test Firm Registration Number: 360543

IC Test Firm Registration Number: 28796

Conformity Assessment Body identifier: CN0138

4. Equipment Under Test

4.1. Description of EUT

EUT Name:	IEEE802.11a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated Bluetooth 2.1/3.0/4.2/5.0
Model Number:	SKI.WB822CU.2
EUT Function Description:	Please refer to user manual of this device
Power Supply:	DC 3.3V+/-0.3
Radio Specification:	IEEE 802.11a/n/ac
Operation Frequency:	IEEE 802.11a: 5180MHz—5825MHz IEEE 802.11n HT20: 5180MHz—5825MHz IEEE 802.11n HT40: 5190MHz—5795MHz IEEE 802.11ac VHT20: 5180MHz—5825MHz IEEE 802.11ac VHT40: 5190MHz—5795MHz IEEE 802.11ac VHT80: 5210MHz—5775MHz
Modulation:	IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac (VHT20/40/80): OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Data Rate:	IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps IEEE 802.11n HT20: 14.4, 28.9, 43.3, 57.8, 86.7, 115.6, 130, 144.4 Mbps IEEE 802.11n HT40: 30, 60, 90, 120, 180, 240, 270, 300 Mbps IEEE 802.11ac VHT20: 14.4, 28.9, 43.3, 57.8, 86.7, 115.6, 130, 144.4, 173.3 Mbps IEEE 802.11ac VHT40: 30, 60, 90, 120, 180, 240, 270, 300, 360, 400 Mbps IEEE 802.11ac VHT80: 65, 130, 195, 260, 390, 520, 585, 650, 780, 866.7 Mbps
Antenna Type:	Shrapnel Antenna, MAX. Gain: 4.89 dBi

Antenna Information		
Ant No.	Antenna Type	Gain(dBi)
1	Shrapnel	3.34
2	Shrapnel	3.31
3	Shrapnel	4.05
4	Shrapnel	4.89

Note 1: EUT is the ab. of equipment under test.

Note 2: The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.

4.2. Channel List

UNII-1 (For Bandwidth = 20 MHz)		UNII-1 (For Bandwidth = 40 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	/	/
48	5240	/	/
UNII-1 (For Bandwidth = 80 MHz)			
Channel		Frequency (MHz)	

42	5210
----	------

UNII-2A (For Bandwidth = 20 MHz)		UNII-2A (For Bandwidth = 40 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270
56	5280	62	5310
60	5300	/	/
64	5320	/	/
UNII-2A (For Bandwidth = 80 MHz)			
Channel		Frequency (MHz)	
58		5290	

UNII-2C (For Bandwidth = 20 MHz)		UNII-2C (For Bandwidth = 40 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510
104	5520	110	5550
108	5540	118	5590
112	5560	126	5630
116	5580	134	5670
120	5600	/	/
124	5620	/	/
128	5640	/	/
132	5660	/	/
136	5680	/	/
140	5700	/	/
UNII-2C (For Bandwidth = 80 MHz)			
Channel		Frequency (MHz)	
106		5530	
122		5610	

UNII-3 (For Bandwidth = 20 MHz)		UNII-3 (For Bandwidth = 40 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755
153	5765	159	5795
157	5785	/	/
161	5805	/	/
165	5825	/	/

UNII-3 (For Bandwidth = 80 MHz)	
Channel	Frequency (MHz)
155	5775

4.3. Test Channel Configuration

Mode	Data rate (Mbps) (see Note)	Test Channel and Frequency
802.11a TX Mode	6	CH36, 5180
	6	CH44, 5220
	6	CH48, 5240
	6	CH52, 5260
	6	CH60, 5300
	6	CH64, 5320
	6	CH100, 5500
	6	CH116, 5580
	6	CH140, 5700
	6	CH149, 5745
	6	CH157, 5785
	6	CH165, 5825
802.11n HT20 TX Mode	MCS 8	CH36, 5180
	MCS 8	CH44, 5220
	MCS 8	CH48, 5240
	MCS 8	CH52, 5260
	MCS 8	CH60, 5300
	MCS 8	CH64, 5320
	MCS 8	CH100, 5500
	MCS 8	CH116, 5580
	MCS 8	CH140, 5700
	MCS 8	CH149, 5745
	MCS 8	CH157, 5785
	MCS 8	CH165, 5825
802.11n HT40 TX Mode	MCS 8	CH38, 5190
	MCS 8	CH46, 5230
	MCS 8	CH54, 5270
	MCS 8	CH62, 5310
	MCS 8	CH102, 5510
	MCS 8	CH110, 5550
	MCS 8	CH134, 5670
	MCS 8	CH151, 5755
	MCS 8	CH159, 5795
802.11ac VHT20 TX Mode	MCS 0	CH36, 5180

	MCS 0	CH44, 5220
	MCS 0	CH48, 5240
	MCS 0	CH52, 5260
	MCS 0	CH60, 5300
	MCS 0	CH64, 5320
	MCS 0	CH100, 5500
	MCS 0	CH116, 5580
	MCS 0	CH140, 5700
	MCS 0	CH149, 5745
	MCS 0	CH157, 5785
	MCS 0	CH165, 5825
802.11ac VHT40 TX Mode	MCS 0	CH38, 5190
	MCS 0	CH46, 5230
	MCS 0	CH54, 5270
	MCS 0	CH62, 5310
	MCS 0	CH102, 5510
	MCS 0	CH110, 5550
	MCS 0	CH134, 5670
	MCS 0	CH151, 5755
	MCS 0	CH159, 5795
802.11ac VHT80 TX Mode	MCS 0	CH42, 5210
	MCS 0	CH58, 5290
	MCS 0	CH106, 5530
	MCS 0	CH122, 5610
	MCS 0	CH155, 5775

Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

4.4. Test Environment Conditions

During the measurement the environmental conditions were within the listed ranges:

	Normal Conditions	Extreme Conditions
Temperature range	21-25 °C	N/A
Humidity range	40-75%	N/A
Pressure range	86-106 kPa	N/A
Power supply	NV: DC 3.3V	N/A

Note: The Extreme temperature range and extreme voltages are declared by the manufacturer.

4.5. The Worse Case Power Setting Parameter

The Worse Case Power Setting Parameter			
Test Software	MP Tool		
Mode	Channel	Soft set value	
		ANT0	ANT1
802.11a	36	Default	Default

	44	Default	Default
	48	Default	Default
	52	Default	Default
	60	Default	Default
	64	Default	Default
	100	Default	Default
	116	Default	Default
	140	Default	Default
	149	Default	Default
	157	Default	Default
	165	Default	Default
802.11n HT20	36	Default	Default
	44	Default	Default
	48	Default	Default
	52	Default	Default
	60	Default	Default
	64	Default	Default
	100	Default	Default
	116	Default	Default
	140	Default	Default
	149	Default	Default
	157	Default	Default
802.11n HT40	38	Default	Default
	46	Default	Default
	54	Default	Default
	62	Default	Default
	102	Default	Default
	110	Default	Default
	134	Default	Default
	151	Default	Default
	159	Default	Default
802.11ac VHT20	36	Default	Default
	44	Default	Default
	48	Default	Default
	52	Default	Default
	60	Default	Default
	64	Default	Default
	100	Default	Default
	116	Default	Default
	140	Default	Default

	149	Default	Default
	157	Default	Default
	165	Default	Default
802.11ac VHT40	38	Default	Default
	46	Default	Default
	54	Default	Default
	62	Default	Default
	102	Default	Default
	110	Default	Default
	134	Default	Default
	151	Default	Default
	159	Default	Default
802.11ac VHT80	42	Default	Default
	58	Default	Default
	106	Default	Default
	122	Default	Default
	155	Default	Default

4.6. Description of Available Antennas

Test Mode	Transmit and Receive Mode	Description
802.11a	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.
802.11n HT20	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.
802.11n HT40	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.
802.11ac VHT20	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.
802.11ac VHT40	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.
802.11ac VHT80	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.

5. Description of Test Setup

5.1. Accessory

Description of Accessories	Manufacturer	Model Number	Description	Remark
/	/	/	/	/

5.2. Support Equipment

Equipment	Brand Name	Model Name	P/N
PC	Lenovo	T480	/

5.3. Test Setup

The EUT can work in Fixed Frequency mode.

5.4. Setup Diagram for Tests



6. Measurement uncertainty

Test Item	Uncertainty
AC Power Conduction emission	1.37 dB
All Radiated emissions	5.4dB
Conducted emissions	3.09 dB
Occupied Channel Bandwidth	1.1%
Conducted Output power	0.82dB
Power Spectral Density	0.82dB

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of $k = 2$.

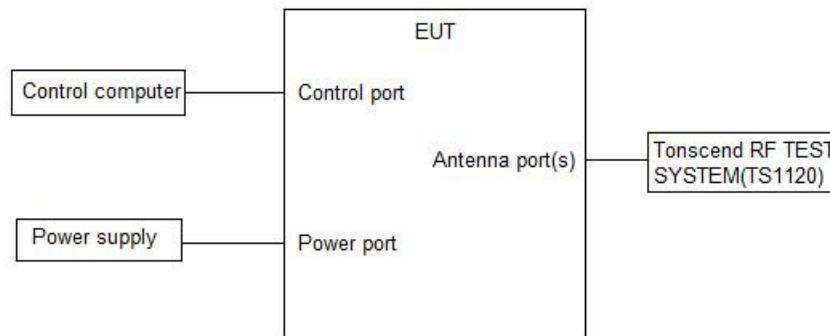
7. Measuring Instrument and Software Used

TS Test System						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	Spectrum Analyzer	Keysight	N9030B	MY56320512	Sep. 12, 2023	Sep. 11, 2024
☒	Vector Signal Generator	Keysight	N5182B	MY57300334	Sep. 12, 2023	Sep. 11, 2024
☒	Signal Generator	Keysight	N5171B	MY57280639	Sep. 12, 2023	Sep. 11, 2024
☒	DC POWER	Keysight	E342A	MY59020356	Jul. 14, 2023	Jul. 13, 2024
☒	Incubator thermometer	GWS	EL-02JA	21107288	Sep. 12, 2023	Sep. 11, 2024
☒	Control unit(Power sensor)	Tonscend	JS0806-2	/	Sep. 12, 2023	Sep. 11, 2024
☒	Wideband radio communication tester	R&S	CMW500	163478	Jul. 11, 2023	Jul. 10, 2024
☒	Spectrum Analyzer	Keysight	N9020B	MY60112206	Sep. 12, 2023	Sep. 12, 2024
☒	Control unit(Power sensor)	Tonscend	JS0806-2	21H8060465	Sep. 12, 2023	Sep. 12, 2024
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	Tonscend	JS1120-3		V3.3.10	
RSE Test System						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	EMI Receiver	R&S	ESW	101685	Jul. 12, 2023	Jul. 11, 2024
☒	Bilog Antenna	Schwarzbeck	VULB 9163	01361	Aug. 16, 2023	Aug. 15, 2024
☒	Horn Antenna 1	Schwarzbeck	BBHA 9120 D	02411	May. 25, 2023	May. 24, 2024
☒	Horn Antenna 2	ETS	BBHA 9170	1090	Sep. 04, 2023	Sep. 03, 2024
☒	loop-antenna	Schwarzbeck	FMZB 1513-60	00030	Jan. 14, 2024	Jan. 13, 2025
☒	Signal Pre-Amplifier	Tonscend	TAP01018050	AP21C806122	Jul. 10, 2023	Jul. 09, 2024
☒	Signal Pre-Amplifier	Tonscend	TAP9K3G32	AP20K806104	Jul. 10, 2023	Jul. 09, 2024
☒	Signal Pre-Amplifier	ETS	3116C-PA	00217677	Aug. 24, 2023	Aug. 23, 2024
☒	3m Fully-anechoic Chamber	ETS	RFD-100	/	Apr. 24, 2021	Apr. 23, 2024
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	Tonscend	TS+		V3.0.0.4	
Conducted Emission Test For AC Power Port						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	LISN	R&S	ENV216	102154	Jul. 10, 2023	Jul. 09, 2024
☒	EMI Receiver	R&S	ESR3	102509	Jul. 12, 2023	Jul. 11, 2024
Software						

Used	Description	Manufacturer	Name		Version	
☒	Test software	EZ	EZ-EMC		EMEC-3A1	
Other Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	Temperature & Humidity	Temperature	HTC-1	/	Nov. 02, 2023	Nov. 01, 2024

8. Maximum Output Power

8.1. Block Diagram of Test Setup



8.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	☐ Outdoor Access Point: 1 W (30 dBm)	5150-5250
	☐ Indoor Access Point: 1 W (30 dBm)	
	☐ Fixed Point-To-Point Access Points: 1 W (30 dBm)	
	☒ Client Devices: 250 mW (24 dBm)	
	Shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.	5250-5350 5470-5725
	Shall not exceed 1 Watt (30 dBm).	5725-5850

ISED RSS-247 ISSUE 2		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power or e.i.r.p.	The maximum e.i.r.p. shall not exceed 200 mW (23 dBm) or 10 + 10 log10B, dBm, whichever power is less. B is the 99 % emission bandwidth in megahertz.	5150-5250
	a. The maximum conducted output power shall not exceed 250 mW (24 dBm) or 11 + 10 log10B dBm, whichever is less.	5250-5350
	b. The maximum e.i.r.p. shall not exceed 1.0 W (30 dBm) or 17 + 10 log10B dBm, whichever is less. B is the 99 % emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.	5250-5350 5470-5600 5650-5725
	Shall not exceed 1 Watt (30 dBm). The e.i.r.p. shall not exceed 4 W	5725-5850

Note: The above limits are based upon the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3. Test Procedure

- (1) Connect each EUT's antenna output to power meter by RF cable and attenuator
- (2) Add each antenna port's results to get the total output power of EUT.

8.4. Test Result

Test Mode	Frequency (MHz)	Conducted Avg Output Power (dBm)		Total Power (dBm)	Total EIRP Power (dBm)	Conducted Power Limit (dBm)	EIRP Power Limit (dBm)	Result
		Ant 1	Ant 2					
IEEE 802.11a	5180	7.989	9.389	---	14.28	23.98	22.14	Pass
	5200	6.937	7.669	---	12.56	23.98	22.14	Pass
	5240	6.474	5.661	---	10.55	23.98	22.15	Pass
IEEE 802.11n HT20	5180	7.217	9.969	11.82	16.71	23.98	22.44	Pass
	5200	7.567	7.840	10.72	15.61	23.98	22.44	Pass
	5240	6.692	5.791	9.28	14.17	23.98	22.44	Pass
IEEE 802.11ac VHT20	5180	6.967	8.158	10.61	15.50	23.98	22.44	Pass
	5200	7.428	7.567	10.51	15.40	23.98	22.45	Pass
	5240	6.953	5.534	9.31	14.20	23.98	22.44	Pass
IEEE 802.11n HT40	5190	9.193	9.998	12.62	17.51	23.98	23.01	Pass
	5230	9.329	8.274	11.84	16.73	23.98	23.01	Pass
IEEE 802.11ac VHT40	5190	10.170	8.895	12.59	17.48	23.98	23.01	Pass
	5230	9.890	7.160	11.75	16.64	23.98	23.01	Pass
IEEE 802.11ac VHT80	5210	5.361	8.438	10.18	15.07	23.98	23.01	Pass
IEEE 802.11a	5260	6.775	5.800	---	11.67	23.44	29.44	Pass
	5300	5.359	4.093	---	10.25	23.44	29.44	Pass
	5320	4.538	3.351	---	9.43	23.44	29.44	Pass
IEEE 802.11n HT20	5260	6.981	7.006	10.00	14.89	23.44	29.44	Pass
	5300	5.647	4.286	8.03	12.92	23.44	29.44	Pass
	5320	4.783	3.636	7.26	12.15	23.44	29.44	Pass
IEEE 802.11ac VHT20	5260	7.101	5.830	9.52	14.41	23.98	30.00	Pass
	5300	5.767	4.053	8.00	12.89	23.98	30.00	Pass
	5320	4.574	3.535	7.10	11.99	23.98	30.00	Pass
IEEE 802.11n HT40	5270	9.224	7.106	11.30	16.19	23.98	30.00	Pass
	5310	7.500	5.203	9.51	14.40	23.98	30.00	Pass
IEEE 802.11ac VHT40	5270	9.215	6.333	11.02	15.91	23.44	29.44	Pass
	5310	7.482	4.760	9.34	14.23	23.44	29.44	Pass
IEEE 802.11ac VHT80	5290	6.648	6.043	9.37	14.26	23.44	29.44	Pass
IEEE 802.11a	5500	7.702	8.344	---	13.23	23.15	29.15	Pass
	5580	5.570	5.633	---	10.52	23.15	29.15	Pass
	5700	4.129	5.866	---	10.76	23.13	29.13	Pass
IEEE 802.11n HT20	5500	7.799	8.524	11.90	16.08	23.44	29.44	Pass
	5580	6.038	6.903	9.50	14.39	23.44	29.44	Pass
	5700	4.453	5.800	8.19	13.08	23.44	29.44	Pass
IEEE 802.11ac	5500	7.725	8.236	11.00	15.89	23.43	29.43	Pass
	5580	6.022	5.712	8.88	13.77	23.44	29.44	Pass

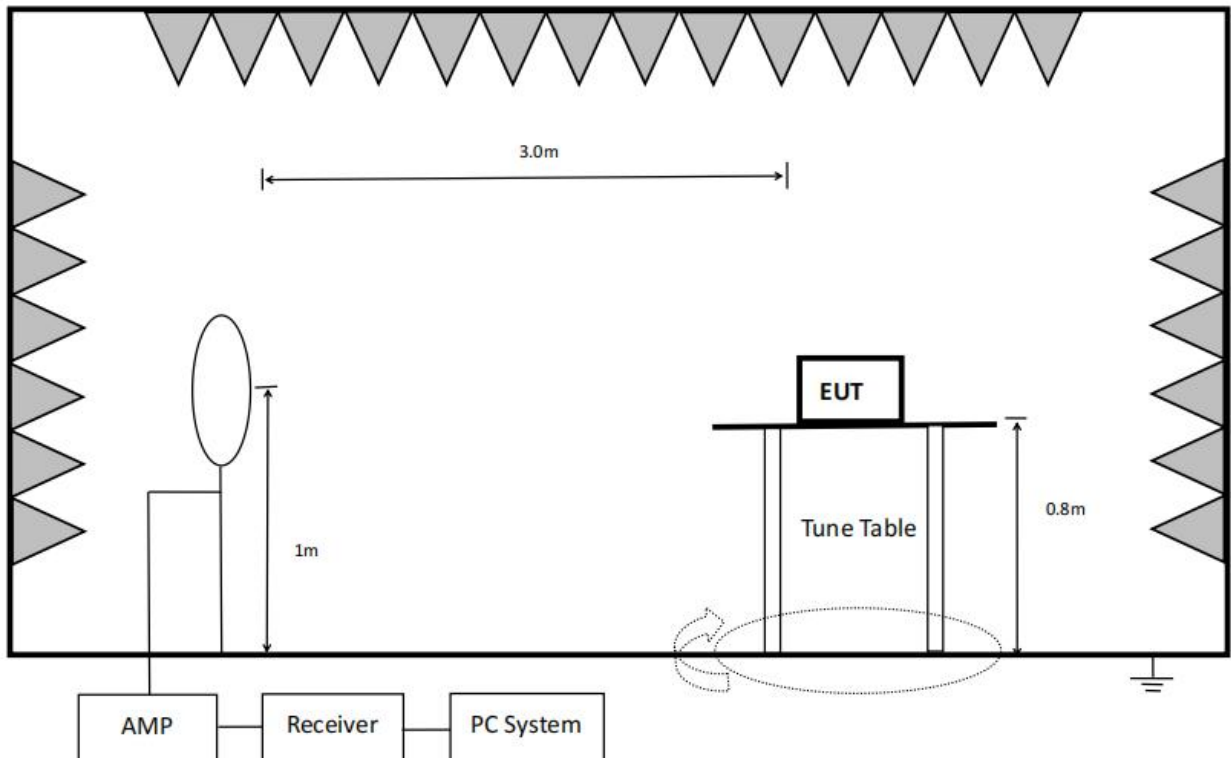
VHT20	5700	4.494	5.108	7.82	12.71	23.44	29.44	Pass
IEEE 802.11n HT40	5510	10.159	9.584	12.89	17.78	23.98	30.00	Pass
	5670	7.148	6.688	9.93	14.82	23.98	30.00	Pass
IEEE 802.11ac VHT40	5510	10.151	9.318	12.76	17.65	23.98	30.00	Pass
	5670	7.069	6.454	9.78	14.67	23.98	30.00	Pass
IEEE 802.11ac VHT80	5530	8.189	8.965	11.60	16.49	23.98	30.00	Pass
IEEE 802.11a	5745	6.363	6.985	---	11.88	30.00	36.00	Pass
	5785	7.938	6.996	---	11.89	30.00	36.00	Pass
	5825	7.161	6.362	---	12.05	30.00	36.00	Pass
IEEE 802.11n HT20	5745	6.642	6.901	9.78	14.67	30.00	36.00	Pass
	5785	7.218	7.076	10.16	15.05	30.00	36.00	Pass
	5825	6.714	6.471	9.60	14.49	30.00	36.00	Pass
IEEE 802.11ac VHT20	5745	6.647	6.558	9.61	14.50	30.00	36.00	Pass
	5785	7.254	6.924	10.10	14.99	30.00	36.00	Pass
	5825	6.707	6.404	9.57	14.46	30.00	36.00	Pass
IEEE 802.11n HT40	5755	9.093	7.882	11.54	16.43	30.00	36.00	Pass
	5795	9.111	7.847	11.54	16.43	30.00	36.00	Pass
IEEE 802.11ac VHT40	5755	8.981	7.792	11.44	16.33	30.00	36.00	Pass
	5795	9.062	7.937	11.55	16.44	30.00	36.00	Pass
IEEE 802.11ac VHT80	5775	6.605	8.262	10.52	15.41	30.00	36.00	Pass

The Conducted Power result reference report “ESTE-R2112275” and “ESTE-R2112281”

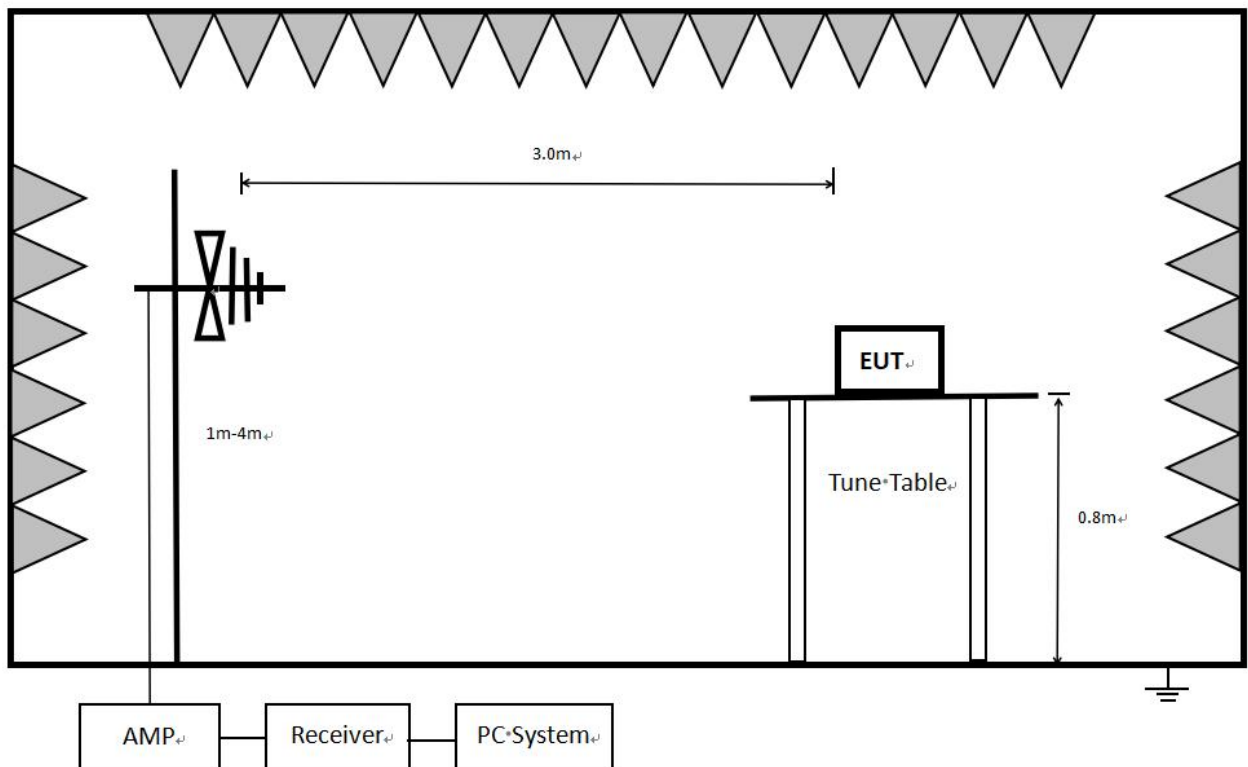
9. Radiated Emission

9.1. Block Diagram of Test Setup

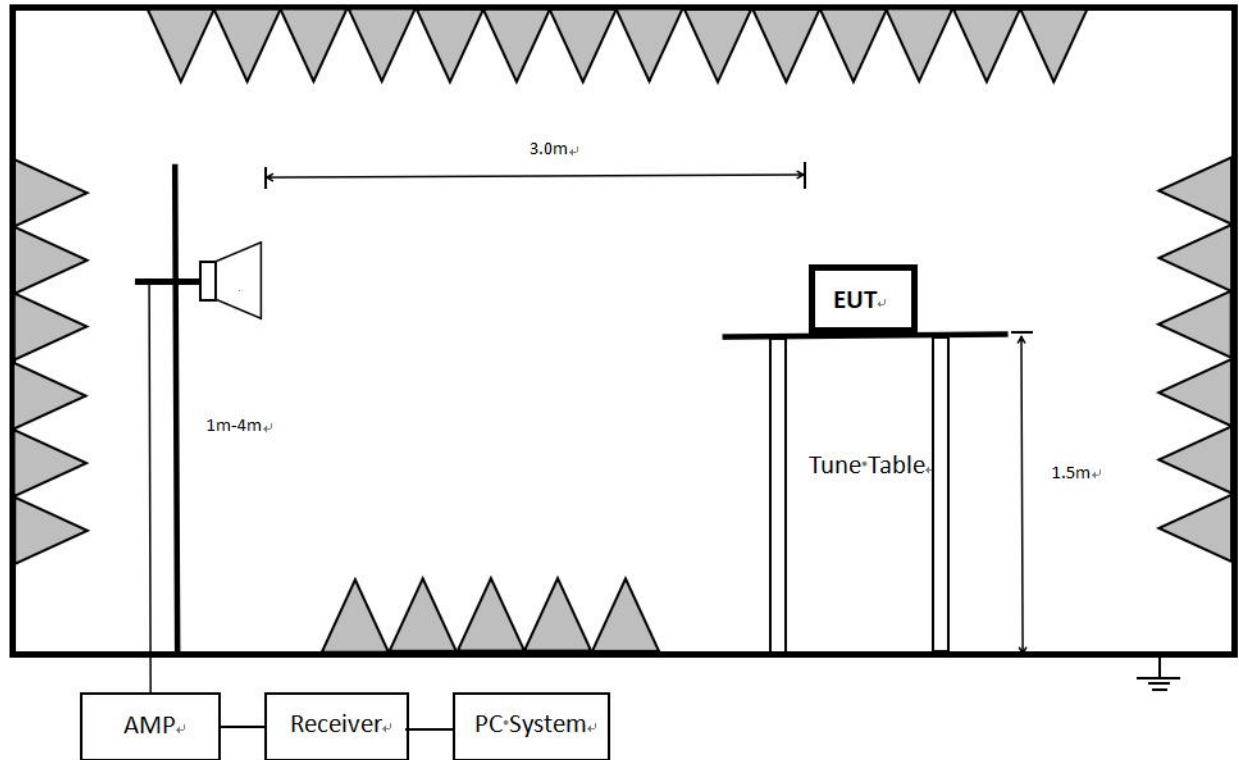
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

9.2. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

²Above 38.6

(2) FCC 15.209 Limit.

Frequency MHz	Distance Meters	Field strengths limit	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

(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.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm / MHz.

(5) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(6) The provisions of §15.205 apply to intentional radiators operating under this section.

-27 dBm/MHz Limit=95.2+EIRP (dBm)=95.2-27=68.2 dB $\mu\text{V}/\text{m}$

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3\text{m}}(\text{dB}\mu\text{V}/\text{m}) = \text{Limit}_{30\text{m}}(\text{dB}\mu\text{V}/\text{m}) + 40\text{Log}(30\text{m}/3\text{m})$$

(3) Limit for this EUT

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions or comply with 15.209 limits.

9.3. Test Procedure

Below 30 MHz:

The setting of the spectrum Analyzer

RBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
VBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
Sweep	Auto
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of 1 meter height antenna tower.

5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

6. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field site. Therefore, sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KdB 414788.

Below 1 GHz and above 30 MHz:

The setting of the spectrum Analyzer

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Above 1 GHz:

RBW	1 MHz
VBW	PEAK: 3 MHz AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 1.5m above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video

bandwidth with peak detector for AVG measurements. For the Duty Cycle please refer to clause 8.1.ON TIME AND DUTY CYCLE.

7. Restriction band: Investigated frequency range from 5.15-5.25 GHz, 5250-5350 GHz, 5470-5725 GHz, 5.725-5.85 GHz.

All restriction band should comply with 15.209, other emission should be at least 20 dB below the fundamental.

Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

Note 2: The EUT does not support simultaneous transmission.

Note 3: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

9.4. Test Result

PASS. (See below detailed test result)

All the emissions except fundamental emission from 9kHz to 40GHz were comply with 15.209 limit.

Note1: According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 40 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

Note2: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in 11N40_5190MHz mode

Note3: For below test data, when the limit tabular marked “/” means this frequency point is the fundamental emission and no need comply with this limit.

Note 4: As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit

Note 5: For emissions Above 1 GHz, all mode have been tested, 11N40 mode is worse case and recorded in report.

9.5. Original Test Data

Below 1 GHz and above 30 MHz test data Refer to appendix A

Above 1 GHz test data Refer to appendix B

Test Mode	Antenna	Ch Name	Frequency (MHz)	Freq. Range (MHz)	Result (dBm)	Limit (dBm)	Verdict
11A	Ant1	Low	5745	5650~5700	-40.19	≤-26.62	PASS
				5700~5720	-38.02	≤11.96	PASS
				5720~5725	-41.37	≤16.34	PASS
				5760~5650	-40.62	≤-27	PASS
	Ant1	High	5825	5850~5855	-40.29	≤16.34	PASS
				5855~5875	-39.96	≤10.44	PASS
				5875~5925	-40.22	≤-26.71	PASS
				5925~5935	-38.73	≤-27	PASS
11N20MIMO	Ant1	Low	5745	5650~5700	-40.56	≤-26.96	PASS
				5700~5720	-40.11	≤10.47	PASS
				5720~5725	-40.65	≤16.60	PASS
				5760~5650	-40.03	≤-27	PASS
	Ant2	Low	5745	5650~5700	-41.85	≤-26.87	PASS
				5700~5720	-41.54	≤10.18	PASS
				5720~5725	-42.22	≤16.34	PASS
				5760~5650	-41.54	≤-27	PASS
	Ant1	High	5825	5850~5855	-40.8	≤16.03	PASS
				5855~5875	-39.77	≤10.29	PASS
				5875~5925	-39.69	≤-26.81	PASS
				5925~5935	-39.11	≤-27	PASS
	Ant2	High	5825	5850~5855	-41.76	≤16.65	PASS
				5855~5875	-41.16	≤10.70	PASS

				5875~5925	-40.88	≤-26.81	PASS
				5925~5935	-40.63	≤-27	PASS
11N40MIMO	Ant1	Low	5755	5650~5700	-39.64	≤-26.60	PASS
				5700~5720	-39.29	≤10.32	PASS
				5720~5725	-41.02	≤15.74	PASS
				5780~5650	-39.88	≤-27	PASS
				5650~5700	-43.48	≤-26.90	PASS
	Ant2	Low	5755	5700~5720	-41.37	≤10.02	PASS
				5720~5725	-41.84	≤15.74	PASS
				5780~5650	-41.93	≤-27	PASS
				5850~5855	-40.09	≤16.03	PASS
	Ant1	High	5795	5855~5875	-39.79	≤10.20	PASS
				5875~5925	-39.69	≤-26.22	PASS
				5925~5935	-39.35	≤-27	PASS
				5850~5855	-41.68	≤16.79	PASS
	Ant2	High	5795	5855~5875	-41.42	≤10.66	PASS
				5875~5925	-40.96	≤-26.59	PASS
				5925~5935	-40.16	≤-27	PASS
				5650~5700	-40.67	≤-26.36	PASS
11AC20MIMO	Ant1	Low	5745	5700~5720	-39.83	≤10.47	PASS
				5720~5725	-40.21	≤16.08	PASS
				5760~5650	-39.16	≤-27	PASS
				5650~5700	-42.85	≤-26.79	PASS
	Ant2	Low	5745	5700~5720	-40.7	≤11.34	PASS
				5720~5725	-40.46	≤17.65	PASS
				5760~5650	-40.48	≤-27	PASS
				5850~5855	-39.73	≤15.73	PASS
	Ant1	High	5825	5855~5875	-40.16	≤10.10	PASS
				5875~5925	-40.13	≤-26.61	PASS
				5925~5935	-39.05	≤-27	PASS
				5850~5855	-43.2	≤16.03	PASS
	Ant2	High	5825	5855~5875	-41.36	≤10.21	PASS
				5875~5925	-39.86	≤-25.41	PASS
				5925~5935	-40.07	≤-27	PASS
				5650~5700	-41.44	≤-26.60	PASS
11AC40MIMO	Ant1	Low	5755	5700~5720	-39.41	≤10.06	PASS
				5720~5725	-40.26	≤16.04	PASS
				5780~5650	-39.81	≤-27	PASS
				5650~5700	-42.05	≤-26.50	PASS
	Ant2	Low	5755	5700~5720	-41.59	≤10.55	PASS
				5720~5725	-41.87	≤16.04	PASS
				5780~5650	-41.6	≤-27	PASS
				5850~5855	-40.74	≤16.03	PASS
	Ant1	High	5795	5855~5875	-40.98	≤10.06	PASS
				5875~5925	-37.97	≤-26.46	PASS
				5925~5935	-38.93	≤-27	PASS
				5850~5855	-42.41	≤15.66	PASS
	Ant2	High	5795	5855~5875	-41.95	≤10.62	PASS
				5875~5925	-39.18	≤-24.51	PASS
				5925~5935	-40.22	≤-27	PASS
				5650~5700	-40.61	≤-26.80	PASS
11AC80MIMO	Ant1	Low	5775	5700~5720	-40.62	≤10.22	PASS
				5720~5725	-39.77	≤16.35	PASS
				5800~5650	-40.68	≤-27	PASS
				5850~5855	-40.63	≤16.26	PASS
		High	5775	5855~5875	-39.44	≤10.04	PASS
				5875~5925	-38.83	≤-26.05	PASS
				5925~5935	-39.01	≤-27	PASS
				5650~5700	-40.88	≤-26.23	PASS
	Ant2	Low	5775	5700~5720	-40.73	≤11.40	PASS

		High	5775	5720~5725	-39.65	≤16.71	PASS
				5800~5650	-42.2	≤-27	PASS
				5850~5855	-43.29	≤16.26	PASS
				5855~5875	-41.18	≤10.55	PASS
				5875~5925	-41.44	≤-26.87	PASS
				5925~5935	-40.36	≤-27	PASS

















10. Antenna Requirements

10.1. Applicable Requirements

Please refer to FCC §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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

10.2. Result

The device support 2T2R MIMO, the antennas both used for this product are dedicated Shrapnel antennas and other than that furnished by the responsible party shall be used with the device, maximum antenna gain is 4.89 dBi for antenna.

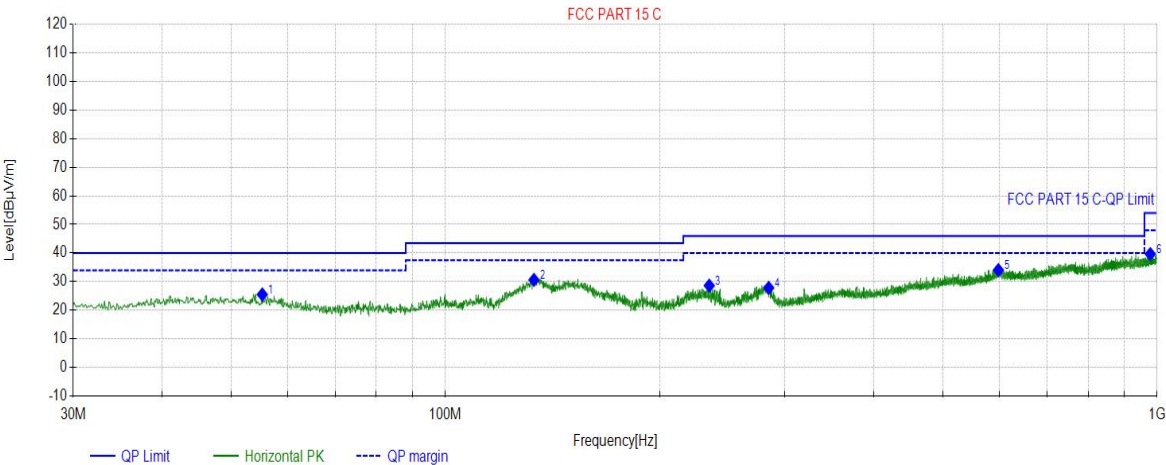
APPENDIX A - Radiated Emission Below 1GHz Test Data

Test Report

Project Information			
EUT:	Wi-Fi Module Integrated Bluetooth	Environment:	22.9℃ 46%
Model:	SKI.WB822CU.2	SN:	
Mode:	11N40_5190	Voltage:	DC 3.3V
Customer:		Engineer:	Soho Liu
Remark:			

Start of Test: 2024-03-16 10:55:09

Test Graph



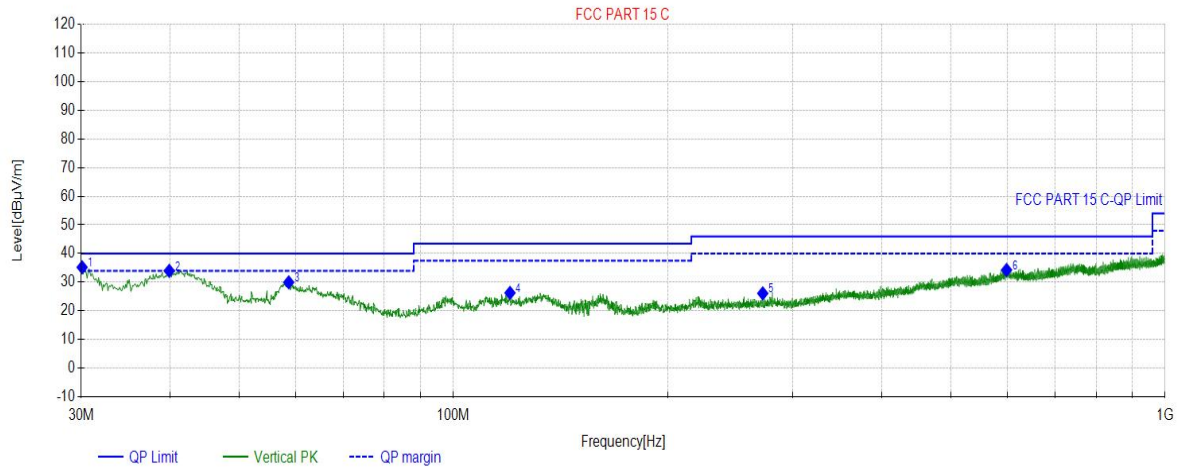
Final Data List								
NO.	Freq. (MHz)	Factor (dB)	QP Value (dBμV/m)	QP Limit (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Polarity
1	55.3195	21.64	25.52	40.00	14.48	100	143	Horizontal
2	133.2183	17.17	30.63	43.50	12.87	100	291	Horizontal
3	234.8845	20.92	28.63	46.00	17.37	100	235	Horizontal
4	284.7475	21.55	27.85	46.00	18.15	100	88	Horizontal
5	598.5739	30.06	34.06	46.00	11.94	100	6	Horizontal
6	978.4638	35.07	39.68	54.00	14.32	100	172	Horizontal

Test Report

Project Information			
EUT:	Wi-Fi Module Integrated Bluetooth	Environment:	22.9°C 46%
Model:	SKI.WB822CU.2	SN:	
Mode:	11N40_5190	Voltage:	DC 3.3V
Customer:		Engineer:	Soho Liu
Remark:			

Start of Test: 2024-03-16 10:56:01

Test Graph



Final Data List

NO.	Freq. (MHz)	Factor (dB)	QP Value (dBμV/m)	QP Limit (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Polarity
1	30.0970	18.53	35.20	40.00	4.80	100	119	Vertical
2	39.8950	21.09	33.97	40.00	6.03	100	262	Vertical
3	58.7149	21.17	29.97	40.00	10.03	100	189	Vertical
4	120.1220	18.38	26.28	43.50	17.22	100	262	Vertical
5	272.1362	21.47	26.11	46.00	19.89	100	41	Vertical
6	598.8649	30.07	34.28	46.00	11.72	100	266	Vertical

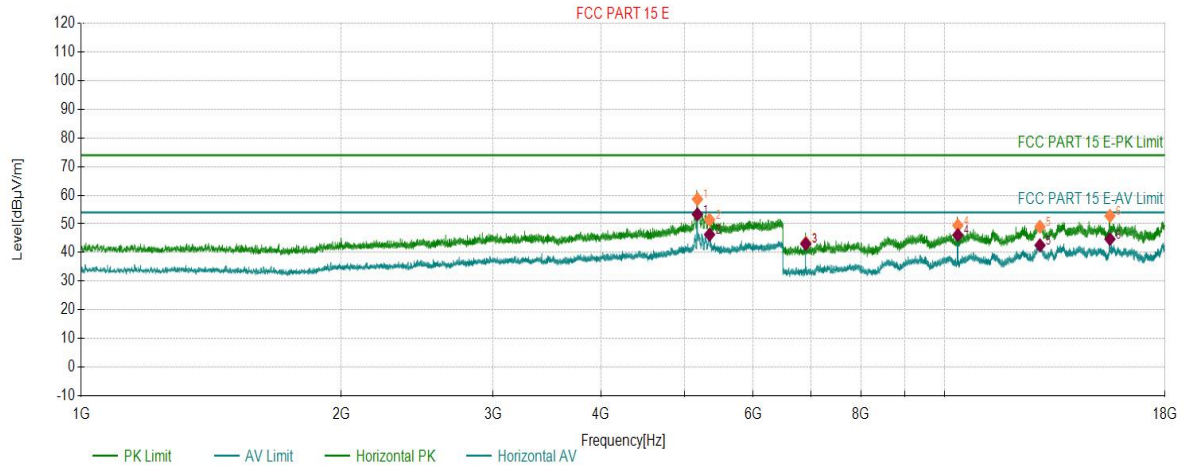
APPENDIX B – Radiated Emission Above 1GHz Test Data

Test Report

Project Information			
EUT:	Wi-Fi Module Integrated Bluetooth	Environment:	22.1°C 48%
Model:	SKI.WB822CU.2	SN:	
Mode:	11N20_5180	Voltage:	DC 3.3V
Customer:		Engineer:	Winnie Meng
Remark:			

Start of Test: 2024-03-05 11:48:35

Test Graph



PK Final Data List

NO.	Freq. (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5172.7173	20.86	58.64	74.00	15.36	150	312	Horizontal
2	5343.2343	20.98	51.42	74.00	22.58	150	297	Horizontal
3	6905.9906	-1.95	43.49	74.00	30.51	150	217	Horizontal
4	10358.6359	4.20	49.46	74.00	24.54	150	331	Horizontal
5	12895.7896	10.84	49.01	74.00	24.99	150	346	Horizontal
6	15541.0541	11.49	52.81	74.00	21.19	150	346	Horizontal

AV Final Data List

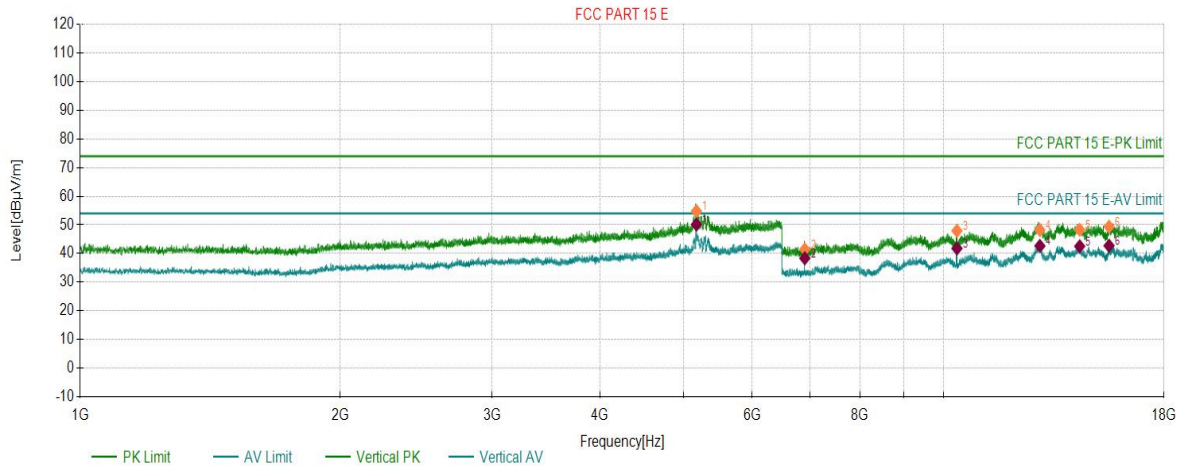
NO.	Freq. (MHz)	Factor (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5172.7173	20.86	53.35	54.00	0.65	150	312	Horizontal
2	5343.2343	20.98	46.28	54.00	7.72	150	297	Horizontal
3	6905.9906	-1.95	43.01	54.00	10.99	150	217	Horizontal
4	10358.6359	4.20	46.12	54.00	7.88	150	331	Horizontal
5	12895.7896	10.84	42.53	54.00	11.47	150	346	Horizontal
6	15541.0541	11.49	44.71	54.00	9.29	150	346	Horizontal

Test Report

Project Information			
EUT:	Wi-Fi Module Integrated Bluetooth	Environment:	22.1°C 48%
Model:	SKI.WB822CU.2	SN:	
Mode:	11N20_5180	Voltage:	DC 3.3V
Customer:		Engineer:	Winnie Meng
Remark:			

Start of Test: 2024-03-05 11:50:03

Test Graph



PK Final Data List

NO.	Freq. (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5173.2673	20.86	54.82	74.00	19.18	150	27	Vertical
2	6905.9906	-1.95	41.47	74.00	32.53	150	321	Vertical
3	10362.0862	4.19	47.94	74.00	26.06	150	351	Vertical
4	12926.8427	10.56	48.23	74.00	25.77	150	304	Vertical
5	14374.8375	11.22	48.31	74.00	25.69	150	31	Vertical
6	15543.3543	11.51	49.39	74.00	24.61	150	351	Vertical

AV Final Data List

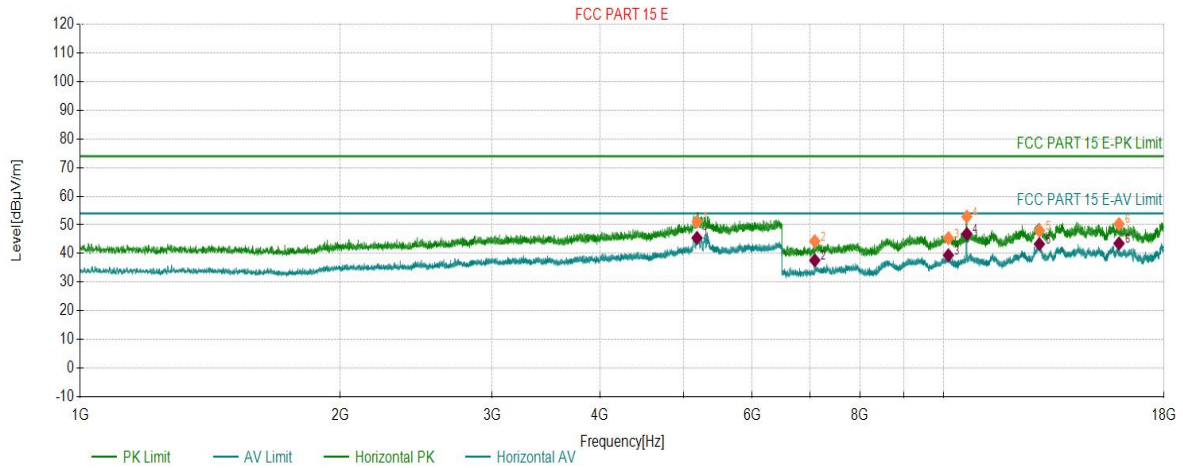
NO.	Freq. (MHz)	Factor (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5173.2673	20.86	50.13	54.00	3.87	150	27	Vertical
2	6905.9906	-1.95	38.38	54.00	15.62	150	321	Vertical
3	10362.0862	4.19	41.80	54.00	12.20	150	351	Vertical
4	12926.8427	10.56	42.67	54.00	11.33	150	304	Vertical
5	14374.8375	11.22	42.53	54.00	11.47	150	31	Vertical
6	15543.3543	11.51	42.75	54.00	11.25	150	351	Vertical

Test Report

Project Information			
EUT:	Wi-Fi Module Integrated Bluetooth	Environment:	22.1°C 48%
Model:	SKI.WB822CU.2	SN:	
Mode:	11N20_5320	Voltage:	DC 3.3V
Customer:		Engineer:	Winnie Meng
Remark:			

Start of Test: 2024-03-05 14:05:53

Test Graph



PK Final Data List

NO.	Freq. (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5180.9681	20.86	51.12	74.00	22.88	150	196	Horizontal
2	7092.3092	-1.11	44.31	74.00	29.69	150	304	Horizontal
3	10127.4627	5.21	45.36	74.00	28.64	150	168	Horizontal
4	10639.2639	5.44	52.89	74.00	21.11	150	321	Horizontal
5	12909.5910	10.78	47.99	74.00	26.01	150	208	Horizontal
6	15961.9962	11.51	50.31	74.00	23.69	150	296	Horizontal

AV Final Data List

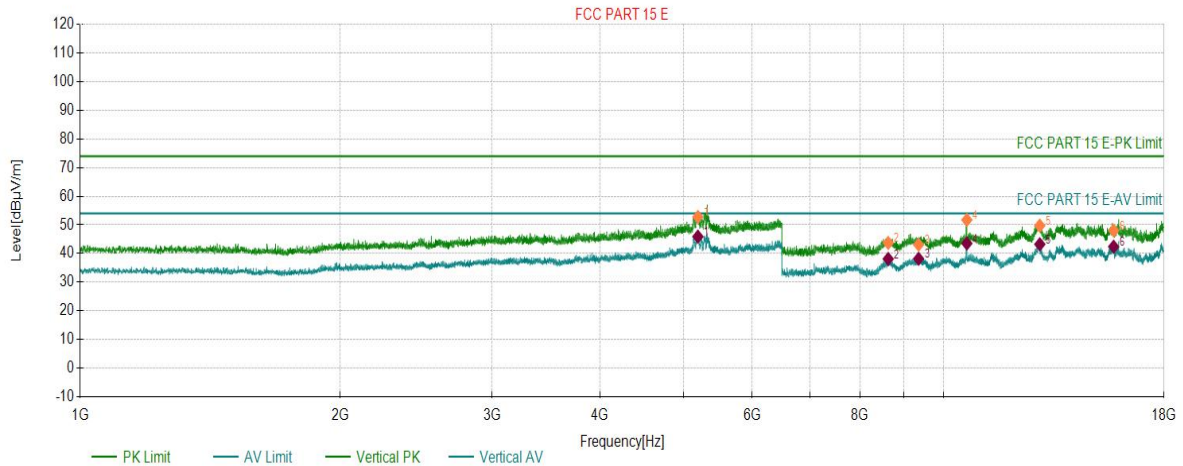
NO.	Freq. (MHz)	Factor (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5180.9681	20.86	45.45	54.00	8.55	150	196	Horizontal
2	7092.3092	-1.11	37.62	54.00	16.38	150	304	Horizontal
3	10127.4627	5.21	39.41	54.00	14.59	150	168	Horizontal
4	10639.2639	5.44	46.85	54.00	7.15	150	321	Horizontal
5	12909.5910	10.78	43.31	54.00	10.69	150	208	Horizontal
6	15961.9962	11.51	43.53	54.00	10.47	150	296	Horizontal

Test Report

Project Information			
EUT:	Wi-Fi Module Integrated Bluetooth	Environment:	22.1°C 48%
Model:	SKI.WB822CU.2	SN:	
Mode:	11N20_5320	Voltage:	DC 3.3V
Customer:		Engineer:	Winnie Meng
Remark:			

Start of Test: 2024-03-05 14:07:21

Test Graph



PK Final Data List

NO.	Freq. (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5193.0693	20.86	52.80	74.00	21.20	150	2	Vertical
2	8626.5627	2.03	43.71	74.00	30.29	150	118	Vertical
3	9354.5855	3.87	43.12	74.00	30.88	150	87	Vertical
4	10640.4140	5.45	51.75	74.00	22.25	150	274	Vertical
5	12923.3923	10.60	49.74	74.00	24.26	150	299	Vertical
6	15735.4235	11.48	48.04	74.00	25.96	150	55	Vertical

AV Final Data List

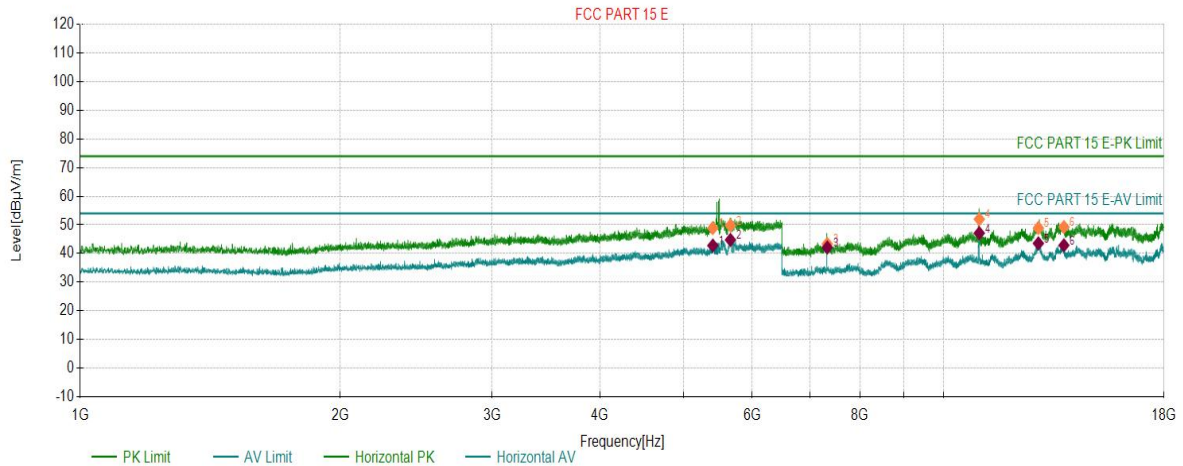
NO.	Freq. (MHz)	Factor (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5193.0693	20.86	45.92	54.00	8.08	150	2	Vertical
2	8626.5627	2.03	38.13	54.00	15.87	150	118	Vertical
3	9354.5855	3.87	38.18	54.00	15.82	150	87	Vertical
4	10640.4140	5.45	43.54	54.00	10.46	150	274	Vertical
5	12923.3923	10.60	43.24	54.00	10.76	150	299	Vertical
6	15735.4235	11.48	42.41	54.00	11.59	150	55	Vertical

Test Report

Project Information			
EUT:	Wi-Fi Module Integrated Bluetooth	Environment:	22.1°C 48%
Model:	SKI.WB822CU.2	SN:	
Mode:	11N20_5500	Voltage:	DC 3.3V
Customer:		Engineer:	Winnie Meng
Remark:			

Start of Test: 2024-03-05 14:20:51

Test Graph



PK Final Data List

NO.	Freq. (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5404.2904	18.17	48.90	74.00	25.10	150	290	Horizontal
2	5664.4664	20.32	49.82	74.00	24.18	150	30	Horizontal
3	7332.6833	-0.94	43.38	74.00	30.62	150	267	Horizontal
4	10996.9497	5.30	52.01	74.00	21.99	150	9	Horizontal
5	12875.0875	10.51	48.91	74.00	25.09	150	127	Horizontal
6	13782.5283	10.16	49.27	74.00	24.73	150	199	Horizontal

AV Final Data List

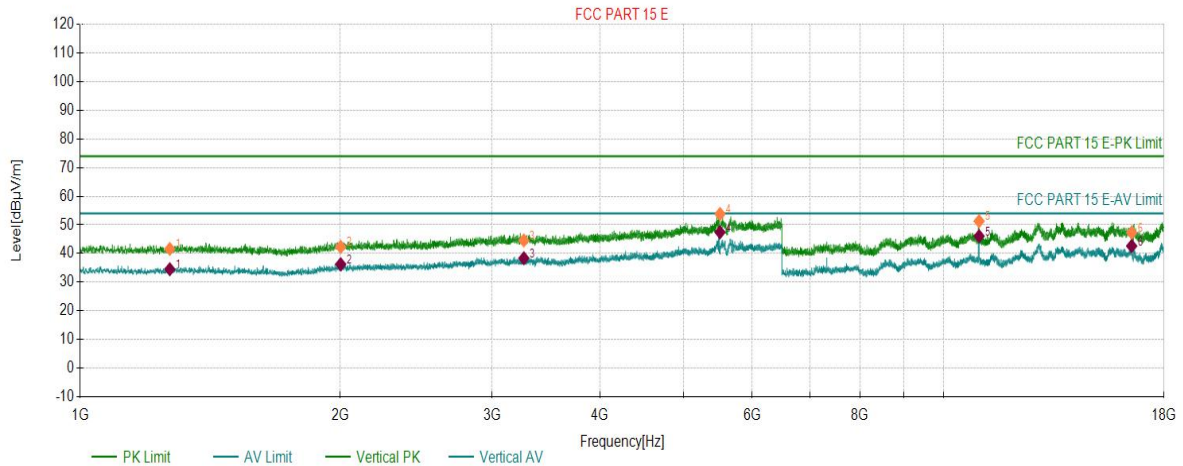
NO.	Freq. (MHz)	Factor (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	5404.2904	18.17	42.80	54.00	11.20	150	290	Horizontal
2	5664.4664	20.32	44.77	54.00	9.23	150	30	Horizontal
3	7332.6833	-0.94	42.12	54.00	11.88	150	267	Horizontal
4	10996.9497	5.30	47.13	54.00	6.87	150	9	Horizontal
5	12875.0875	10.51	43.57	54.00	10.43	150	127	Horizontal
6	13782.5283	10.16	42.90	54.00	11.10	150	199	Horizontal

Test Report

Project Information			
EUT:	Wi-Fi Module Integrated Bluetooth	Environment:	22.1°C 48%
Model:	SKI.WB822CU.2	SN:	
Mode:	11N20_5500	Voltage:	DC 3.3V
Customer:		Engineer:	Winnie Meng
Remark:			

Start of Test: 2024-03-05 14:22:10

Test Graph



PK Final Data List

NO.	Freq. (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	Height (cm)	Angle (°)	Polarity
1	1270.0770	2.74	41.62	74.00	32.38	150	85	Vertical
2	2003.3003	5.32	42.33	74.00	31.67	150	196	Vertical
3	3264.5765	9.74	44.59	74.00	29.41	150	214	Vertical
4	5508.2508	19.66	53.81	74.00	20.19	150	100	Vertical
5	10992.3492	5.32	51.32	74.00	22.68	150	275	Vertical
6	16510.6011	12.17	47.31	74.00	26.69	150	161	Vertical

AV Final Data List

NO.	Freq. (MHz)	Factor (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	1270.0770	2.74	34.54	54.00	19.46	150	85	Vertical
2	2003.3003	5.32	36.28	54.00	17.72	150	196	Vertical
3	3264.5765	9.74	38.37	54.00	15.63	150	214	Vertical
4	5508.2508	19.66	47.44	54.00	6.56	150	100	Vertical
5	10992.3492	5.32	46.06	54.00	7.94	150	275	Vertical
6	16510.6011	12.17	42.63	54.00	11.37	150	161	Vertical