FCC Test Report

Product Name	Notebook Computers
Model No	16T90P,16TD90P,16TG90P,16TB90P
FCC ID.	BEJNT-16T90P

Applicant	LG Electronics USA
Address	111 Sylvan Avenue North Bulding Englewood Cliffs New Jerssy United States

Date of Receipt	Nov. 05, 2020
Issue Date	Dec. 09, 2020
Report No.	20B0154R-E3032110114
Report Version	V1.0

Testing Laboratory
3023

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
This report must not be used to claim product endorsement by TAF or any agency of the government.
The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report

Issue Date: Dec. 09, 2020
Report No.: 20B0154R-E3032110114

Product Name	Notebook Computers
Applicant	LG Electronics USA
Address	111 Sylvan Avenue North Bulding Englewood Cliffs New Jerssy United States
Manufacturer	LG Electronics Inc.
Model No.	16T90P,16TD90P,16TG90P,16TB90P
FCC ID.	BEJNT-16T90P
EUT Rated Voltage	AC 100-240V, 50-60Hz
EUT Test Voltage	AC 120V / 60Hz
Trade Name	LG
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.4: 2014, ANSI C63.10: 2013
Test Result	Complied

Documented By : Rita Huang

(Senior Adm. Specialist / Rita Huang)

Tested By : Bill Lin

(Senior Engineer / Bill Lin)

Approved By :

(Director / Vincent Lin)

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Revision History

Report No.	Version	Description	Issued Date
20B0154R-E3032110114	V1.0	Initial issue of report.	Dec. 09, 2020

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Notebook Computers
Trade Name	LG
Model No.	16T90P,16TD90P,16TG90P,16TB90P
FCC ID.	BEJNT-16T90P
Frequency Range	802.11b/g/n/ax-20: 2412-2472MHz, 802.11n/ax-40: 2422-2462MHz
Number of Channels	802.11b/g/n/ax-20: 13CH, 802.11n/ax-40: 9CH
Data Rate	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 300Mbps, 802.11ax-20MHz：17.2-286.8Mbps, 802.11ax-40MHz：34.4-573.5Mbps
Channel Separation	802.11b/g/n/ax: 5 MHz
Type of Modulation	802.11b:DSSS, DBPSK, DQPSK, CCK 802.11g/n/ax: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Antenna Type	PIFA Antenna
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
Power Adapter	MFR: HONOR, M/N: ADT-65DSU-D03-2 Input: AC 100-240V~50-60Hz 1.6A Output: 20V⎓3.25A , MAX 65W Cable Out: Non-Shielded, 1.5m Power Cord: Non-Shielded, 1.5m
Contain Module	Intel / AX201D2W

Antenna List

No.	Manufacturer	Part No. (Vendor)	Antenna Type	Peak Gain
1	Yageo	DQ601419201 (Main) DQ601419201 (Aux)	PIFA Antenna	1.69dBi in 2.4 GHz
2	Hong-Bo	260-23807 (Main) 260-23807 (Aux)	PIFA Antenna	1.70dBi in 2.4 GHz

Note: The antenna of EUT is conforming to FCC 15.203.

802.11b/g/n/ax-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz	Channel 12:	2467 MHz
Channel 13:	2472 MHz						

802.11n/ax-40MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz	Channel 10:	2457 MHz
Channel 11:	2462 MHz						

Note:

1. The EUT is a Notebook Computers with built-in WLAN and Bluetooth transceiver, this report for WLAN 2.4GHz.
2. The EUT is including four models for different marketing requirement.
3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report.
5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n/ax transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
6. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report.
7. The SISOA(Chain A) is Aux and SISOB(Chain B) is Main for EUT in this report.

Test item:

	Peak Power Output	Power Density	RF antenna conducted test	6dB Bandwidth	Band Edge	Radiated Emission
SISOA-802.11b	✓	✓	✓	✓	✓	✓
SISOA-802.11g	✓					
SISOA-802.11n20	✓	✓				
SISOA-802.11n40	✓	✓				
SISOA-802.11ax20	✓	✓			✓	
SISOA-802.11ax40	✓	✓			✓	
SISOA-802.11ax20-RU	✓	✓				
SISOA-802.11ax40-RU	✓	✓				
SISOB-802.11b	✓					
SISOB-802.11g	✓					
SISOB-802.11n20	✓					
SISOB-802.11n40	✓					
SISOB-802.11ax20	✓					
SISOB-802.11ax40	✓					
SISOB-802.11ax20-RU	✓					
SISOB-802.11ax40-RU	✓					
MIMO-802.11n20	✓	✓				
MIMO-802.11n40	✓	✓				
MIMO-802.11ax20	✓	✓	✓	✓	✓	✓
MIMO-802.11ax40	✓	✓	✓	✓	✓	✓
MIMO-802.11ax20-RU	✓	✓				
MIMO-802.11ax40-RU	✓	✓				

Note:

1. The EUT applies to SISOA、SISOB and MIMO mode. Each mode through the pretest, only the worst case (Please see Test item table) are shown in the test report.
2. RU config settings, please refer to each test item data.

Test Mode (2.4GHz)	Mode 1 SISO A: Transmit (802.11b_1Mbps) Mode 2 SISO A: Transmit (802.11g_6Mbps) Mode 3 SISO A: Transmit (802.11n-20BW_7.2Mbps) Mode 4 SISO A: Transmit (802.11n-40BW_15Mbps) Mode 5 SISO A: Transmit (802.11ax-20BW_8.6Mbps) Mode 6 SISO A: Transmit (802.11ax-40BW_17.2Mbps) Mode 7 SISO B: Transmit (802.11b_1Mbps) Mode 8 SISO B: Transmit (802.11g_6Mbps) Mode 9 SISO B: Transmit (802.11n-20BW_7.2Mbps) Mode 10 SISO B: Transmit (802.11n-40BW_15Mbps) Mode 11 SISO B: Transmit (802.11ax-20BW_8.6Mbps) Mode 12 SISO B: Transmit (802.11ax-40BW_17.2Mbps) Mode 13 MIMO: Transmit (802.11n-20BW_14.4Mbps) Mode 14 MIMO: Transmit (802.11n-40BW_30Mbps) Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps)

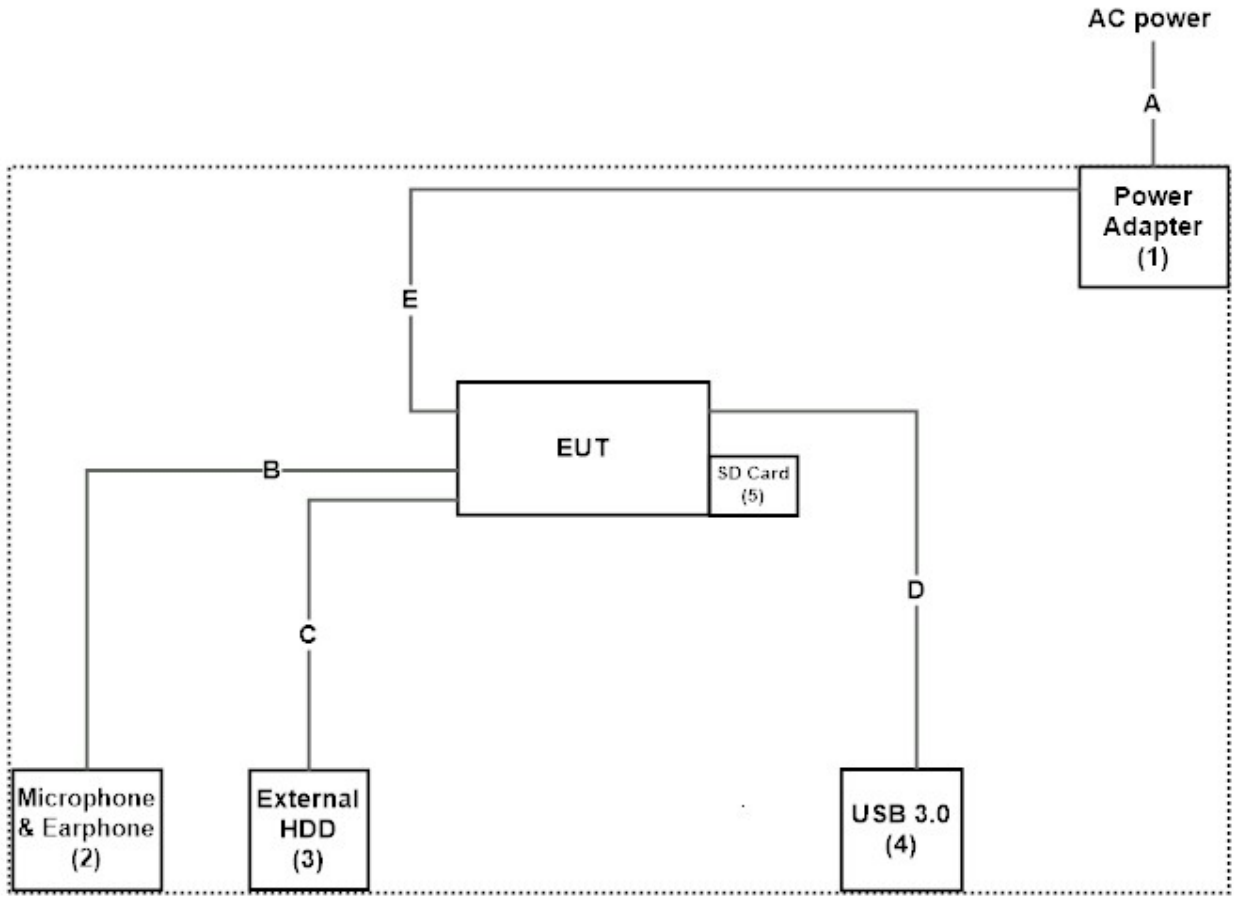
1.2. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Power Adapter	HONOR	ADT-65DSU-D03-2	EAY65895911	Non-Shielded, 1.5m
2	Microphone & Earphone	PCHOME	N/A	N/A	N/A
3	External HDD	SanDisk	SanDisk Extreme 900	N/A	N/A
4	USB 3.0	Transcend	TS1TSJ25M3	D468623809	N/A
5	SD Card	Apacer	64GB R85	N/A	N/A

Signal Cable Type		Signal cable Description
A	Power Cable	Non-Shielded, 1.5m
B	Microphone & Earphone Cable	Non-Shielded, 1.2m
C	USB Cable	Shielded, 0.5m
D	USB Cable	Shielded, 0.4m
E	Power Cable	Non-Shielded, 1.5m

1.3. Configuration of Tested System



1.4. EUT Exercise Software

1. Setup the EUT as shown in Section 1.3.
2. Execute software “DRTU Ver.11.1941.0-10270” on the EUT.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous Transmit.
5. Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10~40 °C	21.8 °C
	Humidity (%RH)	10~90 %	62.9 %
Radiated Emission	Temperature (°C)	10~40 °C	22.2 °C
	Humidity (%RH)	10~90 %	58.5 %
Conductive	Temperature (°C)	10~40 °C	23.1 °C
	Humidity (%RH)	10~90 %	55.7%

USA : FCC Registration Number: TW0023
Canada : IC Registration Number: 25880

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No.159, Sec. 2, Wenhua 1st Rd., Linkou Dist.,
New Taipei City 24457, Taiwan, R.O.C.
Phone number : 886-2-2602-7968
Fax number : 866-2-2602-3286
Email address : info.tw@dekra.com
Website : http://www.dekra.com.tw

1.6. List of Test Item and Equipment

For Conduction measurements /ASR1

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	EMI Test Receiver	R&S	ESR7	101601	2020.05.28	2021.05.27
X	Two-Line V-Network	R&S	ENV216	101306	2020.03.25	2021.03.24
X	Two-Line V-Network	R&S	ENV216	101307	2020.04.17	2021.04.16
X	Coaxial Cable	DEKRA	RG400_BNC	RF001	2020.05.24	2021.05.23

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with “X” are used to measure the final test results.
3. Test Software version : DEKRA Testing System V2.0.

For Conducted measurements /ASR2

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSV30	103464	2020.02.11	2021.02.10
X	Power Meter	Anritsu	ML2496A	1548003	2019.12.17	2020.12.16
X	Power Sensor	Anritsu	MA2411B	1531024	2019.12.17	2020.12.16
X	Power Sensor	Anritsu	MA2411B	1531025	2019.12.17	2020.12.16

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with “X” are used to measure the final test results.
3. Test Software version : DEKRA Conduction Test System V9.0.5.

For Radiated measurements /ACB1

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Loop Antenna	AMETEK	HLA6121	49611	2020.03.16	2021.03.15
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-953	2020.01.03	2021.01.02
X	Horn Antenna	ETS-Lindgren	3117	00203800	2019.12.12	2020.12.11
	Horn Antenna	Com-Power	AH-840	101087	2020.06.08	2021.06.07
X	Pre-Amplifier	EMCI	EMC001330	980316	2020.06.23	2021.06.22
X	Pre-Amplifier	EMCI	EMC051845SE	SN980632	2020.08.21	2021.08.20
	Pre-Amplifier	EMCI	EMC184045SE	980314	2020.06.10	2021.06.09
X	Filter	MICRO-TRONICS	BRM50702	G270	2020.08.17	2021.08.16
	Filter	MICRO-TRONICS	BRM50716	G196	2020.08.17	2021.08.16
X	EMI Test Receiver	R&S	ESR7	101602	2019.12.16	2020.12.15
X	Spectrum Analyzer	R&S	FSV40	101148	2020.03.16	2021.03.15
X	Coaxial Cable	SUHNER	SUCOFLEX 106	RF002	2020.07.03	2021.07.02
X	Mircoflex Cable	HUBER SUHNER	SUCOFLEX 102	MY3381/2	2020.06.10	2021.06.09

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with “X” are used to measure the final test results.
3. Test Software version : DEKRA Testing System V2.0.

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document, and is described in each test chapter of this report.

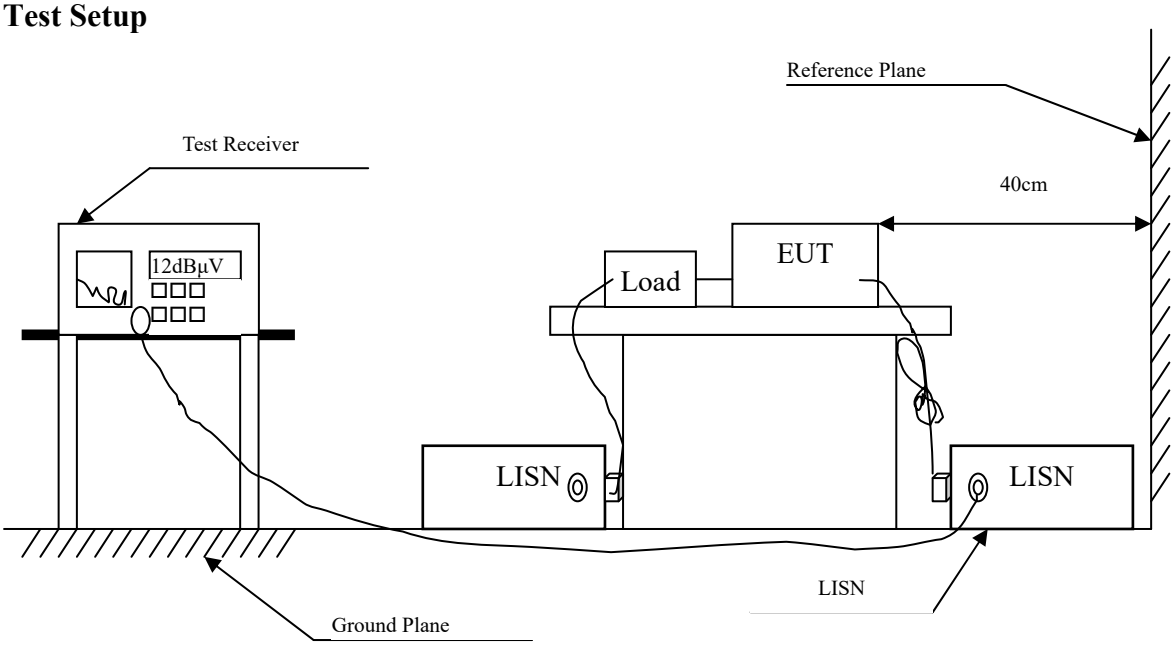
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	**Uncertainty**	
Conducted Emission	±3.42 dB	
Peak Power Output	Power Meter ±0.91 dB	
Radiated Emission	Under 1GHz ±4.06 dB	Above 1GHz ±3.73 dB
RF Antenna Conducted Test	±2.53 dB	
Band Edge	±2.53 dB	
6dB Bandwidth	±682.83 Hz	
Power Density	±2.53 dB	
Duty Cycle	±2.31 ms	

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBµV) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

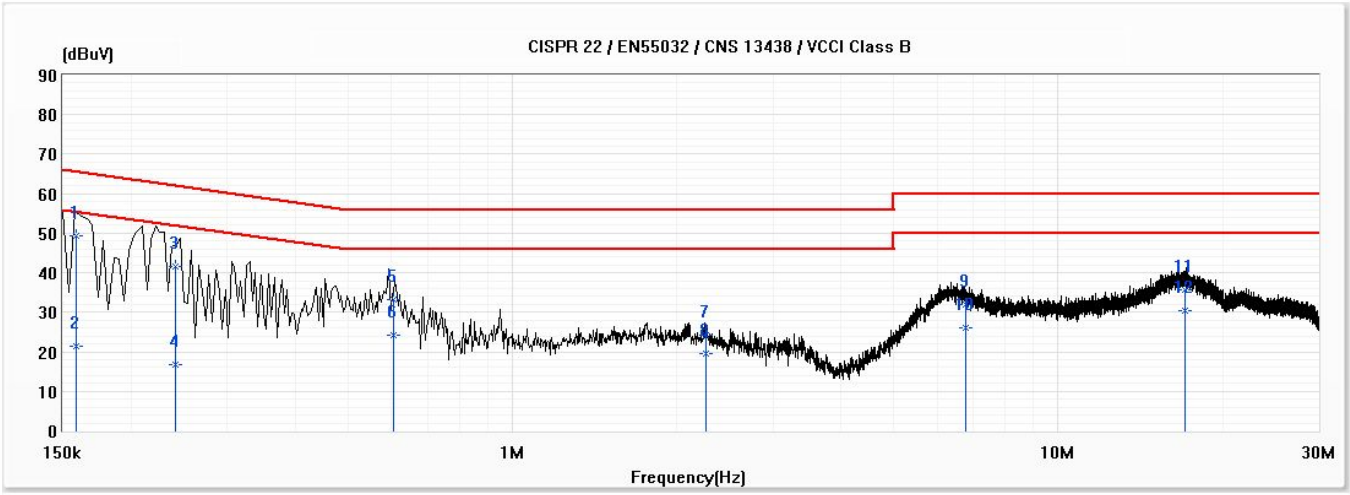
2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.4. Test Result of Conducted Emission

Product	:	Notebook Computers
Test Item	:	Conducted Emission Test
Test date	:	2020/12/09
Test Mode	:	Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2442MHz)

Line1



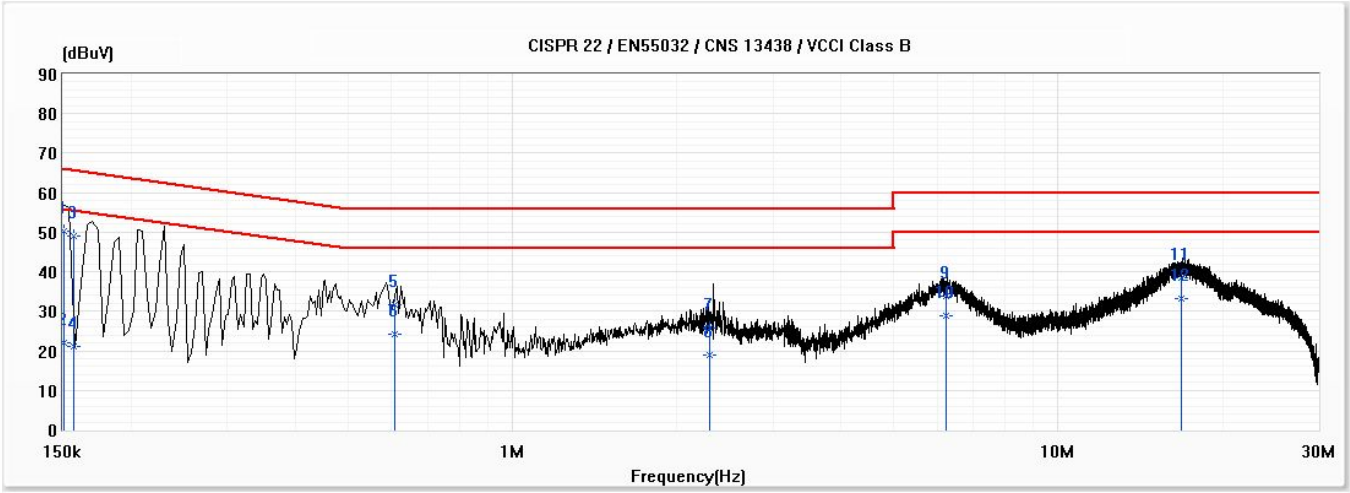
No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.158	49.20	65.55	-16.35	39.54	9.66	QP
2	0.158	21.27	55.55	-34.28	11.61	9.66	AV
3	0.241	41.60	62.04	-20.44	31.95	9.65	QP
4	0.241	16.63	52.04	-35.41	6.98	9.65	AV
5	0.604	33.11	56.00	-22.89	23.44	9.66	QP
6	0.604	24.07	46.00	-21.93	14.40	9.66	AV
7	2.258	24.21	56.00	-31.79	14.49	9.73	QP
8	2.258	19.58	46.00	-26.42	9.86	9.73	AV
9	6.775	31.86	60.00	-28.14	22.03	9.83	QP
10	6.775	26.14	50.00	-23.86	16.31	9.83	AV
11	17.113	35.84	60.00	-24.16	25.89	9.95	QP
12	17.113	30.42	50.00	-19.58	20.47	9.95	AV

Remark:

1. "*" means this data is the worst emission level;"!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
3. Margin=Emission Level-Limit

Product	:	Notebook Computers
Test Item	:	Conducted Emission Test
Test date	:	2020/12/09
Test Mode	:	Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2442MHz)

N



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.150	50.18	65.97	-15.79	40.51	9.67	QP
2	0.150	22.15	55.97	-33.82	12.48	9.67	AV
3	0.157	49.06	65.61	-16.55	39.38	9.67	QP
4	0.157	21.14	55.61	-34.47	11.47	9.67	AV
5	0.608	31.53	56.00	-24.47	21.85	9.67	QP
6	0.608	24.10	46.00	-21.90	14.42	9.67	AV
7	2.303	25.84	56.00	-30.16	16.10	9.74	QP
8	2.303	18.96	46.00	-27.04	9.23	9.74	AV
9	6.220	33.97	60.00	-26.03	24.14	9.83	QP
10	6.220	28.94	50.00	-21.06	19.10	9.83	AV
11	16.848	38.58	60.00	-21.42	28.57	10.01	QP
12	16.848	33.13	50.00	-16.87	23.12	10.01	AV

Remark:

1. "*" means this data is the worst emission level;"!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
3. Margin=Emission Level-Limit

3. Peak Power Output

3.1. Test Setup

3.2. Limits

The maximum peak power shall be less 1 Watt.

3.3. Test Procedure

The EUT was tested according to C63.10:2013 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using C63.10:2013 Section 11.9.1.3 PKPM1 Peak power meter method. The maximum average conducted output power using C63.10:2013 Section 11.9.2.3 Measurement using a power meter (PM). (Measurement using a gated RF average-reading power meter).

3.4. Test Result of Peak Power Output

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	17.47	--	--	--	19.55	<30dBm	Pass
07	2442	17.39	17.35	17.27	17.23	19.59	<30dBm	Pass
11	2462	17.29	--	--	--	19.42	<30dBm	Pass
12	2467	17.33	--	--	--	19.54	<30dBm	Pass
13	2472	15.48	--	--	--	17.60	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 2 SISO A: Transmit (802.11g_6Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	16.73	--	--	--	--	--	--	--	21.92	<30dBm	Pass
07	2442	17.33	17.25	17.18	17.08	16.98	16.92	16.89	16.79	22.43	<30dBm	Pass
11	2462	16.86	--	--	--	--	--	--	--	22.03	<30dBm	Pass
12	2467	14.91	--	--	--	--	--	--	--	20.16	<30dBm	Pass
13	2472	1.89	--	--	--	--	--	--	--	11.57	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 3 SISO A: Transmit (802.11n-20BW_7.2Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
		Measurement Level (dBm)										
01	2412	16.97	--	--	--	--	--	--	--	22.45	<30dBm	Pass
07	2442	17.22	17.16	17.13	17.04	16.94	16.86	16.76	16.71	22.53	<30dBm	Pass
11	2462	15.4	--	--	--	--	--	--	--	21.14	<30dBm	Pass
12	2467	14.83	--	--	--	--	--	--	--	20.58	<30dBm	Pass
13	2472	1.73	--	--	--	--	--	--	--	11.97	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 4 SISO A: Transmit (802.11n-40BW_15Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
		Measurement Level (dBm)										
03	2422	16.23	--	--	--	--	--	--	--	22.3	<30dBm	Pass
07	2442	15.29	15.22	15.16	15.10	15.07	15.03	14.95	14.88	21.4	<30dBm	Pass
09	2452	14.33	--	--	--	--	--	--	--	20.41	<30dBm	Pass
10	2457	12.89	--	--	--	--	--	--	--	18.96	<30dBm	Pass
11	2462	4.96	--	--	--	--	--	--	--	15.44	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 5 SISO A: Transmit (802.11ax-20BW_8.6Mbps)

RU config: Full

Channel No	Frequency (MHz)	Peak Power Output (dBm)														
		Average Power For different Data Rate												Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
01	2412	16.83	--	--	--	--	--	--	--	--	--	--	--	22.62	<30dBm	Pass
07	2442	17.40	17.32	17.27	17.19	17.12	17.08	17.03	16.99	16.91	16.87	16.82	16.79	22.86	<30dBm	Pass
11	2462	15.33	--	--	--	--	--	--	--	--	--	--	--	21.06	<30dBm	Pass
12	2467	14.89	--	--	--	--	--	--	--	--	--	--	--	19.76	<30dBm	Pass
13	2472	1.94	--	--	--	--	--	--	--	--	--	--	--	12.53	<30dBm	Pass

RU config: Other

Frequency (MHz)	RU setting	Peak Power Output (dBm)														
		Average Power For different Data Rate												Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
2412	26/0	16.72	--	--	--	--	--	--	--	--	--	--	--	20.46	<30dBm	Pass
	52/37	16.75	16.71	16.62	16.57	16.51	16.46	16.37	16.30	16.25	16.19	16.14	16.05	20.85	<30dBm	Pass
	106/53	16.87	--	--	--	--	--	--	--	--	--	--	--	20.97	<30dBm	Pass
2472	26/8	1.97	--	--	--	--	--	--	--	--	--	--	--	10.04	<30dBm	Pass
	52/40	1.84	1.78	1.68	1.58	1.49	1.39	1.31	1.23	1.15	1.06	0.99	0.89	10.39	<30dBm	Pass
	106/54	1.78	--	--	--	--	--	--	--	--	--	--	--	10.93	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 6 SISO A: Transmit (802.11ax-40BW_17.2Mbps)

RU config: Full

Channel No	Frequency (MHz)	Peak Power Output (dBm)														
		Average Power For different Data Rate												Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
03	2422	16.24	--	--	--	--	--	--	--	--	--	--	--	22.42	<30dBm	Pass
07	2442	15.42	15.32	15.29	15.23	15.20	15.15	15.07	15.04	14.94	14.85	14.79	14.70	20.69	<30dBm	Pass
09	2452	14.75	--	--	--	--	--	--	--	--	--	--	--	20.91	<30dBm	Pass
10	2457	12.93	--	--	--	--	--	--	--	--	--	--	--	19.08	<30dBm	Pass
11	2462	4.95	--	--	--	--	--	--	--	--	--	--	--	13.96	<30dBm	Pass

RU config: Other

Frequency (MHz)	RU setting	Peak Power Output (dBm)														
		Average Power For different Data Rate												Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
2422	242/61	16.32	16.26	16.23	16.14	16.05	15.98	15.93	15.90	15.86	15.81	15.71	15.61	21.17	<30dBm	Pass
2462	242/62	4.95	4.90	4.86	4.81	4.73	4.67	4.57	4.52	4.47	4.42	4.35	4.29	14.21	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 7 SISO B: Transmit (802.11b_1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	15.18	--	--	--	17.23	<30dBm	Pass
07	2442	15.23	15.13	15.04	15.00	17.27	<30dBm	Pass
11	2462	15.10	--	--	--	17.18	<30dBm	Pass
12	2467	15.40	--	--	--	17.47	<30dBm	Pass
13	2472	15.43	--	--	--	17.58	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 8 SISO B: Transmit (802.11g_6Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	15.38	--	--	--	--	--	--	--	20.55	<30dBm	Pass
07	2442	15.44	15.38	15.28	15.20	15.17	15.10	15.03	14.97	20.5	<30dBm	Pass
11	2462	15.32	--	--	--	--	--	--	--	20.48	<30dBm	Pass
12	2467	14.7	--	--	--	--	--	--	--	20.07	<30dBm	Pass
13	2472	1.31	--	--	--	--	--	--	--	11.20	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 9 SISO B: Transmit (802.11n-20BW_7.2Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
		Measurement Level (dBm)										
01	2412	15.16	--	--	--	--	--	--	--	19.99	<30dBm	Pass
07	2442	15.33	15.30	15.24	15.20	15.10	15.00	14.90	14.82	20.24	<30dBm	Pass
11	2462	15.21	--	--	--	--	--	--	--	20.25	<30dBm	Pass
12	2467	14.82	--	--	--	--	--	--	--	19.81	<30dBm	Pass
13	2472	1.25	--	--	--	--	--	--	--	10.36	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 10 SISO B: Transmit (802.11n-40BW_15Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
		Measurement Level (dBm)										
03	2422	14.38	--	--	--	--	--	--	--	20.3	<30dBm	Pass
07	2442	14.31	14.28	14.19	14.10	14.02	13.92	13.89	13.79	20.36	<30dBm	Pass
09	2452	14.19	--	--	--	--	--	--	--	20.19	<30dBm	Pass
10	2457	12.4	--	--	--	--	--	--	--	18.48	<30dBm	Pass
11	2462	4.87	--	--	--	--	--	--	--	14.95	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 11 SISO B: Transmit (802.11ax-20BW_8.6Mbps)

RU config: Full

Channel No	Frequency (MHz)	Peak Power Output (dBm)														
		Average Power For different Data Rate												Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
01	2412	15.36	--	--	--	--	--	--	--	--	--	--	--	20.28	<30dBm	Pass
07	2442	15.13	15.08	15.00	14.91	14.81	14.75	14.68	14.65	14.62	14.56	14.46	14.37	19.97	<30dBm	Pass
11	2462	14.72	--	--	--	--	--	--	--	--	--	--	--	19.65	<30dBm	Pass
12	2467	14.73	--	--	--	--	--	--	--	--	--	--	--	20.30	<30dBm	Pass
13	2472	1.45	--	--	--	--	--	--	--	--	--	--	--	10.53	<30dBm	Pass

RU config: Other

Frequency (MHz)	RU setting	Peak Power Output (dBm)														
		Average Power For different Data Rate												Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
2412	26/0	15.34	--	--	--	--	--	--	--	--	--	--	--	19.12	<30dBm	Pass
	52/37	15.11	15.03	15.00	14.97	14.94	14.91	14.86	14.76	14.72	14.66	14.60	14.51	19.13	<30dBm	Pass
	106/53	15.38	--	--	--	--	--	--	--	--	--	--	--	19.39	<30dBm	Pass
2472	26/8	1.44	--	--	--	--	--	--	--	--	--	--	--	9.34	<30dBm	Pass
	52/40	1.36	1.26	1.16	1.07	1.04	0.99	0.95	0.85	0.77	0.73	0.67	0.64	9.69	<30dBm	Pass
	106/54	1.34	--	--	--	--	--	--	--	--	--	--	--	10.31	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 12 SISO B: Transmit (802.11ax-40BW_17.2Mbps)

RU config: Full

Channel No	Frequency (MHz)	Peak Power Output (dBm)														
		Average Power For different Data Rate												Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
03	2422	14.18	--	--	--	--	--	--	--	--	--	--	--	19.38	<30dBm	Pass
07	2442	14.21	14.12	14.08	14.02	13.93	13.83	13.79	13.72	13.63	13.60	13.56	13.47	19.45	<30dBm	Pass
09	2452	14.3	--	--	--	--	--	--	--	--	--	--	--	19.41	<30dBm	Pass
10	2457	12.49	--	--	--	--	--	--	--	--	--	--	--	17.7	<30dBm	Pass
11	2462	4.85	--	--	--	--	--	--	--	--	--	--	--	13.71	<30dBm	Pass

RU config: Other

Frequency (MHz)	RU setting	Peak Power Output (dBm)														
		Average Power For different Data Rate												Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
2422	242/61	14.43	14.36	14.27	14.17	14.09	14.00	13.90	13.84	13.74	13.70	13.61	13.53	19.42	<30dBm	Pass
2462	242/62	4.86	4.82	4.72	4.67	4.64	4.60	4.53	4.43	4.36	4.26	4.18	4.10	14.31	<30dBm	Pass

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 13 MIMO: Transmit (802.11n-20BW_14.4Mbps)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8		
		Measurement Level (dBm)										
01	2412	13.88	--	--	--	--	--	--	--	19.22	<30dBm	Pass
07	2442	17.21	17.15	17.10	17.07	16.98	16.92	16.87	16.81	22.46	<30dBm	Pass
11	2462	14.14	--	--	--	--	--	--	--	19.72	<30dBm	Pass
12	2467	11.86	--	--	--	--	--	--	--	16.79	<30dBm	Pass
13	2472	-0.74	--	--	--	--	--	--	--	7.56	<30dBm	Pass

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8		
		Measurement Level (dBm)										
01	2412	13.82	--	--	--	--	--	--	--	19.24	<30dBm	Pass
07	2442	15.47	15.44	15.36	15.33	15.30	15.27	15.18	15.13	20.25	<30dBm	Pass
11	2462	14.49	--	--	--	--	--	--	--	19.94	<30dBm	Pass
12	2467	11.71	--	--	--	--	--	--	--	16.67	<30dBm	Pass
13	2472	-0.84	--	--	--	--	--	--	--	7.79	<30dBm	Pass

Chain A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Peak Power Output (dBm)	Limit (dBm)	Result
01	2412	HT8	19.22	19.24	22.24	<30dBm	Pass
07	2442	HT8	22.46	20.25	24.50	<30dBm	Pass
11	2462	HT8	19.72	19.94	22.84	<30dBm	Pass
12	2467	HT8	16.79	16.67	19.74	<30dBm	Pass
13	2472	HT8	7.56	7.79	10.69	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 14 MIMO: Transmit (802.11n-40BW_30Mbps)

Chain A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8		
		Measurement Level (dBm)										
03	2422	14.44	--	--	--	--	--	--	--	19.77	<30dBm	Pass
07	2442	13.85	13.77	13.70	13.66	13.57	13.48	13.44	13.40	19.16	<30dBm	Pass
09	2452	13.33	--	--	--	--	--	--	--	18.62	<30dBm	Pass
10	2457	9.16	--	--	--	--	--	--	--	14.56	<30dBm	Pass
11	2462	2.33	--	--	--	--	--	--	--	10.99	<30dBm	Pass

Chain B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8		
		Measurement Level (dBm)										
03	2422	14.37	--	--	--	--	--	--	--	19.63	<30dBm	Pass
07	2442	13.77	13.71	13.66	13.63	13.60	13.51	13.47	13.44	19.08	<30dBm	Pass
09	2452	13.36	--	--	--	--	--	--	--	18.7	<30dBm	Pass
10	2457	9.26	--	--	--	--	--	--	--	14.7	<30dBm	Pass
11	2462	2.34	--	--	--	--	--	--	--	10.77	<30dBm	Pass

Chain A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Peak Power Output (dBm)	Limit (dBm)	Result
03	2422	HT8	19.77	19.63	22.71	<30dBm	Pass
07	2442	HT8	19.16	19.08	22.13	<30dBm	Pass
09	2452	HT8	18.62	18.70	21.67	<30dBm	Pass
10	2457	HT8	14.56	14.70	17.64	<30dBm	Pass
11	2462	HT8	10.99	10.77	13.89	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps)

RU config: Full Chain A

Channel No	Frequency (MHz)	Peak Power Output (dBm)														
		Average Power For different Data Rate											Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
01	2412	14	--	--	--	--	--	--	--	--	--	--	--	19.03	<30dBm	Pass
07	2442	16.72	16.69	16.61	16.51	16.46	16.43	16.37	16.29	16.20	16.15	16.10	16.00	21.45	<30dBm	Pass
11	2462	13.95	--	--	--	--	--	--	--	--	--	--	--	18.86	<30dBm	Pass
12	2467	11.96	--	--	--	--	--	--	--	--	--	--	--	16.98	<30dBm	Pass
13	2472	-1.39	--	--	--	--	--	--	--	--	--	--	--	7.54	<30dBm	Pass

RU config: Full Chain B

Channel No	Frequency (MHz)	Peak Power Output (dBm)														
		Average Power For different Data Rate											Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
01	2412	13.61	--	--	--	--	--	--	--	--	--	--	--	18.74	<30dBm	Pass
07	2442	15.41	15.34	15.25	15.20	15.16	15.13	15.06	15.02	14.99	14.92	14.82	14.74	20.2	<30dBm	Pass
11	2462	13.75	--	--	--	--	--	--	--	--	--	--	--	18.58	<30dBm	Pass
12	2467	11.75	--	--	--	--	--	--	--	--	--	--	--	16.78	<30dBm	Pass
13	2472	-1.32	--	--	--	--	--	--	--	--	--	--	--	7.96	<30dBm	Pass

RU config: Full Chain A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
01	2412	MCS0	19.03	18.74	21.90	<30dBm	Pass
07	2442	MCS0	21.45	20.20	23.88	<30dBm	Pass
11	2462	MCS0	18.86	18.58	21.73	<30dBm	Pass
12	2467	MCS0	16.98	16.78	19.89	<30dBm	Pass
13	2472	MCS0	7.54	7.96	10.77	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

RU config: Other Chain A

Frequency (MHz)	RU setting	Peak Power Output (dBm)														
		Average Power For different Data Rate											Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
2412	26/0	13.94	--	--	--	--	--	--	--	--	--	--	--	21.74	<30dBm	Pass
	52/37	13.75	13.71	13.65	13.56	13.53	13.48	13.39	13.33	13.30	13.20	13.15	13.08	22.1	<30dBm	Pass
	106/53	13.81	--	--	--	--	--	--	--	--	--	--	--	22.23	<30dBm	Pass
2472	26/8	-1.33	--	--	--	--	--	--	--	--	--	--	--	-6.53	<30dBm	Pass
	52/40	-1.01	-1.09	-1.14	-1.20	-1.25	-1.33	-1.39	-1.46	-1.50	-1.56	-1.64	-1.71	7.25	<30dBm	Pass
	106/54	-1.24	--	--	--	--	--	--	--	--	--	--	--	7.56	<30dBm	Pass

RU config: Other Chain B

Frequency (MHz)	RU setting	Peak Power Output (dBm)														
		Average Power For different Data Rate											Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
2412	26/0	13.9	--	--	--	--	--	--	--	--	--	--	--	21.66	<30dBm	Pass
	52/37	13.85	13.77	13.74	13.65	13.59	13.54	13.49	13.44	13.37	13.32	13.24	13.14	21.93	<30dBm	Pass
	106/53	13.92	--	--	--	--	--	--	--	--	--	--	--	22.46	<30dBm	Pass
2472	26/8	-1.23	--	--	--	--	--	--	--	--	--	--	--	6.62	<30dBm	Pass
	52/40	-1.1	-1.19	-1.29	-1.32	-1.42	-1.52	-1.62	-1.68	-1.75	-1.85	-1.92	-2.01	7.35	<30dBm	Pass
	106/54	-1.14	--	--	--	--	--	--	--	--	--	--	--	7.39	<30dBm	Pass

RU config: Other Chain A+B

Channel	Frequency (MHz)	RU settin	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
1	2412	26/0	21.74	21.66	24.71	<30dBm	Pass
		52/37	22.10	21.93	25.03	<30dBm	Pass
		106/53	22.23	22.46	25.36	<30dBm	Pass
13	2472	26/8	-6.53	6.62	6.83	<30dBm	Pass
		52/40	7.25	7.35	10.31	<30dBm	Pass
		106/54	7.56	7.39	10.49	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : Notebook Computers
Test Item : Peak Power Output
Test Date : 2020/11/19
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps)

RU config: Full Chain A

Channel No	Frequency (MHz)	Peak Power Output (dBm)														
		Average Power For different Data Rate											Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
03	2422	14.27	--	--	--	--	--	--	--	--	--	--	--	19.46	<30dBm	Pass
07	2442	13.54	13.48	13.45	13.39	13.31	13.26	13.22	13.12	13.07	13.03	12.98	12.92	18.73	<30dBm	Pass
09	2452	13.29	--	--	--	--	--	--	--	--	--	--	--	18.64	<30dBm	Pass
10	2457	9.43	--	--	--	--	--	--	--	--	--	--	--	14.07	<30dBm	Pass
11	2462	1.91	--	--	--	--	--	--	--	--	--	--	--	10.4	<30dBm	Pass

RU config: Full Chain B

Channel No	Frequency (MHz)	Peak Power Output (dBm)														
		Average Power For different Data Rate											Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
03	2422	14.29	--	--	--	--	--	--	--	--	--	--	--	19.63	<30dBm	Pass
07	2442	13.61	13.52	13.46	13.36	13.27	13.24	13.18	13.10	13.07	12.98	12.91	12.88	18.89	<30dBm	Pass
09	2452	13.24	--	--	--	--	--	--	--	--	--	--	--	18.43	<30dBm	Pass
10	2457	9.36	--	--	--	--	--	--	--	--	--	--	--	13.96	<30dBm	Pass
11	2462	1.93	--	--	--	--	--	--	--	--	--	--	--	10.53	<30dBm	Pass

RU config: Full Chain A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
03	2422	MCS0	19.46	19.63	22.56	<30dBm	Pass
07	2442	MCS0	18.73	18.89	21.82	<30dBm	Pass
09	2452	MCS0	18.64	18.43	21.55	<30dBm	Pass
10	2457	MCS0	14.07	13.96	17.03	<30dBm	Pass
11	2462	MCS0	10.40	10.53	13.48	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

RU config: Other Chain A

Frequency (MHz)	RU setting	Peak Power Output (dBm)													
		Average Power For different Data Rate											Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
2422	242/61	14.32	14.27	14.21	14.18	14.08	14.03	13.93	13.84	13.75	13.72	13.67	13.61	19.19	<30dBm	Pass
2462	242/62	1.99	1.94	1.85	1.76	1.70	1.64	1.54	1.49	1.39	1.36	1.26	1.17	10.73	<30dBm	Pass

RU config: Other Chain B

Frequency (MHz)	RU setting	Peak Power Output (dBm)													
		Average Power For different Data Rate											Peak Power	Required Limit	Result
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS0		
2422	242/61	14.16	14.08	14.01	13.94	13.86	13.77	13.73	13.67	13.59	13.52	13.43	13.35	18.99	<30dBm	Pass
2462	242/62	1.83	1.80	1.70	1.67	1.57	1.49	1.44	1.41	1.33	1.27	1.21	1.11	10.57	<30dBm	Pass

RU config: Other Chain A+B

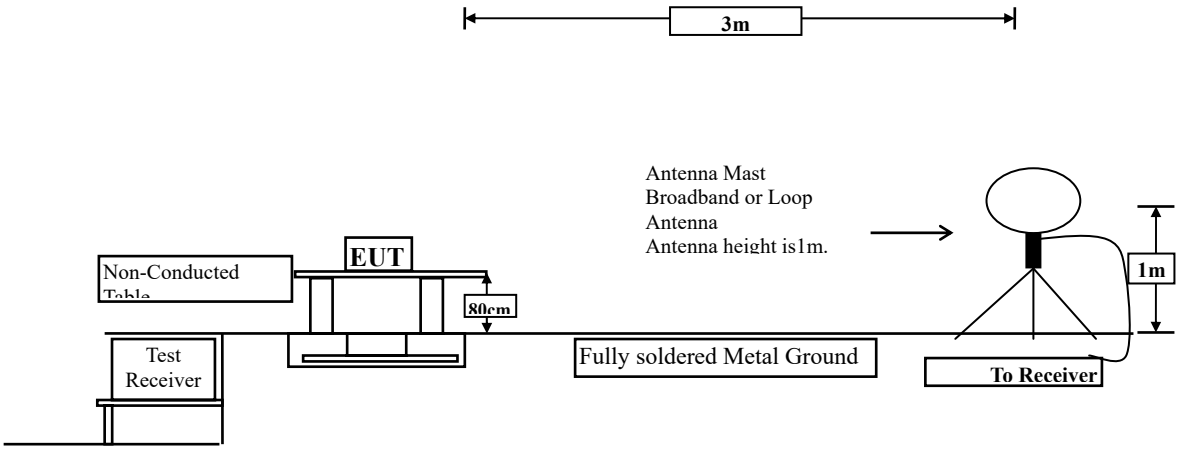
Channel	Frequency (MHz)	RU settin	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
3	2422	242/61	19.19	18.99	22.10	<30dBm	Pass
11	2462	242/62	10.73	10.57	13.66	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

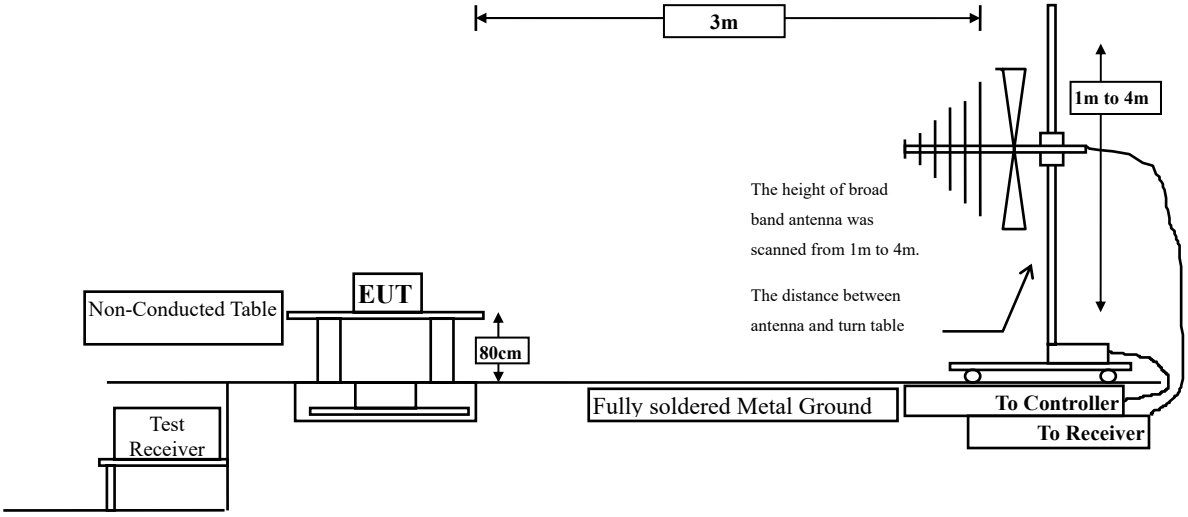
4. Radiated Emission

4.1. Test Setup

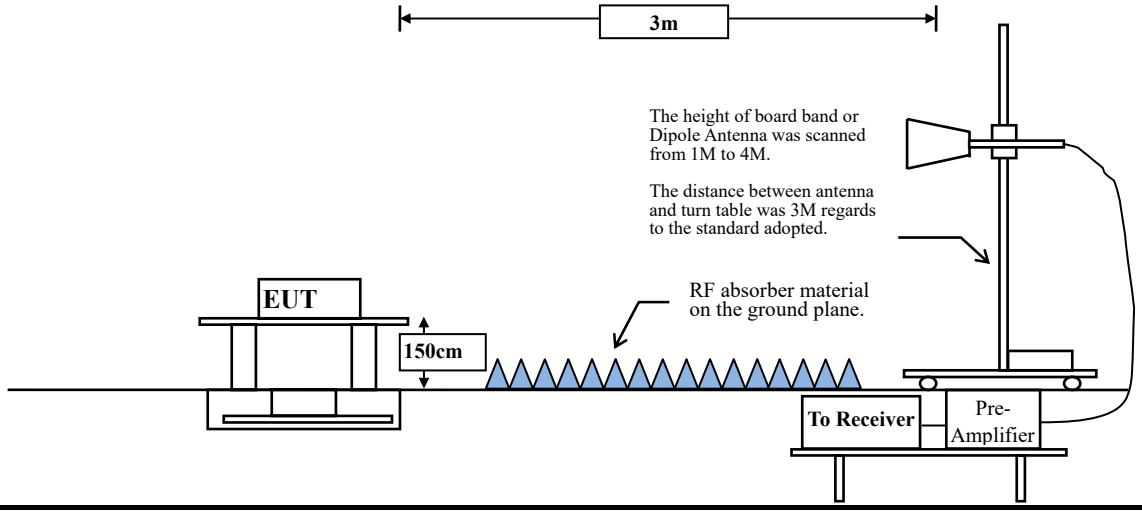
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.2. Limits

➢ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

VBW ≥ 3 x RBW.

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

SISO A

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 b	97.48	8.4058	119	500
802.11 g	88.82	2.0725	483	500
802.11 n20	98.96	24.8260	40	10
802.11 n40	98.01	17.8260	56	10
802.11ax20	98.55	24.6380	41	10
802.11 ax40	98.39	18.6230	54	10
802.11 ax20-26/0-RU	96.79	3.9348	254	500
802.11 ax20-52/37-RU	96.24	3.8913	257	500
802.11 ax20-106/53-RU	96.77	3.9130	256	500
802.11 ax40-242/61-RU	98.38	3.9565	253	10

Note: Duty Cycle Refer to Section 9.

MIMO

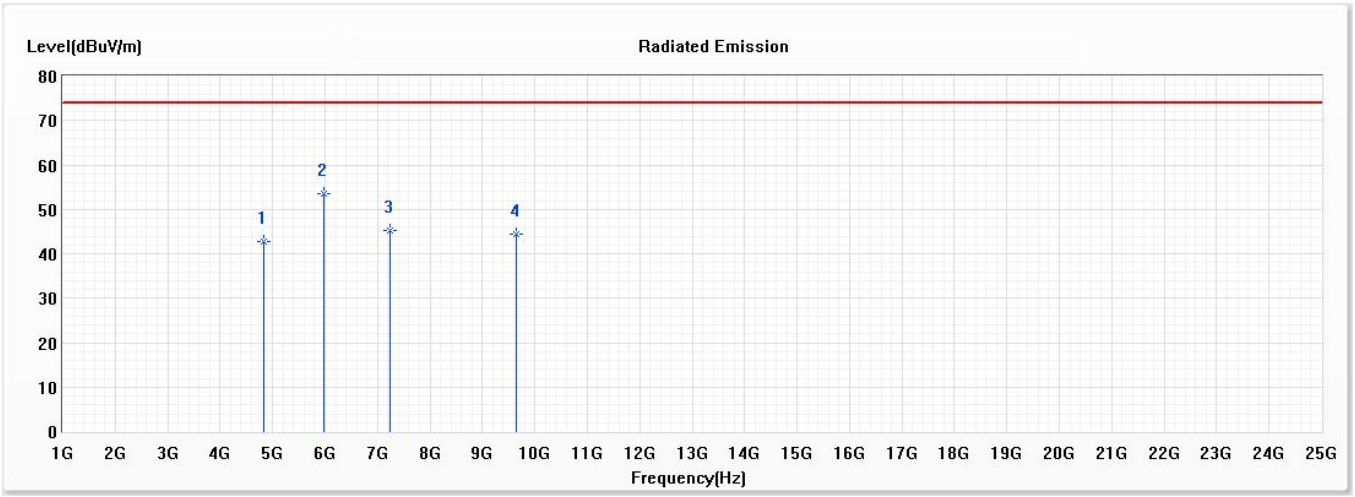
2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 n20	96.89	18.4855	54	100
802.11 n40	95.73	8.7754	114	500
802.11ax20	98.36	18.6739	54	10
802.11 ax40	95.21	9.2101	109	500
802.11 ax20-26/0-RU	97.31	3.9348	254	500
802.11 ax20-52/37-RU	97.31	3.9348	254	500
802.11 ax20-106/53-RU	97.84	3.9348	254	500
802.11 ax40-242/61-RU	97.33	3.9565	253	500

Note: Duty Cycle Refer to Section 9.

4.4. Test Result of Radiated Emission

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2412 MHz)
Test Date : 2020/12/03

HORIZONTAL



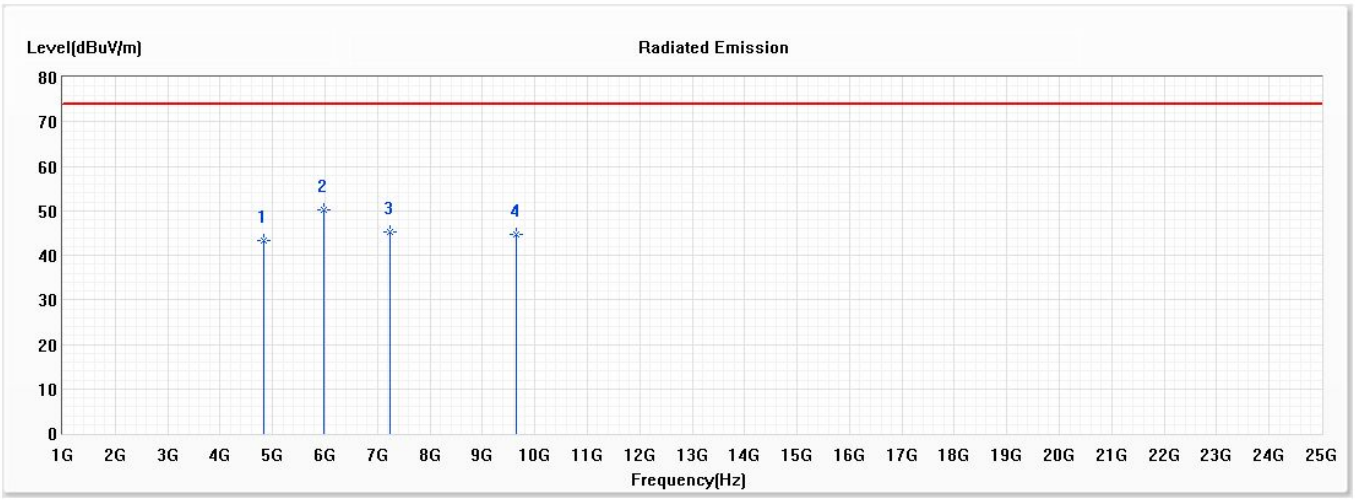
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4824.000	42.71	74.00	-31.29	55.70	-12.99	PK
* 2	5984.000	53.47	74.00	-20.53	65.58	-12.11	PK
3	7236.000	45.22	74.00	-28.78	57.13	-11.91	PK
4	9648.000	44.39	74.00	-29.61	55.56	-11.17	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 1 SISO A: Transmit (802.11b_1Mbps) (2412 MHz)
Test Date	:	2020/12/03

VERTICAL



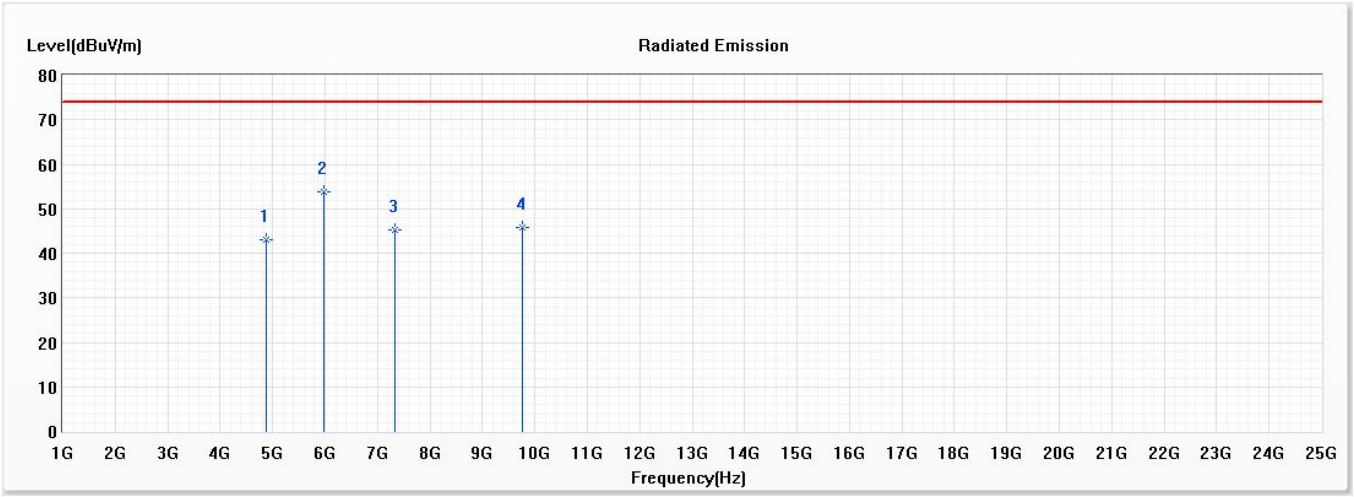
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4824.000	43.20	74.00	-30.80	56.19	-12.99	PK
* 2	5984.000	50.33	74.00	-23.67	62.44	-12.11	PK
3	7236.000	45.29	74.00	-28.71	57.20	-11.91	PK
4	9648.000	44.68	74.00	-29.32	55.85	-11.17	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 1 SISO A: Transmit (802.11b_1Mbps) (2442 MHz)
Test Date	:	2020/12/03

HORIZONTAL



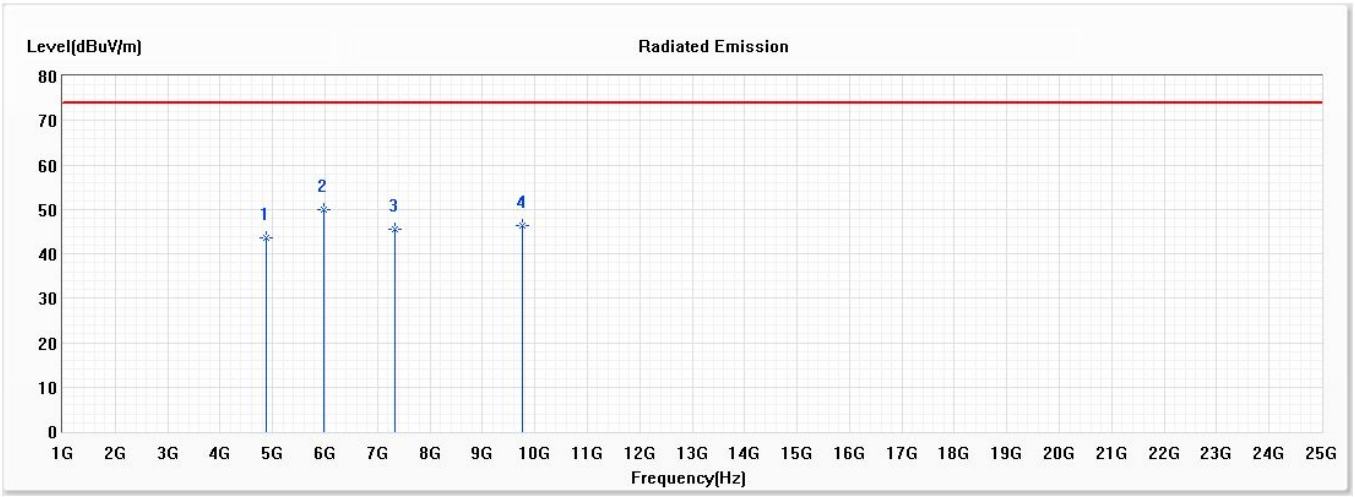
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4884.000	42.91	74.00	-31.09	55.83	-12.92	PK
* 2	5984.000	53.88	74.00	-20.12	65.99	-12.11	PK
3	7326.000	45.18	74.00	-28.82	57.14	-11.96	PK
4	9768.000	45.73	74.00	-28.27	56.70	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 1 SISO A: Transmit (802.11b_1Mbps) (2442 MHz)
Test Date	:	2020/12/03

VERTICAL



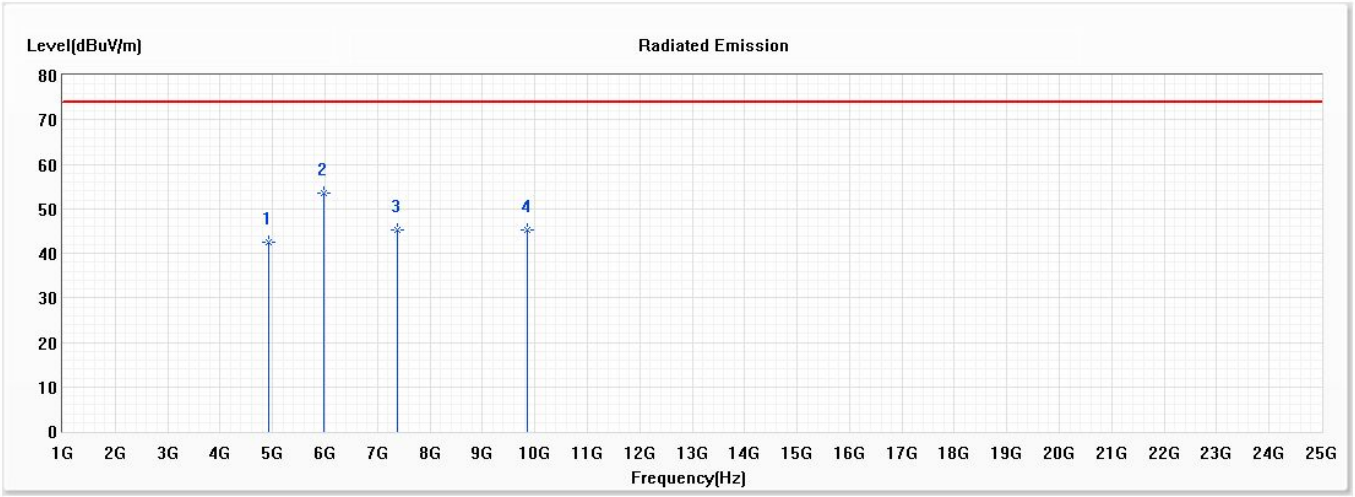
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4884.000	43.67	74.00	-30.33	56.59	-12.92	PK
* 2	5984.000	50.06	74.00	-23.94	62.17	-12.11	PK
3	7326.000	45.38	74.00	-28.62	57.34	-11.96	PK
4	9768.000	46.44	74.00	-27.56	57.41	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 1 SISO A: Transmit (802.11b_1Mbps) (2462 MHz)
Test Date	:	2020/12/03

HORIZONTAL



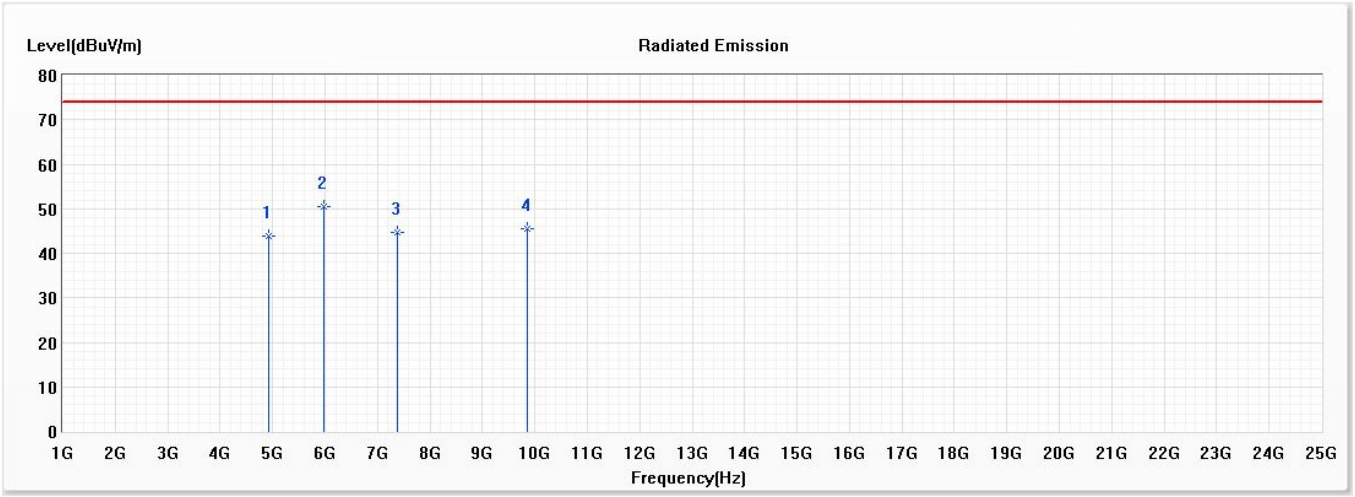
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4924.000	42.62	74.00	-31.38	55.54	-12.92	PK
* 2	5984.000	53.51	74.00	-20.49	65.62	-12.11	PK
3	7386.000	45.18	74.00	-28.82	57.09	-11.91	PK
4	9848.000	45.36	74.00	-28.64	56.33	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 1 SISO A: Transmit (802.11b_1Mbps) (2462 MHz)
Test Date	:	2020/12/03

VERTICAL



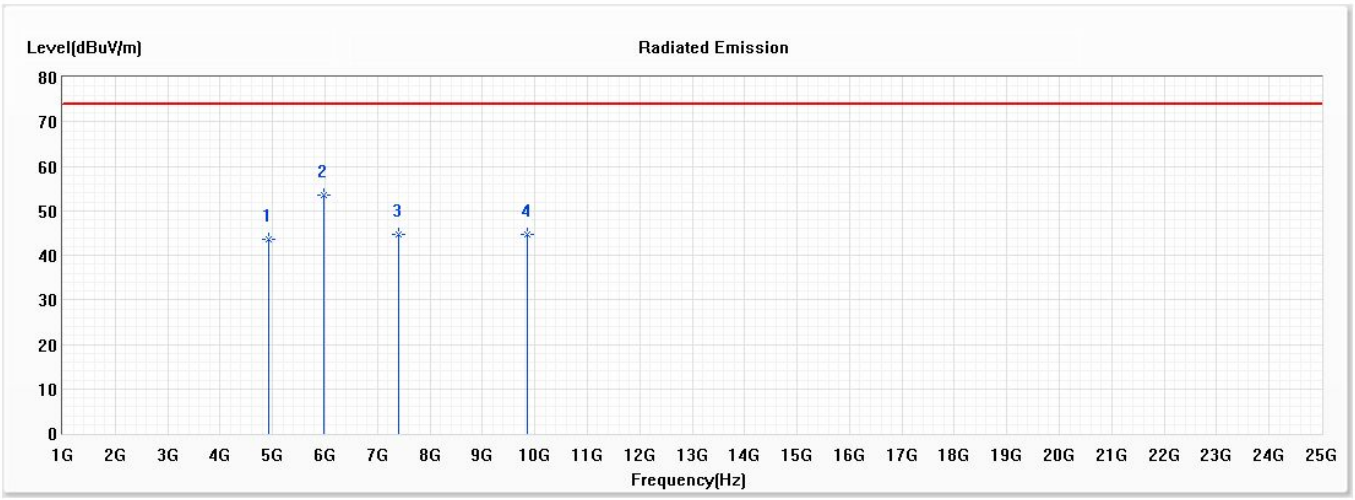
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4924.000	43.95	74.00	-30.05	56.87	-12.92	PK
* 2	5984.000	50.57	74.00	-23.43	62.68	-12.11	PK
3	7386.000	44.78	74.00	-29.22	56.69	-11.91	PK
4	9848.000	45.39	74.00	-28.61	56.36	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2467 MHz)
Test Date : 2020/12/03

HORIZONTAL



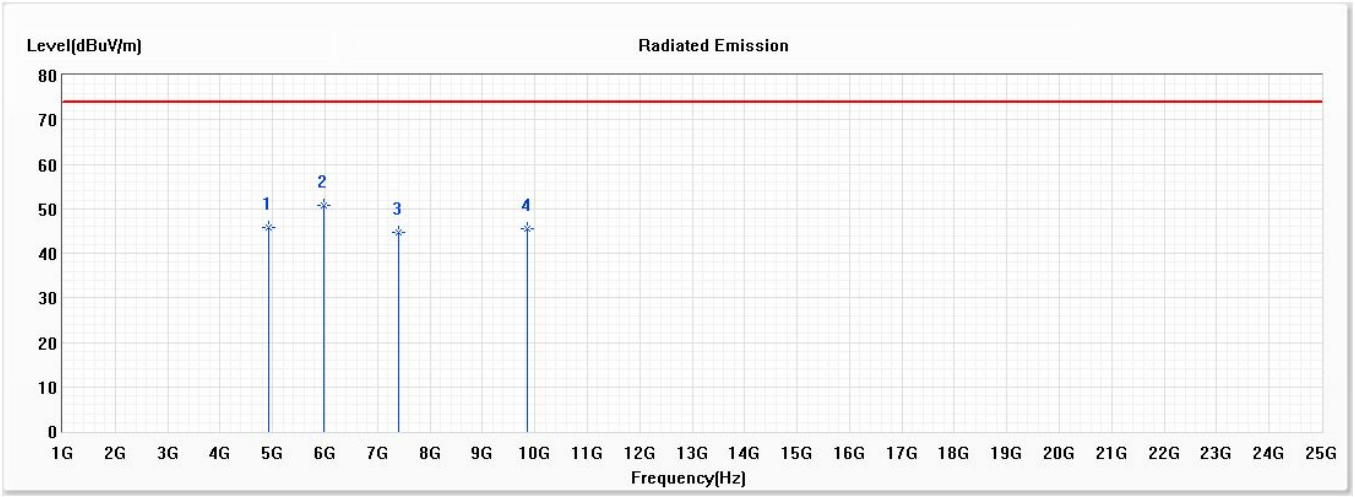
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4934.000	43.68	74.00	-30.32	56.39	-12.71	PK
* 2	5984.000	53.56	74.00	-20.44	65.67	-12.11	PK
3	7401.000	44.76	74.00	-29.24	56.73	-11.97	PK
4	9868.000	44.66	74.00	-29.34	55.48	-10.82	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 1 SISO A: Transmit (802.11b_1Mbps) (2467 MHz)
Test Date	:	2020/12/03

VERTICAL



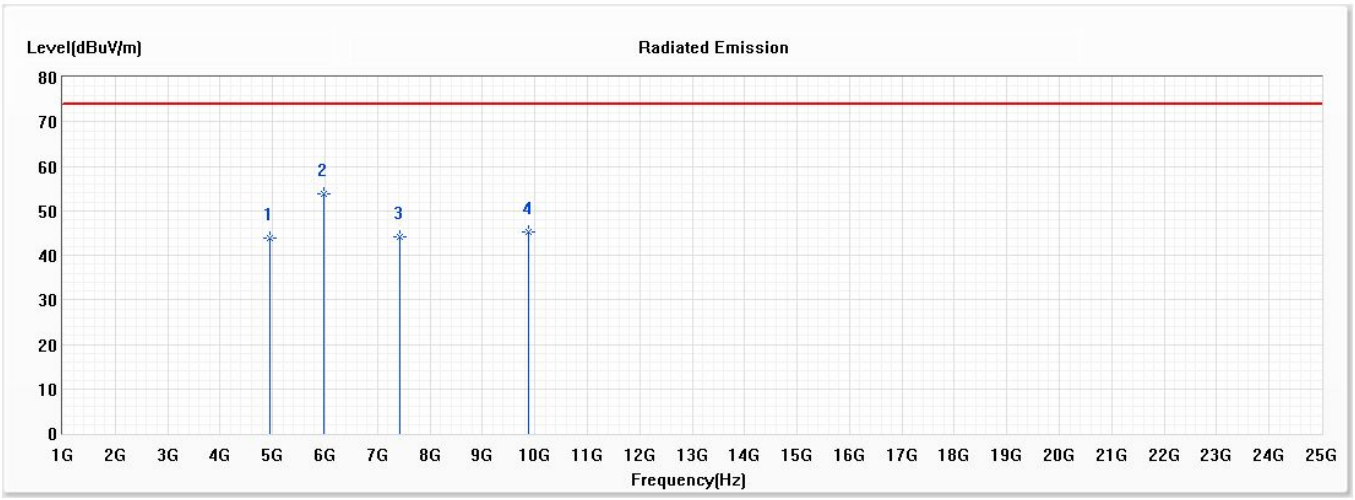
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4934.000	45.68	74.00	-28.32	58.39	-12.71	PK
* 2	5984.000	50.81	74.00	-23.19	62.92	-12.11	PK
3	7401.000	44.81	74.00	-29.19	56.78	-11.97	PK
4	9868.000	45.63	74.00	-28.37	56.45	-10.82	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2472 MHz)
Test Date : 2020/12/03

HORIZONTAL



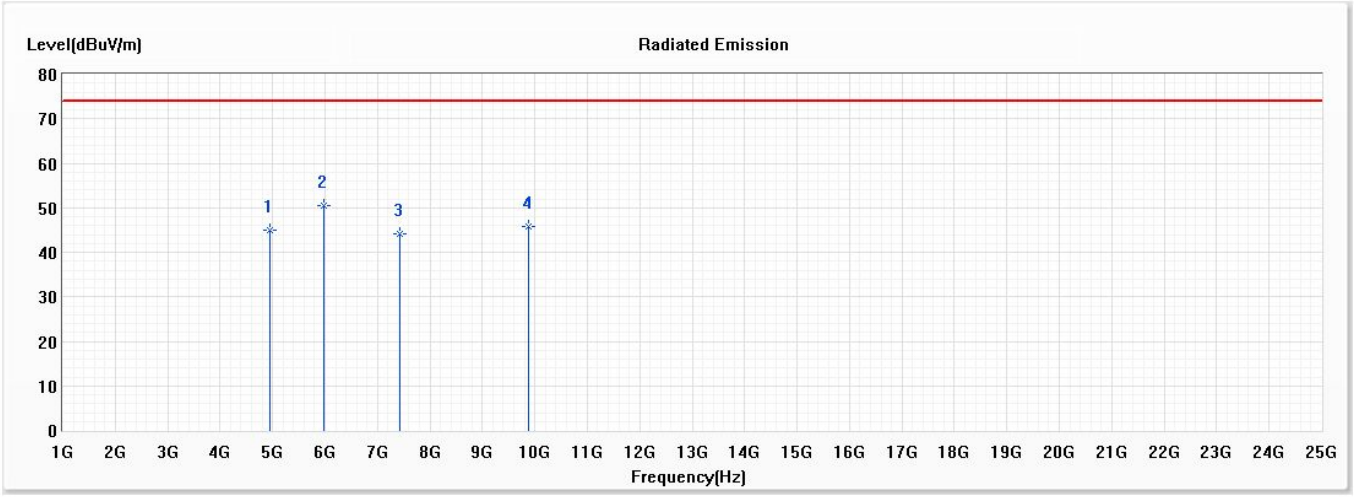
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4944.000	43.87	74.00	-30.13	56.61	-12.74	PK
* 2	5984.000	53.78	74.00	-20.22	65.89	-12.11	PK
3	7416.000	44.14	74.00	-29.86	56.11	-11.97	PK
4	9888.000	45.37	74.00	-28.63	56.12	-10.75	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2472 MHz)
Test Date : 2020/12/03

VERTICAL



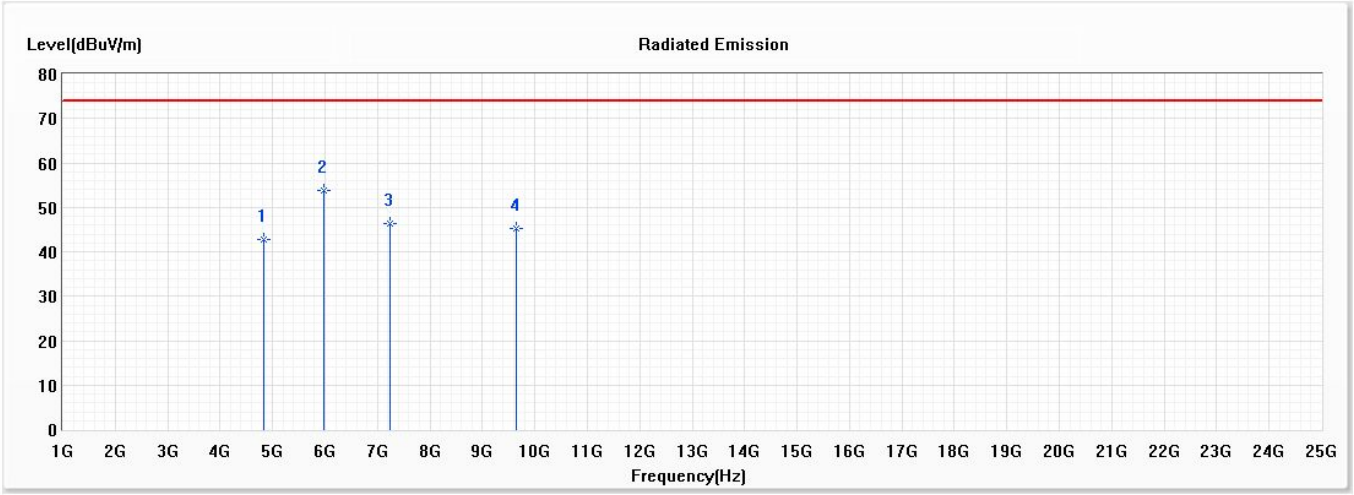
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4944.000	44.89	74.00	-29.11	57.63	-12.74	PK
* 2	5984.000	50.57	74.00	-23.43	62.68	-12.11	PK
3	7416.000	44.18	74.00	-29.82	56.15	-11.97	PK
4	9888.000	45.66	74.00	-28.34	56.41	-10.75	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2412MHz)
Test Date : 2020/12/03

HORIZONTAL



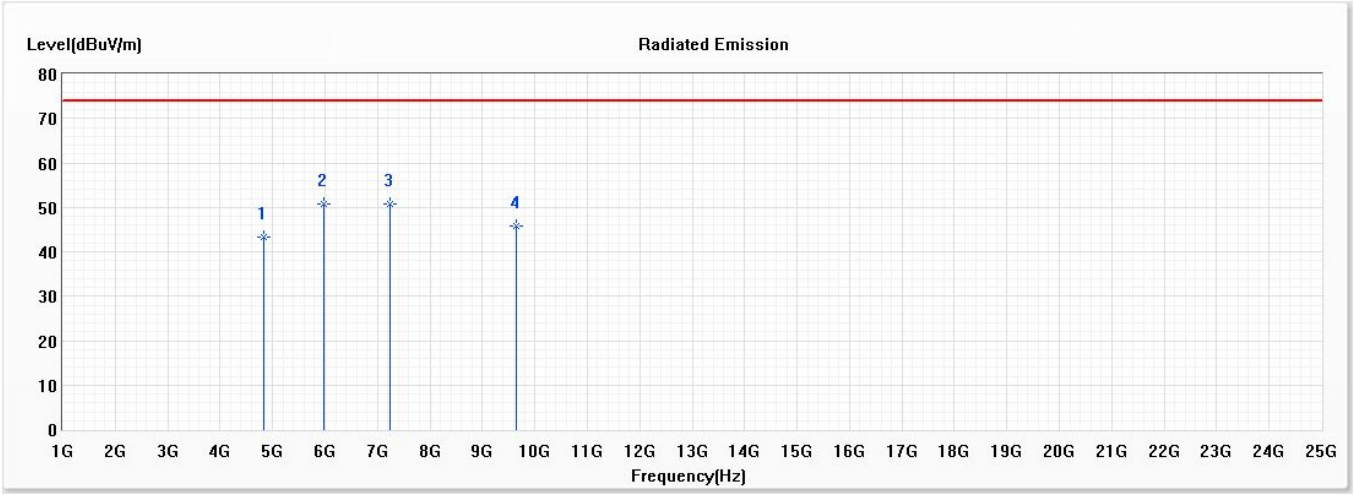
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4824.000	42.73	74.00	-31.27	55.72	-12.99	PK
* 2	5984.000	53.71	74.00	-20.29	65.82	-12.11	PK
3	7236.000	46.41	74.00	-27.59	58.32	-11.91	PK
4	9648.000	45.35	74.00	-28.65	56.52	-11.17	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2412MHz)
Test Date	:	2020/12/03

VERTICAL



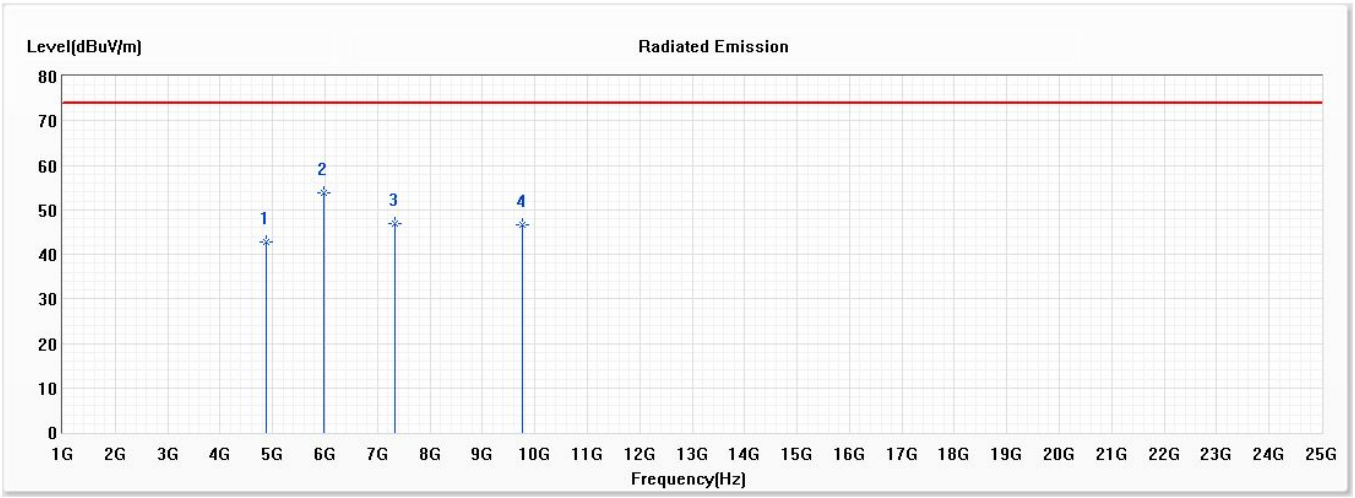
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4824.000	43.26	74.00	-30.74	56.25	-12.99	PK
2	5984.000	50.77	74.00	-23.23	62.88	-12.11	PK
* 3	7236.000	50.82	74.00	-23.18	62.73	-11.91	PK
4	9648.000	45.86	74.00	-28.14	57.03	-11.17	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2442 MHz)
Test Date	:	2020/12/03

HORIZONTAL



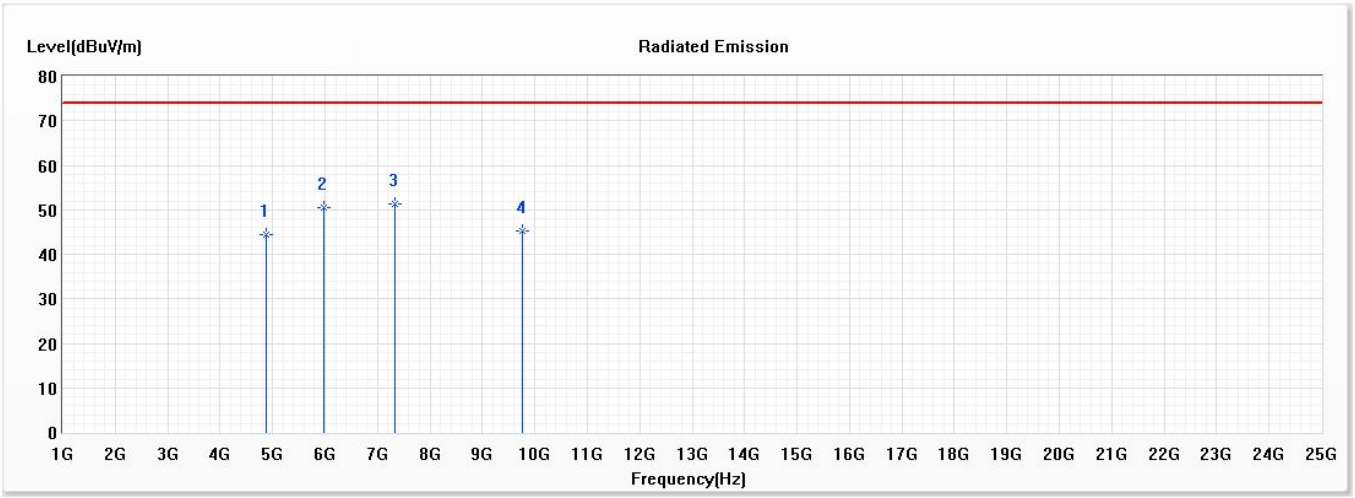
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4884.000	42.63	74.00	-31.37	55.55	-12.92	PK
* 2	5984.000	53.80	74.00	-20.20	65.91	-12.11	PK
3	7326.000	46.91	74.00	-27.09	58.87	-11.96	PK
4	9768.000	46.71	74.00	-27.29	57.68	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2442 MHz)
Test Date	:	2020/12/03

VERTICAL



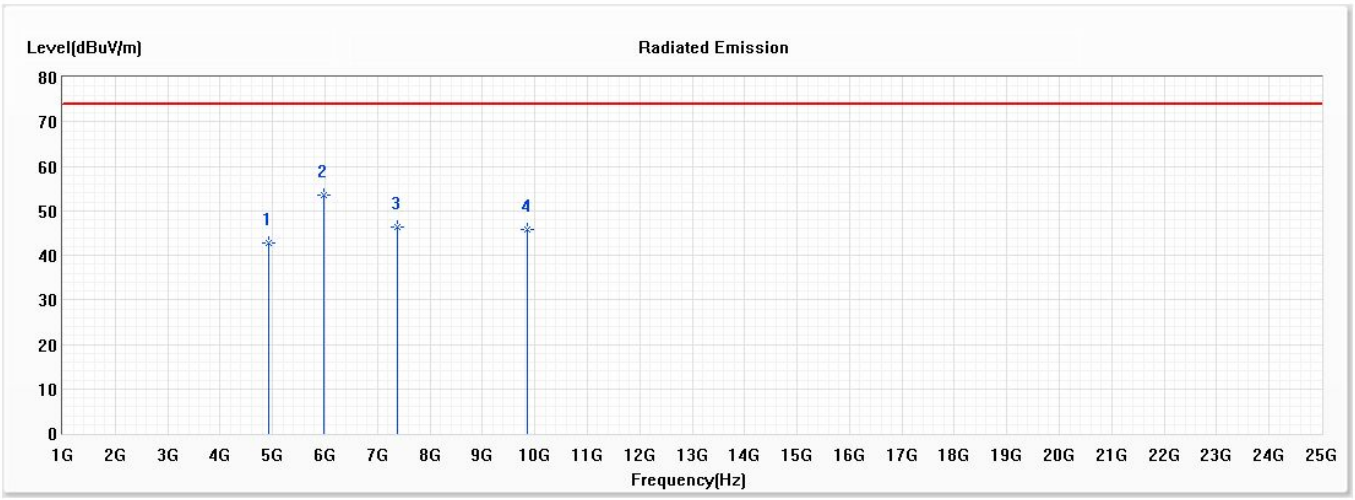
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4884.000	44.36	74.00	-29.64	57.28	-12.92	PK
2	5984.000	50.62	74.00	-23.38	62.73	-12.11	PK
* 3	7326.000	51.24	74.00	-22.76	63.20	-11.96	PK
4	9768.000	45.37	74.00	-28.63	56.34	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2462 MHz)
Test Date : 2020/12/03

HORIZONTAL



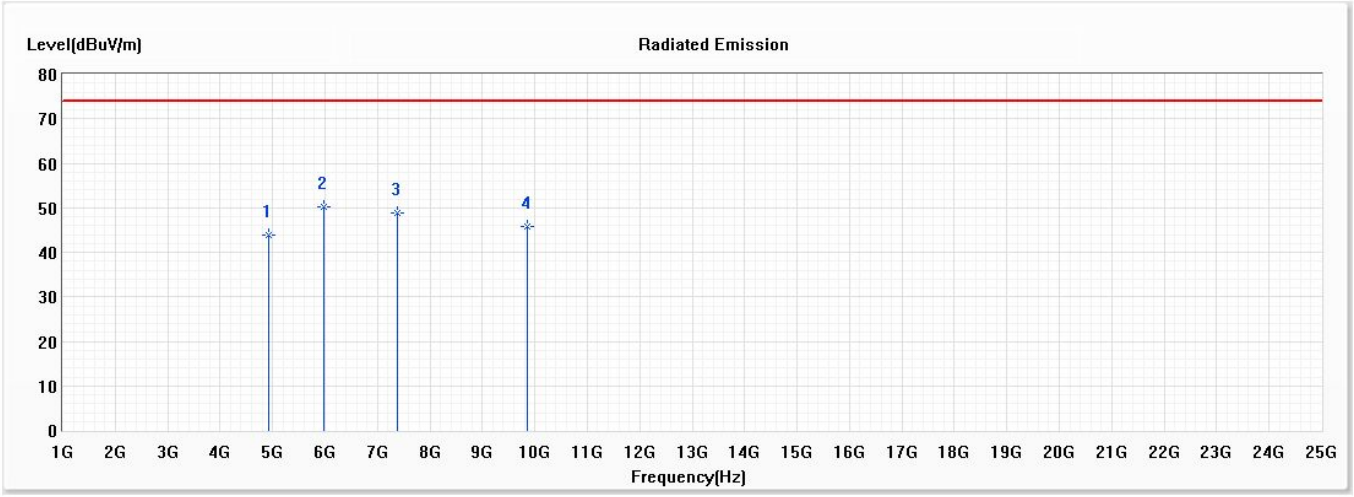
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4924.000	42.85	74.00	-31.15	55.77	-12.92	PK
* 2	5984.000	53.50	74.00	-20.50	65.61	-12.11	PK
3	7386.000	46.37	74.00	-27.63	58.28	-11.91	PK
4	9848.000	45.72	74.00	-28.28	56.69	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps)) (2462 MHz)
Test Date : 2020/12/03

VERTICAL



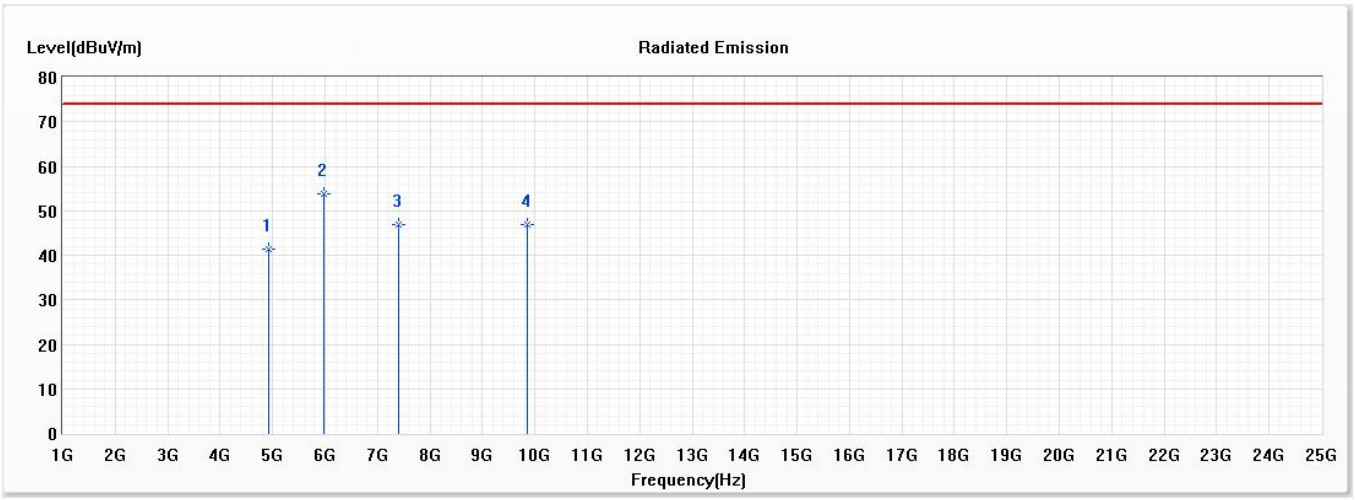
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4924.000	43.81	74.00	-30.19	56.73	-12.92	PK
* 2	5984.000	50.11	74.00	-23.89	62.22	-12.11	PK
3	7386.000	48.70	74.00	-25.30	60.61	-11.91	PK
4	9848.000	45.93	74.00	-28.07	56.90	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2467 MHz)
Test Date : 2020/12/03

HORIZONTAL



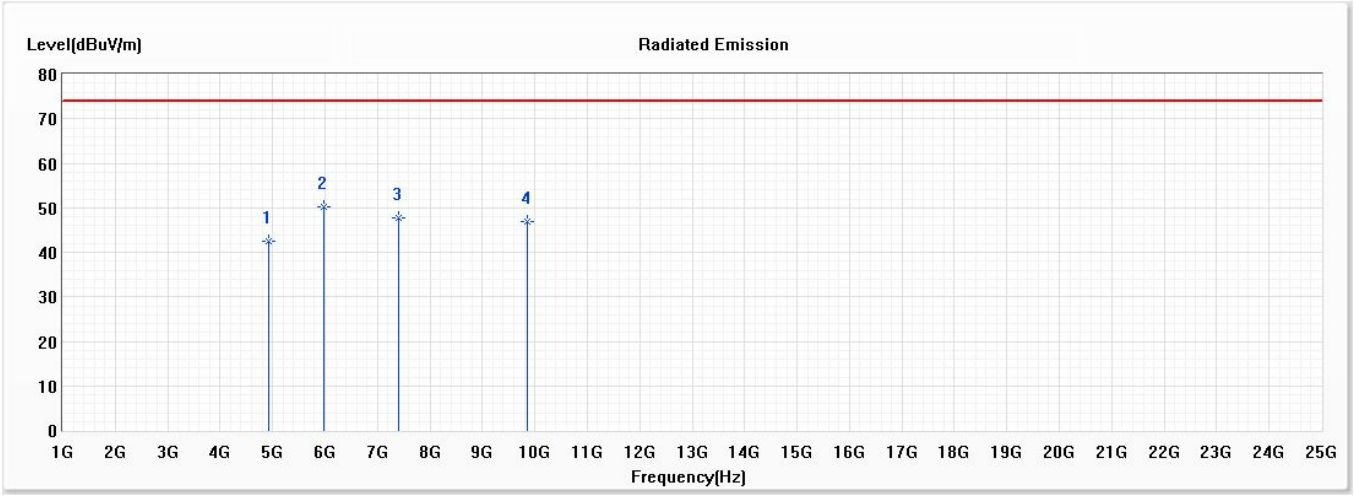
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4934.000	41.51	74.00	-32.49	54.22	-12.71	PK
* 2	5984.000	53.74	74.00	-20.26	65.85	-12.11	PK
3	7401.000	46.79	74.00	-27.21	58.76	-11.97	PK
4	9868.000	46.90	74.00	-27.10	57.72	-10.82	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps)) (2467 MHz)
Test Date : 2020/12/03

VERTICAL



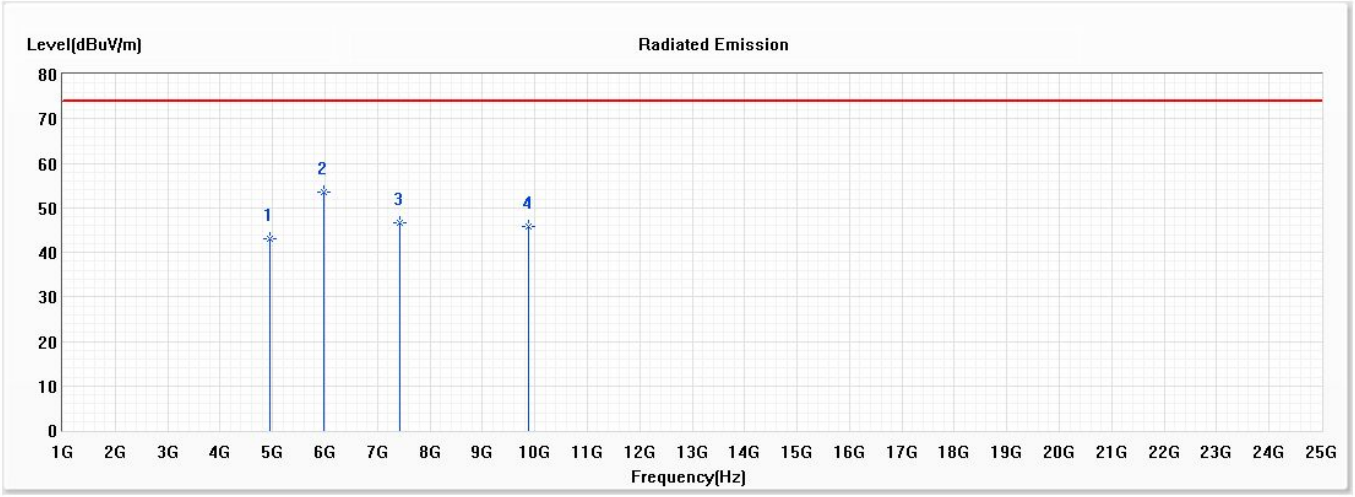
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4934.000	42.45	74.00	-31.55	55.16	-12.71	PK
* 2	5984.000	50.28	74.00	-23.72	62.39	-12.11	PK
3	7401.000	47.64	74.00	-26.36	59.61	-11.97	PK
4	9868.000	46.91	74.00	-27.09	57.73	-10.82	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2472 MHz)
Test Date : 2020/12/03

HORIZONTAL



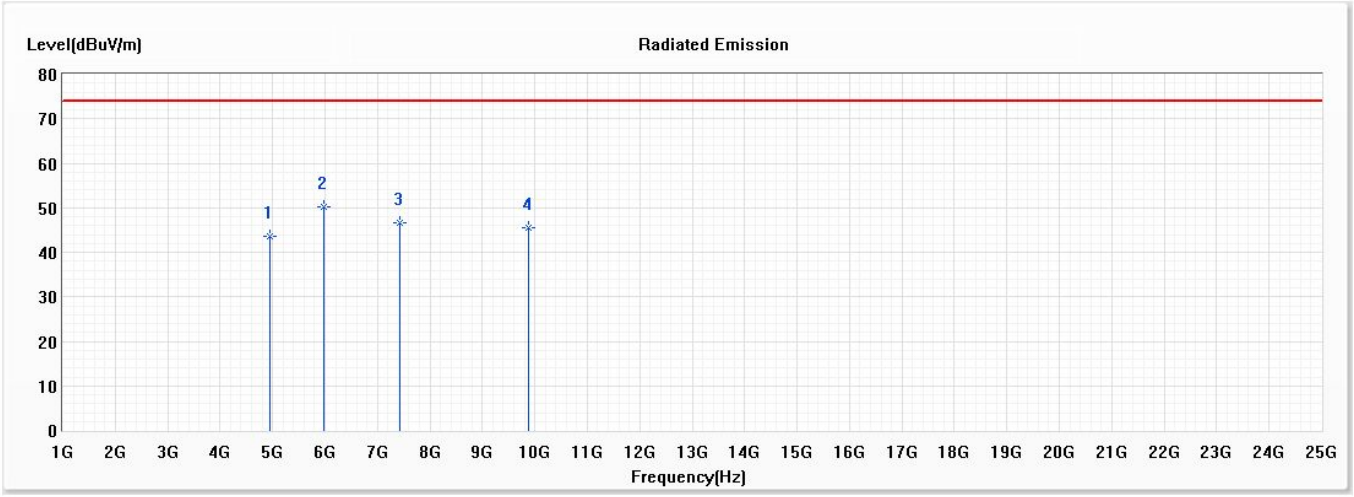
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4944.000	42.93	74.00	-31.07	55.67	-12.74	PK
* 2	5984.000	53.54	74.00	-20.46	65.65	-12.11	PK
3	7416.000	46.74	74.00	-27.26	58.71	-11.97	PK
4	9888.000	45.81	74.00	-28.19	56.56	-10.75	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps)) (2472 MHz)
Test Date : 2020/12/03

VERTICAL



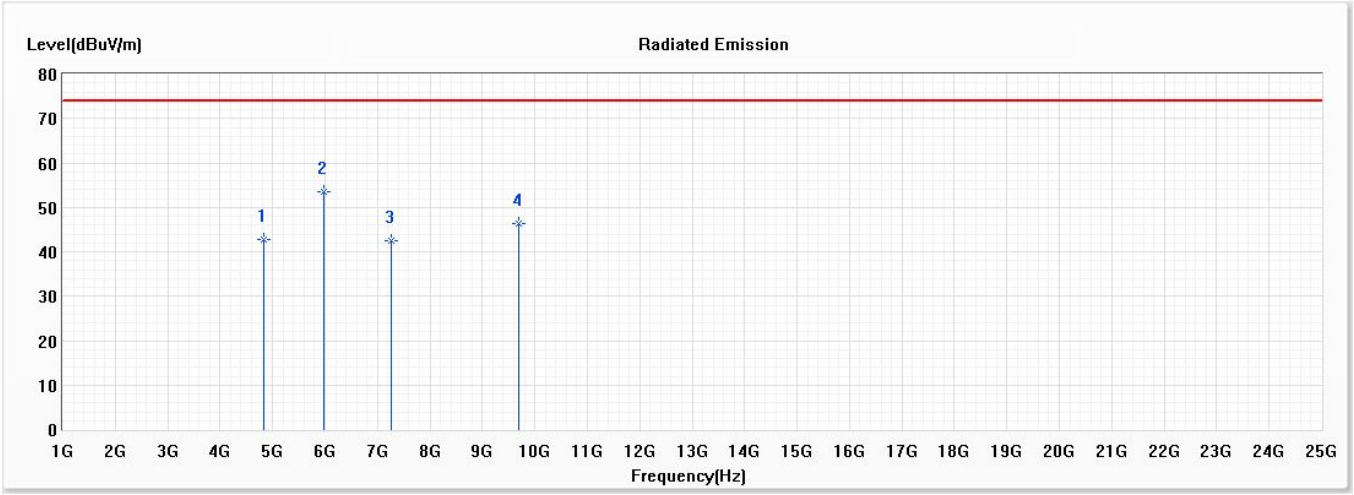
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4944.000	43.46	74.00	-30.54	56.20	-12.74	PK
* 2	5984.000	50.17	74.00	-23.83	62.28	-12.11	PK
3	7416.000	46.62	74.00	-27.38	58.59	-11.97	PK
4	9888.000	45.49	74.00	-28.51	56.24	-10.75	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2422MHz)
Test Date	:	2020/12/03

HORIZONTAL



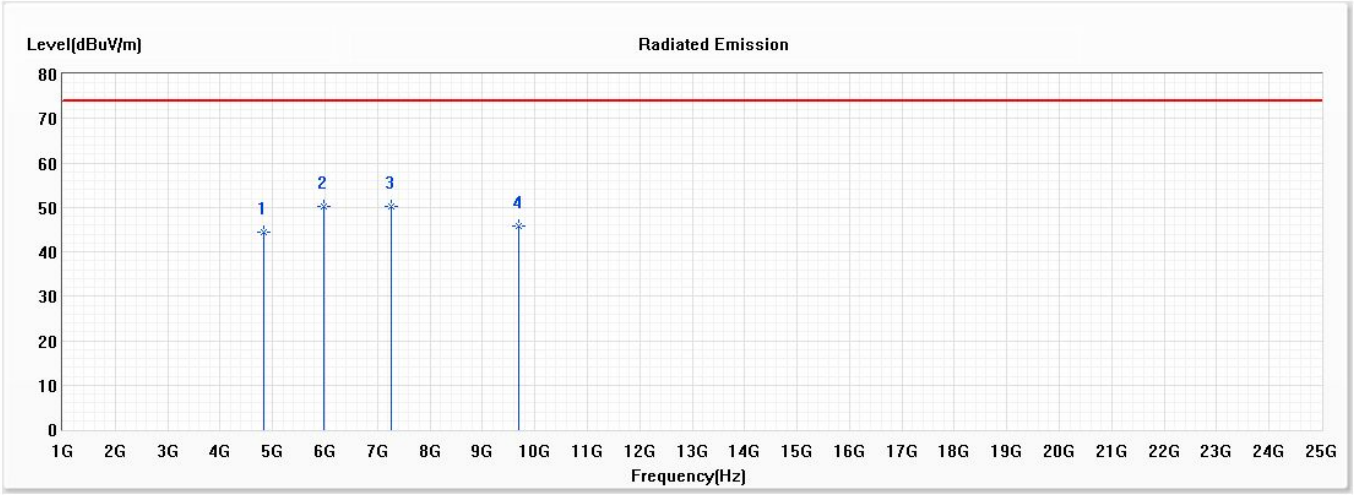
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4844.000	42.82	74.00	-31.18	55.76	-12.94	PK
* 2	5984.000	53.61	74.00	-20.39	65.72	-12.11	PK
3	7266.000	42.59	74.00	-31.41	54.46	-11.87	PK
4	9688.000	46.28	74.00	-27.72	57.44	-11.16	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2422MHz)
Test Date : 2020/12/03

VERTICAL



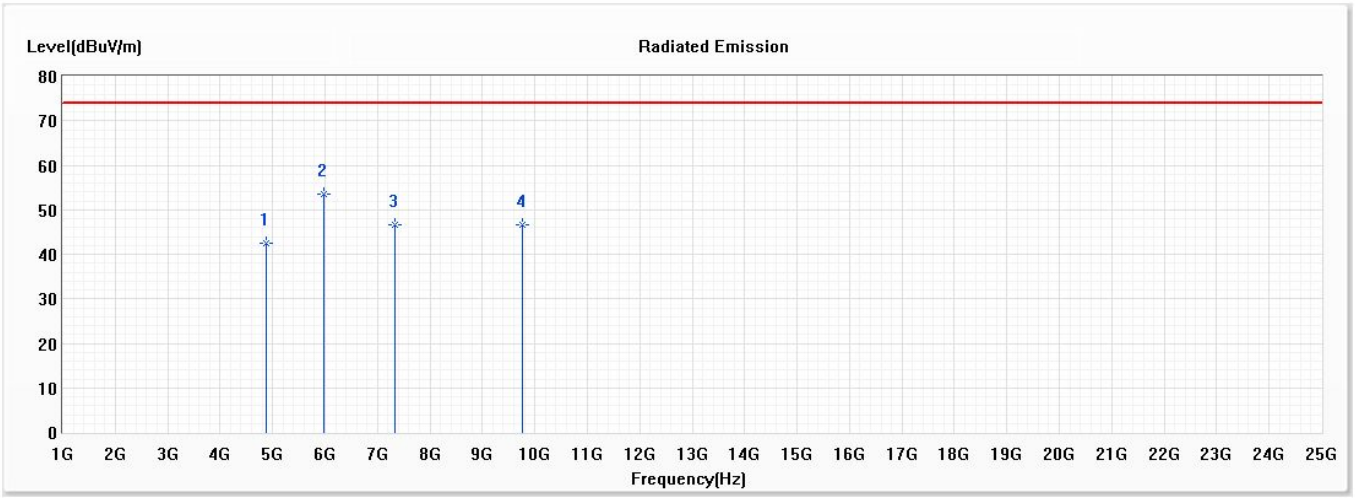
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4844.000	44.46	74.00	-29.54	57.40	-12.94	PK
2	5984.000	50.21	74.00	-23.79	62.32	-12.11	PK
* 3	7266.000	50.34	74.00	-23.66	62.21	-11.87	PK
4	9688.000	45.76	74.00	-28.24	56.92	-11.16	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2442 MHz)
Test Date	:	2020/12/03

HORIZONTAL



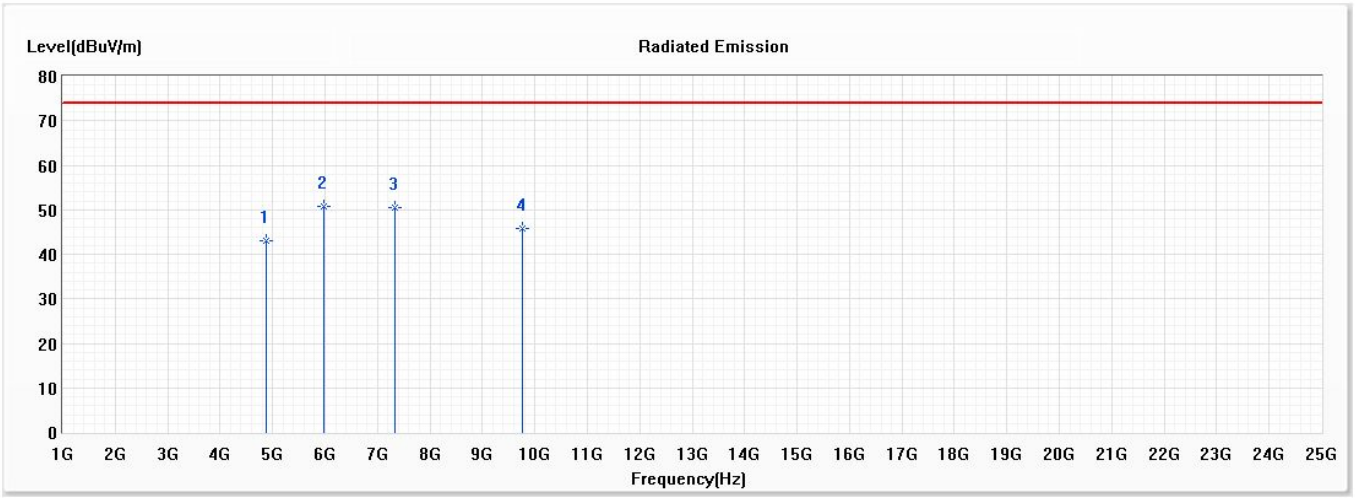
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4884.000	42.62	74.00	-31.38	55.54	-12.92	PK
* 2	5984.000	53.54	74.00	-20.46	65.65	-12.11	PK
3	7326.000	46.61	74.00	-27.39	58.57	-11.96	PK
4	9768.000	46.55	74.00	-27.45	57.52	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook Computers
Test Item	:	Harmonic Radiated Emission Data
Test Mode	:	Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2442 MHz)
Test Date	:	2020/12/03

VERTICAL



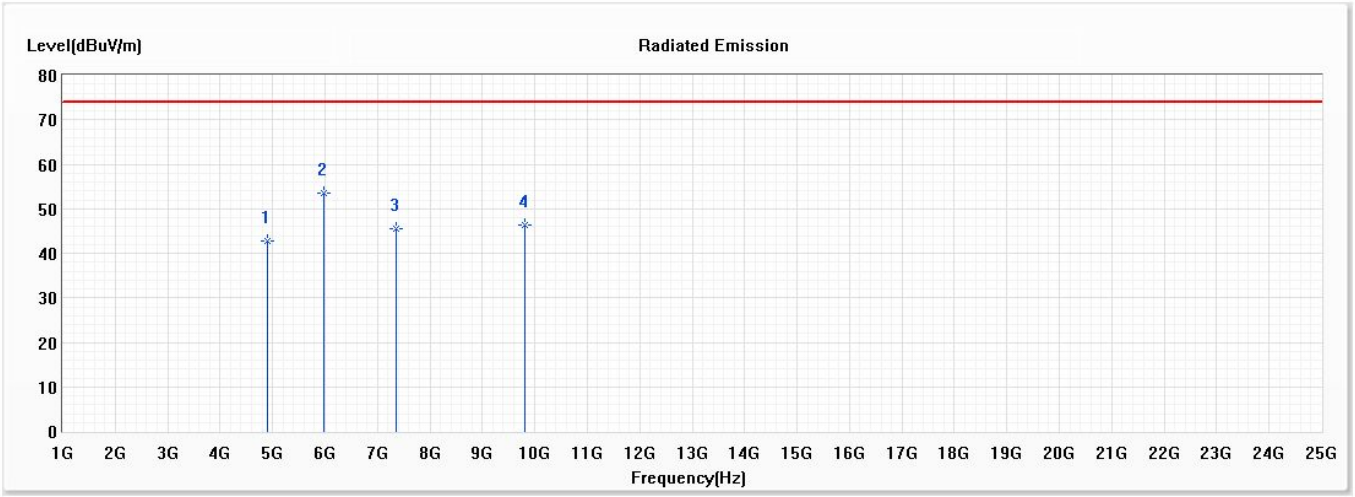
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4884.000	43.15	74.00	-30.85	56.07	-12.92	PK
* 2	5984.000	50.80	74.00	-23.20	62.91	-12.11	PK
3	7326.000	50.38	74.00	-23.62	62.34	-11.96	PK
4	9768.000	45.91	74.00	-28.09	56.88	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2452 MHz)
Test Date : 2020/12/03

HORIZONTAL



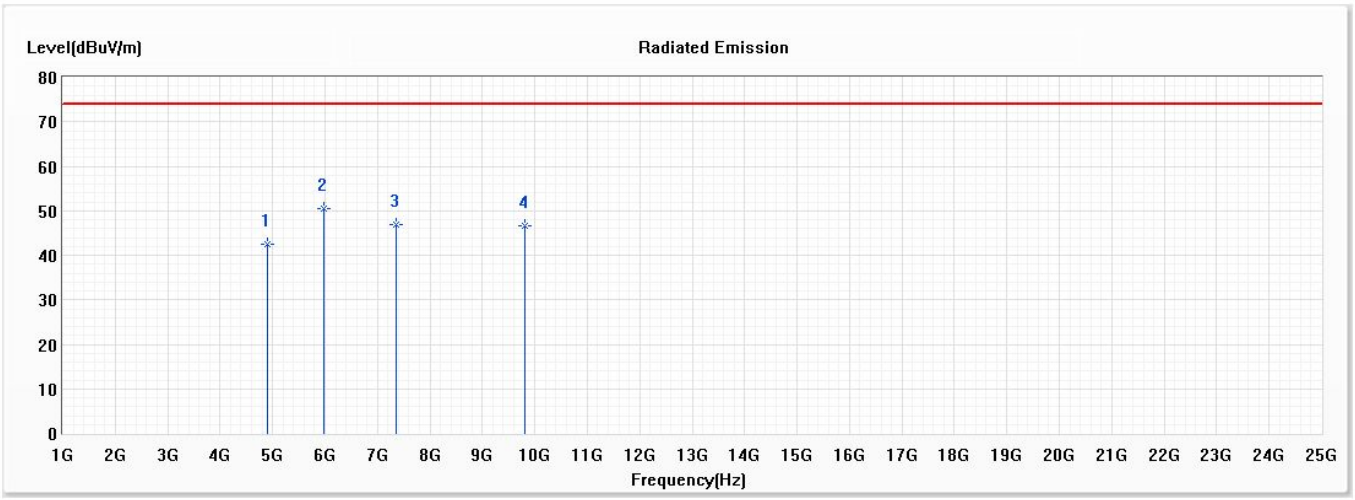
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4904.000	42.82	74.00	-31.18	55.82	-13.00	PK
* 2	5984.000	53.65	74.00	-20.35	65.76	-12.11	PK
3	7356.000	45.62	74.00	-28.38	57.60	-11.98	PK
4	9808.000	46.23	74.00	-27.77	57.16	-10.93	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2452 MHz)
Test Date : 2020/12/03

VERTICAL



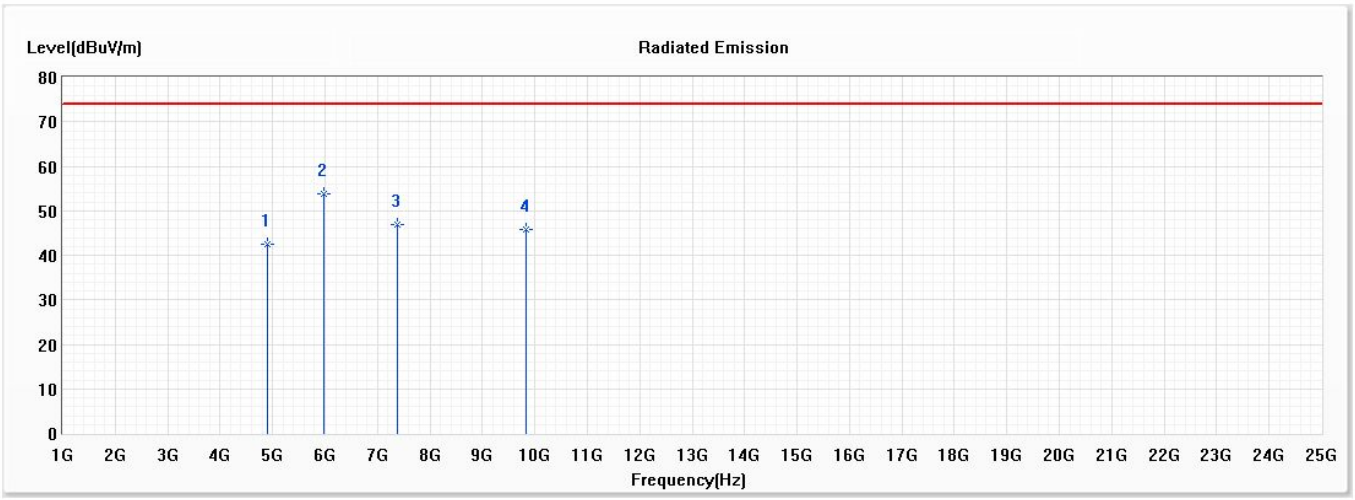
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4904.000	42.57	74.00	-31.43	55.57	-13.00	PK
* 2	5984.000	50.54	74.00	-23.46	62.65	-12.11	PK
3	7356.000	46.94	74.00	-27.06	58.92	-11.98	PK
4	9808.000	46.65	74.00	-27.35	57.58	-10.93	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2457 MHz)
Test Date : 2020/12/03

HORIZONTAL



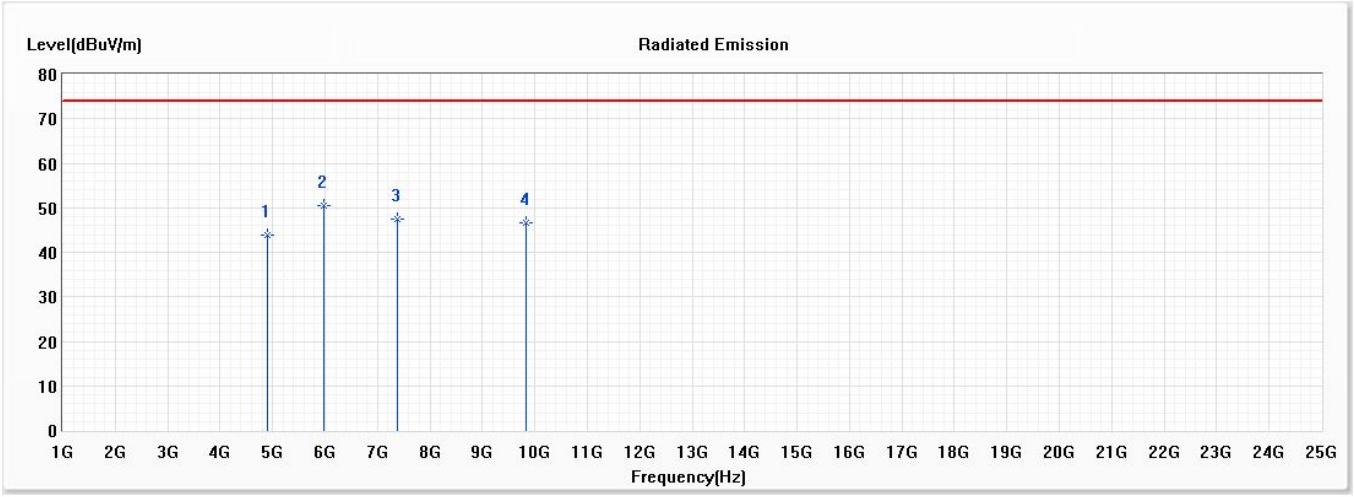
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4914.000	42.46	74.00	-31.54	55.36	-12.90	PK
* 2	5984.000	53.70	74.00	-20.30	65.81	-12.11	PK
3	7371.000	46.76	74.00	-27.24	58.74	-11.98	PK
4	9828.000	45.67	74.00	-28.33	56.57	-10.90	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2457 MHz)
Test Date : 2020/12/03

VERTICAL



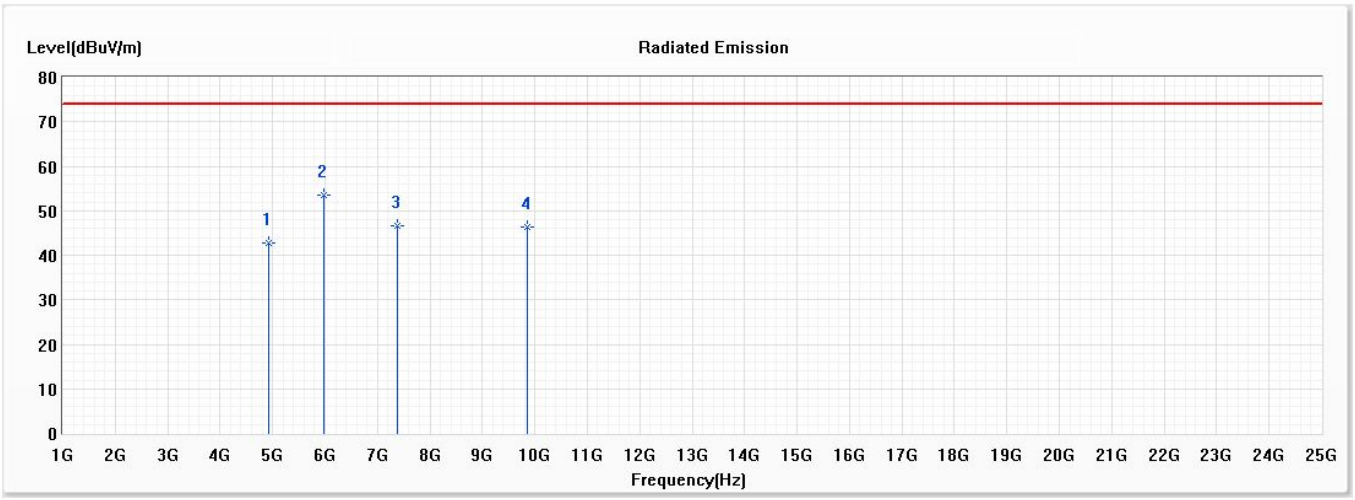
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4914.000	43.85	74.00	-30.15	56.75	-12.90	PK
* 2	5984.000	50.36	74.00	-23.64	62.47	-12.11	PK
3	7371.000	47.42	74.00	-26.58	59.40	-11.98	PK
4	9828.000	46.62	74.00	-27.38	57.52	-10.90	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2462 MHz)
Test Date : 2020/12/03

HORIZONTAL



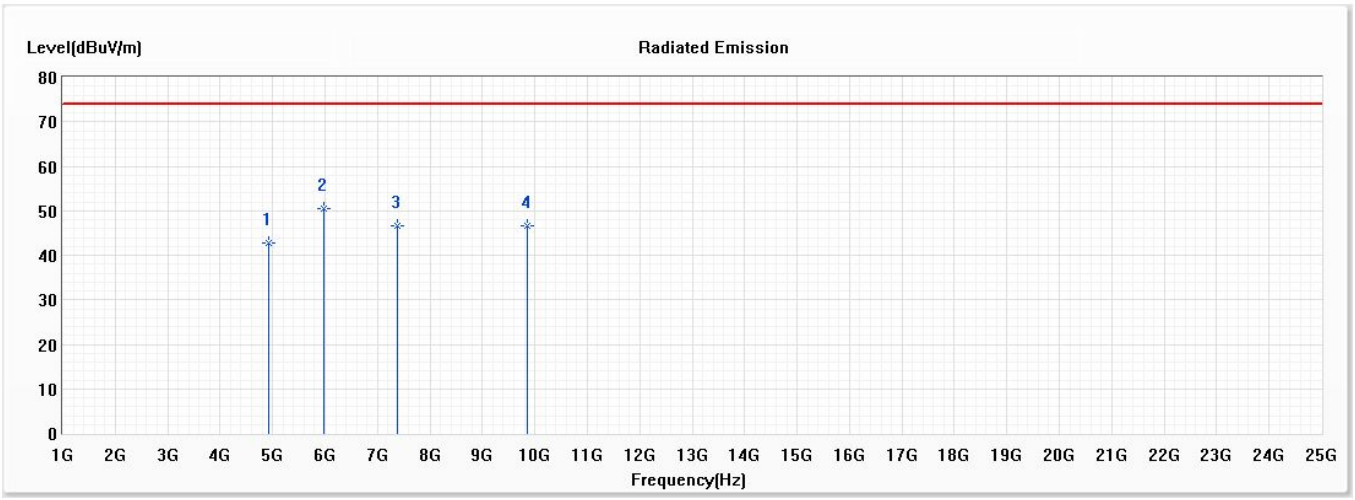
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4924.000	42.65	74.00	-31.35	55.57	-12.92	PK
* 2	5984.000	53.59	74.00	-20.41	65.70	-12.11	PK
3	7386.000	46.72	74.00	-27.28	58.63	-11.91	PK
4	9848.000	46.28	74.00	-27.72	57.25	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : Harmonic Radiated Emission Data
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2462 MHz)
Test Date : 2020/12/03

VERTICAL



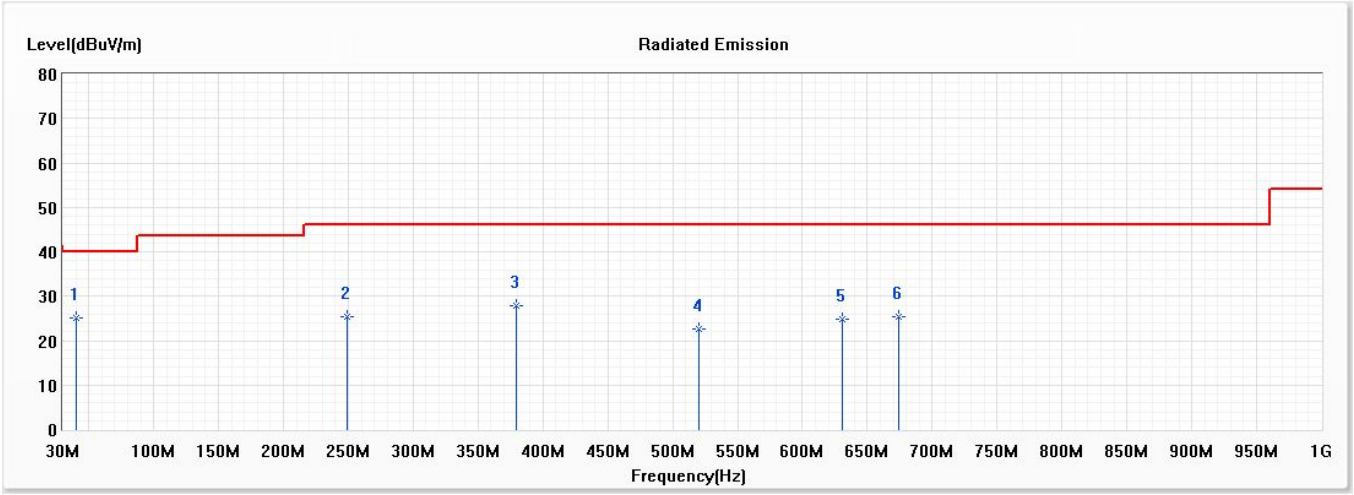
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4924.000	42.82	74.00	-31.18	55.74	-12.92	PK
* 2	5984.000	50.52	74.00	-23.48	62.63	-12.11	PK
3	7386.000	46.67	74.00	-27.33	58.58	-11.91	PK
4	9848.000	46.73	74.00	-27.27	57.70	-10.97	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Notebook Computers
Test Item : General Radiated Emission Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2442 MHz)
Test Date : 2020/12/03

HORIZONTAL



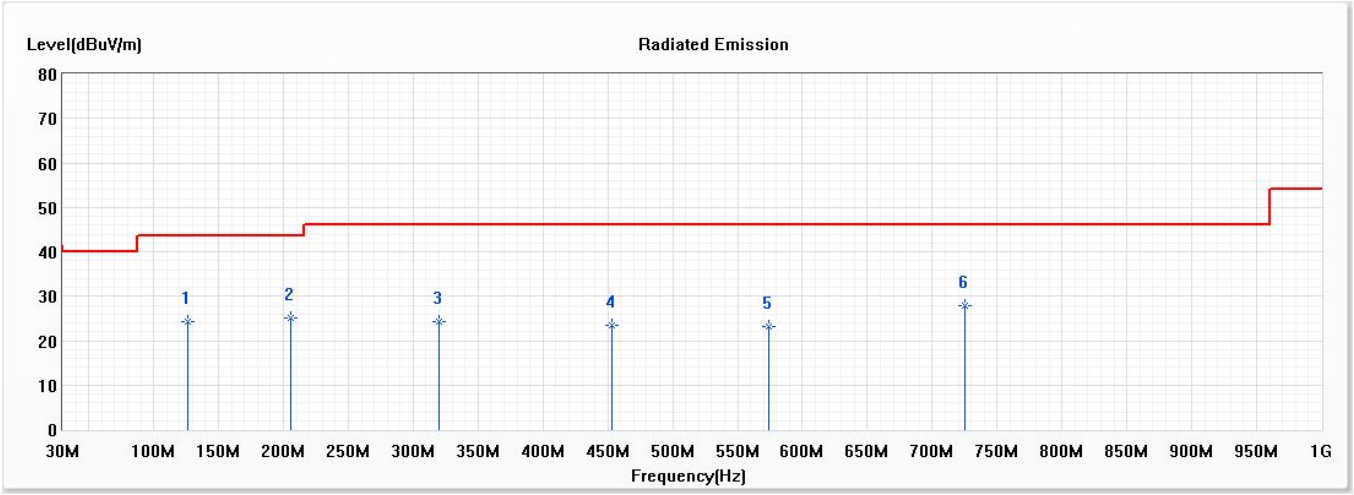
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	40.670	25.09	40.00	-14.91	36.03	-10.94	QP
2	249.220	25.48	46.00	-20.52	36.79	-11.31	QP
3	379.200	27.73	46.00	-18.27	35.20	-7.47	QP
4	519.850	22.75	46.00	-23.25	27.13	-4.38	QP
5	630.430	24.81	46.00	-21.19	27.36	-2.55	QP
6	674.080	25.38	46.00	-20.62	28.42	-3.04	QP

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.
6. Each mode through the pretest, only the worst case is shown in the report.

Product : Notebook Computers
Test Item : General Radiated Emission Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2442 MHz)
Test Date : 2020/12/03

VERTICAL



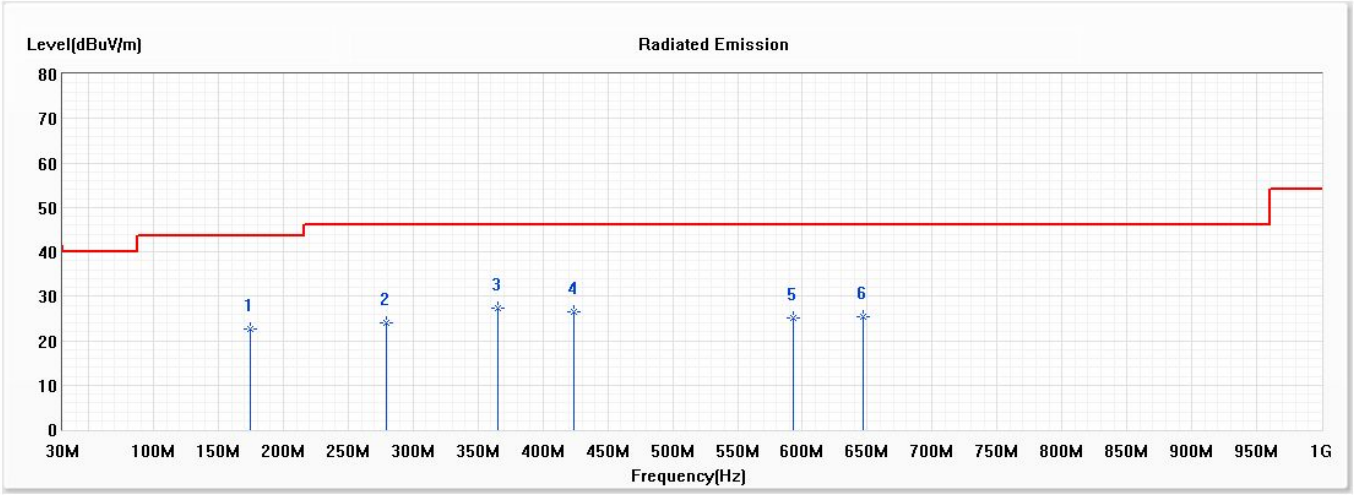
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	126.030	24.29	43.50	-19.21	37.15	-12.86	QP
2	205.570	25.05	43.50	-18.45	37.78	-12.73	QP
3	320.030	24.39	46.00	-21.61	33.27	-8.88	QP
4	452.920	23.38	46.00	-22.62	29.17	-5.79	QP
5	574.170	23.04	46.00	-22.96	26.70	-3.66	QP
* 6	725.490	27.88	46.00	-18.12	29.11	-1.23	QP

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.
6. Each mode through the pretest, only the worst case is shown in the report.

Product	:	Notebook Computers
Test Item	:	General Radiated Emission Data
Test Mode	:	Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2442 MHz)
Test Date	:	2020/12/03

HORIZONTAL



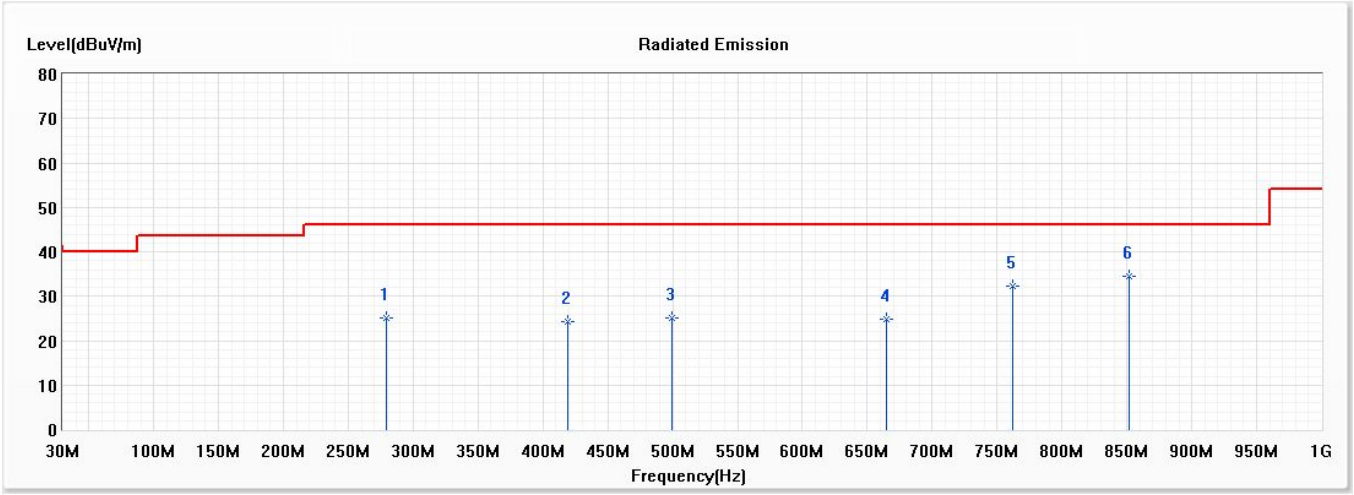
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	174.530	22.73	43.50	-20.77	33.83	-11.10	QP
2	279.290	24.04	46.00	-21.96	34.05	-10.01	QP
* 3	365.620	27.18	46.00	-18.82	35.03	-7.85	QP
4	423.820	26.58	46.00	-19.42	33.21	-6.63	QP
5	592.600	25.15	46.00	-20.85	28.25	-3.10	QP
6	647.080	25.38	46.00	-20.62	27.89	-2.51	QP

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.
6. Each mode through the pretest, only the worst case is shown in the report.

Product : Notebook Computers
Test Item : General Radiated Emission Data
Test Mode : Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps) (2442 MHz)
Test Date : 2020/12/03

VERTICAL



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	279.290	25.24	46.00	-20.76	35.25	-10.01	QP
2	418.970	24.29	46.00	-21.71	31.08	-6.79	QP
3	499.480	25.18	46.00	-20.82	30.11	-4.93	QP
4	664.380	24.87	46.00	-21.13	27.20	-2.33	QP
5	762.350	32.22	46.00	-13.78	32.88	-0.66	QP
* 6	851.590	34.41	46.00	-11.59	33.97	0.44	QP

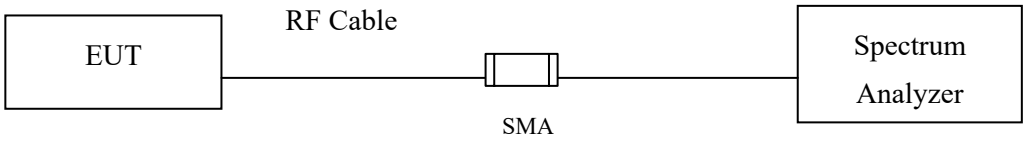
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.
6. Each mode through the pretest, only the worst case is shown in the report.

5. RF antenna conducted test

5.1. Test Setup

RF antenna Conducted Measurement:



5.2. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.3. Test Procedure

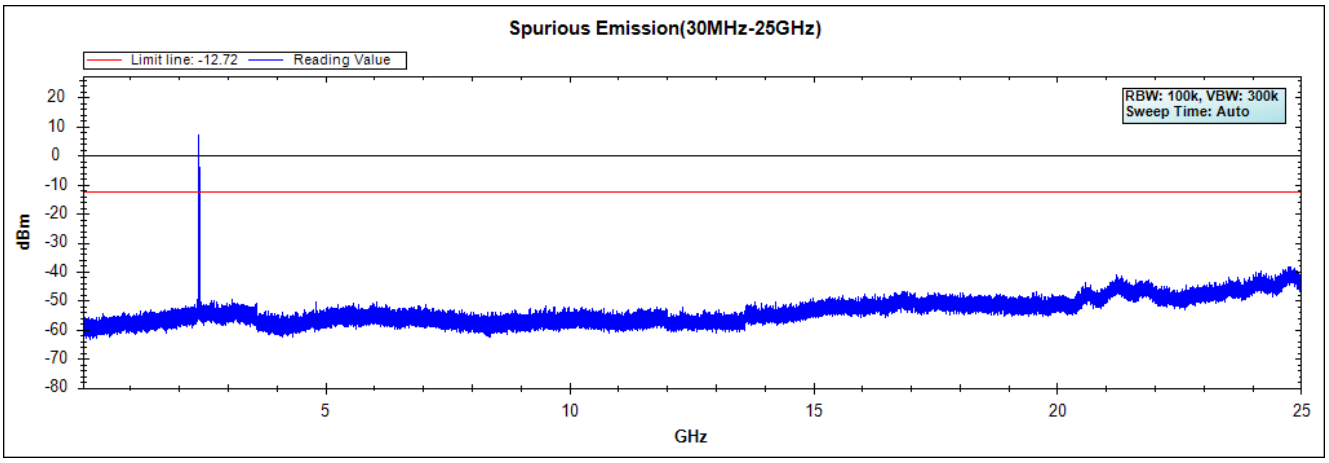
The EUT was tested according to C63.10:2013 Section 11.11 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

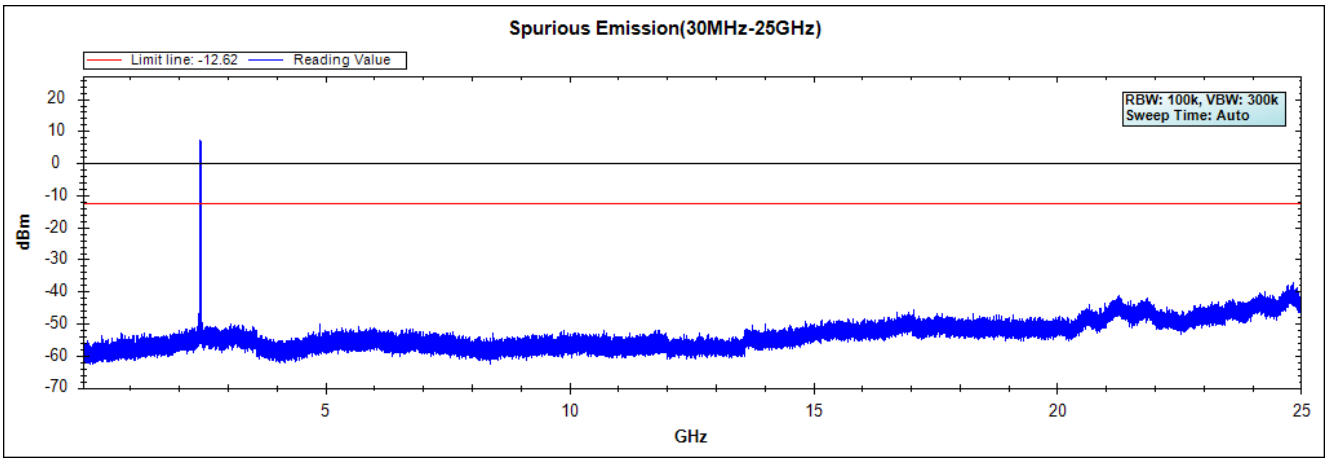
5.4. Test Result of RF antenna conducted test

Product : Notebook Computers
Test Item : RF antenna conducted test
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps)
Test Date : 2020/11/19

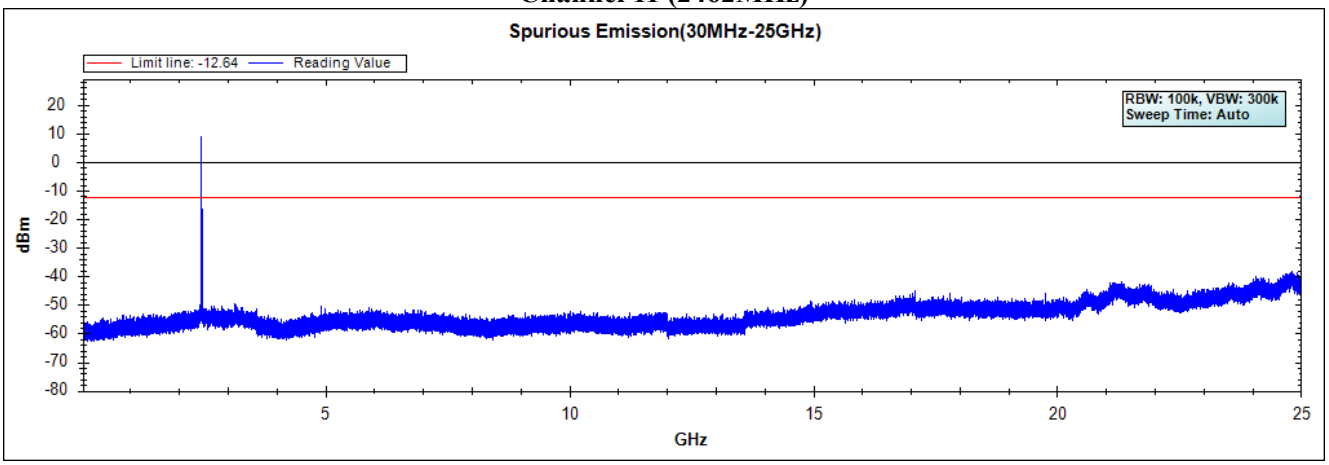
Channel 01 (2412MHz)



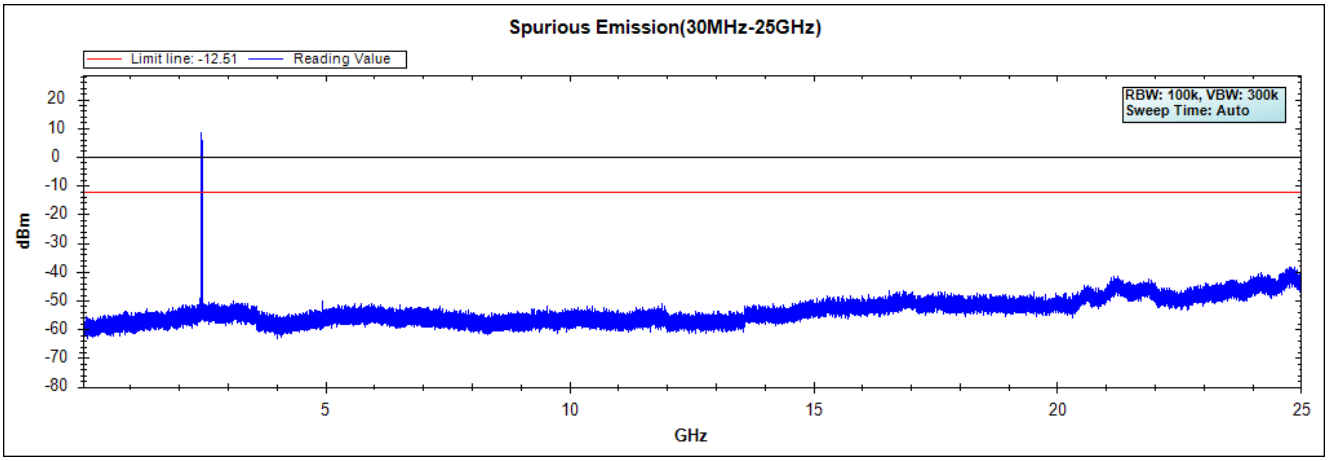
Channel 03 (2442MHz)



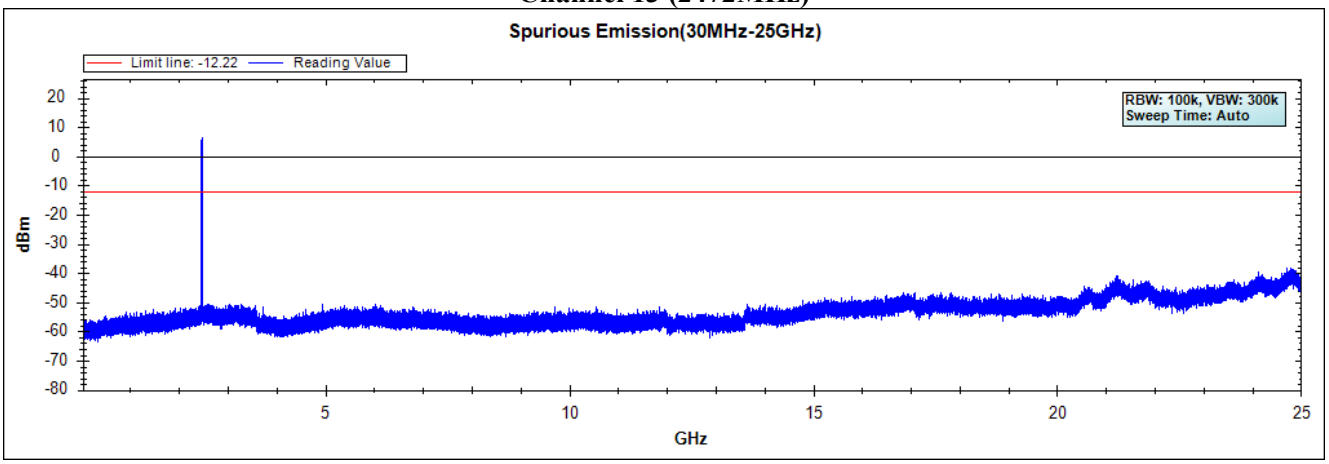
Channel 11 (2462MHz)



Channel 12 (2467MHz)



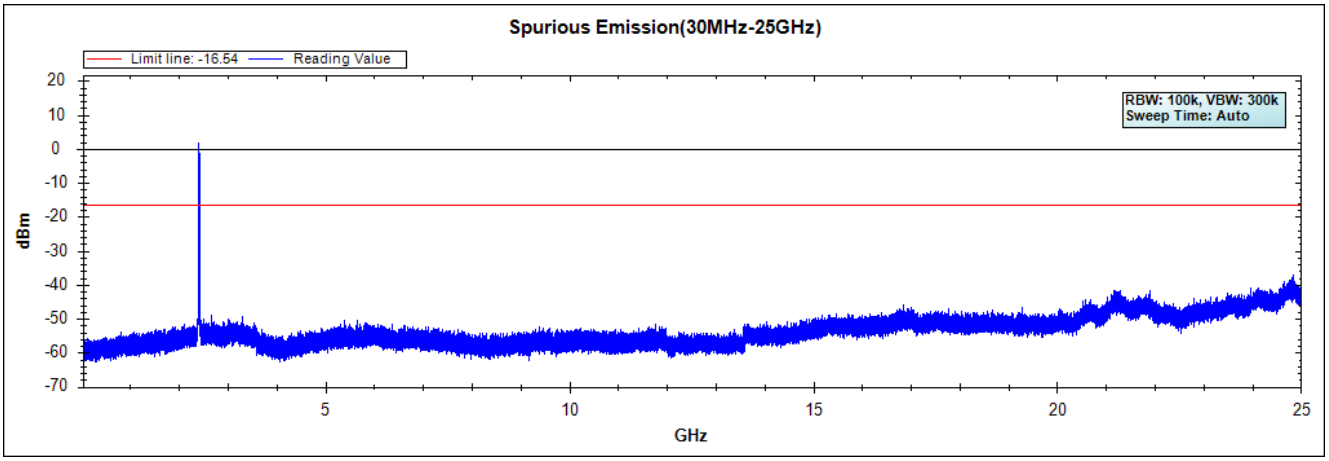
Channel 13 (2472MHz)



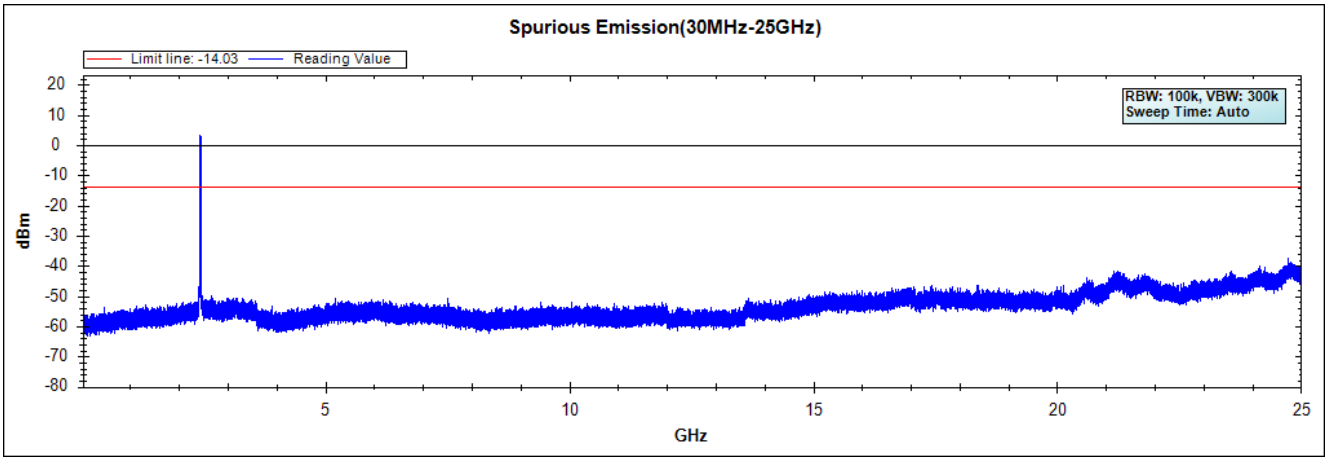
Note: The above test pattern is synthesized by multiple of the frequency range.

Product	:	Notebook Computers
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps)
Test Date	:	2020/11/19

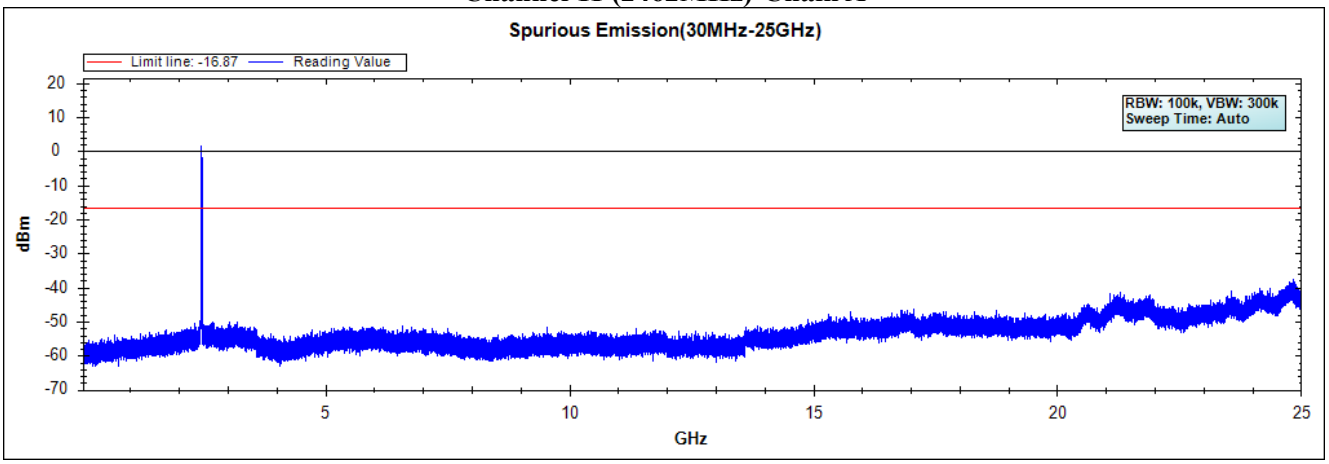
Channel 01 (2412MHz)-Chain A



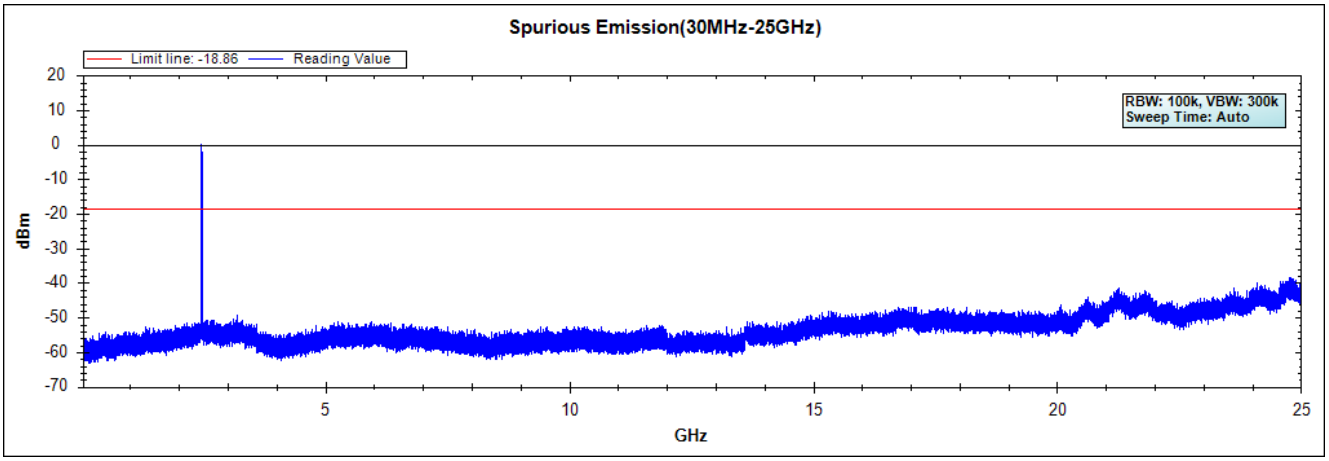
Channel 03 (2442MHz)-Chain A



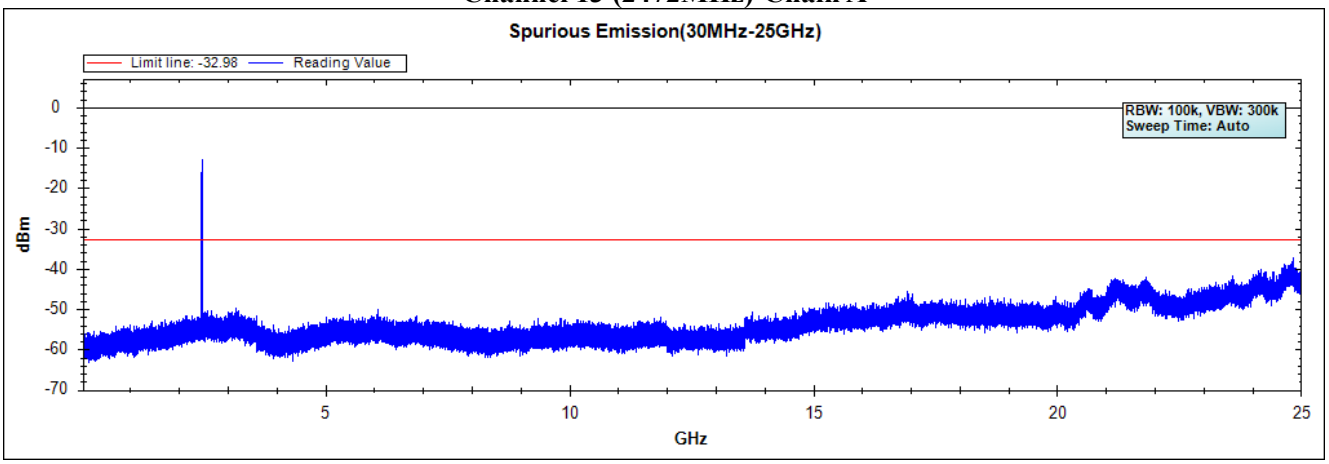
Channel 11 (2462MHz)-Chain A



Channel 12 (2467MHz)-Chain A



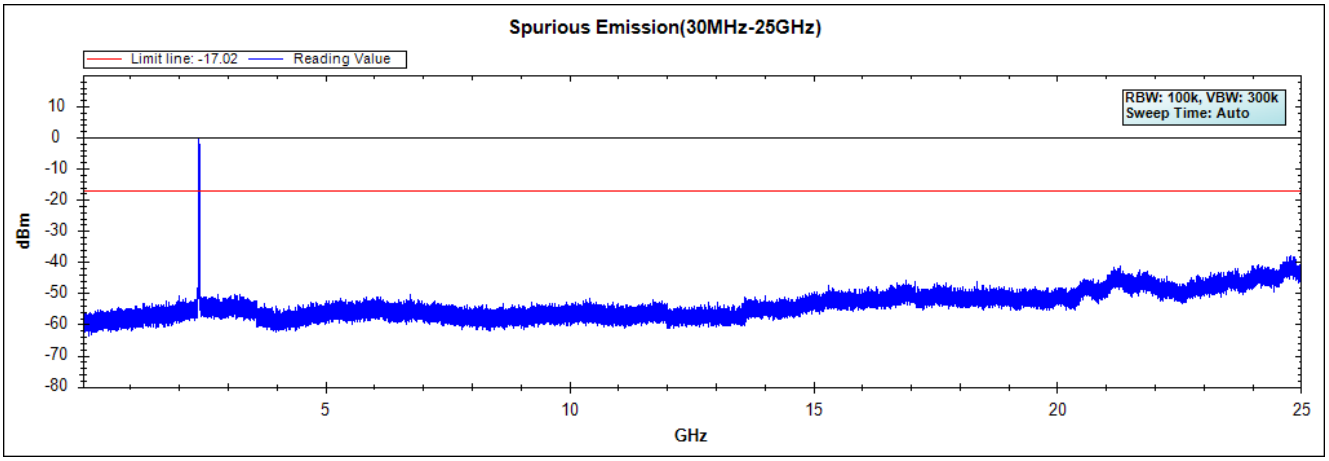
Channel 13 (2472MHz)-Chain A



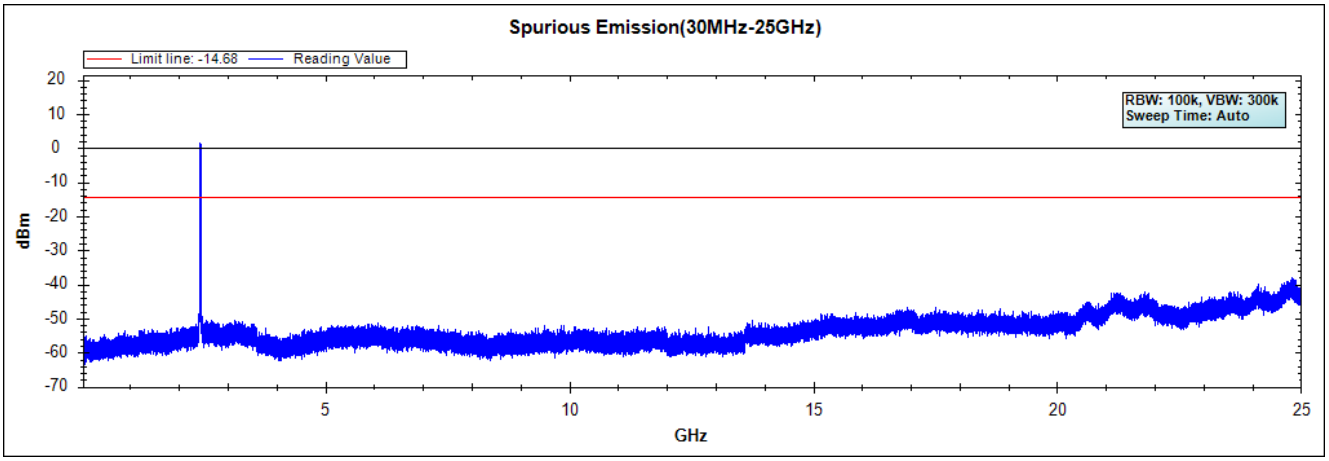
Note: The above test pattern is synthesized by multiple of the frequency range.

Product	:	Notebook Computers
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps)
Test Date	:	2020/11/19

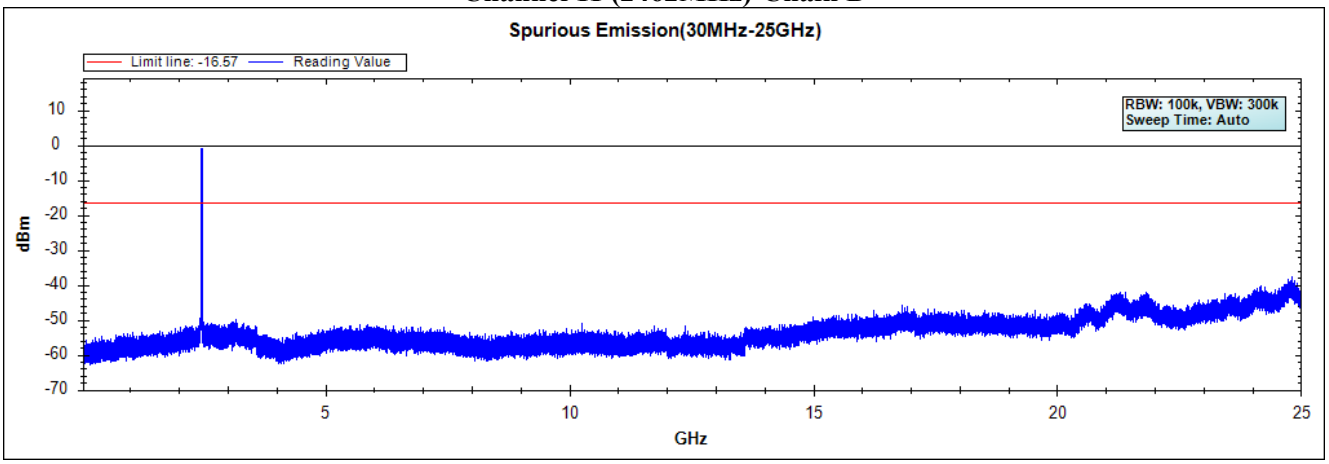
Channel 01 (2412MHz)-Chain B



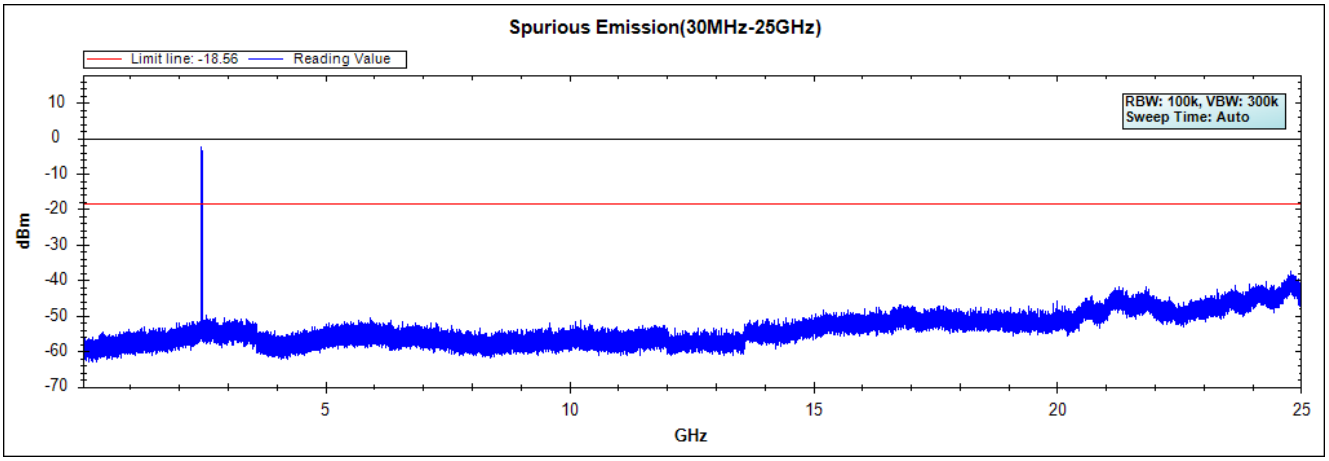
Channel 03 (2442MHz)-Chain B



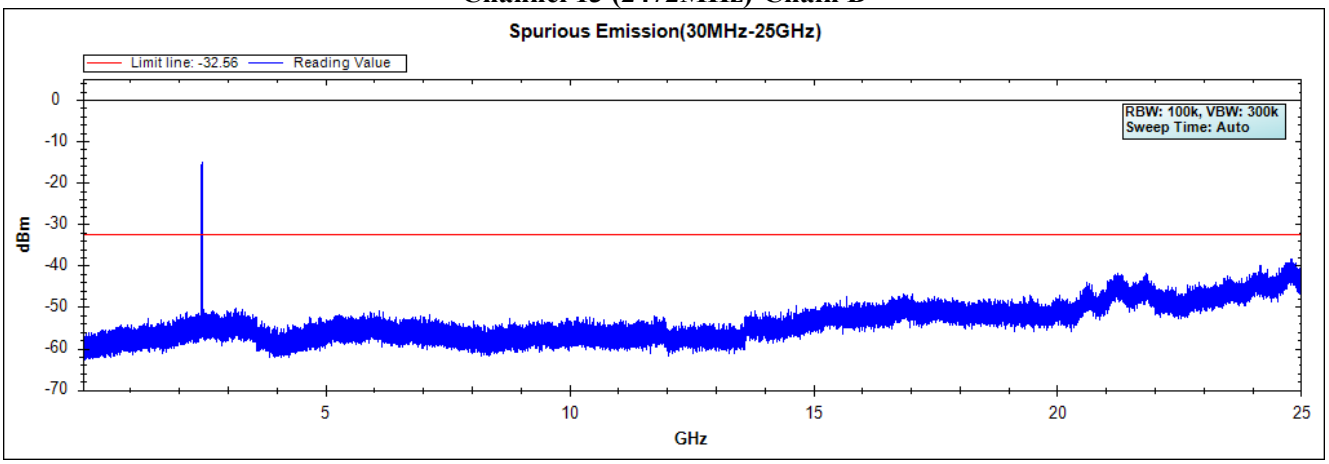
Channel 11 (2462MHz)-Chain B



Channel 12 (2467MHz)-Chain B



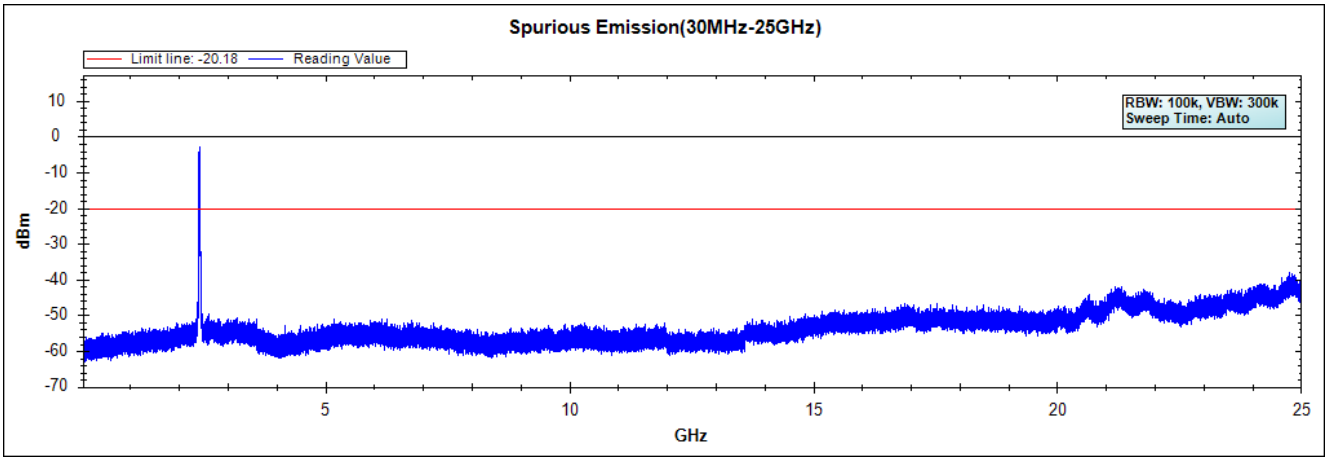
Channel 13 (2472MHz)-Chain B



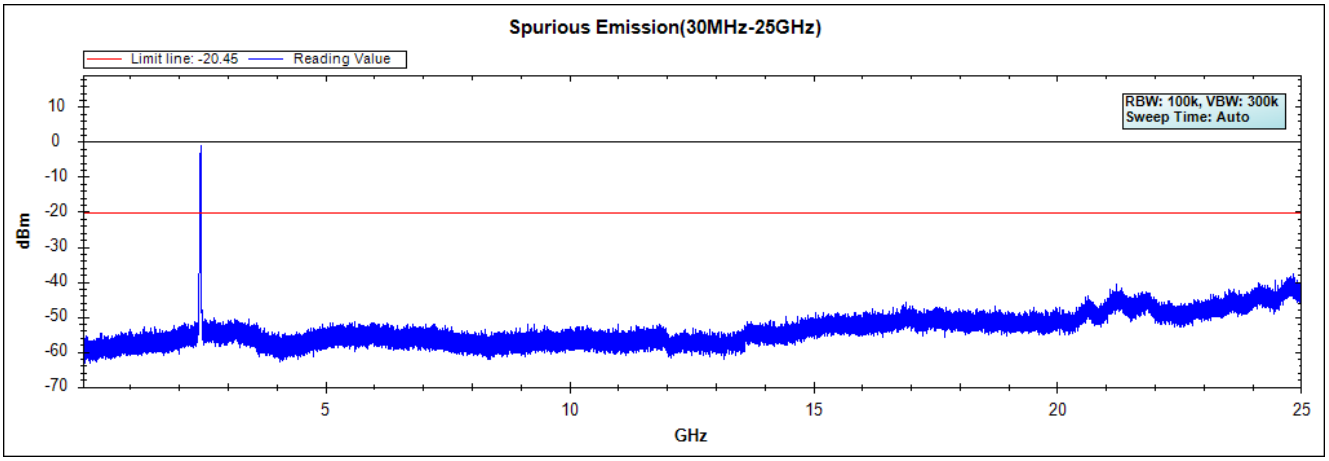
Note: The above test pattern is synthesized by multiple of the frequency range.

Product	:	Notebook Computers
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps)
Test Date	:	2020/11/19

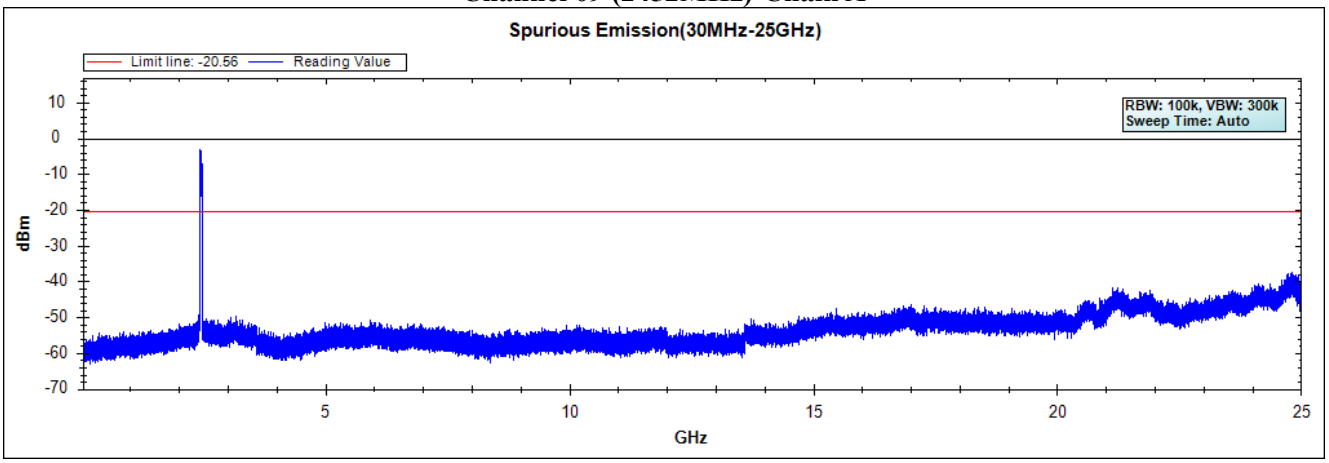
Channel 03 (2422MHz)-Chain A



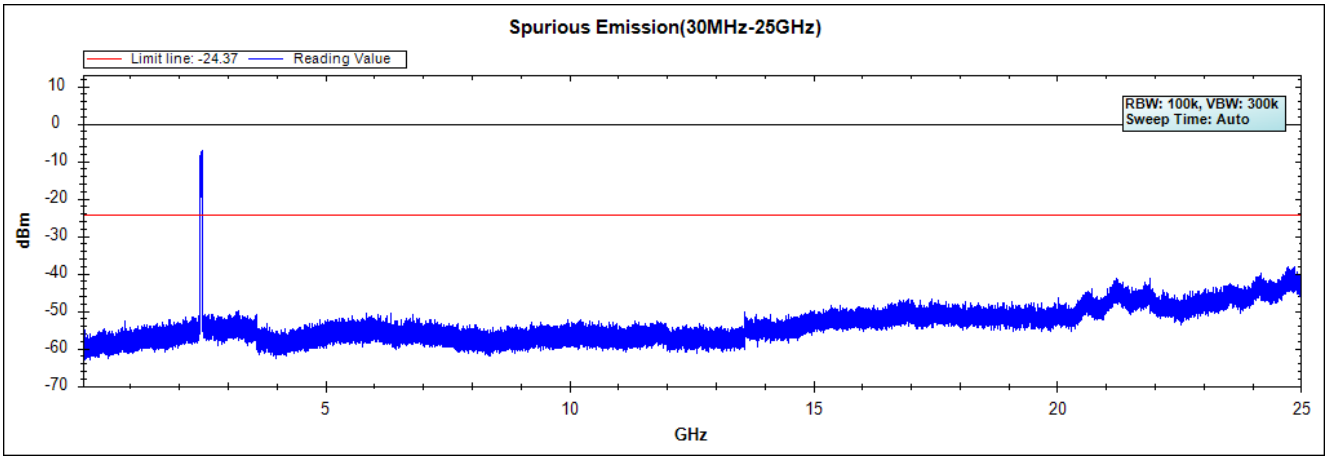
Channel 07 (2442MHz)-Chain A



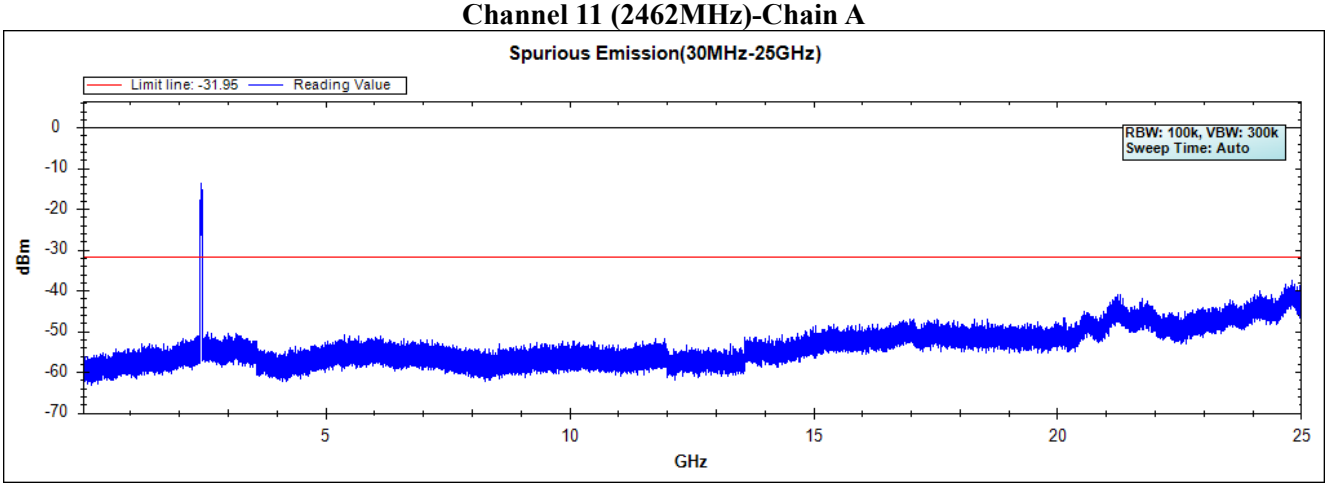
Channel 09 (2452MHz)-Chain A



Channel 10 (2457MHz)-Chain A



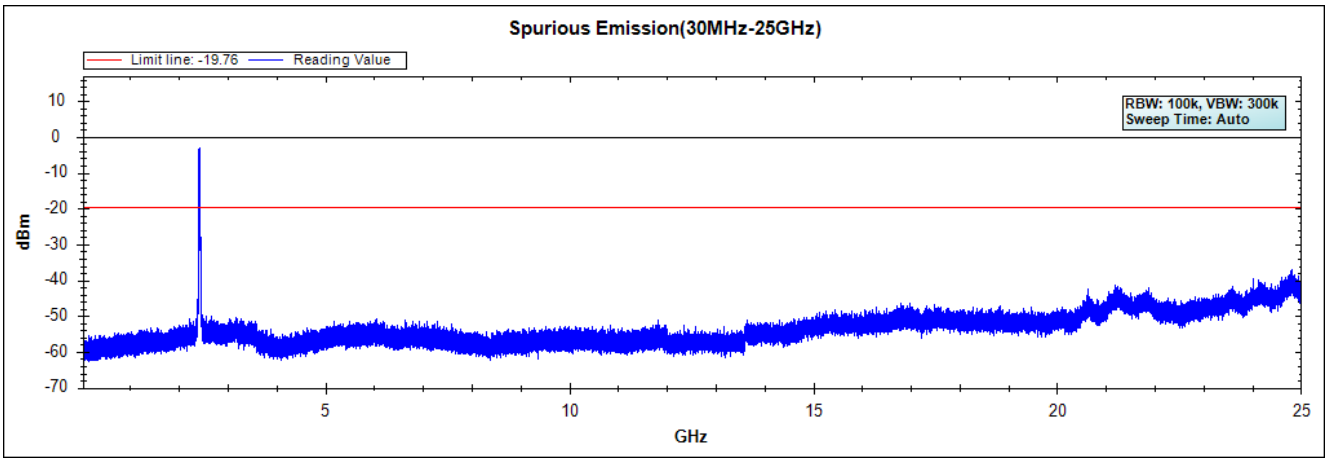
Channel 11 (2462MHz)-Chain A



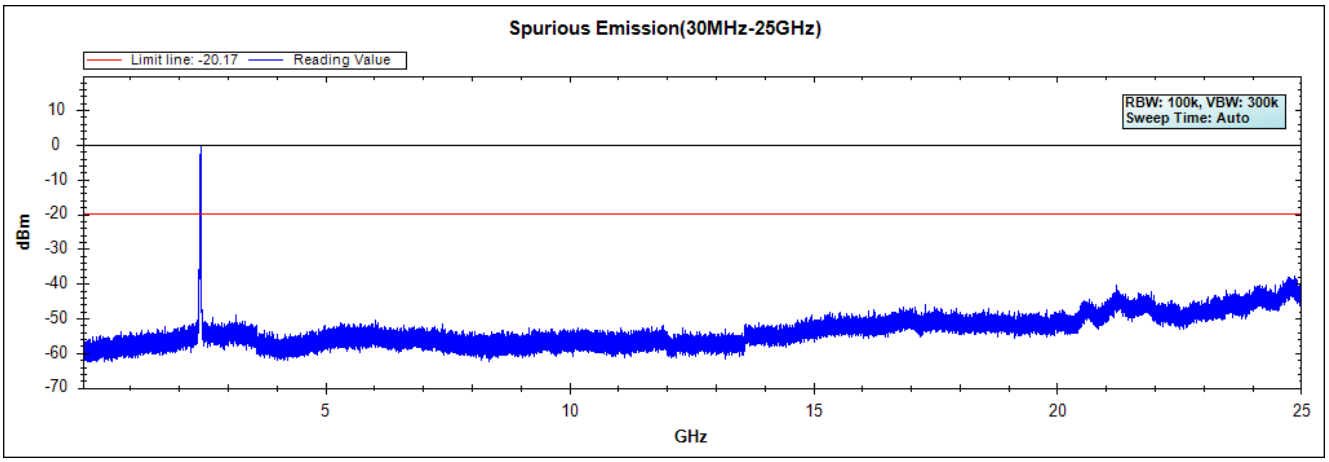
Note: The above test pattern is synthesized by multiple of the frequency range.

Product	:	Notebook Computers
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Mode 16 MIMO: Transmit (802.11ax-40BW_34.4Mbps)
Test Date	:	2020/11/19

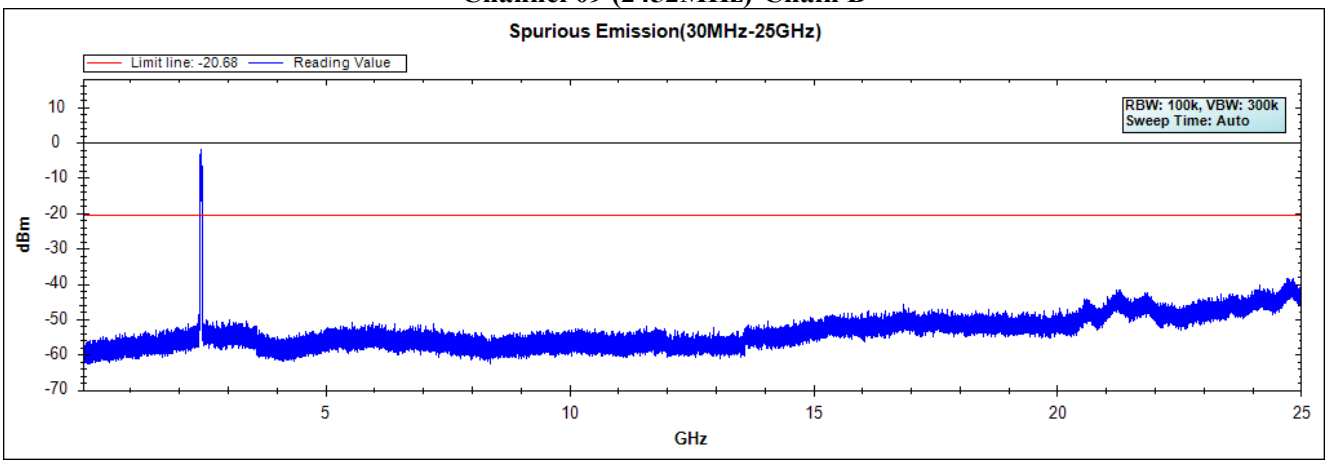
Channel 03 (2422MHz)-Chain B



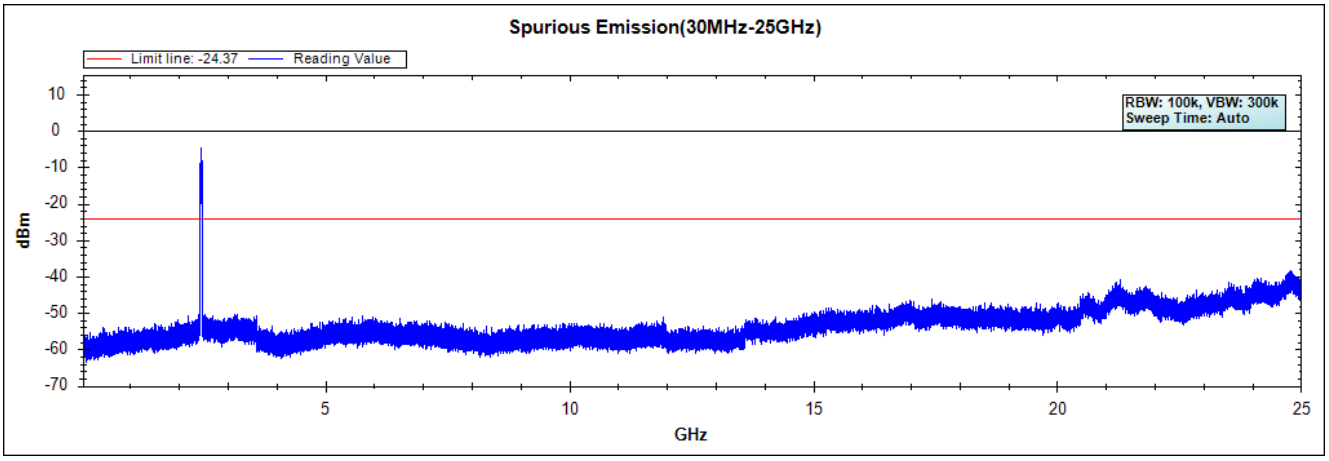
Channel 07 (2442MHz)-Chain B



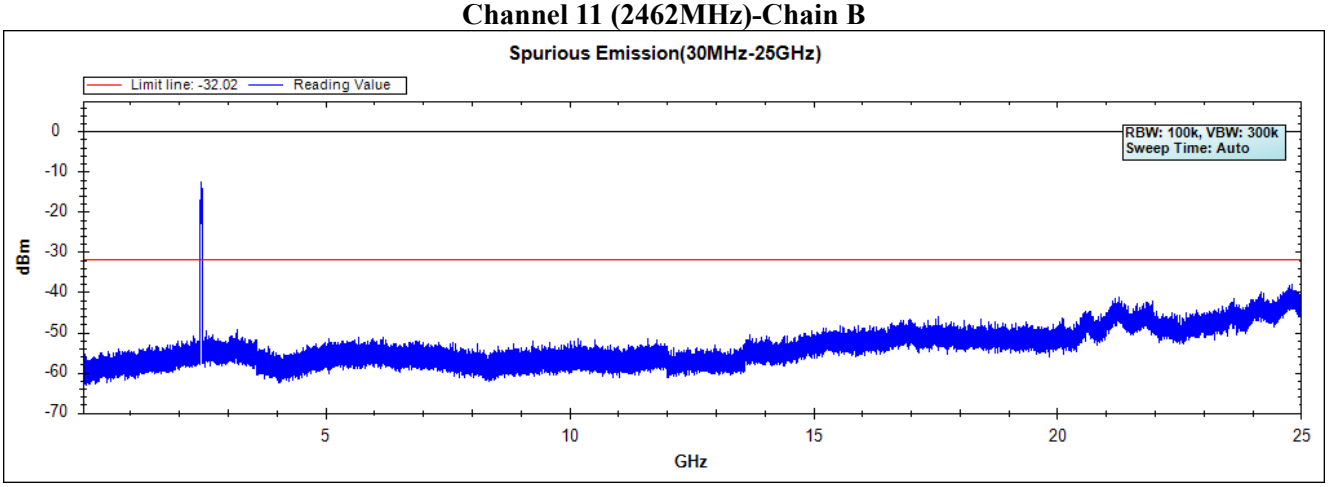
Channel 09 (2452MHz)-Chain B



Channel 10 (2457MHz)-Chain B



Channel 11 (2462MHz)-Chain B

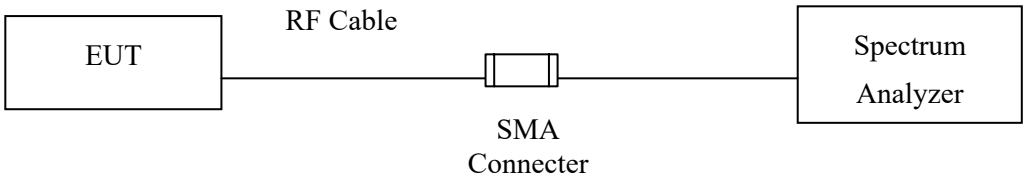


Note: The above test pattern is synthesized by multiple of the frequency range.

6. Band Edge

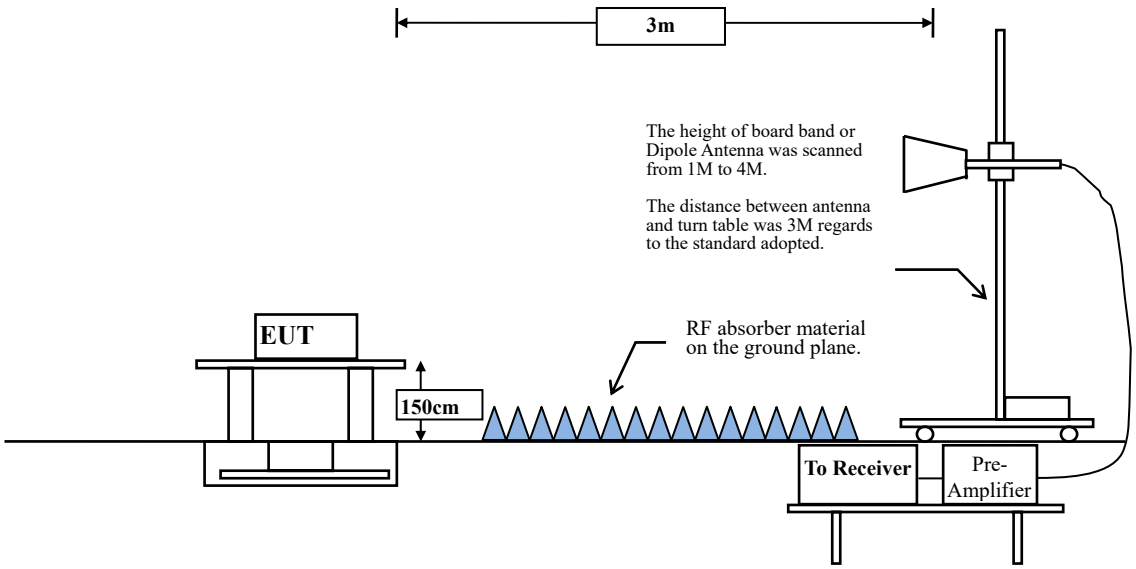
6.1. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1GHz



6.2. Limits

According to FCC Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

6.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.
The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

RBW and VBW Parameter setting:

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

VBW ≥ 3 x RBW.

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

SISO A

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 b	97.48	8.4058	119	500
802.11 g	88.82	2.0725	483	500
802.11 n20	98.96	24.8260	40	10
802.11 n40	98.01	17.8260	56	10
802.11ax20	98.55	24.6380	41	10
802.11 ax40	98.39	18.6230	54	10
802.11 ax20-26/0-RU	96.79	3.9348	254	500
802.11 ax20-52/37-RU	96.24	3.8913	257	500
802.11 ax20-106/53-RU	96.77	3.9130	256	500
802.11 ax40-242/61-RU	98.38	3.9565	253	10

Note: Duty Cycle Refer to Section 9.

MIMO

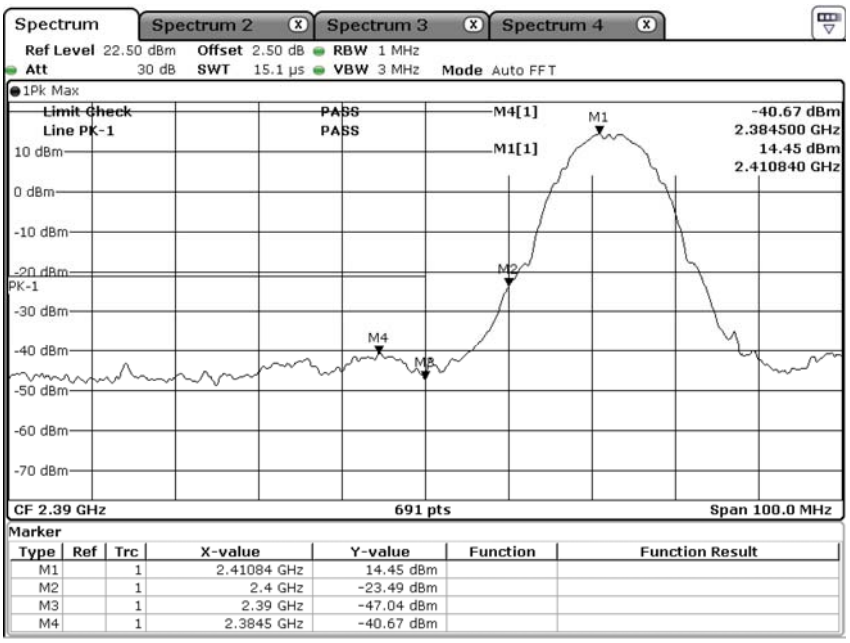
2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11 n20	96.89	18.4855	54	100
802.11 n40	95.73	8.7754	114	500
802.11ax20	98.36	18.6739	54	10
802.11 ax40	95.21	9.2101	109	500
802.11 ax20-26/0-RU	97.31	3.9348	254	500
802.11 ax20-52/37-RU	97.31	3.9348	254	500
802.11 ax20-106/53-RU	97.84	3.9348	254	500
802.11 ax40-242/61-RU	97.33	3.9565	253	500

Note: Duty Cycle Refer to Section 9.

6.4. Test Result of Band Edge

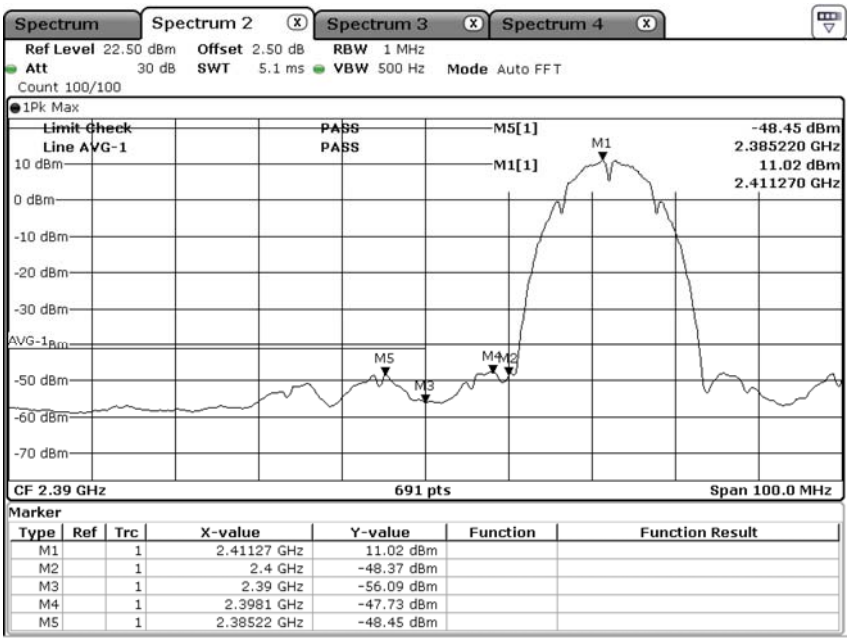
Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2412MHz)
Test Date : 2020/11/19

Peak:



Date: 24.NOV.2020 06:31:19

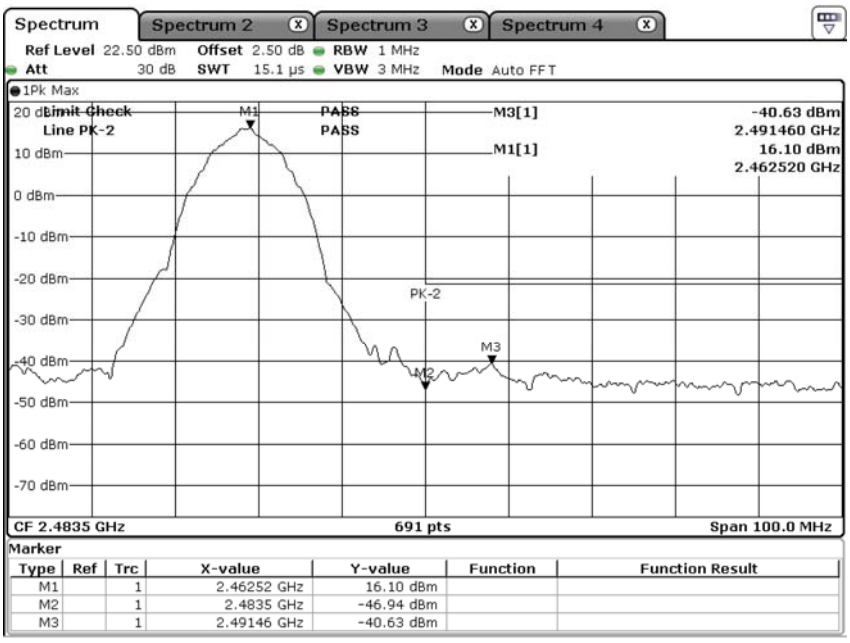
Average:



Date: 24.NOV.2020 06:32:07

Product	:	Notebook Computers
Test Item	:	Band Edge Data
Test Mode	:	Mode 1 SISO A: Transmit (802.11b_1Mbps) (2462MHz)
Test Date	:	2020/11/19

Peak:



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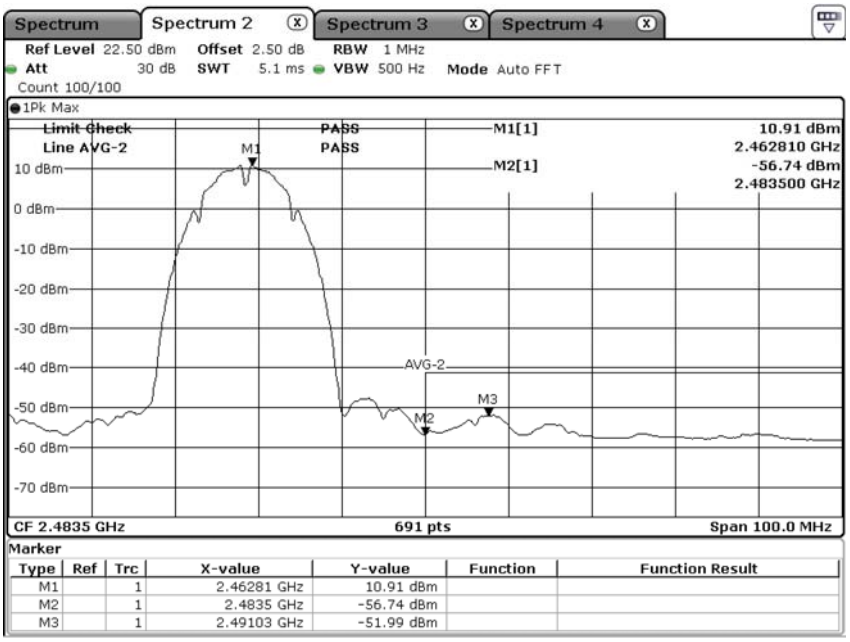
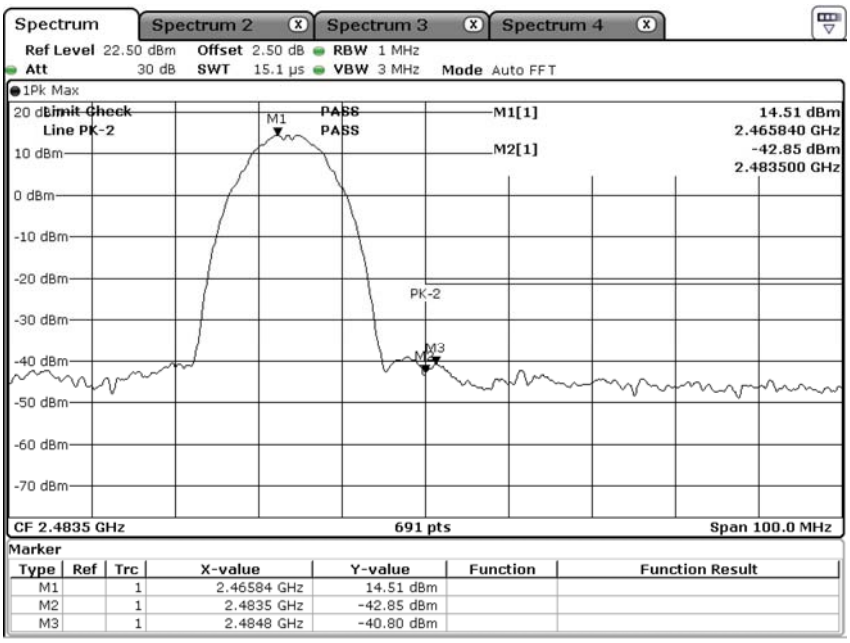


Date: 24.NOV.2020 06:35:13

Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2467MHz)
Test Date : 2020/11/19

Peak:



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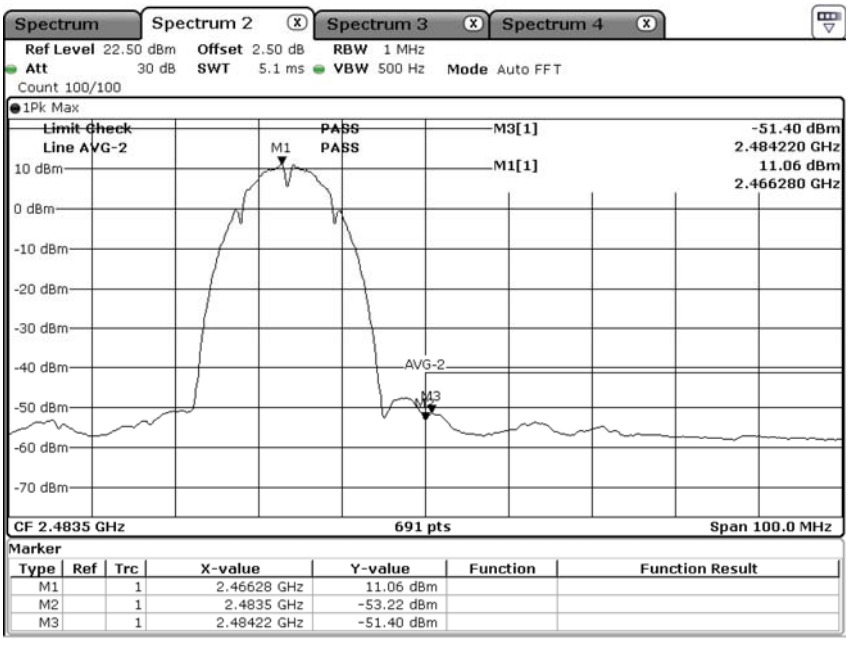
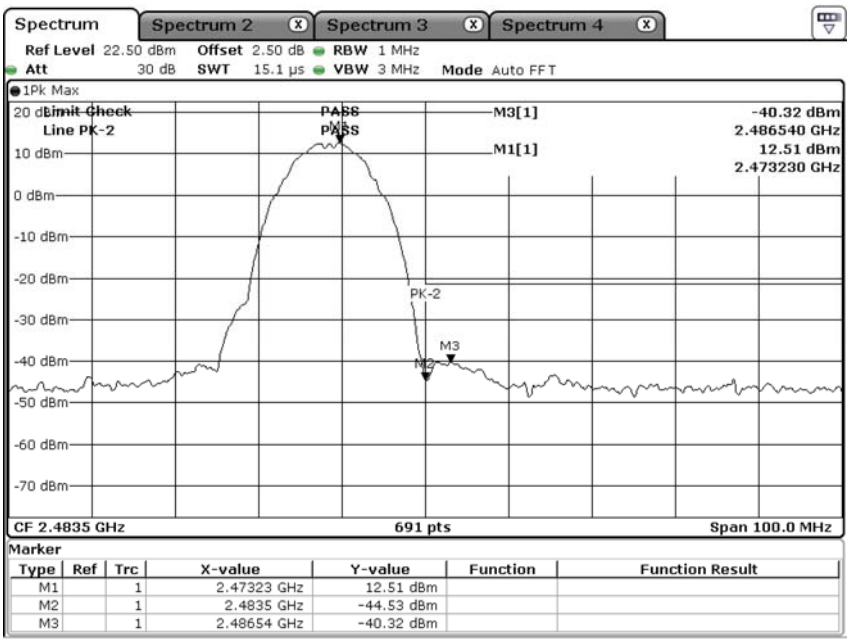


Date: 24.NOV.2020 06:36:33

Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 1 SISO A: Transmit (802.11b_1Mbps) (2472MHz)
Test Date : 2020/11/19

Peak:



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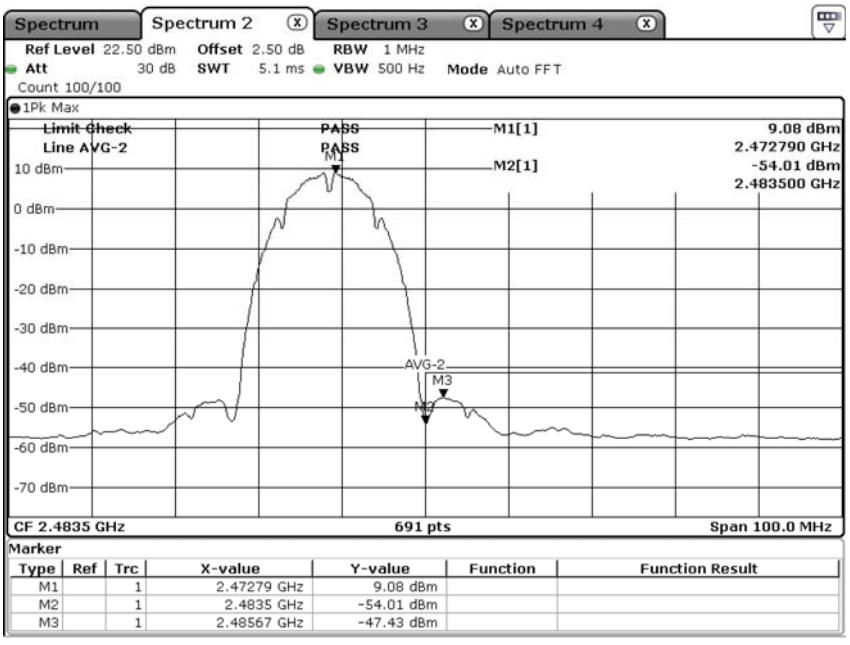
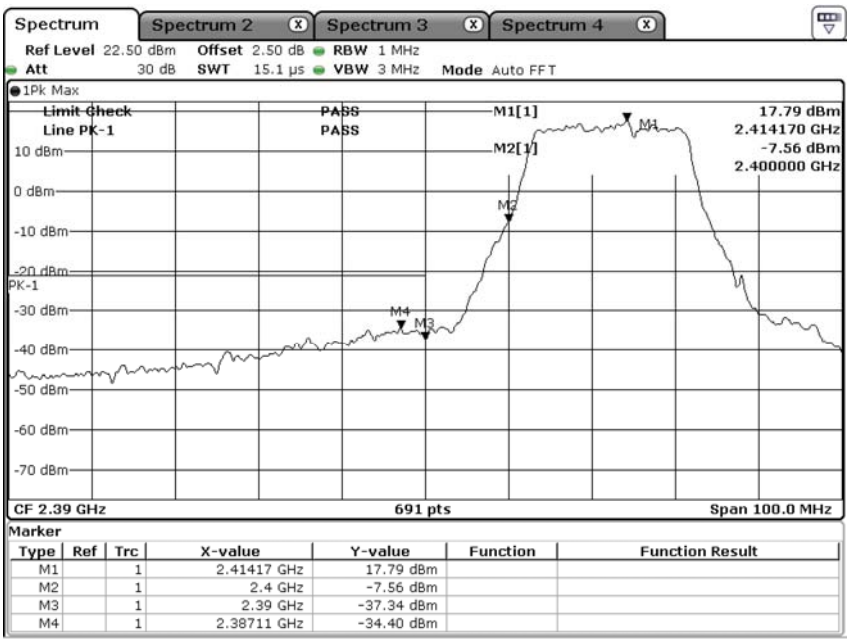


Date: 24.NOV.2020 06:39:12

Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 5 SISO A: Transmit (802.11ax-20BW_8.6Mbps) (2412MHz)
Test Date : 2020/11/19

Peak:



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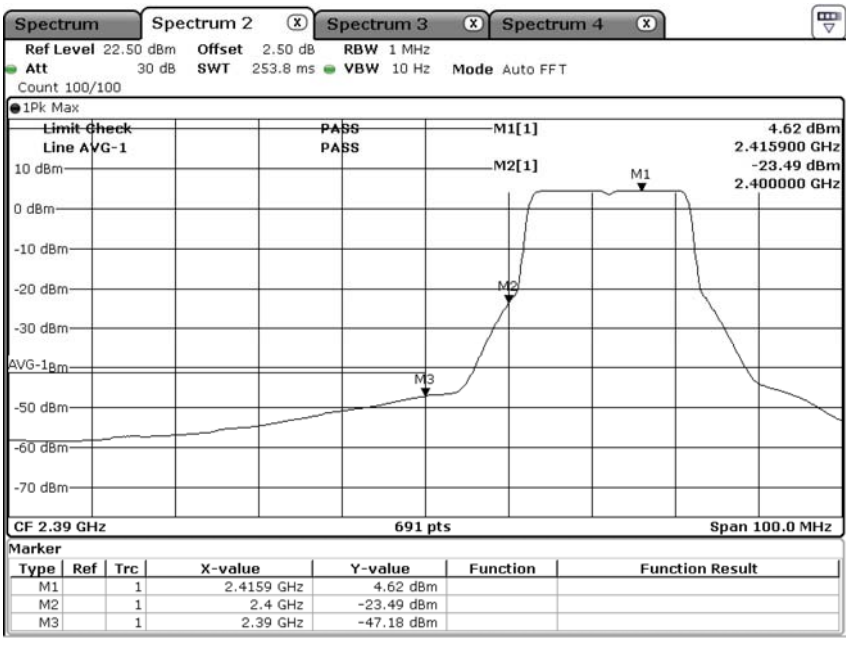
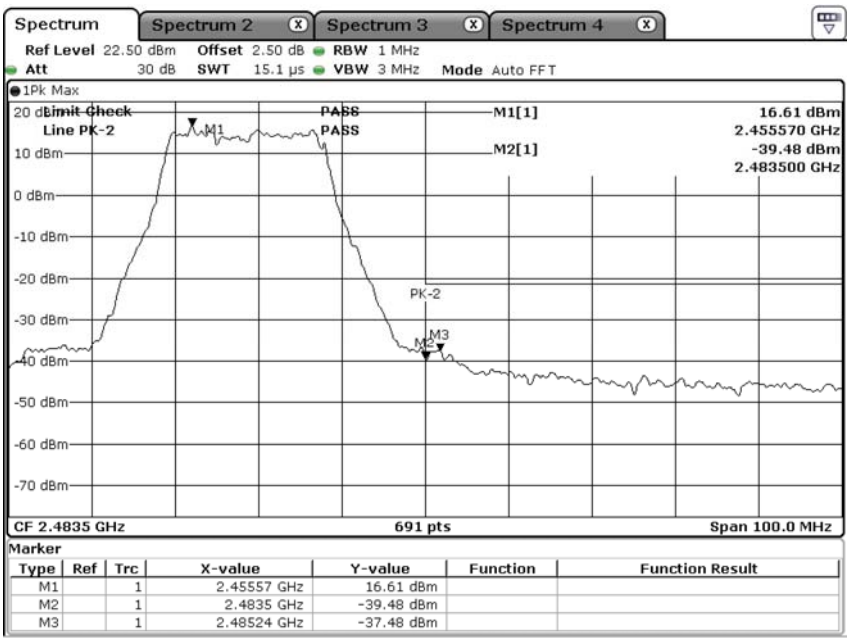


Date: 24.NOV.2020 06:44:06

Product	:	Notebook Computers
Test Item	:	Band Edge Data
Test Mode	:	Mode 5 SISO A: Transmit (802.11ax-20BW_8.6Mbps) (2462MHz)
Test Date	:	2020/11/19

Peak:



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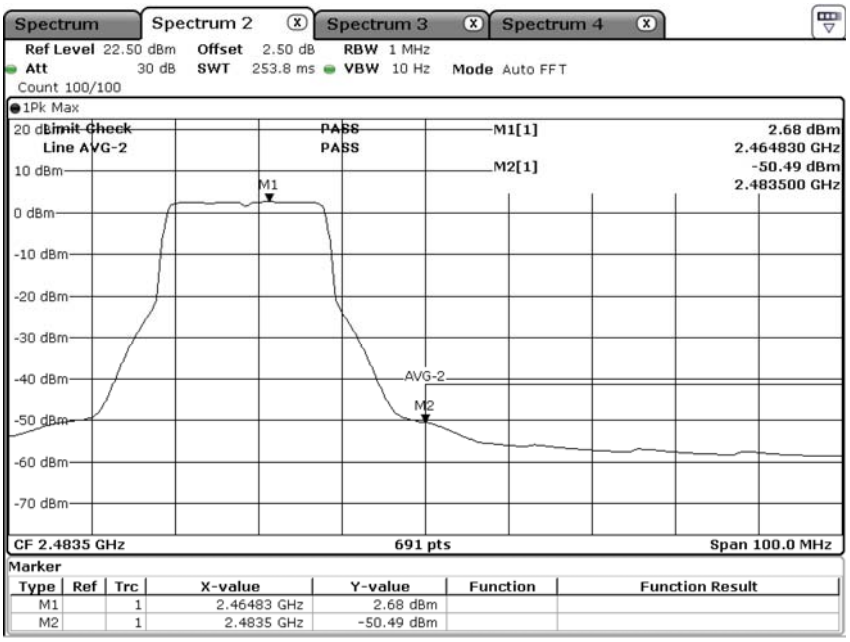
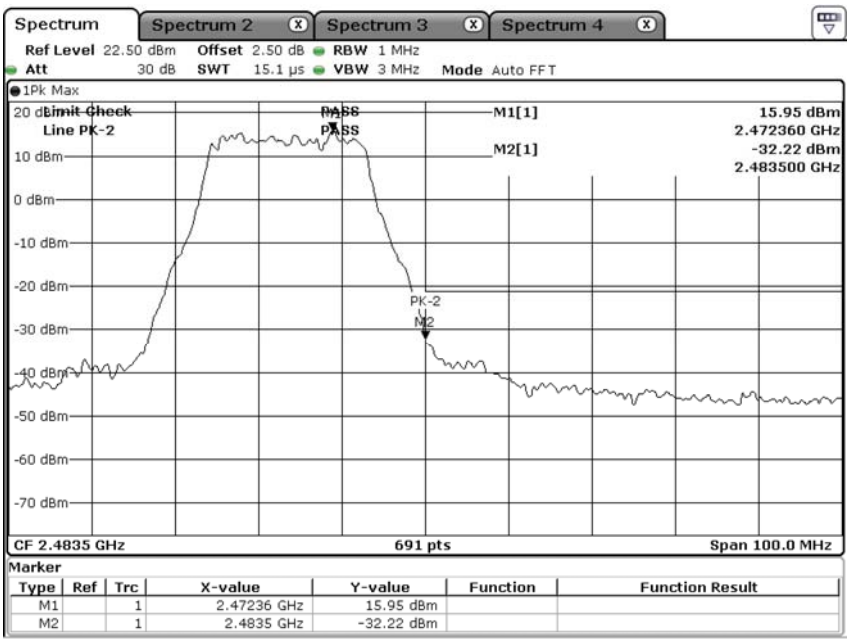


Date: 24.NOV.2020 06:48:41

Product	:	Notebook Computers
Test Item	:	Band Edge Data
Test Mode	:	Mode 5 SISO A: Transmit (802.11ax-20BW_8.6Mbps) (2467MHz)
Test Date	:	2020/11/19

Peak:



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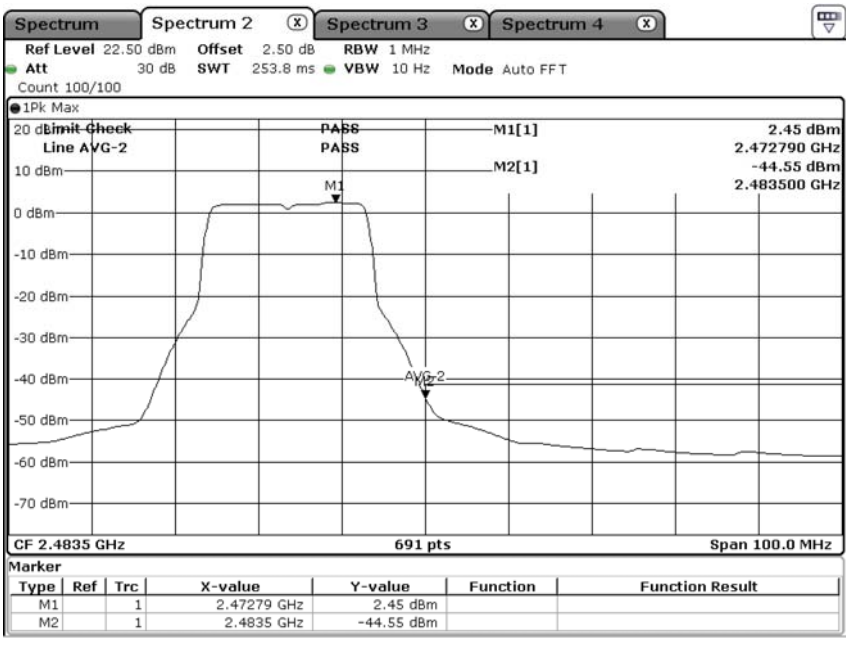
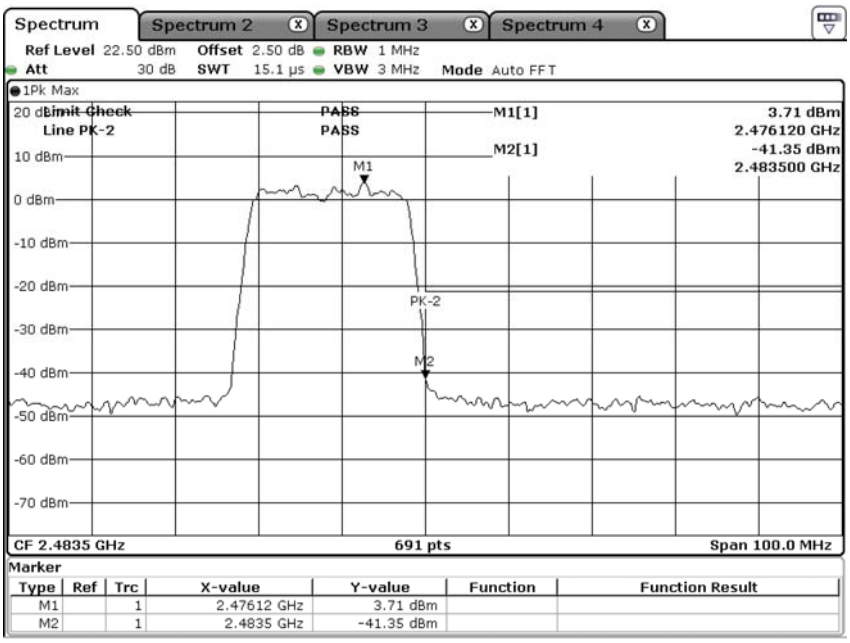


Date: 24.NOV.2020 06:52:41

Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 5 SISO A: Transmit (802.11ax-20BW_8.6Mbps) (2472MHz)
Test Date : 2020/11/19

Peak:



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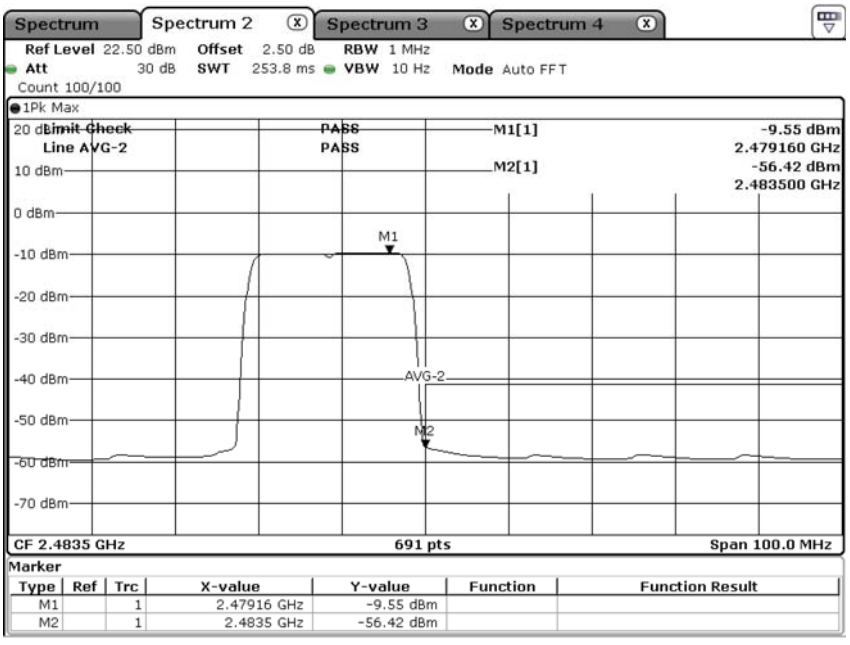
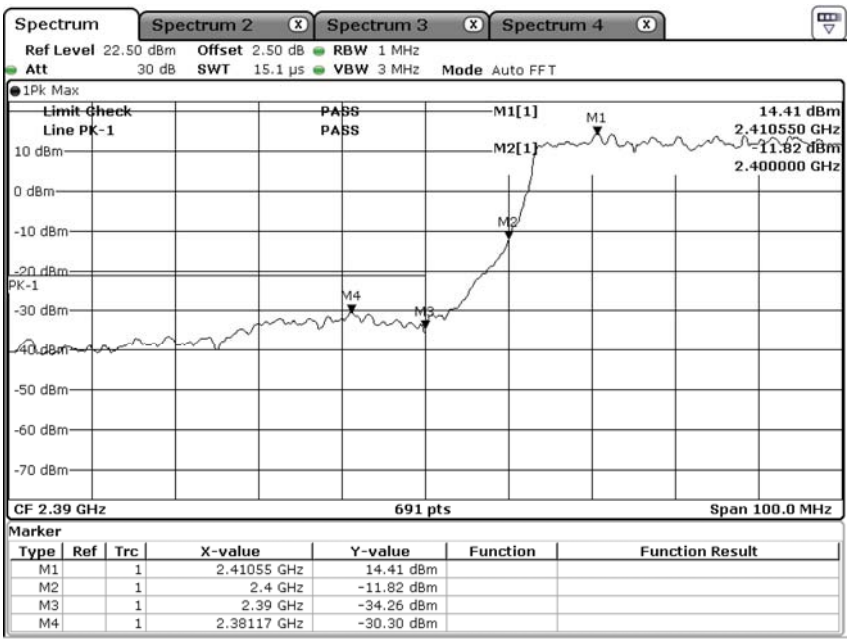


Date: 24.NOV.2020 07:15:10

Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 6 SISO A: Transmit (802.11ax-40BW_17.2Mbps) (2422MHz)
Test Date : 2020/11/19

Peak:



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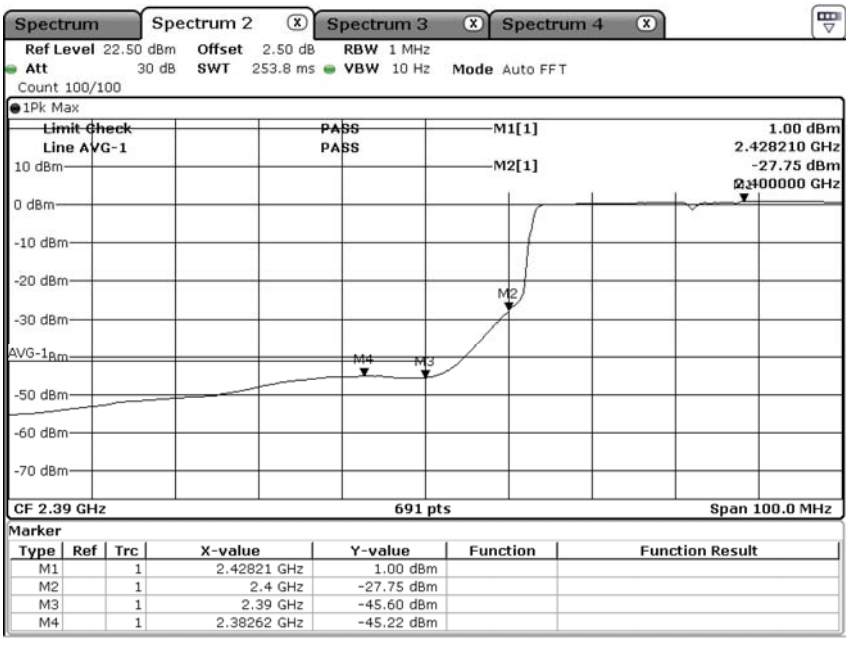
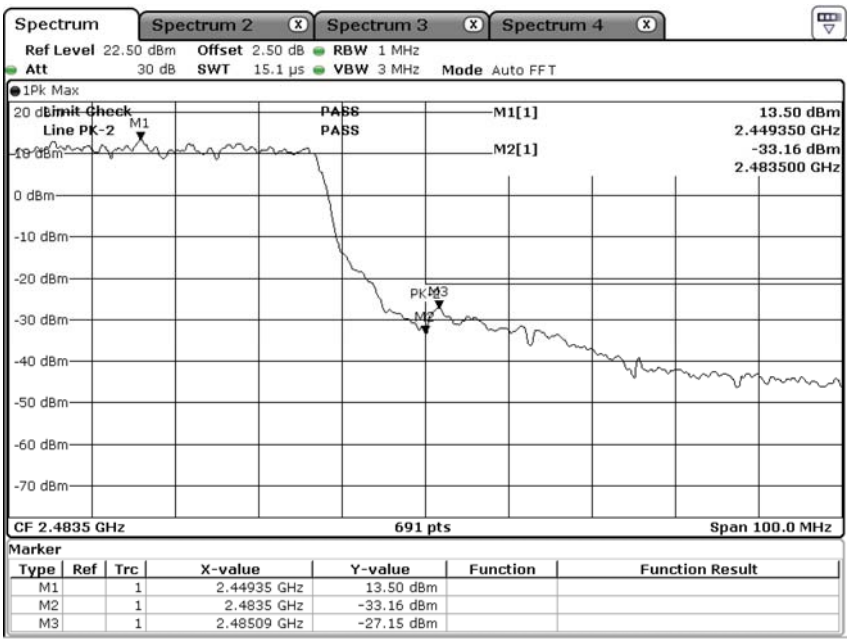


Date: 24.NOV.2020 07:18:55

Product	:	Notebook Computers
Test Item	:	Band Edge Data
Test Mode	:	Mode 6 SISO A: Transmit (802.11ax-40BW_17.2Mbps) (2452MHz)
Test Date	:	2020/11/19

Peak:



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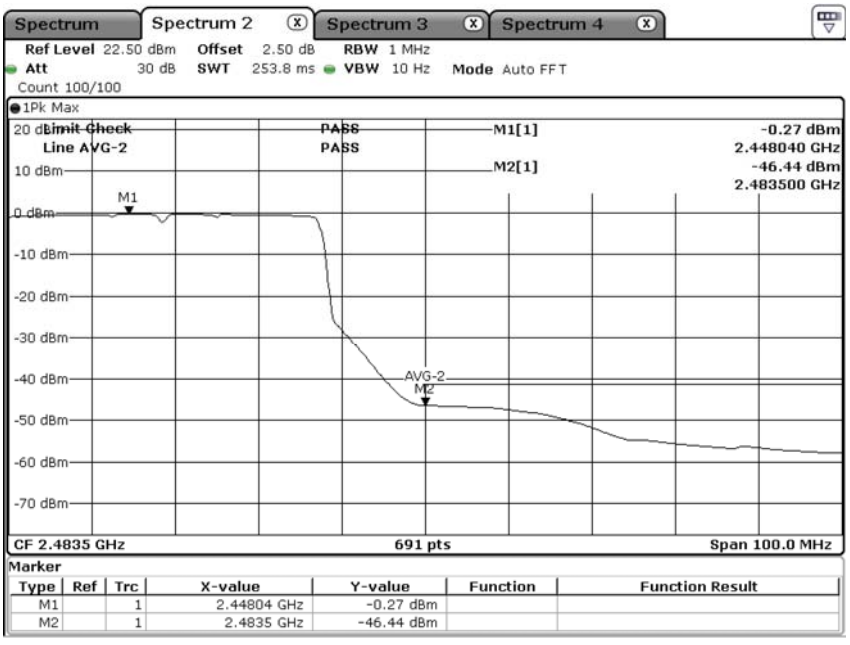
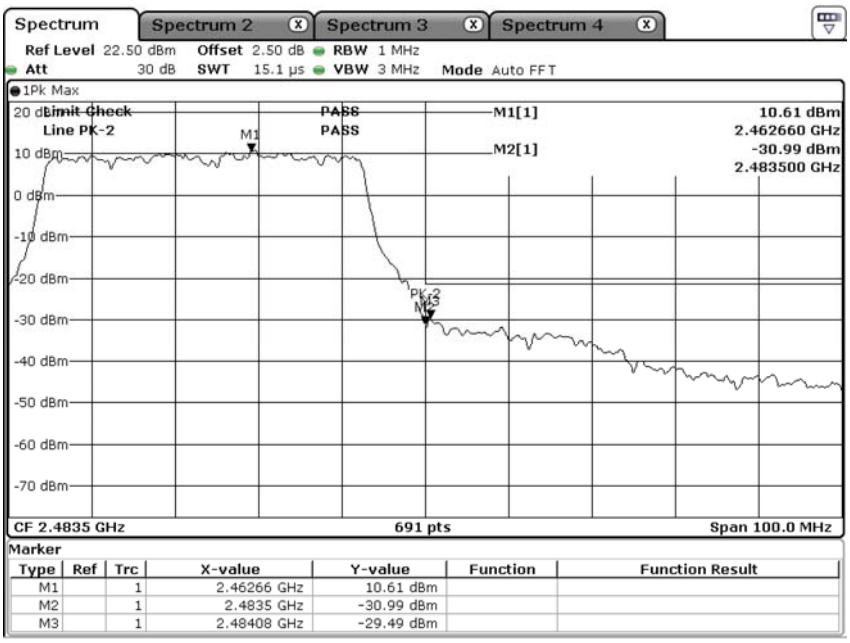


Date: 24.NOV.2020 07:22:34

Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 6 SISO A: Transmit (802.11ax-40BW_17.2Mbps) (2457MHz)
Test Date : 2020/11/19

Peak:



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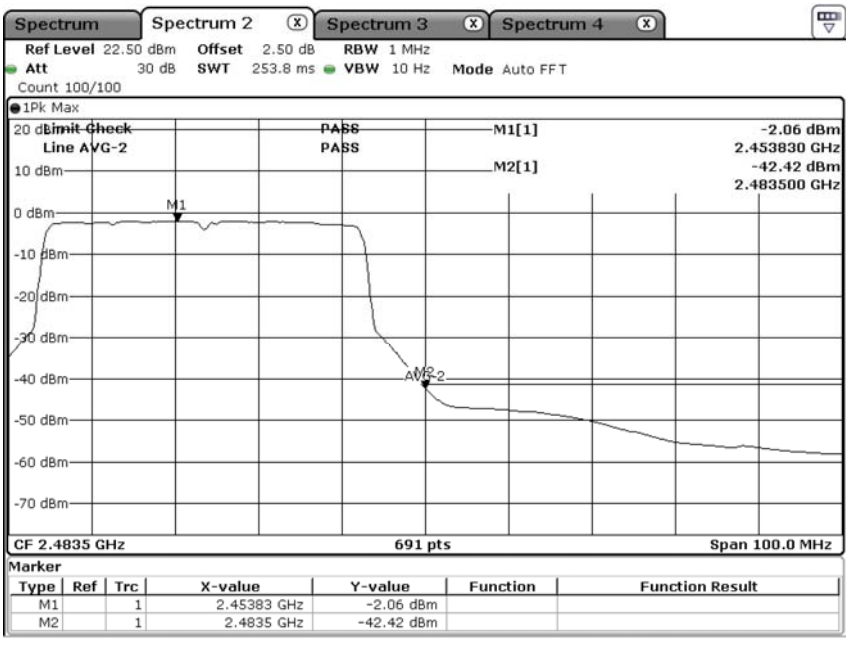
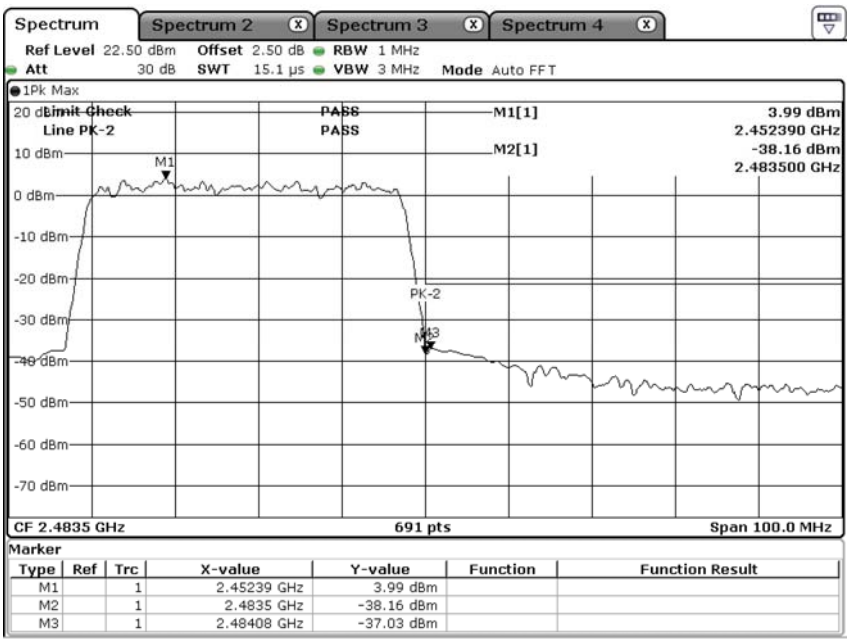


Date: 24.NOV.2020 07:26:48

Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 6 SISO A: Transmit (802.11ax-40BW_17.2Mbps) (2462MHz)
Test Date : 2020/11/19

Peak:



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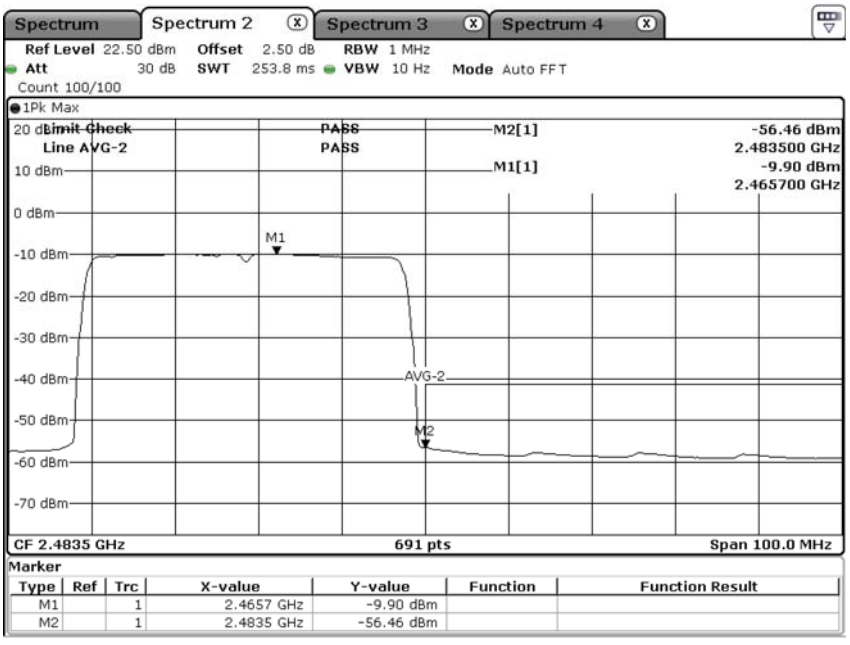
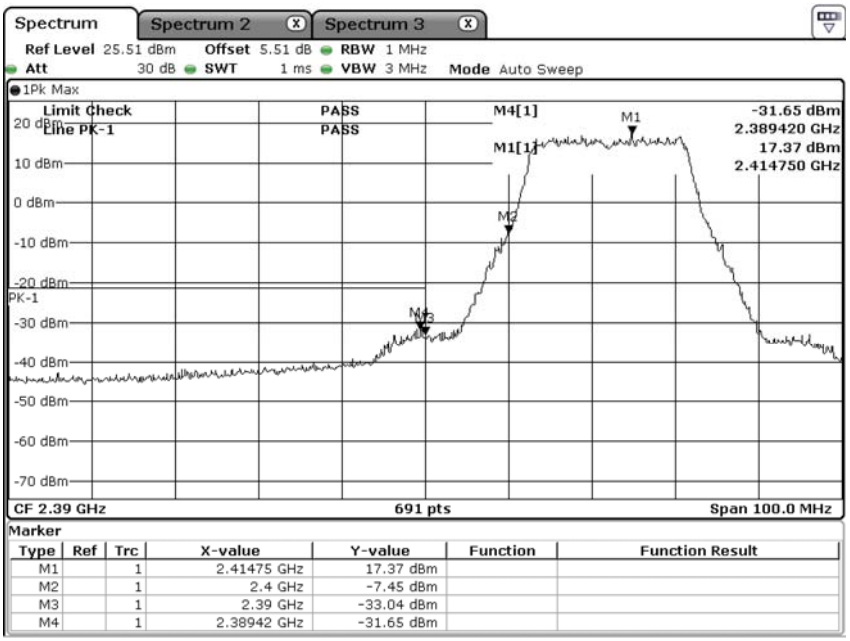


Date: 24.NOV.2020 07:31:53

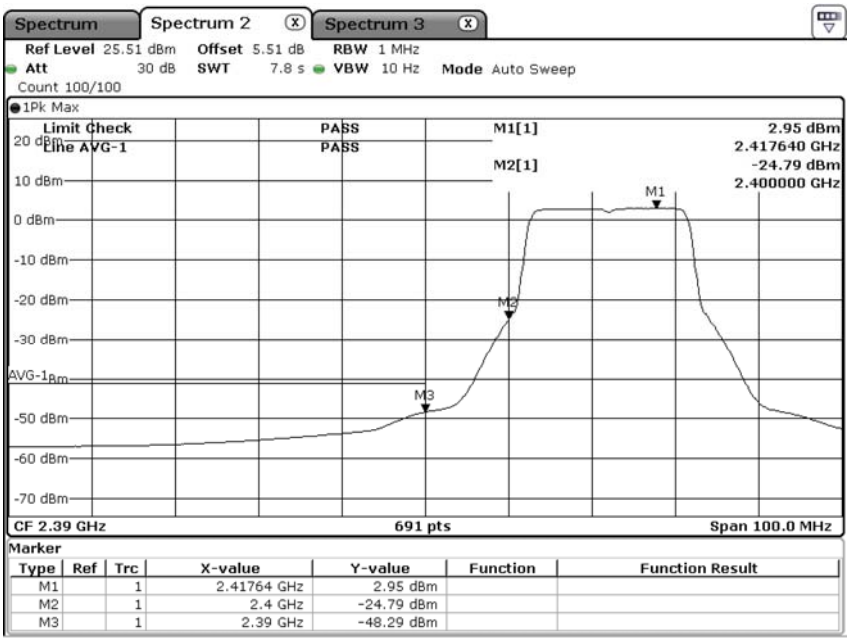
Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2412MHz)
Test Date : 2020/11/19

Peak: - Chain A



Date: 13.NOV.2020 13:39:37

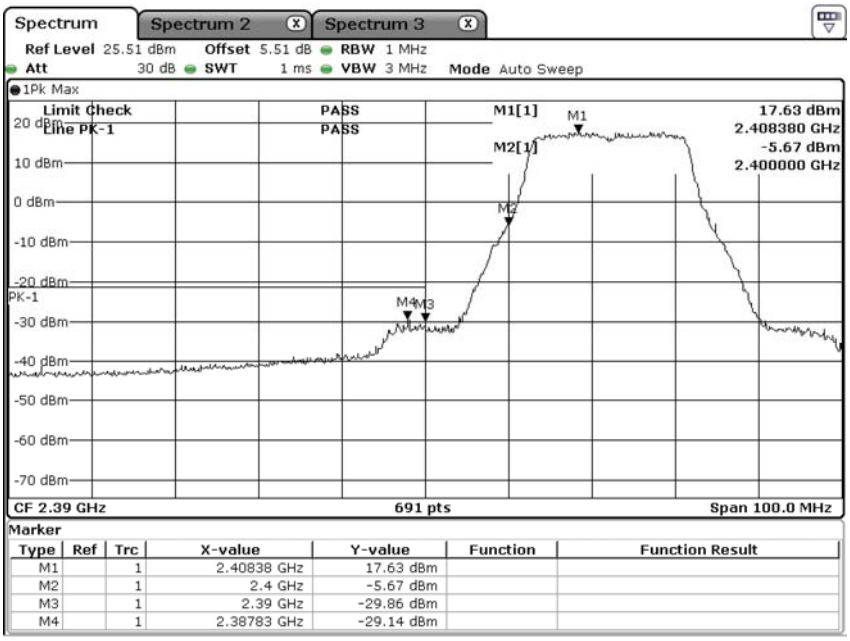
Average: - Chain A



Date: 13.NOV.2020 13:38:54

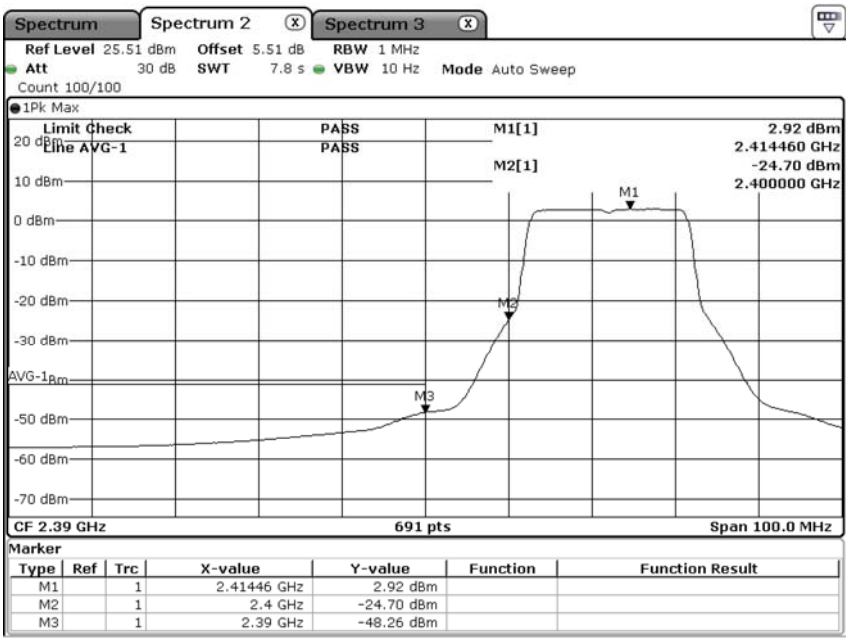
Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2412MHz)
Test Date : 2020/11/19

Peak: - Chain B



Date: 13.NOV.2020 13:36:45

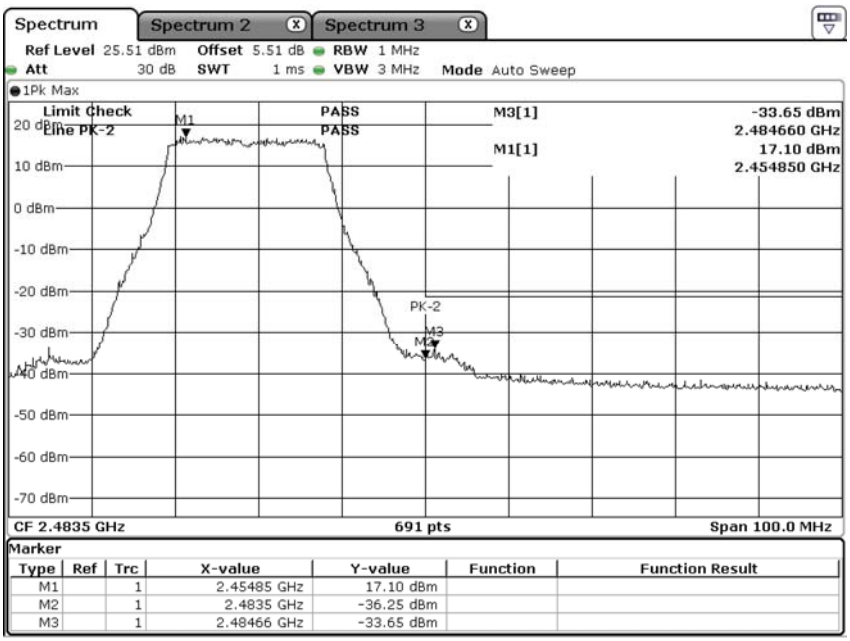
Average: - Chain B



Date: 13.NOV.2020 13:37:26

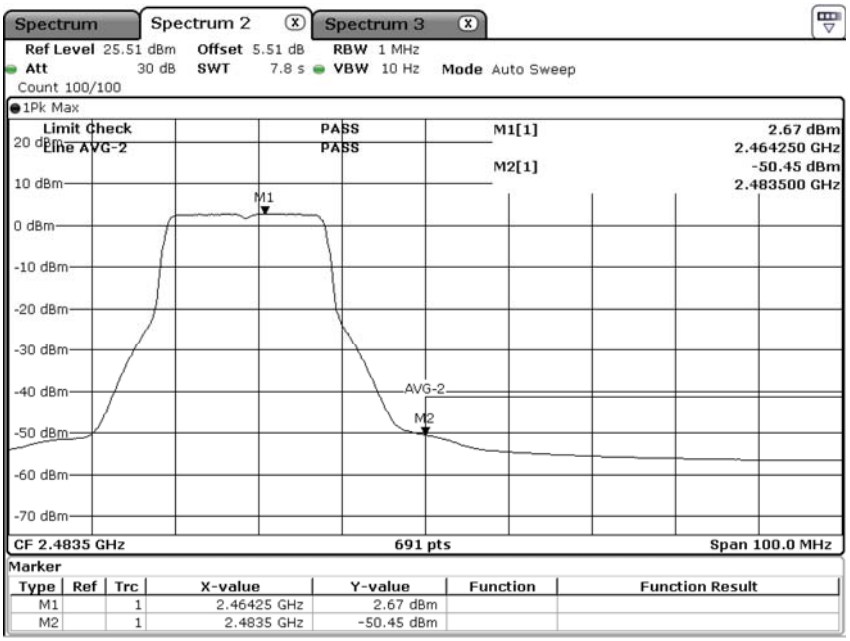
Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2462MHz)
Test Date : 2020/11/19

Peak: - Chain A



Date: 13.NOV.2020 13:43:50

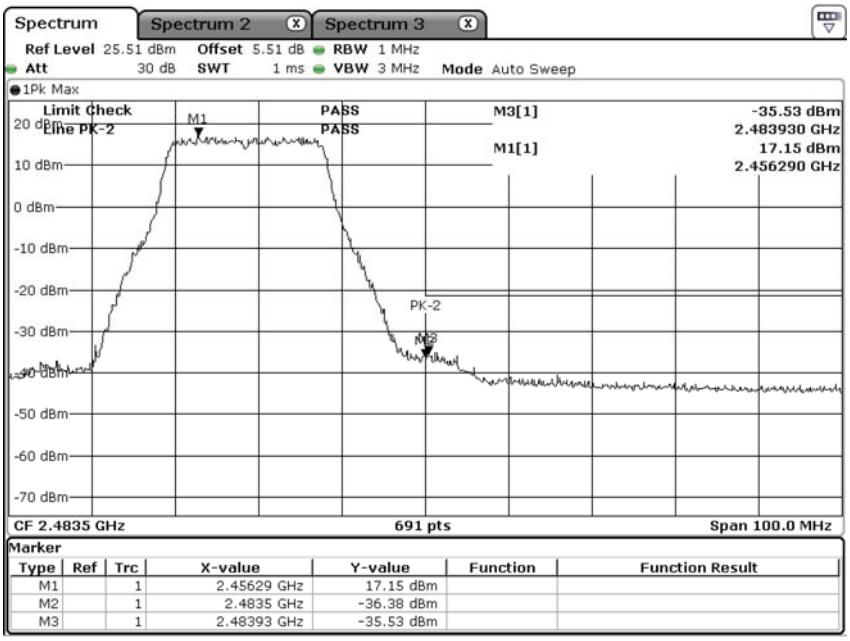
Average: - Chain A



Date: 13.NOV.2020 13:45:06

Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2462MHz)
Test Date : 2020/11/19

Peak: - Chain B



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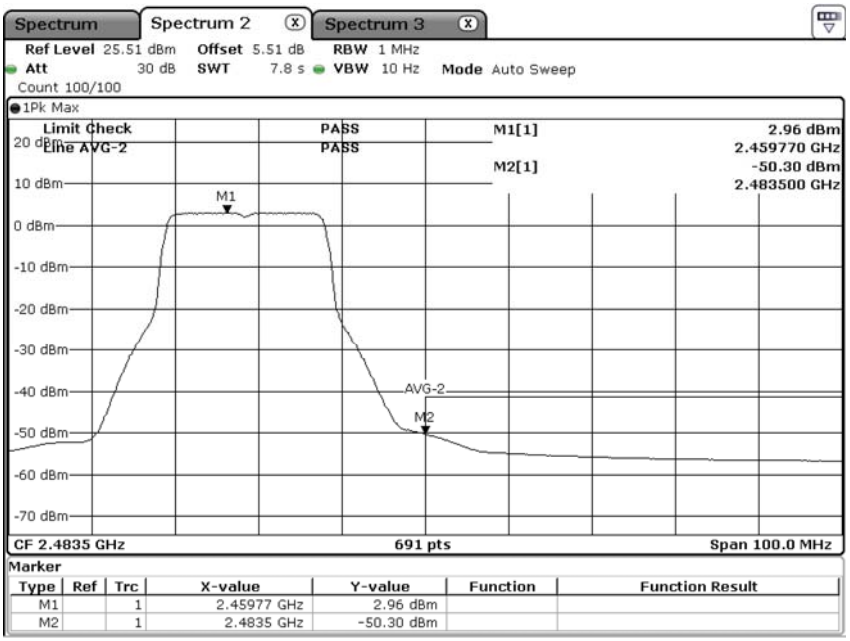
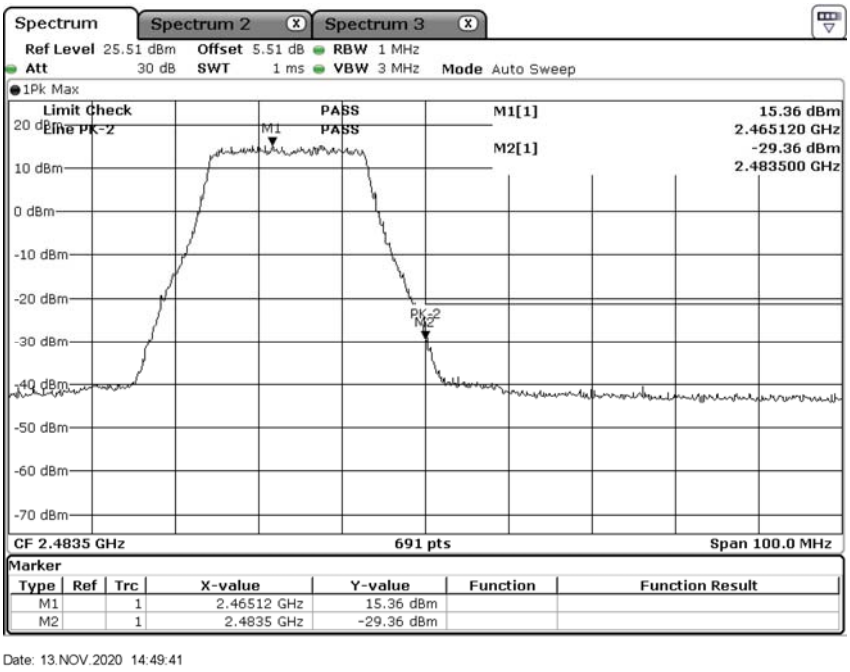
Average: - Chain B



Date: 13.NOV.2020 13:46:43

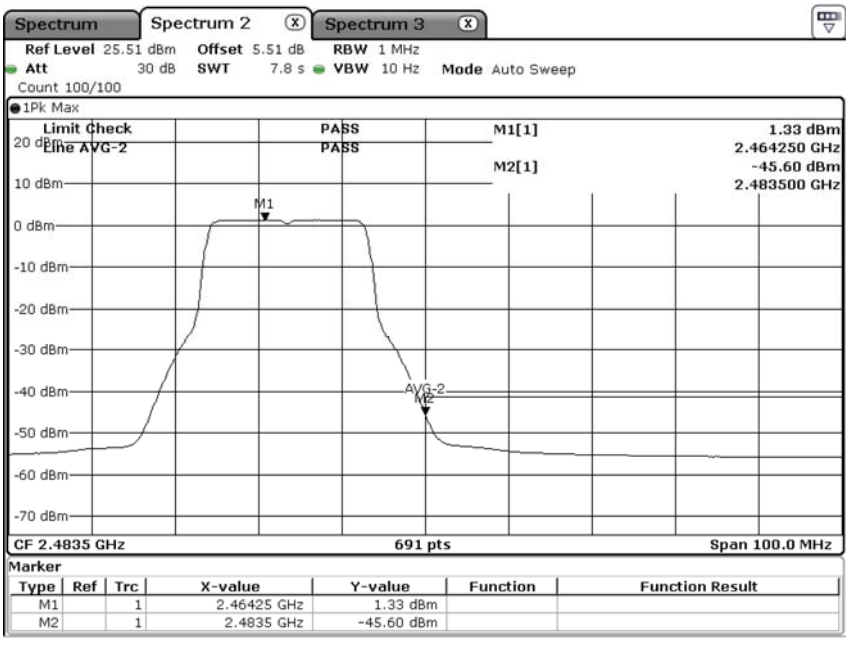
Product : Notebook Computers
Test Item : Band Edge Data
Test Mode : Mode 15 MIMO: Transmit (802.11ax-20BW_17.2Mbps) (2467MHz)
Test Date : 2020/11/19

Peak: - Chain A



Date: 13.NOV.2020 14:49:41

Average: - Chain A



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