



# FCC PART 15 TEST REPORT No.I23Z60697-IOT04

for

**Client Name:LG Electronics USA,Inc.**

**Product Name : 10A30Q**

**Model Name: 10A30Q**

**With**

**FCC ID: BEJTB-10A30Q**

**Hardware Version: Rev 1.0**

**Software Version: 10A30Q10y**

**Issued Date: 2023-06-26**

**Note:**

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

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

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I23Z60697-IOT04	Rev.0	1st edition	2023-06-26

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## **1. TEST LATORATORY**

### **1.1. Introduction & Accreditation**

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

### **1.2. Testing Location**

Conducted testing Location: CTTL(Huayuan North Road)

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

Radiated testing Location: CTTL(huayuan North Road)

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

### **1.3. Testing Environment**

Normal Temperature: 15-35°C

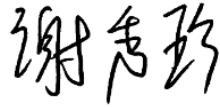
Relative Humidity: 20-75%

### **1.4. Project date**

Testing Start Date: 2023-04-20

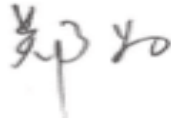
Testing End Date: 2023-06-26

### 1.5. Signature



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Xie Xiuzhen  
( Prepared this test report )



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Zheng Wei  
(Reviewed this test report)



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Pang Shuai  
(Approved this test report)



## **2. CLIENT INFORMATION**

### **2.1 Applicant Information**

Company Name: LG Electronics USA, Inc.  
Address: 111 Sylvan Avenue, North Building, Englewood Cliffs, New Jersey  
07632, United States  
City: Englewood Cliffs  
Postal Code: /  
Country: USA  
Telephone: /  
Fax: /

### **2.2 Manufacturer Information**

Company Name: LG Electronics Inc.  
Address: 222, LG-ro, Jinwi-myeon Pyeongtaek-Si, Gyeonggi-Do, 17709  
Republic of KOREA  
City: Pyeongtaek-Si  
Postal Code: /  
Country: KOREA  
Telephone: 82-10-9973-2929  
Fax: /

### 3. EQUIPMENT UNDER TEST (EUT) AND

#### ANCILLARY EQUIPMENT (AE)

##### 3.1. About EUT

Description	10A30Q
Model name	10A30Q
FCC ID	BEJTB-10A30Q
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Voltage	3.85V

##### 3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
UT13a	304WIKN000085	Rev 1.0	10A30Q10y
UT32a	304WIBF000093	Rev 1.0	10A30Q10y

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

UT32a is used for Conduction test, UT13a is used for Radiation test.

##### 3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	Manufacture
AE1	Battery	BL-M22	Shenzhen BYD Lithium Battery Company Limited
AE2	Charger	MCS-H06WA	Dongguan Aohai Technology Co., Ltd.
AE3	USB Cable	HX-WT-41	HUIZHOU WASHIN ELECTRONICS CO.,LTD

\*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 10A30Q 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. SUMMARY OF TEST RESULTS

### 6.1. Summary of Test Results

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

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

Terms used in Verdict column

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

### 6.2. Statements

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

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

### 6.3. Test Conditions

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

Temperature	26°C
Voltage	3.85V
Humidity	44%

## 7. TEST EQUIPMENTS UTILIZED

### Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2024-06-05
2	LISN	ENV216	101200	Rohde & Schwarz	1 year	2023-06-29
3	Test Receiver	ESCI	100344	Rohde & Schwarz	1 year	2024-02-21
4	Shielding Room	S81	/	ETS-Lindgren	/	/

### Radiated emission test system

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

※Note: The EMI Antenna with series number of 00167250 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 Occupied Channel Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

### 8.4 Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

### 8.5 Spurious Emissions

#### Conducted (k=1.96)

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

#### Radiated (k=2)

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

### 8.6 AC Power-line Conducted Emission

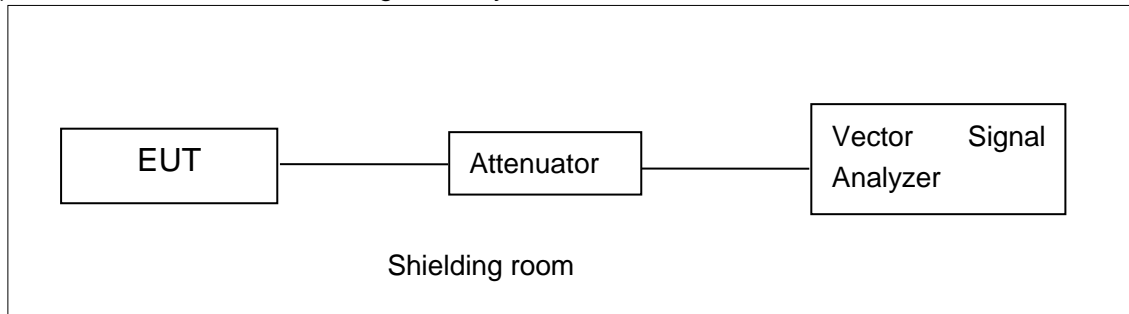
Measurement Uncertainty : 3.08,k=2

## ANNEX A: MEASUREMENT RESULTS

### A.1. Measurement Method

#### A.1.1. Conducted Measurements

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

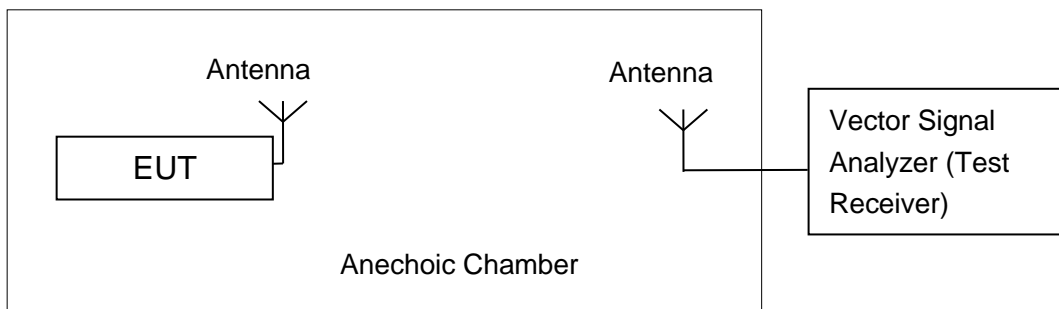


#### A.1.2. Radiated Emission Measurements

In the case of radiated emission, the used settings are as follows,

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;

Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 10Hz;



The measurement is made according to KDB 789033

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

## A.2. Maximum output Power

### Measurement Limit and Method:

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

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

The measurementmethod SA-2 is made according to KDB 789033

### Measurement Results:

**Antenna Gain: -1.36dBi**

#### 802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	16.87	/	/	/	/	/	/	/
	5200MHz	16.69	/	/	/	/	/	/	/
	5240MHz	15.37	/	/	/	/	/	/	/
	5260MHz	15.24	/	/	/	/	/	/	/
	5280MHz	15.32	/	/	/	/	/	/	/
	5320MHz	16.26	/	/	/	/	/	/	/
	5500MHz	16.73	/	/	/	/	/	/	/
	5580MHz	16.45	/	/	/	/	/	/	/
	5700MHz	16.98	/	/	/	/	/	/	/
	5720MHz	16.29	/	/	/	/	/	/	/

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	MCS8
802.11n (HT20)	5180MHz	17.02	/	/	/	/	/	/	/	/
	5200MHz	16.97	/	/	/	/	/	/	/	/
	5240MHz	15.85	/	/	/	/	/	/	/	/
	5260MHz	16.12	/	/	/	/	/	/	/	/
	5280MHz	16.08	/	/	/	/	/	/	/	/
	5320MHz	16.25	/	/	/	/	/	/	/	/
	5500MHz	16.68	/	/	/	/	/	/	/	/
	5580MHz	16.63	/	/	/	/	/	/	/	/
	5700MHz	16.21	/	/	/	/	/	/	/	/
	5720 MHz	16.29	/	/	/	/	/	/	/	/

The data rate MSC0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ac-HT20 mode

Mode	Frequency	Test Result (dBm)								
		Data Rate								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
802.11ac (HT20)	5180MHz	17.03	/	/	/	/	/	/	/	/
	5200MHz	16.96	/	/	/	/	/	/	/	/
	5240MHz	15.85	/	/	/	/	/	/	/	/
	5260MHz	16.11	/	/	/	/	/	/	/	/
	5280MHz	16.10	/	/	/	/	/	/	/	/
	5320MHz	16.23	/	/	/	/	/	/	/	/
	5500MHz	16.70	/	/	/	/	/	/	/	/
	5580MHz	16.67	/	/	/	/	/	/	/	/
	5700MHz	16.24	/	/	/	/	/	/	/	/
	5720 MHz	16.36	/	/	/	/	/	/	/	/

The data rate MSC0 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	16.20	/	/	/	/	/	/	/
	5230MHz	16.02	/	/	/	/	/	/	/
	5270MHz	15.72	/	/	/	/	/	/	/
	5310MHz	15.70	/	/	/	/	/	/	/
	5510MHz	16.27	/	/	/	/	/	/	/
	5550MHz	16.10	/	/	/	/	/	/	/
	5670MHz	16.71	/	/	/	/	/	/	/
	5710MHz	15.92	/	/	/	/	/	/	/

The data rate MSC0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ac-HT40 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11a c (HT40)	5190MHz	16.22	/	/	/	/	/	/	/
	5230MHz	16.01	/	/	/	/	/	/	/
	5270MHz	15.75	/	/	/	/	/	/	/

	5310MHz	15.70	/	/	/	/	/	/	/	/
	5510MHz	16.29	/	/	/	/	/	/	/	/
	5550MHz	16.15	/	/	/	/	/	/	/	/
	5670MHz	16.69	/	/	/	/	/	/	/	/
	5710MHz	15.93	/	/	/	/	/	/	/	/

The data rate MSC0 is selected as worst condition, and the following cases are performed with this condition.

#### 802.11ac-HT80 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (HT80)	5210MHz	15.35	/	/	/	/	/	/	/	/	/
	5290MHz	14.72	/	/	/	/	/	/	/	/	/
	5530MHz	15.31	/	/	/	/	/	/	/	/	/
	5610MHz	15.99	/	/	/	/	/	/	/	/	/
	5690MHz	15.81	/	/	/	/	/	/	/	/	/

The data rate MSC0 is selected as worst condition, and the following cases are performed with this condition.

#### Duty Cycle

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

**Conclusion: PASS**



### A.3. Peak Power Spectral Density (conducted)

#### Measurement Limit:

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

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

#### Measurement Results:

Mode	Frequency	Power Spectral Density (dBm/MHz)	Conclusion
802.11a	5180 MHz	6.43	P
	5200 MHz	6.36	P
	5240 MHz	5.20	P
	5260 MHz	5.50	P
	5280 MHz	5.50	P
	5320 MHz	5.66	P
	5500 MHz	6.17	P
	5580 MHz	6.02	P
	5700 MHz	5.60	P
	5720 MHz	5.68	P
802.11ac HT20	5180 MHz	6.53	P
	5200 MHz	6.42	P
	5240 MHz	5.29	P
	5260 MHz	5.58	P
	5280 MHz	5.56	P
	5320 MHz	5.72	P
	5500 MHz	6.29	P
	5580 MHz	6.08	P
	5700 MHz	5.68	P
	5720 MHz	5.72	P
802.11n HT40	5190 MHz	2.66	P
	5230 MHz	2.39	P
	5270 MHz	2.29	P
	5310 MHz	2.22	P
	5510 MHz	2.83	P
	5550 MHz	2.60	P
	5670 MHz	3.09	P
	5710 MHz	2.34	P
802.11ac HT80	5210MHz	-1.41	P
	5290MHz	-2.29	P
	5530MHz	-1.70	P



	5610MHz	-0.83	P
	5690 MHz	-1.05	P

**Conclusion: PASS**

#### A.4. Occupied 26dB Bandwidth(conducted)

##### Measurement Limit:

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

The measurement is made according to KDB 789033

##### Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
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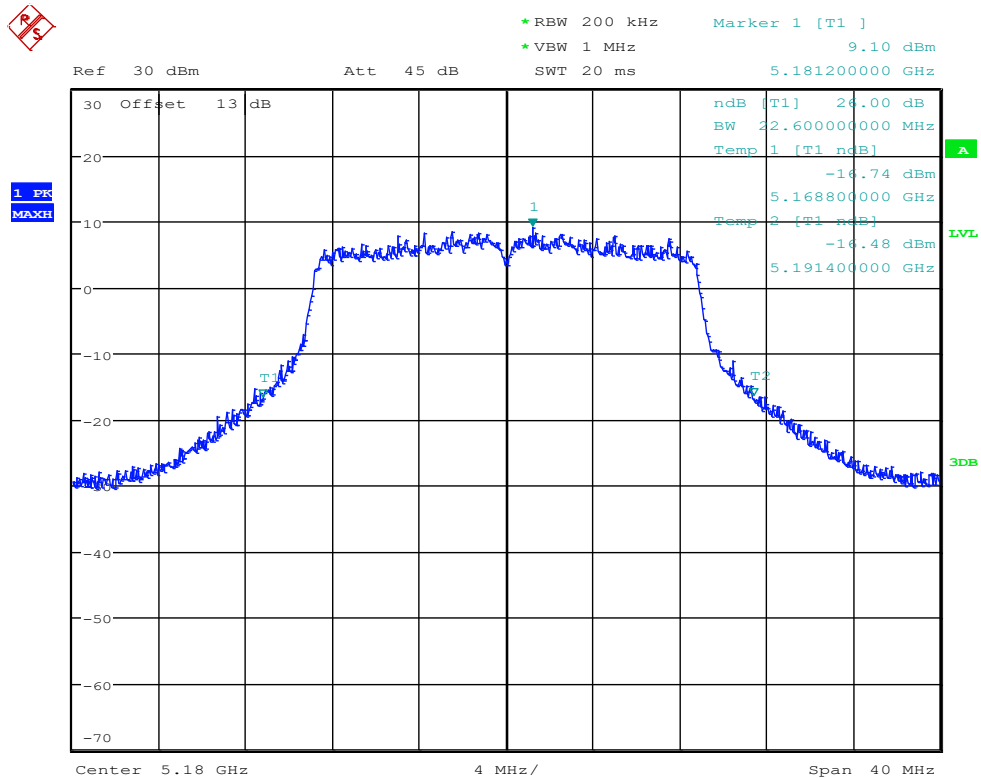
##### Measurement Result:

Mode	Frequency	Occupied 26dB Bandwidth ( MHz)		conclusion
		Fig.	Value	
802.11a	5180 MHz	Fig.1	22.60	P
	5200 MHz	Fig.2	22.24	P
	5240 MHz	Fig.3	22.56	P
	5260 MHz	Fig.4	22.64	P
	5280 MHz	Fig.5	22.64	P
	5320 MHz	Fig.6	22.56	P
	5500 MHz	Fig.7	22.16	P
	5580 MHz	Fig.8	22.28	P
	5700 MHz	Fig.9	22.36	P
	5720 MHz	Fig.10	22.40	P
802.11ac HT20	5180 MHz	Fig.11	22.60	P
	5200 MHz	Fig.12	22.40	P
	5240 MHz	Fig.13	22.44	P
	5260 MHz	Fig.14	22.80	P
	5280 MHz	Fig.15	22.68	P
	5320 MHz	Fig.16	22.44	P
	5500 MHz	Fig.17	22.04	P
	5580 MHz	Fig.18	22.28	P
	5700 MHz	Fig.19	22.16	P
	5720 MHz	Fig.20	22.76	P
802.11n HT40	5190 MHz	Fig.21	42.00	P
	5230 MHz	Fig.22	42.00	P
	5270 MHz	Fig.23	41.76	P
	5310 MHz	Fig.24	41.76	P
	5510 MHz	Fig.25	41.36	P
	5550 MHz	Fig.26	41.76	P
	5670 MHz	Fig.27	41.68	P
	5710 MHz	Fig.28	41.84	P
802.11ac HT80	5210 MHz	Fig.29	84.64	P
	5290 MHz	Fig.30	84.96	P
	5530 MHz	Fig.31	84.80	P

	5610 MHz	Fig.32	83.84	P
	5690 MHz	Fig.33	84.64	P

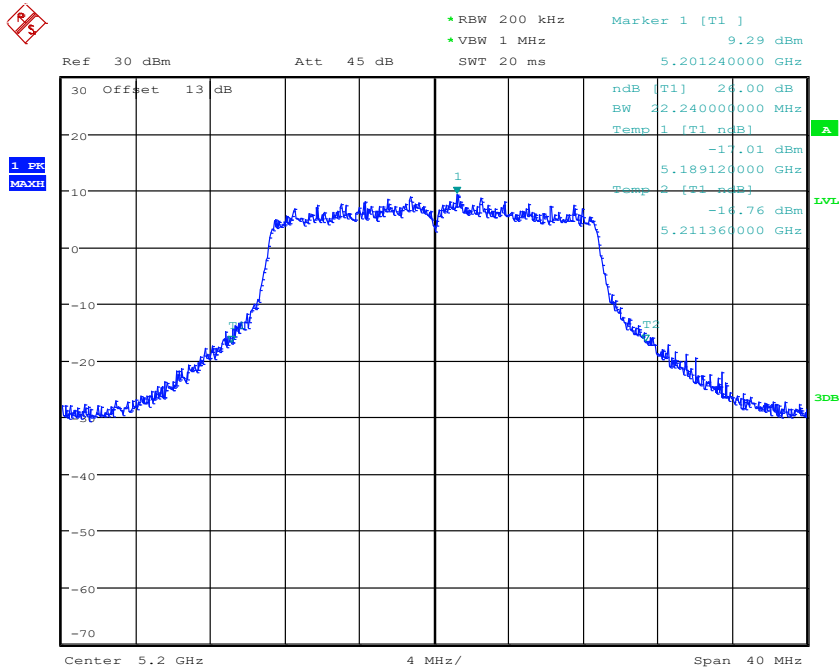
**Conclusion: PASS**

**Test graphs as below:**



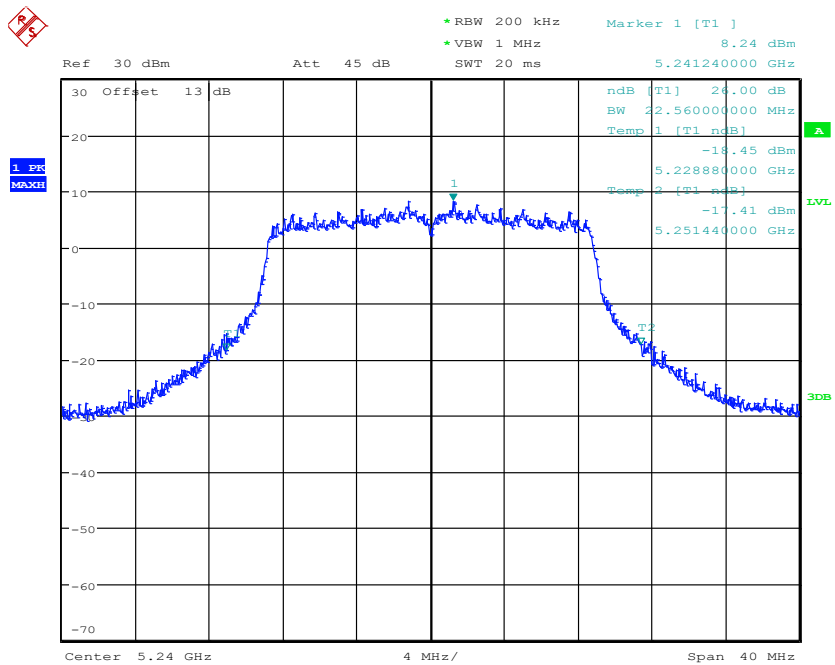
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**Fig.1 Occupied 26dB Bandwidth (802.11a, 5180MHz)**



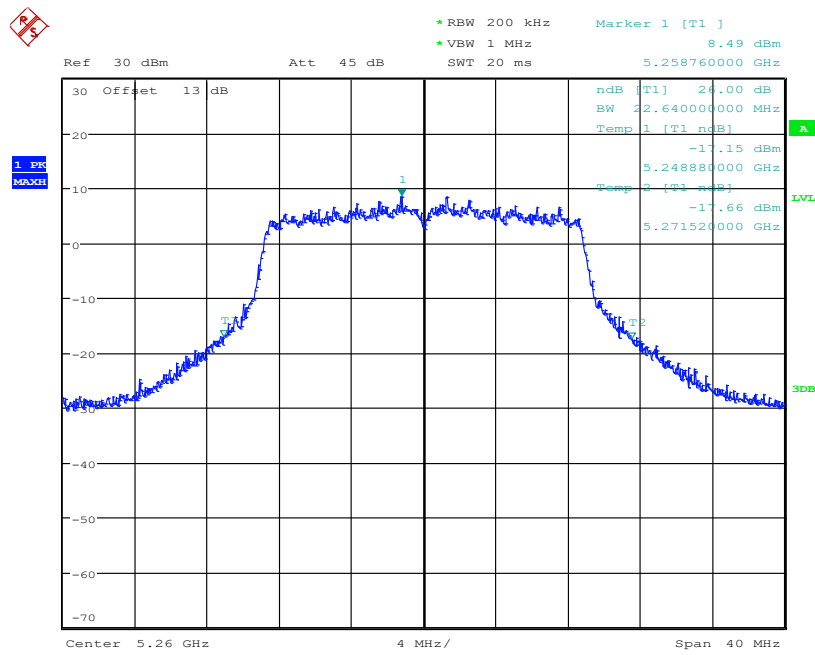
Date: 19.MAY.2023 02:32:13

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



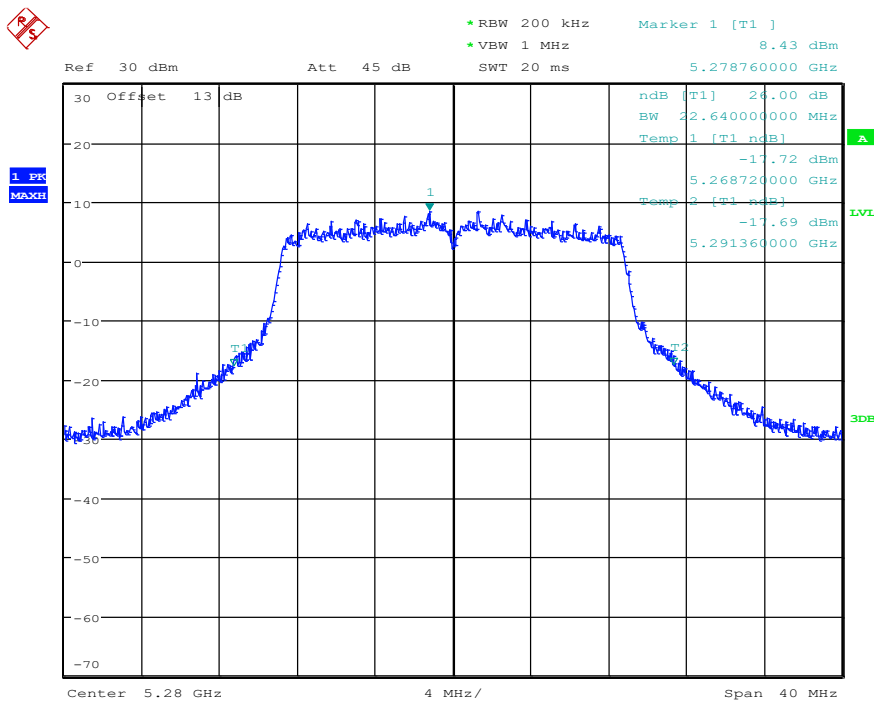
Date: 19.MAY.2023 02:32:41

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



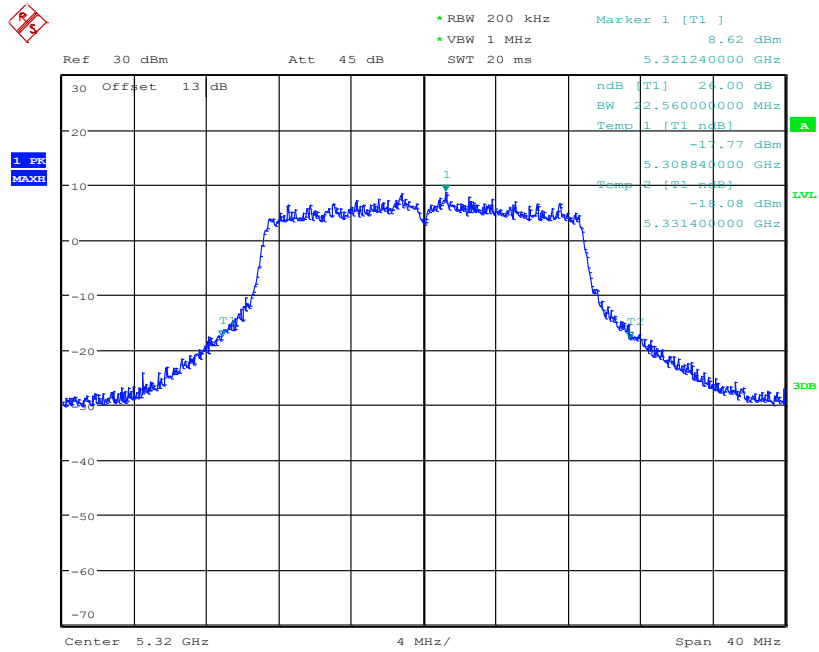
Date: 19.MAY.2023 02:33:09

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



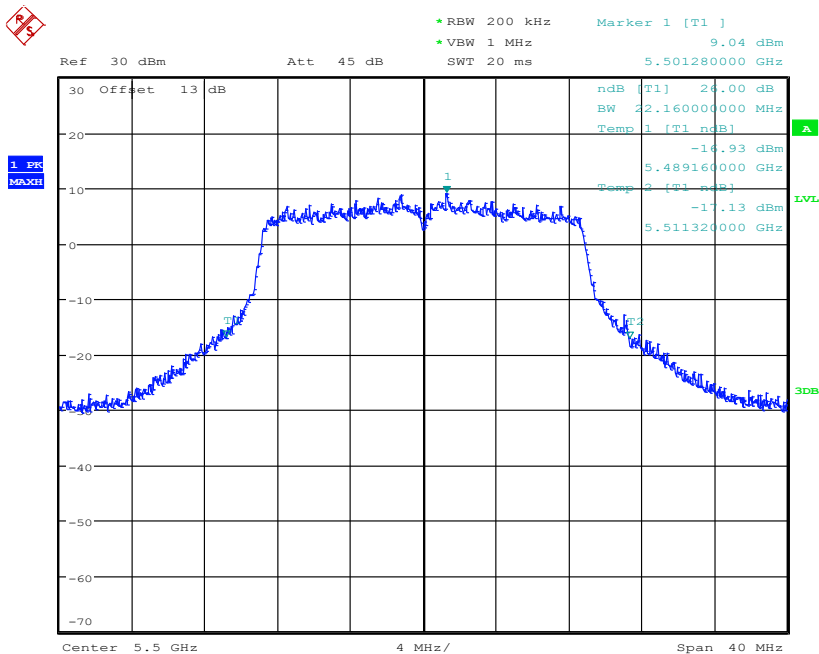
Date: 19.MAY.2023 02:33:37

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



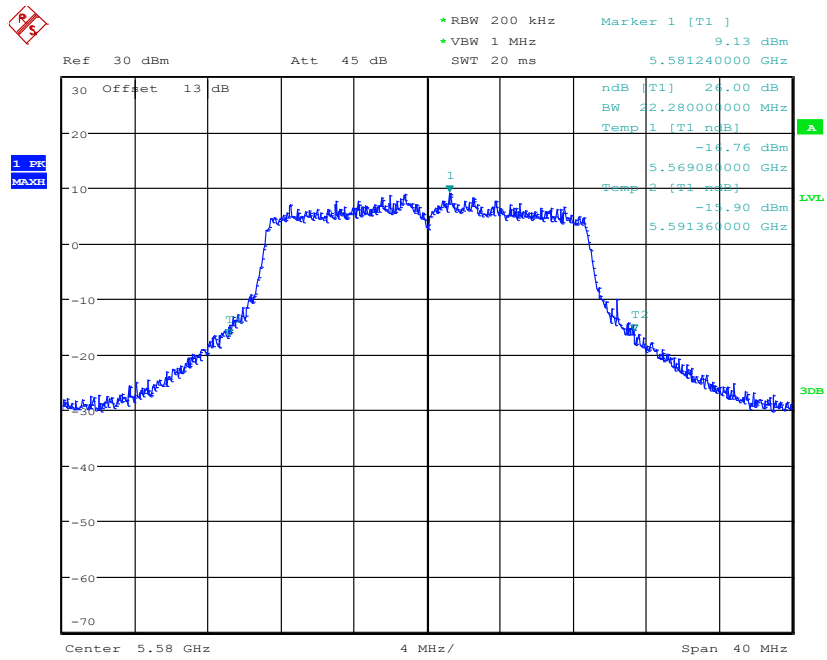
Date: 19.MAY.2023 02:34:05

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



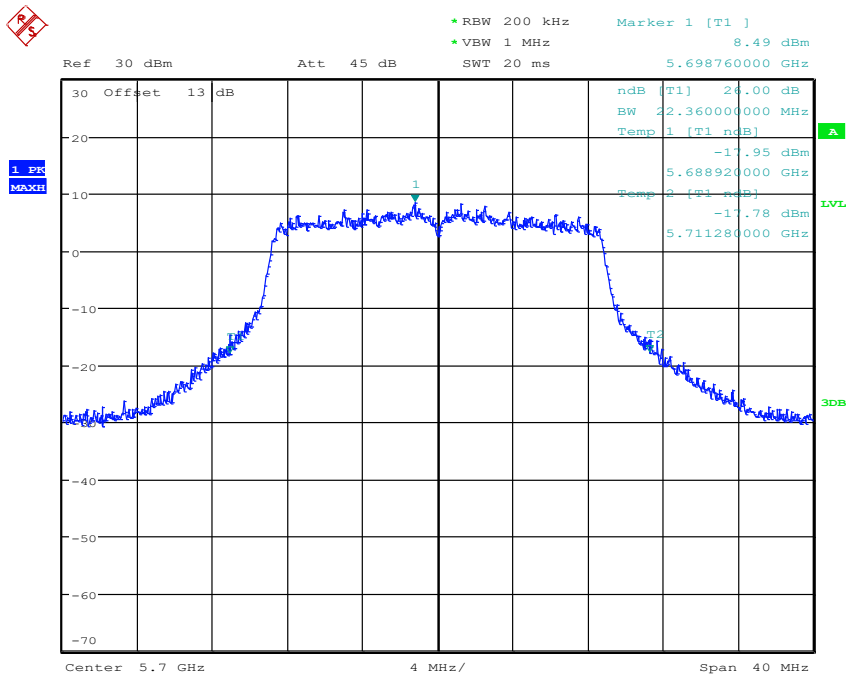
Date: 19.MAY.2023 02:34:33

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



Date: 19.MAY.2023 02:35:01

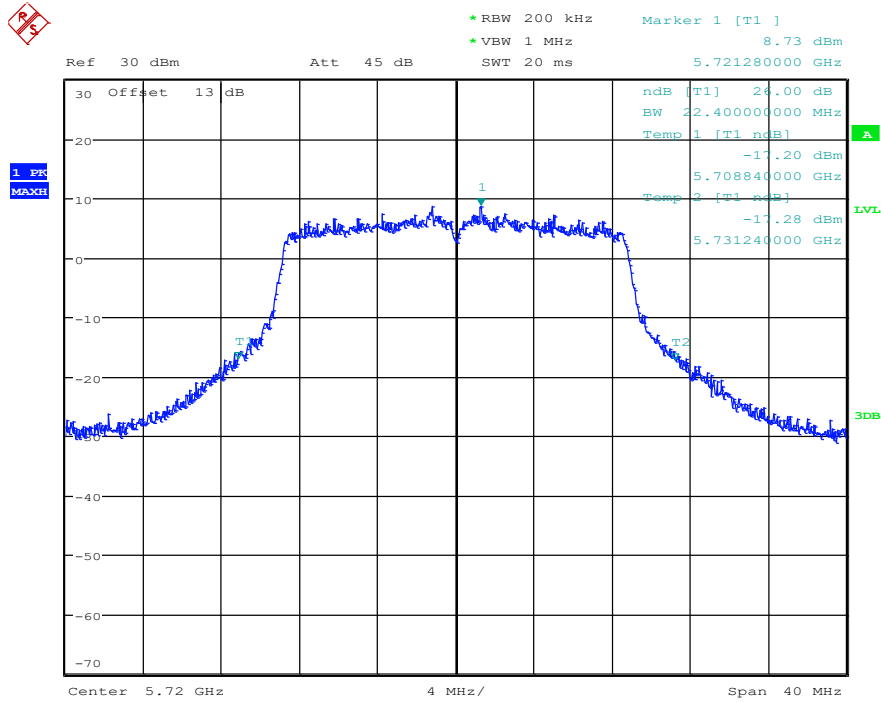
**Fig.8 Occupied 26dB Bandwidth (802.11a, 5580MHz)**



Date: 19.MAY.2023 02:35:28

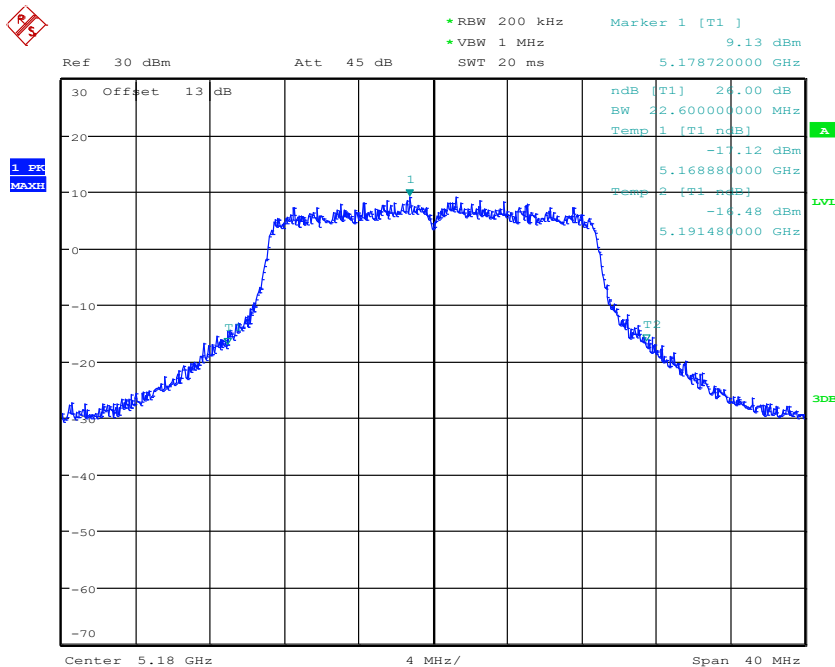
**Fig.9 Occupied 26dB Bandwidth (802.11a, 5700MHz)**





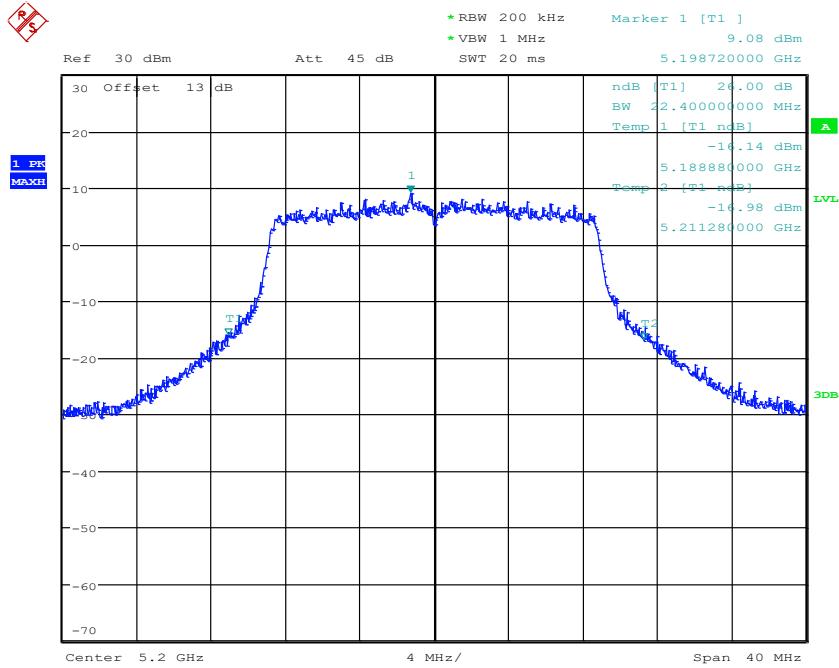
Date: 19.MAY.2023 02:35:56

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



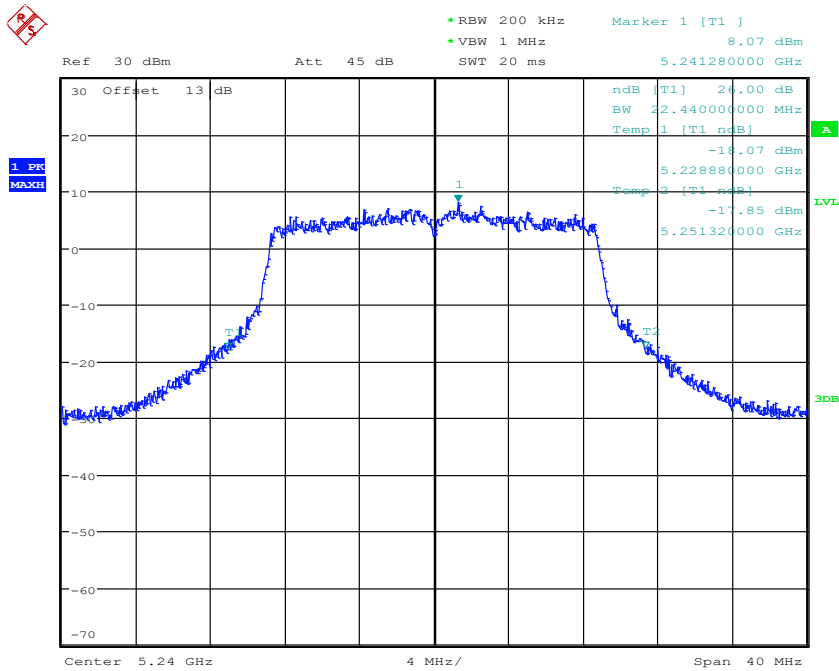
Date: 19.MAY.2023 02:41:31

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



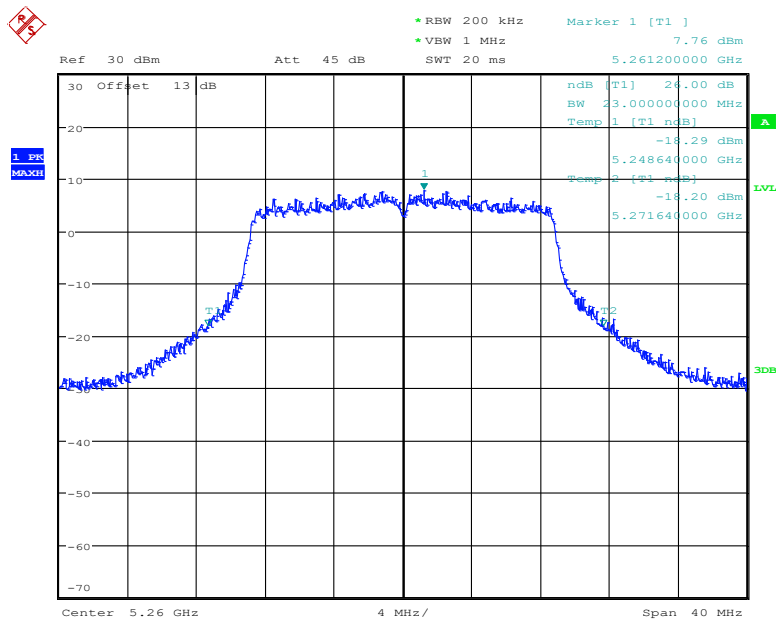
Date: 19.MAY.2023 02:41:58

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



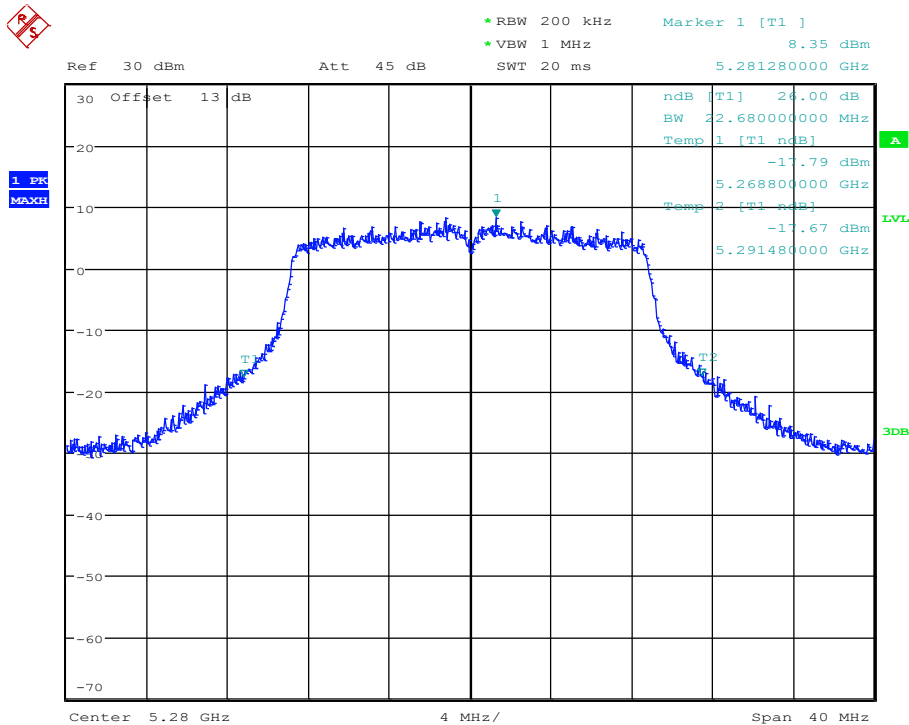
Date: 19.MAY.2023 02:42:26

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



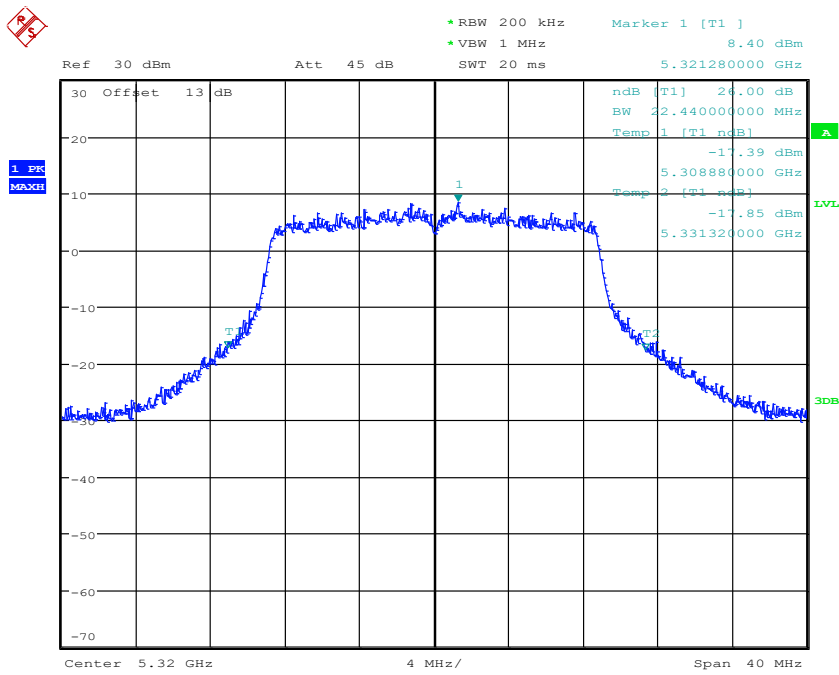
Date: 19.MAY.2023 02:42:54

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



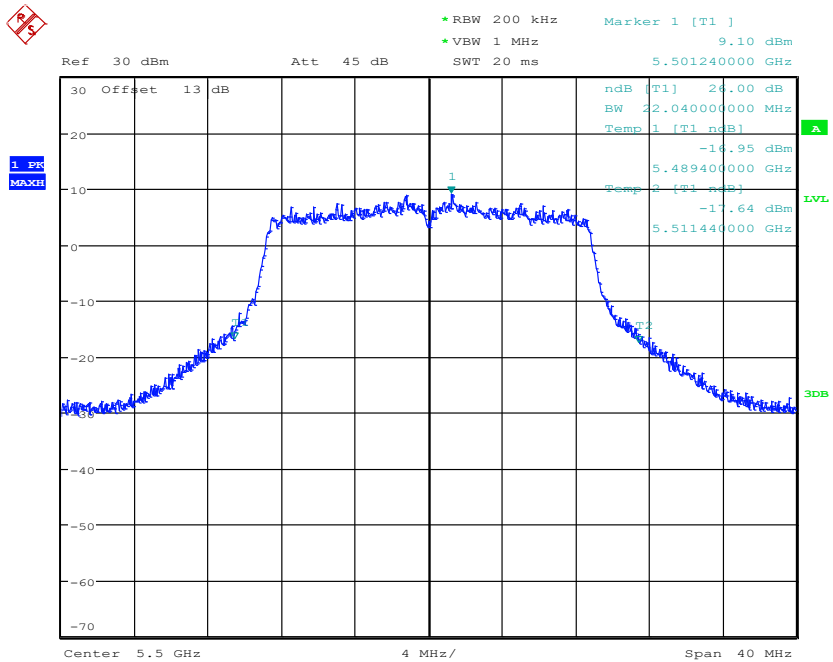
Date: 19.MAY.2023 02:43:21

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



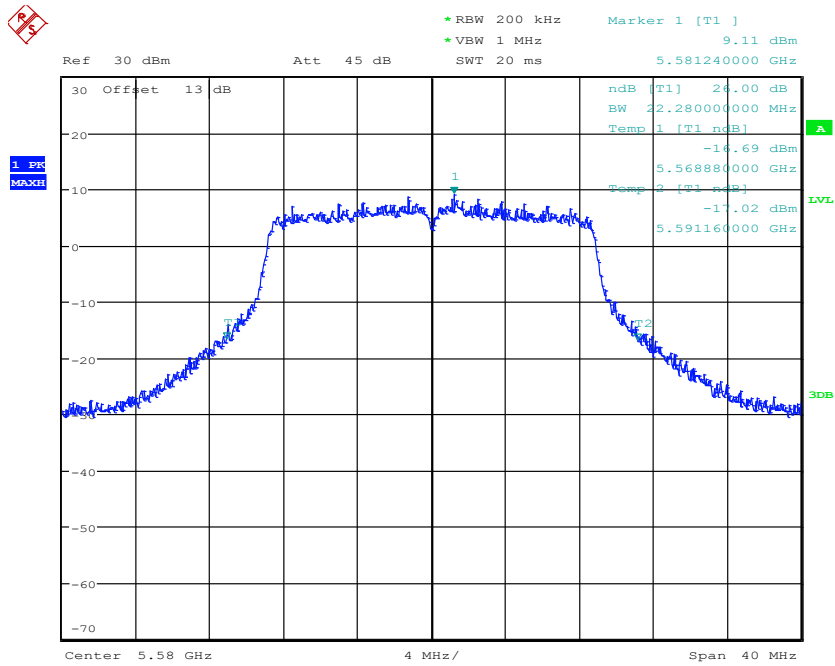
Date: 19.MAY.2023 02:43:49

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



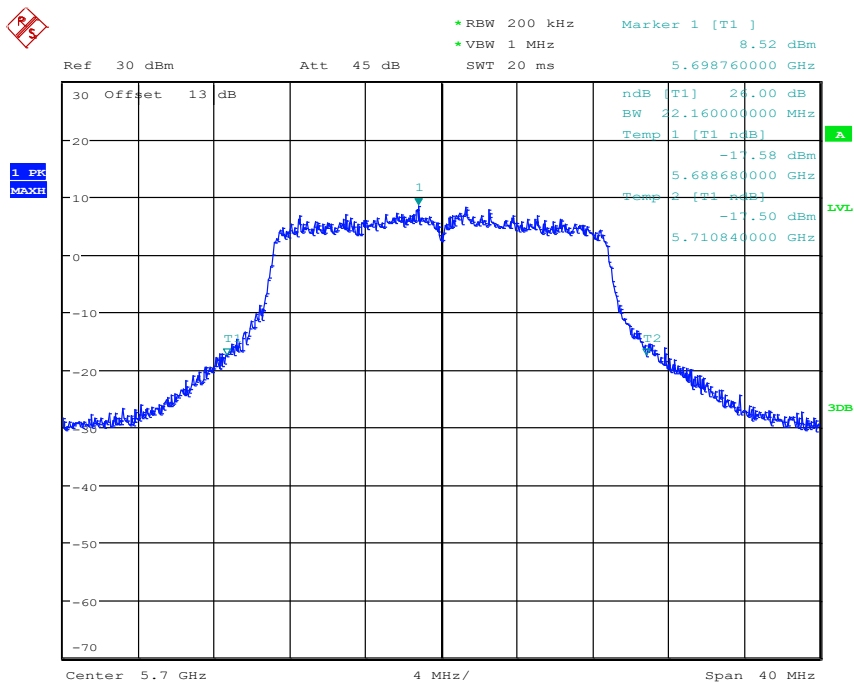
Date: 19.MAY.2023 02:44:17

**Fig.17 Occupied 26dB Bandwidth (802.11ac-HT20, 5500MHz)**



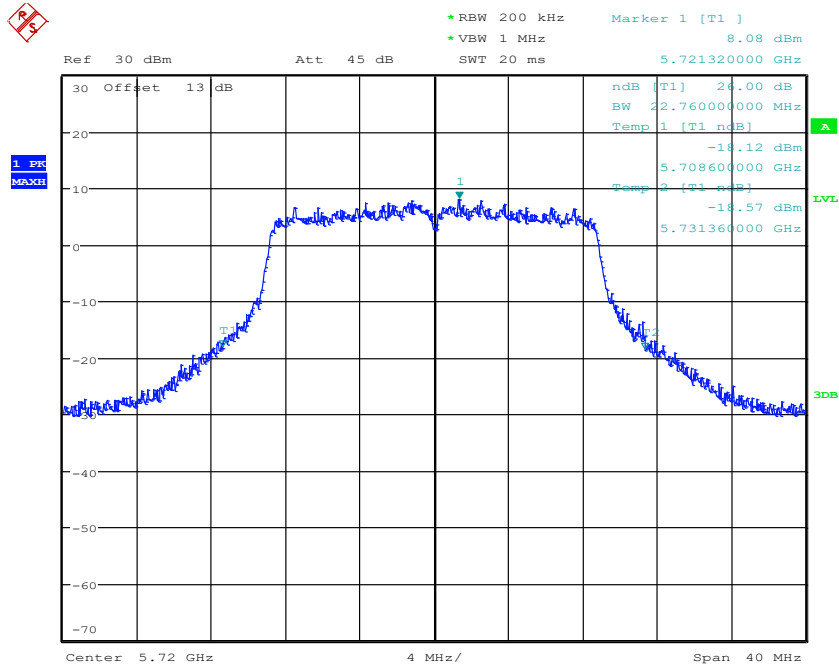
Date: 19.MAY.2023 02:44:44

**Fig.18 Occupied 26dB Bandwidth (802.11ac-HT20, 5580MHz)**



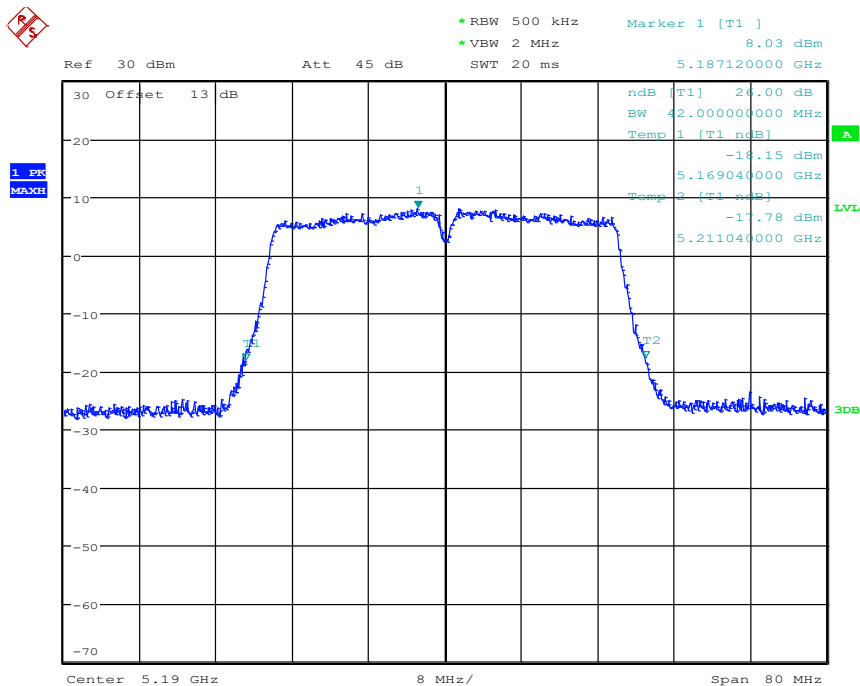
Date: 19.MAY.2023 02:45:12

**Fig.19 Occupied 26dB Bandwidth (802.11ac-HT20, 5700MHz)**



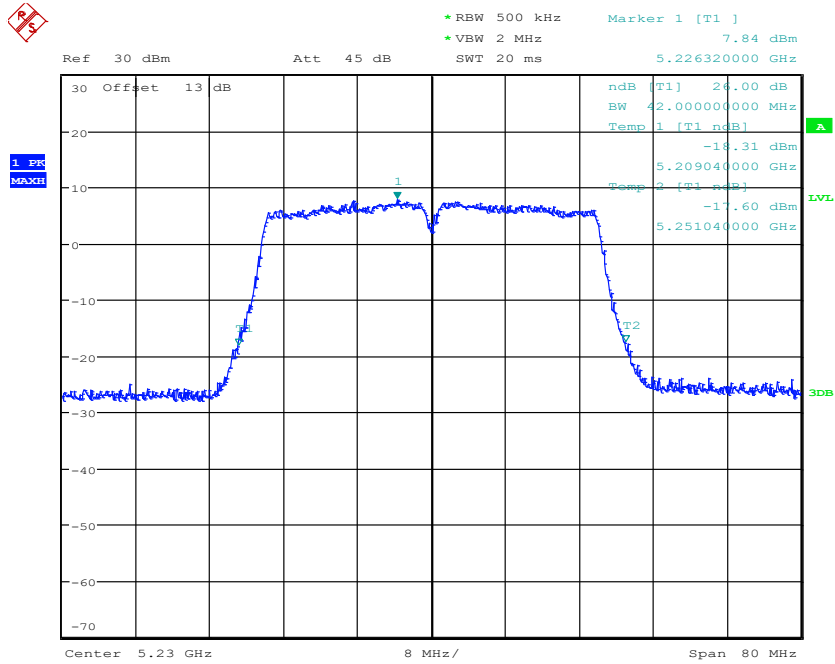
Date: 19.MAY.2023 02:45:40

**Fig.20 Occupied 26dB Bandwidth (802.11ac-HT20, 5720MHz)**



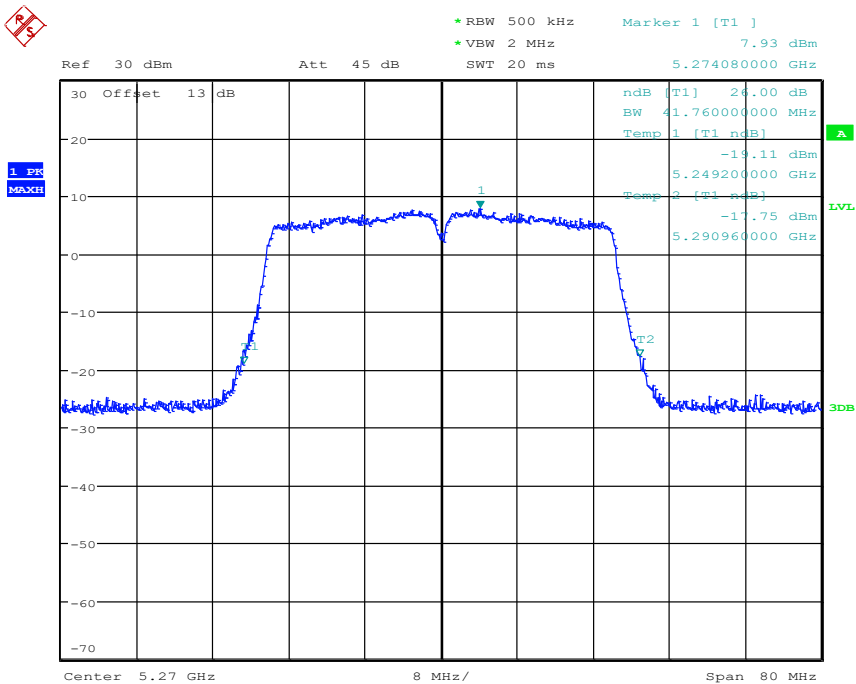
Date: 19.MAY.2023 02:46:12

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



Date: 19.MAY.2023 02:46:45

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

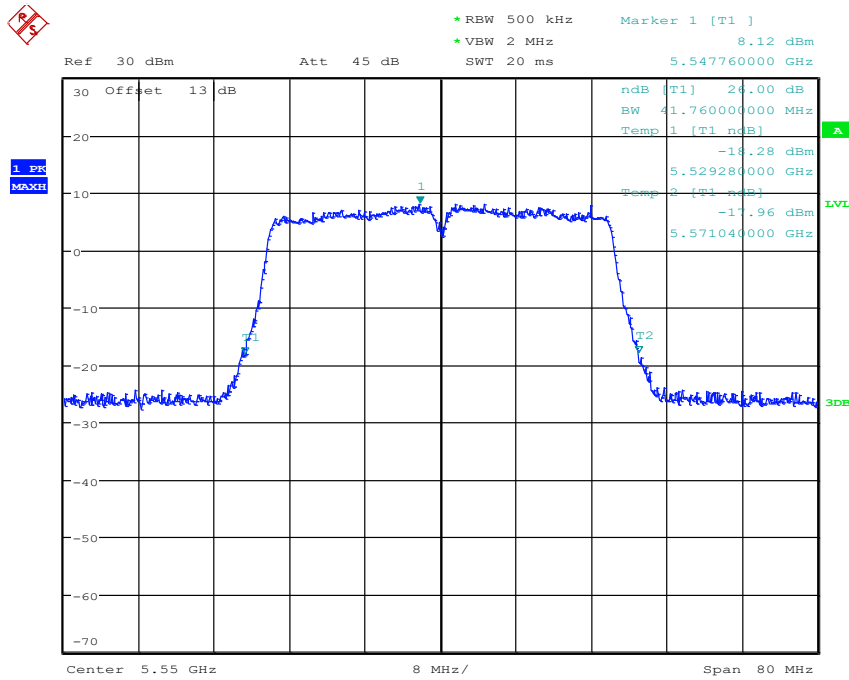


Date: 19.MAY.2023 02:47:18

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

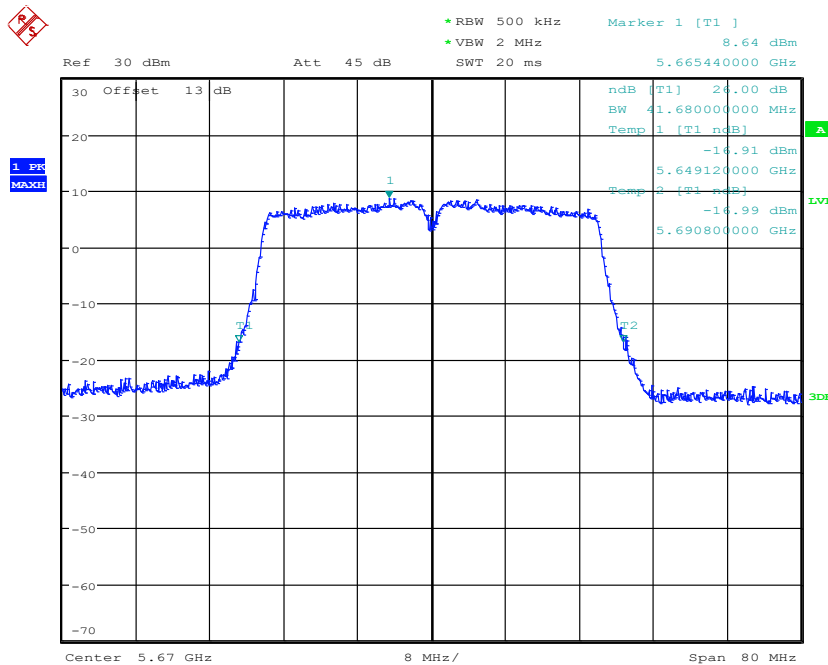






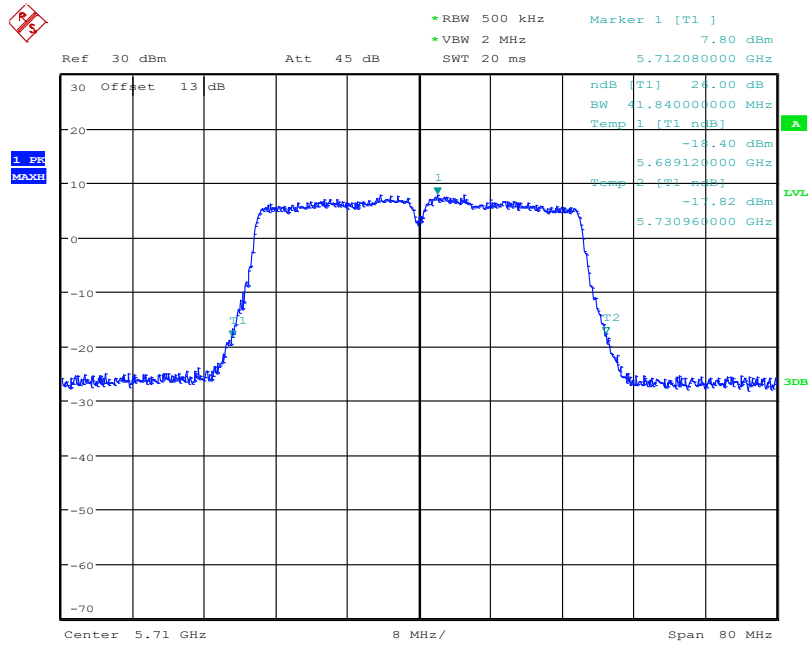
Date: 19.MAY.2023 02:48:56

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



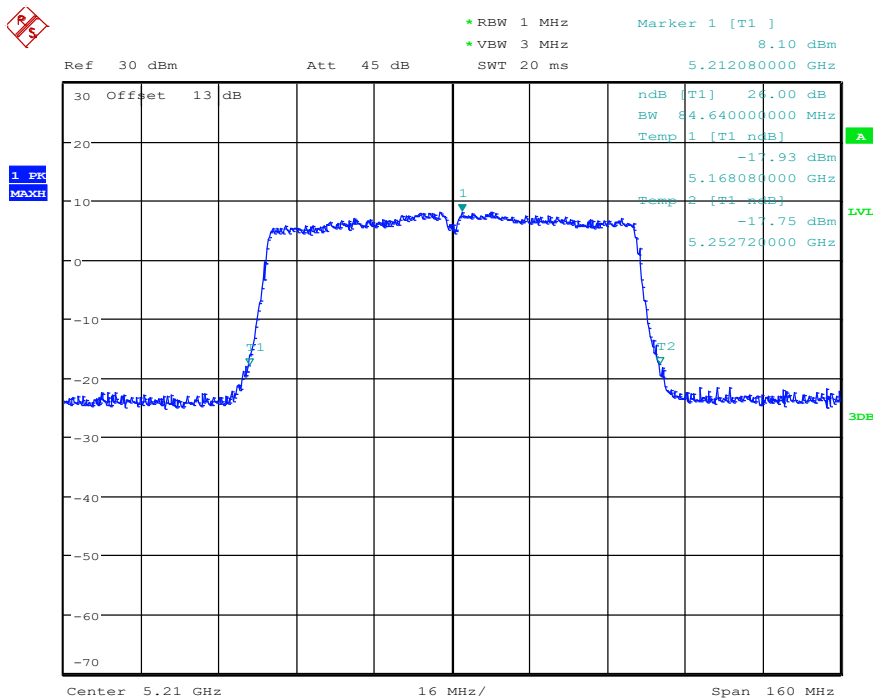
Date: 19.MAY.2023 02:49:28

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



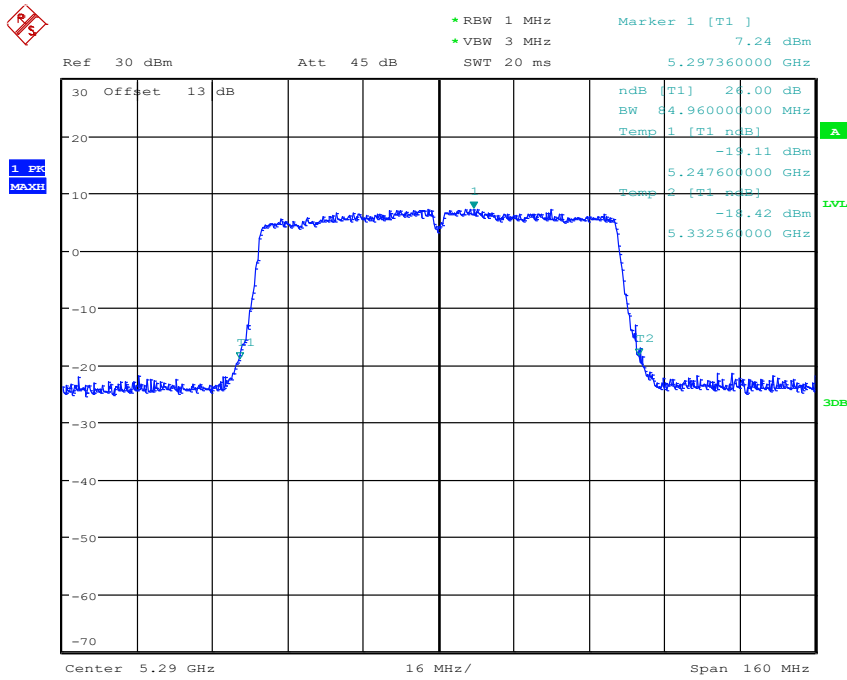
Date: 19.MAY.2023 02:50:01

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



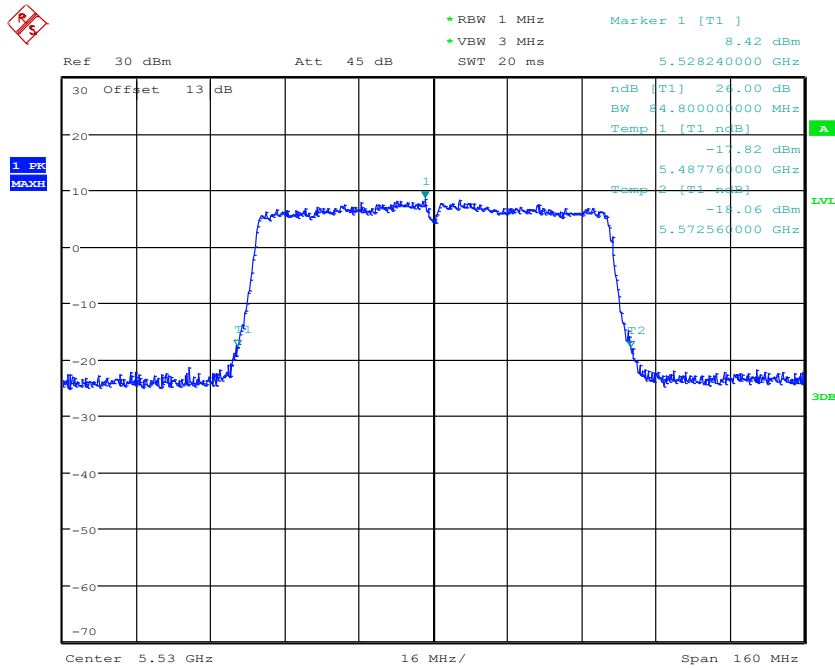
Date: 19.MAY.2023 02:54:10

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



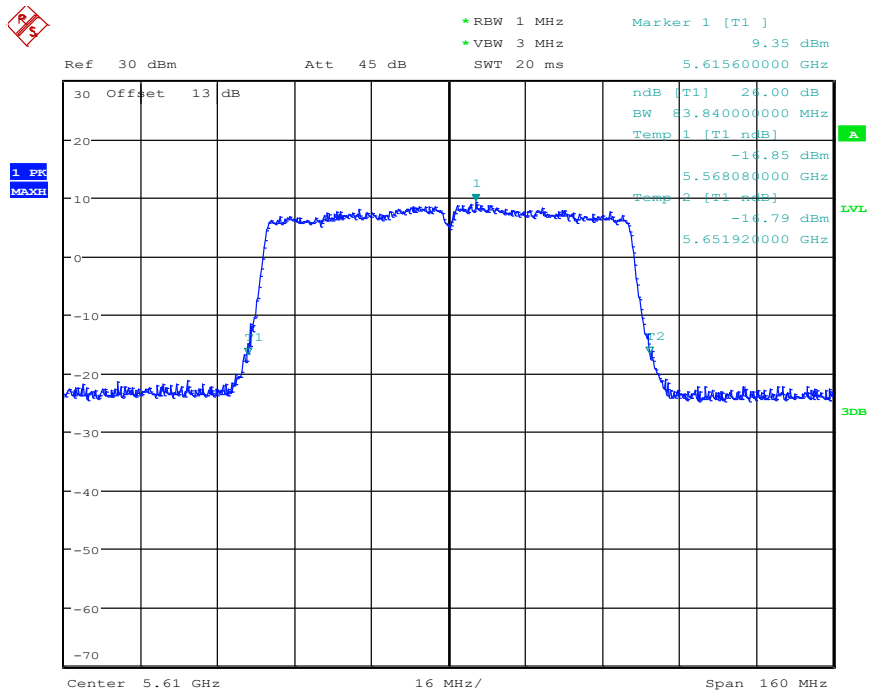
Date: 19.MAY.2023 02:54:38

**Fig.30 Occupied 26dB Bandwidth (802.11ac-HT80, 5290MHz)**



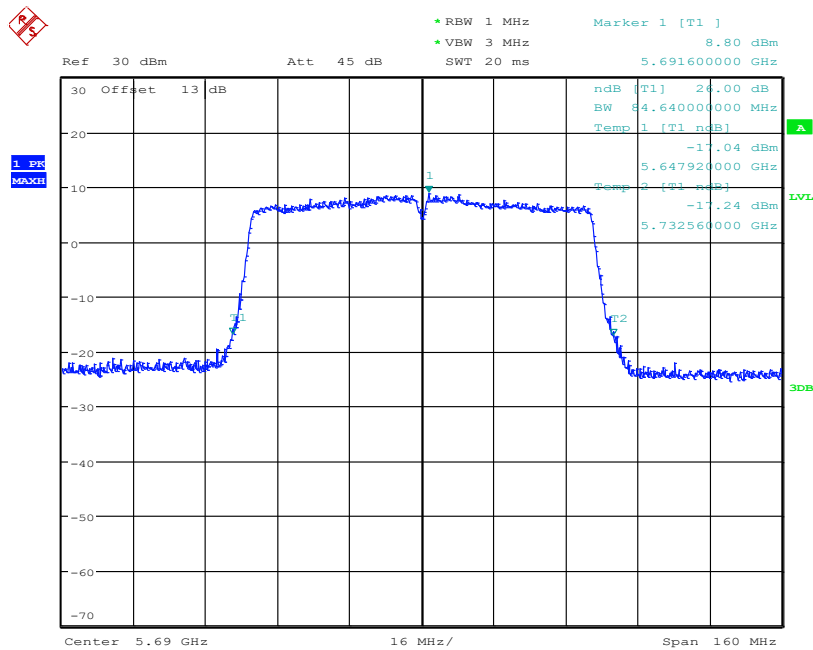
Date: 19.MAY.2023 02:55:05

**Fig.31 Occupied 26dB Bandwidth (802.11ac-HT80, 5530MHz)**



Date: 19.MAY.2023 02:55:33

**Fig.32 Occupied 26dB Bandwidth (802.11ac-HT80, 5610MHz)**



Date: 19.MAY.2023 02:56:01

**Fig.33 Occupied 26dB Bandwidth (802.11ac-HT80, 5690MHz)**

## A.5. Band Edges Compliance

### A5.1 Band Edges - Radiated

#### Measurement Limit:

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

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

#### Limit in restricted band:

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

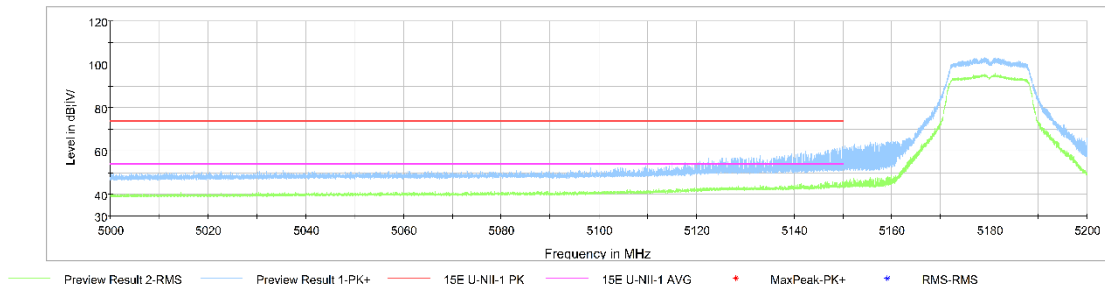
The measurement is made according to ANSI C63.10-2013 and KDB 789033

#### Measurement Result:

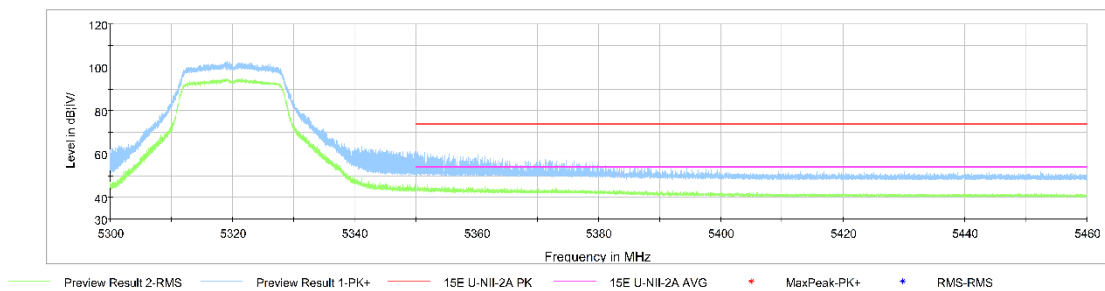
Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.34	P
	5320 MHz	Fig.35	P
	5500 MHz	Fig.36	P
	5700 MHz	Fig.37	P
802.11n HT20	5180 MHz	Fig.38	P
	5320 MHz	Fig.39	P
	5500 MHz	Fig.40	P
	5700 MHz	Fig.41	P
802.11n HT40	5190 MHz	Fig.42	P
	5310 MHz	Fig.43	P
	5510 MHz	Fig.44	P
	5670 MHz	Fig.45	P
802.11ac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

**Conclusion: PASS**

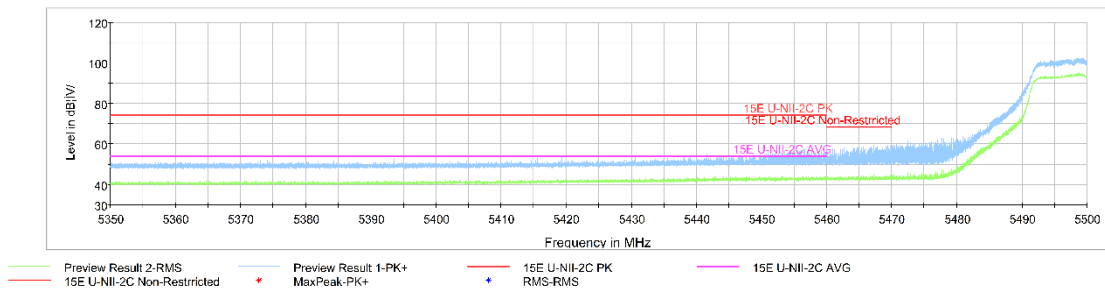
**Test graphs as below:**



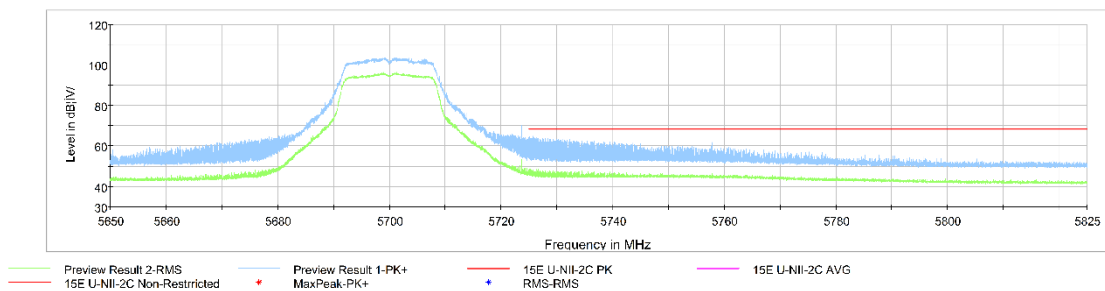
**Fig.34 Band Edges (802.11a Ch36, 5180MHz)**



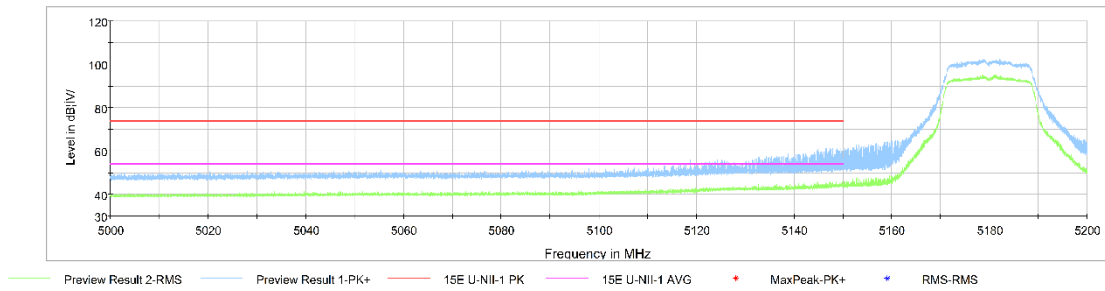
**Fig.35 Band Edges (802.11a Ch64, 5320MHz)**



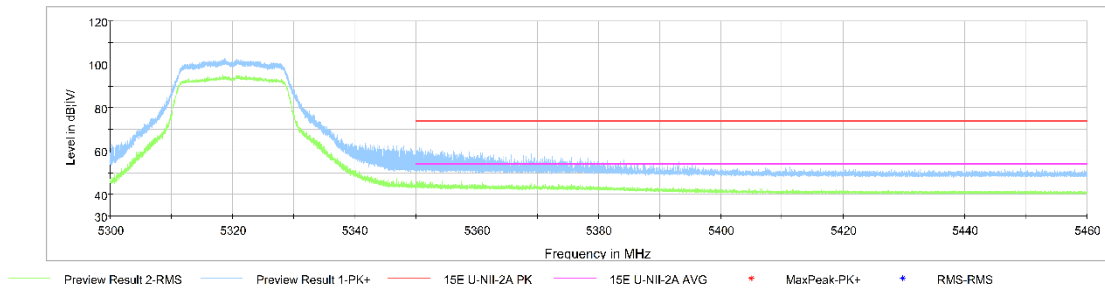
**Fig.36 Band Edges (802.11a Ch100, 5500MHz)**



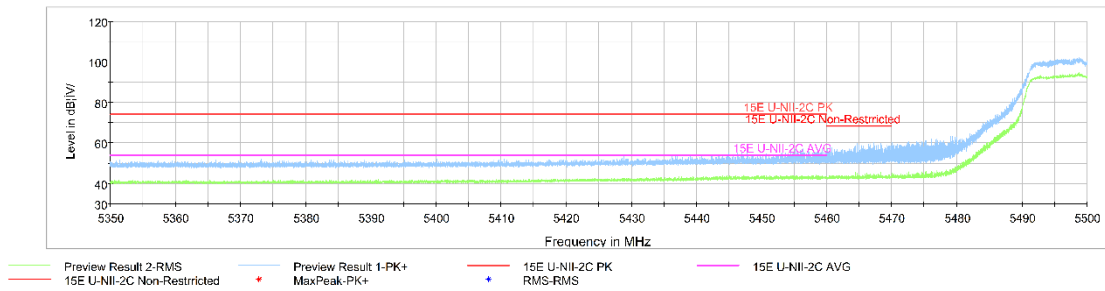
**Fig.37 Band Edges (802.11a Ch140, 5700MHz)**



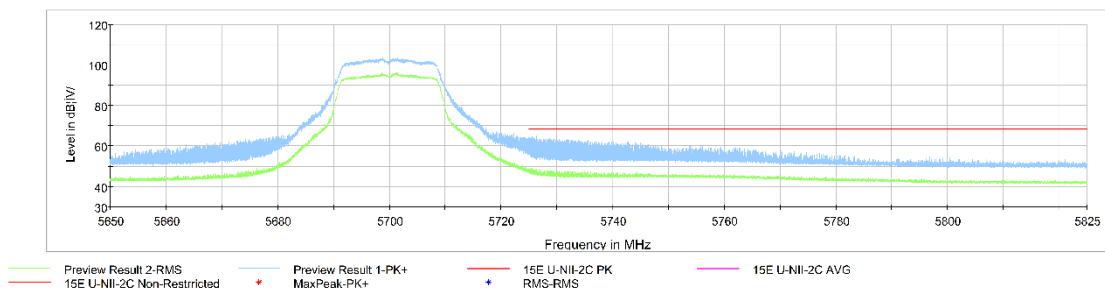
**Fig.38 Band Edges (802.11n-HT20 Ch36, 5180MHz)**



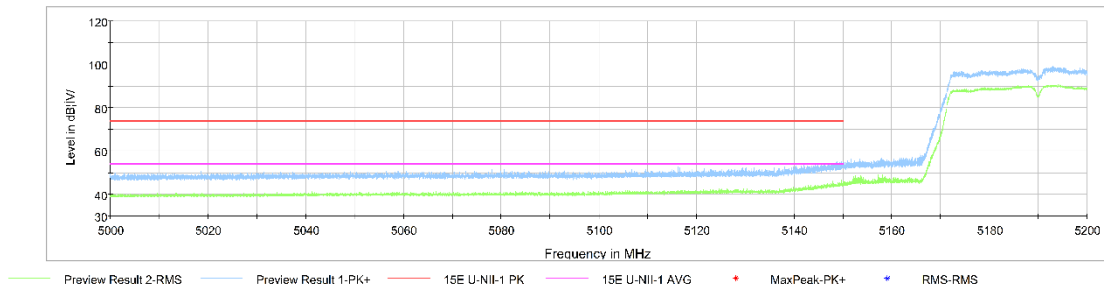
**Fig.39 Band Edges (802.11n-HT20 Ch64, 5320MHz)**



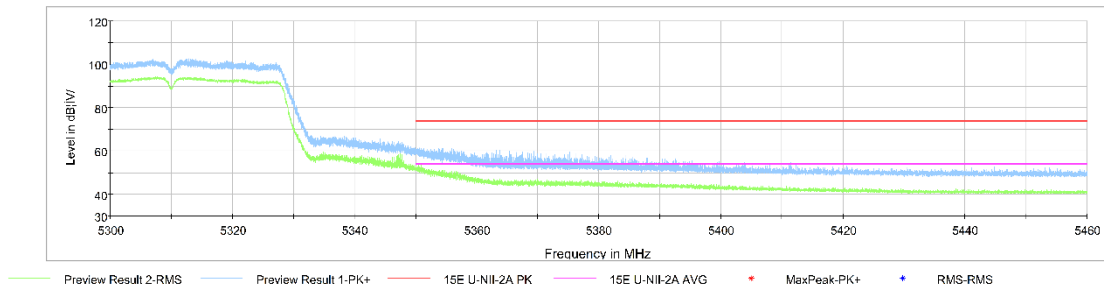
**Fig.40 Band Edges (802.11n-HT20 Ch100, 5500MHz)**



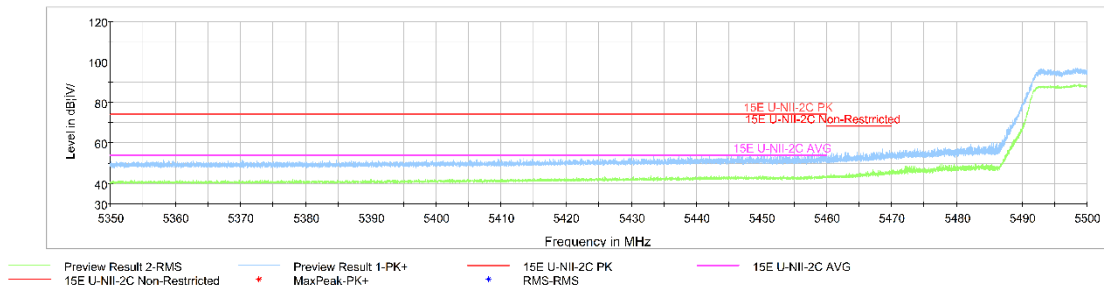
**Fig.41 Band Edges (802.11n-HT20 Ch140, 5700MHz)**



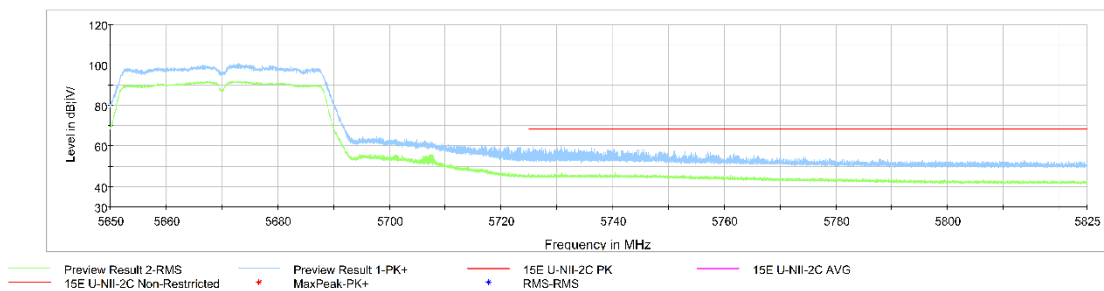
**Fig.42 Band Edges (802.11n-HT40 Ch38, 5190MHz)**



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

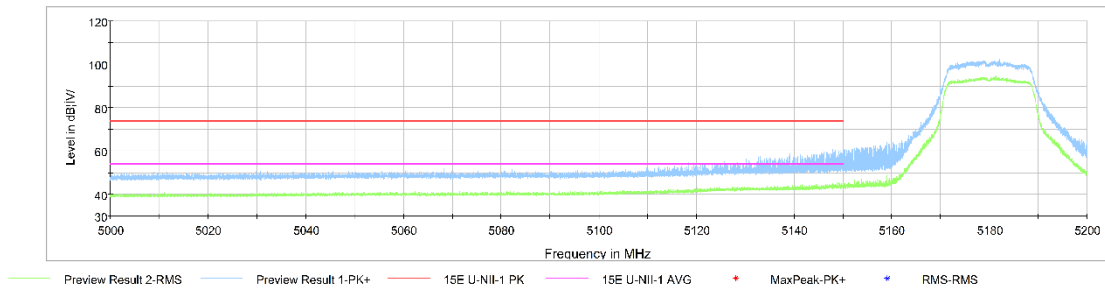


**Fig.44 Band Edges (802.11n-HT40 Ch102, 5510MHz)**

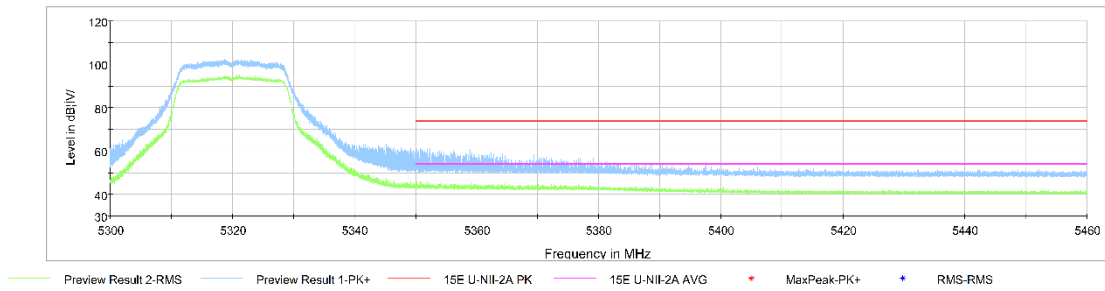


**Fig.45 Band Edges (802.11n-HT40 Ch134, 5670MHz)**

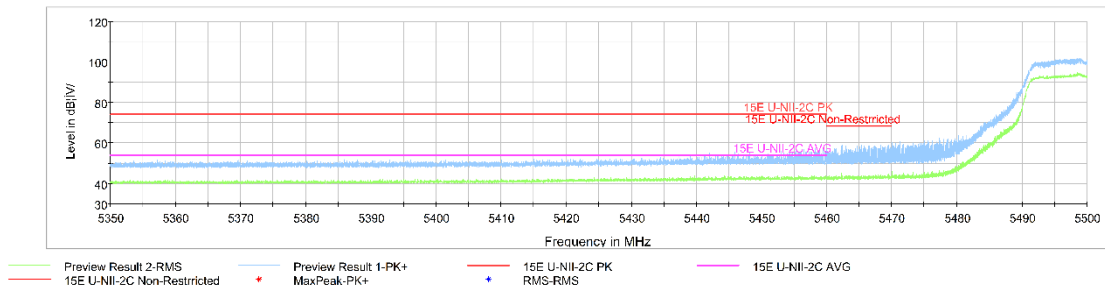




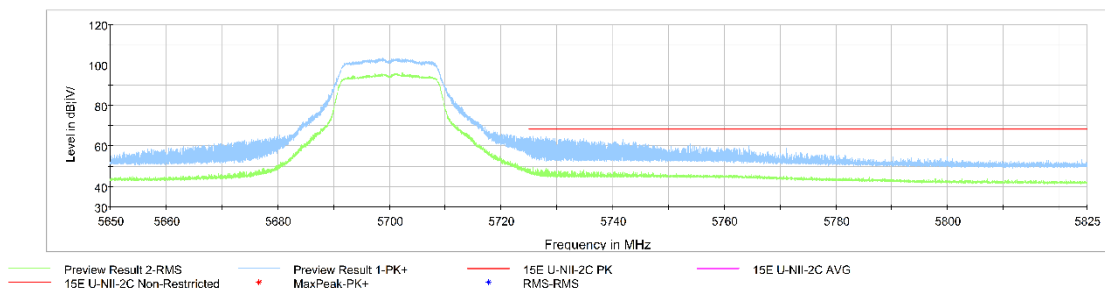
**Fig.46 Band Edges (802.11ac-HT20 Ch36, 5180MHz)**



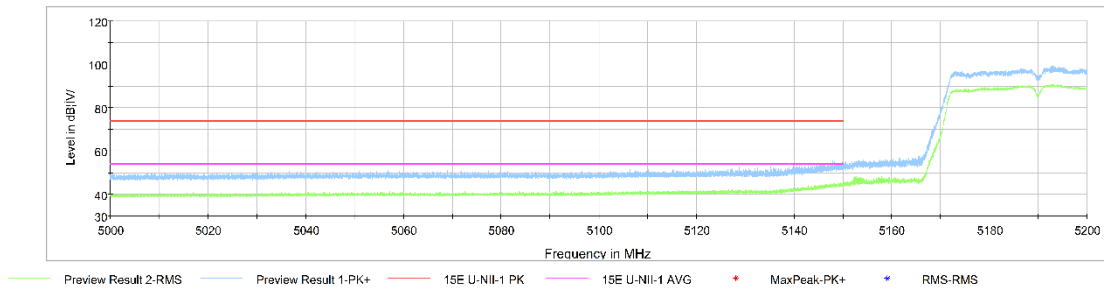
**Fig.47 Band Edges (802.11ac-HT20 Ch64, 5320MHz)**



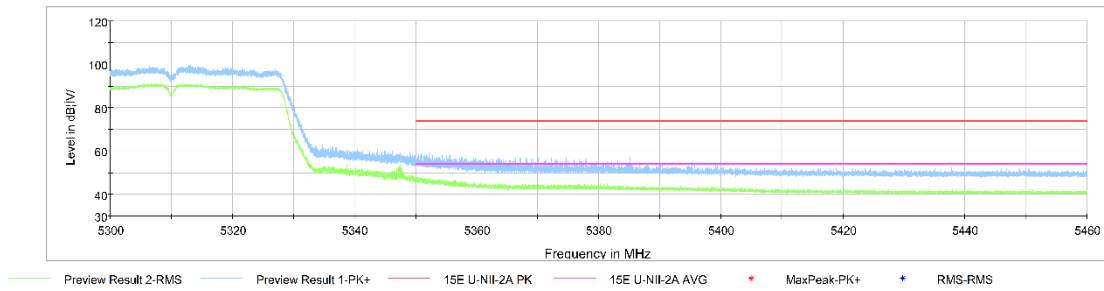
**Fig.48 Band Edges (802.11ac-HT20 Ch100, 5500MHz)**



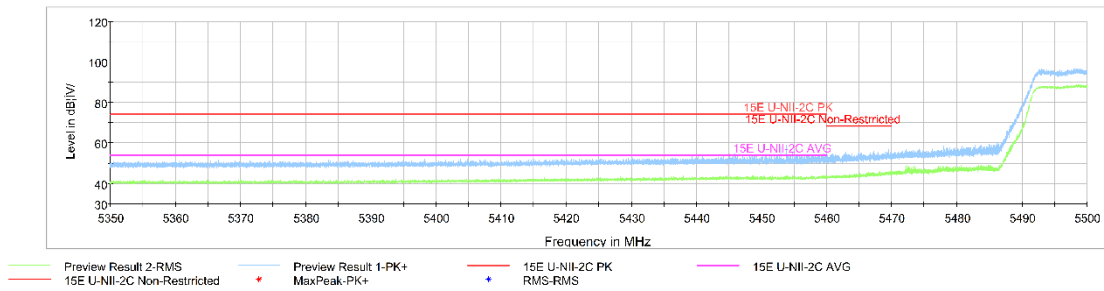
**Fig.49 Band Edges (802.11ac-HT20 Ch140, 5700MHz)**



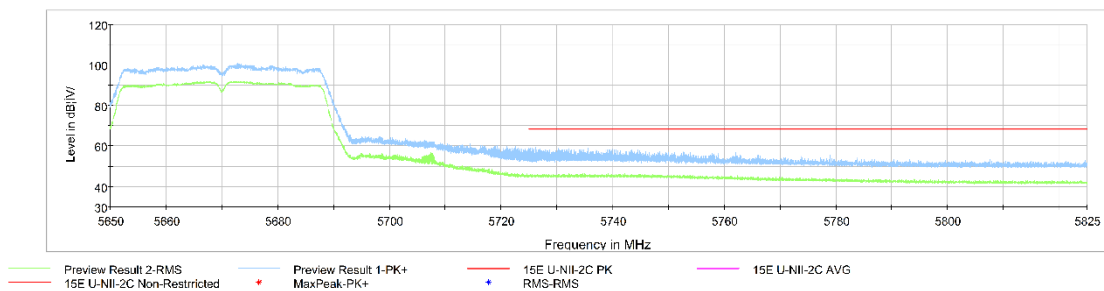
**Fig.50 Band Edges (802.11ac-HT40 Ch38, 5190MHz)**



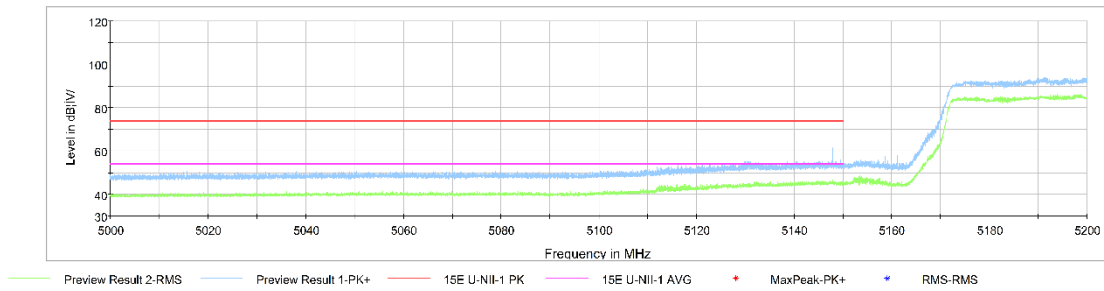
**Fig.51 Band Edges (802.11ac-HT40 Ch62, 5310MHz)**



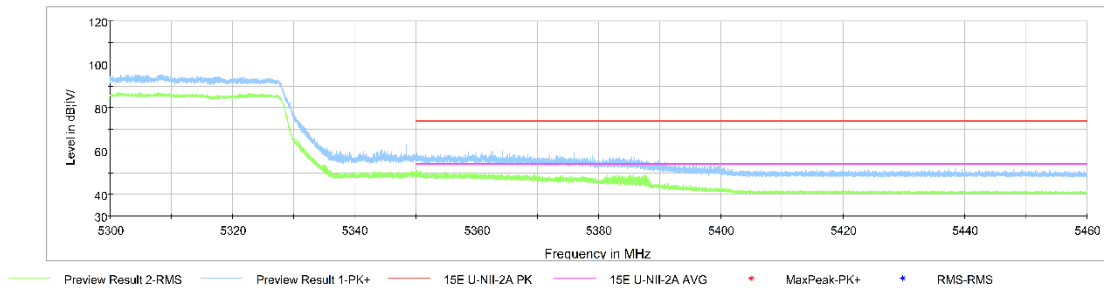
**Fig.52 Band Edges (802.11ac-HT40 Ch102, 5510MHz)**



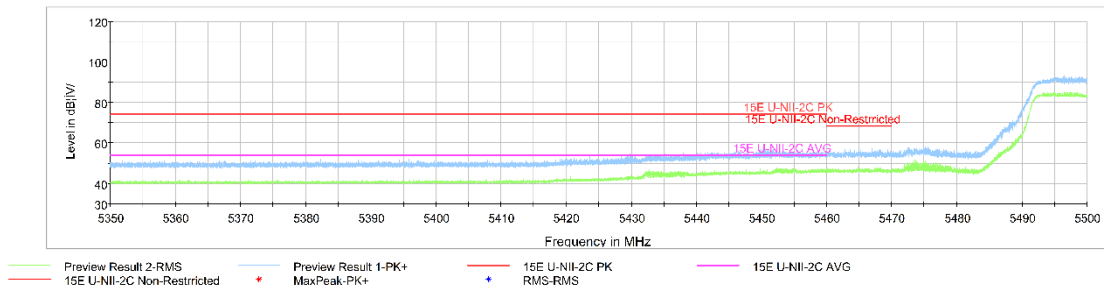
**Fig.53 Band Edges (802.11ac-HT40 Ch134, 5670MHz)**



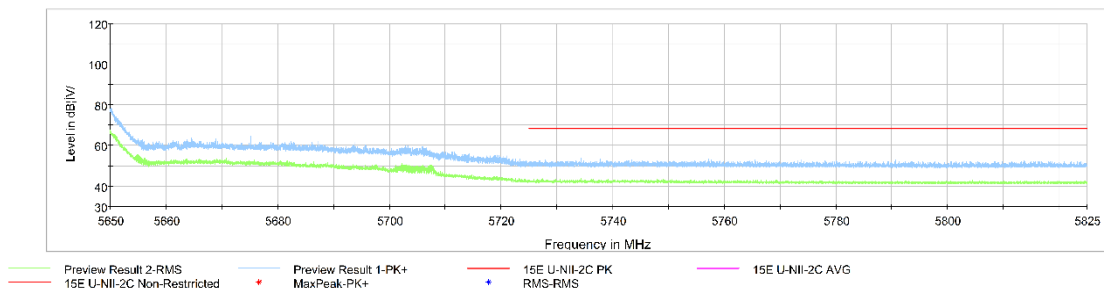
**Fig.54 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)**



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



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



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

## A.6. Transmitter Spurious Emission

### Measurement Limit:

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

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

### Limit in restricted band:

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

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

### Measurement Results:

**802.11a mode**

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

**802.11n-HT20 mode**

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

**802.11n-HT40 mode**

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

**802.11ac-HT20 mode**

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



**802.11ac-HT40 mode**

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

**802.11ac-HT80 mode**

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

**Conclusion: PASS**

**Note:**

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

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

The measurement results are obtained as described below:

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

**AVERAGE Results:**
**802.11a**

## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17946.467	40.57	-29.59	45.95	24.21	54.00	13.43	H
17975.067	40.46	-29.59	45.95	24.10	54.00	13.54	V
12328.767	36.69	-32.39	38.95	30.13	54.00	17.31	H
12016.733	36.46	-32.66	39.00	30.12	54.00	17.54	V
5148.880	46.16	-28.00	34.00	40.16	54.00	7.84	H
5146.710	45.92	-27.79	34.00	39.71	54.00	8.08	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)
17946.467	40.64	-29.59	45.95	24.28	54.00	13.36	V
17817.767	40.45	-29.59	45.95	24.09	54.00	13.55	V
12332.800	37.13	-32.39	38.95	30.57	54.00	16.87	H
12328.767	36.90	-32.39	38.95	30.34	54.00	17.10	H
8302.033	33.94	-34.84	37.10	31.67	54.00	20.06	H
8495.633	33.62	-34.28	37.30	30.60	54.00	20.38	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)
17977.267	40.90	-29.59	45.95	24.54	54.00	13.10	V
17926.300	40.55	-29.59	45.95	24.19	54.00	13.45	H
12332.800	36.83	-32.39	38.95	30.27	54.00	17.17	H
12330.967	36.80	-32.39	38.95	30.24	54.00	17.20	V
8297.267	33.53	-34.84	37.10	31.26	54.00	20.47	V
8306.433	33.48	-34.84	37.10	31.21	54.00	20.52	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)
17934.367	41.07	-29.59	45.95	24.71	54.00	12.93	V
17979.100	41.07	-29.59	45.95	24.71	54.00	12.93	H
12330.233	38.34	-32.39	38.95	31.78	54.00	15.66	V
12289.533	37.76	-32.12	39.00	30.88	54.00	16.24	V
8333.933	34.19	-34.93	37.20	31.92	54.00	19.81	V
8215.500	34.17	-34.94	36.90	32.21	54.00	19.83	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)
17842.700	40.97	-29.59	45.95	24.61	54.00	13.03	H
17936.933	40.89	-29.59	45.95	24.53	54.00	13.11	V
12332.800	37.81	-32.39	38.95	31.25	54.00	16.19	H
12293.200	37.42	-32.12	39.00	30.54	54.00	16.58	H
8490.133	34.46	-34.28	37.30	31.44	54.00	19.54	V
8309.000	34.22	-34.84	37.10	31.95	54.00	19.78	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)
17981.667	40.69	-29.59	45.95	24.33	54.00	13.31	H
17940.600	40.66	-29.59	45.95	24.30	54.00	13.34	H
12328.400	37.48	-32.39	38.95	30.92	54.00	16.52	H
12331.700	37.19	-32.39	38.95	30.63	54.00	16.81	V
5351.984	45.81	-27.82	34.20	39.43	54.00	8.19	H
5350.376	45.44	-27.82	34.20	39.06	54.00	8.56	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)
17939.500	40.59	-29.59	45.95	24.23	54.00	13.41	H
17950.867	40.33	-29.59	45.95	23.97	54.00	13.67	H
12241.133	36.87	-32.37	38.95	30.29	54.00	17.13	H
12330.233	36.85	-32.39	38.95	30.29	54.00	17.15	H
5457.220	44.13	-27.49	34.20	37.42	54.00	9.87	H
5442.993	44.09	-27.94	34.30	37.73	54.00	9.91	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	40.46	-29.59	45.95	24.10	54.00	13.54	V
17980.567	40.40	-29.59	45.95	24.04	54.00	13.60	H
12288.800	37.02	-32.12	39.00	30.14	54.00	16.98	V
12333.167	36.92	-32.39	38.95	30.36	54.00	17.08	H
8479.867	33.94	-34.28	37.30	30.92	54.00	20.06	H
8497.467	33.57	-34.28	37.30	30.55	54.00	20.43	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)
17972.500	40.64	-29.59	45.95	24.28	54.00	13.36	V
17940.600	40.39	-29.59	45.95	24.03	54.00	13.61	V
12310.433	36.78	-32.12	39.00	29.90	54.00	17.22	H
12331.700	36.76	-32.39	38.95	30.20	54.00	17.24	V
8318.167	34.01	-34.93	37.20	31.74	54.00	19.99	V
8491.600	33.70	-34.28	37.30	30.68	54.00	20.30	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)
17948.667	40.83	-29.59	45.95	24.47	54.00	13.17	V
17972.500	40.68	-29.59	45.95	24.32	54.00	13.32	H
12309.700	36.98	-32.12	39.00	30.10	54.00	17.02	H
12333.167	36.81	-32.39	38.95	30.25	54.00	17.19	H
5147.280	45.95	-27.79	34.00	39.74	54.00	8.05	H
5144.890	45.78	-27.79	34.00	39.57	54.00	8.22	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)
17957.100	40.63	-29.59	45.95	24.27	54.00	13.37	H
17911.267	40.41	-29.59	45.95	24.05	54.00	13.59	H
12332.800	36.89	-32.39	38.95	30.33	54.00	17.11	H
12308.233	36.63	-32.12	39.00	29.75	54.00	17.37	H
9416.700	33.83	-33.60	37.90	29.53	54.00	20.17	V
8324.033	33.80	-34.93	37.20	31.53	54.00	20.20	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)
17973.600	40.70	-29.59	45.95	24.34	54.00	13.30	V
17981.667	40.54	-29.59	45.95	24.18	54.00	13.46	H
12331.333	36.93	-32.39	38.95	30.37	54.00	17.07	V
11988.133	36.85	-32.66	39.00	30.51	54.00	17.15	H
8289.567	34.41	-34.84	37.10	32.14	54.00	19.59	H
8379.400	33.49	-34.42	37.30	30.61	54.00	20.51	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)
17868.000	40.81	-29.59	45.95	24.45	54.00	13.19	H
17969.200	40.81	-29.59	45.95	24.45	54.00	13.19	H
12290.633	37.50	-32.12	39.00	30.62	54.00	16.50	V
12332.800	37.37	-32.39	38.95	30.81	54.00	16.63	H
8309.000	34.00	-34.84	37.10	31.73	54.00	20.00	H
8262.067	33.90	-34.48	37.00	31.38	54.00	20.10	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)
17936.200	40.55	-29.59	45.95	24.19	54.00	13.45	H
17932.900	40.47	-29.59	45.95	24.11	54.00	13.53	H
12330.967	37.20	-32.39	38.95	30.64	54.00	16.80	V
12259.100	37.03	-32.37	38.95	30.45	54.00	16.97	H
8470.700	33.74	-34.28	37.30	30.72	54.00	20.26	V
8319.633	33.64	-34.93	37.20	31.37	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)
17951.233	40.97	-29.59	45.95	24.61	54.00	13.03	H
17938.400	40.84	-29.59	45.95	24.48	54.00	13.16	H
12330.967	37.08	-32.39	38.95	30.52	54.00	16.92	H
12332.433	37.02	-32.39	38.95	30.46	54.00	16.98	V
5350.648	46.40	-27.82	34.20	40.02	54.00	7.60	H
5352.376	46.12	-27.82	34.20	39.74	54.00	7.88	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)
17927.033	40.62	-29.59	45.95	24.26	54.00	13.38	V
17956.367	40.35	-29.59	45.95	23.99	54.00	13.65	V
12262.767	37.14	-32.37	38.95	30.56	54.00	16.86	V
12332.067	36.87	-32.39	38.95	30.31	54.00	17.13	V
5447.230	44.15	-27.49	34.20	37.44	54.00	9.85	H
5449.600	44.14	-27.49	34.20	37.43	54.00	9.86	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)
17869.100	40.67	-29.59	45.95	24.31	54.00	13.33	H
17963.700	40.27	-29.59	45.95	23.91	54.00	13.73	V
12333.167	37.13	-32.39	38.95	30.57	54.00	16.87	H
12267.167	36.96	-32.37	38.95	30.38	54.00	17.04	H
9064.700	34.62	-34.52	37.70	31.44	54.00	19.38	H
8215.500	33.58	-34.94	36.90	31.62	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)
17938.033	40.81	-29.59	45.95	24.45	54.00	13.19	V
17974.333	40.79	-29.59	45.95	24.43	54.00	13.21	V
12329.867	36.77	-32.39	38.95	30.21	54.00	17.23	H
12263.133	36.69	-32.37	38.95	30.11	54.00	17.31	H
8494.167	33.70	-34.28	37.30	30.68	54.00	20.30	V
8235.667	33.65	-34.48	37.00	31.13	54.00	20.35	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)
17979.467	40.50	-29.59	45.95	24.14	54.00	13.50	V
17980.567	40.33	-29.59	45.95	23.97	54.00	13.67	H
12286.967	37.07	-32.12	39.00	30.19	54.00	16.93	V
12332.800	36.97	-32.39	38.95	30.41	54.00	17.03	V
5149.770	46.71	-28.00	34.00	40.71	54.00	7.29	H
5149.740	46.40	-28.00	34.00	40.40	54.00	7.60	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)
17941.333	40.64	-29.59	45.95	24.28	54.00	13.36	V
17979.100	40.60	-29.59	45.95	24.24	54.00	13.40	H
11734.033	36.64	-32.71	39.20	30.15	54.00	17.36	V
12288.433	36.63	-32.12	39.00	29.75	54.00	17.37	V
8497.100	34.10	-34.28	37.30	31.08	54.00	19.90	V
8491.600	34.04	-34.28	37.30	31.02	54.00	19.96	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)
17936.200	40.60	-29.59	45.95	24.24	54.00	13.40	H
17976.533	40.47	-29.59	45.95	24.11	54.00	13.53	H
12332.067	37.33	-32.39	38.95	30.77	54.00	16.67	H
12328.033	36.80	-32.39	38.95	30.24	54.00	17.20	V
8098.167	34.10	-35.06	36.90	32.26	54.00	19.90	H
8326.967	33.69	-34.93	37.20	31.42	54.00	20.31	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)
17935.467	40.75	-29.59	45.95	24.39	54.00	13.25	V
17975.067	40.51	-29.59	45.95	24.15	54.00	13.49	H
12332.800	36.93	-32.39	38.95	30.37	54.00	17.07	V
12332.433	36.75	-32.39	38.95	30.19	54.00	17.25	H
5350.512	53.28	-27.82	34.20	46.90	54.00	0.72	V
5350.960	53.27	-27.82	34.20	46.89	54.00	0.73	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)
17976.900	40.48	-29.59	45.95	24.12	54.00	13.52	V
17947.933	40.47	-29.59	45.95	24.11	54.00	13.53	V
12332.800	37.16	-32.39	38.95	30.60	54.00	16.84	H
12331.700	36.85	-32.39	38.95	30.29	54.00	17.15	H
5442.205	43.84	-27.94	34.30	37.48	54.00	10.16	H
5459.650	43.81	-27.49	34.20	37.10	54.00	10.19	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)
17938.767	41.09	-29.59	45.95	24.73	54.00	12.91	V
17954.533	40.66	-29.59	45.95	24.30	54.00	13.34	H
12292.100	37.32	-32.12	39.00	30.44	54.00	16.68	V
12259.467	37.16	-32.37	38.95	30.58	54.00	16.84	H
8309.000	34.36	-34.84	37.10	32.09	54.00	19.64	H
8235.667	34.25	-34.48	37.00	31.73	54.00	19.75	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)
17938.033	40.70	-29.59	45.95	24.34	54.00	13.30	V
17977.633	40.69	-29.59	45.95	24.33	54.00	13.31	V
12332.067	37.91	-32.39	38.95	31.35	54.00	16.09	V
12333.167	37.36	-32.39	38.95	30.80	54.00	16.64	V
8200.833	33.87	-34.94	36.90	31.91	54.00	20.13	V
8304.233	33.83	-34.84	37.10	31.56	54.00	20.17	V

**802.11ac-HT20**

## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17969.200	40.98	-29.59	45.95	24.62	54.00	13.02	V
17963.333	40.49	-29.59	45.95	24.13	54.00	13.51	H
12263.500	36.98	-32.37	38.95	30.40	54.00	17.02	V
12328.400	36.77	-32.39	38.95	30.21	54.00	17.23	V
5149.210	45.50	-28.00	34.00	39.50	54.00	8.50	H
5149.690	45.16	-28.00	34.00	39.16	54.00	8.84	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)
17980.567	40.59	-29.59	45.95	24.23	54.00	13.41	H
17978.733	40.55	-29.59	45.95	24.19	54.00	13.45	H
12331.700	37.27	-32.39	38.95	30.71	54.00	16.73	H
12330.600	37.19	-32.39	38.95	30.63	54.00	16.81	H
8480.600	33.90	-34.28	37.30	30.88	54.00	20.10	H
8345.667	33.46	-34.93	37.20	31.19	54.00	20.54	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)
17957.833	41.42	-29.59	45.95	25.06	54.00	12.58	H
17978.367	40.84	-29.59	45.95	24.48	54.00	13.16	H
12259.100	36.68	-32.37	38.95	30.10	54.00	17.32	V
12333.167	36.52	-32.39	38.95	29.96	54.00	17.48	H
8234.933	33.53	-34.48	37.00	31.01	54.00	20.47	V
8290.300	33.41	-34.84	37.10	31.14	54.00	20.59	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)
17968.467	40.93	-29.59	45.95	24.57	54.00	13.07	H
17949.400	40.64	-29.59	45.95	24.28	54.00	13.36	V
12332.433	37.36	-32.39	38.95	30.80	54.00	16.64	H
12331.700	36.97	-32.39	38.95	30.41	54.00	17.03	V
8375.733	33.89	-34.42	37.30	31.01	54.00	20.11	V
8355.933	33.80	-34.93	37.20	31.53	54.00	20.20	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)
17941.333	40.83	-29.59	45.95	24.47	54.00	13.17	V
17979.100	40.42	-29.59	45.95	24.06	54.00	13.58	H
12331.700	37.08	-32.39	38.95	30.52	54.00	16.92	V
12307.867	36.84	-32.12	39.00	29.96	54.00	17.16	V
8480.967	34.03	-34.28	37.30	31.01	54.00	19.97	V
8098.167	34.01	-35.06	36.90	32.17	54.00	19.99	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)
17953.067	40.78	-29.59	45.95	24.42	54.00	13.22	V
17969.200	40.59	-29.59	45.95	24.23	54.00	13.41	H
12331.333	37.47	-32.39	38.95	30.91	54.00	16.53	H
12330.967	37.25	-32.39	38.95	30.69	54.00	16.75	H
5352.016	46.02	-27.82	34.20	39.64	54.00	7.98	H
5355.144	45.83	-27.82	34.20	39.45	54.00	8.17	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)
17932.900	40.60	-29.59	45.95	24.24	54.00	13.40	H
17928.133	40.44	-29.59	45.95	24.08	54.00	13.56	H
12239.667	36.94	-32.37	38.95	30.36	54.00	17.06	V
12330.233	36.93	-32.39	38.95	30.37	54.00	17.07	H
5458.150	44.03	-27.49	34.20	37.32	54.00	9.97	H
5452.450	43.90	-27.49	34.20	37.19	54.00	10.10	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)
17980.567	40.78	-29.59	45.95	24.42	54.00	13.22	H
17954.533	40.57	-29.59	45.95	24.21	54.00	13.43	V
12330.600	36.89	-32.39	38.95	30.33	54.00	17.11	V
12331.333	36.86	-32.39	38.95	30.30	54.00	17.14	V
8344.200	34.07	-34.93	37.20	31.80	54.00	19.93	H
8329.167	33.68	-34.93	37.20	31.41	54.00	20.32	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)
17974.333	40.93	-29.59	45.95	24.57	54.00	13.07	V
17955.267	40.46	-29.59	45.95	24.10	54.00	13.54	V
12328.767	37.63	-32.39	38.95	31.07	54.00	16.37	H
12332.433	37.11	-32.39	38.95	30.55	54.00	16.89	V
8482.433	34.04	-34.28	37.30	31.02	54.00	19.96	V
8204.500	33.86	-34.94	36.90	31.90	54.00	20.14	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	40.80	-29.59	45.95	24.44	54.00	13.20	H
17975.800	40.79	-29.59	45.95	24.43	54.00	13.21	H
12264.600	36.96	-32.37	38.95	30.38	54.00	17.04	H
12332.067	36.91	-32.39	38.95	30.35	54.00	17.09	V
5149.400	45.26	-28.00	34.00	39.26	54.00	8.74	H
5149.680	45.17	-28.00	34.00	39.17	54.00	8.83	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)
17949.767	40.96	-29.59	45.95	24.60	54.00	13.04	V
17960.400	40.57	-29.59	45.95	24.21	54.00	13.43	V
12330.967	37.14	-32.39	38.95	30.58	54.00	16.86	H
12332.433	37.10	-32.39	38.95	30.54	54.00	16.90	V
8492.700	33.77	-34.28	37.30	30.75	54.00	20.23	V
8314.500	33.72	-34.84	37.10	31.45	54.00	20.28	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)
17946.467	40.66	-29.59	45.95	24.30	54.00	13.34	V
17980.933	40.56	-29.59	45.95	24.20	54.00	13.44	V
12332.800	37.68	-32.39	38.95	31.12	54.00	16.32	V
12263.500	37.27	-32.37	38.95	30.69	54.00	16.73	V
8306.433	34.05	-34.84	37.10	31.78	54.00	19.95	H
8238.600	33.94	-34.48	37.00	31.42	54.00	20.06	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)
17959.667	40.68	-29.59	45.95	24.32	54.00	13.32	H
17932.167	40.53	-29.59	45.95	24.17	54.00	13.47	V
12330.967	37.25	-32.39	38.95	30.69	54.00	16.75	V
12332.067	37.17	-32.39	38.95	30.61	54.00	16.83	V
5350.408	48.16	-27.82	34.20	41.78	54.00	5.84	H
5350.000	48.15	-27.82	34.20	41.77	54.00	5.85	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)
17975.800	40.94	-29.59	45.95	24.58	54.00	13.06	V
17979.833	40.76	-29.59	45.95	24.40	54.00	13.24	V
12289.900	37.31	-32.12	39.00	30.43	54.00	16.69	H
12332.433	36.94	-32.39	38.95	30.38	54.00	17.06	V
5453.950	44.06	-27.49	34.20	37.35	54.00	9.94	H
5457.752	43.98	-27.49	34.20	37.27	54.00	10.02	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)
17979.100	40.39	-29.59	45.95	24.03	54.00	13.61	V
17978.367	40.38	-29.59	45.95	24.02	54.00	13.62	H
12331.700	37.02	-32.39	38.95	30.46	54.00	16.98	V
12308.600	36.99	-32.12	39.00	30.11	54.00	17.01	H
8317.433	33.86	-34.93	37.20	31.59	54.00	20.14	V
8265.367	33.70	-34.48	37.00	31.18	54.00	20.30	H

## Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17976.533	41.42	-29.59	45.95	25.06	54.00	12.58	V
17934.367	40.85	-29.59	45.95	24.49	54.00	13.15	H
12331.700	37.58	-32.39	38.95	31.02	54.00	16.42	V
12332.800	37.55	-32.39	38.95	30.99	54.00	16.45	V
8317.433	34.40	-34.93	37.20	32.13	54.00	19.60	V
8334.300	34.40	-34.93	37.20	32.13	54.00	19.60	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)
17938.767	40.54	-29.59	45.95	24.18	54.00	13.46	V
17972.867	40.39	-29.59	45.95	24.03	54.00	13.61	H
12331.700	37.05	-32.39	38.95	30.49	54.00	16.95	H
12332.433	36.95	-32.39	38.95	30.39	54.00	17.05	V
5147.890	46.54	-27.79	34.00	40.33	54.00	7.46	H
5145.760	46.27	-27.79	34.00	40.06	54.00	7.73	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)
17979.833	40.79	-29.59	45.95	24.43	54.00	13.21	V
17943.900	40.61	-29.59	45.95	24.25	54.00	13.39	V
12332.433	37.04	-32.39	38.95	30.48	54.00	16.96	V
12333.167	36.90	-32.39	38.95	30.34	54.00	17.10	V
5350.192	50.99	-27.82	34.20	44.61	54.00	3.01	H
5351.008	50.67	-27.82	34.20	44.29	54.00	3.33	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)
17957.833	41.31	-29.59	45.95	24.95	54.00	12.69	V
17968.467	40.88	-29.59	45.95	24.52	54.00	13.12	V
12331.700	37.80	-32.39	38.95	31.24	54.00	16.20	V
12332.800	37.57	-32.39	38.95	31.01	54.00	16.43	H
5452.345	47.79	-27.49	34.20	41.08	54.00	6.21	H
5452.938	47.52	-27.49	34.20	40.81	54.00	6.48	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)
17946.467	41.10	-29.59	45.95	24.74	54.00	12.90	H
17837.200	40.56	-29.59	45.95	24.20	54.00	13.44	V
12261.667	37.30	-32.37	38.95	30.72	54.00	16.70	V
12331.700	37.20	-32.39	38.95	30.64	54.00	16.80	V
8237.867	34.11	-34.48	37.00	31.59	54.00	19.89	V
8285.533	33.89	-34.84	37.10	31.62	54.00	20.11	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	49.04	-29.59	45.95	32.68	74.00	24.96	H
17320.200	48.99	-29.54	42.90	35.63	68.20	19.21	H
11733.667	45.25	-32.71	39.20	38.76	74.00	28.75	V
12263.500	45.00	-32.37	38.95	38.42	74.00	29.00	V
5149.920	61.98	-28.00	34.00	55.98	74.00	12.02	H
5149.390	61.38	-28.00	34.00	55.38	74.00	12.62	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)
16632.333	49.43	-29.22	39.40	39.25	68.20	18.77	V
17928.133	49.32	-29.59	45.95	32.96	74.00	24.68	V
12330.233	45.20	-32.39	38.95	38.64	74.00	28.80	H
12196.767	45.09	-32.12	38.90	38.31	74.00	28.91	V
8472.533	42.77	-34.28	37.30	39.75	74.00	31.23	H
10086.233	42.68	-33.75	38.05	38.38	68.20	25.52	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)
17934.367	49.52	-29.59	45.95	33.16	74.00	24.48	V
17939.500	49.30	-29.59	45.95	32.94	74.00	24.70	H
12293.567	45.08	-32.12	39.00	38.20	74.00	28.92	V
12200.800	44.72	-32.12	38.90	37.94	74.00	29.28	H
10166.167	43.38	-33.67	38.05	39.00	68.20	24.82	V
8517.267	42.67	-33.81	37.40	39.08	68.20	25.53	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)
17019.533	50.13	-29.38	40.85	38.66	68.20	18.07	H
16637.833	50.11	-29.84	39.60	40.35	68.20	18.09	V
12266.067	47.53	-32.37	38.95	40.95	74.00	26.47	H
12238.567	46.22	-32.37	38.95	39.64	74.00	27.78	V
8865.600	43.32	-34.69	37.80	40.21	68.20	24.88	V
8216.233	43.31	-34.94	36.90	41.35	74.00	30.69	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)
16973.333	50.03	-29.68	40.60	39.11	68.20	18.17	H
17851.133	49.70	-29.59	45.95	33.34	74.00	24.30	H
12332.800	46.59	-32.39	38.95	40.03	74.00	27.41	H
11762.633	45.85	-32.71	39.20	39.36	74.00	28.15	H
10150.400	44.70	-33.67	38.05	40.32	68.20	23.50	H
10264.800	43.24	-33.82	38.00	39.06	68.20	24.96	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)
17351.000	49.71	-28.74	43.40	35.05	68.20	18.49	H
17090.300	49.70	-29.25	41.40	37.55	68.20	18.50	V
12331.700	46.02	-32.39	38.95	39.46	74.00	27.98	H
12259.100	45.33	-32.37	38.95	38.75	74.00	28.67	H
5350.376	61.23	-27.82	34.20	54.85	74.00	12.77	H
5352.384	60.82	-27.82	34.20	54.44	74.00	13.18	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)
17939.500	49.43	-29.59	45.95	33.07	74.00	24.57	H
17942.800	49.24	-29.59	45.95	32.88	74.00	24.76	V
12325.467	45.51	-32.12	39.00	38.63	74.00	28.49	H
12221.333	45.50	-32.12	38.90	38.72	74.00	28.50	H
5456.448	57.70	-27.49	34.20	50.99	74.00	16.30	H
5468.770	60.00	-27.49	34.20	53.29	68.20	8.20	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)
17683.567	49.06	-29.82	45.65	33.23	68.20	19.14	V
17973.967	48.90	-29.59	45.95	32.54	74.00	25.10	V
12291.367	46.17	-32.12	39.00	39.29	74.00	27.83	H
12331.333	45.99	-32.39	38.95	39.43	74.00	28.01	H
10264.433	44.04	-33.82	38.00	39.86	68.20	24.16	H
10093.567	43.54	-33.75	38.05	39.24	68.20	24.66	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)
17945.733	49.22	-29.59	45.95	32.86	74.00	24.78	H
17978.733	48.71	-29.59	45.95	32.35	74.00	25.29	V
12330.600	46.43	-32.39	38.95	39.87	74.00	27.57	H
12296.133	45.36	-32.12	39.00	38.48	74.00	28.64	V
5725.722	64.85	-27.47	34.10	58.22	68.20	3.35	V
5725.092	64.47	-27.47	34.10	57.84	68.20	3.73	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)
16857.467	48.77	-29.50	40.00	38.27	68.20	19.43	H
17948.300	48.73	-29.59	45.95	32.37	74.00	25.27	H
12333.167	45.05	-32.39	38.95	38.49	74.00	28.95	V
11756.033	44.90	-32.71	39.20	38.41	74.00	29.10	V
5149.640	61.35	-28.00	34.00	55.35	74.00	12.65	H
5146.460	61.08	-27.79	34.00	54.87	74.00	12.92	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)
17954.900	49.93	-29.59	45.95	33.57	74.00	24.07	H
17965.900	48.85	-29.59	45.95	32.49	74.00	25.15	H
12307.500	45.32	-32.12	39.00	38.44	74.00	28.68	V
12332.433	45.21	-32.39	38.95	38.65	74.00	28.79	H
10127.300	42.64	-34.28	38.10	38.82	68.20	25.56	V
8332.833	42.53	-34.93	37.20	40.26	74.00	31.47	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)
17943.533	48.98	-29.59	45.95	32.62	74.00	25.02	V
17972.133	48.95	-29.59	45.95	32.59	74.00	25.05	V
12332.067	45.38	-32.39	38.95	38.82	74.00	28.62	H
11730.733	45.26	-32.70	39.20	38.76	74.00	28.74	H
8289.567	42.87	-34.84	37.10	40.60	74.00	31.13	H
10042.233	42.81	-34.07	38.00	38.88	68.20	25.39	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)
16849.400	49.65	-29.50	40.00	39.15	68.20	18.55	H
17158.500	49.62	-29.31	41.70	37.23	68.20	18.58	V
11943.033	45.16	-32.42	39.05	38.53	74.00	28.84	V
12150.200	45.04	-32.17	38.90	38.31	74.00	28.96	V
10147.100	42.98	-34.28	38.10	39.16	68.20	25.22	H
10244.267	42.80	-34.09	38.00	38.89	68.20	25.40	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)
17362.733	49.03	-28.74	43.40	34.37	68.20	19.17	H
17274.733	49.00	-29.33	42.40	35.93	68.20	19.20	H
12332.433	45.26	-32.39	38.95	38.70	74.00	28.74	V
12237.467	45.19	-32.37	38.95	38.61	74.00	28.81	V
10132.067	43.16	-34.28	38.10	39.34	68.20	25.04	V
10113.000	43.02	-34.28	38.10	39.20	68.20	25.18	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)
16855.267	49.58	-29.50	40.00	39.08	68.20	18.62	H
17982.400	49.09	-29.59	45.95	32.73	74.00	24.91	H
12252.867	45.68	-32.37	38.95	39.10	74.00	28.32	H
12328.033	45.27	-32.39	38.95	38.71	74.00	28.73	H
5350.648	61.73	-27.82	34.20	55.35	74.00	12.27	H
5350.920	61.02	-27.82	34.20	54.64	74.00	12.98	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)
17866.533	49.28	-29.59	45.95	32.92	74.00	24.72	V
16928.967	49.17	-29.28	40.30	38.15	68.20	19.03	V
11722.667	46.15	-32.70	39.20	39.65	74.00	27.85	V
12327.667	45.42	-32.39	38.95	38.86	74.00	28.58	V
5456.387	56.93	-27.49	34.20	50.22	74.00	17.07	H
5467.278	60.56	-27.49	34.20	53.85	68.20	7.64	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)
17024.667	49.47	-29.38	40.85	38.00	68.20	18.73	V
17972.133	48.90	-29.59	45.95	32.54	74.00	25.10	V
11855.033	45.41	-32.73	39.15	38.99	74.00	28.59	V
12301.267	45.32	-32.12	39.00	38.44	74.00	28.68	V
9651.367	43.77	-34.18	37.60	40.35	68.20	24.43	V
8196.800	42.91	-34.94	36.90	40.95	74.00	31.09	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)
17863.233	49.42	-29.59	45.95	33.06	74.00	24.58	V
16970.767	49.21	-29.68	40.60	38.29	68.20	18.99	H
12222.067	45.86	-32.12	38.90	39.08	74.00	28.14	H
12285.500	45.70	-32.12	39.00	38.82	74.00	28.30	H
5726.449	65.14	-27.47	34.10	58.51	68.20	3.06	V
5725.539	64.44	-27.47	34.10	57.81	68.20	3.76	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)
16774.600	49.56	-29.73	39.70	39.59	68.20	18.64	H
17974.700	49.50	-29.59	45.95	33.14	74.00	24.50	V
12226.467	45.31	-32.12	38.90	38.53	74.00	28.69	H
11803.333	45.13	-32.09	39.20	38.02	74.00	28.87	H
5148.750	54.98	-28.00	34.00	48.98	74.00	19.02	H
5149.740	54.90	-28.00	34.00	48.90	74.00	19.10	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)
17846.000	49.40	-29.59	45.95	33.04	74.00	24.60	H
17976.900	49.28	-29.59	45.95	32.92	74.00	24.72	V
12150.933	45.40	-32.17	38.90	38.67	74.00	28.60	V
12261.300	45.34	-32.37	38.95	38.76	74.00	28.66	V
8492.700	43.23	-34.28	37.30	40.21	74.00	30.77	H
10265.167	43.18	-33.82	38.00	39.00	68.20	25.02	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)
17984.967	49.11	-29.59	45.95	32.75	74.00	24.89	H
16820.067	49.03	-29.24	39.85	38.42	68.20	19.17	H
12292.833	45.89	-32.12	39.00	39.01	74.00	28.11	V
12015.267	45.57	-32.66	39.00	39.23	74.00	28.43	V
10109.700	42.72	-34.28	38.10	38.90	68.20	25.48	H
10184.133	42.66	-33.67	38.05	38.28	68.20	25.54	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)
17935.833	49.30	-29.59	45.95	32.94	74.00	24.70	V
17318.733	49.24	-29.54	42.90	35.88	68.20	18.96	H
11976.400	45.79	-32.42	39.05	39.16	74.00	28.21	V
12017.100	45.28	-32.66	39.00	38.94	74.00	28.72	H
5352.472	61.75	-27.82	34.20	55.37	74.00	12.25	V
5350.664	61.28	-27.82	34.20	54.90	74.00	12.72	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)
17404.533	49.08	-29.44	43.80	34.72	68.20	19.12	H
17062.433	48.84	-29.30	41.10	37.04	68.20	19.36	H
12328.033	45.27	-32.39	38.95	38.71	74.00	28.73	V
11735.867	45.25	-32.71	39.20	38.76	74.00	28.75	V
5451.400	55.58	-27.49	34.20	48.87	74.00	18.42	V
5468.583	56.91	-27.49	34.20	50.20	68.20	11.29	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)
17943.533	49.95	-29.59	45.95	33.59	74.00	24.05	V
17971.400	49.74	-29.59	45.95	33.38	74.00	24.26	V
12062.933	45.73	-32.19	38.95	38.97	74.00	28.27	H
12267.900	45.72	-32.37	38.95	39.14	74.00	28.28	V
10081.467	43.53	-33.75	38.05	39.23	68.20	24.67	H
10260.400	43.36	-33.82	38.00	39.18	68.20	24.84	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)
17342.933	49.48	-28.74	43.40	34.82	68.20	18.72	V
17932.533	49.42	-29.59	45.95	33.06	74.00	24.58	V
12219.867	45.58	-32.12	38.90	38.80	74.00	28.42	V
10878.600	45.56	-33.07	38.50	40.13	74.00	28.44	H
5730.701	59.65	-27.47	34.10	53.02	68.20	8.55	V
5725.653	59.53	-27.47	34.10	52.90	68.20	8.67	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)
17429.467	49.36	-28.70	44.20	33.86	68.20	18.84	H
17935.100	49.28	-29.59	45.95	32.92	74.00	24.72	V
12194.933	45.35	-32.12	38.90	38.57	74.00	28.65	V
12307.133	45.02	-32.12	39.00	38.14	74.00	28.98	V
5147.980	60.75	-27.79	34.00	54.54	74.00	13.25	H
5149.560	60.56	-28.00	34.00	54.56	74.00	13.44	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)
17936.200	49.37	-29.59	45.95	33.01	74.00	24.63	H
17981.300	49.14	-29.59	45.95	32.78	74.00	24.86	V
12330.233	45.42	-32.39	38.95	38.86	74.00	28.58	H
12333.167	45.39	-32.39	38.95	38.83	74.00	28.61	H
8491.233	43.54	-34.28	37.30	40.52	74.00	30.46	H
10103.100	43.18	-34.28	38.10	39.36	68.20	25.02	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)
16833.267	49.44	-29.50	40.00	38.94	68.20	18.76	H
17838.667	49.02	-29.59	45.95	32.66	74.00	24.98	H
12288.800	45.02	-32.12	39.00	38.14	74.00	28.98	V
12291.000	44.72	-32.12	39.00	37.84	74.00	29.28	V
10193.300	42.68	-33.67	38.05	38.30	68.20	25.52	H
10080.367	42.64	-33.75	38.05	38.34	68.20	25.56	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)
17614.267	49.40	-29.60	45.15	33.85	68.20	18.80	V
17935.833	49.08	-29.59	45.95	32.72	74.00	24.92	H
11994.000	45.19	-32.66	39.00	38.85	74.00	28.81	H
11976.400	45.13	-32.42	39.05	38.50	74.00	28.87	H
10062.033	43.09	-33.75	38.05	38.79	68.20	25.11	H
10072.667	43.01	-33.75	38.05	38.71	68.20	25.19	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)
17951.600	49.28	-29.59	45.95	32.92	74.00	24.72	V
17943.167	49.26	-29.59	45.95	32.90	74.00	24.74	V
12240.033	45.03	-32.37	38.95	38.45	74.00	28.97	V
12015.633	44.99	-32.66	39.00	38.65	74.00	29.01	H
8507.367	43.23	-34.28	37.30	40.21	68.20	24.97	V
10112.267	43.22	-34.28	38.10	39.40	68.20	24.98	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)
17976.900	49.32	-29.59	45.95	32.96	74.00	24.68	H
17854.800	49.25	-29.59	45.95	32.89	74.00	24.75	H
12223.533	45.57	-32.12	38.90	38.79	74.00	28.43	H
11993.267	45.52	-32.66	39.00	39.18	74.00	28.48	V
5350.768	61.24	-27.82	34.20	54.86	74.00	12.76	H
5352.016	61.19	-27.82	34.20	54.81	74.00	12.81	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)
17412.600	49.37	-29.44	43.80	35.01	68.20	18.83	V
17957.467	49.23	-29.59	45.95	32.87	74.00	24.77	V
12222.433	45.31	-32.12	38.90	38.53	74.00	28.69	H
12329.500	45.19	-32.39	38.95	38.63	74.00	28.81	V
5458.285	57.35	-27.49	34.20	50.64	74.00	16.65	H
5468.815	59.50	-27.49	34.20	52.79	68.20	8.70	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)
17016.967	49.30	-29.38	40.85	37.83	68.20	18.90	H
17935.833	48.89	-29.59	45.95	32.53	74.00	25.11	H
12328.033	45.68	-32.39	38.95	39.12	74.00	28.32	V
12330.600	45.37	-32.39	38.95	38.81	74.00	28.63	V
10303.300	43.08	-33.88	38.00	38.96	68.20	25.12	V
10185.600	42.91	-33.67	38.05	38.53	68.20	25.29	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)
17969.933	49.60	-29.59	45.95	33.24	74.00	24.40	H
17934.367	49.29	-29.59	45.95	32.93	74.00	24.71	H
11731.467	45.65	-32.70	39.20	39.15	74.00	28.35	V
12224.633	45.45	-32.12	38.90	38.67	74.00	28.55	H
5725.688	64.87	-27.47	34.10	58.24	68.20	3.33	V
5725.320	64.64	-27.47	34.10	58.01	68.20	3.56	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)
17939.133	50.40	-29.59	45.95	34.04	74.00	23.60	H
17975.800	49.61	-29.59	45.95	33.25	74.00	24.39	H
12332.067	45.36	-32.39	38.95	38.80	74.00	28.64	V
12267.167	45.22	-32.37	38.95	38.64	74.00	28.78	V
5147.960	55.50	-27.79	34.00	49.29	74.00	18.50	H
5149.920	54.90	-28.00	34.00	48.90	74.00	19.10	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)
16850.133	49.41	-29.50	40.00	38.91	68.20	18.79	V
17938.033	49.29	-29.59	45.95	32.93	74.00	24.71	H
12265.700	45.79	-32.37	38.95	39.21	74.00	28.21	H
11991.433	45.70	-32.66	39.00	39.36	74.00	28.30	H
8875.867	42.62	-34.69	37.80	39.51	68.20	25.58	H
8068.467	42.47	-34.89	36.90	40.46	74.00	31.53	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)
17334.500	49.30	-28.74	43.40	34.64	68.20	18.90	V
16996.433	48.85	-29.38	40.85	37.38	68.20	19.35	V
12313.000	46.03	-32.12	39.00	39.15	74.00	27.97	V
12288.800	45.78	-32.12	39.00	38.90	74.00	28.22	V
10061.300	43.69	-33.75	38.05	39.39	68.20	24.51	H
8560.900	43.02	-33.81	37.40	39.43	68.20	25.18	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)
17955.633	49.22	-29.59	45.95	32.86	74.00	24.78	H
17001.567	49.04	-29.38	40.85	37.57	68.20	19.16	V
12314.100	45.72	-32.12	39.00	38.84	74.00	28.28	H
12298.333	45.28	-32.12	39.00	38.40	74.00	28.72	H
5352.160	59.05	-27.82	34.20	52.67	74.00	14.95	H
5350.904	58.85	-27.82	34.20	52.47	74.00	15.15	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)
17370.800	49.29	-28.74	43.40	34.63	68.20	18.91	H
17846.000	49.11	-29.59	45.95	32.75	74.00	24.89	H
11738.433	45.72	-32.71	39.20	39.23	74.00	28.28	H
10990.067	45.17	-33.13	38.55	39.75	74.00	28.83	H
5453.852	58.88	-27.49	34.20	52.17	74.00	15.12	H
5469.528	56.72	-27.49	34.20	50.01	68.20	11.48	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)
17980.933	50.88	-29.59	45.95	34.52	74.00	23.12	H
16857.833	49.13	-29.50	40.00	38.63	68.20	19.07	H
12314.100	45.74	-32.12	39.00	38.86	74.00	28.26	H
12290.633	45.48	-32.12	39.00	38.60	74.00	28.52	H
8223.567	43.21	-34.48	37.00	40.69	74.00	30.79	H
10135.733	42.95	-34.28	38.10	39.13	68.20	25.25	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)
17832.067	49.64	-29.59	45.95	33.28	74.00	24.36	H
17131.733	49.59	-29.31	41.70	37.20	68.20	18.61	V
12266.433	46.57	-32.37	38.95	39.99	74.00	27.43	V
12330.967	45.89	-32.39	38.95	39.33	74.00	28.11	V
5726.125	59.33	-27.47	34.10	52.70	68.20	8.87	V
5735.627	59.11	-27.47	34.10	52.48	68.20	9.09	V

**802.11ac-HT80**
**Channel 42**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17950.133	49.25	-29.59	45.95	32.89	74.00	24.75	H
16675.600	49.15	-29.84	39.60	39.39	68.20	19.05	V
11739.167	45.73	-32.71	39.20	39.24	74.00	28.27	V
11972.367	45.71	-32.42	39.05	39.08	74.00	28.29	H
5147.890	61.40	-27.79	34.00	55.19	74.00	12.60	H
5149.490	55.83	-28.00	34.00	49.83	74.00	18.17	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)
17951.600	48.84	-29.59	45.95	32.48	74.00	25.16	V
17911.267	48.78	-29.59	45.95	32.42	74.00	25.22	H
12333.167	45.52	-32.39	38.95	38.96	74.00	28.48	V
12311.533	45.23	-32.12	39.00	38.35	74.00	28.77	V
5364.168	60.22	-27.82	34.20	53.84	74.00	13.78	H
5362.448	59.91	-27.82	34.20	53.53	74.00	14.09	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)
17986.067	49.52	-29.59	45.95	33.16	74.00	24.48	V
16977.733	49.08	-29.68	40.60	38.16	68.20	19.12	V
12266.067	45.33	-32.37	38.95	38.75	74.00	28.67	V
12331.700	45.30	-32.39	38.95	38.74	74.00	28.70	V
5450.523	57.79	-27.49	34.20	51.08	74.00	16.21	H
5466.962	57.28	-27.49	34.20	50.57	68.20	10.92	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)
16645.167	49.26	-29.84	39.60	39.50	68.20	18.94	V
16861.133	49.24	-29.50	40.00	38.74	68.20	18.96	H
12333.167	46.15	-32.39	38.95	39.59	74.00	27.85	V
12196.400	45.42	-32.12	38.90	38.64	74.00	28.58	H
5734.376	53.46	-27.47	34.10	46.83	68.20	14.74	V
5757.266	53.21	-27.21	34.00	46.42	68.20	14.99	V

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

**Test Condition:**

Voltage (V)	Frequency (Hz)
120	60

**Measurement uncertainty:**

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

**Measurement Result and limit:**

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger AE5		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig.58	Fig.59	<b>P</b>
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.

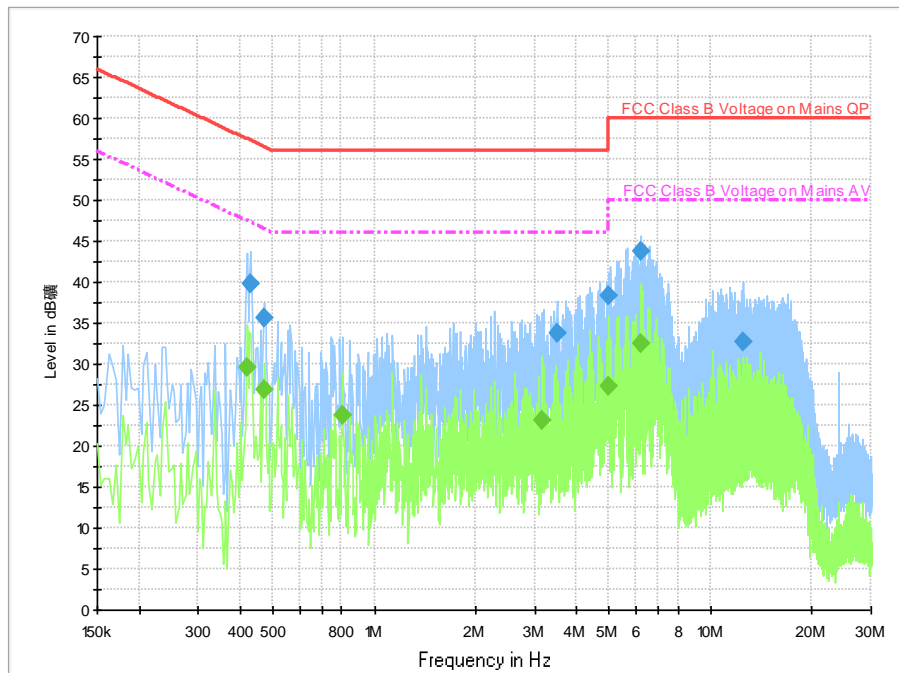
WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger AE5		
		802.11a	Idle	
0.15 to 0.5	67 56 to 46	Fig.58	Fig.59	<b>P</b>
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)**

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

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.430000	39.8	2000.0	9.000	On	L1	19.7	17.5	57.3
0.470000	35.6	2000.0	9.000	On	L1	19.7	20.9	56.5
3.486000	33.7	2000.0	9.000	On	L1	19.6	22.3	56.0
4.950000	38.3	2000.0	9.000	On	L1	19.6	17.7	56.0
6.226000	43.8	2000.0	9.000	On	L1	19.6	16.2	60.0
12.554000	32.7	2000.0	9.000	On	L1	19.7	27.3	60.0

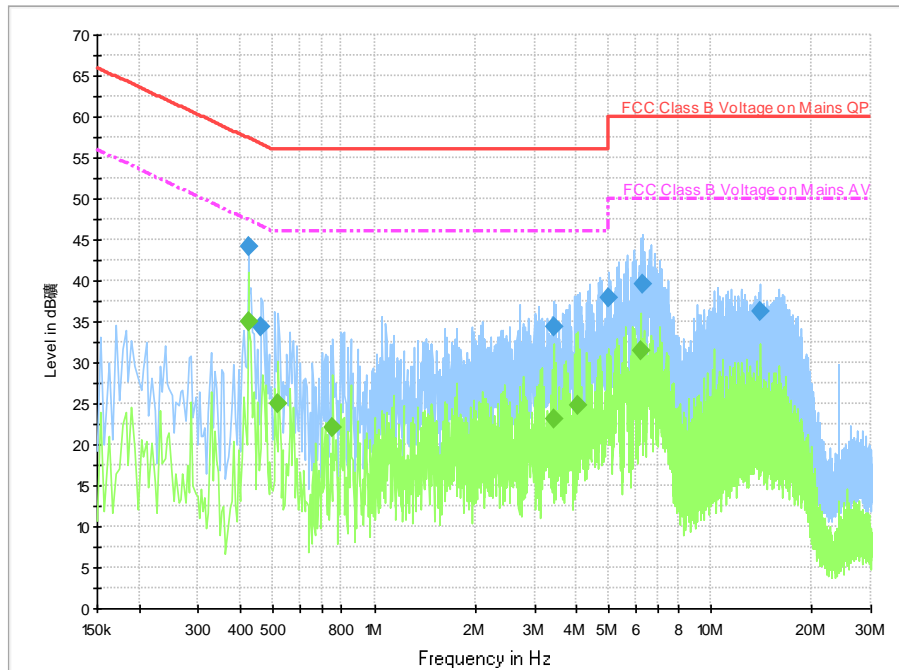
**Final Result 2**

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.418000	29.7	2000.0	9.000	On	L1	19.7	17.8	47.5
0.470000	27.0	2000.0	9.000	On	L1	19.7	19.6	46.5
0.802000	23.7	2000.0	9.000	On	L1	19.7	22.3	46.0
3.146000	23.2	2000.0	9.000	On	L1	19.6	22.8	46.0
4.950000	27.3	2000.0	9.000	On	L1	19.6	18.7	46.0
6.226000	32.5	2000.0	9.000	On	L1	19.6	17.5	50.0

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



Idle:



**Fig.59 Conducted Emission(802.11a, IDLE)**

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

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.422000	44.1	2000.0	9.000	On	L1	19.7	13.3	57.4
0.462000	34.4	2000.0	9.000	On	L1	19.7	22.3	56.7
3.430000	34.4	2000.0	9.000	On	L1	19.6	21.6	56.0
4.954000	38.0	2000.0	9.000	On	L1	19.6	18.0	56.0
6.290000	39.6	2000.0	9.000	On	L1	19.6	20.4	60.0
14.118000	36.2	2000.0	9.000	On	L1	19.7	23.8	60.0

**Final Result 2**

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.422000	35.0	2000.0	9.000	On	L1	19.7	12.4	47.4
0.518000	24.9	2000.0	9.000	On	L1	19.7	21.1	46.0
0.754000	22.0	2000.0	9.000	On	L1	19.7	24.0	46.0
3.430000	23.2	2000.0	9.000	On	L1	19.6	22.8	46.0
4.042000	24.7	2000.0	9.000	On	L1	19.6	21.3	46.0
6.230000	31.5	2000.0	9.000	On	L1	19.6	18.5	50.0

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

### A.8. 99% Occupied bandwidth

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

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than  $[10 \log (OBW/RBW)]$  below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% 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).

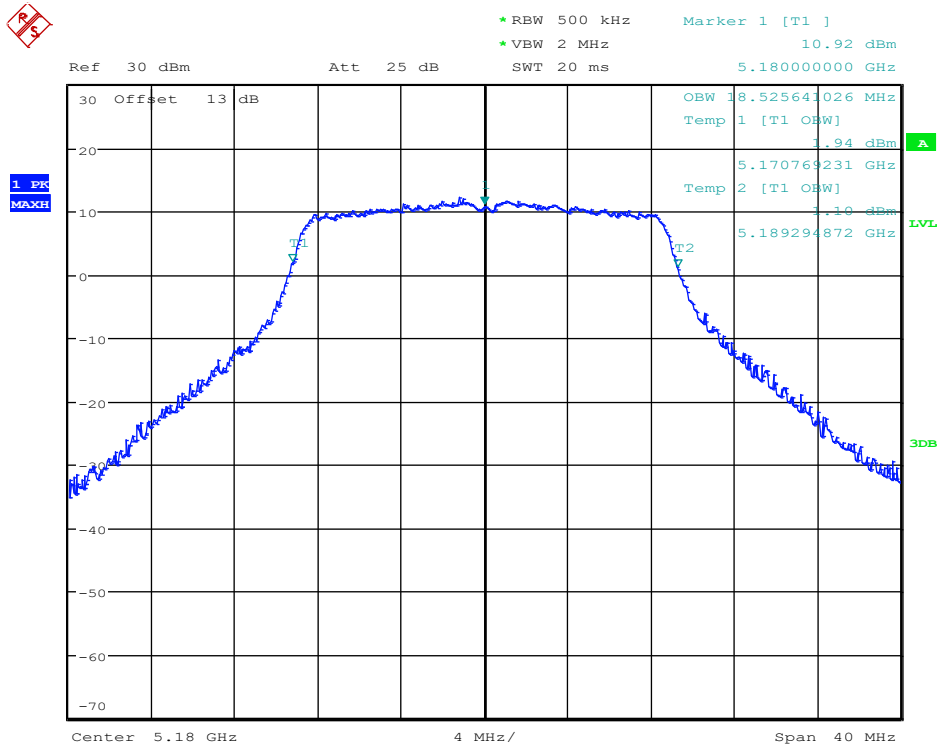
#### Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
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#### Measurement Result:

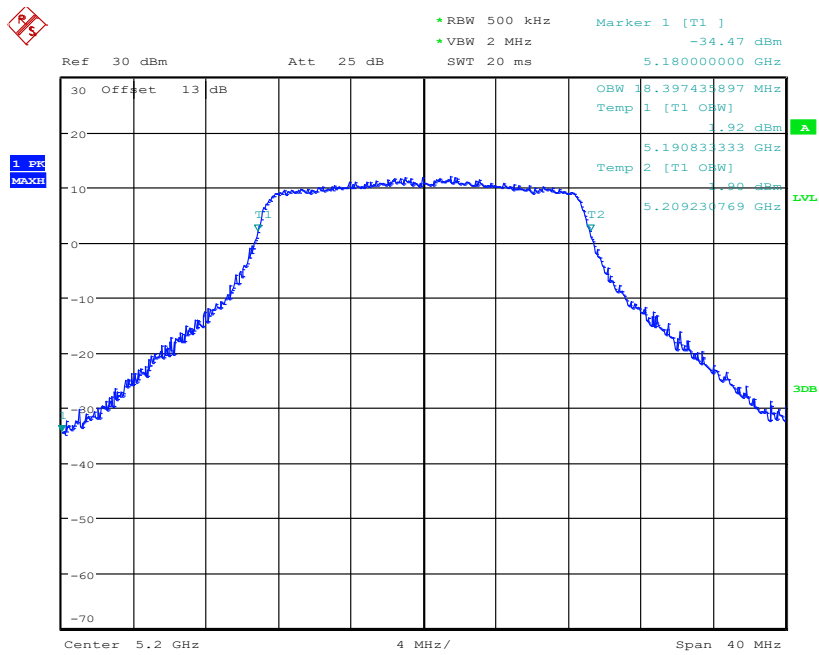
Mode	Frequency	99% Occupied bandwidth ( MHz)		conclusion
		Fig.	Value	
802.11a	5180 MHz	Fig.60	18.53	P
	5200 MHz	Fig.61	18.40	P
	5240 MHz	Fig.62	18.53	P
802.11ac HT20	5180 MHz	Fig.63	18.46	P
	5200 MHz	Fig.64	18.40	P
	5240 MHz	Fig.65	18.40	P
802.11n HT40	5190 MHz	Fig.66	36.54	P
	5230 MHz	Fig.67	36.41	P
802.11ac HT80	5210 MHz	Fig.68	75.90	P

**Conclusion: PASS**  
**Test graphs as below:**



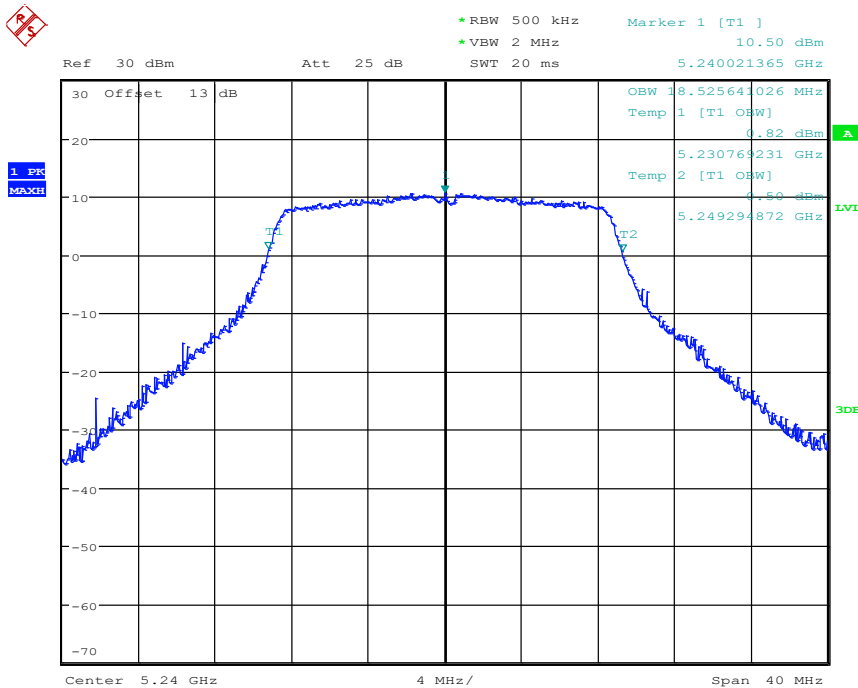
Date: 19.MAY.2023 03:19:08

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



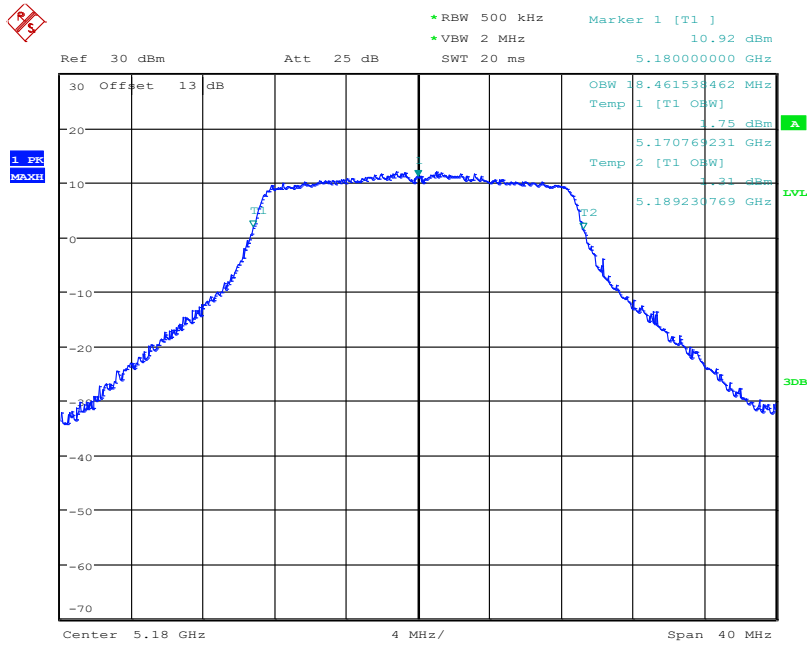
Date: 19.MAY.2023 03:19:39

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



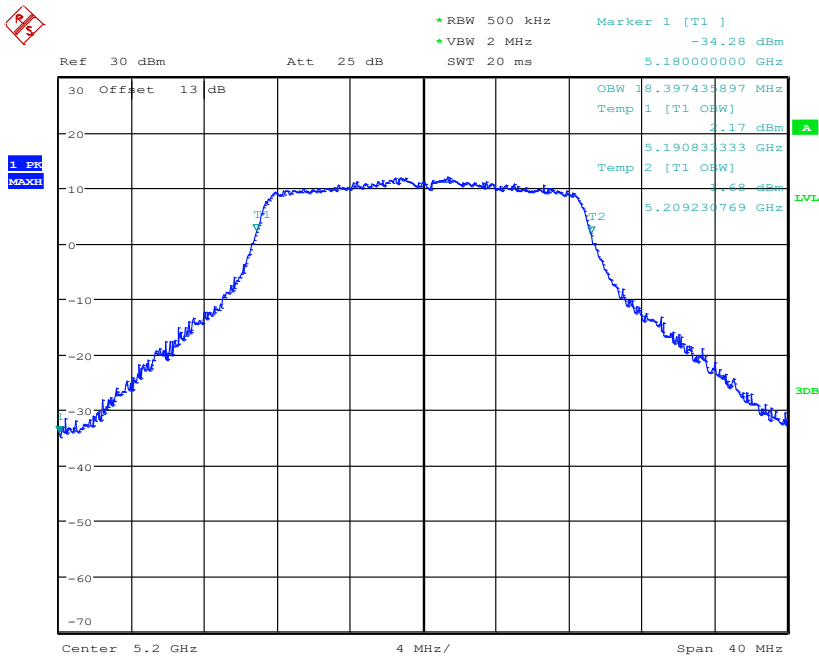
Date: 19.MAY.2023 03:20:10

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



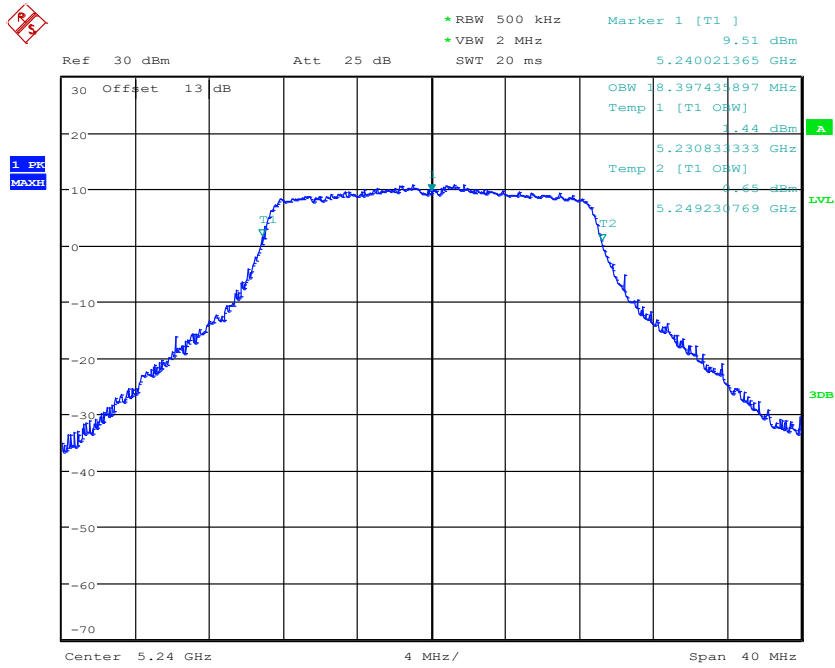
Date: 19.MAY.2023 03:22:15

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



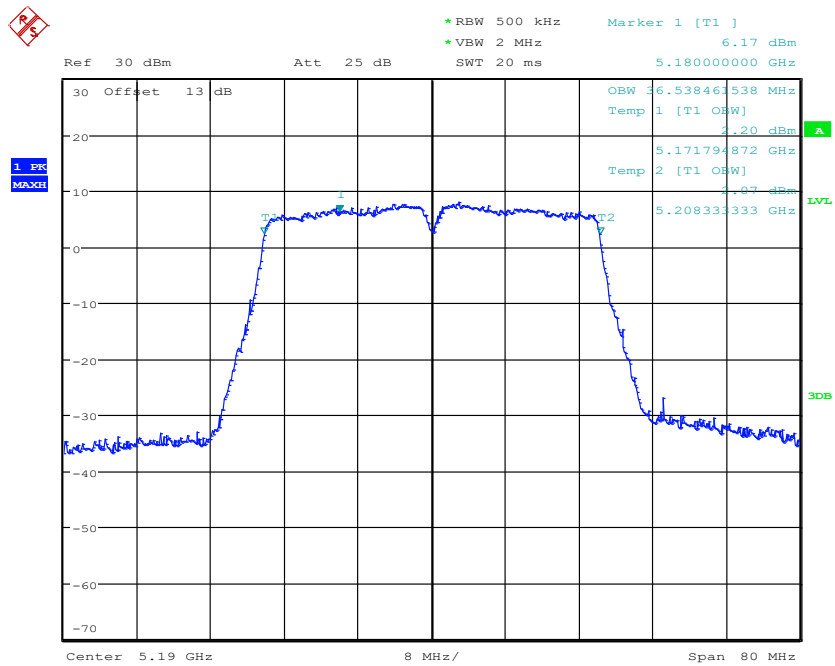
Date: 19.MAY.2023 03:22:47

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



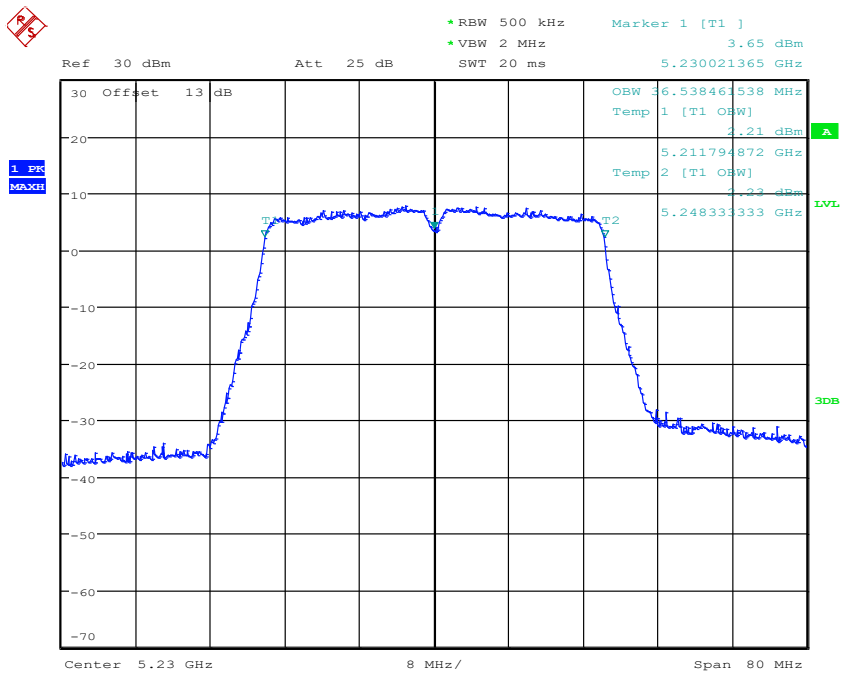
Date: 19.MAY.2023 03:23:18

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



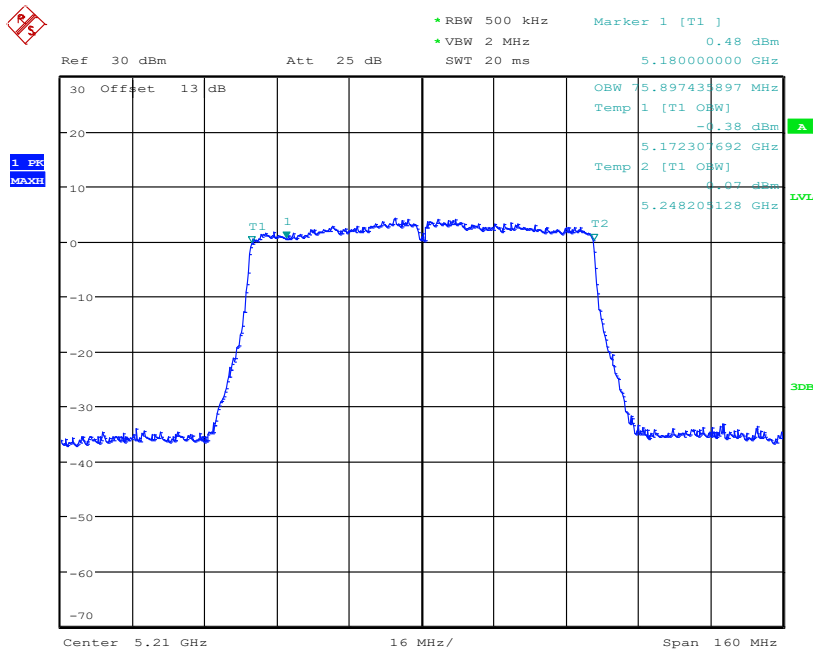
Date: 19.MAY.2023 03:25:02

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



Date: 19.MAY.2023 03:25:33

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



Date: 19.MAY.2023 03:26:04

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

## A.9. Power control

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

## ANNEX B: EUT parameters

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

## ANNEX C: Accreditation Certificate



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