TESTING
NVLAP LAB CODE 600118-0

FCC PART 15
TEST REPORT
No.I23Z60833-IOT04

for

Wingtech Group (Hong Kong) Limited

REVVLTAB5G

TMRV5GTB

With

FCC ID: 2APXW-TMRV5GTB

Hardware Version: V1.1

Software Version: REVVLTAB5G_0.01.01

Issued Date: 2023-06-15

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I23Z60833-IOT04	Rev.0	1st edition	2023-06-15

CONTENTS

1. TEST LATORATORY

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (ISED#: 24849). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Conducted testing Location: CTTL(Huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China100191

Radiated testing Location: CTTL (huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, 100191, P. R. China

1.3. Testing Environment

Normal Temperature: 15-35℃

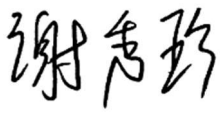
Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2023-05-04

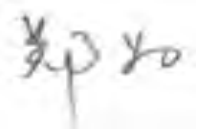
Testing End Date: 2023-06-14

1.5. Signature



Xie Xiuzhen

(Prepared this test report)



Zheng Wei

(Reviewed this test report)

Pang Shuai

(Approved this test report)

2. CLIENT INFORMATION

2.1 Applicant Information

Company Name:	Wingtech Group (Hong Kong) Limited
Address:	Flat/RM 1903 19/F, Podium Plaza, 5 Hanoi Road, Tsim Sha Tsui, KL, HK
City:	Hong Kong
Postal Code:	/
Country:	China
Telephone:	+86-21-53529900
Fax:	/

2.2 Manufacturer Information

Company Name:	Wingtech Group (Hong Kong) Limited
Address:	Flat/RM 1903 19/F, Podium Plaza, 5 Hanoi Road, Tsim Sha Tsui, KL, HK
City:	Hong Kong
Postal Code:	/
Country:	China
Telephone:	+86-21-53529900
Fax:	/

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARYEQUIPMENT(AE)

3.1. About EUT

Description	REVVLTAB5G
Model name	TMRV5GTB
FCC ID	2APXW-TMRV5GTB
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Voltage	3.85V

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
UT15a	864182060001568/ 864182060001576	V1.1	REVVLTAB5G_0.01.01
UT07a	864182060000404/ 864182060000412	V1.1	REVVLTAB5G_0.01.01

*EUT ID: is used to identify the test sample in the lab internally.
UT07a is used for Conduction test, UT15a is used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Remark
AE1	Battery	/
AE2	Charger	Provided by client for testing
AE3	USB Cable	/

AE1

Model	SGA35
Manufacturer	SCUD
Capacity	Typ7040
Nominal Voltage	

AE2

Model	/
Manufacturer	/
Length of cable	/

AE3

Model	711300002001

Manufacturer	washin
Length of cable	/

*AE ID: is used to identify the test sample in the lab internally

3.4. General Description

The Equipment under Test (EUT) is a model of REVVLTAB5G with integrated antenna and inbuilt battery.

It has Bluetooth (EDR)function.

It consists of normal options: travel charger, USB cable.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

3.5. Interpretation of the Test Environment

For the test methods, the test environment uncertainty figures correspond to an expansion factor k=2.

Measurement Uncertainty

Parameter	Uncertainty
temperature	0.48°C
humidity	2 %
DC voltages	0.003V

4. REFERENCE DOCUMENTS

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

FCC Part15	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	2021
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	Sub-clause of IC	Verdict
Maximum Output Power	15.407	/	**P**
Peak Power Spectral Density	15.407	/	**P**
Occupied 26dB Bandwidth	15.403	/	**P**
Band edge compliance (Radiated)	15.209	/	**P**
Transmitter spurious emissions (Radiated)	15.407	/	**P**
AC Powerline Conducted Emission (150kHz- 30MHz)	15.407	/	**P**
Frequency Stability	15.407	/	**P**
99% Occupied bandwidth	/	/	**P**
Transmit Power Control	15.407	/	**NA**

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

6.2. Statements

CTTL has evaluated the test cases requested by the client/manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deals with the WLAN function among the features described in section 3.

6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	26℃
Voltage	3.85V
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2024-06-15
2	Test Receiver	ESCI	100344	R&S	1 year	2024-02-21
3	LISN	ENV216	101200	R&S	1 year	2023-06-29
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESW44	103144	R&S	1 year	2023-10-25
2	EMI Antenna	VULB 9163	01223	SCHWARZBECK	1 year	2023-07-25
3	EMI Antenna	3115	00167250	ETS-Lindgren	1 year	2023-06-20
4	EMI Antenna	3116	2661	ETS-Lindgren	1 year	2024-01-30

8. Measurement Uncertainty

8.1 Transmitter Output Power

Measurement Uncertainty: 0.387dB,k=1.96

8.2 Peak Power Spectral Density

Measurement Uncertainty: 0.705dB,k=1.96

8.3 Occupied Channel Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

8.4 Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

8.5 Spurious Emissions

Conducted (k=1.96)

Frequency Range	Uncertainty(dB)
30MHz ≤ f ≤ 2GHz	1.22
2GHz ≤ f ≤3.6GHz	1.22
3.6GHz ≤ f ≤8GHz	1.22
8GHz ≤ f ≤12.75GHz	1.51
12.75GHz ≤ f ≤26GHz	1.51
26GHz ≤ f ≤40GHz	1.59

Radiated (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	/
30MHz ≤ f ≤ 1GHz	5.15
1GHz ≤ f ≤18GHz	5.54
18GHz ≤ f ≤40GHz	5.26

8.6 AC Power-line Conducted Emission

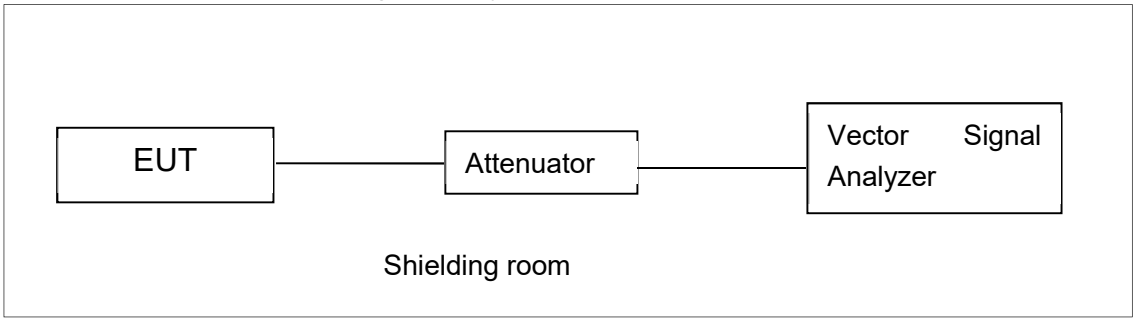
Measurement Uncertainty : 3.08,k=2

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

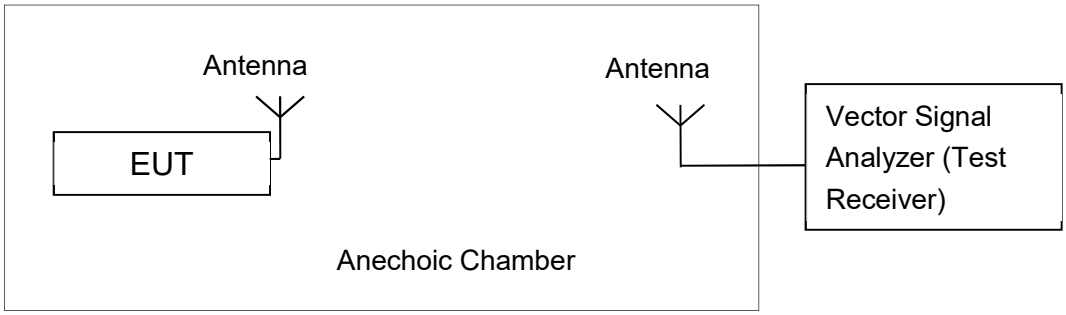
A.1.1. Conducted Measurements

1). Connect the EUT to the test system correctly.
2). Set the EUT to the required work mode.
3). Set the EUT to the required channel.
4). Set the spectrum analyzer to start measurement.
5). Record the values. Vector Signal Analyzer



A.1.2. Radiated Emission Measurements

In the case of radiated emission, the used settings are as follows,
Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;
Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 10Hz;



The measurement is made according to KDB 789033
The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

A.2. Maximum output Power

Measurement Limit and Method:

Standard	Frequency (MHz)	Limit (dBm)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	24dBm
	5250MHz~5350MHz	24dBm or 11+10logB
	5470MHz~5725MHz	24dBm or 11+10logB

Limit use the less value, and B is the 26dB bandwidth.

The measurementmethod SA-2 is made according to KDB 789033

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	18.94	/	/	/	/	/	/	/
	5200MHz	18.88	/	/	/	/	/	/	/
	5240MHz	18.74	/	/	/	/	/	/	/
	5260MHz	18.69	/	/	/	/	/	/	/
	5280MHz	18.77	/	/	/	/	/	/	/
	5320MHz	18.98	/	/	/	/	/	/	/
	5500MHz	18.04	/	/	/	/	/	/	/
	5580MHz	18.86	/	/	/	/	/	/	/
	5700MHz	18.29	/	/	/	/	/	/	/
	5720MHz	18.25	/	/	/	/	/	/	/

The data rate 6Mbps is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT20)	5180MHz	18.93	/	/	/	/	/	/	/
	5200MHz	18.84	/	/	/	/	/	/	/
	5240MHz	18.76	/	/	/	/	/	/	/
	5260MHz	18.68	/	/	/	/	/	/	/
	5280MHz	18.73	/	/	/	/	/	/	/
	5320MHz	18.77	/	/	/	/	/	/	/
	5500MHz	17.94	/	/	/	/	/	/	/
	5580MHz	18.83	/	/	/	/	/	/	/
	5700MHz	18.32	/	/	/	/	/	/	/
	5720MHz	18.26	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-HT20 mode

Mode	Frequency	Test Result (dBm)								
		Data Rate								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
802.11ac (HT20)	5180MHz	17.66	/	/	/	/	/	/	/	/
	5200MHz	17.43	/	/	/	/	/	/	/	/
	5240MHz	17.41	/	/	/	/	/	/	/	/
	5260MHz	17.33	/	/	/	/	/	/	/	/
	5280MHz	17.26	/	/	/	/	/	/	/	/
	5320MHz	17.67	/	/	/	/	/	/	/	/
	5500MHz	17.59	/	/	/	/	/	/	/	/
	5580MHz	17.43	/	/	/	/	/	/	/	/
	5700MHz	17.38	/	/	/	/	/	/	/	/
	5720MHz	17.36	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT40 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT40)	5190MHz	15.89	/	/	/	/	/	/	/
	5230MHz	15.76	/	/	/	/	/	/	/
	5270MHz	15.83	/	/	/	/	/	/	/
	5310MHz	15.82	/	/	/	/	/	/	/
	5510MHz	15.56	/	/	/	/	/	/	/
	5550MHz	15.10	/	/	/	/	/	/	/
	5670MHz	17.32	/	/	/	/	/	/	/
	5710MHz	17.21	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-HT40 mode

Mode	Frequen	Test Result (dBm)

	cy	Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (HT40)	5190MHz	15.74	/	/	/	/	/	/	/	/	/
	5230MHz	15.89	/	/	/	/	/	/	/	/	/
	5270MHz	15.75	/	/	/	/	/	/	/	/	/
	5310MHz	15.56	/	/	/	/	/	/	/	/	/
	5510MHz	17.47	/	/	/	/	/	/	/	/	/
	5550MHz	17.40	/	/	/	/	/	/	/	/	/
	5670MHz	17.22	/	/	/	/	/	/	/	/	/
	5710MHz	17.01	/	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-HT80 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (HT80)	5210MHz	15.01	/	/	/	/	/	/	/	/	/
	5290MHz	14.83	/	/	/	/	/	/	/	/	/
	5530MHz	16.55	/	/	/	/	/	/	/	/	/
	5610MHz	16.38	/	/	/	/	/	/	/	/	/
	5690MHz	16.17	/	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

The duty cycle of all mode are 100%

Conclusion: PASS

A.3. Peak Power Spectral Density (conducted)

Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	11
	5250MHz~5350MHz	11
	5470MHz~5725MHz	11

The output power measurement method Section F is made according to KDB 789033

Measurement Results:

Mode	Frequency	Power Spectral Density (dBm/MHz)	Conclusion
802.11a	5180 MHz	7.08	P
	5200 MHz	7.14	P
	5240 MHz	6.88	P
	5260 MHz	6.96	P
	5280 MHz	6.83	P
	5320 MHz	6.65	P
	5500 MHz	5.52	P
	5580 MHz	6.20	P
	5700 MHz	6.59	P
	5720 MHz	6.52	P
802.11n HT20	5180 MHz	6.67	P
	5200 MHz	6.78	P
	5240 MHz	6.49	P
	5260 MHz	6.55	P
	5280 MHz	6.54	P
	5320 MHz	6.49	P
	5500 MHz	5.30	P
	5580 MHz	5.87	P
	5700 MHz	6.20	P
	5720 MHz	6.15	P
802.11ac HT40	5190 MHz	0.65	P
	5230 MHz	0.57	P
	5270 MHz	0.41	P
	5310 MHz	0.24	P
	5510 MHz	0.39	P
	5550 MHz	0.34	P
	5670 MHz	2.40	P
	5710 MHz	2.33	P
802.11ac HT80	5210MHz	-3.09	P
	5290MHz	-3.37	P
	5530MHz	-1.36	P
	5610MHz	-3.67	P
	5690MHz	-2.05	P

Conclusion: PASS

A.4. Occupied 26dB Bandwidth(conducted)

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.403 (i)	/

The measurement is made according to KDB 789033

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz

Measurement Result:

Mode	Frequency	Occupied 26dB Bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.1	19.88	P
	5200 MHz	Fig.2	19.76	P
	5240 MHz	Fig.3	19.84	P
	5260 MHz	Fig.4	19.92	P
	5280 MHz	Fig.5	20.16	P
	5320 MHz	Fig.6	22.56	P
	5500 MHz	Fig.7	19.68	P
	5580 MHz	Fig.8	19.88	P
	5700 MHz	Fig.9	20.04	P
	5720 MHz	Fig.10	20.00	P
802.11n HT20	5180 MHz	Fig.11	20.16	P
	5200 MHz	Fig.12	20.04	P
	5240 MHz	Fig.13	20.32	P
	5260 MHz	Fig.14	20.20	P
	5280 MHz	Fig.15	20.12	P
	5320 MHz	Fig.16	20.28	P
	5500 MHz	Fig.17	20.04	P
	5580 MHz	Fig.18	20.24	P
	5700 MHz	Fig.19	20.24	P
	5720 MHz	Fig.20	20.16	P
802.11ac HT40	5190 MHz	Fig.21	40.56	P
	5230 MHz	Fig.22	40.80	P
	5270 MHz	Fig.23	40.56	P

	5310 MHz	Fig.24	40.40	P
	5510 MHz	Fig.25	40.32	P
	5550 MHz	Fig.26	40.88	P
	5670 MHz	Fig.27	40.64	P
	5710 MHz	Fig.28	40.48	P

802.11ac HT80	5210MHz	Fig.29	81.28	P
	5290MHz	Fig.30	81.12	P
	5530MHz	Fig.31	81.28	P
	5610MHz	Fig.32	81.44	P
	5690MHz	Fig.33	81.76	P

Conclusion: PASS

Test graphs as below:

Fig.1 Occupied 26dB Bandwidth (802.11a, 5180MHz)

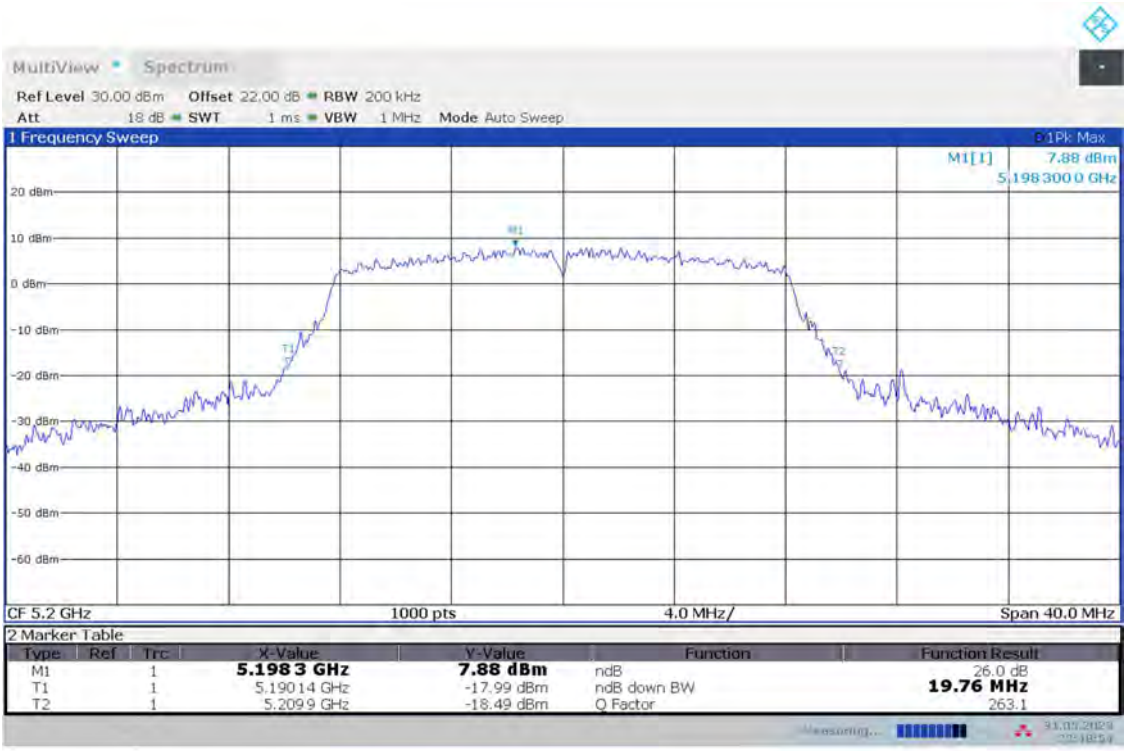


Fig.2 Occupied 26dB Bandwidth (802.11a, 5200MHz)

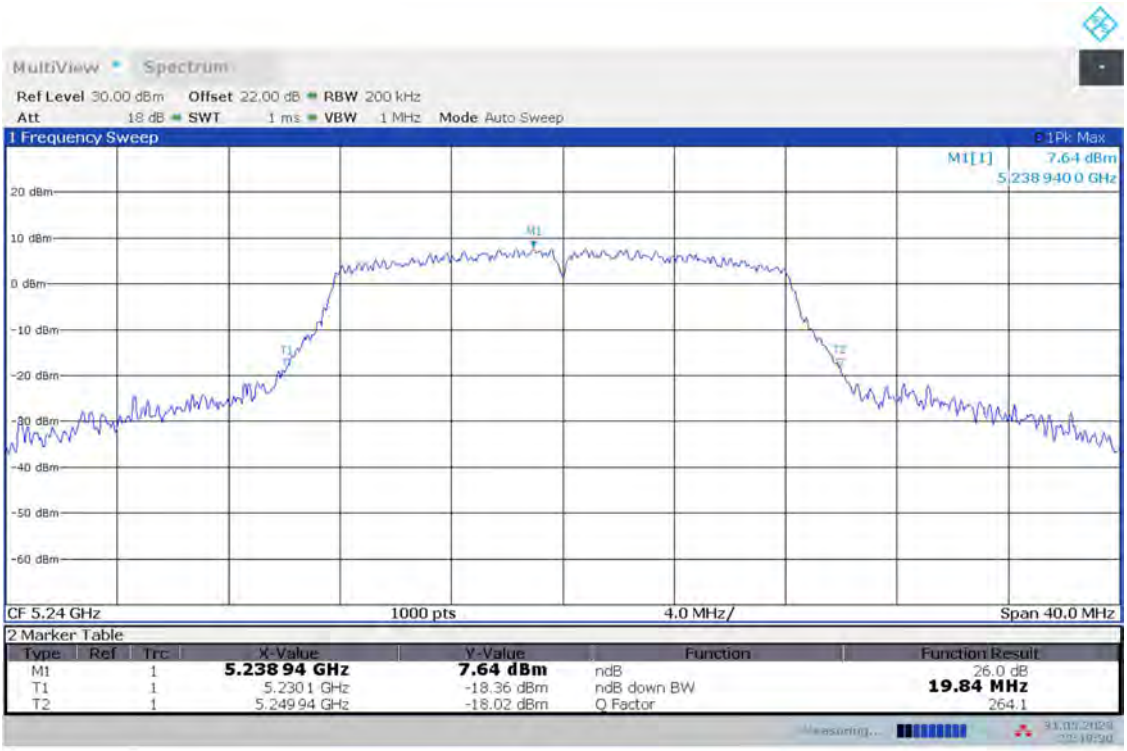


Fig.3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

01:40:58 16.06.2023

Fig.4 Occupied 26dB Bandwidth (802.11a, 5260MHz)

01:41:25 16.06.2023

Fig.5 Occupied 26dB Bandwidth (802.11a, 5280MHz)

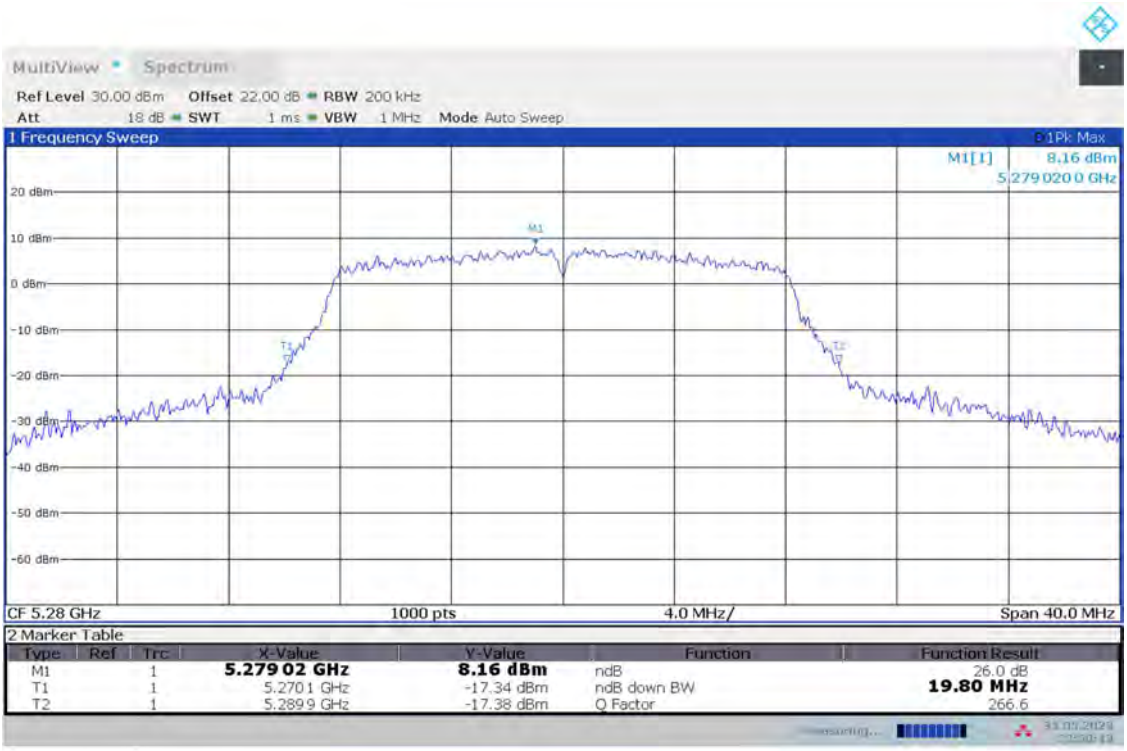


Fig.6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

Fig.7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

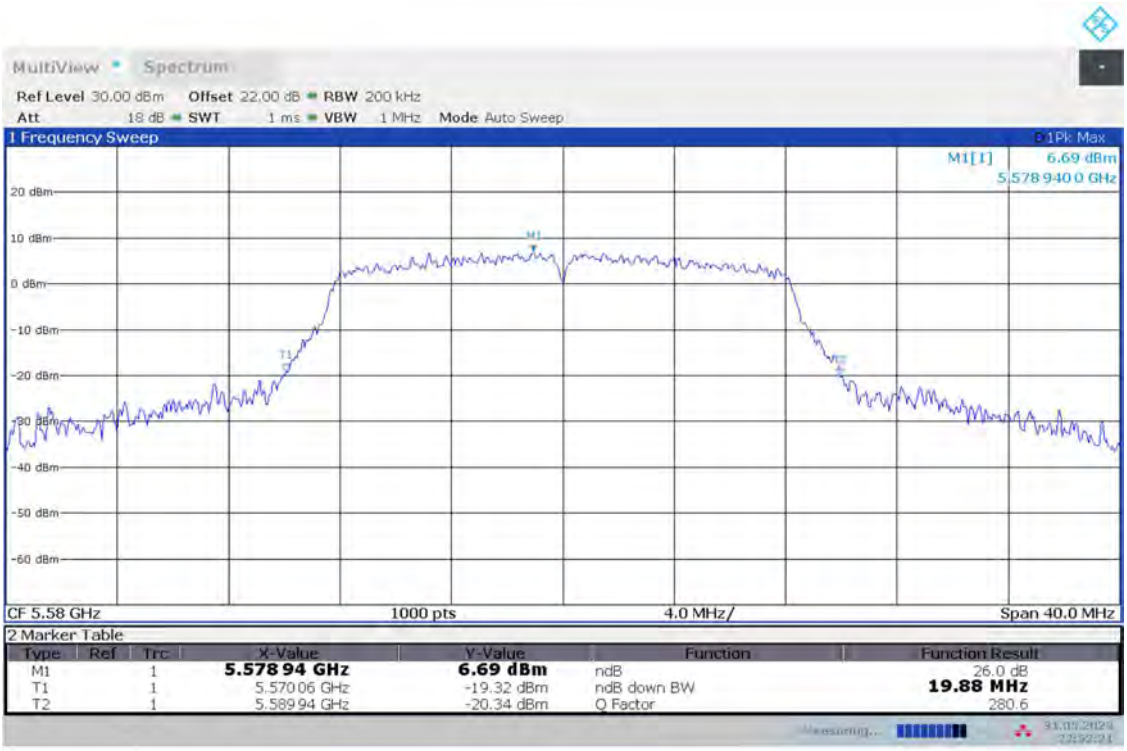


Fig.8 Occupied 26dB Bandwidth (802.11a, 5580MHz)

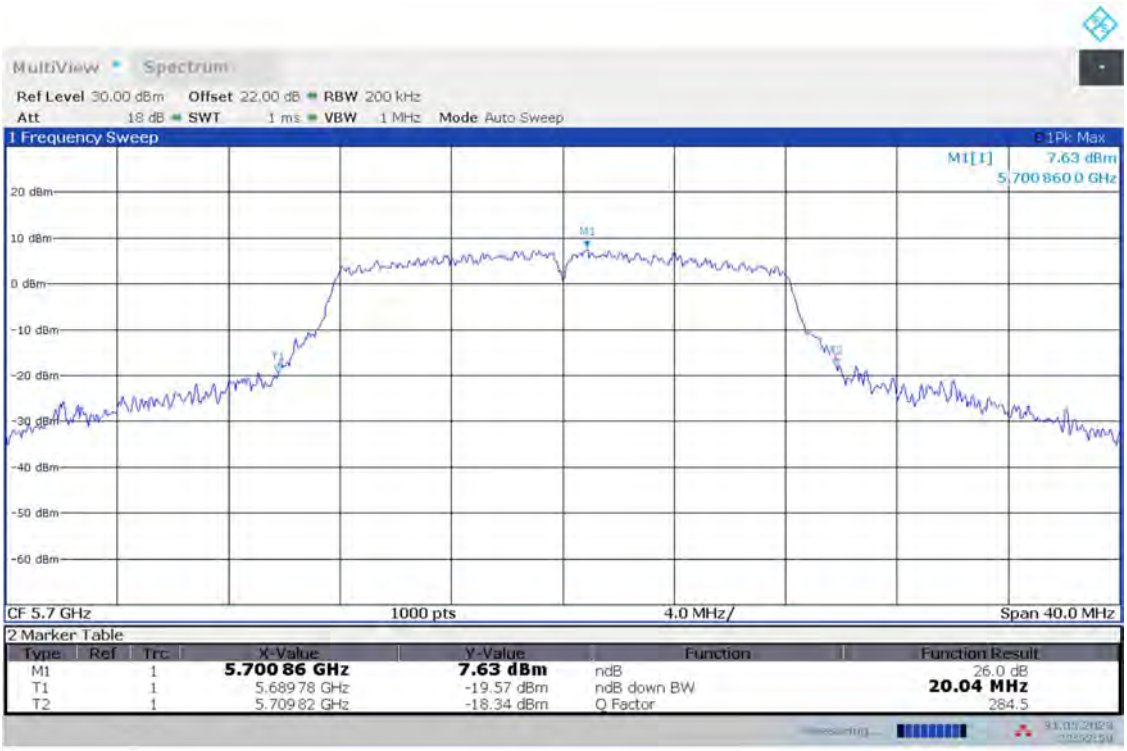


Fig.9 Occupied 26dB Bandwidth (802.11a, 5700MHz)

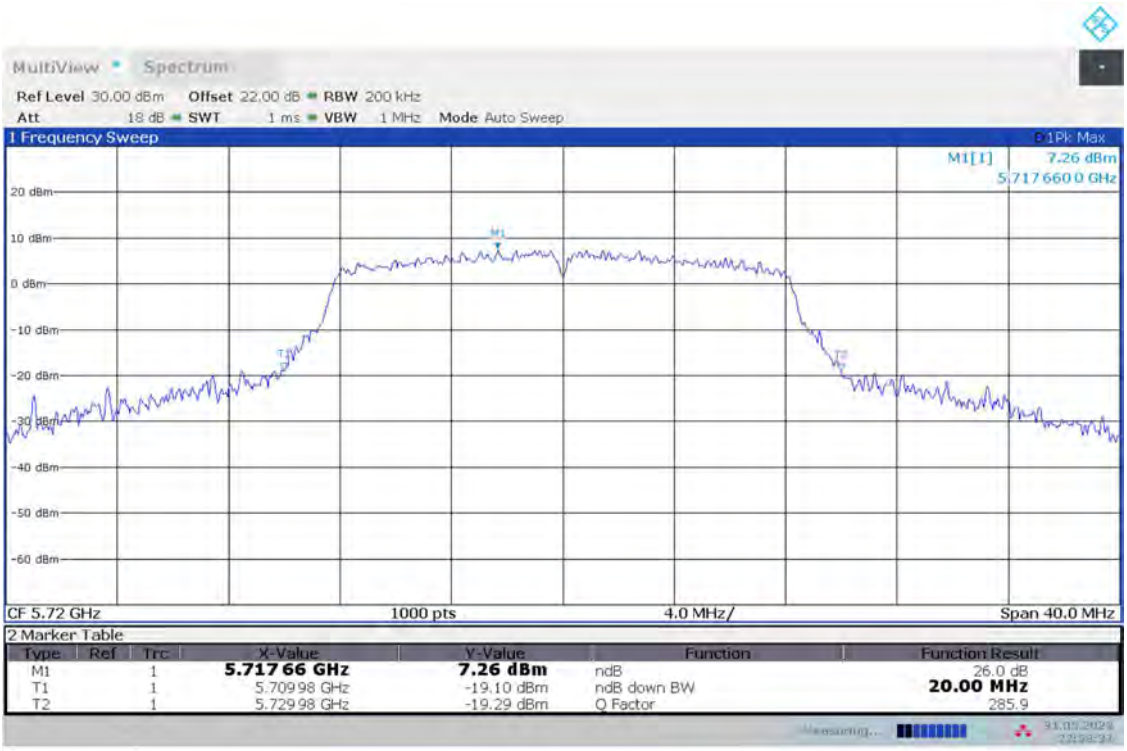


Fig.10 Occupied 26dB Bandwidth (802.11a, 5720MHz)

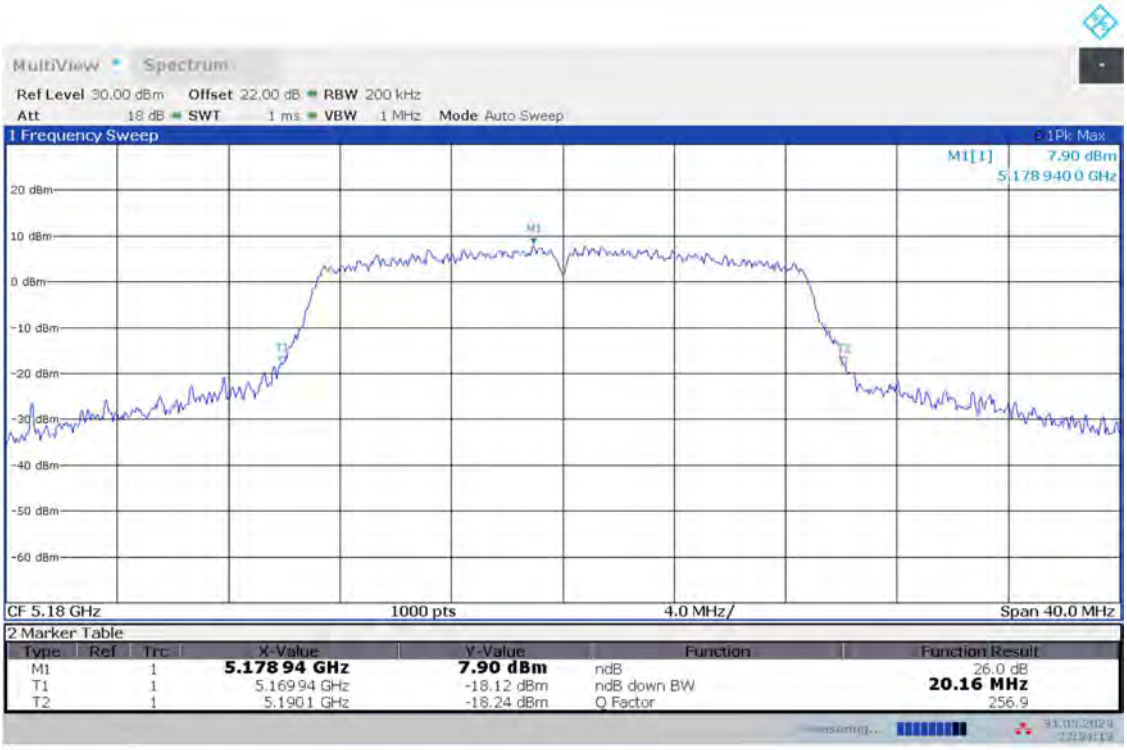


Fig.11 Occupied 26dB Bandwidth (802.11n-HT20, 5180MHz)

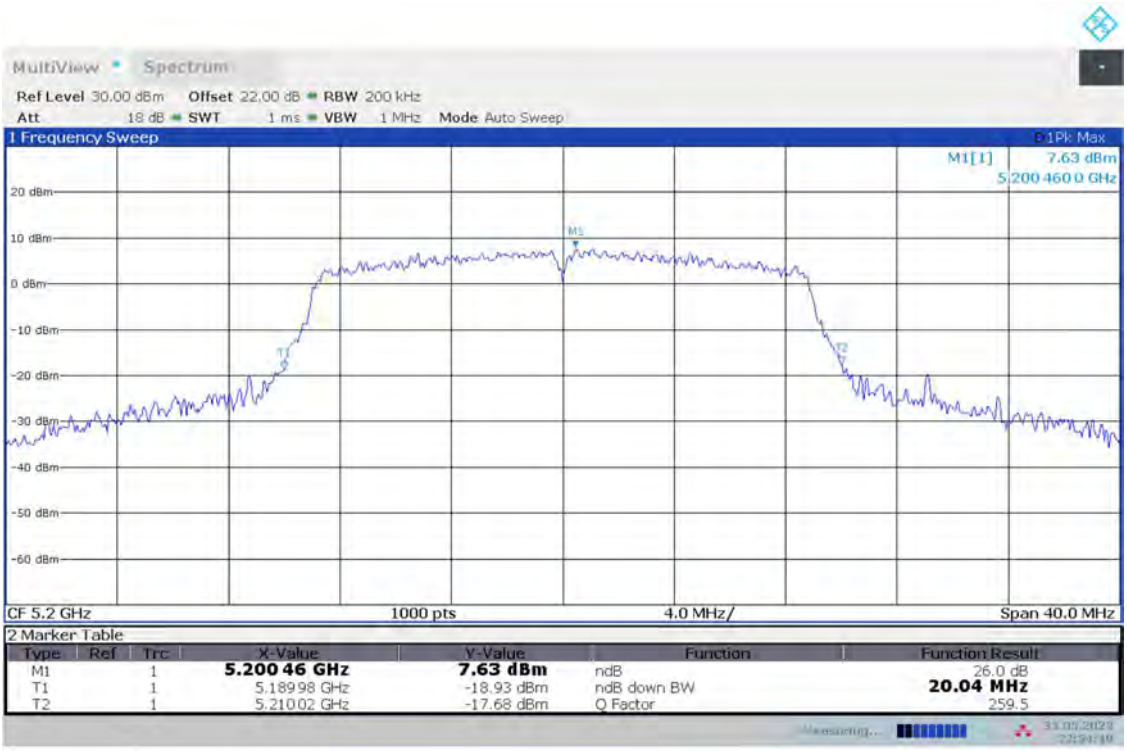
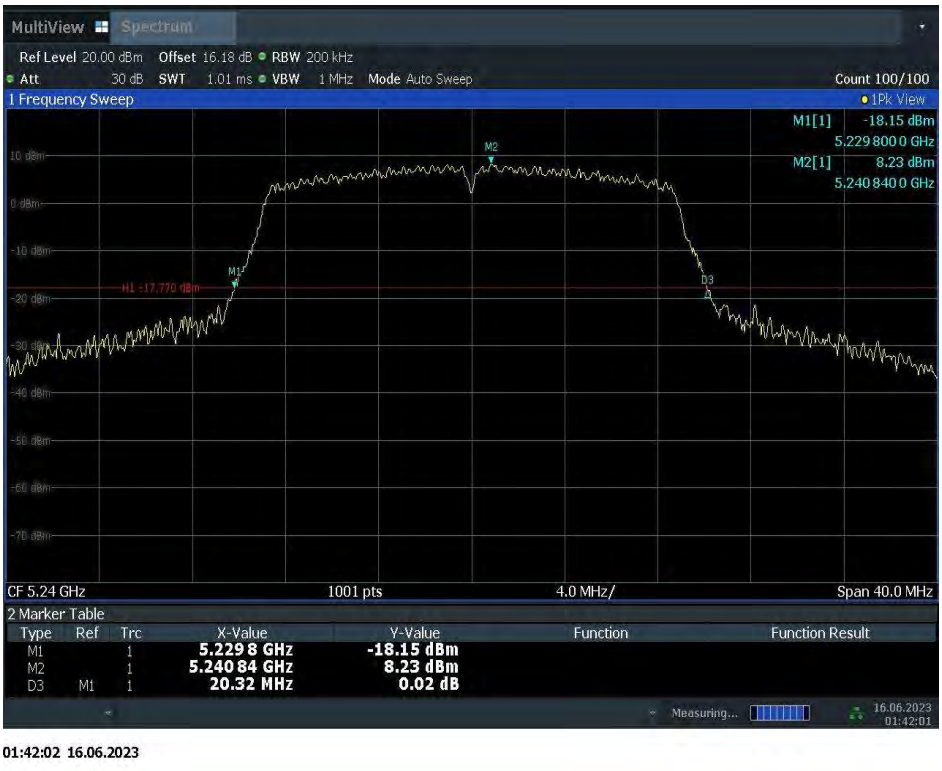


Fig.12 Occupied 26dB Bandwidth (802.11n-HT20, 5200MHz)



01:42:02 16.06.2023

Fig.13 Occupied 26dB Bandwidth (802.11n-HT20, 5240MHz)

Fig.14 Occupied 26dB Bandwidth (802.11n-HT20, 5260MHz)

Fig.15 Occupied 26dB Bandwidth (802.11n-HT20, 5280MHz)

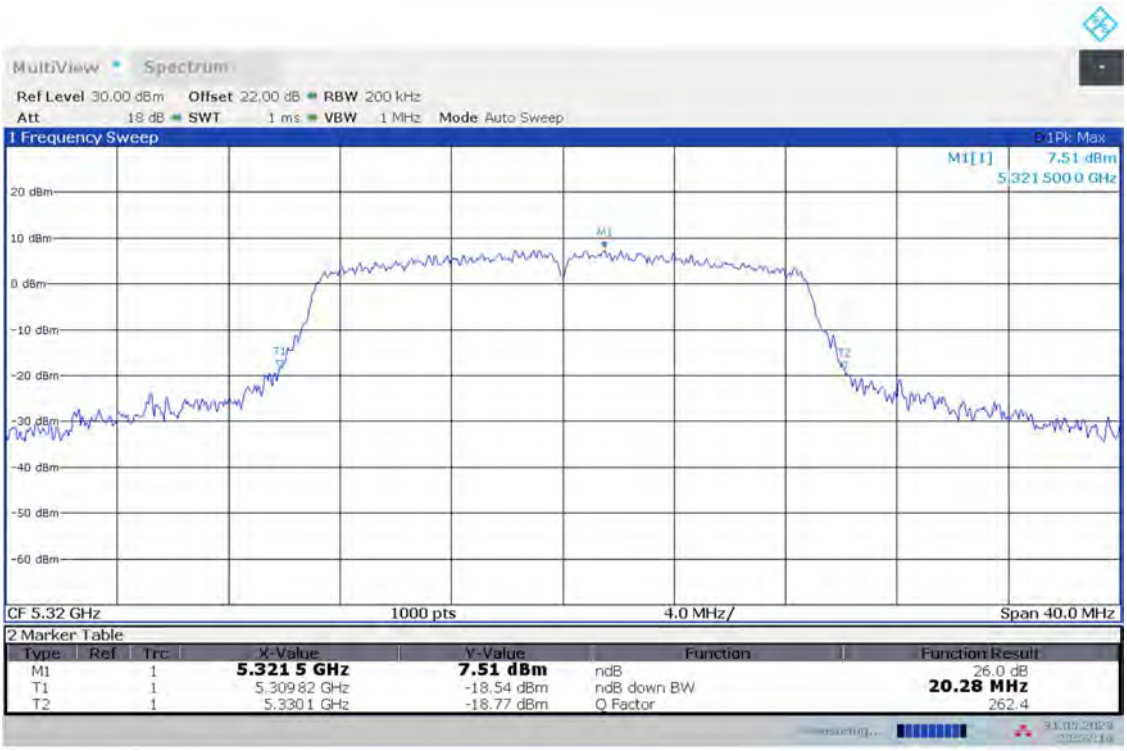


Fig.16 Occupied 26dB Bandwidth (802.11n-HT20, 5320MHz)

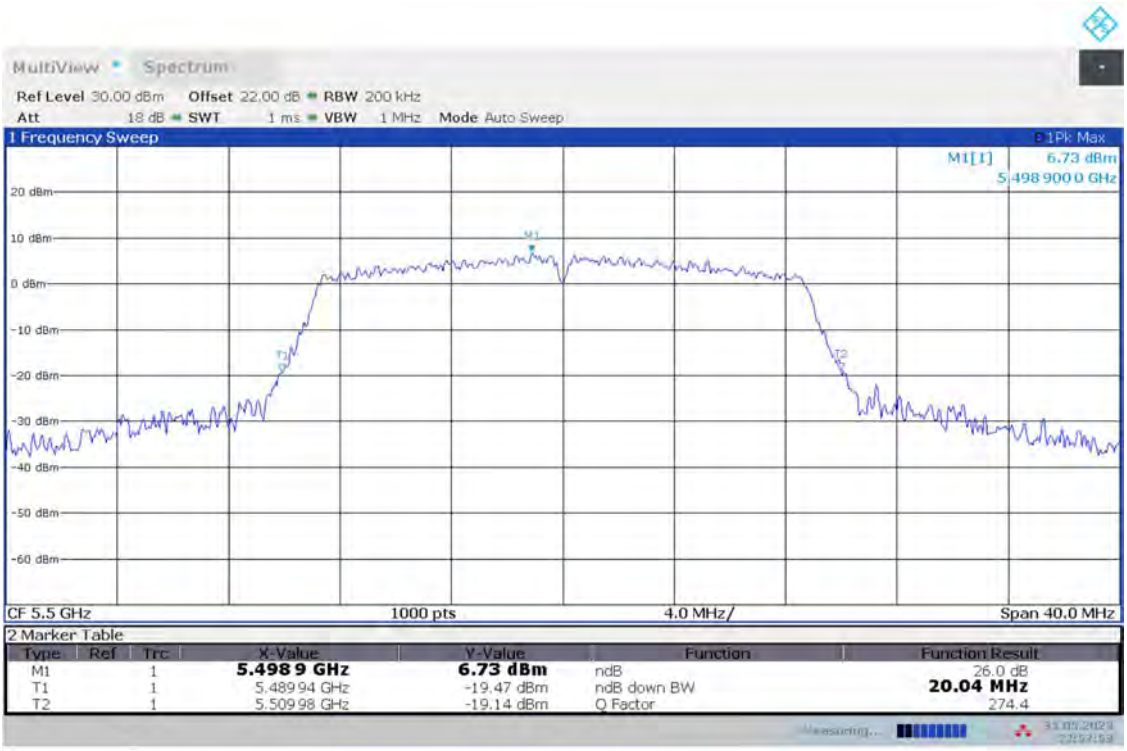


Fig.17 Occupied 26dB Bandwidth (802. 11n-HT20, 5500MHz)

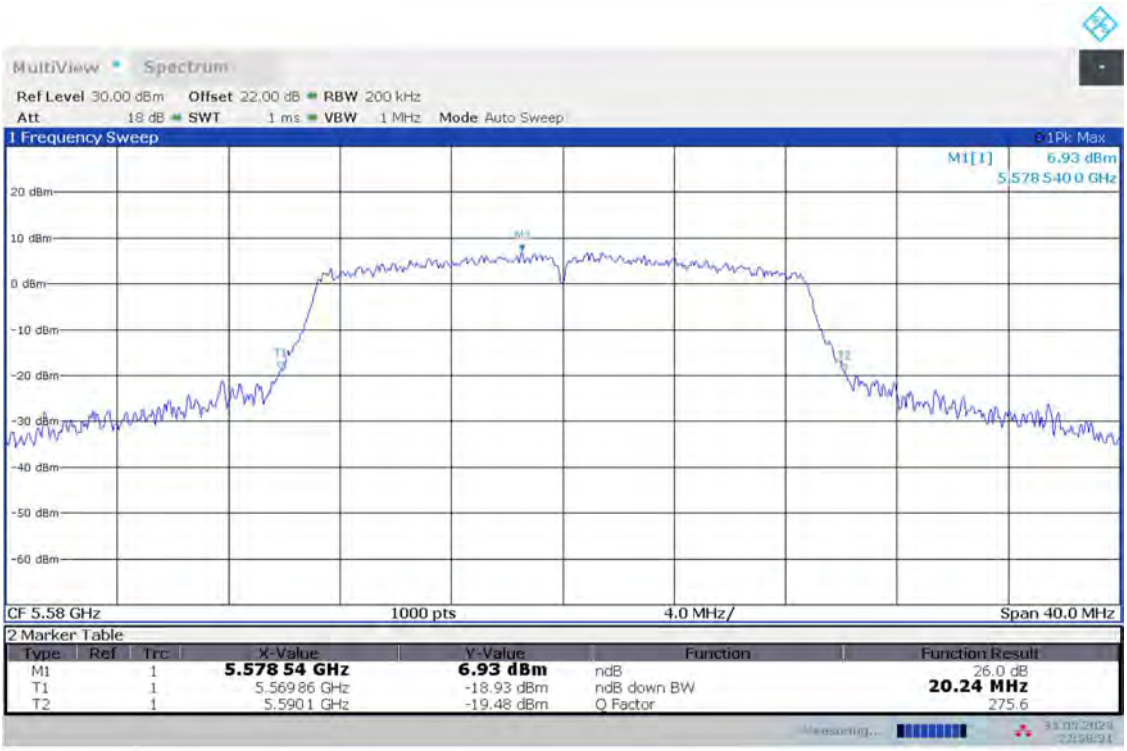


Fig.18 Occupied 26dB Bandwidth (802. 11n-HT20, 5580MHz)

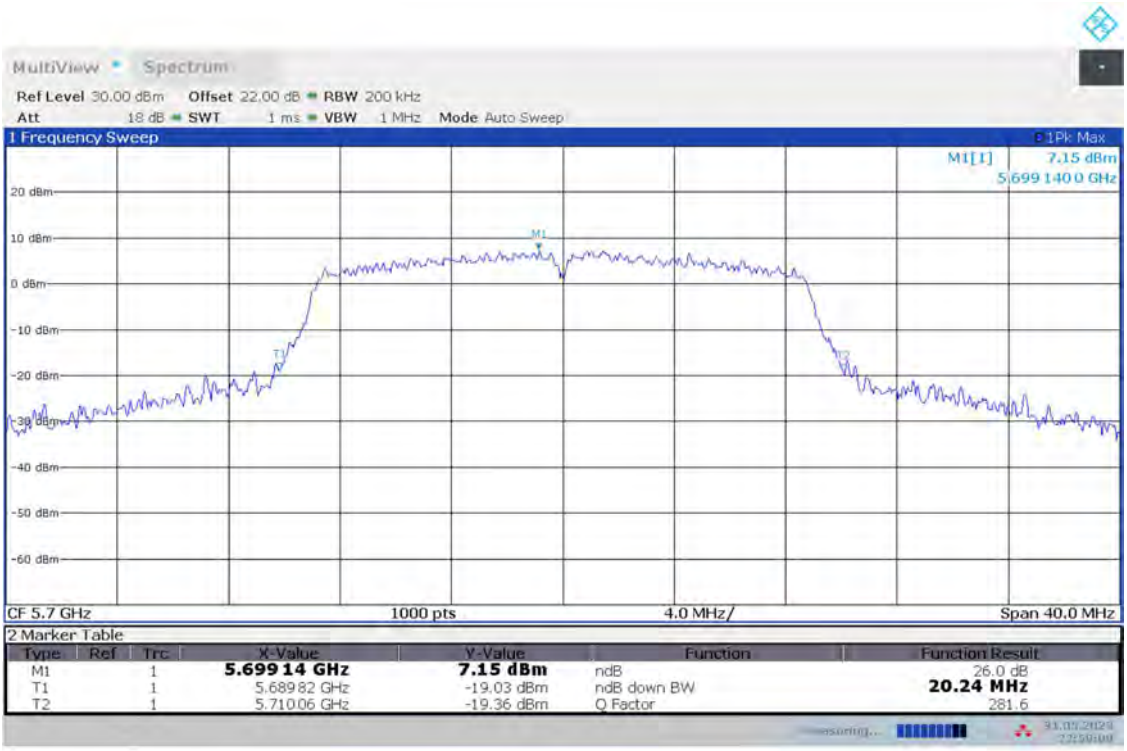


Fig.19 Occupied 26dB Bandwidth (802. 11n-HT20, 5700MHz)

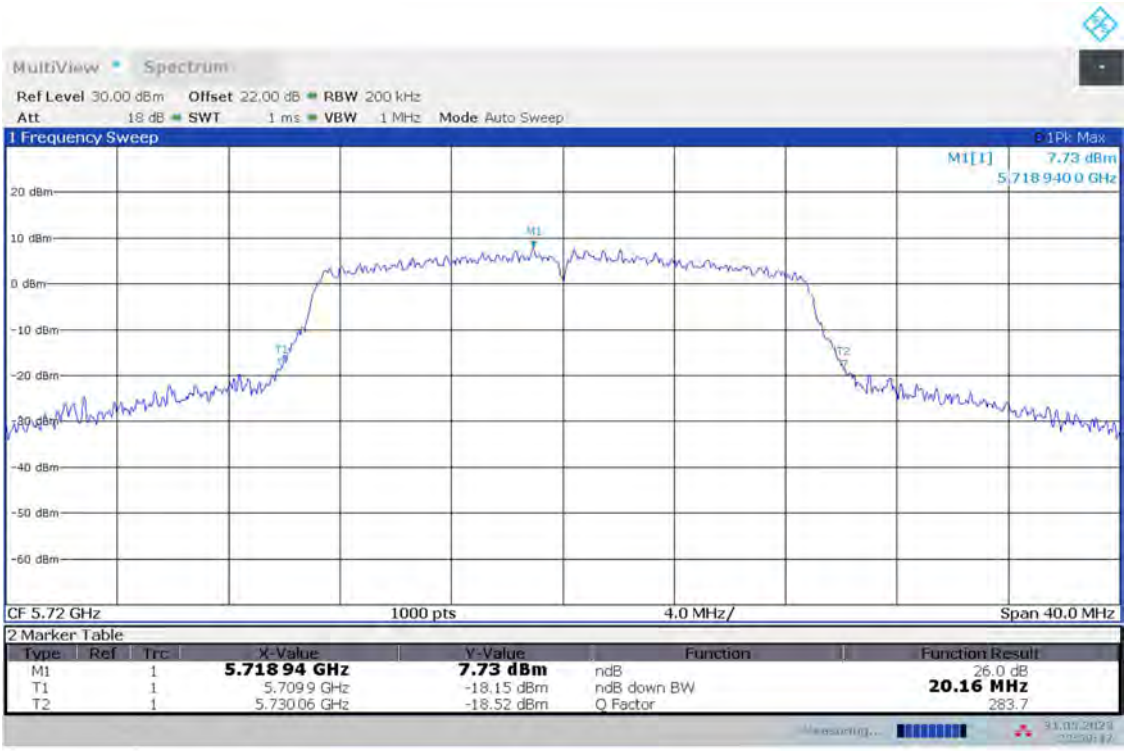


Fig.20 Occupied 26dB Bandwidth (802. 11n-HT20, 5720MHz)

01:45:44 16.06.2023

Fig.21 Occupied 26dB Bandwidth (802.11ac-HT40, 5190MHz)

01:46:10 16.06.2023

Fig.22 Occupied 26dB Bandwidth (802.11ac-HT40, 5230MHz)

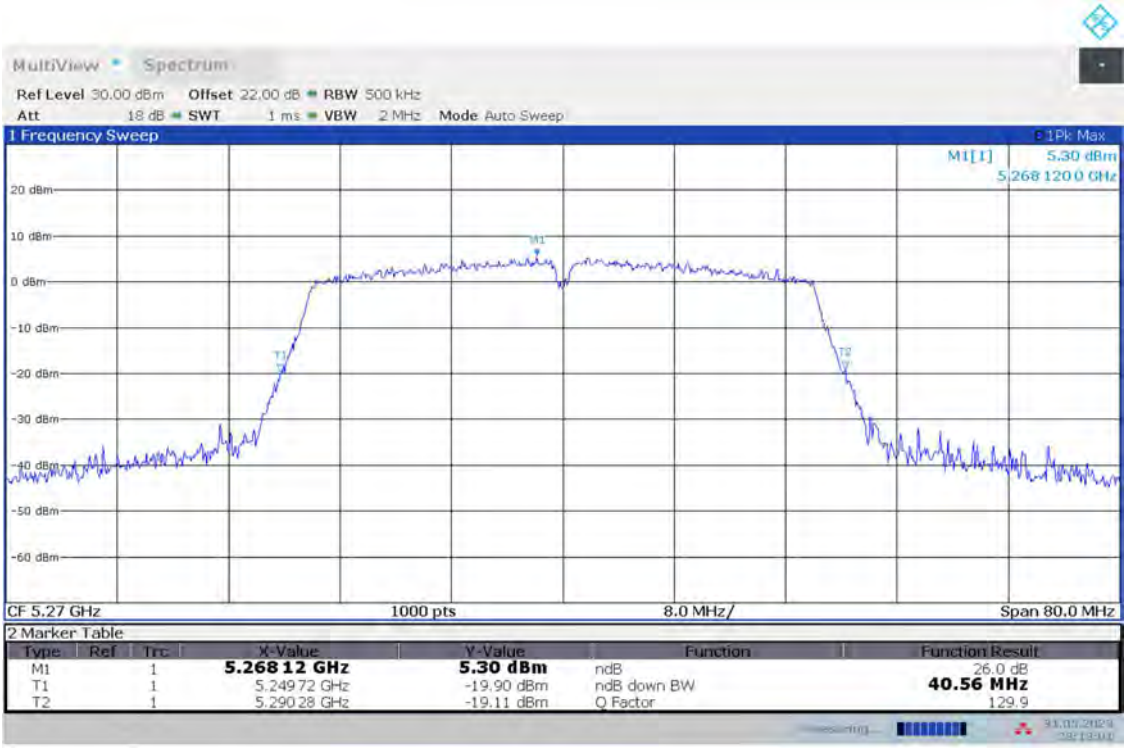


Fig.23 Occupied 26dB Bandwidth (802.11ac-HT40, 5270MHz)

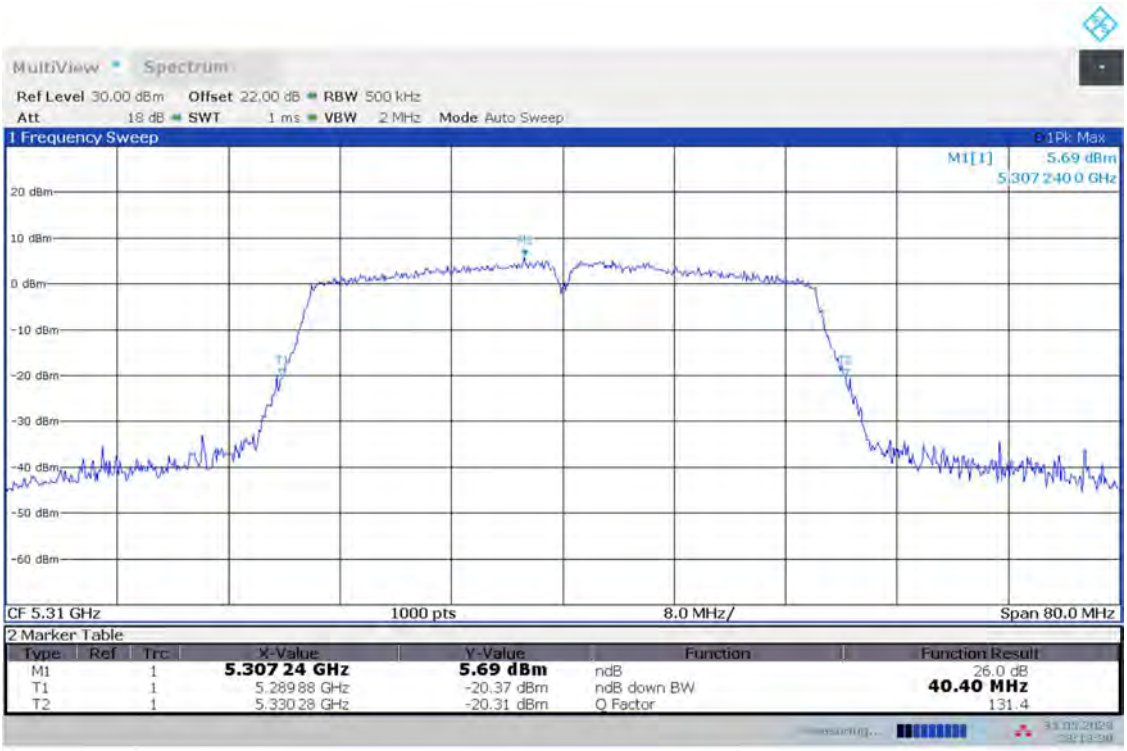


Fig.24 Occupied 26dB Bandwidth (802.11ac-HT40, 5310MHz)

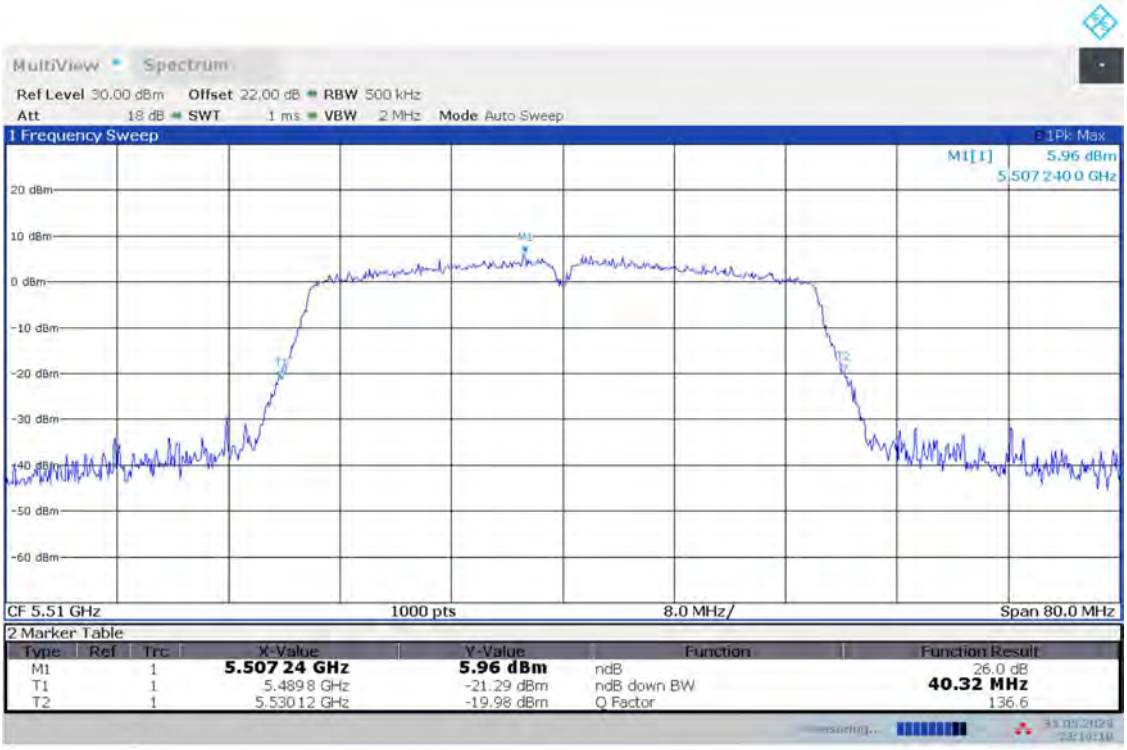
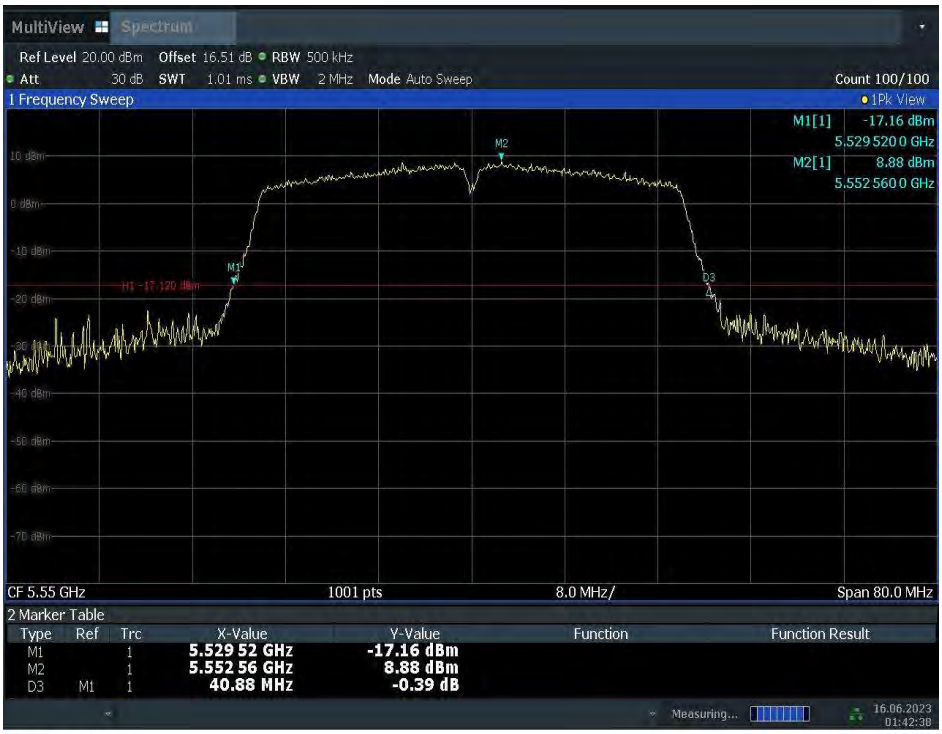


Fig.25 Occupied 26dB Bandwidth (802. 11ac-HT40, 5510MHz)



01:42:38 16.06.2023

Fig.26 Occupied 26dB Bandwidth (802. 11ac-HT40, 5550MHz)

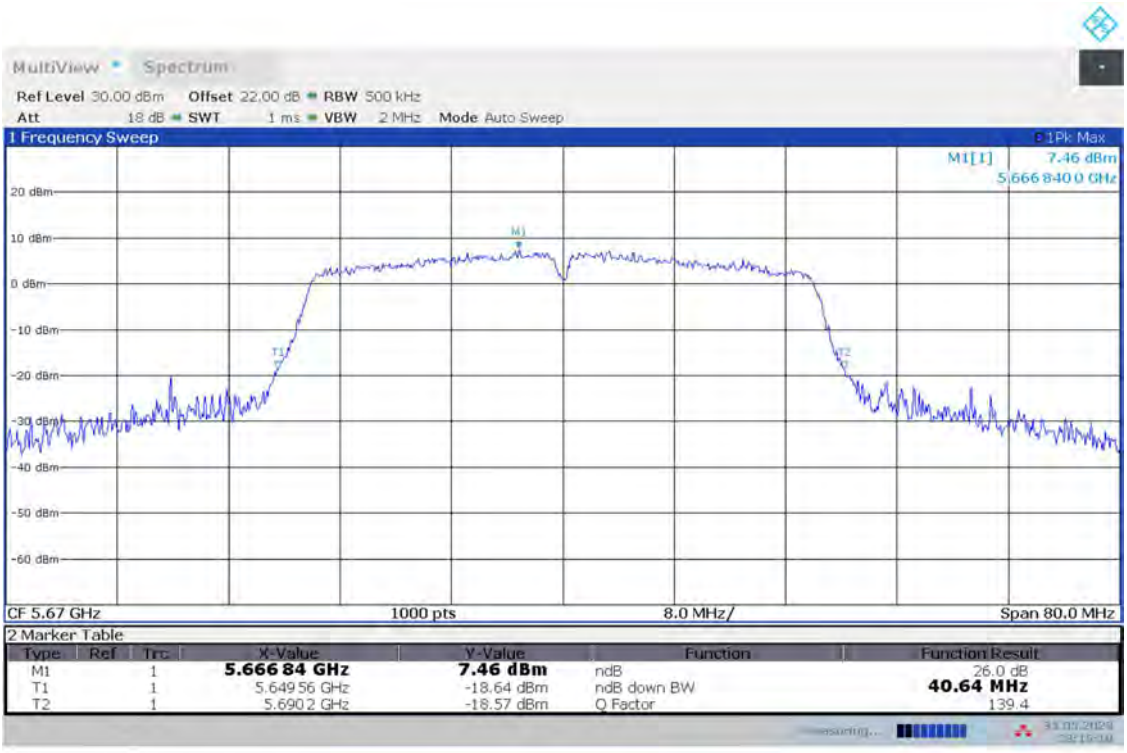


Fig.27 Occupied 26dB Bandwidth (802. 11ac-HT40, 5670MHz)

Fig.28 Occupied 26dB Bandwidth (802. 11ac-HT40, 5710MHz)

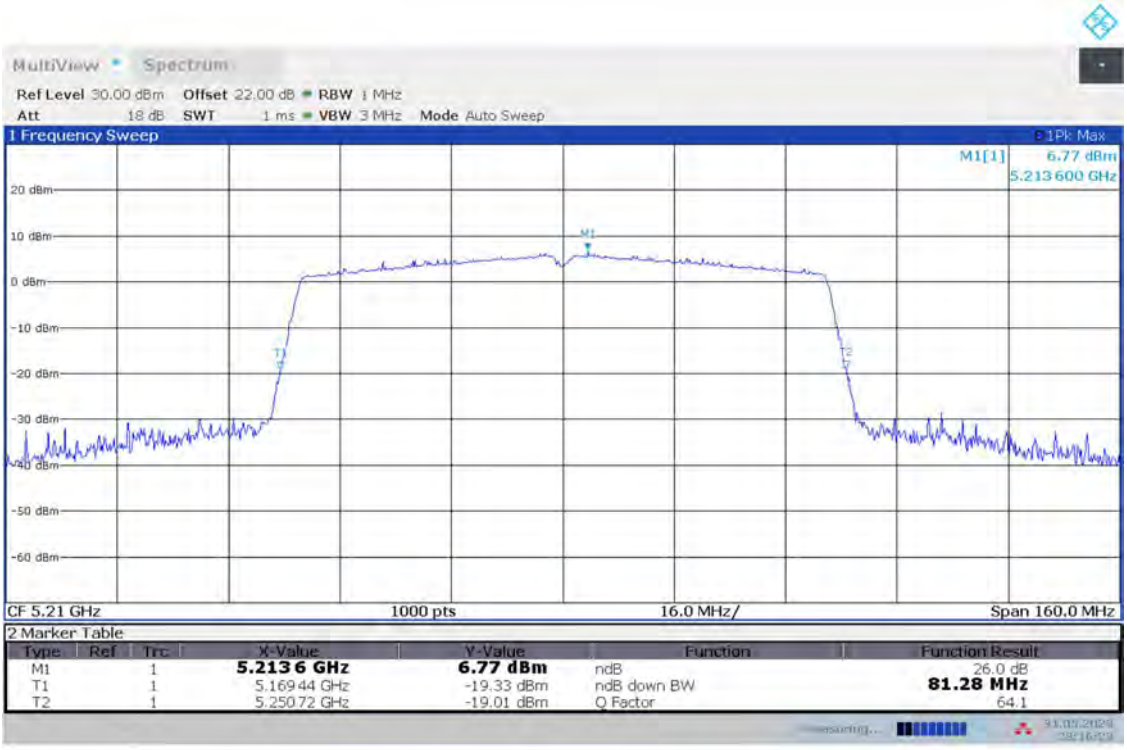


Fig.29 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

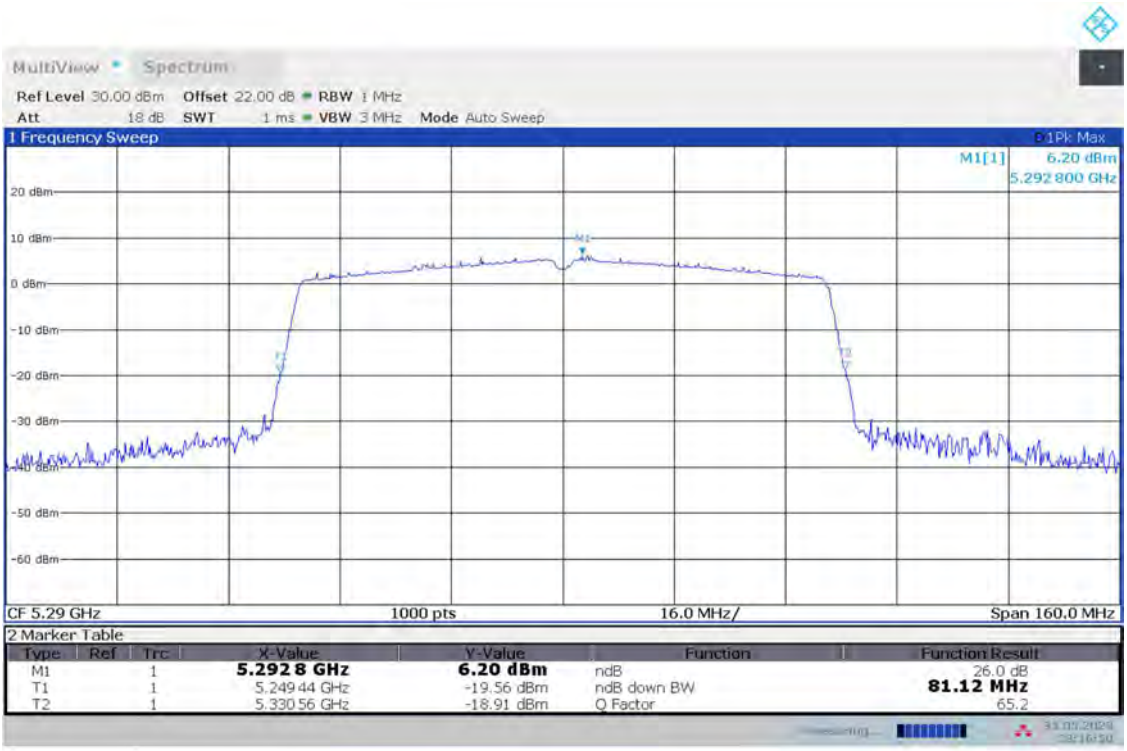


Fig.30 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

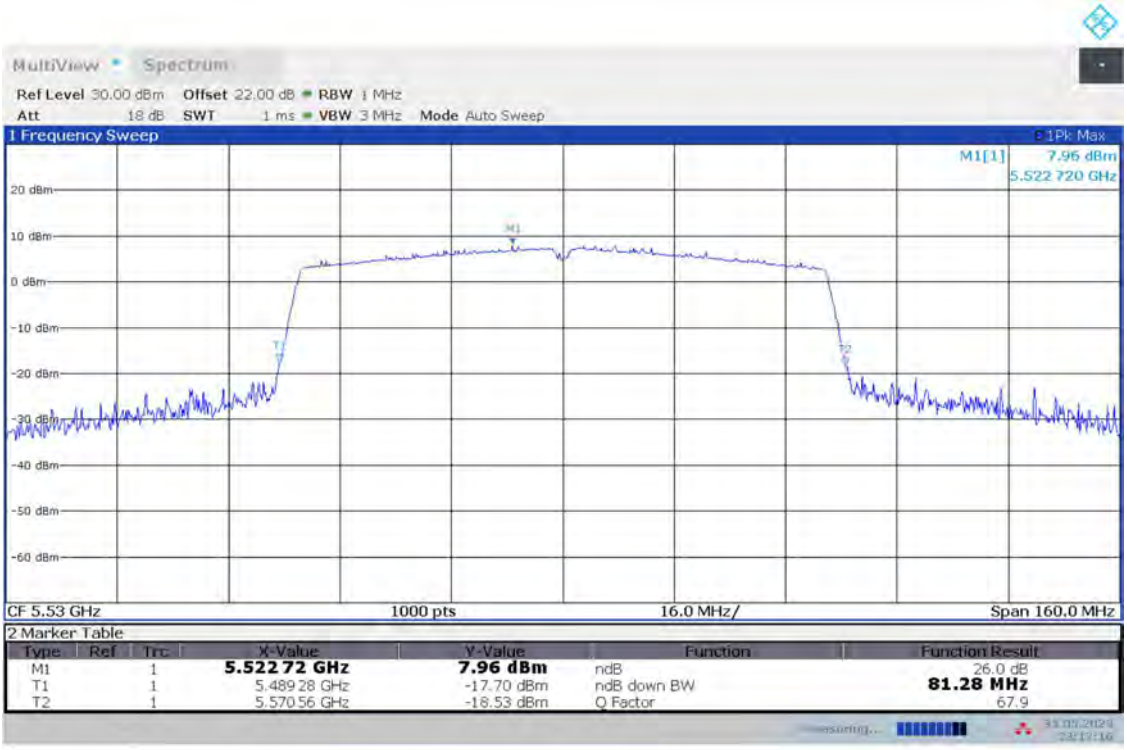


Fig.31 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

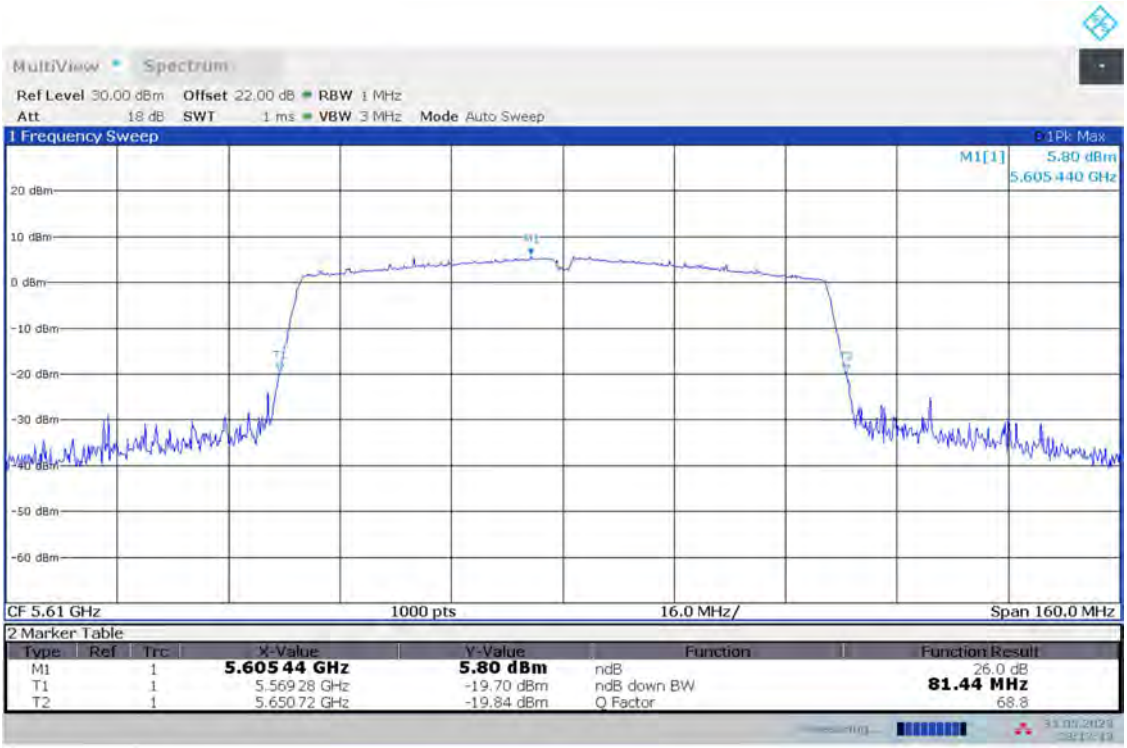


Fig.32 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

01:43:46 16.06.2023

Fig.33 Occupied 26dB Bandwidth (802. 11ac-HT80, 5690MHz)

A.5. Band Edges Compliance

A5.1 Band Edges - Radiated

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)	Measurement distance(m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The measurement is made according to ANSI C63.10-2013 and KDB 789033

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.34	P
	5320 MHz	Fig.35	P
	5500 MHz	Fig.36	P
	5700 MHz	Fig.37	P
802.11n HT20	5180 MHz	Fig.38	P
	5320 MHz	Fig.39	P
	5500 MHz	Fig.40	P
	5700 MHz	Fig.41	P
802.11n HT40	5190 MHz	Fig.42	P
	5310 MHz	Fig.43	P
	5510 MHz	Fig.44	P
	5670 MHz	Fig.45	P
802.11ac HT20	5180 MHz	Fig.46	P
	5320 MHz	Fig.47	P
	5500 MHz	Fig.48	P
	5700 MHz	Fig.49	P
802.11ac HT40	5190 MHz	Fig.50	P
	5310 MHz	Fig.51	P
	5510 MHz	Fig.52	P
	5670 MHz	Fig.53	P
802.11ac HT80	5210MHz	Fig.54	P
	5290MHz	Fig.55	P
	5530MHz	Fig.56	P
	5610MHz	Fig.57	P

Conclusion: PASS

Test graphs as below:

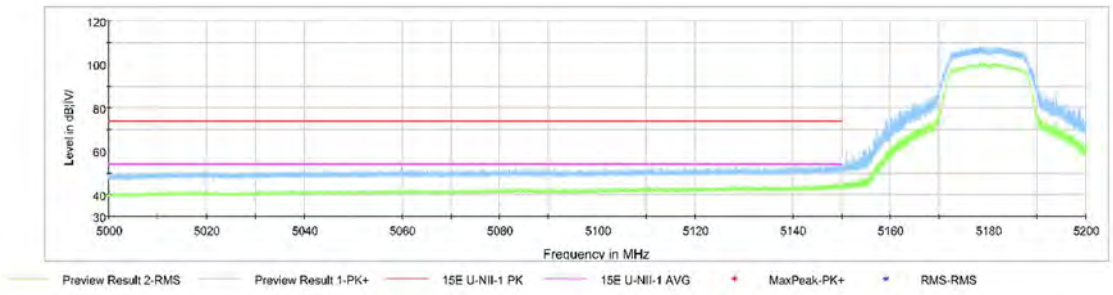


Fig.34 Band Edges (802.11a Ch36, 5180MHz)

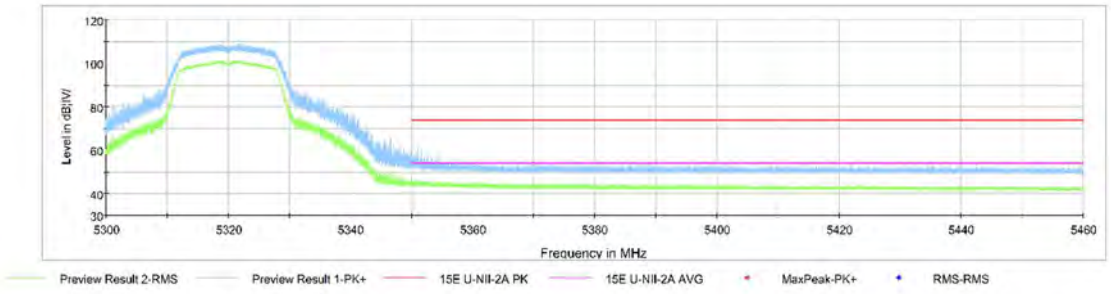


Fig.35 Band Edges (802.11a Ch64, 5320MHz)

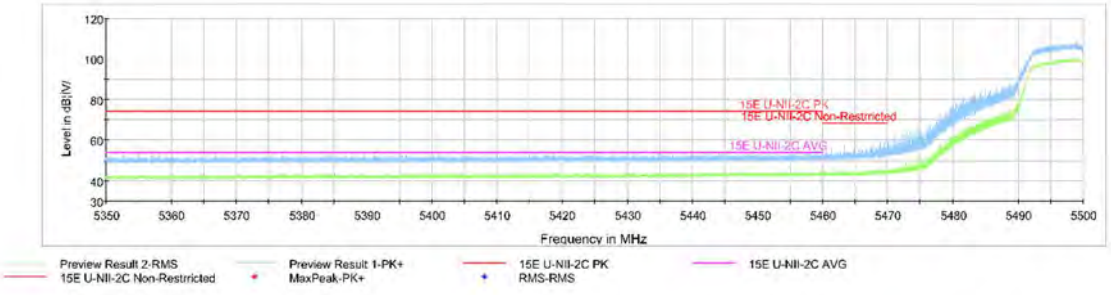


Fig.36 Band Edges (802.11a Ch100, 5500MHz)

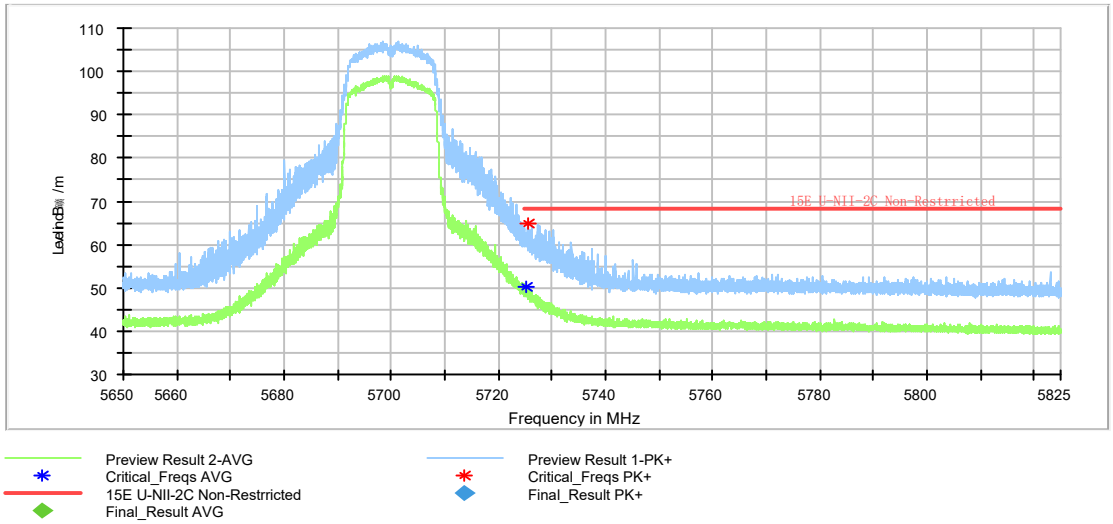


Fig.37 Band Edges (802.11a Ch140, 5700MHz)

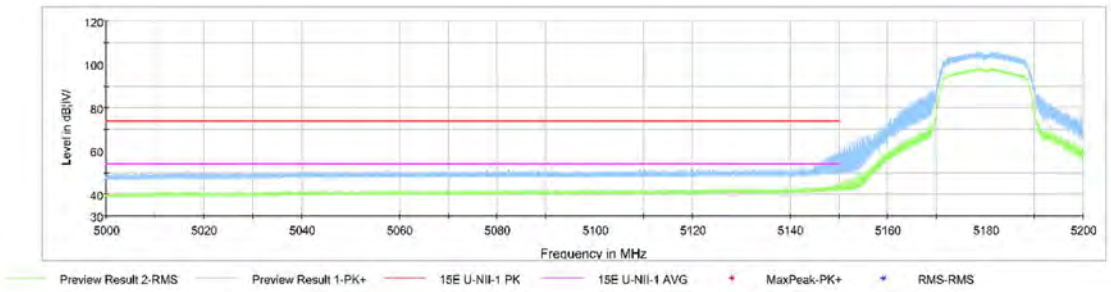


Fig.38 Band Edges (802.11n-HT20 Ch36, 5180MHz)

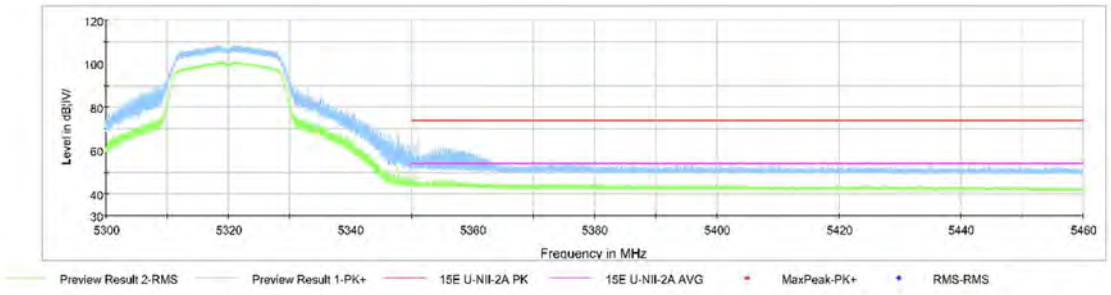


Fig.39 Band Edges (802.11n-HT20 Ch64, 5320MHz)

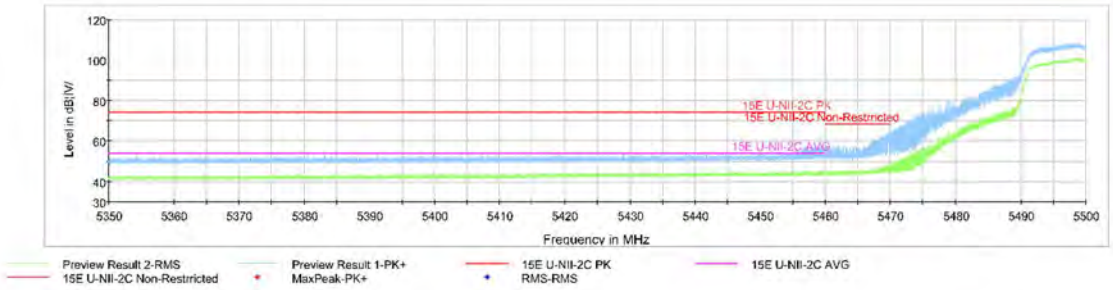


Fig.40 Band Edges (802.11n-HT20 Ch100, 5500MHz)

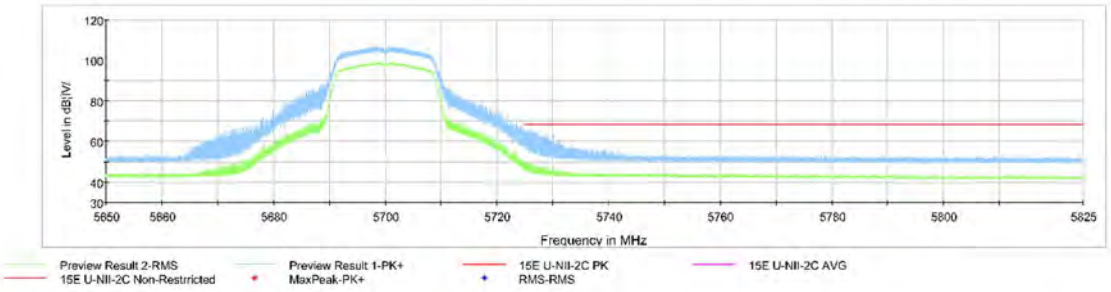


Fig.41 Band Edges (802.11n-HT20 Ch140, 5700MHz)

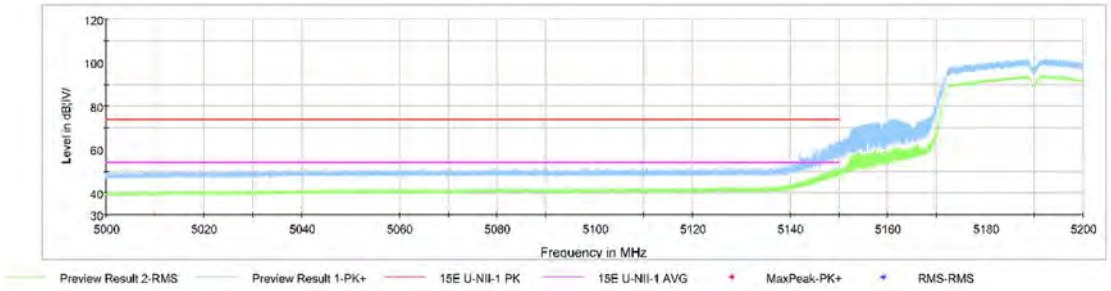


Fig.42 Band Edges (802.11n-HT40 Ch38, 5190MHz)

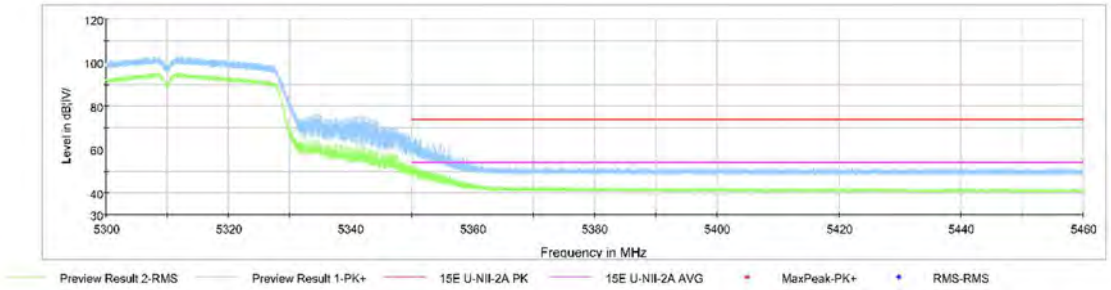


Fig.43 Band Edges (802.11n-HT40 Ch62, 5310MHz)

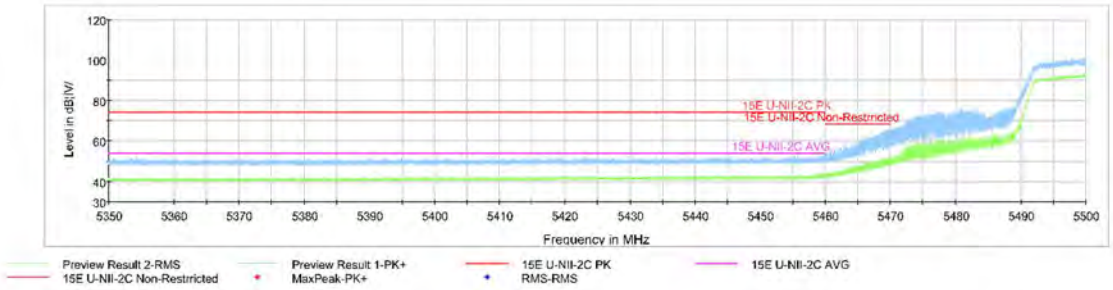


Fig.44 Band Edges (802.11n-HT40 Ch102, 5510MHz)

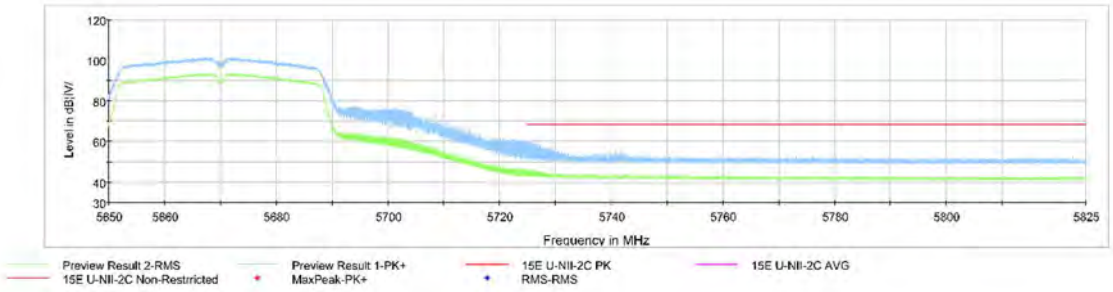


Fig.45 Band Edges (802.11n-HT40 Ch134, 5670MHz)

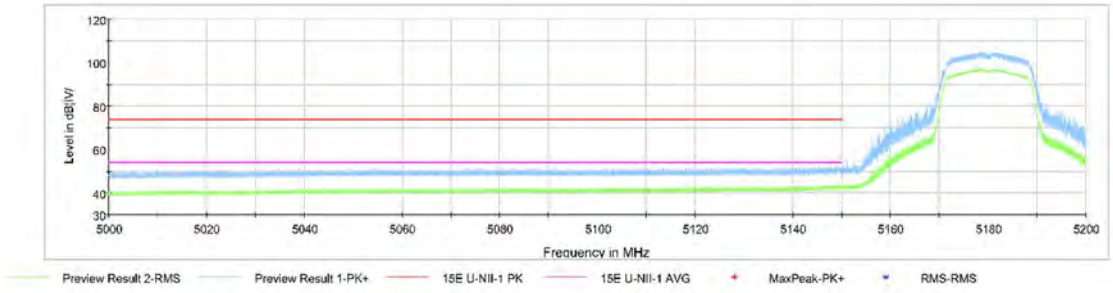


Fig.46 Band Edges (802.11ac-HT20 Ch36, 5180MHz)

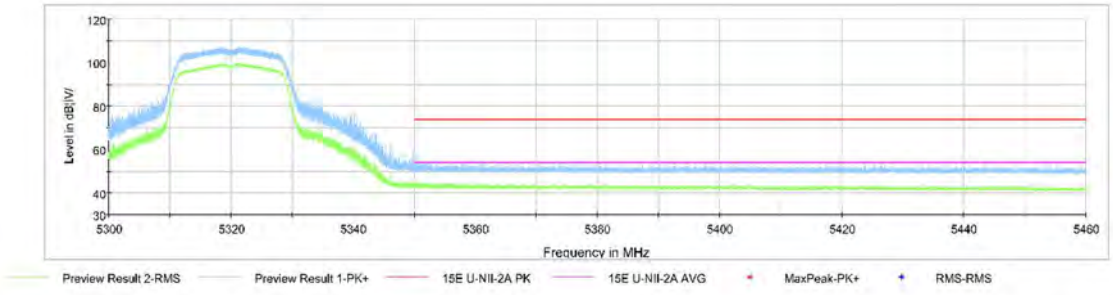


Fig.47 Band Edges (802.11ac-HT20 Ch64, 5320MHz)

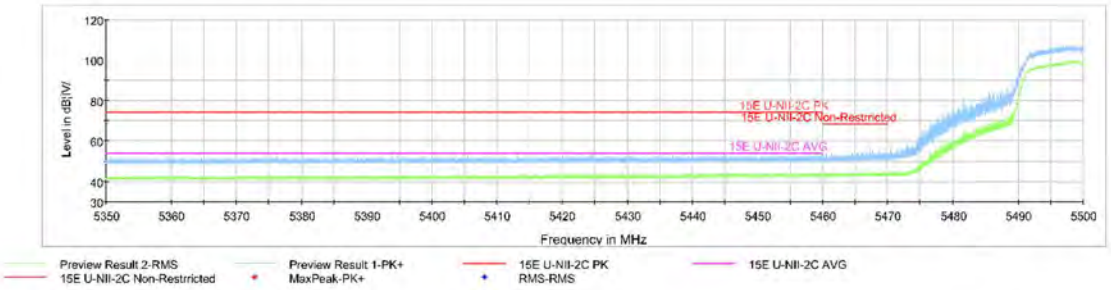


Fig.48 Band Edges (802.11ac-HT20 Ch100, 5500MHz)

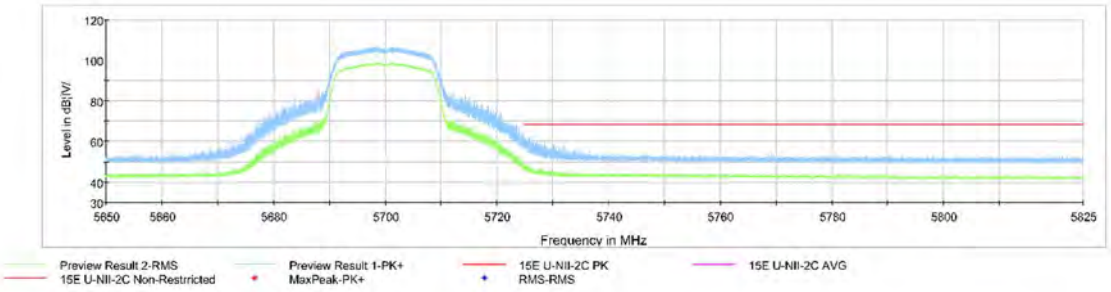


Fig.49 Band Edges (802.11ac-HT20 Ch140, 5700MHz)

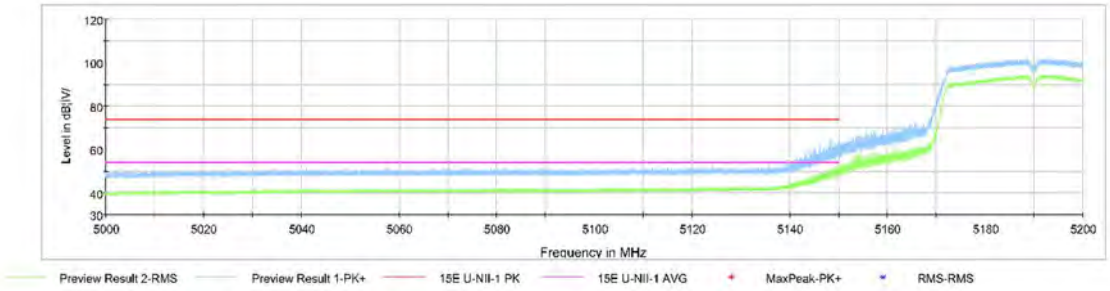


Fig.50 Band Edges (802.11ac-HT40 Ch38, 5190MHz)

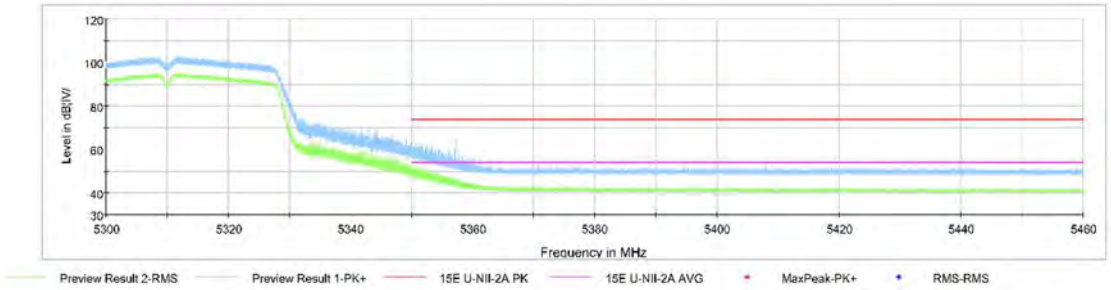


Fig.51 Band Edges (802.11ac-HT40 Ch62, 5310MHz)

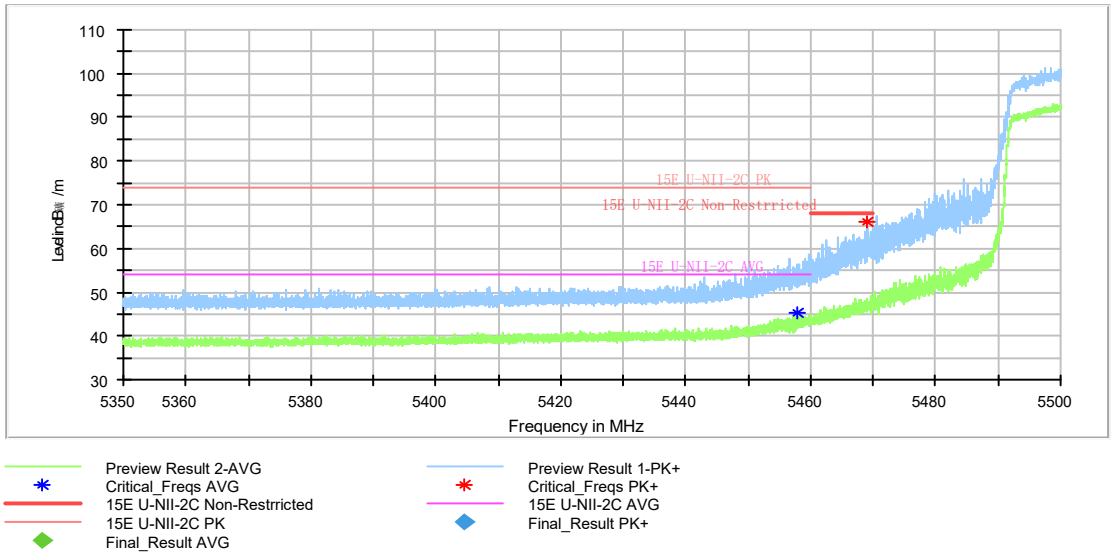


Fig.52 Band Edges (802.11ac-HT40 Ch102, 5510MHz)

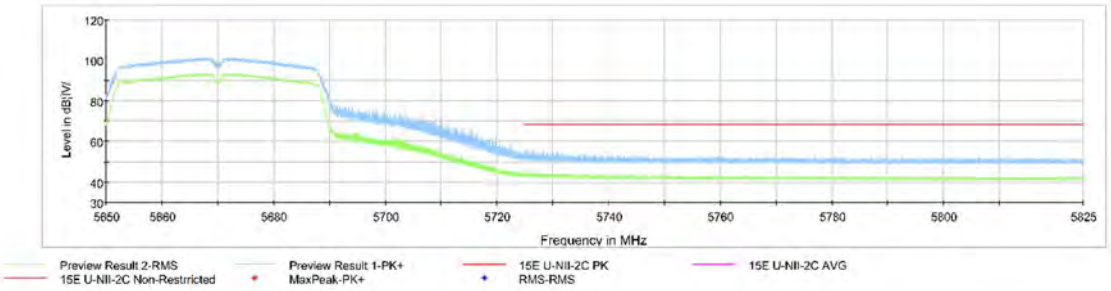


Fig.53 Band Edges (802.11ac-HT40 Ch134, 5670MHz)

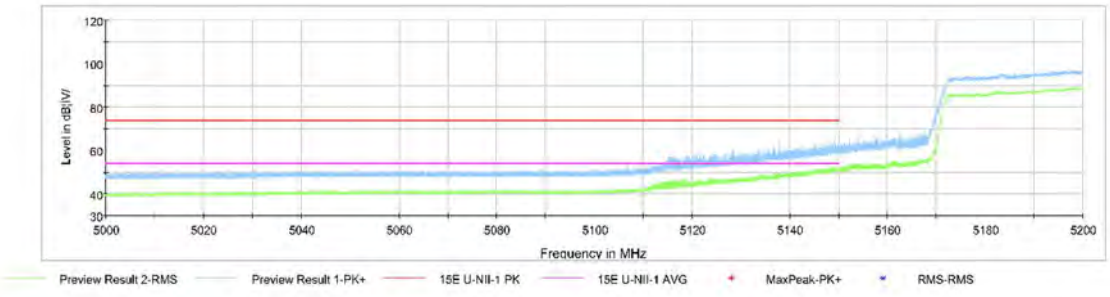


Fig.54 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)

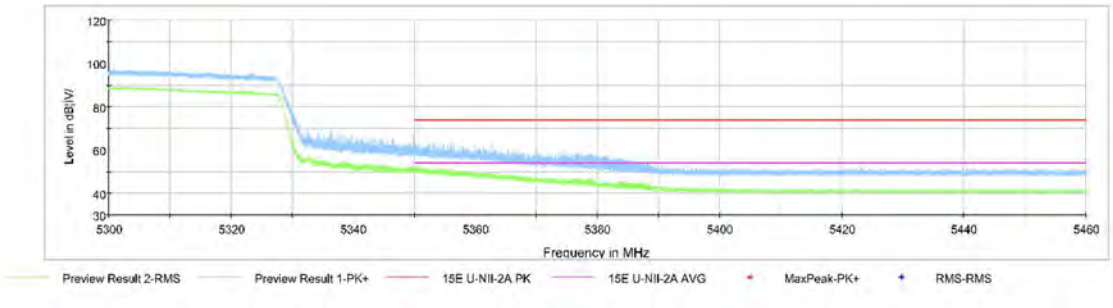


Fig.55 Band Edges (802.11ac-HT80 Ch58, 5290MHz)

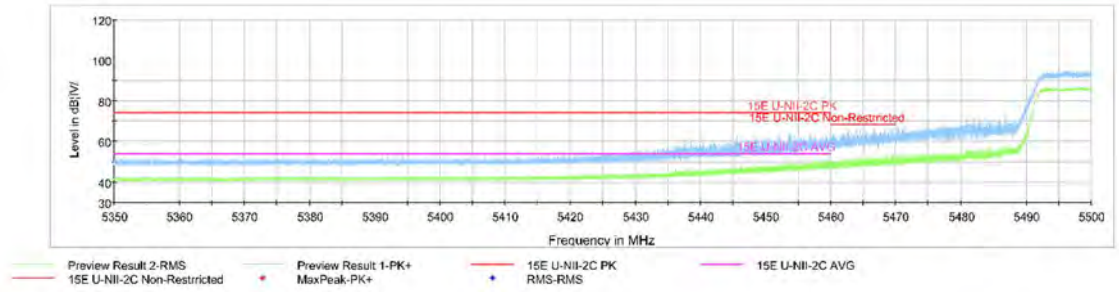


Fig.56 Band Edges (802.11ac-HT80 Ch106, 5530MHz)

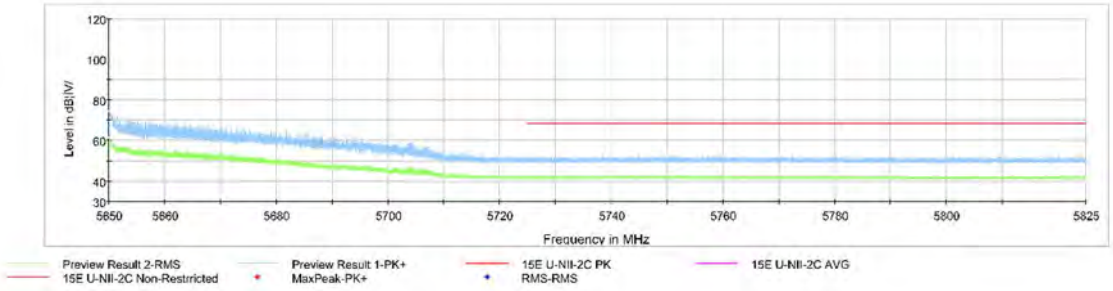


Fig.57 Band Edges (802.11ac-HT80 Ch122, 5610MHz)

A.6. Transmitter Spurious Emission

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)	Measurement distance(m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The measurement is made according to ANSI C63.10-2013 and KDB 789033

Measurement Results:

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	36(5180MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	40(5200MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	48(5240MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	52(5260MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	56(5280MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	64(5320MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	120(5600MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	36(5180MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	40(5200MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	48(5240MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	52(5260MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	56(5280MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	64(5320MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	120(5600MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	38(5190MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	46(5230MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	54(5270MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	62(5310MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	102(5510MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	118(5590MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	134(5670MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P

802.11ac-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac -HT20	36(5180MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	40(5200MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	48(5240MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	52(5260MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	56(5280MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	64(5320MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	120(5600MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11ac-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac HT40	38(5190MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	46(5230MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	54(5270MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	62(5310MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	102(5510MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	118(5590MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	134(5670MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P

802.11ac-HT80 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac – HT80	42(5210MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	58(5290MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	106(5530MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	122(5610MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result=P_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor

AVERAGE Results:

802.11a

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17957.833	41.00	-29.59	45.95	24.64	54.00	13.00	H
17977.633	40.91	-29.59	45.95	24.55	54.00	13.09	H
12332.800	36.95	-32.39	38.95	30.39	54.00	17.05	V
12330.233	36.86	-32.39	38.95	30.30	54.00	17.14	H
5148.020	45.31	-27.79	34.00	39.10	54.00	8.69	V
5149.220	45.25	-28.00	34.00	39.25	54.00	8.75	V

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17935.100	40.59	-29.59	45.95	24.23	54.00	13.41	H

17980.933	40.57	-29.59	45.95	24.21	54.00	13.43	H
12332.433	37.72	-32.39	38.95	31.16	54.00	16.28	H
12314.467	36.83	-32.12	39.00	29.95	54.00	17.17	H
8340.533	33.71	-34.93	37.20	31.44	54.00	20.29	V
8479.500	33.55	-34.28	37.30	30.53	54.00	20.45	V

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17953.800	40.63	-29.59	45.95	24.27	54.00	13.37	H
17928.867	40.60	-29.59	45.95	24.24	54.00	13.40	V
11770.700	37.28	-32.71	39.20	30.79	54.00	16.72	H
12293.200	36.93	-32.12	39.00	30.05	54.00	17.07	V
8348.233	33.84	-34.93	37.20	31.57	54.00	20.16	V
8346.400	33.74	-34.93	37.20	31.47	54.00	20.26	V

Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17939.500	41.05	-29.59	45.95	24.69	54.00	12.95	V
17956.367	41.04	-29.59	45.95	24.68	54.00	12.96	V
12332.800	37.57	-32.39	38.95	31.01	54.00	16.43	V
12333.167	37.23	-32.39	38.95	30.67	54.00	16.77	H
8489.033	34.32	-34.28	37.30	31.30	54.00	19.68	H
8482.433	34.26	-34.28	37.30	31.24	54.00	19.74	H

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17958.567	40.71	-29.59	45.95	24.35	54.00	13.29	V
17942.067	40.69	-29.59	45.95	24.33	54.00	13.31	H
12332.800	37.59	-32.39	38.95	31.03	54.00	16.41	H
12331.700	37.07	-32.39	38.95	30.51	54.00	16.93	H
8485.000	34.06	-34.28	37.30	31.04	54.00	19.94	H
8284.800	33.81	-34.84	37.10	31.54	54.00	20.19	H

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17939.500	40.70	-29.59	45.95	24.34	54.00	13.30	V
17975.800	40.66	-29.59	45.95	24.30	54.00	13.34	H
12332.067	36.78	-32.39	38.95	30.22	54.00	17.22	H
12332.433	36.70	-32.39	38.95	30.14	54.00	17.30	H
5351.032	46.81	-27.82	34.20	40.43	54.00	7.19	H
5350.728	46.27	-27.82	34.20	39.89	54.00	7.73	H

Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17944.633	40.59	-29.59	45.95	24.23	54.00	13.41	H
17932.167	40.54	-29.59	45.95	24.18	54.00	13.46	V
12333.167	37.62	-32.39	38.95	31.06	54.00	16.38	V
12332.800	37.31	-32.39	38.95	30.75	54.00	16.69	H
5455.833	44.82	-27.49	34.20	38.11	54.00	9.18	H
5459.605	44.59	-27.49	34.20	37.88	54.00	9.41	H

Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17940.600	40.63	-29.59	45.95	24.27	54.00	13.37	H
17977.633	40.60	-29.59	45.95	24.24	54.00	13.40	H
12332.800	37.60	-32.39	38.95	31.04	54.00	16.40	V
12260.933	36.72	-32.37	38.95	30.14	54.00	17.28	H
8156.833	34.06	-34.82	37.00	31.88	54.00	19.94	V
8482.433	34.01	-34.28	37.30	30.99	54.00	19.99	H

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17960.400	41.03	-29.59	45.95	24.67	54.00	12.97	V
17951.233	40.77	-29.59	45.95	24.41	54.00	13.23	H
12306.767	36.77	-32.12	39.00	29.89	54.00	17.23	H
12330.600	36.77	-32.39	38.95	30.21	54.00	17.23	V
9422.567	33.95	-33.60	37.90	29.65	54.00	20.05	H
8468.867	33.61	-34.28	37.30	30.59	54.00	20.39	V

802.11n-HT20

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17961.867	40.96	-29.59	45.95	24.60	54.00	13.04	V
17944.633	40.61	-29.59	45.95	24.25	54.00	13.39	V
12267.167	37.28	-32.37	38.95	30.70	54.00	16.72	V
12329.867	36.99	-32.39	38.95	30.43	54.00	17.01	V
5149.840	45.22	-28.00	34.00	39.22	54.00	8.78	H
5149.010	44.59	-28.00	34.00	38.59	54.00	9.41	H

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17913.833	40.85	-29.59	45.95	24.49	54.00	13.15	V
17960.400	40.81	-29.59	45.95	24.45	54.00	13.19	H
12330.233	36.90	-32.39	38.95	30.34	54.00	17.10	H
12330.600	36.84	-32.39	38.95	30.28	54.00	17.16	H
8058.933	34.17	-34.89	36.90	32.16	54.00	19.83	V
8304.233	33.92	-34.84	37.10	31.65	54.00	20.08	H

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17968.467	40.93	-29.59	45.95	24.57	54.00	13.07	H
17959.667	40.90	-29.59	45.95	24.54	54.00	13.10	V
12332.433	36.89	-32.39	38.95	30.33	54.00	17.11	H
12329.500	36.72	-32.39	38.95	30.16	54.00	17.28	H
8467.400	34.13	-34.28	37.30	31.11	54.00	19.87	V
8208.167	33.79	-34.94	36.90	31.83	54.00	20.21	H

Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17978.367	40.80	-29.59	45.95	24.44	54.00	13.20	V
17940.600	40.77	-29.59	45.95	24.41	54.00	13.23	H
12331.700	37.40	-32.39	38.95	30.84	54.00	16.60	V
12307.867	37.21	-32.12	39.00	30.33	54.00	16.79	V
8496.367	34.26	-34.28	37.30	31.24	54.00	19.74	V
8467.400	34.16	-34.28	37.30	31.14	54.00	19.84	V

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17948.667	41.32	-29.59	45.95	24.96	54.00	12.68	V
17983.133	41.03	-29.59	45.95	24.67	54.00	12.97	V
12311.900	37.19	-32.12	39.00	30.31	54.00	16.81	V
12332.433	37.15	-32.39	38.95	30.59	54.00	16.85	V
8192.033	34.10	-34.94	36.90	32.14	54.00	19.90	H
8457.500	33.84	-34.69	37.40	31.13	54.00	20.16	V

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17959.667	41.28	-29.59	45.95	24.92	54.00	12.72	V
17935.467	40.87	-29.59	45.95	24.51	54.00	13.13	V
12333.167	37.42	-32.39	38.95	30.86	54.00	16.58	V
12331.333	37.11	-32.39	38.95	30.55	54.00	16.89	H
5351.104	48.36	-27.82	34.20	41.98	54.00	5.64	V
5350.592	48.06	-27.82	34.20	41.68	54.00	5.94	V

Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17957.100	40.70	-29.59	45.95	24.34	54.00	13.30	H
17938.767	40.55	-29.59	45.95	24.19	54.00	13.45	V
12260.933	36.73	-32.37	38.95	30.15	54.00	17.27	V
12332.800	36.67	-32.39	38.95	30.11	54.00	17.33	H
5458.180	45.51	-27.49	34.20	38.80	54.00	8.49	V
5457.250	45.49	-27.49	34.20	38.78	54.00	8.51	V

Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17934.000	41.19	-29.59	45.95	24.83	54.00	12.81	H
17941.333	40.98	-29.59	45.95	24.62	54.00	13.02	H
12332.800	37.20	-32.39	38.95	30.64	54.00	16.80	V
12332.433	37.11	-32.39	38.95	30.55	54.00	16.89	H
8282.967	34.04	-34.84	37.10	31.77	54.00	19.96	H
8102.567	33.66	-35.06	36.90	31.82	54.00	20.34	V

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17971.033	40.76	-29.59	45.95	24.40	54.00	13.24	V
17960.033	40.66	-29.59	45.95	24.30	54.00	13.34	H
12329.867	36.84	-32.39	38.95	30.28	54.00	17.16	V
12219.867	36.81	-32.12	38.90	30.03	54.00	17.19	V
8309.000	33.78	-34.84	37.10	31.51	54.00	20.22	V
8492.333	33.61	-34.28	37.30	30.59	54.00	20.39	H

802.11n-HT40

Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17961.133	40.87	-29.59	45.95	24.51	54.00	13.13	H
17943.167	40.81	-29.59	45.95	24.45	54.00	13.19	H
12221.700	36.81	-32.12	38.90	30.03	54.00	17.19	V
12332.433	36.76	-32.39	38.95	30.20	54.00	17.24	V
5149.150	51.85	-28.00	34.00	45.85	54.00	2.15	V
5149.190	50.97	-28.00	34.00	44.97	54.00	3.03	V

Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17939.500	41.15	-29.59	45.95	24.79	54.00	12.85	H
17951.233	41.13	-29.59	45.95	24.77	54.00	12.87	V
12332.800	37.46	-32.39	38.95	30.90	54.00	16.54	V
12332.433	37.09	-32.39	38.95	30.53	54.00	16.91	H
8355.933	33.99	-34.93	37.20	31.72	54.00	20.01	H
8285.533	33.84	-34.84	37.10	31.57	54.00	20.16	H

Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17943.167	40.92	-29.59	45.95	24.56	54.00	13.08	H
17840.133	40.55	-29.59	45.95	24.19	54.00	13.45	V
12332.800	36.89	-32.39	38.95	30.33	54.00	17.11	H
12331.333	36.83	-32.39	38.95	30.27	54.00	17.17	H
8346.400	34.04	-34.93	37.20	31.77	54.00	19.96	H
8498.200	33.99	-34.28	37.30	30.97	54.00	20.01	H

Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17862.133	41.06	-29.59	45.95	24.70	54.00	12.94	H
17949.767	40.87	-29.59	45.95	24.51	54.00	13.13	V
12330.967	37.12	-32.39	38.95	30.56	54.00	16.88	H
12329.500	37.01	-32.39	38.95	30.45	54.00	16.99	V
5350.608	52.79	-27.82	34.20	46.41	54.00	1.21	H
5350.360	52.62	-27.82	34.20	46.24	54.00	1.38	H

Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17951.233	41.41	-29.59	45.95	25.05	54.00	12.59	V
17938.033	41.04	-29.59	45.95	24.68	54.00	12.96	V
12302.733	37.41	-32.12	39.00	30.53	54.00	16.59	V
12310.433	37.37	-32.12	39.00	30.49	54.00	16.63	H
5459.485	45.13	-27.49	34.20	38.42	54.00	8.87	V
5459.328	43.82	-27.49	34.20	37.11	54.00	10.18	V

Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17938.033	42.00	-29.59	45.95	25.64	54.00	12.00	V
17972.500	41.05	-29.59	45.95	24.69	54.00	12.95	V
12331.700	37.25	-32.39	38.95	30.69	54.00	16.75	H
12330.967	37.15	-32.39	38.95	30.59	54.00	16.85	H
8494.533	34.31	-34.28	37.30	31.29	54.00	19.69	V
8311.200	34.08	-34.84	37.10	31.81	54.00	19.92	H

Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17976.533	40.87	-29.59	45.95	24.51	54.00	13.13	V
17982.400	40.79	-29.59	45.95	24.43	54.00	13.21	V
12308.600	37.41	-32.12	39.00	30.53	54.00	16.59	H
11992.167	37.24	-32.66	39.00	30.90	54.00	16.76	H
8480.967	34.02	-34.28	37.30	31.00	54.00	19.98	H
8497.100	33.85	-34.28	37.30	30.83	54.00	20.15	V

802.11ac-HT20

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17938.033	41.00	-29.59	45.95	24.64	54.00	13.00	V
17977.267	40.61	-29.59	45.95	24.25	54.00	13.39	H
12330.600	37.09	-32.39	38.95	30.53	54.00	16.91	V
12331.700	36.92	-32.39	38.95	30.36	54.00	17.08	V
5148.320	44.14	-27.79	34.00	37.93	54.00	9.86	V
5146.360	43.90	-27.79	34.00	37.69	54.00	10.10	V

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17972.500	41.11	-29.59	45.95	24.75	54.00	12.89	H
17935.467	40.87	-29.59	45.95	24.51	54.00	13.13	V
12328.767	37.22	-32.39	38.95	30.66	54.00	16.78	H
12310.800	37.06	-32.12	39.00	30.18	54.00	16.94	H
8111.733	33.94	-35.06	36.90	32.10	54.00	20.06	H
8285.533	33.90	-34.84	37.10	31.63	54.00	20.10	V

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.200	40.84	-29.59	45.95	24.48	54.00	13.16	H
17869.100	40.72	-29.59	45.95	24.36	54.00	13.28	V
12332.800	37.18	-32.39	38.95	30.62	54.00	16.82	V
12329.500	36.95	-32.39	38.95	30.39	54.00	17.05	H
8330.267	34.32	-34.93	37.20	32.05	54.00	19.68	H
8497.100	33.93	-34.28	37.30	30.91	54.00	20.07	V

Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.067	40.93	-29.59	45.95	24.57	54.00	13.07	H
17975.800	40.71	-29.59	45.95	24.35	54.00	13.29	H
11988.133	36.98	-32.66	39.00	30.64	54.00	17.02	V
12259.833	36.93	-32.37	38.95	30.35	54.00	17.07	V
8497.100	34.25	-34.28	37.30	31.23	54.00	19.75	H
8332.100	33.85	-34.93	37.20	31.58	54.00	20.15	V

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17937.300	40.79	-29.59	45.95	24.43	54.00	13.21	V
17967.733	40.74	-29.59	45.95	24.38	54.00	13.26	V
12332.800	37.93	-32.39	38.95	31.37	54.00	16.07	H
12332.067	37.10	-32.39	38.95	30.54	54.00	16.90	V
8330.267	33.84	-34.93	37.20	31.57	54.00	20.16	H
8489.033	33.80	-34.28	37.30	30.78	54.00	20.20	H

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17937.300	41.02	-29.59	45.95	24.66	54.00	12.98	H
17938.033	40.73	-29.59	45.95	24.37	54.00	13.27	H
12295.767	36.97	-32.12	39.00	30.09	54.00	17.03	V
12311.167	36.81	-32.12	39.00	29.93	54.00	17.19	H
5350.456	44.83	-27.82	34.20	38.45	54.00	9.17	V
5350.448	44.74	-27.82	34.20	38.36	54.00	9.26	V

Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.800	41.80	-29.59	45.95	25.44	54.00	12.20	H
17940.600	40.89	-29.59	45.95	24.53	54.00	13.11	H
12331.700	36.83	-32.39	38.95	30.27	54.00	17.17	H
12332.800	36.63	-32.39	38.95	30.07	54.00	17.37	H
5455.165	44.51	-27.49	34.20	37.80	54.00	9.49	V
5456.005	44.48	-27.49	34.20	37.77	54.00	9.52	V

Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.800	41.11	-29.59	45.95	24.75	54.00	12.89	V
17954.900	40.52	-29.59	45.95	24.16	54.00	13.48	V
12330.967	36.92	-32.39	38.95	30.36	54.00	17.08	V
12266.800	36.74	-32.37	38.95	30.16	54.00	17.26	V
8279.300	33.55	-34.84	37.10	31.28	54.00	20.45	V
8467.400	33.48	-34.28	37.30	30.46	54.00	20.52	V

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17980.567	41.04	-29.59	45.95	24.68	54.00	12.96	V
17979.100	40.71	-29.59	45.95	24.35	54.00	13.29	V
12332.800	36.93	-32.39	38.95	30.37	54.00	17.07	V
12330.967	36.79	-32.39	38.95	30.23	54.00	17.21	H
8490.500	34.48	-34.28	37.30	31.46	54.00	19.52	V
8479.500	33.78	-34.28	37.30	30.76	54.00	20.22	V

802.11ac-HT40

Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.800	40.72	-29.59	45.95	24.36	54.00	13.28	H
17845.267	40.69	-29.59	45.95	24.33	54.00	13.31	H
12303.100	36.95	-32.12	39.00	30.07	54.00	17.05	H
12331.333	36.88	-32.39	38.95	30.32	54.00	17.12	V
5149.720	52.02	-28.00	34.00	46.02	54.00	1.98	V
5149.320	51.68	-28.00	34.00	45.68	54.00	2.32	V

Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17938.767	41.09	-29.59	45.95	24.73	54.00	12.91	V
17856.633	41.06	-29.59	45.95	24.70	54.00	12.94	V
12313.733	36.85	-32.12	39.00	29.97	54.00	17.15	V
12305.300	36.78	-32.12	39.00	29.90	54.00	17.22	V
8216.600	33.83	-34.94	36.90	31.87	54.00	20.17	V
8180.300	33.72	-34.94	36.90	31.76	54.00	20.28	V

Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17917.867	40.88	-29.59	45.95	24.52	54.00	13.12	V
17979.100	40.61	-29.59	45.95	24.25	54.00	13.39	V
12332.800	37.74	-32.39	38.95	31.18	54.00	16.26	H
12330.233	36.79	-32.39	38.95	30.23	54.00	17.21	H
8494.167	34.06	-34.28	37.30	31.04	54.00	19.94	H
8198.267	33.88	-34.94	36.90	31.92	54.00	20.12	H

Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17938.033	40.70	-29.59	45.95	24.34	54.00	13.30	H
17841.600	40.59	-29.59	45.95	24.23	54.00	13.41	V
12332.800	37.05	-32.39	38.95	30.49	54.00	16.95	V
12328.400	36.95	-32.39	38.95	30.39	54.00	17.05	V
5351.768	52.54	-27.82	34.20	46.16	54.00	1.46	H
5350.288	52.05	-27.82	34.20	45.67	54.00	1.95	H

Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17977.633	41.05	-29.59	45.95	24.69	54.00	12.95	V
17980.567	41.04	-29.59	45.95	24.68	54.00	12.96	H
12330.967	37.43	-32.39	38.95	30.87	54.00	16.57	V
12329.133	37.41	-32.39	38.95	30.85	54.00	16.59	V
5459.320	45.44	-27.49	34.20	38.73	54.00	8.56	V
5459.950	45.25	-27.49	34.20	38.54	54.00	8.75	V

Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17938.033	40.79	-29.59	45.95	24.43	54.00	13.21	V
17847.833	40.66	-29.59	45.95	24.30	54.00	13.34	V
12332.800	37.13	-32.39	38.95	30.57	54.00	16.87	V
12264.233	37.05	-32.37	38.95	30.47	54.00	16.95	V
8419.000	33.97	-34.69	37.40	31.26	54.00	20.03	V
8495.633	33.87	-34.28	37.30	30.85	54.00	20.13	H

Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17955.267	41.56	-29.59	45.95	25.20	54.00	12.44	V
17934.000	40.77	-29.59	45.95	24.41	54.00	13.23	H
12331.700	37.10	-32.39	38.95	30.54	54.00	16.90	H
12310.433	36.89	-32.12	39.00	30.01	54.00	17.11	H
8489.033	34.06	-34.28	37.30	31.04	54.00	19.94	V
9416.333	33.92	-33.60	37.90	29.62	54.00	20.08	V

802.11ac-HT80

Channel 42

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17909.433	41.09	-29.59	45.95	24.73	54.00	12.91	V
17937.300	40.97	-29.59	45.95	24.61	54.00	13.03	V
12259.833	36.84	-32.37	38.95	30.26	54.00	17.16	H
12263.867	36.81	-32.37	38.95	30.23	54.00	17.19	H
5149.140	52.81	-28.00	34.00	46.81	54.00	1.19	V
5149.300	52.53	-28.00	34.00	46.53	54.00	1.47	V

Channel 58

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17976.533	40.53	-29.59	45.95	24.17	54.00	13.47	V
17938.767	40.46	-29.59	45.95	24.10	54.00	13.54	V
12310.433	37.20	-32.12	39.00	30.32	54.00	16.80	V
12332.067	36.94	-32.39	38.95	30.38	54.00	17.06	V
5350.112	52.59	-27.82	34.20	46.21	54.00	1.41	V
5350.136	52.58	-27.82	34.20	46.20	54.00	1.42	V

Channel 106

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17977.267	41.16	-29.59	45.95	24.80	54.00	12.84	V
17979.833	41.01	-29.59	45.95	24.65	54.00	12.99	H
12333.167	37.03	-32.39	38.95	30.47	54.00	16.97	H
12330.967	36.98	-32.39	38.95	30.42	54.00	17.02	H
5457.528	51.91	-27.49	34.20	45.20	54.00	2.09	V
5459.320	51.15	-27.49	34.20	44.44	54.00	2.85	V

Channel 122

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17957.833	40.80	-29.59	45.95	24.44	54.00	13.20	H
17979.833	40.74	-29.59	45.95	24.38	54.00	13.26	V
12267.167	37.51	-32.37	38.95	30.93	54.00	16.49	H
12330.233	37.24	-32.39	38.95	30.68	54.00	16.76	V
8192.033	33.95	-34.94	36.90	31.99	54.00	20.05	H
8056.733	33.75	-34.89	36.90	31.74	54.00	20.25	V

PEAK Results:

802.11a

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17969.567	49.56	-29.59	45.95	33.20	74.00	24.44	V
17914.933	49.26	-29.59	45.95	32.90	74.00	24.74	H
11659.233	45.51	-32.62	39.20	38.93	74.00	28.49	V
11984.467	45.48	-32.66	39.00	39.14	74.00	28.52	H
5148.930	54.77	-28.00	34.00	48.77	74.00	19.23	V
5149.180	54.74	-28.00	34.00	48.74	74.00	19.26	V

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17349.167	49.21	-28.74	43.40	34.55	68.20	18.99	H
16979.200	49.08	-29.68	40.60	38.16	68.20	19.12	V
12009.033	45.55	-32.66	39.00	39.21	74.00	28.45	V
12326.567	44.85	-32.12	39.00	37.97	74.00	29.15	H
8471.433	42.86	-34.28	37.30	39.84	74.00	31.14	H
9804.267	42.78	-33.95	37.90	38.83	68.20	25.42	H

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17932.167	49.40	-29.59	45.95	33.04	74.00	24.60	V
17070.133	49.01	-29.30	41.10	37.21	68.20	19.19	H
12328.033	45.93	-32.39	38.95	39.37	74.00	28.07	V
11749.433	44.93	-32.71	39.20	38.44	74.00	29.07	H
9526.333	43.22	-33.73	37.60	39.35	68.20	24.98	V
8480.967	43.00	-34.28	37.30	39.98	74.00	31.00	H

Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17973.600	49.46	-29.59	45.95	33.10	74.00	24.54	V
17939.500	49.36	-29.59	45.95	33.00	74.00	24.64	V
12333.167	45.51	-32.39	38.95	38.95	74.00	28.49	H
12290.267	45.45	-32.12	39.00	38.57	74.00	28.55	H
10275.433	43.59	-33.82	38.00	39.41	68.20	24.61	V
10001.533	43.51	-34.07	38.00	39.58	68.20	24.69	H

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17955.633	50.79	-29.59	45.95	34.43	74.00	23.21	V
17982.767	49.63	-29.59	45.95	33.27	74.00	24.37	H
12333.167	45.67	-32.39	38.95	39.11	74.00	28.33	H
12018.933	45.32	-32.66	39.00	38.98	74.00	28.68	V
10264.800	43.27	-33.82	38.00	39.09	68.20	24.93	H
8548.800	43.26	-33.81	37.40	39.67	68.20	24.94	H

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17997.433	49.71	-29.59	45.95	33.35	74.00	24.29	H
17988.633	49.03	-29.59	45.95	32.67	74.00	24.97	H
12219.500	46.02	-32.12	38.90	39.24	74.00	27.98	H
12297.967	45.77	-32.12	39.00	38.89	74.00	28.23	H
5351.032	61.14	-27.82	34.20	54.76	74.00	12.86	H
5352.400	60.87	-27.82	34.20	54.49	74.00	13.13	H

Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17934.000	49.53	-29.59	45.95	33.17	74.00	24.47	H
16905.133	49.37	-29.28	40.30	38.35	68.20	18.83	V
12331.333	45.45	-32.39	38.95	38.89	74.00	28.55	V
12332.800	45.44	-32.39	38.95	38.88	74.00	28.56	H
5457.828	54.02	-27.49	34.20	47.31	74.00	19.98	H
5469.850	61.01	-27.49	34.20	54.30	68.20	7.19	H

Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.567	48.98	-29.59	45.95	32.62	74.00	25.02	H
17975.433	48.96	-29.59	45.95	32.60	74.00	25.04	H
12243.333	45.34	-32.37	38.95	38.76	74.00	28.66	V
12323.267	45.02	-32.12	39.00	38.14	74.00	28.98	V
10304.400	43.23	-33.88	38.00	39.11	68.20	24.97	V
9630.100	43.18	-34.18	37.60	39.76	68.20	25.02	H

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17443.400	49.12	-28.70	44.20	33.62	68.20	19.08	V
15955.467	49.06	-29.36	38.30	40.12	74.00	24.94	H
12330.967	45.58	-32.39	38.95	39.02	74.00	28.42	V
12293.567	45.34	-32.12	39.00	38.46	74.00	28.66	V
5725.390	64.91	-27.47	34.10	58.28	68.20	3.29	H
5727.280	64.69	-27.47	34.10	58.06	68.20	3.51	H

802.11n-HT20

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17976.167	49.34	-29.59	45.95	32.98	74.00	24.66	H
17983.133	49.24	-29.59	45.95	32.88	74.00	24.76	V
12266.067	45.51	-32.37	38.95	38.93	74.00	28.49	V
11766.300	45.00	-32.71	39.20	38.51	74.00	29.00	V
5149.840	59.83	-28.00	34.00	53.83	74.00	14.17	H
5149.390	59.23	-28.00	34.00	53.23	74.00	14.77	V

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17478.233	49.53	-29.07	44.55	34.05	68.20	18.67	H
17418.100	49.29	-29.44	43.80	34.93	68.20	18.91	H
12291.000	45.75	-32.12	39.00	38.87	74.00	28.25	V
12332.433	45.57	-32.39	38.95	39.01	74.00	28.43	H
10088.067	43.20	-33.75	38.05	38.90	68.20	25.00	H
10103.833	42.81	-34.28	38.10	38.99	68.20	25.39	H

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17967.367	49.26	-29.59	45.95	32.90	74.00	24.74	V
17862.867	49.14	-29.59	45.95	32.78	74.00	24.86	H
12332.800	45.52	-32.39	38.95	38.96	74.00	28.48	H
12329.867	45.22	-32.39	38.95	38.66	74.00	28.78	H
8882.833	43.29	-34.69	37.80	40.18	68.20	24.91	V
10265.900	42.80	-33.82	38.00	38.62	68.20	25.40	H

Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17958.933	50.16	-29.59	45.95	33.80	74.00	23.84	H
17945.000	49.54	-29.59	45.95	33.18	74.00	24.46	V
12264.967	45.65	-32.37	38.95	39.07	74.00	28.35	V
11153.967	44.99	-32.61	38.60	39.00	74.00	29.01	V
10117.767	43.27	-34.28	38.10	39.45	68.20	24.93	V
8877.333	43.06	-34.69	37.80	39.95	68.20	25.14	V

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17997.433	49.54	-29.59	45.95	33.18	74.00	24.46	H
16672.667	49.35	-29.84	39.60	39.59	68.20	18.85	V
12265.700	45.50	-32.37	38.95	38.92	74.00	28.50	H
12220.967	45.35	-32.12	38.90	38.57	74.00	28.65	H
10250.133	43.43	-33.82	38.00	39.25	68.20	24.77	V
10161.400	43.22	-33.67	38.05	38.84	68.20	24.98	V

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17376.300	49.92	-29.44	43.80	35.56	68.20	18.28	H
17936.933	49.63	-29.59	45.95	33.27	74.00	24.37	V
12292.467	46.34	-32.12	39.00	39.46	74.00	27.66	H
12331.333	45.74	-32.39	38.95	39.18	74.00	28.26	H
5351.104	65.22	-27.82	34.20	58.84	74.00	8.78	V
5350.376	62.82	-27.82	34.20	56.44	74.00	11.18	V

Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17937.667	50.18	-29.59	45.95	33.82	74.00	23.82	V
17938.767	49.63	-29.59	45.95	33.27	74.00	24.37	V
12225.367	45.39	-32.12	38.90	38.61	74.00	28.61	V
12308.233	45.02	-32.12	39.00	38.14	74.00	28.98	H
5459.387	58.04	-27.49	34.20	51.33	74.00	15.96	V
5469.790	64.23	-27.49	34.20	57.52	68.20	3.97	H

Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17982.033	48.88	-29.59	45.95	32.52	74.00	25.12	H
17677.700	48.87	-29.82	45.65	33.04	68.20	19.33	H
12329.500	45.52	-32.39	38.95	38.96	74.00	28.48	H
12307.867	45.43	-32.12	39.00	38.55	74.00	28.57	H
10268.833	43.20	-33.82	38.00	39.02	68.20	25.00	H
10160.667	43.01	-33.67	38.05	38.63	68.20	25.19	V

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.067	49.21	-29.59	45.95	32.85	74.00	24.79	V
17514.167	49.04	-29.07	44.55	33.56	68.20	19.16	V
12326.200	45.38	-32.12	39.00	38.50	74.00	28.62	H
12310.433	45.33	-32.12	39.00	38.45	74.00	28.67	V
5725.618	66.33	-27.47	34.10	59.70	68.20	1.87	V
5725.154	65.81	-27.47	34.10	59.18	68.20	2.39	V

802.11n-HT40

Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17937.667	49.43	-29.59	45.95	33.07	74.00	24.57	V
16948.033	48.89	-29.68	40.60	37.97	68.20	19.31	H
12267.533	45.40	-32.37	38.95	38.82	74.00	28.60	H
12331.333	45.32	-32.39	38.95	38.76	74.00	28.68	H
5149.640	64.19	-28.00	34.00	58.19	74.00	9.81	V
5149.370	63.80	-28.00	34.00	57.80	74.00	10.20	V

Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17939.133	49.52	-29.59	45.95	33.16	74.00	24.48	H
17953.433	49.24	-29.59	45.95	32.88	74.00	24.76	H
12219.500	46.13	-32.12	38.90	39.35	74.00	27.87	H
12220.967	45.79	-32.12	38.90	39.01	74.00	28.21	H
10311.000	43.38	-33.88	38.00	39.26	68.20	24.82	H
9992.000	43.21	-34.00	37.95	39.26	68.20	24.99	V

Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.067	49.64	-29.59	45.95	33.28	74.00	24.36	H
17864.700	49.44	-29.59	45.95	33.08	74.00	24.56	V
12291.000	45.55	-32.12	39.00	38.67	74.00	28.45	H
12261.300	45.33	-32.37	38.95	38.75	74.00	28.67	V
10223.367	43.05	-34.09	38.00	39.14	68.20	25.15	H
8874.767	42.96	-34.69	37.80	39.85	68.20	25.24	H

Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17953.433	49.78	-29.59	45.95	33.42	74.00	24.22	V
17958.567	49.53	-29.59	45.95	33.17	74.00	24.47	V
12262.033	45.47	-32.37	38.95	38.89	74.00	28.53	H
12327.667	45.26	-32.39	38.95	38.70	74.00	28.74	H
5350.608	65.10	-27.82	34.20	58.72	74.00	8.90	H
5351.352	64.92	-27.82	34.20	58.54	74.00	9.08	V

Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17942.800	50.08	-29.59	45.95	33.72	74.00	23.92	V
17411.133	49.82	-29.44	43.80	35.46	68.20	18.38	V
12292.100	46.69	-32.12	39.00	39.81	74.00	27.31	H
12329.867	45.96	-32.39	38.95	39.40	74.00	28.04	H
5459.485	59.24	-27.49	34.20	52.53	74.00	14.76	V
5469.730	65.90	-27.49	34.20	59.19	68.20	2.30	V

Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17965.900	49.75	-29.59	45.95	33.39	74.00	24.25	H
17940.967	49.53	-29.59	45.95	33.17	74.00	24.47	H
11761.167	45.51	-32.71	39.20	39.02	74.00	28.49	H
12331.333	45.48	-32.39	38.95	38.92	74.00	28.52	H
8508.467	43.71	-34.28	37.30	40.69	68.20	24.49	V
9528.900	43.27	-33.73	37.60	39.40	68.20	24.93	V

Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17957.467	49.37	-29.59	45.95	33.01	74.00	24.63	V
17930.700	49.29	-29.59	45.95	32.93	74.00	24.71	H
12306.033	45.99	-32.12	39.00	39.11	74.00	28.01	H
12314.100	45.47	-32.12	39.00	38.59	74.00	28.53	H
5725.092	60.39	-27.47	34.10	53.76	68.20	7.81	V
5725.206	59.76	-27.47	34.10	53.13	68.20	8.44	V

802.11ac-HT20

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17931.067	48.99	-29.59	45.95	32.63	74.00	25.01	V
17961.133	48.84	-29.59	45.95	32.48	74.00	25.16	V
11621.100	45.18	-32.72	39.20	38.70	74.00	28.82	V
12306.033	44.96	-32.12	39.00	38.08	74.00	29.04	V
5142.230	52.83	-27.79	34.00	46.62	74.00	21.17	V
5081.860	52.69	-28.19	33.80	47.08	74.00	21.31	H

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.067	49.19	-29.59	45.95	32.83	74.00	24.81	H
17850.400	49.02	-29.59	45.95	32.66	74.00	24.98	H
12333.167	45.49	-32.39	38.95	38.93	74.00	28.51	V
12296.867	45.29	-32.12	39.00	38.41	74.00	28.71	H
8844.700	43.54	-33.97	37.80	39.71	68.20	24.66	V
8378.300	42.89	-34.42	37.30	40.01	74.00	31.11	H

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16975.900	49.31	-29.68	40.60	38.39	68.20	18.89	V
17972.867	49.23	-29.59	45.95	32.87	74.00	24.77	V
12292.833	45.18	-32.12	39.00	38.30	74.00	28.82	V
12307.867	45.15	-32.12	39.00	38.27	74.00	28.85	H
10133.533	42.93	-34.28	38.10	39.11	68.20	25.27	V
10293.400	42.88	-33.82	38.00	38.70	68.20	25.32	V

Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17973.600	50.32	-29.59	45.95	33.96	74.00	23.68	V
17945.733	49.10	-29.59	45.95	32.74	74.00	24.90	V
12315.567	45.53	-32.12	39.00	38.65	74.00	28.47	V
12330.967	45.33	-32.39	38.95	38.77	74.00	28.67	V
8511.400	43.09	-34.28	37.30	40.07	68.20	25.11	H
8919.500	43.03	-33.35	37.70	38.68	68.20	25.17	V

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17138.333	49.90	-29.31	41.70	37.51	68.20	18.30	H
17961.500	49.64	-29.59	45.95	33.28	74.00	24.36	H
12330.967	45.47	-32.39	38.95	38.91	74.00	28.53	H
12263.500	45.33	-32.37	38.95	38.75	74.00	28.67	H
8242.633	42.96	-34.48	37.00	40.44	74.00	31.04	H
8816.100	42.80	-33.97	37.80	38.97	68.20	25.40	H

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17965.533	49.27	-29.59	45.95	32.91	74.00	24.73	H
17980.567	48.91	-29.59	45.95	32.55	74.00	25.09	V
12332.433	46.42	-32.39	38.95	39.86	74.00	27.58	V
12311.167	46.04	-32.12	39.00	39.16	74.00	27.96	H
5350.336	58.62	-27.82	34.20	52.24	74.00	15.38	V
5354.552	57.72	-27.82	34.20	51.34	74.00	16.28	V

Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17841.233	49.88	-29.59	45.95	33.52	74.00	24.12	H
17977.267	49.40	-29.59	45.95	33.04	74.00	24.60	V
12331.333	45.15	-32.39	38.95	38.59	74.00	28.85	H
12329.500	45.13	-32.39	38.95	38.57	74.00	28.87	V
5457.812	54.16	-27.49	34.20	47.45	74.00	19.84	V
5467.285	59.01	-27.49	34.20	52.30	68.20	9.19	H

Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17961.500	49.36	-29.59	45.95	33.00	74.00	24.64	H
17896.233	49.30	-29.59	45.95	32.94	74.00	24.70	V
11735.867	45.12	-32.71	39.20	38.63	74.00	28.88	H
12262.033	44.99	-32.37	38.95	38.41	74.00	29.01	V
10280.933	43.81	-33.82	38.00	39.63	68.20	24.39	H
10241.700	42.81	-34.09	38.00	38.90	68.20	25.39	H

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17978.733	49.23	-29.59	45.95	32.87	74.00	24.77	H
17859.933	49.18	-29.59	45.95	32.82	74.00	24.82	H
12264.967	45.90	-32.37	38.95	39.32	74.00	28.10	H
12220.967	45.87	-32.12	38.90	39.09	74.00	28.13	V
5726.458	62.94	-27.47	34.10	56.31	68.20	5.26	H
5725.967	62.44	-27.47	34.10	55.81	68.20	5.76	V

802.11ac-HT40

Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17937.300	49.43	-29.59	45.95	33.07	74.00	24.57	V
17843.800	49.21	-29.59	45.95	32.85	74.00	24.79	H
12226.833	46.00	-32.12	38.90	39.22	74.00	28.00	H
12269.733	45.96	-32.37	38.95	39.38	74.00	28.04	V
5148.370	64.81	-27.79	34.00	58.60	74.00	9.19	V
5146.150	64.19	-27.79	34.00	57.98	74.00	9.81	V

Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17965.533	49.28	-29.59	45.95	32.92	74.00	24.72	H
17941.333	48.88	-29.59	45.95	32.52	74.00	25.12	V
12332.433	46.15	-32.39	38.95	39.59	74.00	27.85	H
12237.467	45.31	-32.37	38.95	38.73	74.00	28.69	V
8318.533	43.10	-34.93	37.20	40.83	74.00	30.90	V
10057.267	42.98	-33.75	38.05	38.68	68.20	25.22	V

Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.567	49.28	-29.59	45.95	32.92	74.00	24.72	H
17874.233	49.22	-29.59	45.95	32.86	74.00	24.78	H
12247.367	45.94	-32.37	38.95	39.36	74.00	28.06	V
11357.100	45.22	-33.31	38.85	39.68	74.00	28.78	H
10124.733	43.82	-34.28	38.10	40.00	68.20	24.38	H
8015.667	43.34	-35.07	36.90	41.51	68.20	24.86	H

Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17938.400	49.30	-29.59	45.95	32.94	74.00	24.70	V
16812.733	49.06	-29.24	39.85	38.45	68.20	19.14	V
12267.533	46.34	-32.37	38.95	39.76	74.00	27.66	H
12195.300	45.15	-32.12	38.90	38.37	74.00	28.85	V
5357.128	65.05	-27.82	34.20	58.67	74.00	8.95	H
5350.288	64.57	-27.82	34.20	58.19	74.00	9.43	H

Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17948.300	50.18	-29.59	45.95	33.82	74.00	23.82	V
17353.200	49.72	-28.74	43.40	35.06	68.20	18.48	V
12297.233	46.23	-32.12	39.00	39.35	74.00	27.77	H
11994.367	45.99	-32.66	39.00	39.65	74.00	28.01	V
5459.710	58.59	-27.49	34.20	51.88	74.00	15.41	H
5469.160	66.08	-27.49	34.20	59.37	68.20	2.12	H

Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17978.000	50.06	-29.59	45.95	33.70	74.00	23.94	H
17330.100	49.65	-28.74	43.40	34.99	68.20	18.55	H
12262.033	45.77	-32.37	38.95	39.19	74.00	28.23	V
12295.033	45.48	-32.12	39.00	38.60	74.00	28.52	H
10259.667	44.00	-33.82	38.00	39.82	68.20	24.20	H
8465.567	43.08	-34.28	37.30	40.06	74.00	30.92	H

Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17937.667	49.95	-29.59	45.95	33.59	74.00	24.05	H
17382.900	49.57	-29.44	43.80	35.21	68.20	18.63	V
12330.967	45.64	-32.39	38.95	39.08	74.00	28.36	H
12295.400	45.39	-32.12	39.00	38.51	74.00	28.61	H
5725.521	57.37	-27.47	34.10	50.74	68.20	10.83	V
5727.499	57.06	-27.47	34.10	50.43	68.20	11.14	V

802.11ac-HT80

Channel 42

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17863.967	49.14	-29.59	45.95	32.78	74.00	24.86	V
17439.367	48.84	-28.70	44.20	33.34	68.20	19.36	V
12289.167	46.23	-32.12	39.00	39.35	74.00	27.77	V
12330.967	45.95	-32.39	38.95	39.39	74.00	28.05	V
5149.140	66.03	-28.00	34.00	60.03	74.00	7.97	V
5148.040	64.42	-27.79	34.00	58.21	74.00	9.58	V

Channel 58

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17978.000	49.70	-29.59	45.95	33.34	74.00	24.30	V
17936.200	49.64	-29.59	45.95	33.28	74.00	24.36	V
12240.033	45.73	-32.37	38.95	39.15	74.00	28.27	H
12332.433	45.23	-32.39	38.95	38.67	74.00	28.77	V
5353.424	64.33	-27.82	34.20	57.95	74.00	9.67	V
5354.680	63.78	-27.82	34.20	57.40	74.00	10.22	V

Channel 106

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17939.500	49.76	-29.59	45.95	33.40	74.00	24.24	H
17979.833	49.73	-29.59	45.95	33.37	74.00	24.27	H
12221.333	45.64	-32.12	38.90	38.86	74.00	28.36	V
12258.000	45.63	-32.37	38.95	39.05	74.00	28.37	H
5458.585	65.20	-27.49	34.20	58.49	74.00	8.80	V
5465.267	67.65	-27.49	34.20	60.94	68.20	0.55	H

Channel 122

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17980.567	49.62	-29.59	45.95	33.26	74.00	24.38	H
17905.400	49.51	-29.59	45.95	33.15	74.00	24.49	H
12329.133	45.89	-32.39	38.95	39.33	74.00	28.11	H
12292.467	45.69	-32.12	39.00	38.81	74.00	28.31	V
5744.929	52.97	-27.21	34.00	46.18	68.20	15.23	V
5760.731	52.97	-27.21	34.00	46.18	68.20	15.23	V

A.7. AC Powerline Conducted Emission (150kHz- 30MHz)

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is U =3.10dB, k=2.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE5		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig.58	Fig.59	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE5		
		802.11a	Idle	
0.15 to 0.5	67 56 to 46	Fig.58	Fig.59	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Conclusion: PASS

Test graphs as below:

Traffic:

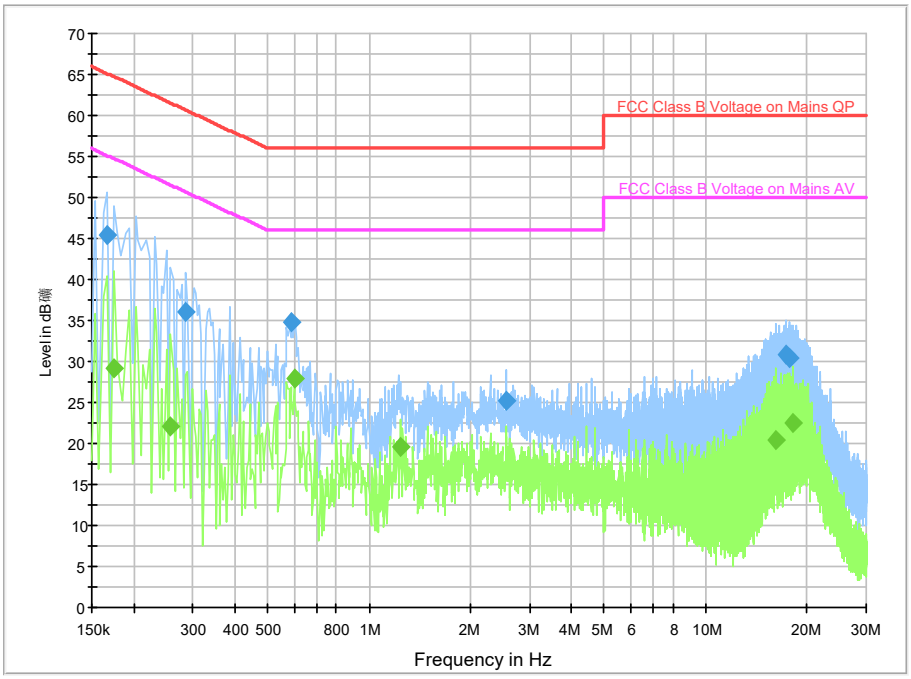


Fig.58 Conducted Emission (802.11a, Ch36, TX)

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	45.5	2000.0	9.000	On	L1	19.8	19.7	65.2
0.286000	35.9	2000.0	9.000	On	N	19.7	24.7	60.6
0.590000	34.7	2000.0	9.000	On	L1	19.7	21.3	56.0
2.558000	25.3	2000.0	9.000	On	L1	19.6	30.7	56.0
17.382000	30.7	2000.0	9.000	On	L1	19.7	29.3	60.0
17.686000	30.4	2000.0	9.000	On	L1	19.7	29.6	60.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	29.2	2000.0	9.000	On	N	19.7	25.6	54.8
0.258000	22.1	2000.0	9.000	On	N	19.7	29.4	51.5
0.598000	28.0	2000.0	9.000	On	L1	19.7	18.0	46.0
1.238000	19.6	2000.0	9.000	On	L1	19.6	26.4	46.0
16.178000	20.5	2000.0	9.000	On	L1	19.7	29.5	50.0
18.094000	22.5	2000.0	9.000	On	L1	19.7	27.5	50.0

Note2: The measurement results showed here are worst cases of the combinations of different cables and chargers

Idle:

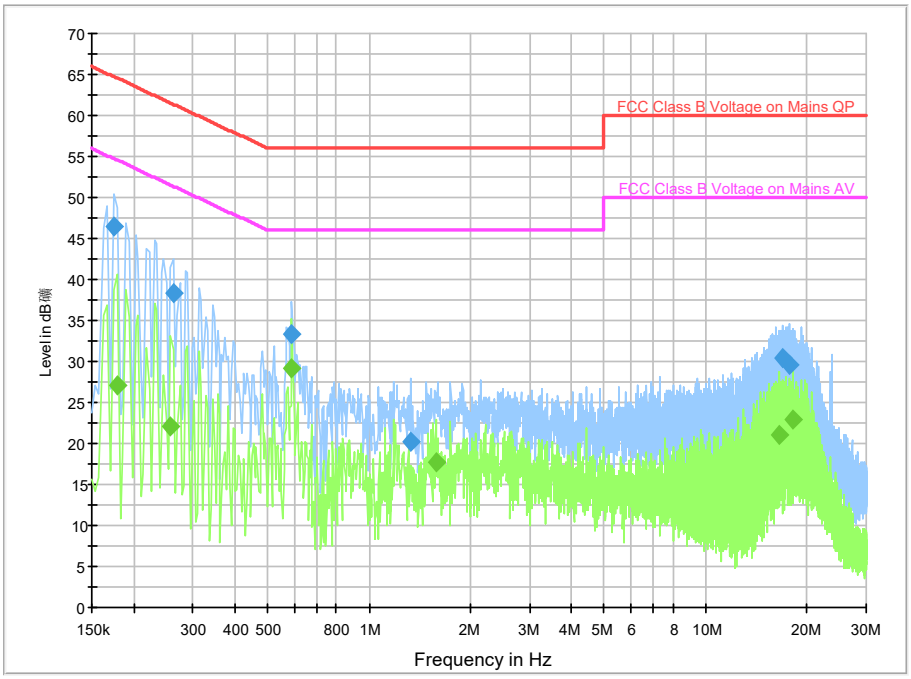


Fig.59 Conducted Emission(802.11a, IDLE)

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	46.4	2000.0	9.000	On	N	19.7	18.3	64.8
0.262000	38.4	2000.0	9.000	On	L1	19.7	23.0	61.4
0.590000	33.4	2000.0	9.000	On	N	19.6	22.6	56.0
1.330000	20.2	2000.0	9.000	On	L1	19.6	35.8	56.0
16.914000	30.4	2000.0	9.000	On	L1	19.7	29.6	60.0
17.714000	29.5	2000.0	9.000	On	L1	19.7	30.5	60.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.178000	27.1	2000.0	9.000	On	L1	19.7	27.5	54.6
0.258000	22.2	2000.0	9.000	On	N	19.7	29.3	51.5
0.590000	29.1	2000.0	9.000	On	L1	19.7	16.9	46.0
1.578000	17.6	2000.0	9.000	On	L1	19.6	28.4	46.0
16.542000	21.0	2000.0	9.000	On	L1	19.7	29.0	50.0
18.174000	22.9	2000.0	9.000	On	L1	19.7	27.1	50.0

Note2: The measurement results showed here are worst cases of the combinations of different cables and chargers

A.8. 99% Occupied bandwidth

Method of Measurement: See ANSI C63.10-2013-clause 12.4.2.

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Step a) through step c) might require iteration to adjust within the specified range.

e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% ofthe total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz

Measurement Result:

Mode	Frequency	99% Occupied bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.60	17.28	P
	5200 MHz	Fig.61	17.22	P
	5240 MHz	Fig.62	17.20	P
802.11n HT20	5180 MHz	Fig.63	18.07	P
	5200 MHz	Fig.64	18.04	P
	5240 MHz	Fig.65	18.00	P
802.11ac HT40	5190 MHz	Fig.66	36.30	P
	5230 MHz	Fig.67	36.33	P
802.11ac HT80	5210 MHz	Fig.68	75.13	P

Conclusion: PASS

Test graphs as below:

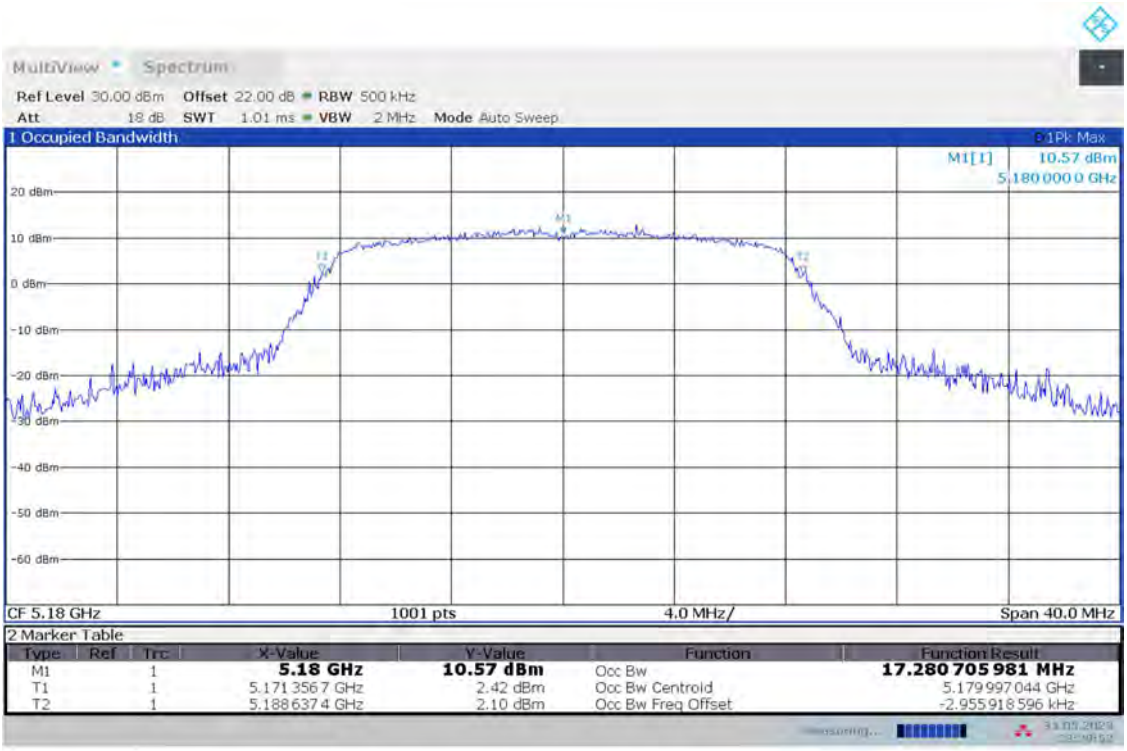


Fig.60 99% Occupied bandwidth (802.11a, 5180MHz)

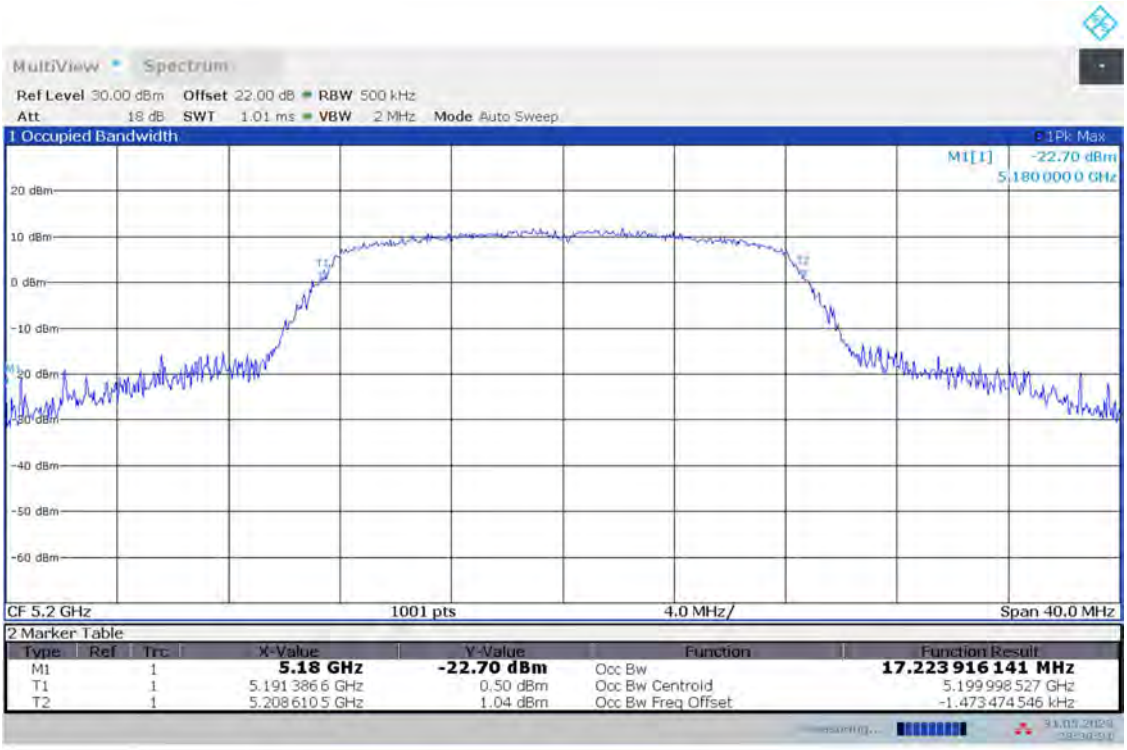


Fig.61 99% Occupied bandwidth (802.11a, 5200MHz)

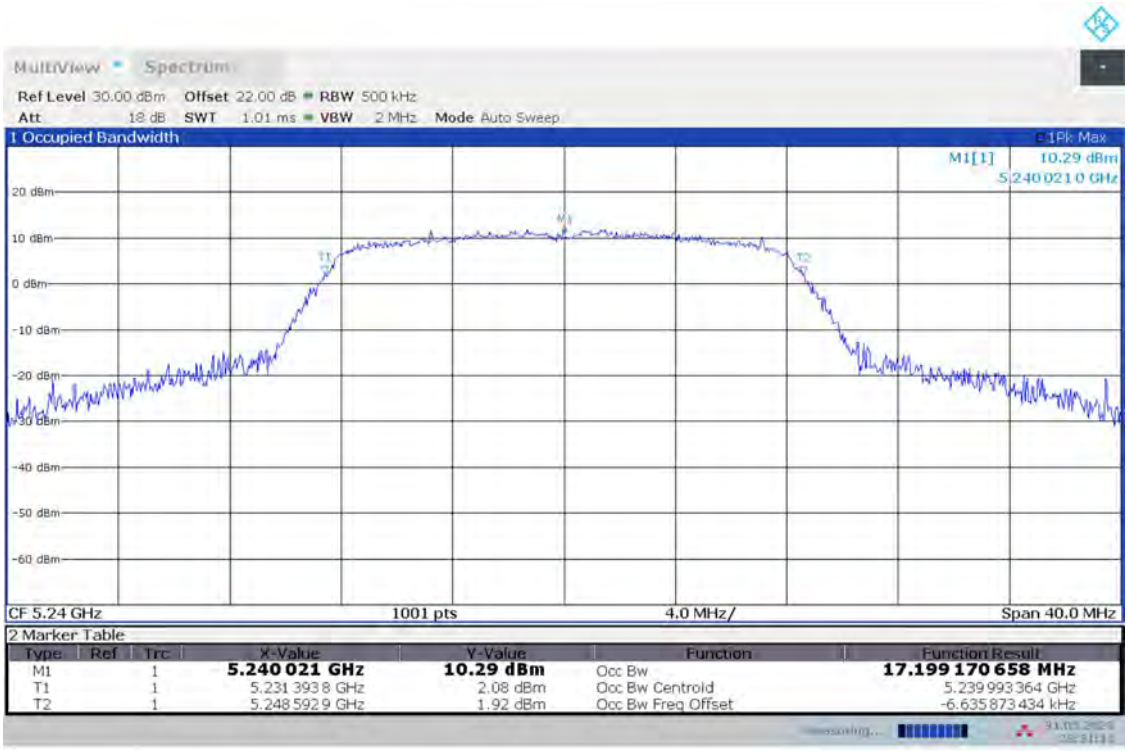


Fig.62 99% Occupied bandwidth (802.11a, 5240MHz)

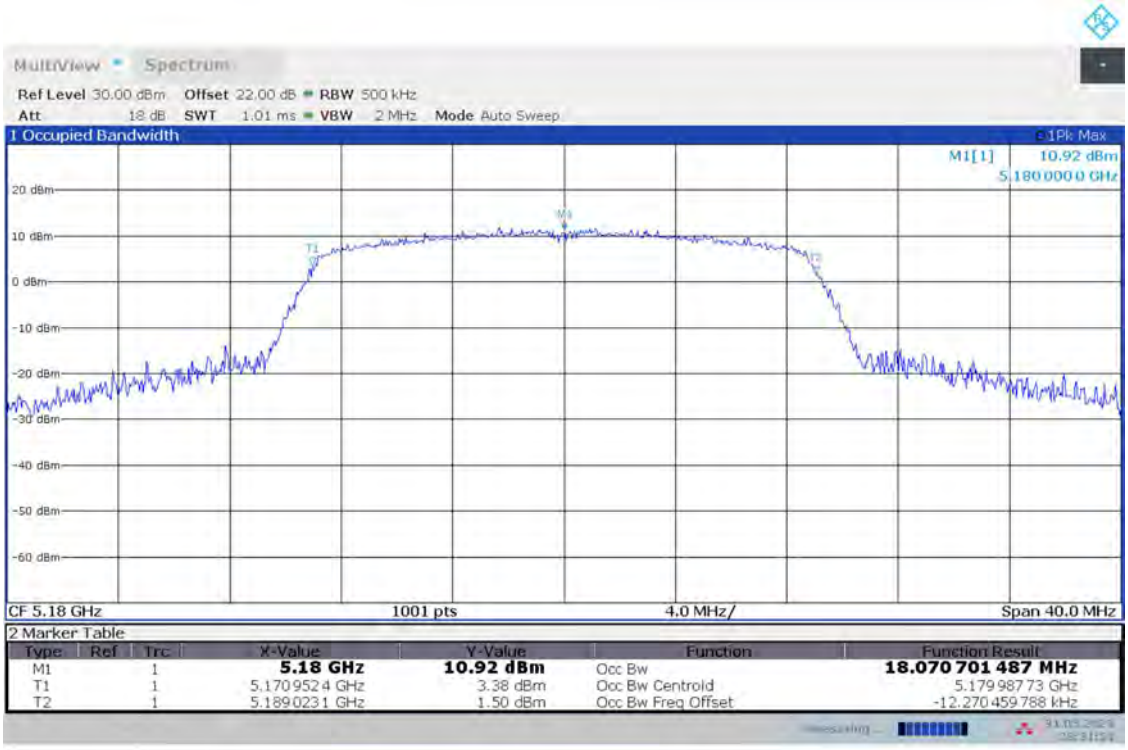


Fig.63 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

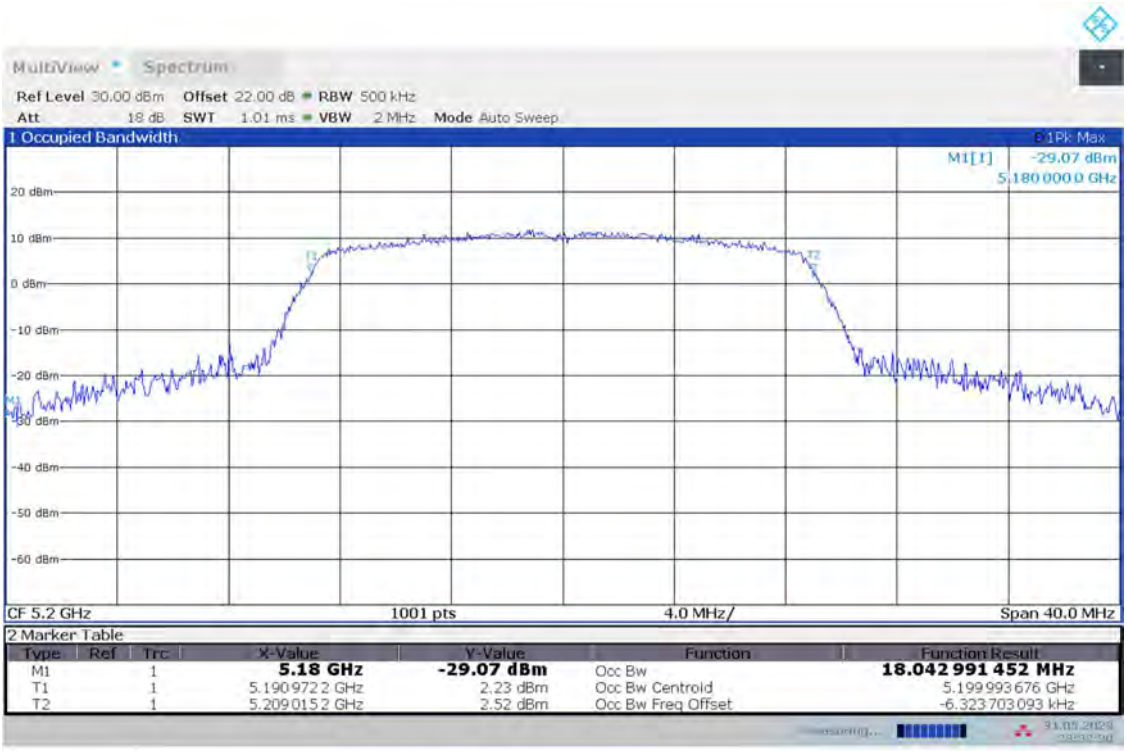


Fig.64 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

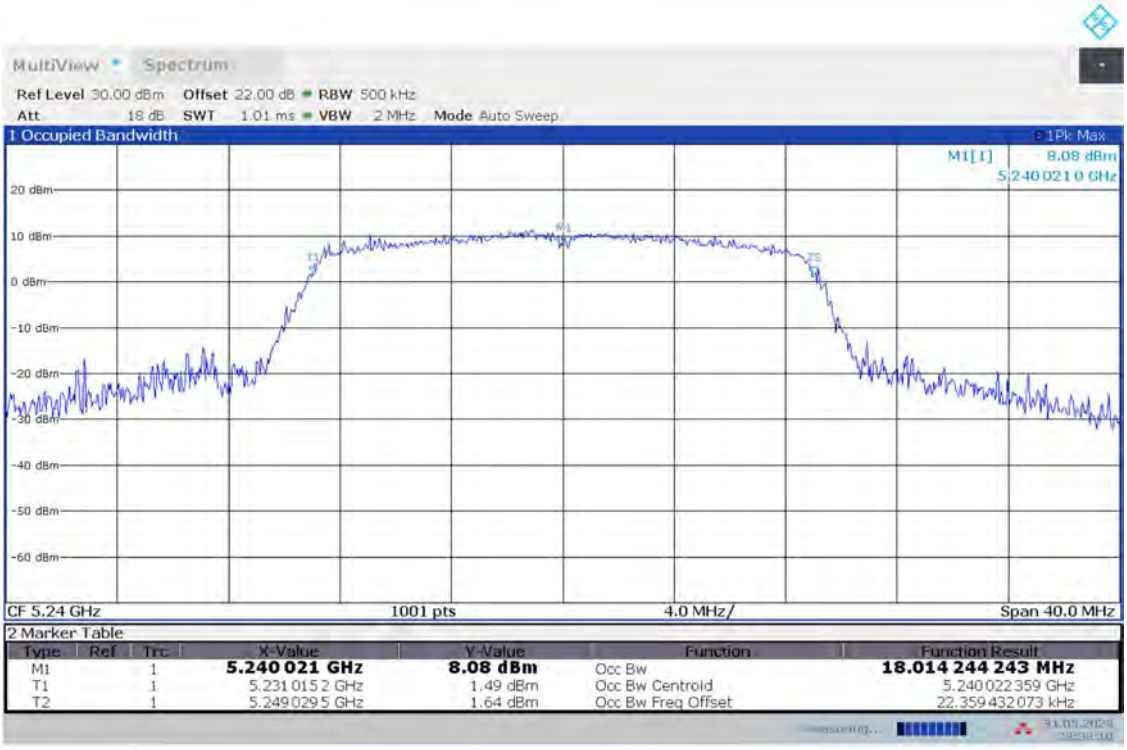
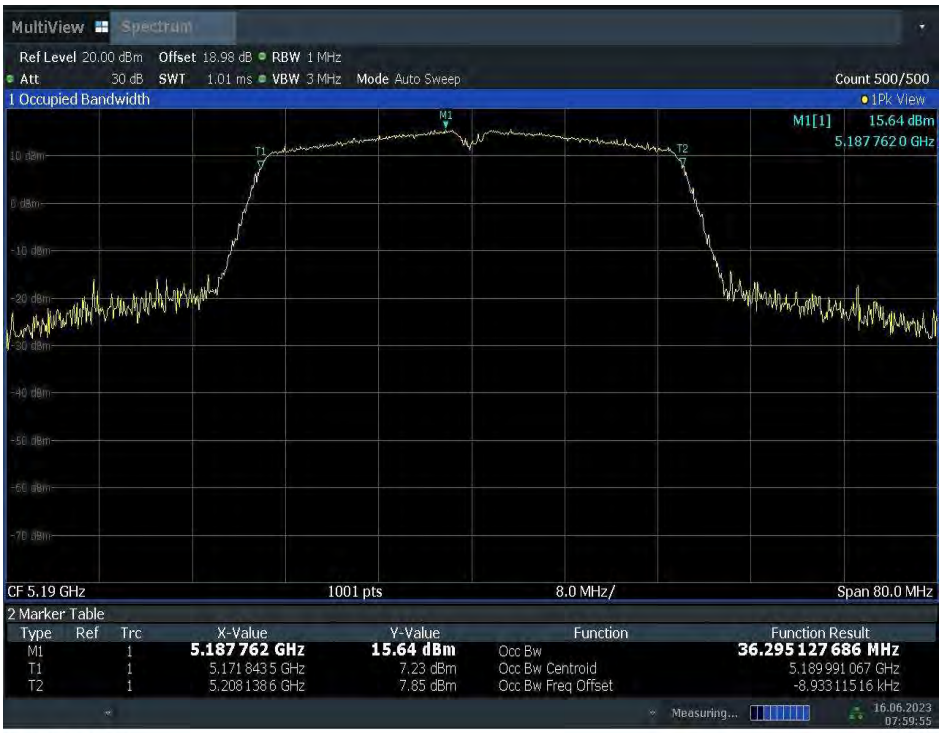
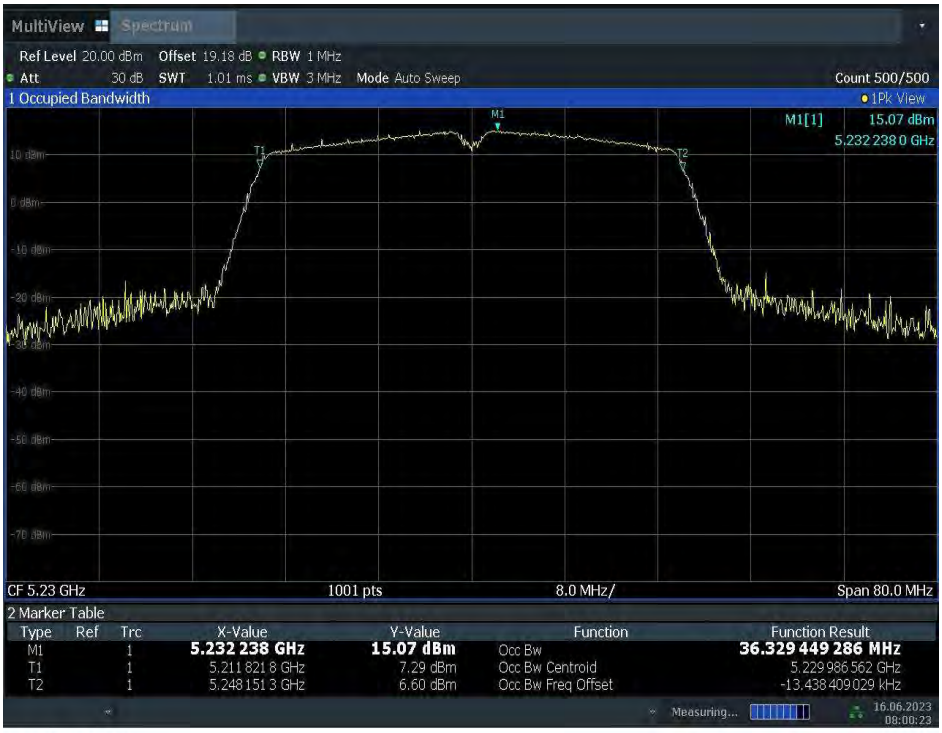


Fig.65 99% Occupied bandwidth (802.11n-HT20, 5240MHz)



07:59:56 16.06.2023

Fig.66 99% Occupied bandwidth (802.11ac-HT40, 5190MHz)



08:00:23 16.06.2023

Fig.67 99% Occupied bandwidth (802.11ac-HT40, 5230MHz)

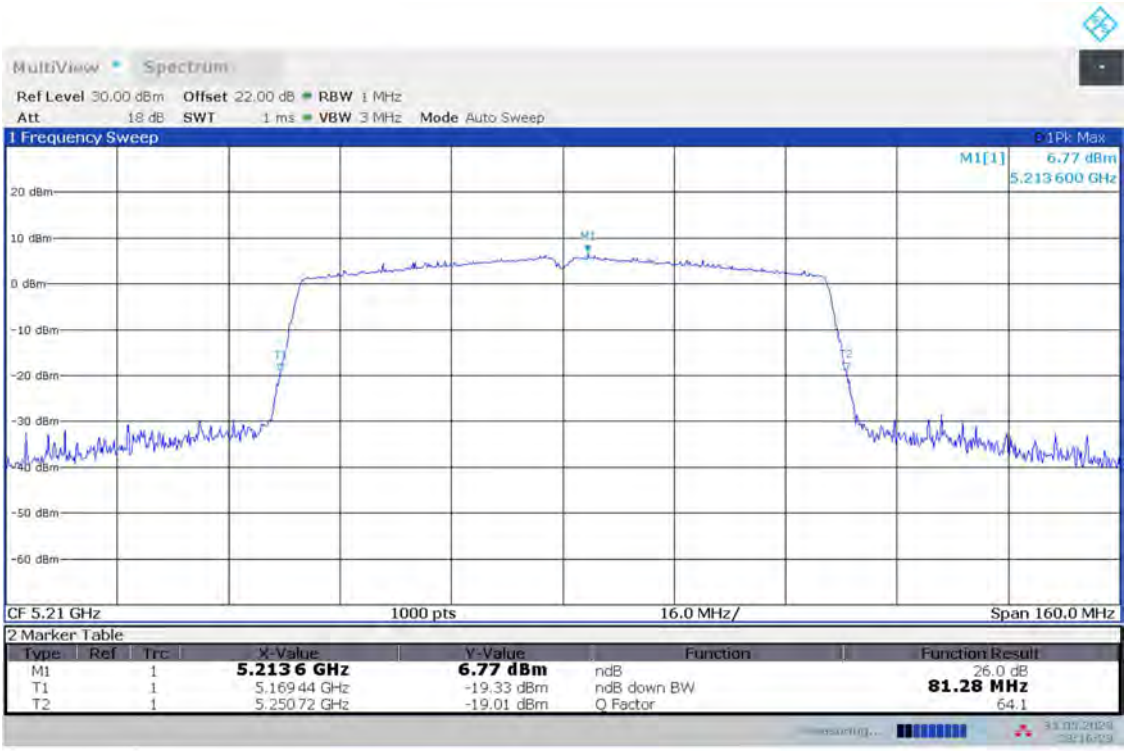


Fig.68 99% Occupied bandwidth (802.11ac-HT80, 5210MHz)

A.9. Power control

A Transmission Power Control mechanism is not required for systems with an e.i.r.p. of less than 27dBm (500 mW).

ANNEX B: EUT parameters

Disclaimer: The antenna gain and worse case provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

ANNEX C: Accreditation Certificate

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ilac-MRA

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2022-10-01 through 2023-09-30
Effective Dates

For the National Voluntary Laboratory Accreditation Program

***** END OF REPORT BODY *****