Test Report

Product: Minilaptop

Trade Mark: N/A

Model Number: NA105H

FCC ID: 2BB3W-NA105H

Prepared for

ShenZhen ZhiWei Technology Co., Ltd

6th Floor, Bld 8, Lijincheng Industrial Park Longhua Street, Longhua District shenzhen China

Prepared by

Shenzhen HongBiao Certification& Testing Co., Ltd

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TEST RESULT CERTIFICATION

Applicant's Name	:	ShenZhen ZhiWei Technology Co., Ltd
Address	:	6th Floor, Bld 8, Lijincheng Industrial Park Longhua Street, Longhua District shenzhen China
Manufacturer's Name	:	ShenZhen ZhiWei Technology Co., Ltd
Address	:	6th Floor, Bld 8, Lijincheng Industrial Park Longhua Street, Longhua District shenzhen China

Product description

Product name	:	Minilaptop
Model Number	:	NA105H
Standards	:	FCC Part 15.407
Test procedure	:	IEEE/ANSI C63.10-2020 789033 D02 General UNII Test Procedures New Rules v02r01

This device described above has been tested by Shenzhen HongBiao Certification& Testing Co., Ltd and the test results show that the equipment under test (EUT) is in compliance with the EMC requirements. And it is applicable only to the tested sample identified in the report.

Date of Test

Date (s) of performance of tests .....: June 20, 2025~ July 01, 2025

Test Result.....: **Pass**

Testing Engineer : Zoe Su

(Zoe Su)

Technical Manager : Gary Lu

(Gary Lu)

Authorized Signatory : Leo Su

(Leo Su)

Revision History

Revised No.	Date of Issue	Description
01	July 04, 2025	Original

1 General Description

1.1 Description of EUT

Product name:	Minilaptop
Model name:	NA105H
Series Model:	N/A
Different of series model:	N/A
Frequency range:	5180 MHz to 5240 MHz
Modulation type:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac/ax;
Transfer rate:	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40): MCS0-MCS15; 802.11ac/ax(VHT20/HE20): NSS1, MCS0-MCS8 802.11ac/ax(VHT40/HE40): NSS1, MCS0-MCS9 802.11ac/ax(VHT80/HE80): NSS1, MCS0-MCS9
Channel bandwidth:	802.11a: 20 MHz 802.11n: 20 MHz, 40 MHz 802.11ac/ax: 20 MHz, 40 MHz, 80MHz
Antenna type:	Internal Antenna
Antenna gain:	2.75dBi
Max. output power:	7.29dBm
Hardware version:	IP3-DNN20A
Software version:	DNN20AV3.54.rom
Battery:	Norminal Voltage: 7.6Vd.c Rated Capacity: 3800mAh, 28.88Wh Charge Limited Voltage: 8.7V
Power supply:	DC 12V from adapter AC 120V/60Hz
Adapter information:	Model: J302-1203000UX Input: 100-240V~50/60Hz 1.5A Output: 12.0V⎓3.0A 36.0W

1.2 Test Mode

For 802.11a/n(HT20)/ ac(VHT20)/ ax(HE20)

U-NII-1 (5150 - 5250 MHz)		
Channel Number	Channel	Frequency (MHz)
36	Low	5180

40	Mid	5200
48	High	5240

For 802.11n (HT40)/ac (VHT40)/ ax (HE40)

U-NII-1 (5150 - 5250 MHz)		
Channel Number	Channel	Frequency (MHz)
38	Low	5190
46	High	5230

For 802.11ac (VHT80)/ax(HE80)

80 MHz	
Channel Number	Frequency (MHz)
42	5210

Note: 802. 11ax mode only support full resource unit size.

1.3 Operation Channel List

For U-NII-1:

20 MHz		40 MHz		80 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
36	5180	38	5190	42	5120
40	5200	46	5230	--	--
44	5220	--	--	--	--
48	5240	--	--	--	--

1.4 Test Setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

1.5 Power setting configuration parameters

During testing, Channel and Power Controlling Software provided by the customer was used to control theoperating channel as well as the output power level. The RF output power selection is for the setting of RFoutput power expected by the customer and is going to be fixed on the firmware of the final end product.Transmitting duty cycle is no less 98%.
The software is TermAssist and SecureCRT tool Use together.

Test Items	Mode	Data Rate	TX/RX
Radiated Emissions	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCSO	TX
	802.11ax(HE20/40/80)	MCS0	TX
Duty Cycle	802.11a(HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCSO	TX

	802.11ax(HE20/40/80)	MCS0	TX
Band Edge	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCSO	TX
	802.11ax(HE20/40/80)	MCS0	TX
26dB Bandwidth and 99% Occupied Bandwidth	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCSO	TX
	802.11ax(HE20/40/80)	MCS0	TX
Conducted Output Power	802.11a(HT20)	6 Mbps	TX
	802.11n/ac/(HT20/40/80)	MCSO	TX
	802.11ax(HE20/40/80)	MCS0	TX
Power Spectral Density	802.11a(HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCSO	TX
	802.11ax(HE20/40/80)	MCS0	TX
Frequency Stability	Un-modulation	/	TX

1.6 Ancillary Equipment

Equipment	Model	S/N	Manufacturer
/	/	/	/

2 Summary of Test Result

No.	Standard Section	Test Item	Result	Remark
1	15.203/15.407	Antenna Requirement	Pass	
2	15.207	Power Line Conducted Emission	Pass	
3	15.407(b) 15.209	Radiation Spurious Emission	Pass	
4	15.407(a)	RF Output Power	Pass	
5	15.407(a)	Power Spectral Density	Pass	
6	15.407(a)	26dB Emission Bandwidth and Occupied bandwidth	Pass	
7	15.407(b)	Out Of Band Emission	Pass	
8	15.407(b)	Spurious RF Conducted Emissions	Pass	

3 Test Facilities and Accreditations

3.1 Test Laboratory

Test Site	Shenzhen HongBiao Certification& Testing Co., Ltd
Test Site Location	Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China
Telephone:	(86-755) 2998 9321
Fax:	(86-755) 2998 5110
FCC Registration No.:	CN1341
A2LA Certificate No.:	6765.01

3.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15ºC~35ºC
Relative Humidity:	20%~75%
Air Pressure:	98kPa~101kPa

3.3 Measurement Uncertainty

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.
The data and results quoted in this document are true and accurate values, and uncertainties are not involved in the calculations.
In addition, components and mass production processes that are similar to testing equipment may introduce additional deviations, and the manufacturer is solely responsible for the continued compliance of the equipment.

Measurement Frequency Range	U, (dB)	Note
RF frequency	2x 10^{-5}	
RF power, conducted	± 0.57 dB	
Conducted emission(150kHz~30MHz)	± 2.5 dB	
Radiated emission(9kHz-30MHz)	± 2.5 dB	
Radiated emission(30MHz~1GHz)	± 4.2 dB	
Radiated emission (above 1GHz)	± 4.7 dB	
Occupied Bandwidth	±3%	
Temperature	±1 degree	

Humidity	± 5 %	

3.4 Test Software

Software name	Manufacturer	Model	Version
Conducted Emission test Software	Farad	EZ-EMC	EMC-CON 3A1.1+
Radiated Emission test Software	Farad	EZ-EMC	FA-03A2
RF Test System	MWRF	MTS 8310	2.0.0.0

4 List of Test Equipment

Radiation emission							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E001	Horn Antenna	Schwarzbeck	BBHA 9120D	02592	2024-05-18	2026-05-17
2	HB-E002	Biconical log-periodic composite antenna	Schwarzbeck	VULB 9168	01340	2024-05-18	2026-05-17
3	HB-E003	SHF-EHF Horn	Schwarzbeck	BBHA 91270	01193	2024-05-18	2026-05-17
4	HB-E005	Preamplifier	Noyetec	LAN-0118	NYCM1420102	2025-05-07	2026-05-06
5	HB-E006	Preamplifier	Noyetec	LAN-1840	NYCM1420103	2025-05-07	2026-05-06
6	HB-E007	EMI TEST RECEIVER	R&S	ESR7	102520	2025-05-07	2026-05-06
7	HB-E009	POSITINAL COTROLLER	Noyetec	N/A	N/A	/	/
8	HB-E013	RF switch	Noyetec	NY-RF4	NY0CM1420204	/	/
9	HB-E066	Illuminance Tester	TASI	TA8121	N/A	2025-05-13	2026-05-12
10	HB-E075	Active loop antenna	Schwarzbeck	FMZB 1519B	1519B-245	2024-05-18	2026-05-17
11	HB-E076	Preamplifier	Hewlett Packard	8447D	1937A02278	2025-05-07	2026-05-06
Conduction emission							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E014	4 Path V-LISN	Schwarzbeck	NNLK 8121	00770	2025-05-07	2026-05-06
2	HB-E015	Pulse Limiter	Schwarzbeck	VTSD 9561-F	00949	2025-05-07	2026-05-06
3	HB-E016	ZN23201	Noyetec	ZN23201	N/A	2025-05-10	2026-05-09
4	HB-E059	Attenuator	Xianghua	TS2-6-1	220215166	2025-05-10	2026-05-09
5	HB-E069	EMI TEST RECEIVER	R&S	ESCI	N/A	2025-05-07	2026-05-06

RF							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E041	MXG Anaiog Signal Generator	Agilent	N5181A	MY47070421	2025-05-07	2026-05-06

2	HB-E042	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	132108	2025-05-08	2026-05-07
3	HB-E043	MXG Anaiog Signal Generator	Agilent	N5182A	US46240335	2025-05-08	2026-05-07
4	HB-E044	Signal& spectrum Analyzer	R&S	FSV3044	101264	2025-05-07	2026-05-06
5	HB-E045	RF Control Box	Noyetec	NY100-RFCB	N/A	2025-05-08	2026-05-07
6	HB-E058	Thermometer Clock Humidity Monitor	N/A	HTC-1S	N/A	2025-05-09	2026-05-08

Note: the calibration interval of the above test instruments is 12&24 months and the calibrations are traceable to international system unit (SI).

5 Test Item And Results

5.1 Antenna Requirement

5.1.1 Standard Requirement

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device

5.1.2 Test Result

The antenna is Internal Antenna, which was permanently affixed to the device and un-replaced, complies with 15.203. In addition, the maximum antenna gain is 2.75dBi.

5.2 Power Line Conducted Emission

5.2.1 Limits

Limits – Class B		
Frequency (MHz)	Limit (dBμV)	
	Quasi-Peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50

Note:
1. the tighter limit applies at the band edges.
2. the limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

5.2.2 Test Procedures

a) EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

b) The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

c) The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

d) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

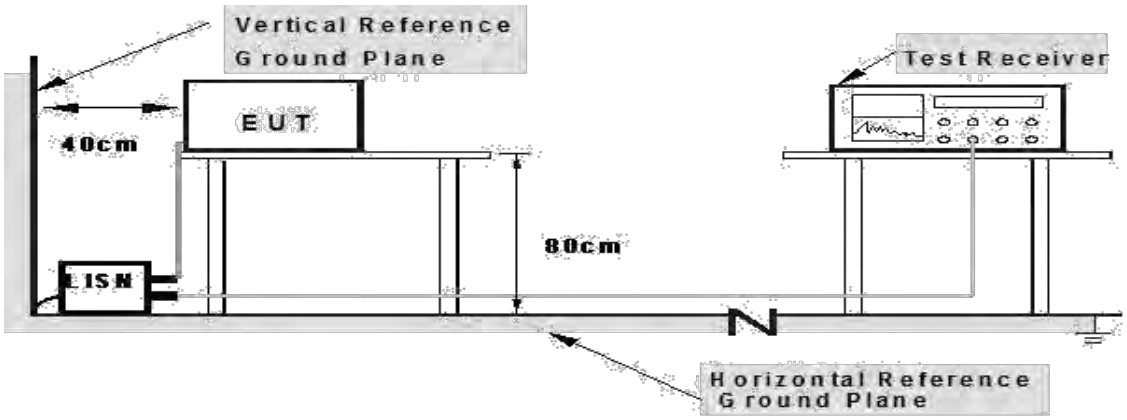
e) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

f) LISN is at least 80 cm from nearest part of EUT chassis.

g) For the actual test configuration, please refer to the related Item – photographs of the test

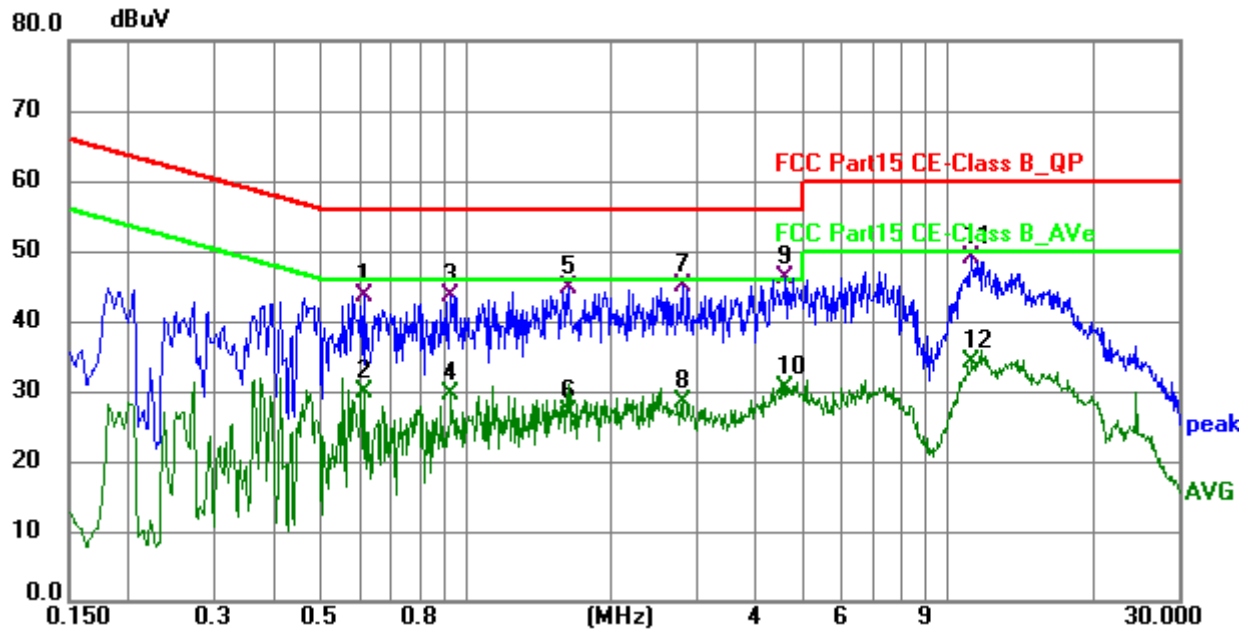
setup.

5.2.3 Test Setup



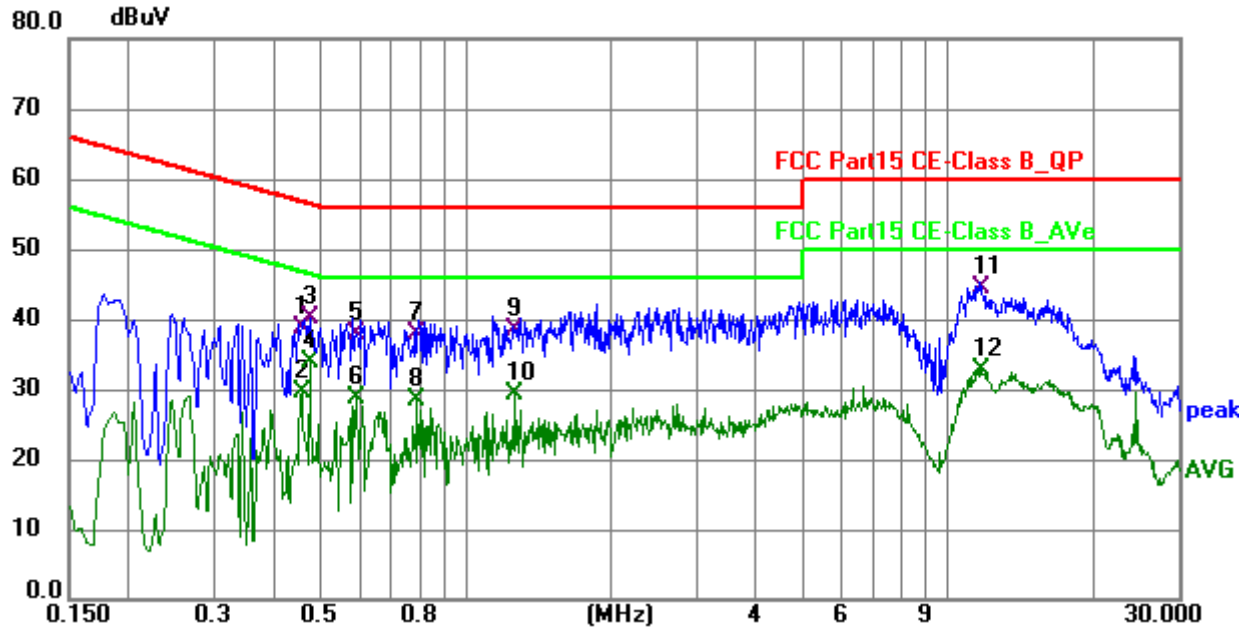
5.2.4 Test Result

EUT:	Minilaptop	Model Name:	NA105H
Test Mode:	Charging + TX	Phase:	L
Test Voltage:	DC 12V from adapter AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.618	33.44	10.11	43.55	56.00	-12.45	QP
2	0.618	19.86	10.11	29.97	46.00	-16.03	AVG
3	0.928	33.58	10.13	43.71	56.00	-12.29	QP
4	0.928	19.36	10.13	29.49	46.00	-16.51	AVG
5	1.631	34.37	10.27	44.64	56.00	-11.36	QP
6	1.631	16.80	10.27	27.07	46.00	-18.93	AVG
7	2.818	34.48	10.59	45.07	56.00	-10.93	QP
8	2.818	17.98	10.59	28.57	46.00	-17.43	AVG
9 *	4.601	35.07	11.21	46.28	56.00	-9.72	QP
10	4.601	19.19	11.21	30.40	46.00	-15.60	AVG
11	11.162	35.46	13.68	49.14	60.00	-10.86	QP
12	11.162	20.36	13.68	34.04	50.00	-15.96	AVG

EUT:	Minilaptop	Model Name:	NA105H
Test Mode:	Charging + TX	Phase:	N
Test Voltage:	DC 12V from adapter AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.456	28.73	10.12	38.85	56.77	-17.92	QP
2	0.456	19.42	10.12	29.54	46.77	-17.23	AVG
3	0.474	30.03	10.12	40.15	56.44	-16.29	QP
4 *	0.474	23.66	10.12	33.78	46.44	-12.66	AVG
5	0.591	27.79	10.12	37.91	56.00	-18.09	QP
6	0.591	18.59	10.12	28.71	46.00	-17.29	AVG
7	0.793	27.68	10.12	37.80	56.00	-18.20	QP
8	0.793	18.38	10.12	28.50	46.00	-17.50	AVG
9	1.266	28.19	10.19	38.38	56.00	-17.62	QP
10	1.266	19.01	10.19	29.20	46.00	-16.80	AVG
11	11.697	30.58	13.79	44.37	60.00	-15.63	QP
12	11.697	18.96	13.79	32.75	50.00	-17.25	AVG

5.3 Radiated Emission

5.3.1 Limits

1. For transmitters operating in the 5.15-5.25 GHz band:

All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

2. For transmitters operating in the 5.25-5.35 GHz band:

All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

3. For transmitters operating in the 5.47-5.725 GHz band:

All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

4. For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Frequency Range	RBW	VBW	Measurement
30MHz-1GHz	1MHz	3MHz	Peak
Above 1GHz	1MHz	10Hz[Note1]	Average
	1MHz	>1/T [Note2]	Average
Note1	When duty cycle is no less than 98%		

Note2	When duty cycle is less than 98%

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

5.3.2 Test Procedures

The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

For emission measurements above 1 GHz, the EUT shall be placed at a height of 1.5 m above the floor on a support that is RF transparent for the frequencies of interest. Final measurements for the EUT require a measurement antenna height scan of 1 m to 4 m.

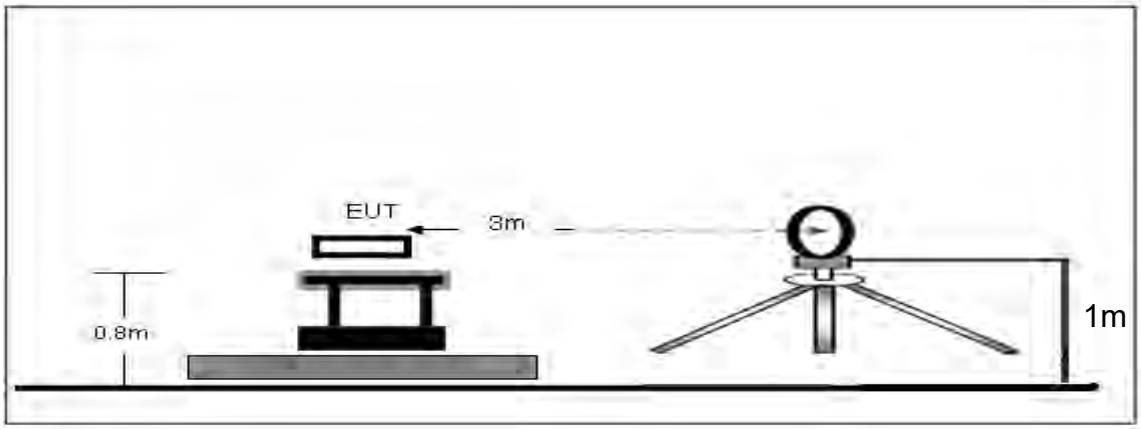
The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
For the actual test configuration, please refer to the related Item –EUT Test Photos.

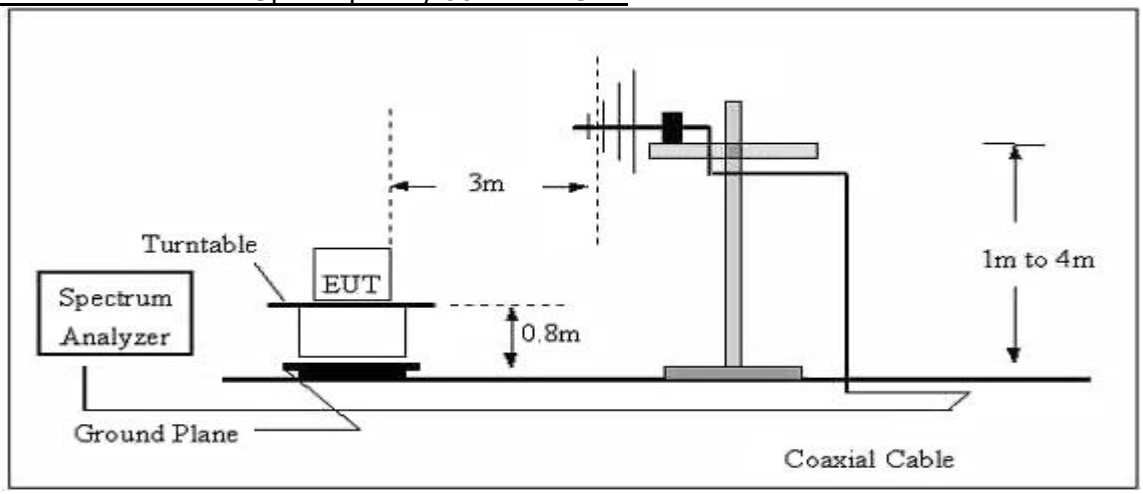
Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

5.3.3 Test Setup

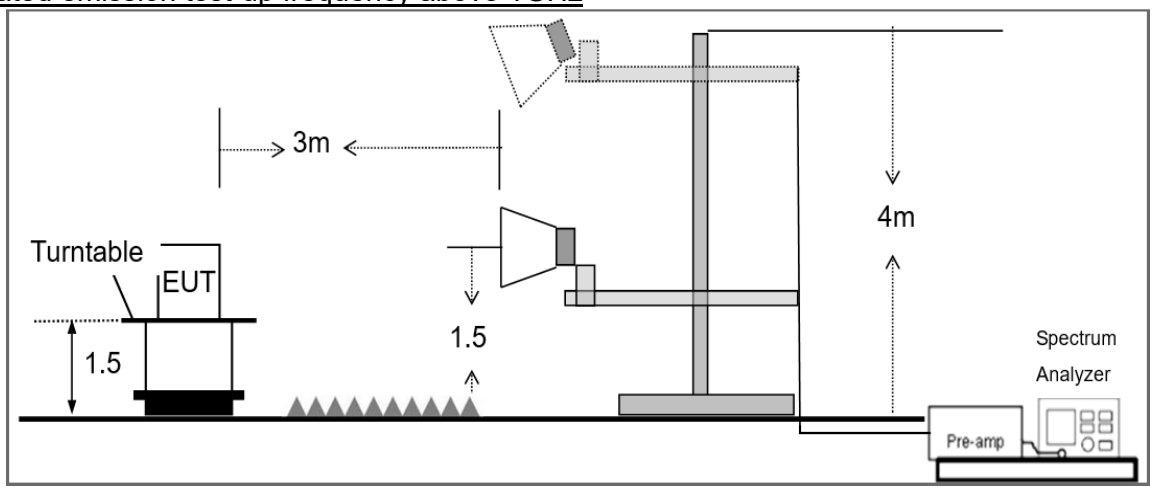
Radiated Emission Test-Up Frequency Below 30MHz



Radiated Emission Test-Up Frequency 30MHz~1GHz



Radiated emission test-up frequency above 1GHz



5.3.4 Test Result

Below 30MHz

EUT:	Minilaptop	Model Name:	NA105H
Pressure:	1010 hPa	Test Voltage:	DC 7.6V from battery
Test Mode:	TX	Polarization:	--

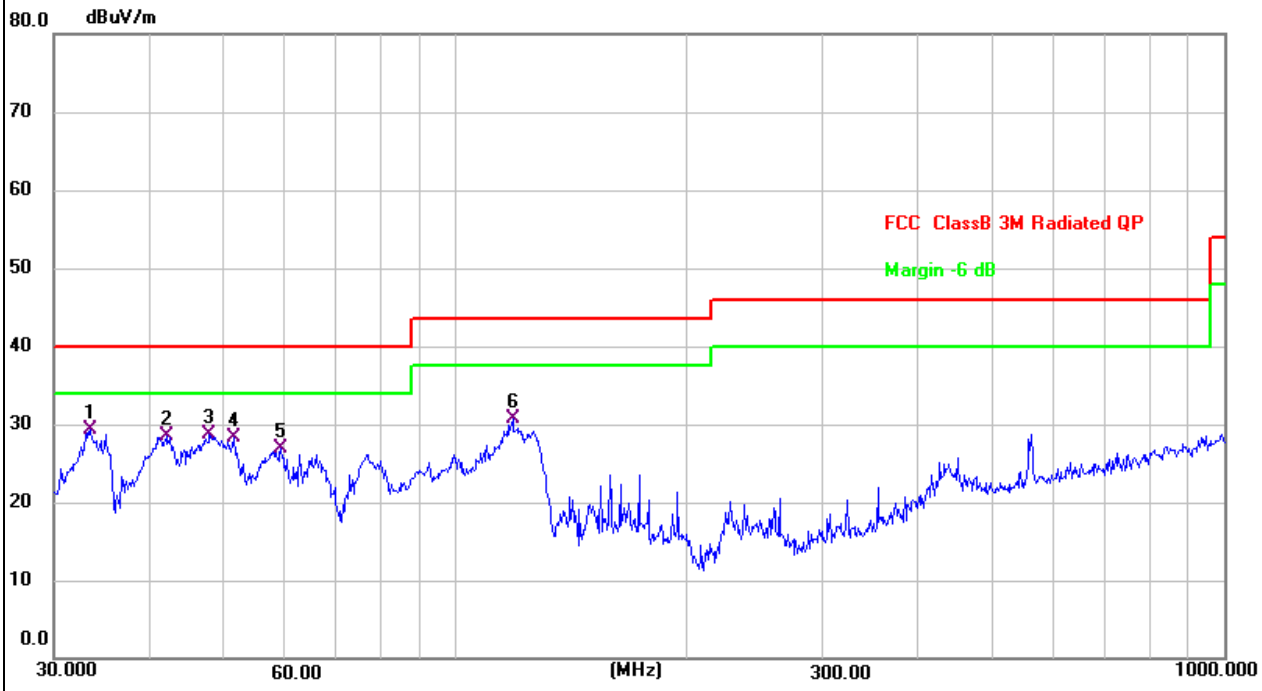
Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	Pass
--	--	--	--	Pass

Note:

1. For 9kHz-30MHz, the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor =40 log (specific distance/test distance)(dB);
3. Limit line = specific limits (dBuV) + distance extrapolation factor.

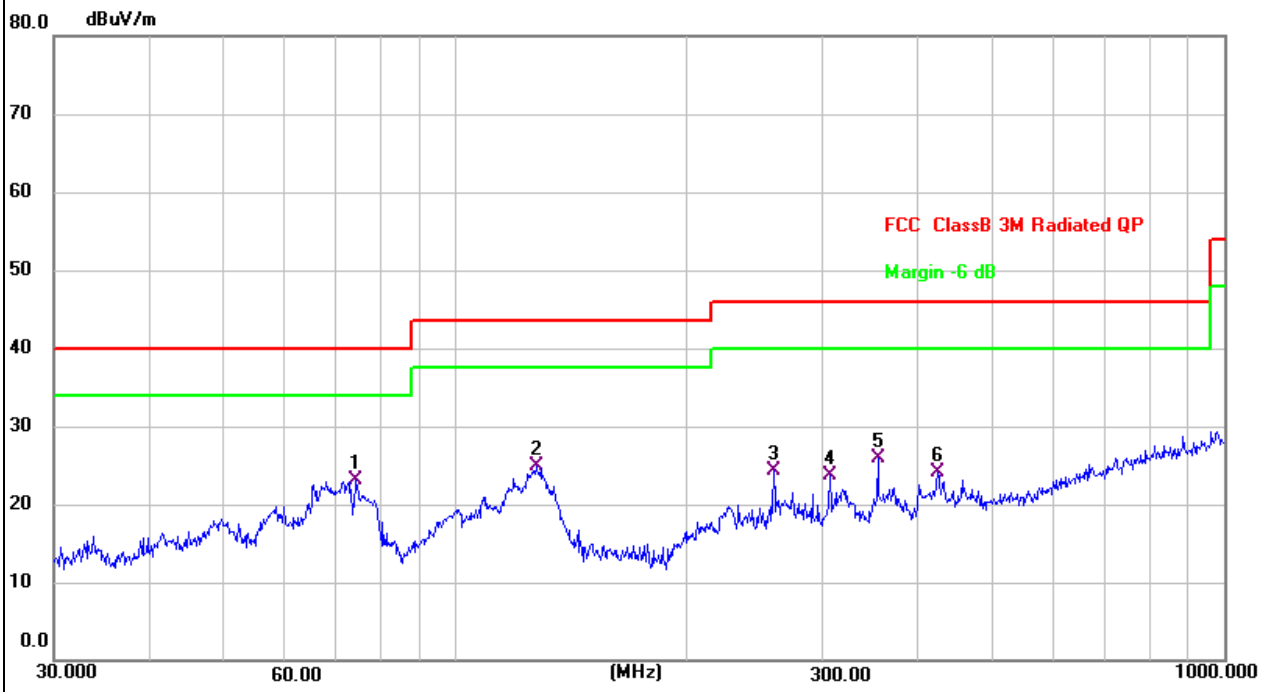
Frequency range (30MHz – 1GHz)

EUT:	Minilaptop	Model Name:	NA105H
Test Mode:	TX	Phase:	Vertical
Test Voltage:	DC 7.6V from battery		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	33.4449	44.20	-14.88	29.32	40.00	-10.68	QP
2	42.1542	42.35	-13.90	28.45	40.00	-11.55	QP
3	47.8260	42.79	-14.02	28.77	40.00	-11.23	QP
4	51.4807	42.42	-14.10	28.32	40.00	-11.68	QP
5	59.2325	41.53	-14.63	26.90	40.00	-13.10	QP
6	118.6014	46.38	-15.63	30.75	43.50	-12.75	QP

EUT:	Minilaptop	Model Name:	NA105H
Test Mode:	TX	Phase:	Horizontal
Test Voltage:	DC 7.6V from battery		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	74.1351	39.87	-16.68	23.19	40.00	-16.81	QP
2	127.2176	39.83	-14.99	24.84	43.50	-18.66	QP
3	259.2338	38.40	-14.08	24.32	46.00	-21.68	QP
4	306.7537	35.97	-12.25	23.72	46.00	-22.28	QP
5	354.1831	36.60	-10.74	25.86	46.00	-20.14	QP
6	423.5403	32.71	-8.68	24.03	46.00	-21.97	QP

Frequency range (1GHz-40GHz)
For U-NII-1

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
Vertical	4435.986	56.23	5.94	35.40	44.00	53.57	74.00	-20.43	Pk
Vertical	4435.656	43.85	5.94	35.40	44.00	41.19	54.00	-12.81	AV
Vertical	10371.051	62.44	8.46	39.75	44.50	66.15	74.00	-7.85	Pk
Vertical	10370.383	42.93	8.46	39.75	44.50	46.64	54.00	-7.36	Pk
Vertical	15540.286	55.87	10.12	38.80	44.10	60.69	74.00	-13.31	AV
Horizontal	15540.529	42.66	10.12	38.80	42.70	48.88	54.00	-5.12	Pk
Horizontal	4435.321	58.48	5.94	35.18	44.00	55.60	74.00	-18.40	AV
Horizontal	4434.904	43.05	5.94	35.18	44.00	40.17	54.00	-13.83	Pk
Horizontal	10370.443	62.47	8.46	38.71	44.50	65.14	74.00	-8.86	Pk
Horizontal	10732.079	45.70	8.46	38.71	44.50	48.37	54.00	-5.63	AV
middle Channel (5200 MHz)-Above 1G									
Vertical	4592.414	57.56	6.48	36.35	44.05	56.34	74.00	-17.66	Pk
Vertical	4592.250	43.21	6.48	36.35	44.05	41.99	54.00	-12.01	AV
Vertical	10403.059	62.26	8.47	37.88	44.51	64.10	74.00	-9.90	Pk
Vertical	10402.869	46.20	8.47	37.88	44.51	48.04	54.00	-5.96	Pk
Vertical	15600.340	57.17	10.12	38.8	44.10	61.99	74.00	-12.01	AV
Horizontal	15602.175	42.65	10.12	38.8	42.70	48.87	54.00	-5.13	Pk
Horizontal	4592.433	58.85	6.48	36.37	44.05	57.65	74.00	-16.35	AV
Horizontal	4594.033	43.22	6.48	36.37	44.05	42.02	54.00	-11.98	Pk
Horizontal	10400.897	60.62	8.47	38.64	44.50	63.23	74.00	-10.77	Pk
Horizontal	10401.969	46.99	8.47	38.64	44.50	49.60	54.00	-4.40	AV
High Channel (5240 MHz)-Above 1G									
Vertical	4739.304	60.45	7.10	37.24	43.50	61.29	74.00	-12.71	Pk
Vertical	4739.573	46.63	7.10	37.24	43.50	47.47	54.00	-6.53	AV
Vertical	10481.039	61.10	8.46	37.68	44.50	62.74	74.00	-11.26	Pk
Vertical	10480.865	45.44	8.46	37.68	44.50	47.08	54.00	-6.92	Pk
Vertical	15721.105	57.45	10.12	38.8	44.10	62.27	74.00	-11.73	AV
Horizontal	15721.595	43.55	10.12	38.8	42.70	49.77	54.00	-4.23	Pk
Horizontal	4740.964	58.72	7.10	37.24	43.50	59.56	74.00	-14.44	AV
Horizontal	4739.996	43.25	7.10	37.24	43.50	44.09	54.00	-9.91	Pk
Horizontal	10482.765	57.88	8.46	38.57	44.50	60.41	74.00	-13.59	Pk
Horizontal	10481.816	43.22	8.46	38.57	44.50	45.75	54.00	-8.25	AV

Note:
All modes have been tested, and only the worst mode 802.11a mode is mentioned in the report.

5.3.5 Radiated Band Edge

For U-NII-1
For 802.11a mode: (CH36 5180MHz&CH48 5240MHz)

Polarization	Frequency	Read Lavel	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Over Limit	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	5150.00	65.46	8.69	29.40	42.59	60.96	74.00	-13.04	Pk
Horizontal	5350.00	62.40	9.37	30.41	43.25	58.93	74.00	-15.07	Pk
Horizontal	5460.00	60.03	8.46	30.75	43.96	55.28	74.00	-18.72	Pk
Vertical	5150.00	67.39	9.21	29.40	42.59	63.41	74.00	-10.59	Pk
Vertical	5350.00	59.27	9.12	30.41	43.25	55.55	74.00	-18.45	Pk
Vertical	5460.00	62.31	8.46	30.75	43.96	57.56	74.00	-16.44	Pk
Polarization	Frequency	Read Lavel	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Over Limit	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	5150.00	45.60	8.69	29.40	42.59	41.10	54.00	-12.90	AV
Horizontal	5350.00	49.41	8.46	30.41	43.25	45.03	54.00	-8.97	AV
Horizontal	5460.00	48.58	9.36	30.75	43.96	44.73	54.00	-9.27	AV
Vertical	5150.00	48.12	9.21	29.40	42.59	44.14	54.00	-9.86	AV
Vertical	5350.00	49.69	9.12	30.41	43.25	45.97	54.00	-8.03	AV
Vertical	5460.00	43.74	8.46	30.75	43.96	38.99	54.00	-15.01	AV

For 802.11n-(HT20) mode: (CH36 5180MHz&CH48 5240MHz)

Polarization	Frequency	Read Lavel	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Over Limit	Detector Type
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	5150.00	65.39	8.69	29.40	42.59	60.89	74.00	-13.11	Pk
Horizontal	5350.00	62.40	9.37	30.41	43.25	58.93	74.00	-15.07	Pk
Horizontal	5460.00	60.10	8.46	30.75	43.96	55.35	74.00	-18.65	Pk
Vertical	5150.00	67.86	9.21	29.40	42.59	63.88	74.00	-10.12	Pk
Vertical	5350.00	60.01	9.12	30.41	43.25	56.29	74.00	-17.71	Pk
Vertical	5460.00	62.65	8.46	30.75	43.96	57.90	74.00	-16.10	Pk

Polarization	Frequency	Read Lavel	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Over Limit	Detector Type
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	5150.00	45.76	8.69	29.40	42.59	41.26	54.00	-12.74	AV
Horizontal	5350.00	46.36	8.46	30.41	43.25	41.98	54.00	-12.02	AV
Horizontal	5460.00	46.67	9.36	30.75	43.96	42.82	54.00	-11.18	AV
Vertical	5150.00	48.05	9.21	29.40	42.59	44.07	54.00	-9.93	AV
Vertical	5350.00	46.14	9.12	30.41	43.25	42.42	54.00	-11.58	AV
Vertical	5460.00	43.49	8.46	30.75	43.96	38.74	54.00	-15.26	AV

For 802.11n-(HT40) mode: (CH38 5190MHz&CH62 5310MHz)

Polarization	Frequency	Read Lavel	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Over Limit	Detector Type
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	5150.00	65.45	8.69	29.40	42.59	60.95	74.00	-13.05	Pk
Horizontal	5350.00	62.42	9.37	30.41	43.25	58.95	74.00	-15.05	Pk
Horizontal	5460.00	60.21	8.46	30.75	43.96	55.46	74.00	-18.54	Pk
Vertical	5150.00	67.75	9.21	29.40	42.59	63.77	74.00	-10.23	Pk
Vertical	5350.00	59.97	9.12	30.41	43.25	56.25	74.00	-17.75	Pk
Vertical	5460.00	62.87	8.46	30.75	43.96	58.12	74.00	-15.88	Pk

Polarization	Frequency	Read Lavel	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Over Limit	Detector Type
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	5150.00	45.77	8.69	29.40	42.59	41.27	54.00	-12.73	AV
Horizontal	5350.00	46.08	8.46	30.41	43.25	41.70	54.00	-12.30	AV
Horizontal	5460.00	46.49	9.36	30.75	43.96	42.64	54.00	-11.36	AV
Vertical	5150.00	47.55	9.21	29.40	42.59	43.57	54.00	-10.43	AV
Vertical	5350.00	47.03	9.12	30.41	43.25	43.31	54.00	-10.69	AV
Vertical	5460.00	43.71	8.46	30.75	43.96	38.96	54.00	-15.04	AV

For 802.11n-(ac80) mode: (CH42 5120MHz)

Polarization	Frequency	Read Lavel	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Over Limit	Detector Type
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	5150.00	65.71	8.69	29.40	42.59	61.21	74.00	-12.79	Pk
Horizontal	5350.00	62.39	9.37	30.41	43.25	58.92	74.00	-15.08	Pk
Horizontal	5460.00	60.12	8.46	30.75	43.96	55.37	74.00	-18.63	Pk
Vertical	5150.00	67.75	9.21	29.40	42.59	63.77	74.00	-10.23	Pk
Vertical	5350.00	59.94	9.12	30.41	43.25	56.22	74.00	-17.78	Pk
Vertical	5460.00	62.97	8.46	30.75	43.96	58.22	74.00	-15.78	Pk

Polarization	Frequency	Read Lavel	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Over Limit	Detector Type
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	5150.00	45.59	8.69	29.40	42.59	41.09	54.00	-12.91	AV
Horizontal	5350.00	46.50	8.46	30.41	43.25	42.12	54.00	-11.88	AV
Horizontal	5460.00	46.60	9.36	30.75	43.96	42.75	54.00	-11.25	AV
Vertical	5150.00	47.62	9.21	29.40	42.59	43.64	54.00	-10.36	AV
Vertical	5350.00	46.62	9.12	30.41	43.25	42.90	54.00	-11.10	AV
Vertical	5460.00	44.01	8.46	30.75	43.96	39.26	54.00	-14.74	AV

5.4 Peak Output Power

5.4.1 Limit

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz band

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

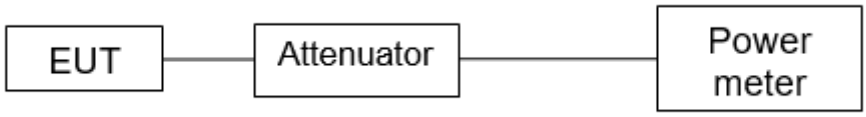
For the band 5.725-5.85 GHz

The maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.4.2 Test Procedure

The maximum peak conducted output power may be measured using a broadband Average RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the emission bandwidth and utilize a fast-responding diode detector.

5.4.3 Test Setup



5.4.4 Test Results

EUT:	Minilaptop	Model Name:	NA105H
Test Mode:	TX	Test Voltage:	DC 7.6V from battery

For U-NII-1

Modulation mode	Test Channel	Frequency(MHz)	Average Conducted Power		Limit(mW)
			(dBm)	(mW)	
11a	CH36	5180	6.43	4.40	250
11a	CH40	5200	6.71	4.69	250
11a	CH48	5240	7.17	5.21	250
11n (HT20)	CH36	5180	6.35	4.32	250
11n (HT20)	CH40	5200	6.69	4.67	250
11n (HT20)	CH48	5240	7.05	5.07	250
11n (HT40)	CH38	5190	6.78	4.76	250
11n (HT40)	CH46	5230	7.23	5.28	250

Modulation mode	Test Channel	Frequency(MHz)	Average Conducted Power		Limit(mW)
			(dBm)	(mW)	
11ac (HT20)	CH36	5180	6.54	4.51	250
11ac (HT20)	CH40	5200	6.82	4.81	250
11ac (HT20)	CH48	5240	7.15	5.19	250
11ac (HT40)	CH38	5190	6.84	4.83	250
11ac (HT40)	CH46	5230	7.29	5.36	250
11ac (HT80)	CH42	5210	6.54	4.51	250

Modulation mode	Test Channel	Frequency(MHz)	Average Conducted Power		Limit(mW)
			(dBm)	(mW)	
11ax (HE20)	CH36	5180	6.47	4.44	250
11ax (HE20)	CH40	5200	6.79	4.78	250
11ax (HE20)	CH48	5240	7.00	5.01	250
11ax (HE40)	CH38	5190	6.73	4.71	250
11ax (HE40)	CH46	5230	7.22	5.27	250
11ax (HE80)	CH42	5210	6.43	4.40	250

5.5 Power Spectral Density

5.5.1 Limit

For the band 5.15-5.25 GHz
For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.25-5.35 GHz and 5.47-5.725 GHz
The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

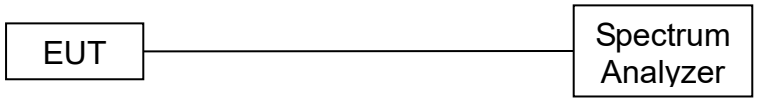
For the band 5.725-5.85 GHz
The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.5.2 Test Procedure

For U-NII-1
1. Set analyzer center frequency to NII channel center frequency.
2. Set the RBW ≥ 1MHz.
3. Set the VBW ≥ 3 x RBW.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum amplitude level.

For U-NII-3
1. Set analyzer center frequency to NII channel center frequency.
2. Set the RBW ≥ 510kHz.
3. Set the VBW ≥ 3 x RBW.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum amplitude level.

5.5.3 Test Setup



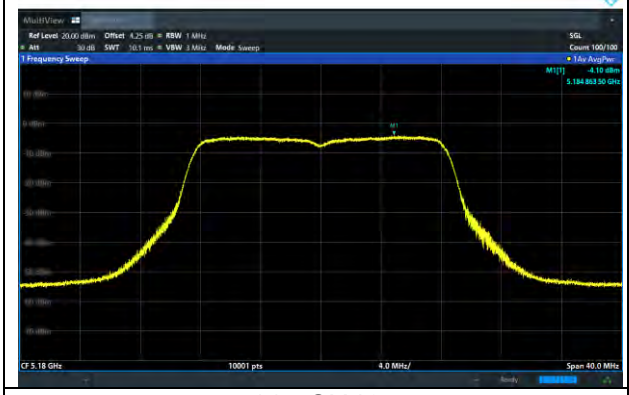
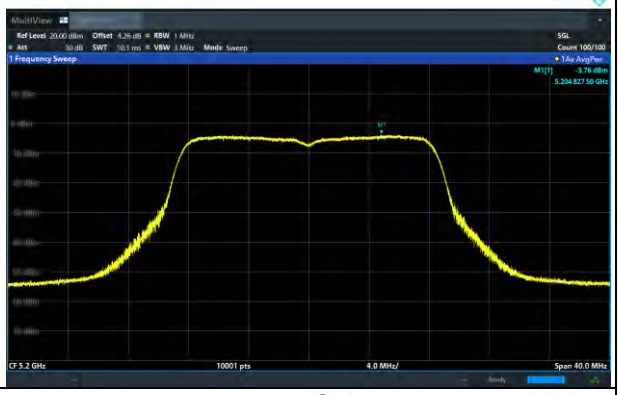
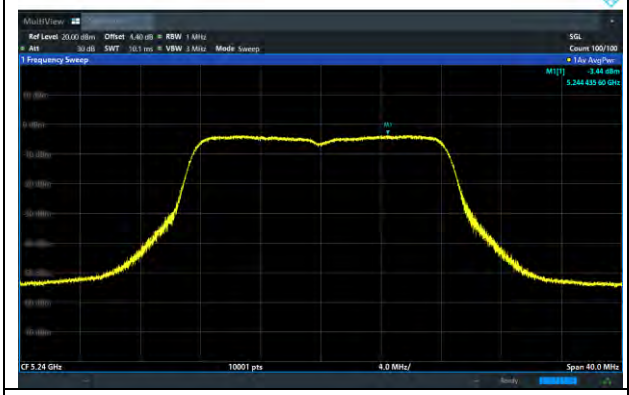
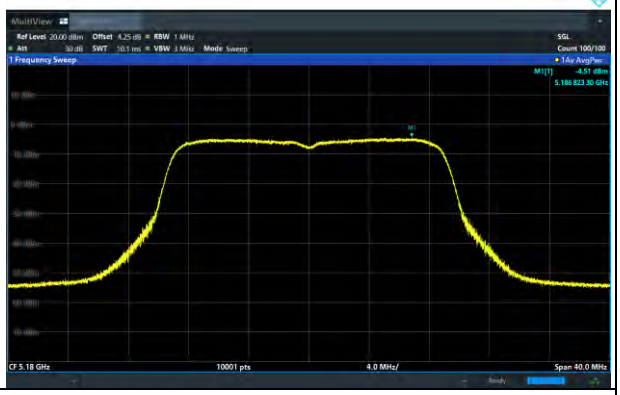
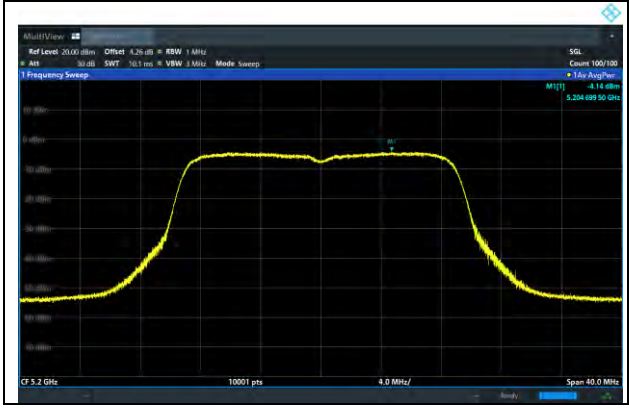
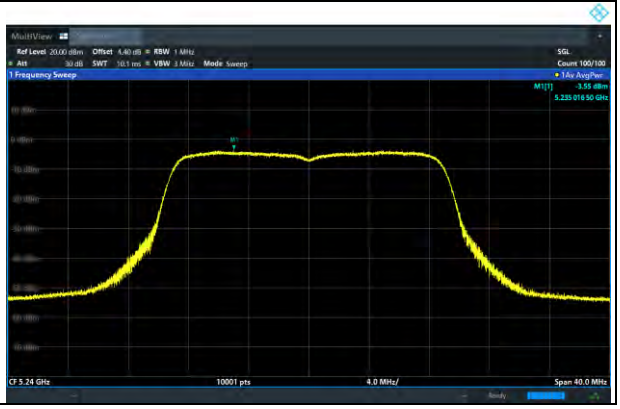
5.5.4 Test Results

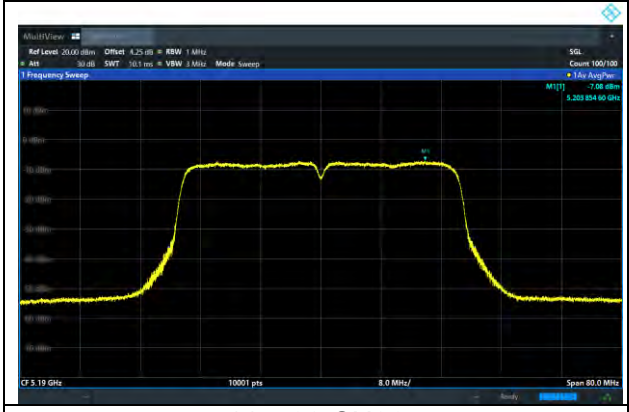
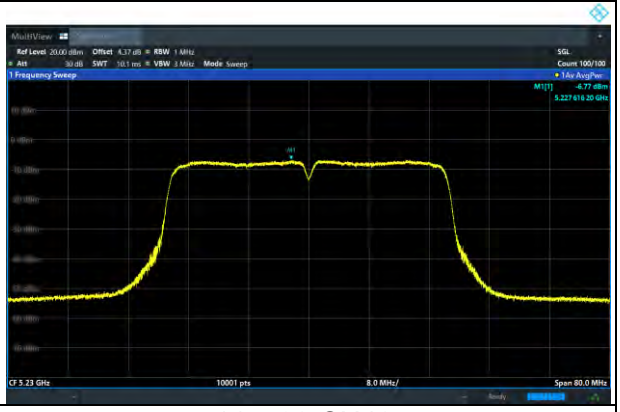
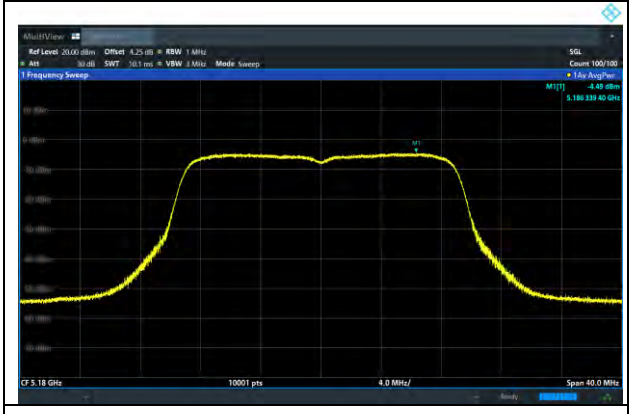
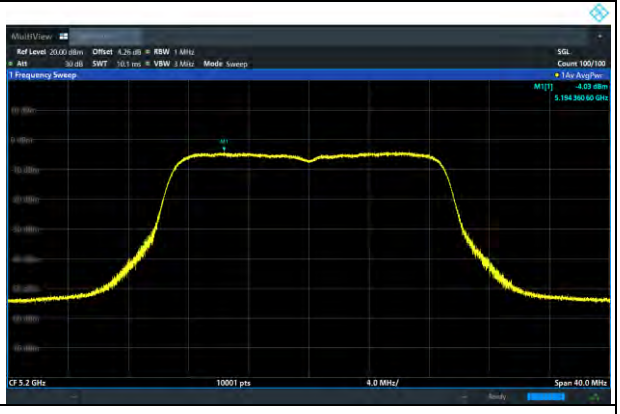
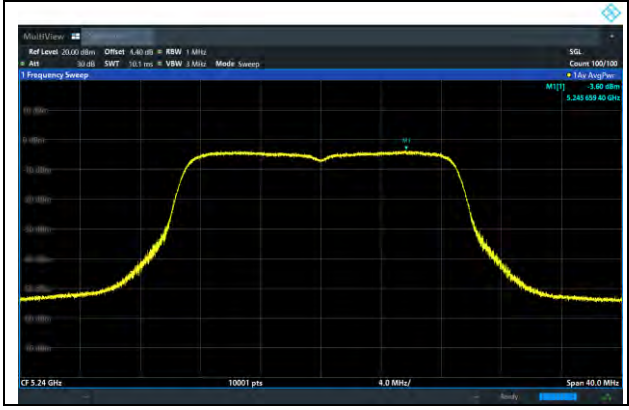
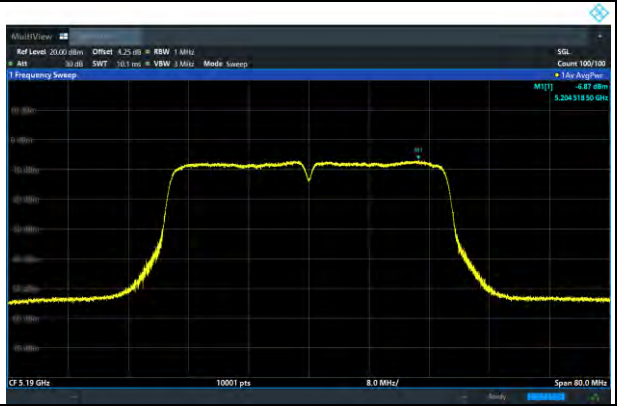
For U-NII-1

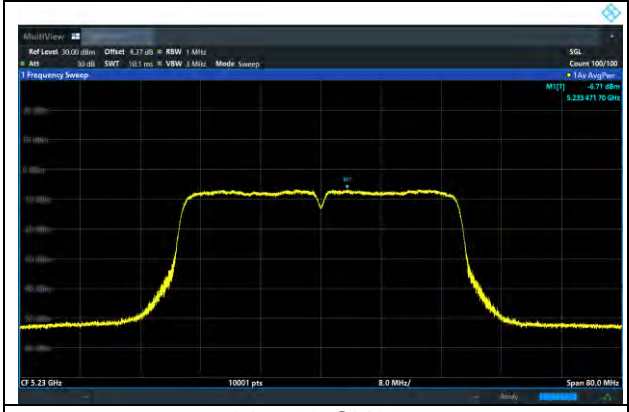
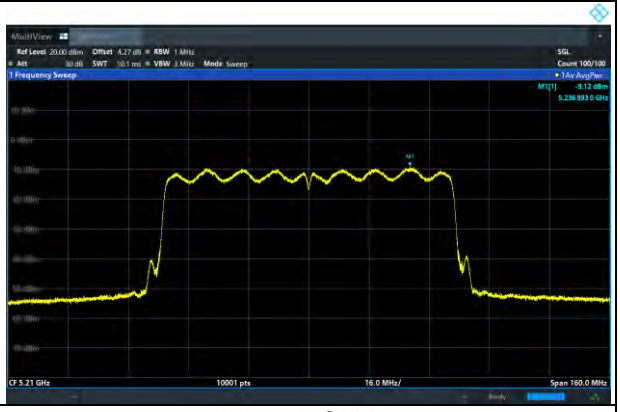
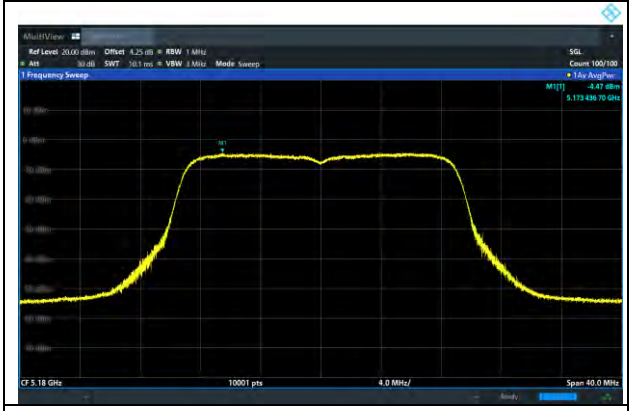
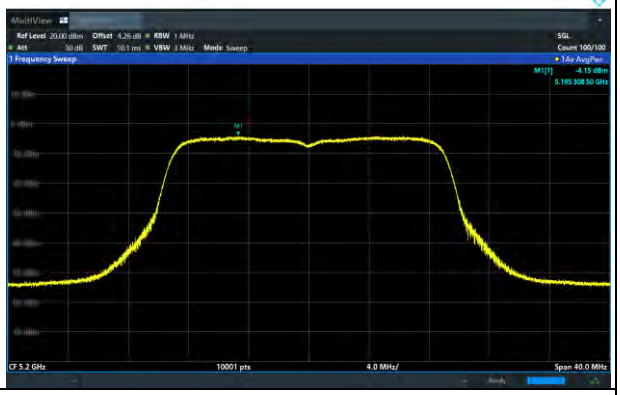
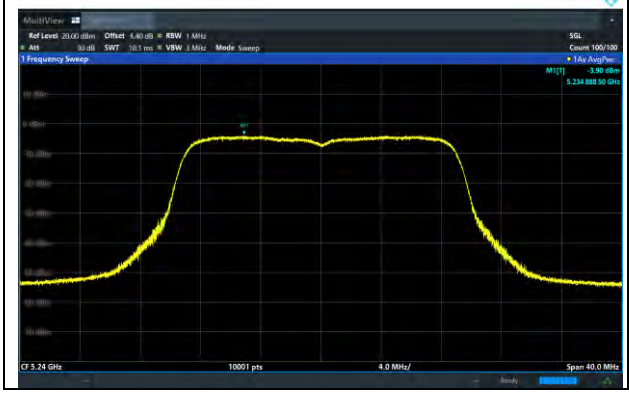
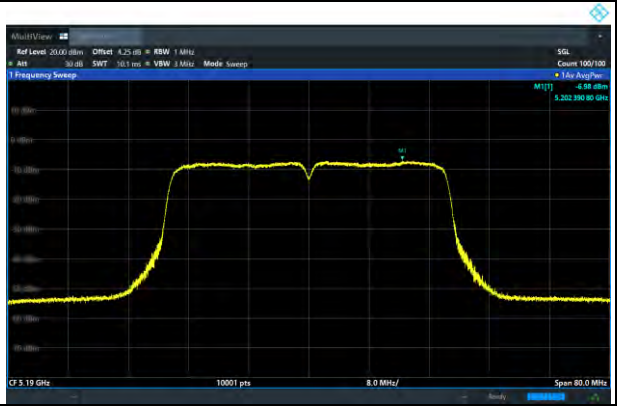
Mode	Channel	Frequency(MHz)	Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
11a	CH36	5180	-4.1	11	Pass
11a	CH44	5220	-3.76	11	Pass
11a	CH48	5240	-3.44	11	Pass
11n(HT20)	CH36	5180	-4.51	11	Pass
11n(HT20)	CH44	5220	-4.14	11	Pass
11n(HT20)	CH48	5240	-3.55	11	Pass
11n(HT40)	CH38	5190	-7.08	11	Pass
11n(HT40)	CH46	5230	-6.77	11	Pass
11ac(HT20)	CH36	5180	-4.49	11	Pass
11ac (HT20)	CH40	5200	-4.03	11	Pass
11ac (HT20)	CH48	5240	-3.6	11	Pass
11ac (HT40)	CH38	5190	-6.87	11	Pass
11ac (HT40)	CH46	5230	-6.71	11	Pass
11ac (HT80)	CH42	5210	-9.12	11	Pass
11ax (HE20)	CH36	5180	-4.47	11	Pass
11ax (HE20)	CH40	5200	-4.15	11	Pass
11ax (HE20)	CH48	5240	-3.9	11	Pass
11ax (HE40)	CH38	5190	-6.98	11	Pass
11ax (HE40)	CH46	5230	-6.9	11	Pass
11ax (HE80)	CH42	5210	-9.16	11	Pass

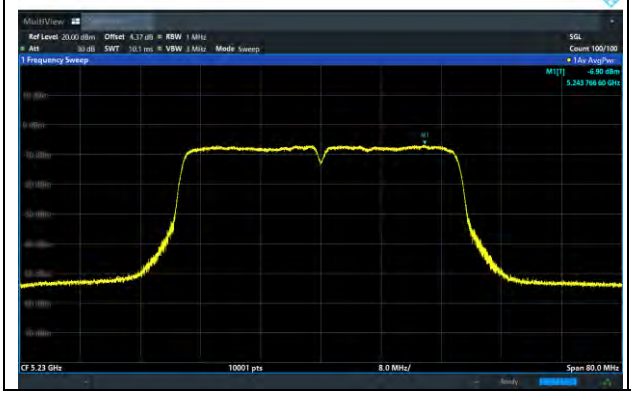
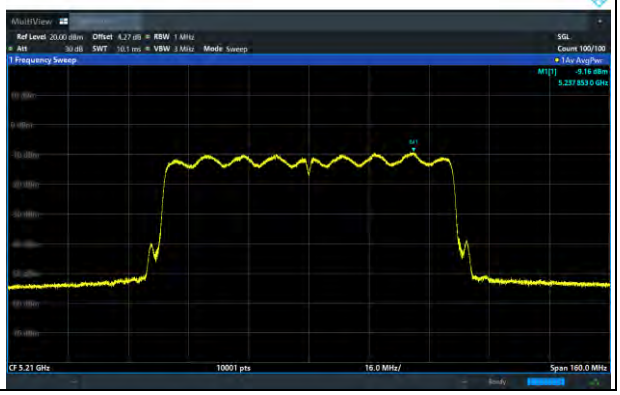
Test plots

For U-NII-1

11a CH36	11a CH44
	
11a CH48	**11n20 CH36**
	
11n20 CH44	**11n20 CH48**
	

11n40 CH38	11n40 CH46
	
11ac20 CH36	**11ac20 CH40**
	
11ac20 CH48	**11ac40 CH38**
	

11ac40 CH46	11ac80 CH42
	
11ax20 CH36	**11ax20 CH40**
	
11ax20 CH48	**11ax40 CH38**
	

11ax40 CH46	11ax80 CH42
	

5.6 26dB Emission Bandwidth and Occupied bandwidth

5.6.1 Limit

For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier

5.6.2 Test Procedure

26dB Emission bandwidth

Set RBW = approximately 1% of the emission bandwidth.

Set VBW ≥ 3*RBW

Detector = Peak.

Trace mode = Max hold.

Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

Occupied Bandwidth

Set Span = 1.5 times to 5.0 times the OBW

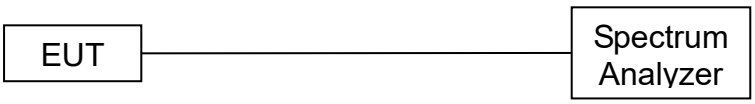
Set RBW = 1% to 5% of the OBW.

Set VBW ≥ 3*RBW, Detector = Peak.

Trace mode = Max hold.

Use the 99% power bandwidth function of the instrument.

5.6.3 Test Setup



5.6.4 Test Results

For U-NII-1

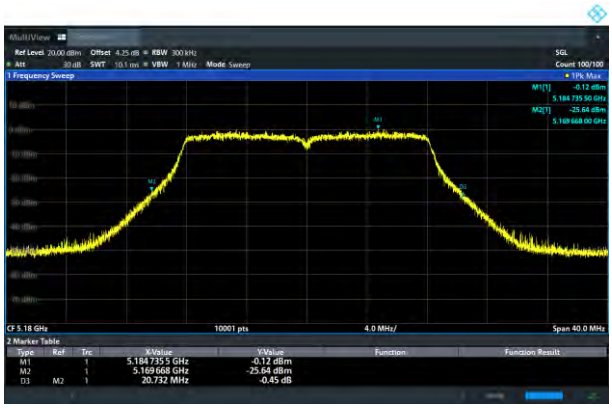
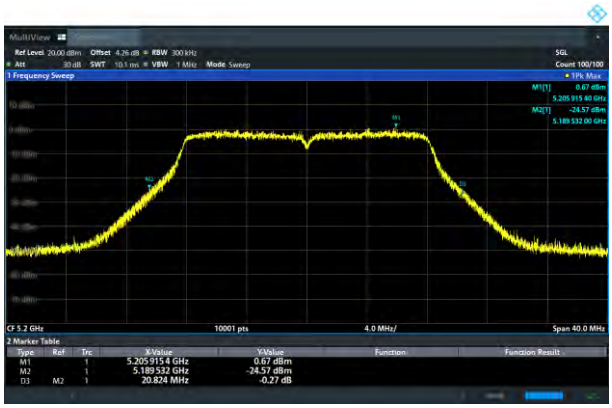
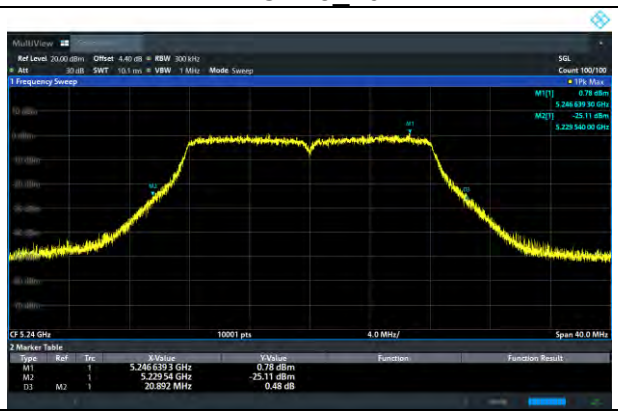
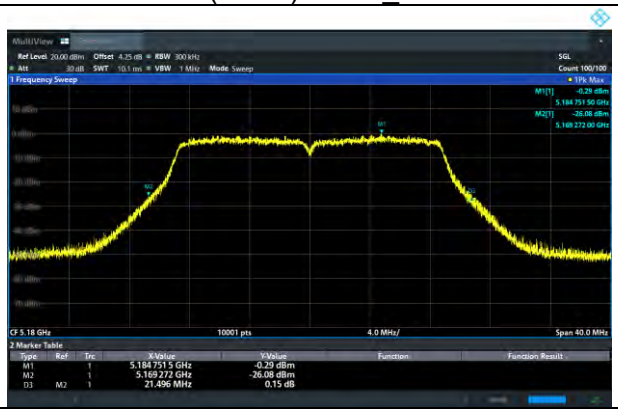
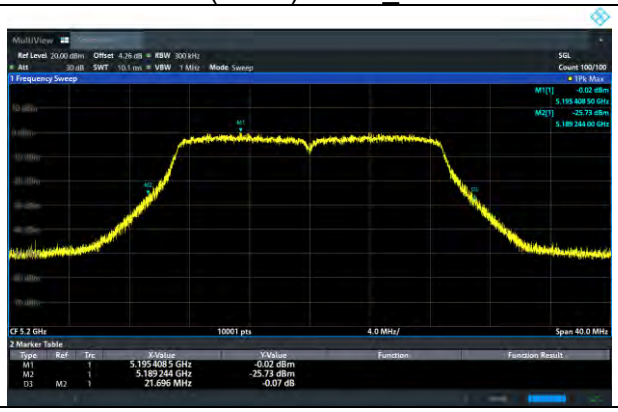
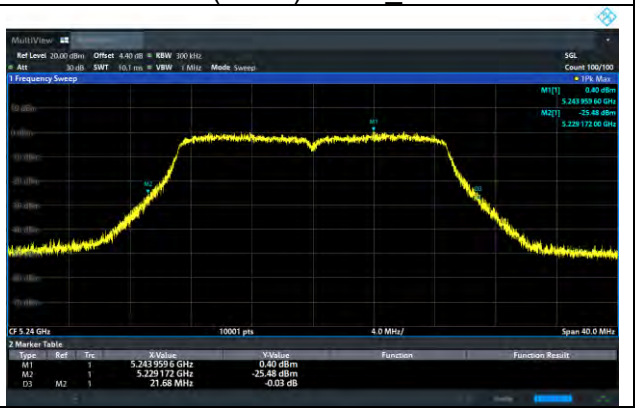
Channel	Test Channel	Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth	Limit (kHz)	Result
11a	CH36	5180	20.732	16.513	/	Pass
11a	CH40	5200	20.824	16.522	/	Pass
11a	CH48	5240	20.892	16.517	/	Pass
11n (HT20)	CH36	5180	21.496	17.612	/	Pass
11n (HT20)	CH40	5200	21.696	17.612	/	Pass
11n (HT20)	CH48	5240	21.68	17.619	/	Pass
11n (HT40)	CH38	5190	40.512	36.104	/	Pass
11n (HT40)	CH46	5230	40.912	36.163	/	Pass

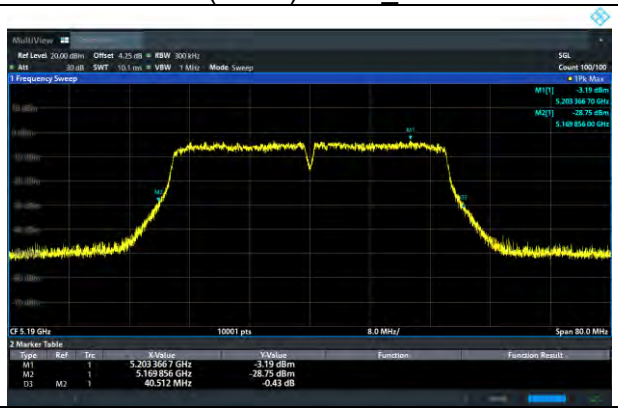
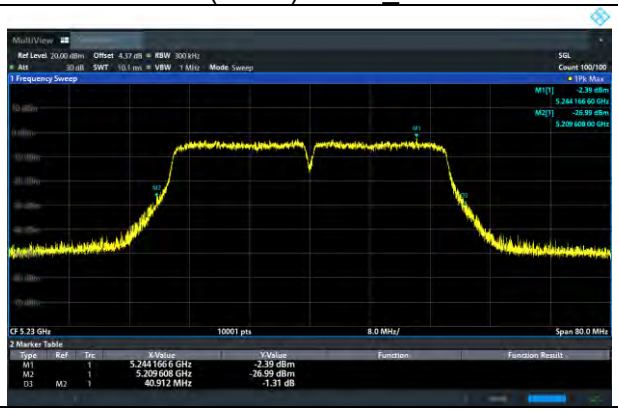
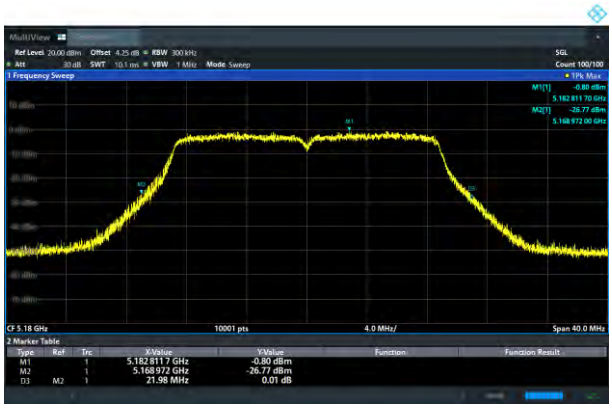
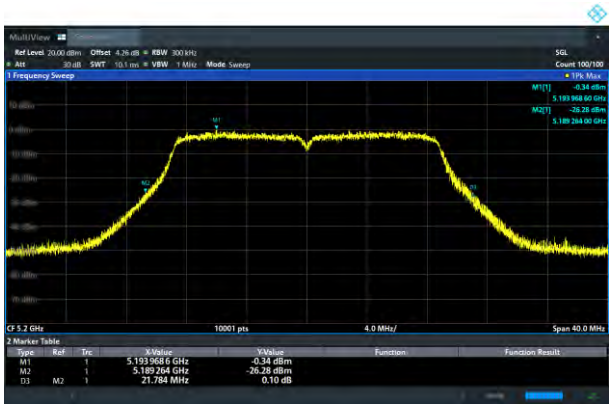
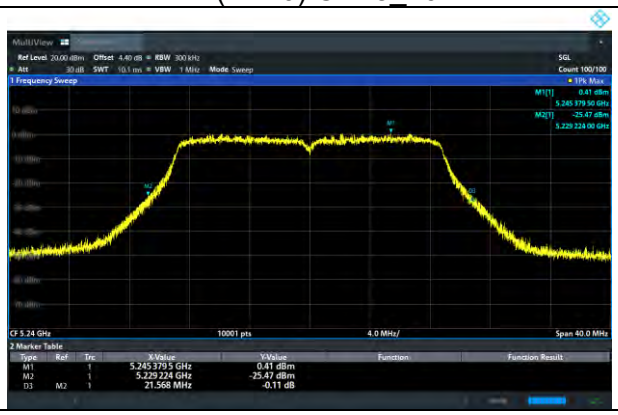
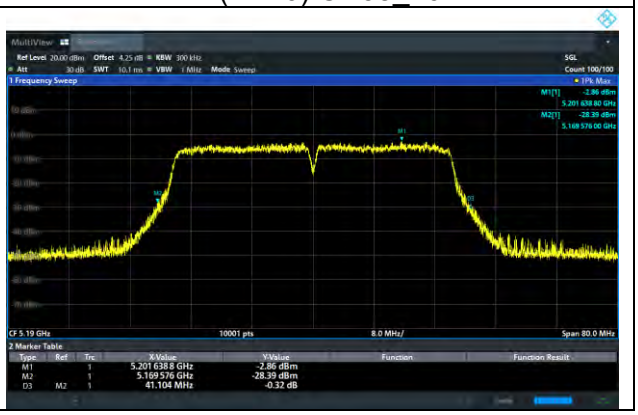
Channel	Test Channel	Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth	Limit (kHz)	Result
11ac (HT20)	CH36	5180	21.98	17.607	/	Pass
11ac (HT20)	CH40	5200	21.784	17.627	/	Pass
11ac (HT20)	CH48	5240	21.568	17.612	/	Pass
11ac (HT40)	CH38	5190	41.104	36.132	/	Pass
11ac (HT40)	CH46	5230	40.52	36.146	/	Pass
11ac (HT80)	CH42	5210	80.192	75.332	/	Pass

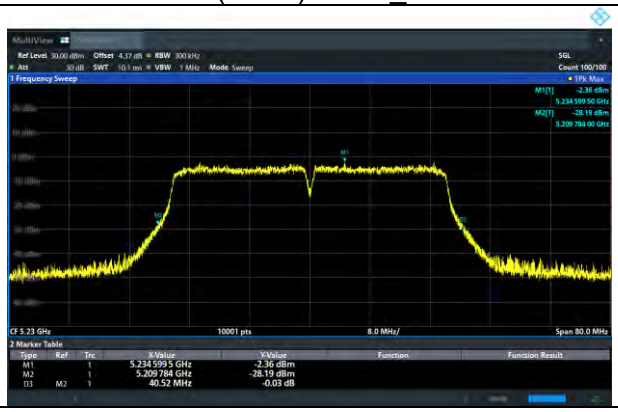
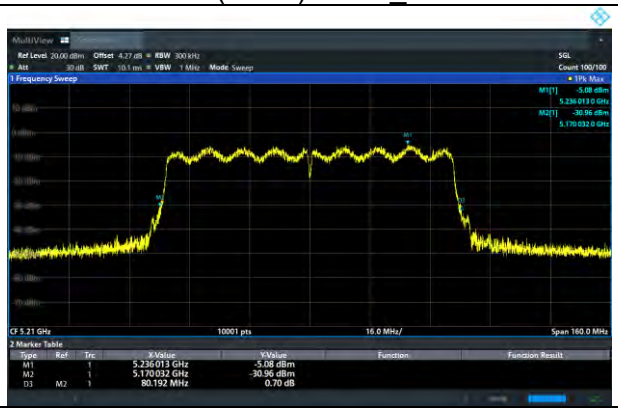
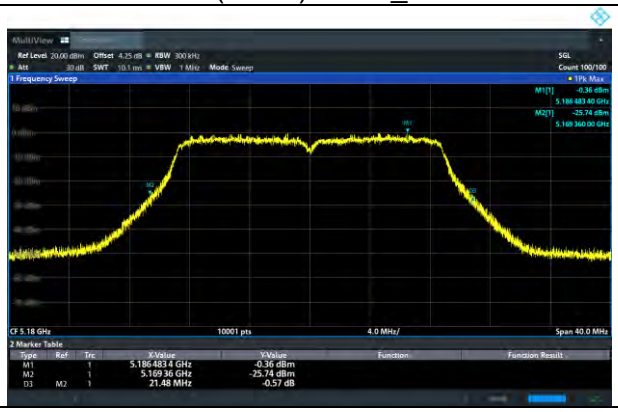
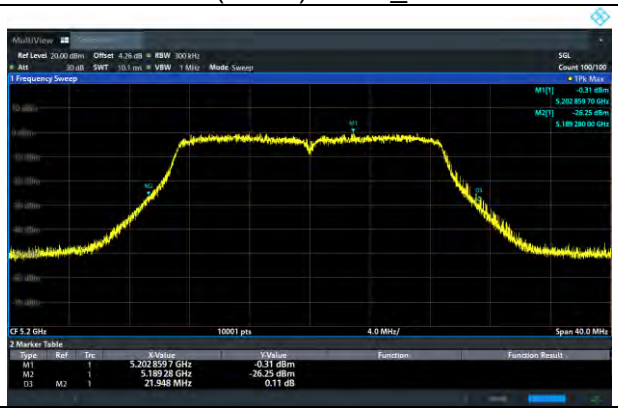
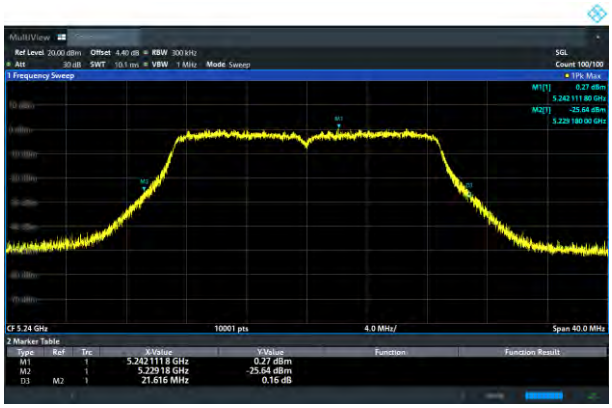
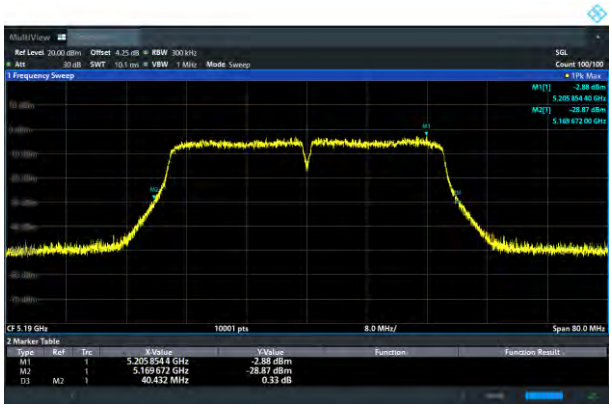
Channel	Test Channel	Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth	Limit (kHz)	Result
11ax (HE20)	CH36	5180	21.48	17.624	/	Pass
11ax (HE20)	CH40	5200	21.948	17.62	/	Pass
11ax (HE20)	CH48	5240	21.616	17.607	/	Pass
11ax (HE40)	CH38	5190	40.432	36.126	/	Pass
11ax (HE40)	CH46	5230	40.576	36.17	/	Pass
11ax (HE80)	CH42	5210	80.16	75.288	/	Pass

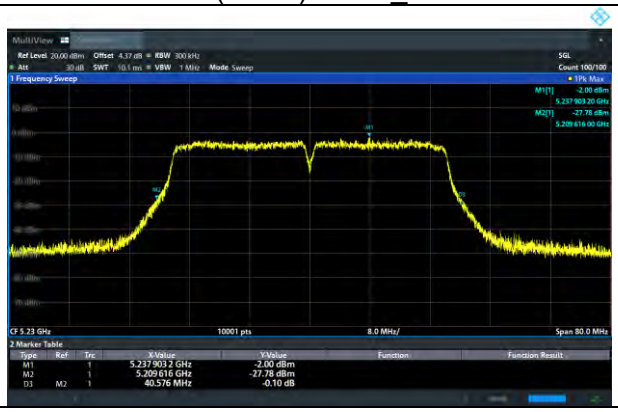
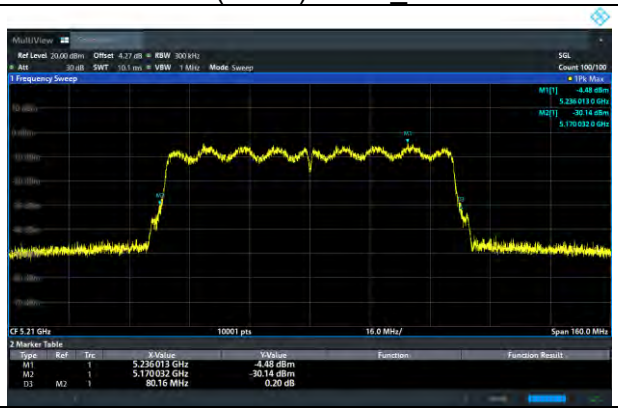
Test plots:

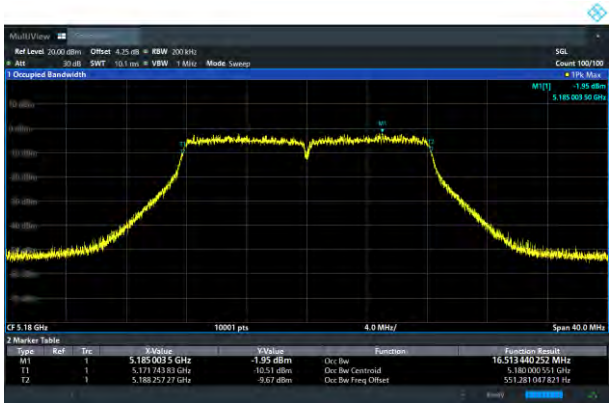
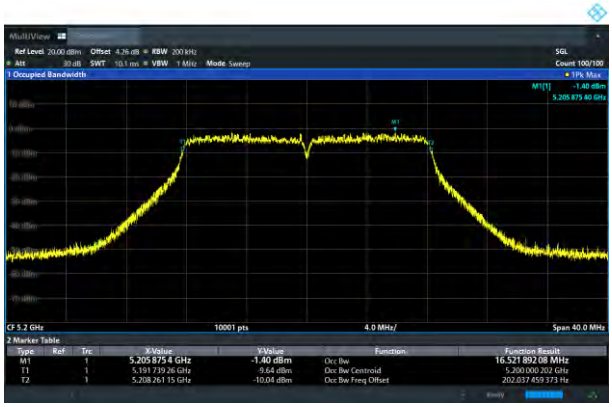
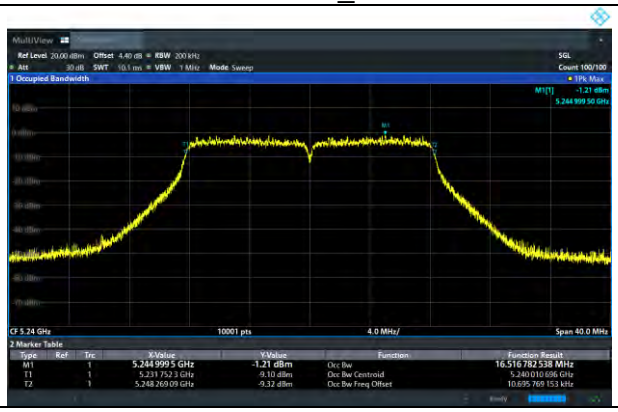
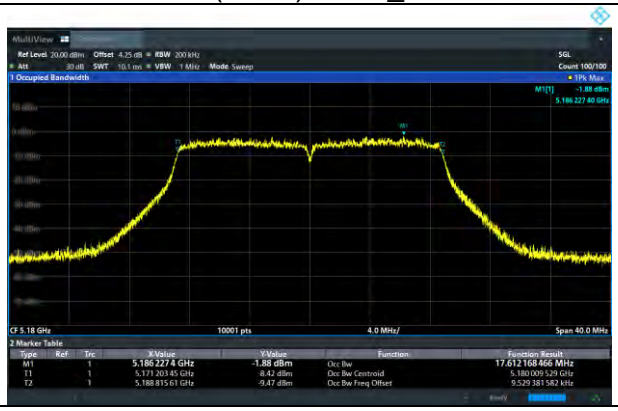
For U-NII-1

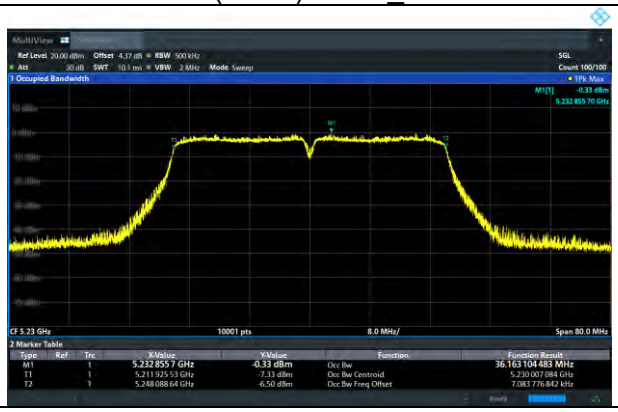
11a CH36_26dB	11a CH40_26dB
	
11a CH48_26dB	**11n (HT20) CH36_26dB**
	
11n (HT20) CH40_26dB	**11n (HT20) CH48_26dB**
	

11n (HT40) CH38_26dB	11n (HT40) CH46_26dB
	
11ac (HT20) CH36_26dB	**11ac (HT20) CH40_26dB**
	
11ac (HT20) CH48_26dB	**11ac (HT40) CH38_26dB**
	

11ac (HT40) CH46_26dB	11ac (HT80) CH42_26dB
	
11ax (HE20) CH36_26dB	**11ax (HE20) CH40_26dB**
	
11ax (HE20) CH48_26dB	**11ax (HE40) CH38_26dB**
	

11ax (HE40) CH46_26dB	11ax (HE80) CH42_26dB
	

11a CH36_99%	11a CH40_99%
	
11a CH48_99%	**11n (HT20) CH36_99%**
	
11n (HT20) CH40_99%	**11n (HT20) CH48_99%**
	

11n (HT40) CH38_99%	11n (HT40) CH46_99%
	
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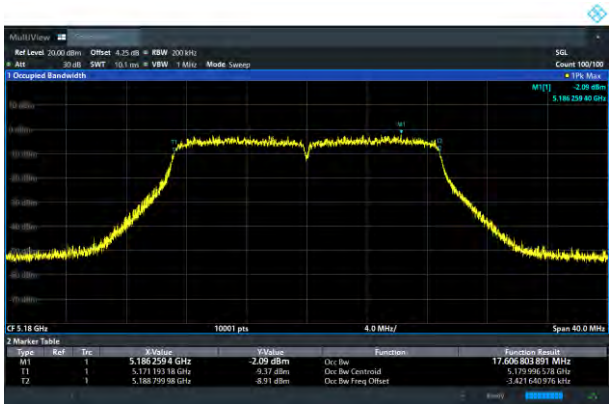	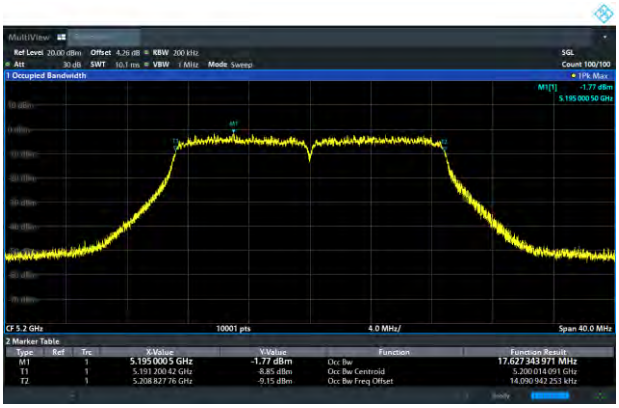
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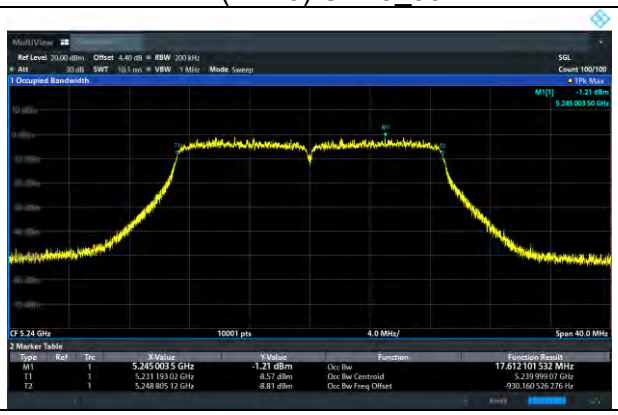
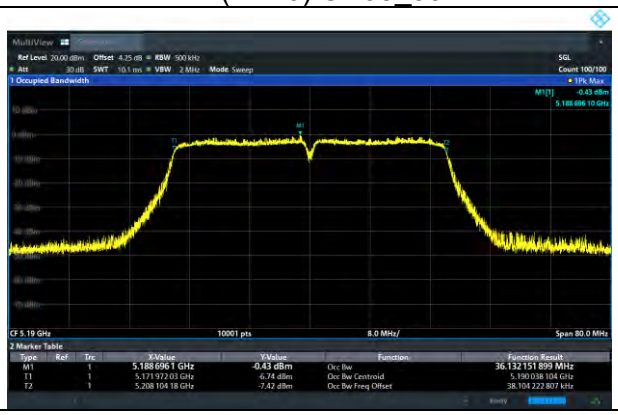
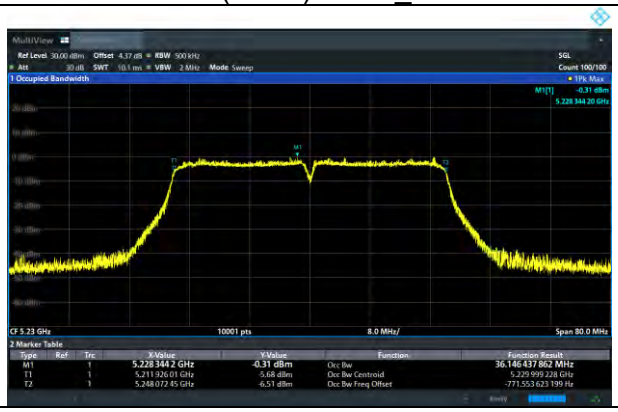
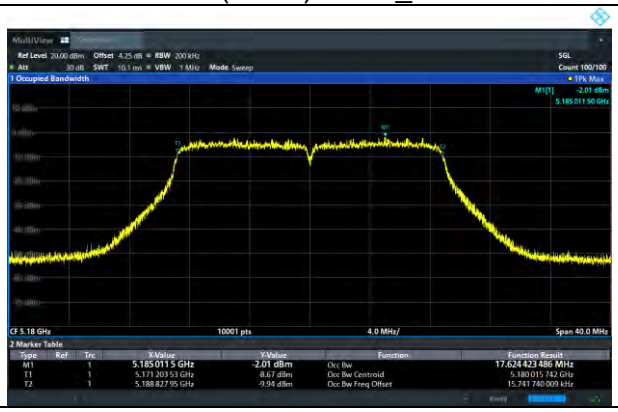
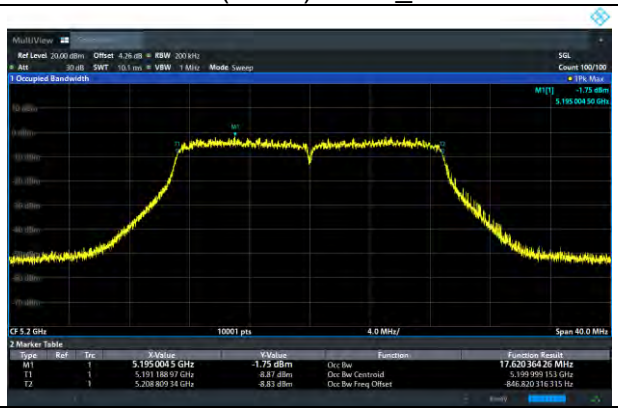
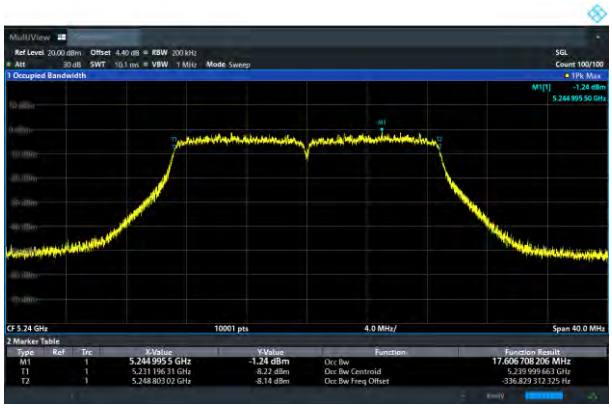
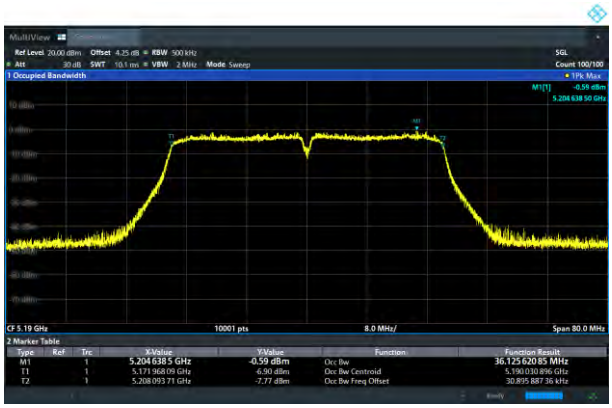
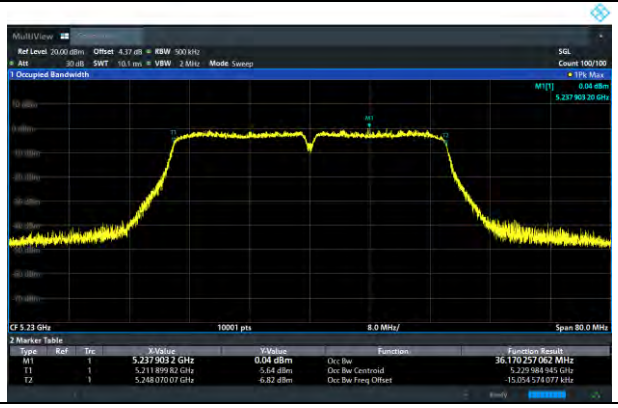
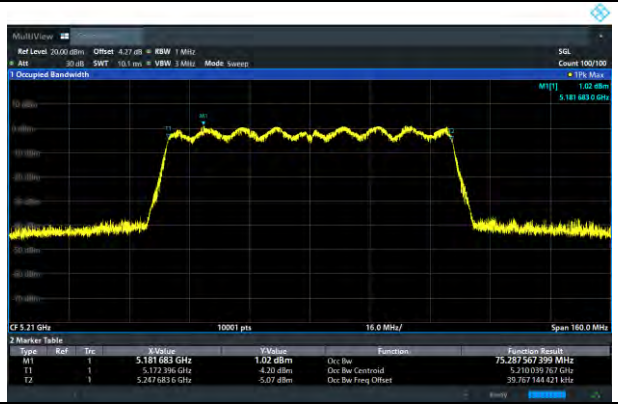
	

11ac (HT40) CH46_99%	11ac (HT80) CH42_99%
	
11ax (HE20) CH36_99%	**11ax (HE20) CH40_99%**
	
11ax (HE20) CH48_99%	**11ax (HE40) CH38_99%**
	

11ax (HE40) CH46_99%	11ax (HE80) CH42_99%
	

5.7 Out Of Band Emission

5.7.1 Limit

According to FCC §15.407(b).

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15–5.25 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25–5.35 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47–5.725 GHz band: All emissions outside of the 5.47–5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating solely in the 5.725–5.850 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

5.7.2 Test Procedure

a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

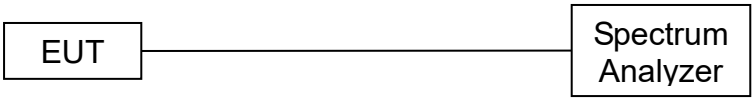
b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.

c) Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.

d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.

e) Repeat above procedures until all measured frequencies were complete.

5.7.3 Test Setup



5.7.4 Test Results

5150-5250 MHz	
(802.11a) Band Edge, Left Side	(802.11n20) Band Edge, Left Side
	
(802.11a) Band Edge, Right Side	(802.11n20) Band Edge, Right Side
	

5150-5250 MHz	
(802.11n40) Band Edge, Left Side	(802.11ac20) Band Edge, Left Side
	
(802.11n40) Band Edge, Right Side	(802.11ac20) Band Edge, Right Side
	

5150-5250 MHz	
(802.11ac40) Band Edge, Left Side	(802.11ac80) Band Edge, Left Side
	
(802.11ac40) Band Edge, Right Side	/
	/

5150-5250 MHz	
(802.11ax20) Band Edge, Left Side	(802.11ax40) Band Edge, Left Side
	
(802.11ax20) Band Edge, Right Side	(802.11ax40) Band Edge, Right Side
	

5150-5250 MHz	
(802.11ax80) Band Edge, Left Side	/
	/
/	/
/	/

5.8 Spurious RF Conducted Emissions

5.8.1 Limit

According to FCC §15.407(b).

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15–5.25 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25–5.35 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47–5.725 GHz band: All emissions outside of the 5.47–5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

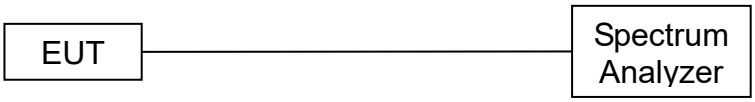
(4) For transmitters operating solely in the 5.725–5.850 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

5.8.2 Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2020 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW= 300kHz to measure the peak field strength, and measure frequency range from 9kHz to 26.5GHz.

5.8.3 Test Setup

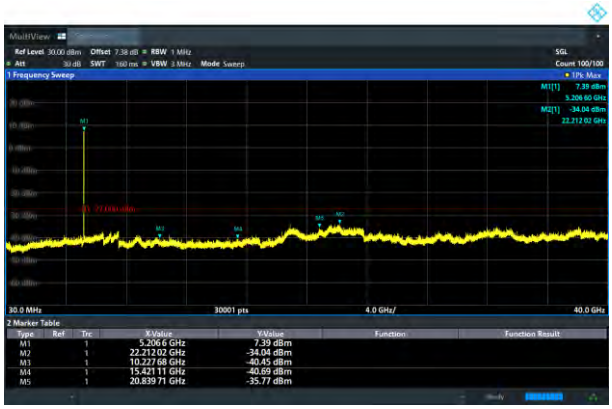
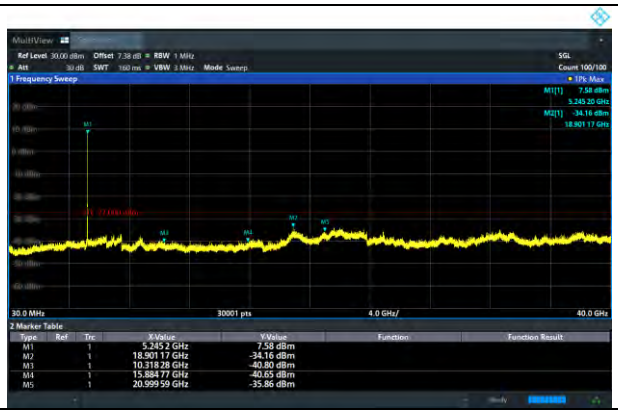
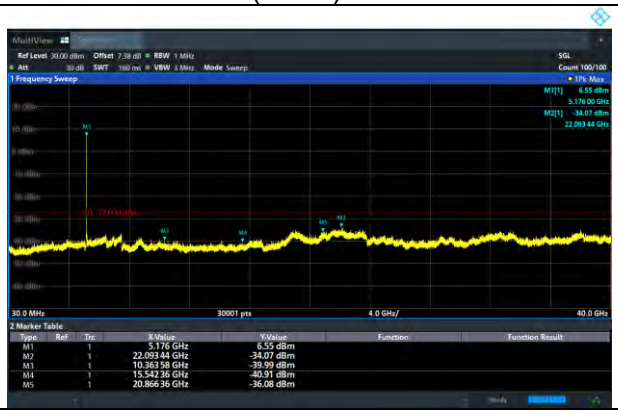
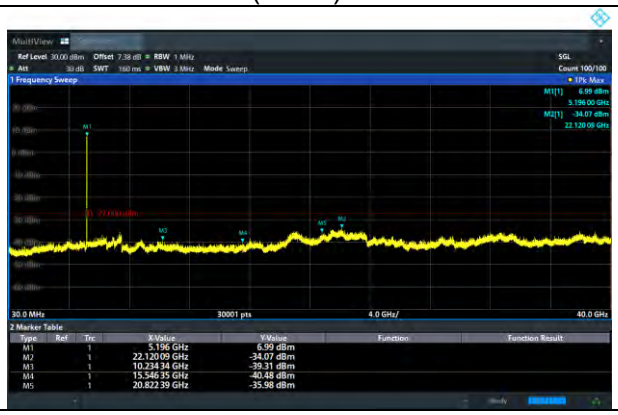
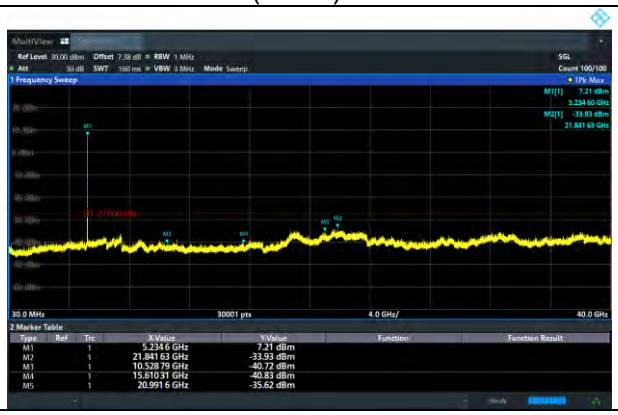


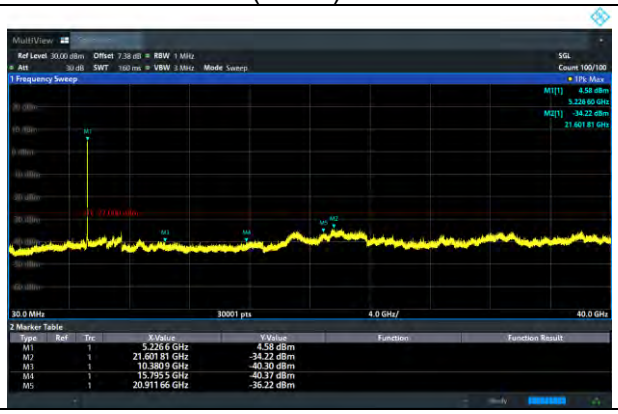
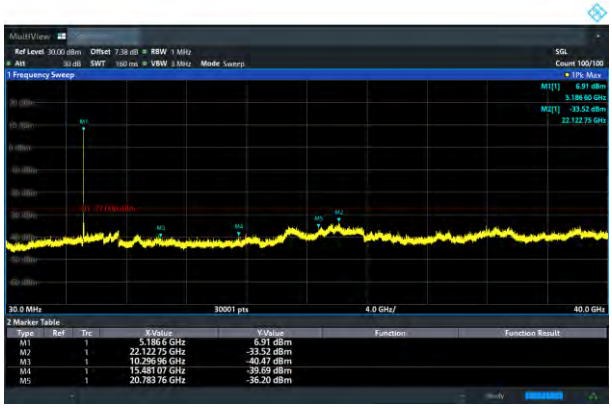
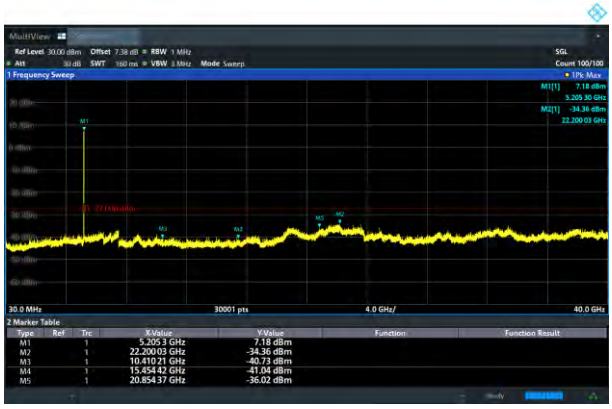
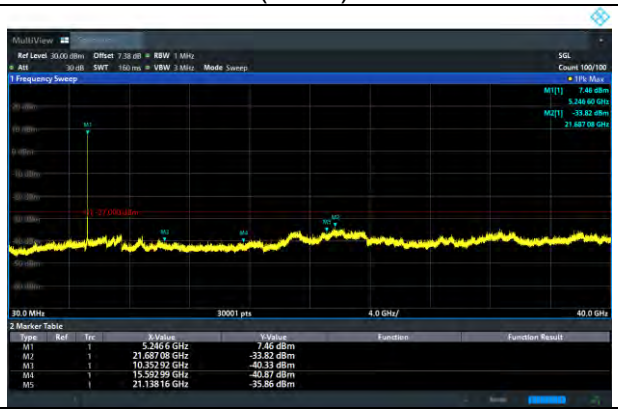
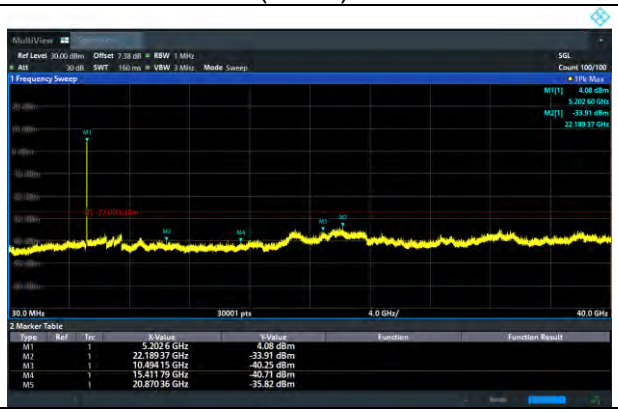
5.8.4 Test Results

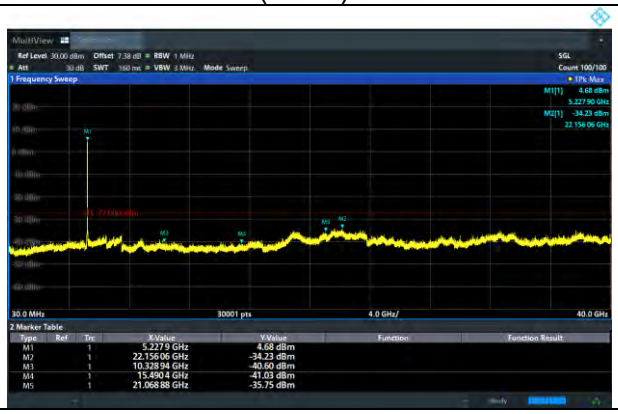
Note:

1: The measurement frequency range is from 9kHz to the 10th harmonic of the fundamental

frequency; The lowest, middle and highest channels are tested to verify the spurious emissions and band edge measurement data.

U-NII-1	
11a CH36	11a CH40
	
11a CH48	11n (HT20) CH36
	
11n (HT20) CH40	11n (HT20) CH48
	

11n (HT40) CH38	11n (HT40) CH46
	
11ac (HT20) CH36	**11ac (HT20) CH40**
	
11ac (HT20) CH48	**11ac (HT40) CH38**
	

11ac (HT40) CH46	11ac (HT80) CH42
	
11ax (HT20) CH36	**11ax (HT20) CH40**
	
11ax (HT20) CH48	**11ax (HT40) CH38**
	

11ax (HT40) CH46	11ax (HT80) CH42
	

6 Photographs of the Test Setup

Radiated Emission Below 1GHz

Radiated Emission Above 1GHz


Conducted Emission


7 Photographs of the EUT

Please refer to report HB20250619012E-01 for product photos.

****** END OF REPORT ******