FCC PART 15C
TEST REPORT
No.I19Z62195-IOT04

for

Client name: Xiaomi Communications Co., Ltd.

Product name: Mobile Phone

Model name: M2001J2G/ M2001J1G

With

FCC ID: 2AFZZJAG

Hardware Version: P2.2

Software Version: MIUI 11

Issued Date: 2020-03-03

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn

<u>REPORT HISTORY</u>

Report Number	Revision	Description	Issue Date
I19Z62195-IOT04	Rev.0	1st edition	2020-02-21
I19Z62195-IOT04	Rev.1	Add antenna gain and power spectral density plots	2020-03-03

CONTENTS

1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 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 (CN0066). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Location 1:CTTL(Huayuan North Road)

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

Location 2:CTTL(Shouxiang)

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

1.3. Testing Environment

   Normal Temperature: 15-35℃

   Relative Humidity: 20-75%
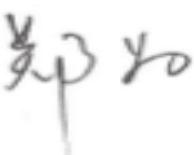
1.4. Project data

   Testing Start Date: 2019-12-25

   Testing End Date: 2020-02-21
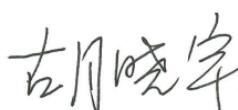
1.5. Signature

Xie Xiuzhen

(Prepared this test report)

Zheng Wei

(Reviewed this test report)

Hu Xiaoyu

(Approved this test report)

2. <u>Client Information</u>

2.1. Applicant Information

Company Name:	Xiaomi Communications Co., Ltd.
Address:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
City:	Beijing
Postal Code:	100085
Country:	China
Telephone:	010-60606666-8088
Fax:	010-60606666-1101

2.2. Manufacturer Information

Company Name:	Xiaomi Communications Co., Ltd.
Address:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
City:	Beijing
Postal Code:	100085
Country:	China
Telephone:	010-60606666-8088
Fax:	010-60606666-1101

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

3.1. About EUT

Description	Mobile Phone
Model name	M2001J2G/ M2001J1G
FCC ID	2AFZZJAG
With WLAN Function	Yes
Frequency Range	ISM 2400MHz~2483.5MHz
Type of Modulation	DSSS/CCK/OFDM
Number of Channels	11
Antenna	Integral Antenna
MAX Conducted Power	29.52dBm
Power Supply	3.85V(M2001J2G)/3.87V(M2001J1G)

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version
EUT4	860021040054548	P2.2	MIUI 11
EUT43	860021040054480	P2.2	MIUI 11
EUT1	860021040038590/ 860021040038608	P2.2	MIUI 11

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

3.3. Internal Identification of AE

AE ID*	Description	SN	Remarks
AE1	battery	/	/
AE3	Travel charger	/	/
AE6	USB Cable	/	/
AE7	USB Cable	/	/
AE11	battery	/	/
AE13	Travel charger	/	/
AE16	USB Cable	/	/

AE1

Model	BM4N
Manufacturer	/
Capacitance	4680 mAh
Nominal voltage	3.85V

AE3

Model	MDY-11-EL

Manufacturer   Xiaomi Communications Co., Ltd.

Length of cable   /

AE6

  Model   L63312

  Manufacturer   LUXSHARE Precision Industry Co., Ltd.

  Length of cable   /

AE7

  Model   K63312

  Manufacturer   SU ZHOU KELI SCIENCE&TECHNOLOGY DEVELOPMENT CO.,LTD.

  Length of cable   /

AE11

  Model   BM4M

  Manufacturer   /

  Capacitance   4400 mAh

  Nominal voltage   3.87V

AE13

  Model   MDY-11-EC

  Manufacturer   Huizhou BYD Electronic Co.,Ltd.

  Length of cable   /

AE16

  Model   L63512

  Manufacturer   LUXSHARE Precision Industry Co., Ltd.

  Length of cable   /

3.4. General Description

The Equipment under Test (EUT) is a model of Mobile Phone with integrated antenna and inbuilt battery.

It has Bluetooth (EDR) function.

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.

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

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.

For WLAN SISO&MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power.

5.3. Explanation of re-use of test data

The Equipment Under Test (EUT) model M2001J1G (FCC ID: 2AFZZJAG) is a variant product of M2001J2G (FCC ID: 2AFZZJAG), according to the declaration of changes provided by the applicant and FCC KDB publication 178919 D01.all the test results are derived from initial model. For detail differences between two models please refer the Declaration of Changes document.

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	3.85V(M2001J2G)/3.87V(M2001J1G)
Humidity	H nom	20-75%

6. <u>Test Facilities Utilized</u>

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2020-05-15
2	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2020-08-04
3	LISN	ENV216	101200	Rohde & Schwarz	1 year	2020-04-27
4	Test Receiver	ESCI	100344	Rohde & Schwarz	1 year	2020-03-14
5	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100235	R&S	1 year	2020-02-27
2	BiLog Antenna	VULB9163	1222	Schwarzbeck	1 year	2020-03-14
3	Dual-Ridge Waveguide Horn Antenna	3117	00139065	ETS-Lindgren	1 year	2020-11-10
4	Dual-Ridge Waveguide Horn Antenna	3116	2663	ETS-Lindgren	1 year	2020-06-18
5	Vector Signal Analyzer	FSV	101047	Rohde & Schwarz	1 year	2020-05-16

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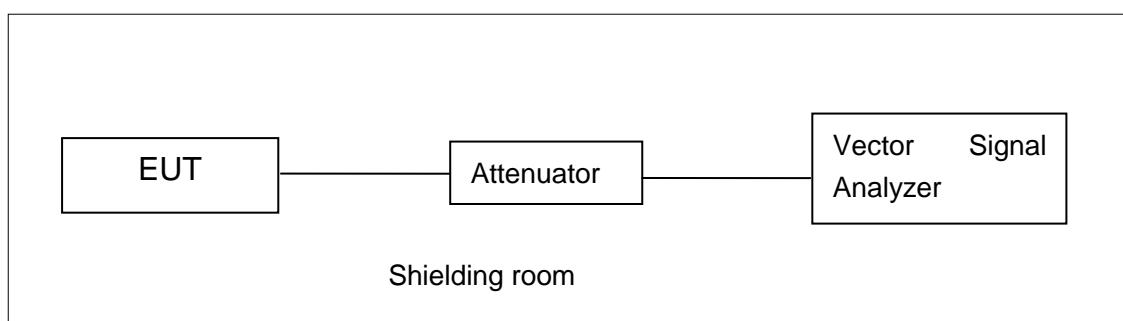
Fig.A.1.1.1: Test Setup Diagram for Conducted Measurements

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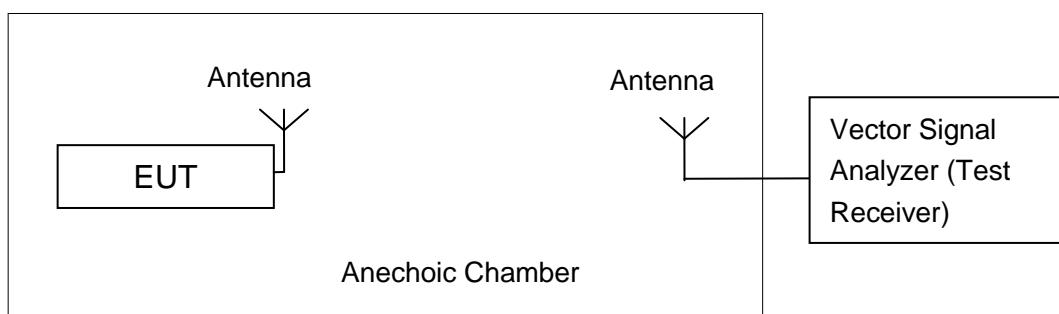
Fig.A.1.2.1: Test Setup Diagram for Radiated Measurements

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 $\geqslant$ [1.5 $\times$ 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

A.2.1 Antenna Gain

Antenna gain is shown in the table below and the value is supplied by the applicant or manufacturer.

Frequency(MHz)	ANT3(dBi)	ANT4(dBi)
2412	-1.3	-5.7
2422	-1.2	-5.7
2442	-1.5	-4.3
2462	-1.3	-5.0
2472	-1.0	-5.2

A.2.2. Peak Output Power-conducted

Measurement Results:

ANT3

802.11b/g mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11b	1	23.25	23.58	23.44
802.11g	6	26.60	27.09	27.03

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n(20MHz)	MCS0	25.98	26.26	26.33

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n(40MHz)	MCS0	27.17	26.63	26.67

802.11ax-HE20 mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11ax-HE20(RU26-left)	MCS0	25.89	25.94	25.95
802.11ax-HE20(RU26-middle)	MCS0	25.83	25.69	25.92
802.11ax-HE20(RU26-right)	MCS0	25.97	25.42	25.80
802.11ax-HE20(RU52-left)	MCS0	26.54	26.46	26.37
802.11ax-HE20(RU52-middle)	MCS0	26.60	26.39	26.51
802.11ax-HE20(RU52-right)	MCS0	26.05	26.15	26.24
802.11ax-HE20(RU106-left)	MCS0	25.89	25.73	25.78
802.11ax-HE20(RU106-right)	MCS0	25.71	25.68	25.77
802.11ax-HE20(RU242)	MCS0	25.71	25.69	25.93

802.11ax-HE40 mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11ax-HE40(RU242-left)	MCS0	27.33	26.72	26.98
802.11ax-HE40(RU242-right)	MCS0	27.44	26.80	26.78
802.11ax-HE40(RU484-left)	MCS0	26.86	26.17	26.27

Conclusion: Pass

MIMO&CDD

11b/g mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11b	1	25.62	25.78	25.72
802.11g	6	29.28	29.47	29.52

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n(20MHz)	MCS0	28.57	28.74	28.83

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n(40MHz)	MCS0	29.17	28.90	28.91

802.11ax-HE20 mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11ax-HE20(RU26-left)	MCS0	28.26	28.19	28.26
802.11ax-HE20(RU26-middle)	MCS0	28.27	27.84	28.15
802.11ax-HE20(RU26-right)	MCS0	28.63	27.47	27.90
802.11ax-HE20(RU52-left)	MCS0	28.93	28.80	28.72
802.11ax-HE20(RU52-middle)	MCS0	28.99	28.49	28.84
802.11ax-HE20(RU52-right)	MCS0	28.56	28.27	28.45
802.11ax-HE20(RU106-left)	MCS0	28.29	28.14	28.22
802.11ax-HE20(RU106-right)	MCS0	28.26	27.84	27.98
802.11ax-HE20(RU242)	MCS0	28.20	27.93	28.08

802.11ax-HE40 mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11ax-HE40(RU242-left)	MCS0	29.32	28.94	29.14
802.11ax-HE40(RU242-right)	MCS0	29.34	28.86	29.02
802.11ax-HE40(RU484-left)	MCS0	28.76	28.34	28.44

Conclusion: Pass

A.2.3. Average Output Power-conducted

Method of Measurement: See ANSI C63.10-2013-clause 11.9.2.2.2

The procedure for this method is as follows:

a) Set span = 1.5OBW.

b) Set RBW = 1MHz.

c) Set VBW = 3MHz

d) Number of points in sweep = 625

e) Sweep time = auto.

f) Detector = RMS.

g) If transmit duty cycle < 98%, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at the maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no OFFintervals) or at duty cycle ≥98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run."

h) Trace average 100 traces in power averaging (rms) mode.

i) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

Duty cycle meets the requirement of 98% and above.

ANT3

11b/g mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11b	1	19.73	20.01	19.93
802.11g	6	18.49	18.93	18.90

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n(20MHz)	MCS0	17.44	17.68	17.66

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n(40MHz)	MCS0	18.65	18.16	18.06

802.11ax-HE20 mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11ax-HE20(RU26-left)	MCS0	15.42	15.13	15.18
802.11ax-HE20(RU26-middle)	MCS0	15.50	15.53	15.47
802.11ax-HE20(RU26-right)	MCS0	14.93	15.19	15.12
802.11ax-HE20(RU52-left)	MCS0	15.56	15.36	15.42
802.11ax-HE20(RU52-middle)	MCS0	15.69	15.64	15.71
802.11ax-HE20(RU52-right)	MCS0	15.02	15.42	15.33
802.11ax-HE20(RU106-left)	MCS0	15.81	15.65	15.76
802.11ax-HE20(RU106-right)	MCS0	15.52	15.68	15.56
802.11ax-HE20(RU242)	MCS0	15.32	15.49	15.56

802.11ax-HE40 mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11ax-HE40(RU242-left)	MCS0	17.13	16.33	16.94
802.11ax-HE40(RU242-right)	MCS0	17.33	16.71	16.49
802.11ax-HE40(RU484-left)	MCS0	17.34	16.69	16.73

Conclusion: Pass

MIMO&CDD

11b/g mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11b	1	22.13	22.28	22.20
802.11g	6	21.05	21.29	21.23

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n(20MHz)	MCS0	19.94	20.12	20.13

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n(40MHz)	MCS0	20.60	20.34	20.38

802.11ax-HE20 mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11ax-HE20(RU26-left)	MCS0	17.83	17.63	17.66
802.11ax-HE20(RU26-middle)	MCS0	17.88	17.75	17.88
802.11ax-HE20(RU26-right)	MCS0	17.62	17.33	17.36
802.11ax-HE20(RU52-left)	MCS0	17.98	17.71	17.82
802.11ax-HE20(RU52-middle)	MCS0	18.03	17.90	18.05
802.11ax-HE20(RU52-right)	MCS0	17.77	17.48	17.53
802.11ax-HE20(RU106-left)	MCS0	18.14	17.92	18.01
802.11ax-HE20(RU106-right)	MCS0	17.97	17.74	17.79
802.11ax-HE20(RU242)	MCS0	17.72	17.52	17.65

802.11ax-HE40 mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11ax-HE40(RU242-left)	MCS0	19.13	18.78	18.97
802.11ax-HE40(RU242-right)	MCS0	19.30	18.69	18.83
802.11ax-HE40(RU484-left)	MCS0	19.24	18.86	18.98

Conclusion: Pass

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:

ANT3

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11b	1	-2.73	**P**
	6	-3.66	**P**
	11	-2.66	**P**
802.11g	1	-8.45	**P**
	6	-7.56	**P**
	11	-7.51	**P**

802.11n-HT20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n(HT20)	1	-7.20	**P**
	6	-6.91	**P**
	11	-7.18	**P**

802.11n-HT40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n(HT40)	3	-10.17	**P**
	6	-10.68	**P**
	9	-10.88	**P**

802.11ax-HE20

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax-HE20(RU26-left)	1	0.30	**P**
	6	-1.04	**P**
	11	0.21	**P**
802.11ax-HE20(RU26-middle)	1	-0.35	**P**
	6	-0.11	**P**
	11	-0.29	**P**
802.11ax-HE20(RU26-right)	1	-0.41	**P**
	6	-0.05	**P**
	11	-0.52	**P**
802.11ax-HE20(RU52-left)	1	-2.34	**P**
	6	-2.73	**P**
	11	-1.32	**P**
802.11ax-HE20(RU52-middle)	1	-2.56	**P**
	6	-2.11	**P**
	11	-2.23	**P**
802.11ax-HE20(RU52-right)	1	-4.13	**P**
	6	-4.90	**P**
	11	-4.54	**P**
802.11ax-HE20(RU106-left)	1	-7.77	**P**
	6	-7.51	**P**
	11	-7.17	**P**
802.11ax-HE20(RU106-right)	1	-7.33	**P**
	6	-7.24	**P**
	11	-7.09	**P**
802.11ax-HE20(RU242)	1	-9.89	**P**
	6	-10.21	**P**
	11	-10.08	**P**

802.11ax-HE40

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax-HE40(RU242-left)	3	-9.17	**P**
	6	-9.49	**P**
	9	-9.26	**P**
802.11ax-HE40(RU242-right)	3	-9.01	**P**
	6	-9.41	**P**
	9	-9.24	**P**

802.11ax-HE40(RU484)	3	-12.33	**P**
	6	-12.31	**P**
	9	-12.37	**P**

Conclusion: Pass

MIMO&CDD

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11b	1	-1.78	**P**
	6	-1.33	**P**
	11	-1.82	**P**
802.11g	1	-5.56	**P**
	6	-5.49	**P**
	11	-5.65	**P**

802.11n-HT20 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n(HT20)	1	-5.60	**P**
	6	-4.96	**P**
	11	-5.40	**P**

802.11n-HT40 mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11n(HT40)	3	-8.06	**P**
	6	-7.63	**P**
	9	-8.60	**P**

802.11ax-HE20

Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax-HE20(RU26-left)	1	1.85	**P**
	6	1.13	**P**
	11	0.75	**P**
802.11ax-HE20(RU26-middle)	1	0.64	**P**
	6	1.64	**P**
	11	1.16	**P**
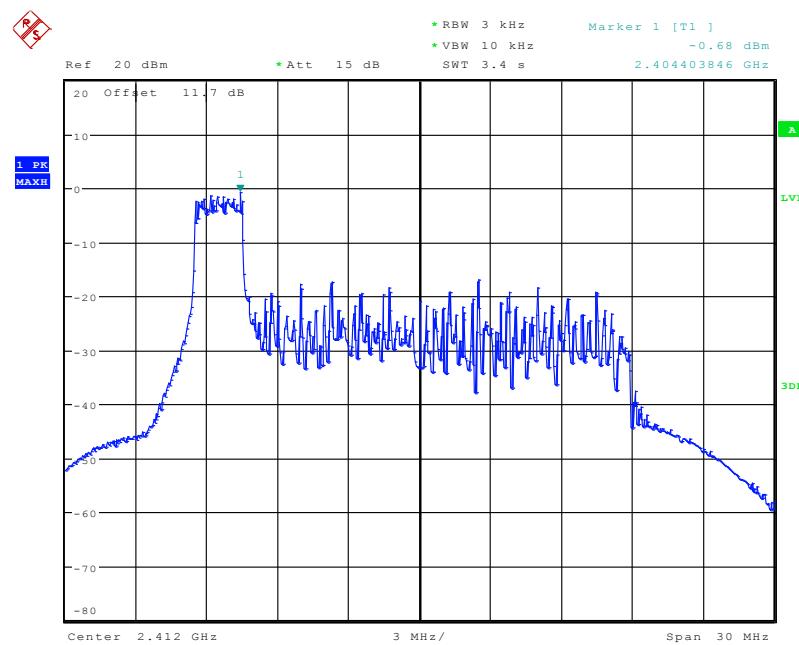
802.11ax-HE20(RU26-right)	1	1.16	**P**
	6	1.04	**P**
	11	0.61	**P**
802.11ax-HE20(RU52-left)	1	-0.70	**P**
	6	-0.53	**P**
	11	-0.56	**P**
802.11ax-HE20(RU52-middle)	1	-1.14	**P**
	6	-0.35	**P**
	11	-0.46	**P**
802.11ax-HE20(RU52-right)	1	-2.41	**P**
	6	-3.00	**P**
	11	-3.19	**P**
802.11ax-HE20(RU106-left)	1	-5.79	**P**
	6	-5.77	**P**
	11	-5.74	**P**
802.11ax-HE20(RU106-right)	1	-5.42	**P**
	6	-5.67	**P**
	11	-5.53	**P**
802.11ax-HE20(RU242)	1	-8.07	**P**
	6	-8.28	**P**
	11	-8.29	**P**

802.11ax-HE40
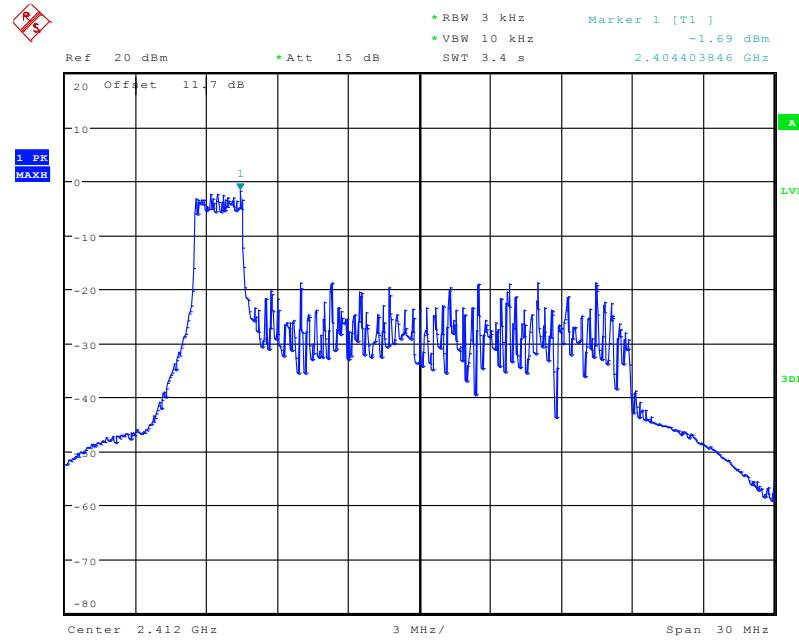
Mode	Channel	Power Spectral Density (dBm/3 kHz)	Conclusion
802.11ax-HE40(RU242-left)	3	-7.68	**P**
	6	-7.74	**P**
	9	-7.65	**P**
802.11ax-HE40(RU242-right)	3	-7.65	**P**
	6	-8.28	**P**
	9	-8.04	**P**
802.11ax-HE40(RU484)	3	-10.17	**P**
	6	-10.62	**P**
	9	-10.77	**P**

Conclusion: Pass

The maximal result of the power spectral density is as follow (802.11ax-HE20 RU26-left ch1):

Date: 3.MAR.2020 09:48:19

Fig.A.3.1 ANT3 802.11ax-HE20 RU26-left ch1

Date: 3.MAR.2020 09:56:22

Fig.A.3.2 ANT4 802.11ax-HE20 RU26-left ch1

A.4. DTS 6-dB Signal Bandwidth

Method of Measurement: See ANSI C63.10-2013 section 11.8.1.

a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) = 300 kHz.

c) Detector = Peak.

d) Trace mode = max hold.

e) Sweep = auto couple.

f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a)	≥ 500

EUT ID: EUT2

Measurement Result:

MIMO&CDD

ANT3

802.11b/g mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11b	1	7.55	**P**
	6	7.10	**P**
	11	7.55	**P**
802.11g	1	16.05	**P**
	6	15.80	**P**
	11	16.05	**P**

802.11n-HT20 mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11n(HT20)	1	16.80	**P**
	6	16.80	**P**
	11	16.90	**P**

802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11n(HT40)	3	35.68	**P**
	6	35.36	**P**
	9	35.68	**P**

802.11ax-H20 mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11ax-HE20(RU242)	1	18.55	**P**
	6	18.70	**P**
	11	18.65	**P**

Conclusion: Pass

802.11ax-H40 mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11ax-HE40(RU484)	3	38.16	**P**
	6	38.08	**P**
	9	38.16	**P**

Conclusion: Pass

ANT4

802.11b/g mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11b	1	8.00	**P**
	6	8.00	**P**
	11	7.10	**P**
802.11g	1	16.30	**P**
	6	15.90	**P**
	11	15.90	**P**

802.11n-HT20 mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11n(HT20)	1	16.85	**P**
	6	16.85	**P**
	11	16.80	**P**

802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11n(HT40)	3	35.04	**P**
	6	35.52	**P**
	9	35.92	**P**

802.11ax-HE20 mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11ax-HE20(RU242)	1	18.70	**P**
	6	18.70	**P**
	11	18.30	**P**

Conclusion: Pass

802.11ax-HE40 mode

Mode	Channel	Occupied 6dB Bandwidth (MHz)	conclusion
802.11ax-HE40(RU484)	3	38.08	**P**
	6	38.08	**P**
	9	38.24	**P**

Conclusion: Pass

A.5. Band Edges Compliance

Method of Measurement: See ANSI C63.10-2013-clause 6.10.4

Connect the spectrum analyzer to the EUT using an appropriate RF cable connected to the EUT output. Configure the spectrum analyzer settings as described below.

a) Set Span = 100MHz

b) Sweep Time: coupled

c) Set the RBW= 100 kHz

c) Set the VBW= 300 kHz

d) Detector: Peak

e) Trace: Max hold

Measurement Limit:

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

EUT ID: EUT2

Measurement Result:

MIMO&CDD

ANT3

802.11b/g mode

Mode	Channel	Test Results	Conclusion
802.11b	1	Fig.A.5.1	**P**
	11	Fig.A.5.2	**P**
802.11g	1	Fig.A.5.3	**P**
	11	Fig.A.5.4	**P**

802.11n-HT20 mode

Mode	Channel	Test Results	Conclusion
802.11n(HT20)	1	Fig.A.5.5	**P**
	11	Fig.A.5.6	**P**

802.11n-HT40 mode

Mode	Channel	Test Results	Conclusion
802.11n(HT40)	3	Fig.A.5.7	**P**
	9	Fig.A.5.8	**P**

802.11ax-HE20 mode

Mode	Channel	Test Results	Conclusion
802.11ax-HE20(RU26-left)	1	Fig.A.5.9	**P**
802.11ax-HE20(RU26-right)	11	Fig.A.5.10	**P**
802.11ax-HE20(RU52-left)	1	Fig.A.5.11	**P**
802.11ax-HE20(RU52-right)	11	Fig.A.5.12	**P**

802.11ax-HE20(RU106-left)	1	Fig.A.5.13	**P**
802.11ax-HE20(RU106-right)	11	Fig.A.5.14	**P**

802.11ax-HE40 mode

Mode	Channel	Test Results	Conclusion
802.11ax-HE40(RU242-left)	3	Fig.A.5.15	**P**
802.11ax-HE40(RU242-right)	9	Fig.A.5.16	**P**

Conclusion: Pass

ANT4

802.11b/g mode

Mode	Channel	Test Results	Conclusion
802.11b	1	Fig.A.5.17	**P**
	11	Fig.A.5.18	**P**
802.11g	1	Fig.A.5.19	**P**
	11	Fig.A.5.20	**P**

802.11n-HT20 mode

Mode	Channel	Test Results	Conclusion
802.11n(HT20)	1	Fig.A.5.21	**P**
	11	Fig.A.5.22	**P**

802.11n-HT40 mode

Mode	Channel	Test Results	Conclusion
802.11n(HT40)	3	Fig.A.5.23	**P**
	9	Fig.A.5.24	**P**

802.11ax-HE20 mode
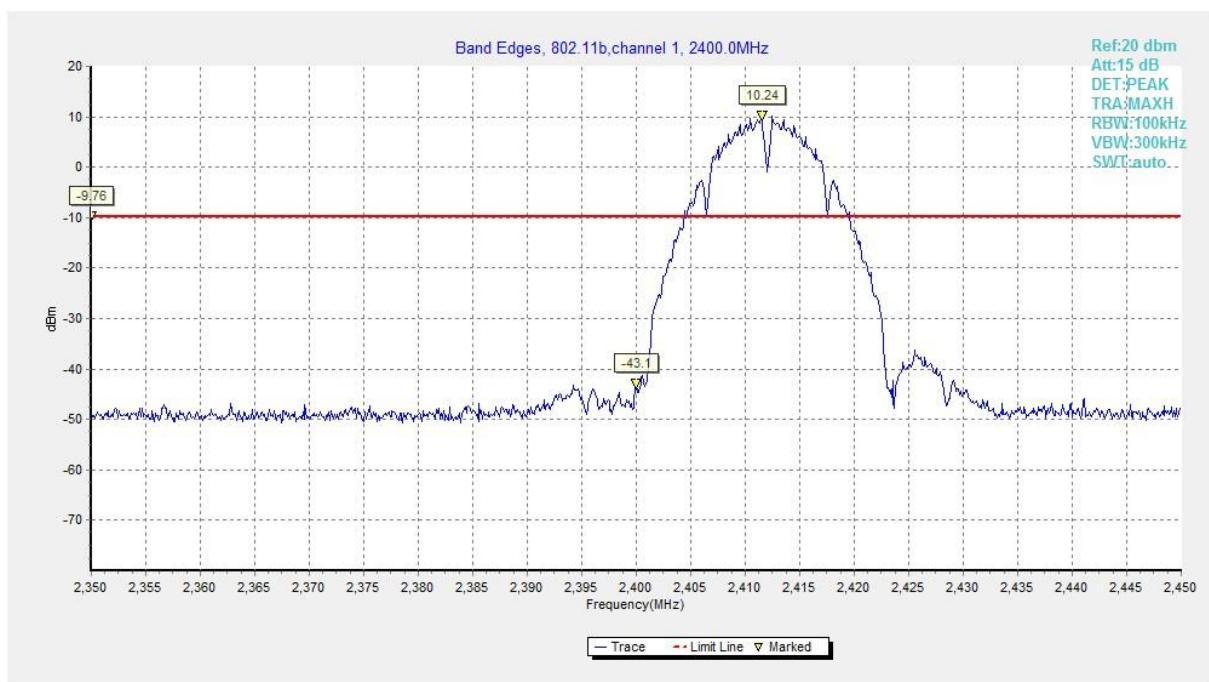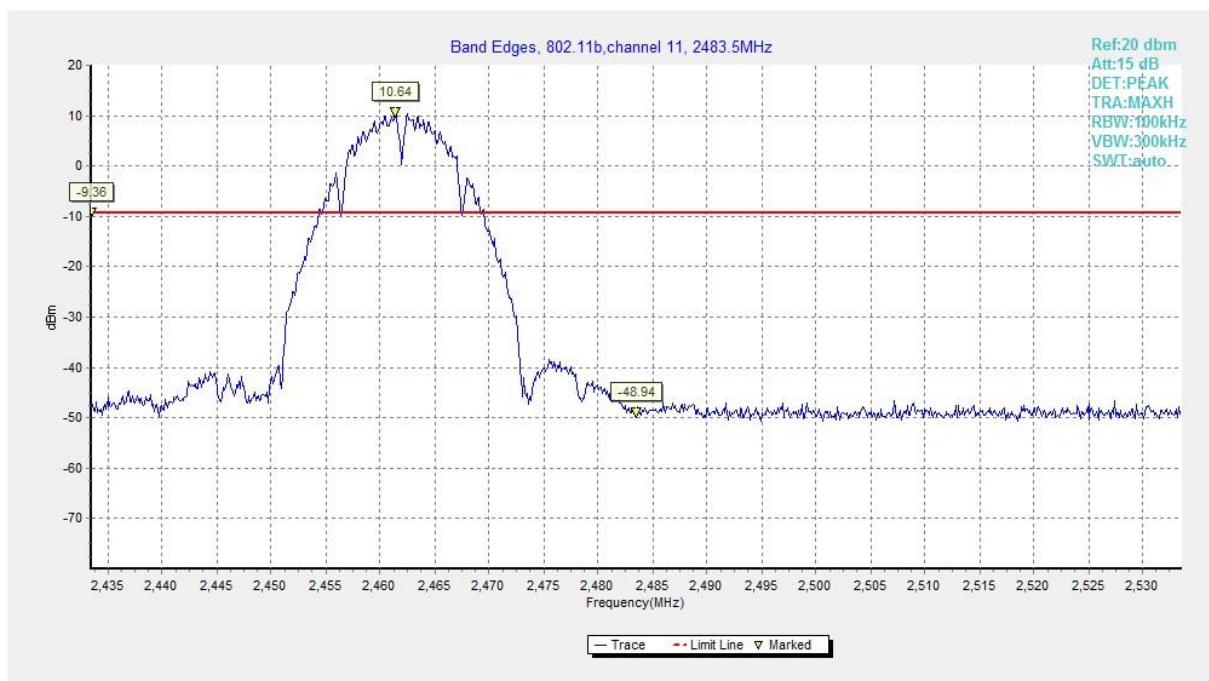
Mode	Channel	Test Results	Conclusion
802.11ax-HE20(RU26-left)	1	Fig.A.5.25	**P**
802.11ax-HE20(RU26-right)	11	Fig.A.5.26	**P**
802.11ax-HE20(RU52-left)	1	Fig.A.5.27	**P**
802.11ax-HE20(RU52-right)	11	Fig.A.5.28	**P**
802.11ax-HE20(RU106-left)	1	Fig.A.5.29	**P**
802.11ax-HE20(RU106-right)	11	Fig.A.5.30	**P**

802.11ax-HE40 mode

Mode	Channel	Test Results	Conclusion
802.11ax-HE40(RU242-left)	3	Fig.A.5.31	**P**
802.11ax-HE40(RU242-right)	9	Fig.A.5.32	**P**

Conclusion: Pass

Test graphs as below:

Fig.A.5.1 Band Edges (802.11b, Ch 1)

Fig.A.5.2 Band Edges (802.11b, Ch 11)
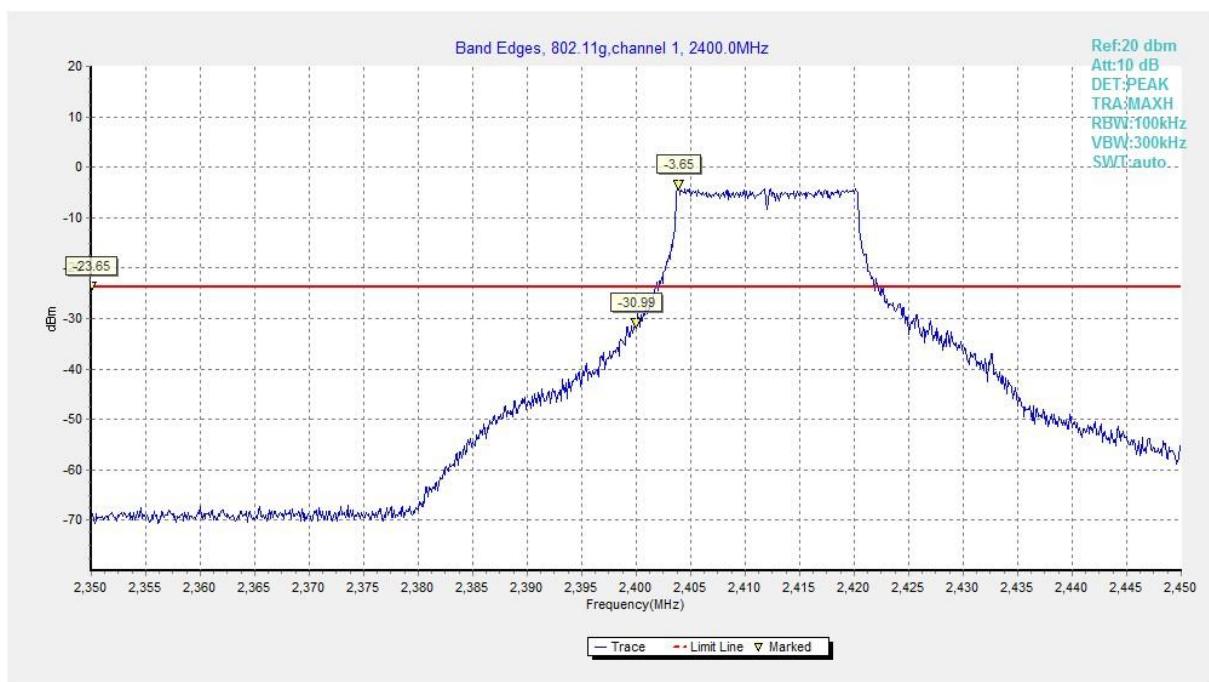
**Fig.A.5.3 Band Edges (802.11g, Ch 1)**
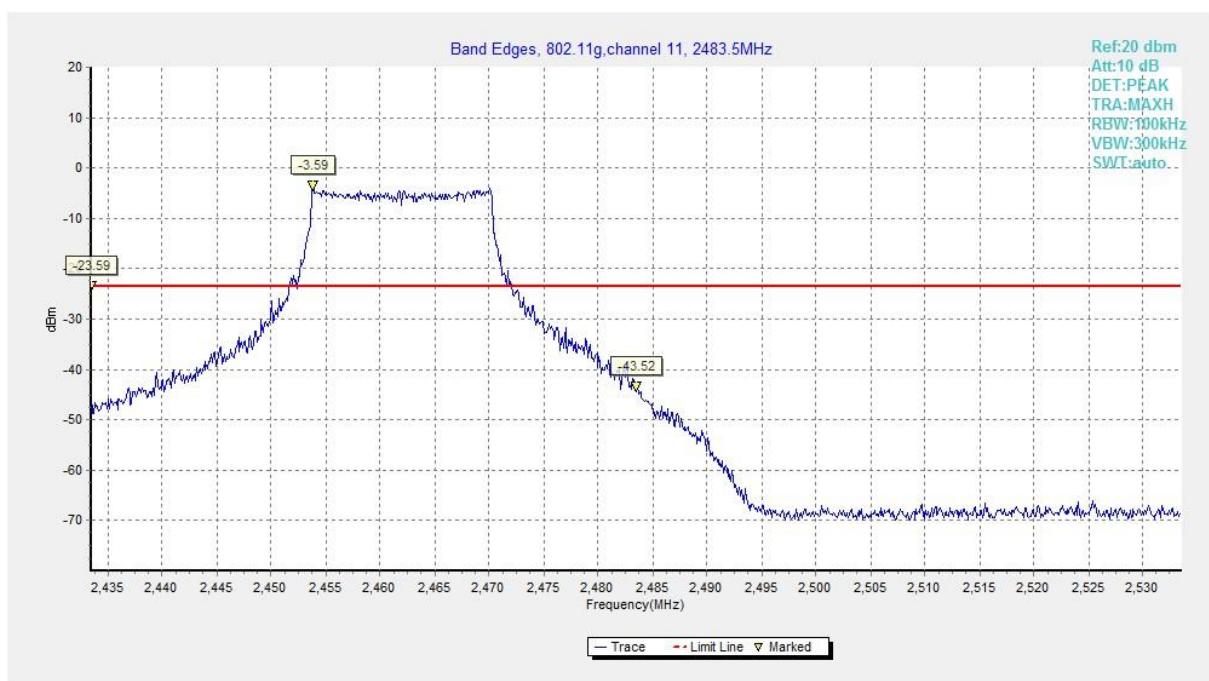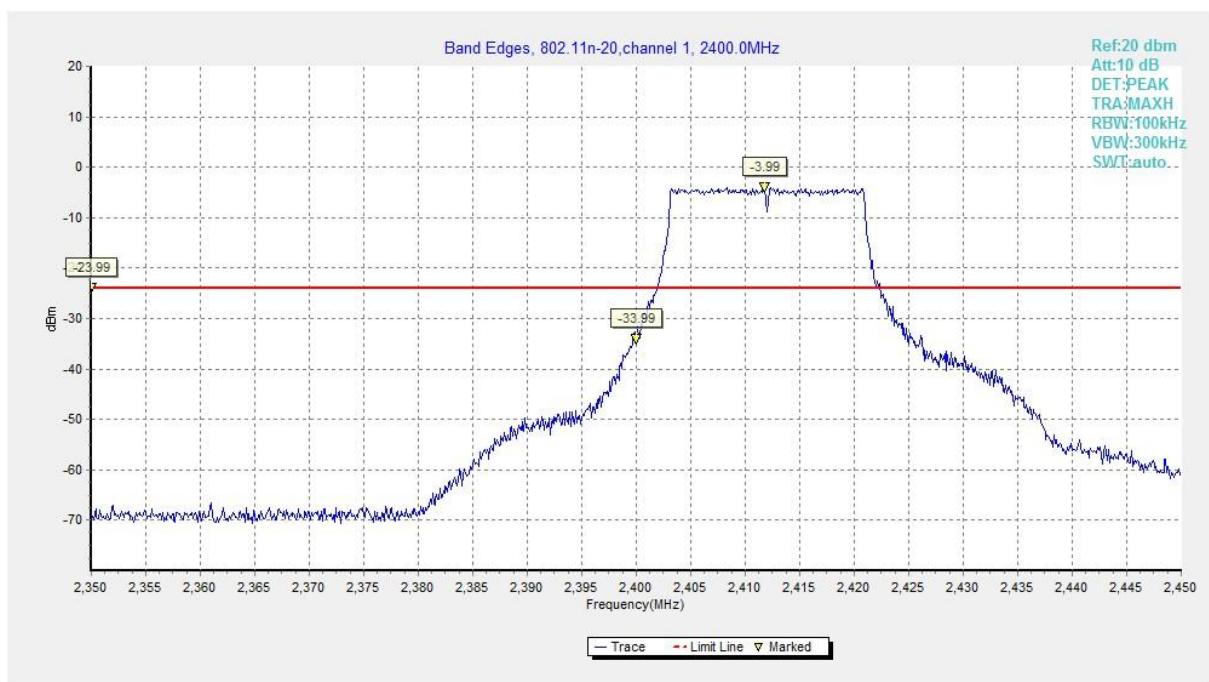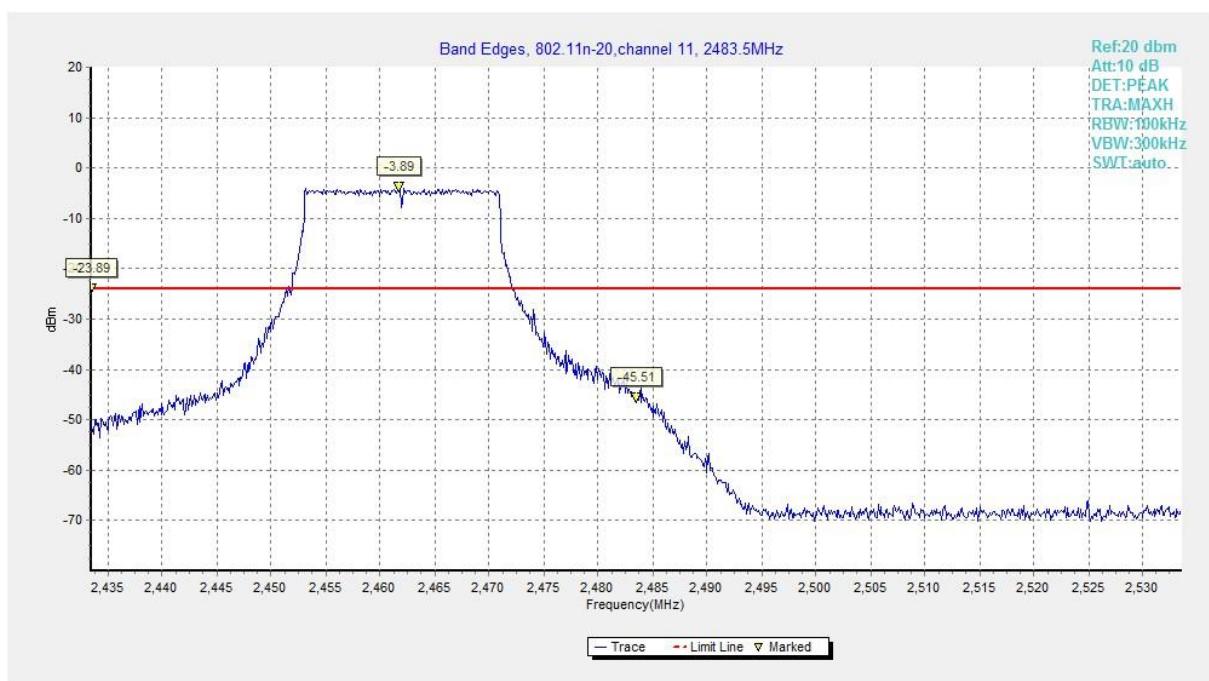
Fig.A.5.4 Band Edges (802.11g, Ch 11)

**Fig.A.5.5 Band Edges (802.11n-HT20, Ch 1)**

Fig.A.5.6 Band Edges (802.11n-HT20, Ch 11)
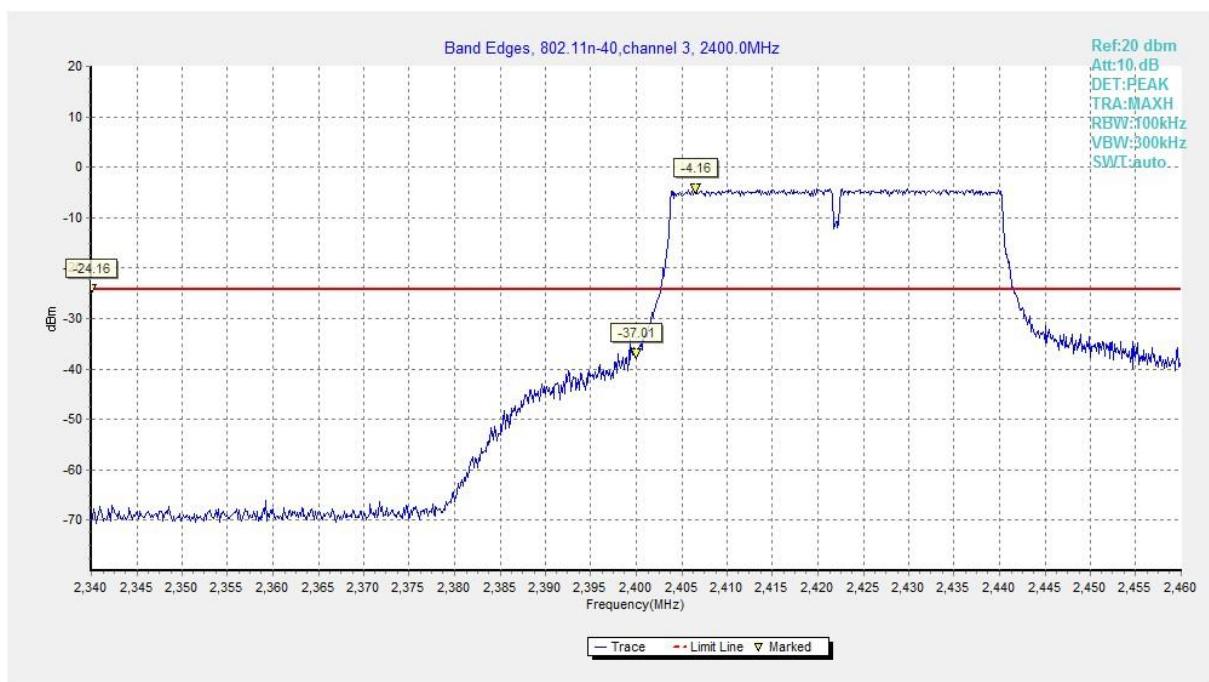
Fig.A.5.7 Band Edges (802.11n-HT40, Ch 3)
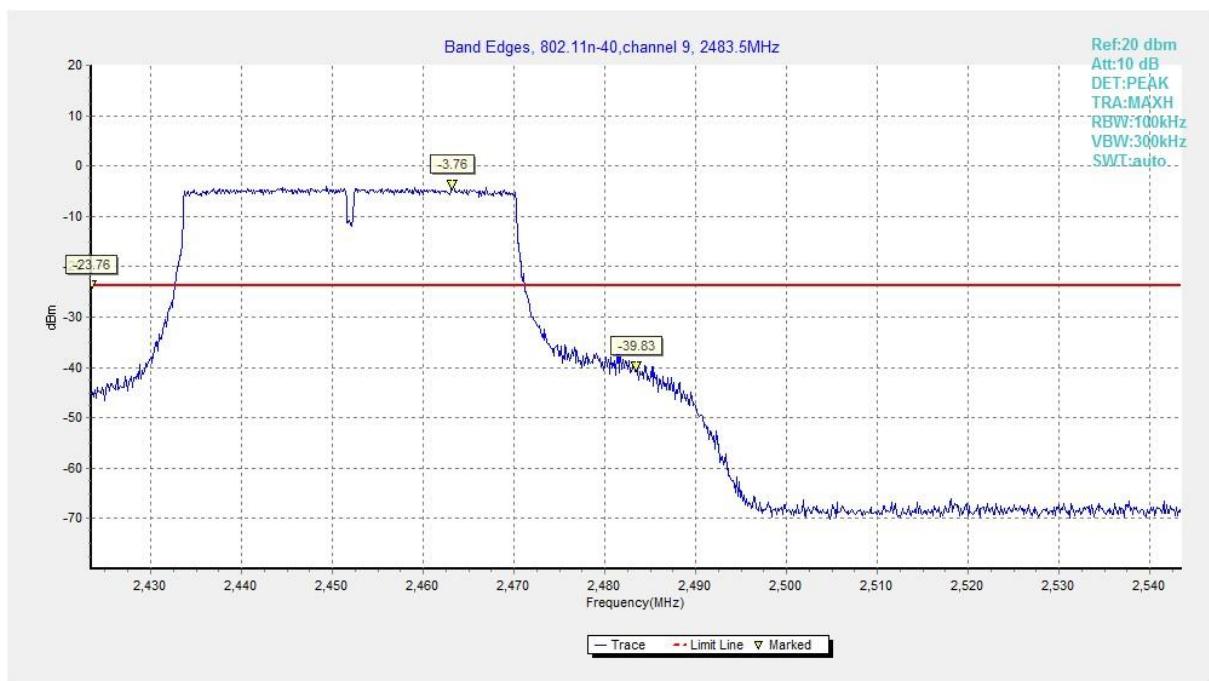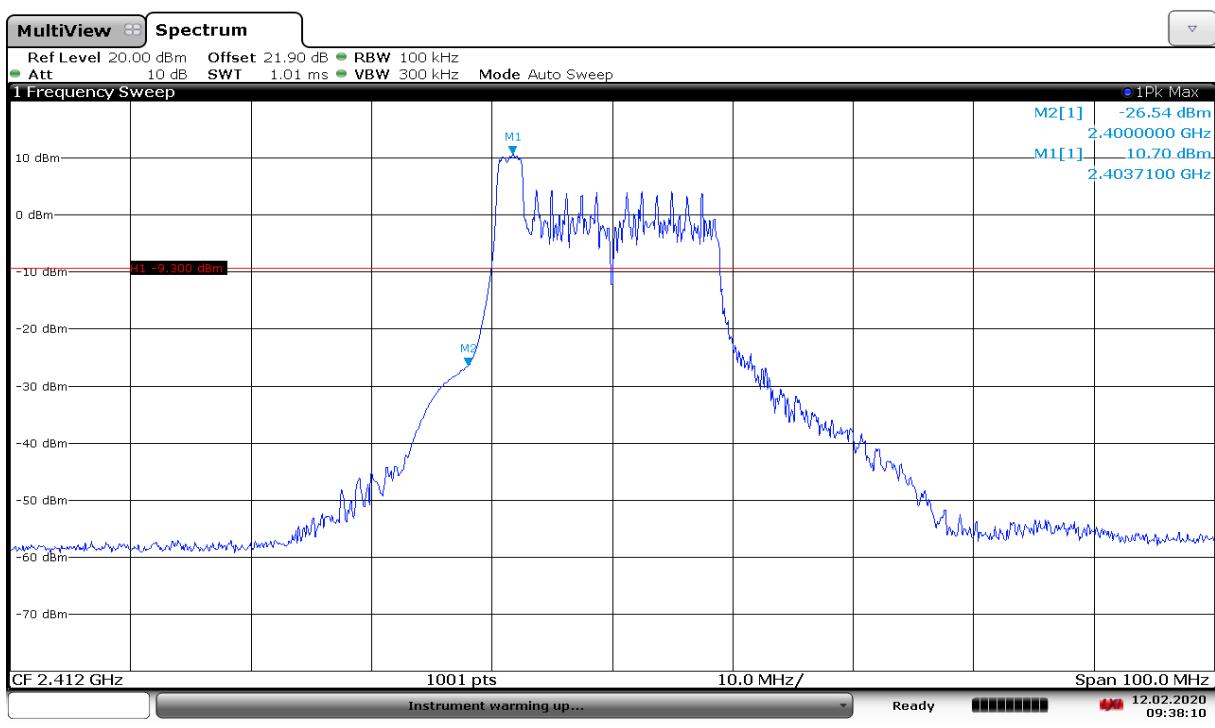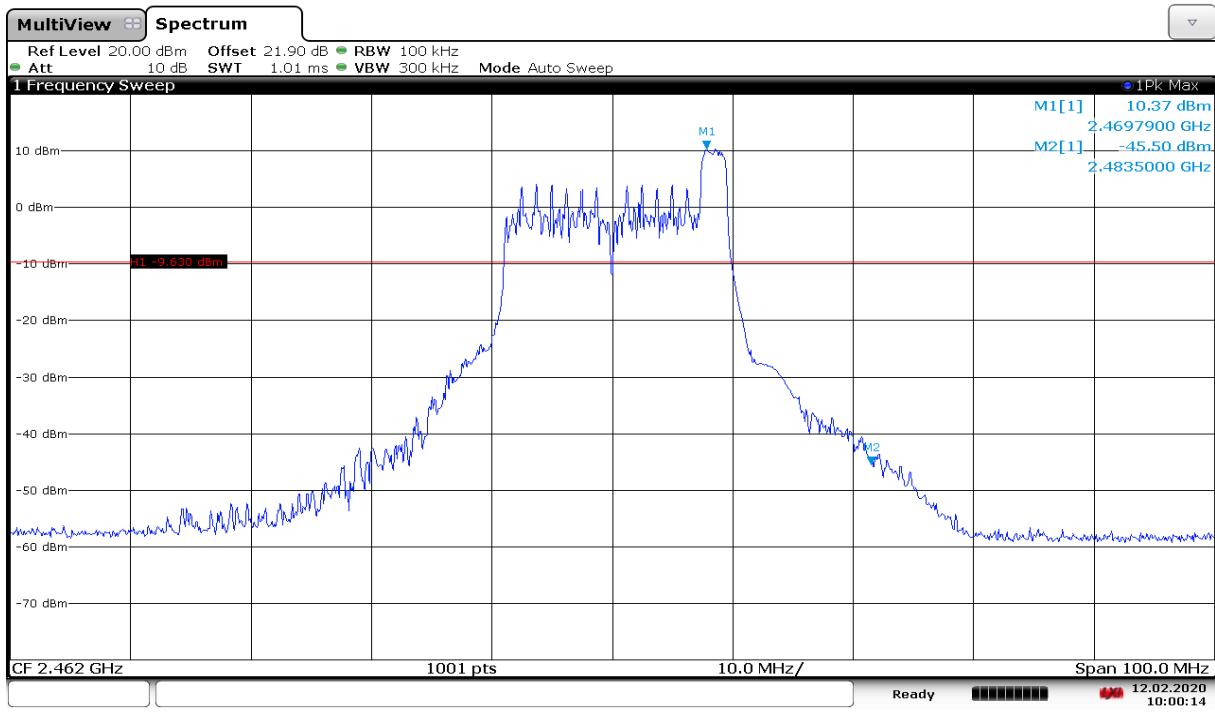

Fig.A.5.8 Band Edges (802.11n-HT40, Ch 9)

09:38:10 12.02.2020

Fig.A.5.9 Band Edges (802.11n-HE20-RU26-left, Ch 1)

10:00:14 12.02.2020

Fig.A.5.10 Band Edges (802.11n-HE20-RU26-right, Ch 11)

09:53:24 12.02.2020
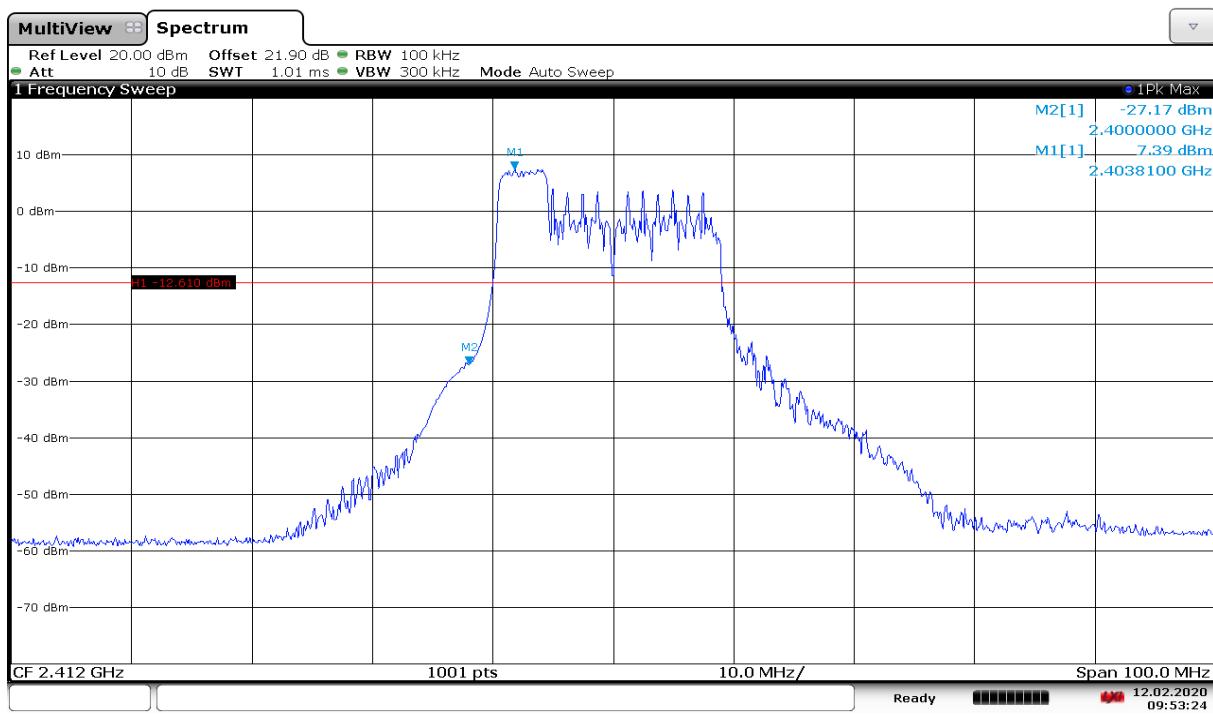
Fig.A.5.11 Band Edges (802.11n-HE20-RU52-left, Ch 1)

10:05:06 12.02.2020
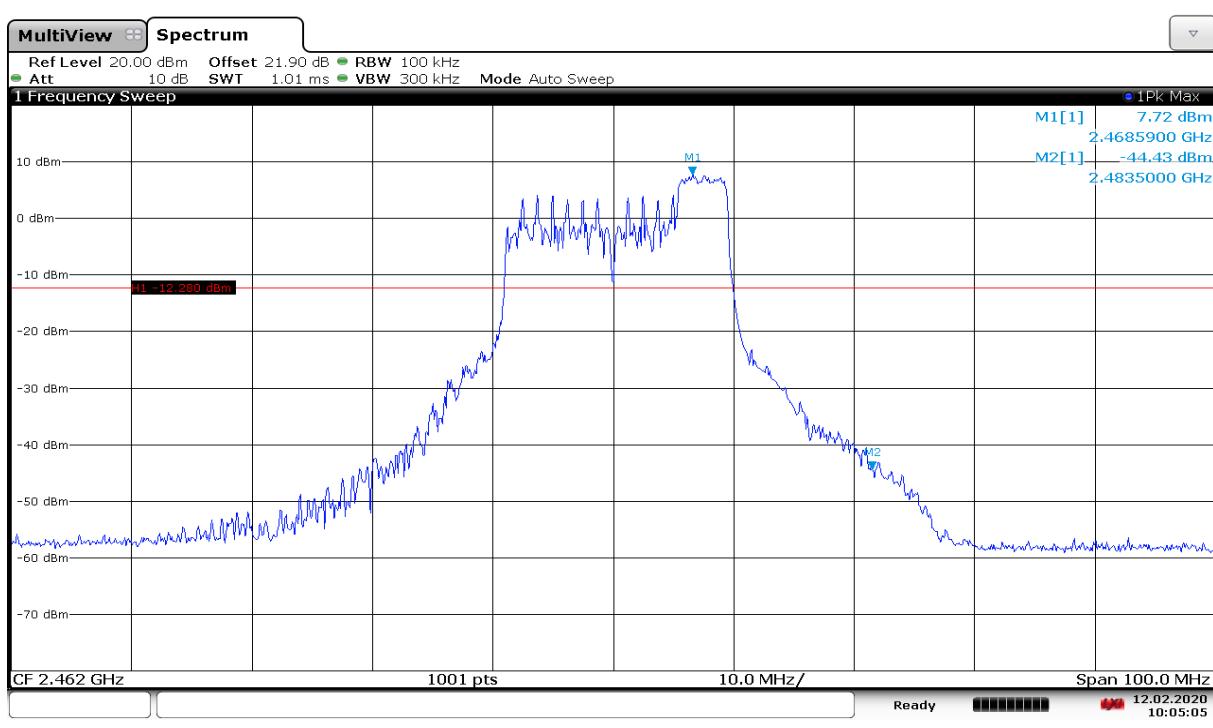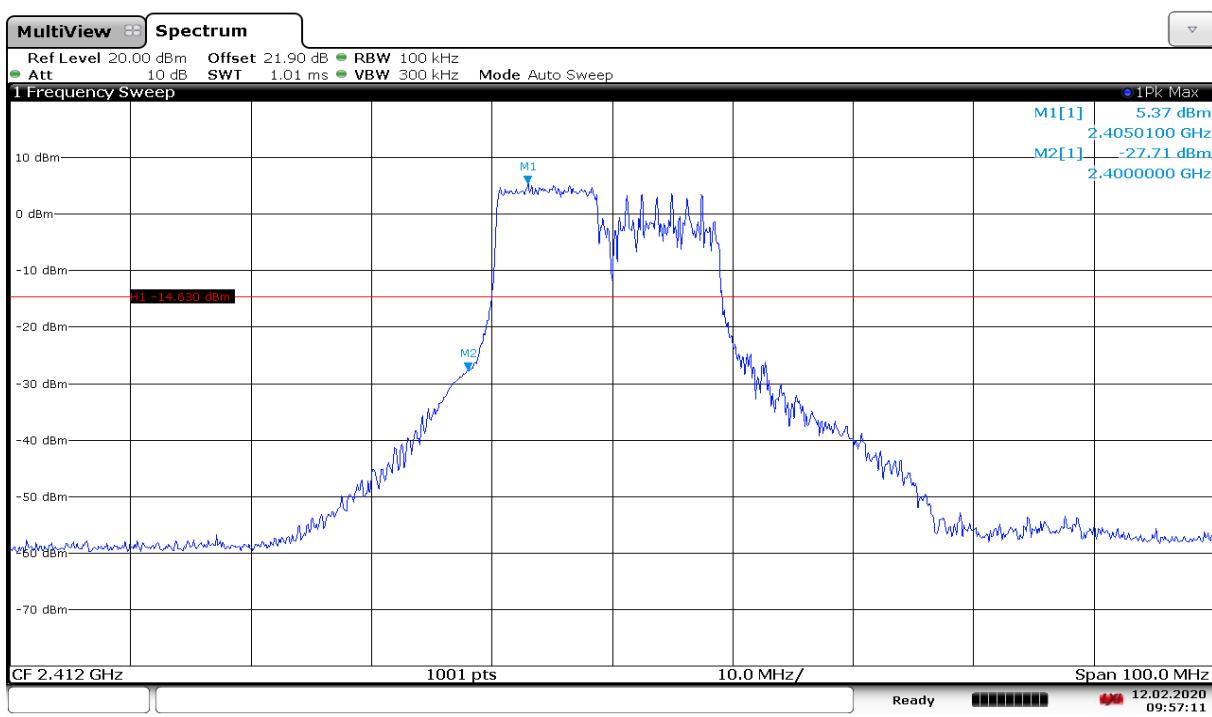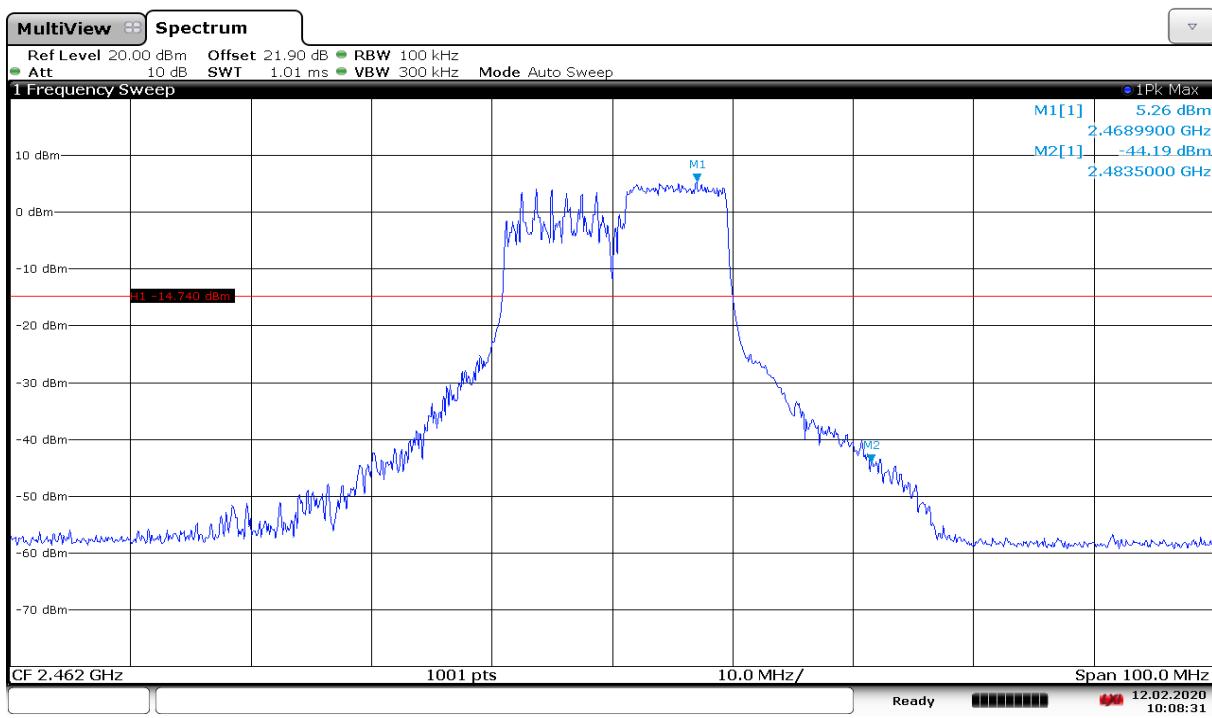
Fig.A.5.12 Band Edges (802.11n-HE20-RU52-right, Ch 11)
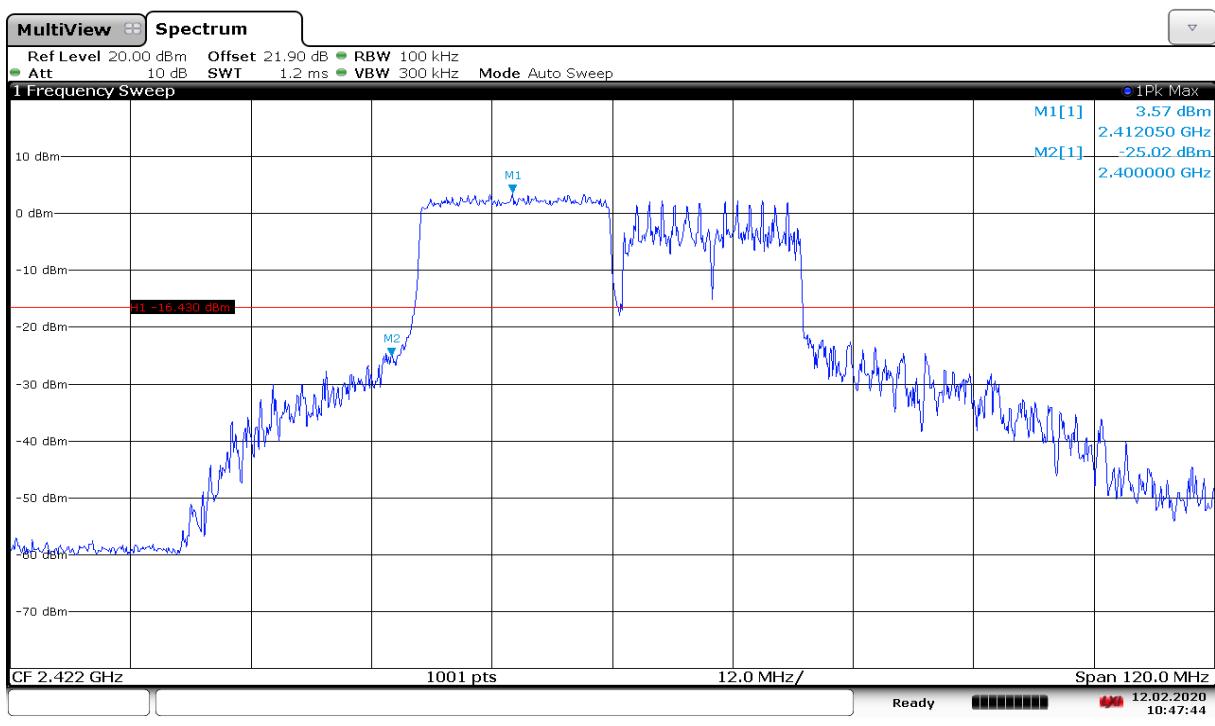
09:57:12 12.02.2020
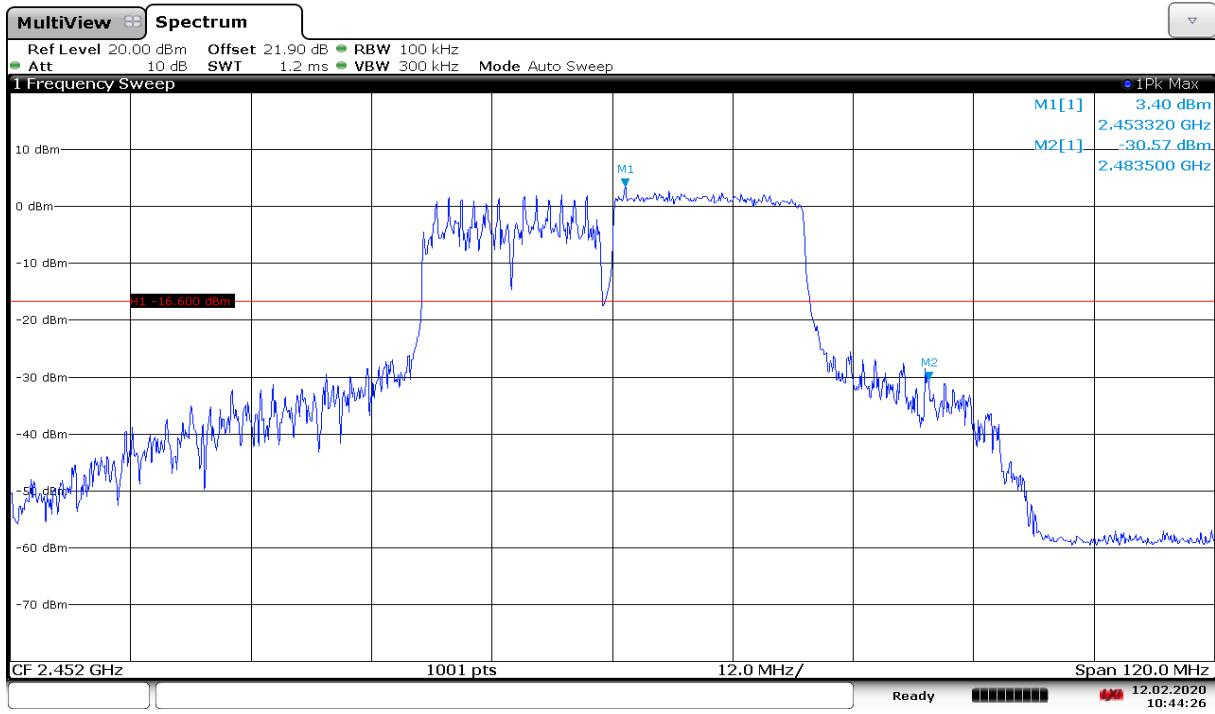
**Fig.A.5.13 Band Edges (802.11n-HE20-RU106-left, Ch 1)**

10:08:32 12.02.2020

Fig.A.5.14 Band Edges (802.11n-HE20-RU106-right, Ch 11)
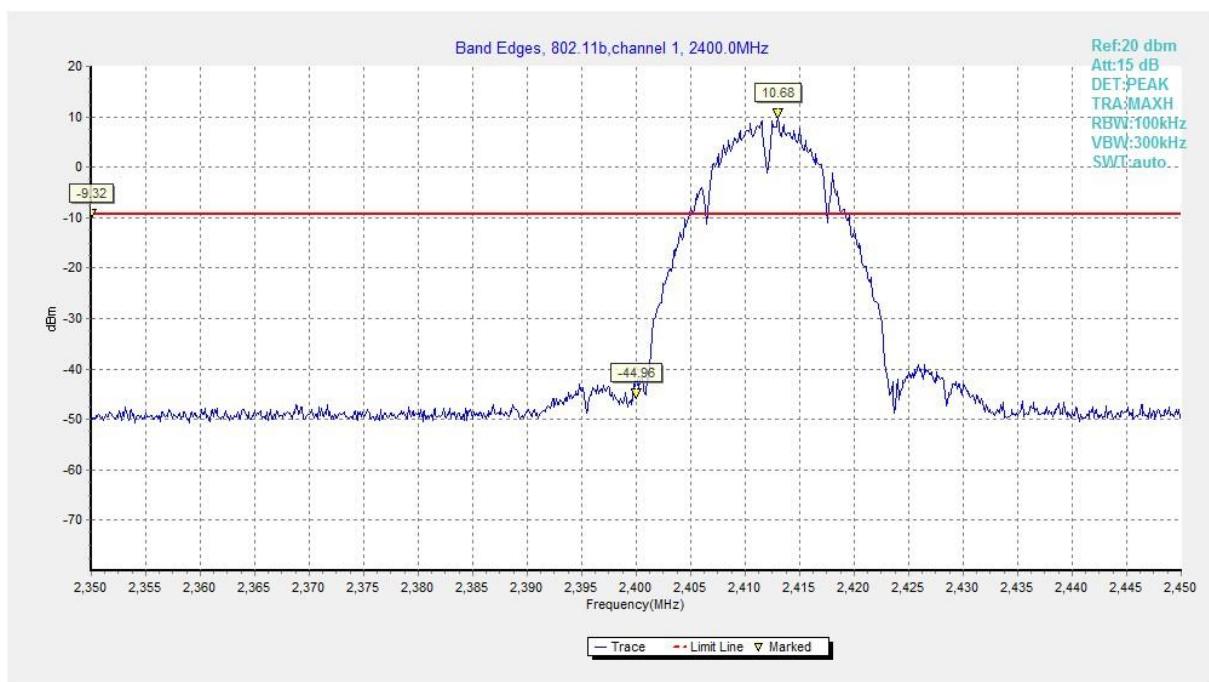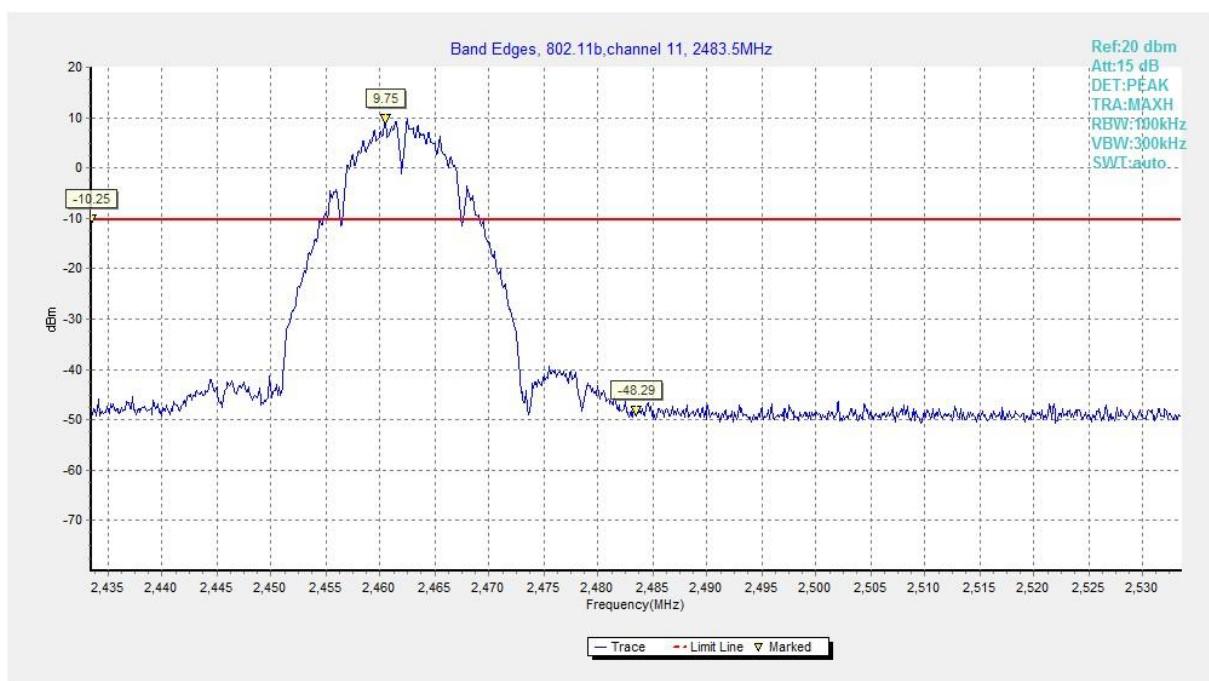
10:47:45 12.02.2020

Fig.A.5.15 Band Edges (802.11n-HE40-RU242-left, Ch 3)

10:44:27 12.02.2020

Fig.A.5.16 Band Edges (802.11n-HE40-RU242-right, Ch 9)

Fig.A.5.17 Band Edges (802.11b, Ch 1)

Fig.A.5.18 Band Edges (802.11b, Ch 11)
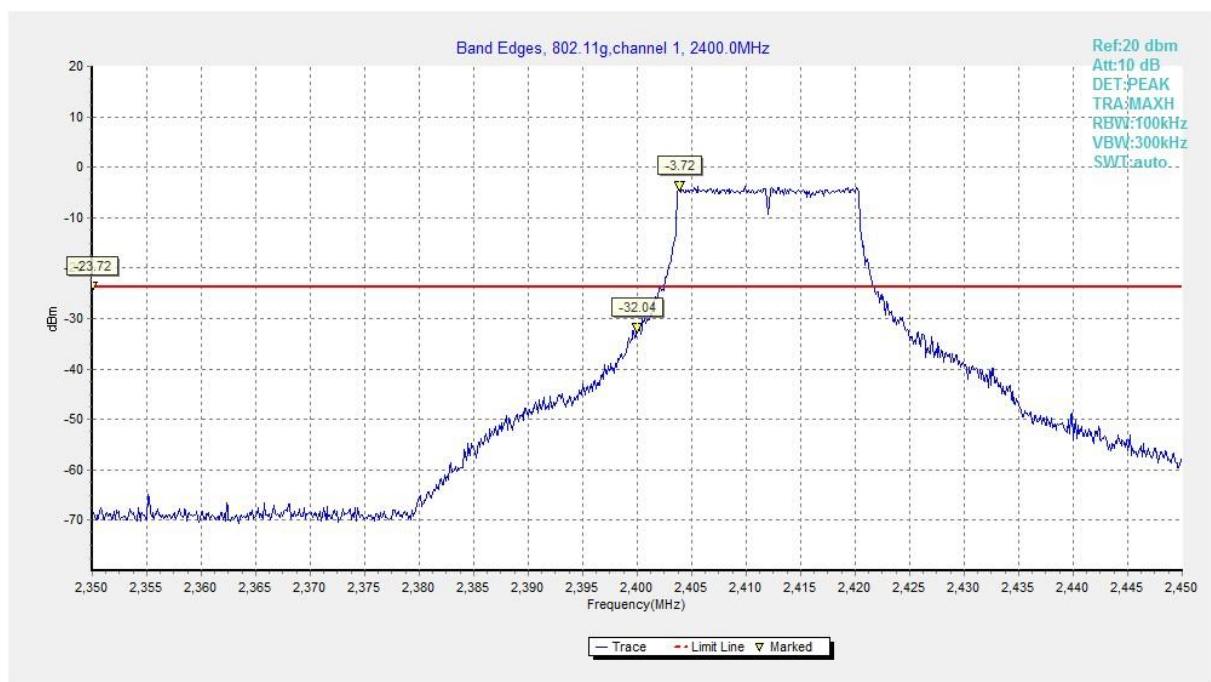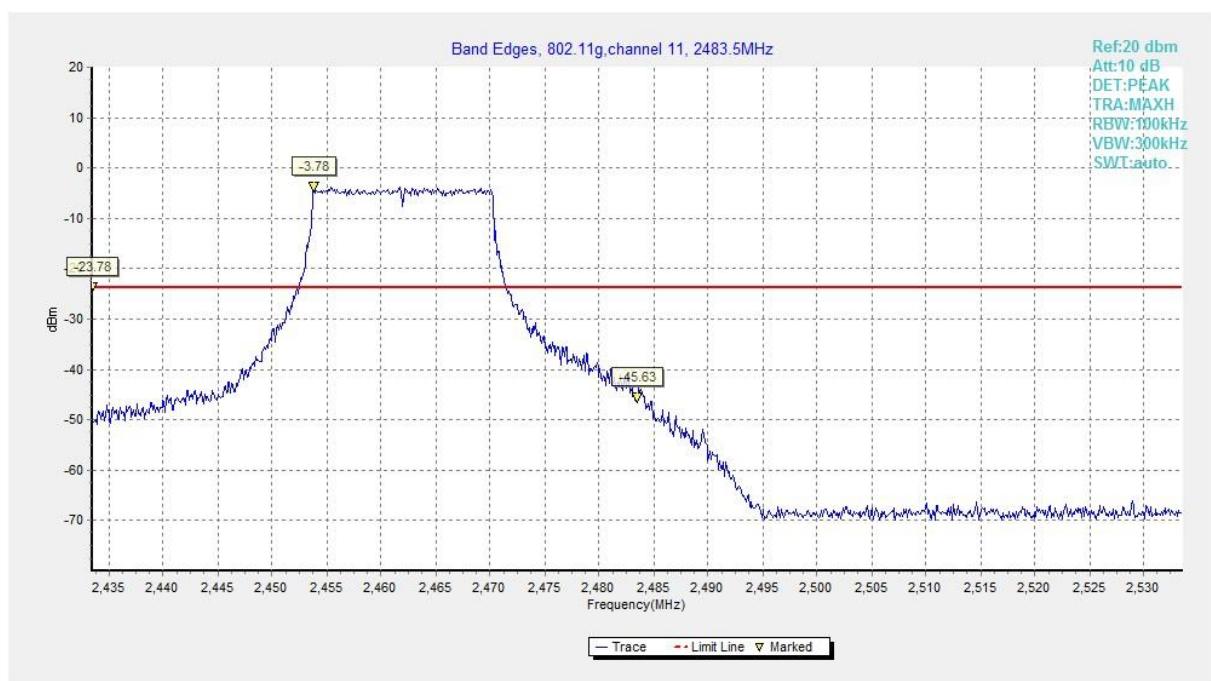
Fig.A.5.19 Band Edges (802.11g, Ch 1)

Fig.A.5.20 Band Edges (802.11g, Ch 11)

Fig.A.5.21 Band Edges (802.11n-HT20, Ch 1)
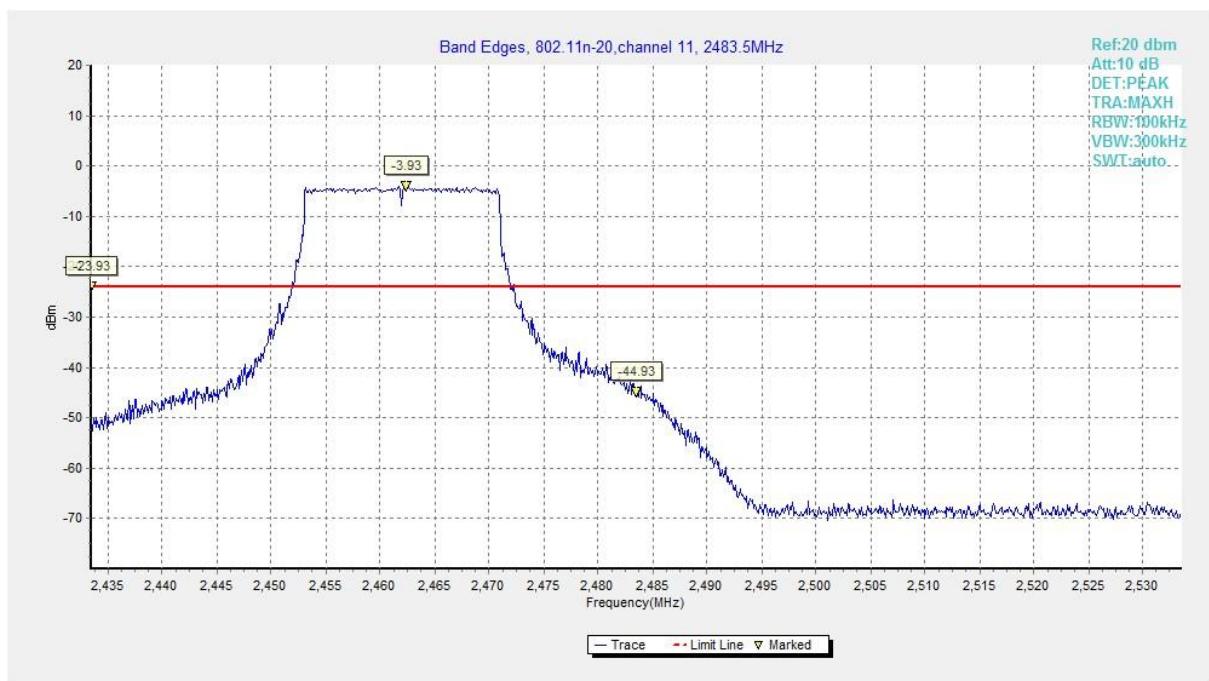
Fig.A.5.22 Band Edges (802.11n-HT20, Ch 11)
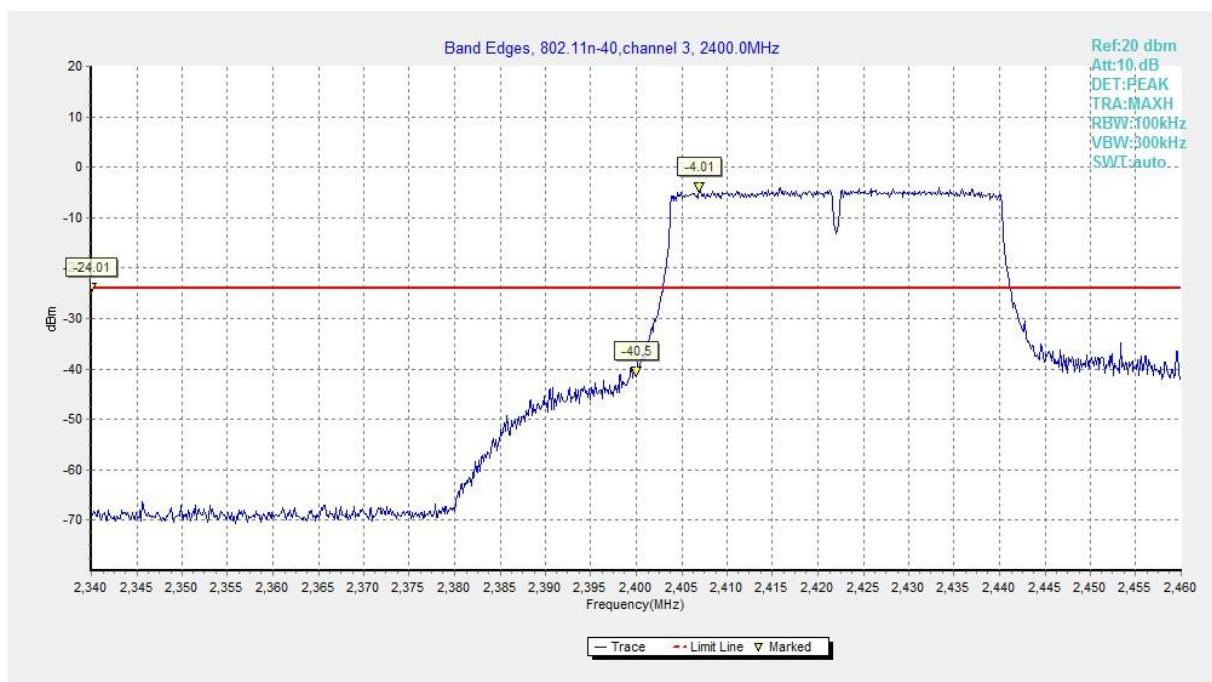
Fig.A.5.23 Band Edges (802.11n-HT40, Ch 3)
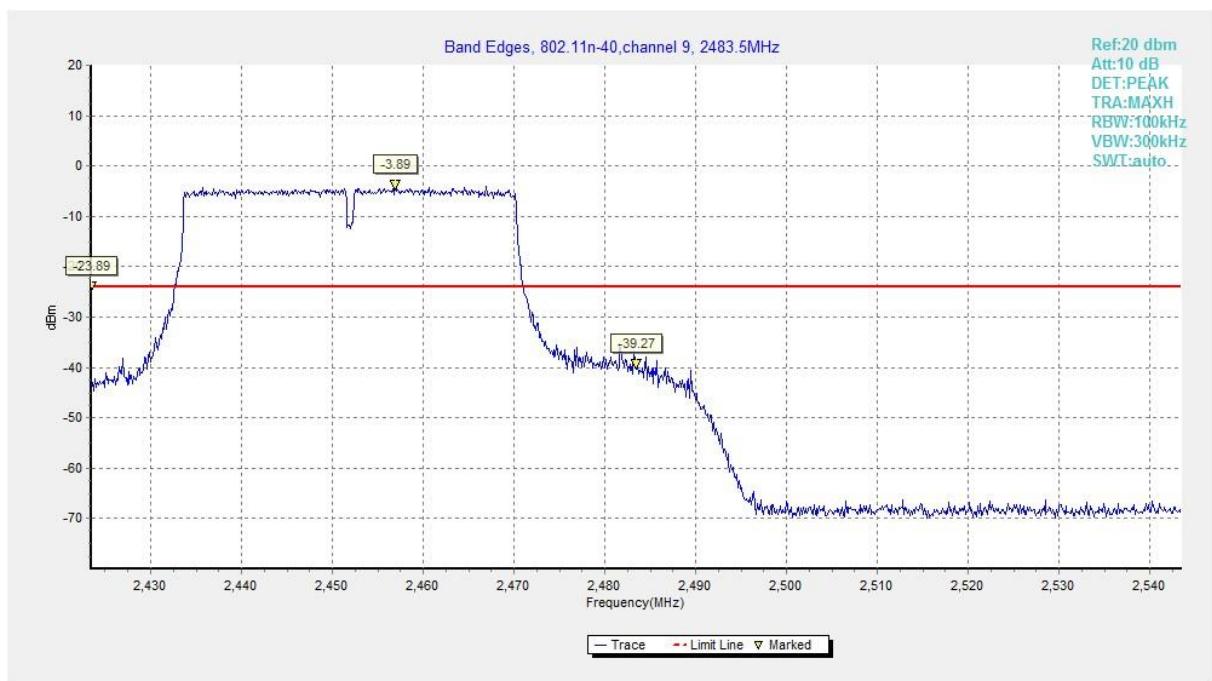
Fig.A.5.24 Band Edges (802.11n-HT40, Ch 9)

10:28:18 12.02.2020
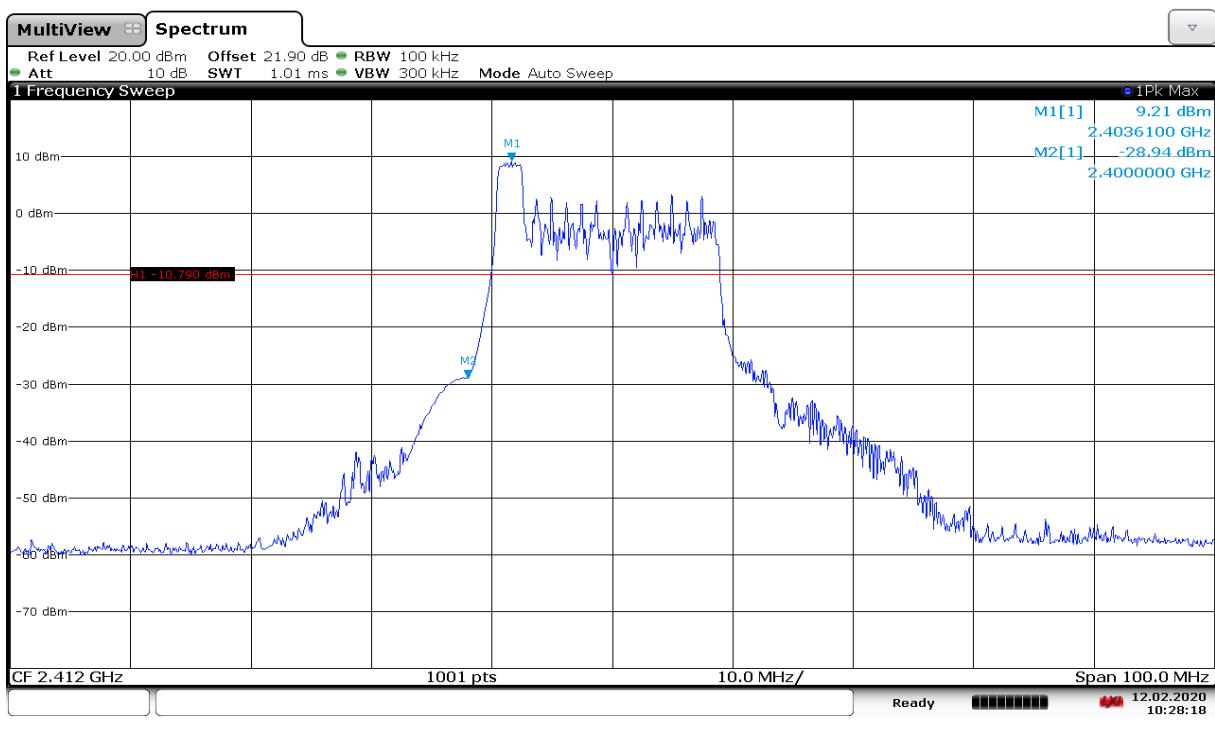
Fig.A.5.25 Band Edges (802.11n-HE20-RU26-left, Ch 1)

10:18:08 12.02.2020
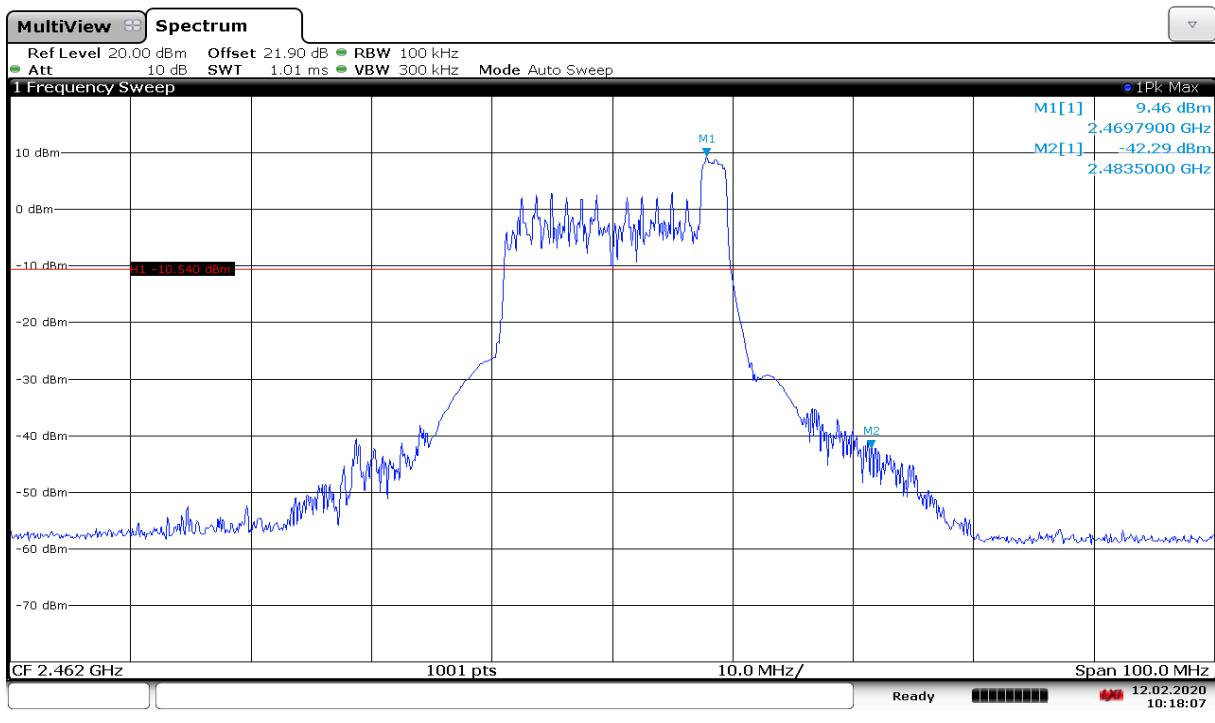
Fig.A.5.26 Band Edges (802.11n-HE20-RU26-right, Ch 11)
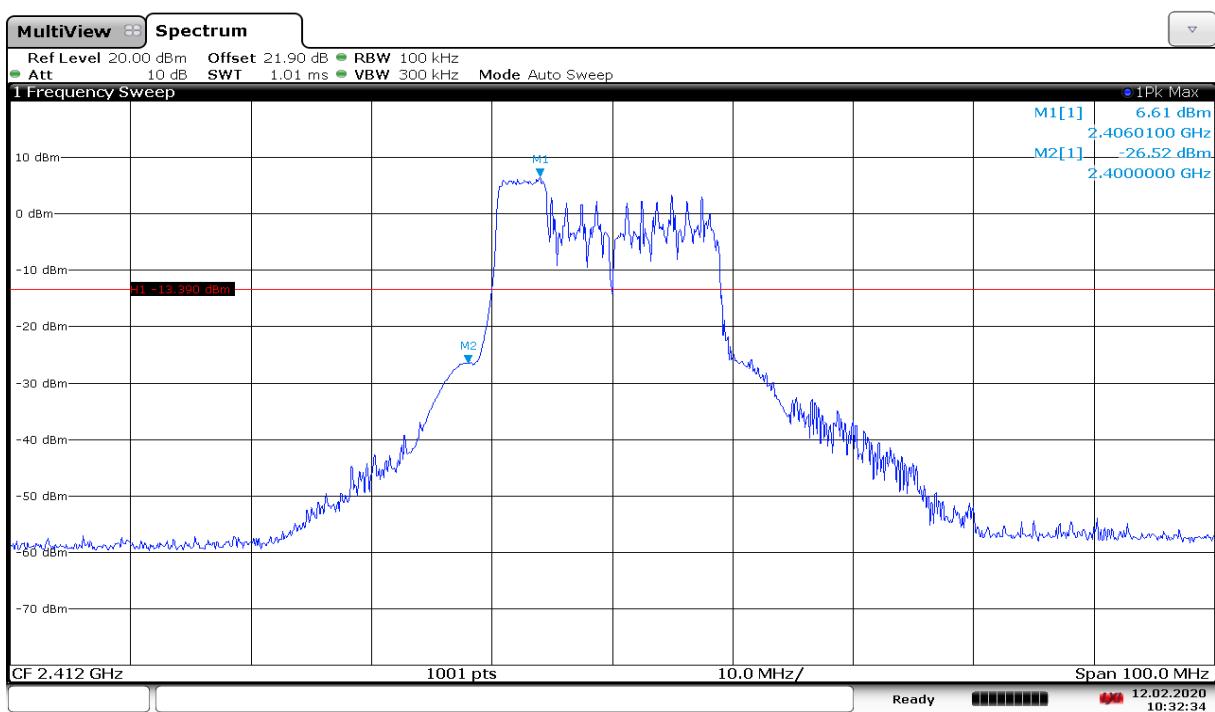
Fig.A.5.27 Band Edges (802.11n-HE20-RU52-left, Ch 1)
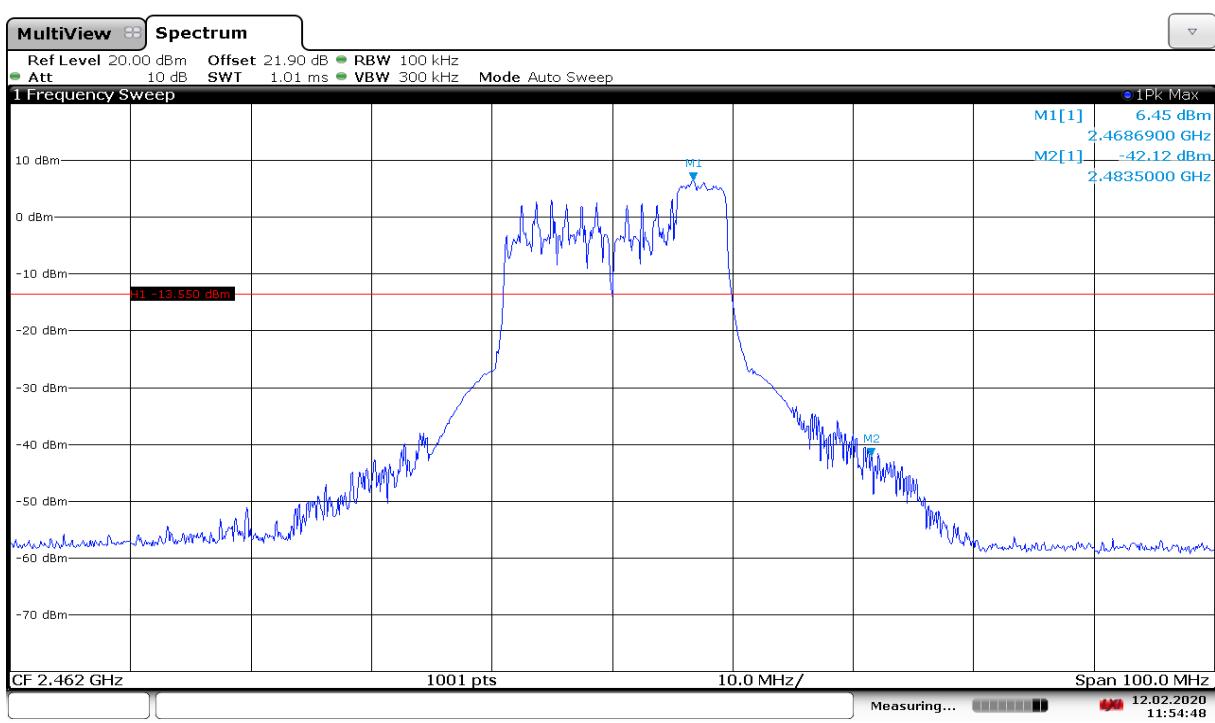
Fig.A.5.28 Band Edges (802.11n-HE20-RU52-right, Ch 11)
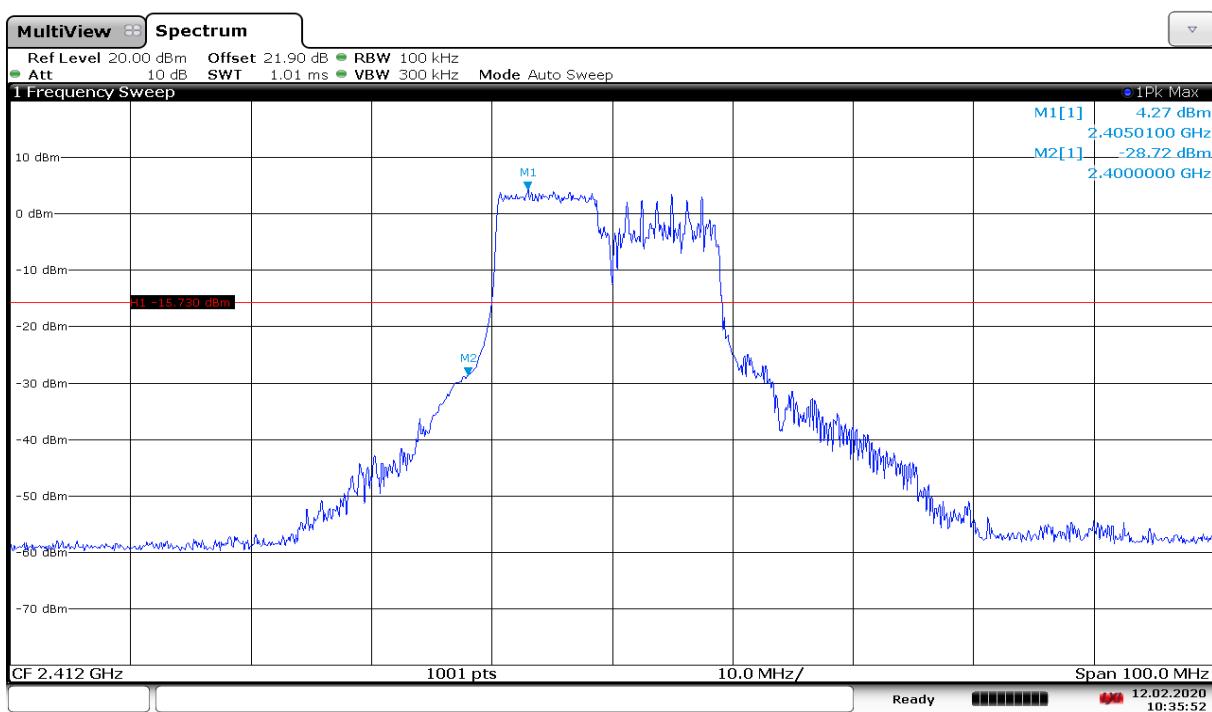
Fig.A.5.29 Band Edges (802.11n-HE20-RU106-left, Ch 1)
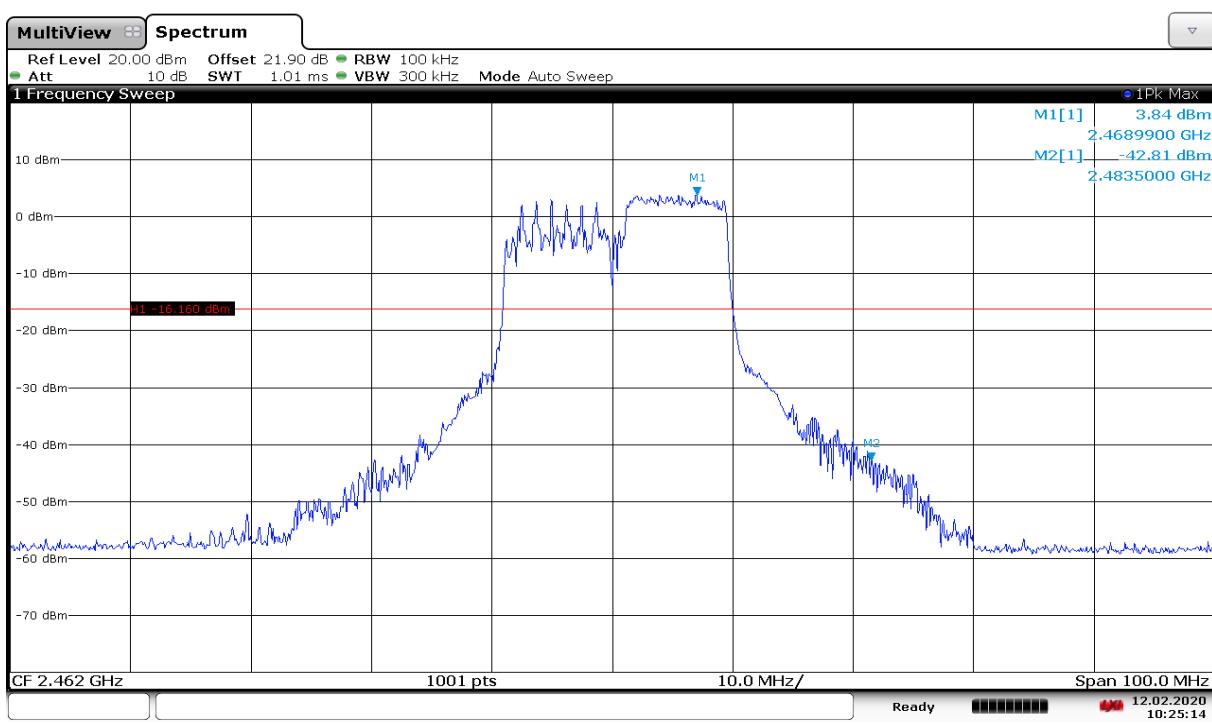
Fig.A.5.30 Band Edges (802.11n-HE20-RU106-right, Ch 11)

10:39:09 12.02.2020
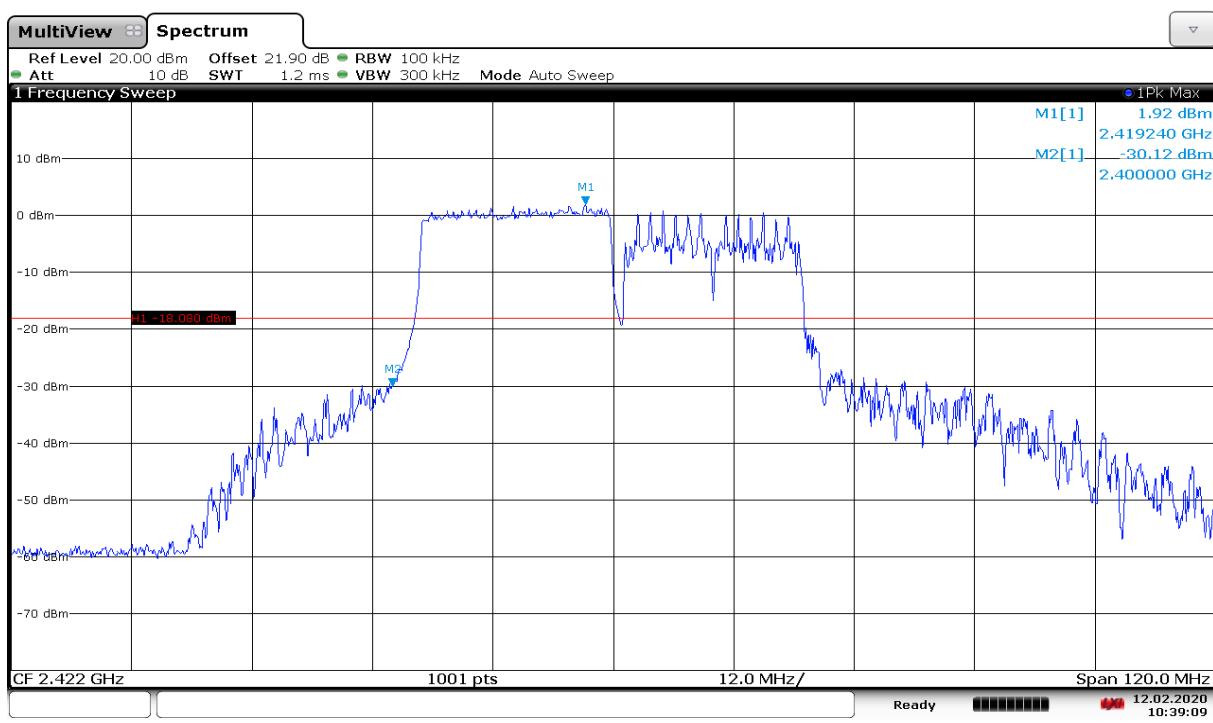
Fig.A.5.31 Band Edges (802.11n-HE40-RU242-left, Ch 3)

10:42:54 12.02.2020
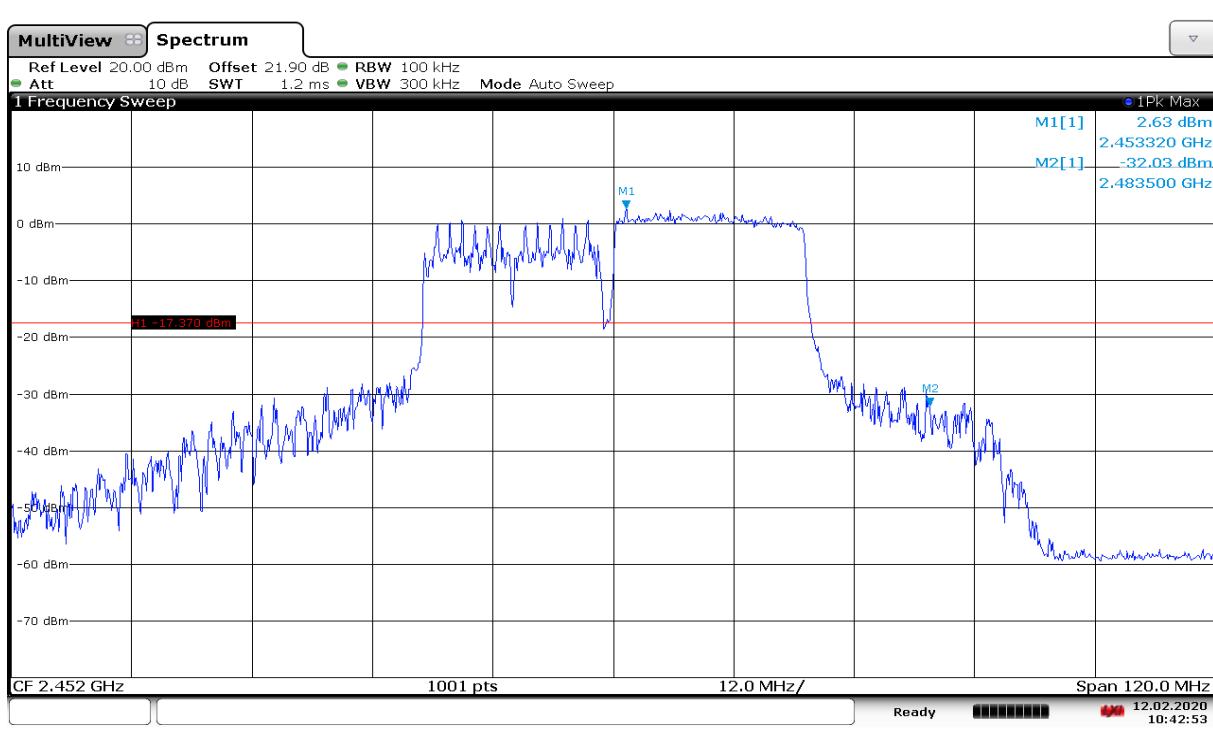
Fig.A.5.32 Band Edges (802.11n-HE40-RU242-right, Ch 9)

A.6. Transmitter Spurious Emission

A.6.1 Transmitter Spurious Emission – Conducted

Method of Measurement: See ANSI C63.10-2013-clause 11.11

Establish a reference level by using the following procedure:

 a) Set instrument center frequency to DTS channel center frequency

 b) Set the span to $\geqslant$ 1.5 times the DTS bandwidth

 c) Set the RBW= 100 kHz

 d) Set the VBW= 300 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 PSD level

 Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

Establish an emission level by using the following procedure:

 a) Set the center frequency and span to encompass frequency range to be measured.

 b) Set the RBW = 100 kHz.

 c) Set the VBW = 300 kHz.

 d) Detector = peak.

 e) Sweep time = auto couple.

 f) Trace mode = max hold.

 g) Allow trace to fully stabilize.

 h) Use the peak marker function to determine the maximum amplitude level.

 Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

EUT ID: EUT2

Measurement Results:

MIMO&CDD

ANT3

802.11b mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.412 GHz	Fig.A.6.1.1	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.2	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.3	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.4	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.5	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.6	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.7	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.8	**P**
	6	2.437 GHz	Fig.A.6.1.9	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.10	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.11	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.12	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.13	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.14	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.15	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.16	**P**
	11	2.462 GHz	Fig.A.6.1.17	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.18	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.19	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.20	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.21	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.22	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.23	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.24	**P**

802.11g mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.412 GHz	Fig.A.6.1.25	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.26	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.27	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.28	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.29	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.30	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.31	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.32	**P**
	6	2.437 GHz	Fig.A.6.1.33	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.34	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.35	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.36	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.37	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.38	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.39	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.40	**P**
	11	2.462 GHz	Fig.A.6.1.41	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.42	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.43	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.44	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.45	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.46	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.47	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.48	**P**

802.11n-HT20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	1	2.412 GHz	Fig.A.6.1.49	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.50	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.51	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.52	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.53	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.54	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.55	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.56	**P**
	6	2.437 GHz	Fig.A.6.1.57	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.58	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.59	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.60	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.61	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.62	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.63	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.64	**P**
	11	2.462 GHz	Fig.A.6.1.65	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.66	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.67	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.68	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.69	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.70	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.71	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.72	**P**

802.11n-HT40 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	3	2.422 GHz	Fig.A.6.1.73	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.74	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.75	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.76	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.77	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.78	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.79	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.80	**P**
	6	2.437 GHz	Fig.A.6.1.81	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.82	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.83	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.84	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.85	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.86	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.87	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.88	**P**
	9	2.452 GHz	Fig.A.6.1.89	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.90	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.91	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.92	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.93	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.94	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.95	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.96	**P**

802.11ax-HE20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11ax-HE20 (RU52-middle)	1	30 MHz ~ 26 GHz	Fig.A.6.1.97	**P**
	6	30 MHz ~ 26 GHz	Fig.A.6.1.98	**P**
	11	30 MHz ~ 26 GHz	Fig.A.6.1.99	**P**

802.11ax-HE40 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11ax-HE40 (RU242-right)	3	30 MHz ~ 26 GHz	Fig.A.6.1.100	**P**
	6	30 MHz ~ 26 GHz	Fig.A.6.1.101	**P**
	9	30 MHz ~ 26 GHz	Fig.A.6.1.102	**P**

The test of 11ax Transmitter Spurious Emissions need choose the configuration with the highest power for each bandwidth.

Conclusion: Pass

ANT4

802.11b mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.412 GHz	Fig.A.6.1.103	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.104	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.105	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.106	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.107	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.108	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.109	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.110	**P**
	6	2.437 GHz	Fig.A.6.1.111	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.112	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.113	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.114	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.115	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.116	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.117	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.118	**P**
	11	2.462 GHz	Fig.A.6.1.119	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.120	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.121	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.122	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.123	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.124	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.125	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.126	**P**

802.11g mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.412 GHz	Fig.A.6.1.127	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.128	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.129	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.130	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.131	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.132	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.133	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.134	**P**
	6	2.437 GHz	Fig.A.6.1.135	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.136	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.137	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.138	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.139	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.140	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.141	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.142	**P**
	11	2.462 GHz	Fig.A.6.1.143	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.144	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.145	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.146	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.147	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.148	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.149	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.150	**P**

802.11n-HT20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT20)	1	2.412 GHz	Fig.A.6.1.151	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.152	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.153	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.154	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.155	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.156	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.157	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.158	**P**
	6	2.437 GHz	Fig.A.6.1.159	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.160	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.161	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.162	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.163	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.164	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.165	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.166	**P**
	11	2.462 GHz	Fig.A.6.1.167	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.168	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.169	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.170	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.171	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.172	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.173	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.174	**P**

802.11n-HT40 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n(HT40)	3	2.422 GHz	Fig.A.6.1.175	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.176	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.177	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.178	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.179	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.180	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.181	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.182	**P**
	6	2.437 GHz	Fig.A.6.1.183	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.184	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.185	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.186	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.187	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.188	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.189	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.190	**P**
	9	2.452 GHz	Fig.A.6.1.191	**P**
		30 MHz ~ 1 GHz	Fig.A.6.1.192	**P**
		1 GHz ~ 2.5 GHz	Fig.A.6.1.193	**P**
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.194	**P**
		7.5 GHz ~ 10 GHz	Fig.A.6.1.195	**P**
		10 GHz ~ 15 GHz	Fig.A.6.1.196	**P**
		15 GHz ~ 20 GHz	Fig.A.6.1.197	**P**
		20 GHz ~ 26 GHz	Fig.A.6.1.198	**P**

802.11ax-HE20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11ax-HE20 (RU52-middle)	1	30 MHz ~ 26 GHz	Fig.A.6.1.199	**P**
	6	30 MHz ~ 26 GHz	Fig.A.6.1.200	**P**
	11	30 MHz ~ 26 GHz	Fig.A.6.1.201	**P**

802.11ax-HE40 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11ax-HE40 (RU242-right)	3	30 MHz ~ 26 GHz	Fig.A.6.1.202	**P**
	6	30 MHz ~ 26 GHz	Fig.A.6.1.203	**P**
	9	30 MHz ~ 26 GHz	Fig.A.6.1.204	**P**

The test of 11ax Transmitter Spurious Emissions need choose the configuration with the highest power for each bandwidth.

Conclusion: Pass

Test graphs as below:
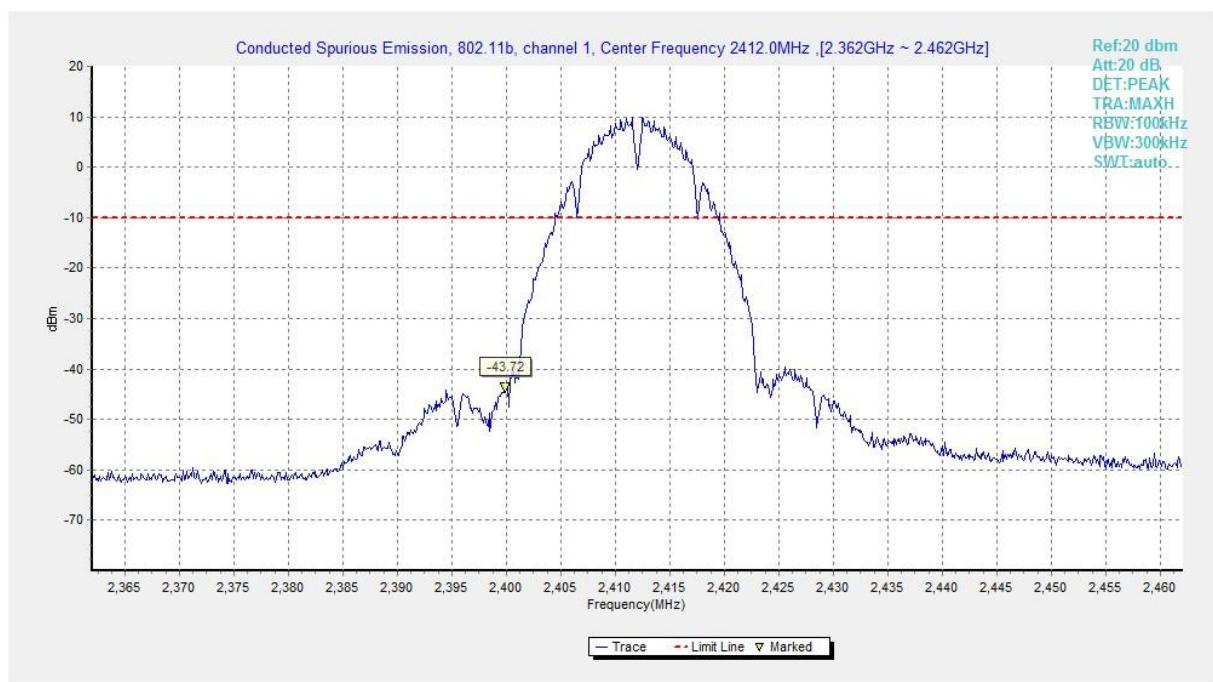
Fig.A.6.1.1 **Transmitter Spurious Emission - Conducted (802.11b, Ch1, Center Frequency)**
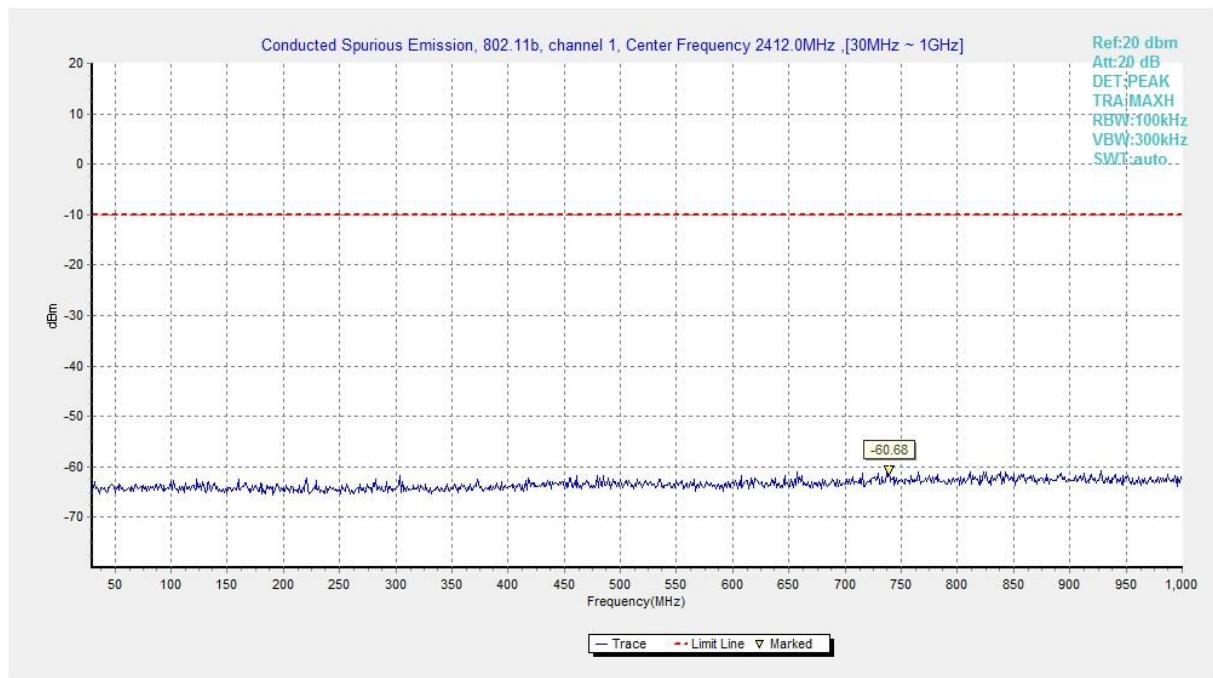
Fig.A.6.1.2 **Transmitter Spurious Emission - Conducted (802.11b, Ch1, 30 MHz-1 GHz)**
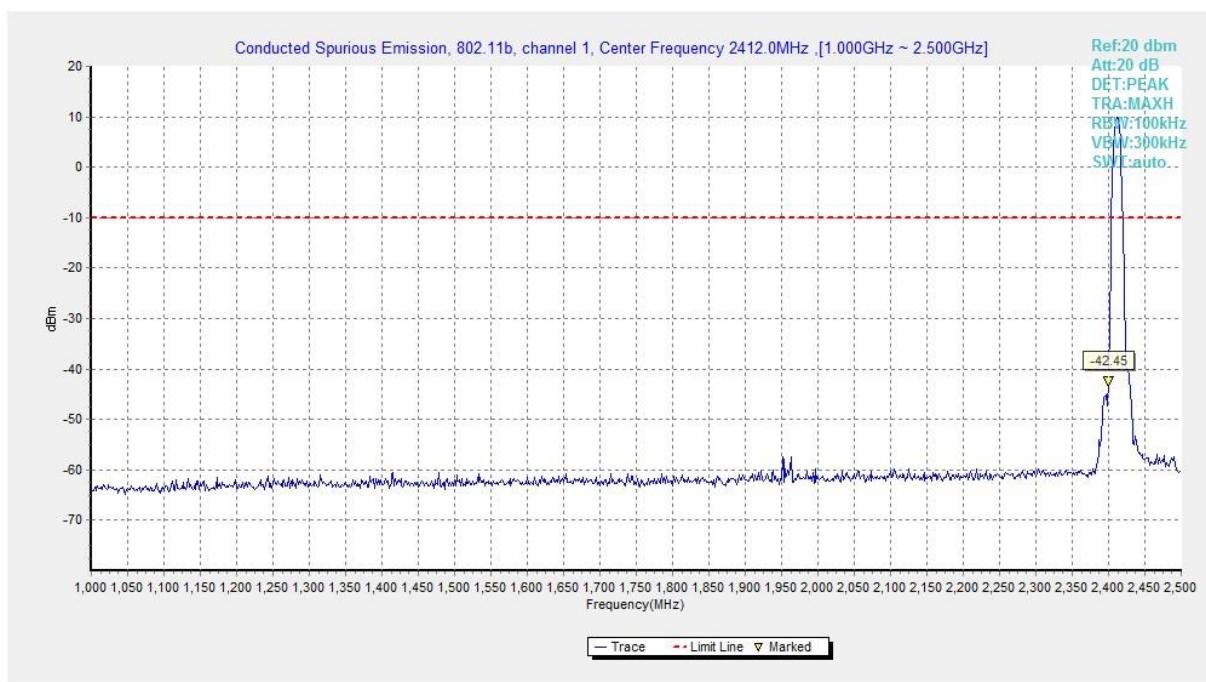
Fig.A.6.1.3   Transmitter Spurious Emission - Conducted (802.11b, Ch1, 1 GHz-2.5 GHz)
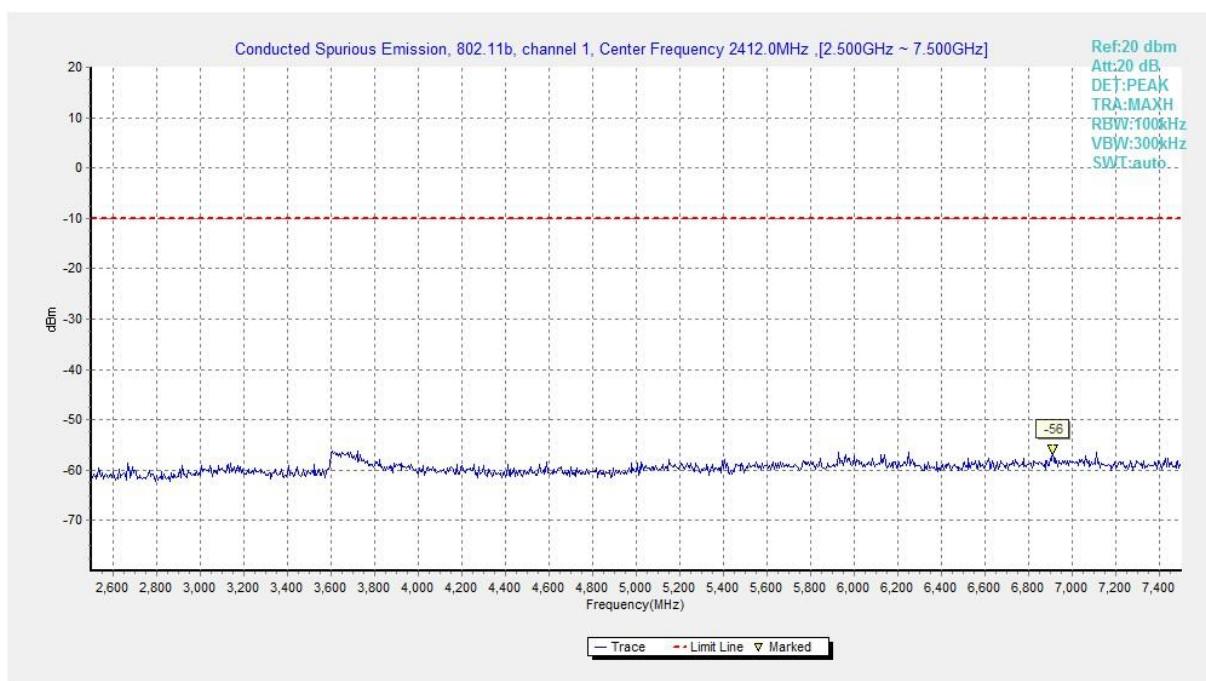

Fig.A.6.1.4   Transmitter Spurious Emission - Conducted (802.11b, Ch1, 2.5 GHz-7.5 GHz)
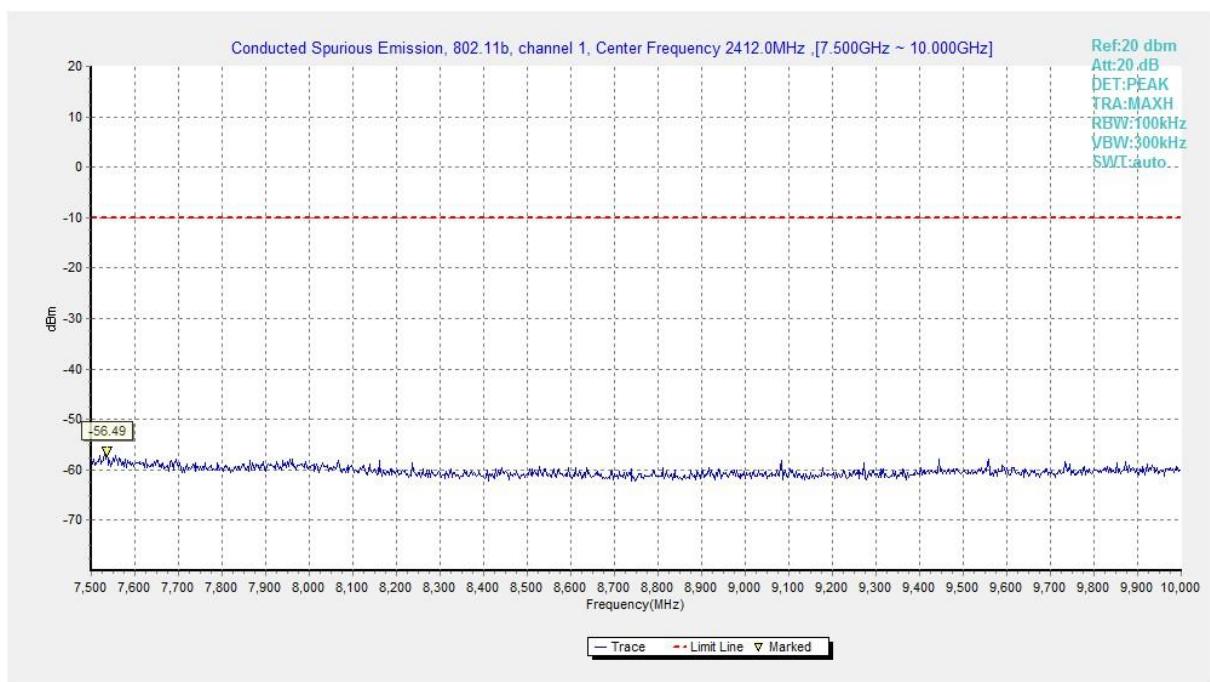
Fig.A.6.1.5   Transmitter Spurious Emission - Conducted (802.11b, Ch1, 7.5 GHz-10 GHz)
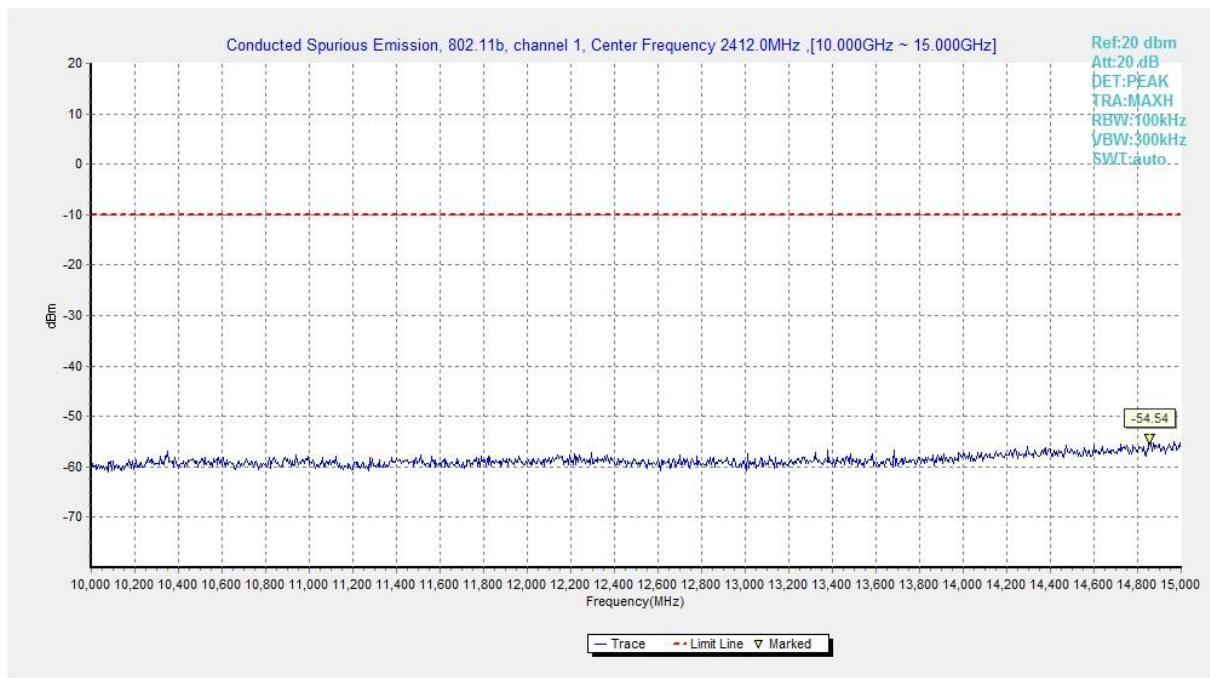
Fig.A.6.1.6   Transmitter Spurious Emission - Conducted (802.11b, Ch1, 10 GHz-15 GHz)
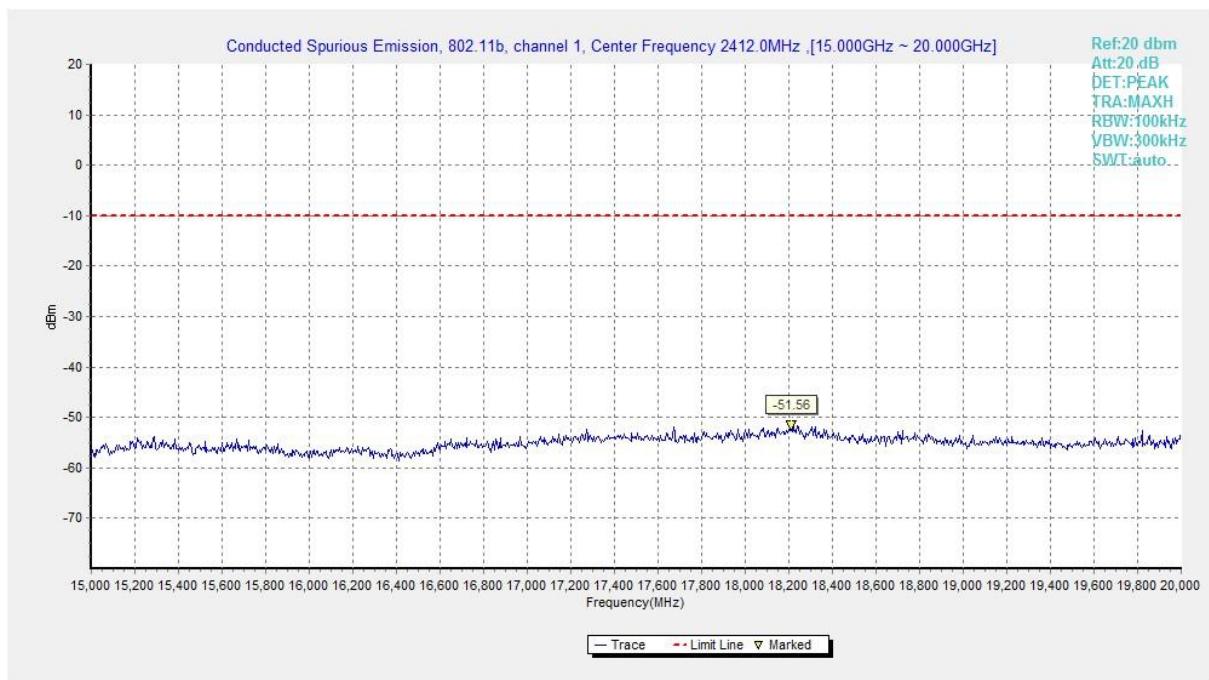
**Fig.A.6.1.7   Transmitter Spurious Emission - Conducted (802.11b, Ch1, 15 GHz-20 GHz)**
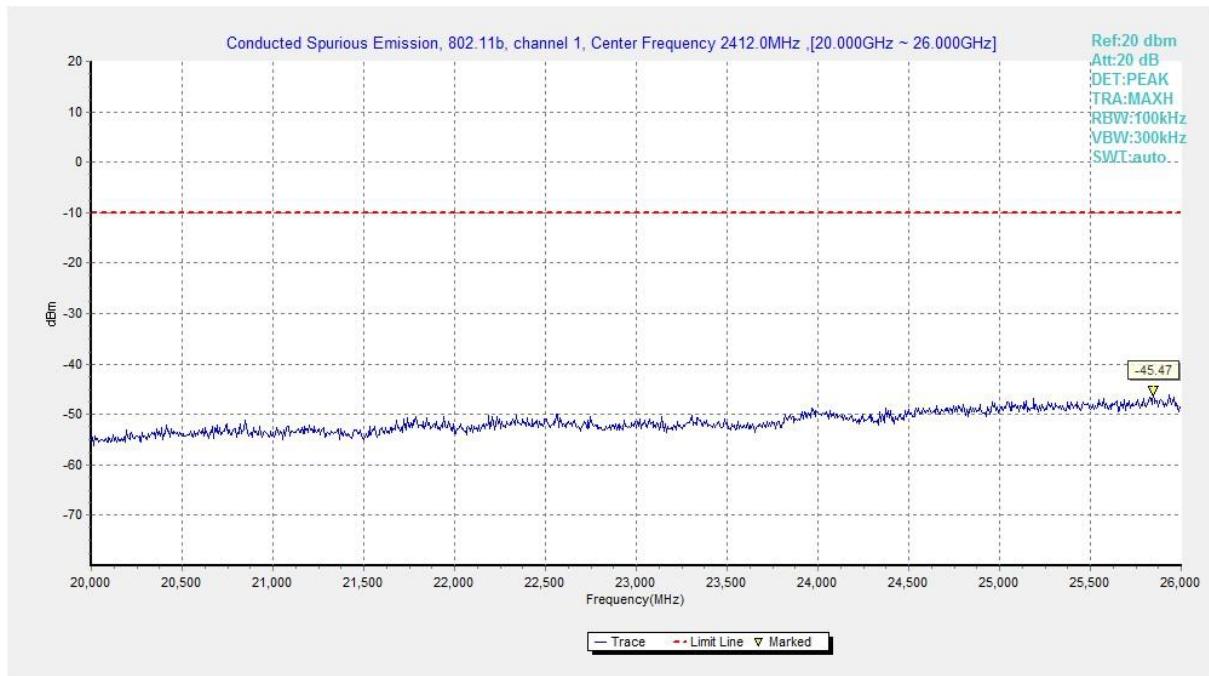
Fig.A.6.1.8   Transmitter Spurious Emission - Conducted (802.11b, Ch1, 20 GHz-26 GHz)
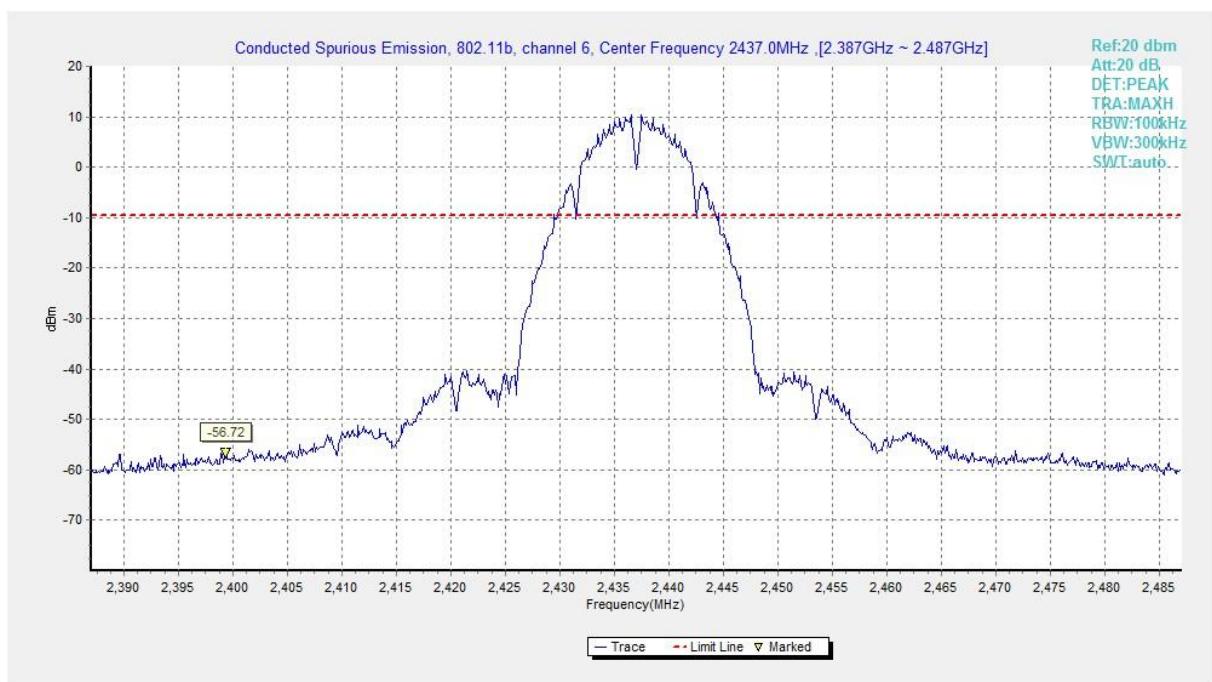
Fig.A.6.1.9   Transmitter Spurious Emission - Conducted (802.11b, Ch6, Center Frequency)
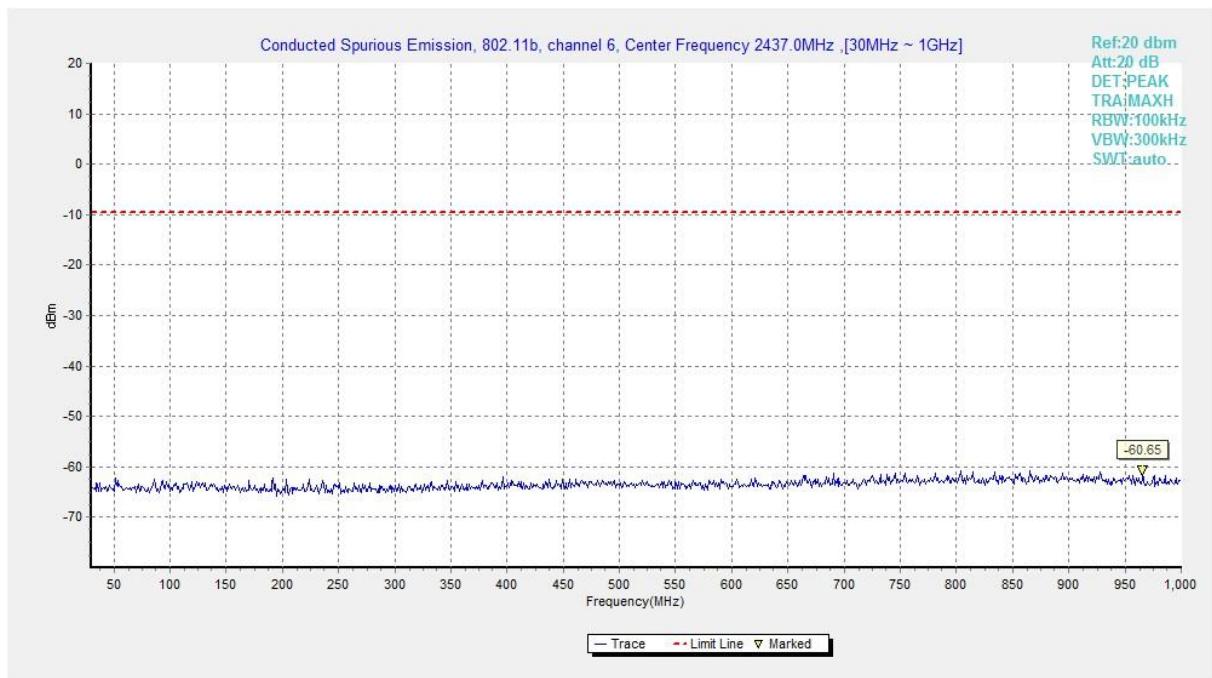
Fig.A.6.1.10   Transmitter Spurious Emission - Conducted (802.11b, Ch6, 30 MHz-1 GHz)
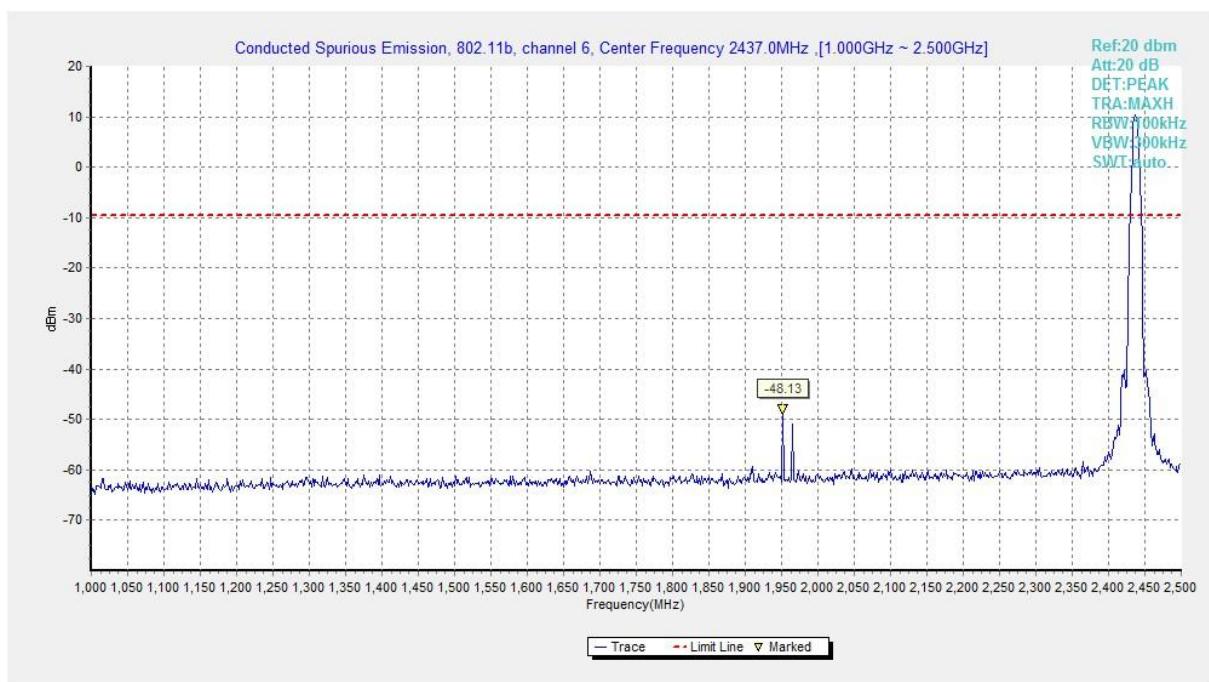
Fig.A.6.1.11   Transmitter Spurious Emission - Conducted (802.11b, Ch6, 1 GHz-2.5 GHz)
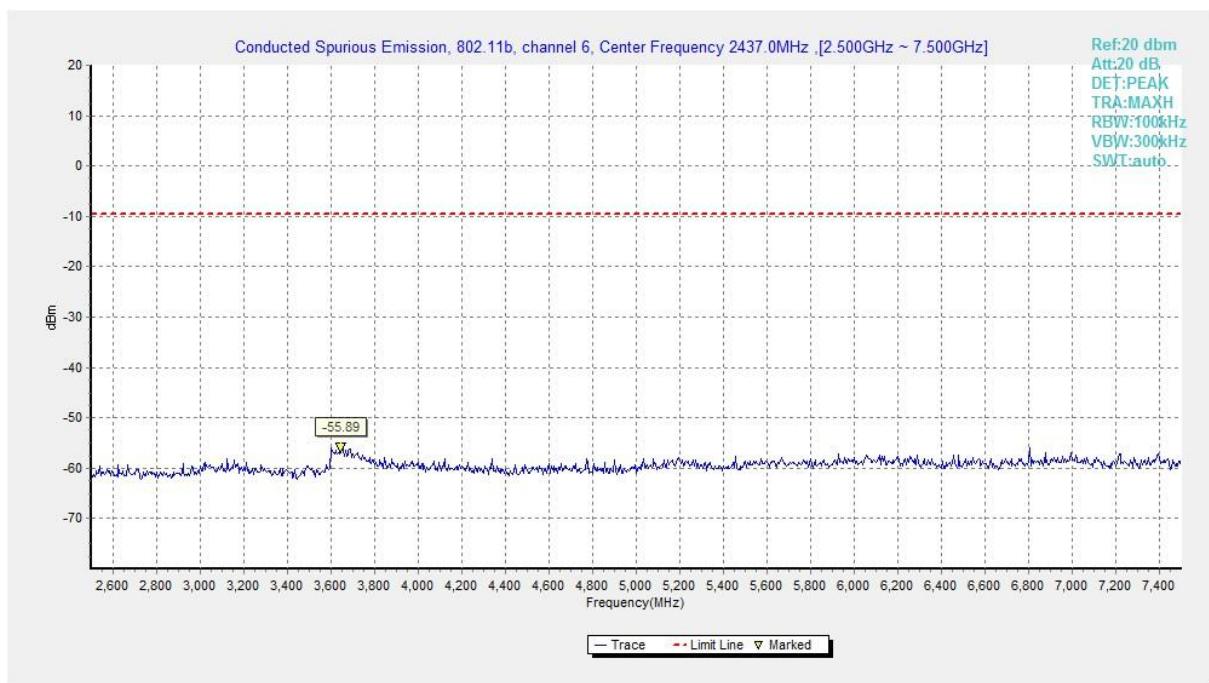
**Fig.A.6.1.12   Transmitter Spurious Emission - Conducted (802.11b, Ch6, 2.5 GHz-7.5 GHz)**
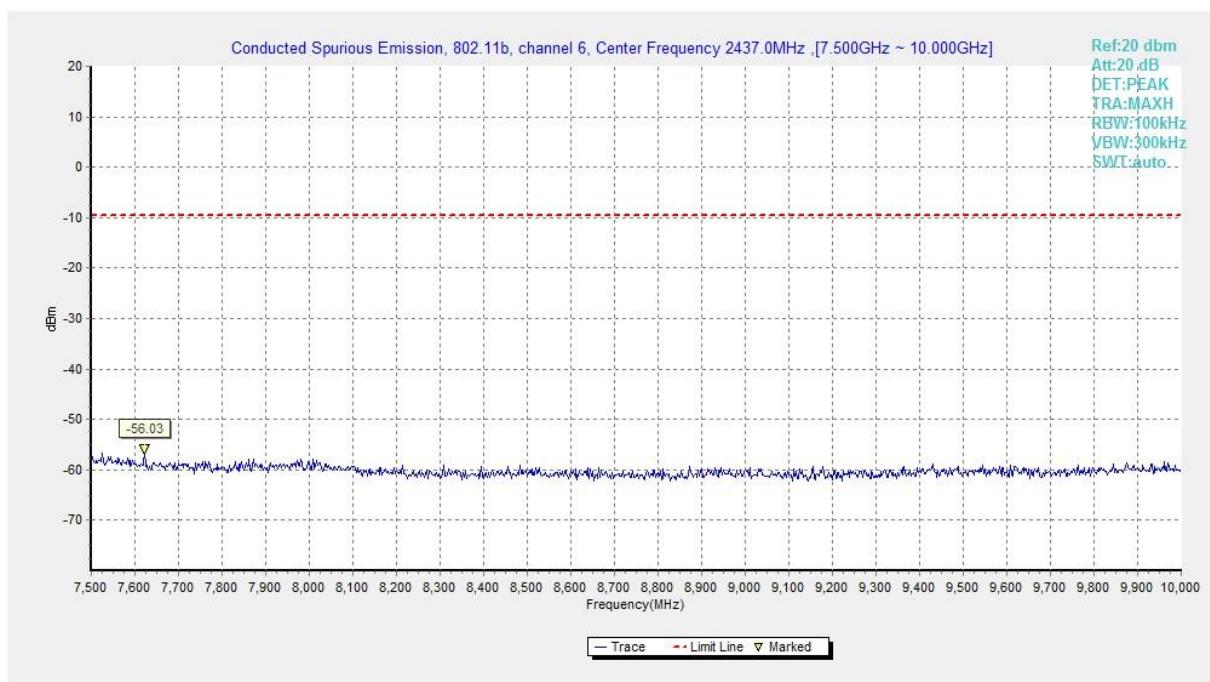
**Fig.A.6.1.13   Transmitter Spurious Emission - Conducted (802.11b, Ch6, 7.5 GHz-10 GHz)**
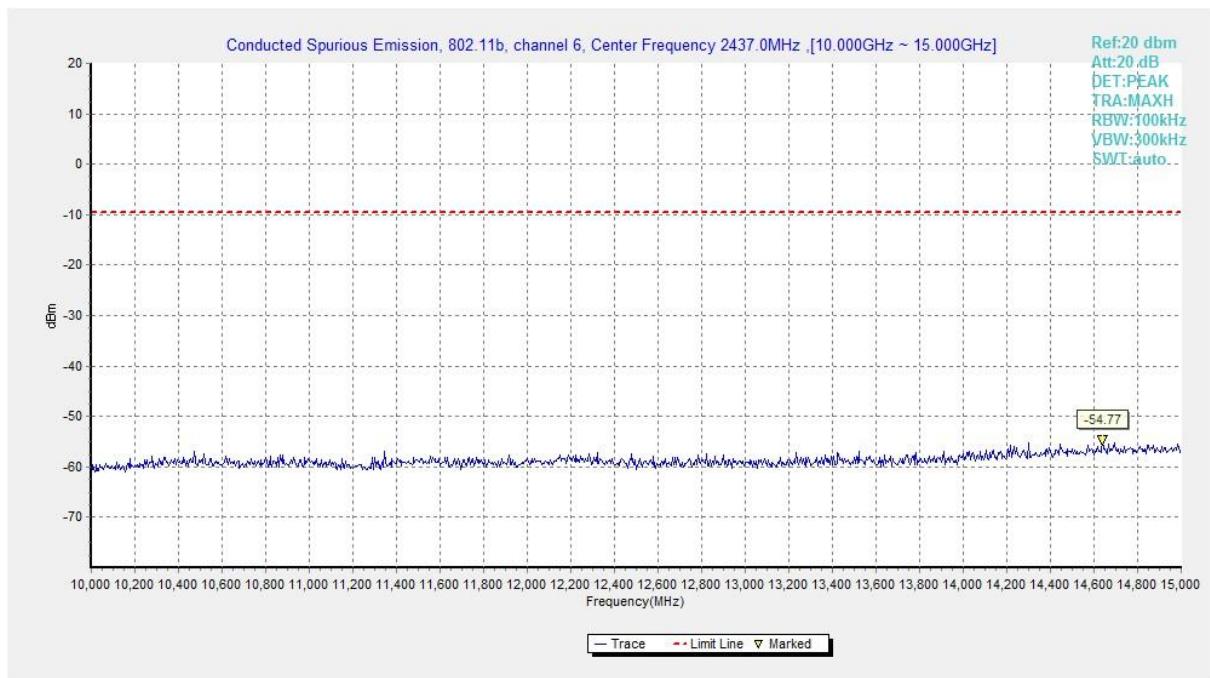
Fig.A.6.1.14   Transmitter Spurious Emission - Conducted (802.11b, Ch6, 10 GHz-15 GHz)
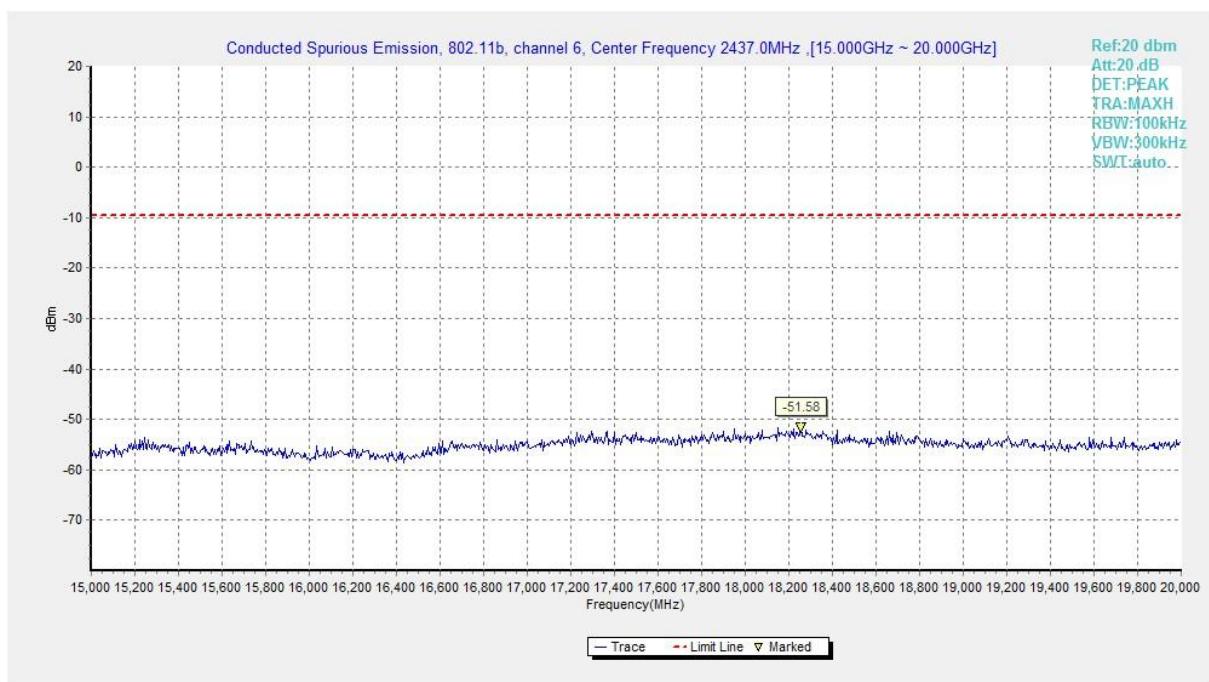
Fig.A.6.1.15   Transmitter Spurious Emission - Conducted (802.11b, Ch6, 15 GHz-20 GHz)
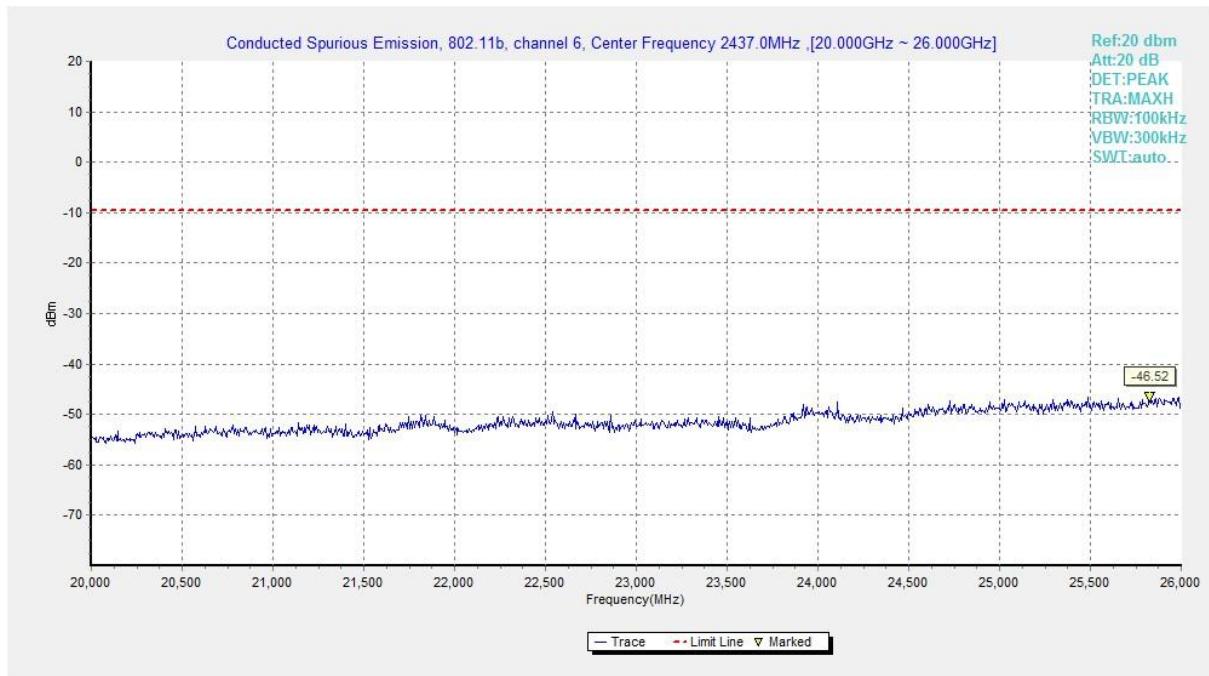
Fig.A.6.1.16   Transmitter Spurious Emission - Conducted (802.11b, Ch6, 20 GHz-26 GHz)
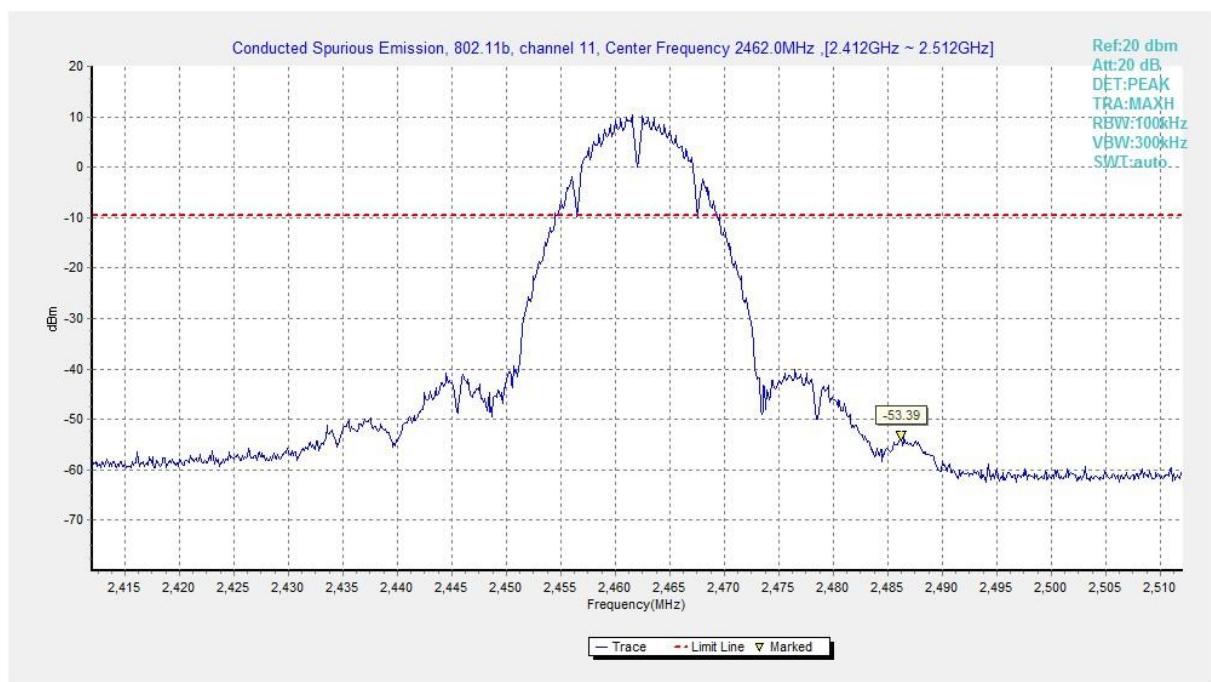
Fig.A.6.1.17   Transmitter Spurious Emission - Conducted (802.11b, Ch11, Center Frequency)
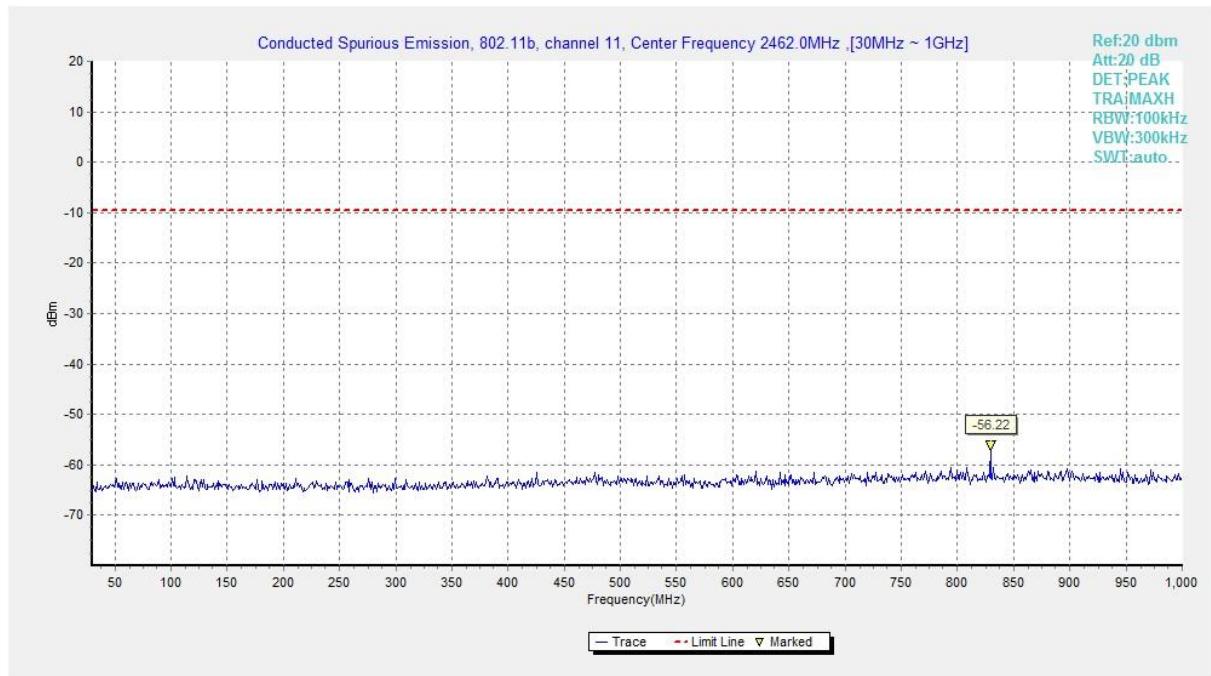
Fig.A.6.1.18   Transmitter Spurious Emission - Conducted (802.11b, Ch11, 30 MHz-1 GHz)
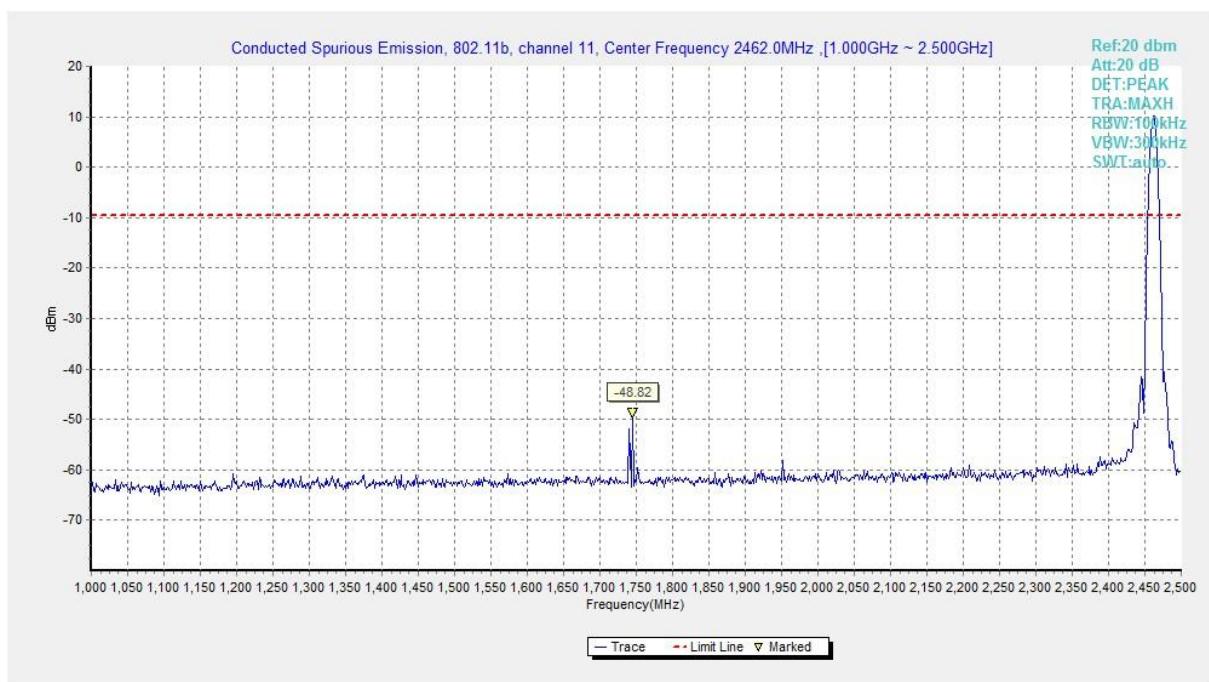
Fig.A.6.1.19   Transmitter Spurious Emission - Conducted (802.11b, Ch11, 1 GHz-2.5 GHz)
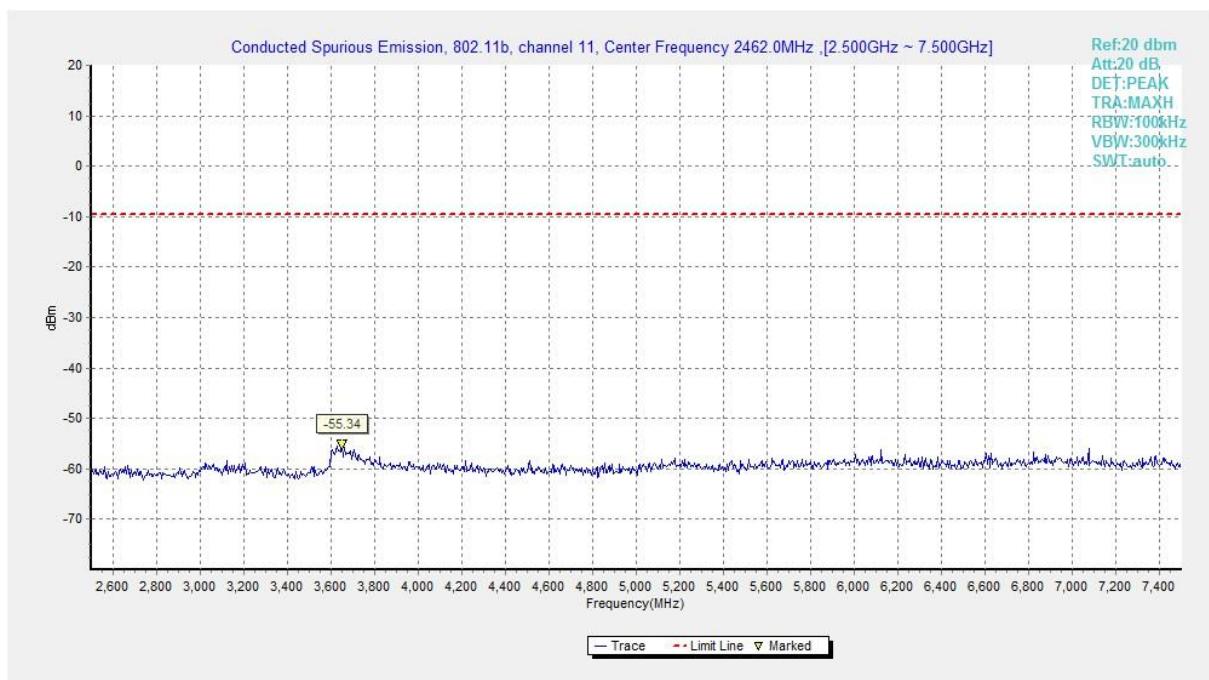
Fig.A.6.1.20   Transmitter Spurious Emission - Conducted (802.11b, Ch11, 2.5 GHz-7.5 GHz)
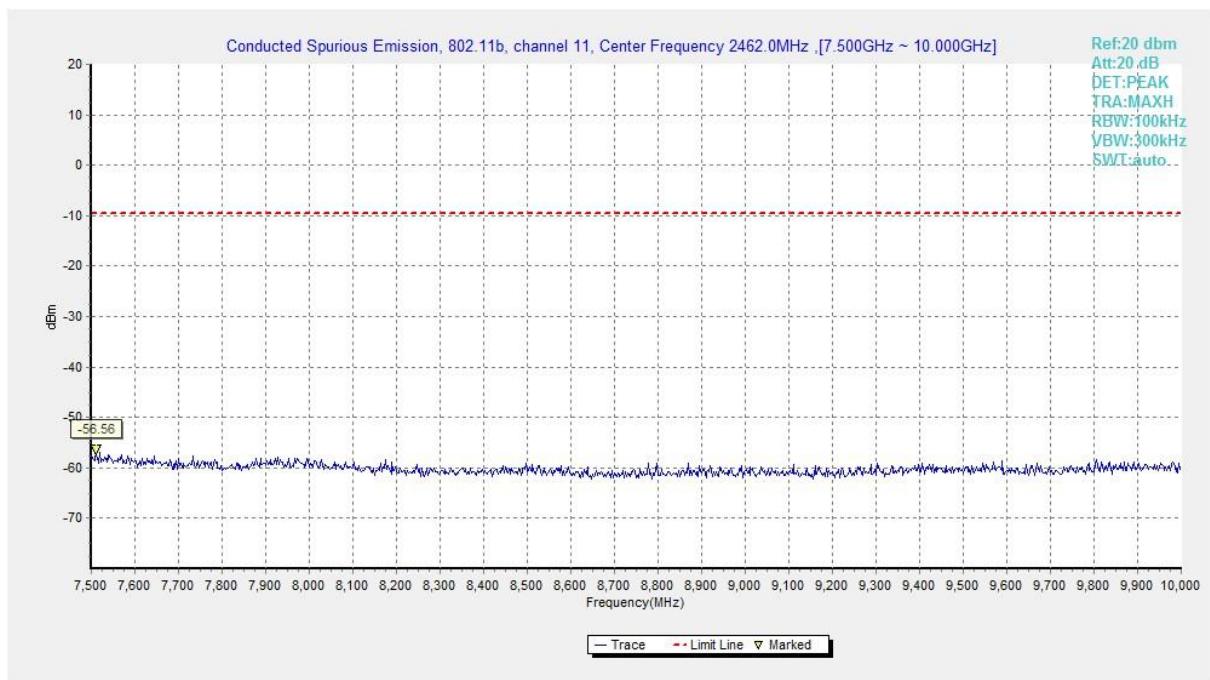
Fig.A.6.1.21   Transmitter Spurious Emission - Conducted (802.11b, Ch11, 7.5 GHz-10 GHz)
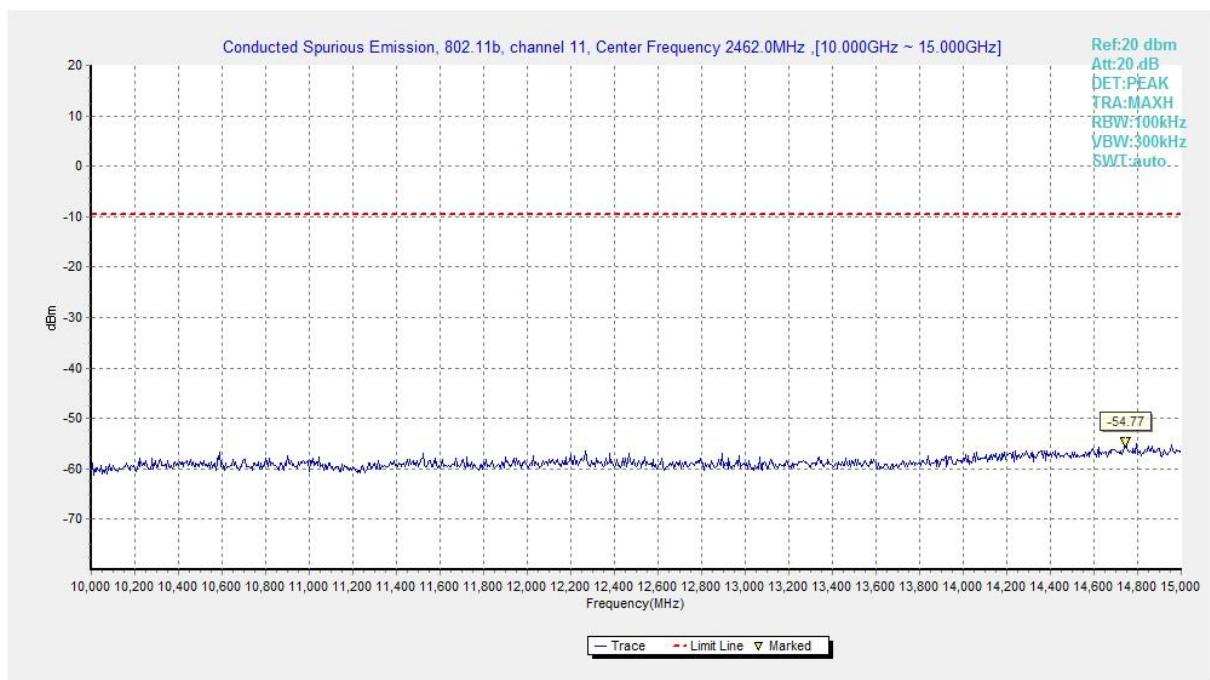
Fig.A.6.1.22   Transmitter Spurious Emission - Conducted (802.11b, Ch11, 10 GHz-15 GHz)
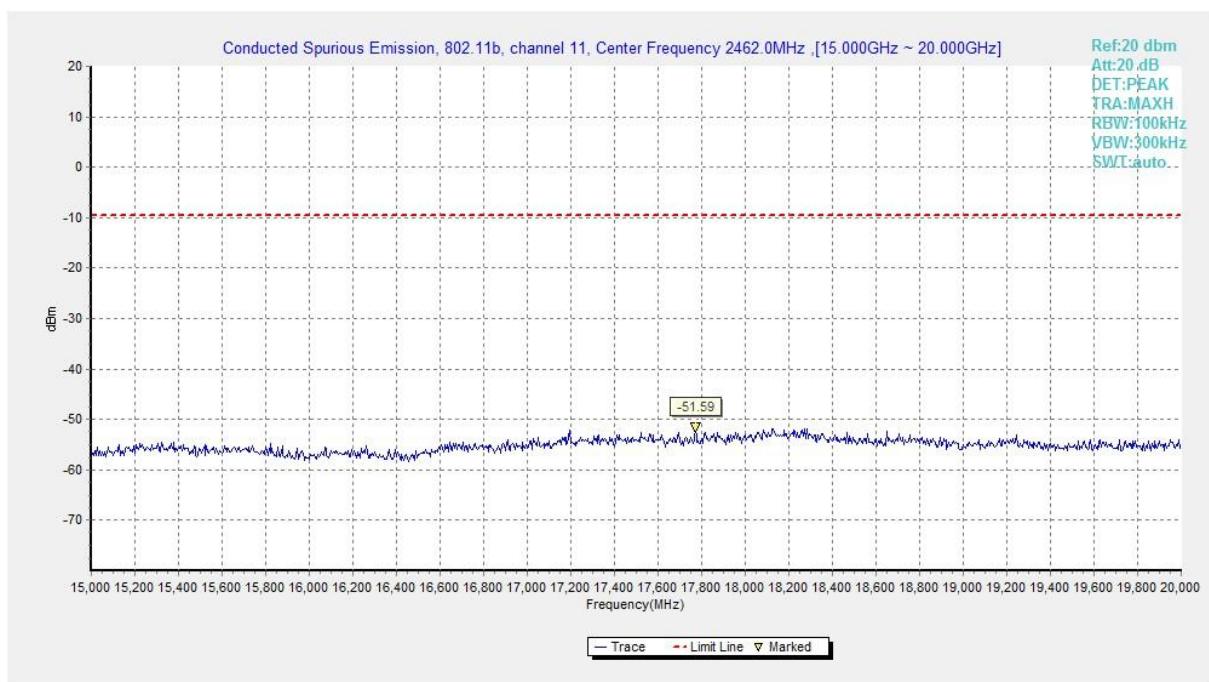
Fig.A.6.1.23   Transmitter Spurious Emission - Conducted (802.11b, Ch11, 15 GHz-20 GHz)
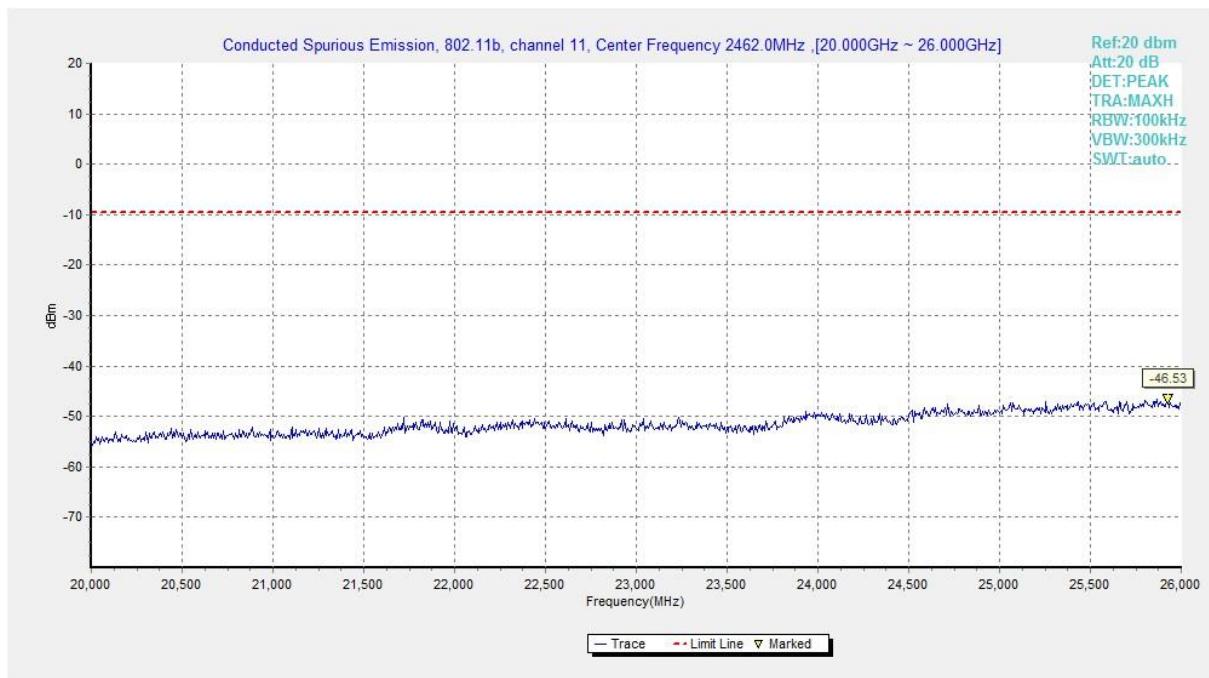
Fig.A.6.1.24   Transmitter Spurious Emission - Conducted (802.11b, Ch11, 20 GHz-26 GHz)
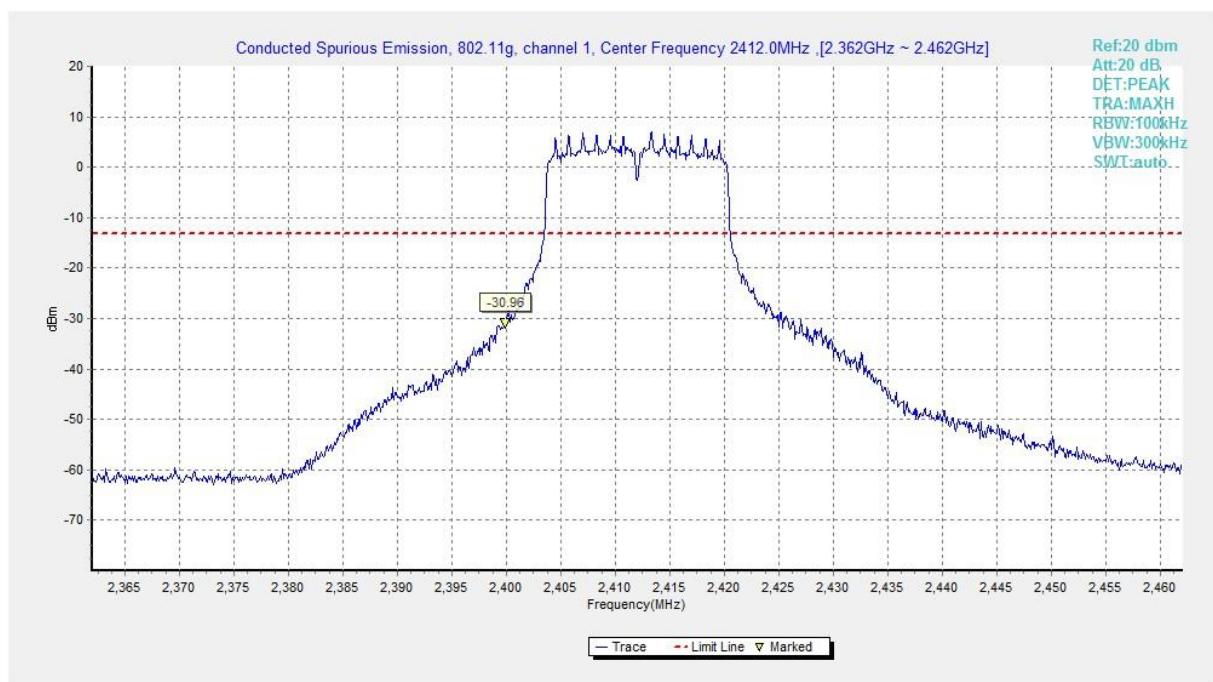
Fig.A.6.1.25 Transmitter Spurious Emission - Conducted (802.11g, Ch1, Center Frequency)
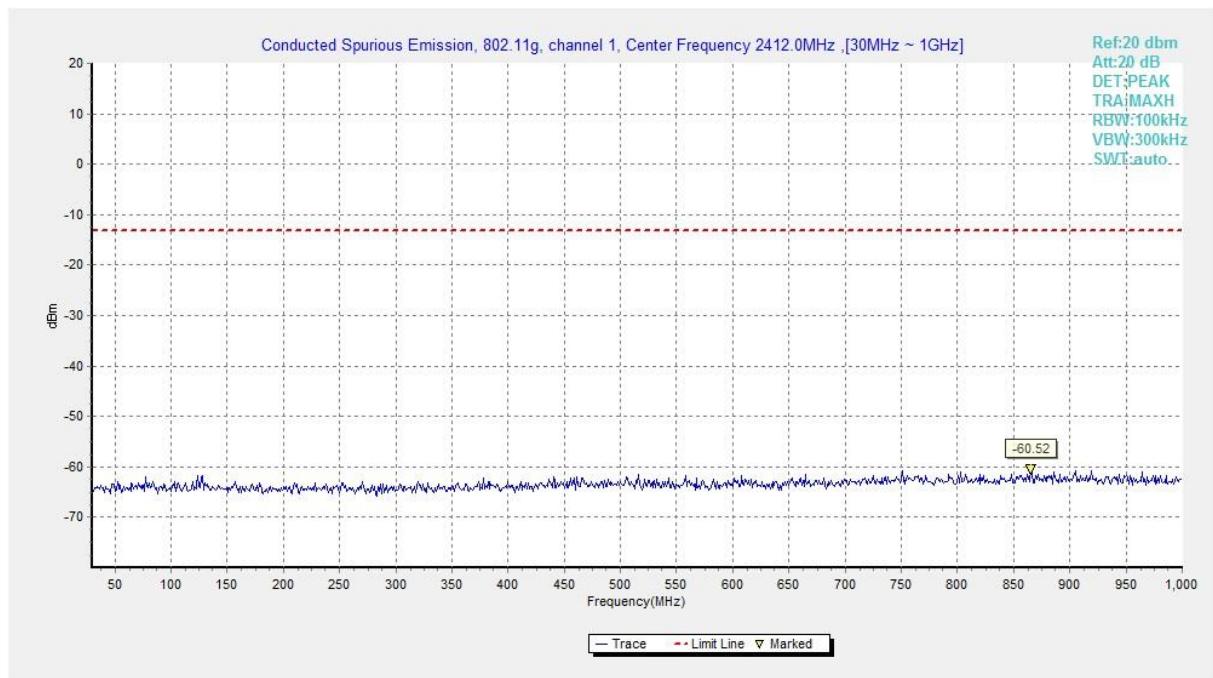
Fig.A.6.1.26 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 30 MHz-1 GHz)
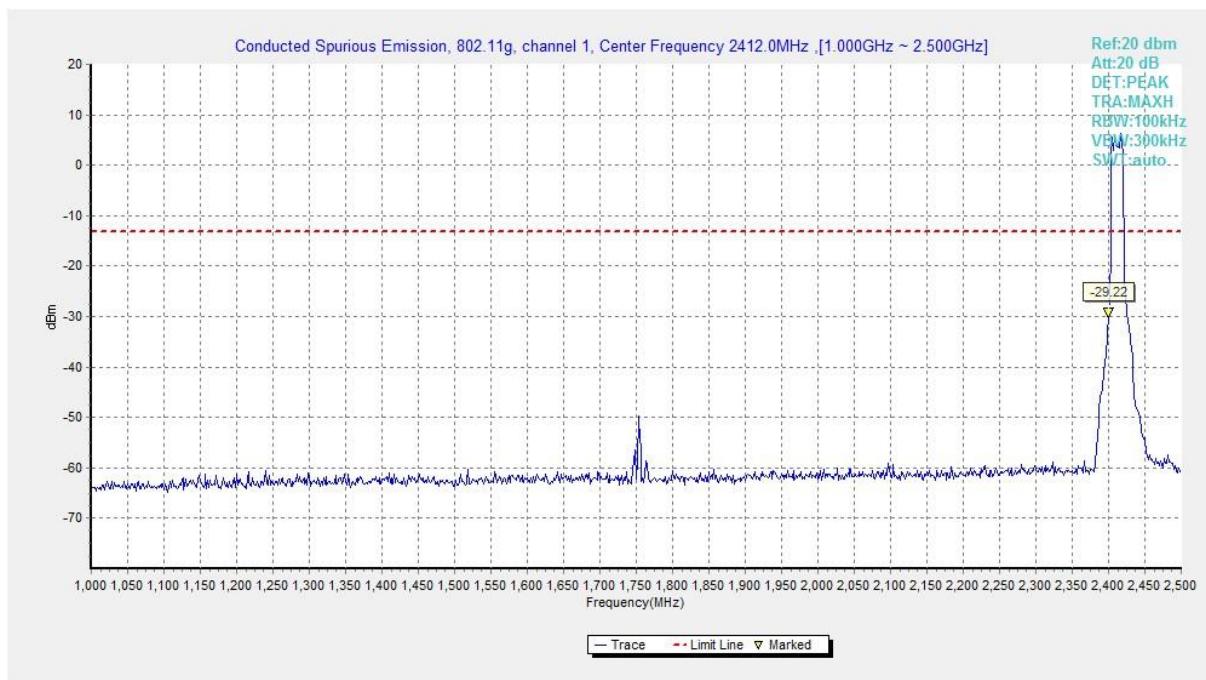
**Fig.A.6.1.27　Transmitter Spurious Emission - Conducted (802.11g, Ch1, 1 GHz-2.5 GHz)**
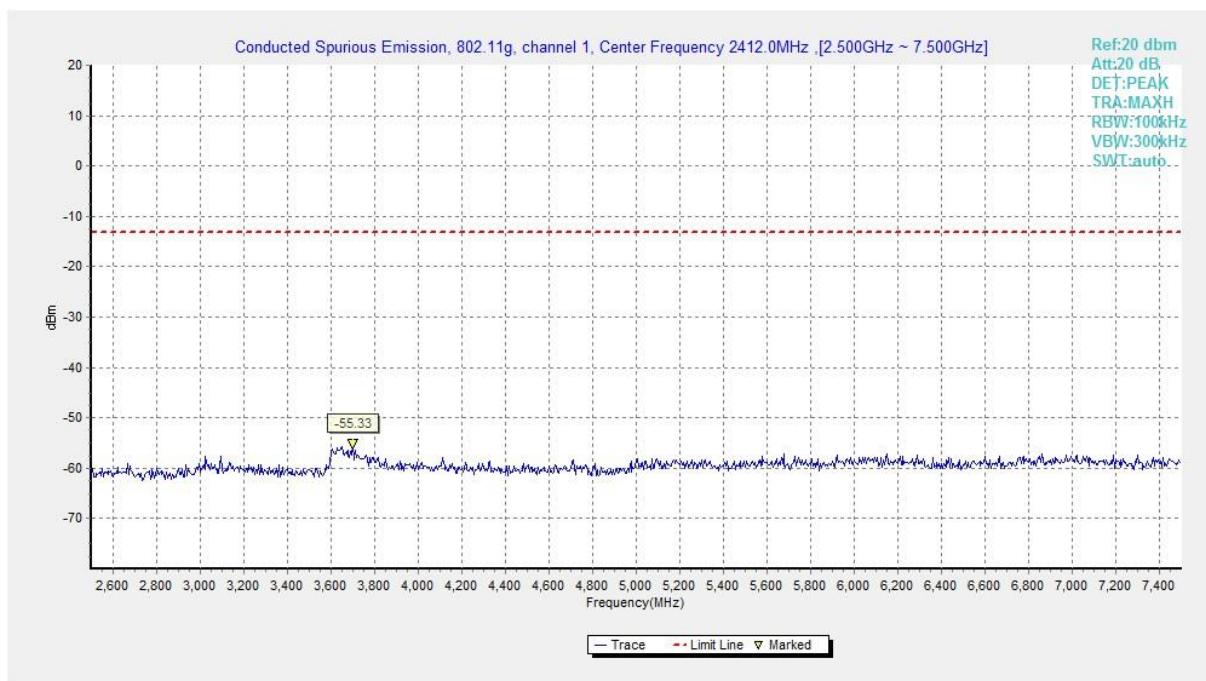

Fig.A.6.1.28　Transmitter Spurious Emission - Conducted (802.11g, Ch1, 2.5 GHz-7.5 GHz)
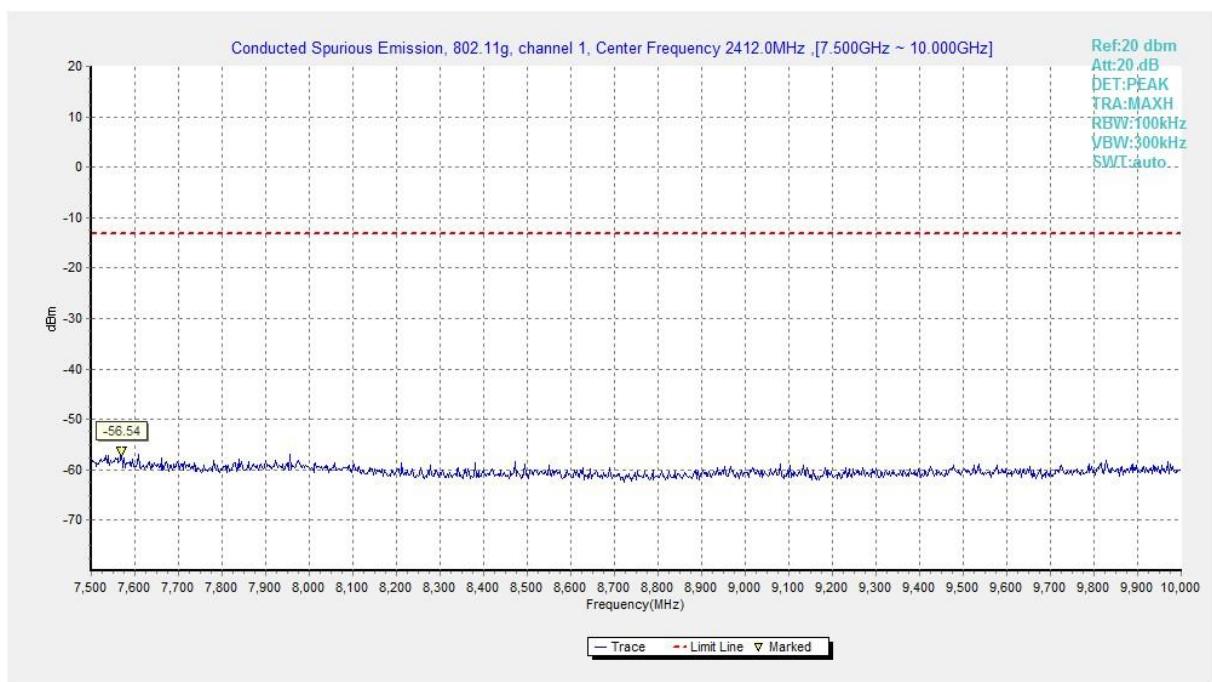
Fig.A.6.1.29   Transmitter Spurious Emission - Conducted (802.11g, Ch1, 7.5 GHz-10 GHz)
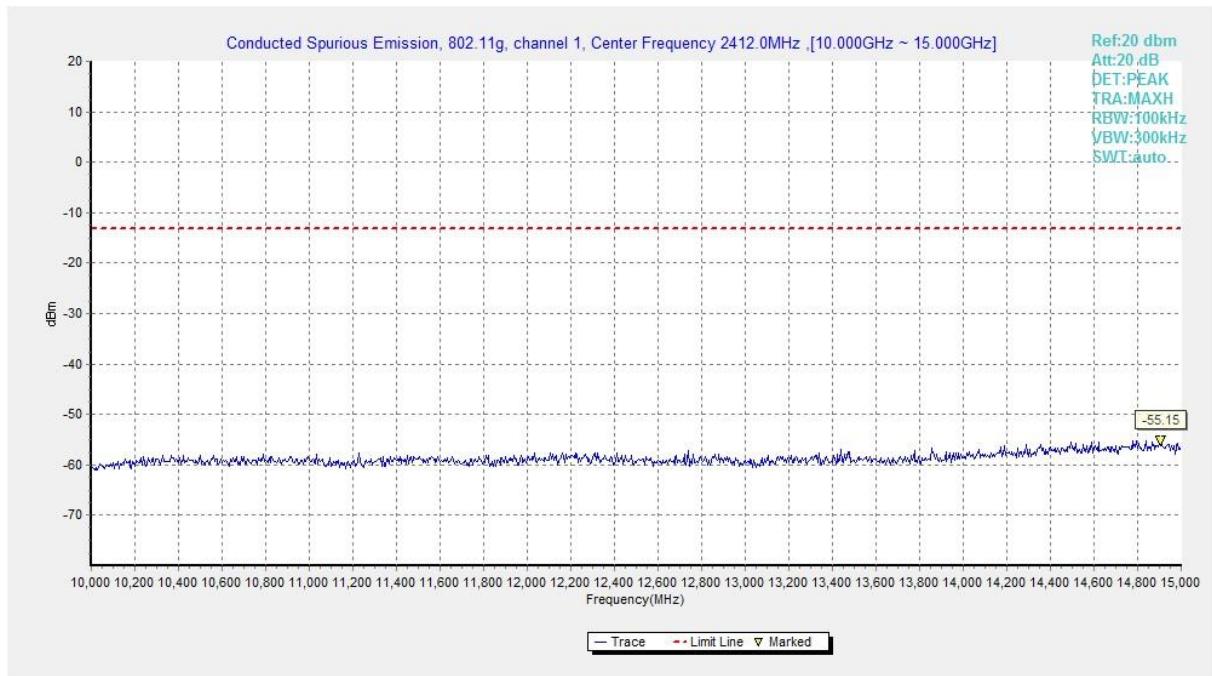
Fig.A.6.1.30   Transmitter Spurious Emission - Conducted (802.11g, Ch1, 10 GHz-15 GHz)