

FCC AND ISCED CERTIFICATION TEST REPORT

FOR

Applicant	:	Ruijie Networks Co., Ltd.
Address	:	Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road, Cangshan District, Fuzhou, Fujian, China
Equipment under Test	:	Wireless Access Point
Model No.	:	RG-RAP73HD
Trade Mark	:	
FCC ID	:	2AX5J-RAP73HD
IC	:	27676-RAP73HD
Manufacturer	:	Ruijie Networks Co., Ltd.
Address	:	Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road, Cangshan District, Fuzhou, Fujian, China

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

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REPORT

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Test Report Declare

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Test Standard Used:

FCC Rules and Regulations Part 15 Subpart E, RSS-247 Issue 2 February 2017.

Test procedure used: ANSI C63.10:2013, 789033 D02 General U-NII Test Procedures New Rules v02r01, 662911 D01 Multiple Transmitter Output v02r01, RSS-Gen Issue 5 April 2018

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service 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 Dongguan Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC&ISED standards.

Report No:	DDT-RE23032214-2E02		
Date of Receipt:	Mar. 07, 2023	Date of Test:	Mar. 07, 2023 ~ Jul. 05, 2023

Prepared By:

Ella Gong

Ella Gong /Engineer

Approved By:



Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jul. 05, 2023	

1. Summary of Test Results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	Standard	Results
6/26db Bandwidth and 99% Bandwidth	FCC 15.407 (e) RSS-247 Clause 6.2 RSS-GEN Clause 6.7	PASS
Maximum Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Frequency Stability Measurement	FCC 15.407 (g) RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Emissions in restricted frequency bands	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9 RSS-GEN Clause 8.10	PASS
Band Edge Compliance	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9 RSS-GEN Clause 8.10	PASS
Power Line Conducted Emission	FCC 15.207 RSS-GEN Clause 8.8	PASS
Antenna requirement	FCC 15.203 RSS-GEN Clause 6.8	PASS
Dynamic Frequency Selection	FCC 15.407 (h) RSS-247 Clause 6.8	PASS Refer to report DDT- RE23032214- 2E03

2. General Test Information

2.1. Description of EUT

EUT* Name	: Wireless Access Point
Model Number	: RG-RAP73HD
EUT function description	: Please reference user manual of this device
Power Supply	: DC 48V from external adapter /POE
Radio Technology	: IEEE 802.11a/n/ac/ax/be
Operation frequency	: U-NII-1: 5150 MHz ~ 5250 MHz U-NI-2A: 5250 MHz ~ 5350 MHz U-NI-2C: 5470 MHz ~ 5725 MHz U-NII-3: 5725 MHz ~ 5850 MHz
Modulation	: IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax: OFDM, OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11be: OFDM, OFDMA (4096QAM, 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Sample Number	: S23032214-02 for conductive test, S23032214-03 for radiation test

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

Note 2: Band 5600-5650MHz will be disabled when shipped to Canada.

Antenna information							
/	Antenna 1	Antenna 2	Antenna 3	Antenna 4	Beamforming Directional Gain (dBi)	CDD Directional Gain (dBi)	
Antenna Type	PIFA	PIFA	PIFA	PIFA		Power	PSD
U-NII-1 Maximum PK gain(dBi)	4.81	7.46	4.40	5.75	13.48	7.46	13.48
U-NII-2A Maximum PK gain(dBi)	4.54	7.35	4.40	6.58	13.37	7.35	13.37
U-NII-2C Maximum PK gain(dBi)	4.28	8.20	5.06	8.46	14.48	8.20	14.48
U-NII-3 Maximum PK gain(dBi)	3.71	8.45	4.55	7.30	14.47	8.45	14.47

Note:

The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows:

- 1) For power spectral density (PSD) measurements on all devices.
Array Gain = $10 \log (N_{ANT} / N_{SS})$ dB;
- 2) For power measurements on IEEE 802.11 devices.
Array Gain = 0 dB for $N_{ANT} < 4$;

The EUT also supports beamforming mode, and the beamforming support 802.11n/ac/ax/be

only, not include 802.11a/b/g. BF Directional Gain = Max. Gain + 10 log (N_{ANT} / N_{SS}).

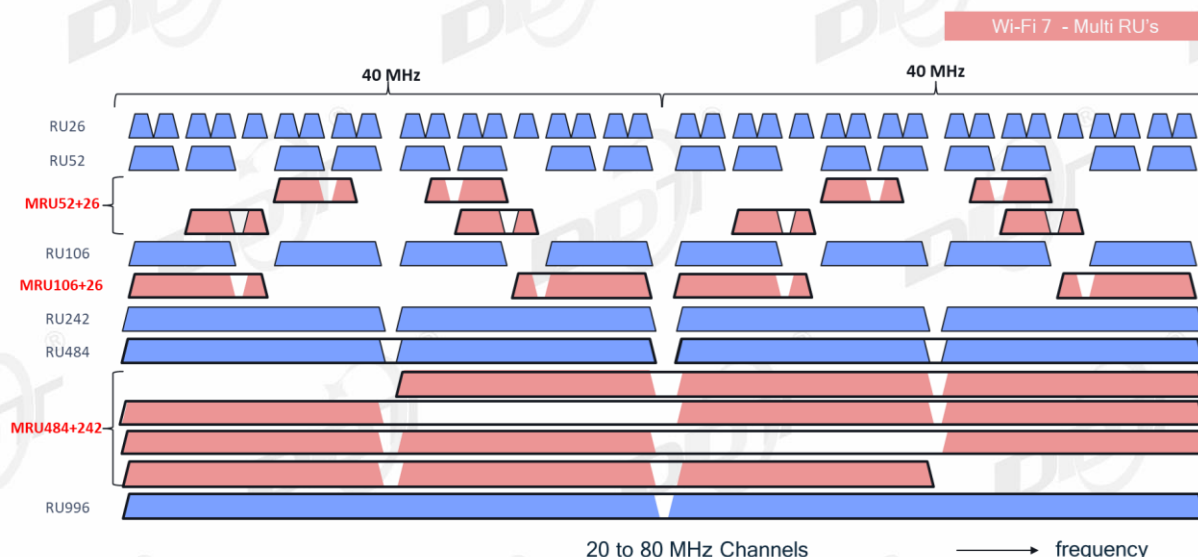
For beamforming operation, manufacturer automatically backs power down based on a 10log (N_{ANT}) factor based on CDD power, Therefore, only the CDD mode was evaluated in this report.

Channel information							
IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20) IEEE 802.11ax (HE20) IEEE 802.11be(EHT20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40) IEEE 802.11ax (HE40) IEEE 802.11be (EHT40)		IEEE 802.11ac (VHT80) IEEE 802.11ax (HE80) IEEE 802.11be (EHT80)		IEEE 802.11ac (VHT160) IEEE 802.11ax (HE160) IEEE 802.11be (EHT160)	
UNII-1							
CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
36	5180	38	5190	42	5210	50	5250 (Straddle)
40	5200	46	5230	/	/	/	/
44	5220	/	/	/	/	/	/
48	5240	/	/	/	/	/	/
UNII-2A							
52	5260	54	5270	58	5290	114	5570
56	5280	62	5310	/	/	/	/
60	5300	/	/	/	/	/	/
64	5320	/	/	/	/	/	/
UNII-2C							
100	5500	102	5510	106	5530	/	/
104	5520	110	5550	122	5610	/	/
108	5540	118	5590	138	5690 (Straddle)	/	/
112	5560	126	5630	/	/	/	/
116	5580	134	5670	/	/	/	/
120	5600	142	5710 (Straddle)	/	/	/	/
124	5620	/	/	/	/	/	/
128	5640	/	/	/	/	/	/
132	5660	/	/	/	/	/	/
136	5680	/	/	/	/	/	/
140	5700	/	/	/	/	/	/
144	5720 (Straddle)						
UNII-3							
149	5745	151	5755	155	5725	/	/
153	5765	159	5795	/	/	/	/
157	5785	/	/	/	/	/	/
161	5805	/	/	/	/	/	/
165	5825	/	/	/	/	/	/

Note:

- For 802.11ax/be 20/40/80/160MHz and 802.11be EHT20/EHT40/ EHT80/ EHT160MHz mode, the whole testing has assessed only the worst case refer to output power.
- For WLAN SISO & MMO mode, the whole testing has assessed only MIMO mode by referring to the higher normal conducted power.

3. 802.11 ax only support full RU mode
4. 802.11be support full RU tone and partial RU tone, both full RU and partial RU-left (for low CH) and partial RU-right (for high CH), small size RU, Large size RU and Puncturing modes are tested for conducted power/PSD, the Channel Mask/RSE/ Bandwidth Emission test for full RU only.
5. 802.11be support small size RU, Large size RU and Puncturing modes as below:



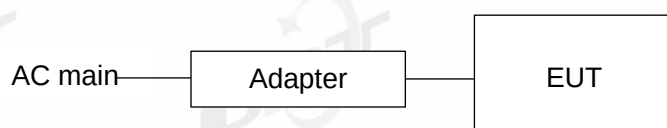
2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Other
POE Power Supply	RISUNIC Technology (ShenZhen) Co., Ltd	RP026-5601080YX	Input: 100-240~50/60Hz, 1.5A Max Output: DC 56.0V/1.08A, 60.48W

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
N/A	N/A	N/A	N/A	N/A

2.4. Block diagram of EUT configuration for test



Test software: MT7990 QA 0.0.2.94

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

The pathloss of external cable: 2 dB (According to the manufacturer's claims)

Tested mode, channel, and data rate information				
Mode	Setting Tx Power	data rate (Mbps) (see Note)	Channel	Frequency (MHz)
IEEE 802.11a	0	6	Low: CH36	5180
	0	6	Middle: CH40	5200
	0	6	High: CH48	5240
	6	6	Low: CH52	5260
	6	6	Middle: CH56	5280
	6	6	High: CH64	5320
	6	6	Low: CH100	5500
	6	6	Middle: CH116	5580
	6	6	High: CH140	5700
	6	6	Straddle: CH144	5720
	13	6	Low: CH149	5745
	13	6	Middle: CH157	5785
	13	6	High: CH165	5825
IEEE 802.11n HT20	0	MCS 24	Low: CH36	5180
	0	MCS 24	Middle: CH40	5200
	0	MCS 24	High: CH48	5240
	6	MCS 24	Low: CH52	5260
	6	MCS 24	Middle: CH56	5280
	6	MCS 24	High: CH64	5320
	6	MCS 24	Low: CH100	5500
	6	MCS 24	Middle: CH116	5580
	6	MCS 24	High: CH140	5700
	6	MCS 24	Straddle: CH144	5720
	13	MCS 24	Low: CH149	5745
	13	MCS 24	Middle: CH157	5785
	13	MCS 24	High: CH165	5825
IEEE 802.11n HT40	1	MCS 24	Low: CH38	5190
	1	MCS 24	Middle: CH46	5230
	6	MCS 24	High: CH54	5270
	6	MCS 24	Low: CH62	5310
	6	MCS 24	Middle: CH102	5510
	6	MCS 24	High: CH110	5550
	6	MCS 24	Low: CH134	5670
	6	MCS 24	Straddle: CH142	5710
	15	MCS 24	Middle: CH151	5755
	15	MCS 24	High: CH159	5795
IEEE 802.11 ac VHT20	0	MCS 0	Low: CH36	5180
	0	MCS 0	Middle: CH40	5200
	0	MCS 0	High: CH48	5240
	6	MCS 0	Low: CH52	5260
	6	MCS 0	Middle: CH56	5280
	6	MCS 0	High: CH64	5320
	6	MCS 0	Low: CH100	5500
	6	MCS 0	Middle: CH116	5580
	6	MCS 0	High: CH140	5700
	6	MCS 0	Straddle: CH144	5720
	13	MCS 0	Low: CH149	5745

	13	MCS 0	Middle: CH157	5785
	13	MCS 0	High: CH165	5825
IEEE 802.11ac VHT40	1	MCS 0	Low: CH38	5190
	1	MCS 0	Middle: CH46	5230
	6	MCS 0	High: CH54	5270
	6	MCS 0	Low: CH62	5310
	6	MCS 0	Middle: CH102	5510
	6	MCS 0	High: CH110	5550
	6	MCS 0	Low: CH134	5670
	6	MCS 0	Straddle: CH142	5710
	12	MCS 0	Middle: CH151	5755
	12	MCS 0	High: CH159	5795
IEEE 802.11ac VHT80	4	MCS 0	CH42	5210
	10	MCS 0	CH58	5290
	10	MCS 0	CH106	5530
	10	MCS 0	CH122	5610
	10	MCS 0	Straddle: CH138	5690
	10	MCS 0	CH155	5775
IEEE 802.11ac VHT160	1	MCS 0	Straddle: CH50	5250
	6	MCS 0	CH114	5570
IEEE 802.11ax HE20	0	MCS 0	Low: CH36	5180
	0	MCS 0	Middle: CH40	5200
	0	MCS 0	High: CH48	5240
	6	MCS 0	Low: CH52	5260
	6	MCS 0	Middle: CH56	5280
	6	MCS 0	High: CH64	5320
	6	MCS 0	Low: CH100	5500
	6	MCS 0	Middle: CH116	5580
	6	MCS 0	High: CH140	5700
	6	MCS 0	Straddle: CH144	5720
	13	MCS 0	Low: CH149	5745
	13	MCS 0	Middle: CH157	5785
	13	MCS 0	High: CH165	5825
IEEE 802.11ax HE40	1	MCS 0	Low: CH38	5190
	1	MCS 0	Middle: CH46	5230
	6	MCS 0	High: CH54	5270
	6	MCS 0	Low: CH62	5310
	6	MCS 0	Middle: CH102	5510
	6	MCS 0	High: CH110	5550
	6	MCS 0	Low: CH134	5670
	6	MCS 0	Straddle: CH142	5710
	12	MCS 0	Middle: CH151	5755
	12	MCS 0	High: CH159	5795
IEEE 802.11ax HE80	4	MCS 0	CH42	5210
	6	MCS 0	CH58	5290
	6	MCS 0	CH106	5530
	6	MCS 0	CH122	5610
	6	MCS 0	Straddle: CH138	5690
	10	MCS 0	CH155	5775
IEEE	1	MCS 0	Straddle: CH50	5250

802.11ax HE160	7	MCS 0	CH114	5570
IEEE 802.11be EHT20	0	MCS 0	Low: CH36	5180
	0	MCS 0	Middle: CH40	5200
	0	MCS 0	High: CH48	5240
	6	MCS 0	Low: CH52	5260
	6	MCS 0	Middle: CH56	5280
	6	MCS 0	High: CH64	5320
	6	MCS 0	Low: CH100	5500
	6	MCS 0	Middle: CH116	5580
	6	MCS 0	High: CH140	5700
	6	MCS 0	Straddle: CH144	5720
	13	MCS 0	Low: CH149	5745
	13	MCS 0	Middle: CH157	5785
	13	MCS 0	High: CH165	5825
IEEE 802.11be EHT40	1	MCS 0	Low: CH38	5190
	1	MCS 0	Middle: CH46	5230
	6	MCS 0	High: CH54	5270
	6	MCS 0	Low: CH62	5310
	6	MCS 0	Middle: CH102	5510
	6	MCS 0	High: CH110	5550
	6	MCS 0	Low: CH134	5670
	6	MCS 0	Straddle: CH142	5710
	12	MCS 0	Middle: CH151	5755
	12	MCS 0	High: CH159	5795
IEEE 802.11be EHT80	4	MCS 0	CH42	5210
	6	MCS 0	CH58	5290
	6	MCS 0	CH106	5530
	6	MCS 0	CH122	5610
	6	MCS 0	Straddle: CH138	5690
	10	MCS 0	CH155	5775
IEEE 802.11be EHT160	1	MCS 0	Straddle: CH50	5250
	7	MCS 0	CH114	5570
Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.				

2.5. Deviations of test standard

No Deviation.

2.6. Test environment conditions

Temperature range:	+15℃ to +35 ℃
Humidity range:	20% to 75%
Pressure range:	86 kPa to 106 kPa

2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City,
Guangdong Province, China, 523808

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2.8. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz $\leq$ f < 3.6 GHz); 1.38 dB (3.6 GHz $\leq$ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz $\leq$ f < 3.6 GHz); 1.38 dB (3.6 GHz $\leq$ f < 8 GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method) 5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz $\leq$ f < 3.6GHz); 1.40 dB (3.6 GHz $\leq$ f < 8 GHz) 1.66 dB (8 GHz $\leq$ f < 22 GHz)
Uncertainty for radio frequency (RBW<20kHz)	3×10^{-8}
Temperature	0.4℃
Humidity	2%
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30MHz-1GHz)	4.70 dB (Antenna Polarize: V) 4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1GHz-40GHz)	4.10 dB (1-6 GHz) 4.40 dB (6 GHz-18 GHz) 3.54 dB (18 GHz-26 GHz) 4.30 dB (26 GHz-40 GHz)
Uncertainty for Power line conduction emission test	3.32 dB (150 kHz-30 MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

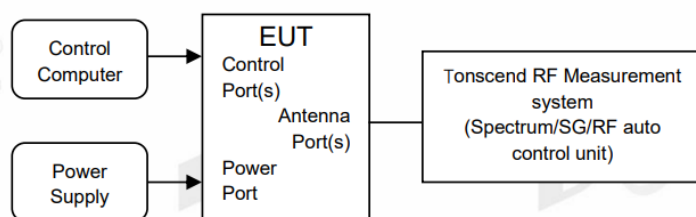
3. Equipment Used During Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☑RF Connected Test (Tonscend RF Measurement System 4#)					
Signal & Spectrum analyzer	R&S	FSV3044	101173	May 26, 2022 Apr. 23, 2023	1 Year
Wideband Radio Communication tester	R&S	CMW500	120259	May 26, 2022 Apr. 27, 2023	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180737	Apr. 27, 2023	1 Year
Vector Signal Generator	Agilent	E8267D	US49060192	Sep. 28, 2022	1 Year
RF Control Unit	Tonsend	JS0806-2	2118060485	May 28, 2022 Apr. 27, 2023	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	May 26, 2022 May 15, 2023	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.3.2.22	N/A	N/A
☑Radiation 3#chamber					
EMI Test Receiver	R&S	ESU26	100472	May 19, 2022 Apr. 23, 2023	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	May 17, 2022 Apr. 23, 2023	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Sep. 29, 2022	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	01429	Jul. 22, 2022	1 Year
Double Ridged Horn Antenna	Schwarzbeck	BBHA9120 D	02468	Sep. 29, 2022	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	May 06, 2022 Apr. 26, 2023	1 Year
Pre-amplifier	COM-POWER	PAM-118A	18040084	Aug. 17, 2022	1 Year
Pre-amplifier	COM-POWER	PAM-840A	461369	May 26, 2022 Apr. 27, 2023	1 Year
RE Cable	N/A	W23.02 CP1-X2 + W23.09 AP1-X8+ JCT26S-NJ-NJ-1.5M+ JCT26S-NJ-NJ-1.5M	4.5M+8M+1.5M+1.5M	Aug. 17, 2022	1 Year
RF Cable	Yuhu Technology	JCTB810-NJ-NJ-9M	21123964	May 19, 2022 Apr. 23, 2023	1 Year
RF Cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	21073466	Aug. 17, 2022	1 Year
Micro-Tronics filters	REBES	BRM50702	G555	N/A	N/A
Micro-Tronics filters	REBES	BRM50716	G392	N/A	N/A
High Pass filter	XB	XBLBQ-GTA67	210820-2-3	N/A	N/A
Test software	Tonscend	JS32-RE	V 5.0.0.1	N/A	N/A
☑Power Line Conducted Emissions Test 1#					
Test Receiver	R&S	ESCI	100551	Aug. 26, 2022	1 Year

LISN 1	R&S	ENV216	101109	Aug. 26, 2022	1 Year
LISN 2	R&S	ESH2-Z5	100309	Aug. 26, 2022	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Aug. 26, 2022	1 Year
CE Cable 1	HUBSER	N/A	W10.01	Aug. 26, 2022	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
Test Receiver	R&S	ESCI	100551	Aug. 26, 2022	1 Year

4. 26dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
26 dB Bandwidth	---	5150 - 5250
	---	5250 - 5350
	---	For FCC: 5470 - 5725
	---	For IC: 5470 - 5600 5650 - 5725

4.3. Test procedure

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

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	approximately 1% of the emission bandwidth.
VBW	> RBW
Trace	Max hold
Sweep	Auto couple

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 relative to the maximum level measured in the fundamental emission.

4.4. Test result

Test Mode	Antenna	Frequency [MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-CDD	Ant1	5180	22.76	5169.36	5192.12	---	---
	Ant2	5180	26.36	5167.40	5193.76	---	---
	Ant3	5180	23.64	5168.68	5192.32	---	---
	Ant4	5180	23.28	5167.40	5190.68	---	---
	Ant1	5200	24.24	5188.60	5212.84	---	---
	Ant2	5200	23.68	5188.32	5212.00	---	---
	Ant3	5200	22.88	5188.64	5211.52	---	---
	Ant4	5200	25.72	5187.36	5213.08	---	---
	Ant1	5240	18.64	5230.68	5249.32	---	---
	Ant2	5240	18.52	5230.72	5249.24	---	---
	Ant3	5240	18.48	5230.72	5249.20	---	---
	Ant4	5240	18.60	5230.72	5249.32	---	---

	Ant1	5260	18.56	5250.72	5269.28	---	---
	Ant2	5260	18.48	5250.76	5269.24	---	---
	Ant3	5260	18.56	5250.72	5269.28	---	---
	Ant4	5260	18.48	5250.76	5269.24	---	---
	Ant1	5280	18.60	5270.64	5289.24	---	---
	Ant2	5280	18.48	5270.76	5289.24	---	---
	Ant3	5280	18.56	5270.72	5289.28	---	---
	Ant4	5280	18.52	5270.76	5289.28	---	---
	Ant1	5320	22.36	5308.64	5331.00	---	---
	Ant2	5320	23.64	5307.68	5331.32	---	---
	Ant3	5320	24.76	5307.40	5332.16	---	---
	Ant4	5320	23.48	5308.40	5331.88	---	---
	Ant1	5500	22.64	5489.36	5512.00	---	---
	Ant2	5500	23.48	5489.40	5512.88	---	---
	Ant3	5500	24.40	5487.44	5511.84	---	---
	Ant4	5500	25.36	5487.76	5513.12	---	---
	Ant1	5580	18.60	5570.72	5589.32	---	---
	Ant2	5580	18.52	5570.72	5589.24	---	---
	Ant3	5580	18.60	5570.68	5589.28	---	---
	Ant4	5580	18.56	5570.68	5589.24	---	---
	Ant1	5700	24.72	5686.76	5711.48	---	---
	Ant2	5700	23.72	5688.48	5712.20	---	---
	Ant3	5700	24.20	5687.72	5711.92	---	---
	Ant4	5700	23.84	5687.72	5711.56	---	---
	Ant1	5720	18.56	5710.68	5729.24	---	---
	Ant2	5720	18.56	5710.72	5729.28	---	---
	Ant3	5720	18.56	5710.72	5729.28	---	---
	Ant4	5720	18.44	5710.76	5729.20	---	---
	Ant1	5720_UNII-2C	14.32	5710.68	5725	---	---
	Ant2	5720_UNII-2C	14.28	5710.72	5725	---	---
	Ant3	5720_UNII-2C	14.28	5710.72	5725	---	---
	Ant4	5720_UNII-2C	14.24	5710.76	5725	---	---
	Ant1	5720_UNII-3	4.24	5725	5729.24	---	---
	Ant2	5720_UNII-3	4.28	5725	5729.28	---	---
	Ant3	5720_UNII-3	4.28	5725	5729.28	---	---
	Ant4	5720_UNII-3	4.2	5725	5729.20	---	---
	Ant1	5745	22.92	5734.60	5757.52	---	---
	Ant2	5745	22.28	5734.56	5756.84	---	---
	Ant3	5745	22.92	5734.96	5757.88	---	---
	Ant4	5745	22.48	5734.76	5757.24	---	---
	Ant1	5785	18.32	5775.84	5794.16	---	---
	Ant2	5785	18.52	5775.72	5794.24	---	---
	Ant3	5785	18.48	5775.76	5794.24	---	---
	Ant4	5785	18.56	5775.76	5794.32	---	---
	Ant1	5825	23.52	5812.44	5835.96	---	---
	Ant2	5825	23.72	5812.40	5836.12	---	---
	Ant3	5825	24.48	5812.20	5836.68	---	---
	Ant4	5825	23.64	5812.24	5835.88	---	---
11N20MIMO	Ant1	5180	24.80	5168.36	5193.16	---	---
	Ant2	5180	25.96	5168.40	5194.36	---	---
	Ant3	5180	22.24	5168.44	5190.68	---	---
	Ant4	5180	24.76	5166.92	5191.68	---	---
	Ant1	5200	22.80	5188.60	5211.40	---	---
	Ant2	5200	24.96	5186.52	5211.48	---	---
	Ant3	5200	22.88	5188.72	5211.60	---	---
	Ant4	5200	22.84	5187.56	5210.40	---	---
	Ant1	5240	19.04	5230.48	5249.52	---	---
	Ant2	5240	19.04	5230.48	5249.52	---	---
	Ant3	5240	18.96	5230.52	5249.48	---	---
	Ant4	5240	18.96	5230.52	5249.48	---	---

	Ant1	5260	19.08	5250.44	5269.52	---	---
	Ant2	5260	19.04	5250.48	5269.52	---	---
	Ant3	5260	19.04	5250.52	5269.56	---	---
	Ant4	5260	19.00	5250.52	5269.52	---	---
	Ant1	5280	19.08	5270.48	5289.56	---	---
	Ant2	5280	19.04	5270.48	5289.52	---	---
	Ant3	5280	19.00	5270.48	5289.48	---	---
	Ant4	5280	19.00	5270.52	5289.52	---	---
	Ant1	5320	23.96	5309.08	5333.04	---	---
	Ant2	5320	26.76	5305.84	5332.60	---	---
	Ant3	5320	25.32	5306.48	5331.80	---	---
	Ant4	5320	22.16	5308.84	5331.00	---	---
	Ant1	5500	23.24	5489.28	5512.52	---	---
	Ant2	5500	24.52	5488.08	5512.60	---	---
	Ant3	5500	23.64	5488.72	5512.36	---	---
	Ant4	5500	23.24	5488.72	5511.96	---	---
	Ant1	5580	19.08	5570.44	5589.52	---	---
	Ant2	5580	18.96	5570.52	5589.48	---	---
	Ant3	5580	19.04	5570.48	5589.52	---	---
	Ant4	5580	19.04	5570.48	5589.52	---	---
	Ant1	5700	23.16	5687.80	5710.96	---	---
	Ant2	5700	23.84	5687.80	5711.64	---	---
	Ant3	5700	22.96	5688.12	5711.08	---	---
	Ant4	5700	22.60	5688.44	5711.04	---	---
	Ant1	5720	19.08	5710.48	5729.56	---	---
	Ant2	5720	19.00	5710.48	5729.48	---	---
	Ant3	5720	19.00	5710.48	5729.48	---	---
	Ant4	5720	19.08	5710.48	5729.56	---	---
	Ant1	5720_UNII-2C	14.52	5710.48	5725	---	---
	Ant2	5720_UNII-2C	14.52	5710.48	5725	---	---
	Ant3	5720_UNII-2C	14.52	5710.48	5725	---	---
	Ant4	5720_UNII-2C	14.52	5710.48	5725	---	---
	Ant1	5720_UNII-3	4.56	5725	5729.56	---	---
	Ant2	5720_UNII-3	4.48	5725	5729.48	---	---
	Ant3	5720_UNII-3	4.48	5725	5729.48	---	---
	Ant4	5720_UNII-3	4.56	5725	5729.56	---	---
	Ant1	5745	21.68	5735.32	5757.00	---	---
	Ant2	5745	22.68	5734.36	5757.04	---	---
	Ant3	5745	22.88	5735.00	5757.88	---	---
	Ant4	5745	21.80	5735.12	5756.92	---	---
	Ant1	5785	19.08	5775.48	5794.56	---	---
	Ant2	5785	19.04	5775.48	5794.52	---	---
	Ant3	5785	19.00	5775.48	5794.48	---	---
	Ant4	5785	19.04	5775.48	5794.52	---	---
	Ant1	5825	24.08	5812.76	5836.84	---	---
	Ant2	5825	26.00	5810.64	5836.64	---	---
	Ant3	5825	24.48	5812.12	5836.60	---	---
	Ant4	5825	25.80	5810.56	5836.36	---	---
11N40MIMO	Ant1	5190	45.04	5168.40	5213.44	---	---
	Ant2	5190	38.40	5170.80	5209.20	---	---
	Ant3	5190	39.04	5170.32	5209.36	---	---
	Ant4	5190	38.56	5170.72	5209.28	---	---
	Ant1	5230	38.64	5210.72	5249.36	---	---
	Ant2	5230	38.32	5210.80	5249.12	---	---
	Ant3	5230	38.40	5210.88	5249.28	---	---
	Ant4	5230	38.32	5210.88	5249.20	---	---
	Ant1	5270	38.56	5250.72	5289.28	---	---
	Ant2	5270	38.32	5250.88	5289.20	---	---
	Ant3	5270	38.32	5250.88	5289.20	---	---
	Ant4	5270	38.48	5250.80	5289.28	---	---

	Ant1	5310	44.56	5290.16	5334.72	---	---
	Ant2	5310	38.56	5290.72	5329.28	---	---
	Ant3	5310	42.88	5290.72	5333.60	---	---
	Ant4	5310	38.88	5290.72	5329.60	---	---
	Ant1	5510	43.12	5489.44	5532.56	---	---
	Ant2	5510	38.80	5490.88	5529.68	---	---
	Ant3	5510	38.64	5490.72	5529.36	---	---
	Ant4	5510	40.48	5490.72	5531.20	---	---
	Ant1	5550	38.56	5530.72	5569.28	---	---
	Ant2	5550	38.24	5530.88	5569.12	---	---
	Ant3	5550	38.24	5530.88	5569.12	---	---
	Ant4	5550	38.24	5530.88	5569.12	---	---
	Ant1	5670	43.28	5648.64	5691.92	---	---
	Ant2	5670	38.64	5650.72	5689.36	---	---
	Ant3	5670	42.72	5649.52	5692.24	---	---
	Ant4	5670	38.48	5650.72	5689.20	---	---
	Ant1	5710	38.64	5690.64	5729.28	---	---
	Ant2	5710	38.24	5690.88	5729.12	---	---
	Ant3	5710	38.48	5690.72	5729.20	---	---
	Ant4	5710	38.32	5690.80	5729.12	---	---
	Ant1	5710_UNII-2C	34.36	5690.64	5725	---	---
	Ant2	5710_UNII-2C	34.12	5690.88	5725	---	---
	Ant3	5710_UNII-2C	34.28	5690.72	5725	---	---
	Ant4	5710_UNII-2C	34.2	5690.80	5725	---	---
	Ant1	5710_UNII-3	4.28	5725	5729.28	---	---
	Ant2	5710_UNII-3	4.12	5725	5729.12	---	---
	Ant3	5710_UNII-3	4.2	5725	5729.20	---	---
	Ant4	5710_UNII-3	4.12	5725	5729.12	---	---
	Ant1	5755	46.08	5734.36	5780.44	---	---
	Ant2	5755	38.48	5735.80	5774.28	---	---
	Ant3	5755	44.96	5735.80	5780.76	---	---
	Ant4	5755	38.88	5735.56	5774.44	---	---
	Ant1	5795	46.48	5768.12	5814.60	---	---
	Ant2	5795	38.56	5775.64	5814.20	---	---
	Ant3	5795	40.72	5773.56	5814.28	---	---
	Ant4	5795	40.16	5774.12	5814.28	---	---
11AC20MIMO	Ant1	5180	23.64	5168.32	5191.96	---	---
	Ant2	5180	25.52	5167.64	5193.16	---	---
	Ant3	5180	24.52	5168.00	5192.52	---	---
	Ant4	5180	23.44	5168.08	5191.52	---	---
	Ant1	5200	22.64	5188.32	5210.96	---	---
	Ant2	5200	22.44	5187.40	5209.84	---	---
	Ant3	5200	22.36	5187.72	5210.08	---	---
	Ant4	5200	22.96	5187.72	5210.68	---	---
	Ant1	5240	19.12	5230.44	5249.56	---	---
	Ant2	5240	19.04	5230.48	5249.52	---	---
	Ant3	5240	19.00	5230.52	5249.52	---	---
	Ant4	5240	19.00	5230.48	5249.48	---	---
	Ant1	5260	19.04	5250.48	5269.52	---	---
	Ant2	5260	19.00	5250.52	5269.52	---	---
	Ant3	5260	19.00	5250.48	5269.48	---	---
	Ant4	5260	19.04	5250.48	5269.52	---	---
	Ant1	5280	19.08	5270.48	5289.56	---	---
	Ant2	5280	19.00	5270.52	5289.52	---	---
	Ant3	5280	19.00	5270.52	5289.52	---	---
	Ant4	5280	19.00	5270.52	5289.52	---	---
	Ant1	5320	28.72	5304.88	5333.60	---	---
	Ant2	5320	27.96	5305.08	5333.04	---	---
	Ant3	5320	24.40	5307.40	5331.80	---	---
	Ant4	5320	27.68	5306.24	5333.92	---	---

	Ant1	5500	25.08	5487.40	5512.48	---	---
	Ant2	5500	24.60	5487.44	5512.04	---	---
	Ant3	5500	22.56	5488.72	5511.28	---	---
	Ant4	5500	24.28	5489.64	5513.92	---	---
	Ant1	5580	19.08	5570.44	5589.52	---	---
	Ant2	5580	19.04	5570.48	5589.52	---	---
	Ant3	5580	19.00	5570.48	5589.48	---	---
	Ant4	5580	19.00	5570.48	5589.48	---	---
	Ant1	5700	25.04	5686.80	5711.84	---	---
	Ant2	5700	25.36	5686.28	5711.64	---	---
	Ant3	5700	26.24	5686.32	5712.56	---	---
	Ant4	5700	22.60	5688.00	5710.60	---	---
	Ant1	5720	19.08	5710.44	5729.52	---	---
	Ant2	5720	19.08	5710.44	5729.52	---	---
	Ant3	5720	19.04	5710.48	5729.52	---	---
	Ant4	5720	19.00	5710.48	5729.48	---	---
	Ant1	5720_UNII-2C	14.56	5710.44	5725	---	---
	Ant2	5720_UNII-2C	14.56	5710.44	5725	---	---
	Ant3	5720_UNII-2C	14.52	5710.48	5725	---	---
	Ant4	5720_UNII-2C	14.52	5710.48	5725	---	---
	Ant1	5720_UNII-3	4.52	5725	5729.52	---	---
	Ant2	5720_UNII-3	4.52	5725	5729.52	---	---
	Ant3	5720_UNII-3	4.52	5725	5729.52	---	---
	Ant4	5720_UNII-3	4.48	5725	5729.48	---	---
	Ant1	5745	22.24	5735.28	5757.52	---	---
	Ant2	5745	22.28	5735.28	5757.56	---	---
	Ant3	5745	23.20	5735.28	5758.48	---	---
	Ant4	5745	22.28	5734.88	5757.16	---	---
	Ant1	5785	19.08	5775.44	5794.52	---	---
	Ant2	5785	19.04	5775.48	5794.52	---	---
	Ant3	5785	19.00	5775.52	5794.52	---	---
	Ant4	5785	19.00	5775.52	5794.52	---	---
	Ant1	5825	24.68	5812.68	5837.36	---	---
	Ant2	5825	25.52	5811.56	5837.08	---	---
	Ant3	5825	25.44	5812.04	5837.48	---	---
	Ant4	5825	23.96	5811.20	5835.16	---	---
11AC40MIMO	Ant1	5190	39.44	5170.32	5209.76	---	---
	Ant2	5190	38.40	5170.88	5209.28	---	---
	Ant3	5190	39.68	5170.64	5210.32	---	---
	Ant4	5190	44.08	5170.32	5214.40	---	---
	Ant1	5230	38.64	5210.72	5249.36	---	---
	Ant2	5230	38.32	5210.88	5249.20	---	---
	Ant3	5230	38.32	5210.88	5249.20	---	---
	Ant4	5230	38.40	5210.80	5249.20	---	---
	Ant1	5270	38.64	5250.72	5289.36	---	---
	Ant2	5270	38.24	5250.88	5289.12	---	---
	Ant3	5270	38.40	5250.80	5289.20	---	---
	Ant4	5270	38.32	5250.88	5289.20	---	---
	Ant1	5310	43.52	5288.56	5332.08	---	---
	Ant2	5310	38.56	5290.64	5329.20	---	---
	Ant3	5310	41.92	5288.96	5330.88	---	---
	Ant4	5310	42.40	5290.08	5332.48	---	---
	Ant1	5510	44.48	5488.48	5532.96	---	---
	Ant2	5510	40.08	5490.72	5530.80	---	---
	Ant3	5510	41.76	5490.56	5532.32	---	---
	Ant4	5510	39.44	5490.48	5529.92	---	---
	Ant1	5550	38.72	5530.72	5569.44	---	---
	Ant2	5550	38.24	5530.88	5569.12	---	---
	Ant3	5550	38.32	5530.80	5569.12	---	---
	Ant4	5550	38.32	5530.88	5569.20	---	---

	Ant1	5670	42.08	5650.24	5692.32	---	---
	Ant2	5670	38.56	5650.64	5689.20	---	---
	Ant3	5670	38.80	5650.64	5689.44	---	---
	Ant4	5670	42.80	5647.04	5689.84	---	---
	Ant1	5710	38.64	5690.64	5729.28	---	---
	Ant2	5710	38.24	5690.88	5729.12	---	---
	Ant3	5710	38.40	5690.80	5729.20	---	---
	Ant4	5710	38.40	5690.80	5729.20	---	---
	Ant1	5710_UNII-2C	34.36	5690.64	5725	---	---
	Ant2	5710_UNII-2C	34.12	5690.88	5725	---	---
	Ant3	5710_UNII-2C	34.2	5690.80	5725	---	---
	Ant4	5710_UNII-2C	34.2	5690.80	5725	---	---
	Ant1	5710_UNII-3	4.28	5725	5729.28	---	---
	Ant2	5710_UNII-3	4.12	5725	5729.12	---	---
	Ant3	5710_UNII-3	4.2	5725	5729.20	---	---
	Ant4	5710_UNII-3	4.2	5725	5729.20	---	---
	Ant1	5755	44.48	5735.24	5779.72	---	---
	Ant2	5755	38.48	5735.80	5774.28	---	---
	Ant3	5755	38.56	5735.64	5774.20	---	---
	Ant4	5755	39.04	5735.32	5774.36	---	---
	Ant1	5795	41.20	5773.16	5814.36	---	---
	Ant2	5795	38.48	5775.72	5814.20	---	---
	Ant3	5795	38.48	5775.64	5814.12	---	---
	Ant4	5795	38.64	5775.64	5814.28	---	---
11AC80MIMO	Ant1	5210	79.68	5170.48	5250.16	---	---
	Ant2	5210	81.44	5170.48	5251.92	---	---
	Ant3	5210	79.04	5170.48	5249.52	---	---
	Ant4	5210	86.08	5168.72	5254.80	---	---
	Ant1	5290	86.72	5245.04	5331.76	---	---
	Ant2	5290	84.80	5246.00	5330.80	---	---
	Ant3	5290	79.20	5250.48	5329.68	---	---
	Ant4	5290	81.92	5248.24	5330.16	---	---
	Ant1	5530	90.08	5490.32	5580.40	---	---
	Ant2	5530	92.96	5490.48	5583.44	---	---
	Ant3	5530	80.64	5490.48	5571.12	---	---
	Ant4	5530	81.44	5490.64	5572.08	---	---
	Ant1	5610	79.20	5570.48	5649.68	---	---
	Ant2	5610	79.04	5570.48	5649.52	---	---
	Ant3	5610	79.04	5570.48	5649.52	---	---
	Ant4	5610	79.04	5570.48	5649.52	---	---
	Ant1	5690	79.36	5650.32	5729.68	---	---
	Ant2	5690	79.04	5650.48	5729.52	---	---
	Ant3	5690	79.04	5650.48	5729.52	---	---
	Ant4	5690	78.88	5650.64	5729.52	---	---
	Ant1	5690_UNII-2C	74.68	5650.32	5725	---	---
	Ant2	5690_UNII-2C	74.52	5650.48	5725	---	---
	Ant3	5690_UNII-2C	74.52	5650.48	5725	---	---
	Ant4	5690_UNII-2C	74.36	5650.64	5725	---	---
	Ant1	5690_UNII-3	4.68	5725	5729.68	---	---
	Ant2	5690_UNII-3	4.52	5725	5729.52	---	---
	Ant3	5690_UNII-3	4.52	5725	5729.52	---	---
	Ant4	5690_UNII-3	4.52	5725	5729.52	---	---
	Ant1	5775	79.52	5735.48	5815.00	---	---
	Ant2	5775	86.56	5735.48	5822.04	---	---
	Ant3	5775	79.04	5735.48	5814.52	---	---
	Ant4	5775	82.08	5735.48	5817.56	---	---

11AC160MIMO	Ant1	5250	168.96	5166.16	5335.12	---	---
	Ant2	5250	166.40	5168.40	5334.80	---	---
	Ant3	5250	168.32	5167.12	5335.44	---	---
	Ant4	5250	166.72	5168.40	5335.12	---	---
	Ant1	5250 UNII-1	83.84	5166.16	5250	---	---
	Ant2	5250 UNII-1	81.6	5168.40	5250	---	---
	Ant3	5250 UNII-1	82.88	5167.12	5250	---	---
	Ant4	5250 UNII-1	81.6	5168.40	5250	---	---
	Ant1	5250 UNII-2A	85.12	5250	5335.12	---	---
	Ant2	5250 UNII-2A	84.8	5250	5334.80	---	---
	Ant3	5250 UNII-2A	85.44	5250	5335.44	---	---
	Ant4	5250 UNII-2A	85.12	5250	5335.12	---	---
	Ant1	5570	166.08	5489.04	5655.12	---	---
	Ant2	5570	165.44	5489.04	5654.48	---	---
	Ant3	5570	166.40	5488.40	5654.80	---	---
	Ant4	5570	165.12	5489.04	5654.16	---	---
11AX20MIMO	Ant1	5180	20.96	5169.32	5190.28	---	---
	Ant2	5180	24.92	5168.16	5193.08	---	---
	Ant3	5180	21.56	5169.96	5191.52	---	---
	Ant4	5180	22.84	5167.96	5190.80	---	---
	Ant1	5200	20.04	5190.00	5210.04	---	---
	Ant2	5200	28.68	5184.40	5213.08	---	---
	Ant3	5200	21.28	5188.72	5210.00	---	---
	Ant4	5200	20.24	5189.76	5210.00	---	---
	Ant1	5240	19.92	5230.04	5249.96	---	---
	Ant2	5240	19.92	5230.04	5249.96	---	---
	Ant3	5240	19.92	5230.04	5249.96	---	---
	Ant4	5240	19.92	5230.04	5249.96	---	---
	Ant1	5260	19.96	5250.00	5269.96	---	---
	Ant2	5260	19.88	5250.08	5269.96	---	---
	Ant3	5260	19.92	5250.04	5269.96	---	---
	Ant4	5260	19.92	5250.04	5269.96	---	---
	Ant1	5280	19.92	5270.04	5289.96	---	---
	Ant2	5280	19.92	5270.04	5289.96	---	---
	Ant3	5280	19.92	5270.04	5289.96	---	---
	Ant4	5280	19.96	5270.00	5289.96	---	---
	Ant1	5320	21.68	5310.00	5331.68	---	---
	Ant2	5320	20.28	5309.72	5330.00	---	---
	Ant3	5320	20.72	5309.44	5330.16	---	---
	Ant4	5320	25.44	5309.20	5334.64	---	---
	Ant1	5500	23.52	5488.68	5512.20	---	---
	Ant2	5500	24.40	5487.16	5511.56	---	---
	Ant3	5500	20.28	5489.76	5510.04	---	---
	Ant4	5500	21.24	5490.00	5511.24	---	---
	Ant1	5580	19.92	5570.04	5589.96	---	---
	Ant2	5580	19.96	5570.00	5589.96	---	---
	Ant3	5580	19.92	5570.04	5589.96	---	---
	Ant4	5580	19.92	5570.04	5589.96	---	---
	Ant1	5700	24.12	5686.12	5710.24	---	---
	Ant2	5700	21.44	5688.72	5710.16	---	---
	Ant3	5700	25.52	5685.04	5710.56	---	---
	Ant4	5700	25.00	5686.80	5711.80	---	---
	Ant1	5720	19.04	5710.48	5729.52	---	---
	Ant2	5720	19.04	5710.48	5729.52	---	---
	Ant3	5720	19.08	5710.44	5729.52	---	---
	Ant4	5720	19.00	5710.48	5729.48	---	---
	Ant1	5720 UNII-2C	14.52	5710.48	5725	---	---
	Ant2	5720 UNII-2C	14.52	5710.48	5725	---	---
	Ant3	5720 UNII-2C	14.56	5710.44	5725	---	---
	Ant4	5720 UNII-2C	14.52	5710.48	5725	---	---

	Ant1	5720 UNII-3	4.52	5725	5729.52	---	---
	Ant2	5720 UNII-3	4.52	5725	5729.52	---	---
	Ant3	5720 UNII-3	4.52	5725	5729.52	---	---
	Ant4	5720 UNII-3	4.48	5725	5729.48	---	---
	Ant1	5745	21.36	5734.92	5756.28	---	---
	Ant2	5745	21.00	5734.96	5755.96	---	---
	Ant3	5745	25.12	5734.16	5759.28	---	---
	Ant4	5745	22.24	5734.92	5757.16	---	---
	Ant1	5785	19.96	5775.04	5795.00	---	---
	Ant2	5785	19.96	5775.00	5794.96	---	---
	Ant3	5785	19.88	5775.04	5794.92	---	---
	Ant4	5785	19.96	5775.00	5794.96	---	---
	Ant1	5825	24.84	5811.56	5836.40	---	---
	Ant2	5825	23.64	5813.36	5837.00	---	---
	Ant3	5825	22.04	5813.04	5835.08	---	---
	Ant4	5825	22.68	5813.12	5835.80	---	---
	Ant1	5190	39.60	5170.16	5209.76	---	---
	Ant2	5190	41.20	5170.08	5211.28	---	---
	Ant3	5190	39.68	5170.24	5209.92	---	---
	Ant4	5190	40.24	5169.60	5209.84	---	---
	Ant1	5230	39.60	5210.16	5249.76	---	---
	Ant2	5230	39.60	5210.16	5249.76	---	---
	Ant3	5230	39.60	5210.24	5249.84	---	---
	Ant4	5230	39.60	5210.24	5249.84	---	---
	Ant1	5270	39.52	5250.32	5289.84	---	---
	Ant2	5270	39.52	5250.24	5289.76	---	---
	Ant3	5270	39.68	5250.16	5289.84	---	---
	Ant4	5270	39.44	5250.32	5289.76	---	---
	Ant1	5310	40.96	5288.96	5329.92	---	---
	Ant2	5310	39.60	5290.16	5329.76	---	---
	Ant3	5310	39.68	5290.16	5329.84	---	---
	Ant4	5310	39.84	5290.08	5329.92	---	---
	Ant1	5510	39.76	5490.24	5530.00	---	---
	Ant2	5510	39.84	5490.16	5530.00	---	---
	Ant3	5510	42.08	5490.24	5532.32	---	---
	Ant4	5510	39.60	5490.24	5529.84	---	---
	Ant1	5550	39.52	5530.24	5569.76	---	---
	Ant2	5550	39.68	5530.16	5569.84	---	---
	Ant3	5550	39.52	5530.24	5569.76	---	---
	Ant4	5550	39.60	5530.16	5569.76	---	---
	Ant1	5670	41.36	5648.48	5689.84	---	---
	Ant2	5670	41.12	5649.36	5690.48	---	---
	Ant3	5670	40.08	5650.16	5690.24	---	---
	Ant4	5670	39.52	5650.24	5689.76	---	---
	Ant1	5710	38.72	5690.64	5729.36	---	---
	Ant2	5710	38.24	5690.88	5729.12	---	---
	Ant3	5710	38.40	5690.72	5729.12	---	---
	Ant4	5710	38.32	5690.80	5729.12	---	---
	Ant1	5710 UNII-2C	34.36	5690.64	5725	---	---
	Ant2	5710 UNII-2C	34.12	5690.88	5725	---	---
	Ant3	5710 UNII-2C	34.28	5690.72	5725	---	---
	Ant4	5710 UNII-2C	34.2	5690.80	5725	---	---
	Ant1	5710 UNII-3	4.36	5725	5729.36	---	---
	Ant2	5710 UNII-3	4.12	5725	5729.12	---	---
	Ant3	5710 UNII-3	4.12	5725	5729.12	---	---
	Ant4	5710 UNII-3	4.12	5725	5729.12	---	---
	Ant1	5755	39.68	5735.16	5774.84	---	---
	Ant2	5755	39.84	5735.00	5774.84	---	---
	Ant3	5755	39.52	5735.24	5774.76	---	---
	Ant4	5755	39.68	5735.16	5774.84	---	---

	Ant1	5795	39.68	5775.08	5814.76	---	---
	Ant2	5795	39.84	5775.00	5814.84	---	---
	Ant3	5795	40.64	5774.20	5814.84	---	---
	Ant4	5795	39.76	5775.08	5814.84	---	---
11AX80MIMO	Ant1	5210	80.32	5170.00	5250.32	---	---
	Ant2	5210	80.32	5169.84	5250.16	---	---
	Ant3	5210	80.32	5169.84	5250.16	---	---
	Ant4	5210	80.00	5170.00	5250.00	---	---
	Ant1	5290	80.32	5249.84	5330.16	---	---
	Ant2	5290	85.76	5244.40	5330.16	---	---
	Ant3	5290	80.16	5250.00	5330.16	---	---
	Ant4	5290	80.16	5250.00	5330.16	---	---
	Ant1	5530	85.92	5490.00	5575.92	---	---
	Ant2	5530	80.16	5490.00	5570.16	---	---
	Ant3	5530	80.16	5490.00	5570.16	---	---
	Ant4	5530	83.36	5490.00	5573.36	---	---
	Ant1	5610	80.16	5570.00	5650.16	---	---
	Ant2	5610	80.00	5570.00	5650.00	---	---
	Ant3	5610	80.16	5570.00	5650.16	---	---
	Ant4	5610	80.16	5570.00	5650.16	---	---
	Ant1	5690	79.20	5650.32	5729.52	---	---
	Ant2	5690	79.04	5650.48	5729.52	---	---
	Ant3	5690	79.04	5650.48	5729.52	---	---
	Ant4	5690	78.88	5650.48	5729.36	---	---
	Ant1	5690_UNII-2C	74.68	5650.32	5725	---	---
	Ant2	5690_UNII-2C	74.52	5650.48	5725	---	---
	Ant3	5690_UNII-2C	74.52	5650.48	5725	---	---
	Ant4	5690_UNII-2C	74.52	5650.48	5725	---	---
	Ant1	5690_UNII-3	4.52	5725	5729.52	---	---
	Ant2	5690_UNII-3	4.52	5725	5729.52	---	---
	Ant3	5690_UNII-3	4.52	5725	5729.52	---	---
	Ant4	5690_UNII-3	4.36	5725	5729.36	---	---
	Ant1	5775	80.16	5735.00	5815.16	---	---
	Ant2	5775	81.28	5735.00	5816.28	---	---
	Ant3	5775	81.12	5735.00	5816.12	---	---
	Ant4	5775	80.16	5735.00	5815.16	---	---
11AX160MIMO	Ant1	5250	162.88	5168.72	5331.60	---	---
	Ant2	5250	162.56	5168.72	5331.28	---	---
	Ant3	5250	162.88	5168.72	5331.60	---	---
	Ant4	5250	164.80	5166.80	5331.60	---	---
	Ant1	5250_UNII-1	81.28	5168.72	5250	---	---
	Ant2	5250_UNII-1	81.28	5168.72	5250	---	---
	Ant3	5250_UNII-1	81.28	5168.72	5250	---	---
	Ant4	5250_UNII-1	83.2	5166.80	5250	---	---
	Ant1	5250_UNII-2A	81.6	5250	5331.60	---	---
	Ant2	5250_UNII-2A	81.28	5250	5331.28	---	---
	Ant3	5250_UNII-2A	81.6	5250	5331.60	---	---
	Ant4	5250_UNII-2A	81.6	5250	5331.60	---	---
	Ant1	5570	162.88	5488.72	5651.60	---	---
	Ant2	5570	162.88	5488.72	5651.60	---	---
	Ant3	5570	162.56	5488.72	5651.28	---	---
	Ant4	5570	163.52	5488.72	5652.24	---	---
11BE20MIMO	Ant1	5180	20.72	5169.92	5190.64	---	---
	Ant2	5180	20.00	5170.00	5190.00	---	---
	Ant3	5180	20.00	5169.96	5189.96	---	---
	Ant4	5180	22.44	5170.04	5192.48	---	---
	Ant1	5200	19.88	5190.04	5209.92	---	---
	Ant2	5200	20.04	5190.00	5210.04	---	---
	Ant3	5200	20.08	5189.88	5209.96	---	---
	Ant4	5200	20.80	5189.16	5209.96	---	---

	Ant1	5240	19.92	5230.08	5250.00	---	---
	Ant2	5240	19.88	5230.08	5249.96	---	---
	Ant3	5240	19.92	5230.04	5249.96	---	---
	Ant4	5240	19.96	5230.04	5250.00	---	---
	Ant1	5260	19.88	5250.12	5270.00	---	---
	Ant2	5260	19.88	5250.08	5269.96	---	---
	Ant3	5260	19.80	5250.12	5269.92	---	---
	Ant4	5260	19.88	5250.08	5269.96	---	---
	Ant1	5280	19.84	5270.08	5289.92	---	---
	Ant2	5280	19.80	5270.12	5289.92	---	---
	Ant3	5280	19.88	5270.08	5289.96	---	---
	Ant4	5280	19.80	5270.12	5289.92	---	---
	Ant1	5320	19.92	5310.04	5329.96	---	---
	Ant2	5320	19.92	5310.04	5329.96	---	---
	Ant3	5320	19.96	5310.04	5330.00	---	---
	Ant4	5320	19.84	5310.12	5329.96	---	---
	Ant1	5500	20.00	5489.92	5509.92	---	---
	Ant2	5500	19.80	5490.12	5509.92	---	---
	Ant3	5500	19.96	5490.04	5510.00	---	---
	Ant4	5500	19.88	5490.04	5509.92	---	---
	Ant1	5580	19.88	5570.08	5589.96	---	---
	Ant2	5580	19.80	5570.12	5589.92	---	---
	Ant3	5580	19.92	5570.00	5589.92	---	---
	Ant4	5580	19.84	5570.04	5589.88	---	---
	Ant1	5700	19.84	5690.12	5709.96	---	---
	Ant2	5700	20.16	5689.84	5710.00	---	---
	Ant3	5700	19.88	5690.08	5709.96	---	---
	Ant4	5700	19.84	5690.08	5709.92	---	---
	Ant1	5720	19.88	5710.04	5729.92	---	---
	Ant2	5720	19.88	5710.04	5729.92	---	---
	Ant3	5720	19.84	5710.08	5729.92	---	---
	Ant4	5720	19.92	5710.00	5729.92	---	---
	Ant1	5720_UNII-2C	14.96	5710.04	5725	---	---
	Ant2	5720_UNII-2C	14.96	5710.04	5725	---	---
	Ant3	5720_UNII-2C	14.92	5710.08	5725	---	---
	Ant4	5720_UNII-2C	15	5710.00	5725	---	---
	Ant1	5720_UNII-3	4.92	5725	5729.92	---	---
	Ant2	5720_UNII-3	4.92	5725	5729.92	---	---
	Ant3	5720_UNII-3	4.92	5725	5729.92	---	---
	Ant4	5720_UNII-3	4.92	5725	5729.92	---	---
	Ant1	5745	19.84	5735.12	5754.96	---	---
	Ant2	5745	19.92	5735.04	5754.96	---	---
	Ant3	5745	20.08	5735.00	5755.08	---	---
	Ant4	5745	20.88	5735.04	5755.92	---	---
	Ant1	5785	19.80	5775.12	5794.92	---	---
	Ant2	5785	19.84	5775.04	5794.88	---	---
	Ant3	5785	19.84	5775.08	5794.92	---	---
	Ant4	5785	19.88	5775.12	5795.00	---	---
	Ant1	5825	19.96	5815.00	5834.96	---	---
	Ant2	5825	25.52	5810.00	5835.52	---	---
	Ant3	5825	19.96	5815.08	5835.04	---	---
	Ant4	5825	20.00	5815.00	5835.00	---	---
11BE40MIMO	Ant1	5190	39.68	5170.16	5209.84	---	---
	Ant2	5190	39.44	5170.32	5209.76	---	---
	Ant3	5190	39.52	5170.24	5209.76	---	---
	Ant4	5190	39.60	5170.16	5209.76	---	---
	Ant1	5230	39.52	5210.32	5249.84	---	---
	Ant2	5230	39.60	5210.16	5249.76	---	---
	Ant3	5230	39.52	5210.32	5249.84	---	---
	Ant4	5230	39.60	5210.16	5249.76	---	---

	Ant1	5270	39.44	5250.32	5289.76	---	---
	Ant2	5270	39.60	5250.24	5289.84	---	---
	Ant3	5270	39.36	5250.40	5289.76	---	---
	Ant4	5270	39.52	5250.24	5289.76	---	---
	Ant1	5310	39.68	5290.16	5329.84	---	---
	Ant2	5310	39.76	5290.16	5329.92	---	---
	Ant3	5310	39.68	5290.24	5329.92	---	---
	Ant4	5310	39.68	5290.08	5329.76	---	---
	Ant1	5510	39.84	5490.08	5529.92	---	---
	Ant2	5510	39.76	5490.16	5529.92	---	---
	Ant3	5510	39.68	5490.16	5529.84	---	---
	Ant4	5510	39.52	5490.24	5529.76	---	---
	Ant1	5550	39.52	5530.32	5569.84	---	---
	Ant2	5550	39.52	5530.32	5569.84	---	---
	Ant3	5550	39.44	5530.32	5569.76	---	---
	Ant4	5550	39.44	5530.32	5569.76	---	---
	Ant1	5670	39.68	5650.16	5689.84	---	---
	Ant2	5670	39.92	5650.08	5690.00	---	---
	Ant3	5670	39.52	5650.32	5689.84	---	---
	Ant4	5670	39.44	5650.32	5689.76	---	---
	Ant1	5710	39.52	5690.24	5729.76	---	---
	Ant2	5710	39.36	5690.40	5729.76	---	---
	Ant3	5710	39.52	5690.24	5729.76	---	---
	Ant4	5710	39.52	5690.24	5729.76	---	---
	Ant1	5710_UNII-2C	34.76	5690.24	5725	---	---
	Ant2	5710_UNII-2C	34.6	5690.40	5725	---	---
	Ant3	5710_UNII-2C	34.76	5690.24	5725	---	---
	Ant4	5710_UNII-2C	34.76	5690.24	5725	---	---
	Ant1	5710_UNII-3	4.76	5725	5729.76	---	---
	Ant2	5710_UNII-3	4.76	5725	5729.76	---	---
	Ant3	5710_UNII-3	4.76	5725	5729.76	---	---
	Ant4	5710_UNII-3	4.76	5725	5729.76	---	---
	Ant1	5755	39.60	5735.24	5774.84	---	---
	Ant2	5755	39.76	5735.16	5774.92	---	---
	Ant3	5755	39.60	5735.24	5774.84	---	---
	Ant4	5755	39.36	5735.32	5774.68	---	---
	Ant1	5795	39.60	5775.24	5814.84	---	---
	Ant2	5795	39.68	5775.16	5814.84	---	---
	Ant3	5795	39.52	5775.32	5814.84	---	---
	Ant4	5795	39.28	5775.40	5814.68	---	---
11BE80MIMO	Ant1	5210	81.12	5169.84	5250.96	---	---
	Ant2	5210	81.44	5169.84	5251.28	---	---
	Ant3	5210	81.92	5169.84	5251.76	---	---
	Ant4	5210	80.96	5169.84	5250.80	---	---
	Ant1	5290	80.32	5249.84	5330.16	---	---
	Ant2	5290	81.12	5249.84	5330.96	---	---
	Ant3	5290	80.48	5250.00	5330.48	---	---
	Ant4	5290	81.12	5249.84	5330.96	---	---
	Ant1	5530	80.96	5490.00	5570.96	---	---
	Ant2	5530	81.12	5490.00	5571.12	---	---
	Ant3	5530	81.60	5490.00	5571.60	---	---
	Ant4	5530	81.28	5490.00	5571.28	---	---
	Ant1	5610	79.84	5570.16	5650.00	---	---
	Ant2	5610	79.84	5570.16	5650.00	---	---
	Ant3	5610	80.16	5570.00	5650.16	---	---
	Ant4	5610	80.16	5570.00	5650.16	---	---
	Ant1	5690	80.00	5650.00	5730.00	---	---
	Ant2	5690	80.16	5650.00	5730.16	---	---
	Ant3	5690	80.00	5650.00	5730.00	---	---
	Ant4	5690	80.00	5650.00	5730.00	---	---

	Ant1	5690_UNII-2C	75	5650.00	5725	---	---
	Ant2	5690_UNII-2C	75	5650.00	5725	---	---
	Ant3	5690_UNII-2C	75	5650.00	5725	---	---
	Ant4	5690_UNII-2C	75	5650.00	5725	---	---
	Ant1	5690_UNII-3	5	5725	5730.00	---	---
	Ant2	5690_UNII-3	5.16	5725	5730.16	---	---
	Ant3	5690_UNII-3	5	5725	5730.00	---	---
	Ant4	5690_UNII-3	5	5725	5730.00	---	---
	Ant1	5775	81.76	5734.84	5816.60	---	---
	Ant2	5775	80.48	5735.00	5815.48	---	---
	Ant3	5775	80.32	5735.00	5815.32	---	---
	Ant4	5775	80.96	5735.00	5815.96	---	---
	Ant1	5250	164.16	5167.76	5331.92	---	---
	Ant2	5250	165.44	5166.48	5331.92	---	---
	Ant3	5250	163.20	5168.72	5331.92	---	---
	Ant4	5250	168.32	5167.76	5336.08	---	---
	Ant1	5250_UNII-1	82.24	5167.76	5250	---	---
	Ant2	5250_UNII-1	83.52	5166.48	5250	---	---
	Ant3	5250_UNII-1	81.28	5168.72	5250	---	---
	Ant4	5250_UNII-1	82.24	5167.76	5250	---	---
	Ant1	5250_UNII-2A	81.92	5250	5331.92	---	---
	Ant2	5250_UNII-2A	81.92	5250	5331.92	---	---
	Ant3	5250_UNII-2A	81.92	5250	5331.92	---	---
	Ant4	5250_UNII-2A	86.08	5250	5336.08	---	---
11BE160MIMO	Ant1	5570	163.20	5488.40	5651.60	---	---
	Ant2	5570	164.48	5487.44	5651.92	---	---
	Ant3	5570	162.56	5488.72	5651.28	---	---
	Ant4	5570	162.88	5488.72	5651.60	---	---

4.5. Test graphs

