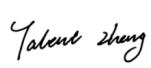


FCC AND ISCED CERTIFICATION TEST REPORT

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:	IEEE 802.11a/b/g/n/ac 2T2R Wi-Fi Module Integrated BT 2.1/3.0/4.2/5.0
Brand Name:	N/A
Tested Model:	SKI.WB822CU.5
FCC ID:	2AR82-SKIWB822CU5
Report No.:	JCF231222208-004
Received Date:	Dec. 22, 2023
Tested Date:	Dec. 22, 2023 - Jan. 20, 2024
Issued Date:	Jan. 23, 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>Kennys Zhang/Engineer</u>	Date: Jan. 23, 2024

Reviewed By:	
	
<u>Roger Li/Engineer</u>	Date: Jan. 23, 2024

Approved By:	
	
<u>Talent Zhang/Engineer</u>	Date: Jan. 23, 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	/	Jan. 23, 2024	Original Report	/

Table of Contents

1. Test Report Declare	5
2. Summary of test results	6
3. Test Laboratory	6
4. Equipment Under Test	7
4.1. Description of EUT	7
4.2. Channel List	7
4.3. Test Channel Configuration	10
4.4. Test Environment Conditions	11
4.5. The Worse Case Power Setting Parameter	11
4.6. Description of Available Antennas	13
5. Description of Test Setup	13
5.1. Accessory	13
5.2. Support Equipment	13
5.3. Test Setup	13
5.4. Setup Diagram for Tests	13
6. Measurement uncertainty	13
7. Measuring Instrument and Software Used	14
8. Duty Cycle	16
8.1. Block Diagram of Test Setup	16
8.2. Limits	16
8.3. Procedure	16
8.4. Results	16
8.5. Original Test Data	19
9. 26dB Bandwidth, 6dB Bandwidth and 99% Bandwidth	63
9.1. Block Diagram of Test Setup	63
9.2. Limits	63
9.3. Test Procedure	63
9.4. Test Result	64
9.5. Original Test Data	71
10. Maximum Output Power	169
10.1. Block Diagram of Test Setup	169
10.2. Limits	169
10.3. Test Procedure	169
10.4. Test Result	170
11. Power Spectral Density	174
11.1. Block Diagram of Test Setup	174
11.2. Limits	174
11.3. Test Procedure	175
11.4. Test Result	176
11.5. Original Test Data	180
12. Frequency Stability Measurement	228
12.1. Block Diagram of Test Setup	228
12.2. Limit of Frequency Stability	228
12.3. Test Procedures	228
12.4. Test Result	228
13. Radiated Emission	232
13.1. Block Diagram of Test Setup	232
13.2. Limit	233
13.3. Test Procedure	235
13.4. Test Result	237
13.5. Original Test Data	237
14. AC Power Line Conducted Emissions	246

14.1. Block Diagram of Test Setup	246
14.2. Limits	246
14.3. Test Procedure	246
14.4. Test Result	247
14.5. Original Test Data	247
15. Dynamic Frequency Selection	248
15.1. Applicability of DFS Requirements	248
15.2. Limit	249
15.3. Parameters of Radar Test Waveform	249
15.4. Calibration of Radar Waveform	250
15.5. Channel Closing Transmission Time, Channel Move Time and Non-Occupancy Period	253
15.6. Test Setup	254
15.7. Test Result	254
16. Antenna Requirements	256
16.1. Applicable Requirements	256
16.2. Result	256
APPENDIX A - Radiated Emission Below 1GHz Test Data	257
APPENDIX B - Radiated Emission Above 1GHz Test Data	259

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:	IEEE 802.11a/b/g/n/ac 2T2R Wi-Fi Module Integrated BT 2.1/3.0/4.2/5.0
Brand Name:	N/A
Model Name:	SKI.WB822CU.5

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	Pass
2	99% Occupied Bandwidth	RSS-Gen Clause 6.6	Pass
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	Pass
5	Frequency Stability Measurement	FCC 15.407 (g)	Pass
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	Pass
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	Pass

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:	IEEE 802.11a/b/g/n/ac 2T2R Wi-Fi Module Integrated BT 2.1/3.0/4.2/5.0
Model Number:	SKI.WB822CU.5
EUT Function Description:	Refer to user manual
Power Supply:	DC 3.3V±0.3
Hardware Version:	N/A
Software Version:	N/A
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:	PCB Antenna0, MAX. Gain: 4.94 dBi PCB Antenna1, MAX. Gain: 4.08 dBi

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	142	5710
124	5620	/	/
128	5640	/	/
132	5660	/	/
136	5680	/	/
140	5700	/	/
144	5720	/	/
UNII-2C (For Bandwidth = 80 MHz)			
Channel		Frequency (MHz)	
106		5530	
122		5610	
138		5690	

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	CH144, 5720
	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	CH144, 5720
	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	CH142, 5710
	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	CH140, 5720
	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

802.11ac VHT80 TX Mode	MCS 0	CH142, 5710
	MCS 0	CH151, 5755
	MCS 0	CH159, 5795
	MCS 0	CH42, 5210
	MCS 0	CH58, 5290
	MCS 0	CH106, 5530
	MCS 0	CH122, 5610
	MCS 0	CH138, 5690
	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	0 °C to +40 °C
Humidity range	40-75%	N/A
Pressure range	86-106 kPa	N/A
Power supply	DC 3.3V±0.3	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	MPTool		
Mode	Channel	Soft set value	
		ANT0	ANT1
802.11a	36	Default	65
	44	Default	65
	48	Default	65
	52	Default	65
	60	Default	65
	64	Default	65
	100	Default	65
	116	Default	65
	140	Default	65
	144	Default	65
	149	Default	80
	157	Default	85
802.11n HT20	165	Default	85
	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
	144	Default	Default
	149	Default	Default
802.11n HT40	157	Default	Default
	165	Default	Default
	38	Default	Default
	46	Default	Default
	54	Default	Default

	62	Default	Default
	102	Default	Default
	110	Default	Default
	134	Default	Default
	142	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
	144	Default	Default
	149	Default	Default
	157	Default	Default
802.11ac VHT40	165	Default	Default
	38	Default	Default
	46	Default	Default
	54	Default	Default
	62	Default	Default
	102	Default	Default
	110	Default	Default
	134	Default	Default
	144	Default	Default
	151	Default	Default
802.11ac VHT80	159	Default	Default
	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 0 and ANT1 can be used as transmitting/receiving antenna.
802.11n HT20	☒ 2TX, 2RX	ANT 0 and ANT1 can be used as transmitting/receiving antenna.
802.11n HT40	☒ 2TX, 2RX	ANT 0 and ANT1 can be used as transmitting/receiving antenna.
802.11ac VHT20	☒ 2TX, 2RX	ANT 0 and ANT1 can be used as transmitting/receiving antenna.
802.11ac VHT40	☒ 2TX, 2RX	ANT 0 and ANT1 can be used as transmitting/receiving antenna.
802.11ac VHT80	☒ 2TX, 2RX	ANT 0 and ANT1 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.

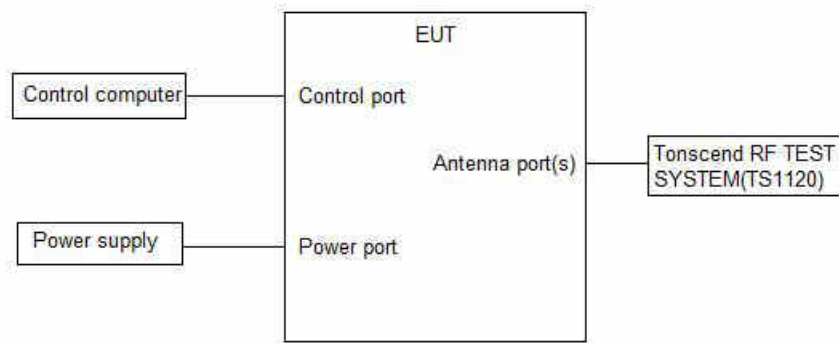
7. Measuring Instrument and Software Used

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	01416	Mar. 21, 2023	Mar. 20, 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. Duty Cycle

8.1. Block Diagram of Test Setup



8.2. Limits

None; for reporting purposes only.

8.3. Procedure

Refer to KdB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.B.

The zero-span mode on a spectrum analyzer or EMI receiver, if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.

Set the center frequency of the instrument to the center frequency of the transmission.

Set RBW $\geq$ EBW if possible; otherwise,

set RBW to the largest available value. Set VBW $\geq$ RBW.

Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

8.4. Results

Test Mode	Ant.	Freq. (MHz)	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)
11A	Ant1	5180	1.36	1.86	73.12
	Ant2	5180	1.36	1.86	73.12
	Ant1	5200	1.36	1.87	72.73
	Ant2	5200	1.36	1.86	73.12
	Ant1	5240	1.36	1.86	73.12
	Ant2	5240	1.36	1.87	72.73
	Ant1	5260	1.36	1.86	73.12
	Ant2	5260	1.36	1.86	73.12
	Ant1	5280	1.36	1.87	72.73
	Ant2	5280	1.36	1.86	73.12
	Ant1	5320	1.36	1.86	73.12
	Ant2	5320	1.36	1.87	72.73
	Ant1	5500	1.36	1.87	72.73
	Ant2	5500	1.36	1.87	72.73
	Ant1	5580	1.36	1.86	73.12
	Ant2	5580	1.36	1.86	73.12
	Ant1	5700	1.36	1.86	73.12
	Ant2	5700	1.36	1.86	73.12
	Ant1	5720	1.36	1.87	72.73
	Ant2	5720	1.36	1.86	73.12
	Ant1	5745	1.36	1.86	73.12
	Ant2	5745	1.36	1.86	73.12
	Ant1	5785	1.36	1.87	72.73

	Ant2	5785	1.36	1.87	72.73
	Ant1	5825	1.36	1.86	73.12
	Ant2	5825	1.36	1.87	72.73
11N20MIMO	Ant1	5180	1.27	1.77	71.75
	Ant2	5180	1.27	1.78	71.35
	Ant1	5200	1.27	1.77	71.75
	Ant2	5200	1.27	1.77	71.75
	Ant1	5240	1.28	1.78	71.91
	Ant2	5240	1.27	1.77	71.75
	Ant1	5260	1.27	1.78	71.35
	Ant2	5260	1.27	1.77	71.75
	Ant1	5280	1.27	1.78	71.35
	Ant2	5280	1.27	1.77	71.75
	Ant1	5320	1.28	1.78	71.91
	Ant2	5320	1.27	1.78	71.35
	Ant1	5500	1.27	1.77	71.75
	Ant2	5500	1.27	1.77	71.75
	Ant1	5580	1.28	1.78	71.91
	Ant2	5580	1.27	1.77	71.75
	Ant1	5700	1.28	1.78	71.91
	Ant2	5700	1.27	1.78	71.35
	Ant1	5720	1.27	1.77	71.75
	Ant2	5720	1.27	1.77	71.75
	Ant1	5745	1.27	1.77	71.75
	Ant2	5745	1.28	1.78	71.91
	Ant1	5785	1.27	1.77	71.75
	Ant2	5785	1.28	1.78	71.91
	Ant1	5825	1.27	1.78	71.35
	Ant2	5825	1.28	1.78	71.91
11N40MIMO	Ant1	5190	0.63	1.13	55.75
	Ant2	5190	0.63	1.13	55.75
	Ant1	5230	0.63	1.14	55.26
	Ant2	5230	0.63	1.14	55.26
	Ant1	5270	0.63	1.13	55.75
	Ant2	5270	0.63	1.13	55.75
	Ant1	5310	0.63	1.13	55.75
	Ant2	5310	0.63	1.13	55.75
	Ant1	5510	0.63	1.13	55.75
	Ant2	5510	0.64	1.14	56.14
	Ant1	5550	0.63	1.13	55.75
	Ant2	5550	0.63	1.13	55.75
	Ant1	5670	0.63	1.14	55.26
	Ant2	5670	0.63	1.13	55.75
	Ant1	5710	0.63	1.14	55.26
	Ant2	5710	0.63	1.13	55.75
	Ant1	5755	0.63	1.14	55.26
	Ant2	5755	0.63	1.14	55.26
	Ant1	5795	0.63	1.13	55.75
	Ant2	5795	0.63	1.13	55.75
11AC20MIMO	Ant1	5180	1.28	1.78	71.91
	Ant2	5180	1.27	1.77	71.75
	Ant1	5200	1.28	1.78	71.91
	Ant2	5200	1.28	1.78	71.91
	Ant1	5240	1.28	1.78	71.91
	Ant2	5240	1.27	1.78	71.35
	Ant1	5260	1.27	1.78	71.35
	Ant2	5260	1.28	1.78	71.91
	Ant1	5280	1.27	1.77	71.75
	Ant2	5280	1.28	1.78	71.91
	Ant1	5320	1.27	1.78	71.35

	Ant2	5320	1.27	1.78	71.35
	Ant1	5500	1.28	1.78	71.91
	Ant2	5500	1.28	1.78	71.91
	Ant1	5580	1.27	1.77	71.75
	Ant2	5580	1.28	1.78	71.91
	Ant1	5700	1.27	1.77	71.75
	Ant2	5700	1.27	1.78	71.35
	Ant1	5720	1.27	1.77	71.75
	Ant2	5720	1.27	1.78	71.35
	Ant1	5745	1.28	1.78	71.91
	Ant2	5745	1.27	1.78	71.35
	Ant1	5785	1.27	1.77	71.75
	Ant2	5785	1.27	1.77	71.75
	Ant1	5825	1.28	1.78	71.91
	Ant2	5825	1.27	1.78	71.35
11AC40MIMO	Ant1	5190	0.64	1.14	56.14
	Ant2	5190	0.63	1.14	55.26
	Ant1	5230	0.63	1.14	55.26
	Ant2	5230	0.64	1.14	56.14
	Ant1	5270	0.63	1.14	55.26
	Ant2	5270	0.63	1.14	55.26
	Ant1	5310	0.64	1.14	56.14
	Ant2	5310	0.64	1.14	56.14
	Ant1	5510	0.63	1.14	55.26
	Ant2	5510	0.63	1.14	55.26
	Ant1	5550	0.64	1.14	56.14
	Ant2	5550	0.64	1.14	56.14
	Ant1	5670	0.63	1.14	55.26
	Ant2	5670	0.63	1.14	55.26
	Ant1	5710	0.63	1.14	55.26
	Ant2	5710	0.64	1.14	56.14
	Ant1	5755	0.63	1.14	55.26
	Ant2	5755	0.63	1.14	55.26
	Ant1	5795	0.63	1.14	55.26
	Ant2	5795	0.63	1.14	55.26
11AC80MIMO	Ant1	5210	0.32	0.82	39.02
	Ant2	5210	0.32	0.82	39.02
	Ant1	5290	0.32	0.82	39.02
	Ant2	5290	0.31	0.82	37.80
	Ant1	5530	0.31	0.82	37.80
	Ant2	5530	0.32	0.82	39.02
	Ant1	5610	0.31	0.82	37.80
	Ant2	5610	0.32	0.82	39.02
	Ant1	5690	0.31	0.82	37.80
	Ant2	5690	0.32	0.82	39.02
	Ant1	5775	0.31	0.82	37.80
	Ant2	5775	0.31	0.82	37.80

8.5. Original Test Data

