FCC PART 15C
TEST REPORT
No.I21Z61036-IOT07

for

TCL Communication Ltd.

Vodafone Gigacube

HH500V

With

FCC ID: 2ACCJB157

Hardware Version: HH500_MB_C

Software Version: HH500V_VDF_V2.0.0B01

Issued Date: 2021-08-21

Note:

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Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I21Z61036-IOT07	Rev.0	1st edition	2021-08-02
I21Z61036-IOT07	Rev.1	Add the information of attenuator. Update the note of SISO maximum power. Update the CDD/Beamingforming statement. Clarify the antenna of measurement results of radiated band edges.	2021-08-21

CONTENTS

1. Test Laboratory

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

Location 1:CTTL(Gaolizhang Road)

Address: Cuihu Cloud Center, No.1, Gaolizhang Road, Wenquan, Haidian District, Beijing, China

Location 2:CTTL(Shouxiang)

Address: No. 51 Shouxiang Science Building, Xueyuan Road, Haidian District, Beijing, P. R. China100191

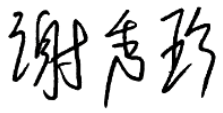
1.3. Testing Environment

Normal Temperature: 15-25℃
Relative Humidity: 20-75%

1.4. Project date

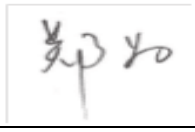
Testing Start Date: 2021-05-31
Testing End Date: 2021-08-20

1.5. Signature



Xie Xiuzhen

(Prepared this test report)



Zheng Wei

(Reviewed this test report)

Hu Xiaoyu

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	TCL Communication Ltd.
Address:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
City:	Hong Kong
Postal Code:	/
Country:	China
Telephone:	0086-755-36611722
Fax:	0086-755-36612000-81722

2.2. Manufacturer Information

Company Name:	TCL Communication Ltd.
Address:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
City:	Hong Kong
Postal Code:	/
Country:	China
Telephone:	0086-755-36611722
Fax:	0086-755-36612000-81722

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

3.1. About EUT

Description	Vodafone Gigacube
Model name	HH500V
FCC ID	2ACCJB157
With WLAN Function	Yes
Frequency Band	ISM 2400MHz~2483.5MHz
Type of Modulation	DSSS/CCK/OFDM/OFDMA
Number of Channels	11
Antenna	Integral Antenna
MAX Conducted Power	25.75dBm
Power Supply	12V

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	350364240200093	HH500_MB_C	HH500V_VDF_V2.0.0B01
EUT2	350364240200069	HH500_MB_C	HH500V_VDF_V2.0.0B01
EUT3	350364240200077	HH500_MB_C	HH500V_VDF_V2.0.0B01
EUT4	350364240200085	HH500_MB_C	HH500V_VDF_V2.0.0B01

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

3.3. Internal Identification of AE

AE ID*	Description	SN
AE1	Charger	/
AE2	Charger	/

AE1

Model	CYSE36-120300E
Manufacturer	Jiangsu Chenyang Electron Co.,Ltd

AE2

Model	CYSE36-120300UK
Manufacturer	Jiangsu Chenyang Electron 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 Vodafone Gigacube with integrated antenna. 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.

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902-928MHz, 2400-2483.5 MHz, and 5725-5850 MHz.	2018
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013
KDB 558074 D01	Federal Communications Commission Office of Engineering and Technology Laboratory Division GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES	2019
KDB-662911 D01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g. MIMO Smart Antenna etc)	2013

5. Test Results

5.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15C	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.247 (b)	/	P
Peak Power Spectral Density	15.247 (e)	/	P
Occupied 6dB Bandwidth	15.247 (a)	/	P
Band Edges Compliance	15.247 (d)	/	P
Transmitter Spurious Emission - Conducted	15.247 (d)	/	P
Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	/	P
AC Powerline Conducted Emission	15.107, 15.207	/	P

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

Terms used in Verdict column

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

5.2. Statements

The test cases as listed in section 5.1 of this report for the EUT specified in section 3 was performed by CTTL and according to the standards or reference documents listed in section 4.2

The EUT met all requirements of the standards or reference documents, and only the WLAN function was tested in this report.

5.3. Test Conditions

T nom	Normal Temperature
T min	Low Temperature
T max	High Temperature
V nom	Normal Voltage

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

Temperature	T nom	26℃
Voltage	V nom	12V
Humidity	H nom	20-75%

6. Test Facilities Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2022-05-24
2	LISN	ENV216	101200	Rohde & Schwarz	1 year	2022-02-23
3	Test Receiver	ESCI	100344	Rohde & Schwarz	1 year	2022-05-30
4	Shielding Room	S81	/	ETS-Lindgren	/	/
5	Attenuator	10dB/2W	/	Rosenberger	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100235	R&S	1 year	2022-02-23
2	BiLog Antenna	VULB9163	483	Schwarzbeck	1 year	2021-08-27
3	Dual-Ridge Waveguide Horn Antenna	3115	6914	ETS-Lindgren	1 year	2022-02-03
4	Loop Antenna	HFH2-Z2	829324/007	R&S	1 year	2021-12-10
5	EMI Antenna	3116	2661	ETS-Lindgren	1 year	2022-01-05

7. Measurement Uncertainty

7.1. Maximum Output Power

Measurement Uncertainty: 0.387dB,k=1.96

7.2. Peak Power Spectral Density

Measurement Uncertainty: 0.705dB,k=1.96

7.3. DTS 6-dB Signal Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

7.4. Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

7.5. Transmitter Spurious Emission

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	5.40
1GHz ≤ f ≤18GHz	4.32
18GHz ≤ f ≤40GHz	5.26

7.6. AC Power-line Conducted Emission

Measurement Uncertainty : 3.08dB,k=2

ANNEX A: Detailed Test Results

A.1. Measurement Method

A.1.1. Conducted Measurements

Connect the EUT to the test system as Fig.A.1.1.1 shows.
Set the EUT to the required work mode.
Set the EUT to the required channel.
Set the Vector Signal Analyzer and start measurement.
Record the values. Vector Signal Analyzer

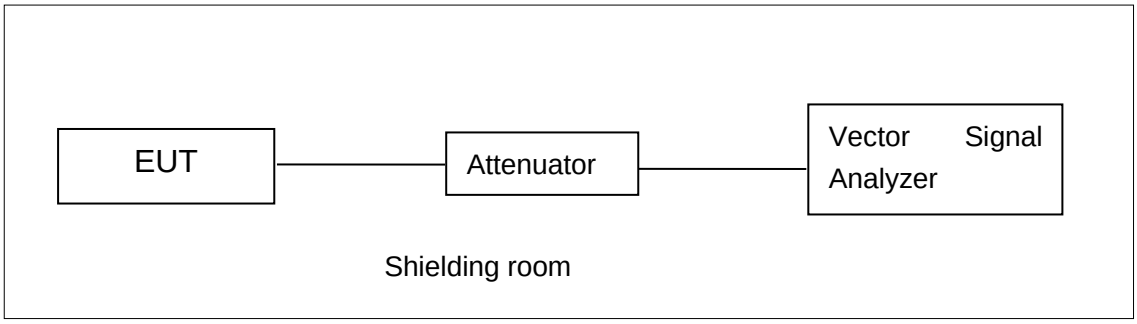


Fig.A.1.1.1: Test Setup Diagram for Conducted Measurements

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;

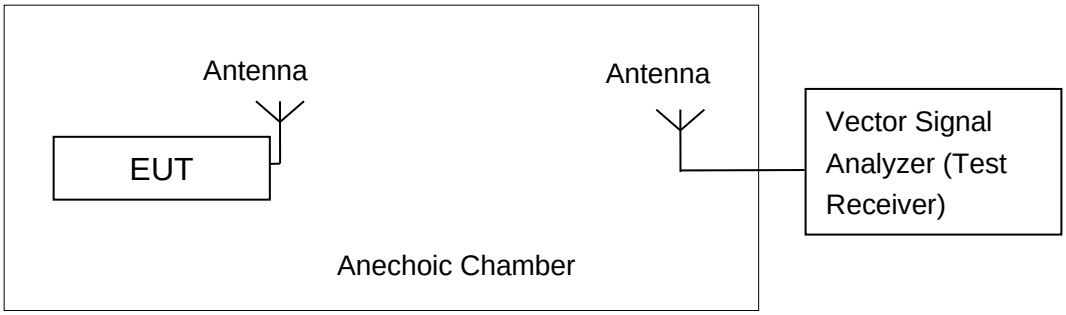


Fig.A.1.2.1: Test Setup Diagram for Radiated Measurements

A.2. Maximum Output Power

Method of Measurement: See ANSI C63.10-2013-clause 11.9.1.2

a) Set the RBW = 1 MHz.
b) Set the VBW = 3 MHz.
c) Set the span ≥ [1.5 × DTS bandwidth].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector).

Measurement Limit:

Standard	Limit (dBm)
FCC CRF Part 15.247(b)	< 30

EUT ID: EUT2/3/4

A.2.1. Peak Output Power-conducted

The following data rate are selected as the worst condition; as the maximum power is got with these data rate. The following cases are performed with this condition.

W1:

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
1Mbps	6Mbps	MCS0	MCS0	MCS0	MCS0

W2

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
1Mbps	6Mbps	MCS0	MCS0	MCS0	MCS0

W3

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
1Mbps	6Mbps	MCS0	MCS0	MCS0	MCS0

W4

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	6Mbps	MCS0	MCS0	MCS0	MCS0

MIMO&CDD(W1&W2)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode

11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11

(W1&W2&W4)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11

(W1&W2&W3&W4)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11

All duty cycle of Worse case as following:

W1:

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
1Mbps	6Mbps	MCS0	MCS0	MCS0	MCS0
62%	94%	94%	89%	88%	64%

W2

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
1Mbps	6Mbps	MCS0	MCS0	MCS0	MCS0
62%	94%	95%	89%	90%	74%

W3

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
1Mbps	6Mbps	MCS0	MCS0	MCS0	MCS0
62%	94%	95%	89%	90%	74%

W4

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	6Mbps	MCS0	MCS0	MCS0	MCS0
32%	94%	94%	87%	91%	75%

(W1&W2-W1)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	85%	75%

(W1&W2-W2)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	90%	68%

(W1&W2&W4-W1)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	88%	76%

(W1&W2&W4-W2)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	88%	76%

(W1&W2&W4-W4)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	88%	76%

(W1&W2&W3&W4-W1)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	87%	75%

(W1&W2&W3&W4-W2)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	87%	75%

(W1&W2&W3&W4-W3)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	87%	75%

(W1&W2&W3&W4-W4)

802.11b mode	802.11g mode	802.11n-HT20 mode	802.11n-HT40 mode	802.11ax-HE20 mode	802.11ax-HE40 mode
11Mbps	54Mbps	MCS7	MCS7	MCS11	MCS11
33%	59%	90%	90%	87%	75%

802.11ax-HE20: tp-26x9_20MHz

802.11ax-HE40: tp-52x2_106_242_40MHz

802.11b/g supports CDD 802.11n support CDD and Beamforming.

Tx Paths	Antenna Gain(dBi)	Beamforming DG(dBi)	CDD DG(Power)(dBi)
2	3.8	6.81	3.8
3	3.8	8.57	3.8
4	3.8	9.82	3.8

Measurement Results:

SISO

Result(dBm)				
802.11b	**W1**	**W2**	**W3**	**W4**
Channel\ rate	1Mbps	1Mbps	1Mbps	11Mbps
1	16.53	18.21	17.32	17.67
6	16.41	17.81	17.37	16.76
11	16.18	17.11	16.92	17.14
802.11g	**W1**	**W2**	**W3**	**W4**
Channel\ rate	6Mbps	6Mbps	6Mbps	6Mbps
1	22.49	22.49	21.52	21.94
6	22.64	22.07	21.65	21.57
11	22.64	21.54	21.42	21.94
802.11n-HT20	**W1**	**W2**	**W3**	**W4**
Channel\ rate	MCS0	MCS0	MCS0	MCS0
1	23.43	23.44	22.29	22.81
6	23.26	22.76	22.57	22.31
11	21.97	22.54	22.17	22.67
802.11n-HT40	**W1**	**W2**	**W3**	**W4**
Channel\ rate	MCS0	MCS0	MCS0	MCS0
3	22.52	22.56	21.74	23.29
6	23.52	23.16	22.87	22.81

9	24.39	23.27	22.83	23.64
802.11ax-HE20	**W1**	**W2**	**W3**	**W4**
Channel\ rate	MCS0	MCS0	MCS0	MCS0
1	22.97	24.32	22.79	22.69
6	22.23	23.73	21.68	22.70
11	22.13	22.99	21.95	22.00
802.11ax-HE40	**W1**	**W2**	**W3**	**W4**
Channel\ rate	MCS0	MCS0	MCS0	MCS0
3	22.91	24.30	22.90	23.04
6	22.31	23.91	22.23	22.91
9	22.70	23.91	22.70	22.73

Note: The maximum power points for each mode of modulation are as follows:

The largest point of 802.11b/n20 is W2; 802.11g/n40 is W1; 802.11ax-HE20/40 is W2.

(W1&W2)

Result(dBm)				
Mode	Rate	2412MHz	2437MHz	2462 MHz
802.11b	11Mbps	18.95	18.54	18.34
802.11g	54Mbps	23.02	22.98	22.70
802.11n-HT20	MCS7	23.11	22.96	22.81
802.11ax-HE20	MCS11	23.55	23.09	22.94

802.11n-HT40

Result(dBm)				
Ant	Rate	2422MHz	2437MHz	2452 MHz
802.11n-HT40	MCS7	23.66	23.58	23.85
802.11ax-HE40	MCS11	23.51	23.16	23.24

Note: The maximum power points for each mode of modulation are as follows:

The largest point of 802.11b/g/n20/n40 is W1; 802.11ax-HE20/40 is W1.

(W1&W2&W4)

Result(dBm)				
Mode	Rate	2412MHz	2437MHz	2462 MHz
802.11b	11Mbps	19.10	18.14	18.66
802.11g	54Mbps	22.11	21.86	21.99
802.11n-HT20	MCS7	22.60	22.48	22.66
802.11ax-HE20	MCS11	24.98	25.00	24.73

802.11n-HT40

Result(dBm)				
Ant	Rate	2422MHz	2437MHz	2452 MHz
802.11n-HT40	MCS7	22.85	22.58	23.08
802.11ax-HE40	MCS11	25.34	25.10	25.29

Note: The maximum power points for each mode of modulation are as follows:

The largest point of 802.11b/g/n20/n40 is W1; 802.11ax-HE20/40 is W2.

(W1&W2&W3&W4)

Result(dBm)				
Mode	Rate	2412MHz	2437MHz	2462 MHz
802.11b	11Mbps	17.02	17.27	16.94
802.11g	54Mbps	21.71	21.58	21.66
802.11n-HT20	MCS7	22.94	22.76	22.72
802.11ax-HE20	MCS11	24.73	25.44	25.25

802.11n-HT40

Result(dBm)				
Ant	Rate	2422MHz	2437MHz	2452 MHz
802.11n-HT40	MCS7	22.03	21.83	22.22
802.11ax-HE40	MCS11	25.75	25.56	24.27

Note: The maximum power points for each mode of modulation are as follows:

The largest point of 802.11b/g/n20/n40 is W1; 802.11ax-HE20/40 is W2.

A.3. Peak Power Spectral Density

Method of Measurement: See ANSI C63.10-2013-clause 11.10.2

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set the RBW to RBW = 3 kHz.
d) Set the VBW = 10 kHz.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.

Measurement Limit:

Standard	Limit
FCC CRF Part 15.247(e)	< 8 dBm/3 kHz

Measurement Results:

SISO(802.11b/n20 is W2; 802.11g/n40 is W1)

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11b	1	-13.98	P
	6	-14.42	P
	11	-14.22	P
802.11g	1	-14.14	P
	6	-13.90	P
	11	-14.13	P

802.11n-HT20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n (HT20)	1	-11.53	P
	6	-11.72	P
	11	-11.93	P

802.11n-HT40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n (HT40)	3	-15.07	P
	6	-14.79	P
	9	-13.58	P

SISO-W2

802.11ax-HE20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax (HE20)	1	-13.49	P
	6	-14.56	P
	11	-14.39	P

802.11ax-HE40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax (HE40)	3	-16.63	P
	6	-16.36	P
	9	-16.12	P

(W1&W2)

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11b	1	-11.25	P
	6	-11.65	P
	11	-11.32	P
802.11g	1	-12.45	P
	6	-12.67	P
	11	-12.36	P

802.11n-HT20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n (HT20)	1	-11.17	P
	6	-11.33	P
	11	-11.66	P

802.11n-HT40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n (HT40)	3	-14.15	P
	6	-14.64	P
	9	-14.33	P

802.11ax-HE20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax (HE20)	1	-13.14	P
	6	-14.39	P
	11	-13.83	P

802.11ax-HE40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax (HE40)	3	-15.68	P
	6	-16.30	P
	9	-16.34	P

(W1&W2&w4)

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11b	1	-11.84	P
	6	-11.68	P
	11	-11.43	P
802.11g	1	-13.62	P
	6	-13.49	P
	11	-13.29	P

802.11n-HT20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n (HT20)	1	-11.63	P
	6	-12.19	P
	11	-11.60	P

802.11n-HT40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n (HT40)	3	-14.99	P
	6	-15.14	P
	9	-14.51	P

802.11ax-HE20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax (HE20)	1	-12.82	P
	6	-12.51	P
	11	-12.46	P

802.11ax-HE40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax (HE40)	3	-15.06	P
	6	-14.79	P

	9	-15.24	**P**

(W1&W2&W3&W4)

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11b	1	-12.36	**P**
	6	-12.30	**P**
	11	-12.48	**P**
802.11g	1	-13.68	**P**
	6	-13.63	**P**
	11	-13.19	**P**

802.11n-HT20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n (HT20)	1	-11.44	**P**
	6	-11.89	**P**
	11	-11.63	**P**

802.11n-HT40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n (HT40)	3	-15.90	**P**
	6	-16.16	**P**
	9	-15.80	**P**

802.11ax-HE20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax (HE20)	1	-11.81	**P**
	6	-12.09	**P**
	11	-12.38	**P**

802.11ax-HE40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax (HE40)	3	-14.59	**P**
	6	-14.40	**P**
	9	-14.30	**P**

Conclusion: Pass

Test graphs as below:

siso

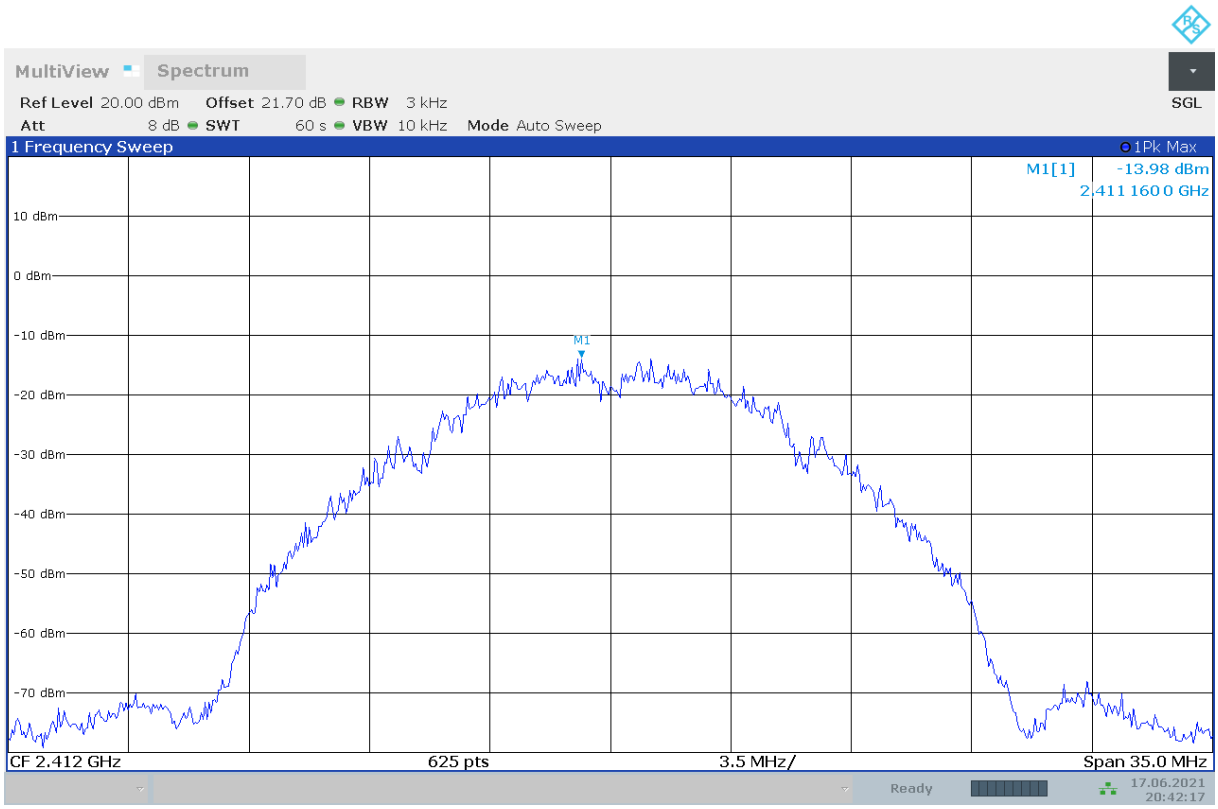


Fig.A.3.1 Power Spectral Density(802.11b,Ch1)

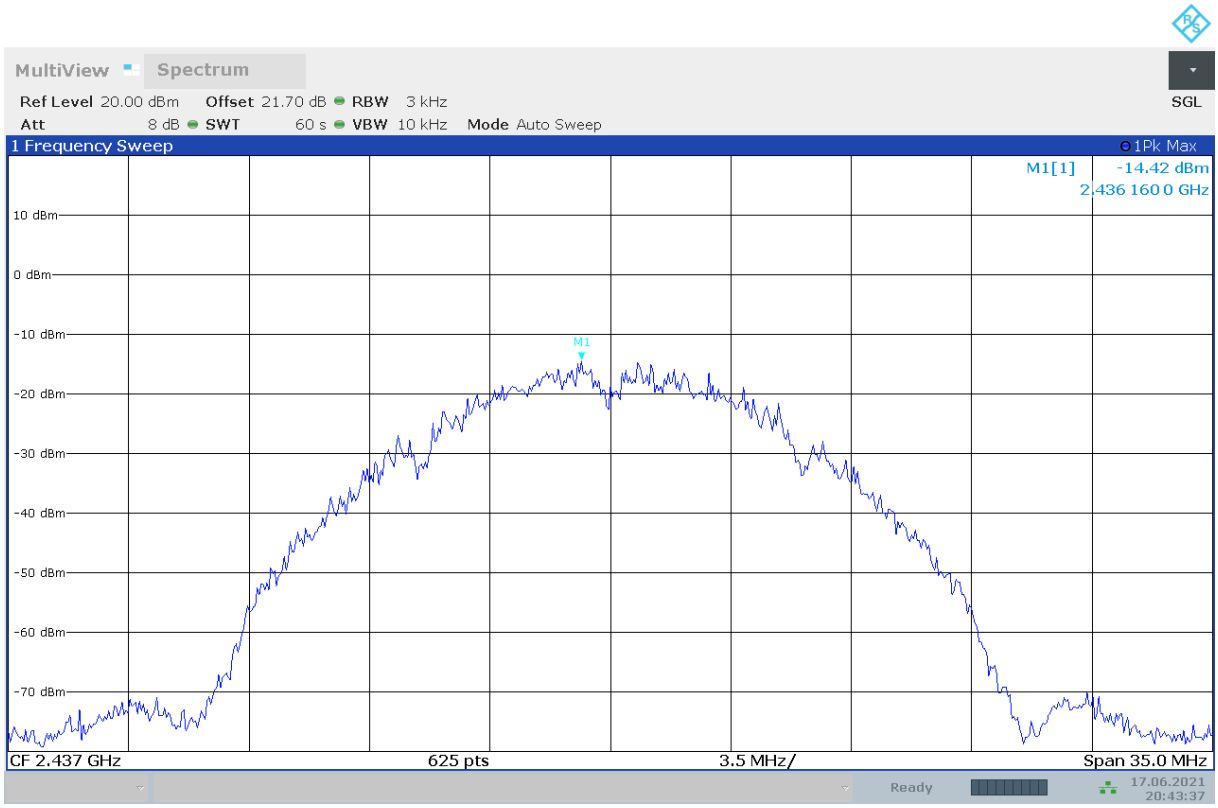


Fig.A.3.2 Power Spectral Density (802.11b, Ch 6)

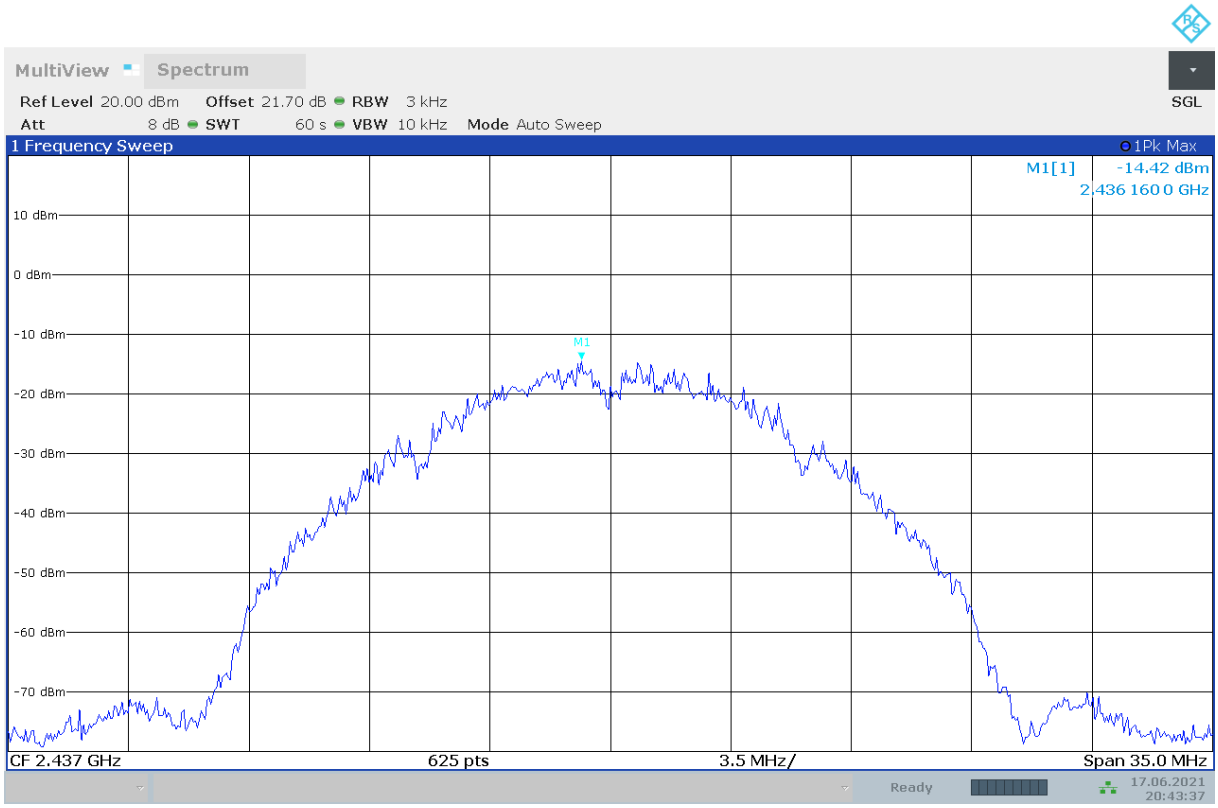


Fig.A.3.3 Power Spectral Density (802.11b, Ch 11)

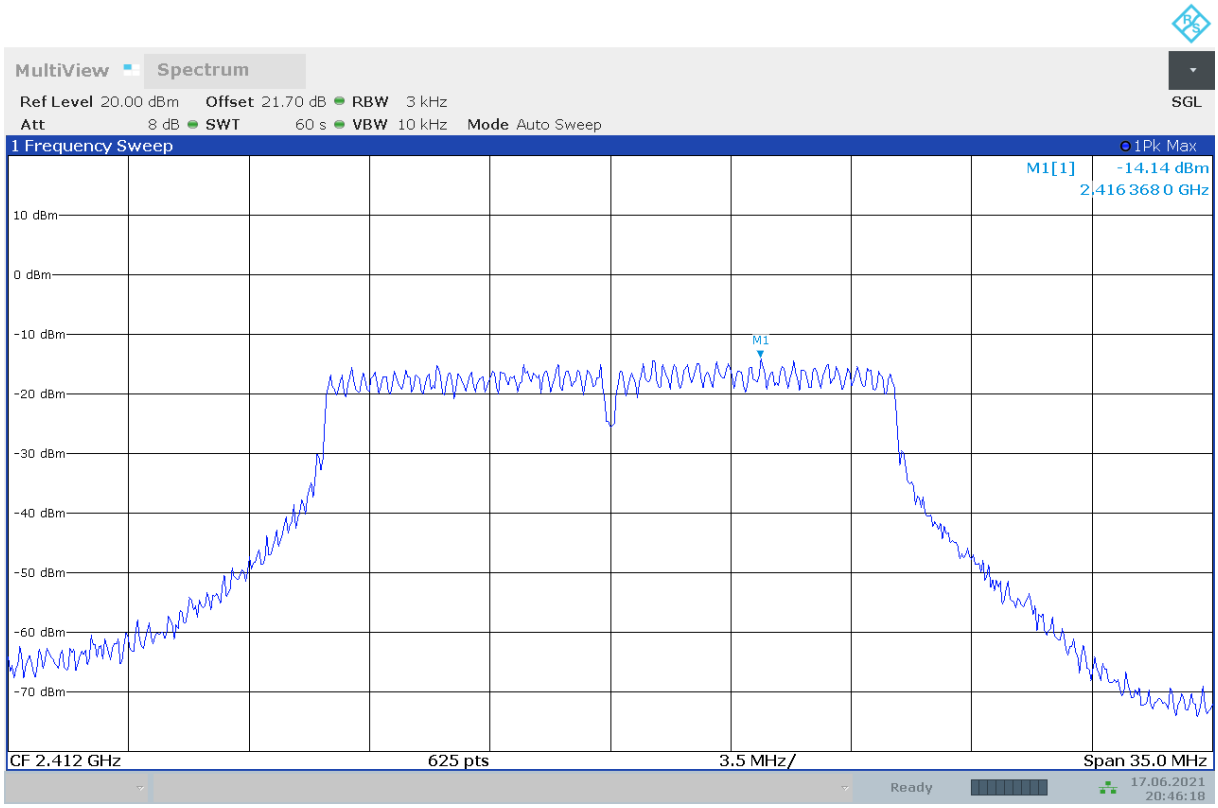


Fig.A.3.4 Power Spectral Density (802.11g, Ch 1)

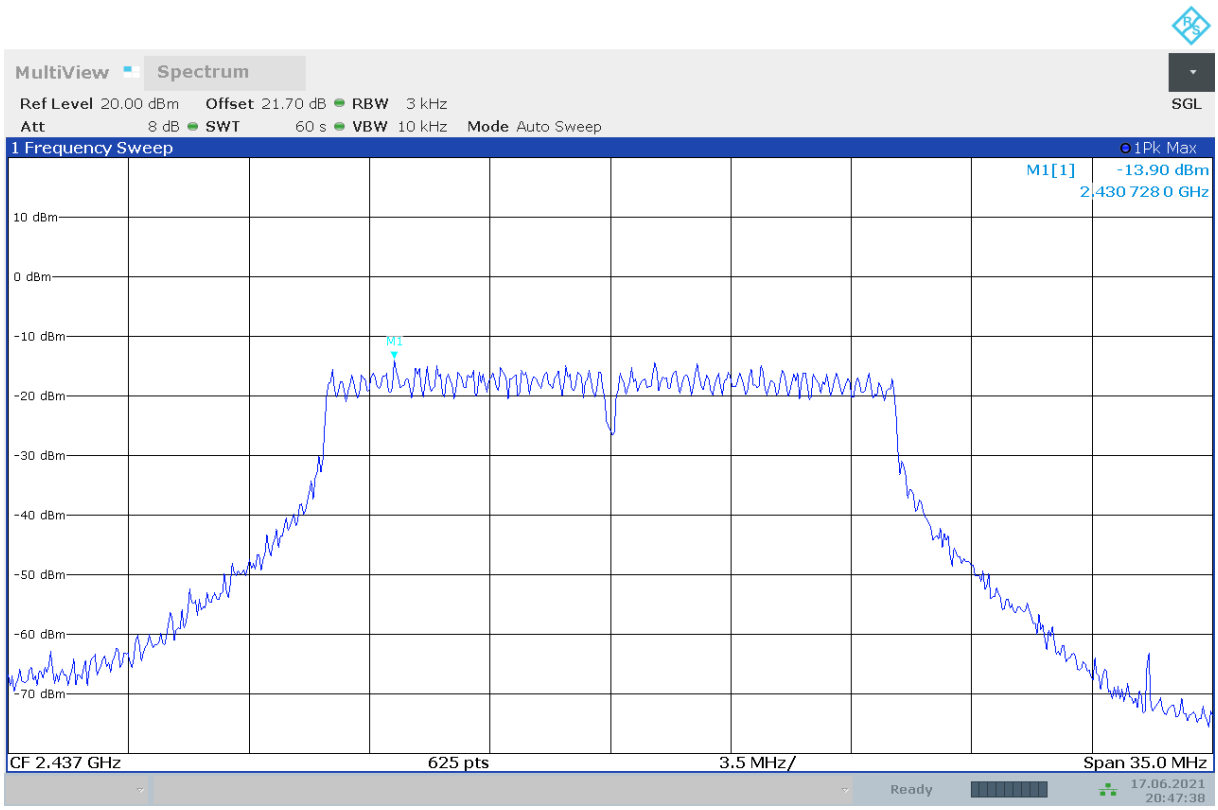


Fig.A.3.5 Power Spectral Density (802.11g, Ch 6)

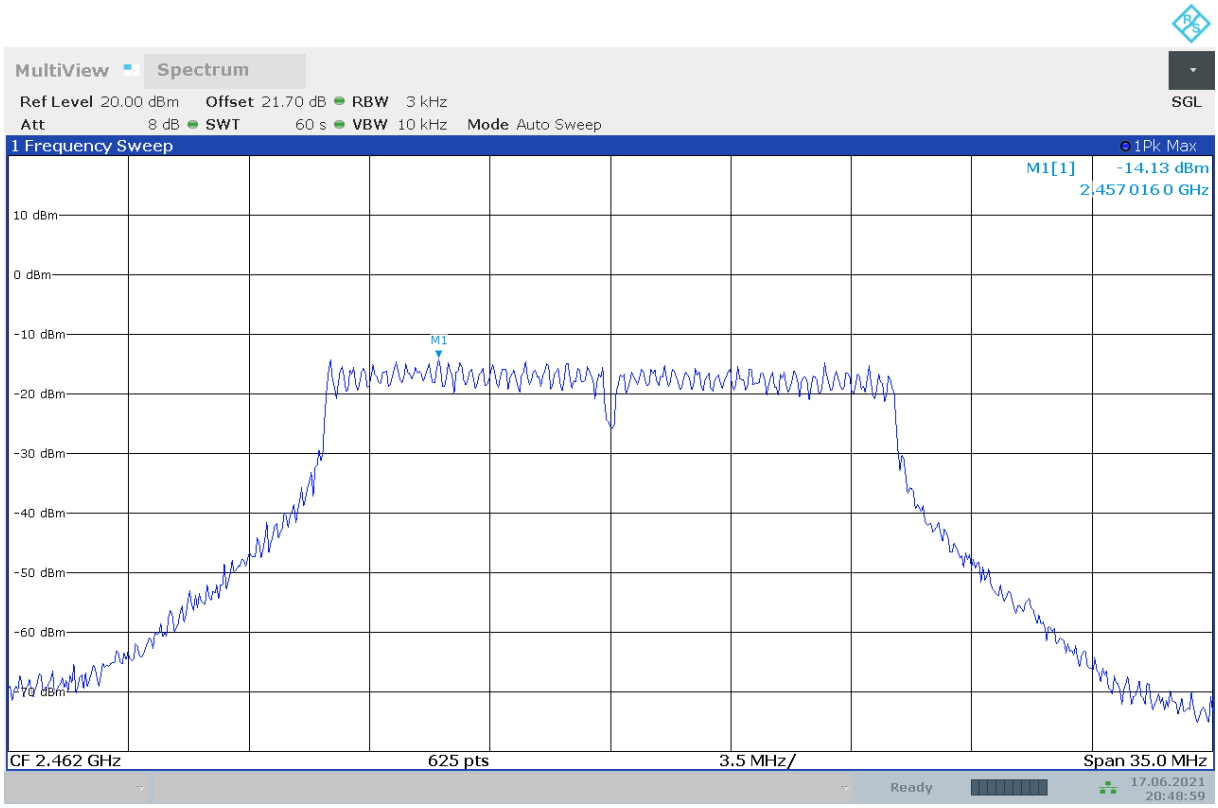


Fig.A.3.6 Power Spectral Density (802.11g, Ch 11)

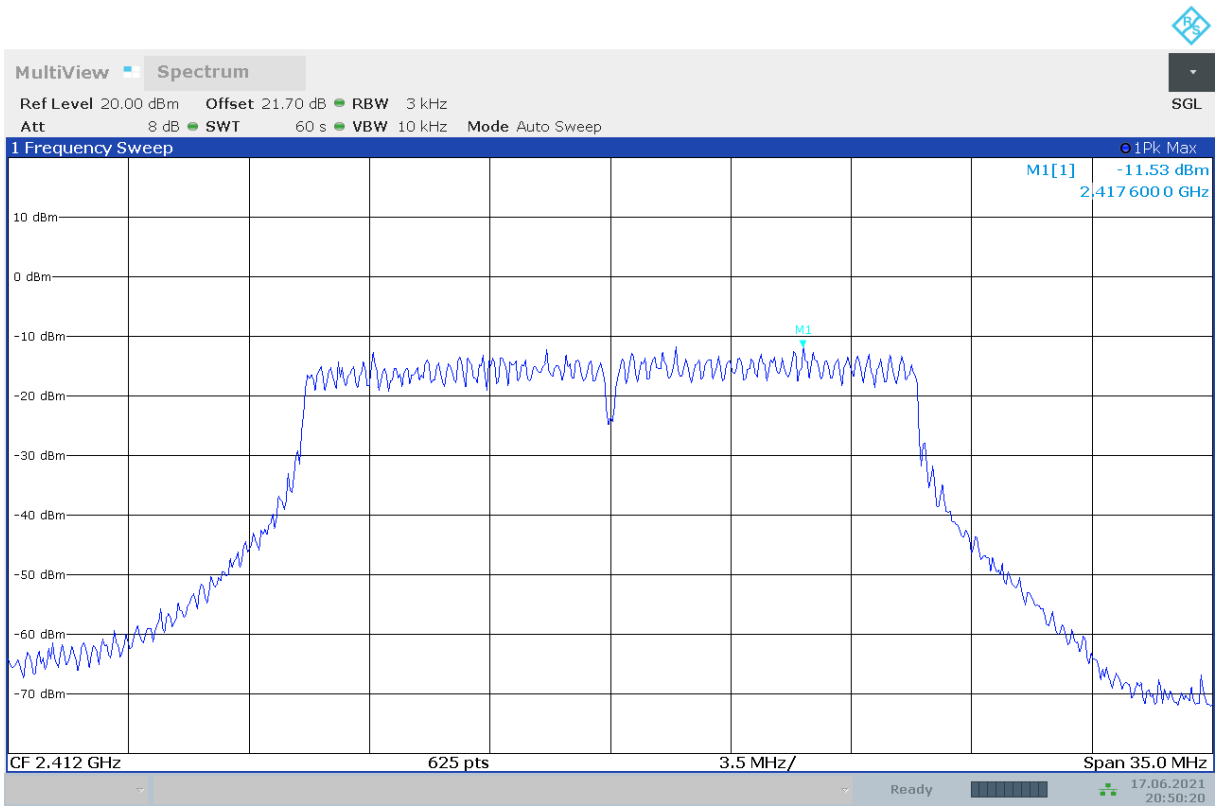


Fig.A.3.7 Power Spectral Density (802.11n-HT20, Ch 1)

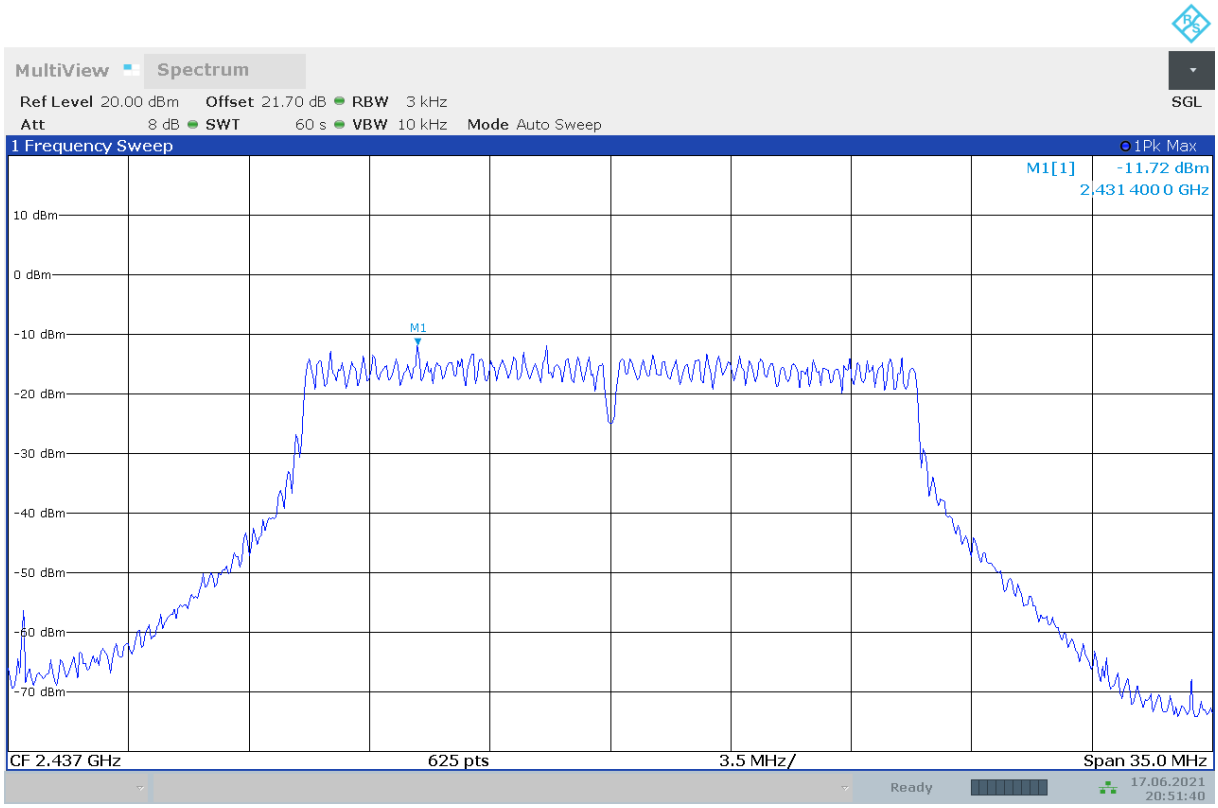


Fig.A.3.8 Power Spectral Density (802.11n-HT20, Ch 6)

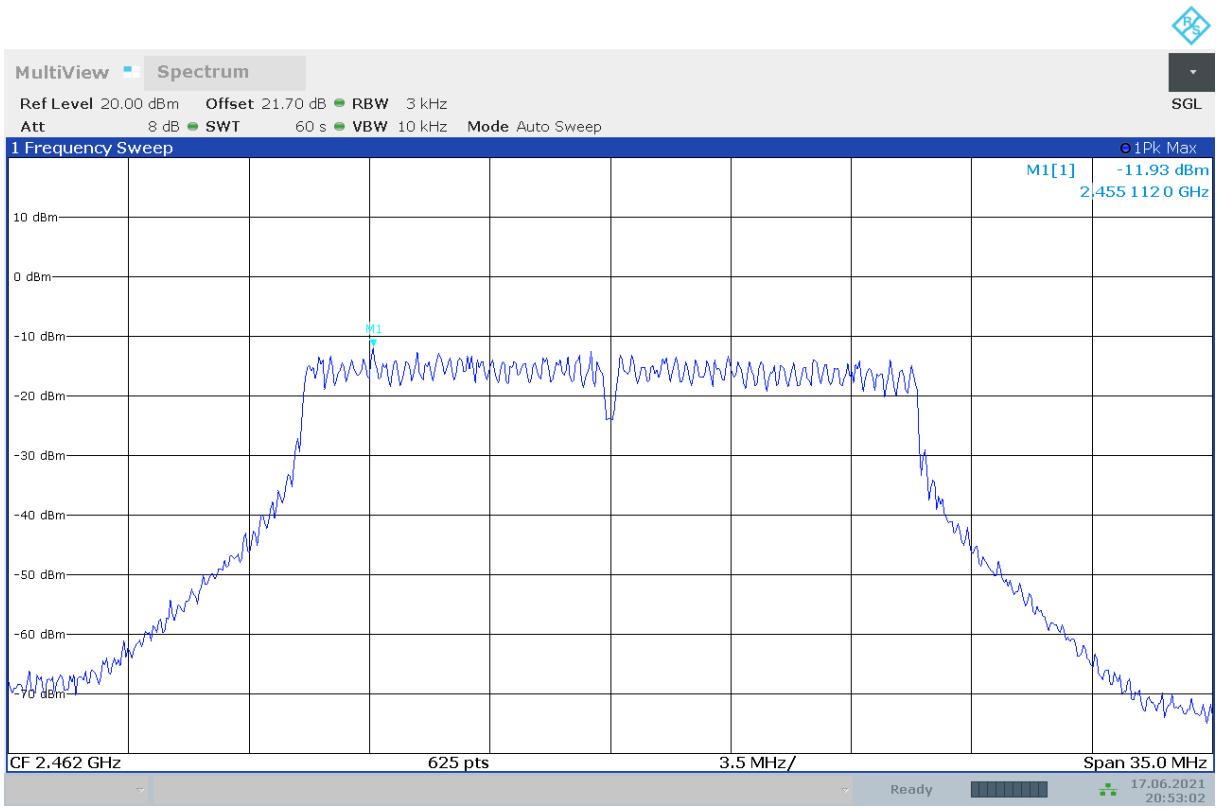


Fig.A.3.9 Power Spectral Density (802.11n-HT20, Ch 11)

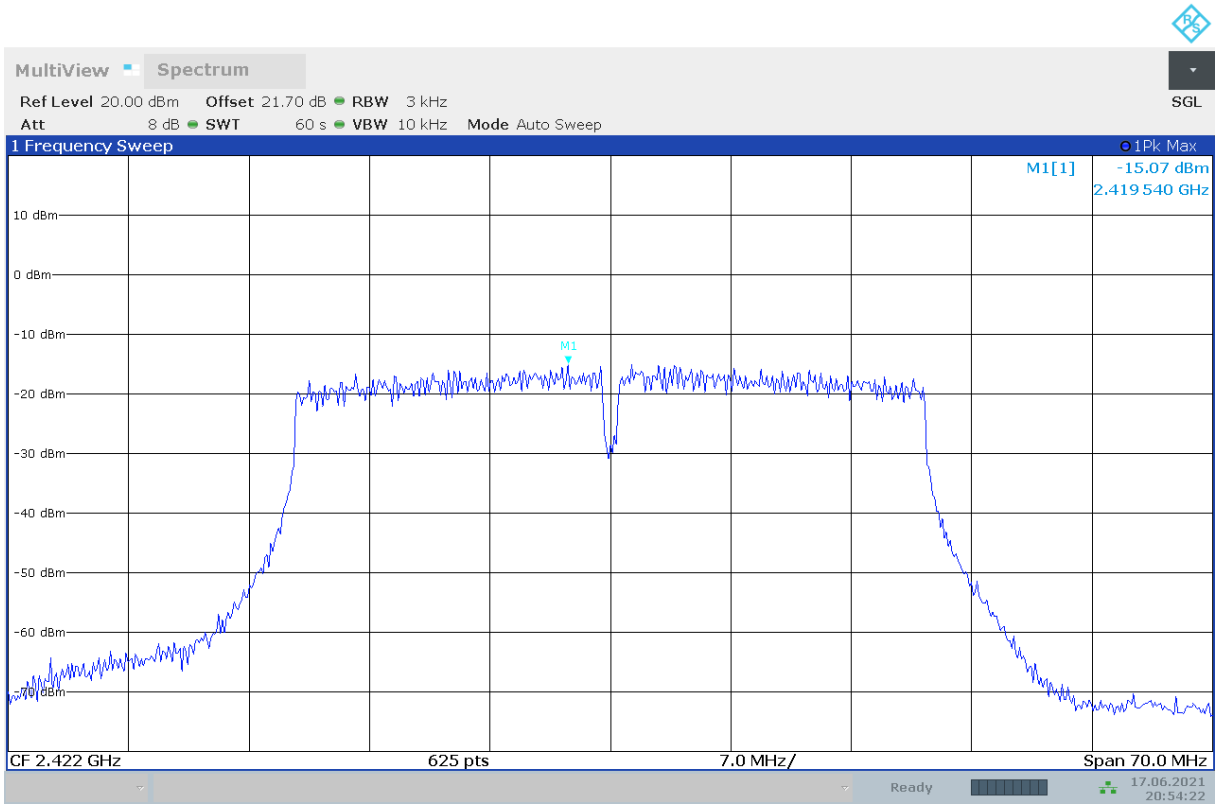


Fig.A.3.10 Power Spectral Density (802.11n-HT40, Ch 3)

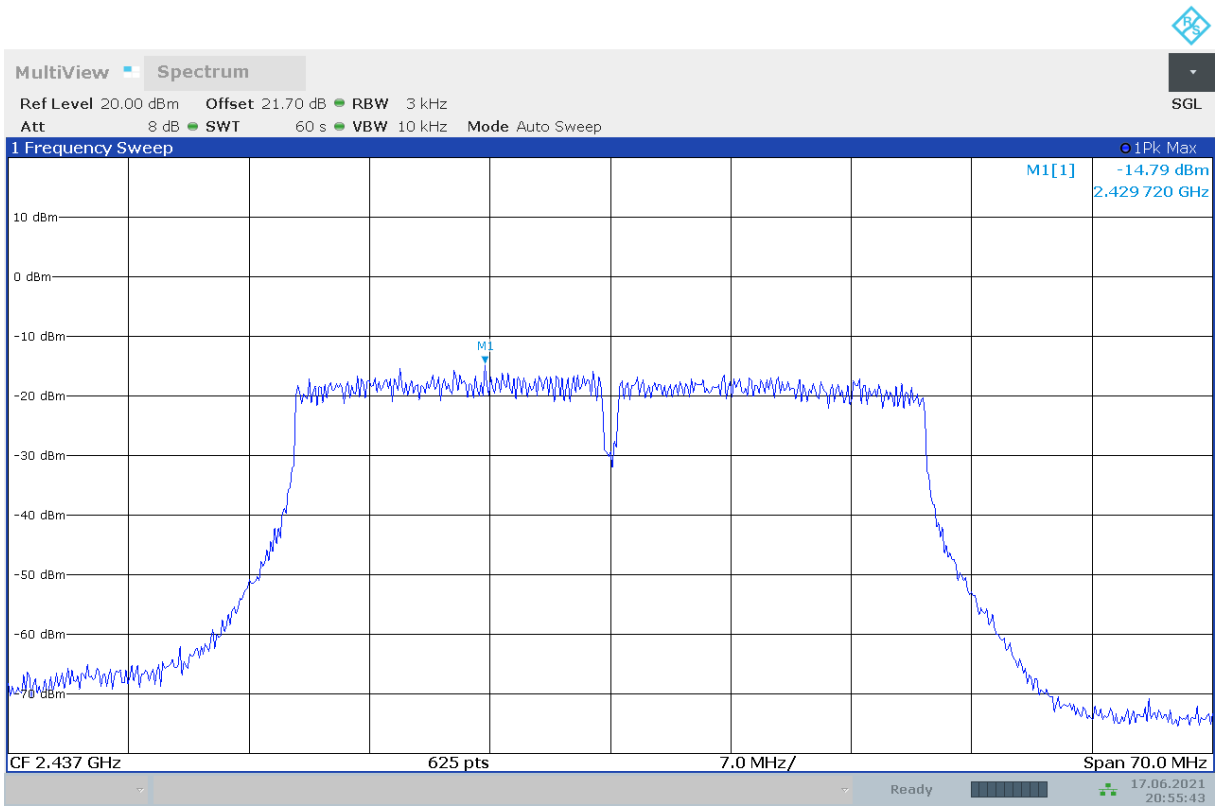


Fig.A.3.11 Power Spectral Density (802.11n-HT40, Ch 6)

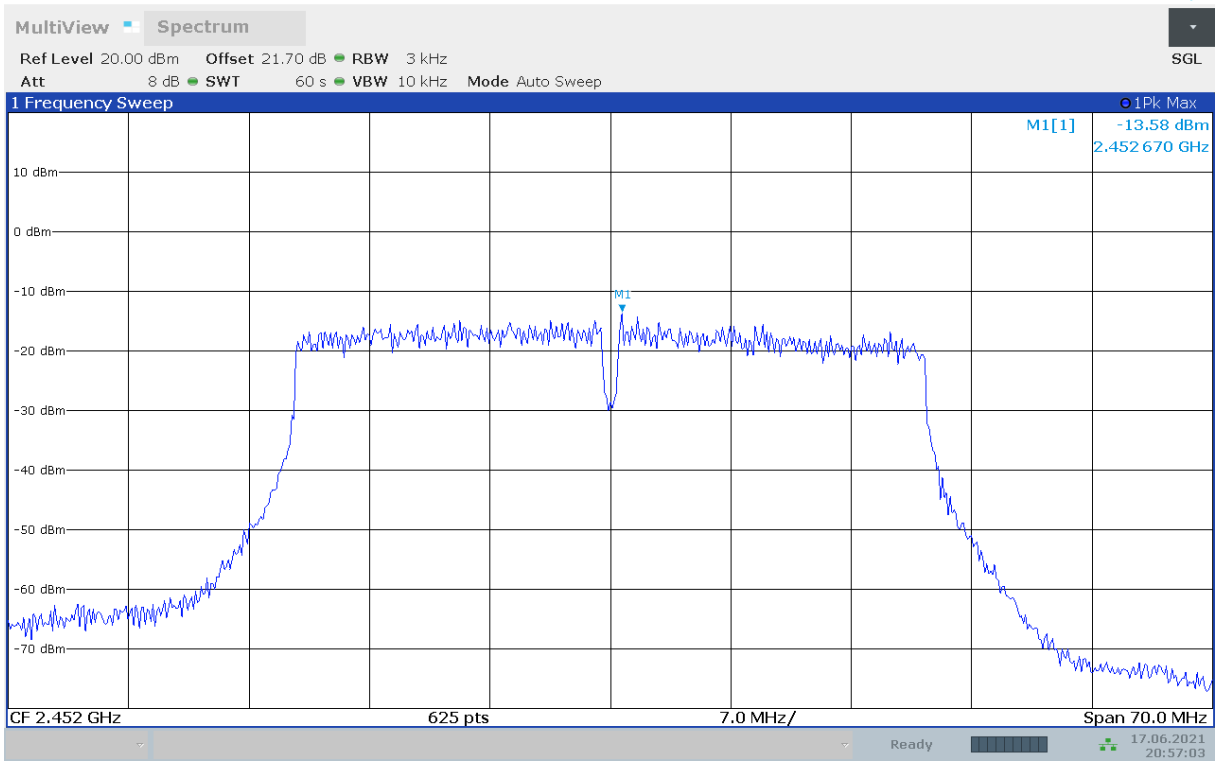


Fig.A.3.12 Power Spectral Density (802.11n-HT40, Ch 9)

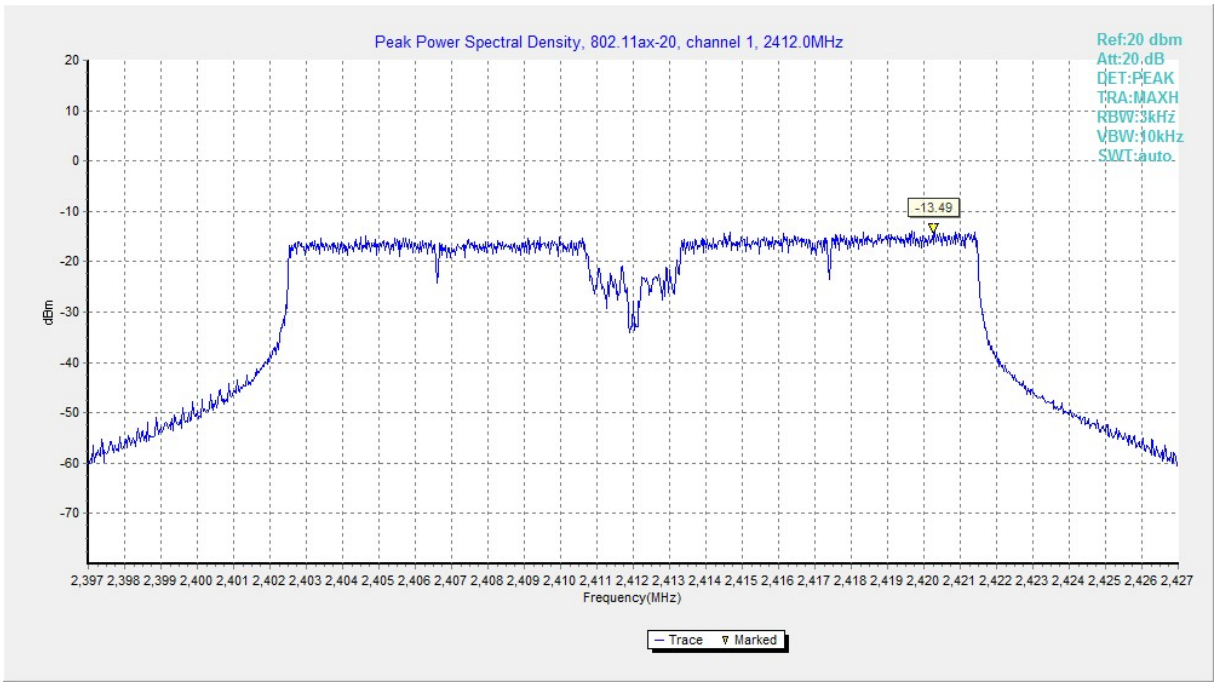


Fig.A.3.13 Power Spectral Density (802.11ax-HE20, Ch 1)

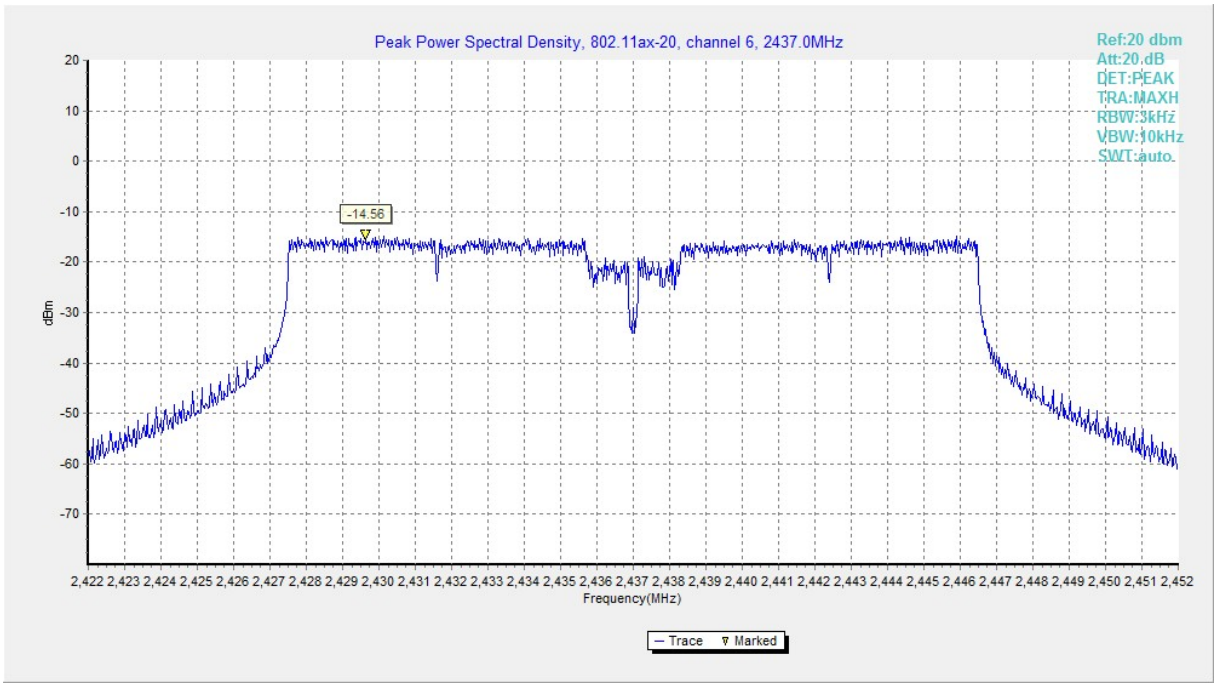


Fig.A.3.14 Power Spectral Density (802.11ax-HE20, Ch 6)

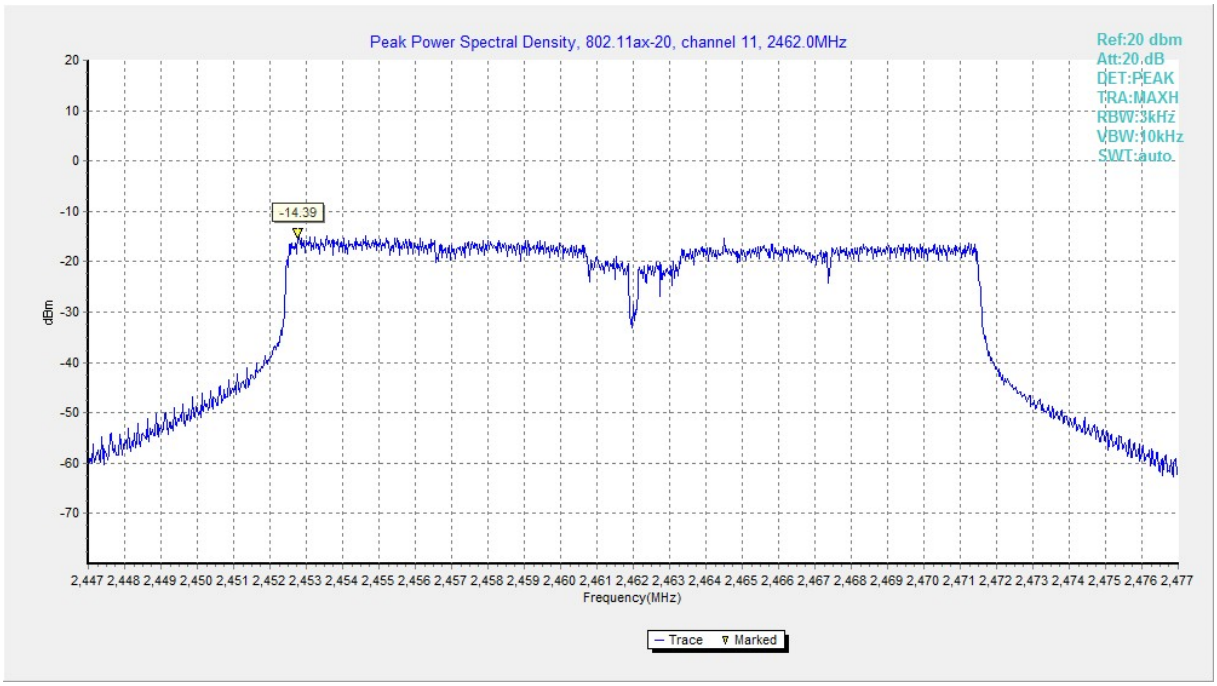


Fig.A.3.15 Power Spectral Density (802.11ax-HE20, Ch 11)

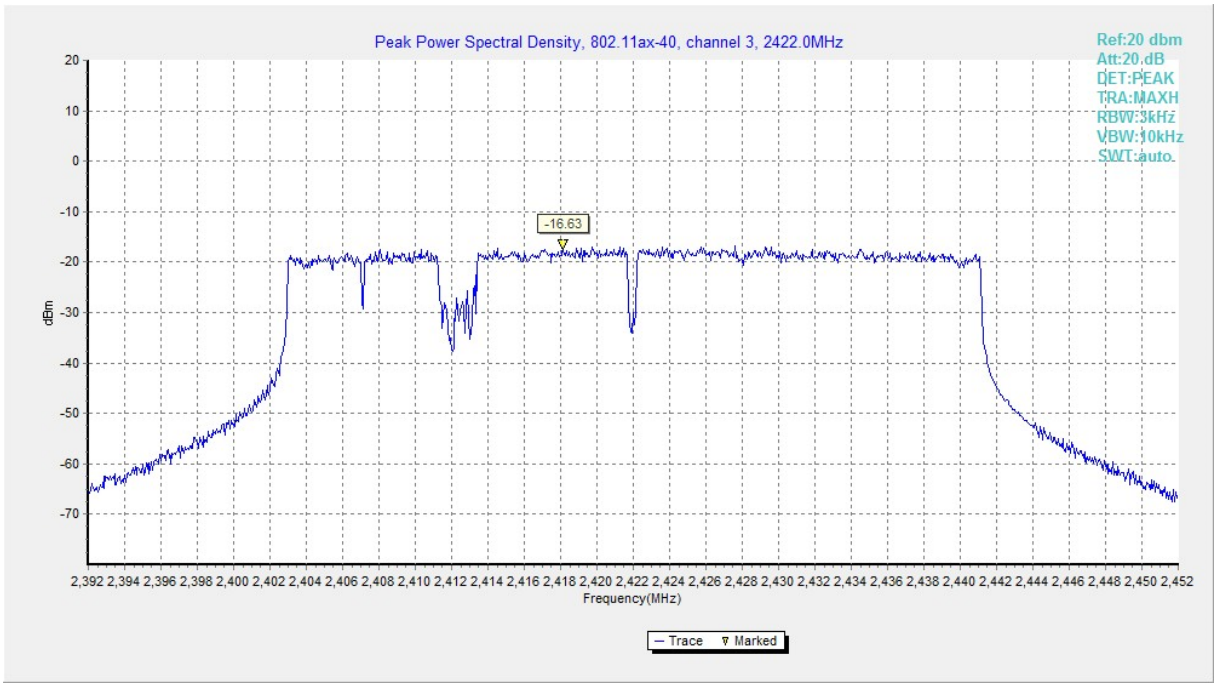


Fig.A.3.16 Power Spectral Density (802.11ax-HE40, Ch 3)

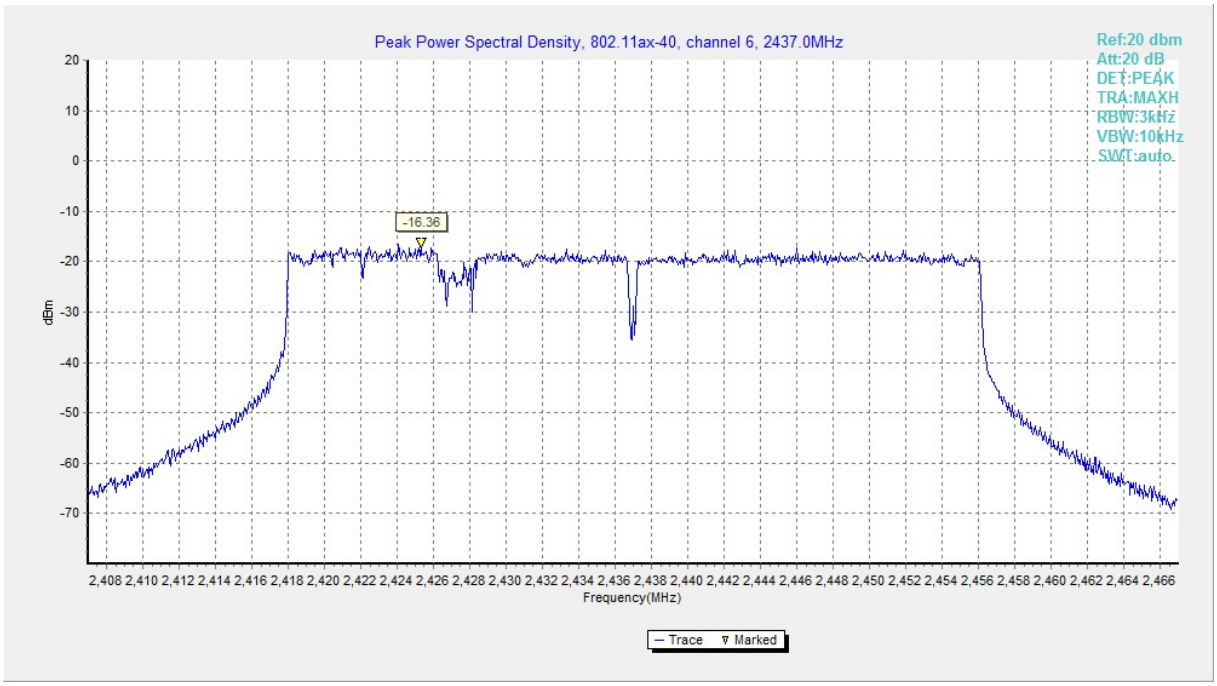


Fig.A.3.17 Power Spectral Density (802.11ax-HE40, Ch 6)

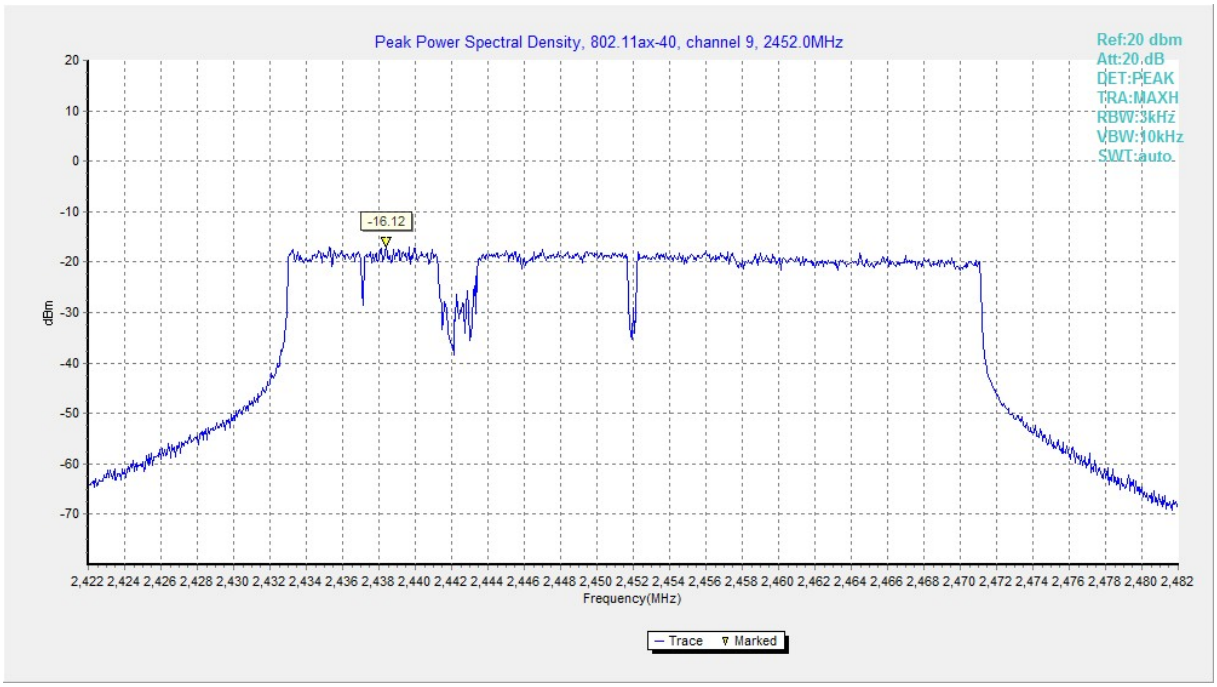


Fig.A.3.18 Power Spectral Density (802.11ax-HE40, Ch 9)

MIMO&CDD(W1&W2-W1)

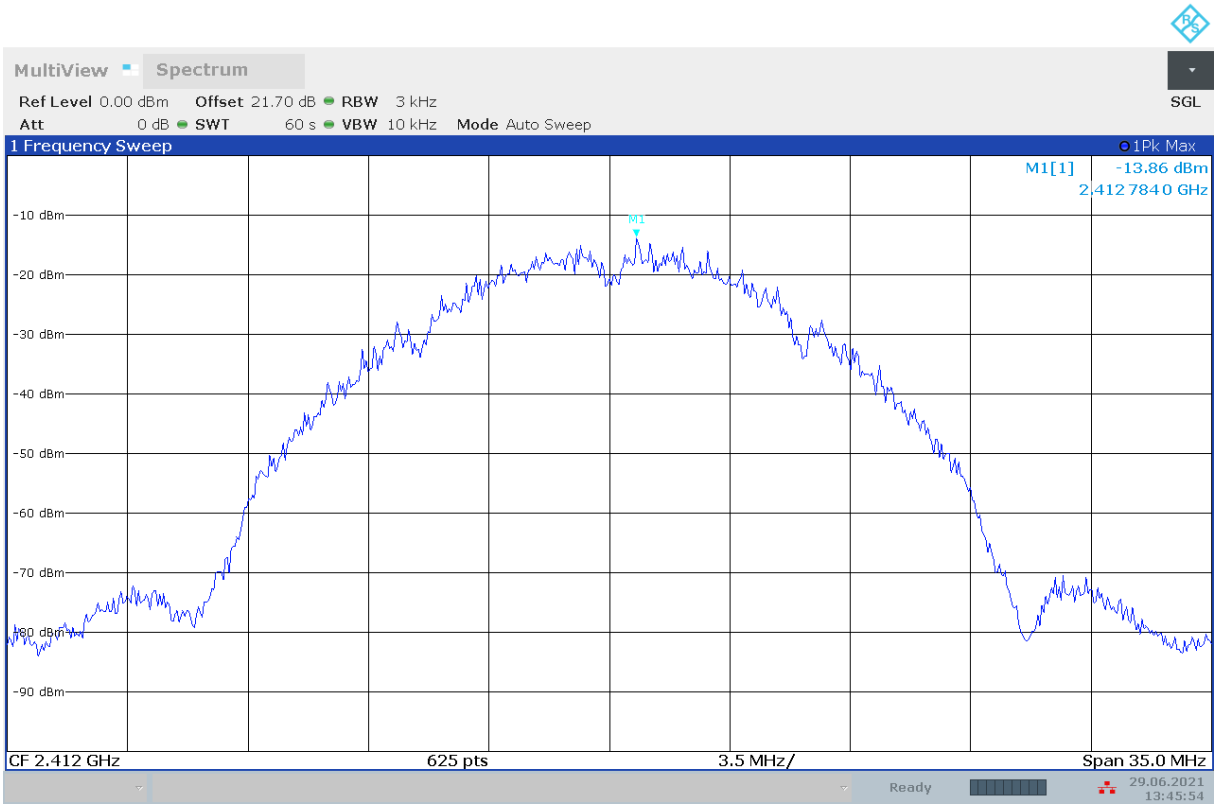


Fig.A.3.19 Power Spectral Density(802.11b,Ch1)

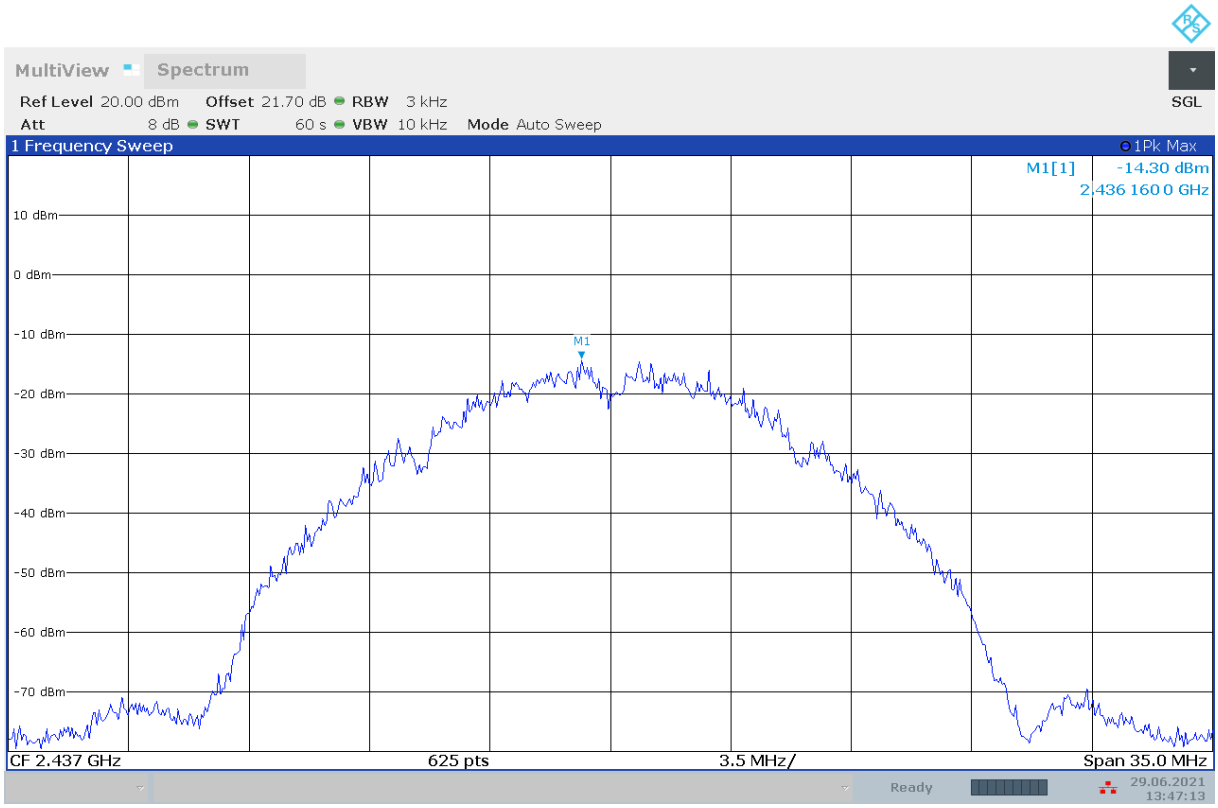


Fig.A.3.20 Power Spectral Density (802.11b, Ch 6)

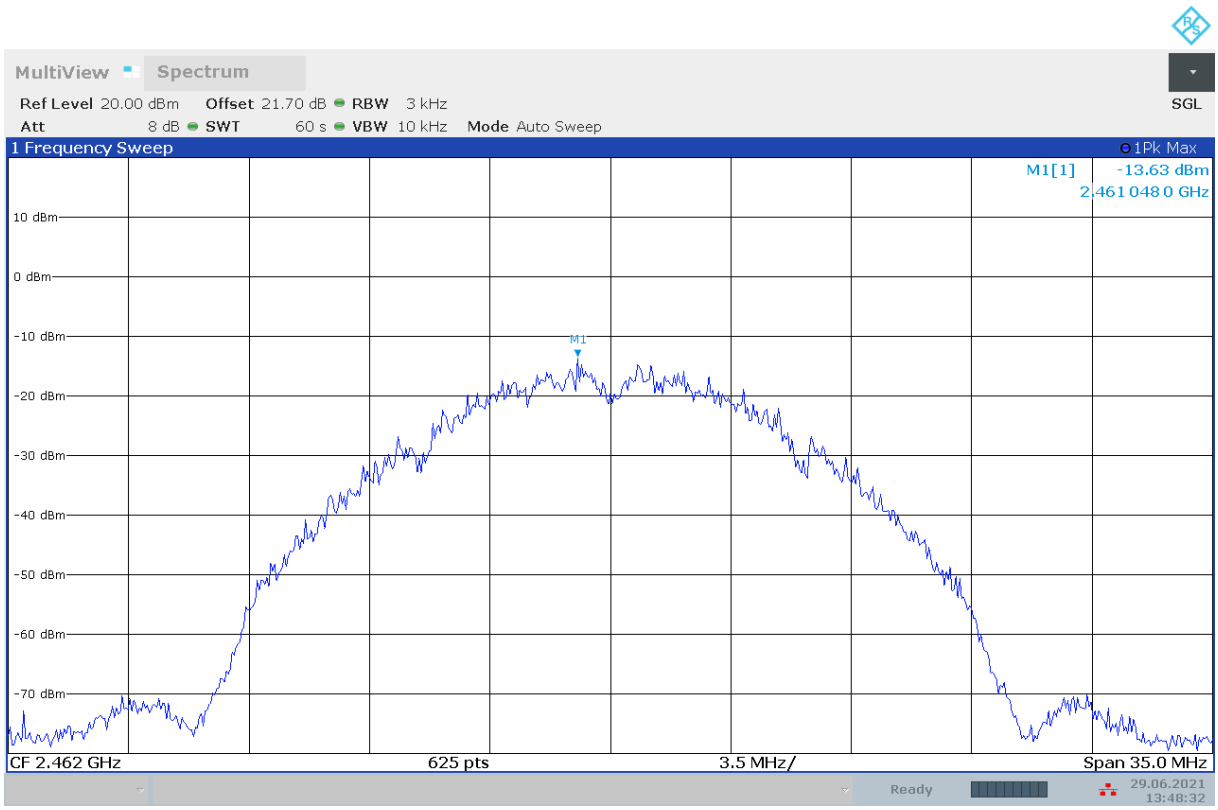


Fig.A.3.21 Power Spectral Density (802.11b, Ch 11)

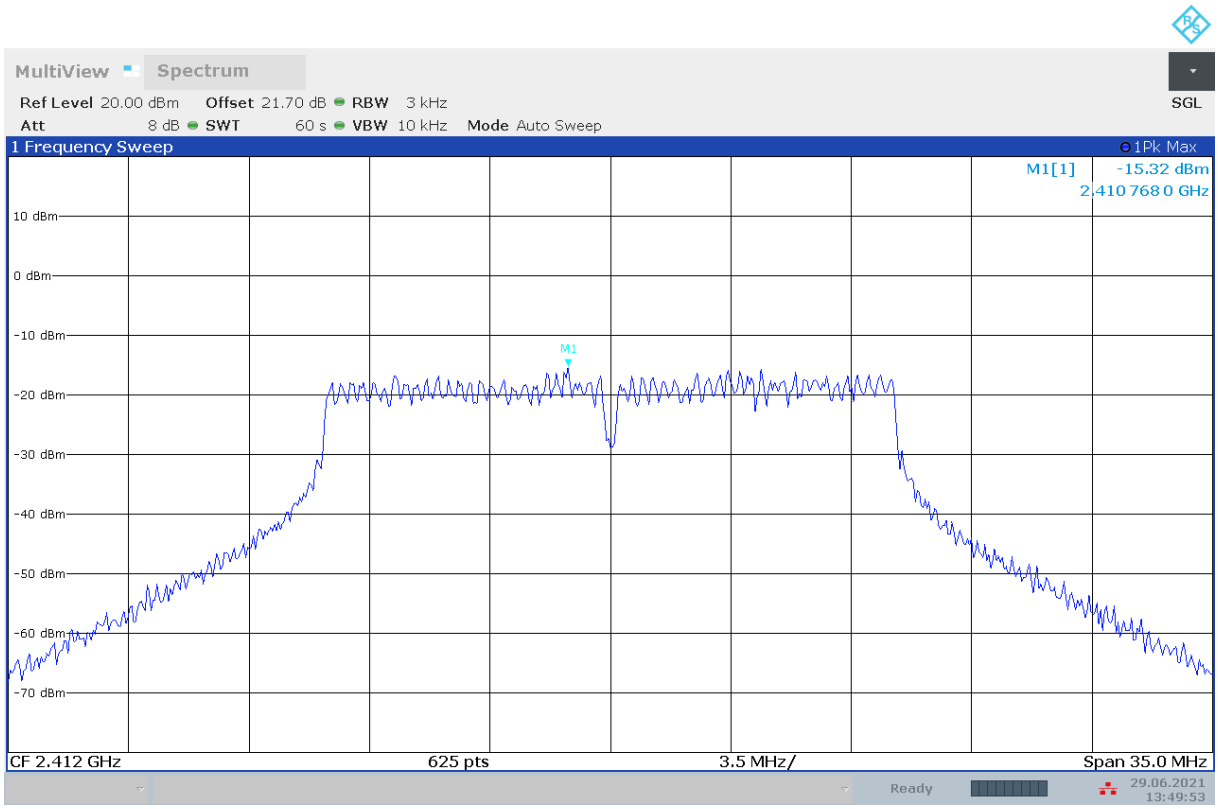


Fig.A.3.22 Power Spectral Density (802.11g, Ch 1)

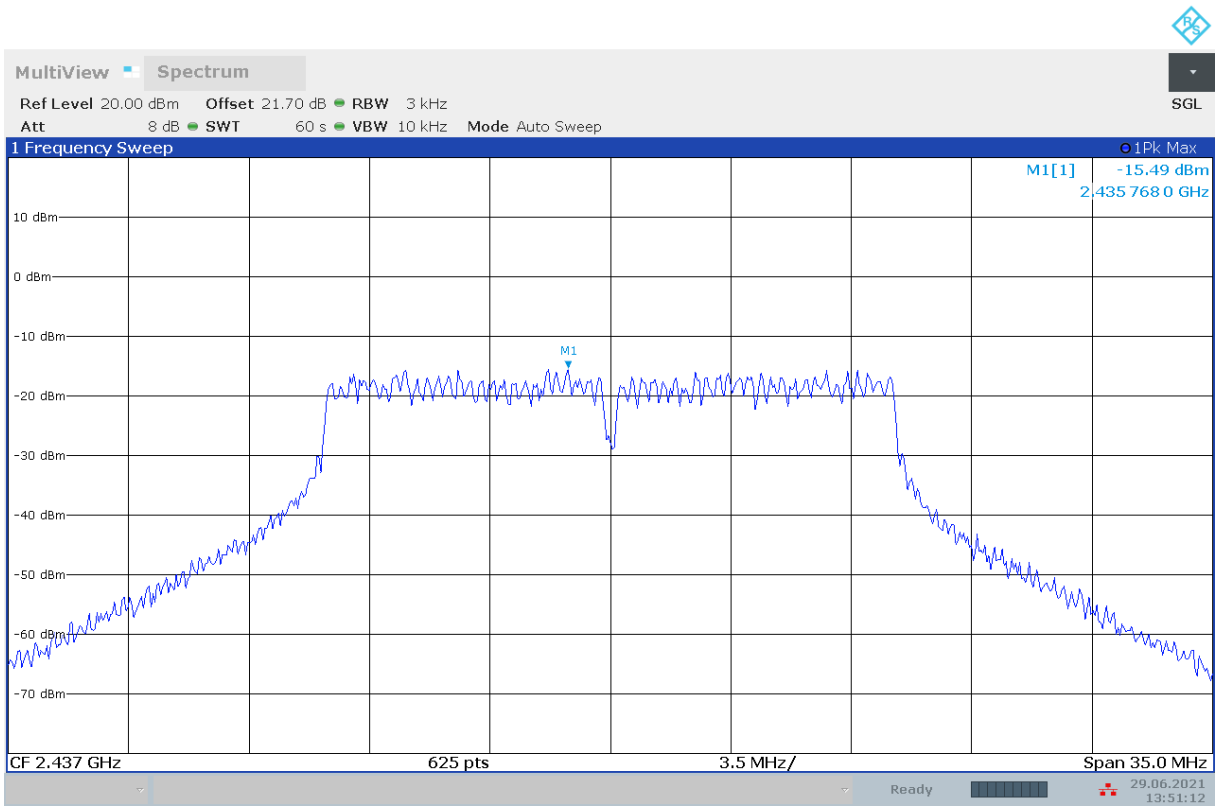


Fig.A.3.23 Power Spectral Density (802.11g, Ch 6)

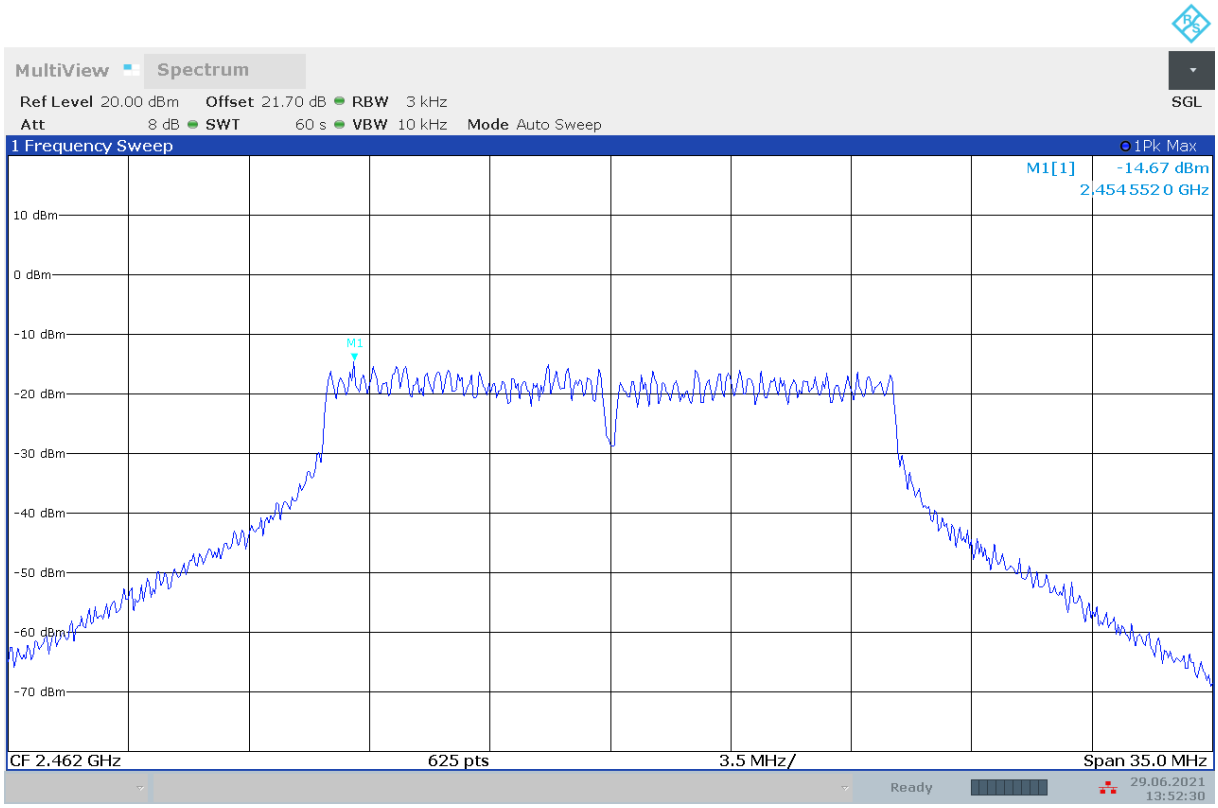


Fig.A.3.24 Power Spectral Density (802.11g, Ch 11)

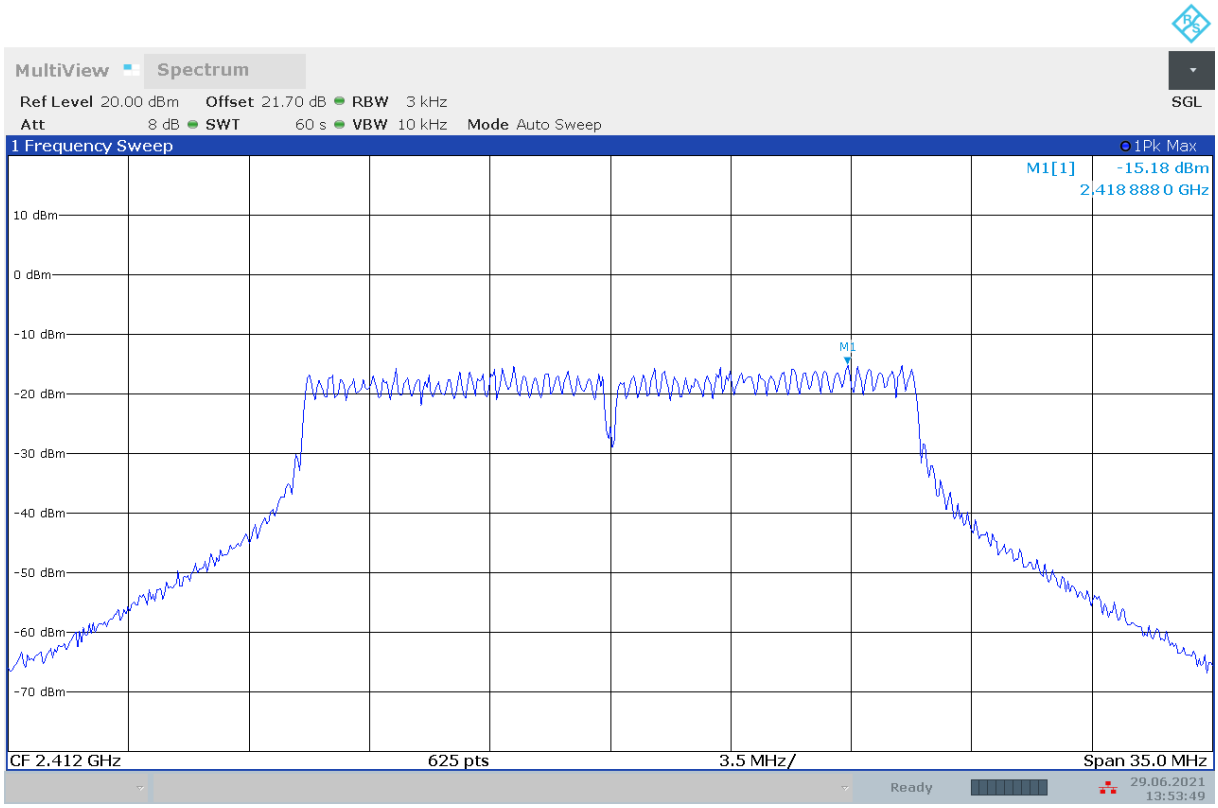


Fig.A.3.25 Power Spectral Density (802.11n-HT20, Ch 1)

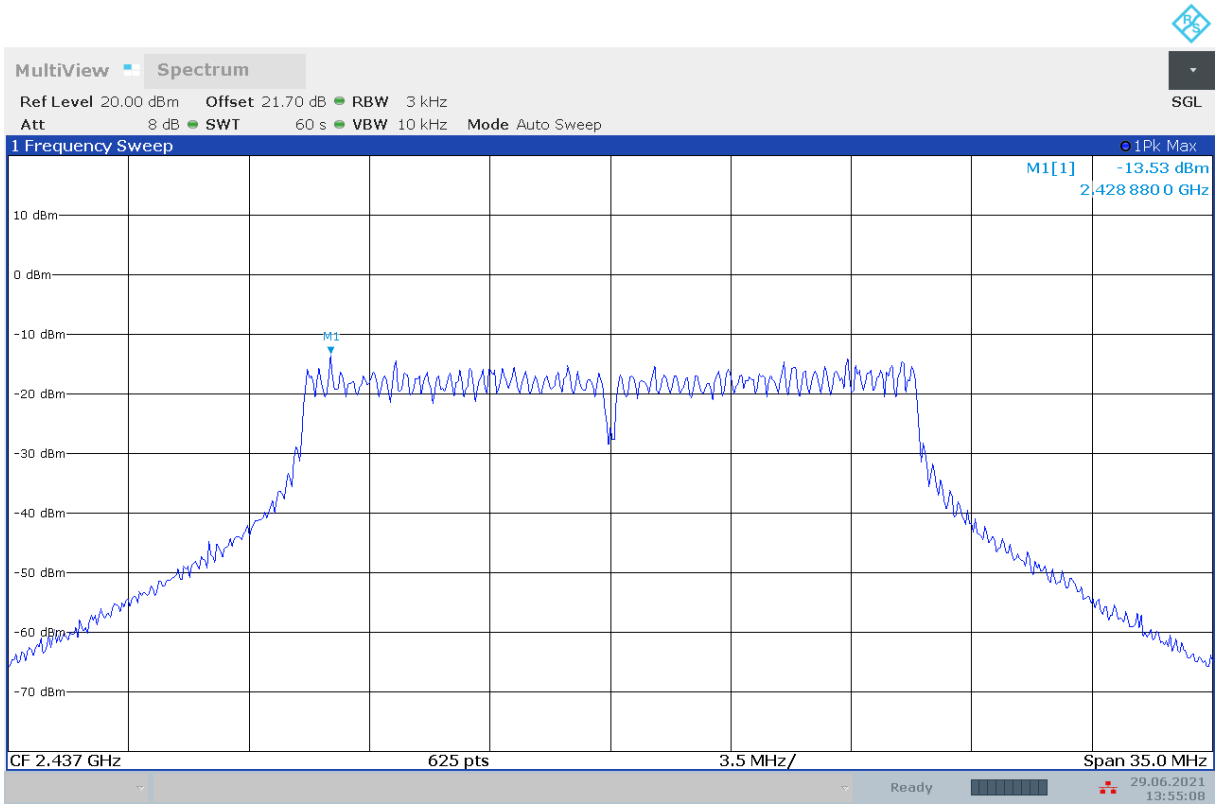


Fig.A.3.26 Power Spectral Density (802.11n-HT20, Ch 6)

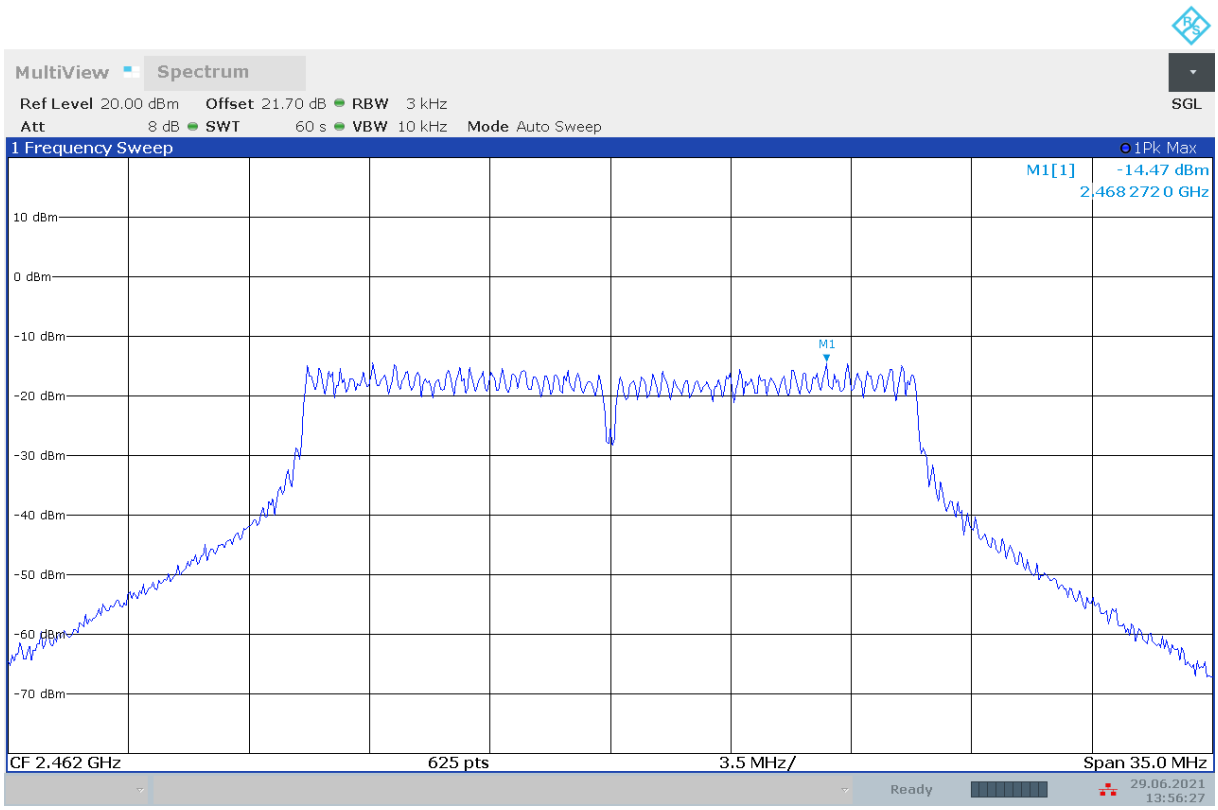


Fig.A.3.27 Power Spectral Density (802.11n-HT20, Ch 11)

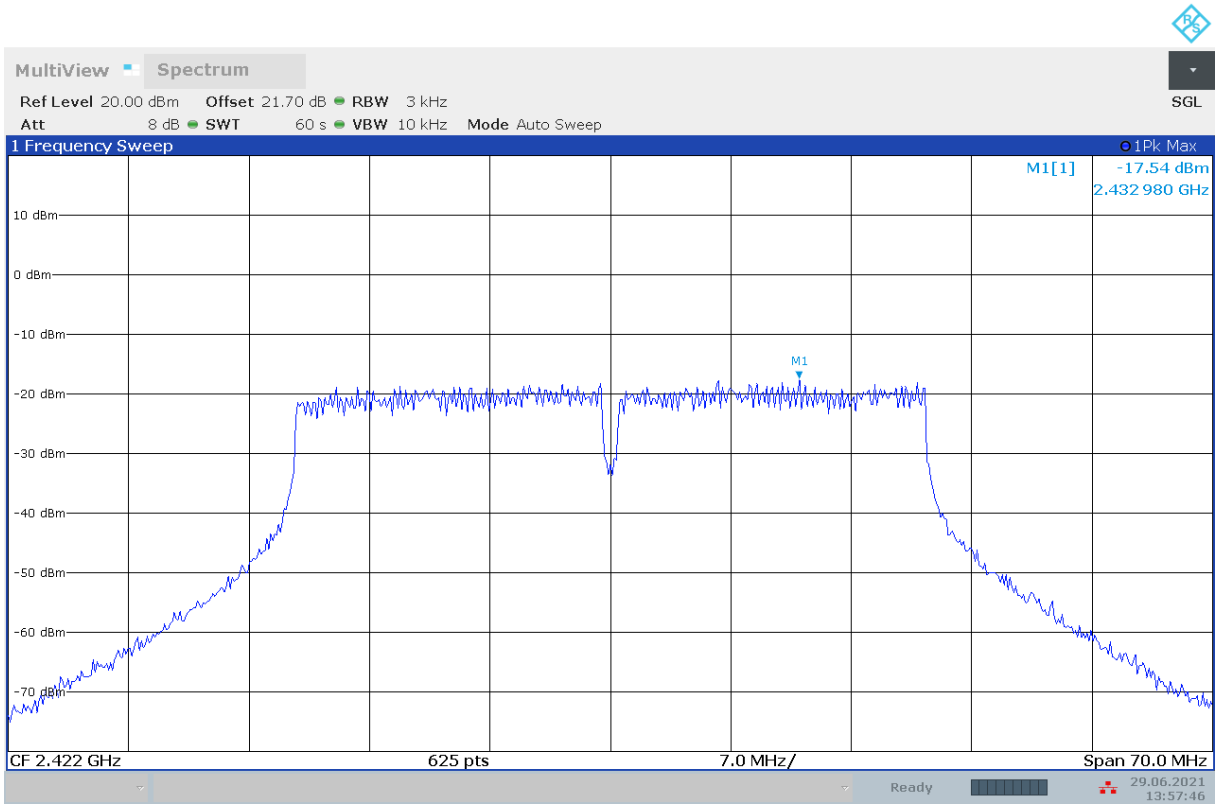


Fig.A.3.28 Power Spectral Density (802.11n-HT40, Ch 3)

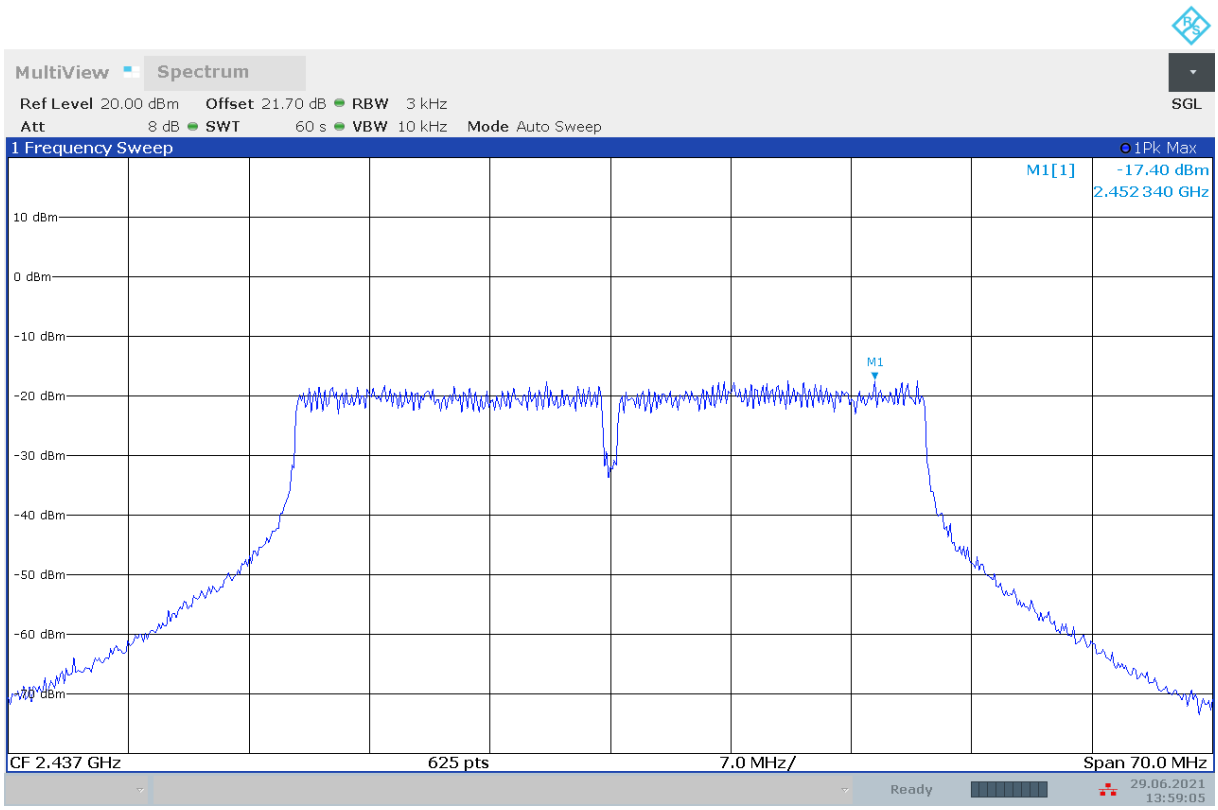


Fig.A.3.29 Power Spectral Density (802.11n-HT40, Ch 6)

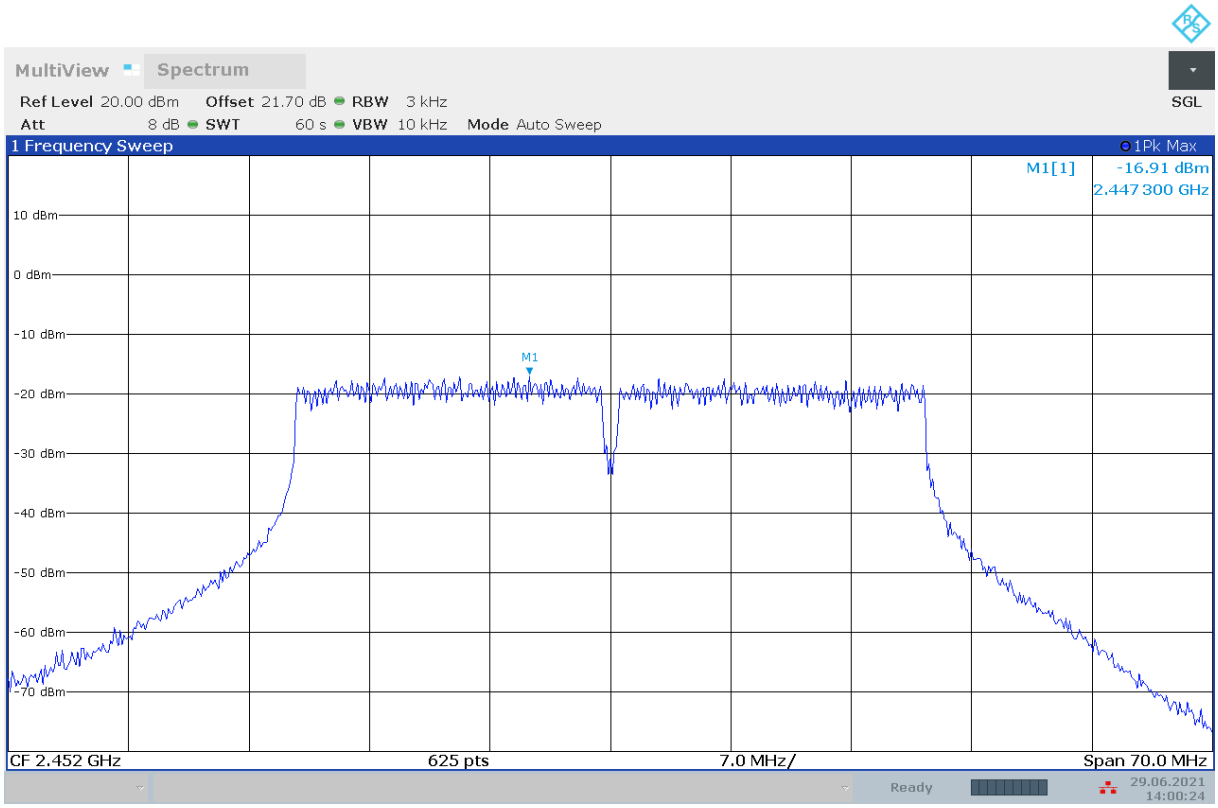


Fig.A.3.30 Power Spectral Density (802.11n-HT40, Ch 9)

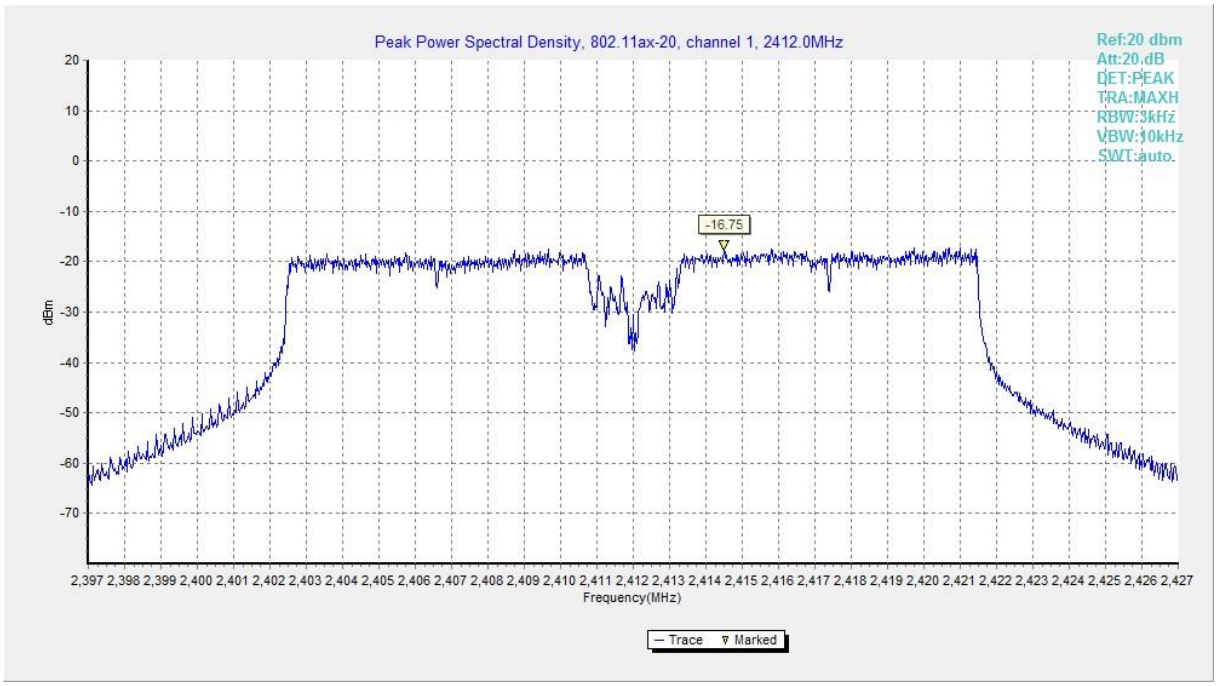


Fig.A.3.31 Power Spectral Density (802.11ax-HE20, Ch 1)

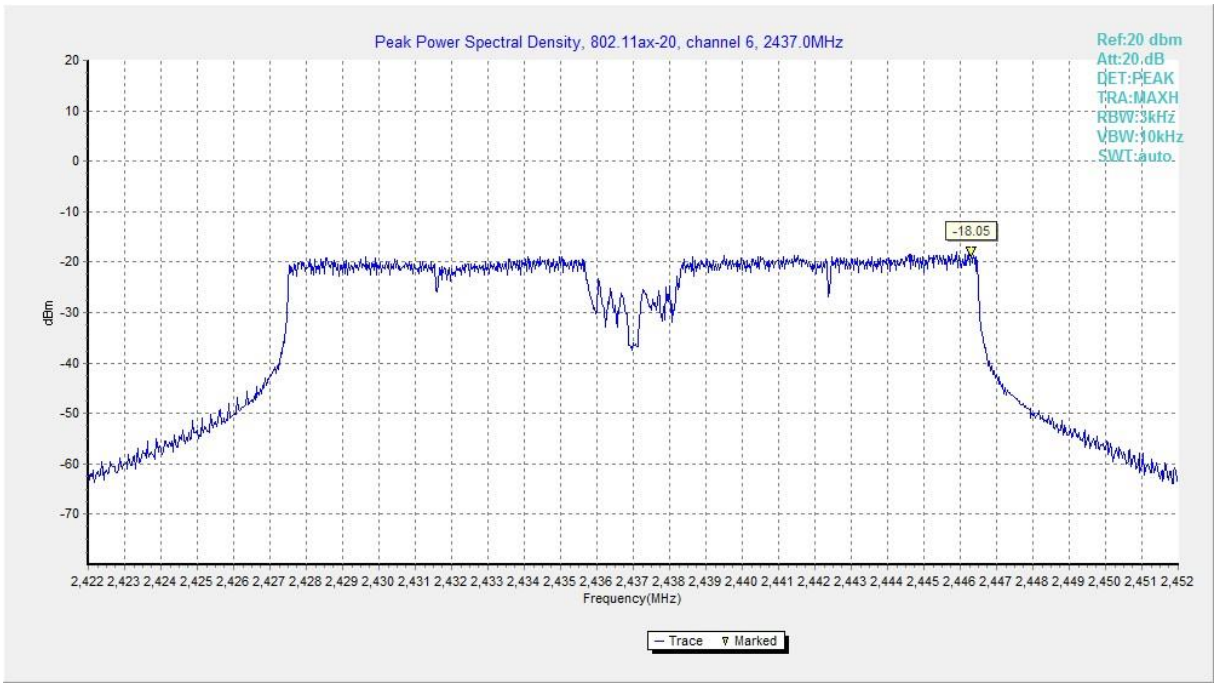


Fig.A.3.32 Power Spectral Density (802.11ax-HE20, Ch 6)

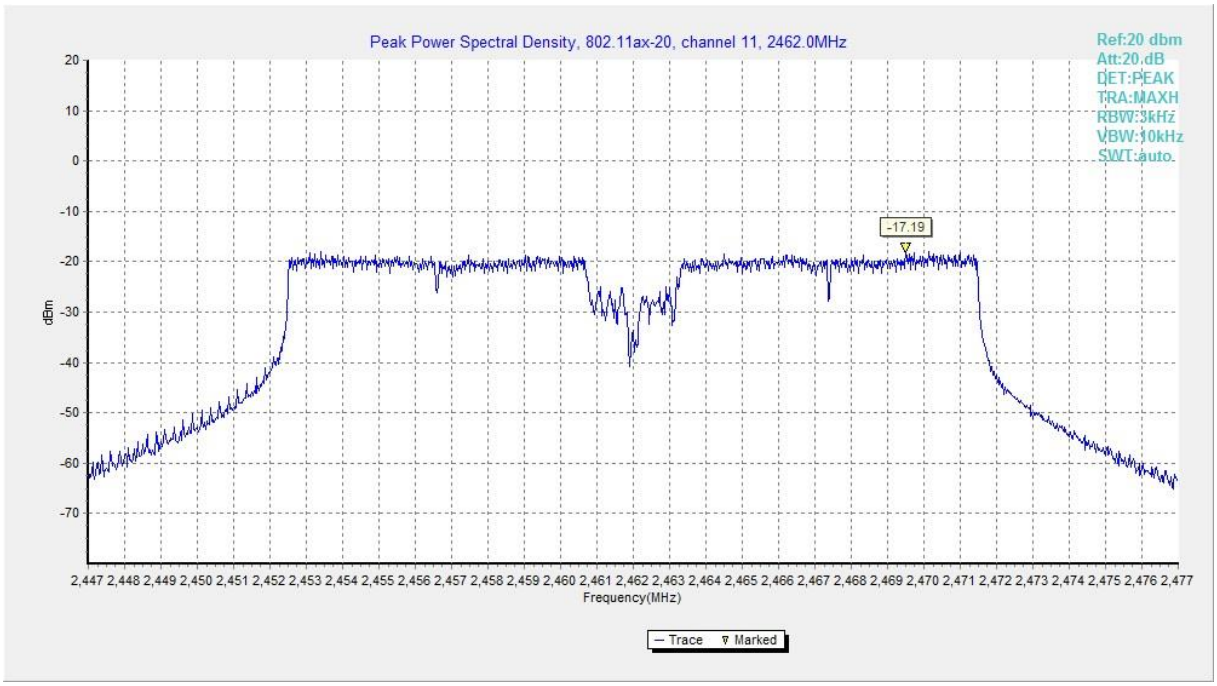


Fig.A.3.33 Power Spectral Density (802.11ax-HE20, Ch 11)

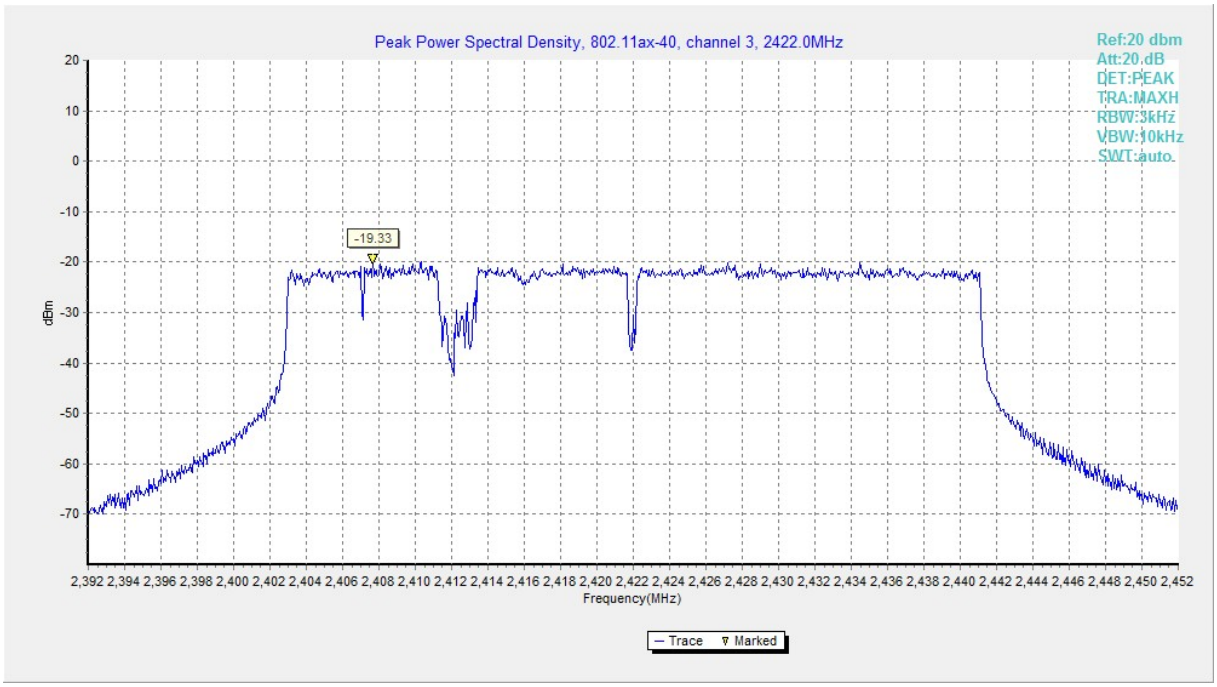


Fig.A.3.34 Power Spectral Density (802.11ax-HE40, Ch 3)

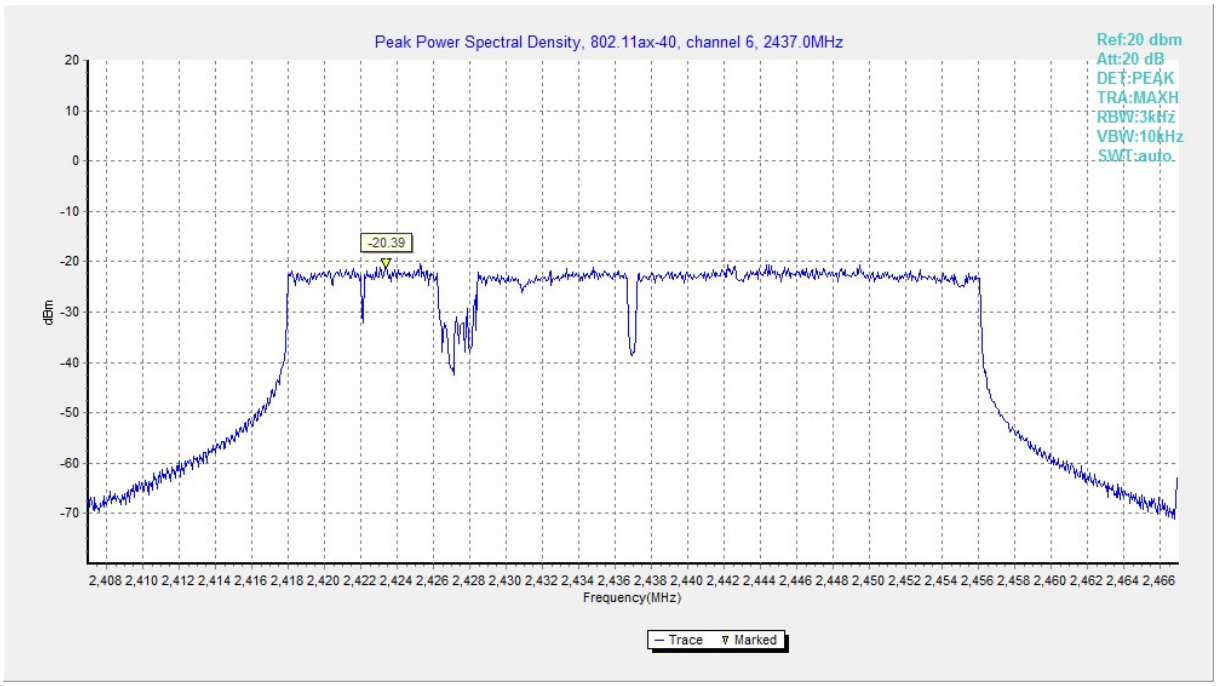


Fig.A.3.35 Power Spectral Density (802.11ax-HE40, Ch 6)

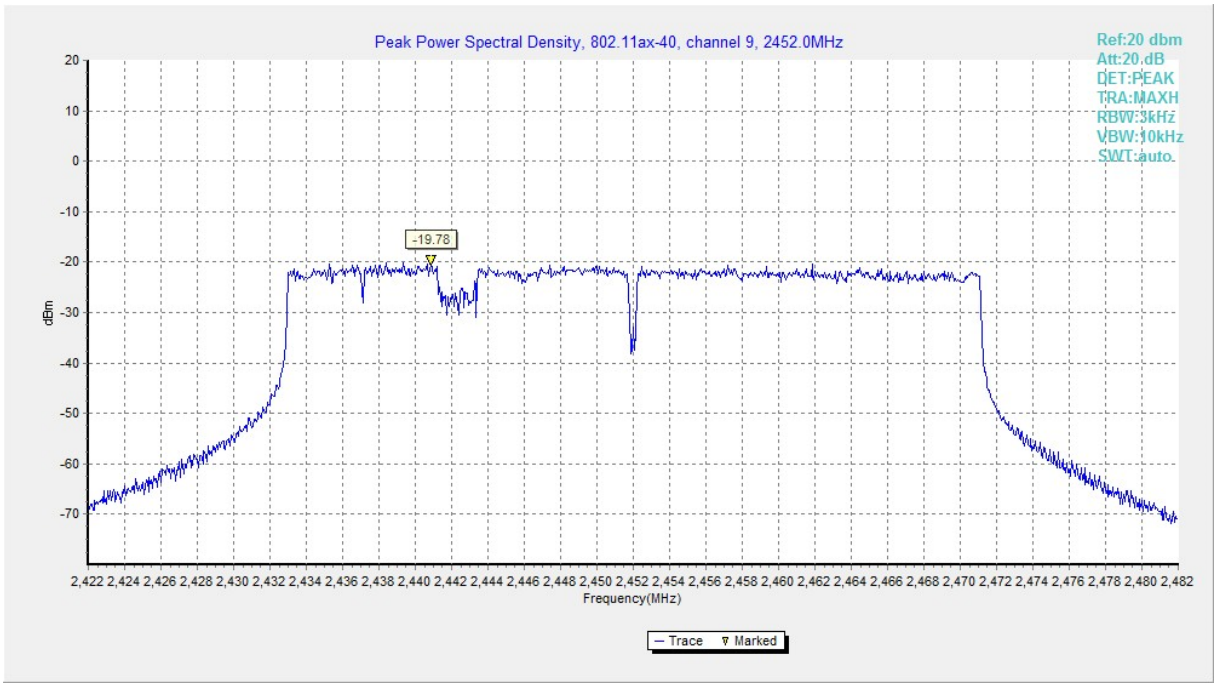


Fig.A.3.36 Power Spectral Density (802.11ax-HE40, Ch 9)

MIMO&CDD(W1&W2&W4-W1)

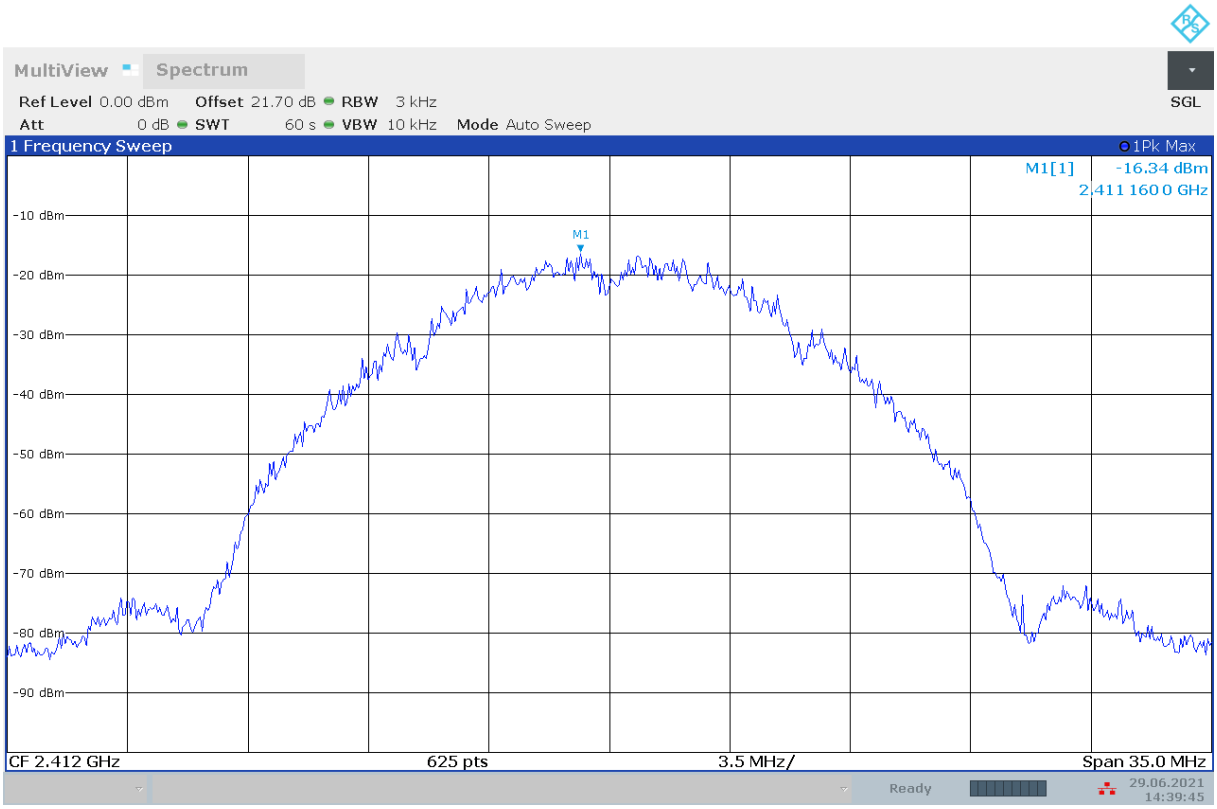


Fig.A.3.37 Power Spectral Density(802.11b,Ch1)

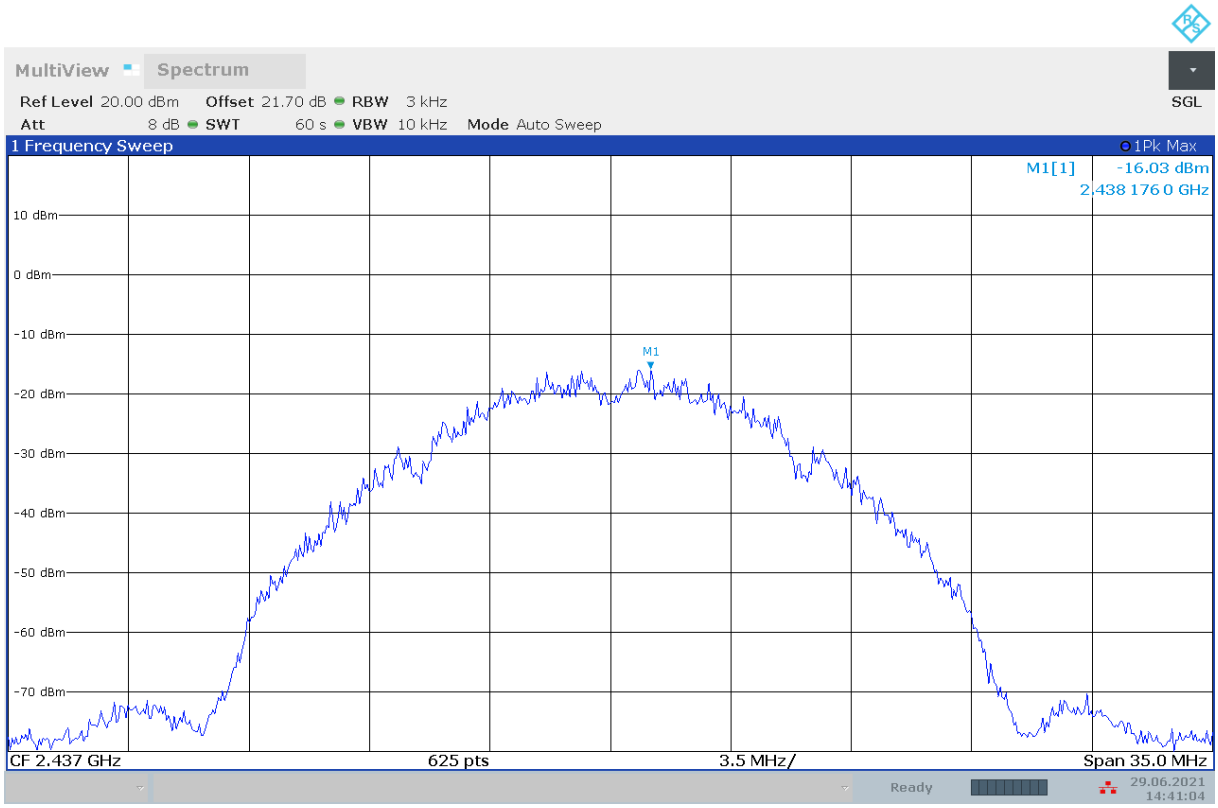


Fig.A.3.38 Power Spectral Density (802.11b, Ch 6)

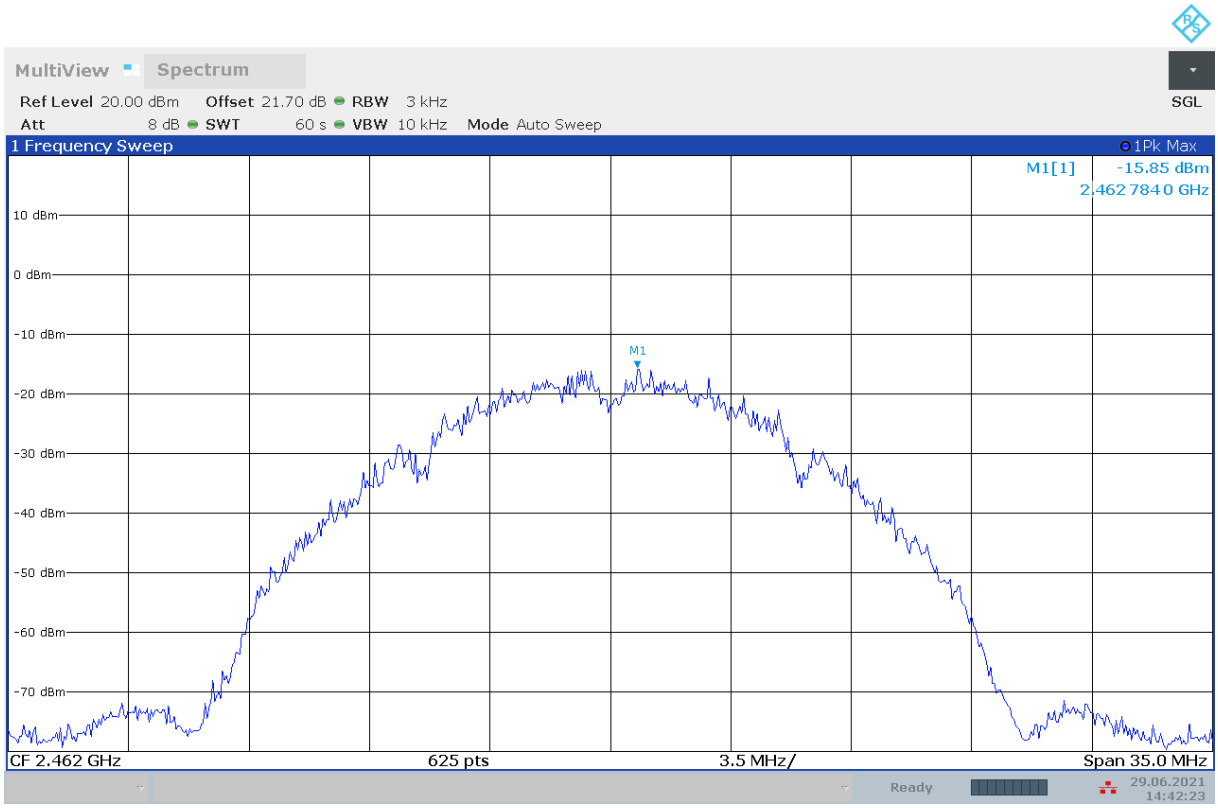


Fig.A.3.39 Power Spectral Density (802.11b, Ch 11)

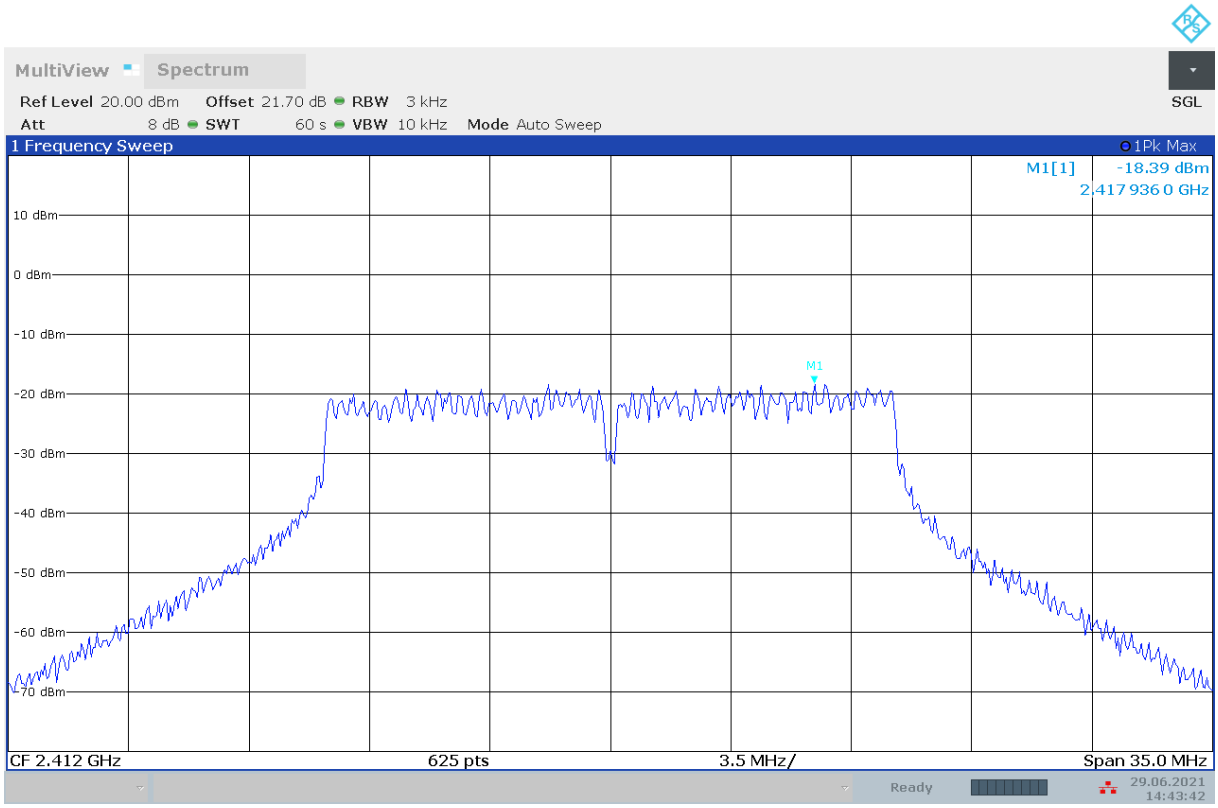


Fig.A.3.40 Power Spectral Density (802.11g, Ch 1)

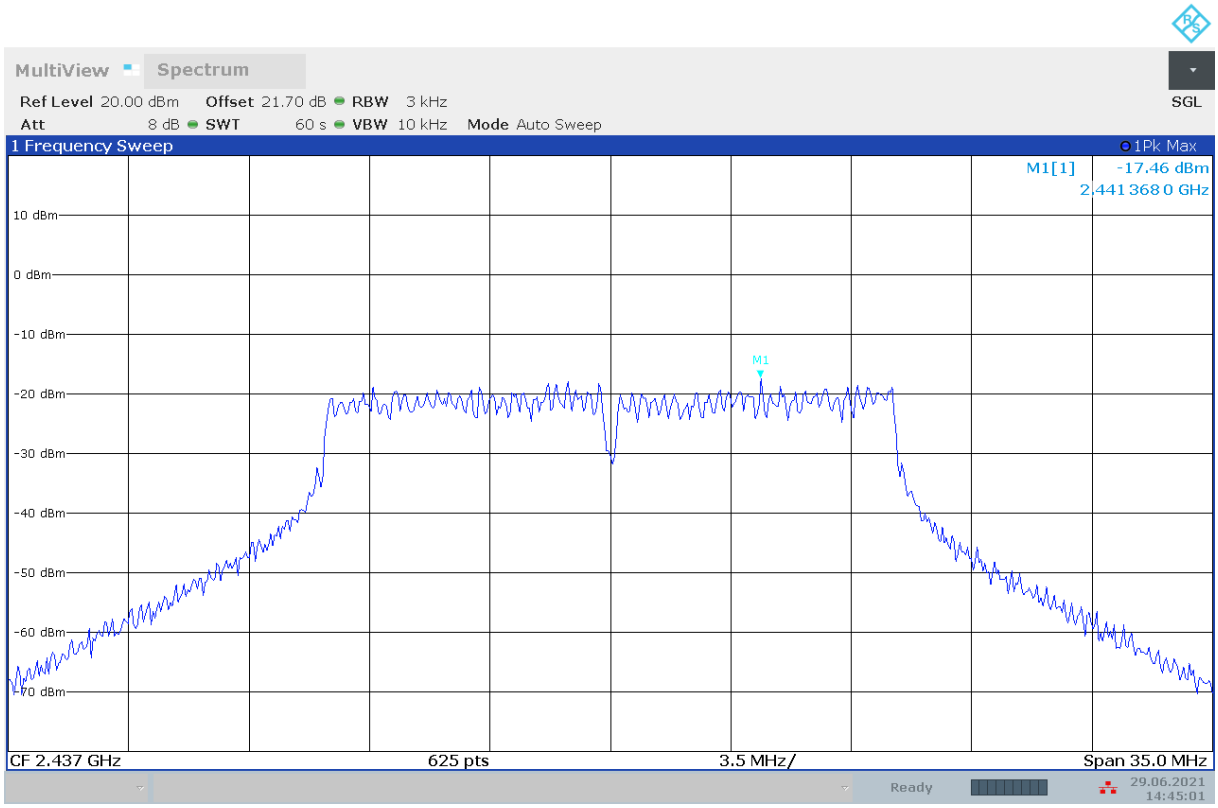


Fig.A.3.41 Power Spectral Density (802.11g, Ch 6)

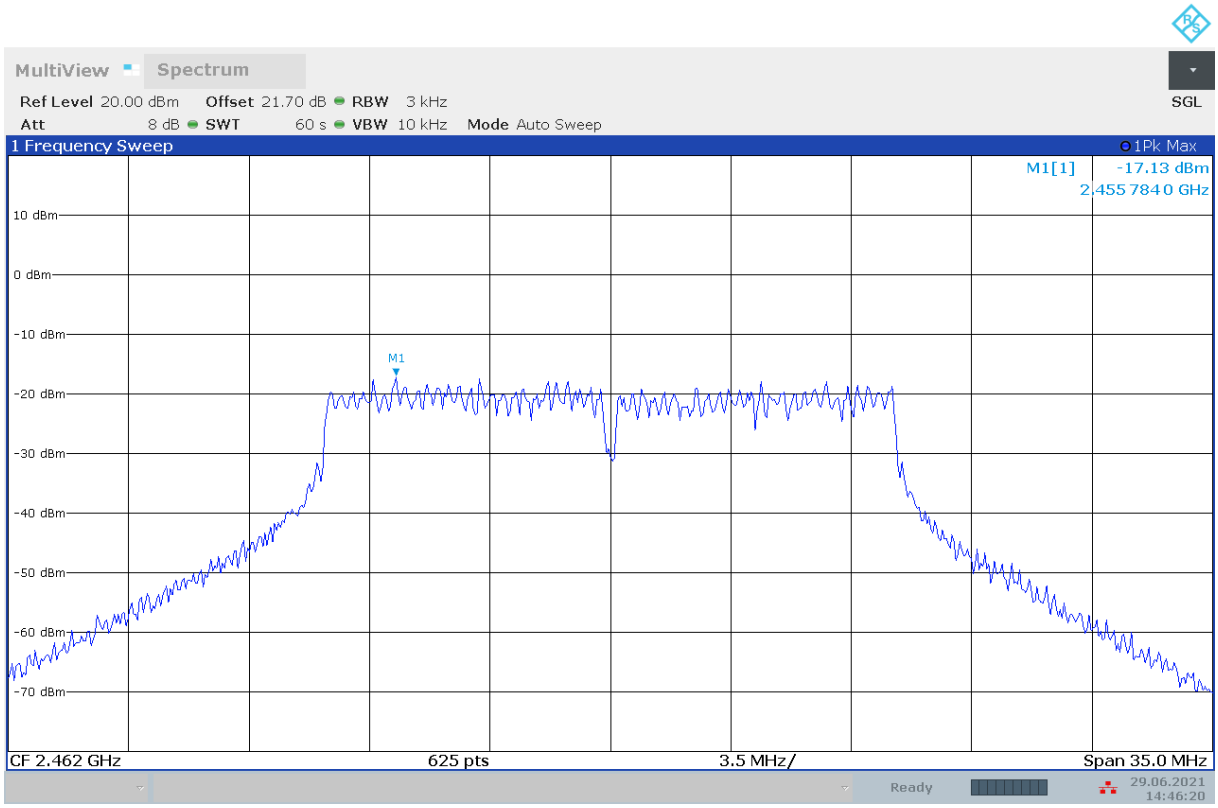


Fig.A.3.42 Power Spectral Density (802.11g, Ch 11)

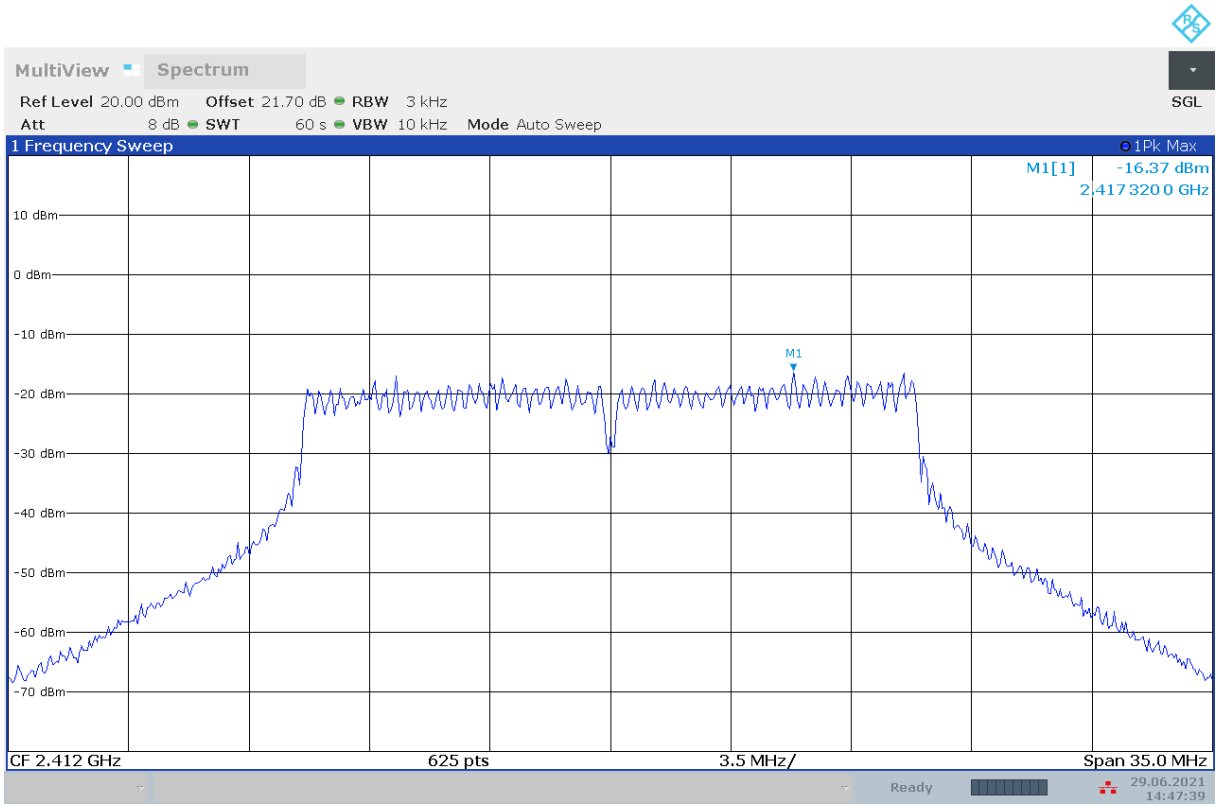


Fig.A.3.43 Power Spectral Density (802.11n-HT20, Ch 1)

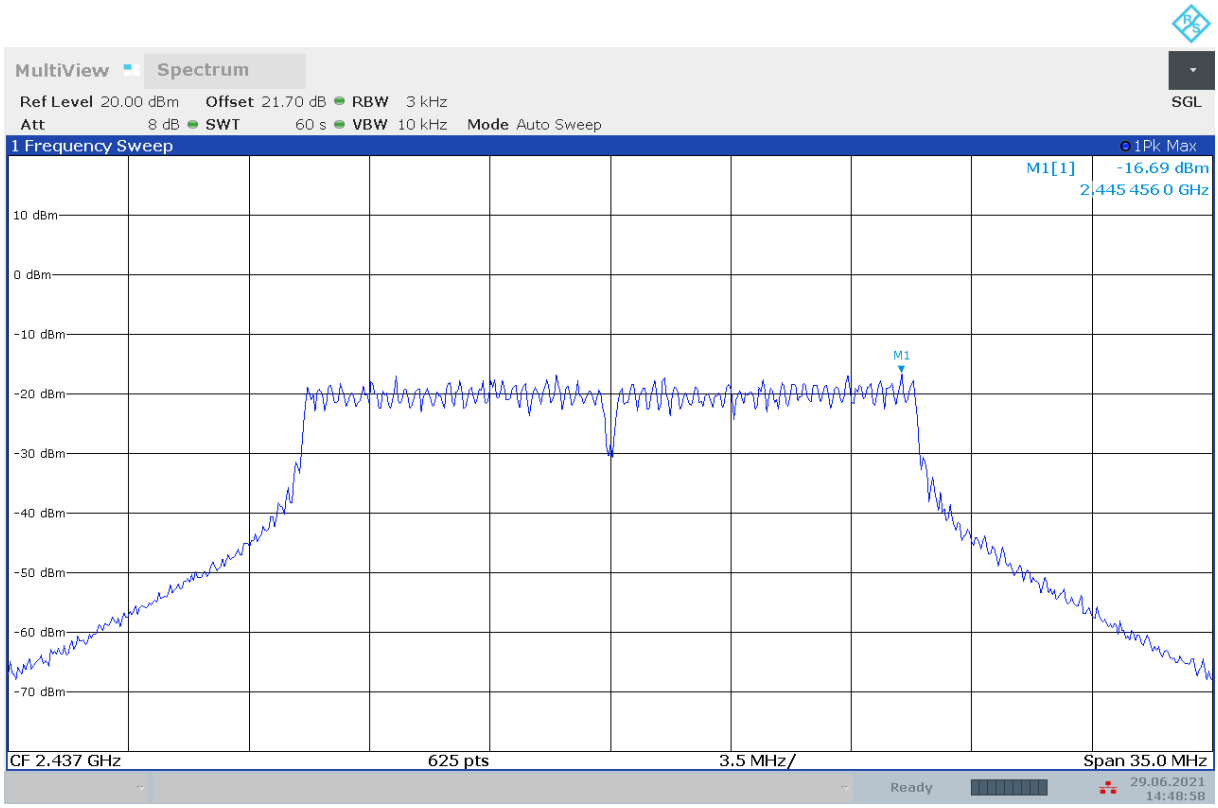


Fig.A.3.44 Power Spectral Density (802.11n-HT20, Ch 6)

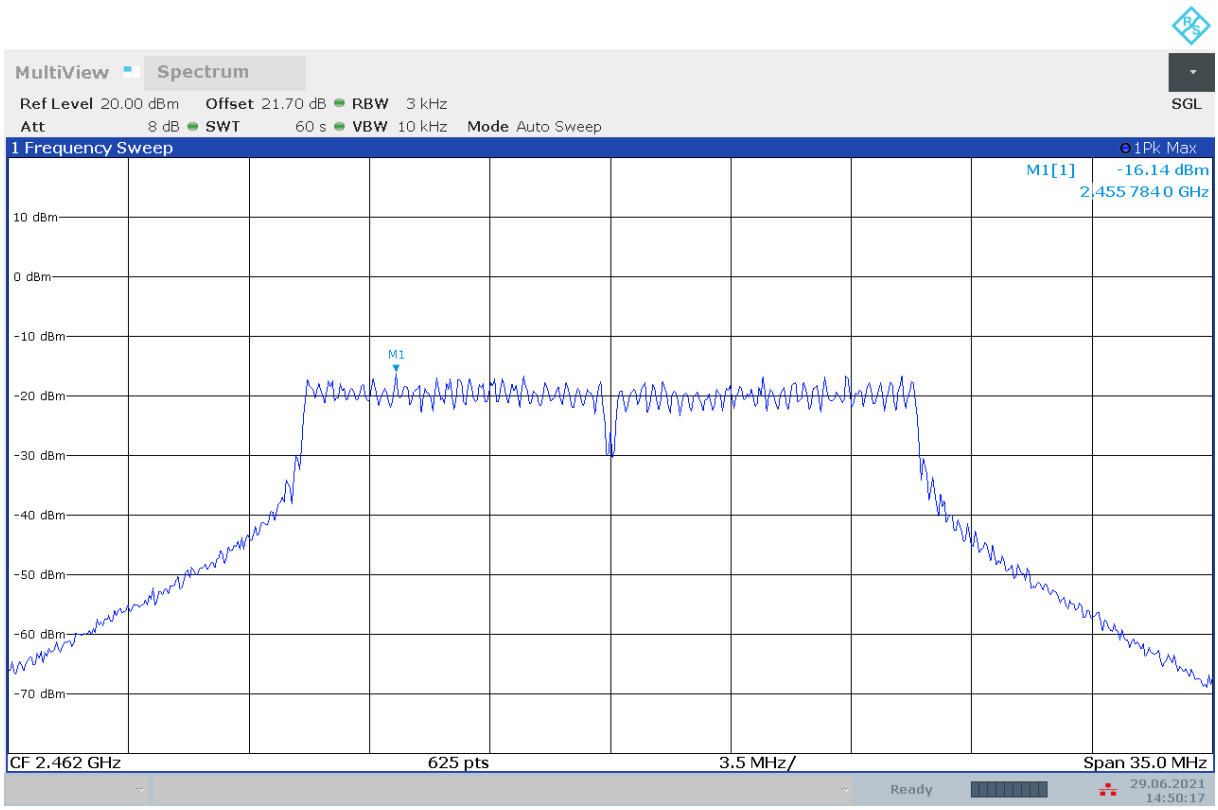


Fig.A.3.45 Power Spectral Density (802.11n-HT20, Ch 11)

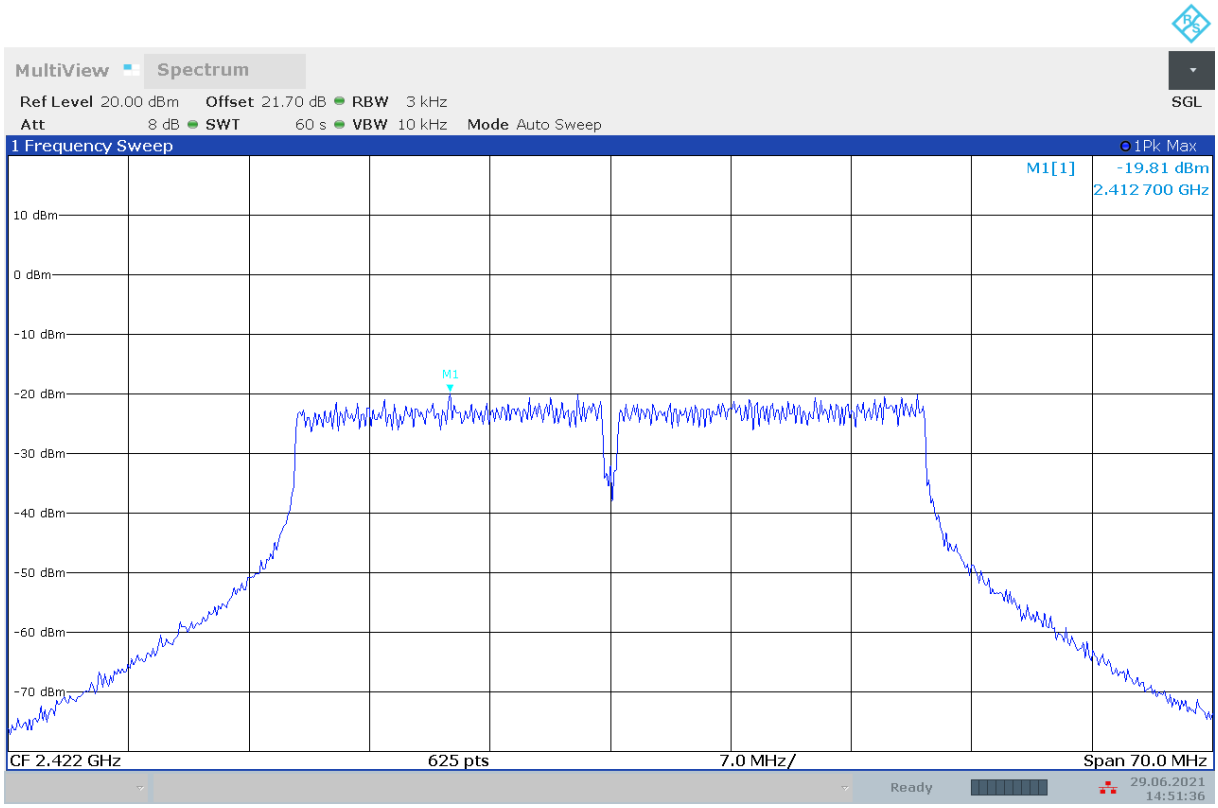


Fig.A.3.46 Power Spectral Density (802.11n-HT40, Ch 3)

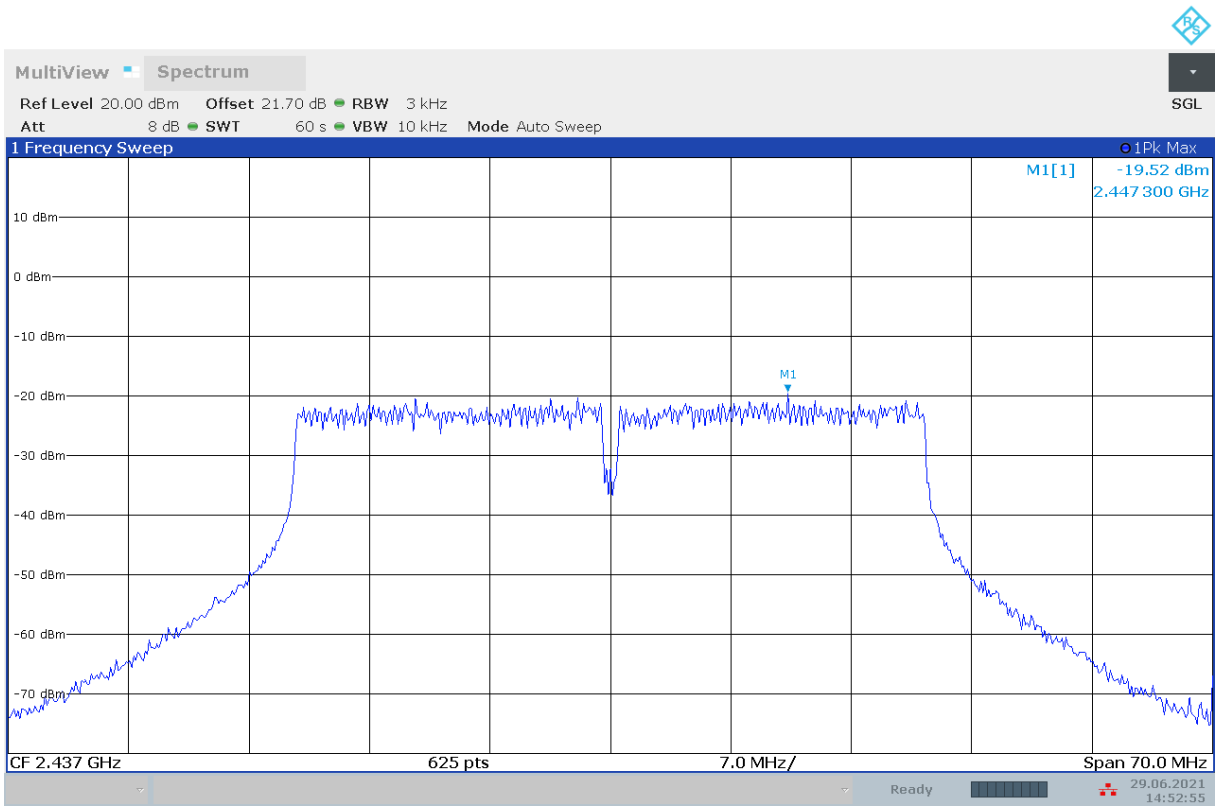


Fig.A.3.47 Power Spectral Density (802.11n-HT40, Ch 6)

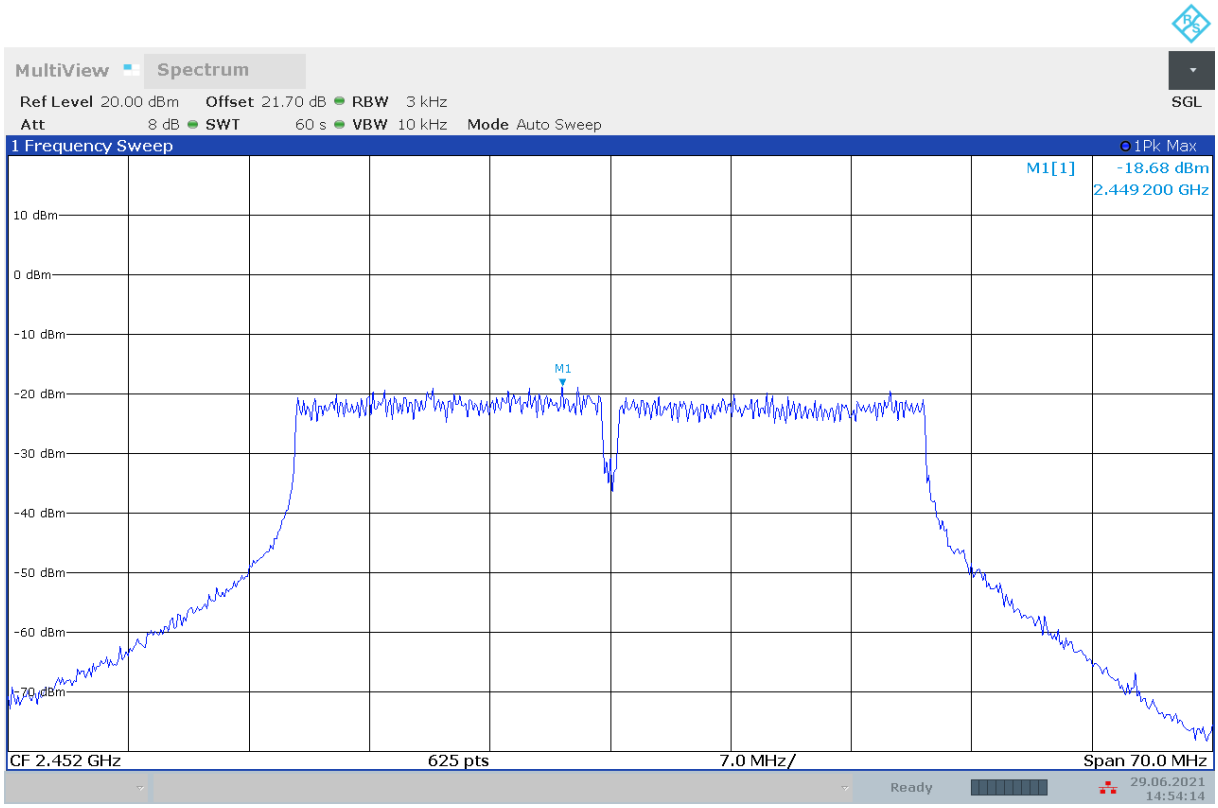


Fig.A.3.48 Power Spectral Density (802.11n-HT40, Ch 9)

MIMO&CDD(W1&W2&W4-W2)

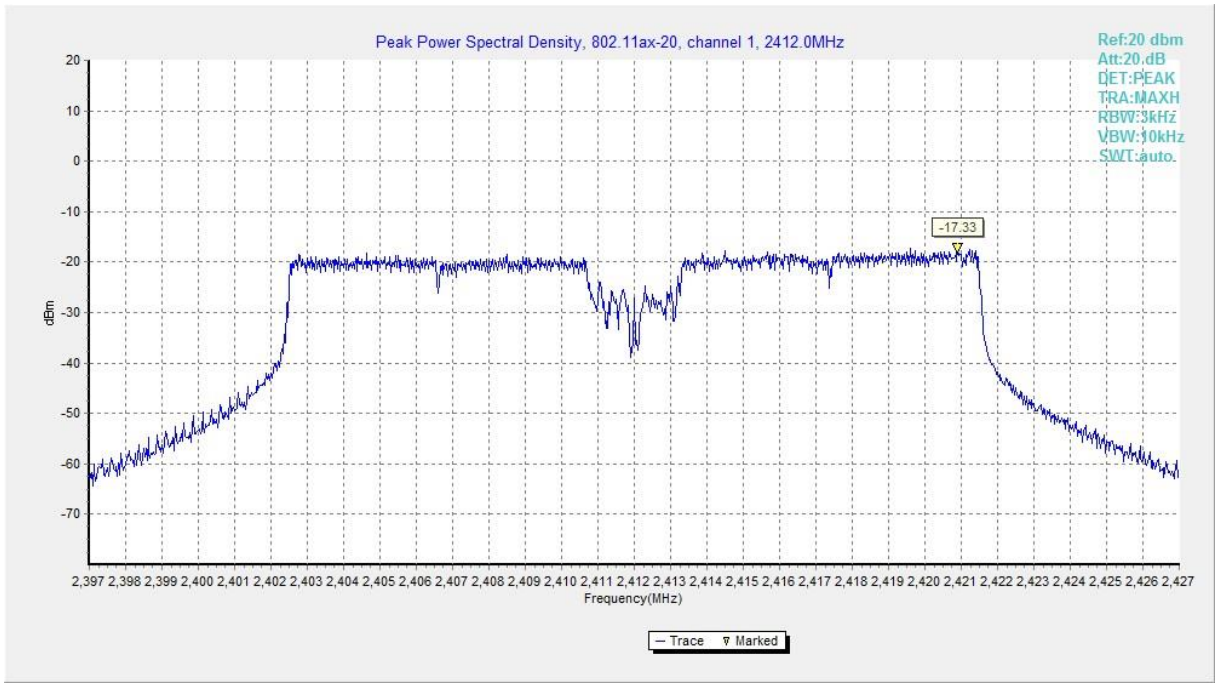


Fig.A.3.49 Power Spectral Density (802.11ax-HE20, Ch 1)

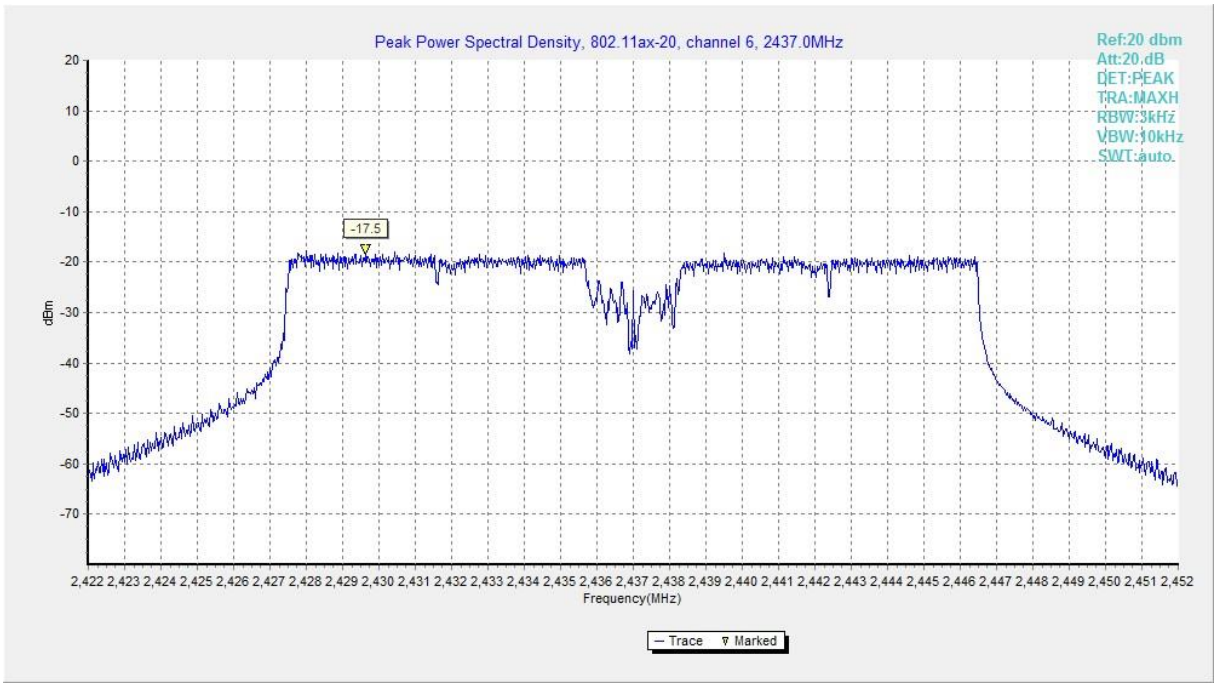


Fig.A.3.50 Power Spectral Density (802.11ax-HE20, Ch 6)

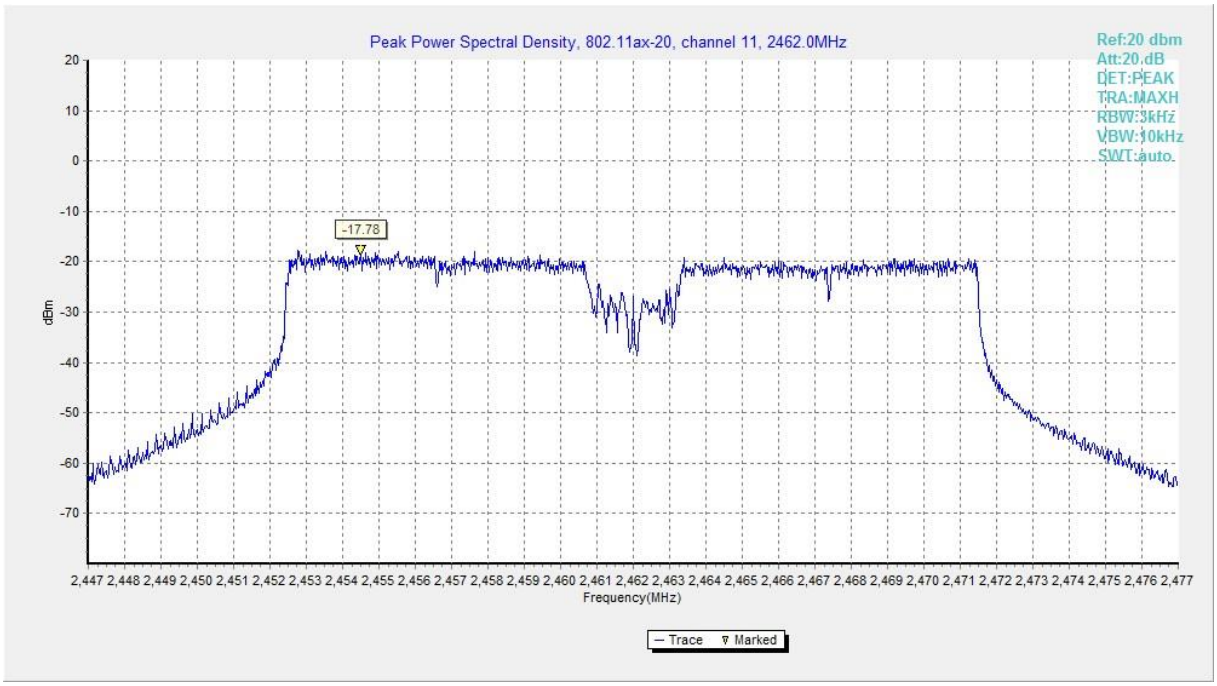


Fig.A.3.51 Power Spectral Density (802.11ax-HE20, Ch 11)