



TEST REPORT

No.I22N01710-WLAN 2.4GHz

for

Guangdong OPPO Mobile Telecommunications Corp., Ltd.

Mobile Phone

Model Name: CPH2483

with

Hardware Version: 11

Software Version: ColorOS V13.0

FCC ID: R9C-CPH2483

Issued Date: 2022-10-25

Designation Number: CN1210

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 SAICT.

Test Laboratory:

SAICT, Shenzhen Academy of Information and Communications Technology

Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000.

Tel:+86(0)755-33322000, Fax:+86(0)755-33322001

Email: yewu@saict.ac.cn. www.saict.ac.cn

©Copyright. All rights reserved by SAICT.



CONTENTS

CONTENTS	2
1. SUMMARY OF TEST REPORT	3
1.1. TEST ITEMS	3
1.2. TEST STANDARDS	3
1.3. TEST RESULT	3
1.4. TESTING LOCATION	3
1.5. PROJECT DATA	3
1.6. SIGNATURE	3
2. CLIENT INFORMATION	4
2.1. APPLICANT INFORMATION	4
2.2. MANUFACTURER INFORMATION	4
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	5
3.1. ABOUT EUT	5
3.2. INTERNAL IDENTIFICATION OF EUT	5
3.3. INTERNAL IDENTIFICATION OF AE	5
3.4. GENERAL DESCRIPTION	6
4. REFERENCE DOCUMENTS	7
4.1. DOCUMENTS SUPPLIED BY APPLICANT	7
4.2. REFERENCE DOCUMENTS FOR TESTING	7
5. TEST RESULTS	8
5.1. TESTING ENVIRONMENT	8
5.2. TEST RESULTS	8
5.3. STATEMENTS	8
6. TEST EQUIPMENTS UTILIZED	9
7. LABORATORY ENVIRONMENT	10
8. MEASUREMENT UNCERTAINTY	11
ANNEX A: DETAILED TEST RESULTS	12
TEST CONFIGURATION	12
A.0 ANTENNA REQUIREMENT	15
A.1 MAXIMUM OUTPUT POWER	16
A.2 PEAK POWER SPECTRAL DENSITY	17
A.3 6dB BANDWIDTH	27
A.4 BAND EDGES COMPLIANCE	37
A.5 CONDUCTED EMISSION	44
A.6 RADIATED EMISSION	73
A.7 AC POWER LINE CONDUCTED EMISSION	95



1. Summary of Test Report

1.1. Test Items

Product Name	Mobile Phone
Model Name	CPH2483
Applicant's name	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Manufacturer's Name	Guangdong OPPO Mobile Telecommunications Corp., Ltd.

1.2. Test Standards

FCC Part15-2021; ANSI C63.10-2013.

1.3. Test Result

Pass

Please refer to "5.2. Test Results"

1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road,
Futian District, Shenzhen, Guangdong, P. R. China

1.5. Project data

Testing Start Date: 2022-09-08
Testing End Date: 2022-10-25

1.6. Signature

Lin Zechuang
(Prepared this test report)

An Ran
(Reviewed this test report)

Zhang Bojun
(Approved this test report)



No.I22N01710-WLAN 2.4GHz

2. Client Information

2.1. Applicant Information

Company Name: Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address: NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City,
Guangdong, China
Contact Person Mei XiLi
E-Mail (86)76986076999
Telephone: meixili@oppo.com
Fax: /

2.2. Manufacturer Information

Company Name: Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address: NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City,
Guangdong, China
Contact Person Mei XiLi
E-Mail (86)76986076999
Telephone: meixili@oppo.com
Fax: /



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

3.1. About EUT

Product Name	Mobile Phone
Model Name	CPH2483
RF Protocol	IEEE 802.11b/g/n-HT20/n-HT40/VHT20/VHT40
Operating Frequency	ISM 2412MHz~2462MHz
Type of Modulation	DSSS/CCK/OFDM
Antenna Type	Integrated antenna
Antenna Gain	1.6dBi
Power Supply	3.87V DC by Battery
FCC ID	R9C-CPH2483
Condition of EUT as received	No abnormality in appearance

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

3.2. Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version	Receive Date
UT02aa	869062060034790	11	ColorOS V13.0	2022-09-08
	869062060034782			
UT09aa	869062060033933	11	ColorOS V13.0	2022-09-13
	869062060033925			
UT10aa	869062060031390	11	ColorOS V13.0	2022-09-13
	869062060031382			

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

UT02aa is used for conduction test, UT09aa is used for radiation test, and UT10aa is used for AC Power line Conducted Emission test.

3.3. Internal Identification of AE

AE ID*	Description	AE ID*
AE1	Battery	/
AE2	Charger	Ab01a, Ab02a
AE3	USB Cable	Ca01a, Ca02a

AE1

Model	BLP923
Manufacturer	Chongqing Cosmx Battery Co., Ltd.
Capacity	4880mAh
Nominal Voltage	3.87 V

AE2

Model	VCB3HDUH
Manufacturer	SHENZHEN HUNTKEY ELECTRIC CO., LTD.



No.I22N01710-WLAN 2.4GHz

Specification	American Standard Charger
AE3	
Model	DL150
Manufacturer	/

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

3.4. General Description

The Equipment under Test (EUT) is a model of Smart Phone with PIFA antenna and battery. It consists of normal options: Lithium Battery, Charger and USB Cable. Manual and specifications of the EUT were provided to fulfil the test. Samples undergoing test were selected by the client.



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	2021
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013



5. Test Results

5.1. Testing Environment

Normal Temperature: 15~35°C

Relative Humidity: 20~75%

5.2. Test Results

No	Test cases	Sub-clause of Part 15C	Verdict
0	Antenna Requirement	15.203	P
1	Maximum Output Power	15.247 (b)	P
2	Peak Power Spectral Density	15.247 (e)	P
3	6dB Bandwidth	15.247 (a)	P
4	Band Edges Compliance	15.247 (d)	P
5	Conducted Emission	15.247 (d)	P
6	Radiated Emission	15.247, 15.205, 15.209	P
7	AC Power line Conducted	15.207	P

See **ANNEX A** for details.

5.3. Statements

SAICT has evaluated the test cases requested by the applicant/manufacture as listed in section 5.2 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in section 4.2.

Disclaimer:

A. After confirmation with the customer, the sample information provided by the customer may affect the validity of the measurement results in this report, and the impact and consequences arising therefrom shall be borne by the customer.

B. The samples in this report are provided by the customer, and the test results are only applicable to the samples received.



6. Test Equipments Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	Vector Signal Analyzer	FSV40	100903	Rohde & Schwarz	2022-12-29	1 year
2	Power Sensor	U2021XA	MY55430013	Keysight	2022-12-29	1 year
3	Data Acquisition	U2531A	TW55443507	Keysight	/	/
4	RF Control Unit	JS0806-2	21C8060398	Tonscend	2023-05-08	1 year

Radiated test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	Test Receiver	ESR7	101676	Rohde & Schwarz	2022-11-24	1 year
2	BiLog Antenna	3142E	0224831	ETS-Lindgren	2024-05-27	3 years
3	Horn Antenna	3117	00066577	ETS-Lindgren	2025-04-17	3 years
4	Anechoic Chamber	FACT3-2.0	1285	ETS-Lindgren	2023-05-29	2 years
5	Spectrum Analyzer	FSV40	101192	Rohde & Schwarz	2023-01-12	1 year
6	Loop Antenna	HLA6120	35779	TESEQ	2025-05-10	3 years
7	Horn Antenna	QSH-SL-1 8-26-S-20	17013	Q-par	2023-01-06	3 years
8	Test Receiver	ESCI	100702	Rohde & Schwarz	2023-01-12	1 year
9	LISN	ENV216	102067	Rohde & Schwarz	2023-07-14	1 year

Test software

No.	Equipment	Manufacturer	Version
1	JS1120-3	Tonscend	3.2
2	EMC32	Rohde & Schwarz	10.50.40

EUT is engineering software provided by the customer to control the transmitting signal. The EUT was programmed to be in continuously transmitting mode.



7. Laboratory Environment

Shielded room

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2M Ω
Ground system resistance	< 4 Ω

Anechoic chamber

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2M Ω
Ground system resistance	< 4 Ω
Normalised site attenuation (NSA)	< ± 4 dB, 3 m distance, from 30 to 1000 MHz
Voltage Standing Wave Ratio (VSWR)	≤ 6 dB, from 1 to 18 GHz, 3m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz



8. Measurement Uncertainty

Test Name	Uncertainty ($k=2$)	
1. Maximum Peak Output Power	1.32dB	
2. Peak Power Spectral Density	1.32dB	
3. 6dB Bandwidth	4.56kHz	
4. Band Edges Compliance	1.92dB	
5. Transmitter Spurious Emission - Conducted	$30\text{MHz} \leq f < 1\text{GHz}$	1.41dB
	$1\text{GHz} \leq f < 7\text{GHz}$	1.92dB
	$7\text{GHz} \leq f < 13\text{GHz}$	2.31dB
	$13\text{GHz} \leq f \leq 26\text{GHz}$	2.61dB
6. Transmitter Spurious Emission - Radiated	$9\text{kHz} \leq f < 30\text{MHz}$	1.79dB
	$30\text{MHz} \leq f < 1\text{GHz}$	4.86dB
	$1\text{GHz} \leq f < 18\text{GHz}$	4.82dB
	$18\text{GHz} \leq f \leq 40\text{GHz}$	2.90dB
7. AC Power line Conducted Emission	$150\text{kHz} \leq f \leq 30\text{MHz}$	2.62dB

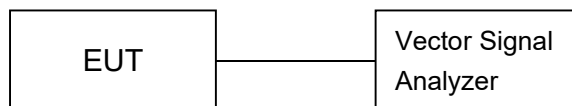
ANNEX A: Detailed Test Results

Test Configuration

The measurement is made according to ANSI C63.10.

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.

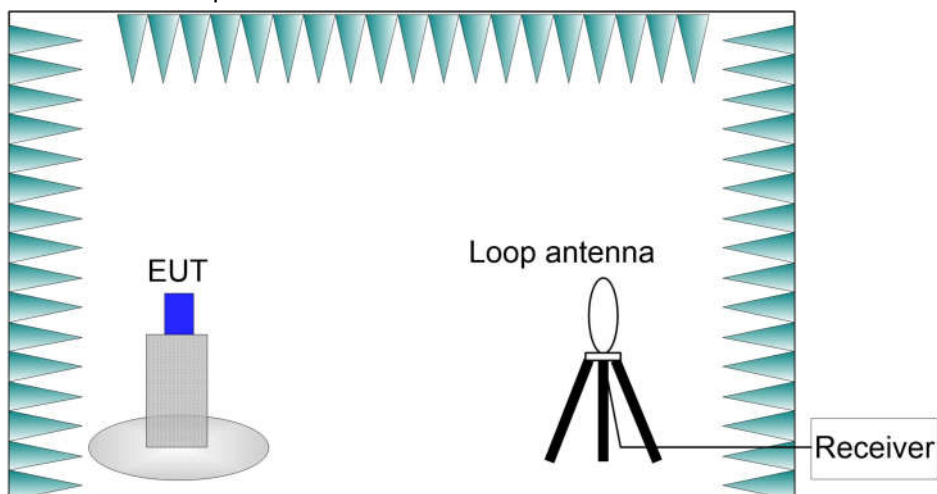


2) Radiated Measurements

Test setup:

9kHz-30MHz:

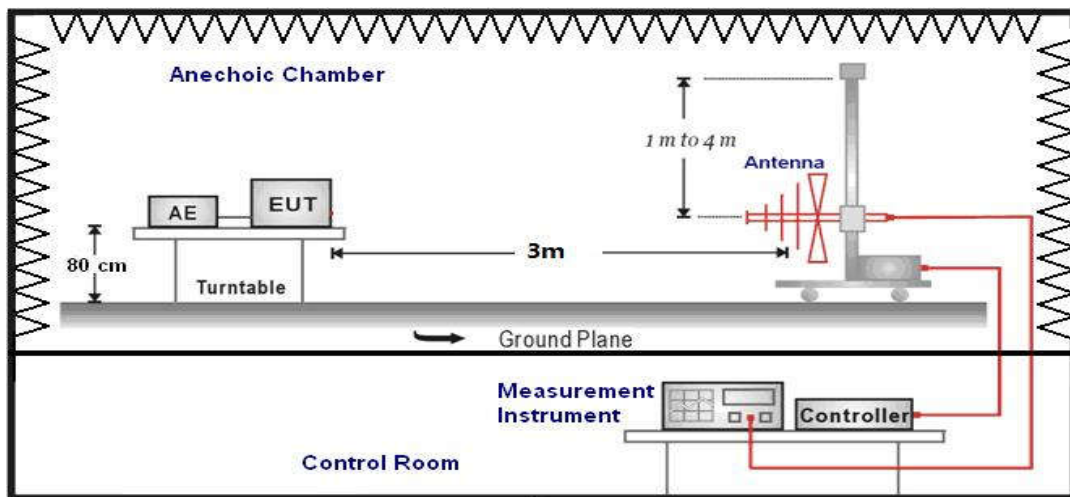
The EUT are measured in a anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving loop antenna is 1.0 meter above the ground. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT and adjusting the receiver antenna polarization.



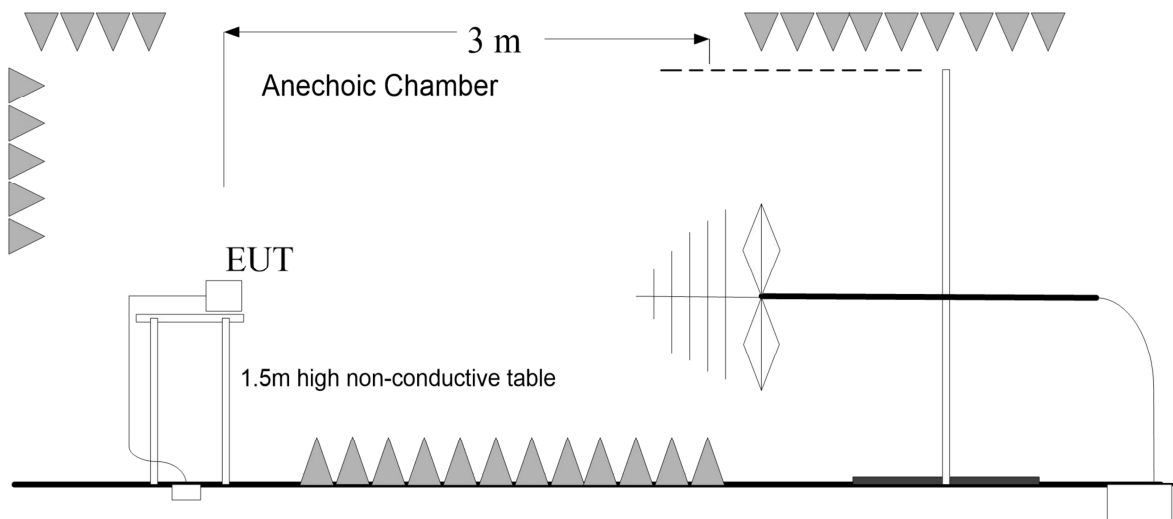
30MHz-26.5GHz:

The EUT are measured in a anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving antenna is 1.0 meter to 4.0 meter above the ground. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT and adjusting the receiver antenna polarization.

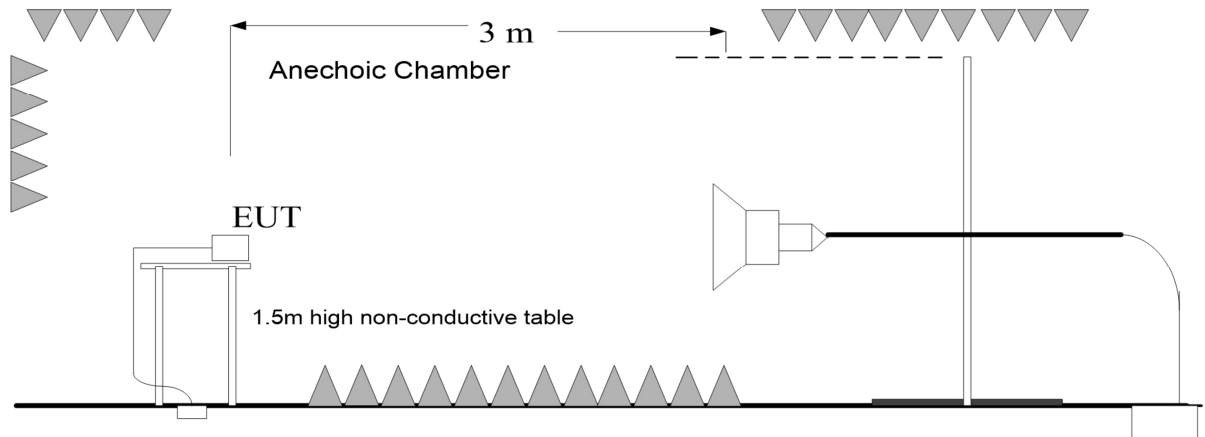
30MHz-1GHz:



1GHz-3GHz:

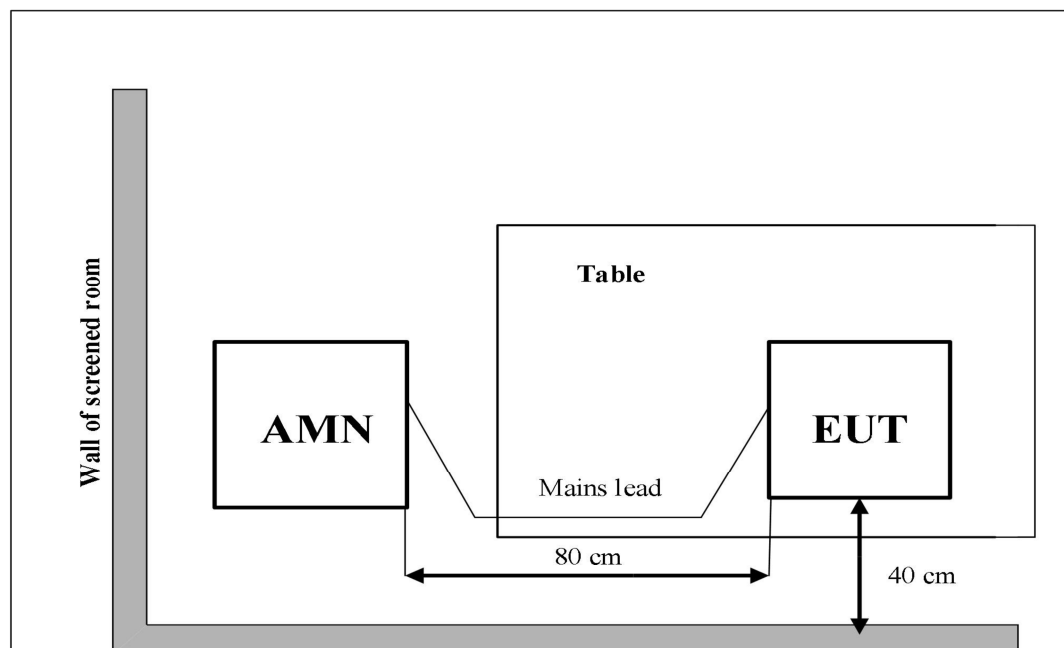


3GHz-26.5GHz:



3) AC Power line Conducted Emission Measurement

For WLAN, the EUT is working under test mode. The EUT is commanded to operate at maximum transmitting power.



**A.0 Antenna requirement****Measurement Limit:**

Standard	Requirement
FCC CRF Part 15.203	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

Conclusion: The Directional gains of antenna used for transmitting is 1.6dBi.

The RF transmitter uses an integrate antenna without connector.



A.1 Maximum Output Power

Measurement of method: See ANSI C63.10-2013-Clause 11.9.2.3.2.

Method AVGPM-G is a measurement using a gated RF average power meter.

Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Measurement Limit:

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

Measurement Results:

Mode	RF output power (dBm)		
	2412MHz (CH1)	2437MHz (CH6)	2462MHz (CH11)
802.11b	18.07	18.46	18.30
802.11g	15.16	17.50	14.91
802.11n-HT20	15.08	17.49	14.83
802.11-VHT20	15.03	17.45	14.84
/	2422MHz (CH3)	2437MHz (CH6)	2452MHz (CH9)
802.11n-HT40	13.22	16.47	13.17
802.11-VHT40	13.18	16.43	13.12

Note:

The data rate 1Mbps (11b mode), 6Mbps (11g mode), MCS0 (11n mode) and MCS0 (VHT mode) are selected as the Worst-Case. The following cases and test graphs are performed with this condition.

The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

Conclusion: PASS

**A.2 Peak Power Spectral Density****Method of Measurement:** See ANSI C63.10-clause 11.10.2.**Measurement Limit:**

Standard	Limit (dBm/10 kHz)
FCC CRF Part 15.247(e)	< 8

Measurement Results:

Mode	Frequency (MHz)	Test Results(dBm/10 kHz)		Conclusion
802.11b	2412(CH1)	Fig.1	-0.83	P
	2437(CH6)	Fig.2	0.99	P
	2462(CH11)	Fig.3	-0.66	P
802.11g	2412(CH1)	Fig.4	-5.59	P
	2437(CH6)	Fig.5	-4.07	P
	2462(CH11)	Fig.6	-6.45	P
802.11n-HT20	2412(CH1)	Fig.7	-5.96	P
	2437(CH6)	Fig.8	-4.12	P
	2462(CH11)	Fig.9	-6.52	P
802.11n-HT40	2422(CH3)	Fig.10	-10.12	P
	2437(CH6)	Fig.11	-6.91	P
	2452(CH9)	Fig.12	-10.66	P
802.11-VHT20	2412(CH1)	Fig.13	-5.22	P
	2437(CH6)	Fig.14	-4.57	P
	2462(CH11)	Fig.15	-6.85	P
802.11-VHT40	2422(CH3)	Fig.16	-10.38	P
	2437(CH6)	Fig.17	-6.50	P
	2452(CH9)	Fig.18	-10.55	P

See below for test graphs.**Conclusion: PASS**

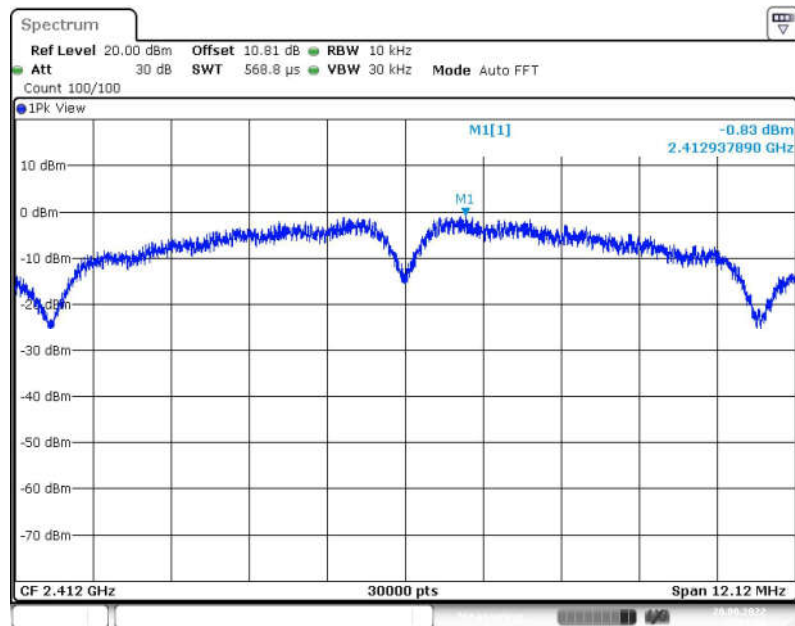


Fig.1 Power Spectral Density (802.11b, CH1)

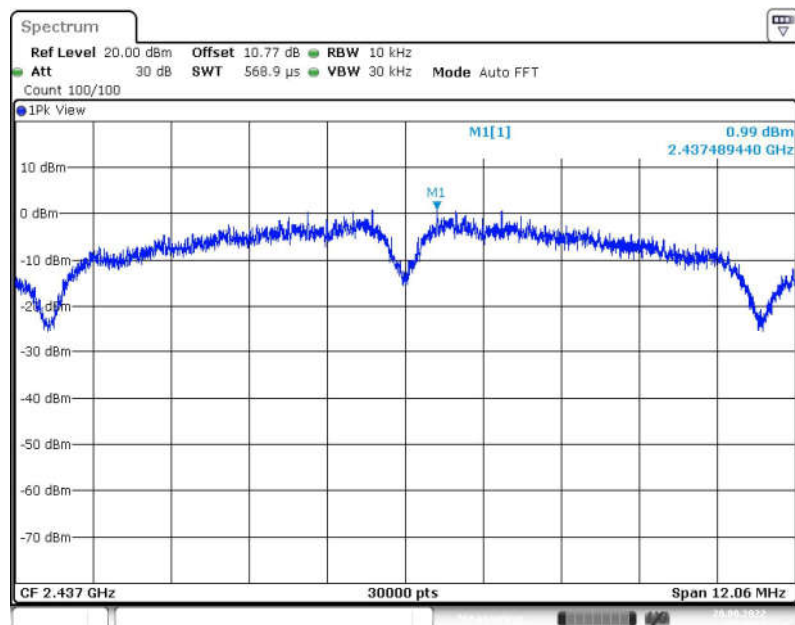


Fig.2 Power Spectral Density (802.11b, CH6)

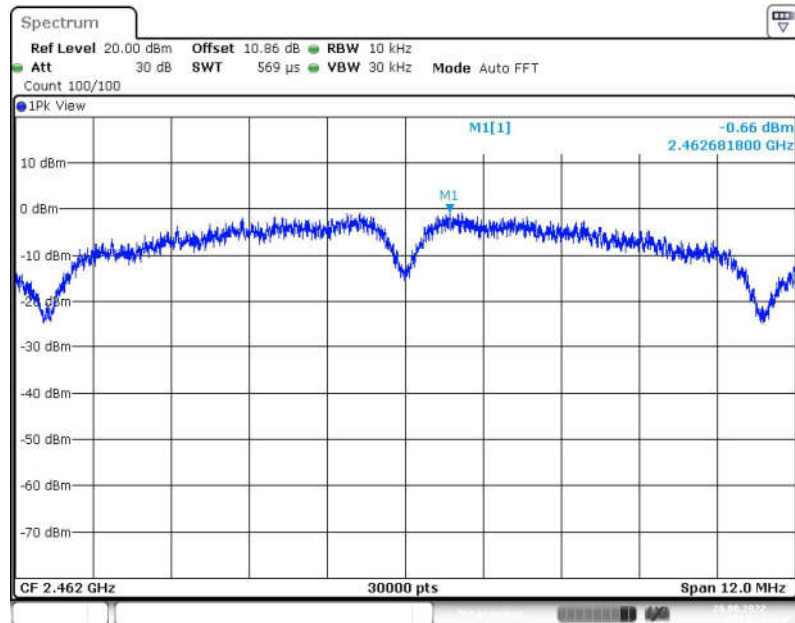


Fig.3 Power Spectral Density (802.11b, CH11)

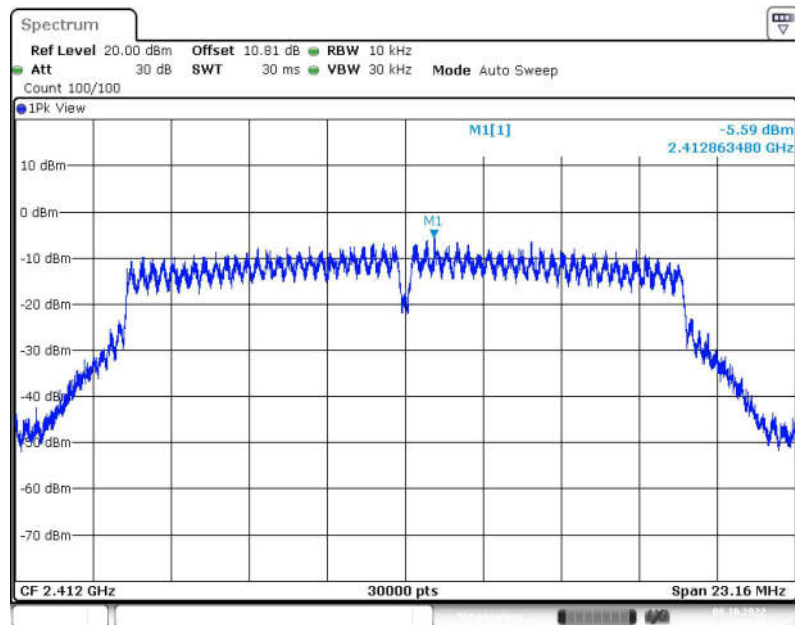


Fig.4 Power Spectral Density (802.11g, CH1)

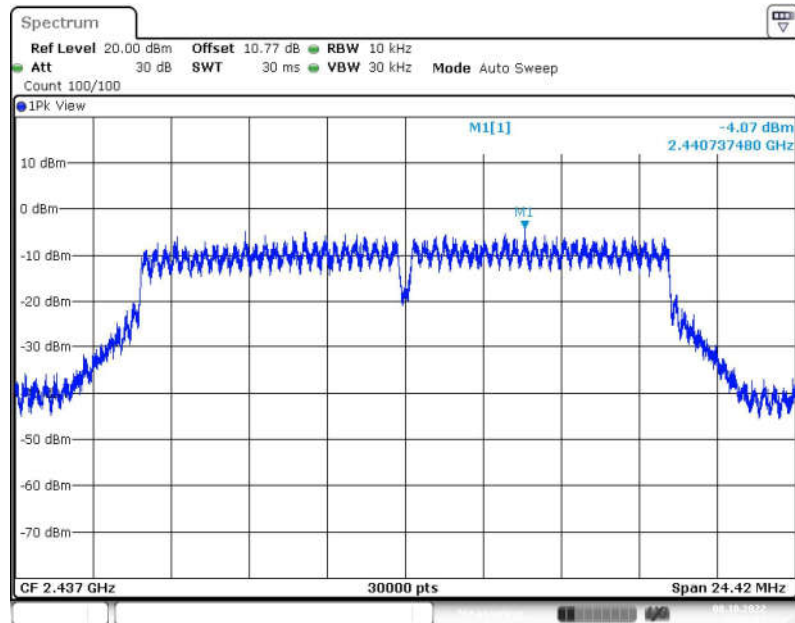


Fig.5 Power Spectral Density (802.11g, CH6)

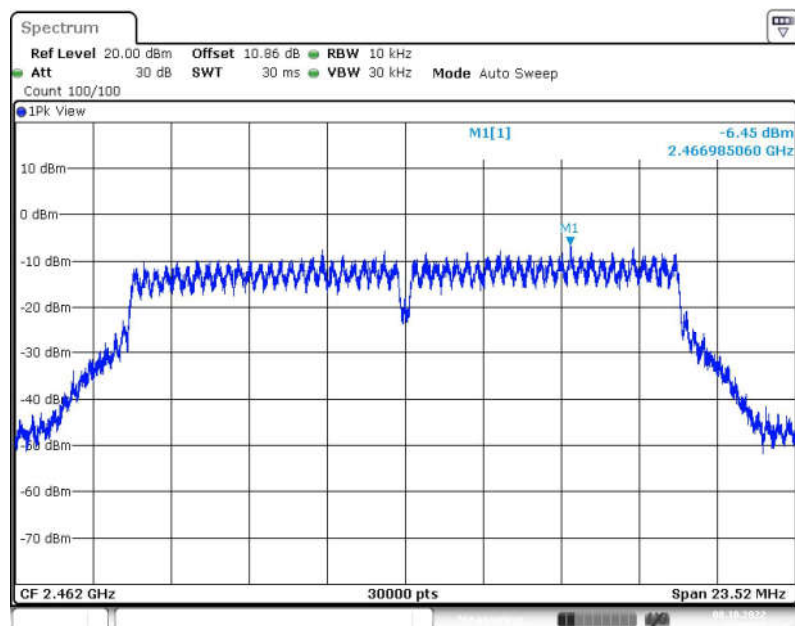


Fig.6 Power Spectral Density (802.11g, CH11)

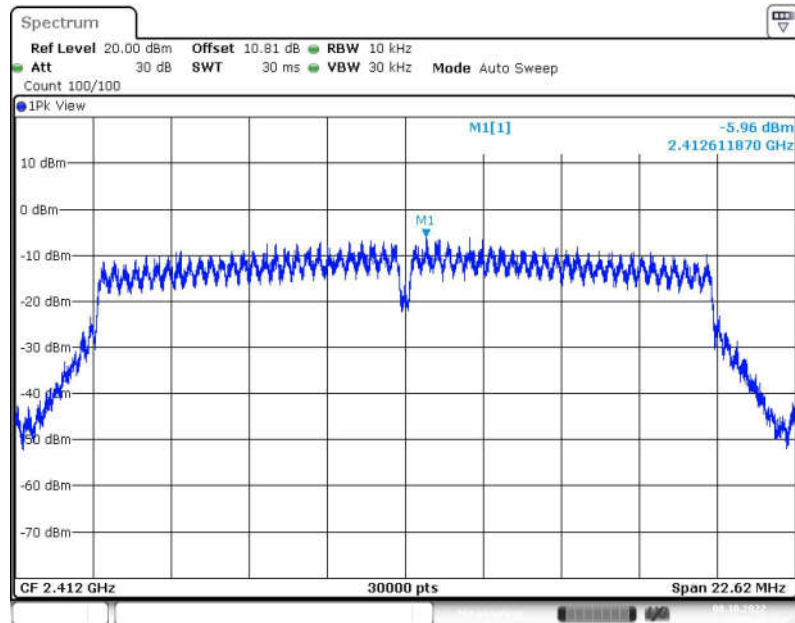


Fig.7 Power Spectral Density (802.11n-HT20, CH1)

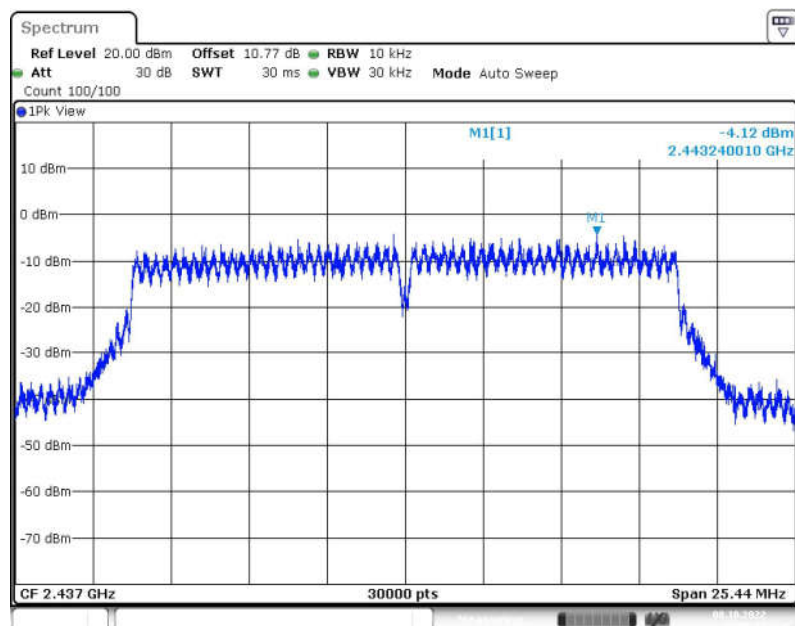


Fig.8 Power Spectral Density (802.11n-HT20, CH6)

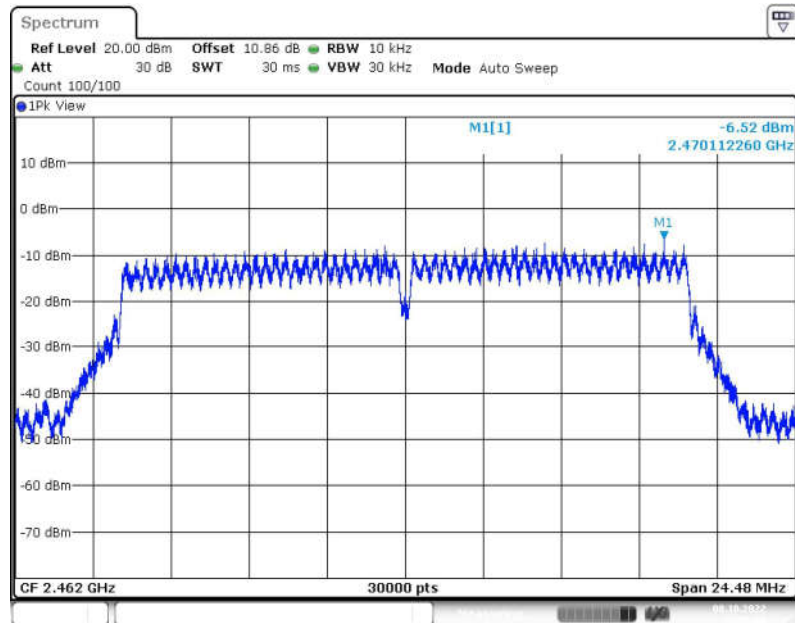


Fig.9 Power Spectral Density (802.11n-HT20, CH11)

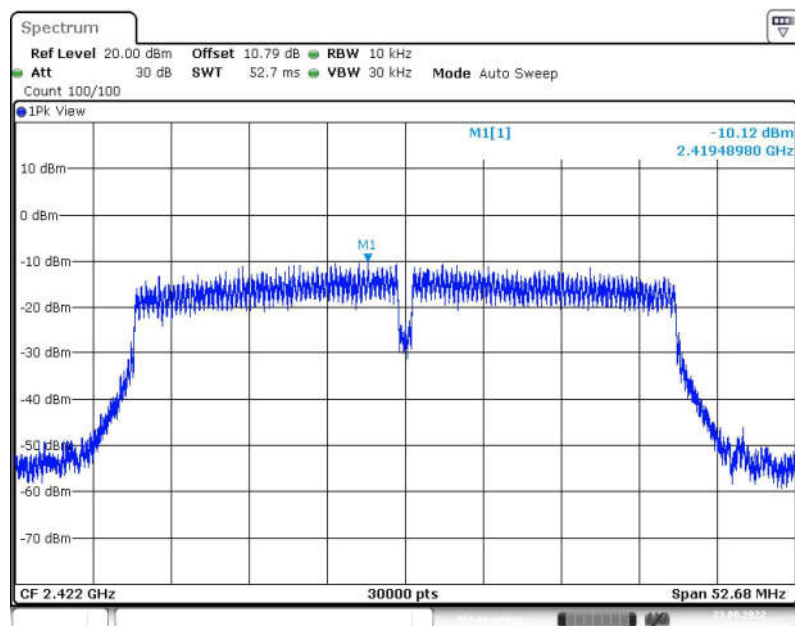


Fig.10 Power Spectral Density (802.11n-HT40, CH3)

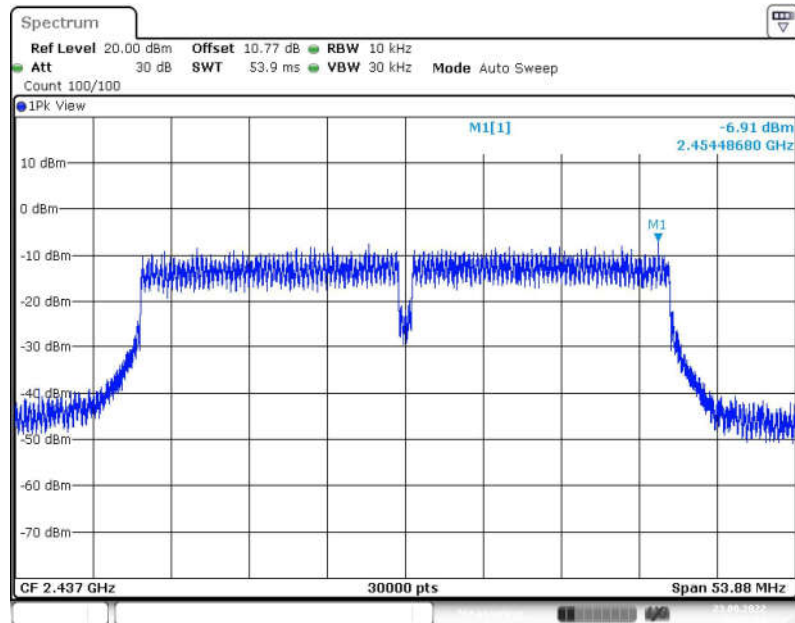


Fig.11 Power Spectral Density (802.11n-HT40, CH6)

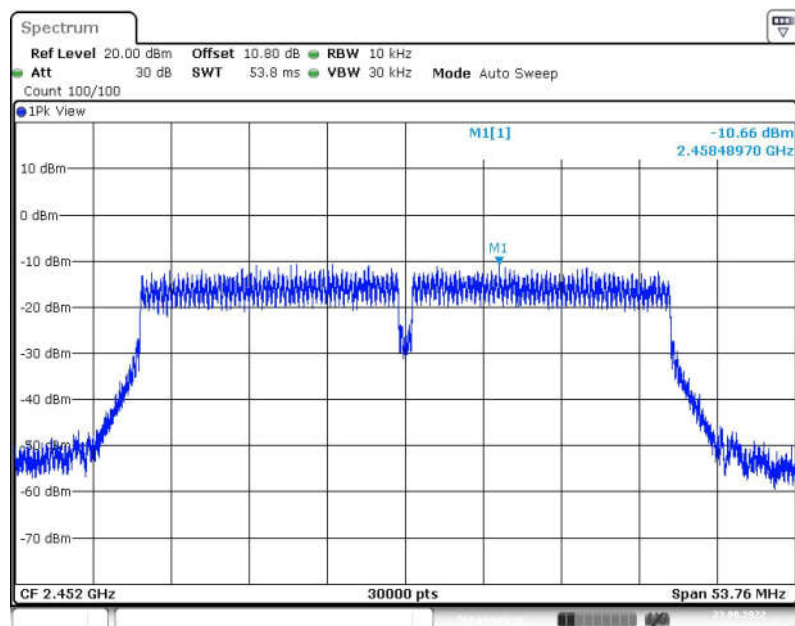


Fig.12 Power Spectral Density (802.11n-HT40, CH9)

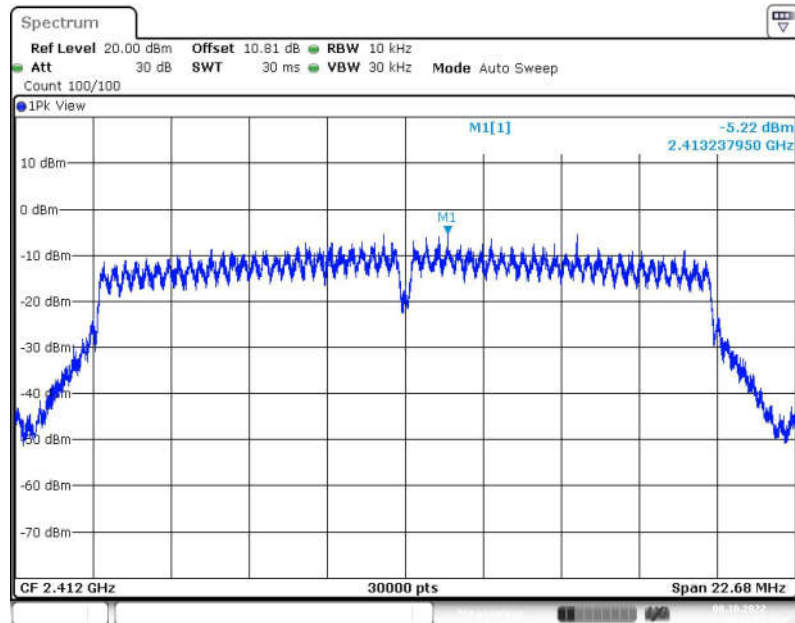


Fig.13 Power Spectral Density (802.11-VHT20, CH1)

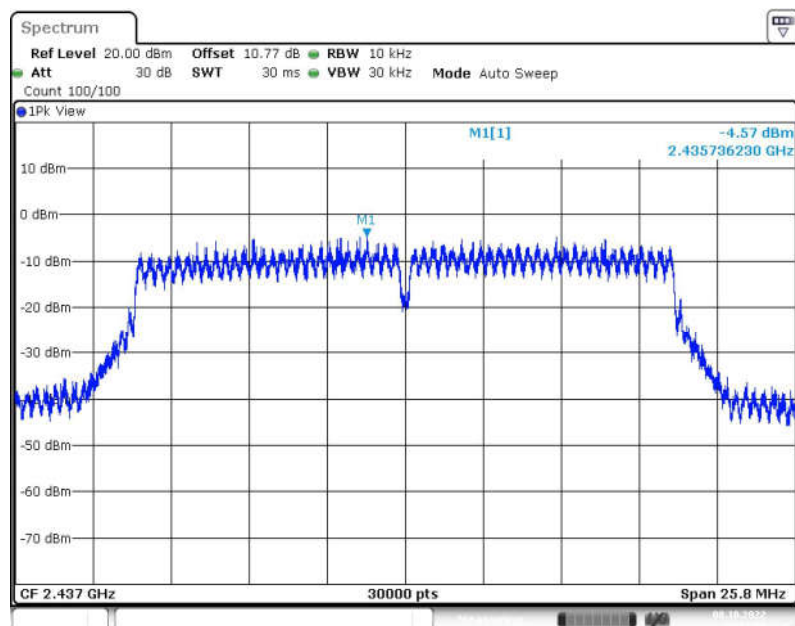


Fig.14 Power Spectral Density (802.11-VHT20, CH6)

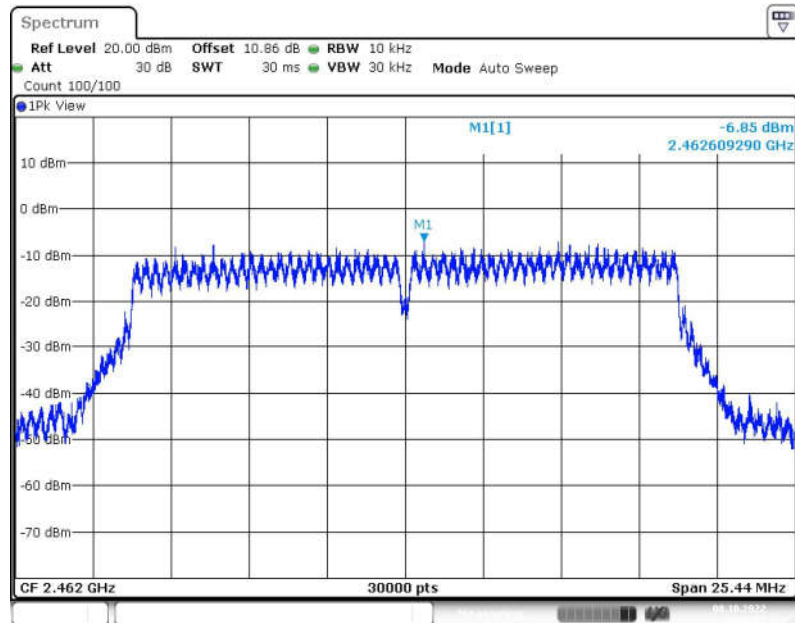


Fig.15 Power Spectral Density (802.11-VHT20, CH11)

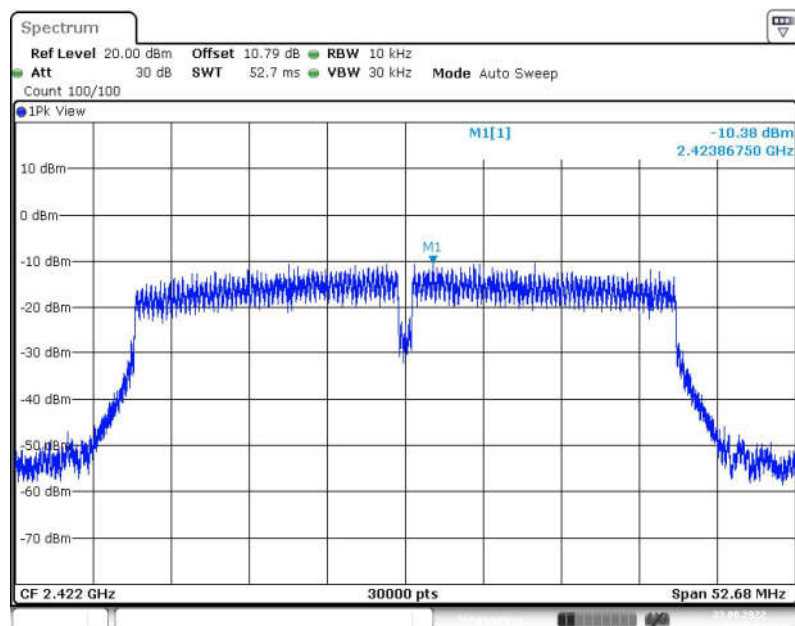


Fig.16 Power Spectral Density (802.11-VHT40, CH3)

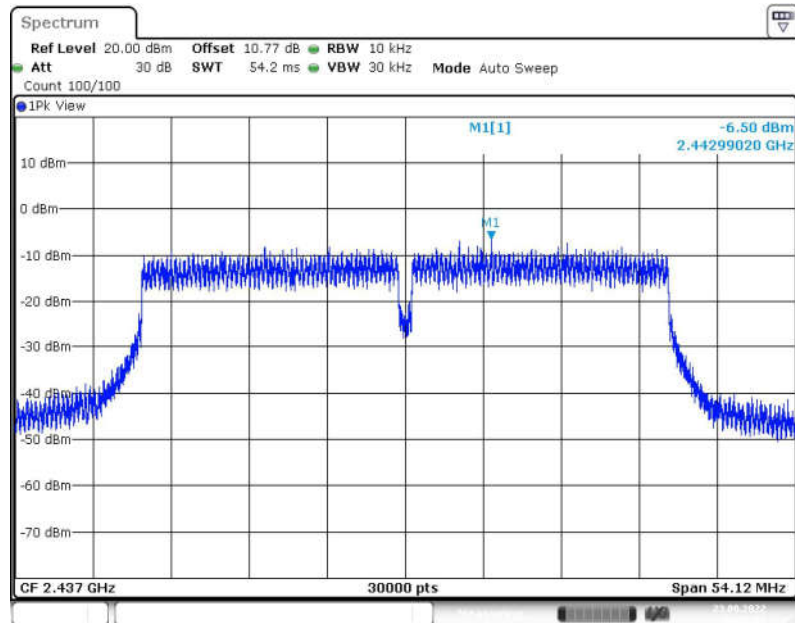


Fig.17 Power Spectral Density (802.11-VHT40, CH6)

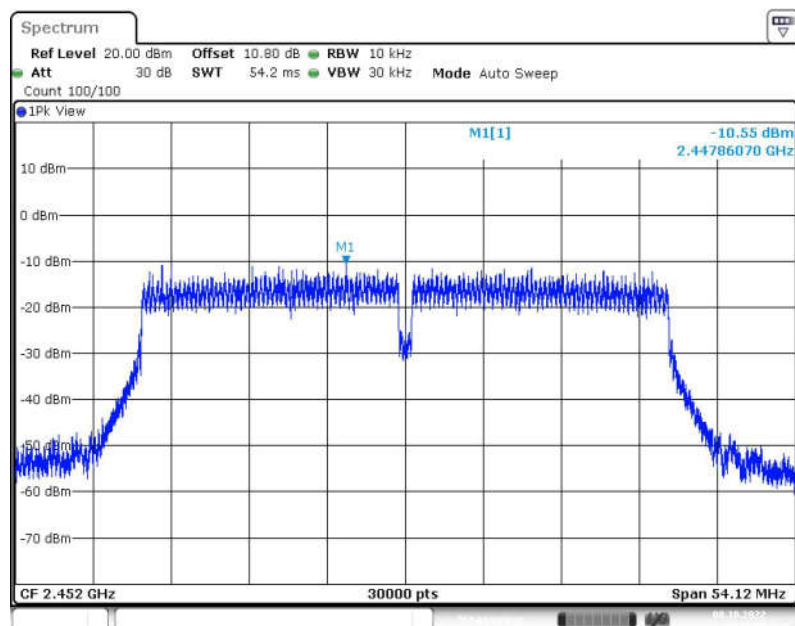


Fig.18 Power Spectral Density (802.11-VHT40, CH9)



A.3 6dB Bandwidth

Method of Measurement: See ANSI C63.10-clause 11.8.2.

Measurement Limit:

Standard	Limit (MHz)
FCC 47 CFR Part 15.247 (a)	≥ 0.5

Measurement Result:

Mode	Frequency (MHz)	Test Results (MHz)		Conclusion
802.11b	2412(CH1)	Fig.19	8.08	P
	2437(CH6)	Fig.20	8.04	P
	2462(CH11)	Fig.21	8.00	P
802.11g	2412(CH1)	Fig.22	15.44	P
	2437(CH6)	Fig.23	16.28	P
	2462(CH11)	Fig.24	15.68	P
802.11n-HT20	2412(CH1)	Fig.25	15.08	P
	2437(CH6)	Fig.26	16.96	P
	2462(CH11)	Fig.27	16.32	P
802.11n-HT40	2422(CH3)	Fig.28	35.12	P
	2437(CH6)	Fig.29	35.92	P
	2452(CH9)	Fig.30	35.84	P
802.11-VHT20	2412(CH1)	Fig.31	15.12	P
	2437(CH6)	Fig.32	17.20	P
	2462(CH11)	Fig.33	16.96	P
802.11-VHT40	2422(CH3)	Fig.34	35.12	P
	2437(CH6)	Fig.35	36.08	P
	2452(CH9)	Fig.36	36.08	P

See below for test graphs.

Conclusion: PASS

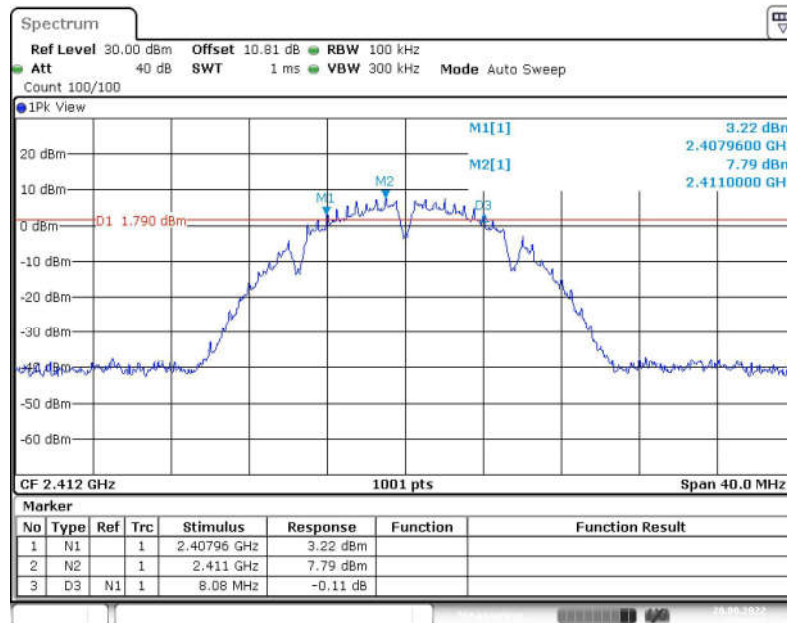


Fig.19 6dB Bandwidth (802.11b, CH1)

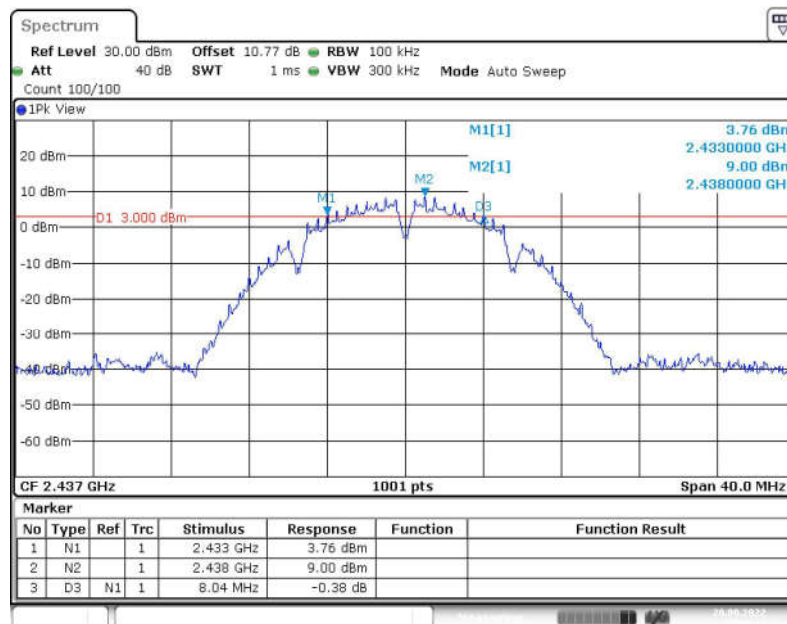


Fig.20 6dB Bandwidth (802.11b, CH6)

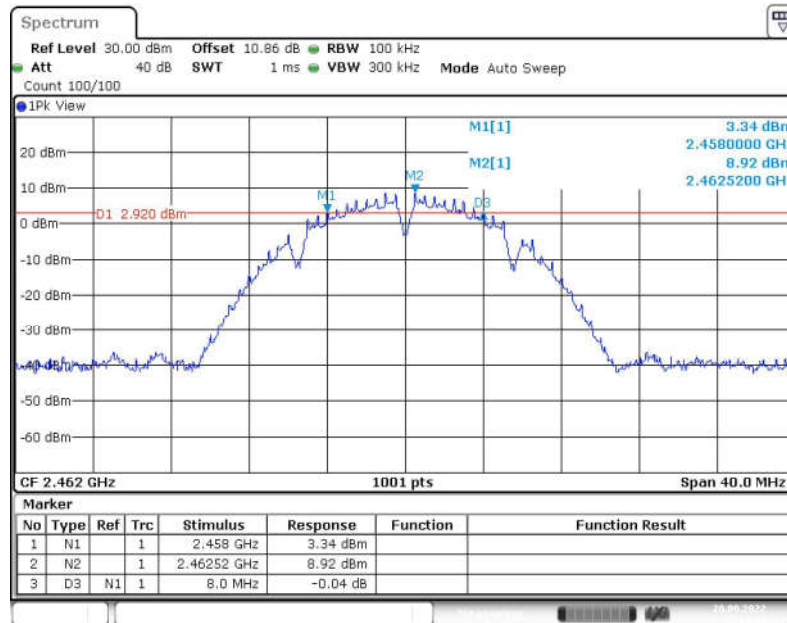


Fig.21 6dB Bandwidth (802.11b, CH11)

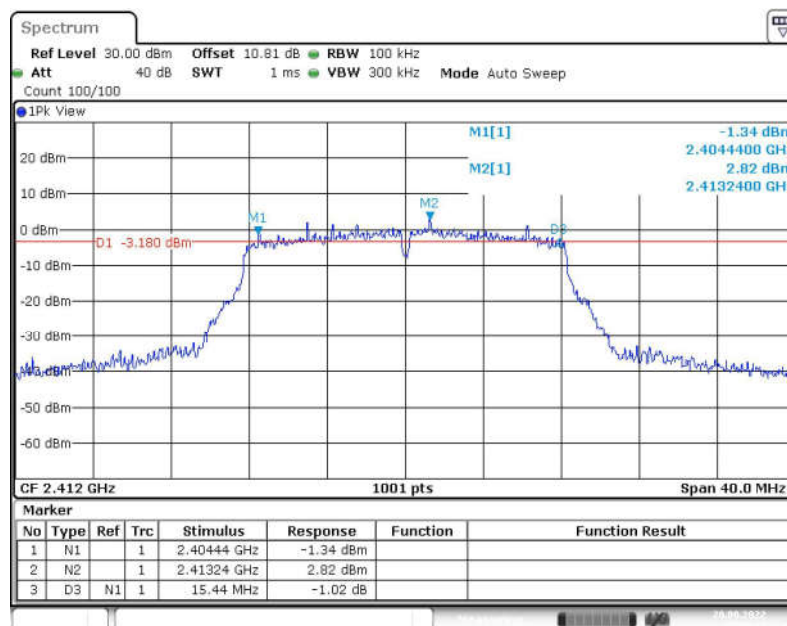


Fig.22 6dB Bandwidth (802.11g, CH1)

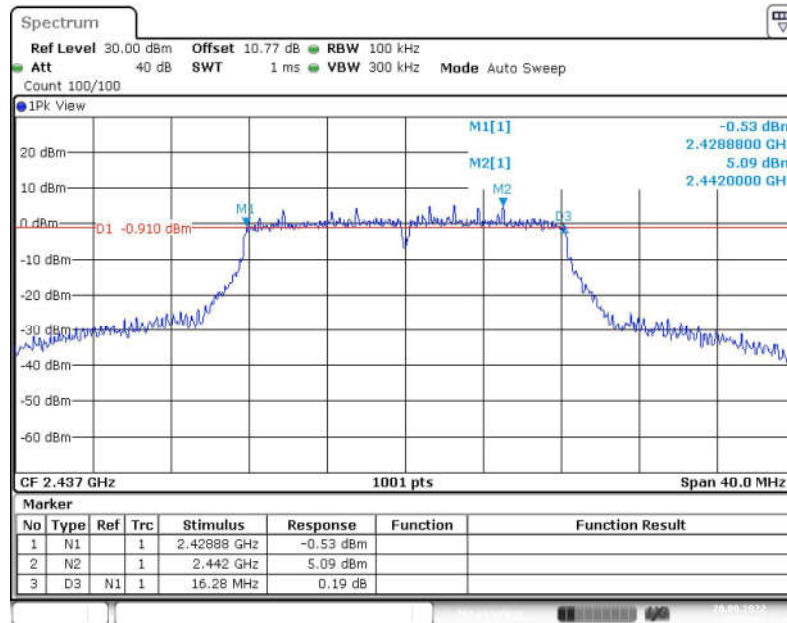


Fig.23 6dB Bandwidth (802.11g, CH6)

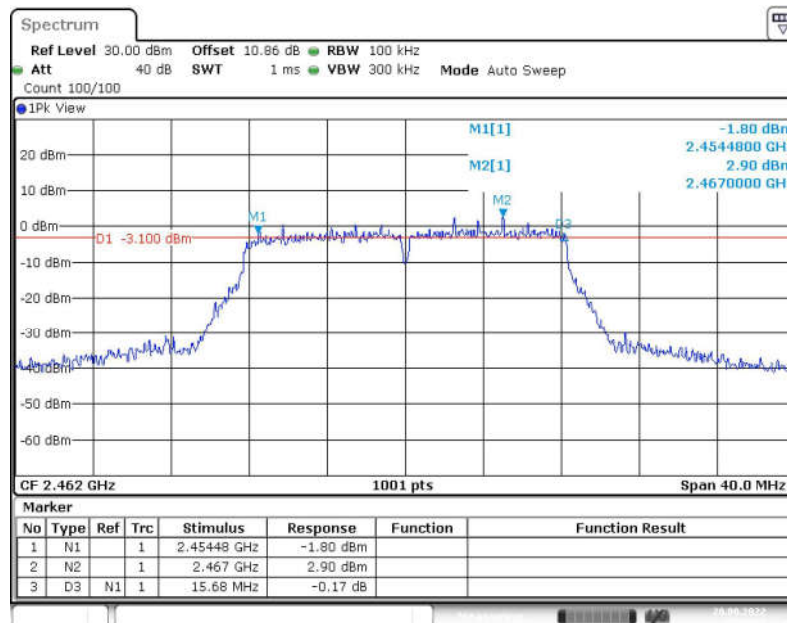


Fig.24 6dB Bandwidth (802.11g, CH11)

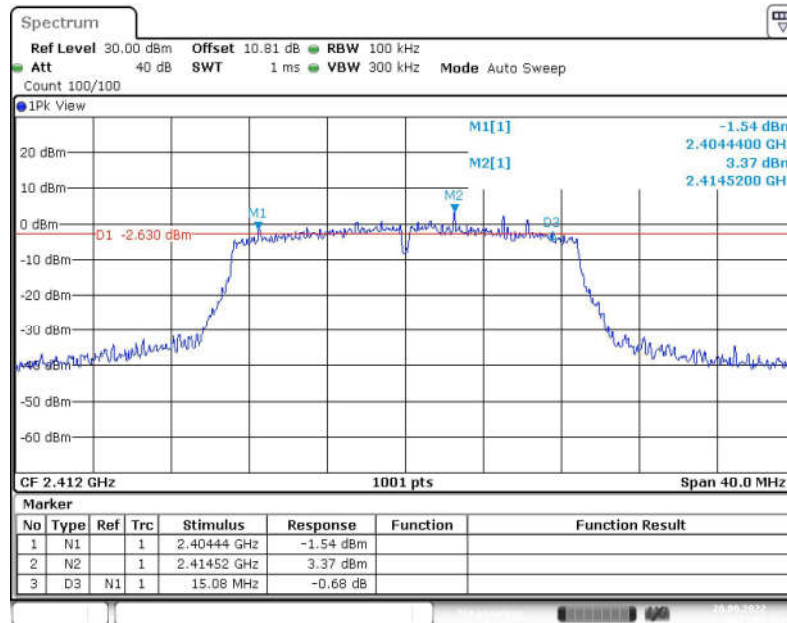


Fig.25 6dB Bandwidth (802.11n-HT20, CH1)

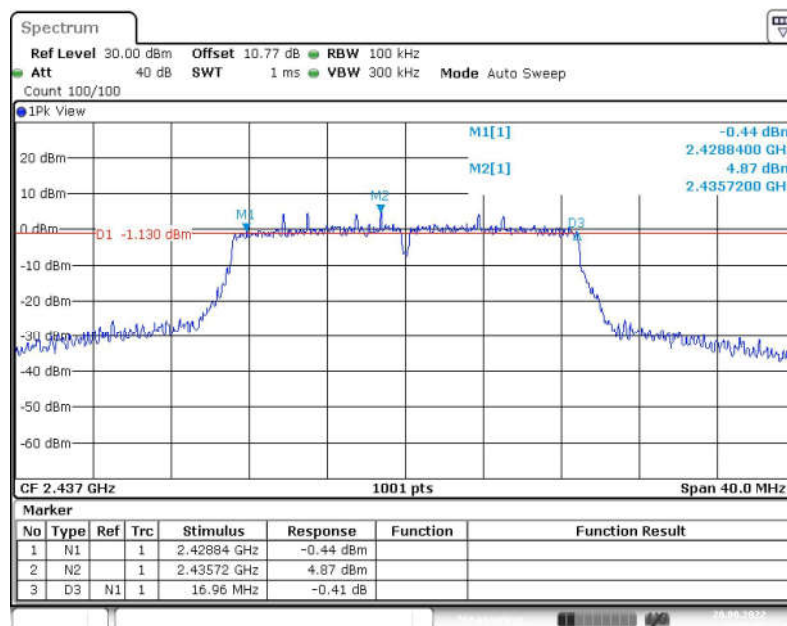


Fig.26 6dB Bandwidth (802.11n-HT20, CH6)

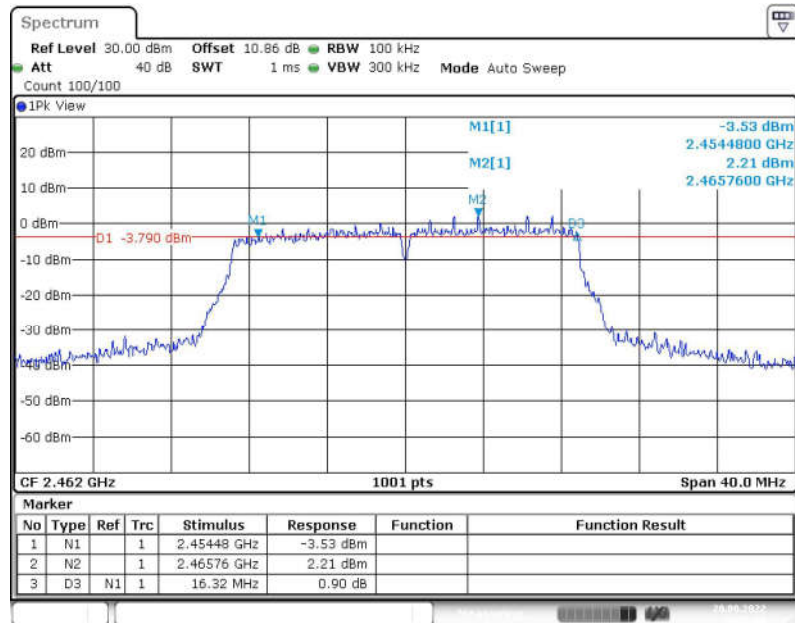


Fig.27 6dB Bandwidth (802.11n-HT20, CH11)

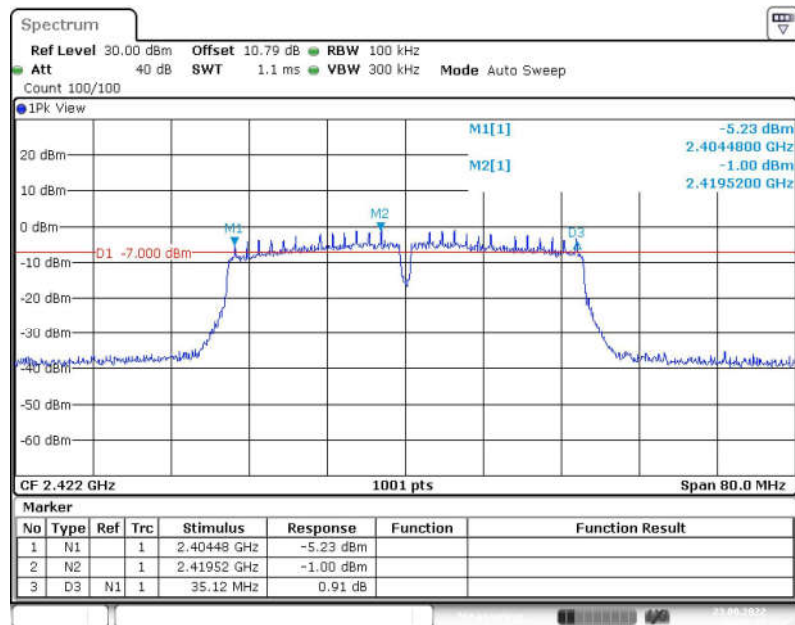


Fig.28 6dB Bandwidth (802.11n-HT40, CH3)

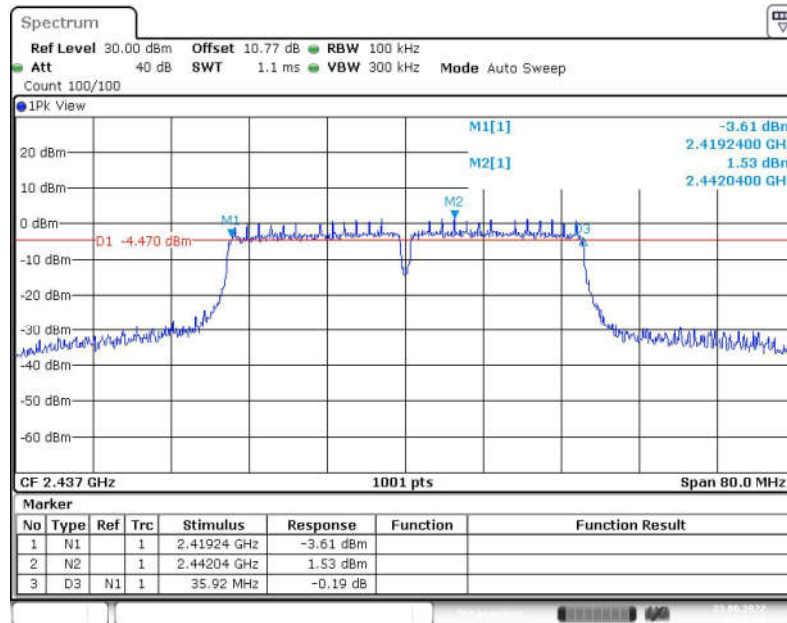


Fig.29 6dB Bandwidth (802.11n-HT40, CH6)

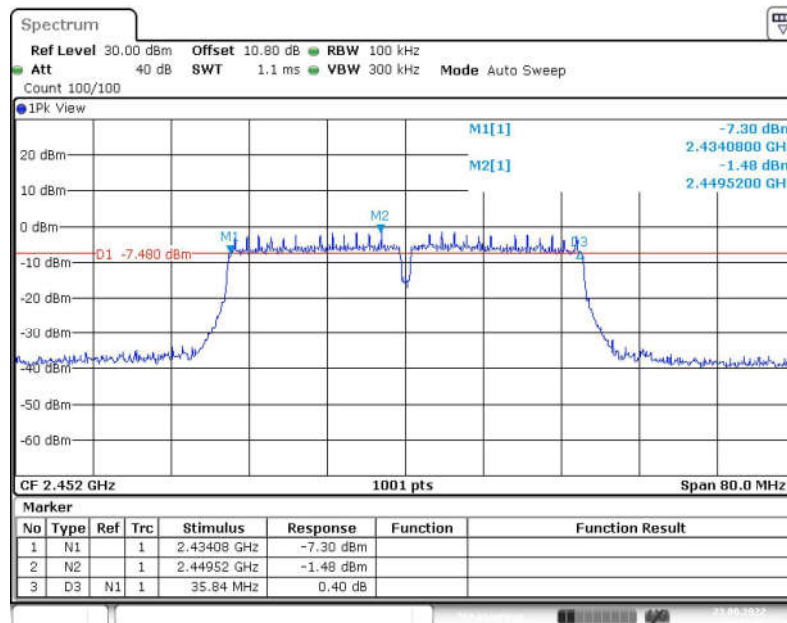


Fig.30 6dB Bandwidth (802.11n-HT40, CH9)

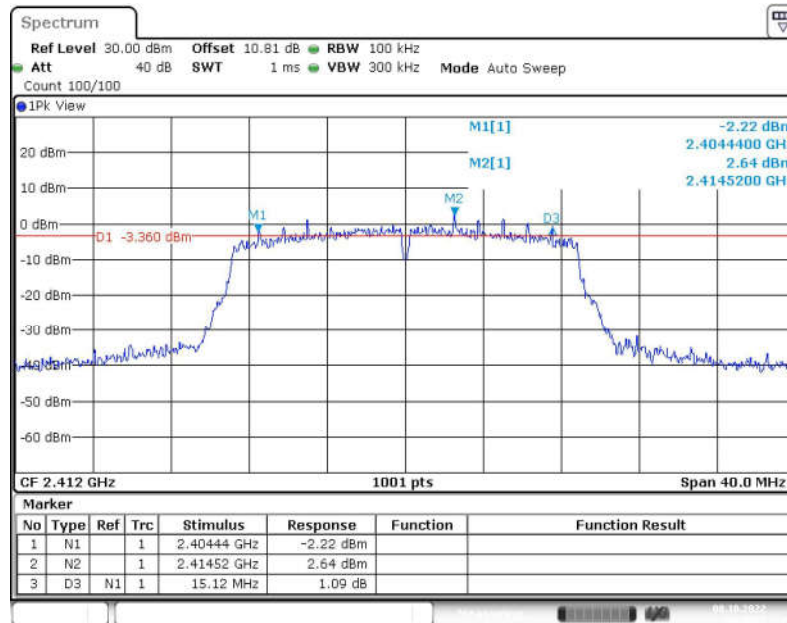


Fig.31 6dB Bandwidth (802.11-VHT20, CH1)

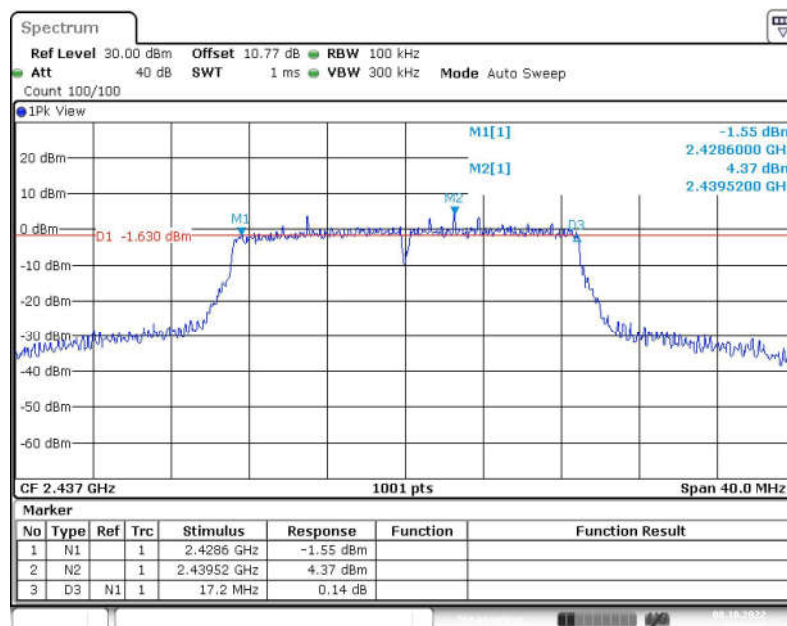


Fig.32 6dB Bandwidth (802.11-VHT20, CH6)

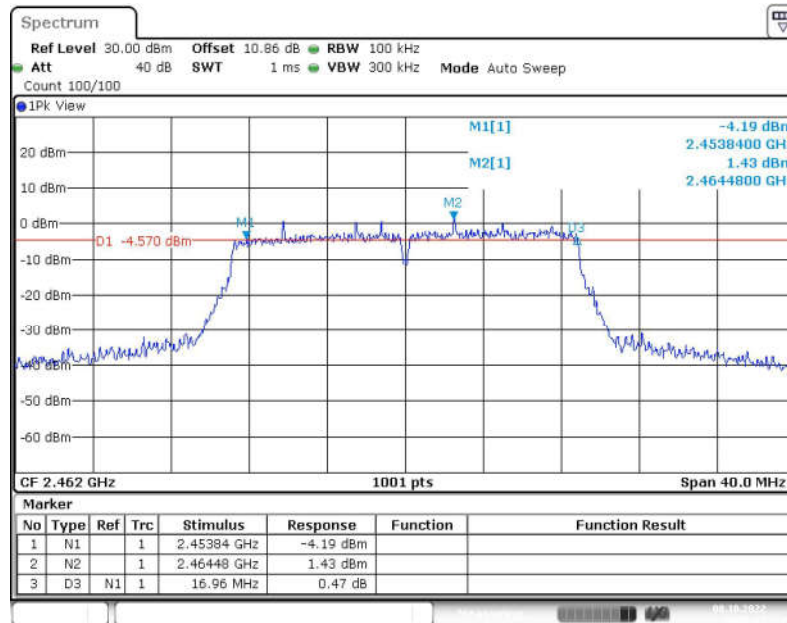


Fig.33 6dB Bandwidth (802.11-VHT20, CH11)

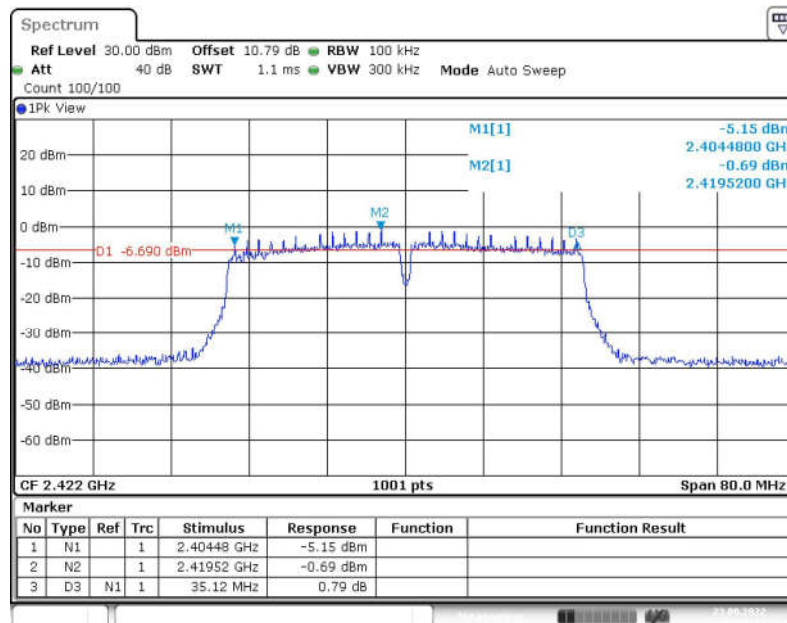


Fig.34 6dB Bandwidth (802.11-VHT40, CH3)

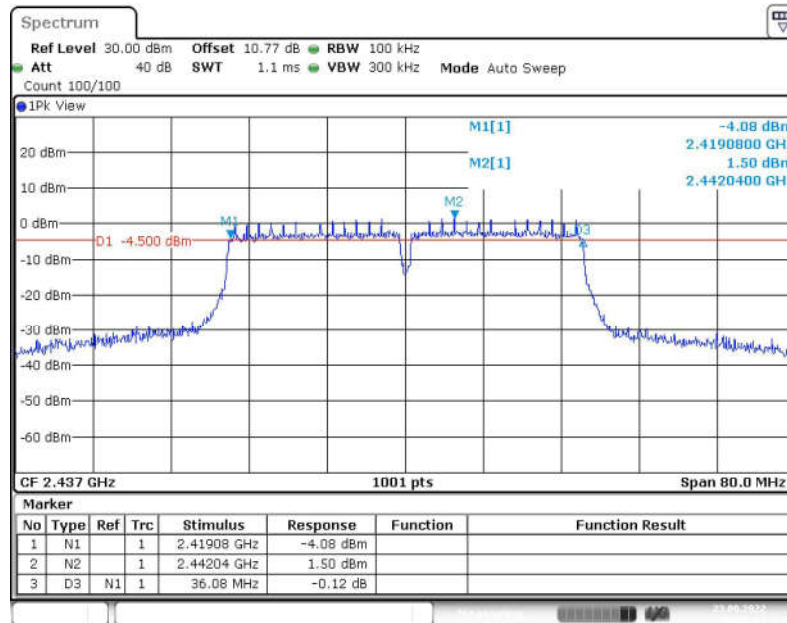


Fig.35 6dB Bandwidth (802.11-VHT40, CH6)

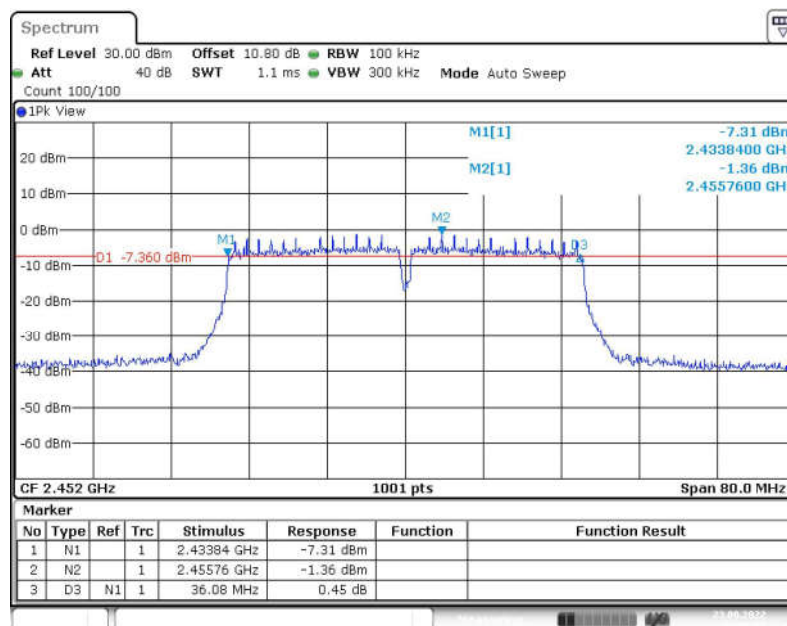


Fig.36 6dB Bandwidth (802.11-VHT40, CH9)



A.4 Band Edges Compliance

Method of Measurement: See ANSI C63.10-clause 11.13.3.

Measurement Limit:

Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	> 20

Measurement Result:

Mode	Frequency (MHz)	Test Results (dBc)		Conclusion
802.11b	2412(CH1)	Fig.37	50.64	P
	2462(CH11)	Fig.38	57.25	P
802.11g	2412(CH1)	Fig.39	39.11	P
	2462(CH11)	Fig.40	49.03	P
802.11n-HT20	2412(CH1)	Fig.41	38.96	P
	2462(CH11)	Fig.42	47.89	P
802.11n-HT40	2422(CH3)	Fig.43	38.56	P
	2452(CH9)	Fig.44	44.18	P
802.11-VHT20	2412(CH1)	Fig.45	38.83	P
	2462(CH11)	Fig.46	47.73	P
802.11-VHT40	2422(CH3)	Fig.47	38.22	P
	2452(CH9)	Fig.48	39.02	P

See below for test graphs.

Conclusion: **PASS**

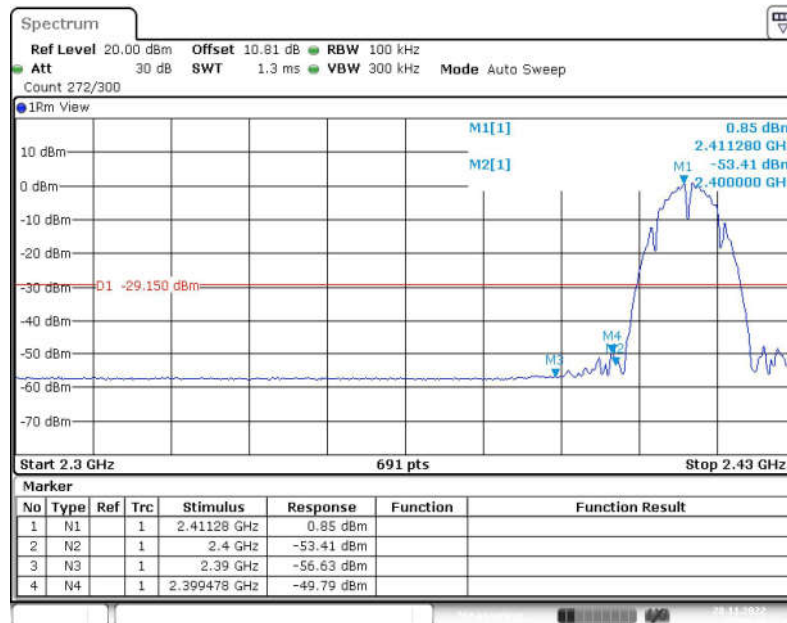


Fig.37 Band Edges (802.11b, CH1)

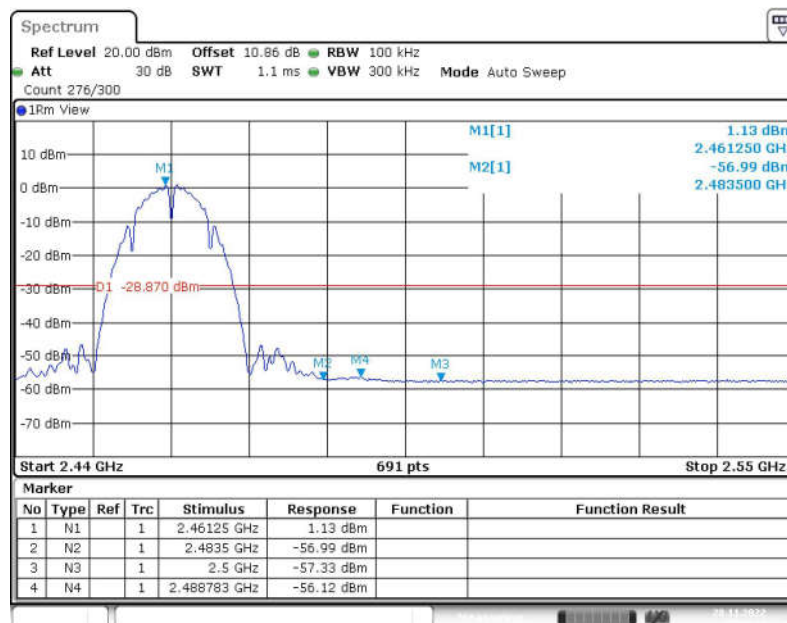


Fig.38 Band Edges (802.11b, CH11)

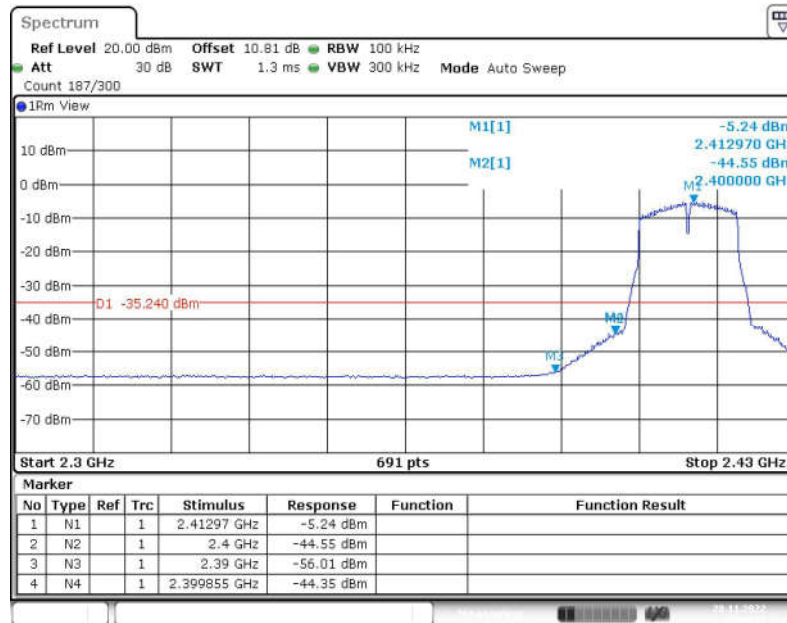


Fig.39 Band Edges (802.11g, CH1)

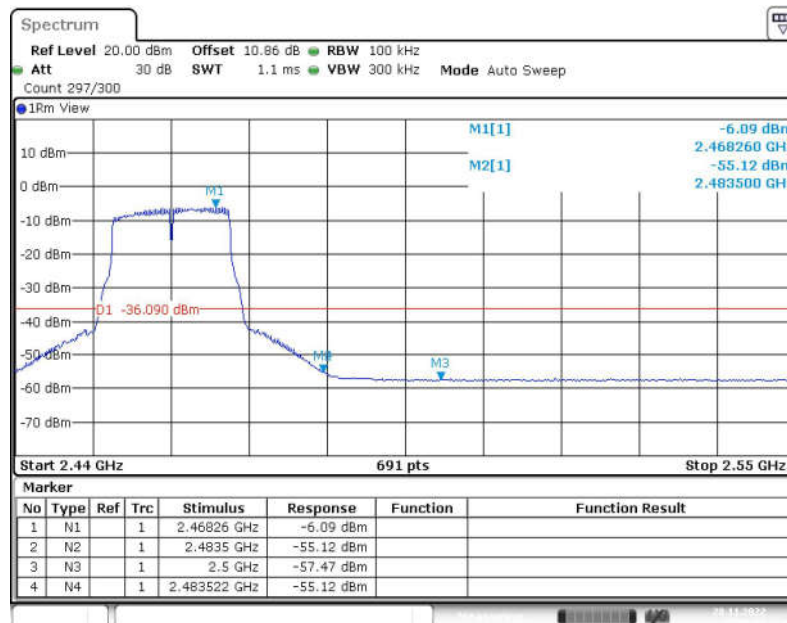


Fig.40 Band Edges (802.11g, CH11)

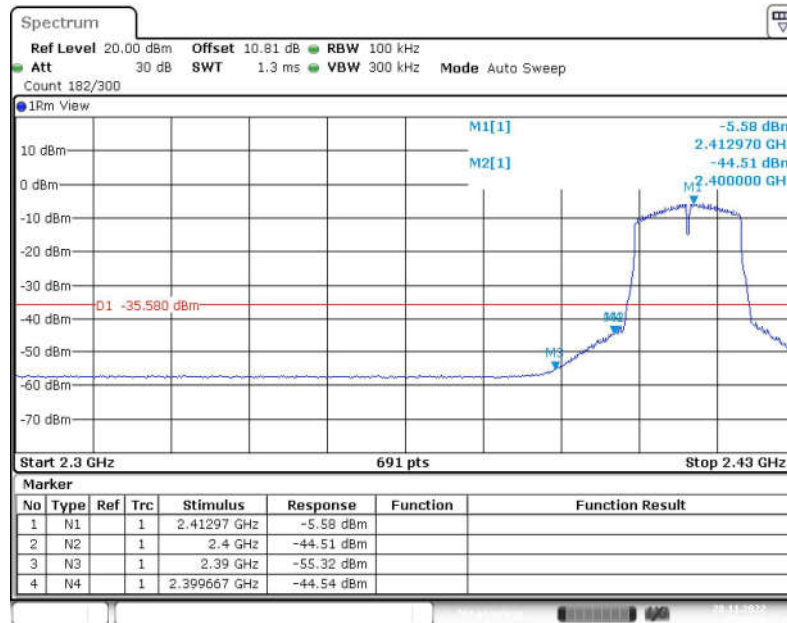


Fig.41 Band Edges (802.11n-HT20, CH1)

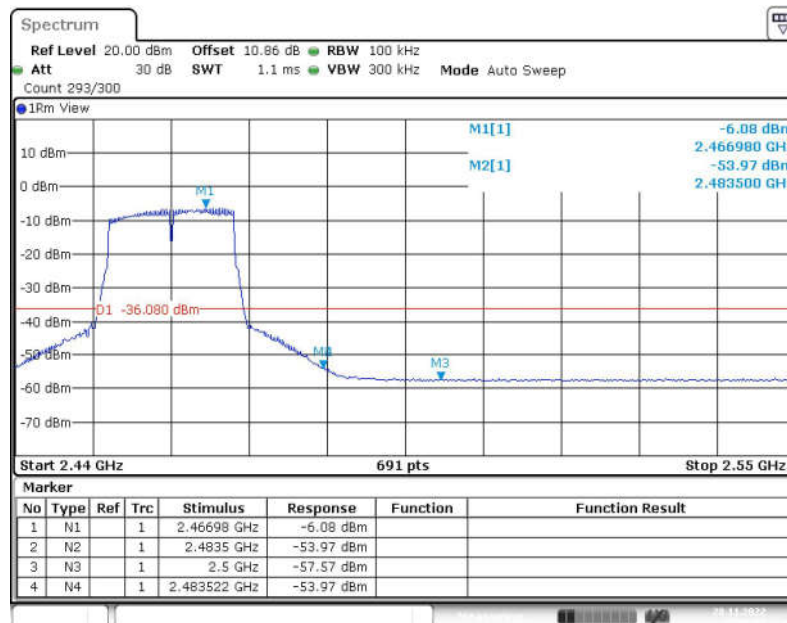


Fig.42 Band Edges (802.11n-HT20, CH11)

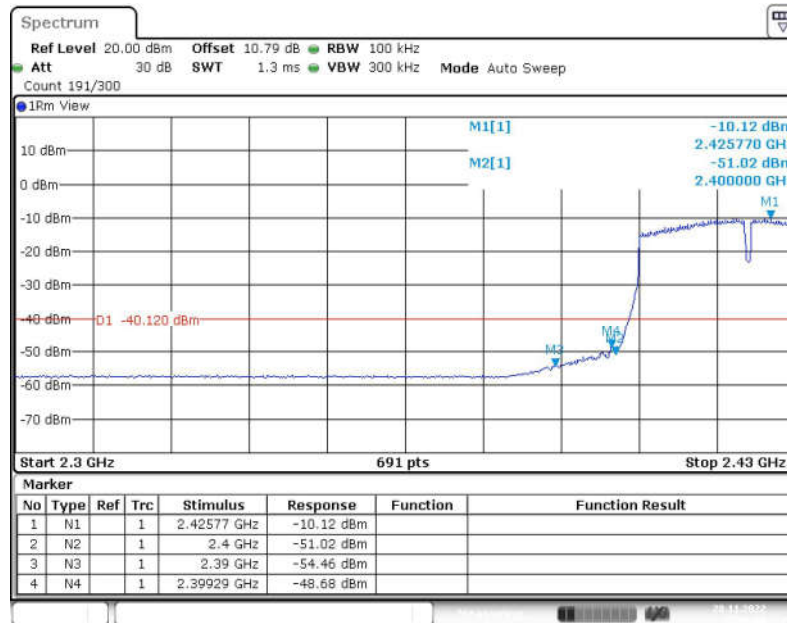


Fig.43 Band Edges (802.11n-HT40, CH3)

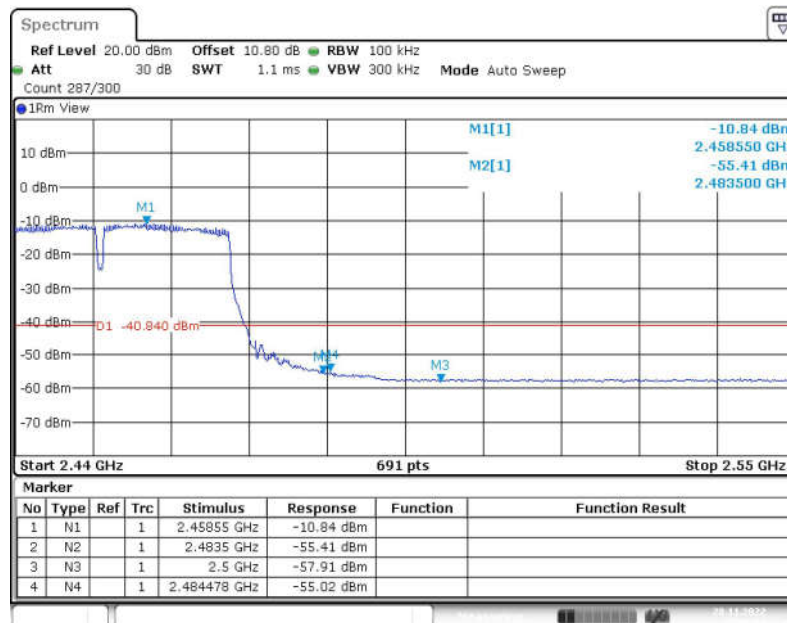


Fig.44 Band Edges (802.11n-HT40, CH9)

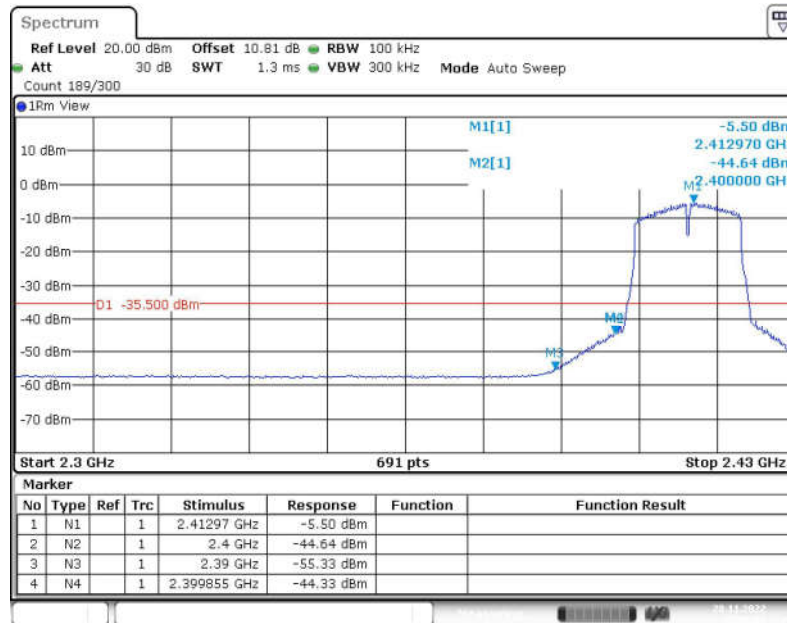


Fig.45 Band Edges (802.11-VHT20, CH1)

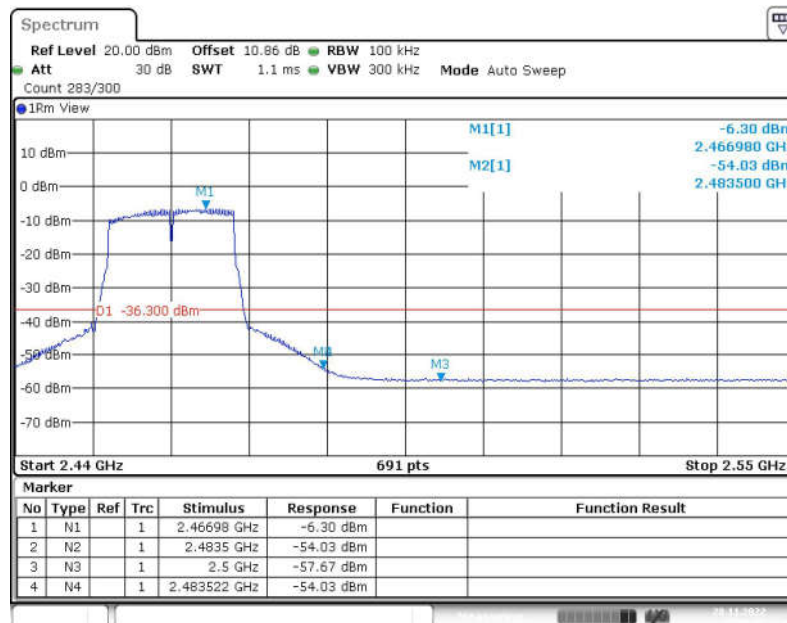


Fig.46 Band Edges (802.11-VHT20, CH11)

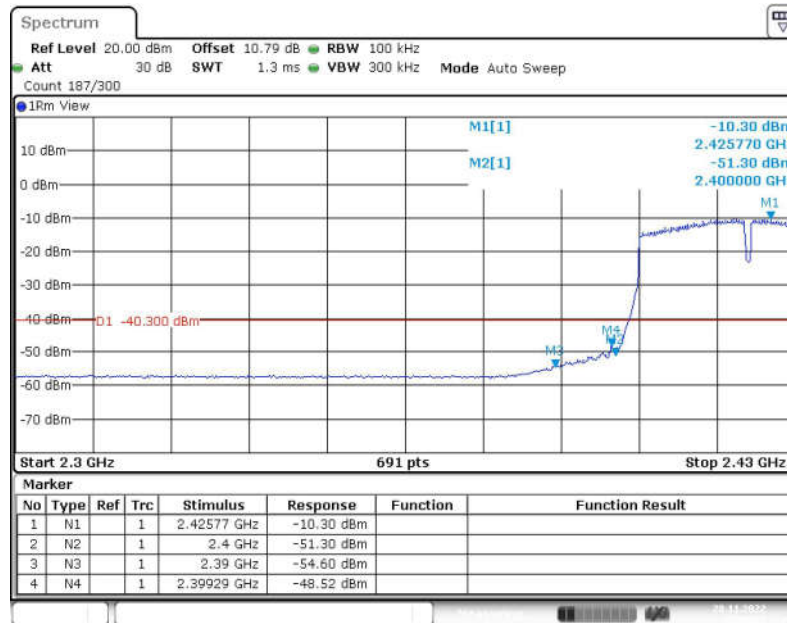


Fig.47 Band Edges (802.11-VHT40, CH3)

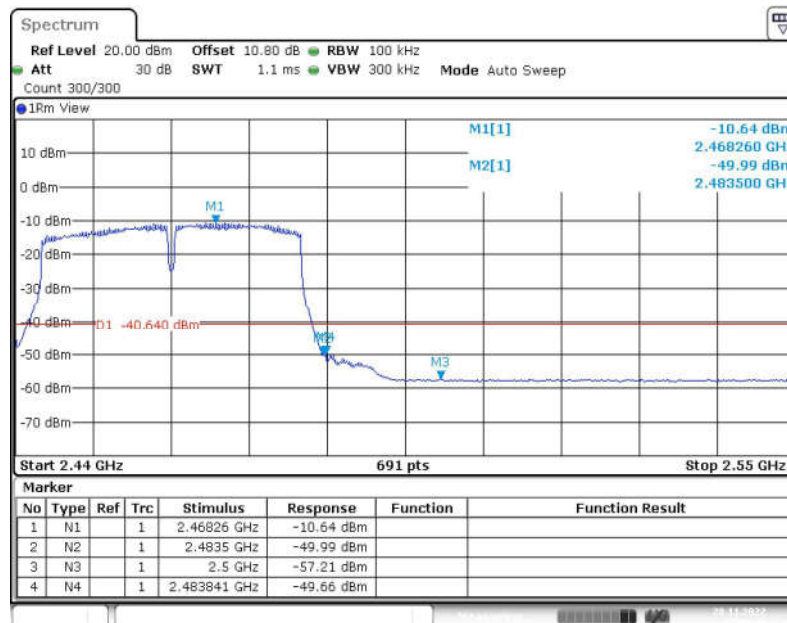


Fig.48 Band Edges (802.11-VHT40, CH9)

**A.5 Conducted Emission****Method of Measurement: See ANSI C63.10-clause 11.11.2&11.11.3.****Measurement Limit:**

Standard	Limit (dBm)
FCC 47 CFR Part 15.247 (d)	30dBm below peak output power in 100kHz bandwidth

Measurement Results:

Mode	Frequency (MHz)	Frequency Range	Test Results	Conclusion
802.11b	2412(CH1)	2.412GHz	Fig.49	P
		30MHz-1GHz	Fig.50	P
		1GHz-26.5GHz	Fig.51	P
	2437(CH6)	2.437GHz	Fig.52	P
		30MHz-1GHz	Fig.53	P
		1GHz-26.5GHz	Fig.54	P
	2462(CH11)	2.462GHz	Fig.55	P
		30MHz-1GHz	Fig.56	P
		1GHz-26.5GHz	Fig.57	P
802.11g	2412(CH1)	2.412GHz	Fig.58	P
		30MHz-1GHz	Fig.59	P
		1GHz-26.5GHz	Fig.60	P
	2437(CH6)	2.437GHz	Fig.61	P
		30MHz-1GHz	Fig.62	P
		1GHz-26.5GHz	Fig.63	P
	2462(CH11)	2.462GHz	Fig.64	P
		30MHz-1GHz	Fig.65	P
		1GHz-26.5GHz	Fig.66	P
802.11n-HT20	2412(CH1)	2.412GHz	Fig.67	P
		30MHz-1GHz	Fig.68	P
		1GHz-26.5GHz	Fig.69	P
	2437(CH6)	2.437GHz	Fig.70	P
		30MHz-1GHz	Fig.71	P
		1GHz-26.5GHz	Fig.72	P
	2462(CH11)	2.462GHz	Fig.73	P
		30MHz-1GHz	Fig.74	P
		1GHz-26.5GHz	Fig.75	P
802.11n-HT40	2422(CH3)	2.422GHz	Fig.76	P
		30MHz-1GHz	Fig.77	P
		1GHz-26.5GHz	Fig.78	P
	2437(CH6)	2.437GHz	Fig.79	P
		30MHz-1GHz	Fig.80	P



No.I22N01710-WLAN 2.4GHz

	2452(CH9)	1GHz-26.5GHz	Fig.81	P
		2.452GHz	Fig.82	P
		30MHz-1GHz	Fig.83	P
		1GHz-26.5GHz	Fig.84	P
802.11-VHT20	2412(CH1)	2.412GHz	Fig.85	P
		30MHz-1GHz	Fig.86	P
		1GHz-26.5GHz	Fig.87	P
	2437(CH6)	2.437GHz	Fig.88	P
		30MHz-1GHz	Fig.89	P
		1GHz-26.5GHz	Fig.90	P
	2462(CH11)	2.462GHz	Fig.91	P
		30MHz-1GHz	Fig.92	P
		1GHz-26.5GHz	Fig.93	P
802.11-VHT40	2422(CH3)	2.422GHz	Fig.94	P
		30MHz-1GHz	Fig.95	P
		1GHz-26.5GHz	Fig.96	P
	2437(CH6)	2.437GHz	Fig.97	P
		30MHz-1GHz	Fig.98	P
		1GHz-26.5GHz	Fig.99	P
	2452(CH9)	2.452GHz	Fig.100	P
		30MHz-1GHz	Fig.101	P
		1GHz-26.5GHz	Fig.102	P

See below for test graphs.

Conclusion: **PASS**

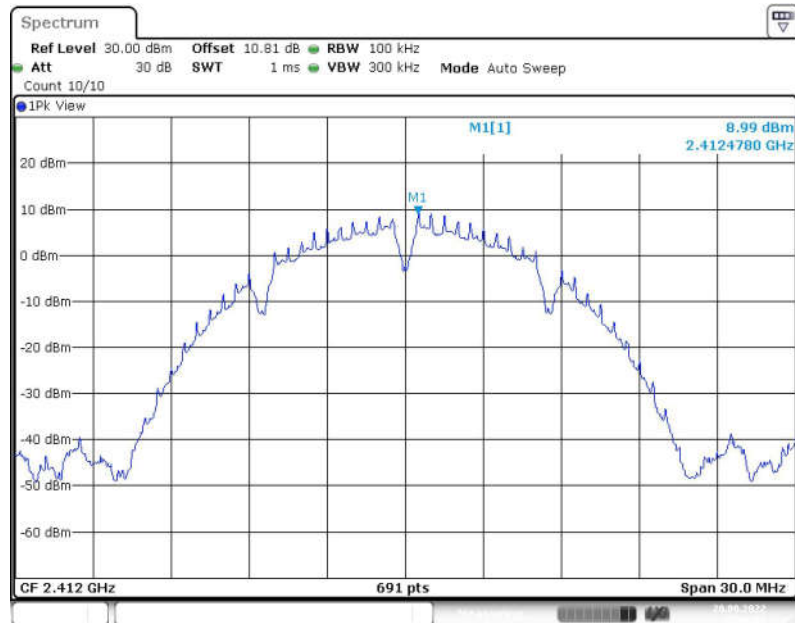


Fig.49 Conducted Spurious Emission (Center Frequency, 802.11b, CH1)

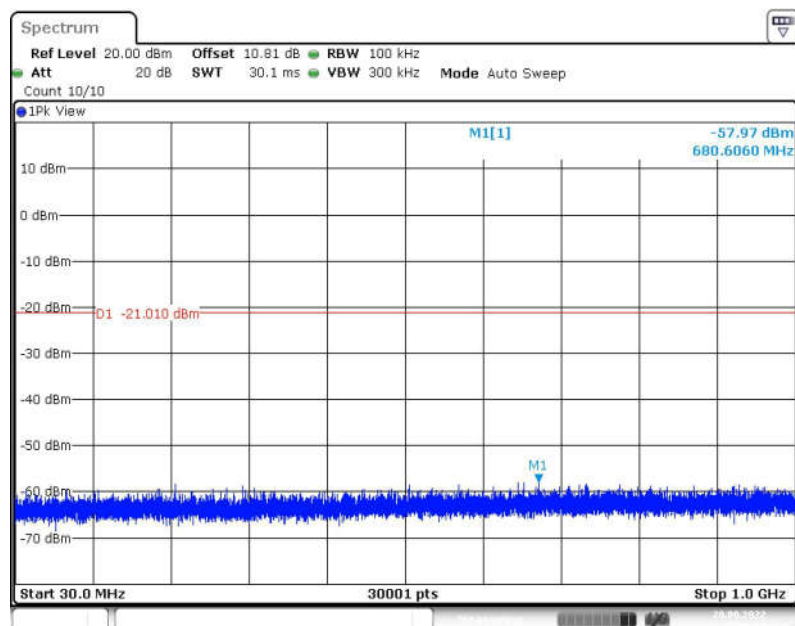


Fig.50 Conducted Spurious Emission (30MHz -1GHz, 802.11b, CH1)

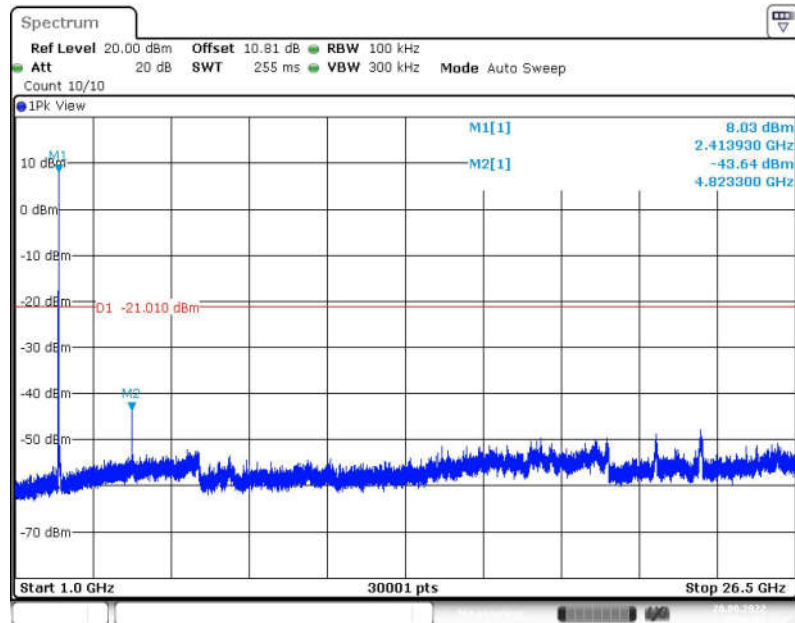


Fig.51 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH1)

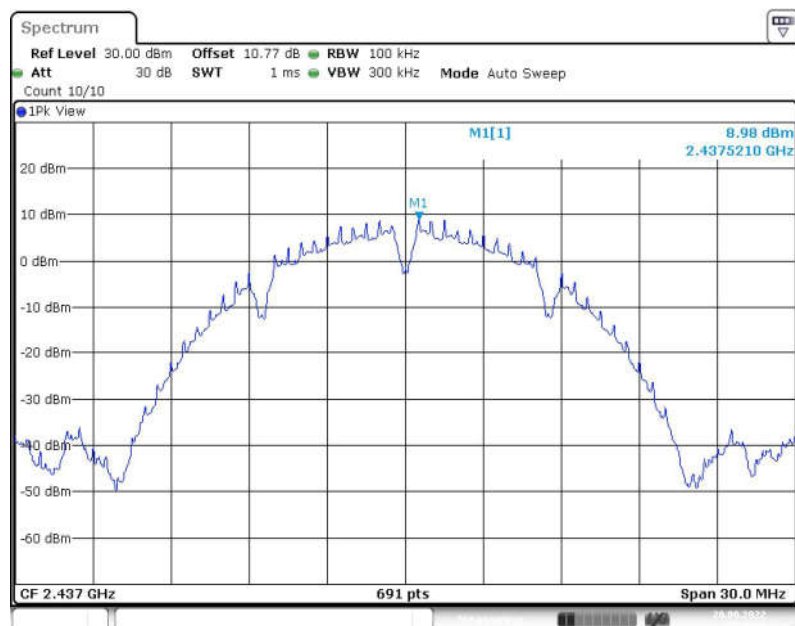


Fig.52 Conducted Spurious Emission (Center Frequency, 802.11b, CH6)

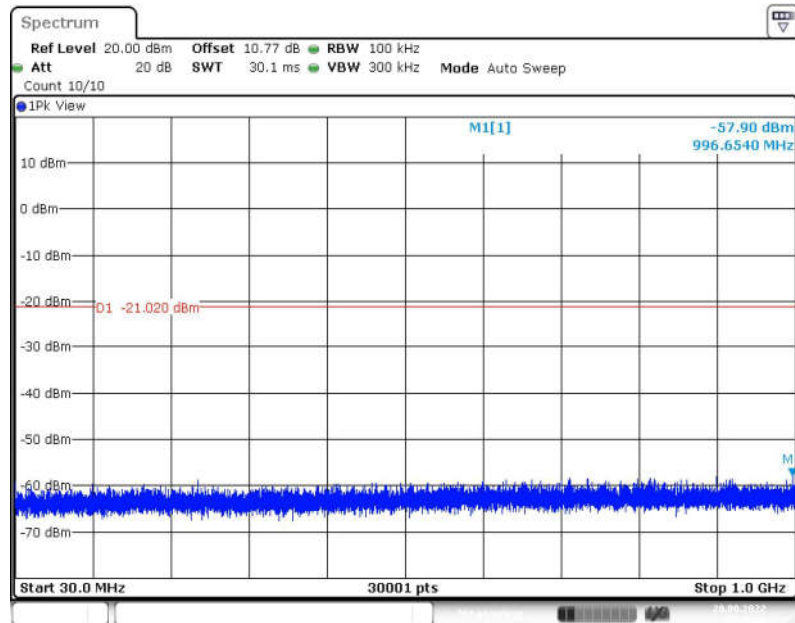


Fig.53 Conducted Spurious Emission (30MHz -1GHz, 802.11b, CH6)

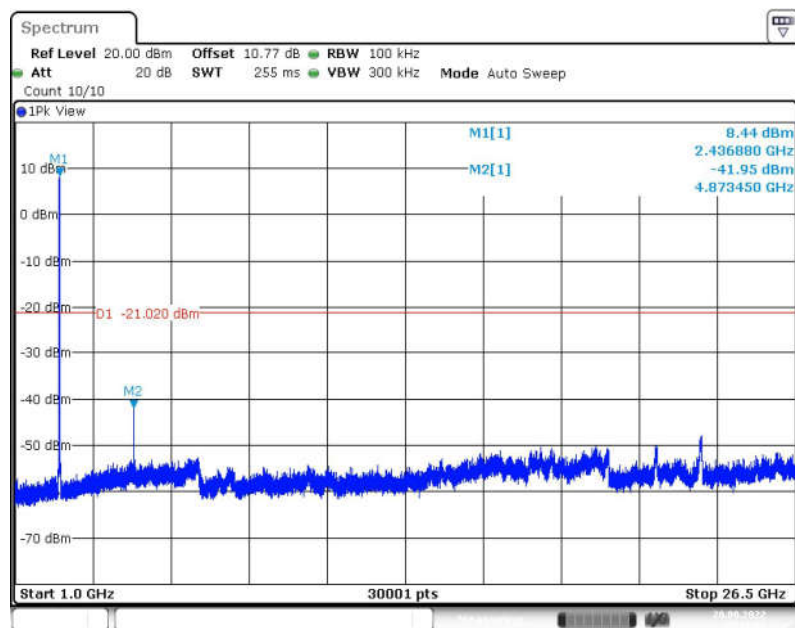


Fig.54 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH6)

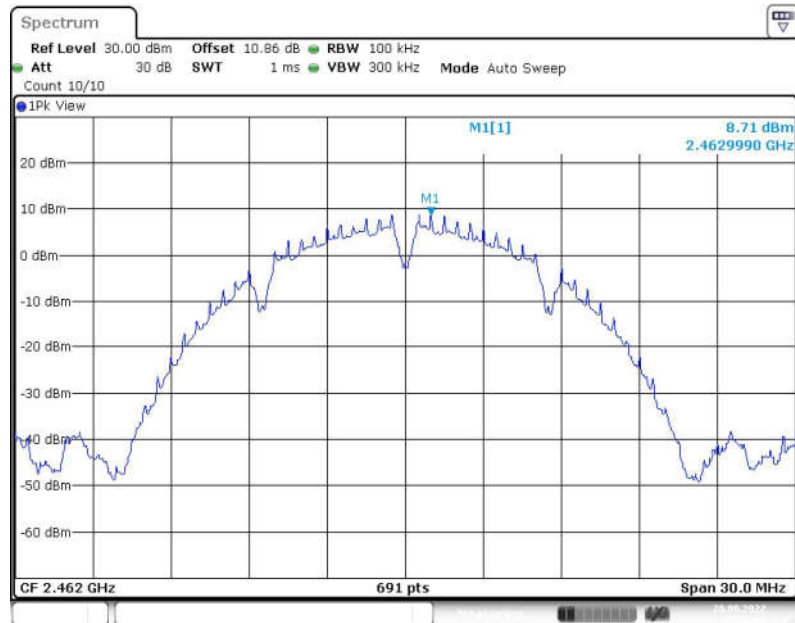


Fig.55 Conducted Spurious Emission (Center Frequency, 802.11b, CH11)

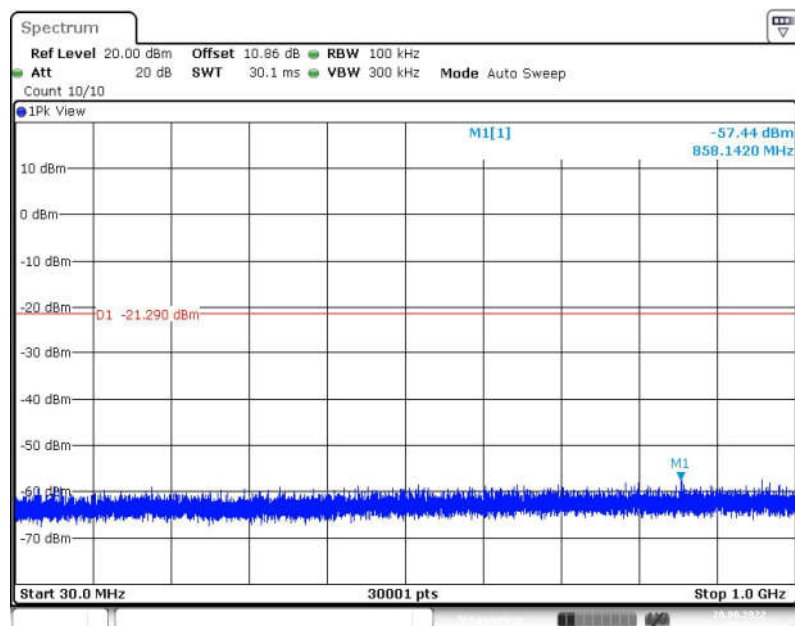


Fig.56 Conducted Spurious Emission (30MHz -1GHz, 802.11b, CH11)

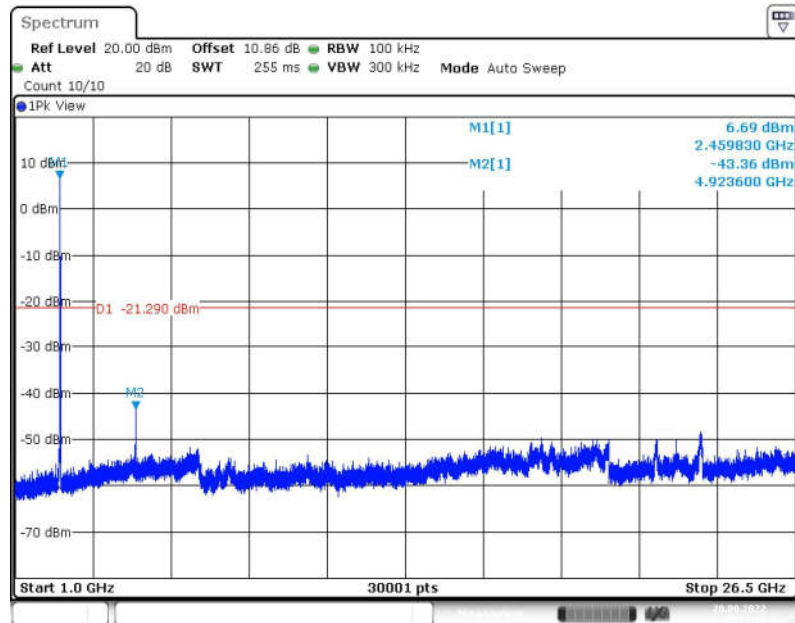


Fig.57 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH11)

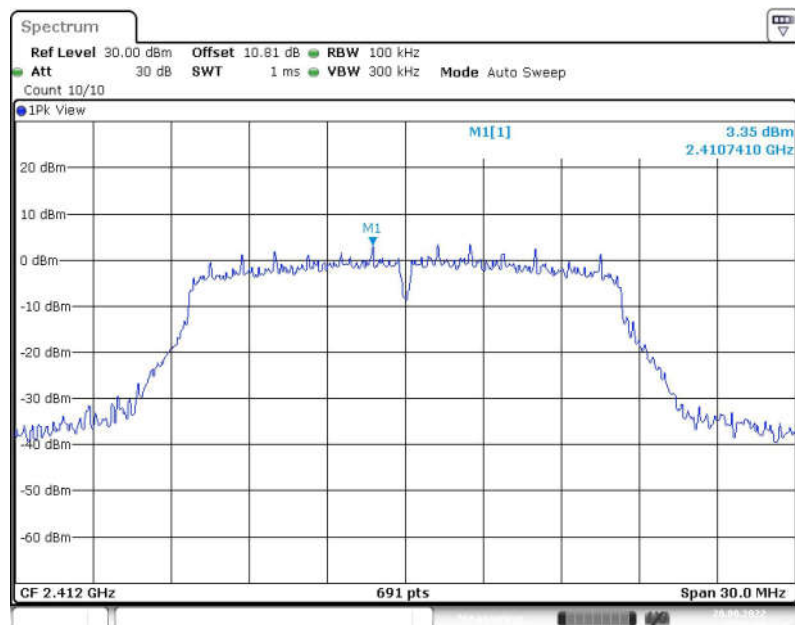


Fig.58 Conducted Spurious Emission (Center Frequency, 802.11g, CH1)

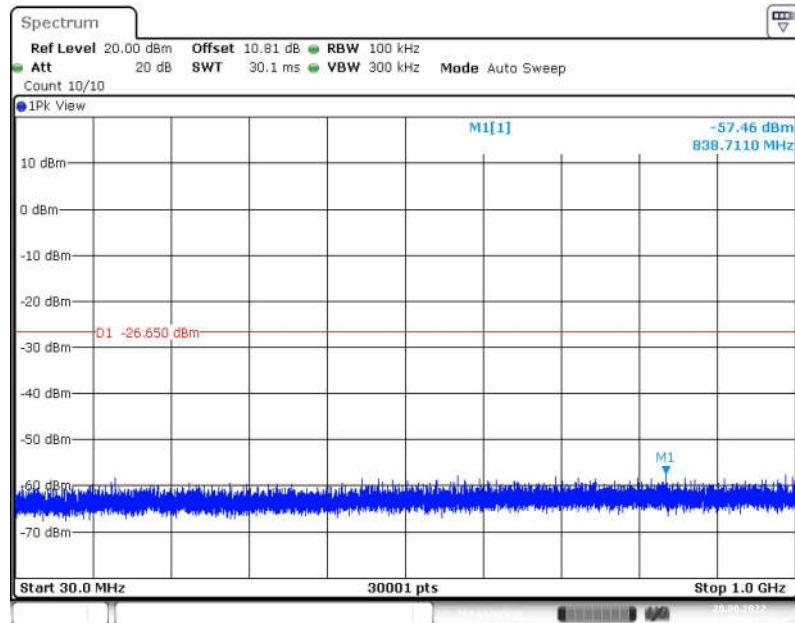


Fig.59 Conducted Spurious Emission (30MHz -1GHz, 802.11g, CH1)

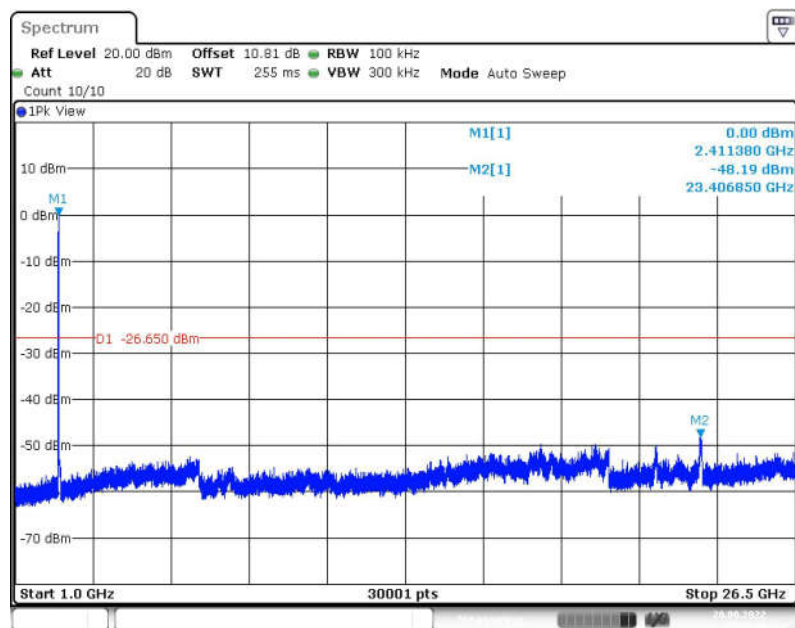


Fig.60 Conducted Spurious Emission (1GHz-26.5GHz, 802.11g, CH1)

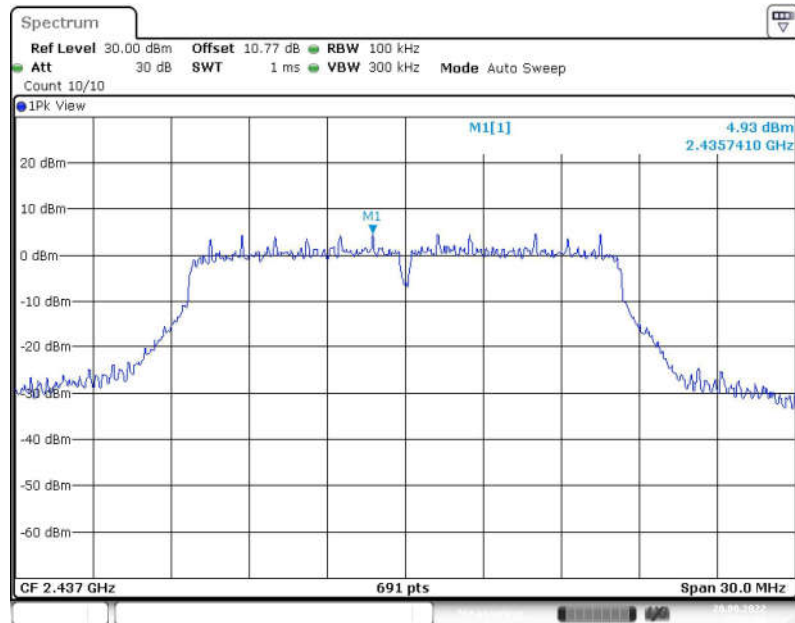


Fig.61 Conducted Spurious Emission (Center Frequency, 802.11g, CH6)

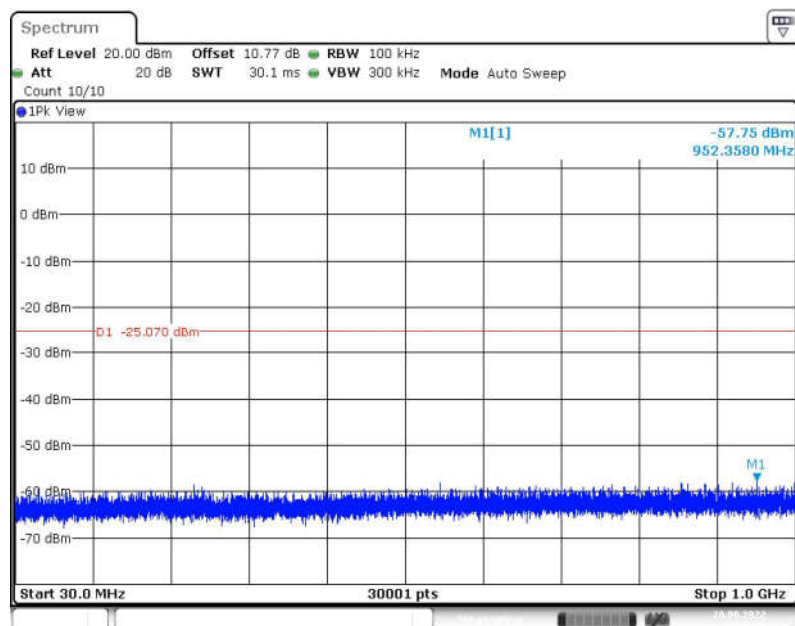


Fig.62 Conducted Spurious Emission (30MHz -1GHz, 802.11g, CH6)

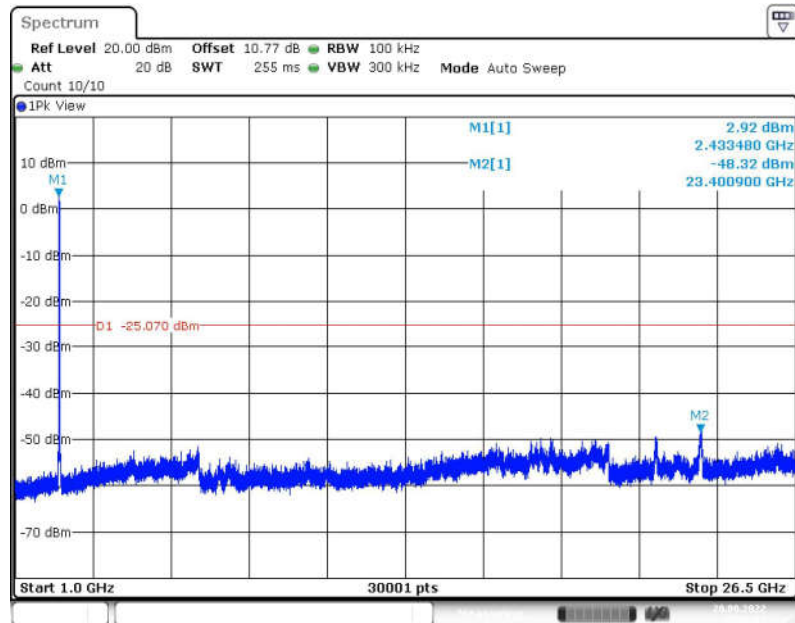


Fig.63 Conducted Spurious Emission (1GHz-26.5GHz, 802.11g, CH6)

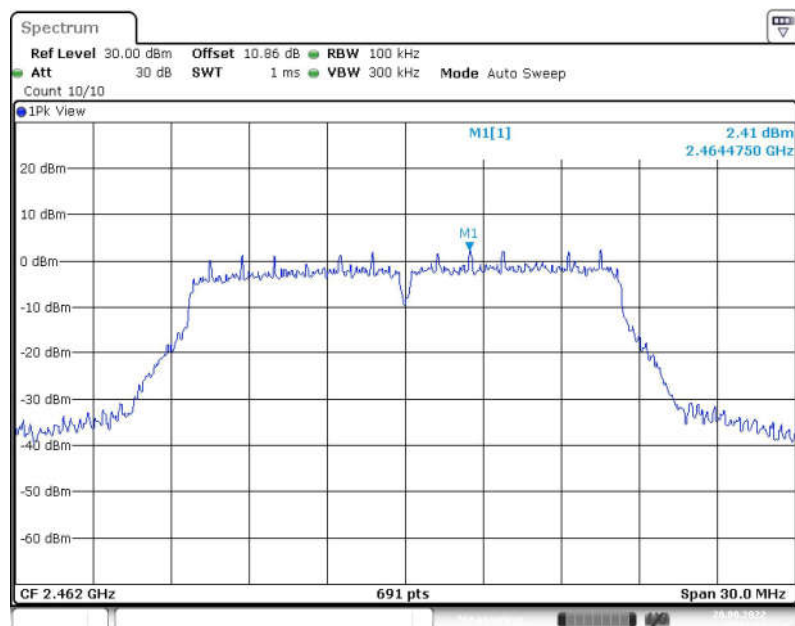


Fig.64 Conducted Spurious Emission (Center Frequency, 802.11g, CH11)

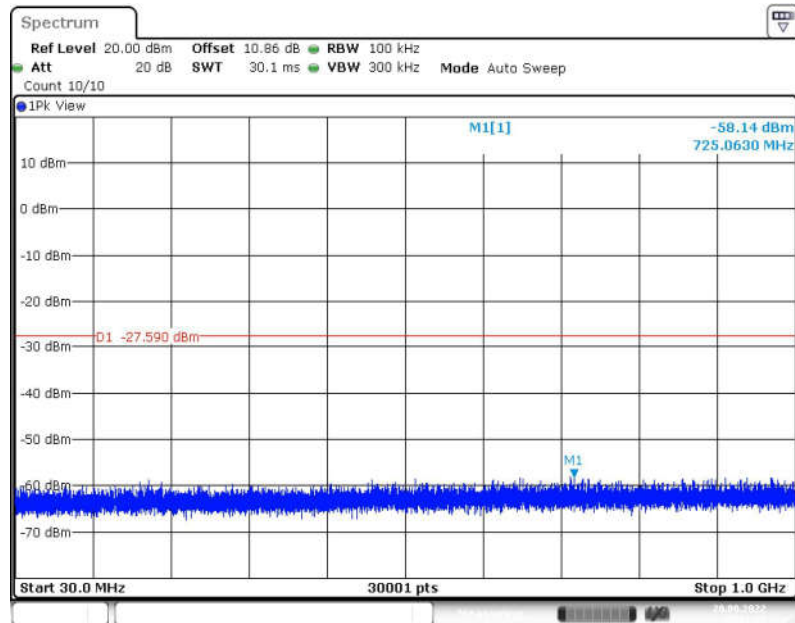


Fig.65 Conducted Spurious Emission (30MHz -1GHz, 802.11g, CH11)

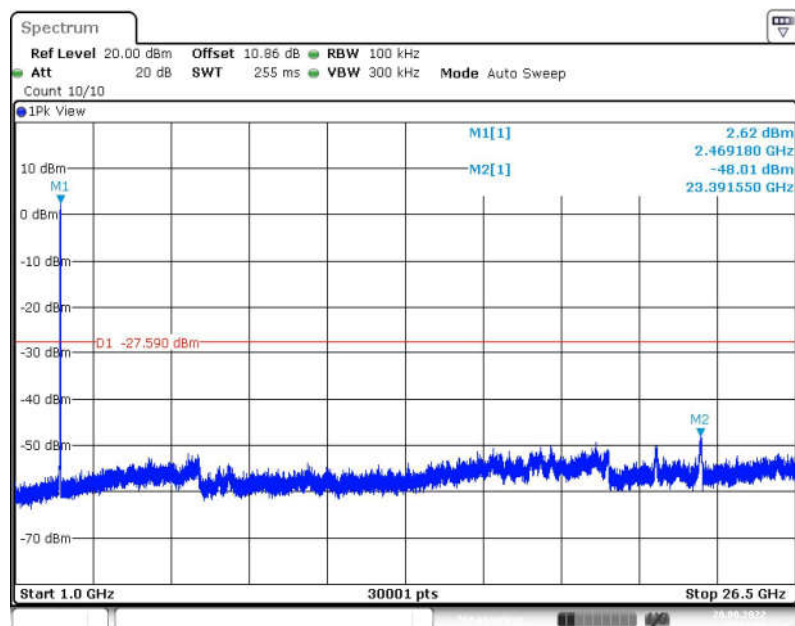


Fig.66 Conducted Spurious Emission (1GHz-26.5GHz, 802.11g, CH11)

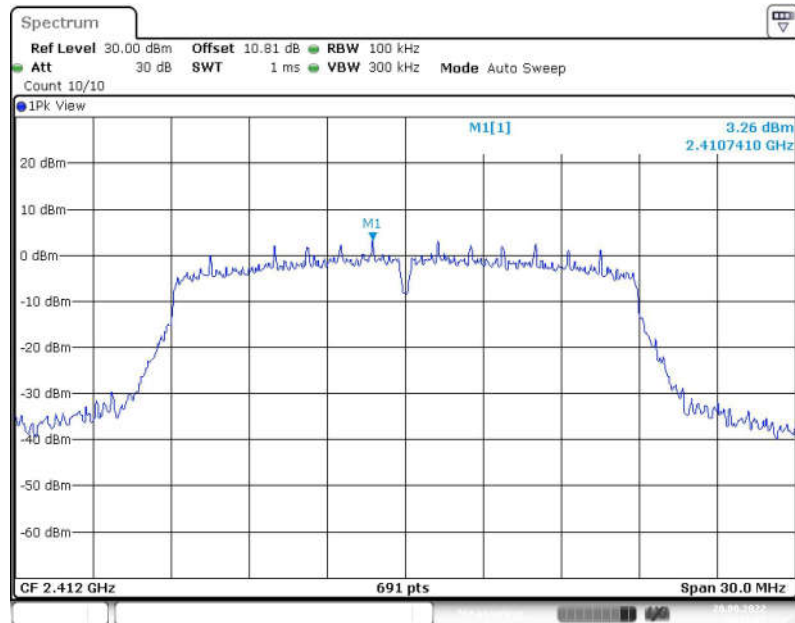


Fig.67 Conducted Spurious Emission (Center Frequency, 802.11n-HT20, CH1)

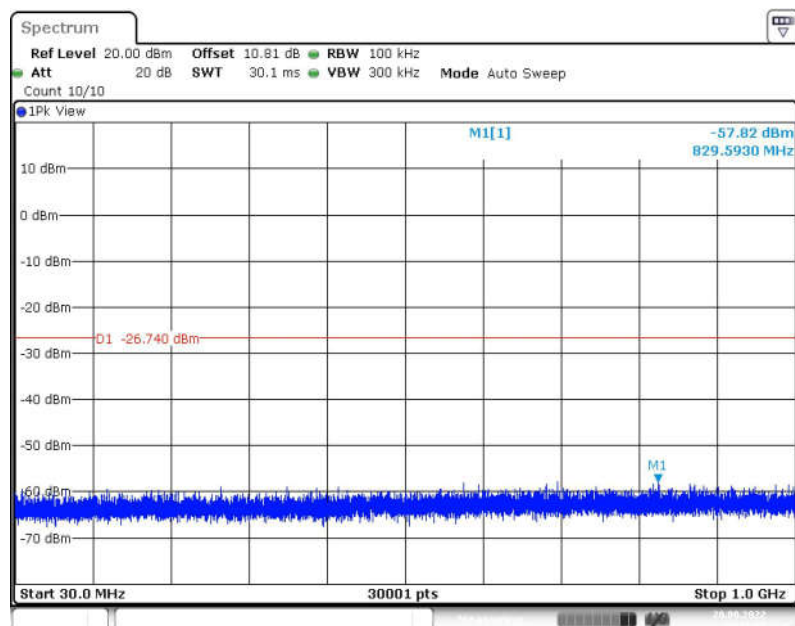


Fig.68 Conducted Spurious Emission (30MHz -1GHz, 802.11n-HT20, CH1)

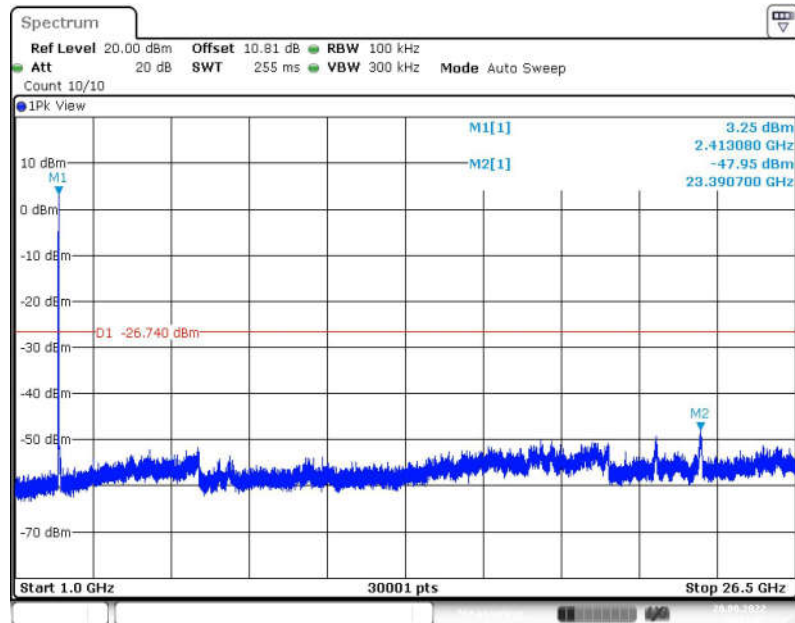


Fig.69 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT20, CH1)

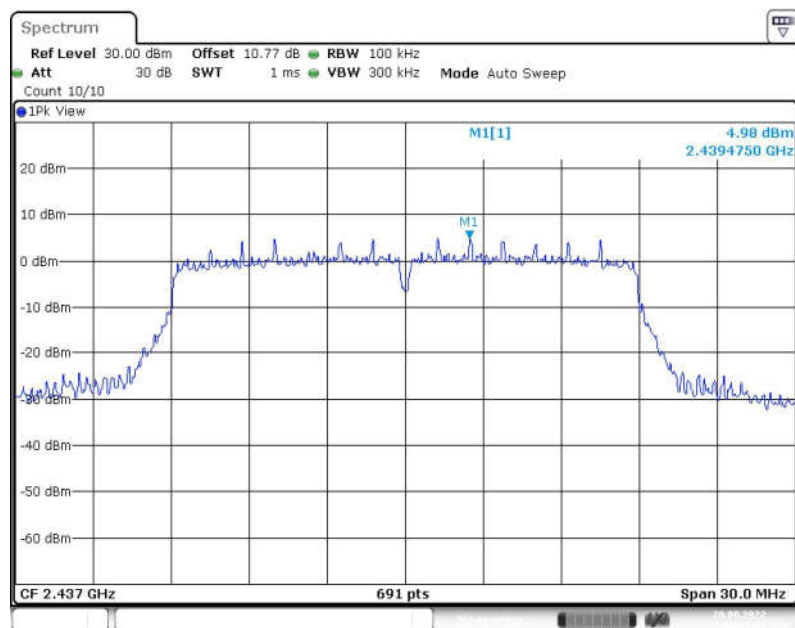


Fig.70 Conducted Spurious Emission (Center Frequency, 802.11n-HT20, CH6)

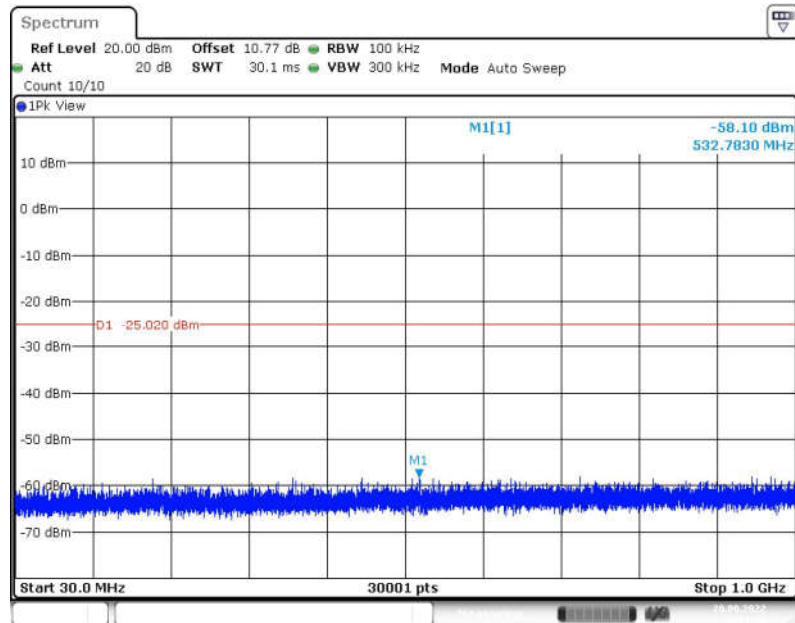


Fig.71 Conducted Spurious Emission (30MHz-1GHz, 802.11n-HT20, CH6)

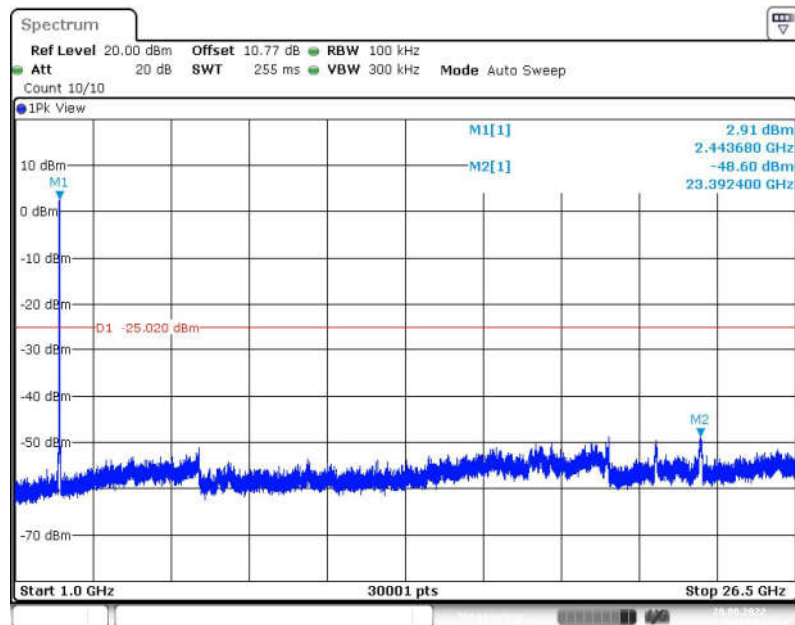


Fig.72 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT20, CH6)

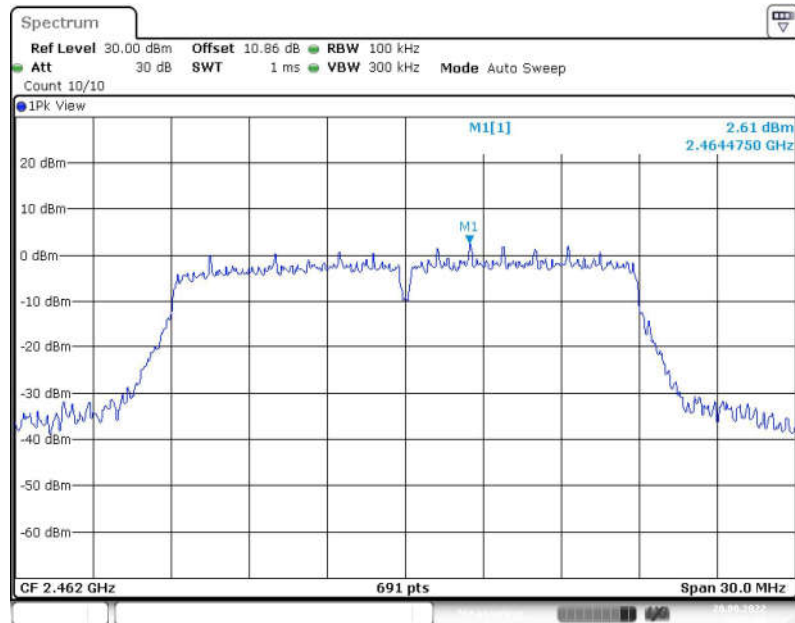


Fig.73 Conducted Spurious Emission (Center Frequency, 802.11n-HT20, CH11)

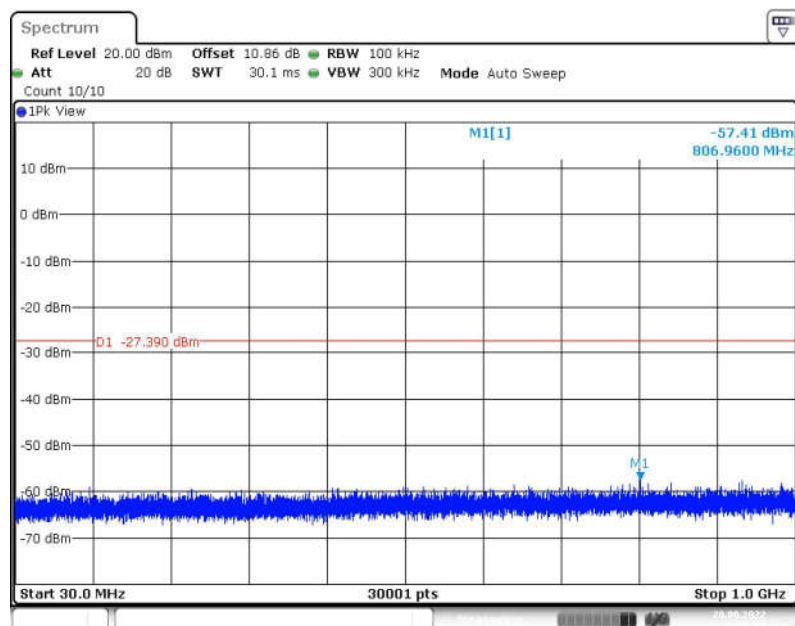


Fig.74 Conducted Spurious Emission (30MHz-1GHz, 802.11n-HT20, CH11)

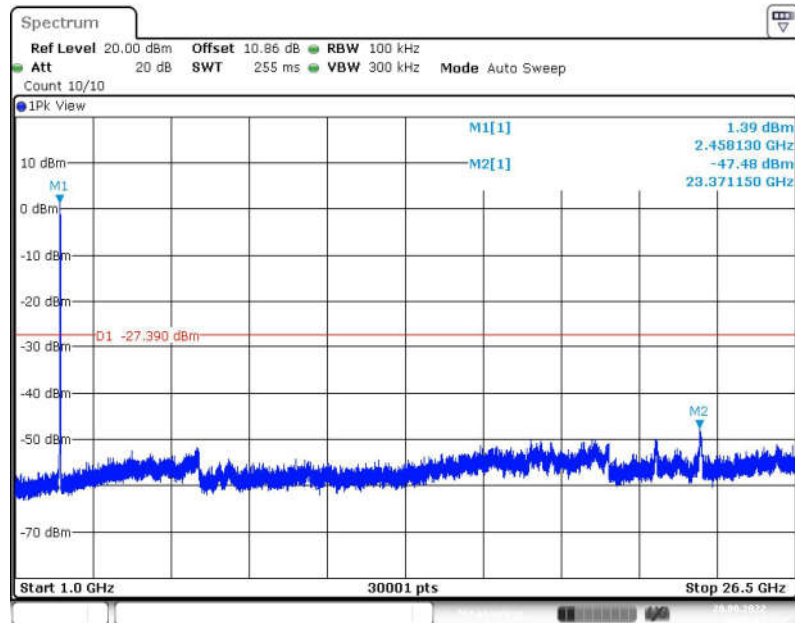


Fig.75 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT20, CH11)

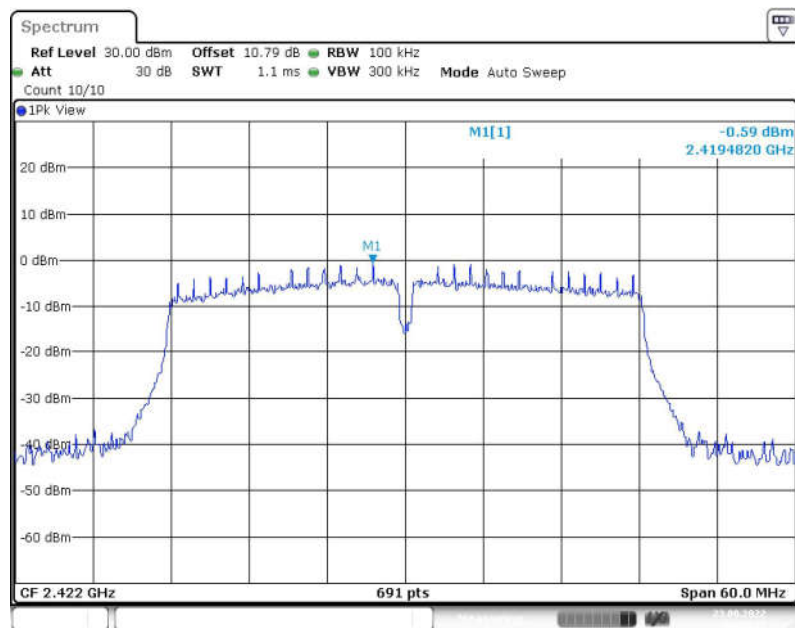


Fig.76 Conducted Spurious Emission (Center Frequency, 802.11n-HT40, CH3)

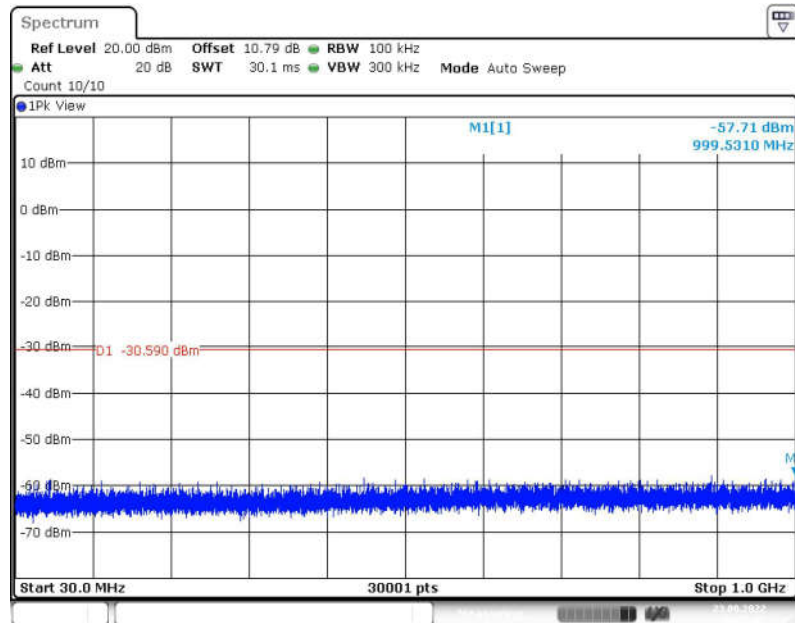


Fig.77 Conducted Spurious Emission (30MHz -1GHz, 802.11n-HT40, CH3)

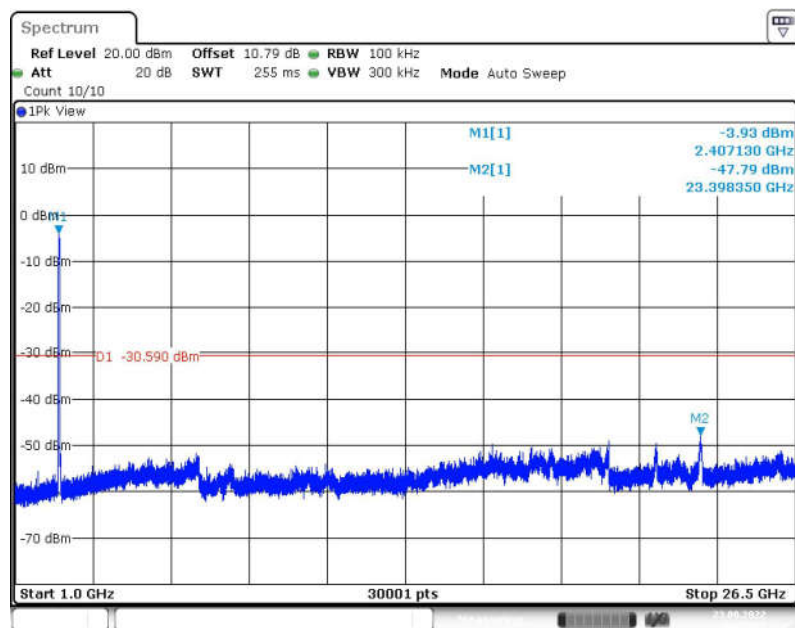


Fig.78 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT40, CH3)

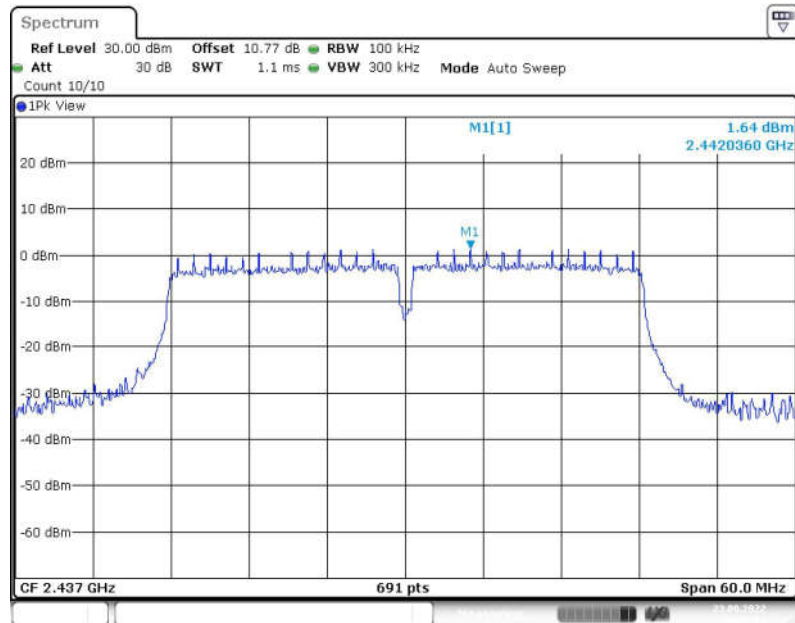


Fig.79 Conducted Spurious Emission (Center Frequency, 802.11n-HT40, CH6)

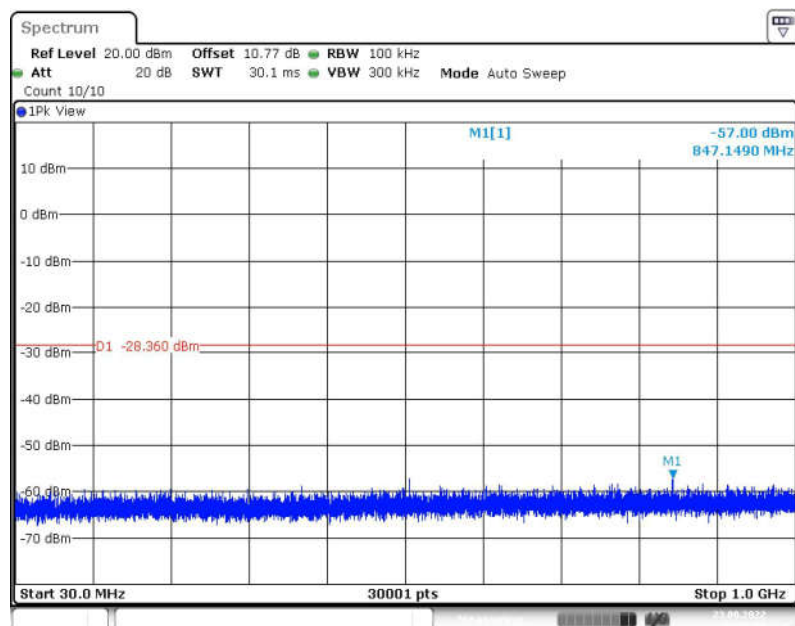


Fig.80 Conducted Spurious Emission (30MHz -1GHz, 802.11n-HT40, CH6)

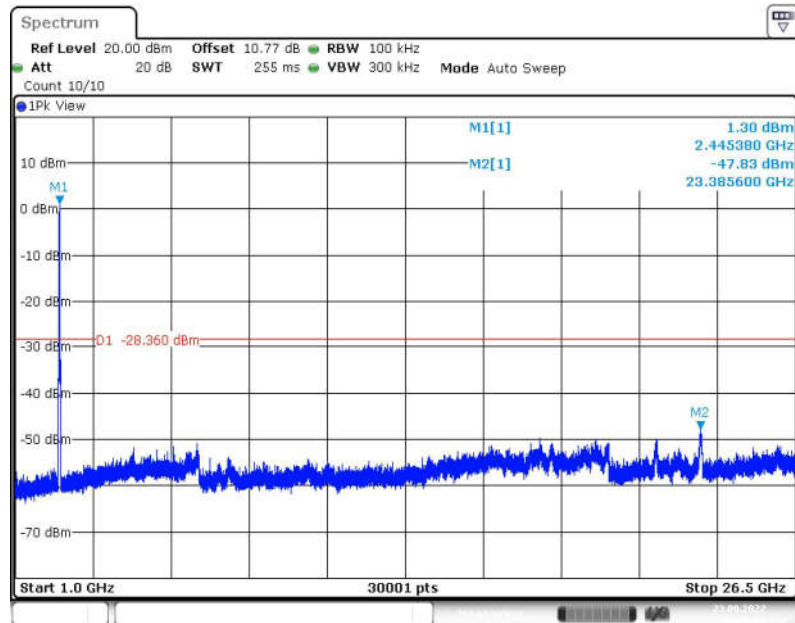


Fig.81 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT40, CH6)

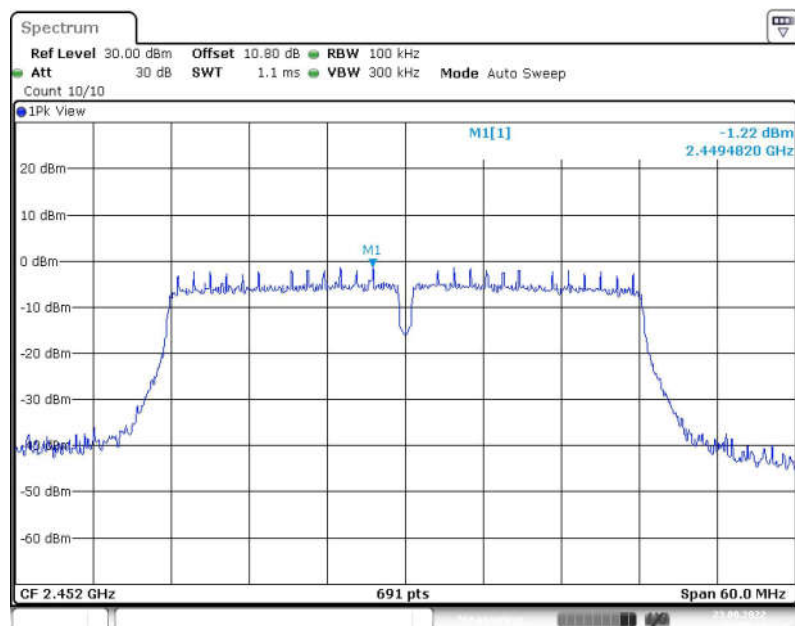


Fig.82 Conducted Spurious Emission (Center Frequency, 802.11n-HT40, CH9)

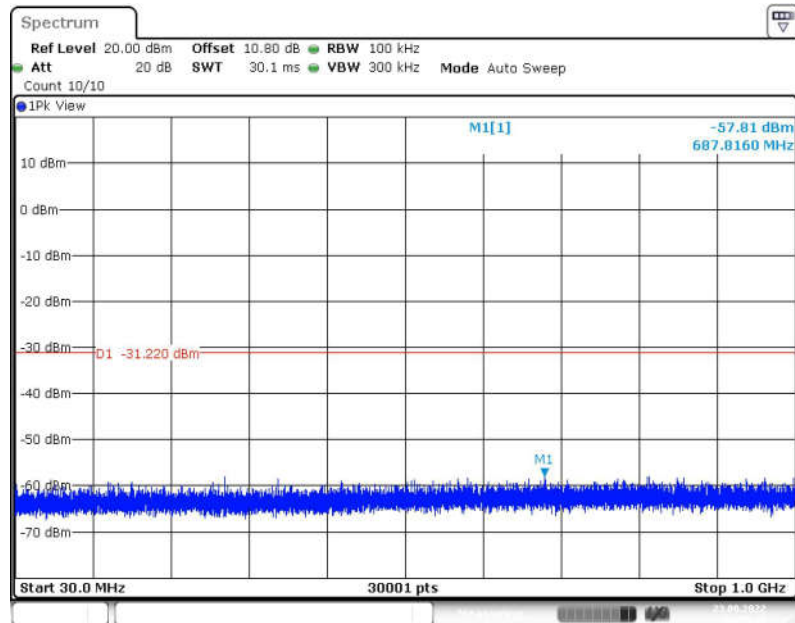


Fig.83 Conducted Spurious Emission (30MHz -1GHz, 802.11n-HT40, CH9)

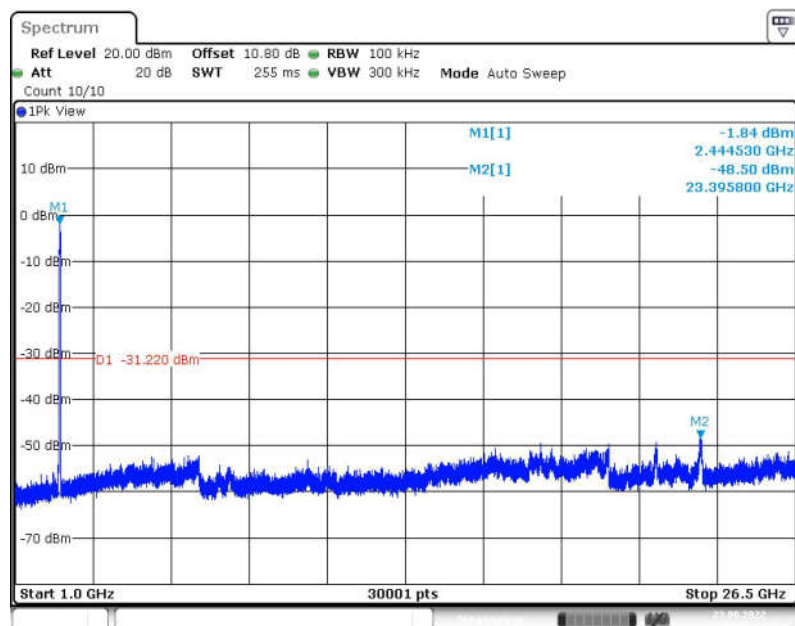


Fig.84 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT40, CH9)

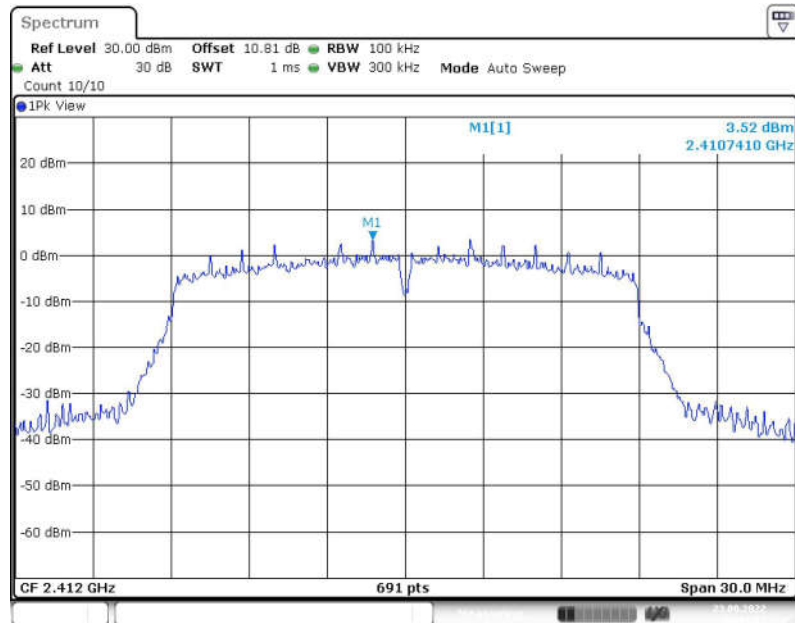


Fig.85 Conducted Spurious Emission (Center Frequency, 802.11-VHT20, CH1)

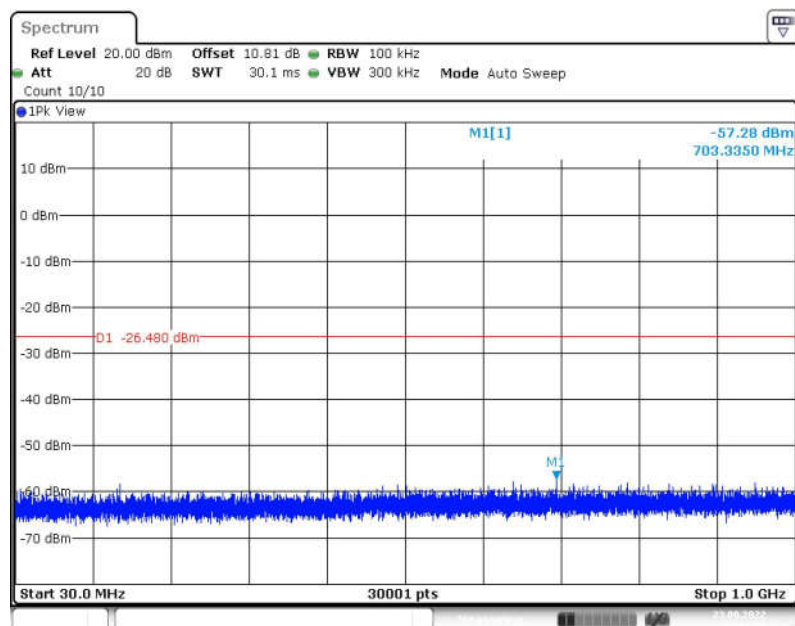


Fig.86 Conducted Spurious Emission (30MHz -1GHz, 802.11-VHT20, CH1)

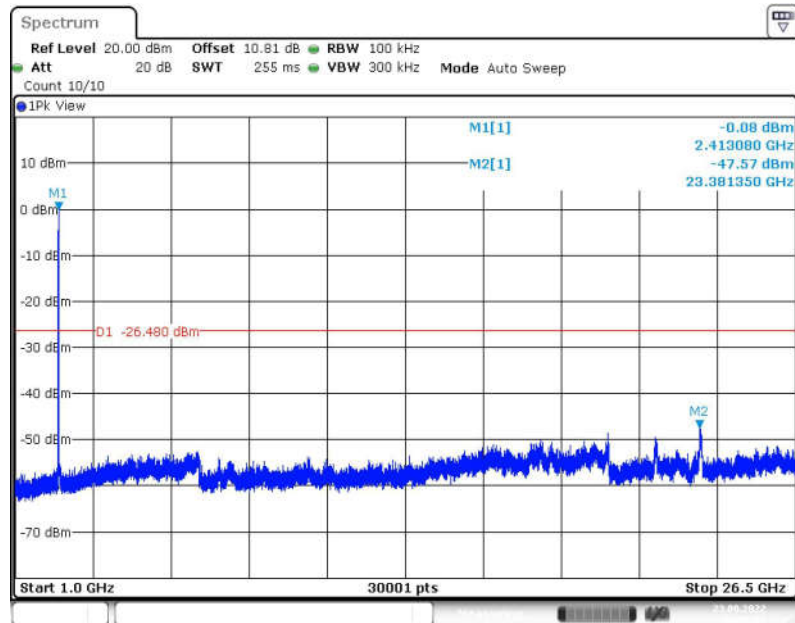


Fig.87 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT20, CH1)

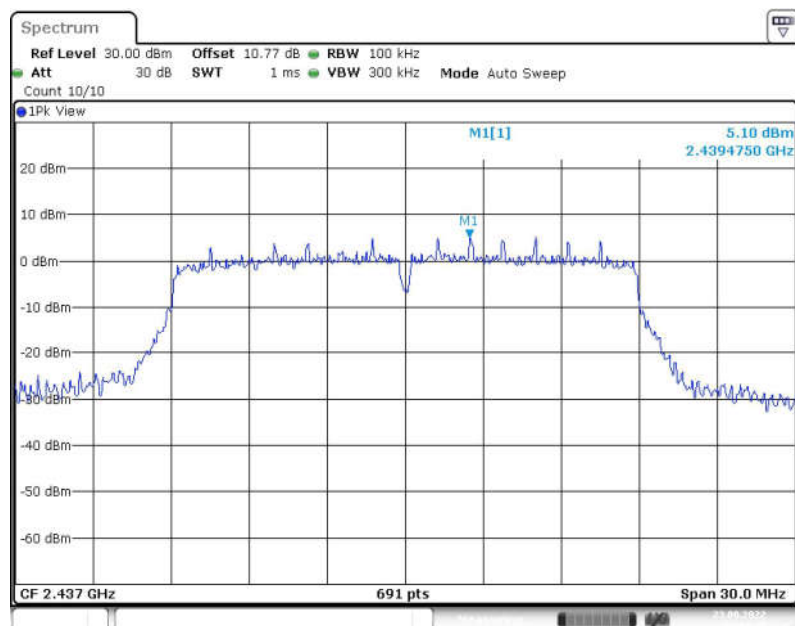


Fig.88 Conducted Spurious Emission (Center Frequency, 802.11-VHT20, CH6)

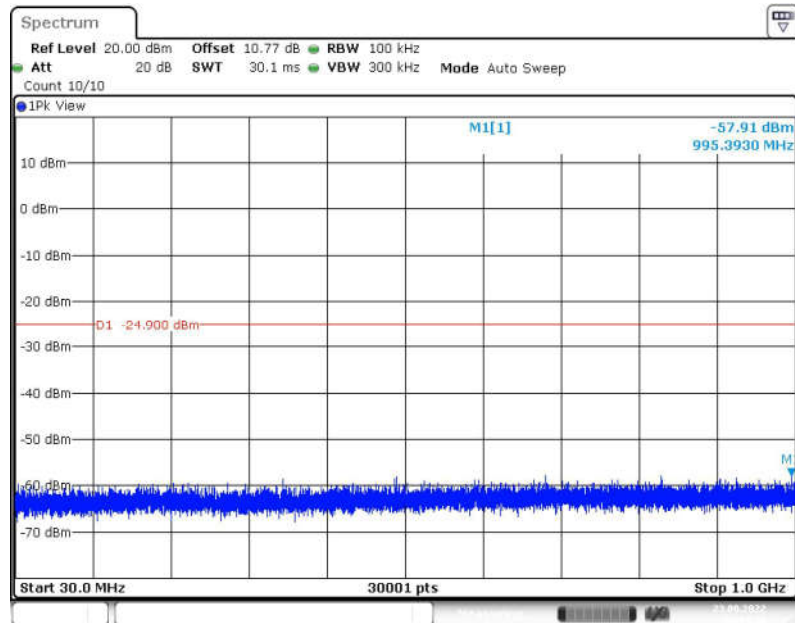


Fig.89 Conducted Spurious Emission (30MHz -1GHz, 802.11-VHT20, CH6)

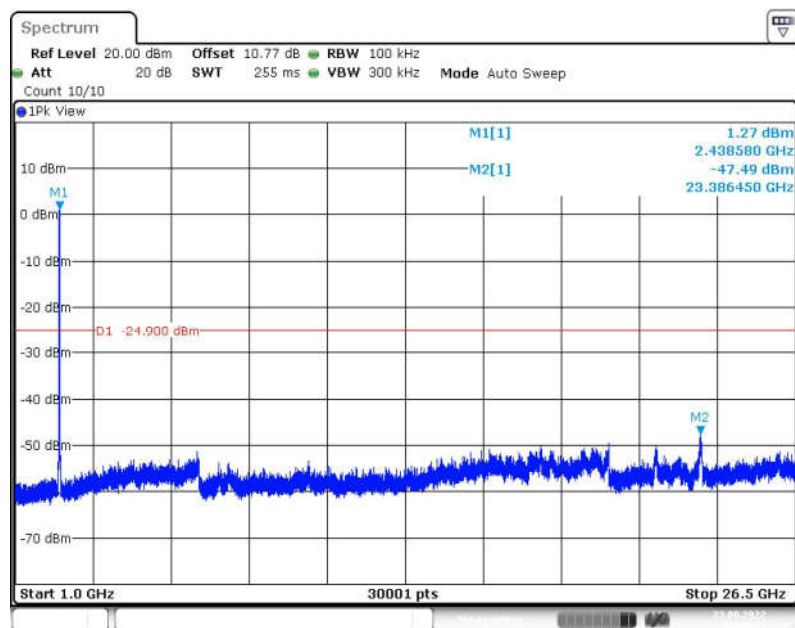


Fig.90 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT20, CH6)

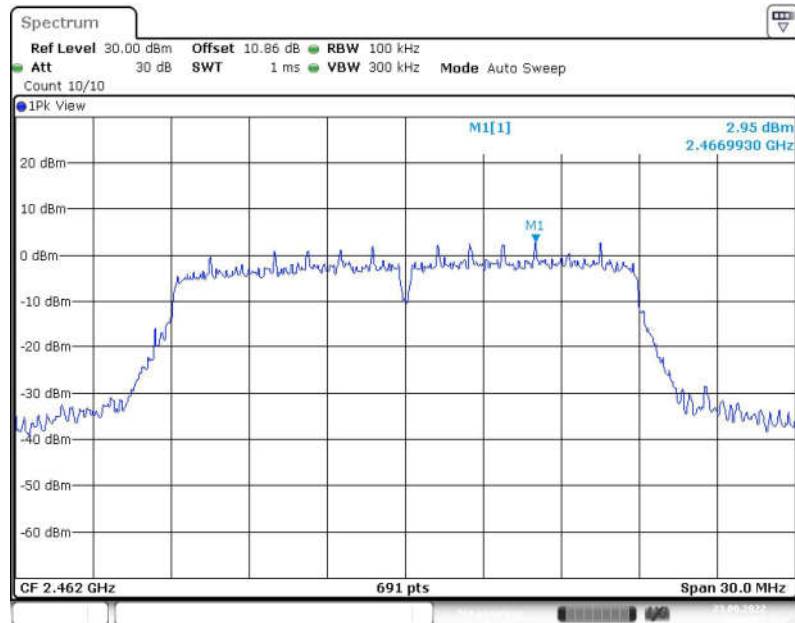


Fig.91 Conducted Spurious Emission (Center Frequency, 802.11-VHT20, CH11)

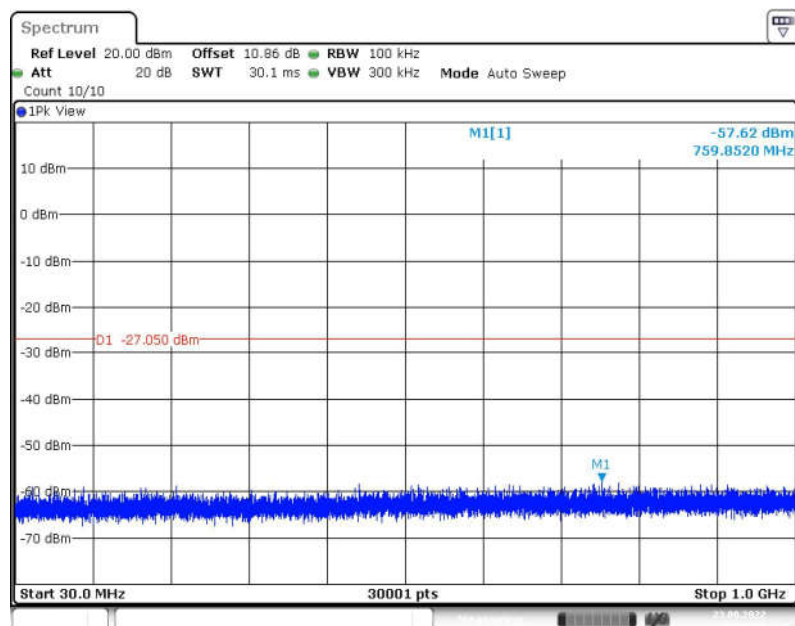


Fig.92 Conducted Spurious Emission (30MHz -1GHz, 802.11-VHT20, CH11)

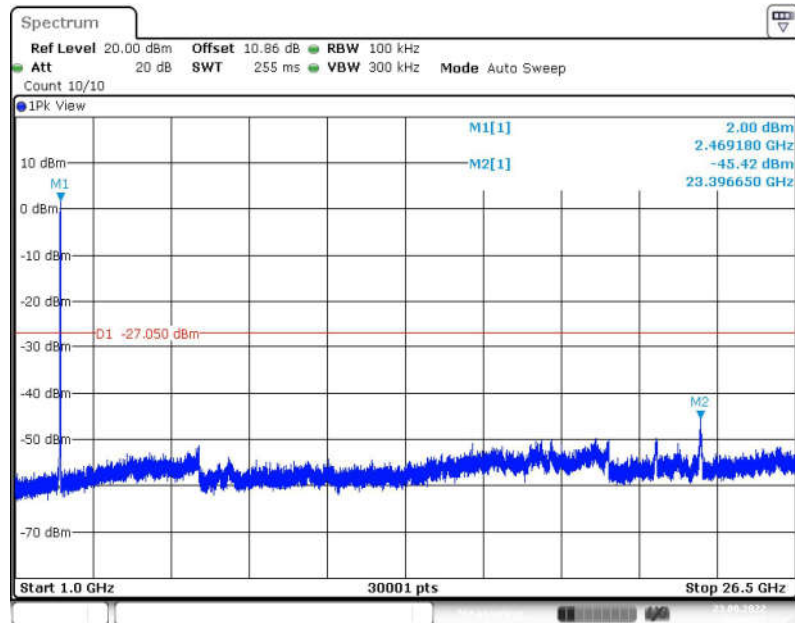


Fig.93 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT20, CH11)

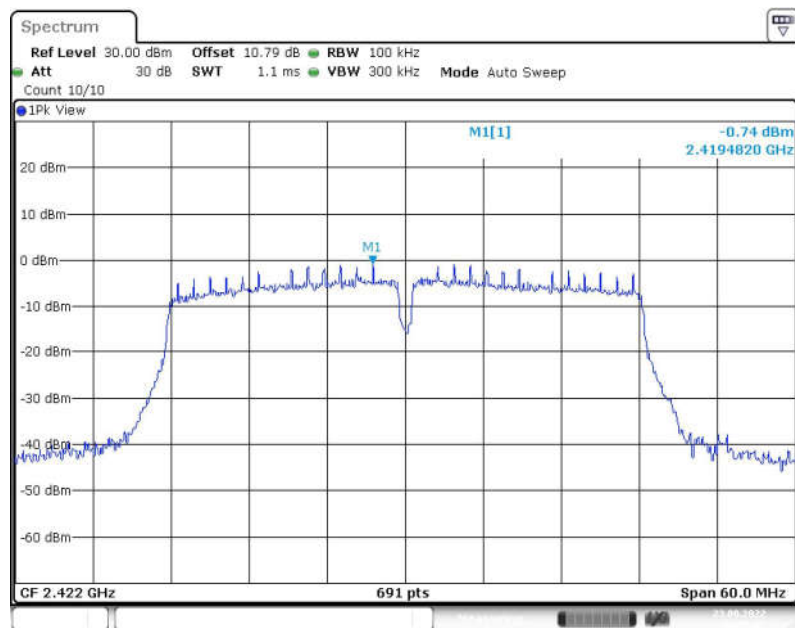


Fig.94 Conducted Spurious Emission (Center Frequency, 802.11-VHT40, CH3)

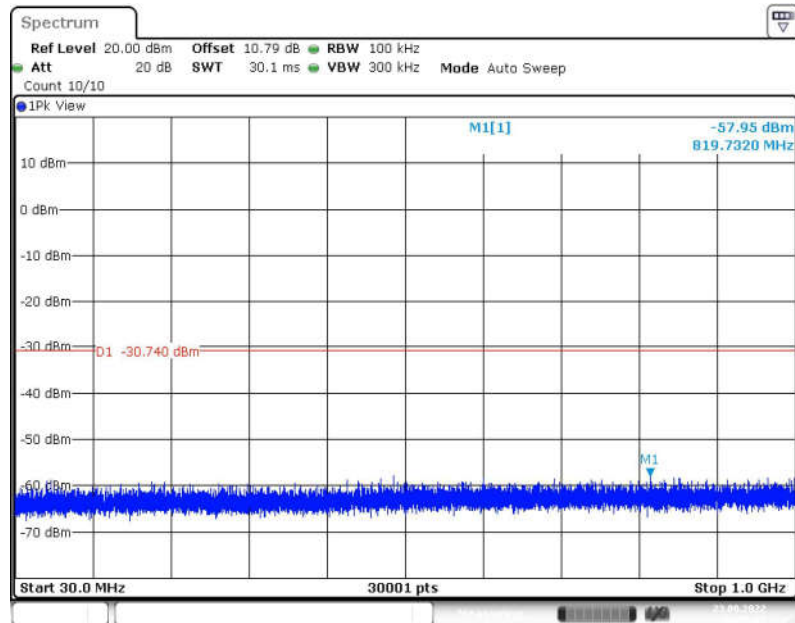


Fig.95 Conducted Spurious Emission (30MHz -1GHz, 802.11-VHT40, CH3)

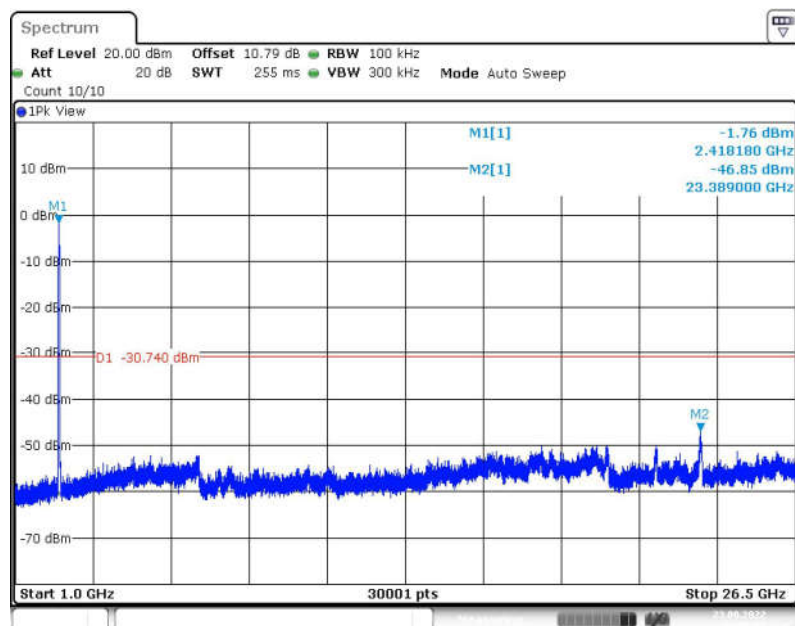


Fig.96 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT40, CH3)