



FCC PART 15E TEST REPORT No.23T04Z80961-10

for

Wingtech Group (Hong Kong) Limited

5G Mobile Phone

TMRV075G

FCC ID:2APXW-TMRV075G

with

Hardware Version: V1.0

Software Version: TMRV075G_0.03.03

Issued Date: 2024-03-04

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.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
23T04Z80961-10	Rev.0	1st edition	2024-03-04

Note: the latest revision of the test report supersedes all previous version.



CONTENTS

1. TEST LABORATORY	5
1.1. INTRODUCTION & ACCREDITATION	5
1.2. TESTING LOCATION	5
1.3. TESTING ENVIRONMENT	5
1.4. PROJECT DATE	5
1.5. SIGNATURE	6
2. CLIENT INFORMATION	7
2.1. APPLICANT INFORMATION	7
2.2. MANUFACTURER INFORMATION	7
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	8
3.1. ABOUT EUT	8
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	8
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	8
3.4. GENERAL DESCRIPTION	8
3.5. INTERPRETATION OF THE TEST ENVIRONMENT	9
4. REFERENCE DOCUMENTS	9
4.1. DOCUMENTS SUPPLIED BY APPLICANT	9
4.2. REFERENCE DOCUMENTS FOR TESTING	9
5. LABORATORY ENVIRONMENT	9
6. TEST RESULTS	10
6.1. SUMMARY OF TEST RESULTS	10
6.2. STATEMENTS	10
6.3. TEST CONDITIONS	10
7. TEST FACILITIES UTILIZED	11
8. MEASUREMENT UNCERTAINTY	12
8.1 TRANSMITTER OUTPUT POWER	12
8.2 PEAK POWER SPECTRAL DENSITY	12
8.3 26dB EMISSION BANDWIDTH	12
8.4 BAND EDGES COMPLIANCE	12
8.5 SPURIOUS EMISSIONS	12
8.6 RADIATED UNWANTED EMISSION	12
8.7 AC POWER-LINE CONDUCTED EMISSION	12
ANNEX A: DETAILED TEST RESULTS	13
A.1. MEASUREMENT METHOD	13
A.2. MAXIMUM OUTPUT POWER	14
A.2.1 ANTENNA GAIN	14



A.2.2 MAXIMUM OUTPUT POWER-CONDUCTED14

A.3. PEAK POWER SPECTRAL DENSITY (CONDUCTED) 18

A.4. 26dB EMISSION BANDWIDTH (CONDUCTED)20

A.5. RADIATED UNWANTED EMISSION 38

A.5.1 LIMITS 38

A.5.2 TEST SETUP 39

A.5.3 TEST PROCEDURES40

A.5.4 CALCULATION 40

A.6. AC POWERLINE CONDUCTED EMISSION (150kHz- 30MHz)82

A.6.1 SUMMARY 82

A.6.2 METHOD OF MEASUREMENT 82

A.6.3 TEST CONDITION82

A.6.4 TEST SETUP 83

A.7. 99% OCCUPIED BANDWIDTH 86

A.8. POWER CONTROL 91

ANNEX B: EUT PARAMETERS91

ANNEX C: ACCREDITATION CERTIFICATE 92



1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under American Association for Laboratory Accreditation (A2LA) with lab code 7049.01, and is also an FCC accredited test laboratory (CN1349), and ISED accredited test laboratory (CAB identifier:CN0066). The detail accreditation scope can be found on A2LA 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°C

Relative Humidity: 20-75%

1.4. Project date

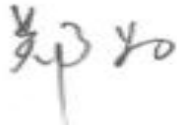
Testing Start Date: 2023-12-27

Testing End Date: 2024-03-04

1.5. Signature

姚兴宇

Yao Xingyu
(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 Ancillary Equipment (AE)

3.1. About EUT

Description	5G Mobile Phone
Model name	TMRV075G
FCC ID	2APXW-TMRV075G
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Nominal Voltage	3.87V
Extreme High Voltage	4.45V
Extreme Low Voltage	3.6V

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT30a	862503070011333/ 862503070011325	V1.0	TMRV075G_0.03.03	2023-12-29
UT88a	862503070027362/ 862503070027370	V1.0	TMRV075G_0.03.03	2024-01-22

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

UT30a is used for Conduction test, UT88a is used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	Manufacture
AE1	Battery1	TM002	SCUD (FUJIAN) Electronics Co., Ltd.
AE2	USB Cable1	USB AM TO TYPE-C2.0	Huizhou Washin Electronics Co., LTD
AE3	PC	/	/

*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 5G Mobile Phone with integrated antenna and inbuilt battery.

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. 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
Radiated Unwanted Emission	15.407, 15.205, 15.209	/	P
AC Powerline Conducted Emission	15.107, 15.207	/	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 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.

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°C
Voltage	3.87V
Humidity	44%

7. Test Facilities 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	2024-07-04
2	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2024-03-06
3	Test Receiver	ESCI	100344	R&S	1 year	2024-03-20
4	LISN	ENV216	101200	R&S	1 year	2024-07-04
5	Attenuator	10dB/2W	/	Rosenberger	/	/
6	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESW44	103023	R&S	1 year	2024-07-08
2	EMI Antenna	VULB 9163	01222	SCHWARZBECK	1 year	2024-02-28
3	EMI Antenna	3115	6914	ETS-Lindgren	1 year	2024-04-25
4	EMI Antenna	3116	2661	ETS-Lindgren	1 year	2024-03-28

※ Note: The EMI Antenna with series number of 01222 and 2661 did not exceed the CAL.DUE.DATE when used.

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 26dB Emission 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)
$30\text{MHz} \leq f \leq 2\text{GHz}$	1.22
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	1.22
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.22
$8\text{GHz} \leq f \leq 12.75\text{GHz}$	1.51
$12.75\text{GHz} \leq f \leq 26\text{GHz}$	1.51
$26\text{GHz} \leq f \leq 40\text{GHz}$	1.59

8.6 Radiated Unwanted Emission

Frequency Range	Uncertainty(dB) (k=2)
9kHz-30MHz	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	4.72
$1\text{GHz} \leq f \leq 18\text{GHz}$	4.84
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.12

8.7 AC Power-line Conducted Emission

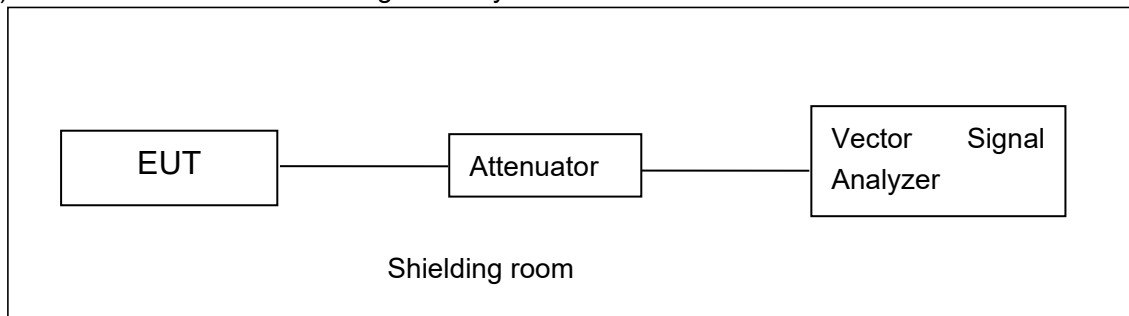
Measurement Uncertainty : 3.08dB,k=2

ANNEX A: Detailed Test 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

Measurement performed according to Clause 6.4, 6.5, 6.6 in ANSI C63.10-2013 and II.G.4, II.G.5, II.G.6 in KDB 789033.

The radiated emission test is performed in semi-anechoic chamber. The EUT was placed on a non-conductive table with 80cm above the ground plane for measurement below 1GHz and 1.5m above the ground plane for measurement above 1GHz. The measurement antenna was placed at a distance of 3 meters from the EUT. 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 from 0° to 360° and the measurement antenna is moved from 1m to 4m to get the maximization result. The maximization process was repeated with the EUT positioned in each of its three orthogonal orientations

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 measurement method SA-2 is made according to KDB 789033

A.2.1 Antenna Gain

Antenna gain is 0.1dBi and the value is supplied by the applicant or manufacturer.

A.2.2 Maximum output Power-Conducted

EUT ID: UT30a

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	19.79	/	/	/	/	/	/	/
	5200MHz	19.77	/	/	/	/	/	/	/
	5240MHz	19.83	/	/	/	/	/	/	/
	5260MHz	19.74	/	/	/	/	/	/	/
	5280MHz	19.76	/	/	/	/	/	/	/
	5320MHz	19.75	/	/	/	/	/	/	/
	5500MHz	19.54	/	/	/	/	/	/	/
	5580MHz	19.53	/	/	/	/	/	/	/
	5700MHz	19.52	/	/	/	/	/	/	/
5720MHz	19.55	/	/	/	/	/	/	/	

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	19.00	/	/	/	/	/	/	/
	5200MHz	19.44	/	/	/	/	/	/	/
	5240MHz	19.45	/	/	/	/	/	/	/
	5260MHz	19.55	/	/	/	/	/	/	/
	5280MHz	19.36	/	/	/	/	/	/	/
	5320MHz	19.11	/	/	/	/	/	/	/
	5500MHz	19.34	/	/	/	/	/	/	/

	5580MHz	19.18	/	/	/	/	/	/	/
	5700MHz	19.47	/	/	/	/	/	/	/
	5720MHz	19.11	/	/	/	/	/	/	/

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

802.11ac-VHT20 mode

Mode	Frequency	Test Result (dBm)								
		Data Rate								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
802.11ac (VHT20)	5180MHz	16.32	/	/	/	/	/	/	/	/
	5200MHz	16.80	/	/	/	/	/	/	/	/
	5240MHz	17.11	/	/	/	/	/	/	/	/
	5260MHz	16.97	/	/	/	/	/	/	/	/
	5280MHz	16.78	/	/	/	/	/	/	/	/
	5320MHz	16.62	/	/	/	/	/	/	/	/
	5500MHz	16.90	/	/	/	/	/	/	/	/
	5580MHz	16.70	/	/	/	/	/	/	/	/
	5700MHz	16.94	/	/	/	/	/	/	/	/
	5720MHz	16.45	/	/	/	/	/	/	/	/

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	16.16	/	/	/	/	/	/	/
	5230MHz	16.57	/	/	/	/	/	/	/
	5270MHz	16.56	/	/	/	/	/	/	/
	5310MHz	16.49	/	/	/	/	/	/	/
	5510MHz	16.47	/	/	/	/	/	/	/
	5550MHz	16.55	/	/	/	/	/	/	/
	5670MHz	16.02	/	/	/	/	/	/	/
	5710MHz	16.59	/	/	/	/	/	/	/

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

802.11ac-VHT40 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (VHT40)	5190MHz	15.11	/	/	/	/	/	/	/	/	/
	5230MHz	15.48	/	/	/	/	/	/	/	/	/
	5270MHz	15.45	/	/	/	/	/	/	/	/	/
	5310MHz	15.32	/	/	/	/	/	/	/	/	/
	5510MHz	15.43	/	/	/	/	/	/	/	/	/
	5550MHz	15.50	/	/	/	/	/	/	/	/	/
	5670MHz	15.01	/	/	/	/	/	/	/	/	/
5710MHz	15.53	/	/	/	/	/	/	/	/	/	

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

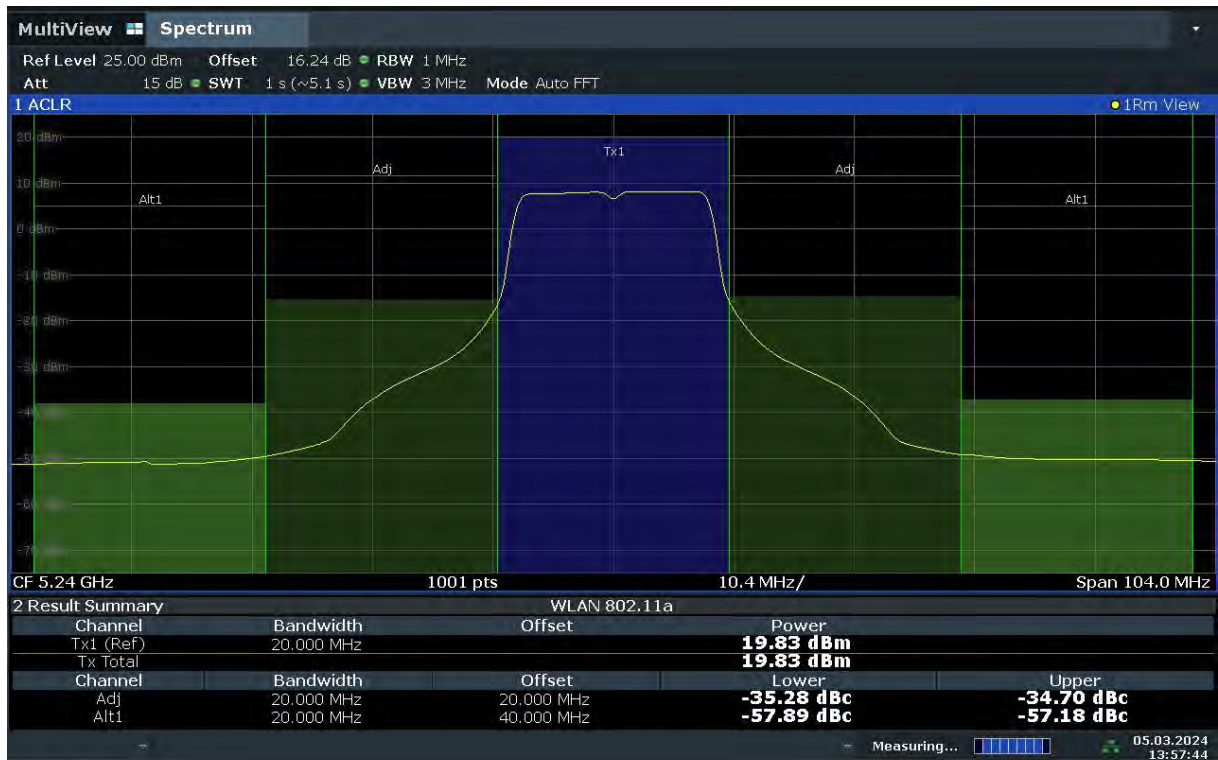
802.11ac-VHT80 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (VHT80)	5210MHz	15.62	/	/	/	/	/	/	/	/	/
	5290MHz	15.74	/	/	/	/	/	/	/	/	/
	5530MHz	15.80	/	/	/	/	/	/	/	/	/
	5610MHz	15.00	/	/	/	/	/	/	/	/	/
	5690MHz	15.48	/	/	/	/	/	/	/	/	/

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

Mode	802.11a	802.11n20	802.11ac20	802.11n40	802.11ac40	802.11ac80
Duty Cycle	98%	98%	98%	98%	98%	98%



13:57:45 05.03.2024

Maximum output Power: 11a CH48

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

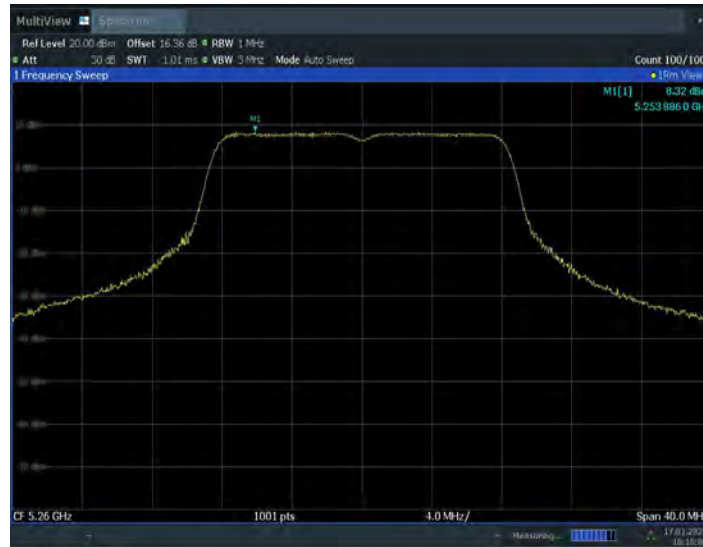
The output power measurement method Section F is made according to KDB 789033

EUT ID: UT30a

Measurement Results:

Mode	Frequency	Power Spectral Density (dBm/MHz)	Conclusion
802.11a	5180 MHz	7.78	P
	5200 MHz	8.19	P
	5240 MHz	8.12	P
	5260 MHz	8.32	P
	5280 MHz	8.11	P
	5320 MHz	8.00	P
	5500 MHz	7.99	P
	5580 MHz	8.01	P
	5700 MHz	8.23	P
	5720 MHz	8.29	P
802.11n HT20	5180 MHz	7.46	P
	5200 MHz	7.86	P
	5240 MHz	8.03	P
	5260 MHz	7.96	P
	5280 MHz	7.72	P
	5320 MHz	7.62	P
	5500 MHz	7.64	P
	5580 MHz	7.55	P
	5700 MHz	7.92	P
	5720 MHz	7.80	P
802.11n HT40	5190 MHz	1.71	P
	5230 MHz	2.25	P
	5270 MHz	2.19	P
	5310 MHz	1.90	P
	5510 MHz	1.99	P
	5550 MHz	1.99	P
	5670 MHz	1.81	P
	5710 MHz	2.12	P
802.11ac VHT80	5210 MHz	-1.38	P
	5290 MHz	-1.96	P

	5530 MHz	-1.66	P
	5610 MHz	-2.63	P
	5690 MHz	-2.17	P



16:16:07 17.01.2024

Peak Power Spectral Density:11a CH52

Conclusion: PASS

A.4. 26dB Emission 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
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EUT ID: UT30a

Measurement Result:

Mode	Frequency	26dB Emission Bandwidth (MHz)		conclusion
		Fig.	Value	
802.11a	5180 MHz	Fig.1	22.00	P
	5200 MHz	Fig.2	21.28	P
	5240 MHz	Fig.3	21.92	P
	5260 MHz	Fig.4	22.00	P
	5280 MHz	Fig.5	21.96	P
	5320 MHz	Fig.6	22.08	P
	5500 MHz	Fig.7	21.60	P
	5580 MHz	Fig.8	21.72	P
	5700 MHz	Fig.9	22.28	P
	5720 MHz	Fig.10	21.84	P
802.11n HT20	5180 MHz	Fig.11	23.40	P
	5200 MHz	Fig.12	22.80	P
	5240 MHz	Fig.13	22.84	P
	5260 MHz	Fig.14	23.56	P
	5280 MHz	Fig.15	22.60	P
	5320 MHz	Fig.16	22.84	P
	5500 MHz	Fig.17	22.68	P
	5580 MHz	Fig.18	23.28	P
	5700 MHz	Fig.19	22.68	P
	5720 MHz	Fig.20	22.92	P
802.11n HT40	5190 MHz	Fig.21	42.96	P
	5230 MHz	Fig.22	42.96	P
	5270 MHz	Fig.23	42.96	P
	5310 MHz	Fig.24	42.96	P
	5510 MHz	Fig.25	42.96	P
	5550 MHz	Fig.26	42.96	P
	5670 MHz	Fig.27	43.20	P
	5710 MHz	Fig.28	42.88	P
802.11ac	5210MHz	Fig.29	86.40	P

VHT80	5290MHz	Fig.30	86.56	P
	5530MHz	Fig.31	86.40	P
	5610 MHz	Fig.32	86.56	P
	5690MHz	Fig.33	86.40	P

Test graphs as below:



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



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



16:14:37 17.01.2024

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



16:15:34 17.01.2024

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



16:16:31 17/01/2024

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

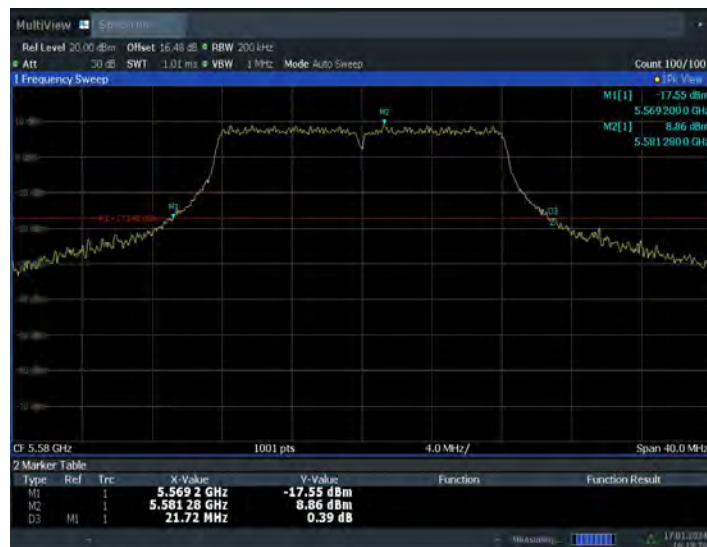


16:17:24 17/01/2024

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



16:18:31 17/01/2024

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


16:19:27 17/01/2024

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



16:22:02 17.01.2024

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



16:23:11 17.01.2024

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

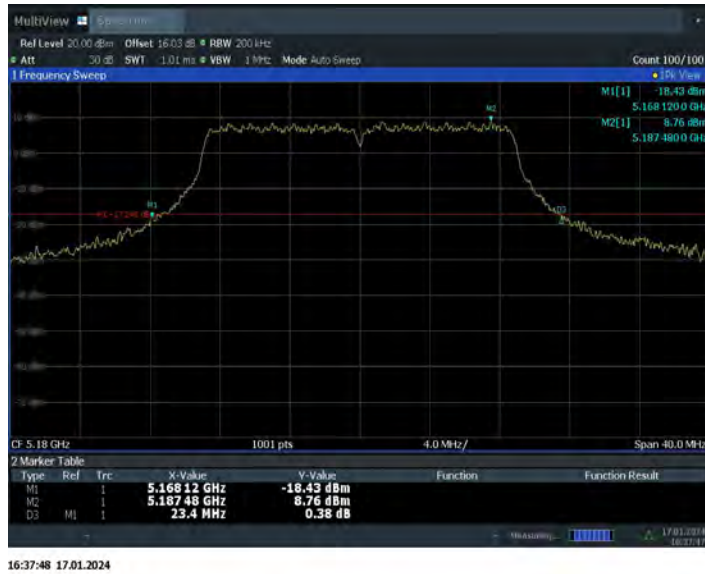


Fig.11 26dB Emission Bandwidth (802.11n-HT20, 5180MHz)



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

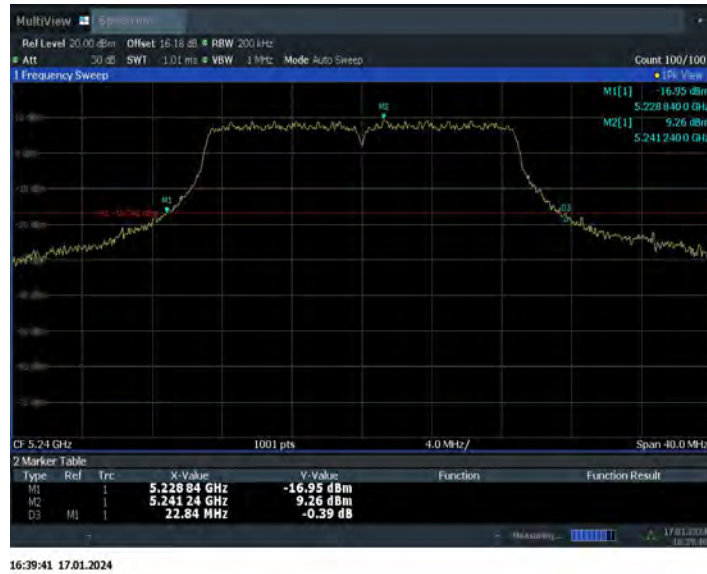


Fig.13 26dB Emission Bandwidth (802.11n-HT20, 5240MHz)



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



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



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



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



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



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



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



17:15:25 17.01.2024

Fig.21 26dB Emission Bandwidth (802.11n-HT40, 5190MHz)


17:16:27 17.01.2024

Fig.22 26dB Emission Bandwidth (802.11n-HT40, 5230MHz)

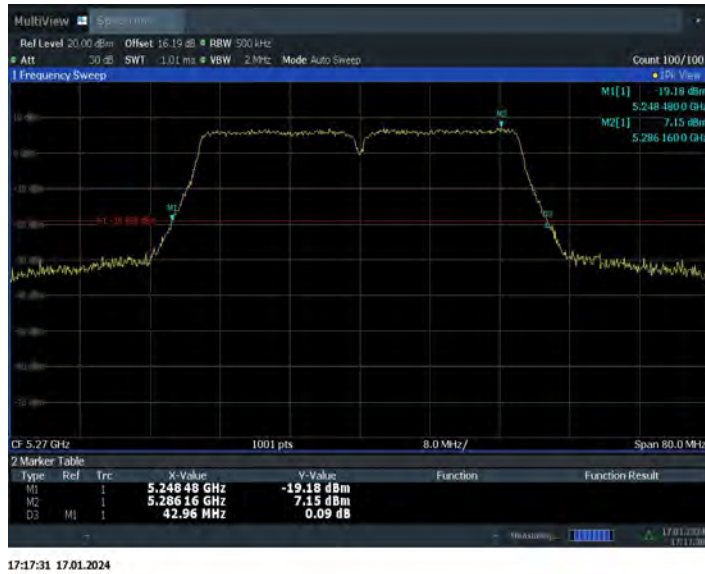


Fig.23 26dB Emission Bandwidth (802.11n-HT40, 5270MHz)



Fig.24 26dB Emission Bandwidth (802.11n-HT40, 5310MHz)



17:19:23 17.01.2024

Fig.25 26dB Emission Bandwidth (802. 11n-HT40, 5510MHz)


17:20:21 17.01.2024

Fig.26 26dB Emission Bandwidth (802. 11n-HT40, 5550MHz)



17:21:22 17.01.2024

Fig.27 26dB Emission Bandwidth (802. 11n-HT40, 5670MHz)


17:22:22 17.01.2024

Fig.28 26dB Emission Bandwidth (802. 11n-HT40, 5710MHz)



Fig.29 26dB Emission Bandwidth (802. 11ac-VHT80, 5210MHz)



Fig.30 26dB Emission Bandwidth (802. 11ac-VHT80, 5290MHz)

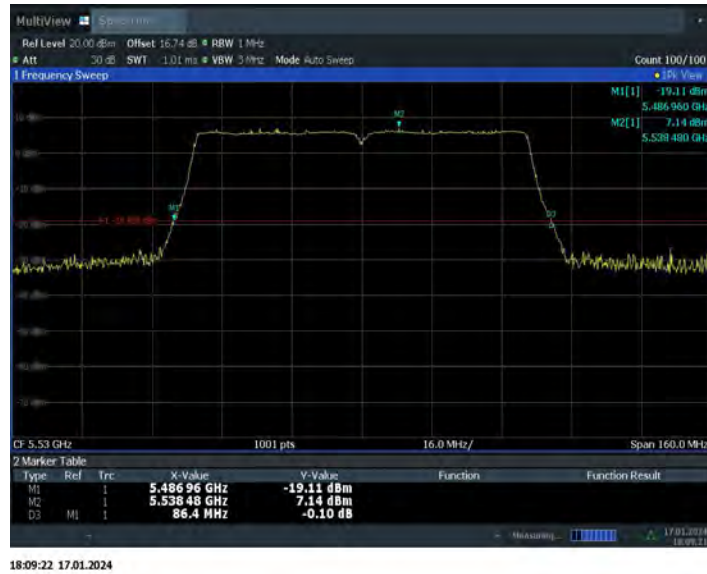


Fig.31 26dB Emission Bandwidth (802. 11ac-VHT80, 5530MHz)



Fig.32 26dB Emission Bandwidth (802. 11ac-VHT80, 5610MHz)



Fig.33 26dB Emission Bandwidth (802. 11ac-VHT80, 5690MHz)

Conclusion: PASS

A.5. Radiated Unwanted Emission

A.5.1 Limits

Unwanted Emissions in the unrestricted bands shall not exceed the limits that shown in 15.407:

Standard	Limit
FCC 47 CFR Part 15.407	(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

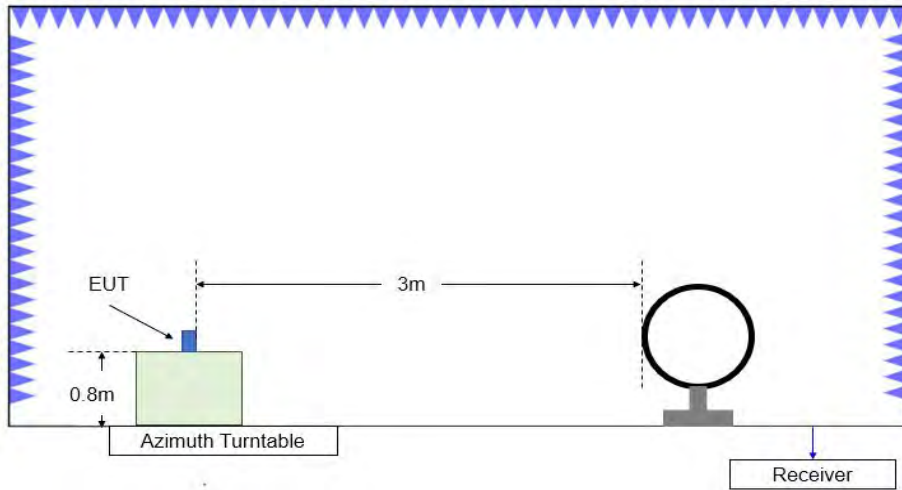
In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

Frequency (MHz)	Field strength(μ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

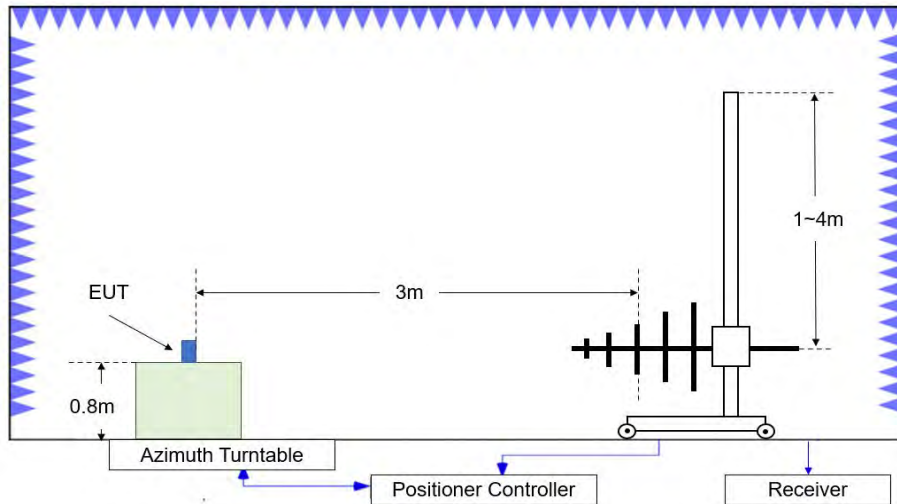
Frequency of emission (MHz)	Field strength (μ V/m)	Field strength (dBuV/m)	Measurement distance (m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Note: When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor (as defined in KDB 789033 II.G.2.d).

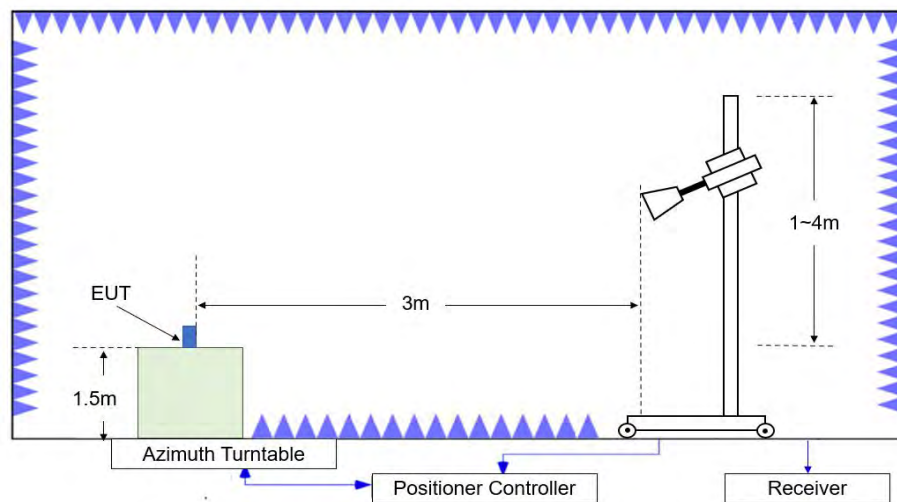
A.5.2 Test setup



Test Site Diagram (9kHz-30MHz)



Test Site Diagram (30MHz-1GHz)



Test Site Diagram (1GHz-40GHz)

A.5.3 Test Procedures

Radiated unwanted emissions from the EUT were measured according to ANSI C63.10 and KDB 789033 D02 v02r01.

Test setting

Frequency of emission (MHz)	RBW/VBW
30-1000	100kHz/300kHz
1000-4000	1MHz/3MHz
4000-18000	1MHz/3MHz
18000-26500	1MHz/3MHz
26500-40000	1MHz/3MHz

A.5.4 Calculation

1. The measurement results reported below is calculated by:

Measurement Results (dB μ V/m) = $P_{\text{measurement}}$ (dB μ V) + Cable Loss(dB) + Antenna Factor (dB/m)

Where: $P_{\text{measurement}}$ is the field strength recorded from the instrument

2. Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20 \log(D) + 104.77$$

Where:

E is the field strength in dB μ V/m

D is the measurement distance in meters

EIRP is the equivalent isotropically radiated power in dBm

Test note

1. The EUT is operating at its maximum duty cycle and its maximum power control level.
2. Investigation has been done on all modes and modulations/data rates. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.
3. Spurious emissions for all channels were investigated and almost the same below 1GHz. According to FCC 47 CFR §15.31, emission levels are not report much lower than the limit by over 20dB
4. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept.
5. EUT in each of three orthogonal axis emissions had been tested out only the worst case (axis data) recorded in the report.
6. Measurement frequencies were performed from 9 kHz to the 10th harmonic of highest fundamental frequency or 40GHz, whichever is lower.
7. No spurious emissions were detected within 20dB of the limit below 30MHz. OFS and semi-chamber comparison testing had been performed and the result came out very similar. (KDB 414788)

Measurement Results:
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)
17935.833	41.26	-29.59	45.95	24.90	54.00	12.74	V
17954.167	41.26	-29.59	45.95	24.90	54.00	12.74	H
12306.767	38.06	-32.12	39.00	31.18	54.00	15.94	V
12310.433	37.73	-32.12	39.00	30.85	54.00	16.27	H
5148.640	44.93	-28.00	34.00	38.93	54.00	9.07	H
5148.510	44.67	-27.79	34.00	38.46	54.00	9.33	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)
17910.533	41.17	-29.59	45.95	24.81	54.00	12.83	H
17934.733	41.11	-29.59	45.95	24.75	54.00	12.89	H
12332.800	38.26	-32.39	38.95	31.70	54.00	15.74	H
12288.433	37.76	-32.12	39.00	30.88	54.00	16.24	V
8499.300	33.61	-34.28	37.30	30.59	54.00	20.39	H
8485.733	33.35	-34.28	37.30	30.33	54.00	20.65	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)
17939.867	41.35	-29.59	45.95	24.99	54.00	12.65	V
17951.233	41.28	-29.59	45.95	24.92	54.00	12.72	H
12330.967	38.29	-32.39	38.95	31.73	54.00	15.71	H
12331.700	38.27	-32.39	38.95	31.71	54.00	15.73	V
8288.100	33.65	-34.84	37.10	31.38	54.00	20.35	V
8496.733	33.61	-34.28	37.30	30.59	54.00	20.39	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)
17935.467	41.23	-29.59	45.95	24.87	54.00	12.77	V
17946.833	41.17	-29.59	45.95	24.81	54.00	12.83	V
12331.700	37.92	-32.39	38.95	31.36	54.00	16.08	V
12332.800	37.81	-32.39	38.95	31.25	54.00	16.19	V
8286.633	33.24	-34.84	37.10	30.97	54.00	20.76	V
8491.967	33.02	-34.28	37.30	30.00	54.00	20.98	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)
17871.667	41.26	-29.59	45.95	24.90	54.00	12.74	H
17943.533	41.15	-29.59	45.95	24.79	54.00	12.85	H
12332.433	38.22	-32.39	38.95	31.66	54.00	15.78	V
12333.167	37.76	-32.39	38.95	31.20	54.00	16.24	V
8494.900	33.65	-34.28	37.30	30.63	54.00	20.35	V
8498.933	33.64	-34.28	37.30	30.62	54.00	20.36	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)
17937.667	41.48	-29.59	45.95	25.12	54.00	12.52	V
17937.300	41.33	-29.59	45.95	24.97	54.00	12.67	H
12329.867	37.90	-32.39	38.95	31.34	54.00	16.10	H
12328.400	37.85	-32.39	38.95	31.29	54.00	16.15	V
5357.352	43.57	-27.82	34.20	37.19	54.00	10.43	V
5351.064	43.35	-27.82	34.20	36.97	54.00	10.65	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)
17936.933	41.21	-29.59	45.95	24.85	54.00	12.79	V
17910.167	40.92	-29.59	45.95	24.56	54.00	13.08	V
12330.233	38.09	-32.39	38.95	31.53	54.00	15.91	V
12330.967	38.00	-32.39	38.95	31.44	54.00	16.00	H
5458.075	43.28	-27.49	34.20	36.57	54.00	10.72	H
5446.922	42.71	-27.49	34.20	36.00	54.00	11.29	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)
17976.167	41.12	-29.59	45.95	24.76	54.00	12.88	V
17946.833	40.96	-29.59	45.95	24.60	54.00	13.04	H
12328.033	38.14	-32.39	38.95	31.58	54.00	15.86	H
12288.433	37.68	-32.12	39.00	30.80	54.00	16.32	H
7466.400	35.15	-35.20	36.50	33.85	54.00	18.85	V
8495.633	33.58	-34.28	37.30	30.56	54.00	20.42	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)
17982.033	41.21	-29.59	45.95	24.85	54.00	12.79	H
17902.100	41.10	-29.59	45.95	24.74	54.00	12.90	V
12310.433	38.16	-32.12	39.00	31.28	54.00	15.84	V
12288.067	38.02	-32.12	39.00	31.14	54.00	15.98	V
8497.833	33.76	-34.28	37.30	30.74	54.00	20.24	H
8432.200	33.46	-34.69	37.40	30.75	54.00	20.54	H

Channel 144

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)
17908.700	41.51	-29.59	45.95	25.15	54.00	12.49	H
17938.767	41.16	-29.59	45.95	24.80	54.00	12.84	H
12329.500	38.08	-32.39	38.95	31.52	54.00	15.92	H
12333.167	37.98	-32.39	38.95	31.42	54.00	16.02	H
8492.700	33.65	-34.28	37.30	30.63	54.00	20.35	H
8497.833	33.65	-34.28	37.30	30.63	54.00	20.35	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)
17904.667	41.83	-29.59	45.95	25.47	54.00	12.17	H
17943.167	41.48	-29.59	45.95	25.12	54.00	12.52	H
12332.067	38.39	-32.39	38.95	31.83	54.00	15.61	V
12332.800	38.15	-32.39	38.95	31.59	54.00	15.85	V
5145.160	42.59	-27.79	34.00	36.38	54.00	11.41	V
5148.180	42.56	-27.79	34.00	36.35	54.00	11.44	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)
17936.200	41.22	-29.59	45.95	24.86	54.00	12.78	V
17947.933	41.12	-29.59	45.95	24.76	54.00	12.88	H
12331.700	37.74	-32.39	38.95	31.18	54.00	16.26	V
12306.767	37.56	-32.12	39.00	30.68	54.00	16.44	V
8427.067	33.90	-34.69	37.40	31.19	54.00	20.10	V
8492.700	33.67	-34.28	37.30	30.65	54.00	20.33	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)
17976.533	41.70	-29.59	45.95	25.34	54.00	12.30	V
17945.367	41.35	-29.59	45.95	24.99	54.00	12.65	V
12330.600	37.94	-32.39	38.95	31.38	54.00	16.06	V
12332.433	37.90	-32.39	38.95	31.34	54.00	16.10	V
8354.467	33.57	-34.93	37.20	31.30	54.00	20.43	V
8497.100	33.36	-34.28	37.30	30.34	54.00	20.64	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)
17904.300	41.65	-29.59	45.95	25.29	54.00	12.35	H
17937.667	41.10	-29.59	45.95	24.74	54.00	12.90	V
12330.967	38.26	-32.39	38.95	31.70	54.00	15.74	V
12330.233	38.07	-32.39	38.95	31.51	54.00	15.93	V
8490.133	33.37	-34.28	37.30	30.35	54.00	20.63	V
8496.367	33.31	-34.28	37.30	30.29	54.00	20.69	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)
17904.300	41.11	-29.59	45.95	24.75	54.00	12.89	H
17987.900	40.99	-29.59	45.95	24.63	54.00	13.01	H
12328.033	38.03	-32.39	38.95	31.47	54.00	15.97	V
12308.967	37.76	-32.12	39.00	30.88	54.00	16.24	V
8493.800	33.79	-34.28	37.30	30.77	54.00	20.21	H
8496.000	33.63	-34.28	37.30	30.61	54.00	20.37	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)
17975.800	41.33	-29.59	45.95	24.97	54.00	12.67	V
17940.600	41.31	-29.59	45.95	24.95	54.00	12.69	H
12332.433	38.20	-32.39	38.95	31.64	54.00	15.80	V
12314.833	37.95	-32.12	39.00	31.07	54.00	16.05	H
5374.248	43.94	-27.82	34.20	37.56	54.00	10.06	H
5357.176	43.37	-27.82	34.20	36.99	54.00	10.63	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)
17911.267	41.94	-29.59	45.95	25.58	54.00	12.06	H
17934.733	41.63	-29.59	45.95	25.27	54.00	12.37	H
12333.167	38.47	-32.39	38.95	31.91	54.00	15.53	H
12313.000	37.93	-32.12	39.00	31.05	54.00	16.07	V
5459.733	43.15	-27.49	34.20	36.44	54.00	10.85	V
5458.653	42.62	-27.49	34.20	35.91	54.00	11.38	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)
17928.500	41.47	-29.59	45.95	25.11	54.00	12.53	H
17873.500	41.41	-29.59	45.95	25.05	54.00	12.59	V
12332.433	38.13	-32.39	38.95	31.57	54.00	15.87	H
12308.233	37.86	-32.12	39.00	30.98	54.00	16.14	H
8497.833	34.53	-34.28	37.30	31.51	54.00	19.47	V
7466.033	33.71	-35.20	36.50	32.41	54.00	20.29	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)
17905.033	41.86	-29.59	45.95	25.50	54.00	12.14	V
17939.133	41.53	-29.59	45.95	25.17	54.00	12.47	V
12332.800	38.28	-32.39	38.95	31.72	54.00	15.72	H
12333.167	38.11	-32.39	38.95	31.55	54.00	15.89	V
8364.733	33.84	-34.93	37.20	31.57	54.00	20.16	H
8497.833	33.60	-34.28	37.30	30.58	54.00	20.40	H

Channel 144

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	41.47	-29.59	45.95	25.11	54.00	12.53	H
17945.000	41.38	-29.59	45.95	25.02	54.00	12.62	H
12307.867	37.93	-32.12	39.00	31.05	54.00	16.07	H
12314.833	37.66	-32.12	39.00	30.78	54.00	16.34	V
8451.267	33.35	-34.69	37.40	30.64	54.00	20.65	V
8262.067	33.29	-34.48	37.00	30.77	54.00	20.71	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)
17979.467	41.39	-29.59	45.95	25.03	54.00	12.61	H
17935.833	41.36	-29.59	45.95	25.00	54.00	12.64	V
12332.067	37.95	-32.39	38.95	31.39	54.00	16.05	V
12310.067	37.85	-32.12	39.00	30.97	54.00	16.15	V
5149.620	48.78	-28.00	34.00	42.78	54.00	5.22	V
5149.860	48.73	-28.00	34.00	42.73	54.00	5.27	H

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)
17904.300	41.10	-29.59	45.95	24.74	54.00	12.90	V
17908.333	41.03	-29.59	45.95	24.67	54.00	12.97	V
12332.067	37.86	-32.39	38.95	31.30	54.00	16.14	V
12333.167	37.77	-32.39	38.95	31.21	54.00	16.23	V
8499.667	33.51	-34.28	37.30	30.49	54.00	20.49	V
8425.600	33.49	-34.69	37.40	30.78	54.00	20.51	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)
17941.333	41.56	-29.59	45.95	25.20	54.00	12.44	V
17943.900	41.44	-29.59	45.95	25.08	54.00	12.56	V
12332.800	38.22	-32.39	38.95	31.66	54.00	15.78	H
12311.167	37.90	-32.12	39.00	31.02	54.00	16.10	H
8499.300	33.55	-34.28	37.30	30.53	54.00	20.45	V
8489.767	33.36	-34.28	37.30	30.34	54.00	20.64	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	41.15	-29.59	45.95	24.79	54.00	12.85	V
17932.900	41.14	-29.59	45.95	24.78	54.00	12.86	V
12331.700	37.88	-32.39	38.95	31.32	54.00	16.12	V
12331.333	37.82	-32.39	38.95	31.26	54.00	16.18	V
5350.640	49.05	-27.82	34.20	42.67	54.00	4.95	V
5351.000	49.01	-27.82	34.20	42.63	54.00	4.99	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)
17934.000	42.00	-29.59	45.95	25.64	54.00	12.00	H
17977.633	41.20	-29.59	45.95	24.84	54.00	12.80	H
12330.967	37.76	-32.39	38.95	31.20	54.00	16.24	H
12331.333	37.55	-32.39	38.95	30.99	54.00	16.45	V
5459.920	44.86	-27.49	34.20	38.15	54.00	9.14	H
5459.778	44.79	-27.49	34.20	38.08	54.00	9.21	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)
17978.733	41.26	-29.59	45.95	24.90	54.00	12.74	H
17907.967	41.22	-29.59	45.95	24.86	54.00	12.78	H
12309.333	37.90	-32.12	39.00	31.02	54.00	16.10	H
12332.433	37.72	-32.39	38.95	31.16	54.00	16.28	H
8495.267	33.70	-34.28	37.30	30.68	54.00	20.30	H
8493.067	33.45	-34.28	37.30	30.43	54.00	20.55	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)
17934.733	41.61	-29.59	45.95	25.25	54.00	12.39	H
17909.433	41.24	-29.59	45.95	24.88	54.00	12.76	H
12332.433	38.07	-32.39	38.95	31.51	54.00	15.93	V
12314.467	37.99	-32.12	39.00	31.11	54.00	16.01	H
8491.233	33.81	-34.28	37.30	30.79	54.00	20.19	H
7559.533	33.50	-35.16	36.30	32.36	54.00	20.50	H

Channel 142

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	41.31	-29.59	45.95	24.95	54.00	12.69	V
17932.533	41.25	-29.59	45.95	24.89	54.00	12.75	V
12332.800	38.06	-32.39	38.95	31.50	54.00	15.94	V
12331.700	37.84	-32.39	38.95	31.28	54.00	16.16	V
8498.933	33.61	-34.28	37.30	30.59	54.00	20.39	V
8496.367	33.35	-34.28	37.30	30.33	54.00	20.65	H

802.11ac-VHT20

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)
17939.500	41.18	-29.59	45.95	24.82	54.00	12.82	V
17942.433	41.07	-29.59	45.95	24.71	54.00	12.93	V
12332.800	37.86	-32.39	38.95	31.30	54.00	16.14	H
12332.067	37.57	-32.39	38.95	31.01	54.00	16.43	V
5145.220	42.08	-27.79	34.00	35.87	54.00	11.92	V
5148.820	42.05	-28.00	34.00	36.05	54.00	11.95	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)
17933.633	41.57	-29.59	45.95	25.21	54.00	12.43	V
17948.300	41.20	-29.59	45.95	24.84	54.00	12.80	H
12306.400	37.81	-32.12	39.00	30.93	54.00	16.19	V
12332.800	37.61	-32.39	38.95	31.05	54.00	16.39	H
8488.300	34.20	-34.28	37.30	31.18	54.00	19.80	V
8498.567	33.44	-34.28	37.30	30.42	54.00	20.56	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)
17903.933	41.30	-29.59	45.95	24.94	54.00	12.70	V
17905.033	41.23	-29.59	45.95	24.87	54.00	12.77	V
12308.233	37.62	-32.12	39.00	30.74	54.00	16.38	V
12331.700	37.56	-32.39	38.95	31.00	54.00	16.44	V
8497.100	33.63	-34.28	37.30	30.61	54.00	20.37	V
8353.000	33.28	-34.93	37.20	31.01	54.00	20.72	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)
17935.833	41.61	-29.59	45.95	25.25	54.00	12.39	H
17950.867	41.43	-29.59	45.95	25.07	54.00	12.57	H
12310.067	38.13	-32.12	39.00	31.25	54.00	15.87	H
12331.700	38.01	-32.39	38.95	31.45	54.00	15.99	H
8468.867	33.24	-34.28	37.30	30.22	54.00	20.76	H
9427.700	33.23	-33.60	37.90	28.93	54.00	20.77	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)
17899.900	41.29	-29.59	45.95	24.93	54.00	12.71	V
17907.233	41.29	-29.59	45.95	24.93	54.00	12.71	H
12333.167	38.22	-32.39	38.95	31.66	54.00	15.78	H
12329.867	37.99	-32.39	38.95	31.43	54.00	16.01	H
8355.567	33.52	-34.93	37.20	31.25	54.00	20.48	H
8490.867	33.51	-34.28	37.30	30.49	54.00	20.49	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)
17936.200	41.33	-29.59	45.95	24.97	54.00	12.67	V
17944.633	41.18	-29.59	45.95	24.82	54.00	12.82	H
12313.000	38.04	-32.12	39.00	31.16	54.00	15.96	V
12311.900	37.81	-32.12	39.00	30.93	54.00	16.19	V
5358.368	43.03	-27.82	34.20	36.65	54.00	10.97	V
5376.504	43.03	-27.82	34.20	36.65	54.00	10.97	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)
17909.800	41.61	-29.59	45.95	25.25	54.00	12.39	V
17935.100	41.32	-29.59	45.95	24.96	54.00	12.68	H
12330.600	38.11	-32.39	38.95	31.55	54.00	15.89	H
12307.500	37.74	-32.12	39.00	30.86	54.00	16.26	H
5452.682	42.63	-27.49	34.20	35.92	54.00	11.37	H
5455.592	42.52	-27.49	34.20	35.81	54.00	11.48	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)
17940.600	41.42	-29.59	45.95	25.06	54.00	12.58	H
17948.667	41.37	-29.59	45.95	25.01	54.00	12.63	H
12333.167	38.05	-32.39	38.95	31.49	54.00	15.95	H
12306.033	37.99	-32.12	39.00	31.11	54.00	16.01	V
8356.667	33.74	-34.93	37.20	31.47	54.00	20.26	H
7466.400	33.72	-35.20	36.50	32.42	54.00	20.28	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)
17977.633	41.42	-29.59	45.95	25.06	54.00	12.58	V
17936.200	41.37	-29.59	45.95	25.01	54.00	12.63	H
12332.800	38.13	-32.39	38.95	31.57	54.00	15.87	H
12307.500	38.07	-32.12	39.00	31.19	54.00	15.93	H
8487.200	33.34	-34.28	37.30	30.32	54.00	20.66	H
9394.700	33.32	-33.86	37.90	29.28	54.00	20.68	V

Channel 144

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	41.73	-29.59	45.95	25.37	54.00	12.27	H
17953.067	41.34	-29.59	45.95	24.98	54.00	12.66	V
12333.167	38.27	-32.39	38.95	31.71	54.00	15.73	H
12309.700	38.14	-32.12	39.00	31.26	54.00	15.86	H
8474.367	33.20	-34.28	37.30	30.18	54.00	20.80	H
8488.300	33.20	-34.28	37.30	30.18	54.00	20.80	H

802.11ac-VHT40

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)
17945.367	41.45	-29.59	45.95	25.09	54.00	12.55	V
17906.133	41.23	-29.59	45.95	24.87	54.00	12.77	V
12332.800	38.22	-32.39	38.95	31.66	54.00	15.78	V
12333.167	37.97	-32.39	38.95	31.41	54.00	16.03	H
5149.840	46.97	-28.00	34.00	40.97	54.00	7.03	V
5149.830	46.68	-28.00	34.00	40.68	54.00	7.32	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)
17936.567	41.87	-29.59	45.95	25.51	54.00	12.13	V
17951.233	41.64	-29.59	45.95	25.28	54.00	12.36	V
12333.167	37.91	-32.39	38.95	31.35	54.00	16.09	V
12314.100	37.76	-32.12	39.00	30.88	54.00	16.24	H
8494.533	33.66	-34.28	37.30	30.64	54.00	20.34	V
8496.000	33.49	-34.28	37.30	30.47	54.00	20.51	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)
17904.667	41.31	-29.59	45.95	24.95	54.00	12.69	H
17939.500	41.18	-29.59	45.95	24.82	54.00	12.82	H
12332.800	38.18	-32.39	38.95	31.62	54.00	15.82	H
12306.767	37.97	-32.12	39.00	31.09	54.00	16.03	H
8319.633	33.39	-34.93	37.20	31.12	54.00	20.61	H
8499.667	33.25	-34.28	37.30	30.23	54.00	20.75	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)
17912.000	41.32	-29.59	45.95	24.96	54.00	12.68	H
17976.900	41.12	-29.59	45.95	24.76	54.00	12.88	H
12332.433	37.96	-32.39	38.95	31.40	54.00	16.04	H
12308.233	37.40	-32.12	39.00	30.52	54.00	16.60	H
5350.272	47.17	-27.82	34.20	40.79	54.00	6.83	H
5350.280	46.76	-27.82	34.20	40.38	54.00	7.24	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)
17943.167	41.59	-29.59	45.95	25.23	54.00	12.41	H
17904.300	41.28	-29.59	45.95	24.92	54.00	12.72	V
12328.767	37.72	-32.39	38.95	31.16	54.00	16.28	V
12333.167	37.60	-32.39	38.95	31.04	54.00	16.40	V
5458.000	46.94	-27.49	34.20	40.23	54.00	7.06	V
5459.807	45.73	-27.49	34.20	39.02	54.00	8.27	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)
17943.900	41.06	-29.59	45.95	24.70	54.00	12.94	V
17942.433	41.01	-29.59	45.95	24.65	54.00	12.99	V
12311.533	37.76	-32.12	39.00	30.88	54.00	16.24	V
12332.800	37.72	-32.39	38.95	31.16	54.00	16.28	V
7453.200	34.03	-35.20	36.50	32.73	54.00	19.97	H
9466.200	33.61	-34.40	37.70	30.31	54.00	20.39	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)
17935.100	41.53	-29.59	45.95	25.17	54.00	12.47	H
17947.200	41.19	-29.59	45.95	24.83	54.00	12.81	V
12329.133	37.69	-32.39	38.95	31.13	54.00	16.31	H
12310.433	37.46	-32.12	39.00	30.58	54.00	16.54	V
7559.533	34.29	-35.16	36.30	33.15	54.00	19.71	V
8497.100	33.36	-34.28	37.30	30.34	54.00	20.64	H

Channel 142

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)
17946.467	41.37	-29.59	45.95	25.01	54.00	12.63	H
17939.867	41.17	-29.59	45.95	24.81	54.00	12.83	H
12331.333	37.61	-32.39	38.95	31.05	54.00	16.39	H
12308.233	37.58	-32.12	39.00	30.70	54.00	16.42	V
8491.233	33.49	-34.28	37.30	30.47	54.00	20.51	H
8367.667	32.97	-34.42	37.30	30.09	54.00	21.03	V

802.11ac-VHT80

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)
17903.933	41.34	-29.59	45.95	24.98	54.00	12.66	V
17905.400	41.27	-29.59	45.95	24.91	54.00	12.73	V
12333.167	38.00	-32.39	38.95	31.44	54.00	16.00	H
12332.067	37.94	-32.39	38.95	31.38	54.00	16.06	V
8353.733	33.47	-34.93	37.20	31.20	54.00	20.53	H
8308.633	33.14	-34.84	37.10	30.87	54.00	20.86	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)
17950.133	41.35	-29.59	45.95	24.99	54.00	12.65	V
17945.000	41.02	-29.59	45.95	24.66	54.00	12.98	H
12323.633	37.62	-32.12	39.00	30.74	54.00	16.38	H
12327.300	37.61	-32.39	38.95	31.05	54.00	16.39	V
5354.240	50.57	-27.82	34.20	44.19	54.00	3.43	H
5354.696	50.18	-27.82	34.20	43.80	54.00	3.82	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)
17950.500	41.37	-29.59	45.95	25.01	54.00	12.63	V
17900.633	41.13	-29.59	45.95	24.77	54.00	12.87	V
12331.700	37.75	-32.39	38.95	31.19	54.00	16.25	H
12313.000	37.71	-32.12	39.00	30.83	54.00	16.29	V
5457.685	51.05	-27.49	34.20	44.34	54.00	2.95	V
5456.493	50.83	-27.49	34.20	44.12	54.00	3.17	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)
17974.333	41.13	-29.59	45.95	24.77	54.00	12.87	H
17908.700	41.08	-29.59	45.95	24.72	54.00	12.92	H
12332.800	38.06	-32.39	38.95	31.50	54.00	15.94	H
12333.167	37.79	-32.39	38.95	31.23	54.00	16.21	H
7479.600	33.82	-35.32	36.40	32.74	54.00	20.18	H
8469.233	33.65	-34.28	37.30	30.63	54.00	20.35	V

Channel 138

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)
17907.600	41.09	-29.59	45.95	24.73	54.00	12.91	V
17909.067	41.04	-29.59	45.95	24.68	54.00	12.96	V
12330.967	38.28	-32.39	38.95	31.72	54.00	15.72	H
12333.167	38.22	-32.39	38.95	31.66	54.00	15.78	H
8340.167	33.82	-34.93	37.20	31.55	54.00	20.18	V
8358.500	33.72	-34.93	37.20	31.45	54.00	20.28	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)
17891.467	50.76	-29.59	45.95	34.40	74.00	23.24	V
17340.367	49.52	-28.74	43.40	34.86	68.20	18.68	V
12304.567	45.80	-32.12	39.00	38.92	74.00	28.20	H
12312.267	45.72	-32.12	39.00	38.84	74.00	28.28	V
5150.000	59.80	-28.00	34.00	53.80	74.00	14.20	H
5149.570	59.30	-28.00	34.00	53.30	74.00	14.70	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)
17949.400	49.76	-29.59	45.95	33.40	74.00	24.24	V
17948.667	49.46	-29.59	45.95	33.10	74.00	24.54	H
12331.333	46.65	-32.39	38.95	40.09	74.00	27.35	H
12267.167	45.67	-32.37	38.95	39.09	74.00	28.33	H
10220.067	44.06	-34.09	38.00	40.15	68.20	24.14	H
10176.433	43.61	-33.67	38.05	39.23	68.20	24.59	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)
17956.000	50.09	-29.59	45.95	33.73	74.00	23.91	H
17945.000	49.32	-29.59	45.95	32.96	74.00	24.68	V
12242.967	45.98	-32.37	38.95	39.40	74.00	28.02	V
12331.333	45.89	-32.39	38.95	39.33	74.00	28.11	V
10235.467	43.65	-34.09	38.00	39.74	68.20	24.55	V
10151.133	42.92	-33.67	38.05	38.54	68.20	25.28	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)
17974.333	49.52	-29.59	45.95	33.16	74.00	24.48	V
15987.733	49.34	-29.36	38.30	40.40	74.00	24.66	V
12264.233	46.34	-32.37	38.95	39.76	74.00	27.66	V
12332.800	46.33	-32.39	38.95	39.77	74.00	27.67	V
7012.833	44.57	-34.94	35.30	44.21	68.20	23.63	H
7013.200	44.37	-34.94	35.30	44.01	68.20	23.83	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)
17872.033	49.56	-29.59	45.95	33.20	74.00	24.44	V
17335.233	49.48	-28.74	43.40	34.82	68.20	18.72	H
12333.167	46.21	-32.39	38.95	39.65	74.00	27.79	H
12325.833	46.00	-32.12	39.00	39.12	74.00	28.00	H
7039.600	44.58	-34.40	35.50	43.48	68.20	23.62	V
7039.233	43.58	-34.40	35.50	42.48	68.20	24.62	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)
15964.633	50.09	-29.36	38.30	41.15	74.00	23.91	H
17943.167	49.98	-29.59	45.95	33.62	74.00	24.02	H
12330.233	47.20	-32.39	38.95	40.64	74.00	26.80	H
12306.767	46.36	-32.12	39.00	39.48	74.00	27.64	H
5353.128	56.58	-27.82	34.20	50.20	74.00	17.42	H
5357.304	56.58	-27.82	34.20	50.20	74.00	17.42	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)
17950.133	49.60	-29.59	45.95	33.24	74.00	24.40	H
16496.300	49.10	-29.90	39.00	40.00	68.20	19.10	H
12329.133	46.56	-32.39	38.95	40.00	74.00	27.44	H
12308.600	46.11	-32.12	39.00	39.23	74.00	27.89	V
5450.688	54.99	-27.49	34.20	48.28	74.00	19.01	H
5468.807	58.44	-27.49	34.20	51.73	68.20	9.76	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)
17384.000	49.42	-29.44	43.80	35.06	68.20	18.78	V
17977.633	49.34	-29.59	45.95	32.98	74.00	24.66	V
12264.967	46.31	-32.37	38.95	39.73	74.00	27.69	H
12329.500	46.09	-32.39	38.95	39.53	74.00	27.91	V
10286.433	43.09	-33.82	38.00	38.91	68.20	25.11	V
10112.633	42.93	-34.28	38.10	39.11	68.20	25.27	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)
17907.967	50.17	-29.59	45.95	33.81	74.00	23.83	V
17936.200	50.08	-29.59	45.95	33.72	74.00	23.92	V
12332.067	46.62	-32.39	38.95	40.06	74.00	27.38	H
12310.067	45.80	-32.12	39.00	38.92	74.00	28.20	V
5745.585	53.50	-27.21	34.00	46.71	68.20	14.70	H
5725.250	53.48	-27.47	34.10	46.85	68.20	14.72	H

Channel 144

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)
17913.100	49.66	-29.59	45.95	33.30	74.00	24.34	V
17868.733	49.52	-29.59	45.95	33.16	74.00	24.48	H
12332.067	46.28	-32.39	38.95	39.72	74.00	27.72	H
12330.600	46.10	-32.39	38.95	39.54	74.00	27.90	V
10286.067	43.22	-33.82	38.00	39.04	68.20	24.98	H
10234.367	42.93	-34.09	38.00	39.02	68.20	25.27	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)
17933.633	49.46	-29.59	45.95	33.10	74.00	24.54	V
17913.833	49.42	-29.59	45.95	33.06	74.00	24.58	H
12331.700	46.47	-32.39	38.95	39.91	74.00	27.53	H
12310.067	46.03	-32.12	39.00	39.15	74.00	27.97	H
5137.360	54.24	-27.79	34.00	48.03	74.00	19.76	V
5139.690	54.07	-27.79	34.00	47.86	74.00	19.93	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)
17977.267	49.83	-29.59	45.95	33.47	74.00	24.17	H
17938.400	49.67	-29.59	45.95	33.31	74.00	24.33	V
12268.633	46.68	-32.37	38.95	40.10	74.00	27.32	V
12310.800	46.34	-32.12	39.00	39.46	74.00	27.66	H
10243.533	43.37	-34.09	38.00	39.46	68.20	24.83	H
10283.867	43.30	-33.82	38.00	39.12	68.20	24.90	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)
17947.933	49.93	-29.59	45.95	33.57	74.00	24.07	V
15970.867	49.90	-29.36	38.30	40.96	74.00	24.10	H
12333.167	46.29	-32.39	38.95	39.73	74.00	27.71	V
12330.967	46.21	-32.39	38.95	39.65	74.00	27.79	H
10150.767	43.76	-33.67	38.05	39.38	68.20	24.44	V
10229.600	42.97	-34.09	38.00	39.06	68.20	25.23	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)
17978.000	50.27	-29.59	45.95	33.91	74.00	23.73	V
17935.467	49.25	-29.59	45.95	32.89	74.00	24.75	V
12330.967	47.31	-32.39	38.95	40.75	74.00	26.69	V
12329.133	46.49	-32.39	38.95	39.93	74.00	27.51	V
7012.833	44.20	-34.94	35.30	43.84	68.20	24.00	V
7013.200	44.13	-34.94	35.30	43.77	68.20	24.07	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)
17952.333	50.13	-29.59	45.95	33.77	74.00	23.87	V
17905.767	49.76	-29.59	45.95	33.40	74.00	24.24	H
12326.567	46.13	-32.12	39.00	39.25	74.00	27.87	V
12331.333	46.08	-32.39	38.95	39.52	74.00	27.92	H
7039.600	44.06	-34.40	35.50	42.96	68.20	24.14	H
7039.233	43.69	-34.40	35.50	42.59	68.20	24.51	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)
17946.833	50.21	-29.59	45.95	33.85	74.00	23.79	V
17947.567	50.21	-29.59	45.95	33.85	74.00	23.79	H
12330.600	45.90	-32.39	38.95	39.34	74.00	28.10	H
12279.267	45.87	-32.12	39.00	38.99	74.00	28.13	H
5374.248	59.56	-27.82	34.20	53.18	74.00	14.44	H
5363.624	55.37	-27.82	34.20	48.99	74.00	18.63	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)
16491.167	50.22	-29.90	39.00	41.12	68.20	17.98	V
17907.233	49.82	-29.59	45.95	33.46	74.00	24.18	V
12296.133	46.48	-32.12	39.00	39.60	74.00	27.52	H
12330.233	46.30	-32.39	38.95	39.74	74.00	27.70	H
5456.920	55.42	-27.49	34.20	48.71	74.00	18.58	V
5469.745	57.20	-27.49	34.20	50.49	68.20	11.00	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)
17930.333	50.61	-29.59	45.95	34.25	74.00	23.39	V
17937.667	50.43	-29.59	45.95	34.07	74.00	23.57	H
12274.867	46.25	-32.37	38.95	39.67	74.00	27.75	H
12313.367	45.75	-32.12	39.00	38.87	74.00	28.25	V
10031.233	43.60	-34.07	38.00	39.67	68.20	24.60	V
10038.933	42.98	-34.07	38.00	39.05	68.20	25.22	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)
17954.167	50.38	-29.59	45.95	34.02	74.00	23.62	V
17930.700	49.66	-29.59	45.95	33.30	74.00	24.34	H
12332.433	45.91	-32.39	38.95	39.35	74.00	28.09	V
12290.267	45.82	-32.12	39.00	38.94	74.00	28.18	H
5725.031	58.66	-27.47	34.10	52.03	68.20	9.54	V
5725.005	58.41	-27.47	34.10	51.78	68.20	9.79	H

Channel 144

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)
17910.900	50.97	-29.59	45.95	34.61	74.00	23.03	V
17937.300	49.35	-29.59	45.95	32.99	74.00	24.65	V
12332.800	46.46	-32.39	38.95	39.90	74.00	27.54	V
12311.900	46.37	-32.12	39.00	39.49	74.00	27.63	V
10248.667	43.75	-33.82	38.00	39.57	68.20	24.45	V
10143.800	43.57	-34.28	38.10	39.75	68.20	24.63	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)
16923.100	49.21	-29.28	40.30	38.19	68.20	18.99	V
17979.467	49.14	-29.59	45.95	32.78	74.00	24.86	V
12330.967	46.10	-32.39	38.95	39.54	74.00	27.90	H
11548.133	45.85	-32.86	39.15	39.56	74.00	28.15	H
5126.080	61.02	-27.79	34.00	54.81	74.00	12.98	V
5149.970	59.49	-28.00	34.00	53.49	74.00	14.51	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)
15962.800	50.60	-29.36	38.30	41.66	74.00	23.40	V
17905.400	50.29	-29.59	45.95	33.93	74.00	23.71	H
12332.433	46.63	-32.39	38.95	40.07	74.00	27.37	H
12330.967	46.55	-32.39	38.95	39.99	74.00	27.45	H
10102.367	43.77	-34.28	38.10	39.95	68.20	24.43	V
10264.067	43.42	-33.82	38.00	39.24	68.20	24.78	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)
17952.333	49.80	-29.59	45.95	33.44	74.00	24.20	V
17864.700	49.59	-29.59	45.95	33.23	74.00	24.41	V
12303.467	47.02	-32.12	39.00	40.14	74.00	26.98	H
12290.267	46.94	-32.12	39.00	40.06	74.00	27.06	H
7026.400	44.51	-34.94	35.30	44.15	68.20	23.69	V
7026.033	44.37	-34.94	35.30	44.01	68.20	23.83	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)
17909.433	50.14	-29.59	45.95	33.78	74.00	23.86	V
17936.567	50.03	-29.59	45.95	33.67	74.00	23.97	V
12310.067	45.98	-32.12	39.00	39.10	74.00	28.02	V
12331.700	45.89	-32.39	38.95	39.33	74.00	28.11	V
5365.064	62.73	-27.82	34.20	56.35	74.00	11.27	H
5353.552	60.35	-27.82	34.20	53.97	74.00	13.65	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)
17934.000	51.68	-29.59	45.95	35.32	74.00	22.32	H
16538.833	50.47	-29.97	39.20	41.24	68.20	17.73	H
12317.033	46.86	-32.12	39.00	39.98	74.00	27.14	V
12306.033	46.66	-32.12	39.00	39.78	74.00	27.34	V
5459.837	57.97	-27.49	34.20	51.26	74.00	16.03	H
5469.850	60.65	-27.49	34.20	53.94	68.20	7.55	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)
17909.433	49.46	-29.59	45.95	33.10	74.00	24.54	V
17979.833	49.27	-29.59	45.95	32.91	74.00	24.73	V
12310.800	46.31	-32.12	39.00	39.43	74.00	27.69	V
12304.567	45.57	-32.12	39.00	38.69	74.00	28.43	V
10256.000	43.27	-33.82	38.00	39.09	68.20	24.93	H
9698.667	42.86	-33.86	37.70	39.02	68.20	25.34	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)
17942.433	50.15	-29.59	45.95	33.79	74.00	23.85	V
17944.267	49.91	-29.59	45.95	33.55	74.00	24.09	V
12307.867	46.89	-32.12	39.00	40.01	74.00	27.11	H
12330.967	46.56	-32.39	38.95	40.00	74.00	27.44	H
5748.455	54.44	-27.21	34.00	47.65	68.20	13.76	V
5727.289	54.40	-27.47	34.10	47.77	68.20	13.80	V

Channel 142

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)
17979.833	50.28	-29.59	45.95	33.92	74.00	23.72	H
17939.133	49.93	-29.59	45.95	33.57	74.00	24.07	H
12332.800	47.30	-32.39	38.95	40.74	74.00	26.70	V
12313.367	45.83	-32.12	39.00	38.95	74.00	28.17	H
10148.933	44.16	-33.67	38.05	39.78	68.20	24.04	V
10181.933	42.96	-33.67	38.05	38.58	68.20	25.24	H

802.11ac-VHT20

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)
17836.100	49.91	-29.59	45.95	33.55	74.00	24.09	V
17907.600	49.71	-29.59	45.95	33.35	74.00	24.29	V
12332.433	46.55	-32.39	38.95	39.99	74.00	27.45	V
12304.933	46.29	-32.12	39.00	39.41	74.00	27.71	H
5149.330	56.20	-28.00	34.00	50.20	74.00	17.80	H
5149.860	56.10	-28.00	34.00	50.10	74.00	17.90	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)
16607.400	49.81	-29.22	39.40	39.63	68.20	18.39	H
17930.333	49.44	-29.59	45.95	33.08	74.00	24.56	H
12315.567	46.40	-32.12	39.00	39.52	74.00	27.60	V
12260.567	45.93	-32.37	38.95	39.35	74.00	28.07	V
10147.100	44.24	-34.28	38.10	40.42	68.20	23.96	V
10238.033	42.98	-34.09	38.00	39.07	68.20	25.22	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)
17936.933	49.78	-29.59	45.95	33.42	74.00	24.22	V
17973.600	49.66	-29.59	45.95	33.30	74.00	24.34	V
12331.333	47.28	-32.39	38.95	40.72	74.00	26.72	H
12331.700	46.92	-32.39	38.95	40.36	74.00	27.08	H
10128.767	43.27	-34.28	38.10	39.45	68.20	24.93	V
10029.400	43.11	-34.07	38.00	39.18	68.20	25.09	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)
15976.000	49.45	-29.36	38.30	40.51	74.00	24.55	H
17978.000	49.41	-29.59	45.95	33.05	74.00	24.59	H
12310.433	46.34	-32.12	39.00	39.46	74.00	27.66	H
12307.867	46.03	-32.12	39.00	39.15	74.00	27.97	H
7012.833	44.94	-34.94	35.30	44.58	68.20	23.26	V
7013.200	44.22	-34.94	35.30	43.86	68.20	23.98	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)
17798.333	50.07	-29.59	45.95	33.71	74.00	23.93	H
17976.533	49.91	-29.59	45.95	33.55	74.00	24.09	H
12332.800	46.22	-32.39	38.95	39.66	74.00	27.78	H
12318.867	46.14	-32.12	39.00	39.26	74.00	27.86	H
7039.600	44.40	-34.40	35.50	43.30	68.20	23.80	H
7039.967	44.06	-34.40	35.50	42.96	68.20	24.14	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)
17331.567	49.92	-28.74	43.40	35.26	68.20	18.28	H
17949.400	49.83	-29.59	45.95	33.47	74.00	24.17	V
12330.233	46.26	-32.39	38.95	39.70	74.00	27.74	H
12309.333	45.89	-32.12	39.00	39.01	74.00	28.11	V
5376.504	58.97	-27.82	34.20	52.59	74.00	15.03	H
5361.304	55.88	-27.82	34.20	49.50	74.00	18.12	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)
17907.233	49.84	-29.59	45.95	33.48	74.00	24.16	H
17978.000	49.66	-29.59	45.95	33.30	74.00	24.34	V
12312.633	46.00	-32.12	39.00	39.12	74.00	28.00	H
12331.333	45.91	-32.39	38.95	39.35	74.00	28.09	H
5459.658	55.67	-27.49	34.20	48.96	74.00	18.33	V
5469.842	56.32	-27.49	34.20	49.61	68.20	11.88	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)
17938.400	50.73	-29.59	45.95	34.37	74.00	23.27	H
17914.567	49.74	-29.59	45.95	33.38	74.00	24.26	H
12333.167	46.39	-32.39	38.95	39.83	74.00	27.61	H
12299.433	46.00	-32.12	39.00	39.12	74.00	28.00	V
10172.767	43.21	-33.67	38.05	38.83	68.20	24.99	V
10237.667	43.04	-34.09	38.00	39.13	68.20	25.16	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)
17949.767	50.77	-29.59	45.95	34.41	74.00	23.23	V
17978.000	49.83	-29.59	45.95	33.47	74.00	24.17	H
12307.500	47.42	-32.12	39.00	40.54	74.00	26.58	V
12268.267	45.94	-32.37	38.95	39.36	74.00	28.06	H
5731.533	52.25	-27.47	34.10	45.62	68.20	15.95	H
5741.061	52.21	-27.47	34.10	45.58	68.20	15.99	V

Channel 144

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)
17911.267	50.14	-29.59	45.95	33.78	74.00	23.86	V
17909.800	49.80	-29.59	45.95	33.44	74.00	24.20	H
12313.000	45.91	-32.12	39.00	39.03	74.00	28.09	H
12272.300	45.85	-32.37	38.95	39.27	74.00	28.15	H
10220.800	43.22	-34.09	38.00	39.31	68.20	24.98	V
10261.500	42.82	-33.82	38.00	38.64	68.20	25.38	V

802.11ac-VHT40

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)
17931.800	50.30	-29.59	45.95	33.94	74.00	23.70	H
17928.500	49.67	-29.59	45.95	33.31	74.00	24.33	V
12331.333	46.39	-32.39	38.95	39.83	74.00	27.61	H
12330.600	46.03	-32.39	38.95	39.47	74.00	27.97	V
5147.420	58.89	-27.79	34.00	52.68	74.00	15.11	V
5149.600	57.18	-28.00	34.00	51.18	74.00	16.82	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)
17909.800	50.40	-29.59	45.95	34.04	74.00	23.60	H
17909.433	49.74	-29.59	45.95	33.38	74.00	24.26	V
12264.967	46.86	-32.37	38.95	40.28	74.00	27.14	V
12226.833	45.98	-32.12	38.90	39.20	74.00	28.02	V
10142.333	43.63	-34.28	38.10	39.81	68.20	24.57	H
10288.267	42.83	-33.82	38.00	38.65	68.20	25.37	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)
16004.600	49.85	-29.04	38.20	40.69	74.00	24.15	V
17876.067	49.39	-29.59	45.95	33.03	74.00	24.61	V
12291.367	47.24	-32.12	39.00	40.36	74.00	26.76	H
12332.067	46.24	-32.39	38.95	39.68	74.00	27.76	V
7026.033	45.13	-34.94	35.30	44.77	68.20	23.07	V
7026.400	44.94	-34.94	35.30	44.58	68.20	23.26	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)
17912.000	50.94	-29.59	45.95	34.58	74.00	23.06	H
17058.033	50.29	-29.30	41.10	38.49	68.20	17.91	V
12308.233	46.01	-32.12	39.00	39.13	74.00	27.99	H
12289.167	45.74	-32.12	39.00	38.86	74.00	28.26	H
5372.744	59.34	-27.82	34.20	52.96	74.00	14.66	V
5351.144	59.26	-27.82	34.20	52.88	74.00	14.74	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)
17932.533	50.17	-29.59	45.95	33.81	74.00	23.83	V
17891.100	49.51	-29.59	45.95	33.15	74.00	24.49	V
12305.300	45.93	-32.12	39.00	39.05	74.00	28.07	V
12326.933	45.72	-32.39	38.95	39.16	74.00	28.28	V
5458.000	62.72	-27.49	34.20	56.01	74.00	11.28	V
5468.342	62.76	-27.49	34.20	56.05	68.20	5.44	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)
17907.600	49.68	-29.59	45.95	33.32	74.00	24.32	H
17869.100	49.25	-29.59	45.95	32.89	74.00	24.75	V
12309.333	46.05	-32.12	39.00	39.17	74.00	27.95	V
12240.400	45.96	-32.37	38.95	39.38	74.00	28.04	V
10246.467	42.88	-34.09	38.00	38.97	68.20	25.32	H
10291.200	42.59	-33.82	38.00	38.41	68.20	25.61	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)
17952.700	50.49	-29.59	45.95	34.13	74.00	23.51	V
17948.667	49.87	-29.59	45.95	33.51	74.00	24.13	V
12328.767	47.00	-32.39	38.95	40.44	74.00	27.00	V
12330.967	45.94	-32.39	38.95	39.38	74.00	28.06	V
5728.995	53.17	-27.47	34.10	46.54	68.20	15.03	V
5732.714	52.54	-27.47	34.10	45.91	68.20	15.66	V

Channel 142

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)
17902.100	49.40	-29.59	45.95	33.04	74.00	24.60	V
17939.500	49.39	-29.59	45.95	33.03	74.00	24.61	V
12331.333	45.93	-32.39	38.95	39.37	74.00	28.07	V
12263.133	45.28	-32.37	38.95	38.70	74.00	28.72	H
10279.833	43.45	-33.82	38.00	39.27	68.20	24.75	V
10144.533	42.99	-34.28	38.10	39.17	68.20	25.21	V

802.11ac-VHT80

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)
17931.067	49.99	-29.59	45.95	33.63	74.00	24.01	H
17903.200	49.65	-29.59	45.95	33.29	74.00	24.35	H
12312.633	46.58	-32.12	39.00	39.70	74.00	27.42	H
12309.333	46.29	-32.12	39.00	39.41	74.00	27.71	H
10172.400	43.34	-33.67	38.05	38.96	68.20	24.86	H
9825.167	43.07	-33.95	37.90	39.12	68.20	25.13	H

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)
17943.533	49.77	-29.59	45.95	33.41	74.00	24.23	V
17905.033	49.55	-29.59	45.95	33.19	74.00	24.45	H
12332.067	46.62	-32.39	38.95	40.06	74.00	27.38	H
12327.300	46.37	-32.39	38.95	39.81	74.00	27.63	V
5368.088	62.49	-27.82	34.20	56.11	74.00	11.51	V
5368.080	62.41	-27.82	34.20	56.03	74.00	11.59	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)
17341.833	49.37	-28.74	43.40	34.71	68.20	18.83	H
17932.533	49.34	-29.59	45.95	32.98	74.00	24.66	H
12329.133	46.12	-32.39	38.95	39.56	74.00	27.88	V
12332.433	45.93	-32.39	38.95	39.37	74.00	28.07	V
5452.127	60.65	-27.49	34.20	53.94	74.00	13.35	V
5467.833	62.03	-27.49	34.20	55.32	68.20	6.17	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)
17336.333	49.62	-28.74	43.40	34.96	68.20	18.58	H
17950.133	49.41	-29.59	45.95	33.05	74.00	24.59	V
12329.867	46.59	-32.39	38.95	40.03	74.00	27.41	V
12327.667	46.56	-32.39	38.95	40.00	74.00	27.44	V
5751.395	52.47	-27.21	34.00	45.68	68.20	15.73	H
5743.940	51.95	-27.21	34.00	45.16	68.20	16.25	H

Channel 138

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	49.71	-29.59	45.95	33.35	74.00	24.29	H
17905.400	49.63	-29.59	45.95	33.27	74.00	24.37	H
12333.167	46.25	-32.39	38.95	39.69	74.00	27.75	H
12332.433	46.06	-32.39	38.95	39.50	74.00	27.94	H
10262.233	43.81	-33.82	38.00	39.63	68.20	24.39	H
10259.300	43.18	-33.82	38.00	39.00	68.20	25.02	V

Conclusion: PASS

Band edge compliance

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:

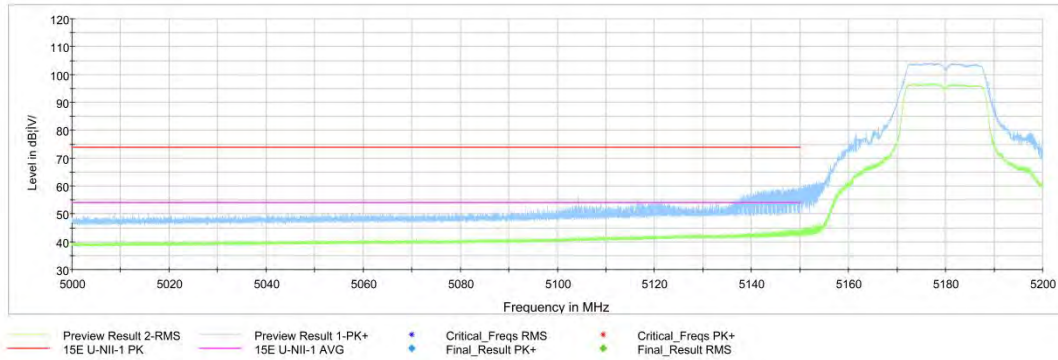


Fig. 34 Band Edges (802.11a Ch36, 5180MHz)

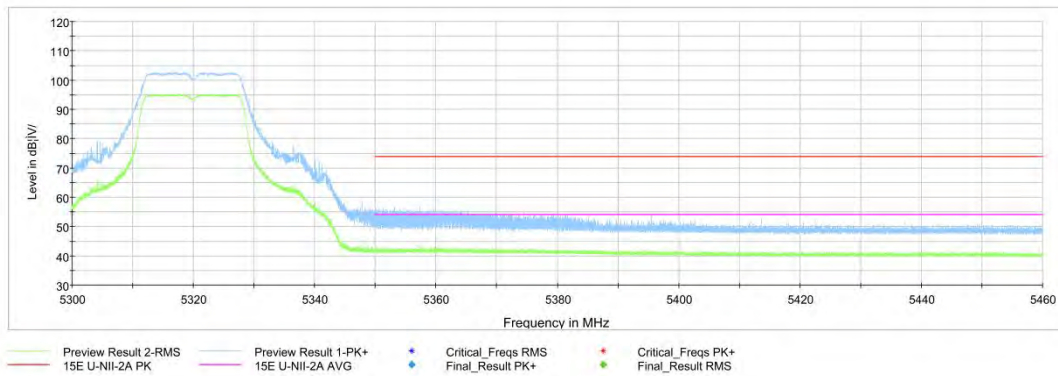


Fig. 35 Band Edges (802.11a Ch64, 5320MHz)

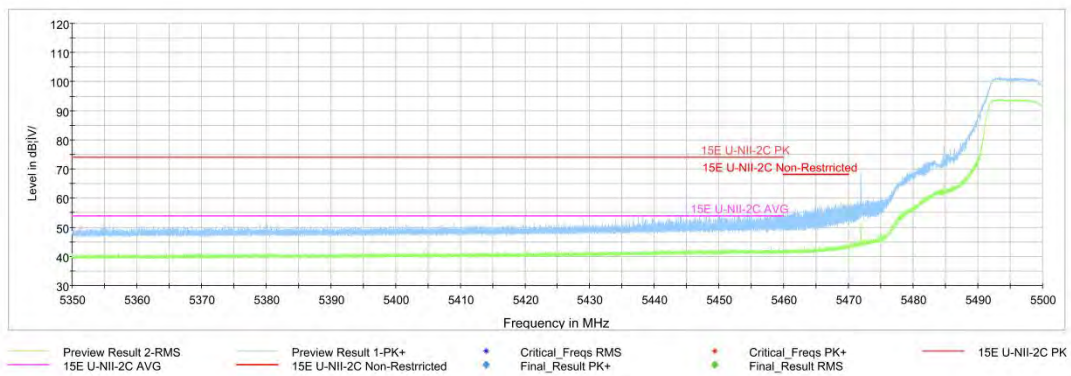


Fig. 36 Band Edges (802.11a Ch100, 5500MHz)

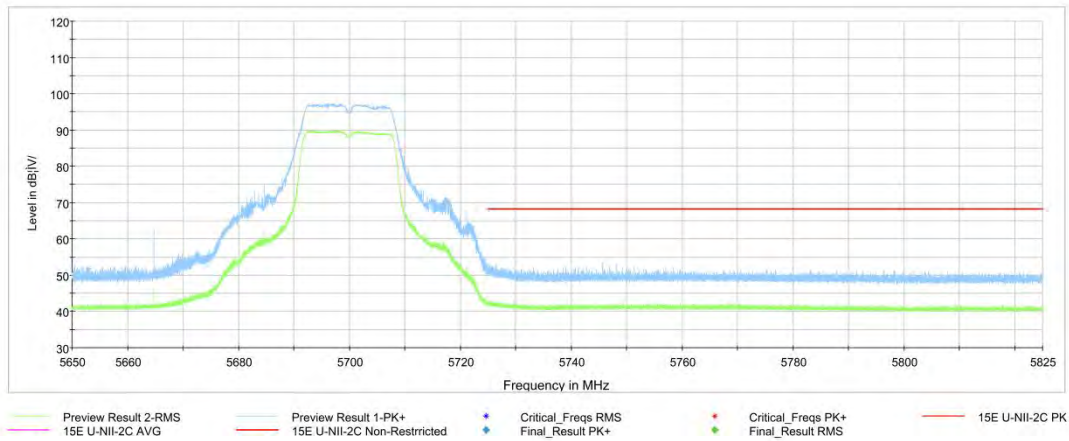


Fig. 37 Band Edges (802.11a Ch140, 5700MHz)

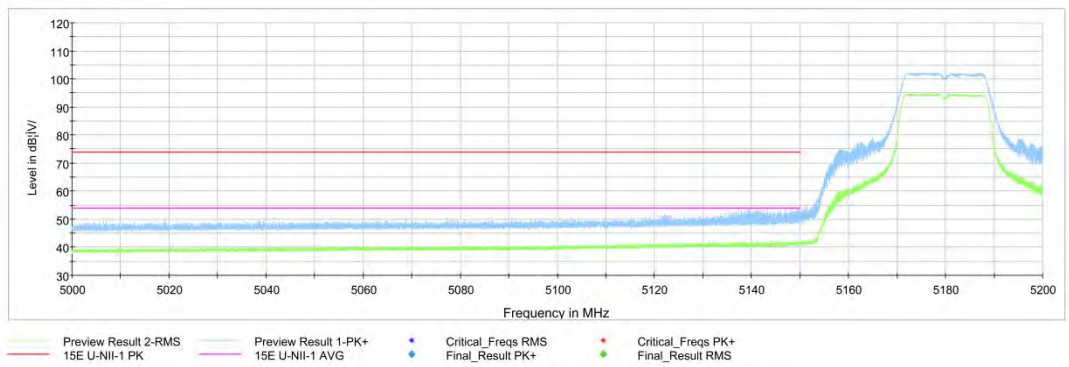


Fig. 38 Band Edges (802.11n-HT20 Ch36, 5180MHz)

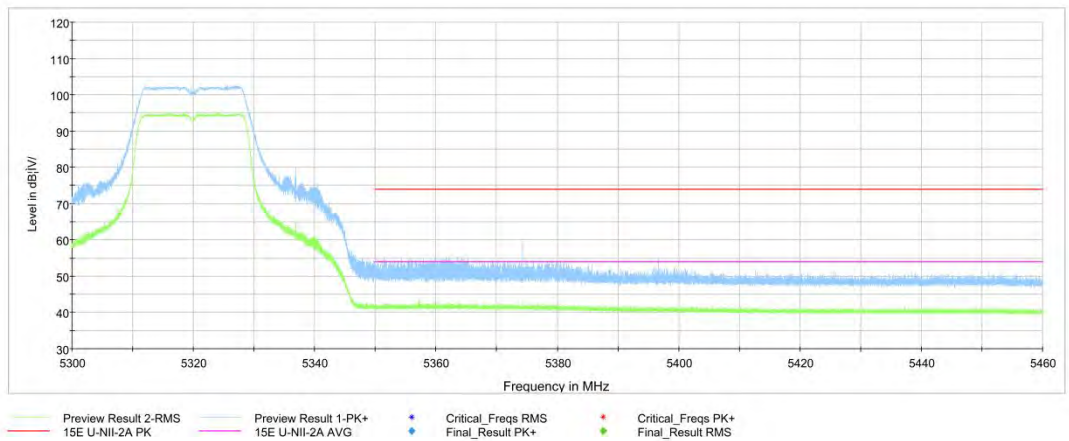


Fig. 39 Band Edges (802.11n-HT20 Ch64, 5320MHz)

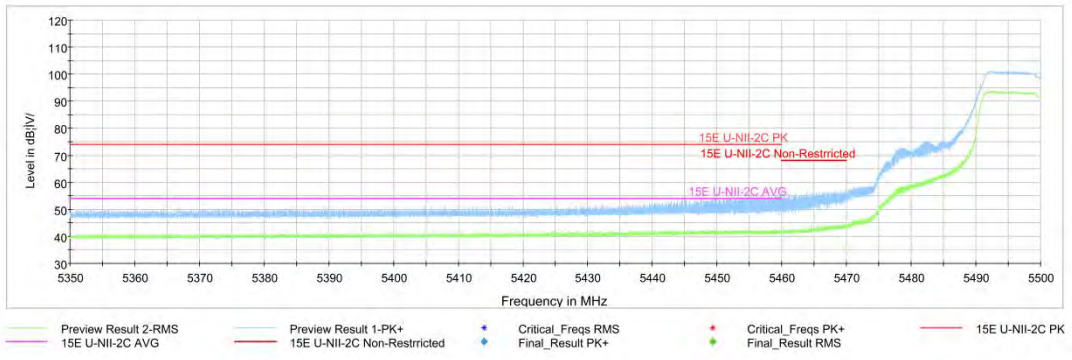


Fig. 40 Band Edges (802.11n-HT20 Ch100, 5500MHz)

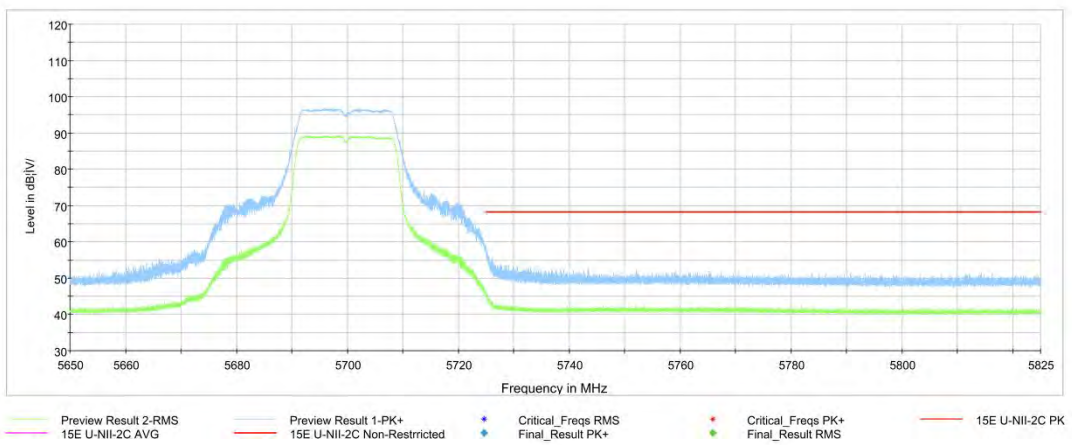


Fig. 41 Band Edges (802.11n-HT20 Ch140, 5700MHz)

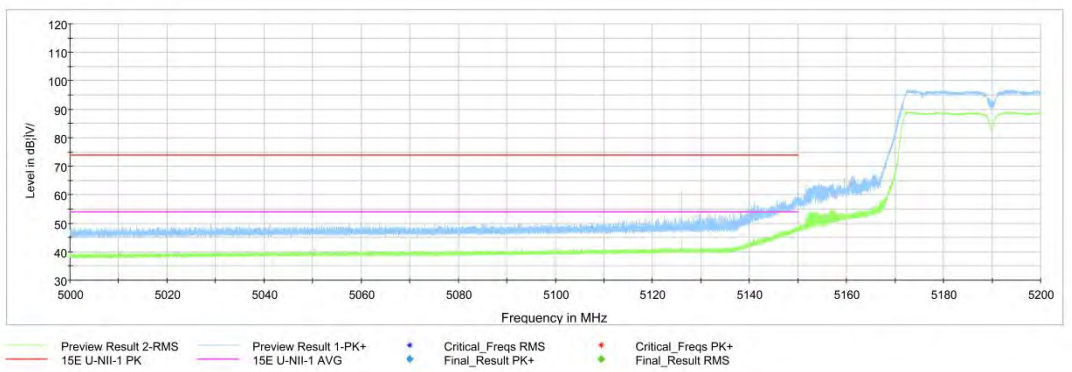


Fig. 42 Band Edges (802.11n-HT40 Ch38, 5190MHz)

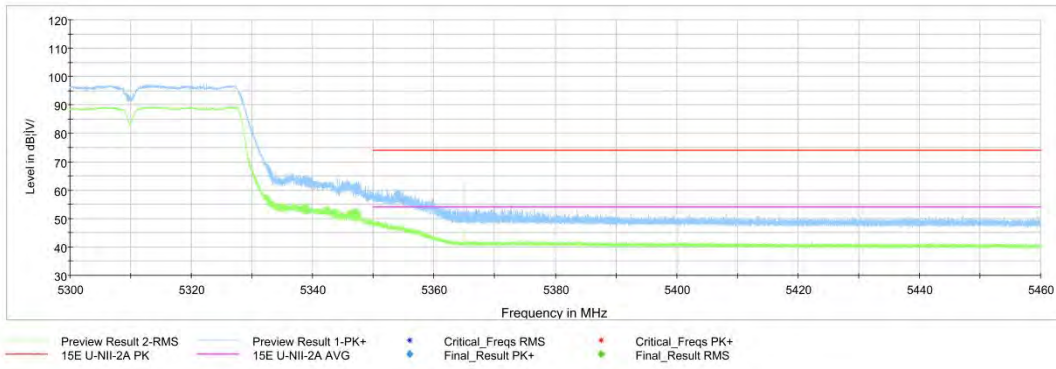


Fig. 43 Band Edges (802.11n-HT40 Ch62, 5310MHz)

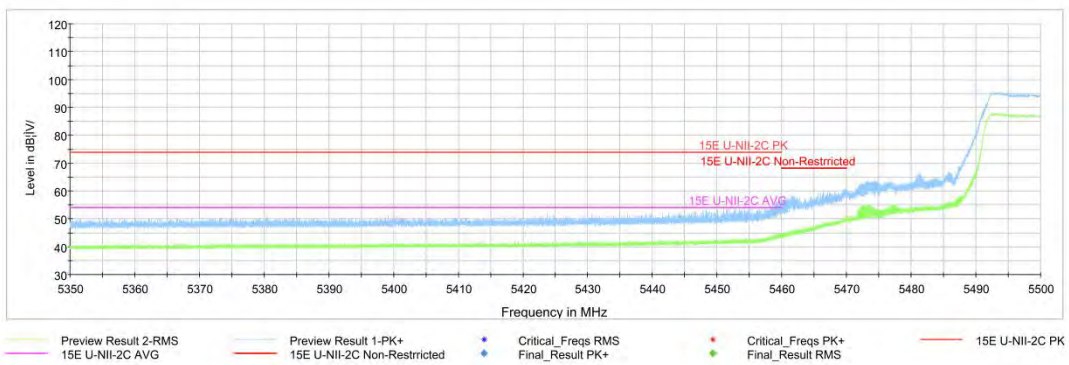


Fig. 44 Band Edges (802.11n-HT40 Ch102, 5510MHz)

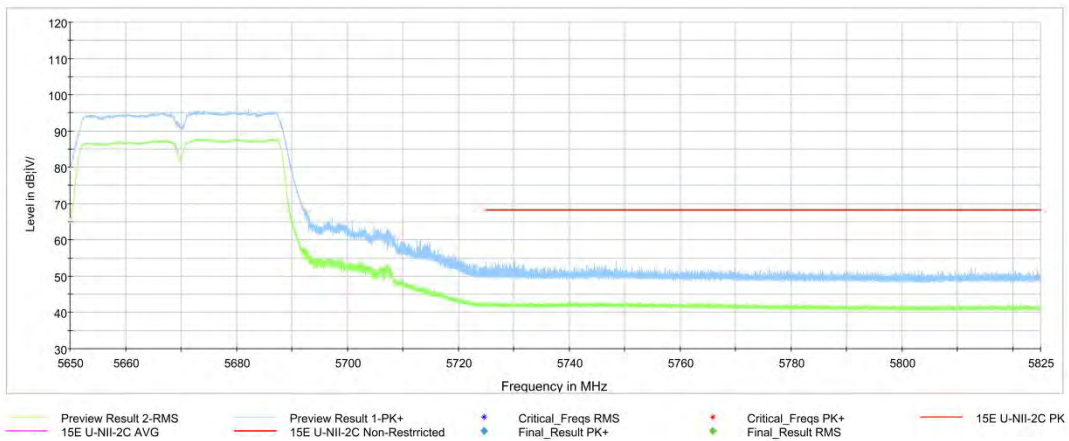


Fig. 45 Band Edges (802.11n-HT40 Ch134, 5670MHz)

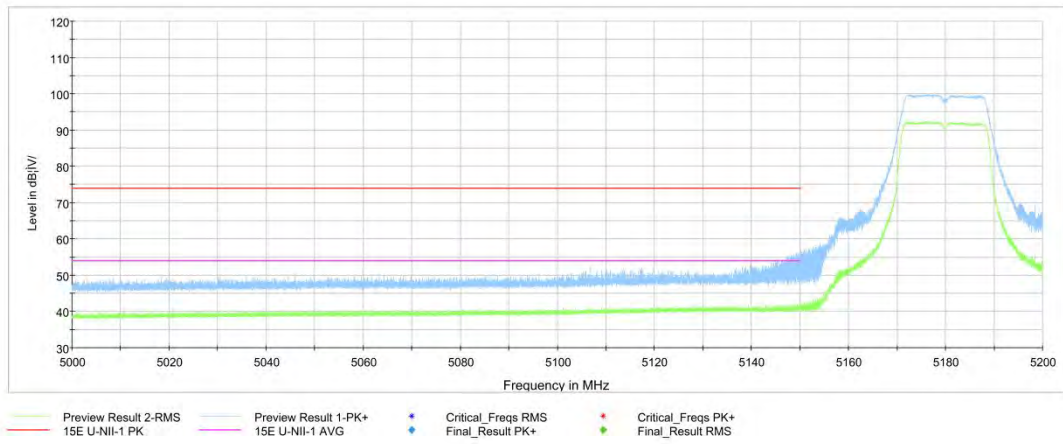


Fig. 46 Band Edges (802.11ac-HT20 Ch36, 5180MHz)

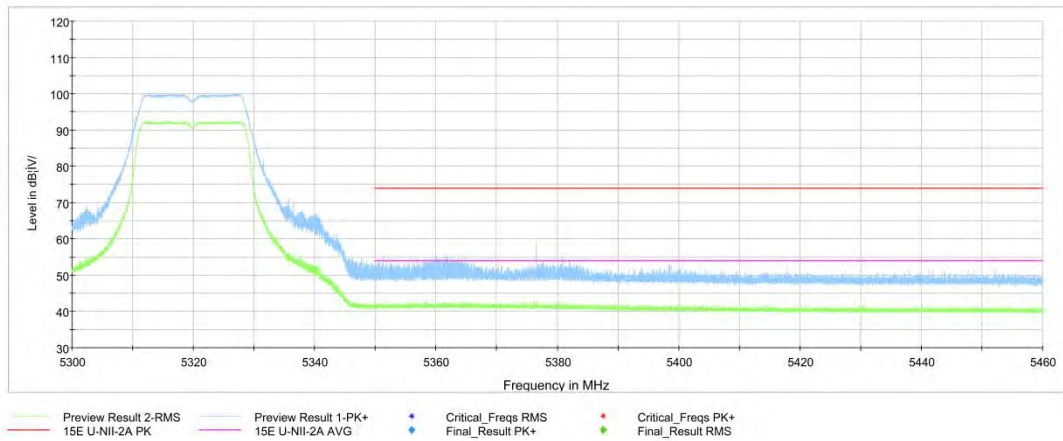


Fig. 47 Band Edges (802.11ac-HT20 Ch64, 5320MHz)

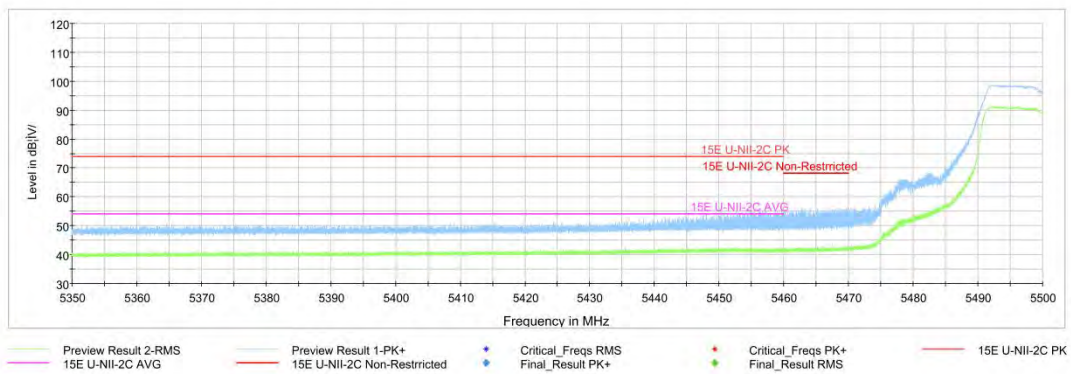


Fig. 48 Band Edges (802.11ac-HT20 Ch100, 5500MHz)

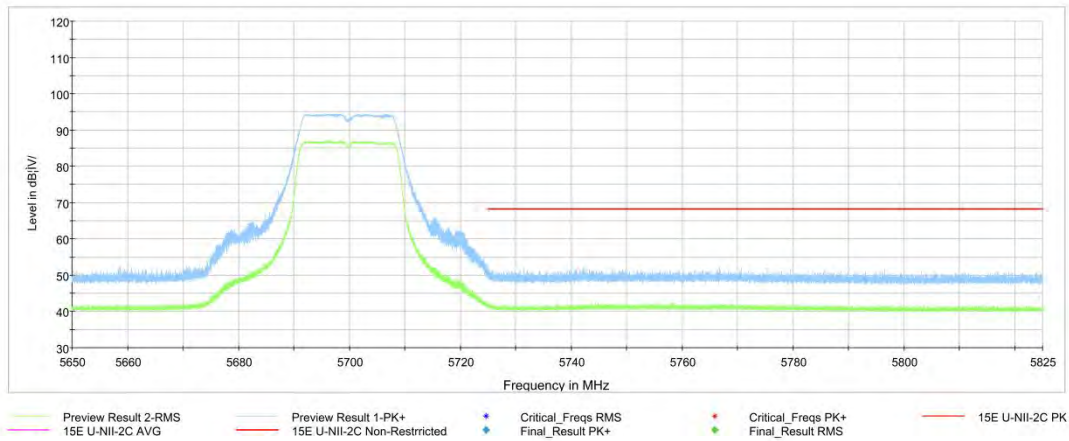


Fig. 49 Band Edges (802.11ac-HT20 Ch140, 5700MHz)

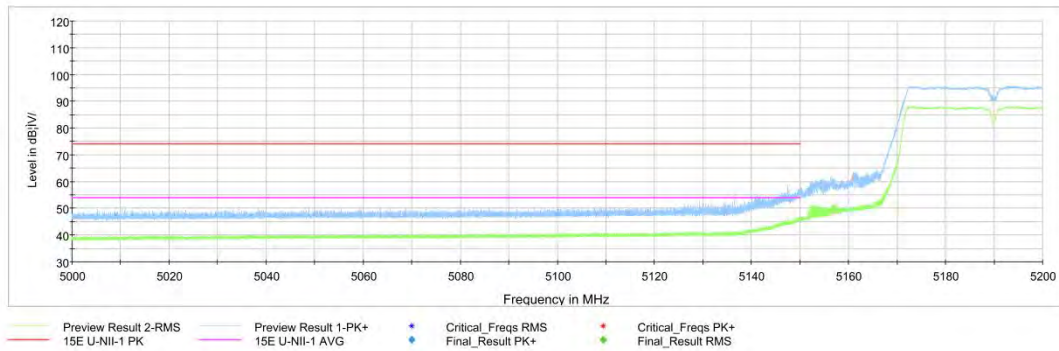


Fig. 50 Band Edges (802.11ac-HT40 Ch38, 5190MHz)

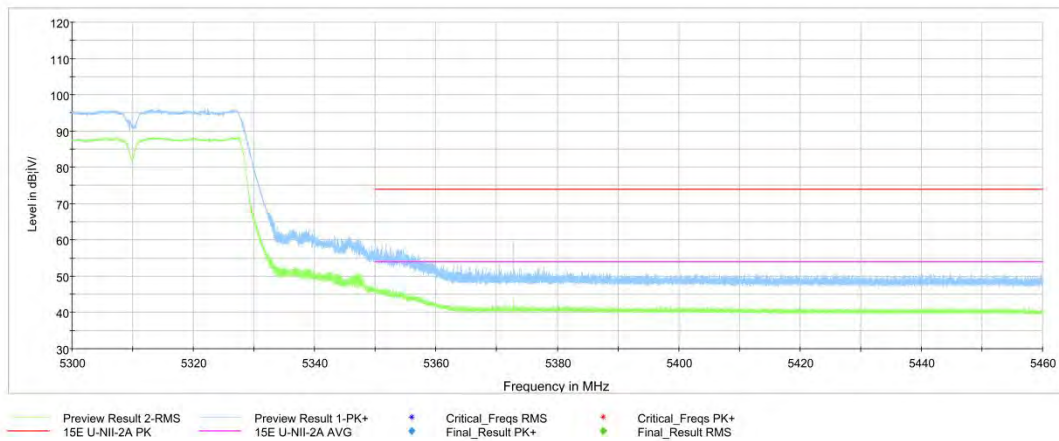


Fig. 51 Band Edges (802.11ac-HT40 Ch62, 5310MHz)

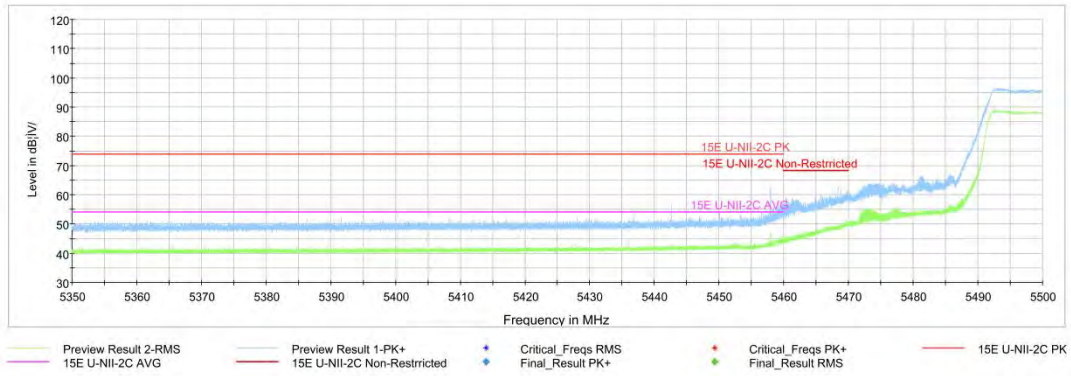


Fig. 52 Band Edges (802.11ac-HT40 Ch102, 5510MHz)

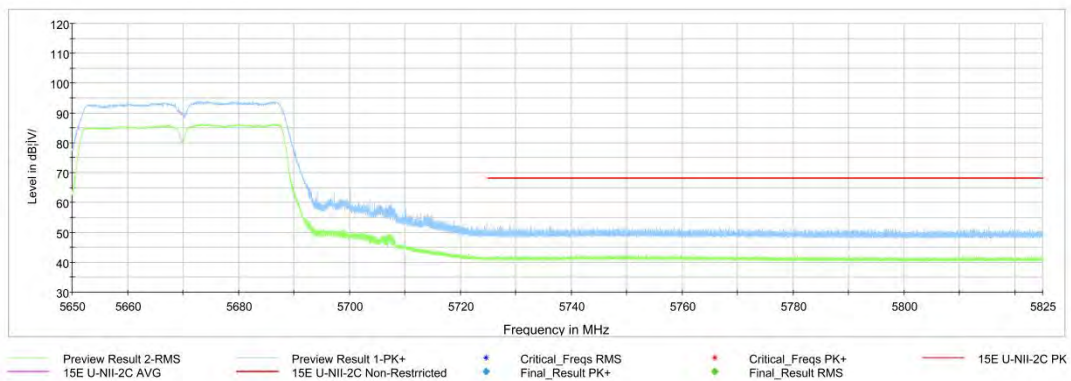


Fig. 53 Band Edges (802.11ac-HT40 Ch134, 5670MHz)

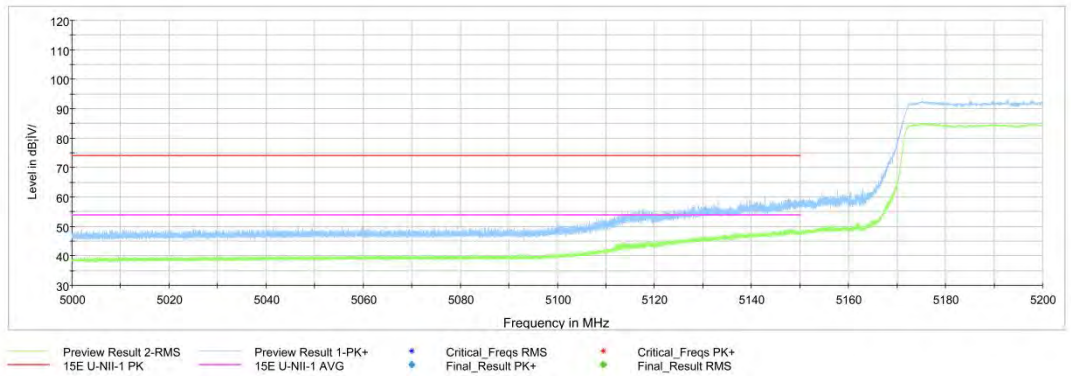


Fig. 54 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)

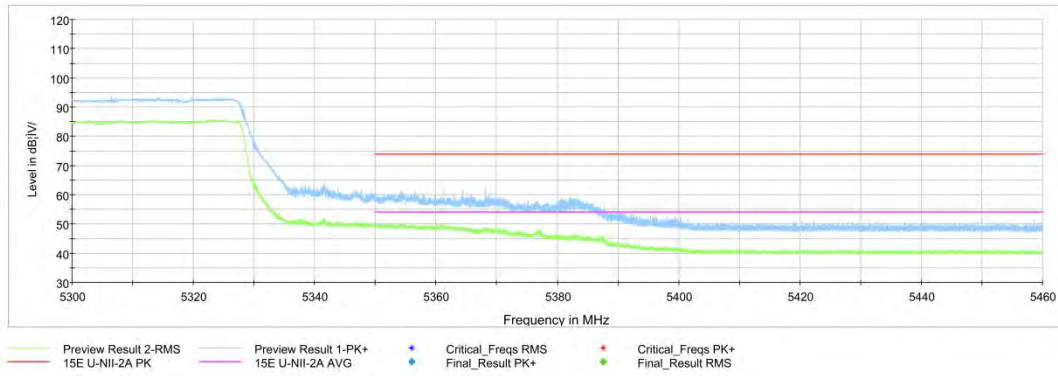


Fig. 55 Band Edges (802.11ac-HT80 Ch58, 5290MHz)

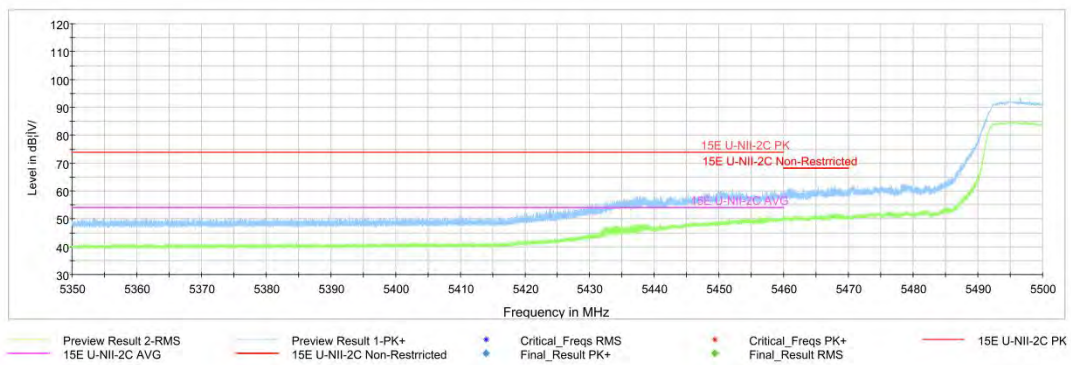


Fig. 56 Band Edges (802.11ac-HT80 Ch106, 5530MHz)

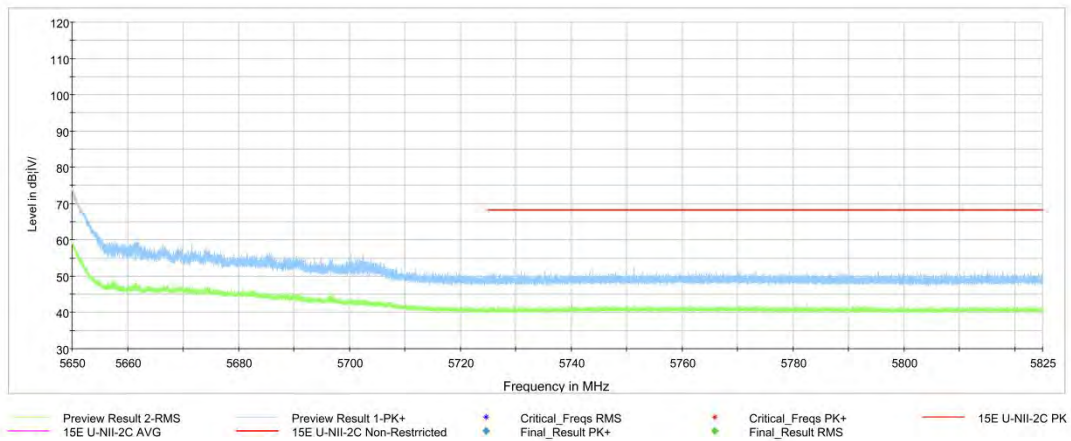


Fig. 57 Band Edges (802.11ac-HT80 Ch122, 5610MHz)

A.6. AC Powerline Conducted Emission (150kHz- 30MHz)

A.6.1 Summary

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section

A.6.2 Method of Measurement

See Clause 6.2 of ANSI C63.10 specifically.

See Clause 4 and Clause 5 of ANSI C63.10 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

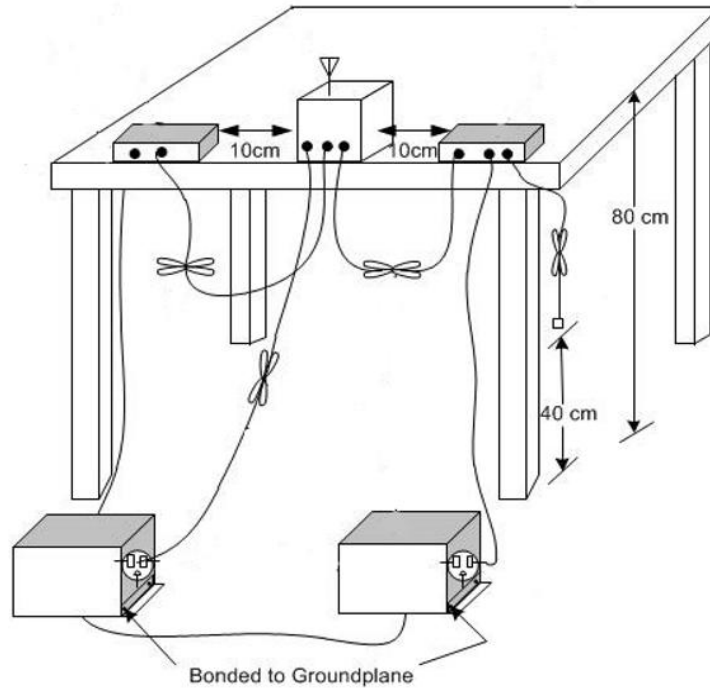
The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/IF bandwidth
0.15-30	9kHz

A.6.3 Test Condition

Voltage (V)	Frequency (Hz)
120	60

A.6.4 Test setup



Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode	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 (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	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:

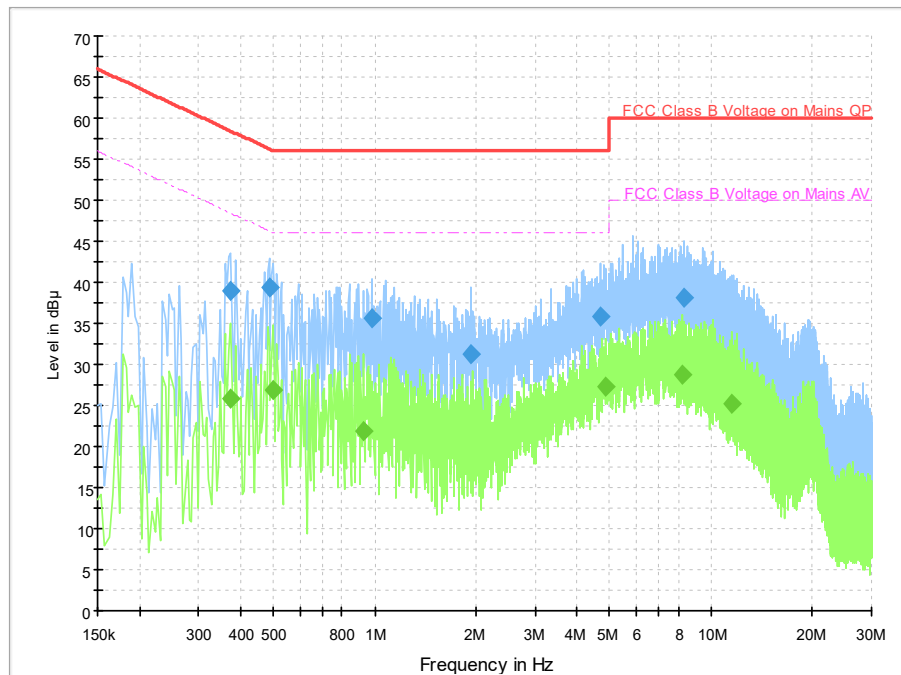


Fig.58 Conducted Emission(802.11a, TX)

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.374000	38.9	2000.0	9.000	On	L1	19.7	19.5	58.4	
0.486000	39.3	2000.0	9.000	On	L1	19.7	16.9	56.2	
0.978000	35.7	2000.0	9.000	On	L1	19.7	20.3	56.0	
1.934000	31.2	2000.0	9.000	On	N	19.6	24.8	56.0	
4.670000	35.9	2000.0	9.000	On	L1	19.6	20.1	56.0	
8.270000	38.0	2000.0	9.000	On	L1	19.7	22.0	60.0	

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.374000	25.8	2000.0	9.000	On	L1	19.7	22.7	48.4	
0.498000	26.8	2000.0	9.000	On	L1	19.7	19.2	46.0	
0.926000	21.8	2000.0	9.000	On	L1	19.7	24.2	46.0	
4.862000	27.3	2000.0	9.000	On	L1	19.6	18.7	46.0	
8.242000	28.7	2000.0	9.000	On	L1	19.7	21.3	50.0	
11.546000	25.1	2000.0	9.000	On	L1	19.8	24.9	50.0	

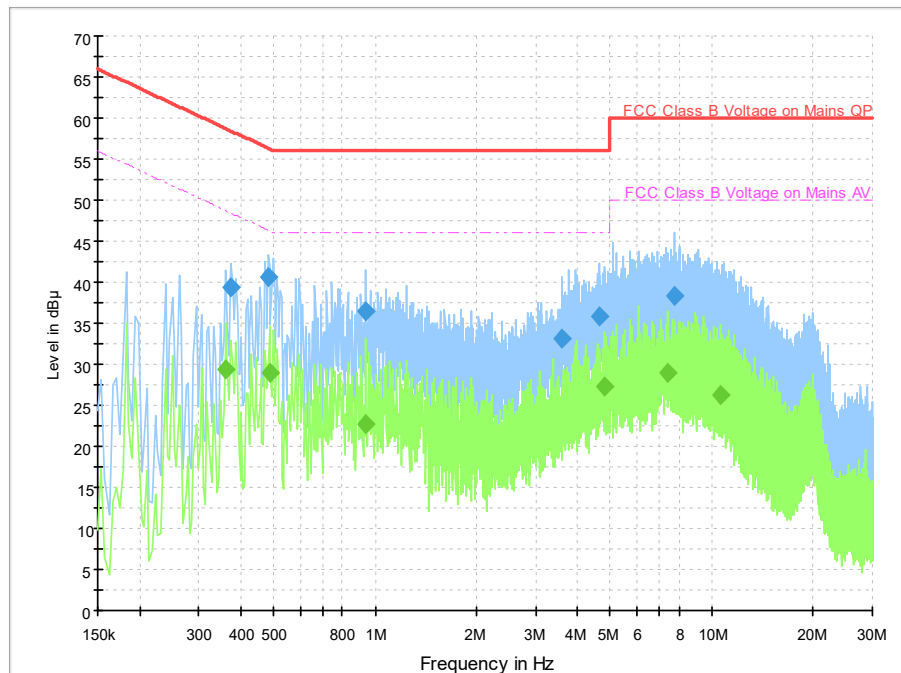


Fig.59 Conducted Emission(802.11a, IDLE)

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.374000	39.4	2000.0	9.000	On	N	19.7	19.0	58.4	
0.482000	40.6	2000.0	9.000	On	L1	19.7	15.7	56.3	
0.938000	36.4	2000.0	9.000	On	L1	19.7	19.6	56.0	
3.590000	33.1	2000.0	9.000	On	L1	19.6	22.9	56.0	
4.654000	35.9	2000.0	9.000	On	L1	19.6	20.1	56.0	
7.734000	38.4	2000.0	9.000	On	L1	19.7	21.6	60.0	

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.362000	29.5	2000.0	9.000	On	N	19.7	19.2	48.7	
0.486000	28.9	2000.0	9.000	On	N	19.7	17.3	46.2	
0.938000	22.8	2000.0	9.000	On	L1	19.7	23.2	46.0	
4.826000	27.4	2000.0	9.000	On	L1	19.6	18.6	46.0	
7.370000	28.9	2000.0	9.000	On	L1	19.7	21.1	50.0	
10.578000	26.3	2000.0	9.000	On	L1	19.7	23.7	50.0	

A.7. 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% of the 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
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EUT ID: UT30a

Measurement Result:

Mode	Frequency	99% Occupied bandwidth (MHz)		conclusion
		Fig.	Value	
802.11a	5180 MHz	Fig.60	17.55	P
	5200 MHz	Fig.61	17.47	P
	5240 MHz	Fig.62	17.49	P
802.11n HT20	5180 MHz	Fig.63	18.72	P
	5200 MHz	Fig.64	18.59	P
	5240 MHz	Fig.65	18.63	P
802.11n HT40	5190 MHz	Fig.66	37.26	P
	5230 MHz	Fig.67	37.21	P
802.11ac (VHT80)	5210 MHz	Fig.68	76.68	P

Test graphs as below:



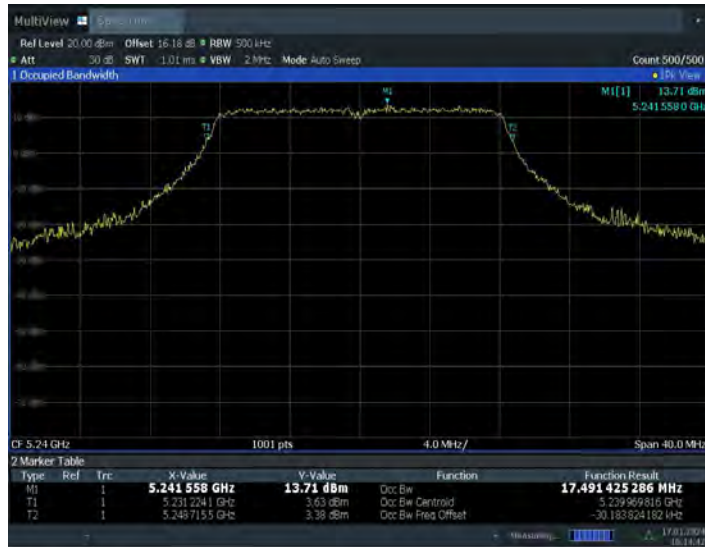
16:12:43 17.01.2024

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



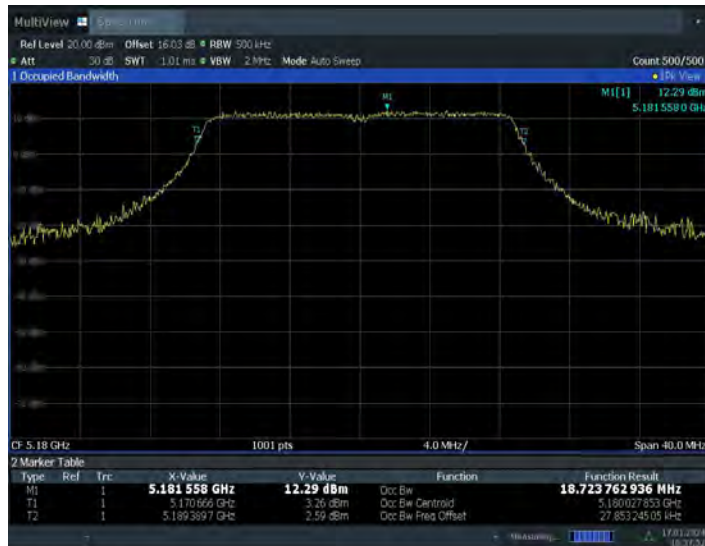
16:13:46 17.01.2024

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



16:14:42 17.01.2024

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



16:37:53 17.01.2024

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

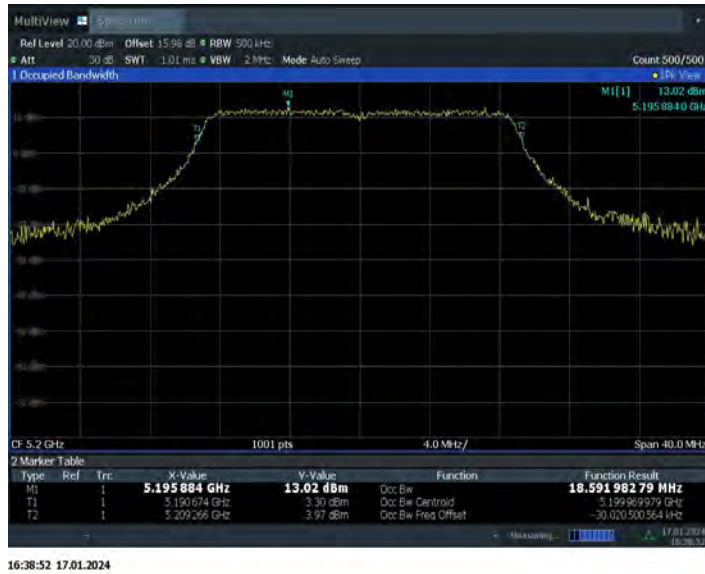
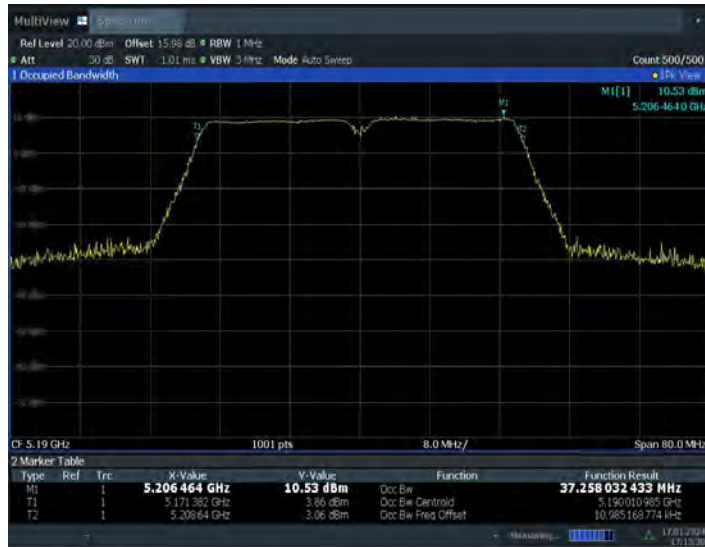


Fig.64 99% Occupied bandwidth (802.11n-HT20, 5200MHz)



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



17:15:30 17.01.2024

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



17:16:33 17.01.2024

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



Fig.68 99% Occupied bandwidth (802.11ac-VHT80, 5210MHz)

Conclusion: PASS

A.8. 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



Accredited Laboratory

A2LA has accredited

TELECOMMUNICATION TECHNOLOGY LABS, CAICT

Beijing, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 26th day of June 2023.

Mr. Trace McInturf, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 7049.01
Valid to July 31, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

*** END OF REPORT BODY ***