



FCC PART 15 TEST REPORT No.23T04Z80421-05

for

TCL Communication Ltd.

GSM/UMTS/LTE/NR Mobile phone

T614D

FCC ID: 2ACCJH179

with

Hardware Version: 06

Software Version: 3CSF

Issued Date: 2023-12-25

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
23T04Z80421-05	Rev.0	1st edition	2023-12-25

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

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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: 2023-11-02

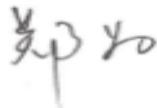
Testing End Date: 2023-12-22

1.5. Signature



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: TCL Communication Ltd.
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
City: Hong Kong
Postal Code: /
Country: China
Telephone: +86 755 3661 1621
Fax: +86 755 3661 2000-81722

2.2. Manufacturer Information

Company Name: TCL Communication Ltd.
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
City: Hong Kong
Postal Code: /
Country: China
Telephone: +86 755 3661 1621
Fax: +86 755 3661 2000-81722

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	GSM/UMTS/LTE/NR Mobile phone
Model name	T614D
FCC ID	2ACCJH179
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Nominal Voltage	3.85V
Extreme High Voltage	4.4V
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
UT15a	016499000013298/ 016499000013314	06	3CSF	2023-12-08
UT14a	016499000012464/ 016499000012498	06	3CSF	2023-11-01

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

UT15a is used for Conduction test, UT14a is used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	Manufacture
AE1	Battery1	TLp049FA	TMB
AE2	Battery2	TLp049F7	Veken
AE3	Charger1	QC13US	JUWEI
AE4	USB Cable1	CDA0000256C1	JUWEI
AE5	USB Cable2	CDA0000256C2	SHENGHUA

*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 GSM/UMTS/LTE/NR 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
Band edge compliance (Radiated)	15.209	/	P
Transmitter spurious emissions (Radiated)	15.407	/	P
AC Powerline Conducted Emission (150kHz- 30MHz)	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 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	3.85V
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
3	LISN	ENV216	101200	R&S	1 year	2024-06-05
4	Test Receiver	ESCI	100344	R&S	1 year	2024-02-21
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	13 Months	2024-07-08
2	EMI Antenna	VULB 9163	01222	SCHWARZBECK	13 Months	2024-02-28
3	EMI Antenna	3115	6914	ETS-Lindgren	13 Months	2024-04-25
4	EMI Antenna	3116	2661	ETS-Lindgren	13 Months	2024-01-30

Test Software

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V10.60.20	R&S
Conducted Emission	EMC32 V8.53.0	R&S

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	4.92
$30\text{MHz} \leq f \leq 1\text{GHz}$	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

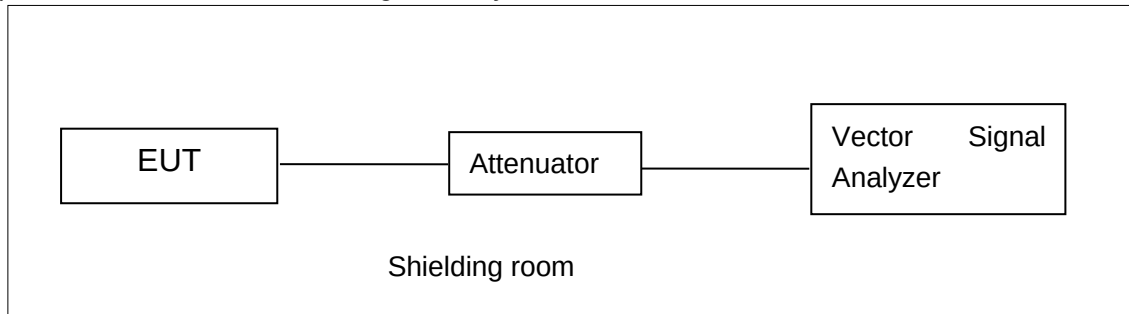
Measurement Uncertainty : 3.08dB,k=2

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 -4.88dBi and the value is supplied by the applicant or manufacturer.

A.2.2 Maximum output Power-Conducted

EUT ID: UT15a

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	17.60	/	/	/	/	/	/	/
	5200MHz	17.85	/	/	/	/	/	/	/
	5240MHz	17.35	/	/	/	/	/	/	/
	5260MHz	17.11	/	/	/	/	/	/	/
	5280MHz	17.27	/	/	/	/	/	/	/
	5320MHz	17.46	/	/	/	/	/	/	/
	5500MHz	17.27	/	/	/	/	/	/	/
	5580MHz	17.14	/	/	/	/	/	/	/
	5700MHz	17.59	/	/	/	/	/	/	/
	5720MHz	17.57	/	/	/	/	/	/	/

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	17.83	/	/	/	/	/	/	/
	5200MHz	17.72	/	/	/	/	/	/	/
	5240MHz	17.69	/	/	/	/	/	/	/
	5260MHz	17.78	/	/	/	/	/	/	/
	5280MHz	17.67	/	/	/	/	/	/	/
	5320MHz	17.65	/	/	/	/	/	/	/
	5500MHz	18.49	/	/	/	/	/	/	/

	5580MHz	17.86	/	/	/	/	/	/	/
	5700MHz	17.79	/	/	/	/	/	/	/
	5720MHz	17.92	/	/	/	/	/	/	/

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	17.70	/	/	/	/	/	/	/	/
	5200MHz	17.82	/	/	/	/	/	/	/	/
	5240MHz	17.76	/	/	/	/	/	/	/	/
	5260MHz	17.78	/	/	/	/	/	/	/	/
	5280MHz	17.63	/	/	/	/	/	/	/	/
	5320MHz	17.67	/	/	/	/	/	/	/	/
	5500MHz	18.50	/	/	/	/	/	/	/	/
	5580MHz	17.79	/	/	/	/	/	/	/	/
	5700MHz	18.31	/	/	/	/	/	/	/	/
	5720MHz	18.32	/	/	/	/	/	/	/	/

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	14.59	/	/	/	/	/	/	/
	5230MHz	14.64	/	/	/	/	/	/	/
	5270MHz	14.61	/	/	/	/	/	/	/
	5310MHz	14.50	/	/	/	/	/	/	/
	5510MHz	15.36	/	/	/	/	/	/	/
	5550MHz	14.98	/	/	/	/	/	/	/
	5670MHz	15.26	/	/	/	/	/	/	/
	5710MHz	15.22	/	/	/	/	/	/	/

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	14.95	/	/	/	/	/	/	/	/	/
	5230MHz	14.69	/	/	/	/	/	/	/	/	/
	5270MHz	14.78	/	/	/	/	/	/	/	/	/
	5310MHz	14.43	/	/	/	/	/	/	/	/	/
	5510MHz	15.25	/	/	/	/	/	/	/	/	/
	5550MHz	15.00	/	/	/	/	/	/	/	/	/
	5670MHz	15.28	/	/	/	/	/	/	/	/	/
	5710MHz	15.23	/	/	/	/	/	/	/	/	/

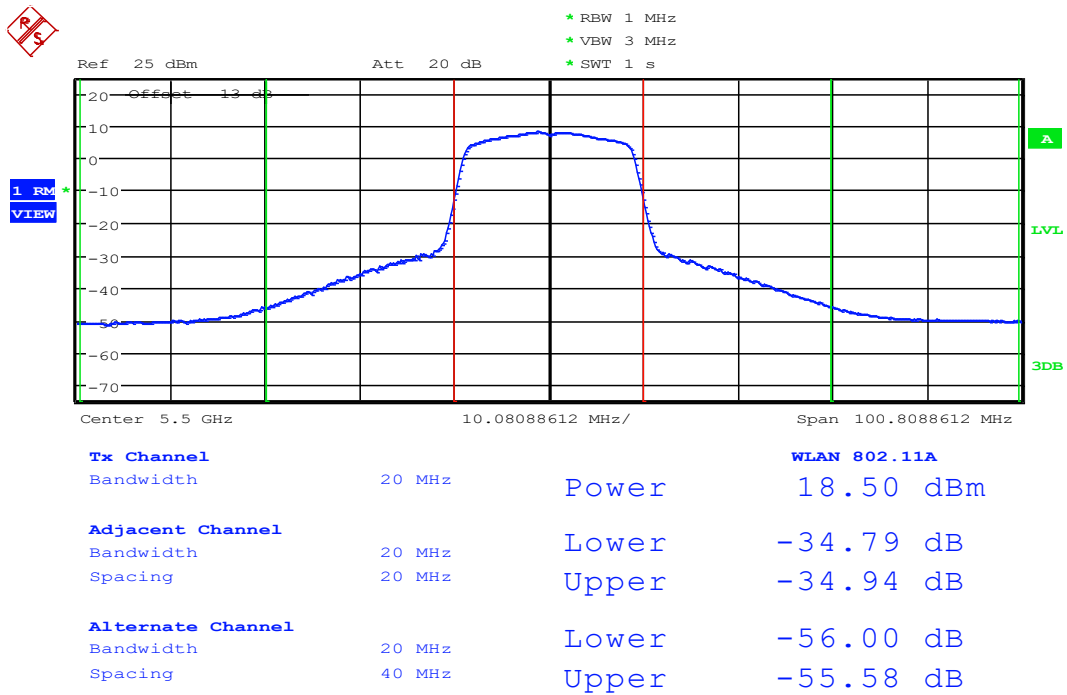
The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

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	14.18	/	/	/	/	/	/	/	/	/
	5290MHz	14.22	/	/	/	/	/	/	/	/	/
	5530MHz	14.81	/	/	/	/	/	/	/	/	/
	5610MHz	14.49	/	/	/	/	/	/	/	/	/
	5690MHz	14.76	/	/	/	/	/	/	/	/	/

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%



Date: 22.DEC.2023 16:13:32

Maximum output Power: 11ac20 CH100

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

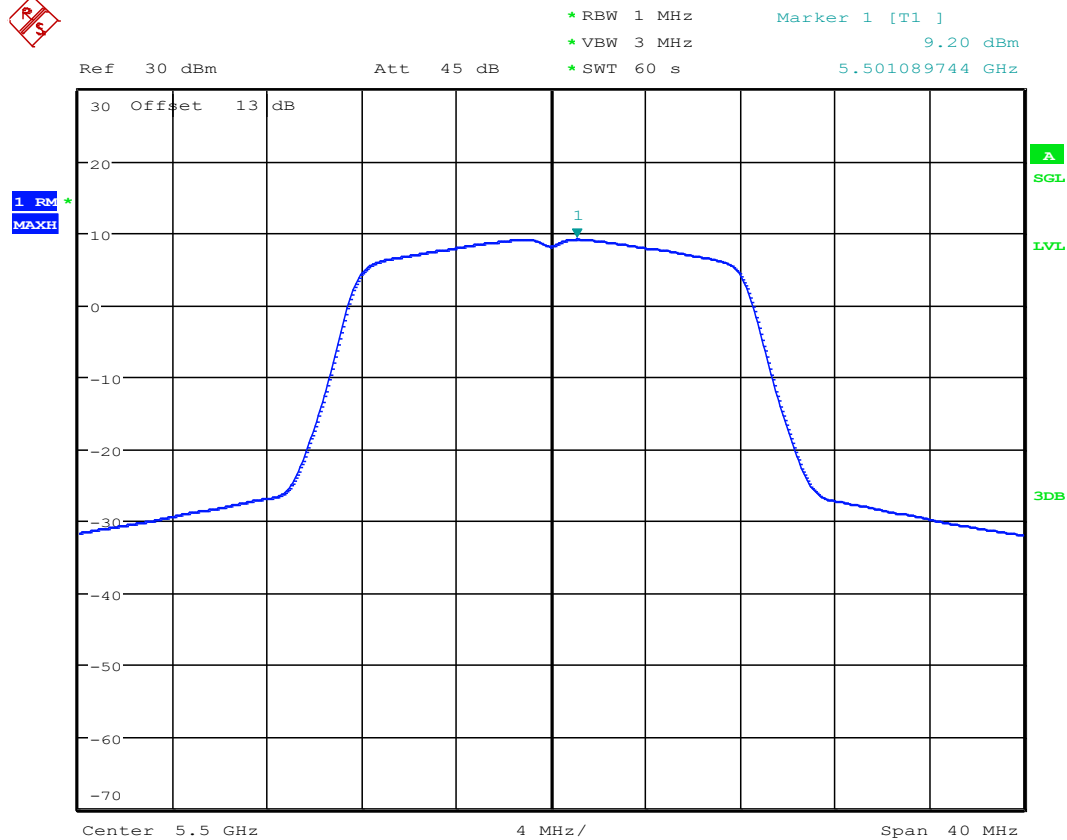
The output power measurement method Section F is made according to KDB 789033

EUT ID: UT15a

Measurement Results:

Mode	Frequency	Power Spectral Density (dBm/MHz)	Conclusion
802.11a	5180 MHz	8.18	P
	5200 MHz	8.30	P
	5240 MHz	8.32	P
	5260 MHz	8.30	P
	5280 MHz	8.06	P
	5320 MHz	8.38	P
	5500 MHz	9.20	P
	5580 MHz	8.00	P
	5700 MHz	5.57	P
	5720 MHz	8.58	P
802.11ac VHT20	5180 MHz	7.79	P
	5200 MHz	7.90	P
	5240 MHz	7.94	P
	5260 MHz	7.94	P
	5280 MHz	7.68	P
	5320 MHz	7.92	P
	5500 MHz	8.98	P
	5580 MHz	7.70	P
	5700 MHz	8.38	P
	5720 MHz	8.27	P
802.11n HT40	5190 MHz	1.88	P
	5230 MHz	1.73	P
	5270 MHz	1.84	P
	5310 MHz	1.85	P
	5510 MHz	2.31	P
	5550 MHz	2.32	P
	5670 MHz	2.30	P
	5710 MHz	2.11	P
802.11ac VHT80	5210 MHz	-2.04	P
	5290 MHz	-2.14	P

	5530 MHz	-1.42	P
	5610 MHz	-1.66	P
	5690 MHz	-1.46	P



Date: 15.DEC.2023 14:01:05

Peak Power Spectral Density:11a CH100

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:

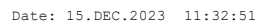
Measurement Uncertainty	60.80Hz
-------------------------	---------

EUT ID: UT15a

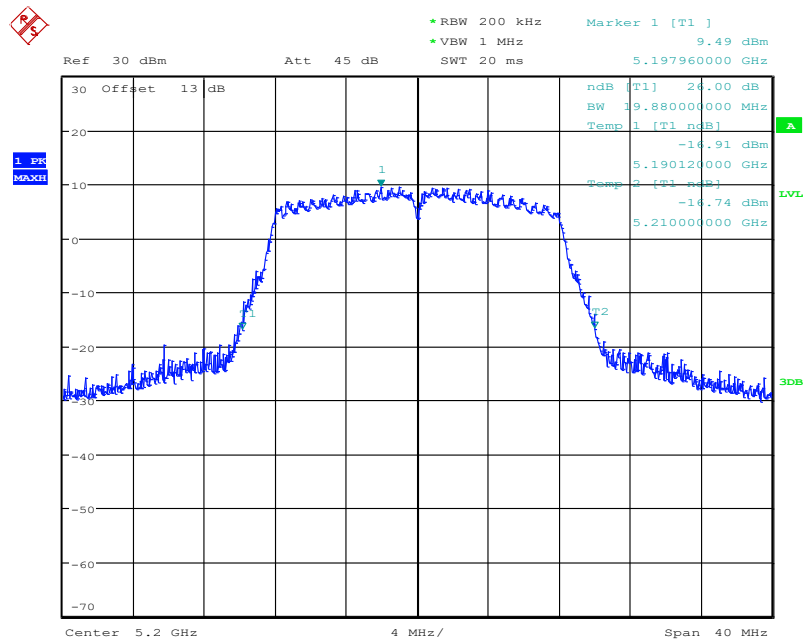
Measurement Result:

Mode	Frequency	26dB Emission Bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.1	20.00	P
	5200 MHz	Fig.2	19.88	P
	5240 MHz	Fig.3	19.96	P
	5260 MHz	Fig.4	19.88	P
	5280 MHz	Fig.5	19.92	P
	5320 MHz	Fig.6	19.84	P
	5500 MHz	Fig.7	20.00	P
	5580 MHz	Fig.8	19.84	P
	5700 MHz	Fig.9	20.16	P
	5720 MHz	Fig.10	20.16	P
802.11ac VHT20	5180 MHz	Fig.11	20.32	P
	5200 MHz	Fig.12	20.36	P
	5240 MHz	Fig.13	20.40	P
	5260 MHz	Fig.14	20.32	P
	5280 MHz	Fig.15	20.44	P
	5320 MHz	Fig.16	20.36	P
	5500 MHz	Fig.17	20.44	P
	5580 MHz	Fig.18	20.48	P
	5700 MHz	Fig.19	20.32	P
	5720 MHz	Fig.20	20.56	
802.11n HT40	5190 MHz	Fig.21	40.96	P
	5230 MHz	Fig.22	40.88	P
	5270 MHz	Fig.23	41.20	P
	5310 MHz	Fig.24	40.88	P
	5510 MHz	Fig.25	41.04	P
	5550 MHz	Fig.26	41.04	P
	5670 MHz	Fig.27	41.12	P
	5710 MHz	Fig.28	40.96	P
802.11ac	5210MHz	Fig.29	81.92	P

Test graphs as below:

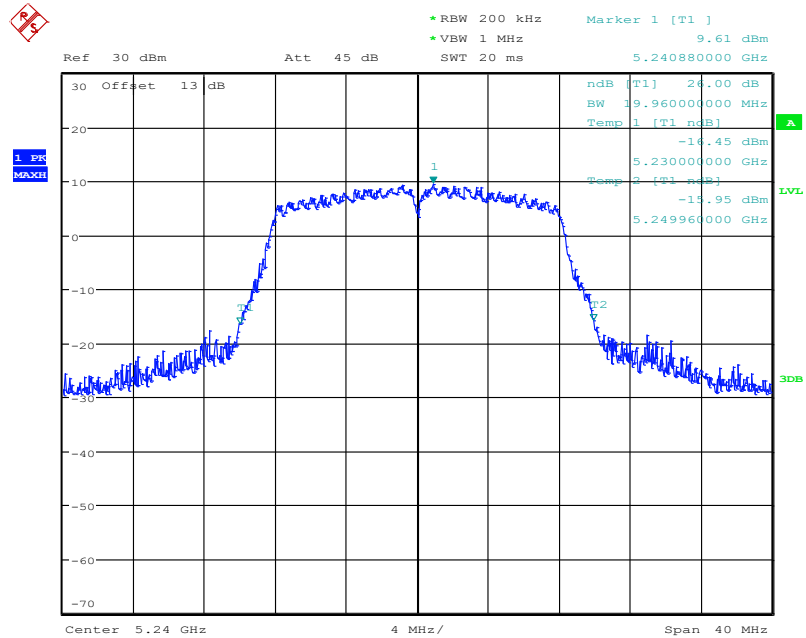


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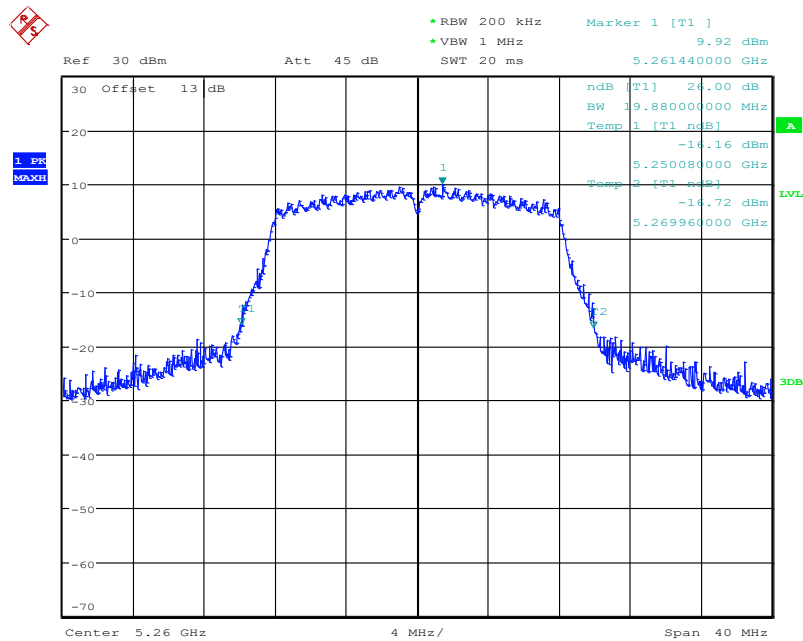
Date: 15.DEC.2023 13:35:24

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



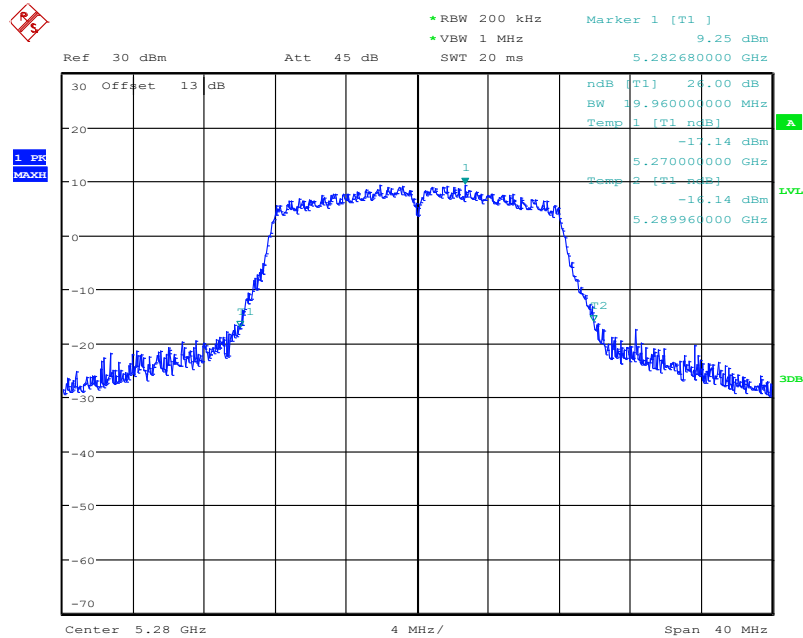
Date: 15.DEC.2023 13:35:48

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



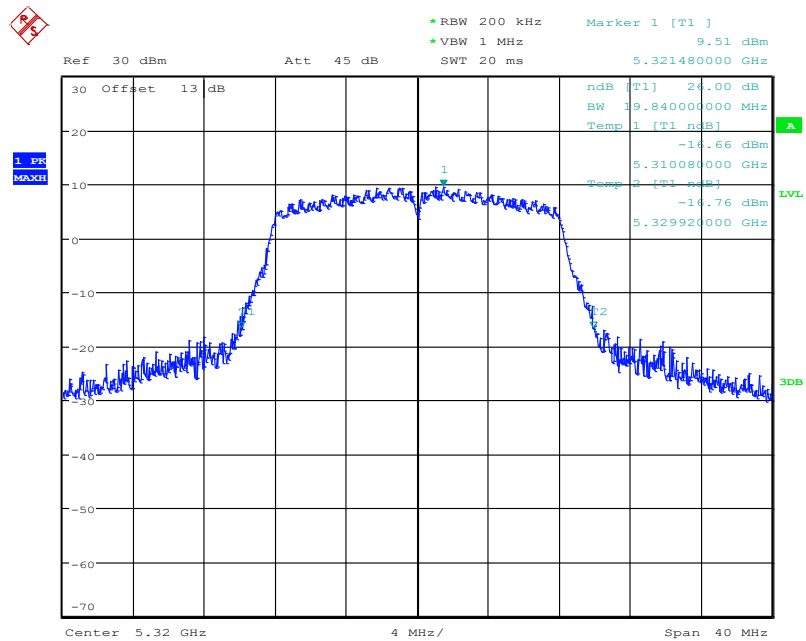
Date: 15.DEC.2023 13:36:10

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



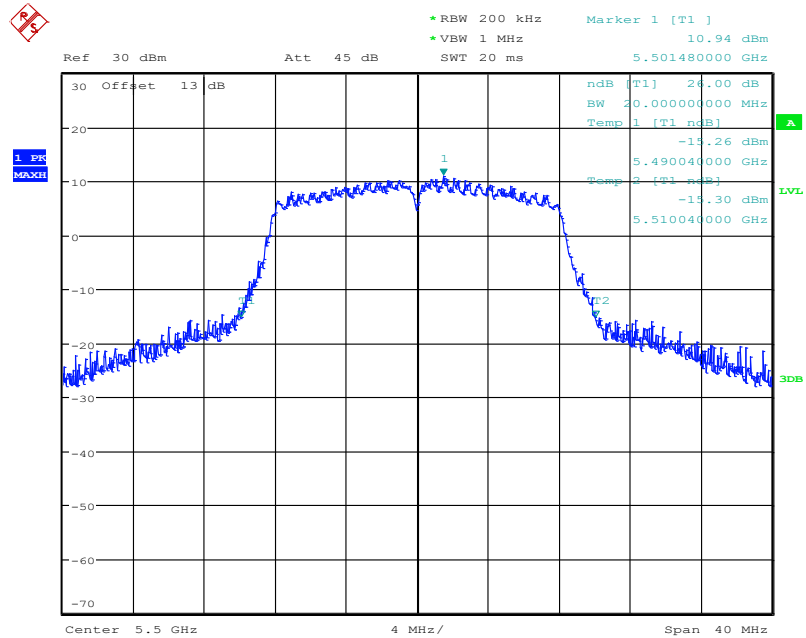
Date: 15.DEC.2023 13:36:32

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



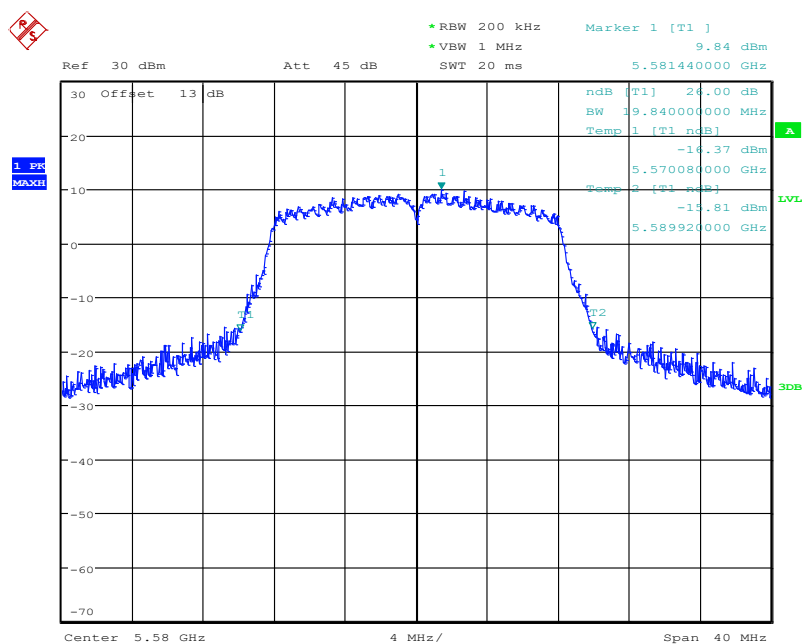
Date: 15.DEC.2023 13:36:55

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



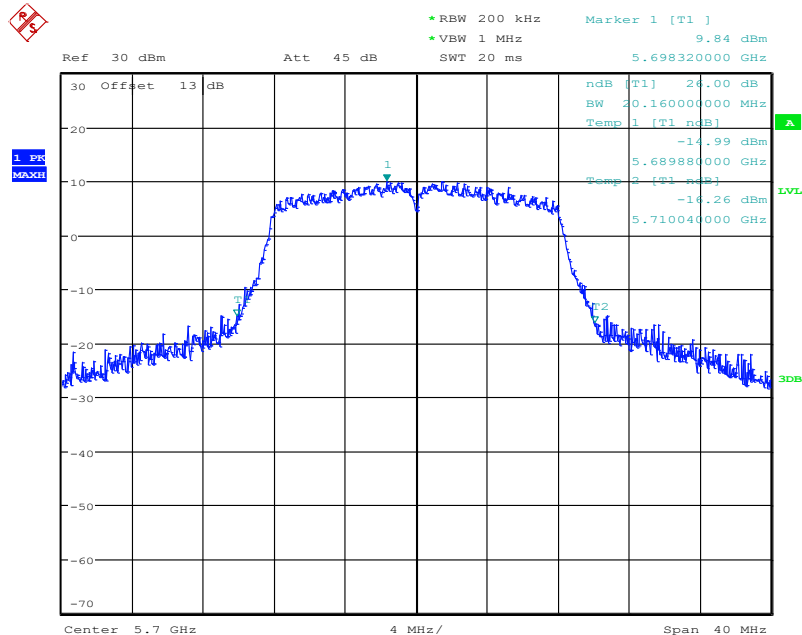
Date: 15.DEC.2023 13:37:19

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



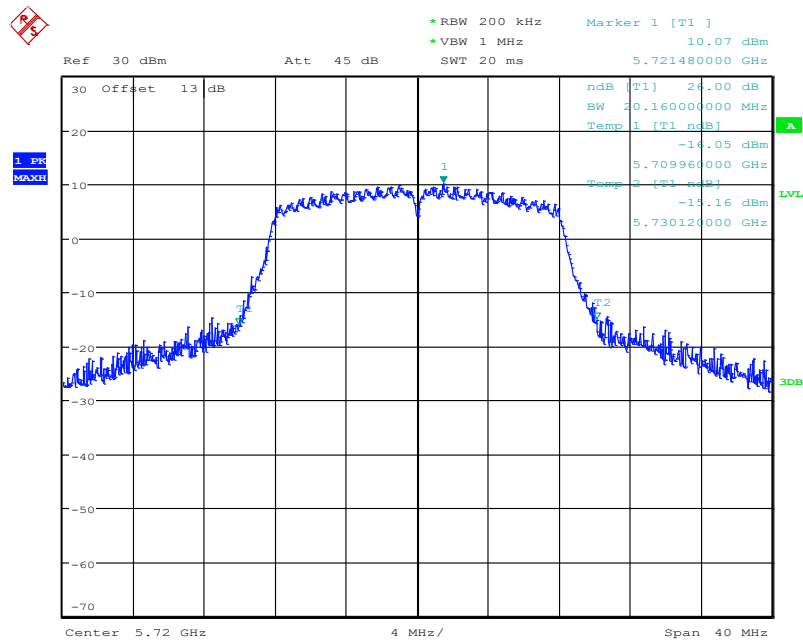
Date: 15.DEC.2023 13:37:54

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



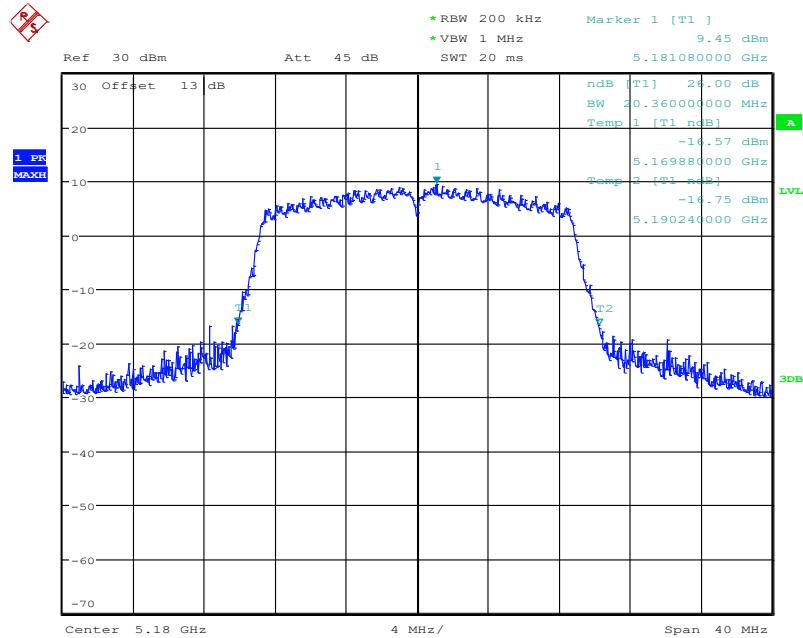
Date: 15.DEC.2023 13:38:25

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



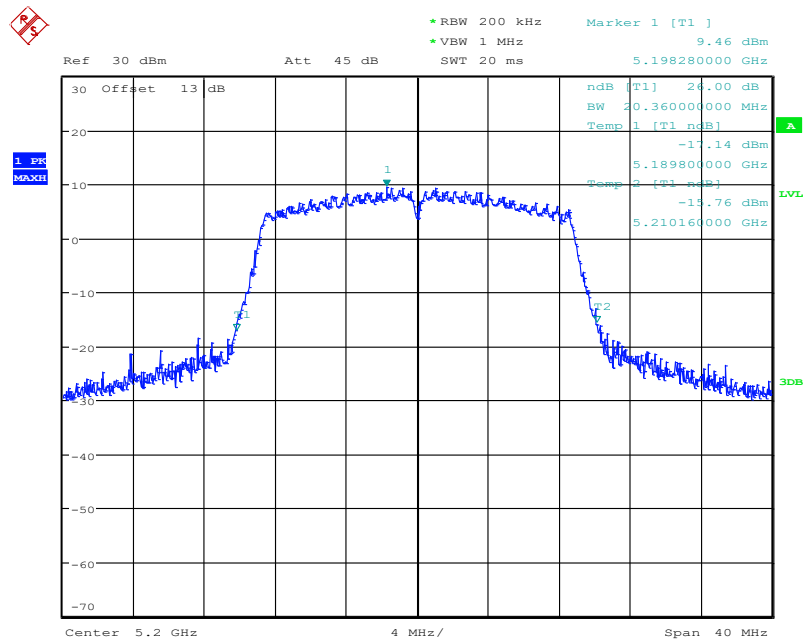
Date: 15.DEC.2023 13:38:52

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



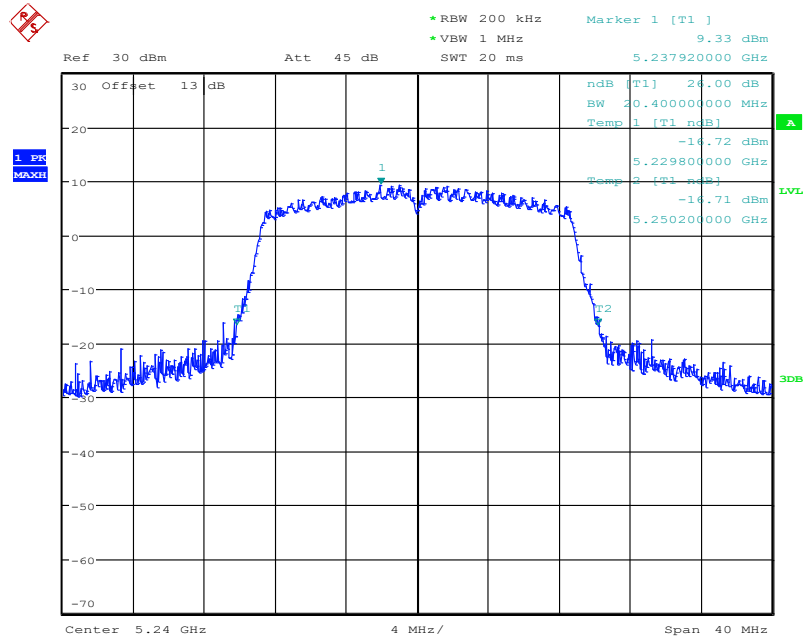
Date: 15.DEC.2023 13:39:17

Fig.11 26dB Emission Bandwidth (802.11ac-VHT20, 5180MHz)



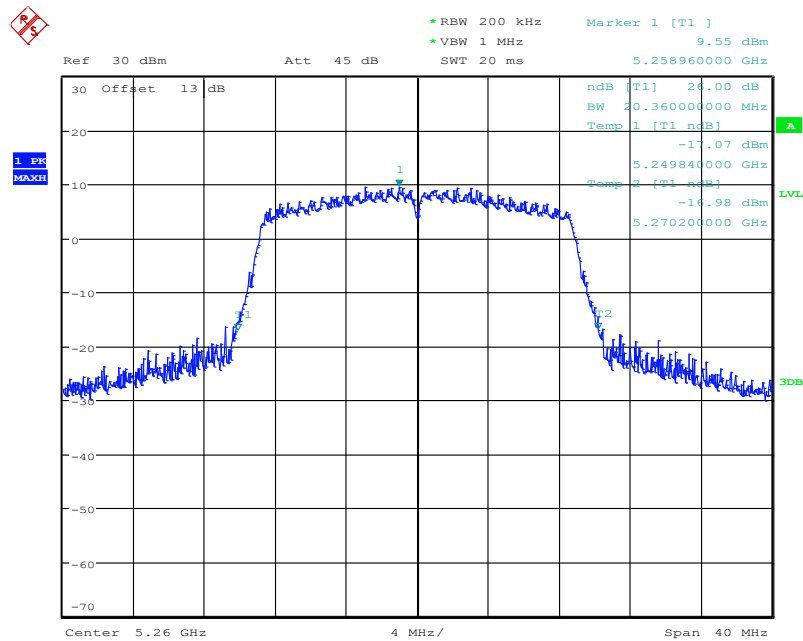
Date: 15.DEC.2023 13:39:38

Fig.12 26dB Emission Bandwidth (802.11ac-VHT20, 5200MHz)



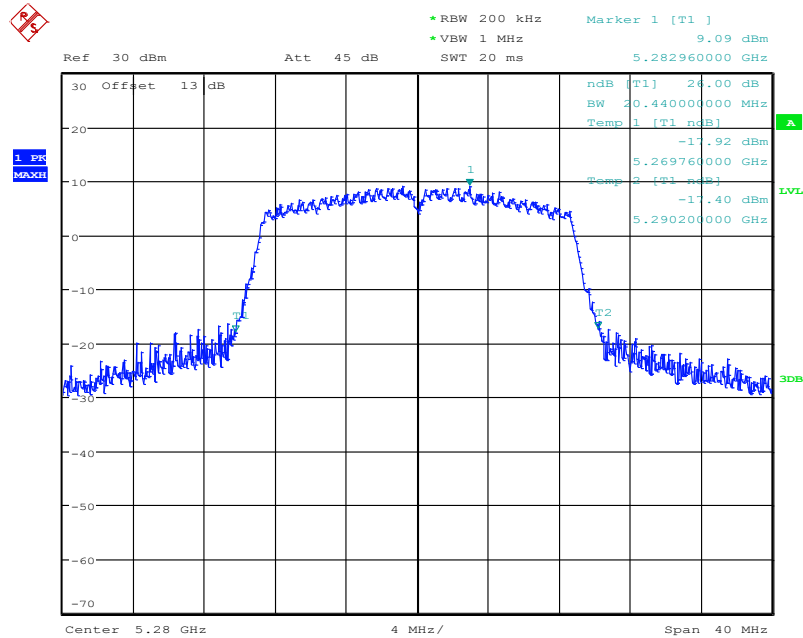
Date: 15.DEC.2023 13:39:59

Fig.13 26dB Emission Bandwidth (802.11ac-VHT20, 5240MHz)



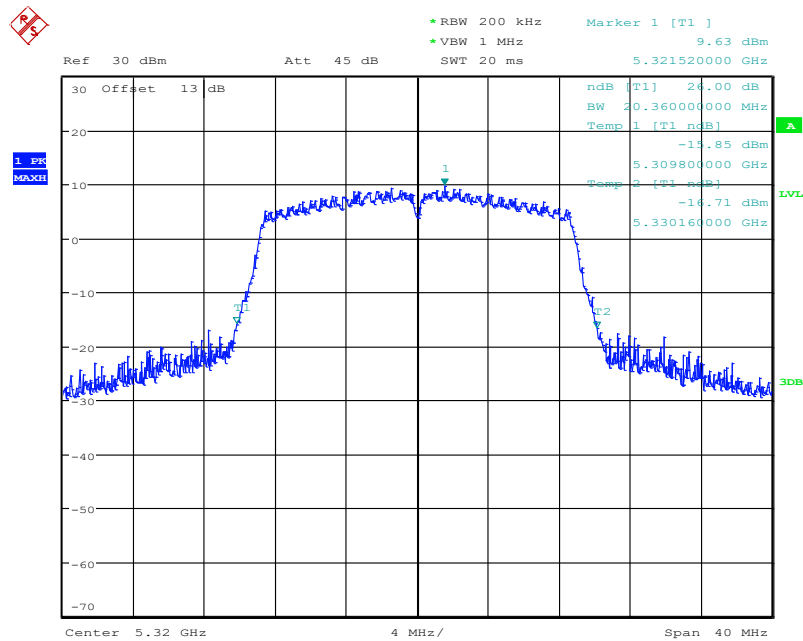
Date: 15.DEC.2023 13:40:20

Fig.14 26dB Emission Bandwidth (802.11ac-VHT20, 5260MHz)



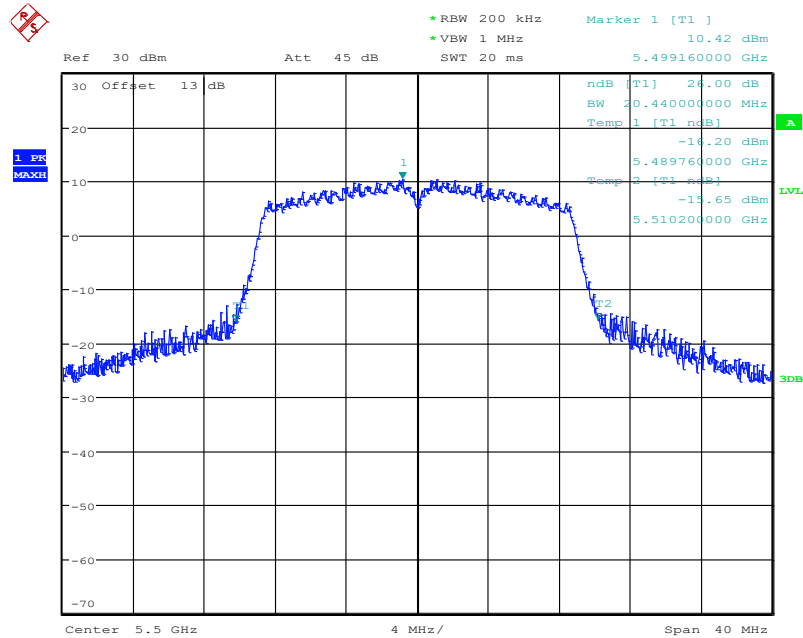
Date: 15.DEC.2023 13:40:42

Fig.15 26dB Emission Bandwidth (802.11ac-VHT20, 5280MHz)



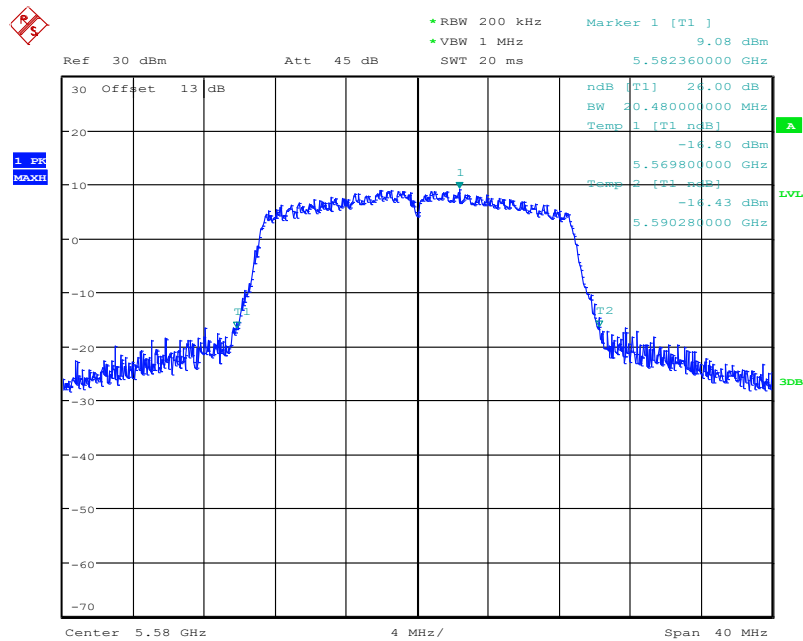
Date: 15.DEC.2023 13:41:04

Fig.16 26dB Emission Bandwidth (802.11ac-VHT20, 5320MHz)



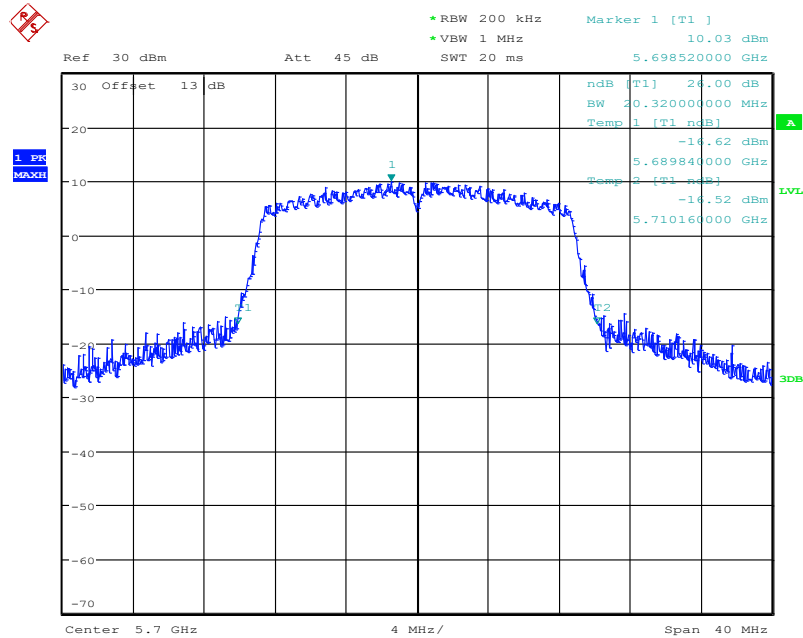
Date: 15.DEC.2023 13:41:26

Fig.17 26dB Emission Bandwidth (802.11ac-VHT20, 5500MHz)



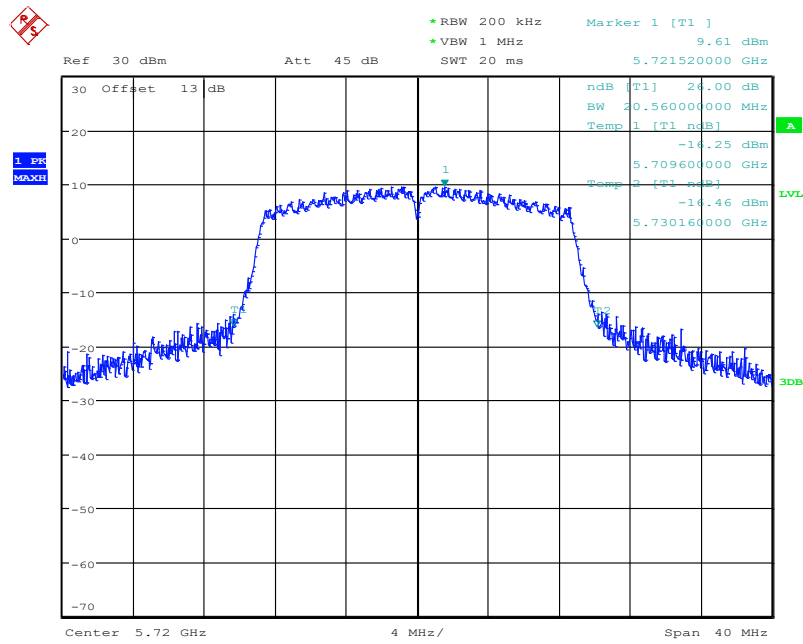
Date: 15.DEC.2023 13:41:50

Fig.18 26dB Emission Bandwidth (802. 11ac-VHT20, 5580MHz)



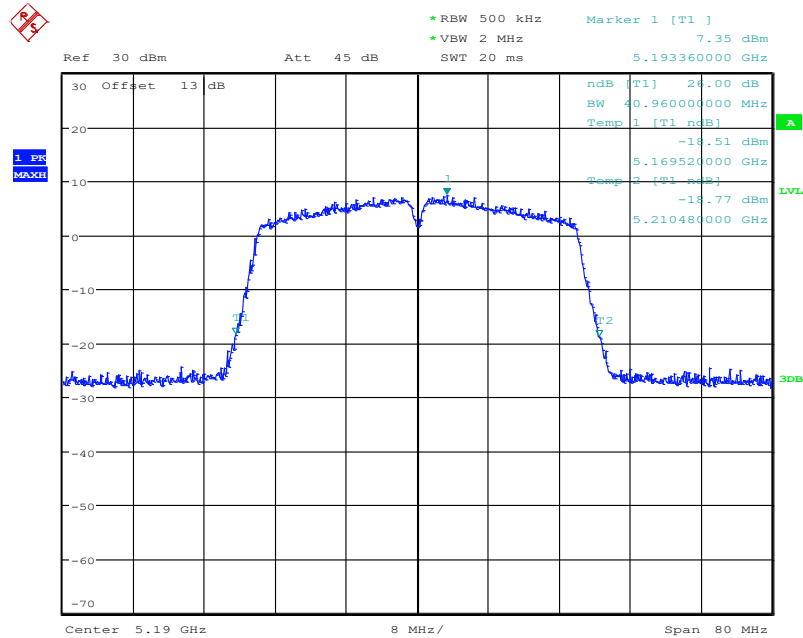
Date: 15.DEC.2023 13:42:16

Fig.19 26dB Emission Bandwidth (802. 11ac-VHT20, 5700MHz)



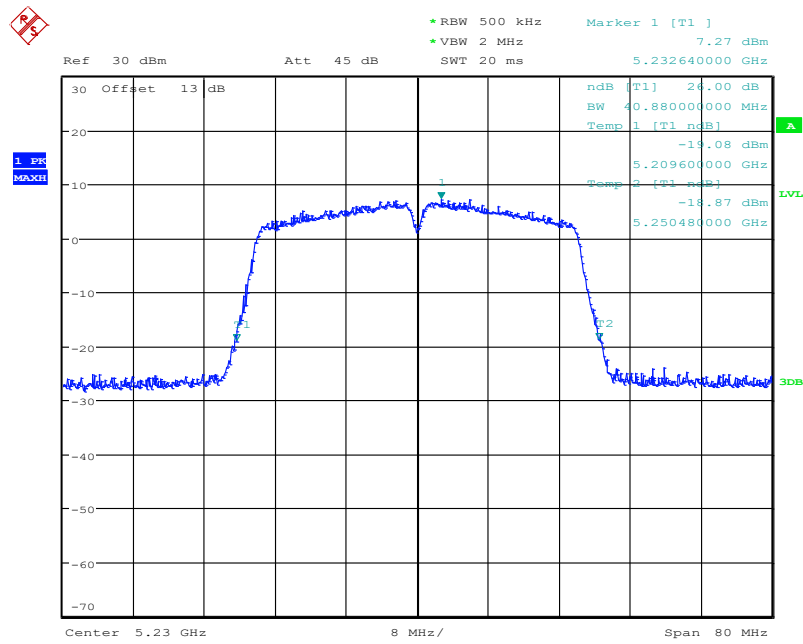
Date: 15.DEC.2023 13:42:37

Fig.20 26dB Emission Bandwidth (802. 11ac-VHT20, 5720MHz)



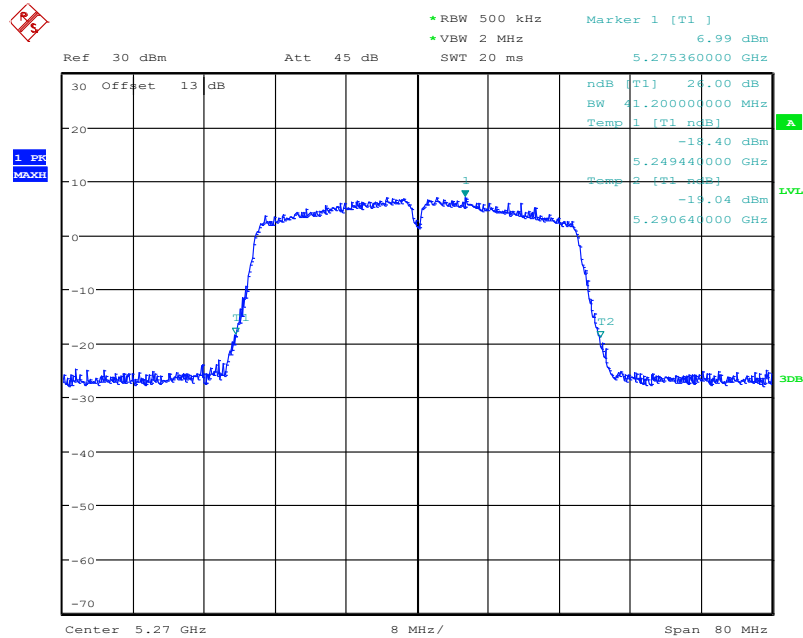
Date: 15.DEC.2023 11:22:28

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



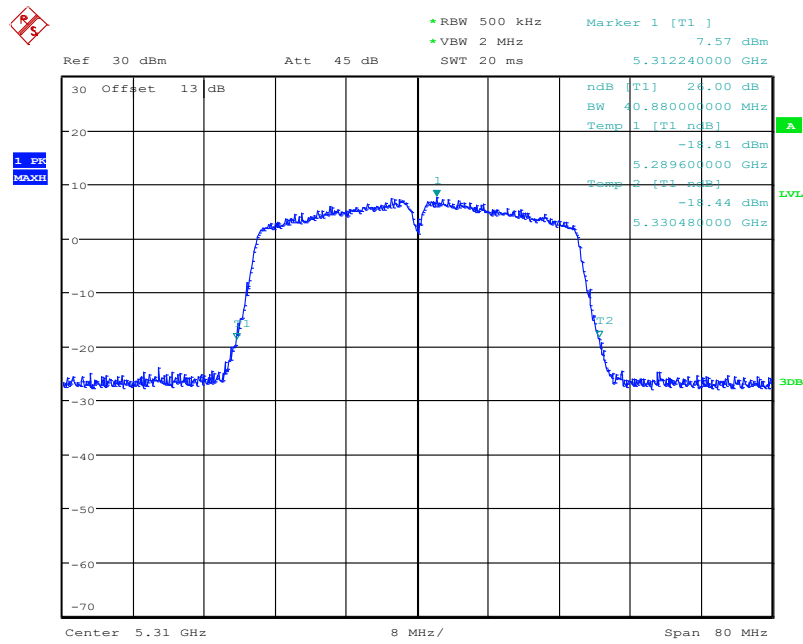
Date: 15.DEC.2023 11:23:11

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



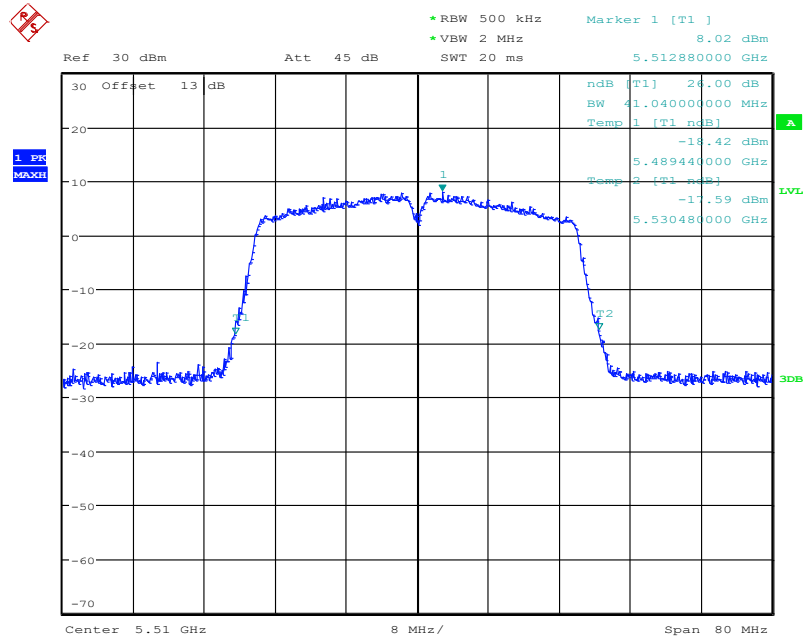
Date: 15.DEC.2023 11:23:40

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



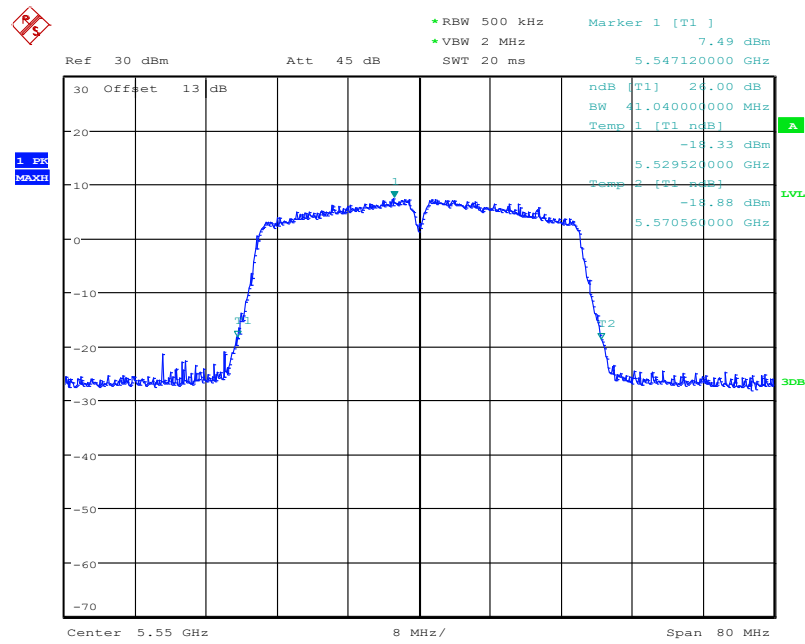
Date: 15.DEC.2023 11:24:31

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



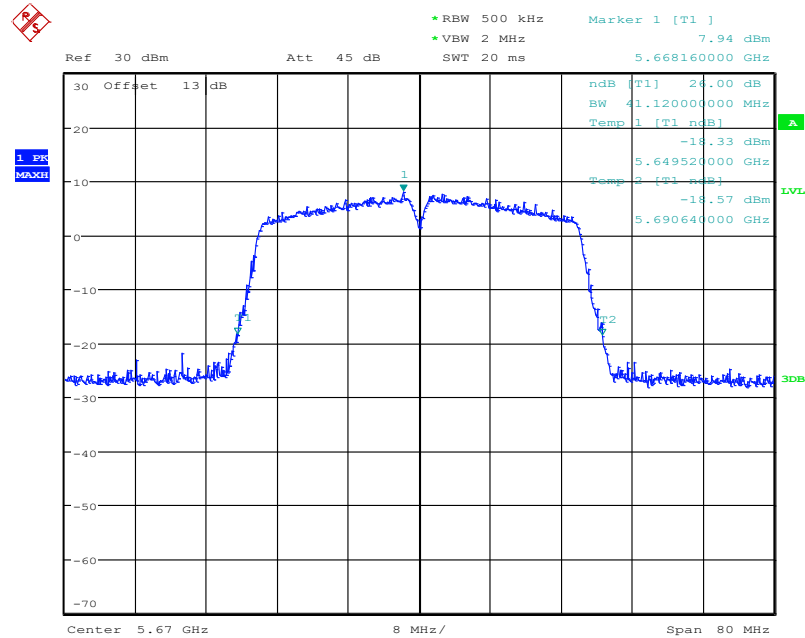
Date: 15.DEC.2023 11:28:11

Fig.25 26dB Emission Bandwidth (802.11n-HT40, 5510MHz)



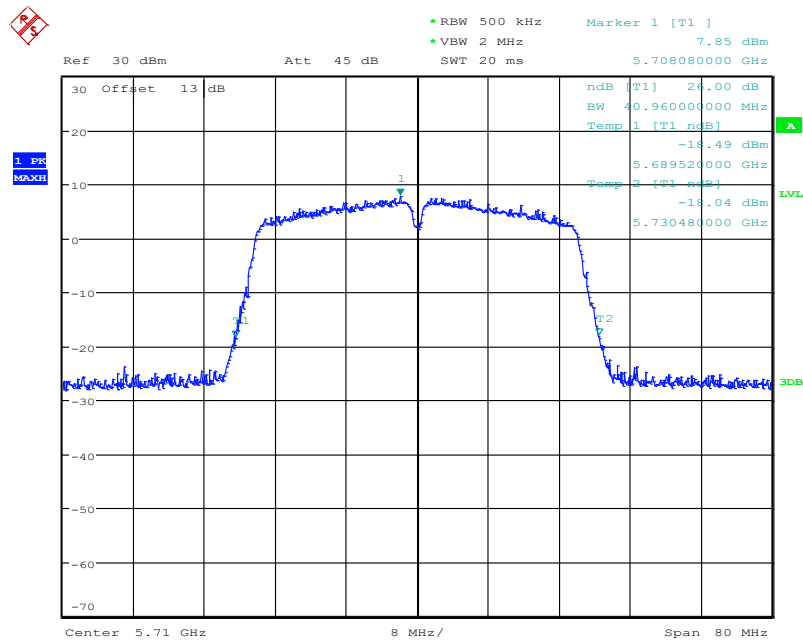
Date: 15.DEC.2023 11:28:38

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



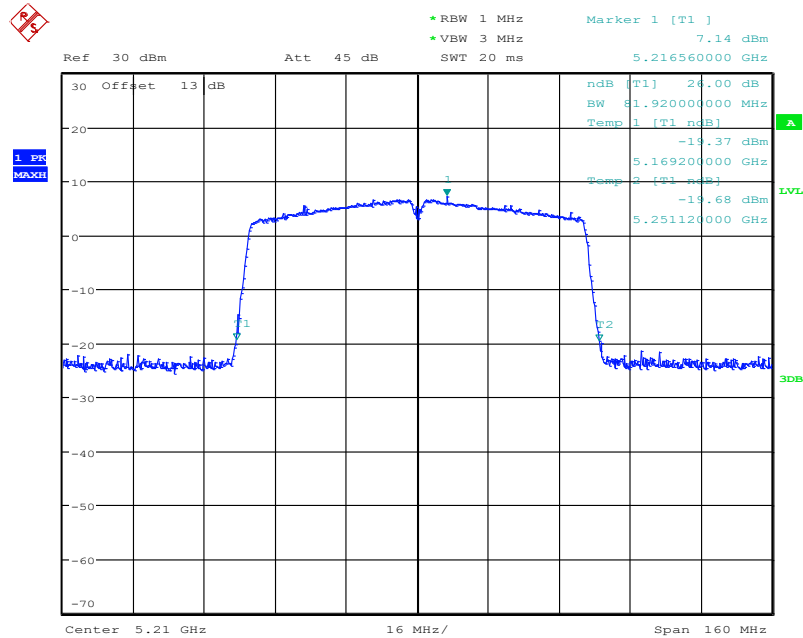
Date: 15.DEC.2023 11:30:40

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



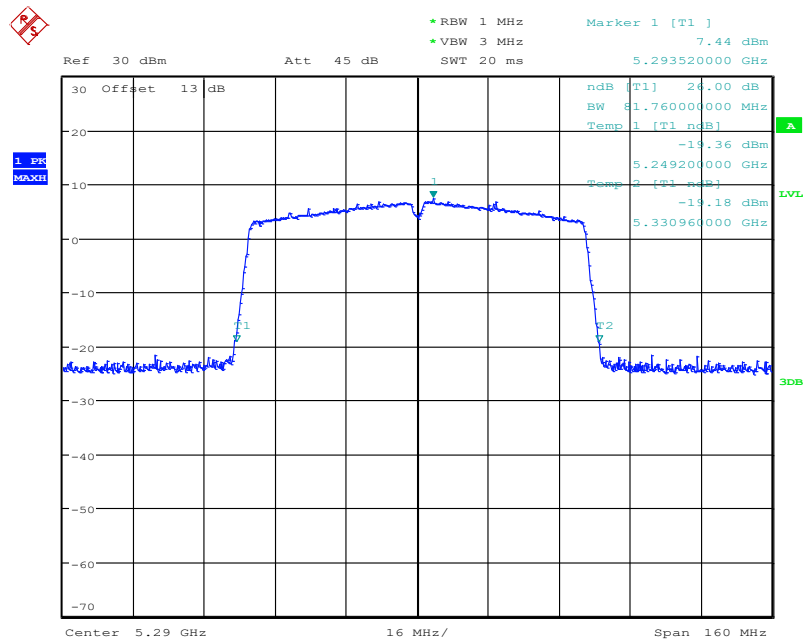
Date: 15.DEC.2023 11:31:11

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



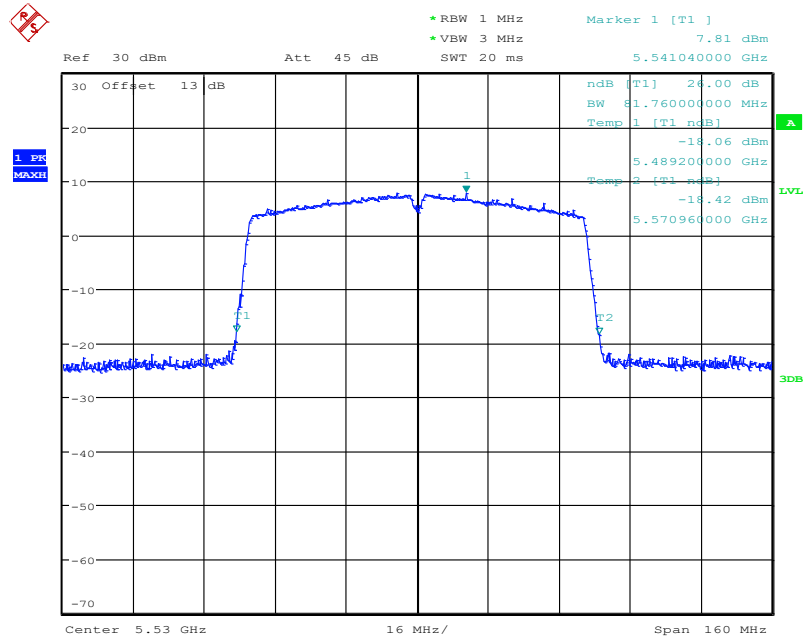
Date: 15.DEC.2023 11:19:02

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



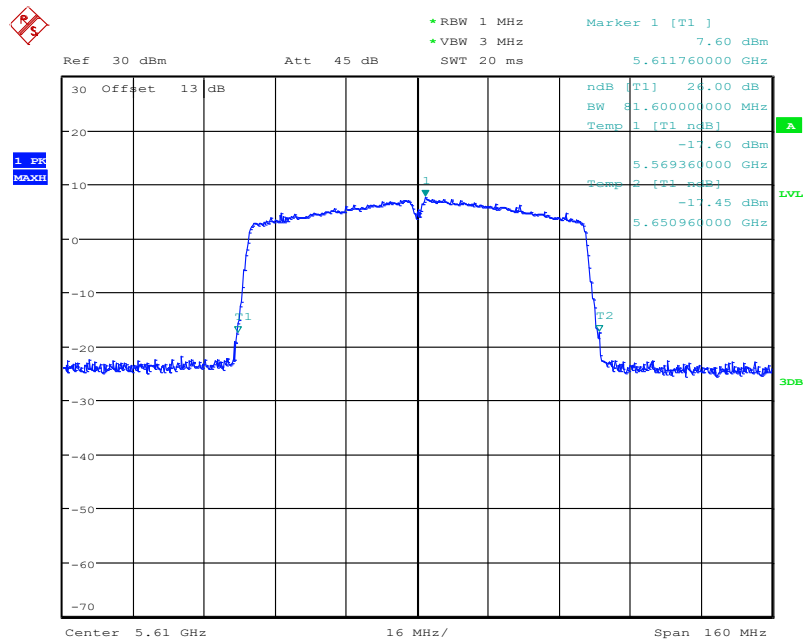
Date: 15.DEC.2023 11:19:32

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



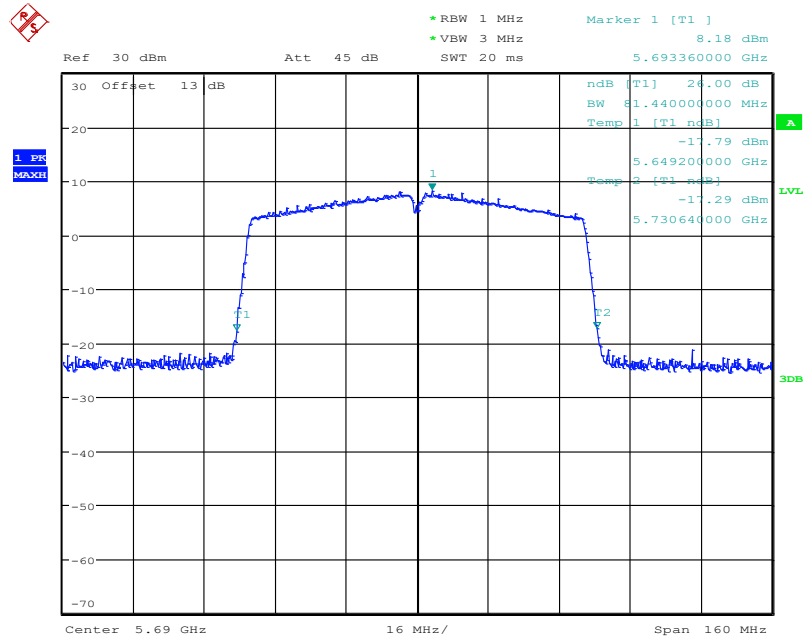
Date: 15.DEC.2023 11:20:40

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



Date: 15.DEC.2023 11:21:08

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



Date: 15.DEC.2023 11:21:48

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

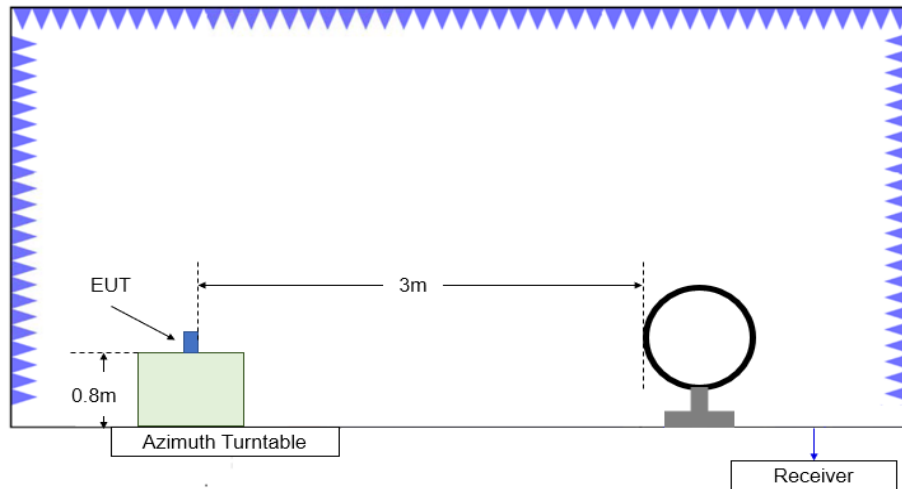


Figure A.5.1. Test Site Diagram (9kHz-30MHz)

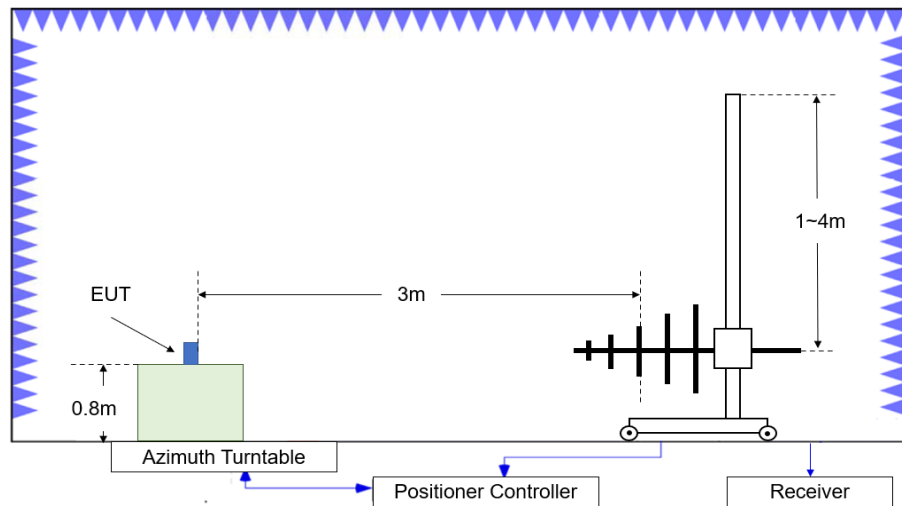


Figure A.5.2. Test Site Diagram (30MHz-1GHz)

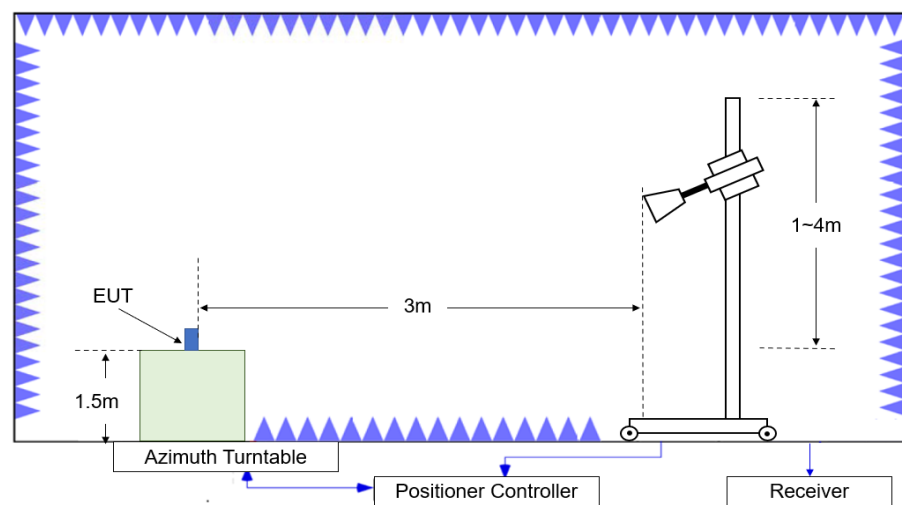


Figure A.5.3. Test Site Diagram (1GHz-40GHz)

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)
17979.100	44.04	-29.59	45.95	27.68	54.00	9.96	V
17993.400	44.03	-29.59	45.95	27.67	54.00	9.97	V
14497.600	38.85	-29.56	41.90	26.51	54.00	15.15	V
14494.850	38.65	-29.56	41.90	26.31	54.00	15.35	V
5149.780	44.03	-28.00	34.00	38.03	54.00	9.97	H
5149.860	43.19	-28.00	34.00	37.19	54.00	10.81	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)
17961.500	42.98	-29.59	45.95	26.62	54.00	11.02	H
17932.350	42.63	-29.59	45.95	26.27	54.00	11.37	H
14496.500	37.97	-29.56	41.90	25.63	54.00	16.03	V
14494.850	37.90	-29.56	41.90	25.56	54.00	16.10	V
11780.600	35.58	-32.71	39.20	29.09	54.00	18.42	V
11864.750	35.29	-32.73	39.15	28.87	54.00	18.71	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)
17985.700	42.70	-29.59	45.95	26.34	54.00	11.30	V
17993.950	42.51	-29.59	45.95	26.15	54.00	11.49	H
14476.150	38.11	-29.56	41.90	25.77	54.00	15.89	H
14492.100	37.88	-29.56	41.90	25.54	54.00	16.12	H
11862.550	35.59	-32.73	39.15	29.17	54.00	18.41	V
11899.950	35.37	-32.53	39.10	28.80	54.00	18.63	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)
17998.350	42.64	-29.59	45.95	26.28	54.00	11.36	V
17981.850	42.60	-29.59	45.95	26.24	54.00	11.40	V
14499.800	37.92	-29.56	41.90	25.58	54.00	16.08	V
14476.700	37.76	-29.56	41.90	25.42	54.00	16.24	V
11776.750	35.59	-32.71	39.20	29.10	54.00	18.41	H
11856.500	35.58	-32.73	39.15	29.16	54.00	18.42	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)
17987.350	42.66	-29.59	45.95	26.30	54.00	11.34	V
17989.550	42.65	-29.59	45.95	26.29	54.00	11.35	V
14488.800	38.32	-29.56	41.90	25.98	54.00	15.68	V
14481.650	37.92	-29.56	41.90	25.58	54.00	16.08	H
11862.550	35.59	-32.73	39.15	29.17	54.00	18.41	H
11862.000	35.45	-32.73	39.15	29.03	54.00	18.55	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)
17994.500	42.47	-29.59	45.95	26.11	54.00	11.53	H
17959.300	42.45	-29.59	45.95	26.09	54.00	11.55	V
14478.900	38.28	-29.56	41.90	25.94	54.00	15.72	V
14496.500	38.04	-29.56	41.90	25.70	54.00	15.96	V
5351.616	43.70	-27.82	34.20	37.32	54.00	10.30	H
5350.624	43.63	-27.82	34.20	37.25	54.00	10.37	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)
17995.050	43.04	-29.59	45.95	26.68	54.00	10.96	V
17955.450	42.91	-29.59	45.95	26.55	54.00	11.09	V
14484.400	38.58	-29.56	41.90	26.24	54.00	15.42	V
14497.600	38.31	-29.56	41.90	25.97	54.00	15.69	V
5459.035	43.62	-27.49	34.20	36.91	54.00	10.38	H
5459.410	43.56	-27.49	34.20	36.85	54.00	10.44	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)
17979.100	43.07	-29.59	45.95	26.71	54.00	10.93	V
17991.200	42.93	-29.59	45.95	26.57	54.00	11.07	H
14486.600	38.48	-29.56	41.90	26.14	54.00	15.52	H
14494.850	38.41	-29.56	41.90	26.07	54.00	15.59	H
11887.850	36.03	-32.53	39.10	29.46	54.00	17.97	V
11786.650	35.90	-32.09	39.20	28.79	54.00	18.10	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)
17957.650	43.05	-29.59	45.95	26.69	54.00	10.95	H
17947.200	42.95	-29.59	45.95	26.59	54.00	11.05	H
14499.800	38.68	-29.56	41.90	26.34	54.00	15.32	H
14476.700	38.52	-29.56	41.90	26.18	54.00	15.48	V
11868.050	36.29	-32.73	39.15	29.87	54.00	17.71	V
11880.700	36.05	-32.73	39.15	29.63	54.00	17.95	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)
17949.400	42.86	-29.59	45.95	26.50	54.00	11.14	V
17922.450	42.64	-29.59	45.95	26.28	54.00	11.36	V
14497.050	38.23	-29.56	41.90	25.89	54.00	15.77	H
14492.650	38.19	-29.56	41.90	25.85	54.00	15.81	H
11766.850	35.69	-32.71	39.20	29.20	54.00	18.31	V
11871.350	35.64	-32.73	39.15	29.22	54.00	18.36	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)
17987.900	42.63	-29.59	45.95	26.27	54.00	11.37	V
17971.400	42.35	-29.59	45.95	25.99	54.00	11.65	H
14495.950	37.88	-29.56	41.90	25.54	54.00	16.12	V
14493.750	37.61	-29.56	41.90	25.27	54.00	16.39	V
5149.960	43.65	-28.00	34.00	37.65	54.00	10.35	H
5149.740	43.43	-28.00	34.00	37.43	54.00	10.57	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)
17982.950	42.46	-29.59	45.95	26.10	54.00	11.54	V
17992.850	42.32	-29.59	45.95	25.96	54.00	11.68	V
14495.400	37.99	-29.56	41.90	25.65	54.00	16.01	V
14476.150	37.85	-29.56	41.90	25.51	54.00	16.15	H
11750.350	35.17	-32.71	39.20	28.68	54.00	18.83	H
11770.150	35.16	-32.71	39.20	28.67	54.00	18.84	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)
17982.950	42.70	-29.59	45.95	26.34	54.00	11.30	H
17947.200	42.66	-29.59	45.95	26.30	54.00	11.34	H
14487.150	38.05	-29.56	41.90	25.71	54.00	15.95	H
14497.600	37.80	-29.56	41.90	25.46	54.00	16.20	H
11861.450	35.39	-32.73	39.15	28.97	54.00	18.61	V
11843.300	35.36	-32.73	39.15	28.94	54.00	18.64	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)
17998.350	42.47	-29.59	45.95	26.11	54.00	11.53	V
17967.000	42.45	-29.59	45.95	26.09	54.00	11.55	V
14488.250	37.97	-29.56	41.90	25.63	54.00	16.03	V
14497.600	37.96	-29.56	41.90	25.62	54.00	16.04	V
11832.300	35.61	-32.73	39.15	29.19	54.00	18.39	V
11875.200	35.41	-32.73	39.15	28.99	54.00	18.59	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)
17946.100	43.32	-29.59	45.95	26.96	54.00	10.68	H
17974.150	42.91	-29.59	45.95	26.55	54.00	11.09	V
14495.950	38.47	-29.56	41.90	26.13	54.00	15.53	H
14484.400	38.30	-29.56	41.90	25.96	54.00	15.70	H
11837.250	35.72	-32.73	39.15	29.30	54.00	18.28	V
11774.550	35.52	-32.71	39.20	29.03	54.00	18.48	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)
17962.050	42.92	-29.59	45.95	26.56	54.00	11.08	H
17963.700	42.92	-29.59	45.95	26.56	54.00	11.08	V
14498.700	38.50	-29.56	41.90	26.16	54.00	15.50	V
14489.900	38.38	-29.56	41.90	26.04	54.00	15.62	H
5350.160	44.24	-27.82	34.20	37.86	54.00	9.76	H
5350.368	43.99	-27.82	34.20	37.61	54.00	10.01	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)
17962.050	43.25	-29.59	45.95	26.89	54.00	10.75	V
17969.200	43.06	-29.59	45.95	26.70	54.00	10.94	H
14488.800	38.79	-29.56	41.90	26.45	54.00	15.21	H
14484.400	38.44	-29.56	41.90	26.10	54.00	15.56	H
5459.350	43.44	-27.49	34.20	36.73	54.00	10.56	H
5459.890	43.40	-27.49	34.20	36.69	54.00	10.60	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)
17979.650	43.19	-29.59	45.95	26.83	54.00	10.81	V
17998.350	43.19	-29.59	45.95	26.83	54.00	10.81	H
14498.700	38.58	-29.56	41.90	26.24	54.00	15.42	V
14488.250	38.32	-29.56	41.90	25.98	54.00	15.68	H
11871.900	35.91	-32.73	39.15	29.49	54.00	18.09	V
11765.200	35.90	-32.71	39.20	29.41	54.00	18.10	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)
17990.650	42.93	-29.59	45.95	26.57	54.00	11.07	H
17992.850	42.92	-29.59	45.95	26.56	54.00	11.08	V
14499.800	38.61	-29.56	41.90	26.27	54.00	15.39	V
14499.250	38.27	-29.56	41.90	25.93	54.00	15.73	V
11782.250	36.05	-32.09	39.20	28.94	54.00	17.95	V
11775.100	35.80	-32.71	39.20	29.31	54.00	18.20	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)
17989.550	42.66	-29.59	45.95	26.30	54.00	11.34	H
17973.600	42.62	-29.59	45.95	26.26	54.00	11.38	H
14493.750	38.00	-29.56	41.90	25.66	54.00	16.00	H
14493.200	37.94	-29.56	41.90	25.60	54.00	16.06	H
11849.900	35.58	-32.73	39.15	29.16	54.00	18.42	H
11788.850	35.55	-32.09	39.20	28.44	54.00	18.45	V

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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)
17967.000	42.78	-29.59	45.95	26.42	54.00	11.22	H
17975.800	42.43	-29.59	45.95	26.07	54.00	11.57	V
14476.700	37.83	-29.56	41.90	25.49	54.00	16.17	V
14483.300	37.80	-29.56	41.90	25.46	54.00	16.20	V
5149.580	49.67	-28.00	34.00	43.67	54.00	4.33	H
5149.760	49.45	-28.00	34.00	43.45	54.00	4.55	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)
17937.850	42.71	-29.59	45.95	26.35	54.00	11.29	V
17959.300	42.57	-29.59	45.95	26.21	54.00	11.43	V
14477.250	38.00	-29.56	41.90	25.66	54.00	16.00	V
14477.800	37.87	-29.56	41.90	25.53	54.00	16.13	H
11879.600	35.75	-32.73	39.15	29.33	54.00	18.25	H
11876.300	35.63	-32.73	39.15	29.21	54.00	18.37	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)
17976.350	43.05	-29.59	45.95	26.69	54.00	10.95	H
17946.100	43.03	-29.59	45.95	26.67	54.00	10.97	V
14489.350	38.17	-29.56	41.90	25.83	54.00	15.83	V
14499.800	38.17	-29.56	41.90	25.83	54.00	15.83	V
11893.350	35.85	-32.53	39.10	29.28	54.00	18.15	H
11882.350	35.80	-32.53	39.10	29.23	54.00	18.20	V

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)
17957.650	43.23	-29.59	45.95	26.87	54.00	10.77	V
17977.450	43.14	-29.59	45.95	26.78	54.00	10.86	H
14486.050	38.85	-29.56	41.90	26.51	54.00	15.15	V
14498.150	38.36	-29.56	41.90	26.02	54.00	15.64	H
5350.656	46.45	-27.82	34.20	40.07	54.00	7.55	H
5350.784	46.39	-27.82	34.20	40.01	54.00	7.61	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)
17982.400	43.29	-29.59	45.95	26.93	54.00	10.71	H
17990.100	43.06	-29.59	45.95	26.70	54.00	10.94	V
14499.800	38.56	-29.56	41.90	26.22	54.00	15.44	V
14499.250	38.41	-29.56	41.90	26.07	54.00	15.59	H
5459.320	43.46	-27.49	34.20	36.75	54.00	10.54	H
5458.885	43.43	-27.49	34.20	36.72	54.00	10.57	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)
17992.850	43.26	-29.59	45.95	26.90	54.00	10.74	V
17979.100	43.15	-29.59	45.95	26.79	54.00	10.85	H
14491.550	38.51	-29.56	41.90	26.17	54.00	15.49	H
14498.700	38.40	-29.56	41.90	26.06	54.00	15.60	H
11898.850	36.32	-32.53	39.10	29.75	54.00	17.68	H
11847.150	35.84	-32.73	39.15	29.42	54.00	18.16	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)
17977.450	42.86	-29.59	45.95	26.50	54.00	11.14	V
17956.000	42.83	-29.59	45.95	26.47	54.00	11.17	V
14491.550	38.70	-29.56	41.90	26.36	54.00	15.30	V
14498.700	38.46	-29.56	41.90	26.12	54.00	15.54	V
11853.200	36.02	-32.73	39.15	29.60	54.00	17.98	H
11873.000	35.86	-32.73	39.15	29.44	54.00	18.14	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)
17962.600	42.77	-29.59	45.95	26.41	54.00	11.23	H
17982.950	42.46	-29.59	45.95	26.10	54.00	11.54	V
14472.300	38.29	-29.56	41.90	25.95	54.00	15.71	H
14487.150	38.09	-29.56	41.90	25.75	54.00	15.91	H
11874.650	36.12	-32.73	39.15	29.70	54.00	17.88	V
11765.750	35.78	-32.71	39.20	29.29	54.00	18.22	V

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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)
17987.900	42.60	-29.59	45.95	26.24	54.00	11.40	V
17984.600	42.38	-29.59	45.95	26.02	54.00	11.62	V
14492.100	38.21	-29.56	41.90	25.87	54.00	15.79	V
14494.850	37.81	-29.56	41.90	25.47	54.00	16.19	H
5149.540	44.50	-28.00	34.00	38.50	54.00	9.50	H
5149.880	44.17	-28.00	34.00	38.17	54.00	9.83	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)
17923.000	42.43	-29.59	45.95	26.07	54.00	11.57	V
17947.200	42.42	-29.59	45.95	26.06	54.00	11.58	V
14479.450	37.93	-29.56	41.90	25.59	54.00	16.07	H
14499.250	37.86	-29.56	41.90	25.52	54.00	16.14	V
11909.850	35.25	-32.53	39.10	28.68	54.00	18.75	V
11820.200	35.16	-32.09	39.20	28.05	54.00	18.84	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)
17986.800	42.70	-29.59	45.95	26.34	54.00	11.30	H
17943.350	42.42	-29.59	45.95	26.06	54.00	11.58	V
14497.600	37.65	-29.56	41.90	25.31	54.00	16.35	H
14496.500	37.63	-29.56	41.90	25.29	54.00	16.37	V
11846.600	35.62	-32.73	39.15	29.20	54.00	18.38	V
11748.700	35.43	-32.71	39.20	28.94	54.00	18.57	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)
17992.300	43.08	-29.59	45.95	26.72	54.00	10.92	H
17997.250	42.95	-29.59	45.95	26.59	54.00	11.05	H
14491.550	38.33	-29.56	41.90	25.99	54.00	15.67	V
14495.400	38.31	-29.56	41.90	25.97	54.00	15.69	V
11864.750	35.73	-32.73	39.15	29.31	54.00	18.27	V
11922.500	35.70	-32.53	39.10	29.13	54.00	18.30	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)
17989.550	42.93	-29.59	45.95	26.57	54.00	11.07	H
17991.200	42.92	-29.59	45.95	26.56	54.00	11.08	V
14487.150	38.28	-29.56	41.90	25.94	54.00	15.72	V
14498.700	38.27	-29.56	41.90	25.93	54.00	15.73	V
11750.900	35.61	-32.71	39.20	29.12	54.00	18.39	V
11926.900	35.53	-32.53	39.10	28.96	54.00	18.47	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)
17995.050	42.97	-29.59	45.95	26.61	54.00	11.03	V
17947.750	42.75	-29.59	45.95	26.39	54.00	11.25	H
14498.150	38.35	-29.56	41.90	26.01	54.00	15.65	H
14497.600	38.34	-29.56	41.90	26.00	54.00	15.66	H
5350.160	45.37	-27.82	34.20	38.99	54.00	8.63	H
5350.016	45.05	-27.82	34.20	38.67	54.00	8.95	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)
17981.850	43.04	-29.59	45.95	26.68	54.00	10.96	V
17990.100	43.02	-29.59	45.95	26.66	54.00	10.98	V
14495.950	38.37	-29.56	41.90	26.03	54.00	15.63	V
14494.850	38.33	-29.56	41.90	25.99	54.00	15.67	H
5459.605	43.69	-27.49	34.20	36.98	54.00	10.31	H
5459.620	43.62	-27.49	34.20	36.91	54.00	10.38	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)
17987.900	43.48	-29.59	45.95	27.12	54.00	10.52	V
17984.050	42.98	-29.59	45.95	26.62	54.00	11.02	V
14486.050	38.52	-29.56	41.90	26.18	54.00	15.48	V
14499.800	38.39	-29.56	41.90	26.05	54.00	15.61	H
11778.950	35.91	-32.71	39.20	29.42	54.00	18.09	V
11873.000	35.88	-32.73	39.15	29.46	54.00	18.12	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)
17996.150	43.05	-29.59	45.95	26.69	54.00	10.95	V
17989.000	43.04	-29.59	45.95	26.68	54.00	10.96	V
14494.300	38.32	-29.56	41.90	25.98	54.00	15.68	H
14498.150	38.30	-29.56	41.90	25.96	54.00	15.70	H
11880.150	36.04	-32.73	39.15	29.62	54.00	17.96	V
11878.500	35.96	-32.73	39.15	29.54	54.00	18.04	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)
17964.250	42.98	-29.59	45.95	26.62	54.00	11.02	H
17997.250	42.45	-29.59	45.95	26.09	54.00	11.55	V
14495.400	38.40	-29.56	41.90	26.06	54.00	15.60	V
14492.650	37.97	-29.56	41.90	25.63	54.00	16.03	H
11913.150	35.86	-32.53	39.10	29.29	54.00	18.14	H
11781.700	35.68	-32.71	39.20	29.19	54.00	18.32	H

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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)
17978.550	42.52	-29.59	45.95	26.16	54.00	11.48	H
17983.500	42.50	-29.59	45.95	26.14	54.00	11.50	H
14484.400	38.09	-29.56	41.90	25.75	54.00	15.91	H
14497.050	38.07	-29.56	41.90	25.73	54.00	15.93	V
5149.820	49.87	-28.00	34.00	43.87	54.00	4.13	H
5149.900	49.03	-28.00	34.00	43.03	54.00	4.97	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)
17954.350	42.65	-29.59	45.95	26.29	54.00	11.35	V
17951.050	42.62	-29.59	45.95	26.26	54.00	11.38	H
14499.250	38.24	-29.56	41.90	25.90	54.00	15.76	V
14498.150	38.21	-29.56	41.90	25.87	54.00	15.79	H
11777.300	35.39	-32.71	39.20	28.90	54.00	18.61	V
11875.750	35.34	-32.73	39.15	28.92	54.00	18.66	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)
17969.200	43.22	-29.59	45.95	26.86	54.00	10.78	H
17961.500	43.00	-29.59	45.95	26.64	54.00	11.00	V
14497.600	38.39	-29.56	41.90	26.05	54.00	15.61	V
14482.750	38.22	-29.56	41.90	25.88	54.00	15.78	V
11743.750	35.96	-32.71	39.20	29.47	54.00	18.04	V
11784.450	35.82	-32.09	39.20	28.71	54.00	18.18	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)
17991.750	43.06	-29.59	45.95	26.70	54.00	10.94	H
17975.250	42.94	-29.59	45.95	26.58	54.00	11.06	V
14489.900	38.36	-29.56	41.90	26.02	54.00	15.64	V
14493.200	38.33	-29.56	41.90	25.99	54.00	15.67	V
5350.144	47.06	-27.82	34.20	40.68	54.00	6.94	H
5350.048	46.45	-27.82	34.20	40.07	54.00	7.55	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)
17992.850	43.23	-29.59	45.95	26.87	54.00	10.77	V
17956.550	43.05	-29.59	45.95	26.69	54.00	10.95	V
14484.400	38.68	-29.56	41.90	26.34	54.00	15.32	H
14497.600	38.56	-29.56	41.90	26.22	54.00	15.44	V
5458.795	45.53	-27.49	34.20	38.82	54.00	8.47	H
5459.245	45.44	-27.49	34.20	38.73	54.00	8.56	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)
17976.900	43.13	-29.59	45.95	26.77	54.00	10.87	H
17997.800	43.03	-29.59	45.95	26.67	54.00	10.97	H
14481.100	38.49	-29.56	41.90	26.15	54.00	15.51	V
14497.600	38.48	-29.56	41.90	26.14	54.00	15.52	V
11773.450	36.31	-32.71	39.20	29.82	54.00	17.69	H
11859.250	36.00	-32.73	39.15	29.58	54.00	18.00	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)
17962.600	43.01	-29.59	45.95	26.65	54.00	10.99	V
17963.700	42.98	-29.59	45.95	26.62	54.00	11.02	H
14493.200	38.75	-29.56	41.90	26.41	54.00	15.25	H
14471.750	38.44	-29.56	41.90	26.10	54.00	15.56	V
11865.850	35.95	-32.73	39.15	29.53	54.00	18.05	V
11883.450	35.80	-32.53	39.10	29.23	54.00	18.20	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)
17995.050	42.73	-29.59	45.95	26.37	54.00	11.27	V
17987.350	42.57	-29.59	45.95	26.21	54.00	11.43	H
14495.950	38.24	-29.56	41.90	25.90	54.00	15.76	V
14480.550	37.92	-29.56	41.90	25.58	54.00	16.08	H
11794.350	35.73	-32.09	39.20	28.62	54.00	18.27	V
11819.650	35.69	-32.09	39.20	28.58	54.00	18.31	H

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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)
17992.850	43.04	-29.59	45.95	26.68	54.00	10.96	H
17983.500	42.95	-29.59	45.95	26.59	54.00	11.05	V
14484.950	38.28	-29.56	41.90	25.94	54.00	15.72	H
14498.700	38.28	-29.56	41.90	25.94	54.00	15.72	H
5149.660	52.71	-28.00	34.00	46.71	54.00	1.29	H
5149.340	52.07	-28.00	34.00	46.07	54.00	1.93	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)
17991.200	43.01	-29.59	45.95	26.65	54.00	10.99	H
17945.550	42.99	-29.59	45.95	26.63	54.00	11.01	V
14497.050	38.67	-29.56	41.90	26.33	54.00	15.33	H
14499.800	38.29	-29.56	41.90	25.95	54.00	15.71	H
5350.000	49.57	-27.82	34.20	43.19	54.00	4.43	H
5350.128	49.47	-27.82	34.20	43.09	54.00	4.53	H

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)
17968.100	43.26	-29.59	45.95	26.90	54.00	10.74	H
17950.500	43.09	-29.59	45.95	26.73	54.00	10.91	V
14492.650	38.52	-29.56	41.90	26.18	54.00	15.48	H
14495.400	38.40	-29.56	41.90	26.06	54.00	15.60	H
5457.130	46.56	-27.49	34.20	39.85	54.00	7.44	H
5457.190	45.84	-27.49	34.20	39.13	54.00	8.16	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)
17960.950	43.31	-29.59	45.95	26.95	54.00	10.69	H
17986.800	43.24	-29.59	45.95	26.88	54.00	10.76	V
14492.650	38.74	-29.56	41.90	26.40	54.00	15.26	H
14492.100	38.54	-29.56	41.90	26.20	54.00	15.46	V
11796.000	36.01	-32.09	39.20	28.90	54.00	17.99	V
11910.950	35.98	-32.53	39.10	29.41	54.00	18.02	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)
17974.150	42.82	-29.59	45.95	26.46	54.00	11.18	V
17998.900	42.54	-29.59	45.95	26.18	54.00	11.46	H
14480.550	38.17	-29.56	41.90	25.83	54.00	15.83	V
14499.800	38.17	-29.56	41.90	25.83	54.00	15.83	V
11866.400	35.60	-32.73	39.15	29.18	54.00	18.40	V
11906.550	35.60	-32.53	39.10	29.03	54.00	18.40	H

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)
17983.500	55.16	-29.59	45.95	38.80	74.00	18.84	V
17977.450	55.10	-29.59	45.95	38.74	74.00	18.90	H
14693.950	50.40	-30.04	41.50	38.94	68.20	17.80	H
14169.800	50.28	-30.42	41.70	39.00	68.20	17.92	H
5149.920	59.34	-28.00	34.00	53.34	74.00	14.66	H
5149.340	58.17	-28.00	34.00	52.17	74.00	15.83	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)
17990.100	53.69	-29.59	45.95	37.33	74.00	20.31	V
17984.600	53.20	-29.59	45.95	36.84	74.00	20.80	H
14581.750	49.85	-29.14	41.90	37.09	68.20	18.35	V
14601.000	49.63	-29.14	41.90	36.87	68.20	18.57	V
11800.950	47.05	-32.09	39.20	39.94	74.00	26.95	V
11853.750	46.61	-32.73	39.15	40.19	74.00	27.39	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)
17986.800	53.38	-29.59	45.95	37.02	74.00	20.62	V
17990.650	53.35	-29.59	45.95	36.99	74.00	20.65	H
14587.250	49.85	-29.14	41.90	37.09	68.20	18.35	H
14173.100	49.78	-30.42	41.70	38.50	68.20	18.42	V
11763.550	46.38	-32.71	39.20	39.89	74.00	27.62	V
11769.600	46.10	-32.71	39.20	39.61	74.00	27.90	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)
17958.200	54.20	-29.59	45.95	37.84	74.00	19.80	H
17996.150	53.65	-29.59	45.95	37.29	74.00	20.35	H
14682.950	50.57	-30.04	41.50	39.11	68.20	17.63	V
14580.100	50.00	-29.14	41.90	37.24	68.20	18.20	H
11744.300	46.30	-32.71	39.20	39.81	74.00	27.70	V
11787.750	46.16	-32.09	39.20	39.05	74.00	27.84	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)
17882.850	53.57	-29.59	45.95	37.21	74.00	20.43	H
17884.500	53.27	-29.59	45.95	36.91	74.00	20.73	V
14602.650	49.72	-29.14	41.90	36.96	68.20	18.48	H
14593.300	49.61	-29.14	41.90	36.85	68.20	18.59	H
11885.650	46.64	-32.53	39.10	40.07	74.00	27.36	H
11252.050	46.58	-32.99	38.65	40.92	74.00	27.42	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)
17986.250	53.93	-29.59	45.95	37.57	74.00	20.07	H
17888.350	53.53	-29.59	45.95	37.17	74.00	20.47	H
14202.800	49.93	-30.42	41.70	38.65	68.20	18.27	H
14607.600	49.72	-30.67	41.70	38.69	68.20	18.48	H
5350.128	59.76	-27.82	34.20	53.38	74.00	14.24	H
5351.872	58.74	-27.82	34.20	52.36	74.00	15.26	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)
17991.200	53.51	-29.59	45.95	37.15	74.00	20.49	H
17881.200	53.49	-29.59	45.95	37.13	74.00	20.51	V
14570.750	50.31	-29.14	41.90	37.55	68.20	17.89	V
14599.900	50.09	-29.14	41.90	37.33	68.20	18.11	V
5458.960	58.06	-27.49	34.20	51.35	74.00	15.94	H
5469.325	64.43	-27.49	34.20	57.72	68.20	3.77	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)
17968.100	54.64	-29.59	45.95	38.28	74.00	19.36	H
17980.200	54.13	-29.59	45.95	37.77	74.00	19.87	H
14590.550	50.12	-29.14	41.90	37.36	68.20	18.08	V
14684.050	50.10	-30.04	41.50	38.64	68.20	18.10	V
11918.650	47.39	-32.53	39.10	40.82	74.00	26.61	H
11873.000	47.08	-32.73	39.15	40.66	74.00	26.92	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)
17976.900	53.71	-29.59	45.95	37.35	74.00	20.29	V
17952.700	53.66	-29.59	45.95	37.30	74.00	20.34	V
14693.950	50.66	-30.04	41.50	39.20	68.20	17.54	H
14588.350	50.57	-29.14	41.90	37.81	68.20	17.63	V
5726.790	64.92	-27.47	34.10	58.29	68.20	3.28	H
5726.930	63.97	-27.47	34.10	57.34	68.20	4.23	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)
17976.900	53.80	-29.59	45.95	37.44	74.00	20.20	H
17952.150	53.67	-29.59	45.95	37.31	74.00	20.33	V
14638.950	49.77	-30.67	41.70	38.74	68.20	18.43	H
14412.900	49.68	-30.03	41.90	37.81	68.20	18.52	V
11880.700	46.48	-32.73	39.15	40.06	74.00	27.52	V
11903.800	46.48	-32.53	39.10	39.91	74.00	27.52	H

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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)
17974.700	53.31	-29.59	45.95	36.95	74.00	20.69	H
17931.250	52.97	-29.59	45.95	36.61	74.00	21.03	V
14554.800	49.88	-29.14	41.90	37.12	68.20	18.32	V
14651.050	49.49	-30.67	41.70	38.46	68.20	18.71	H
5149.580	62.63	-28.00	34.00	56.63	74.00	11.37	H
5149.180	62.13	-28.00	34.00	56.13	74.00	11.87	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)
17953.250	53.01	-29.59	45.95	36.65	74.00	20.99	V
17931.800	52.89	-29.59	45.95	36.53	74.00	21.11	V
14585.600	51.23	-29.14	41.90	38.47	68.20	16.97	V
14560.850	49.78	-29.14	41.90	37.02	68.20	18.42	H
11787.200	46.02	-32.09	39.20	38.91	74.00	27.98	H
11767.400	45.70	-32.71	39.20	39.21	74.00	28.30	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)
17989.550	54.02	-29.59	45.95	37.66	74.00	19.98	H
17951.600	53.21	-29.59	45.95	36.85	74.00	20.79	H
13745.750	50.21	-31.18	41.10	40.29	68.20	17.99	H
14592.750	49.52	-29.14	41.90	36.76	68.20	18.68	H
11777.850	46.10	-32.71	39.20	39.61	74.00	27.90	H
11901.050	45.79	-32.53	39.10	39.22	74.00	28.21	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)
17931.250	54.22	-29.59	45.95	37.86	74.00	19.78	V
17887.800	53.27	-29.59	45.95	36.91	74.00	20.73	V
14694.500	50.25	-30.04	41.50	38.79	68.20	17.95	V
14696.700	49.87	-30.04	41.50	38.41	68.20	18.33	H
11777.300	46.68	-32.71	39.20	40.19	74.00	27.32	V
11711.300	45.90	-32.70	39.20	39.40	74.00	28.10	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)
17979.100	54.42	-29.59	45.95	38.06	74.00	19.58	H
17963.700	53.93	-29.59	45.95	37.57	74.00	20.07	V
14511.900	50.18	-30.55	41.90	38.83	68.20	18.02	V
14172.000	50.05	-30.42	41.70	38.77	68.20	18.15	H
11771.800	46.90	-32.71	39.20	40.41	74.00	27.10	H
11864.750	46.32	-32.73	39.15	39.90	74.00	27.68	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)
17982.950	54.17	-29.59	45.95	37.81	74.00	19.83	H
17941.700	53.74	-29.59	45.95	37.38	74.00	20.26	V
14575.700	50.17	-29.14	41.90	37.41	68.20	18.03	V
14653.800	50.09	-30.04	41.50	38.63	68.20	18.11	V
5350.880	61.67	-27.82	34.20	55.29	74.00	12.33	H
5357.568	59.66	-27.82	34.20	53.28	74.00	14.34	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)
17967.550	54.54	-29.59	45.95	38.18	74.00	19.46	H
17973.050	54.47	-29.59	45.95	38.11	74.00	19.53	V
14590.000	50.32	-29.14	41.90	37.56	68.20	17.88	V
14583.950	50.09	-29.14	41.90	37.33	68.20	18.11	H
5459.965	61.15	-27.49	34.20	54.44	74.00	12.85	H
5469.910	65.84	-27.49	34.20	59.13	68.20	2.36	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)
17995.050	53.81	-29.59	45.95	37.45	74.00	20.19	V
17969.200	53.67	-29.59	45.95	37.31	74.00	20.33	V
14486.050	50.24	-29.56	41.90	37.90	74.00	23.76	V
14681.850	50.01	-30.04	41.50	38.55	68.20	18.19	H
11791.600	46.53	-32.09	39.20	39.42	74.00	27.47	H
11759.150	46.49	-32.71	39.20	40.00	74.00	27.51	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)
17969.750	54.74	-29.59	45.95	38.38	74.00	19.26	H
17921.900	54.04	-29.59	45.95	37.68	74.00	19.96	H
14588.350	51.36	-29.14	41.90	38.60	68.20	16.84	H
14590.550	50.41	-29.14	41.90	37.65	68.20	17.79	V
5726.055	66.88	-27.47	34.10	60.25	68.20	1.32	H
5725.583	66.73	-27.47	34.10	60.10	68.20	1.47	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)
17975.800	53.17	-29.59	45.95	36.81	74.00	20.83	V
17924.100	53.16	-29.59	45.95	36.80	74.00	20.84	V
14598.800	50.80	-29.14	41.90	38.04	68.20	17.40	H
14550.400	49.96	-30.55	41.90	38.61	68.20	18.24	V
11906.000	46.50	-32.53	39.10	39.93	74.00	27.50	H
11998.950	46.45	-32.66	39.00	40.11	74.00	27.55	H

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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)
17966.450	53.54	-29.59	45.95	37.18	74.00	20.46	V
17943.350	53.49	-29.59	45.95	37.13	74.00	20.51	V
14602.650	49.89	-29.14	41.90	37.13	68.20	18.31	V
14582.850	49.30	-29.14	41.90	36.54	68.20	18.90	H
5148.940	62.74	-28.00	34.00	56.74	74.00	11.26	H
5149.000	62.39	-28.00	34.00	56.39	74.00	11.61	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)
17974.700	53.01	-29.59	45.95	36.65	74.00	20.99	V
17961.500	52.96	-29.59	45.95	36.60	74.00	21.04	H
14507.500	50.26	-30.55	41.90	38.91	68.20	17.94	V
14604.850	49.48	-30.67	41.70	38.45	68.20	18.72	V
11895.000	46.99	-32.53	39.10	40.42	74.00	27.01	H
11751.450	46.95	-32.71	39.20	40.46	74.00	27.05	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)
17928.500	54.41	-29.59	45.95	38.05	74.00	19.59	H
17973.600	53.82	-29.59	45.95	37.46	74.00	20.18	V
14699.450	51.23	-30.04	41.50	39.77	68.20	16.97	V
14702.200	50.94	-30.04	41.50	39.48	68.20	17.26	V
11904.900	47.07	-32.53	39.10	40.50	74.00	26.93	V
11977.500	46.47	-32.42	39.05	39.84	74.00	27.53	V

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)
17957.100	54.38	-29.59	45.95	38.02	74.00	19.62	V
17992.300	53.63	-29.59	45.95	37.27	74.00	20.37	H
14596.050	50.88	-29.14	41.90	38.12	68.20	17.32	V
14091.700	50.79	-30.20	41.70	39.29	68.20	17.41	H
5351.504	63.78	-27.82	34.20	57.40	74.00	10.22	H
5350.048	63.60	-27.82	34.20	57.22	74.00	10.40	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)
17984.050	54.47	-29.59	45.95	38.11	74.00	19.53	H
17962.600	53.93	-29.59	45.95	37.57	74.00	20.07	H
14598.250	50.40	-29.14	41.90	37.64	68.20	17.80	H
14139.550	50.23	-30.93	41.70	39.45	68.20	17.97	V
5459.845	60.64	-27.49	34.20	53.93	74.00	13.36	H
5468.035	65.69	-27.49	34.20	58.98	68.20	2.51	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)
17980.200	53.68	-29.59	45.95	37.32	74.00	20.32	V
17996.150	53.36	-29.59	45.95	37.00	74.00	20.64	H
14692.850	50.53	-30.04	41.50	39.07	68.20	17.67	H
14538.300	50.26	-30.55	41.90	38.91	68.20	17.94	H
11764.650	47.71	-32.71	39.20	41.22	74.00	26.29	H
11928.550	47.09	-32.53	39.10	40.52	74.00	26.91	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)
17994.500	53.70	-29.59	45.95	37.34	74.00	20.30	V
17972.500	53.64	-29.59	45.95	37.28	74.00	20.36	V
14537.750	50.54	-30.55	41.90	39.19	68.20	17.66	H
14586.700	49.98	-29.14	41.90	37.22	68.20	18.22	V
5725.898	57.30	-27.47	34.10	50.67	68.20	10.90	H
5732.635	56.57	-27.47	34.10	49.94	68.20	11.63	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)
17909.250	53.66	-29.59	45.95	37.30	74.00	20.34	H
17939.500	53.39	-29.59	45.95	37.03	74.00	20.61	H
14564.150	50.01	-29.14	41.90	37.25	68.20	18.19	V
14719.250	49.79	-30.13	41.35	38.57	68.20	18.41	V
11885.100	46.26	-32.53	39.10	39.69	74.00	27.74	V
11921.400	46.23	-32.53	39.10	39.66	74.00	27.77	H

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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)
17971.950	53.59	-29.59	45.95	37.23	74.00	20.41	H
17968.100	53.12	-29.59	45.95	36.76	74.00	20.88	V
14580.650	50.26	-29.14	41.90	37.50	68.20	17.94	V
14597.150	49.68	-29.14	41.90	36.92	68.20	18.52	V
5149.800	60.32	-28.00	34.00	54.32	74.00	13.68	H
5149.360	60.06	-28.00	34.00	54.06	74.00	13.94	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)
17925.750	53.57	-29.59	45.95	37.21	74.00	20.43	V
17971.950	53.52	-29.59	45.95	37.16	74.00	20.48	V
14694.500	50.13	-30.04	41.50	38.67	68.20	18.07	H
14590.000	49.74	-29.14	41.90	36.98	68.20	18.46	H
11898.850	46.86	-32.53	39.10	40.29	74.00	27.14	H
11893.350	46.63	-32.53	39.10	40.06	74.00	27.37	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)
17893.850	53.19	-29.59	45.95	36.83	74.00	20.81	H
17983.500	53.17	-29.59	45.95	36.81	74.00	20.83	V
14221.500	49.94	-30.75	41.75	38.94	68.20	18.26	V
14522.350	49.36	-30.55	41.90	38.01	68.20	18.84	H
11864.750	46.66	-32.73	39.15	40.24	74.00	27.34	V
11885.100	46.52	-32.53	39.10	39.95	74.00	27.48	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)
17985.150	53.77	-29.59	45.95	37.41	74.00	20.23	V
17961.500	53.75	-29.59	45.95	37.39	74.00	20.25	V
14610.350	50.09	-30.67	41.70	39.06	68.20	18.11	V
14128.000	49.88	-30.93	41.70	39.10	68.20	18.32	H
11848.250	46.78	-32.73	39.15	40.36	74.00	27.22	H
11789.950	46.51	-32.09	39.20	39.40	74.00	27.49	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)
17781.650	54.05	-29.59	45.95	37.69	74.00	19.95	H
17948.300	53.89	-29.59	45.95	37.53	74.00	20.11	H
13658.300	50.87	-31.29	40.90	41.26	68.20	17.33	V
14696.700	50.45	-30.04	41.50	38.99	68.20	17.75	V
11846.050	46.54	-32.73	39.15	40.12	74.00	27.46	V
11646.400	46.46	-32.62	39.20	39.88	74.00	27.54	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)
17958.750	54.23	-29.59	45.95	37.87	74.00	19.77	V
17883.950	53.67	-29.59	45.95	37.31	74.00	20.33	H
14697.250	50.42	-30.04	41.50	38.96	68.20	17.78	H
14702.200	49.85	-30.04	41.50	38.39	68.20	18.35	H
5350.576	63.19	-27.82	34.20	56.81	74.00	10.81	H
5352.608	61.76	-27.82	34.20	55.38	74.00	12.24	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)
17941.150	53.71	-29.59	45.95	37.35	74.00	20.29	H
17996.700	53.56	-29.59	45.95	37.20	74.00	20.44	V
14693.400	50.32	-30.04	41.50	38.86	68.20	17.88	V
14591.650	50.31	-29.14	41.90	37.55	68.20	17.89	H
5458.765	59.80	-27.49	34.20	53.09	74.00	14.20	H
5468.170	62.77	-27.49	34.20	56.06	68.20	5.43	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)
17998.900	53.83	-29.59	45.95	37.47	74.00	20.17	V
17954.900	53.62	-29.59	45.95	37.26	74.00	20.38	H
14616.950	50.74	-30.67	41.70	39.71	68.20	17.46	H
14707.700	50.26	-30.13	41.35	39.04	68.20	17.94	V
11774.000	47.17	-32.71	39.20	40.68	74.00	26.83	V
11774.550	47.14	-32.71	39.20	40.65	74.00	26.86	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)
17984.050	54.38	-29.59	45.95	38.02	74.00	19.62	H
17983.500	54.09	-29.59	45.95	37.73	74.00	19.91	H
14143.950	50.34	-30.93	41.70	39.56	68.20	17.86	V
14599.350	50.26	-29.14	41.90	37.50	68.20	17.94	H
5726.108	67.25	-27.47	34.10	60.62	68.20	0.95	H
5725.950	67.17	-27.47	34.10	60.54	68.20	1.03	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)
17966.450	53.14	-29.59	45.95	36.78	74.00	20.86	V
17909.250	53.02	-29.59	45.95	36.66	74.00	20.98	V
14593.850	49.95	-29.14	41.90	37.19	68.20	18.25	H
13716.050	49.73	-31.18	41.10	39.81	68.20	18.47	H
11821.300	46.48	-32.09	39.20	39.37	74.00	27.52	V
11764.650	46.40	-32.71	39.20	39.91	74.00	27.60	H

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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)
17914.750	53.63	-29.59	45.95	37.27	74.00	20.37	H
17958.750	53.56	-29.59	45.95	37.20	74.00	20.44	V
14581.750	50.01	-29.14	41.90	37.25	68.20	18.19	H
14576.800	49.94	-29.14	41.90	37.18	68.20	18.26	V
5149.160	63.41	-28.00	34.00	57.41	74.00	10.59	H
5148.860	62.94	-28.00	34.00	56.94	74.00	11.06	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)
17893.850	53.54	-29.59	45.95	37.18	74.00	20.46	H
17991.200	53.38	-29.59	45.95	37.02	74.00	20.62	H
14573.500	50.02	-29.14	41.90	37.26	68.20	18.18	H
14572.950	50.01	-29.14	41.90	37.25	68.20	18.19	H
11853.200	47.69	-32.73	39.15	41.27	74.00	26.31	V
11871.350	46.53	-32.73	39.15	40.11	74.00	27.47	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)
17934.550	53.84	-29.59	45.95	37.48	74.00	20.16	V
17907.050	53.70	-29.59	45.95	37.34	74.00	20.30	V
14582.300	50.31	-29.14	41.90	37.55	68.20	17.89	H
14535.550	50.07	-30.55	41.90	38.72	68.20	18.13	V
11783.900	46.82	-32.09	39.20	39.71	74.00	27.18	V
11848.250	46.65	-32.73	39.15	40.23	74.00	27.35	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)
17930.700	53.93	-29.59	45.95	37.57	74.00	20.07	H
17959.300	53.83	-29.59	45.95	37.47	74.00	20.17	H
14481.650	50.85	-29.56	41.90	38.51	74.00	23.15	H
14113.150	49.97	-30.93	41.70	39.19	68.20	18.23	H
5350.656	65.31	-27.82	34.20	58.93	74.00	8.69	H
5351.408	63.48	-27.82	34.20	57.10	74.00	10.52	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)
17981.850	53.99	-29.59	45.95	37.63	74.00	20.01	H
17950.500	53.81	-29.59	45.95	37.45	74.00	20.19	V
14613.650	50.89	-30.67	41.70	39.86	68.20	17.31	H
14687.900	50.10	-30.04	41.50	38.64	68.20	18.10	H
5459.230	60.54	-27.49	34.20	53.83	74.00	13.46	H
5469.940	66.46	-27.49	34.20	59.75	68.20	1.74	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)
17992.300	54.56	-29.59	45.95	38.20	74.00	19.44	H
17956.550	53.91	-29.59	45.95	37.55	74.00	20.09	H
14545.450	50.15	-30.55	41.90	38.80	68.20	18.05	V
14692.300	50.05	-30.04	41.50	38.59	68.20	18.15	H
11866.400	47.22	-32.73	39.15	40.80	74.00	26.78	V
11868.050	47.01	-32.73	39.15	40.59	74.00	26.99	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)
17925.750	53.93	-29.59	45.95	37.57	74.00	20.07	V
17962.600	53.81	-29.59	45.95	37.45	74.00	20.19	H
14573.500	51.29	-29.14	41.90	38.53	68.20	16.91	H
14509.150	50.17	-30.55	41.90	38.82	68.20	18.03	H
5731.515	57.79	-27.47	34.10	51.16	68.20	10.41	H
5729.170	55.95	-27.47	34.10	49.32	68.20	12.25	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)
17995.050	53.38	-29.59	45.95	37.02	74.00	20.62	H
17897.150	53.33	-29.59	45.95	36.97	74.00	20.67	V
14491.550	49.91	-29.56	41.90	37.57	74.00	24.09	V
14561.950	49.78	-29.14	41.90	37.02	68.20	18.42	H
11884.550	47.12	-32.53	39.10	40.55	74.00	26.88	V
11890.600	46.96	-32.53	39.10	40.39	74.00	27.04	H

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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)
17974.700	53.86	-29.59	45.95	37.50	74.00	20.14	V
17998.900	53.82	-29.59	45.95	37.46	74.00	20.18	H
14497.050	50.52	-29.56	41.90	38.18	74.00	23.48	V
14582.850	50.46	-29.14	41.90	37.70	68.20	17.74	H
5148.320	63.96	-27.79	34.00	57.75	74.00	10.04	H
5149.520	63.78	-28.00	34.00	57.78	74.00	10.22	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)
17980.200	54.02	-29.59	45.95	37.66	74.00	19.98	H
17988.450	53.61	-29.59	45.95	37.25	74.00	20.39	H
14559.200	50.48	-29.14	41.90	37.72	68.20	17.72	V
14693.950	50.16	-30.04	41.50	38.70	68.20	18.04	V
5356.976	63.97	-27.82	34.20	57.59	74.00	10.03	H
5353.040	63.94	-27.82	34.20	57.56	74.00	10.06	H

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)
17975.250	54.28	-29.59	45.95	37.92	74.00	19.72	H
17992.850	54.03	-29.59	45.95	37.67	74.00	19.97	V
14119.750	50.16	-30.93	41.70	39.38	68.20	18.04	V
14179.700	50.13	-30.42	41.70	38.85	68.20	18.07	H
5450.020	63.91	-27.49	34.20	57.20	74.00	10.09	H
5463.595	65.84	-27.49	34.20	59.13	68.20	2.36	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)
17925.750	53.89	-29.59	45.95	37.53	74.00	20.11	H
17898.800	53.76	-29.59	45.95	37.40	74.00	20.24	H
14695.600	50.52	-30.04	41.50	39.06	68.20	17.68	V
14602.650	50.19	-29.14	41.90	37.43	68.20	18.01	V
5729.993	54.03	-27.47	34.10	47.40	68.20	14.17	H
5730.150	53.41	-27.47	34.10	46.78	68.20	14.79	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)
17984.600	53.41	-29.59	45.95	37.05	74.00	20.59	H
17914.750	53.26	-29.59	45.95	36.90	74.00	20.74	V
14200.600	50.06	-30.42	41.70	38.78	68.20	18.14	H
14601.550	49.89	-29.14	41.90	37.13	68.20	18.31	H
11879.050	47.07	-32.73	39.15	40.65	74.00	26.93	V
11888.400	46.50	-32.53	39.10	39.93	74.00	27.50	H

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:

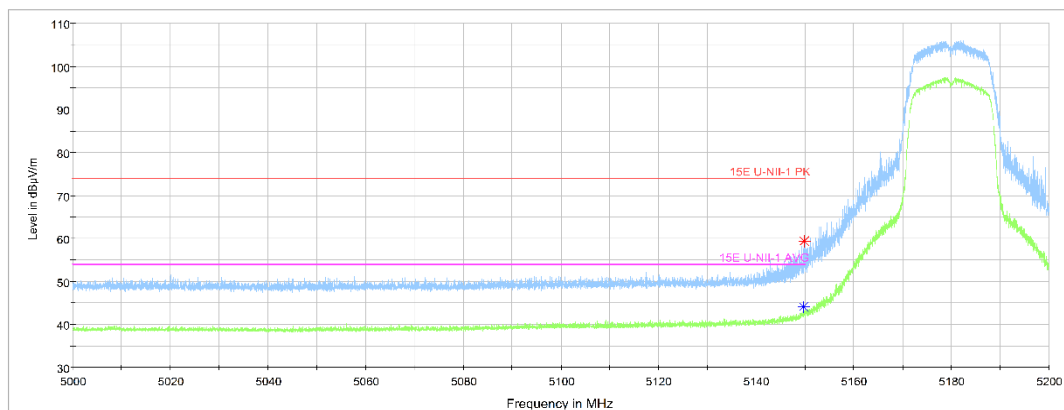


Fig. 34 Band Edges (802.11a Ch36, 5180MHz)

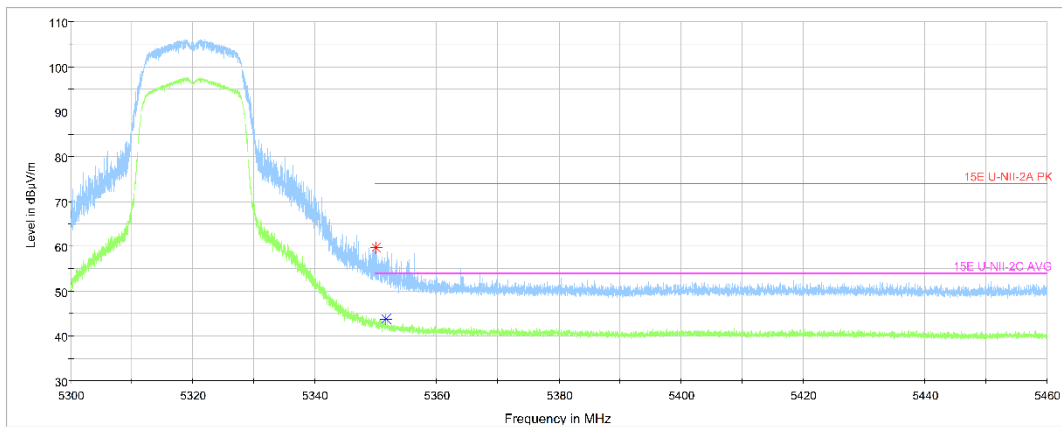


Fig. 35 Band Edges (802.11a Ch64, 5320MHz)

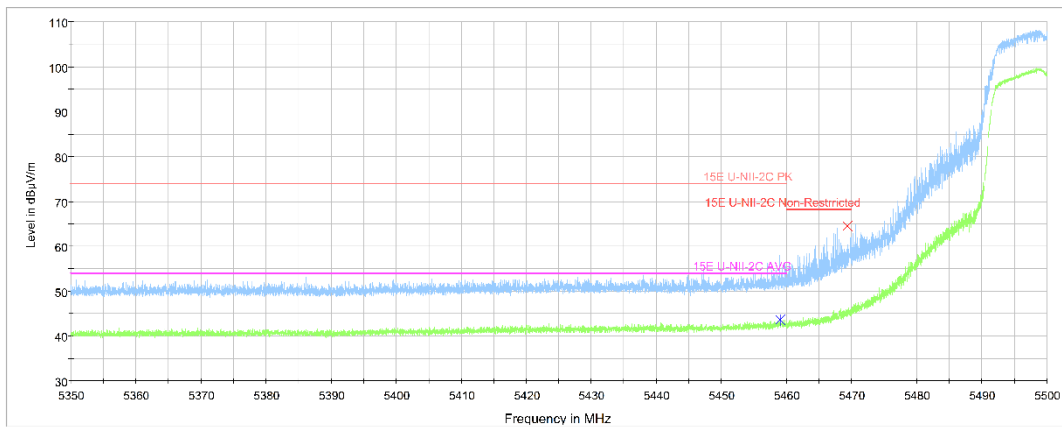


Fig. 36 Band Edges (802.11a Ch100, 5500MHz)

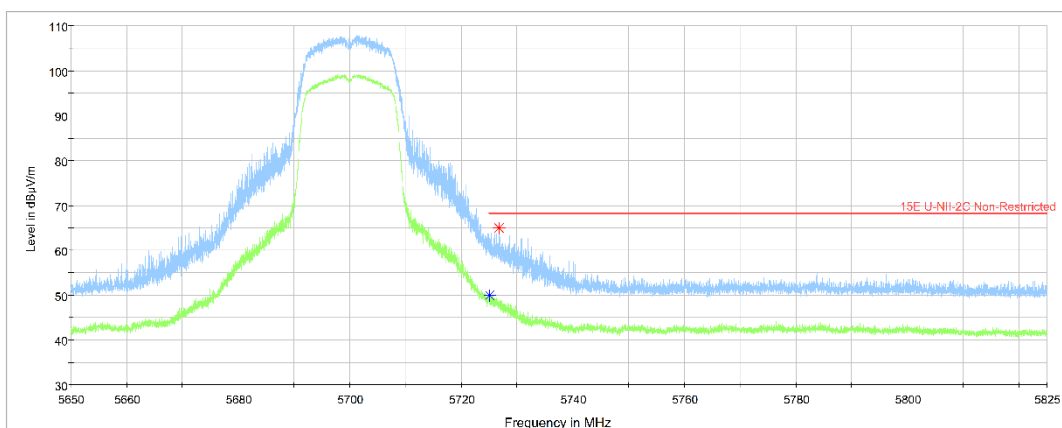


Fig. 37 Band Edges (802.11a Ch140, 5700MHz)

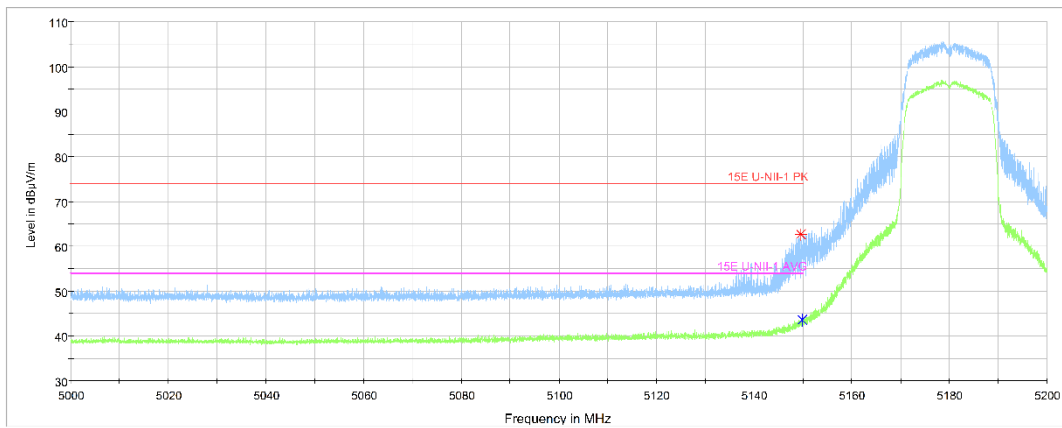


Fig. 38 Band Edges (802.11n-HT20 Ch36, 5180MHz)

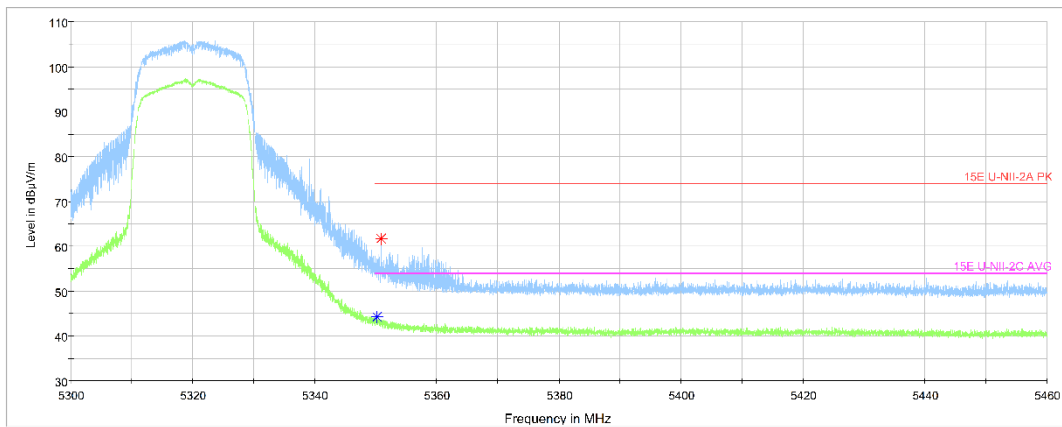


Fig. 39 Band Edges (802.11n-HT20 Ch64, 5320MHz)

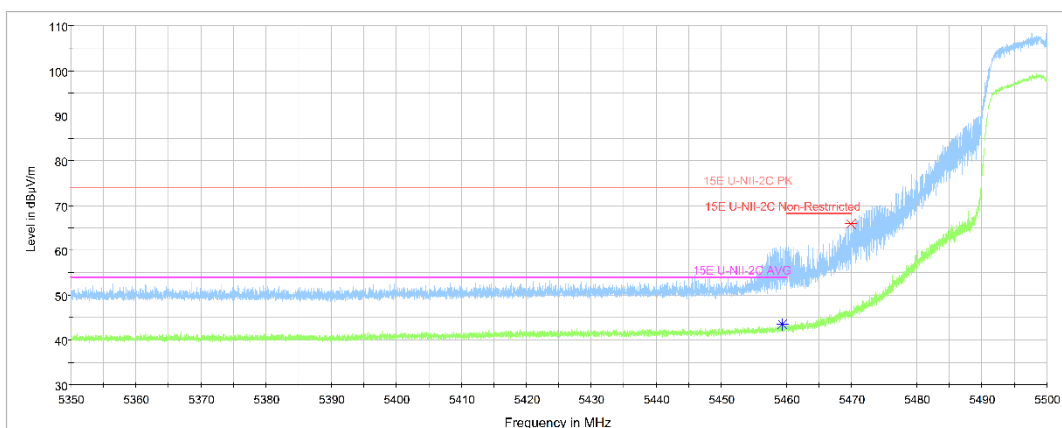


Fig. 40 Band Edges (802.11n-HT20 Ch100, 5500MHz)

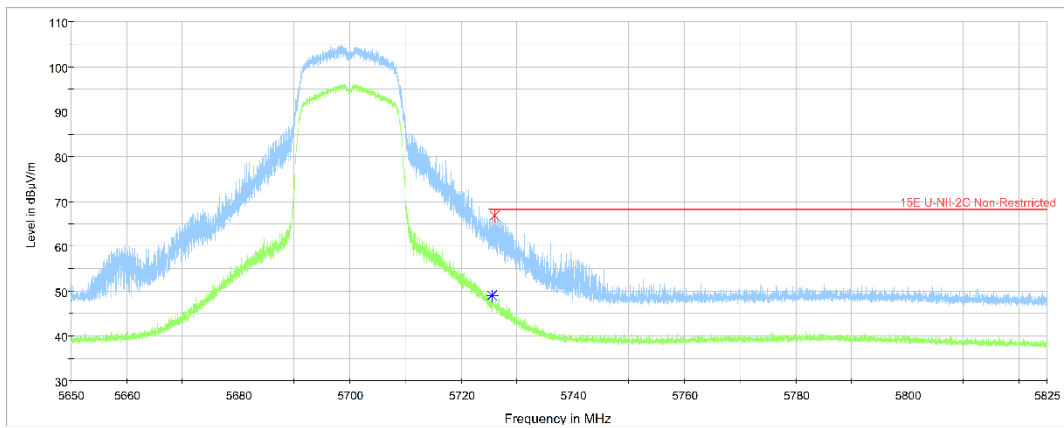


Fig. 41 Band Edges (802.11n-HT20 Ch140, 5700MHz)

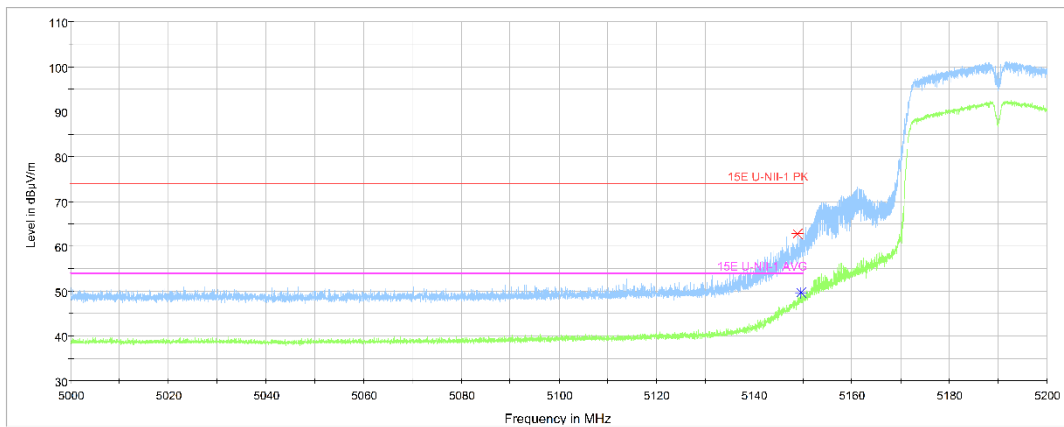


Fig. 42 Band Edges (802.11n-HT40 Ch38, 5190MHz)

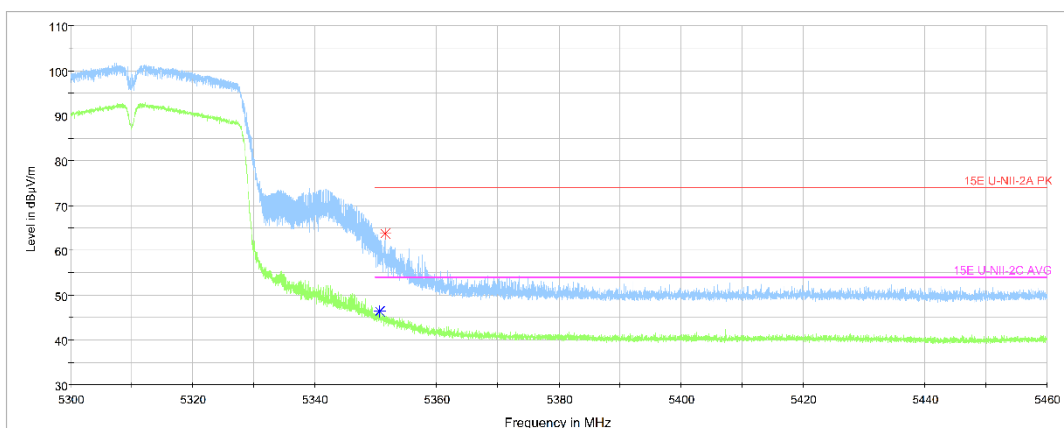


Fig. 43 Band Edges (802.11n-HT40 Ch62, 5310MHz)

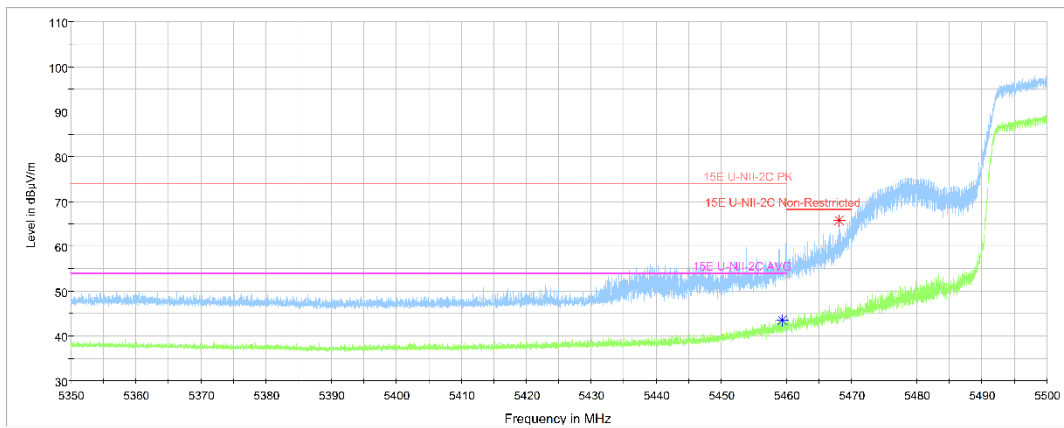


Fig. 44 Band Edges (802.11n-HT40 Ch102, 5510MHz)

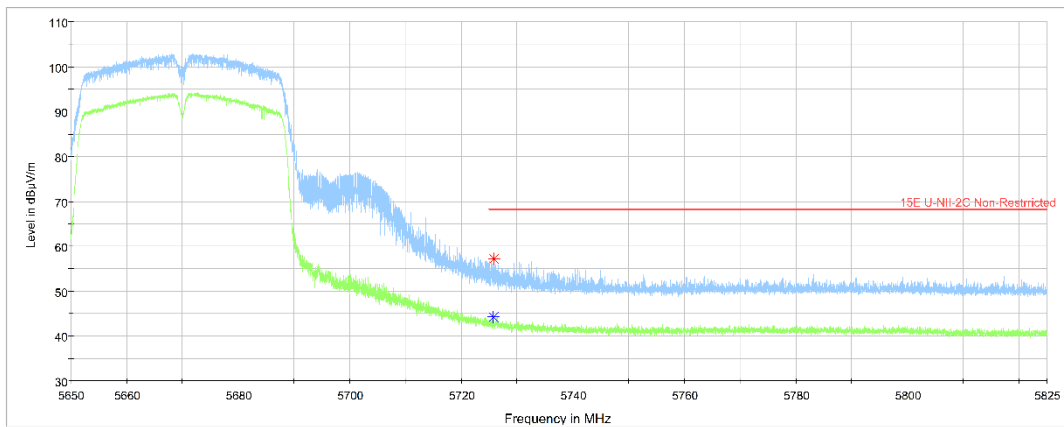


Fig. 45 Band Edges (802.11n-HT40 Ch134, 5670MHz)

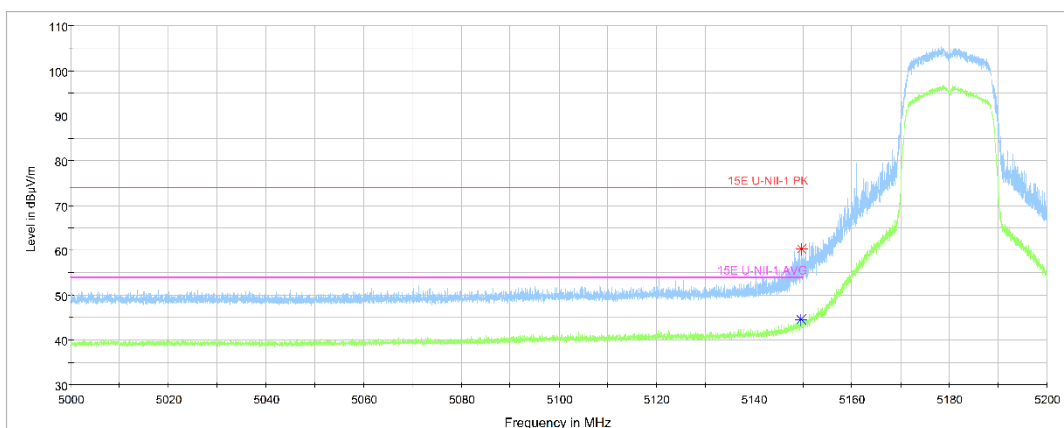


Fig. 46 Band Edges (802.11ac-HT20 Ch36, 5180MHz)

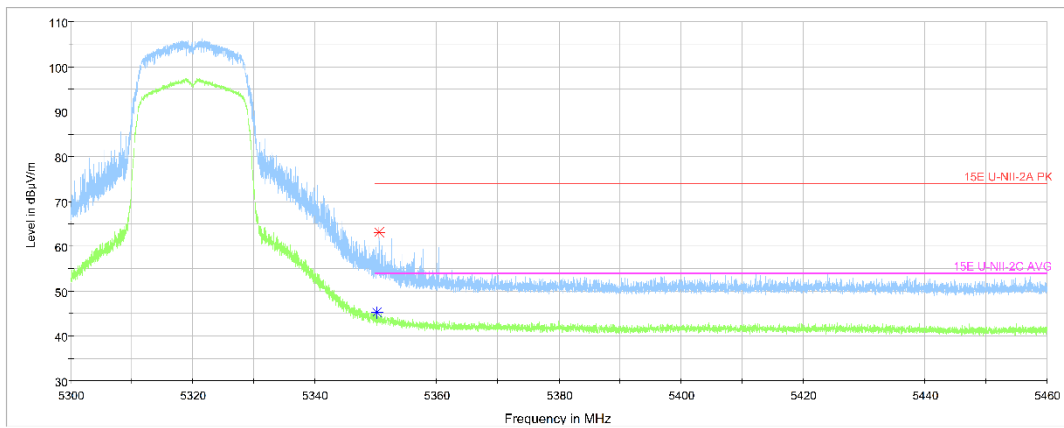


Fig. 47 Band Edges (802.11ac-HT20 Ch64, 5320MHz)

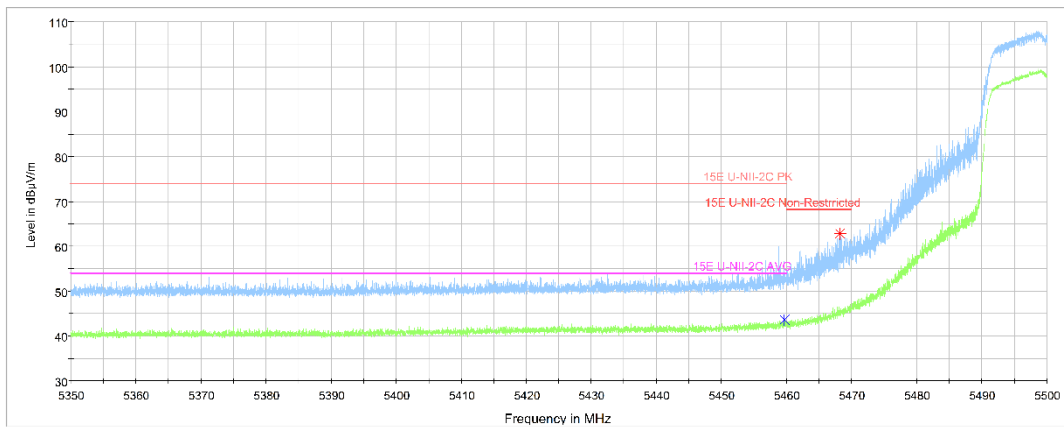


Fig. 48 Band Edges (802.11ac-HT20 Ch100, 5500MHz)

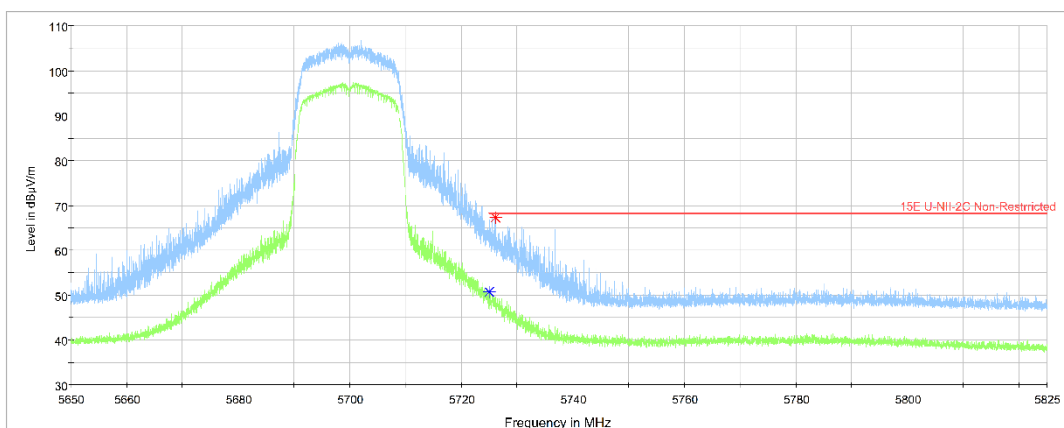


Fig. 49 Band Edges (802.11ac-HT20 Ch140, 5700MHz)

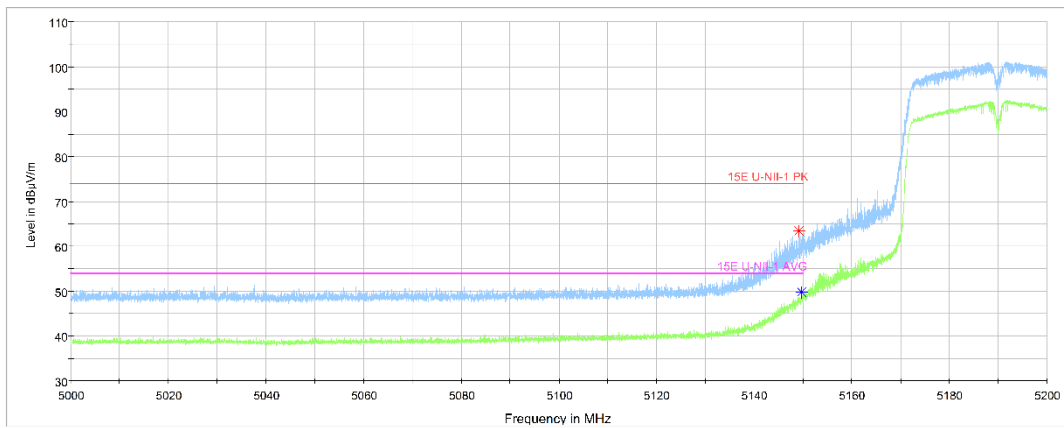


Fig. 50 Band Edges (802.11ac-HT40 Ch38, 5190MHz)

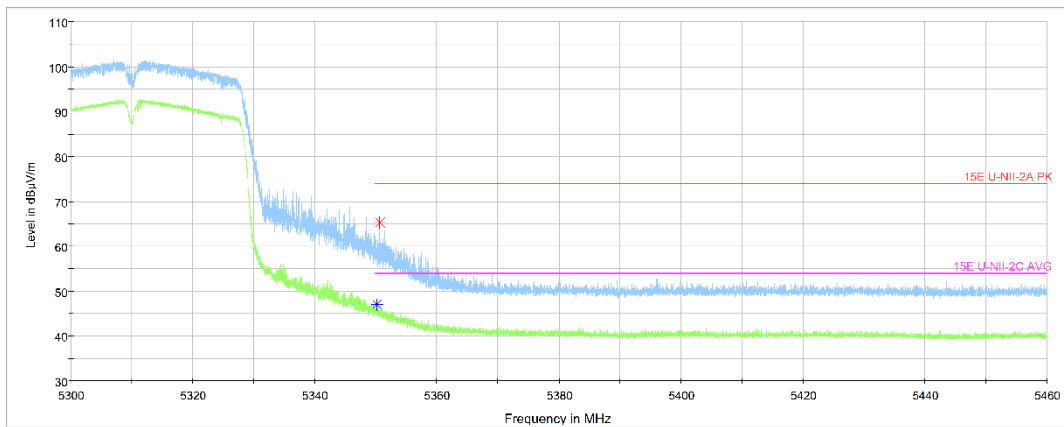


Fig. 51 Band Edges (802.11ac-HT40 Ch62, 5310MHz)

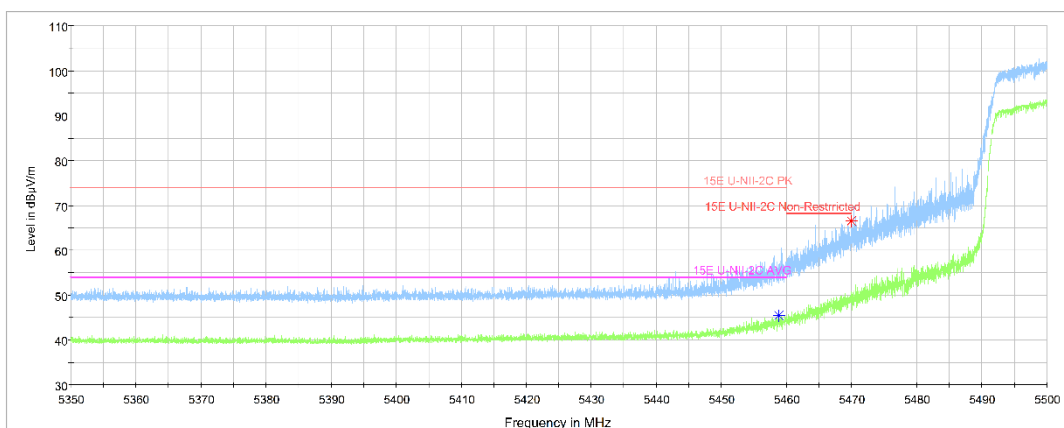


Fig. 52 Band Edges (802.11ac-HT40 Ch102, 5510MHz)

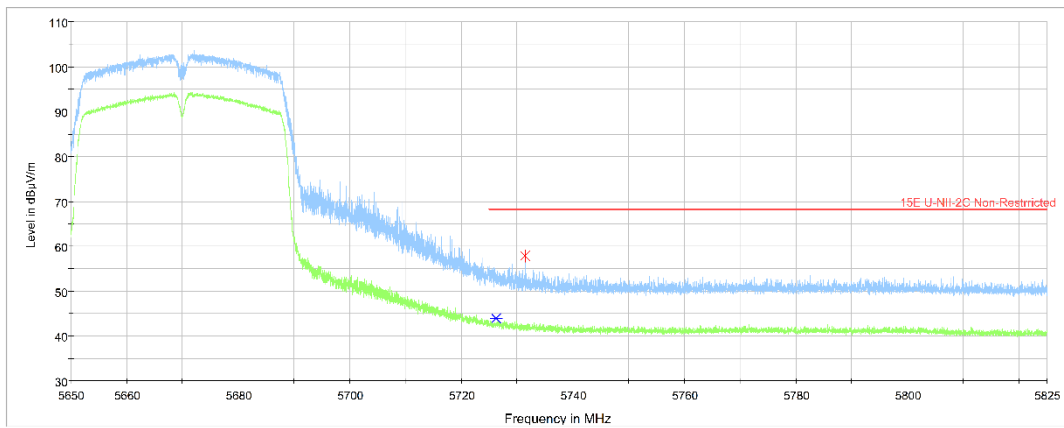


Fig. 53 Band Edges (802.11ac-HT40 Ch134, 5670MHz)

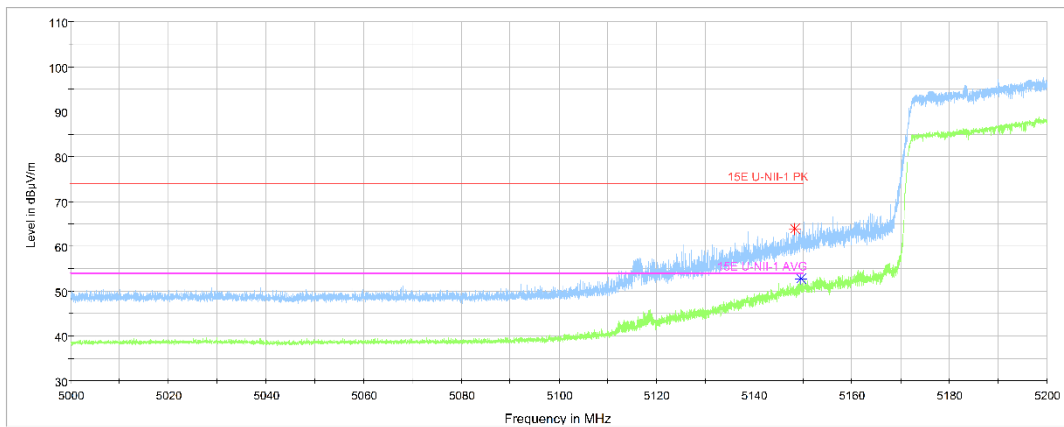


Fig. 54 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)

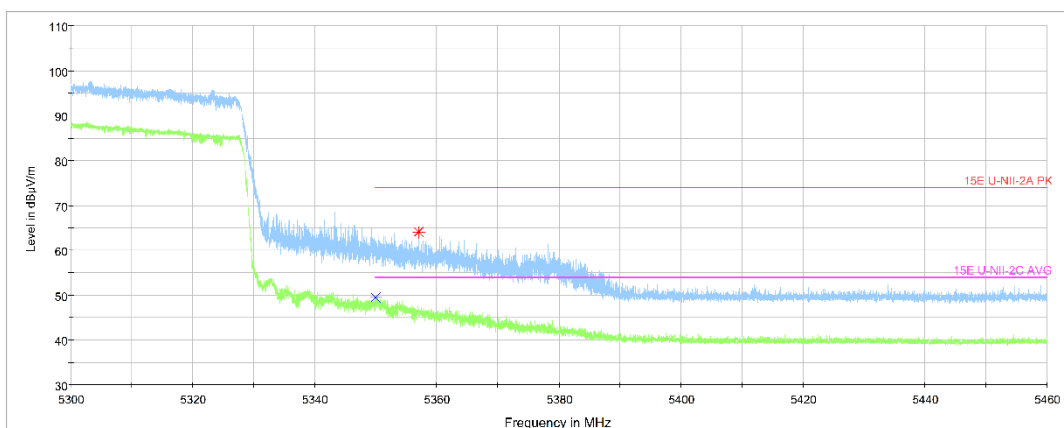


Fig. 55 Band Edges (802.11ac-HT80 Ch58, 5290MHz)

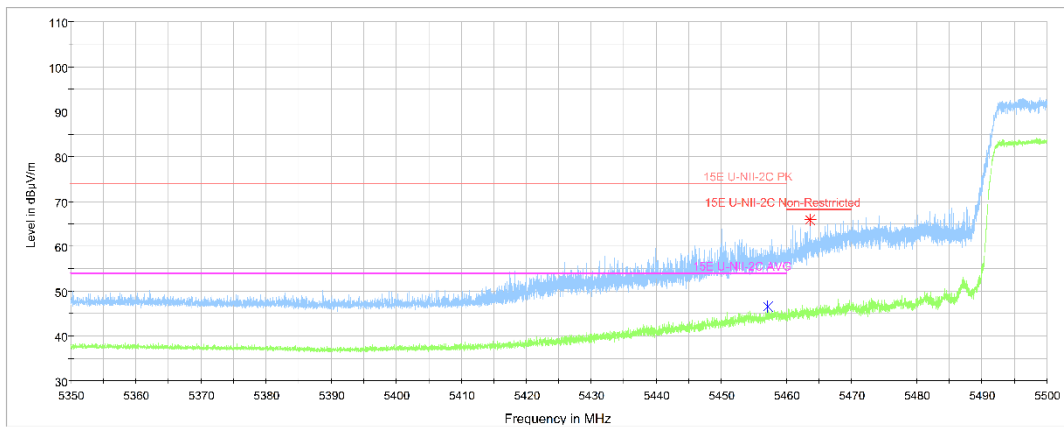


Fig. 56 Band Edges (802.11ac-HT80 Ch106, 5530MHz)

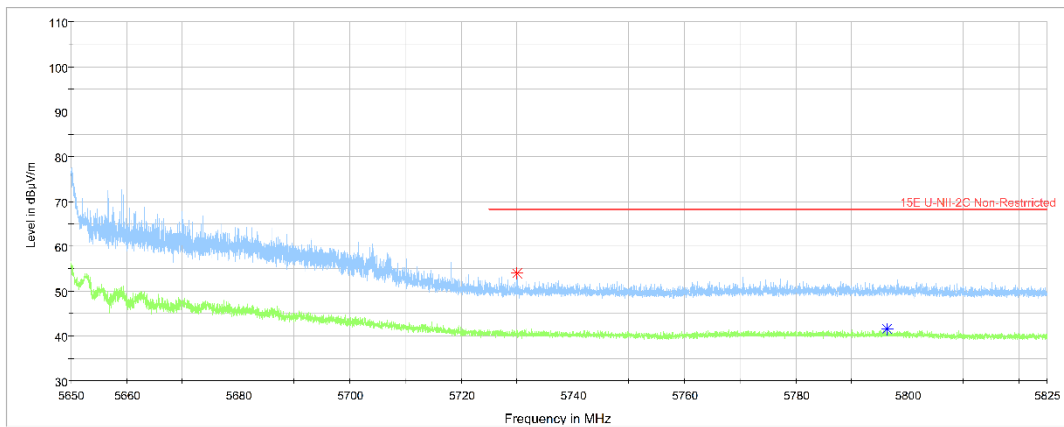


Fig. 57 Band Edges (802.11ac-HT80 Ch122, 5610MHz)

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.

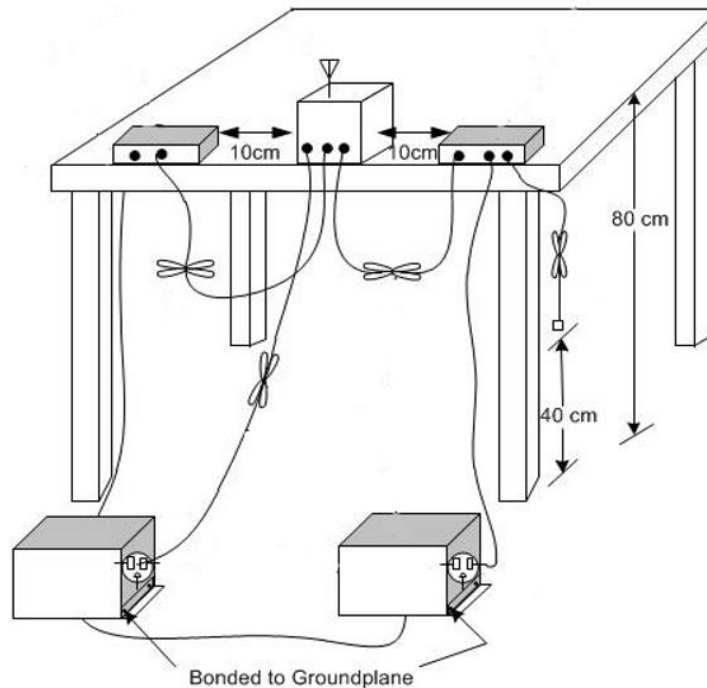
The measurement bandwidth is:

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 (dBμV)	Result (dBμV)		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 (dBμV)	Result (dBμV)		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:

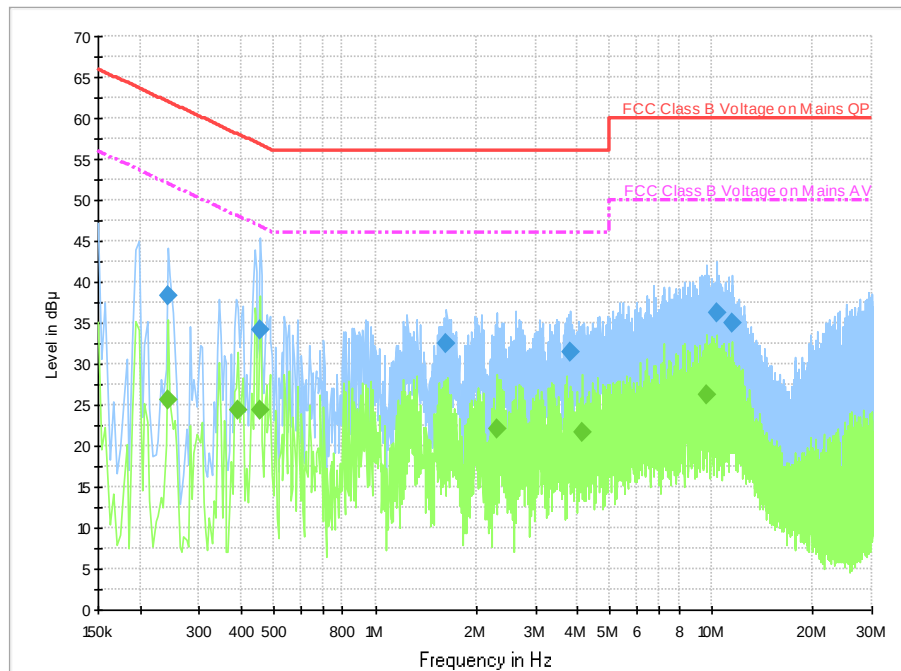


Fig.58 Conducted Emission(802.11a, Ch36, TX)

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.242000	38.4	2000.0	9.000	On	L1	19.7	23.7	62.0	
0.454000	34.1	2000.0	9.000	On	L1	19.7	22.7	56.8	
1.630000	32.5	2000.0	9.000	On	L1	19.6	23.5	56.0	
3.786000	31.4	2000.0	9.000	On	L1	19.6	24.6	56.0	
10.362000	36.3	2000.0	9.000	On	L1	19.7	23.7	60.0	
11.502000	35.1	2000.0	9.000	On	L1	19.7	24.9	60.0	

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.242000	25.7	2000.0	9.000	On	L1	19.7	26.4	52.0	
0.390000	24.4	2000.0	9.000	On	L1	19.7	23.7	48.1	
0.454000	24.3	2000.0	9.000	On	L1	19.7	22.5	46.8	
2.310000	22.0	2000.0	9.000	On	L1	19.6	24.0	46.0	
4.110000	21.6	2000.0	9.000	On	L1	19.6	24.4	46.0	
9.678000	26.2	2000.0	9.000	On	L1	19.7	23.8	50.0	

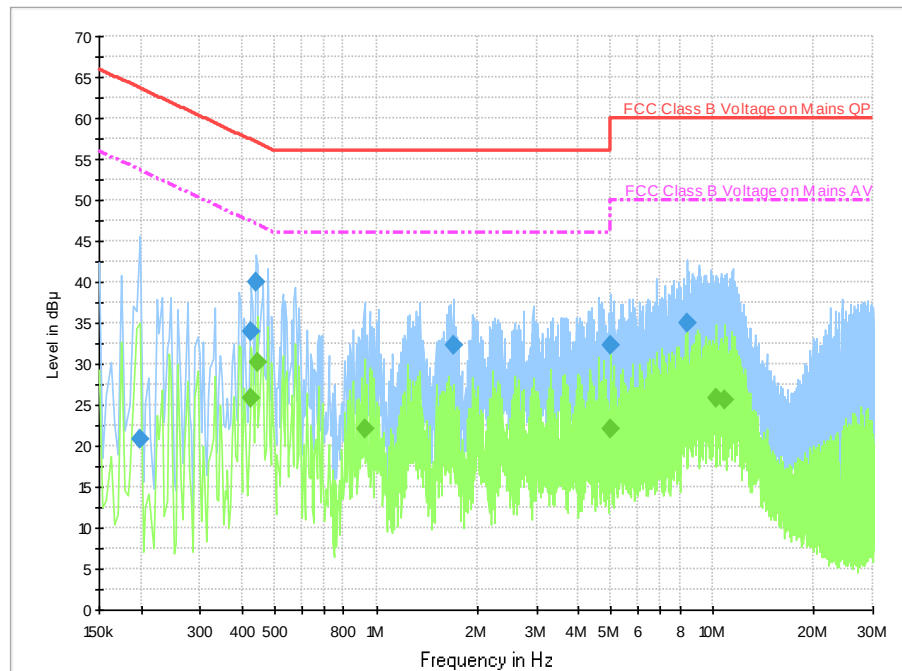


Fig.59 Conducted Emission(802.11a, IDLE)

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.198000	20.8	2000.0	9.000	On	L1	19.7	42.9	63.7	
0.426000	34.0	2000.0	9.000	On	L1	19.7	23.3	57.3	
0.438000	40.0	2000.0	9.000	On	L1	19.7	17.1	57.1	
1.698000	32.3	2000.0	9.000	On	L1	19.6	23.7	56.0	
4.974000	32.2	2000.0	9.000	On	L1	19.6	23.8	56.0	
8.422000	34.9	2000.0	9.000	On	L1	19.7	25.1	60.0	

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.426000	25.7	2000.0	9.000	On	L1	19.7	21.6	47.3	
0.442000	30.2	2000.0	9.000	On	L1	19.7	16.8	47.0	
0.922000	22.0	2000.0	9.000	On	L1	19.7	24.0	46.0	
4.974000	22.2	2000.0	9.000	On	L1	19.6	23.8	46.0	
10.222000	25.9	2000.0	9.000	On	L1	19.7	24.1	50.0	
10.874000	25.7	2000.0	9.000	On	L1	19.7	24.3	50.0	

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% 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:

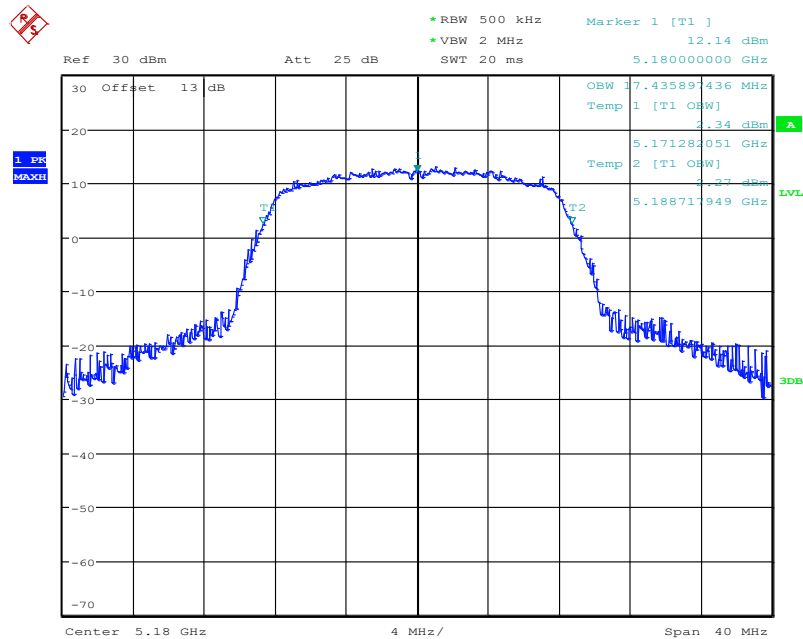
Measurement Uncertainty	60.80Hz
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EUT ID: UT15a

Measurement Result:

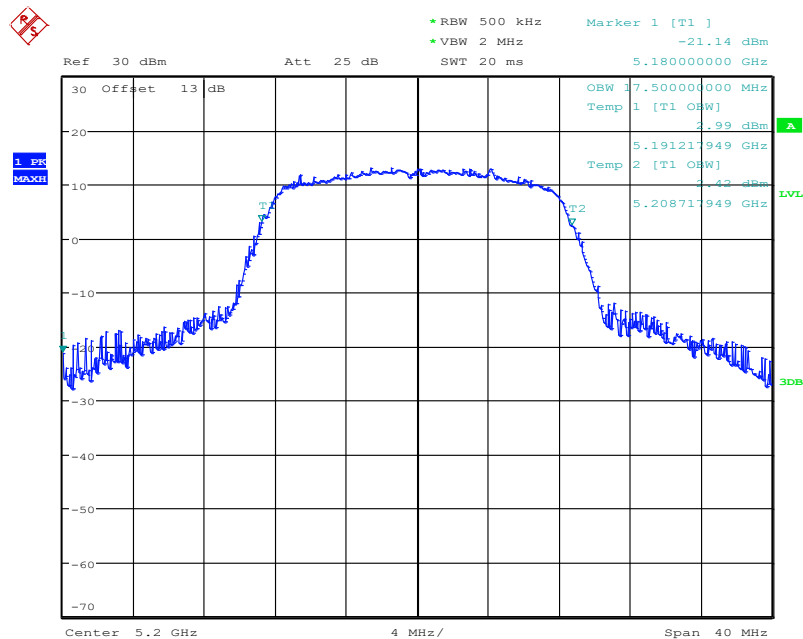
Mode	Frequency	99% Occupied bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.60	17.37	P
	5200 MHz	Fig.61	17.50	P
	5240 MHz	Fig.62	17.44	P
802.11ac (VHT20)	5180 MHz	Fig.63	18.30	P
	5200 MHz	Fig.64	18.21	P
	5240 MHz	Fig.65	18.27	P
802.11n HT40	5190 MHz	Fig.66	36.28	P
	5230 MHz	Fig.67	36.28	P
802.11ac (VHT80)	5210 MHz	Fig.68	75.38	P

Test graphs as below:



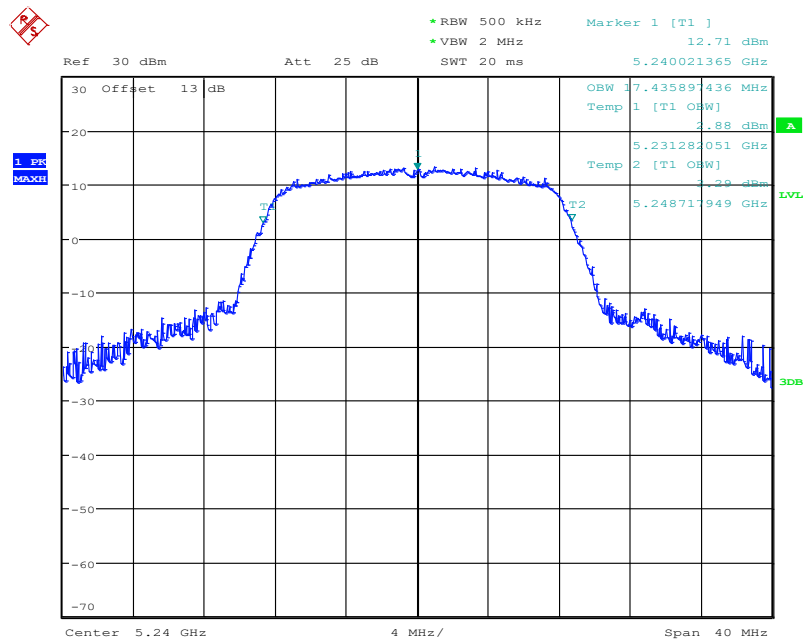
Date: 15.DEC.2023 11:13:56

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



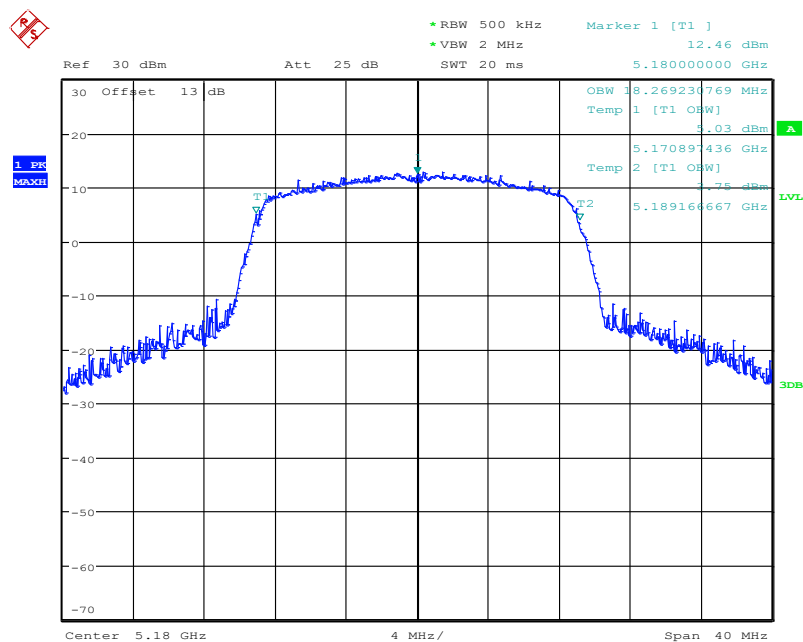
Date: 15.DEC.2023 11:14:24

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



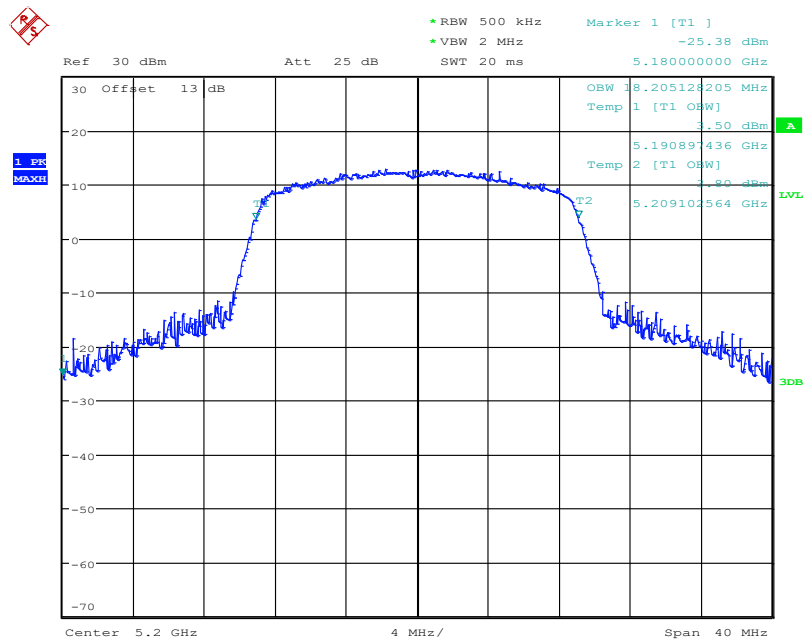
Date: 15.DEC.2023 11:15:10

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



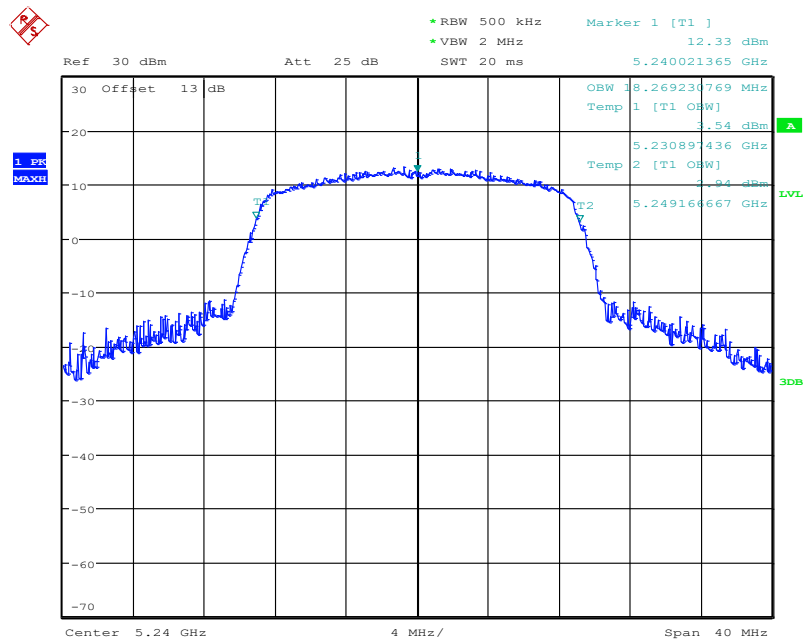
Date: 15.DEC.2023 11:15:49

Fig.63 99% Occupied bandwidth (802.11ac-VHT20, 5180MHz)



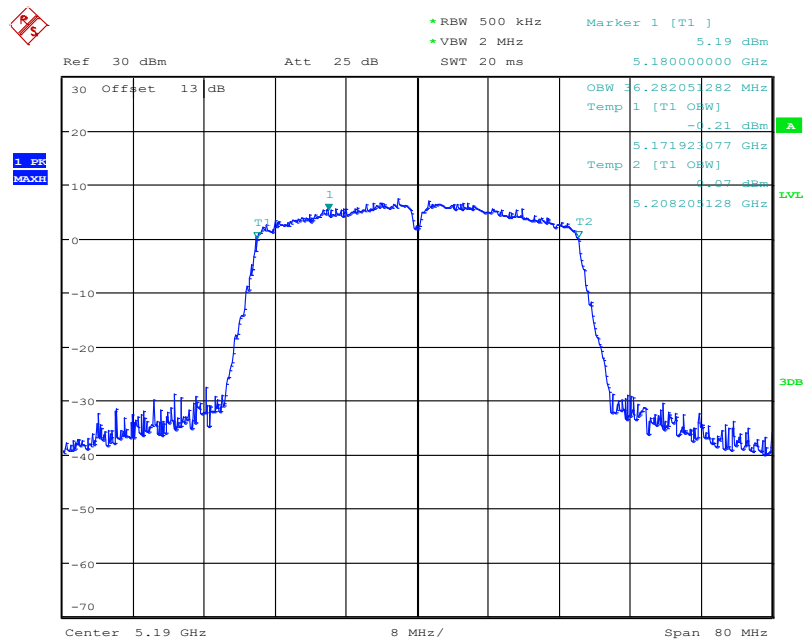
Date: 15.DEC.2023 11:16:17

Fig.64 99% Occupied bandwidth (802.11ac-VHT20, 5200MHz)



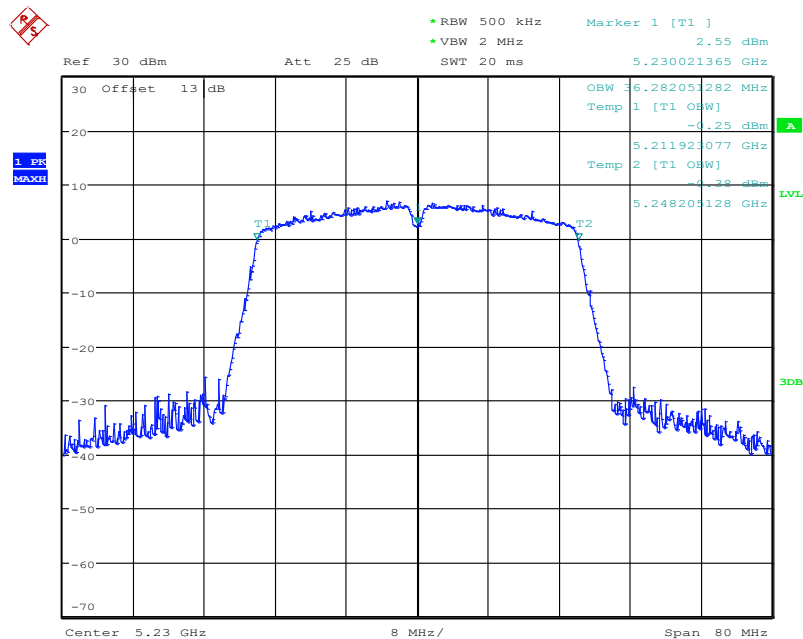
Date: 15.DEC.2023 11:16:41

Fig.65 99% Occupied bandwidth (802.11ac-VHT20, 5240MHz)



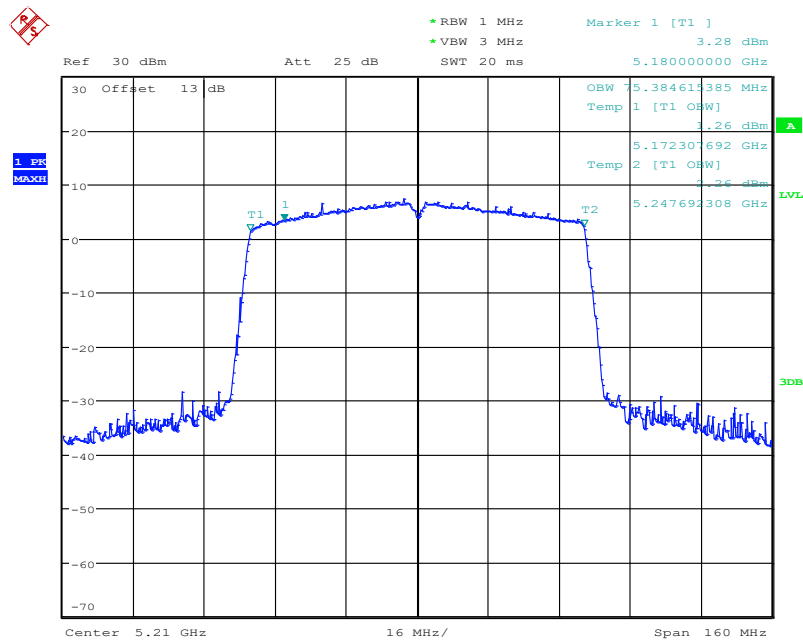
Date: 15.DEC.2023 11:17:15

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



Date: 15.DEC.2023 11:17:43

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



Date: 15.DEC.2023 11:18:14

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

Conclusion: PASS

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





Accredited Laboratory

A2LA has accredited

TELECOMMUNICATION TECHNOLOGY LABS, CAICT

Beijing, People's Republic of China

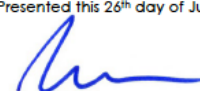
for technical competence in the field of

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 McInturff, 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 ***