



FCC CERTIFICATION TEST REPORT

Applicant:	Guangzhou Shirui Electronics Co., Ltd
Address:	192 KeZhu Road, Sciencetech Park, Guangzhou Economic Technology Development District, Guangzhou China
Manufacturer:	Guangzhou Shirui Electronics Co., Ltd
Address:	192 KeZhu Road, Sciencetech Park, Guangzhou Economic Technology Development District, Guangzhou China
Product Description:	Touch Control Panel
Brand Name:	MAXHUB
Tested Model:	TCP30T
FCC ID:	2AFG6-TCP30T
Report No.:	JCF240313011-004
Received Date:	Mar. 13, 2024
Tested Date:	Mar. 13, 2024 ~ May. 09, 2024
Issued Date:	May. 09, 2024
Test Standards:	FCC Rules and Regulations Part 15 Subpart E,
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:	
	
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Reviewed By:	
	
<u>Kennys Zhang/Engineer</u>	
Approved By:	
	
<u>Talent Zhang/Engineer</u>	

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	/	May. 09, 2024	Original Report	/

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1. Test Report Declare

Applicant:	Guangzhou Shirui Electronics Co., Ltd
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Manufacturer:	Guangzhou Shirui Electronics Co., Ltd
Address:	192 KeZhu Road, Sciencetech Park, guangzhou Economic Technology Development District, Guangzhou China
Product Name:	Touch Control Panel
Brand Name:	MAXHUB
Model Name:	TCP30T, TCP*****(*: A~Z, a~z,0~9, or Blank)
Difference Description:	The derivative model have the same technical construction including circuit diagram, PCB Layout, components and component layout, all electrical construction and mechanical construction with the basic model. The difference lies only the model number just for marketing purpose.

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)	Pass
2	Maximum Conducted Output Power	FCC 15.407 (a)	Pass
3	Power Spectral Density	FCC 15.407 (a)	Pass
4	Frequency Stability Measurement	FCC 15.407 (g)	Pass
5	Radiated Band edge and Spurious Emission	FCC 15.407 (b) FCC 15.209 FCC 15.205	Pass
6	Power Line Conducted Emission	FCC 15.207	NA
7	Antenna requirement	FCC 15.203	Pass

3. Test Laboratory

Guangzhou Jingce Testing Technology Co., Ltd.

Add.: No.10, Hefeng No.1 street, Huangpu District, Guangzhou, Guangdong, People's Republic of China

Association for Laboratory Accreditation(A2LA). Certificate Number: 6594.03

FCC Designation Number: CN1381. Test Firm Registration Number: 486550

IC Test Firm Registration Number: 31808

Conformity Assessment Body identifier: CN0173

4. Equipment Under Test

4.1. Description of EUT

EUT Name:	Touch Control Panel
Model Number:	TCP30T
EUT Function Description:	Please refer to user manual of this device
Power Supply:	52V $\overline{\text{---}}$ 0.49A
Radio Specification:	IEEE 802.11a/n/ac
Operation Frequency:	IEEE 802.11a: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11n HT20: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11n HT40: 5190MHz-5230MHz, 5755MHz-5795MHz IEEE 802.11ac VHT20: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11ac VHT40: 5190MHz-5230MHz, 5755MHz-5795MHz
Modulation:	IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac (VHT20/40): 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
Antenna Type:	FPC Antenna1&2, MAX. Gain: 2.79 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-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	/	/

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	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	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	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	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	CH151, 5755
	MCS 0	CH159, 5795

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	NV: DC 52V	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	MobaXterm		
Mode	Channel	Soft set value	
		ANT0	ANT1
802.11a	36	75	75
	44	75	75
	48	85	85
	149	65	65
	157	65	65
	165	65	65
802.11n HT20	36	67	67
	44	65	65

	48	65	65
	149	57	57
	157	50	50
	165	50	50
802.11n HT40	38	65	65
	46	65	65
	151	50	50
	159	50	50
802.11ac VHT20	36	65	65
	44	65	65
	48	65	65
	149	50	50
	157	50	50
	165	50	50
802.11ac VHT40	38	65	65
	46	65	65
	151	50	50
	159	50	50

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.

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	/
PC BOX	MAXHUB	CBS75A	/

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 $k = 2$.

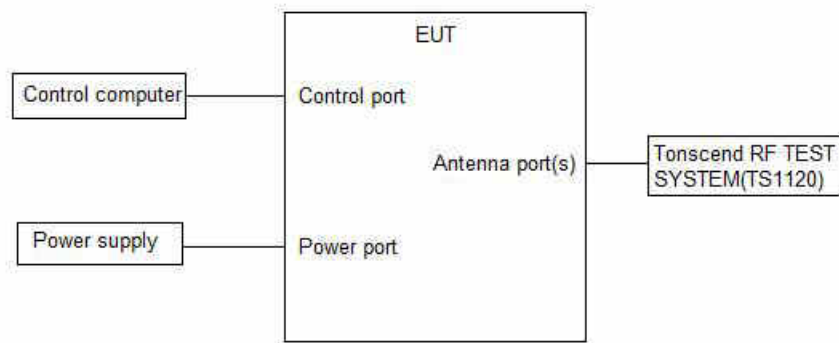
7. Measuring Instrument and Software Used

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	YIHENG	9m*6m*6m	001	Sep. 05, 2023	Sep. 04, 2026
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.

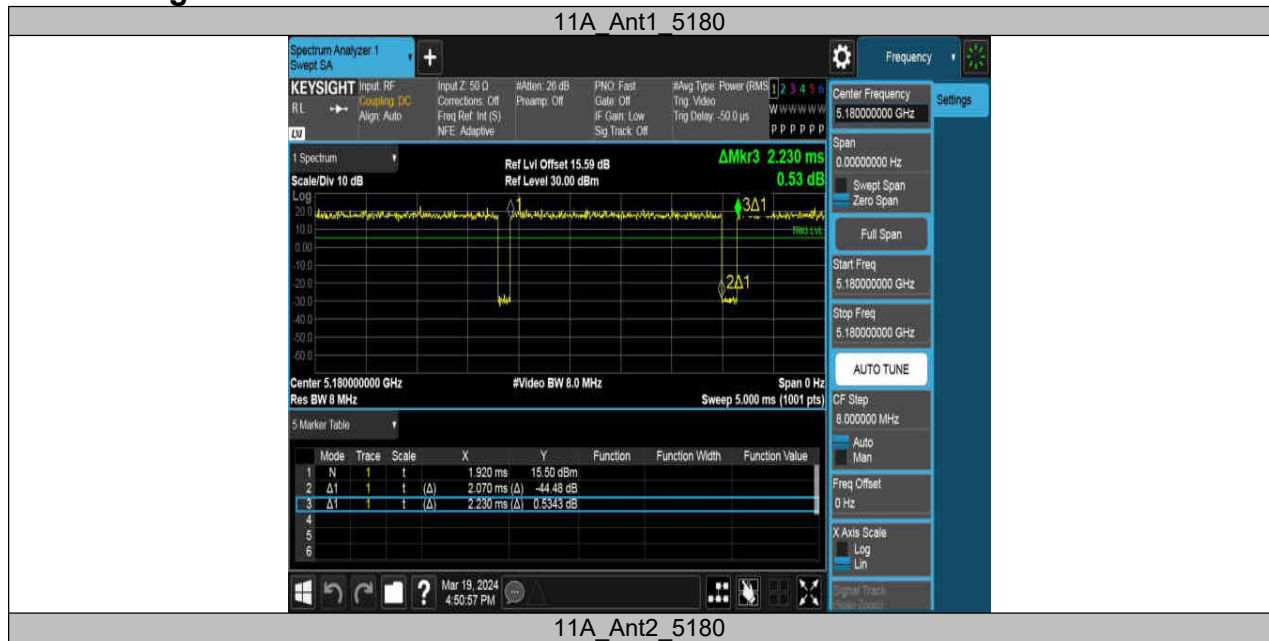
Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring 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	2.07	2.23	92.83
	Ant2	5180	2.06	2.23	92.38
	Ant1	5200	2.06	2.19	94.06
	Ant2	5200	2.06	2.17	94.93
	Ant1	5240	2.06	2.28	90.35
	Ant2	5240	2.06	2.25	91.56
	Ant1	5745	2.06	2.21	93.21
	Ant2	5745	2.06	2.16	95.37
	Ant1	5785	2.07	2.25	92.00
	Ant2	5785	2.06	2.24	91.96
	Ant1	5825	2.07	2.27	91.19
	Ant2	5825	2.06	2.21	93.21
11N20MIMO	Ant1	5180	1.92	2.01	95.52
	Ant2	5180	1.92	2.08	92.31
	Ant1	5200	1.92	2.02	95.05
	Ant2	5200	1.92	2.06	93.20
	Ant1	5240	1.92	2.04	94.12
	Ant2	5240	1.92	2.10	91.43
	Ant1	5745	1.92	2.11	91.00
	Ant2	5745	1.92	2.06	93.20
	Ant1	5785	1.92	2.05	93.66
	Ant2	5785	1.92	2.05	93.66
	Ant1	5825	1.92	2.06	93.20
	Ant2	5825	1.92	2.06	93.20

	Ant2	5825	1.92	2.03	94.58
11N40MIMO	Ant1	5190	0.94	1.16	81.03
	Ant2	5190	0.95	1.17	81.20
	Ant1	5230	0.94	1.17	80.34
	Ant2	5230	0.94	1.16	81.03
	Ant1	5755	0.94	1.16	81.03
	Ant2	5755	0.95	1.15	82.61
	Ant1	5795	0.94	1.16	81.03
	Ant2	5795	0.94	1.17	80.34
11AC20MIMO	Ant1	5180	1.93	2.16	89.35
	Ant2	5180	1.93	2.14	90.19
	Ant1	5200	1.94	2.10	92.38
	Ant2	5200	1.93	2.17	88.94
	Ant1	5240	1.93	2.13	90.61
	Ant2	5240	1.93	2.08	92.79
	Ant1	5745	1.93	2.13	90.61
	Ant2	5745	1.93	2.17	88.94
	Ant1	5785	1.93	2.08	92.79
	Ant2	5785	1.94	2.15	90.23
	Ant1	5825	1.93	2.08	92.79
	Ant2	5825	1.94	2.15	90.23
11AC40MIMO	Ant1	5190	0.95	1.19	79.83
	Ant2	5190	0.95	1.21	78.51
	Ant1	5230	0.95	1.20	79.17
	Ant2	5230	0.95	1.17	81.20
	Ant1	5755	0.95	1.21	78.51
	Ant2	5755	0.95	1.21	78.51
	Ant1	5795	0.95	1.16	81.90
	Ant2	5795	0.95	1.19	79.83

8.5. Original Test Data























11N40MIMO_Ant2_5755



11N40MIMO_Ant1_5795



11N40MIMO Ant2 5795















9. 26dB Bandwidth and 6dB Bandwidth

9.1. Block Diagram of Test Setup

Same as section 8.1

9.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Bandwidth	26 dB Bandwidth	5150 - 5250
	26 dB Bandwidth	5250 - 5350
	26 dB Bandwidth	FCC: 5470 - 5725
	Minimum 500 kHz 6 dB Bandwidth	5725 - 5850

9.3. Test Procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth: RBW=100 kHz For 26 dB Bandwidth: approximately 1% of the emission bandwidth. For 99 % Occupied Bandwidth: approximately 1 % ~ 5 % of the OBW.
VBW	For 6 dB Bandwidth: VBW=300 kHz For 26 dB Bandwidth: >3*RBW For 99 % Bandwidth: >3*RBW
Trace	Max hold
Sweep	Auto couple

(2) Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB and 6 dB relative to the maximum level measured in the fundamental emission.

(3) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

9.4. Test Result

Test Mode	Ant.	Freq. (MHz)	OCB (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11A	Ant1	5180	16.350	5172.0816	5188.4316	---	---
	Ant2	5180	16.422	5172.1818	5188.6038	---	---
	Ant1	5200	16.360	5192.1966	5208.5566	---	---
	Ant2	5200	16.418	5192.0562	5208.4742	---	---
	Ant1	5240	19.162	5231.2187	5250.3807	---	---
	Ant2	5240	16.354	5231.9815	5248.3355	---	---
	Ant1	5745	16.410	5737.2657	5753.6757	---	---
	Ant2	5745	16.401	5736.9268	5753.3278	---	---
	Ant1	5785	16.388	5777.3006	5793.6886	---	---
	Ant2	5785	16.382	5776.9117	5793.2937	---	---
	Ant1	5825	16.439	5817.2239	5833.6629	---	---
	Ant2	5825	16.411	5816.9044	5833.3154	---	---
11N20MIMO	Ant1	5180	17.540	5171.4708	5189.0108	---	---
	Ant2	5180	17.543	5171.5011	5189.0441	---	---
	Ant1	5200	17.560	5191.4963	5209.0563	---	---
	Ant2	5200	17.493	5191.4522	5208.9452	---	---
	Ant1	5240	17.576	5231.5024	5249.0784	---	---
	Ant2	5240	17.475	5231.6650	5249.1400	---	---
	Ant1	5745	17.556	5736.5339	5754.0899	---	---
	Ant2	5745	17.585	5736.4592	5754.0442	---	---

	Ant1	5785	17.530	5776.5559	5794.0859	---	---
	Ant2	5785	17.511	5776.4848	5793.9958	---	---
	Ant1	5825	17.543	5816.4915	5834.0345	---	---
	Ant2	5825	17.571	5816.5122	5834.0832	---	---
11N40MIMO	Ant1	5190	36.009	5172.2924	5208.3014	---	---
	Ant2	5190	35.737	5172.3691	5208.1061	---	---
	Ant1	5230	35.976	5212.0992	5248.0752	---	---
	Ant2	5230	36.207	5212.2311	5248.4381	---	---
	Ant1	5755	36.079	5737.2177	5773.2967	---	---
	Ant2	5755	36.332	5737.1535	5773.4855	---	---
	Ant1	5795	35.964	5777.3380	5813.3020	---	---
	Ant2	5795	35.915	5777.0918	5813.0068	---	---
11AC20MIMO	Ant1	5180	17.559	5171.4484	5189.0074	---	---
	Ant2	5180	17.515	5171.5714	5189.0864	---	---
	Ant1	5200	17.539	5191.5131	5209.0521	---	---
	Ant2	5200	17.496	5191.4408	5208.9368	---	---
	Ant1	5240	17.555	5231.5047	5249.0597	---	---
	Ant2	5240	17.425	5231.7010	5249.1260	---	---
	Ant1	5745	17.584	5736.5169	5754.1009	---	---
	Ant2	5745	17.532	5736.4947	5754.0267	---	---
	Ant1	5785	17.572	5776.5553	5794.1273	---	---
	Ant2	5785	17.509	5776.4905	5793.9995	---	---
	Ant1	5825	17.544	5816.5082	5834.0522	---	---
	Ant2	5825	17.578	5816.5188	5834.0968	---	---
11AC40MIMO	Ant1	5190	35.959	5172.3021	5208.2611	---	---
	Ant2	5190	35.604	5172.4453	5208.0493	---	---
	Ant1	5230	36.053	5212.2149	5248.2679	---	---
	Ant2	5230	36.316	5212.3226	5248.6386	---	---
	Ant1	5755	36.081	5737.2658	5773.3468	---	---
	Ant2	5755	36.288	5737.1946	5773.4826	---	---
	Ant1	5795	35.963	5777.3718	5813.3348	---	---
	Ant2	5795	35.860	5777.1308	5812.9908	---	---

Test Mode	Ant.	Freq. (MHz)	26dB EBW (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11A	Ant1	5180	18.240	5171.000	5189.240	5150 - 5250	PASS
	Ant2	5180	18.320	5171.000	5189.320	5150 - 5250	PASS
	Ant1	5200	18.120	5191.040	5209.160	5150 - 5250	PASS
	Ant2	5200	18.280	5191.120	5209.400	5150 - 5250	PASS
	Ant1	5240	17.920	5231.000	5248.920	5150 - 5250	PASS
	Ant2	5240	18.240	5231.040	5249.280	5150 - 5250	PASS
	Ant1	5745	18.920	5736.080	5755.000	---	---
	Ant2	5745	18.120	5736.080	5754.200	---	---
	Ant1	5785	18.000	5776.440	5794.440	---	---
	Ant2	5785	18.120	5776.000	5794.120	---	---
	Ant1	5825	17.960	5816.520	5834.480	---	---
	Ant2	5825	18.200	5816.080	5834.280	---	---
11N20MIMO	Ant1	5180	19.280	5170.600	5189.880	5150 - 5250	PASS
	Ant2	5180	19.040	5170.760	5189.800	5150 - 5250	PASS
	Ant1	5200	19.040	5190.680	5209.720	5150 - 5250	PASS
	Ant2	5200	19.000	5190.680	5209.680	5150 - 5250	PASS
	Ant1	5240	18.920	5230.840	5249.760	5150 - 5250	PASS
	Ant2	5240	19.120	5230.840	5249.960	5150 - 5250	PASS
	Ant1	5745	18.920	5735.880	5754.800	---	---
	Ant2	5745	18.880	5735.840	5754.720	---	---
	Ant1	5785	19.120	5775.720	5794.840	---	---
	Ant2	5785	19.000	5775.800	5794.800	---	---
	Ant1	5825	19.160	5815.600	5834.760	---	---
	Ant2	5825	19.200	5815.640	5834.840	---	---
11N40MIMO	Ant1	5190	38.880	5170.960	5209.840	5150 - 5250	PASS

	Ant2	5190	37.760	5171.360	5209.120	5150 - 5250	PASS
	Ant1	5230	38.640	5220.480	5240.160	5150 - 5250	PASS
	Ant2	5230	38.800	5210.960	5249.760	5150 - 5250	PASS
	Ant1	5755	38.800	5735.880	5774.680	---	---
	Ant2	5755	39.200	5735.720	5774.920	---	---
	Ant1	5795	38.800	5775.880	5814.680	---	---
	Ant2	5795	38.480	5775.880	5814.360	---	---
11AC20MIMO	Ant1	5180	19.280	5170.600	5189.880	5150 - 5250	PASS
	Ant2	5180	19.200	5170.720	5189.920	5150 - 5250	PASS
	Ant1	5200	19.360	5190.680	5210.040	5150 - 5250	PASS
	Ant2	5200	19.080	5190.560	5209.640	5150 - 5250	PASS
	Ant1	5240	19.120	5230.760	5249.880	5150 - 5250	PASS
	Ant2	5240	18.960	5230.960	5249.920	5150 - 5250	PASS
	Ant1	5745	19.040	5735.800	5754.840	---	---
	Ant2	5745	19.280	5735.560	5754.840	---	---
	Ant1	5785	19.240	5775.720	5794.960	---	---
	Ant2	5785	18.920	5775.840	5794.760	---	---
	Ant1	5825	19.200	5815.640	5834.840	---	---
	Ant2	5825	19.200	5815.720	5834.920	---	---
11AC40MIMO	Ant1	5190	38.480	5170.960	5209.440	5150 - 5250	PASS
	Ant2	5190	38.400	5171.280	5209.680	5150 - 5250	PASS
	Ant1	5230	38.880	5210.800	5249.680	5150 - 5250	PASS
	Ant2	5230	38.880	5211.200	5250.080	5150 - 5250	PASS
	Ant1	5755	39.040	5735.960	5775.000	---	---
	Ant2	5755	39.280	5735.880	5775.160	---	---
	Ant1	5795	38.720	5775.800	5814.520	---	---
	Ant2	5795	38.560	5775.640	5814.200	---	---

Test Mode	Ant.	Freq. (MHz)	6dB EBW (MHz)	FL (MHz)	FH (MHz)	Limit (MHz)	Verdict
11A	Ant1	5745	16.360	5736.800	5753.160	0.5	PASS
	Ant2	5745	15.920	5736.880	5752.800	0.5	PASS
	Ant1	5785	15.480	5777.240	5792.720	0.5	PASS
	Ant2	5785	16.320	5776.880	5793.200	0.5	PASS
	Ant1	5825	15.320	5817.200	5832.520	0.5	PASS
	Ant2	5825	16.320	5817.000	5833.320	0.5	PASS
11N20MIMO	Ant1	5745	17.280	5736.400	5753.680	0.5	PASS
	Ant2	5745	16.240	5736.400	5752.640	0.5	PASS
	Ant1	5785	16.840	5776.760	5793.600	0.5	PASS
	Ant2	5785	17.200	5776.360	5793.560	0.5	PASS
	Ant1	5825	14.480	5818.240	5832.720	0.5	PASS
	Ant2	5825	17.240	5816.680	5833.920	0.5	PASS
11N40MIMO	Ant1	5755	30.400	5738.840	5769.240	0.5	PASS
	Ant2	5755	36.000	5737.320	5773.320	0.5	PASS
	Ant1	5795	32.400	5779.240	5811.640	0.5	PASS
	Ant2	5795	35.680	5777.000	5812.680	0.5	PASS
11AC20MIMO	Ant1	5745	16.280	5737.080	5753.360	0.5	PASS
	Ant2	5745	13.160	5737.440	5750.600	0.5	PASS
	Ant1	5785	17.560	5776.400	5793.960	0.5	PASS
	Ant2	5785	16.960	5776.400	5793.360	0.5	PASS
	Ant1	5825	16.560	5817.040	5833.600	0.5	PASS
	Ant2	5825	16.320	5817.040	5833.360	0.5	PASS
11AC40MIMO	Ant1	5755	35.120	5737.640	5772.760	0.5	PASS
	Ant2	5755	36.320	5737.080	5773.400	0.5	PASS
	Ant1	5795	31.920	5778.920	5810.840	0.5	PASS
	Ant2	5795	25.440	5777.320	5802.760	0.5	PASS

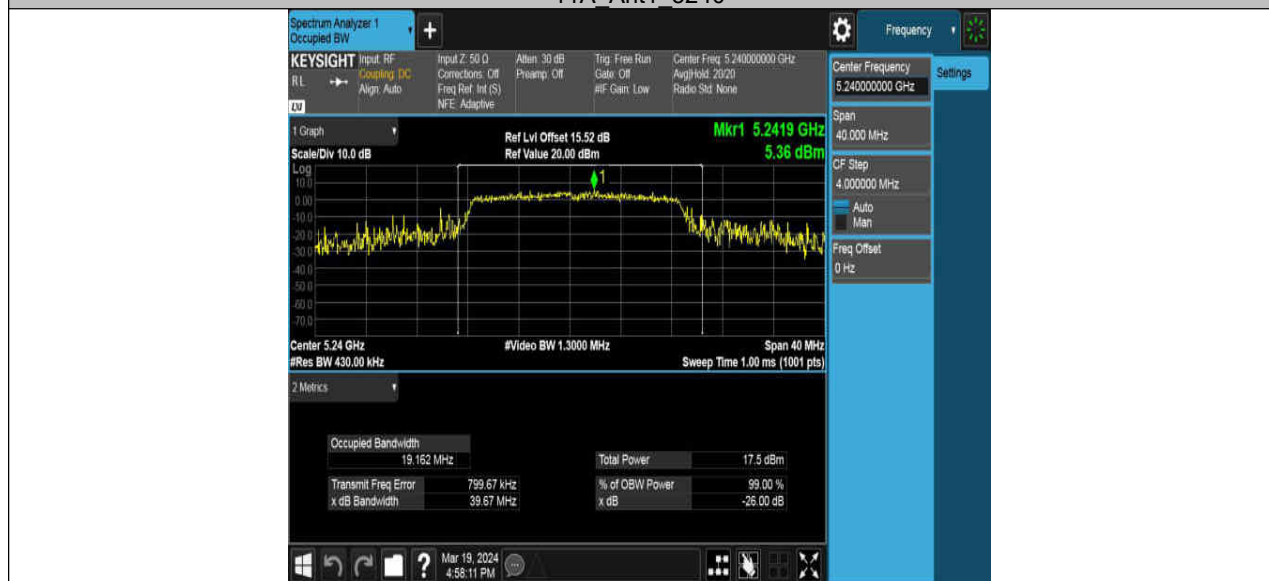
9.5. Original Test Data

99% Bandwidth:





11A Ant1 5240



11A Ant2 5240



11A Ant1 5745

