RF TEST REPORT

Applicant	Daiichi Elektronik Sanayi ve Ticaret A.S.
FCC ID	2AOI6-VQC1006
Product	A7+ 10.25inch w/DAB w/Wireless CP&AA&FM&AM
Brand	Daiichi
Model	VQC1006
Report No.	EFTA25010109-IE-11-R3V1
Issue Date	May 27, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2024)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Xu Ying *Approved by: Xu Kai*

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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	March 31, 2025
Rev.1	Updated information.	May 27, 2025
Note: This revised report (Report No.: EFTA25010109-IE-11-R3V1) supersedes and replaces the previously issued report (Report No.: EFTA25010109-IE-11-R3). Please discard or destroy the previously issued report and dispose of it accordingly.		

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Summary of measurement results

Number	Test Case	Clause in FCC rules	Verdict
1	Average output power	15.407(a)	PASS
2	Occupied bandwidth	15.407(e)	PASS
3	Frequency stability	15.407(g)	PASS
4	Power spectral density	15.407(a)	PASS
5	Unwanted Emissions	15.407(b)	PASS
6	Conducted Emissions	15.207	NA Note 1

Date of Testing: January 9, 2025 ~ February 27, 2025
Date of Sample Received: January 9, 2025

Note:
1. The equipment is not connected to the public network, so test items do not apply.
2. PASS: The EUT complies with the essential requirements in the standard.
   FAIL: The EUT does not comply with the essential requirements in the standard.

All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.

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1. Test Laboratory

1.1. Notes of the test report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3. Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City:	Shanghai
Post code:	201201
Country:	P. R. China
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Fax:	+86-021-50791141/2/3-8000
Website:	https://www.eurofins.com/electrical-and-electronics
E-mail:	Kain.Xu@cpt.eurofinscn.com

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2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	Daiichi Elektronik Sanayi ve Ticaret A.S.
Applicant address	Ferhatpaşa mah. 16. Sok.No:38 Ataşehir/Istanbul
Manufacturer	Daiichi Elektronik Sanayi ve Ticaret A.S.
Manufacturer address	Ferhatpaşa mah. 16. Sok.No:38 Ataşehir/Istanbul

2.2. General information

EUT Description	
Model	VQC1006
Lab internal SN	EFTA25010109-IE-11/S01
Hardware Version	1.0.2
Software Version	1.0.8
Power Supply	External power supply
Antenna Type	Internal Antenna
Antenna Connector	A permanently attached antenna (meet with the standard FCC Part 15.203 requirement)
Antenna Gain	4.0 dBi
Directional Gain	NA
Operating Frequency Range(s)	U-NII-1: 5150MHz-5250MHz U-NII-3: 5725MHz -5850MHz
Modulation Type	802.11a: OFDM 802.11n (HT20/HT40): OFDM 802.11ac (VHT20/VHT40/VHT80): OFDM
Max. Output Power	13.53 dBm
Operating temperature range	-40 ° C to 85° C
Operating voltage range	9VDC to 16VDC
Testing temperature range	-30 ° C to 50° C
Testing voltage range	9VDC - 12 VDC - 16 VDC
State voltage	12 VDC
Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. 2. This device support automatically discontinue transmission, while the device is not transmitting any information, the device can automatically discontinue transmission and become standby mode for power saving. The device can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission. 3. (a) Manufacturers implements security features in any digitally modulated devices capable of	

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operating in any of the U-NII bands, so that third parties are not able to reprogram the device to operate outside the parameters for which the device was certified. The software prevents the user from operating the transmitter with operating frequencies, output power, modulation types or other radio frequency parameters outside those that were approved for the device. Manufacturers uses means including, but not limited to the use of a private network that allows only authenticated users to download software, electronic signatures in software or coding in hardware that is decoded by software to verify that new software can be legally loaded into a device to meet these requirements and must describe the methods in their application for equipment authorization.
(b) Manufacturers take steps to ensure that DFS functionality cannot be disabled by the operator of the U-NII device.

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3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR47 Part 15E (2024) Unlicensed National Information Infrastructure Devices

ANSI C63.10-2013

Reference standard:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

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4. Test Configuration

Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Mode	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

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Wireless Technology and Frequency Range

Wireless Technology		Bandwidth	Channel	Frequency
Wi-Fi	U-NII-1	20 MHz	36	5180MHz
			40	5200MHz
			44	5220MHz
			48	5240MHz
		40 MHz	38	5190MHz
			46	5230MHz
		80 MHz	42	5210MHz
	U-NII-3	20 MHz	149	5745MHz
			153	5765MHz
			157	5785MHz
			161	5805MHz
			165	5825MHz
		40 MHz	151	5755MHz
			159	5795MHz
		80 MHz	155	5775MHz
Does this device support TPC Function? ☐Yes ☒No				

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5. Test Case Results

5.1. Occupied Bandwidth

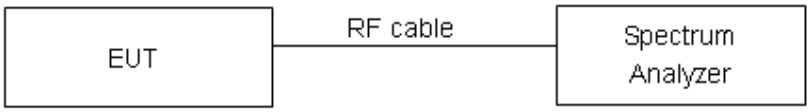
Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.
For U-NII-1, set RBW ≈1% OCB kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.
For U-NII-3, Set RBW = 100 kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.
Use the 99 % power bandwidth function of the instrument

Test Setup



Limits

For U-NII-1
No specific occupied bandwidth requirements in Part 15.407.
For U-NII-3
Rule FCC Part §15.407(e)
Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

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Test Results:

U-NII-1

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5180	16.738	19.845	PASS
	5200	16.713	19.922	PASS
	5240	16.701	19.944	PASS
802.11n HT20	5180	17.709	20.241	PASS
	5200	17.718	20.325	PASS
	5240	17.703	20.157	PASS
802.11n HT40	5190	36.304	42.434	PASS
	5230	36.250	41.052	PASS
802.11ac VHT20	5180	17.681	20.262	PASS
	5200	17.680	20.215	PASS
	5240	17.724	20.125	PASS
802.11ac VHT40	5190	36.346	41.587	PASS
	5230	36.279	41.049	PASS
802.11ac VHT80	5210	76.045	81.471	PASS

U-NII-3

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11a	5745	16.711	16.358	500	PASS
	5785	16.725	16.358	500	PASS
	5825	16.721	16.434	500	PASS
802.11n HT20	5745	17.722	17.554	500	PASS
	5785	17.740	17.559	500	PASS
	5825	17.755	17.578	500	PASS
802.11n HT40	5755	36.329	36.029	500	PASS
	5795	36.319	35.730	500	PASS
802.11ac VHT20	5745	17.734	17.589	500	PASS
	5785	17.730	17.561	500	PASS
	5825	17.754	17.563	500	PASS
802.11ac VHT40	5755	36.296	35.718	500	PASS
	5795	36.243	35.687	500	PASS
802.11ac VHT80	5775	76.217	75.713	500	PASS

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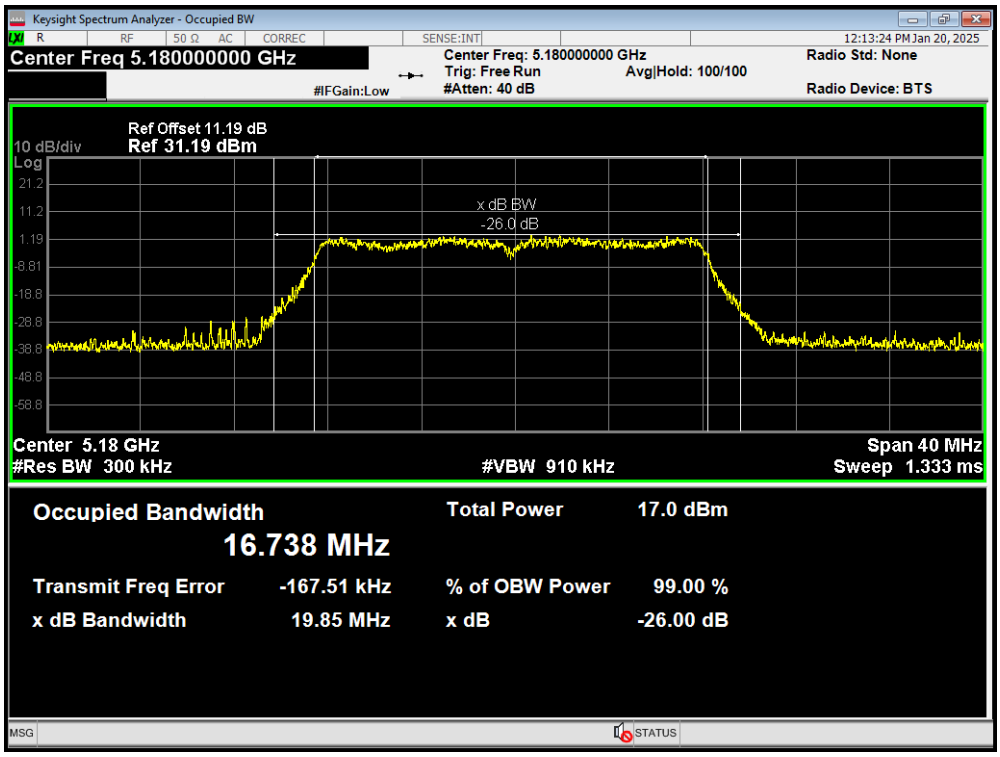
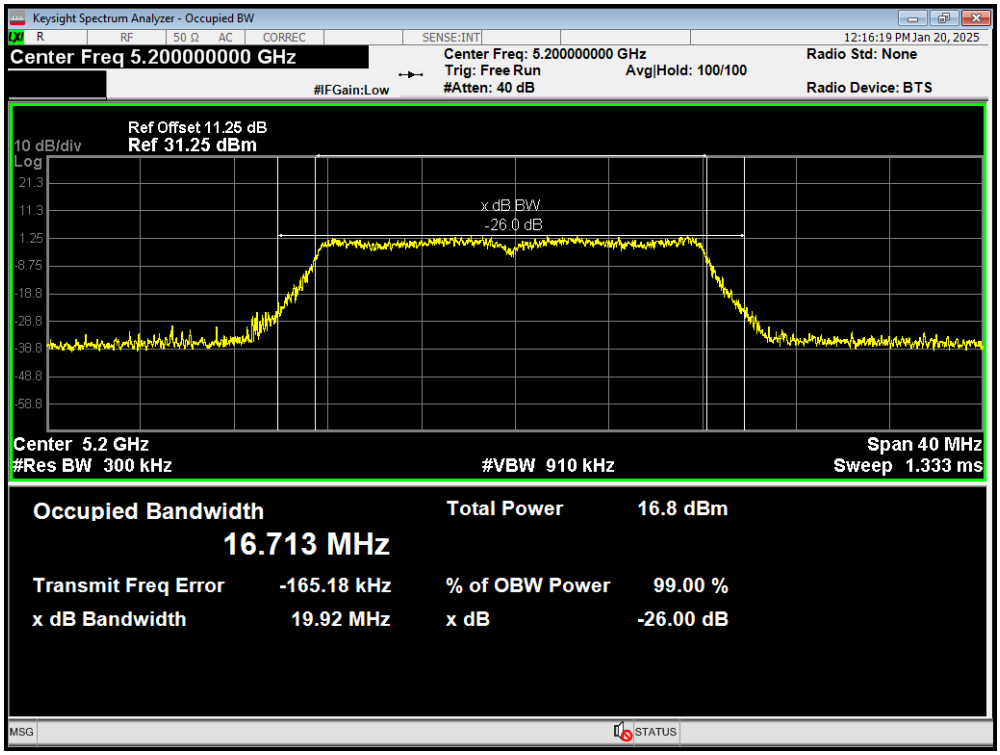
99% bandwidth

U-NII-1

OBW 802.11a 5180MHz



OBW 802.11a 5200MHz



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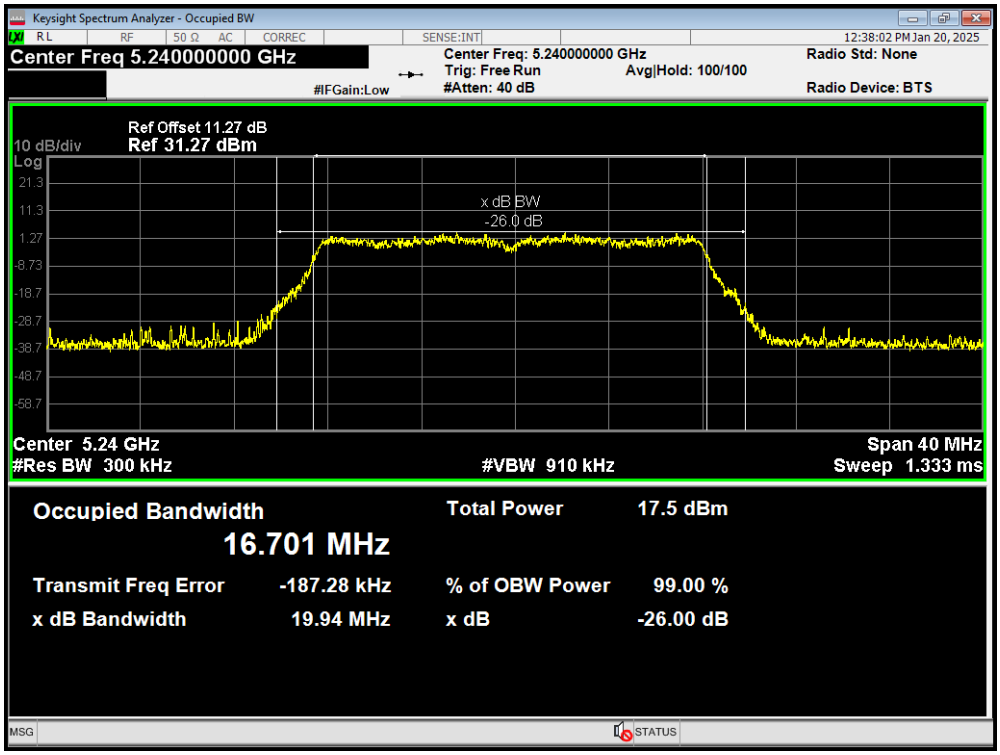
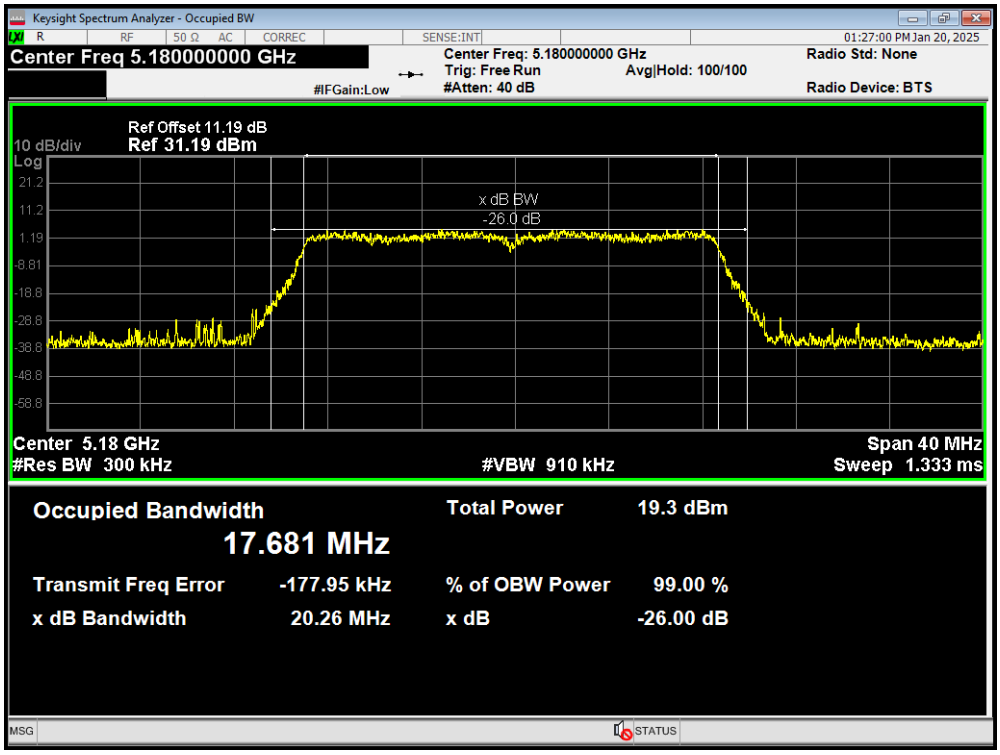
OBW 802.11a 5240MHz



OBW 802.11ac(VHT20) 5180MHz



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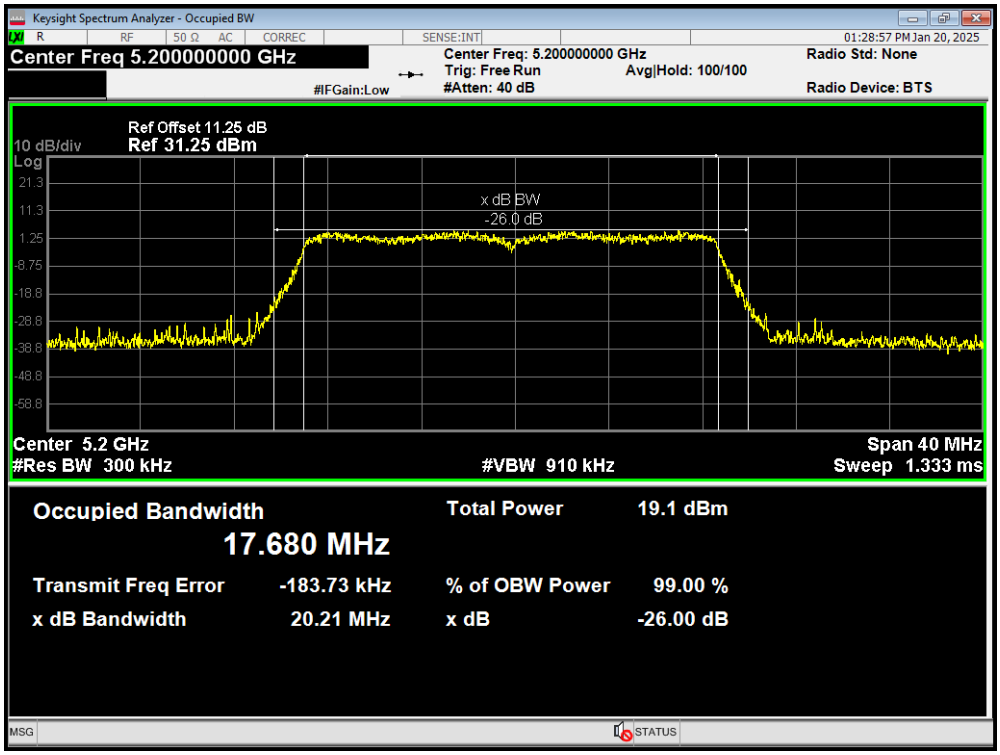
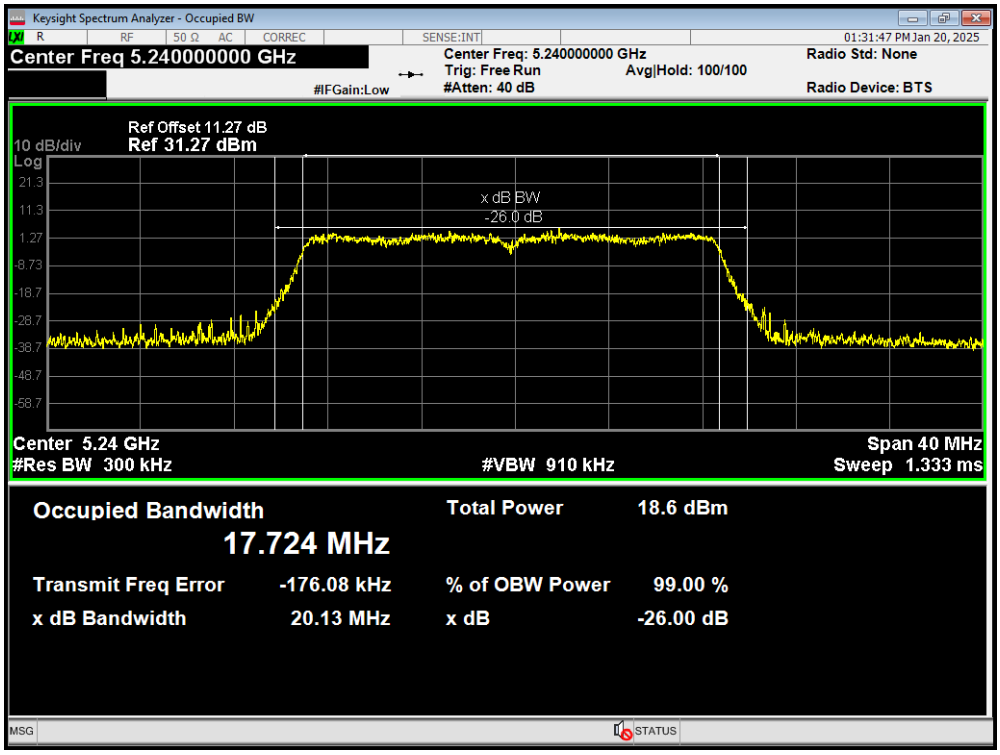
OBW 802.11ac(VHT20) 5200MHz



OBW 802.11ac(VHT20) 5240MHz



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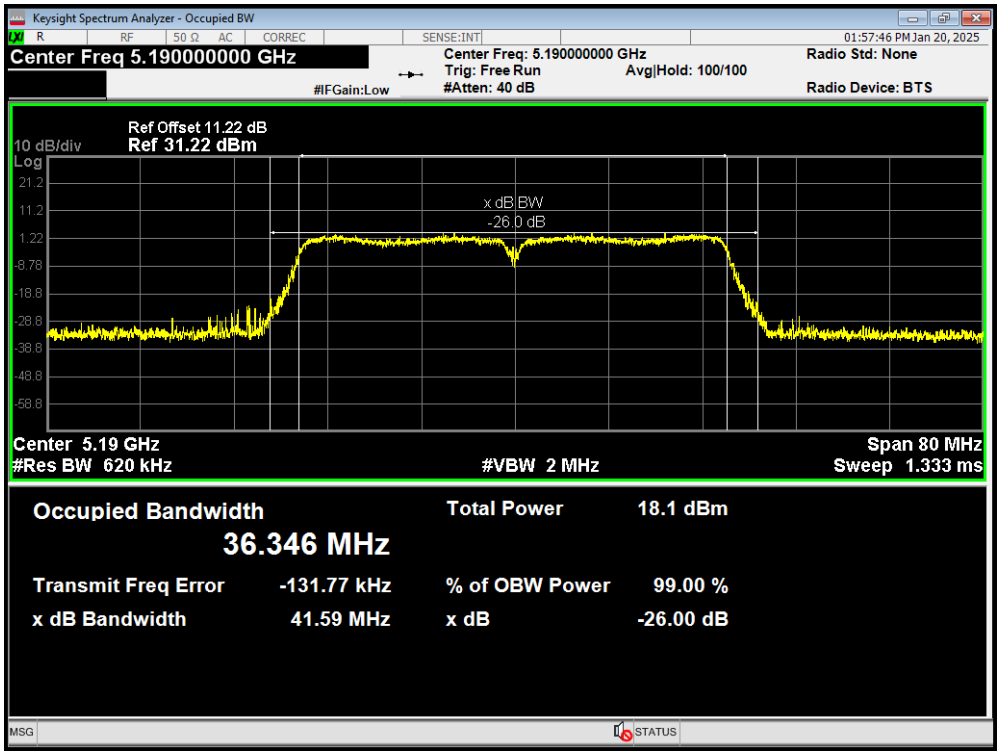
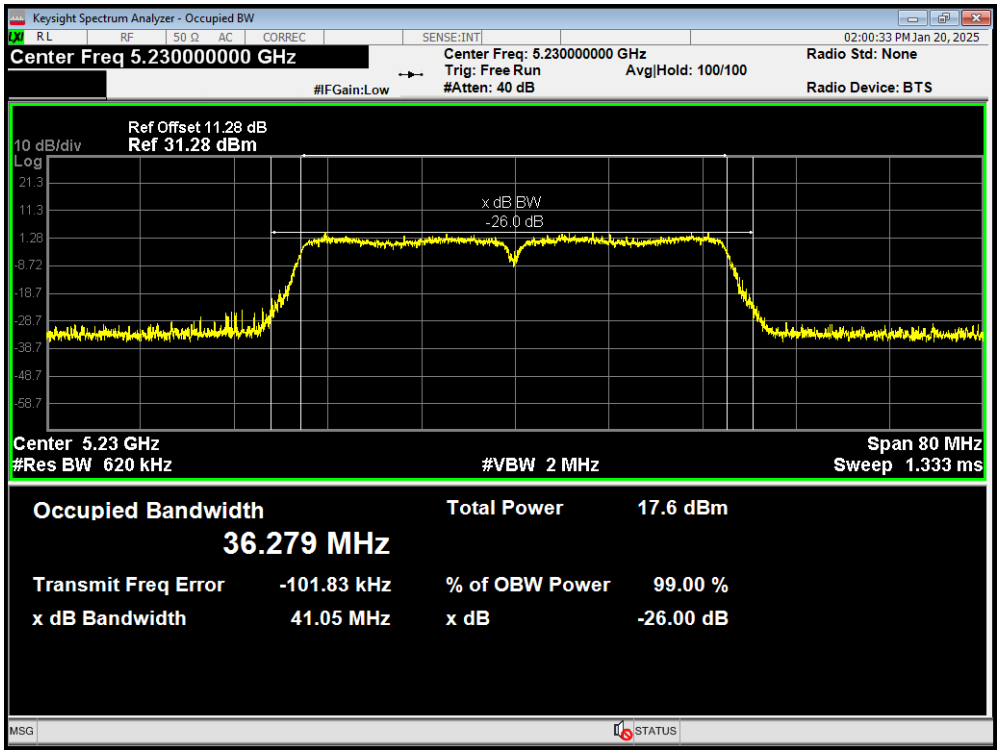
OBW 802.11ac(VHT40) 5190MHz



OBW 802.11ac(VHT40) 5230MHz



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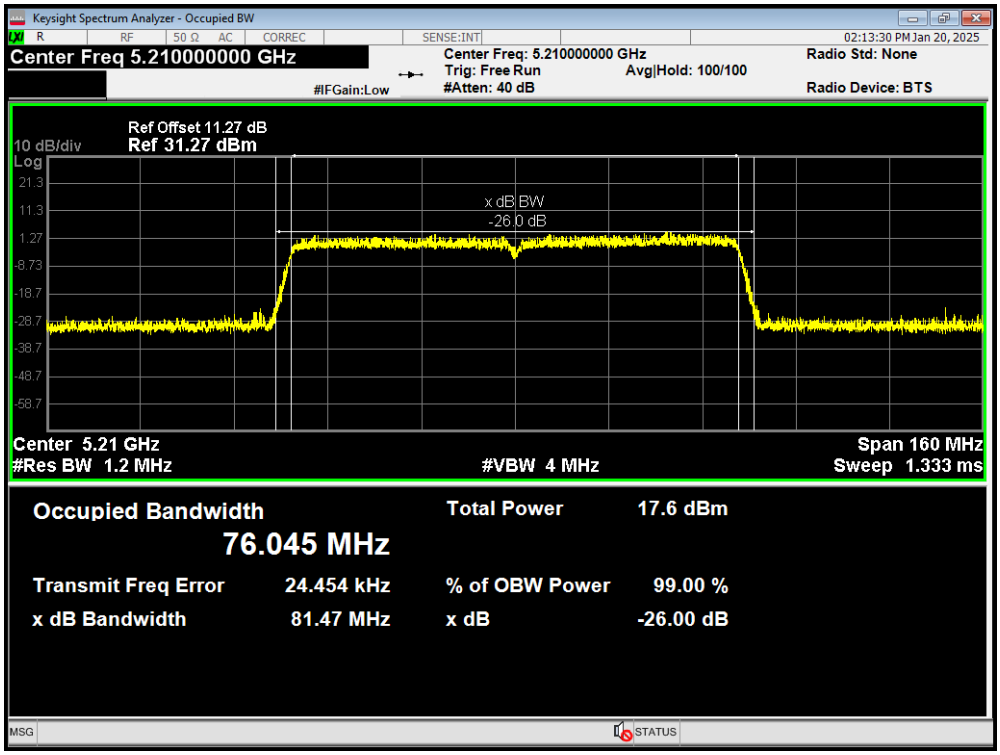
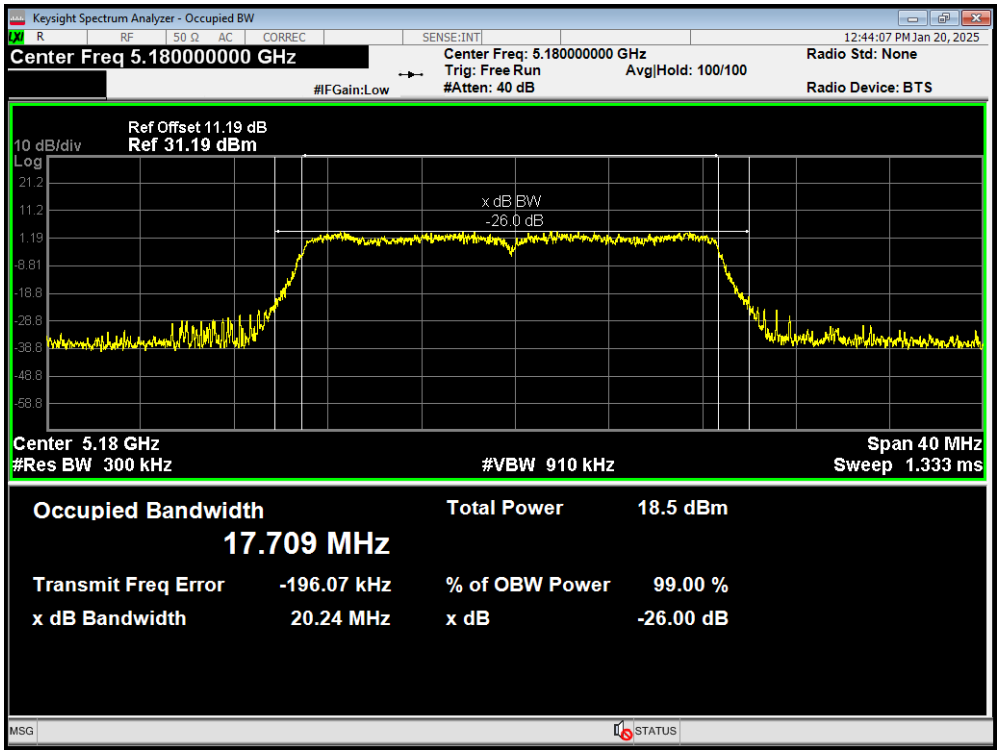
OBW 802.11ac(VHT80) 5210MHz



OBW 802.11n(HT20) 5180MHz



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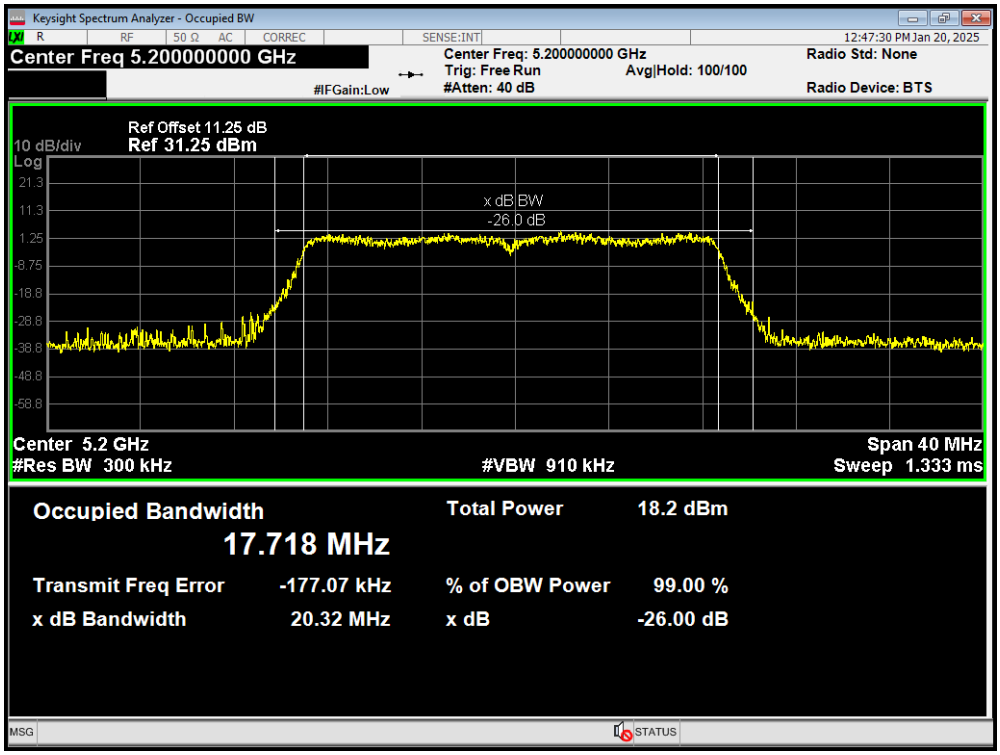
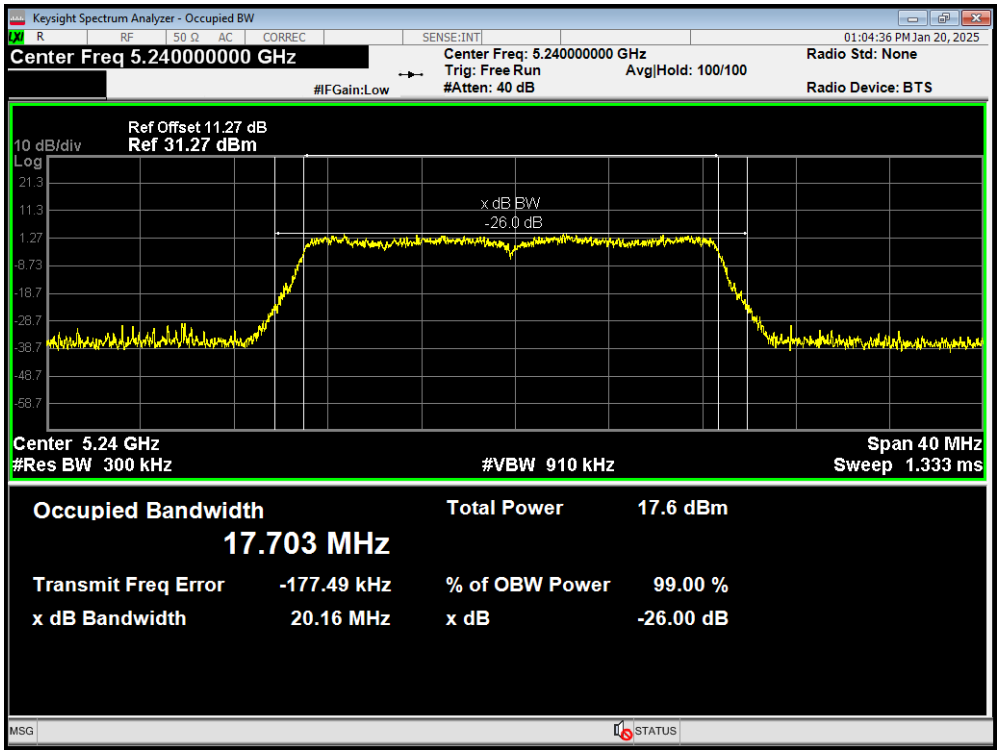
OBW 802.11n(HT20) 5200MHz



OBW 802.11n(HT20) 5240MHz



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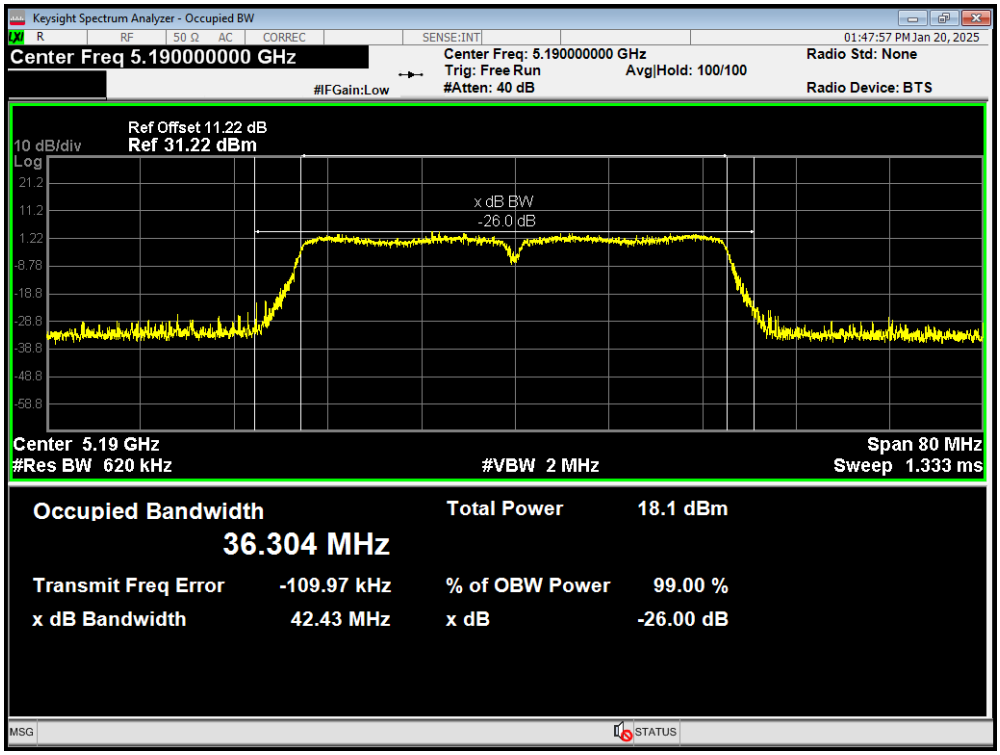
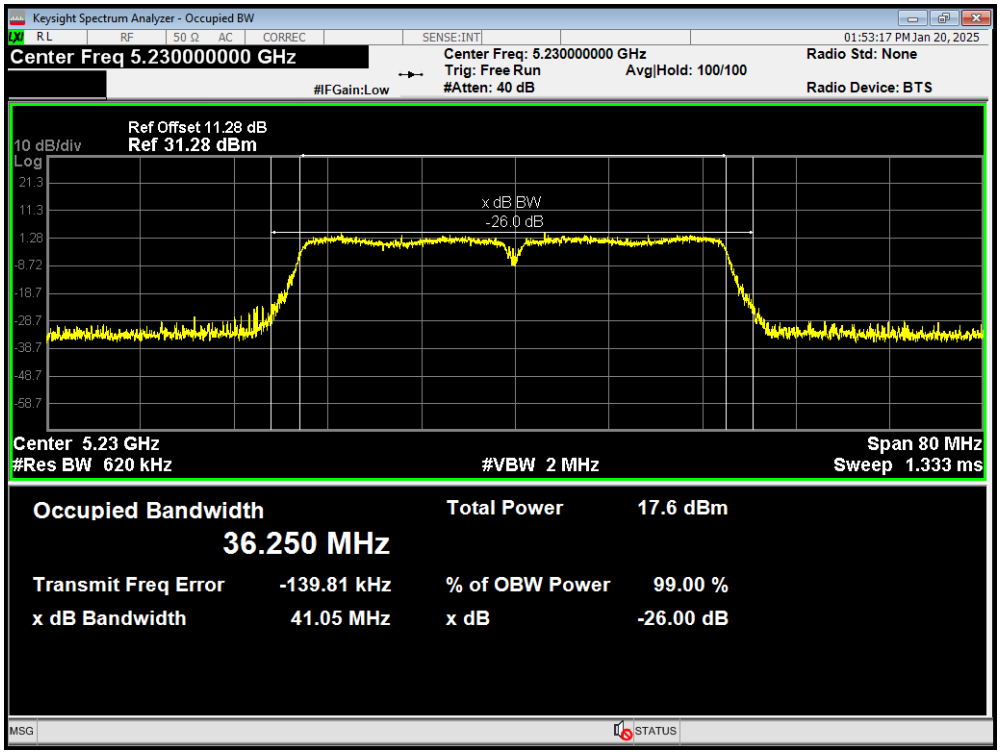
OBW 802.11n(HT40) 5190MHz



OBW 802.11n(HT40) 5230MHz



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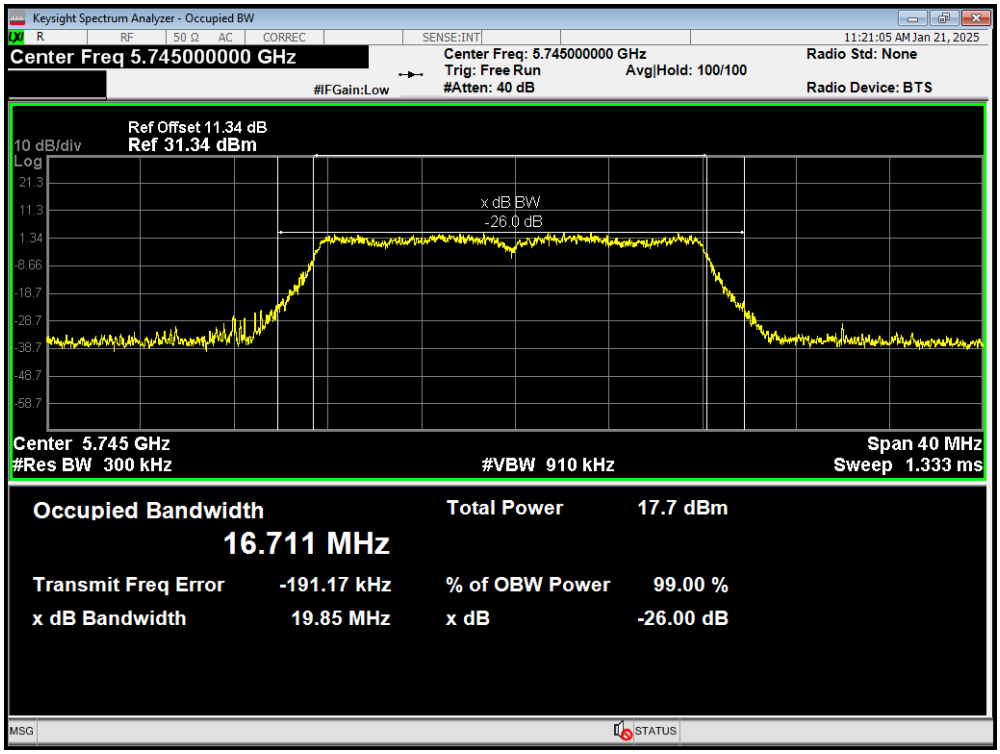
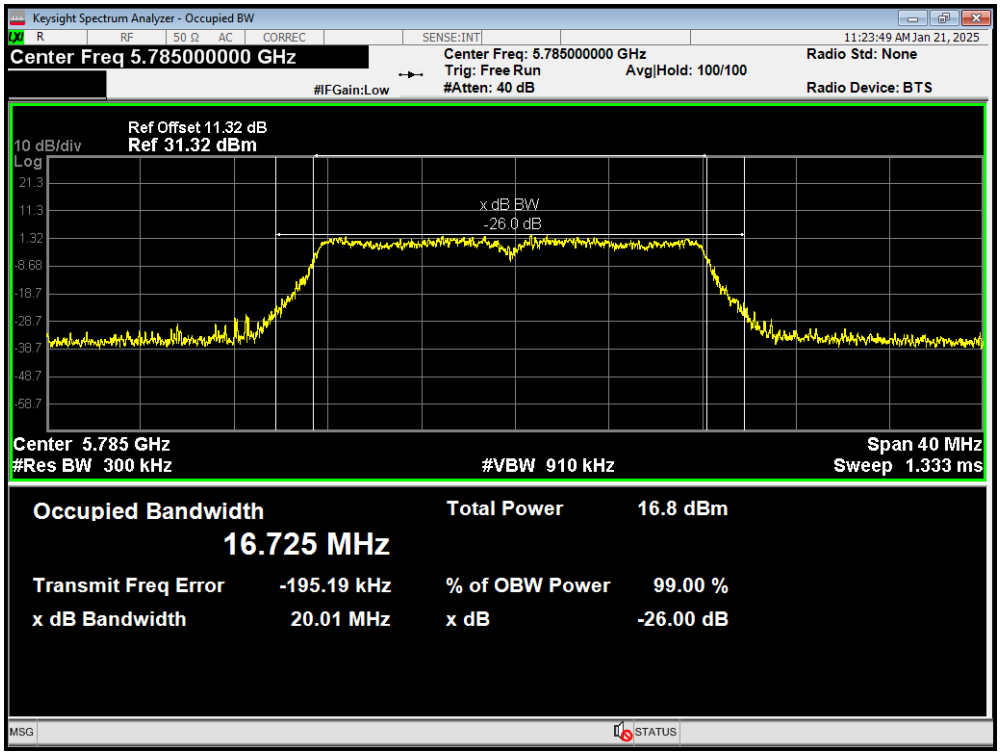
U-NII-3

OBW 802.11a 5745MHz



OBW 802.11a 5785MHz



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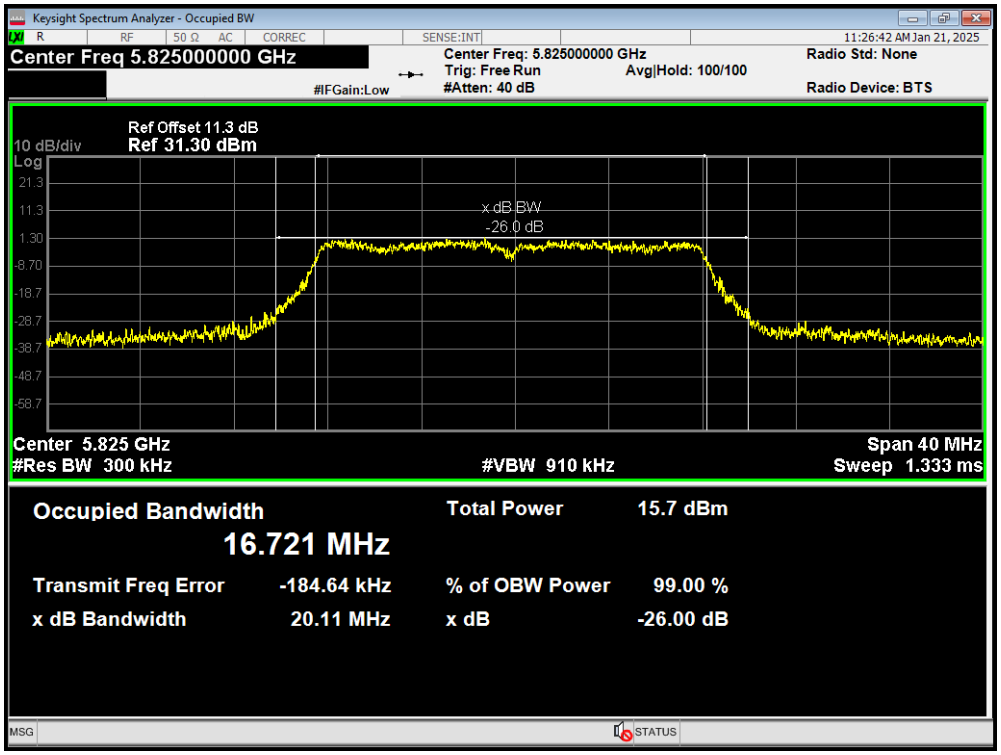
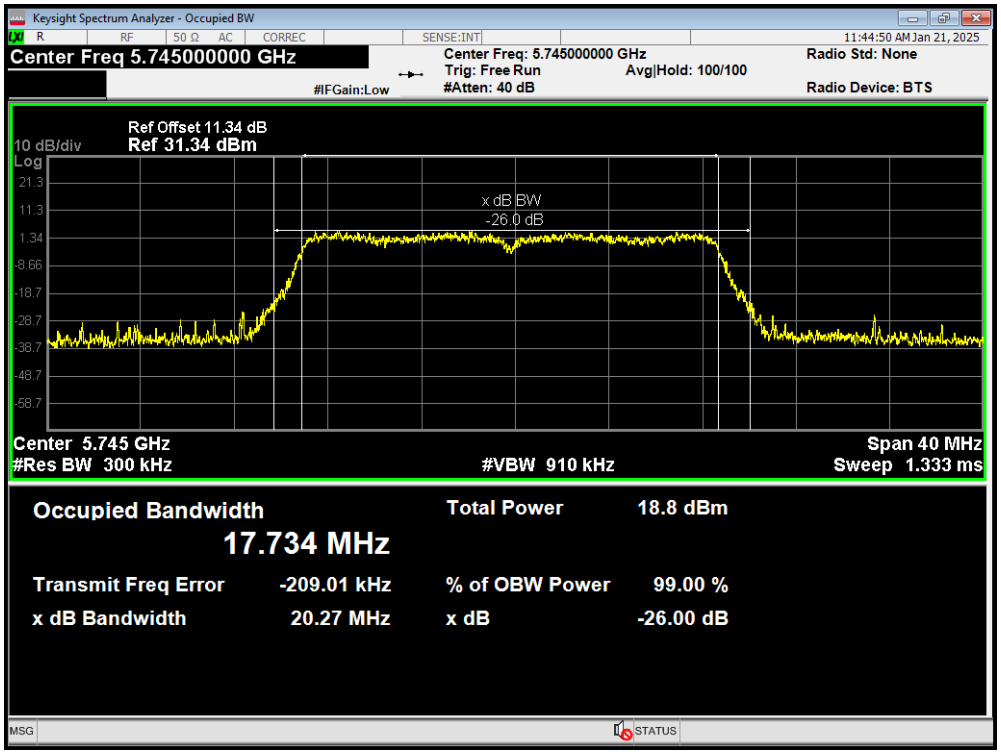
OBW 802.11a 5825MHz



OBW 802.11ac(VHT20) 5745MHz



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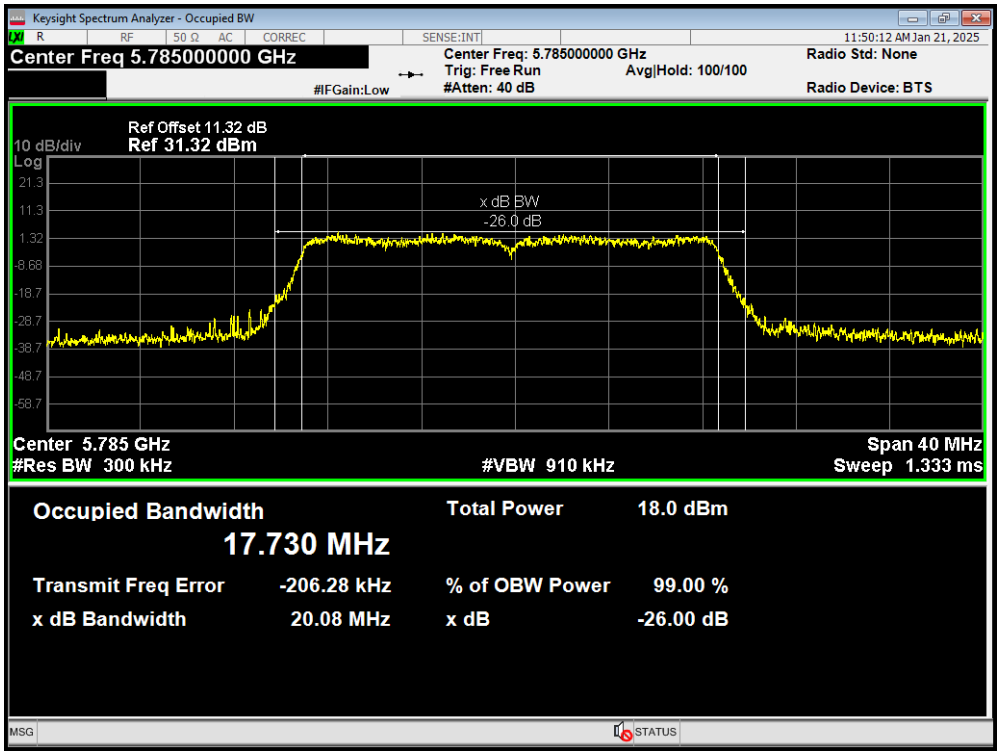
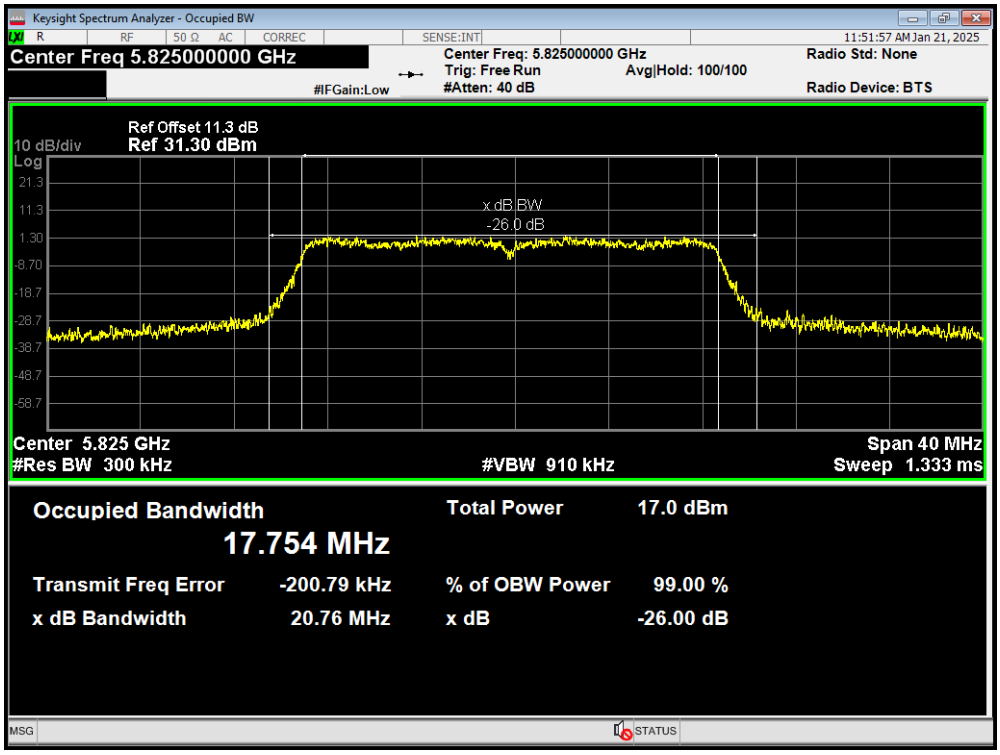
OBW 802.11ac(VHT20) 5785MHz



OBW 802.11ac(VHT20) 5825MHz



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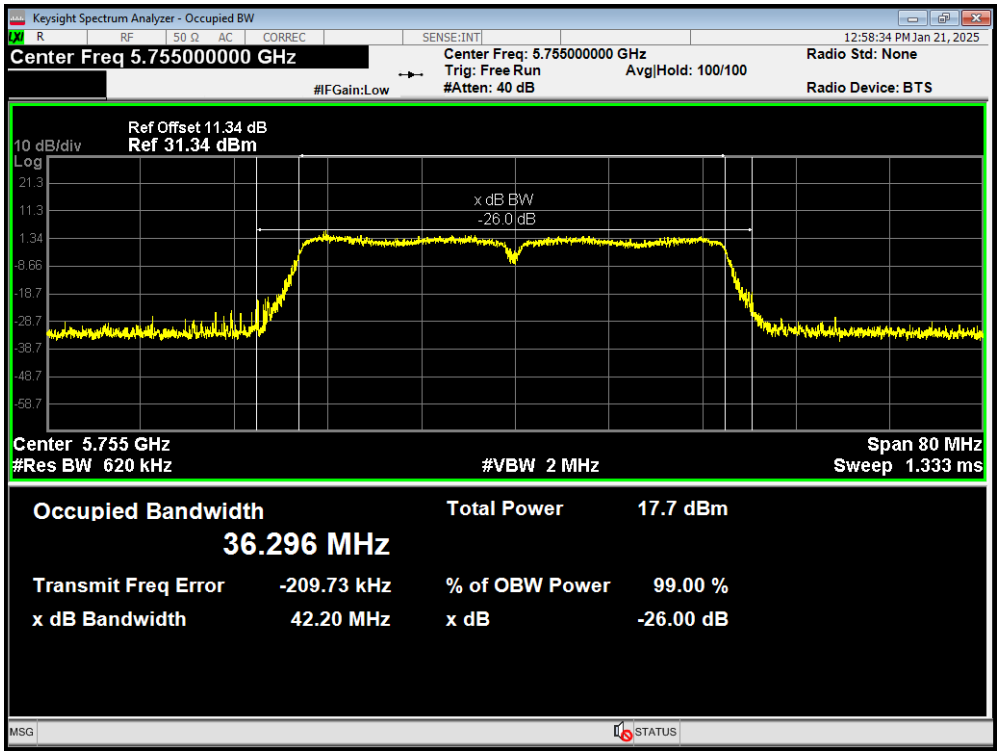
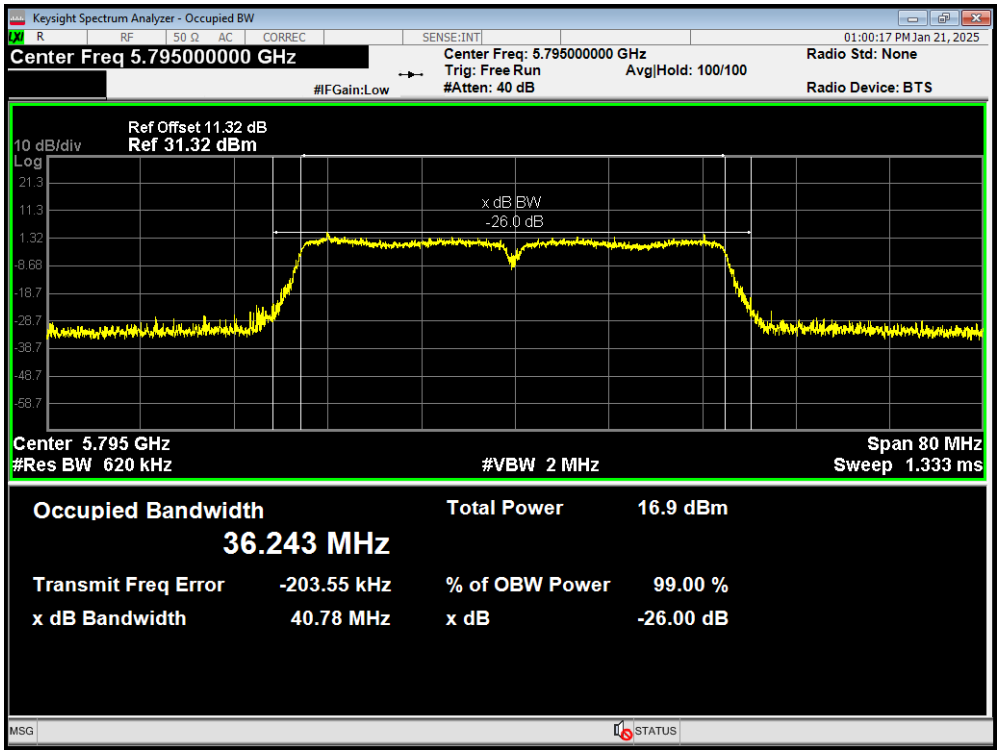
OBW 802.11ac(VHT40) 5755MHz



OBW 802.11ac(VHT40) 5795MHz



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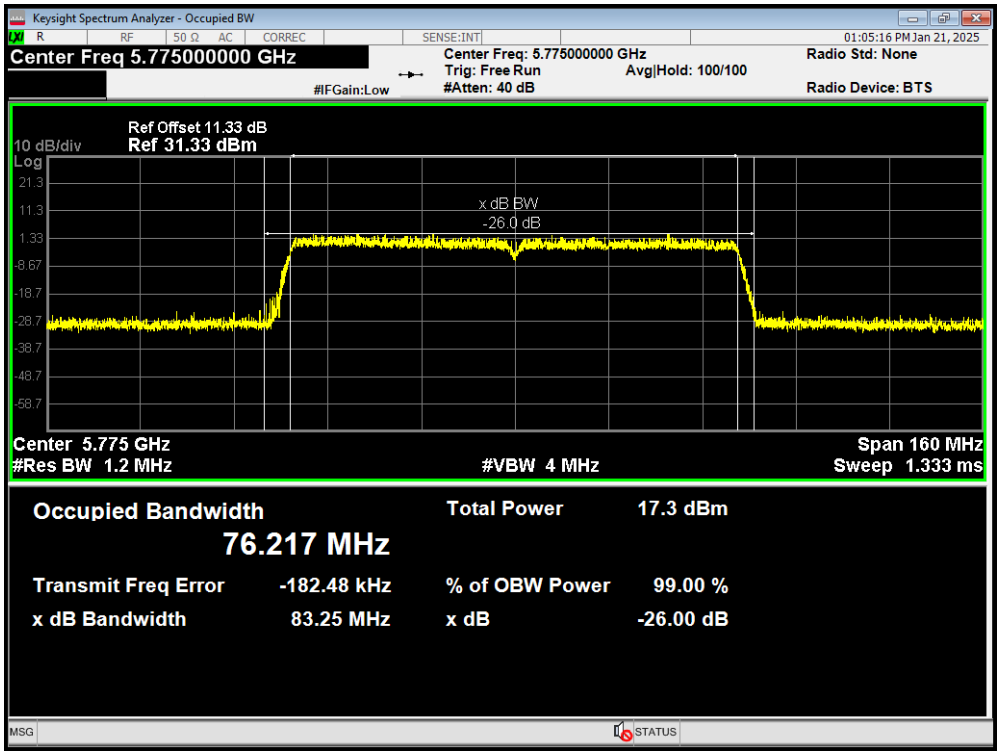
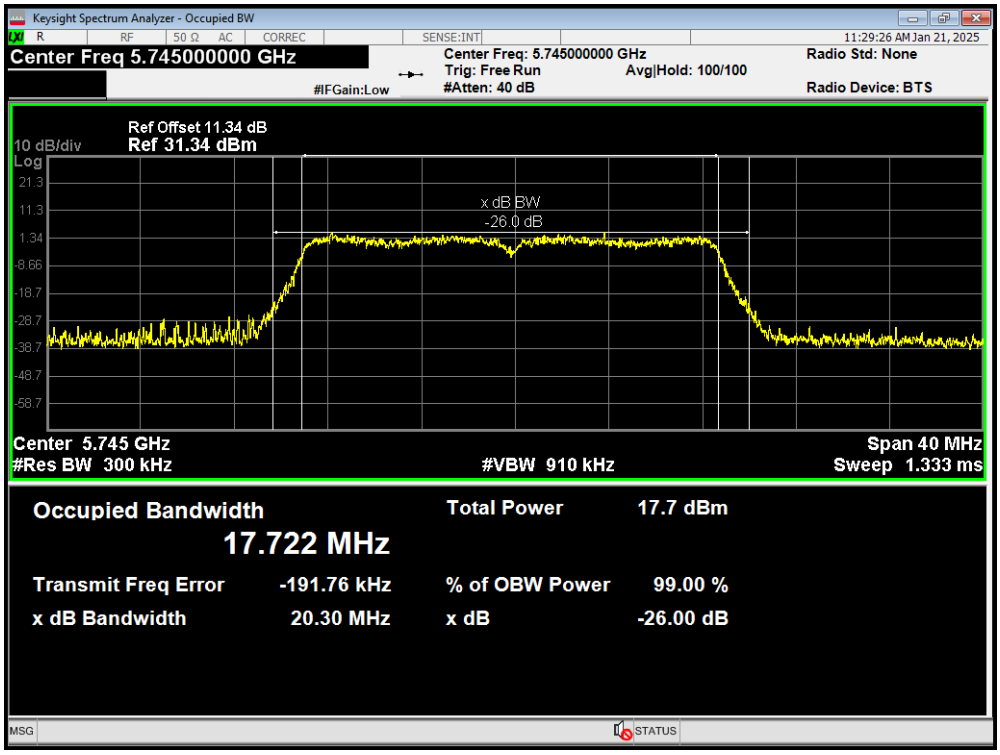
OBW 802.11ac(VHT80) 5775MHz



OBW 802.11n(HT20) 5745MHz



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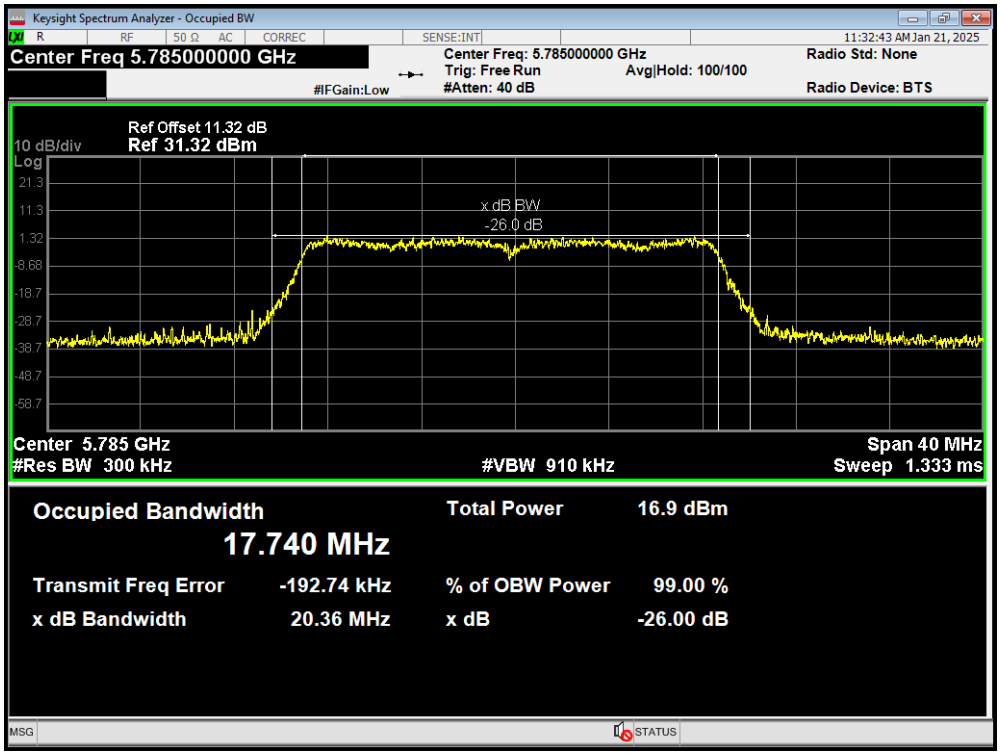
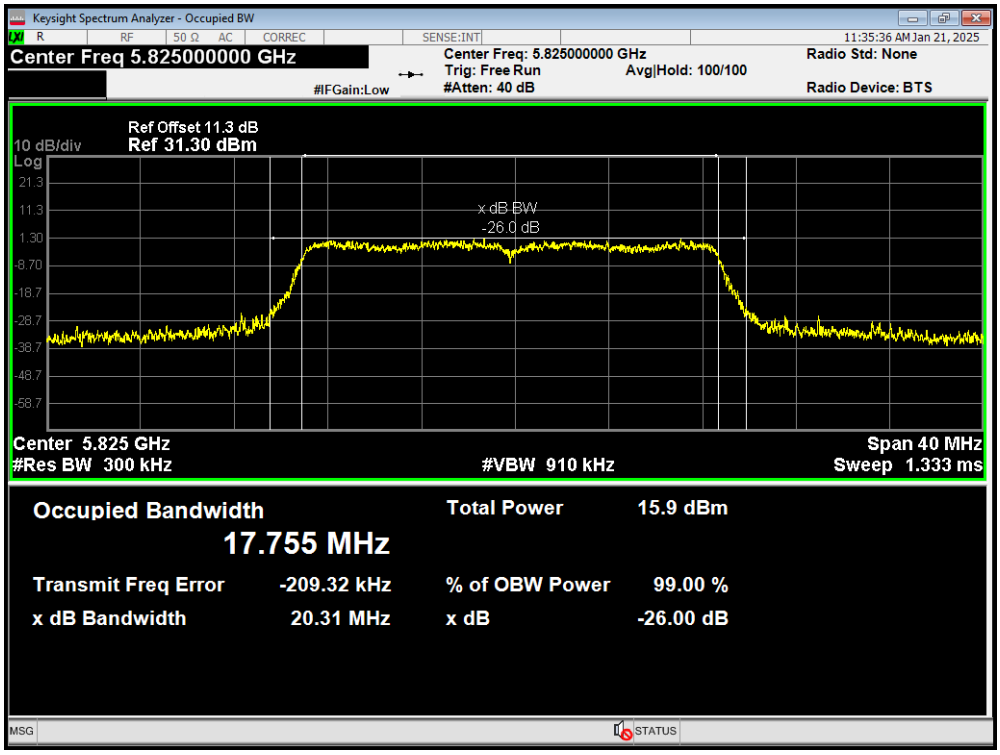
OBW 802.11n(HT20) 5785MHz



OBW 802.11n(HT20) 5825MHz



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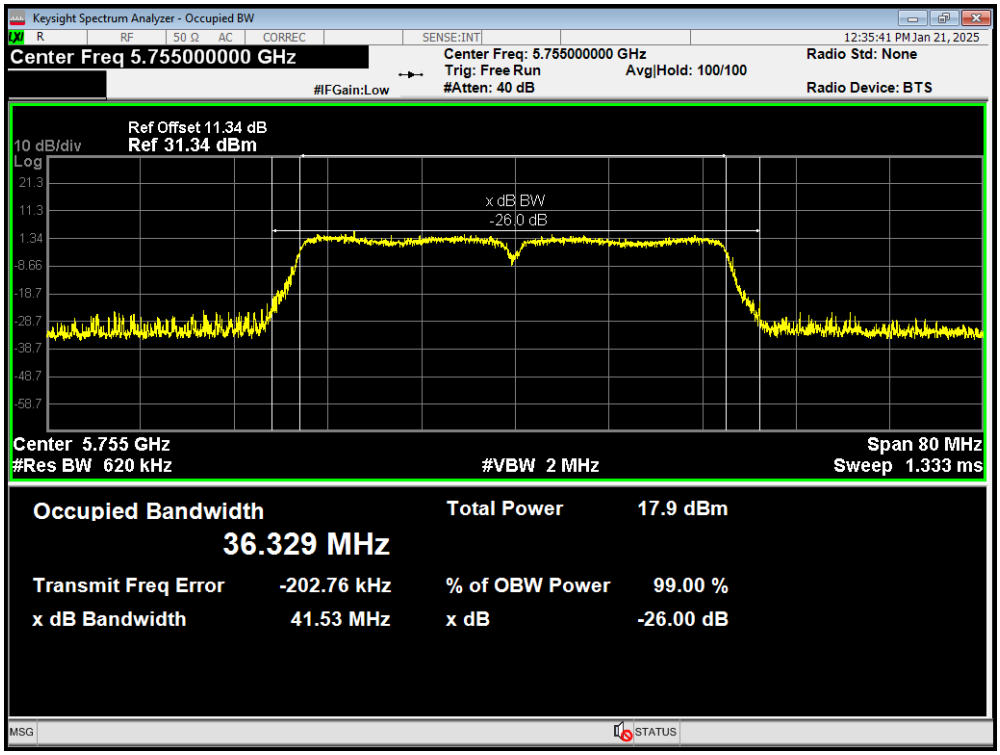
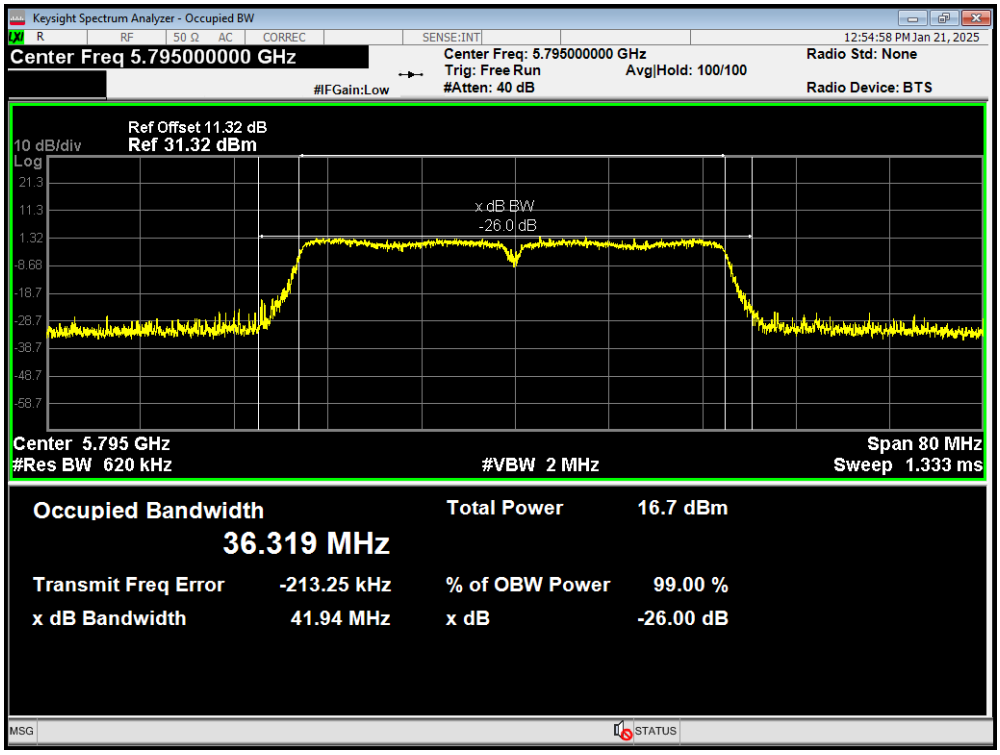
OBW 802.11n(HT40) 5755MHz



OBW 802.11n(HT40) 5795MHz



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Minimum 6 dB bandwidth

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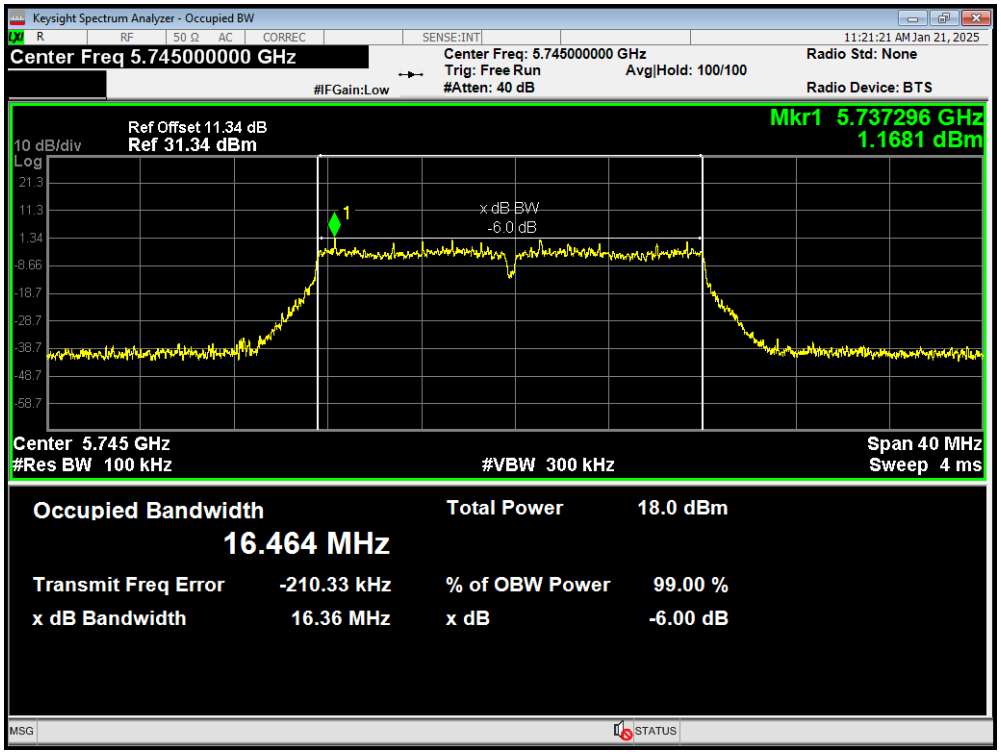
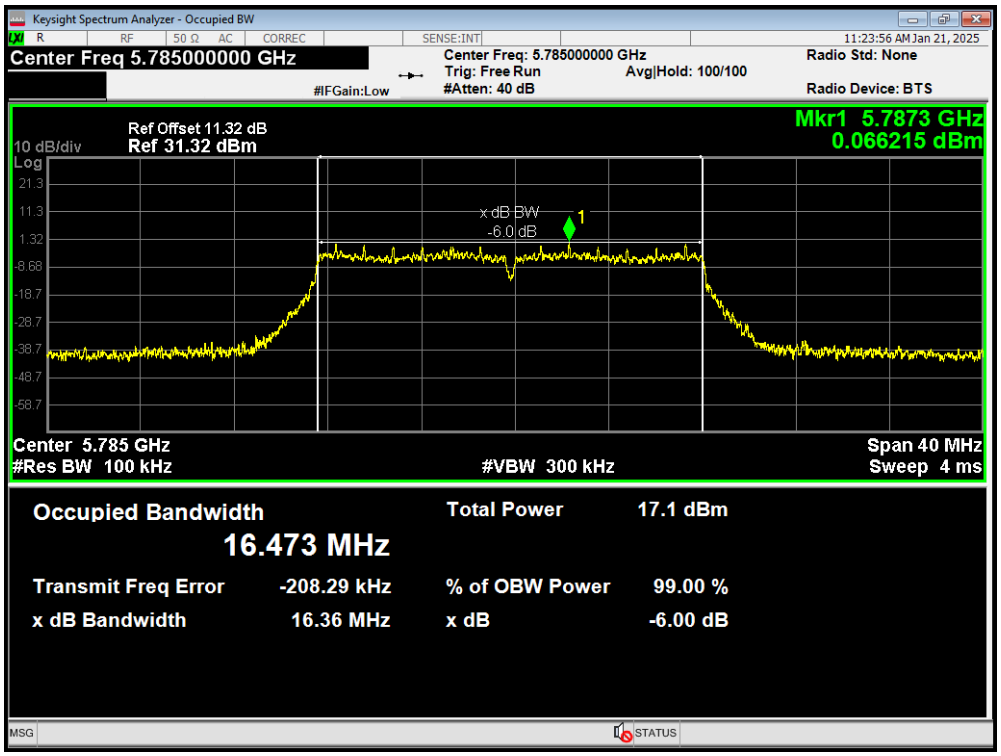
-6dB Bandwidth 802.11a 5745MHz



-6dB Bandwidth 802.11a 5785MHz



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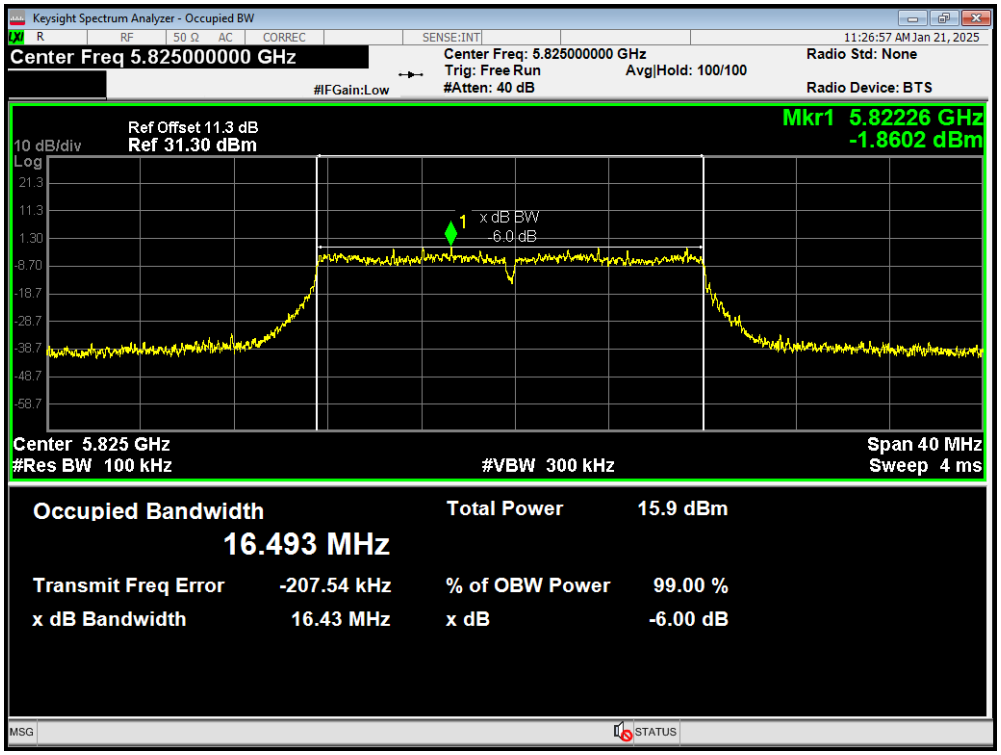
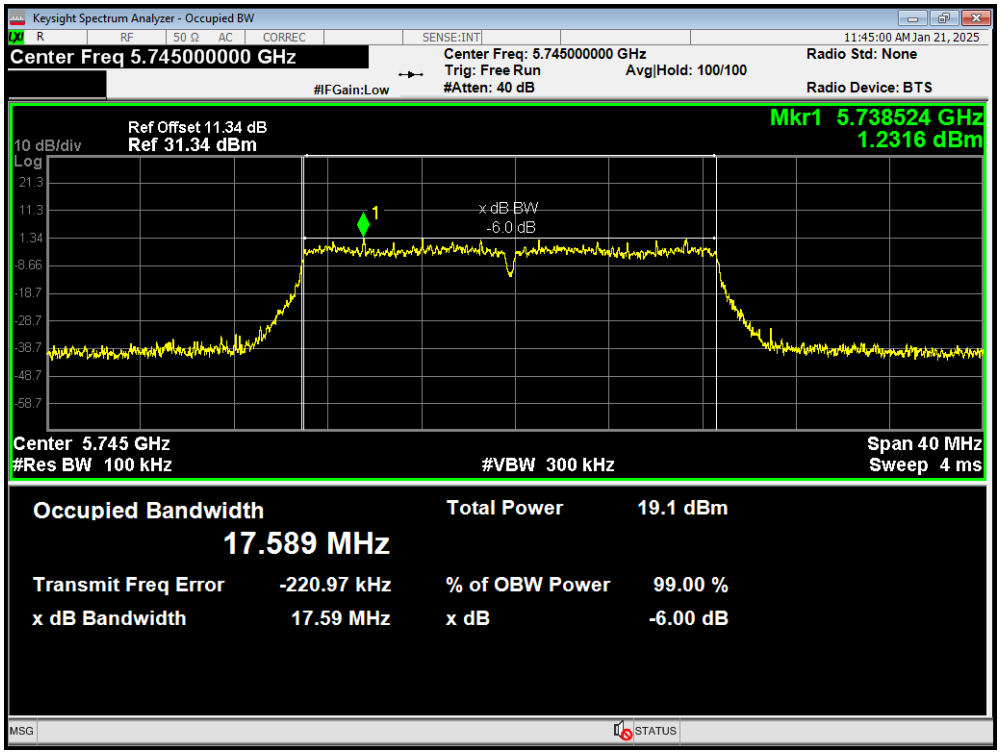
-6dB Bandwidth 802.11a 5825MHz



-6dB Bandwidth 802.11ac(VHT20) 5745MHz



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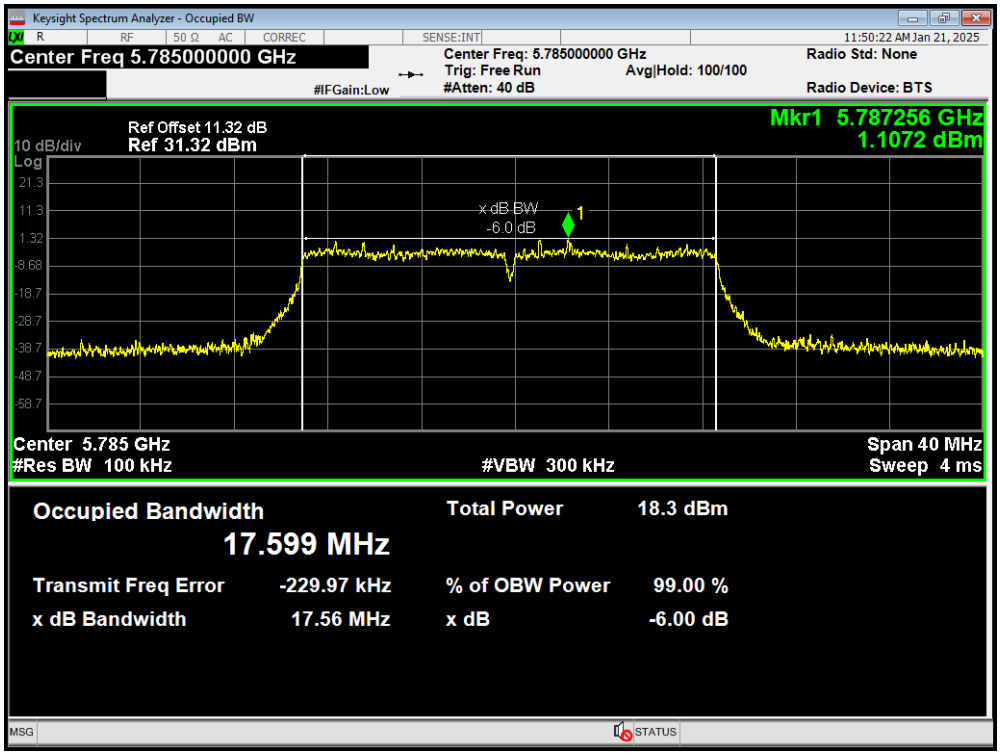
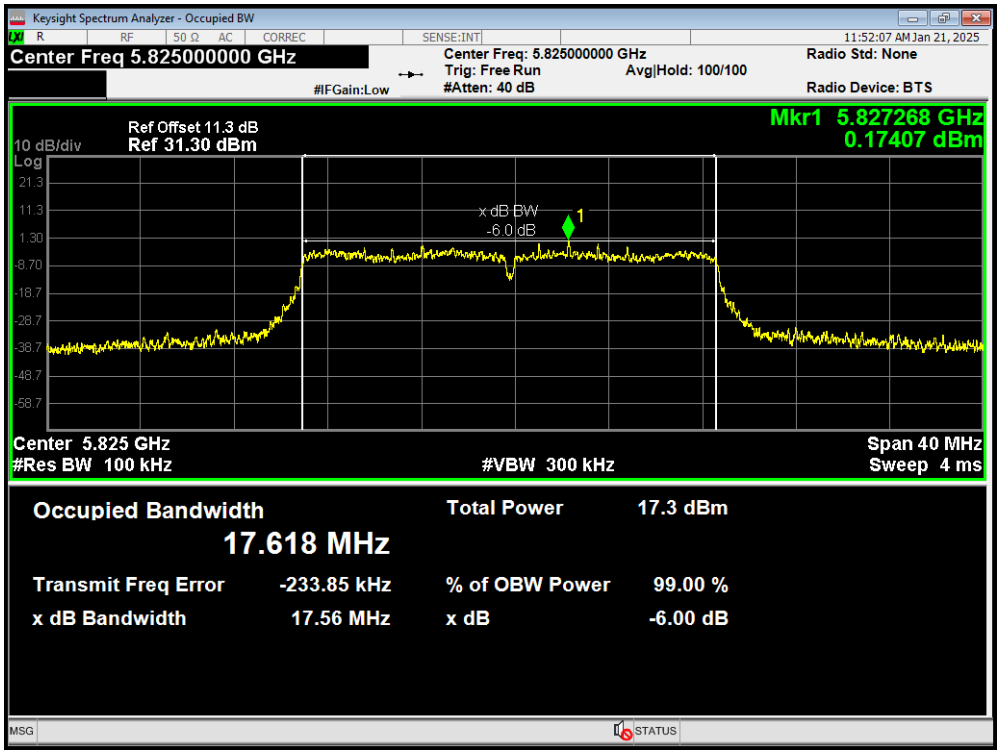
-6dB Bandwidth 802.11ac(VHT20) 5785MHz



-6dB Bandwidth 802.11ac(VHT20) 5825MHz



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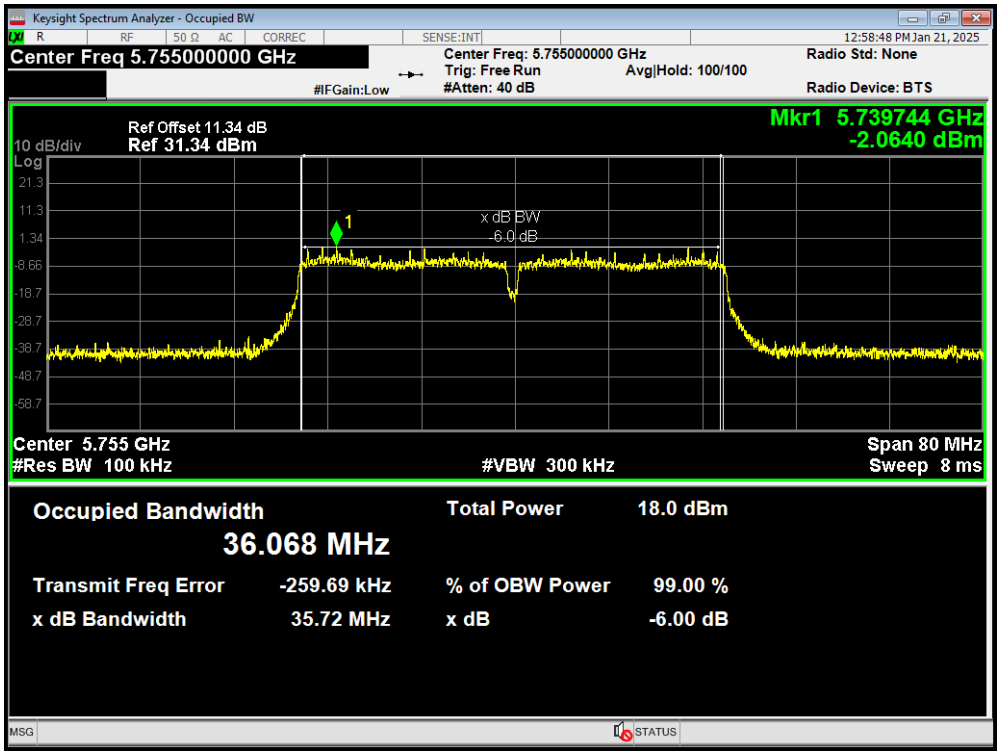
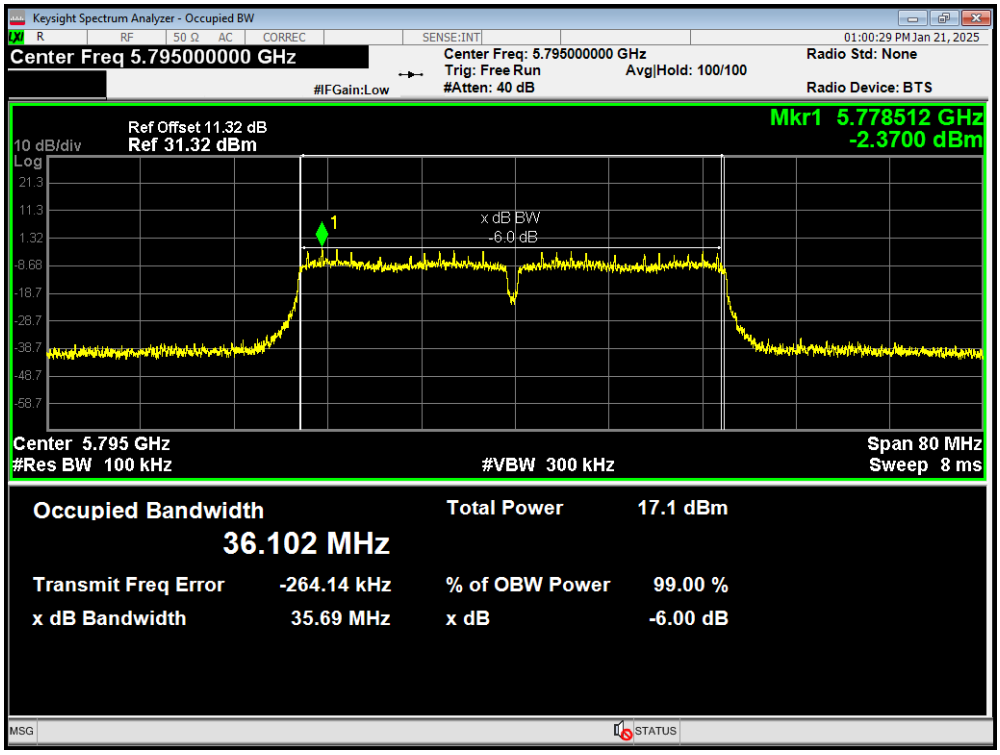
-6dB Bandwidth 802.11ac(VHT40) 5755MHz



-6dB Bandwidth 802.11ac(VHT40) 5795MHz



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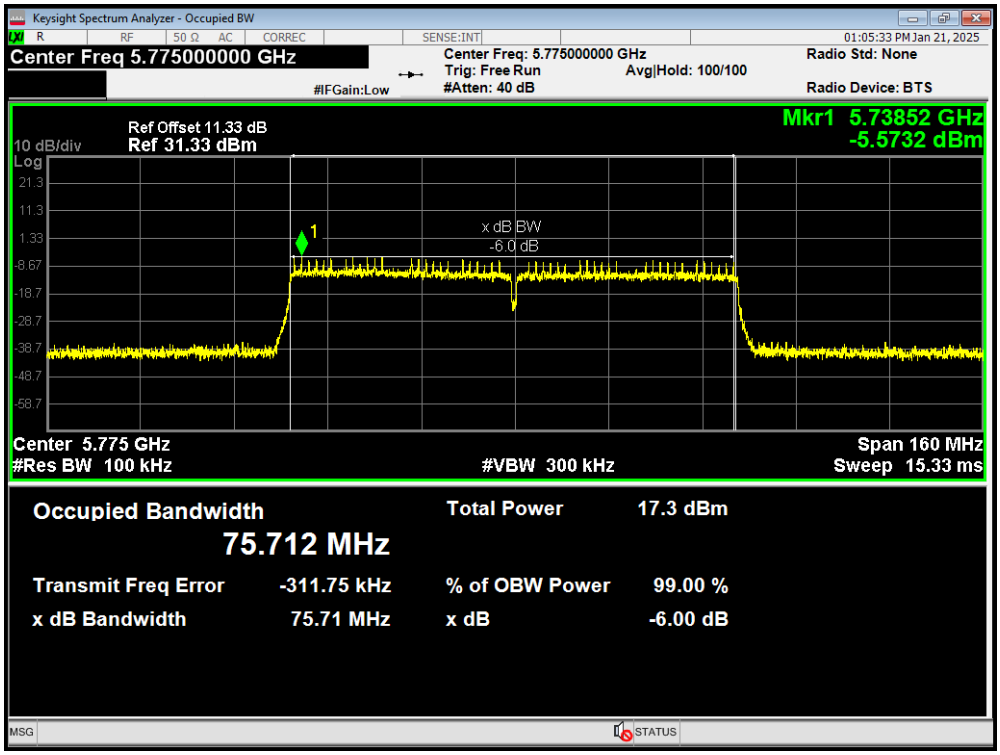
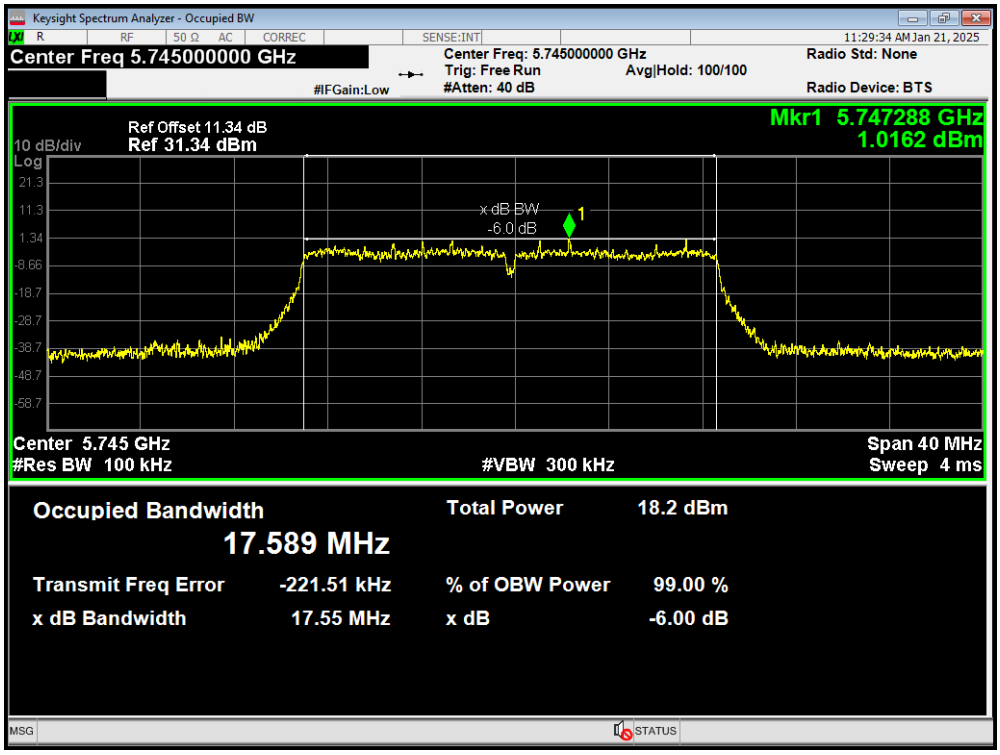
-6dB Bandwidth 802.11ac(VHT80) 5775MHz



-6dB Bandwidth 802.11n(HT20) 5745MHz



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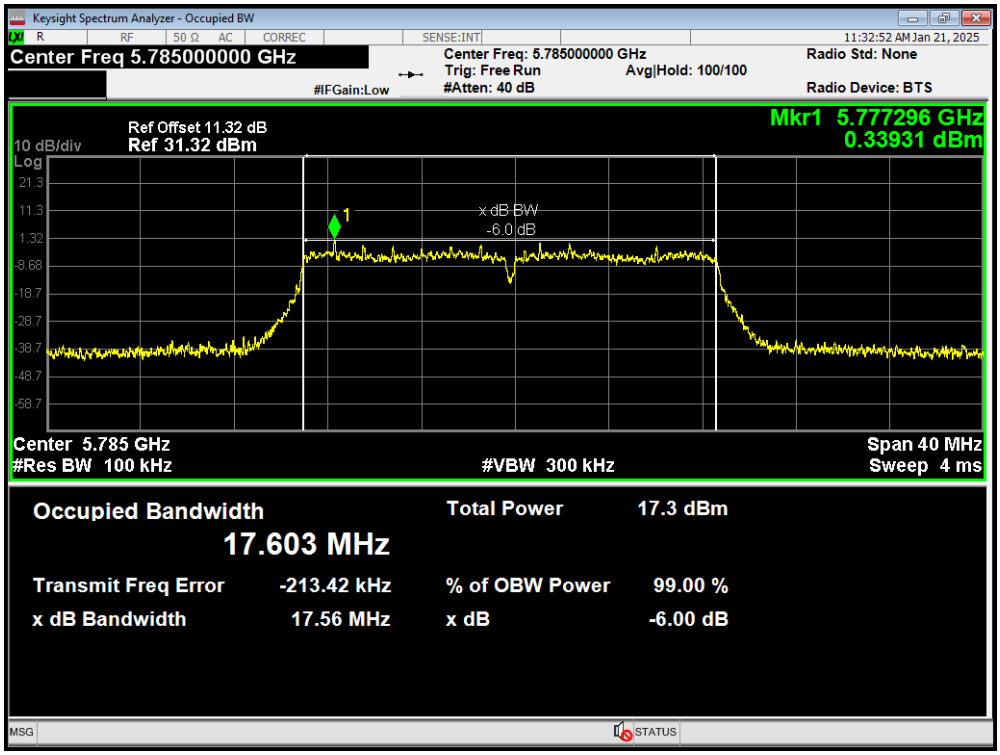
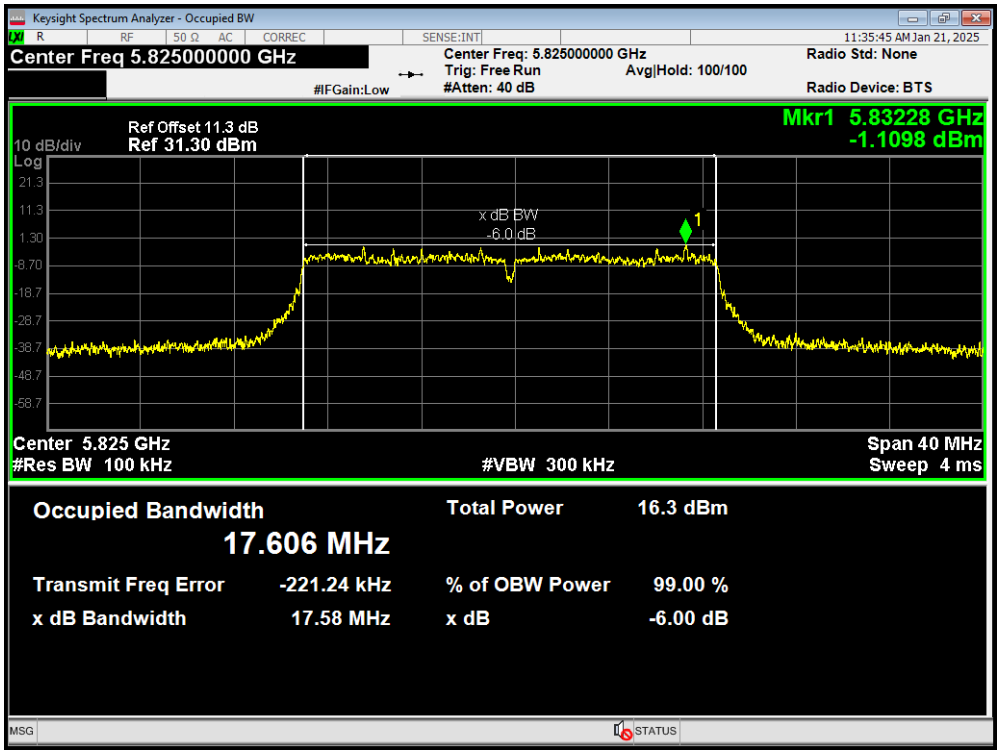
-6dB Bandwidth 802.11n(HT20) 5785MHz



-6dB Bandwidth 802.11n(HT20) 5825MHz



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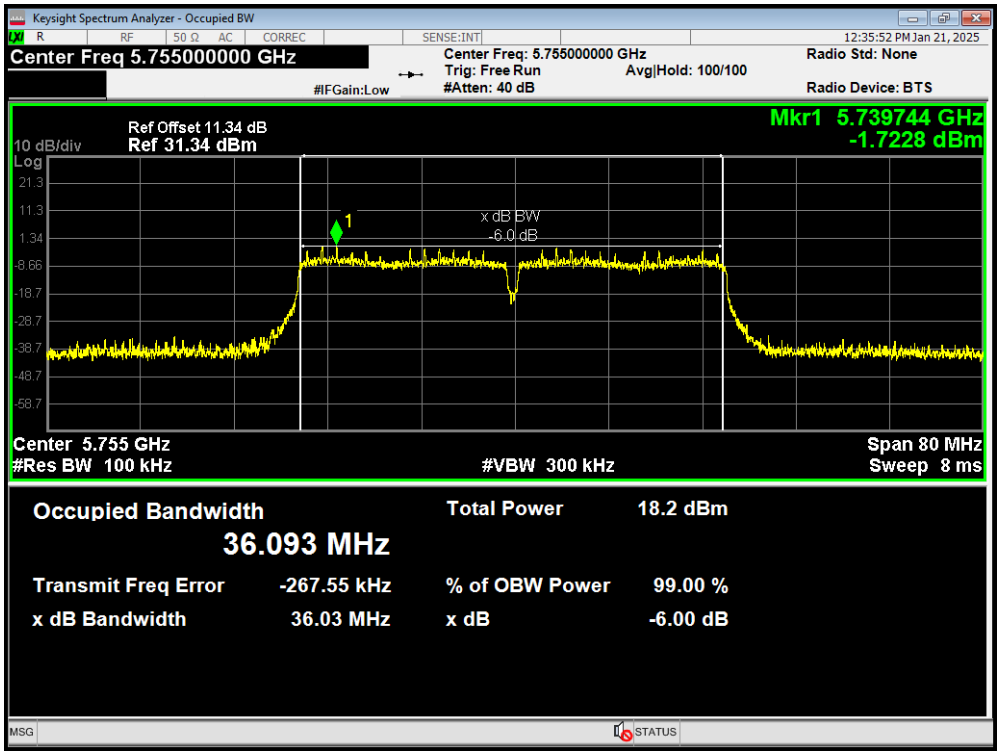
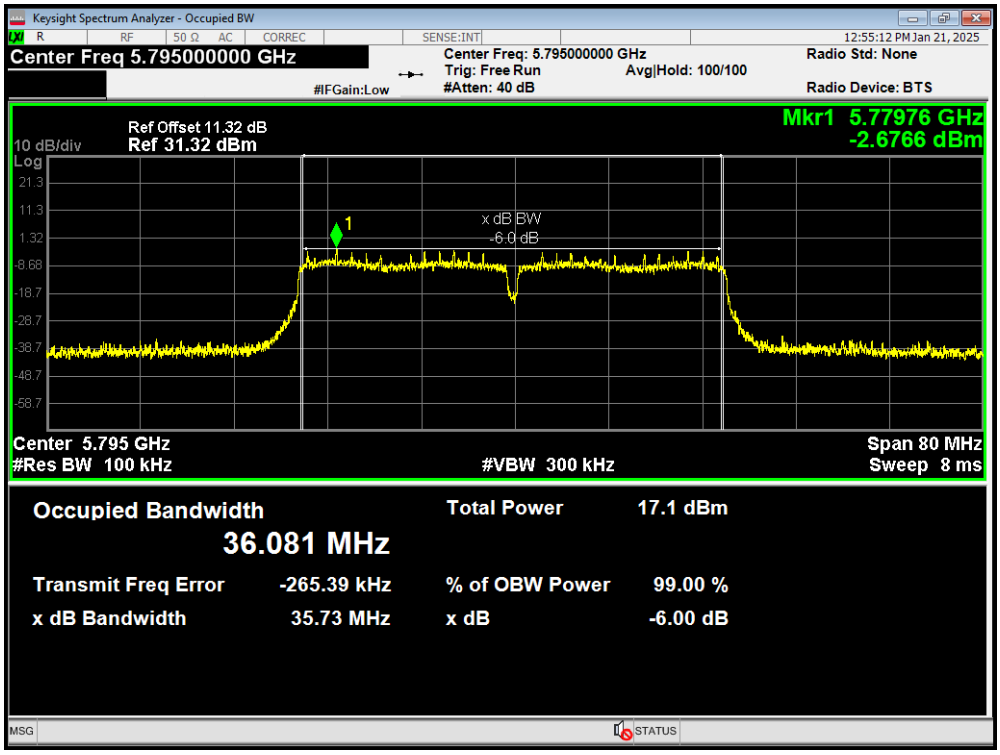
-6dB Bandwidth 802.11n(HT40) 5755MHz



-6dB Bandwidth 802.11n(HT40) 5795MHz



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5.2. Average Power Output

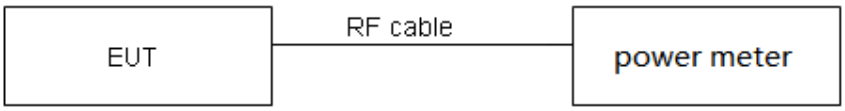
Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the average power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

Test Setup



Limits

Rule FCC Part 15.407(a)(1) / FCC Part 15.407(a) (3)
(1) For the band 5.15-5.25 GHz.
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
(2For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, 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, 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.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.44 dB.

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Test Results

Mode	Duty cycle	Duty cycle correction Factor (dB)
802.11a	1.00	0.00
802.11n HT20	1.00	0.00
802.11n HT40	0.99	0.00
802.11ac VHT20	0.99	0.00
802.11ac VHT40	0.98	0.00
802.11ac VHT80	0.96	0.16
Note: when Duty cycle⩾0.98, Duty cycle correction Factor not required.		

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Power Index		
Network Standards	**Carrier frequency (MHz)**	**TP Set**
802.11a	36/5180	14
	40/5200	14
	48/5240	14
802.11n HT20	36/5180	14
	40/5200	14
	48/5240	14
802.11n HT40	38/5190	14
	46/5230	14
802.11ac VHT20	36/5180	15
	40/5200	15
	48/5240	15
802.11ac VHT40	38/5190	14
	46/5230	14
802.11ac VHT80	42/5210	13

Power Index		
Network Standards	**Carrier frequency (MHz)**	**TP Set**
802.11a	149/5745	14
	157/5785	14
	165/5825	14
802.11n HT20	149/5745	14
	157/5785	14
	165/5825	14
802.11n HT40	151/5755	14
	159/5795	14
802.11ac VHT20	149/5745	15
	157/5785	15
	165/5825	15
802.11ac VHT40	151/5755	14
	159/5795	14
802.11ac VHT80	155/5775	13

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Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	36/5180	11.26	11.26	24	PASS
	40/5200	11.08	11.08	24	PASS
	48/5240	10.79	10.79	24	PASS
802.11n HT20	36/5180	12.69	12.69	24	PASS
	40/5200	12.46	12.46	24	PASS
	48/5240	11.91	11.91	24	PASS
802.11n HT40	38/5190	12.05	12.05	24	PASS
	46/5230	11.64	11.64	24	PASS
802.11ac VHT20	36/5180	13.53	13.53	24	PASS
	40/5200	13.40	13.40	24	PASS
	48/5240	12.93	12.93	24	PASS
802.11ac VHT40	38/5190	12.08	12.08	24	PASS
	46/5230	11.64	11.64	24	PASS
802.11ac VHT80	42/5210	10.81	10.81	24	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-3

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	149/5745	11.95	11.95	30	PASS
	157/5785	11.06	11.06	30	PASS
	165/5825	10.01	10.01	30	PASS
802.11n HT20	149/5745	12.12	12.12	30	PASS
	157/5785	11.23	11.23	30	PASS
	165/5825	10.24	10.24	30	PASS
802.11n HT40	151/5755	11.77	11.77	30	PASS
	159/5795	10.73	10.73	30	PASS
802.11ac VHT20	149/5745	13.10	13.10	30	PASS
	157/5785	12.26	12.26	30	PASS
	165/5825	11.32	11.32	30	PASS
802.11ac VHT40	151/5755	11.68	11.68	30	PASS
	159/5795	10.82	10.82	30	PASS
802.11ac VHT80	155/5775	10.51	10.51	30	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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5.3. Frequency Stability

Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

1. Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more that 10°C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.

2. Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15°C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.

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b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
c) Measure the frequency at each of the frequencies specified in 5.6.
d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936Hz

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Test Results

Voltage (V)	Temperature (°C)	U-NII-1 Test Results			
		5200MHz			
		1min	2min	5min	10min
12	-30	5200.006886	5200.001853	5199.994080	5199.987188
12	-20	5200.008975	5199.998029	5199.993966	5199.980108
12	-10	5200.003110	5199.990543	5199.984485	5199.976533
12	0	5200.004653	5199.993612	5199.988488	5199.972929
12	10	5200.002597	5199.988499	5199.982905	5199.964604
12	20	5200.000227	5199.985836	5199.977943	5199.957915
12	30	5199.994713	5199.985021	5199.968775	5199.955895
12	40	5199.990566	5199.976250	5199.961974	5199.947635
12	50	5199.990224	5199.970239	5199.954935	5199.944949
9	20	5199.986005	5199.966027	5199.950174	5199.937266
16	20	5199.981904	5199.959401	5199.940336	5199.931564
Max. ΔMHz		-0.018096	-0.040599	-0.059664	-0.068436
PPM		-3.480000	-7.807500	-11.473846	-13.160769

Voltage (V)	Temperature (°C)	U-NII-3 Test Results			
		5785MHz			
		1min	2min	5min	10min
12	-30	5784.993503	5784.985501	5784.976860	5784.974332
12	-20	5784.986129	5784.980410	5784.974244	5784.972283
12	-10	5784.979292	5784.973488	5784.969929	5784.963499
12	0	5784.983953	5784.979493	5784.965355	5784.967998
12	10	5784.983867	5784.973107	5784.961201	5784.965191
12	20	5784.983155	5784.967196	5784.955360	5784.964527
12	30	5784.975000	5784.965455	5784.953556	5784.963508
12	40	5784.969765	5784.964715	5784.951068	5784.955291
12	50	5784.960149	5784.963515	5784.946261	5784.950684
9	20	5784.951709	5784.960993	5784.940838	5784.941212
16	20	5784.942045	5784.957274	5784.936585	5784.940523
Max. ΔMHz		-0.057955	-0.042726	-0.063415	-0.059477
PPM		-10.018150	-7.385653	-10.961971	-10.281245

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5.4. Power Spectral Density

Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

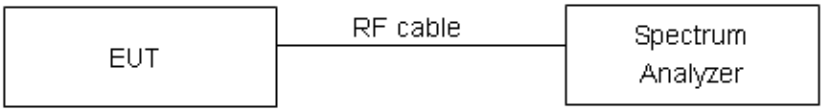
Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Set RBW = 1MHz, VBW =3MHz for the band 5.150-5.250GHz
Set RBW = 470kHz, VBW =1.5MHz for the band 5.725-5.850GHz

The conducted PSD is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test setup



Limits

Rule FCC Part 15.407(a)(1)/ FCC Part 15.407(a)(3)
For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 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 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 band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500kHz band. If transmittingantennas 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.

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Frequency Bands/GHz	Limits
5.15-5.25	11dBm/MHz
5.725-5.85	30dBm/500kHz

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 2, *U*= 0.75dB.

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Test Results:

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Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	36/5180	1.17	1.17	11	PASS
	40/5200	0.56	0.56	11	PASS
	48/5240	1.63	1.63	11	PASS
802.11n HT20	36/5180	2.34	2.34	11	PASS
	40/5200	2.11	2.11	11	PASS
	48/5240	1.40	1.40	11	PASS
802.11n HT40	38/5190	-1.33	-1.33	11	PASS
	46/5230	-1.74	-1.74	11	PASS
802.11ac VHT20	36/5180	3.05	3.05	11	PASS
	40/5200	2.95	2.95	11	PASS
	48/5240	2.33	2.33	11	PASS
802.11ac VHT40	38/5190	-1.05	-1.05	11	PASS
	46/5230	-1.58	-1.58	11	PASS
802.11ac VHT80	42/5210	-5.92	-5.92	11	PASS
Note: Power Spectral Density =Read Value+Duty cycle correction factor					

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Mode	Channel /Frequency (MHz)	Read Value (dBm/470kHz)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)	Conclusion
802.11a	149/5745	-1.50	-1.23	30	PASS
	157/5785	-2.42	-2.15	30	PASS
	165/5825	-3.54	-3.27	30	PASS
802.11n HT20	149/5745	-1.61	-1.34	30	PASS
	157/5785	-2.56	-2.29	30	PASS
	165/5825	-3.55	-3.28	30	PASS
802.11n HT40	151/5755	-4.74	-4.47	30	PASS
	159/5795	-6.04	-5.77	30	PASS
802.11ac VHT20	149/5745	-0.81	-0.54	30	PASS
	157/5785	-1.46	-1.19	30	PASS
	165/5825	-2.38	-2.11	30	PASS
802.11ac VHT40	151/5755	-4.98	-4.71	30	PASS
	159/5795	-5.63	-5.36	30	PASS
802.11ac VHT80	155/5775	-9.26	-8.99	30	PASS
Note: PSD=Read Value+ Duty cycle correction factor +10*log (500/470)					

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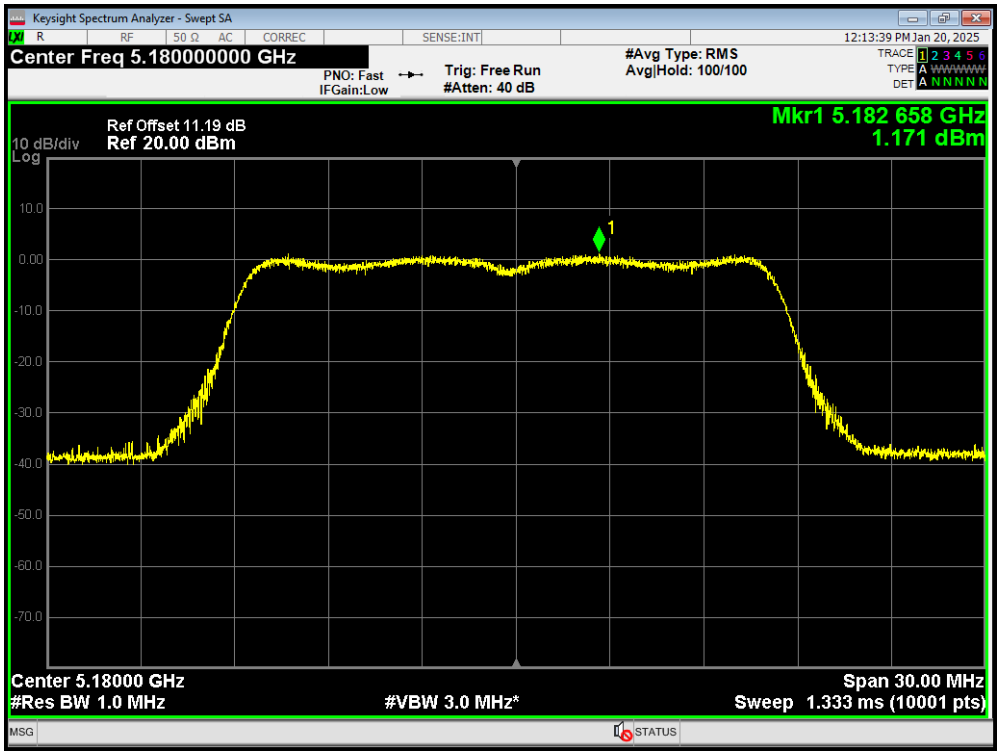
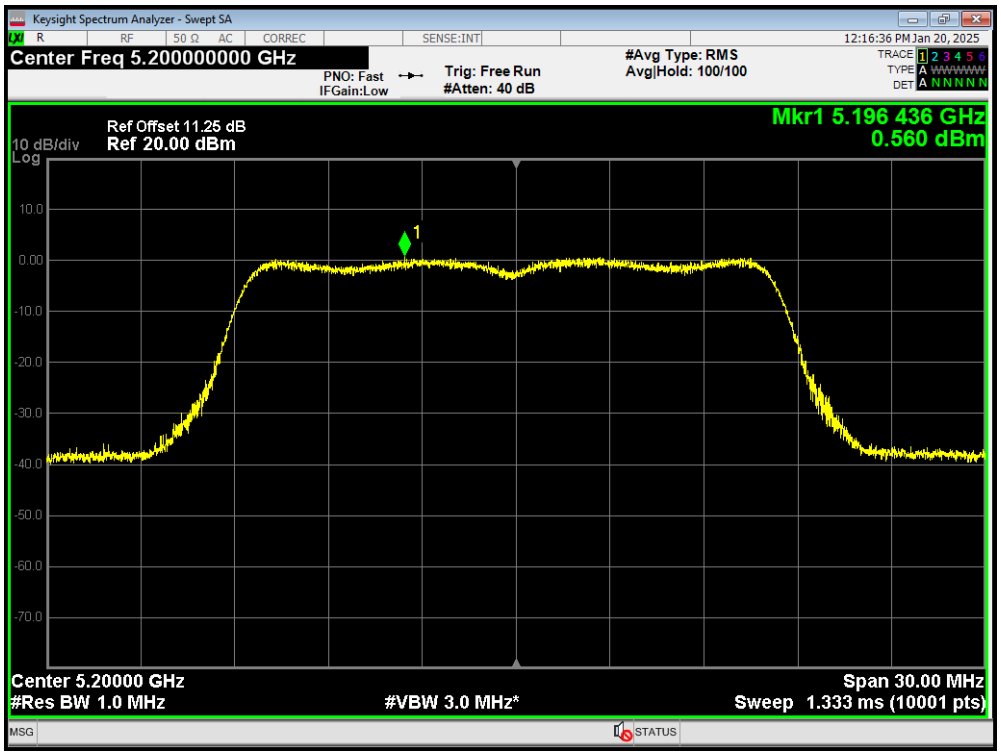
PSD 802.11a 5180MHz



PSD 802.11a 5200MHz



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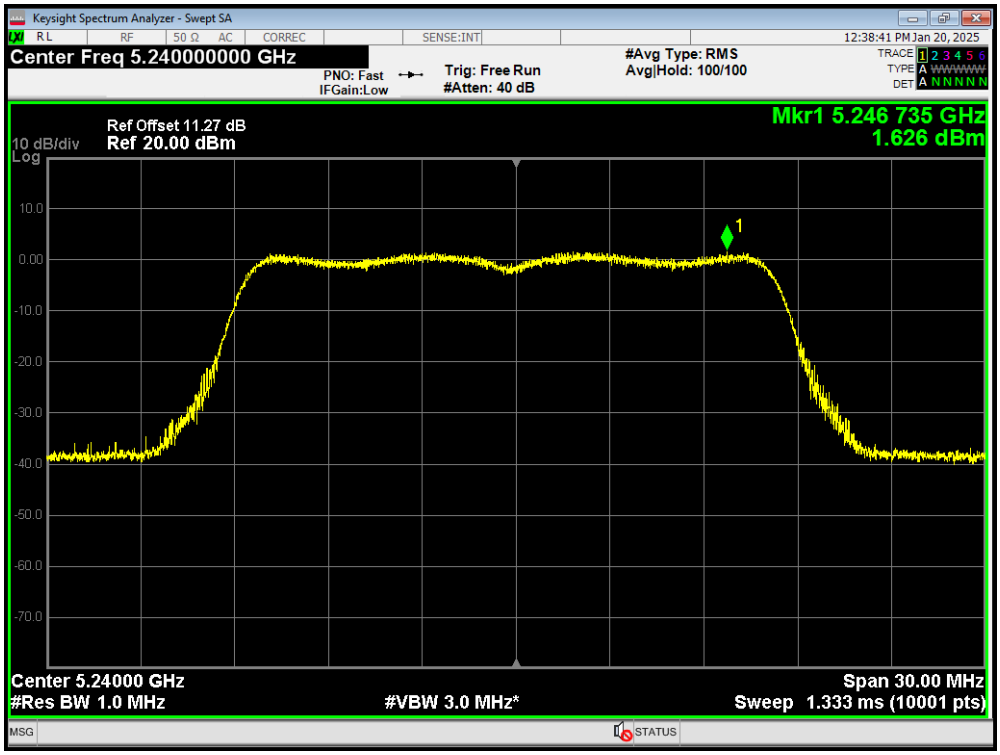
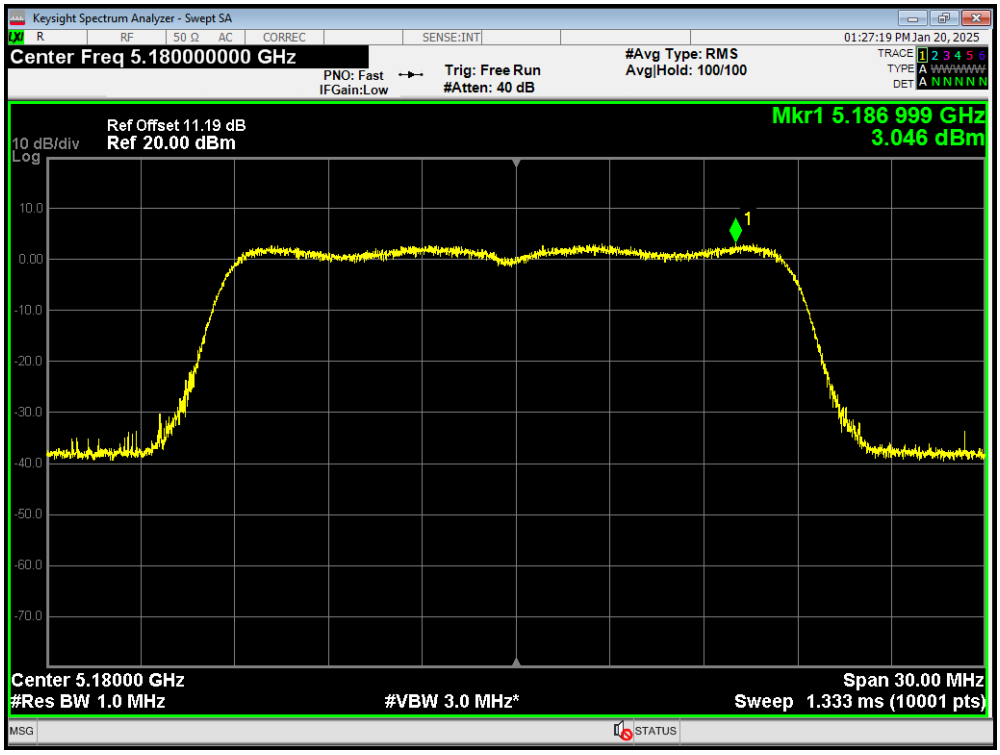
PSD 802.11a 5240MHz



PSD 802.11ac(VHT20) 5180MHz



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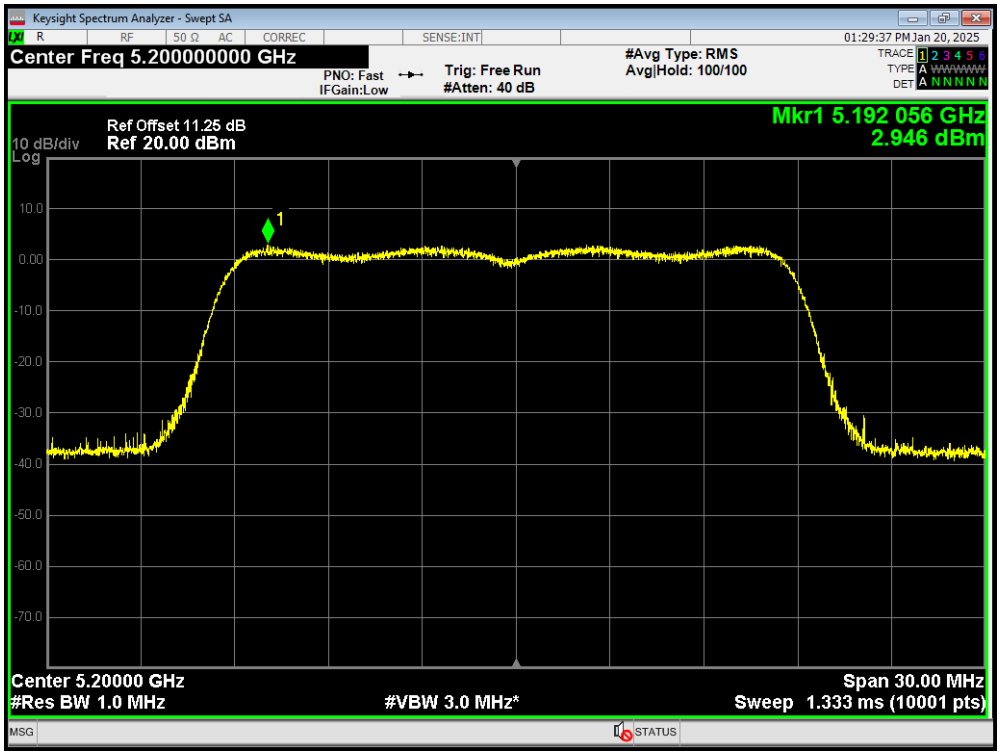
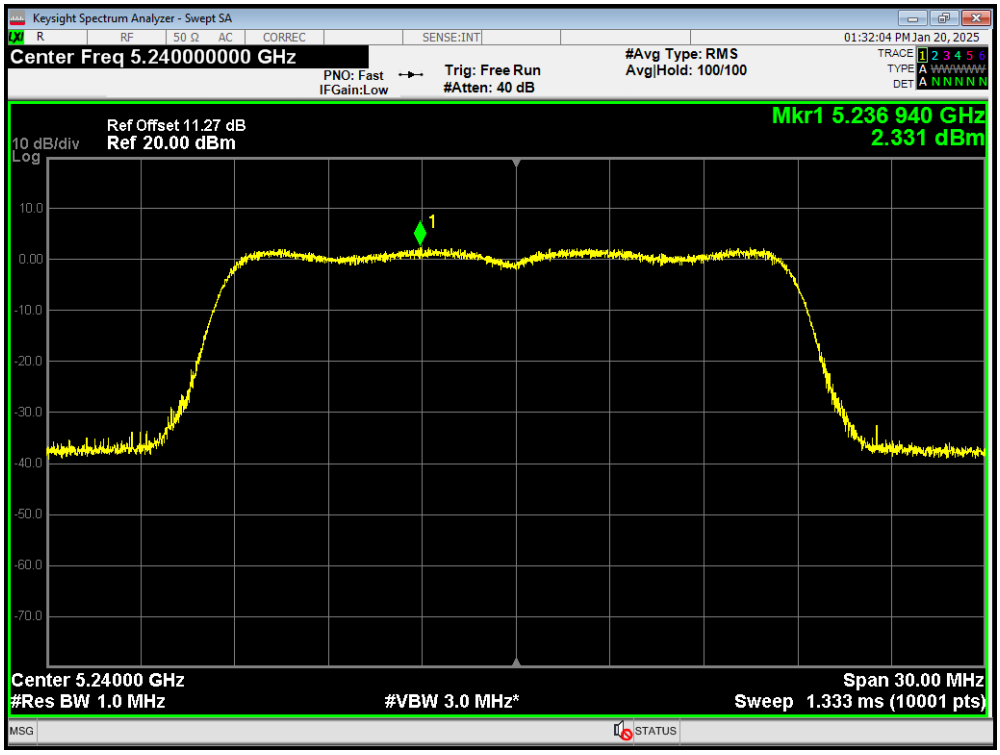
PSD 802.11ac(VHT20) 5200MHz



PSD 802.11ac(VHT20) 5240MHz



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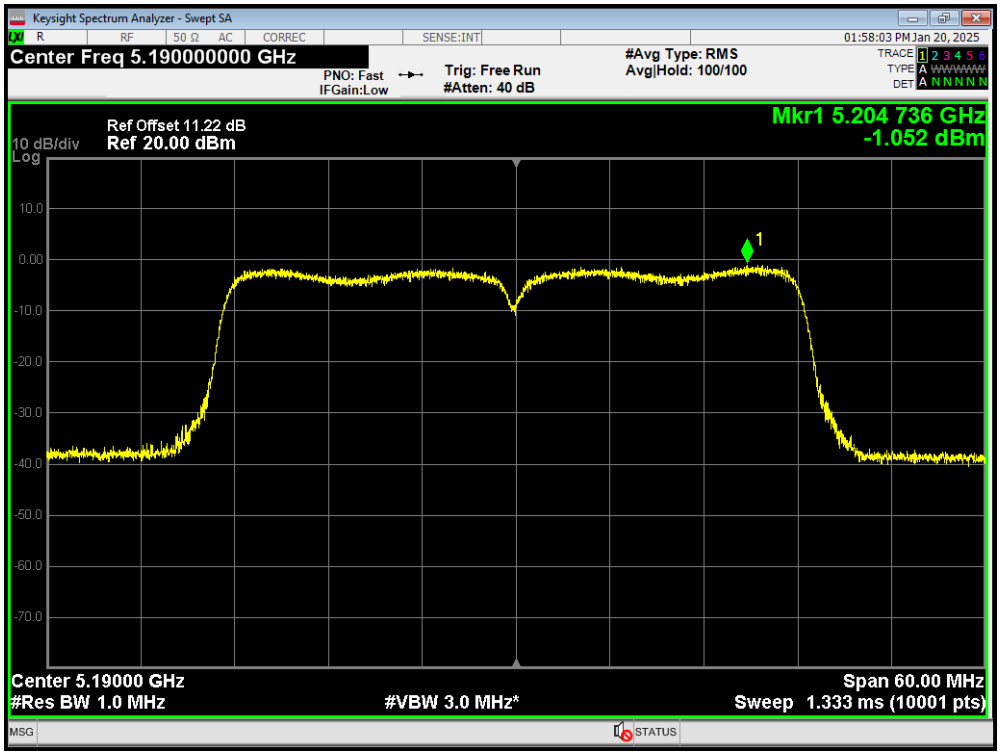
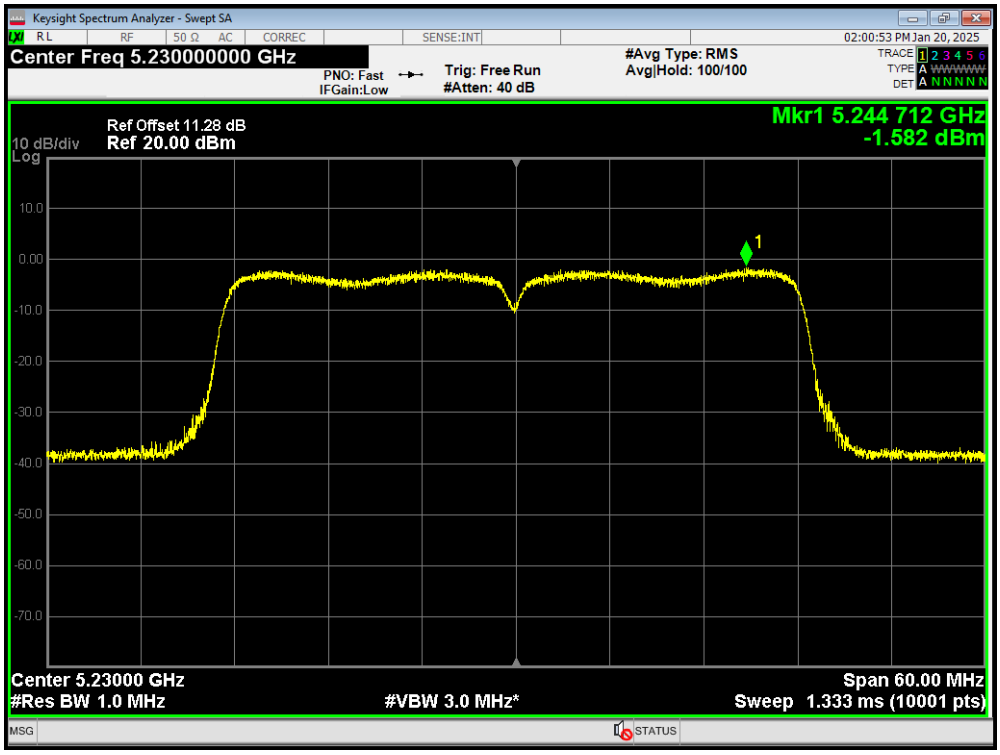
PSD 802.11ac(VHT40) 5190MHz



PSD 802.11ac(VHT40) 5230MHz



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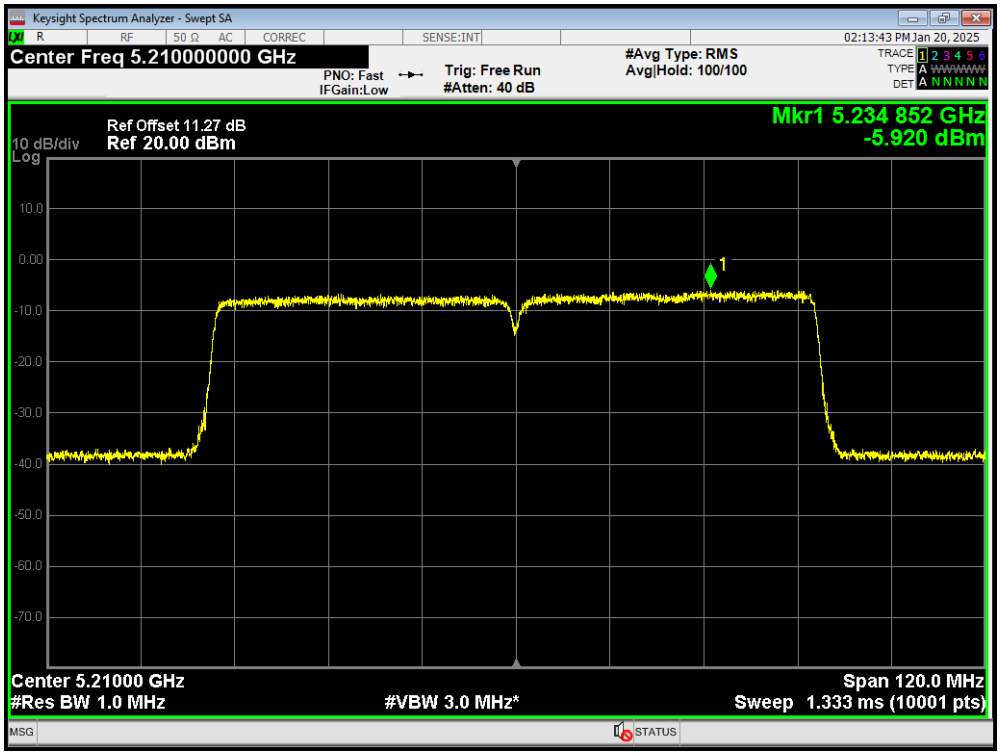
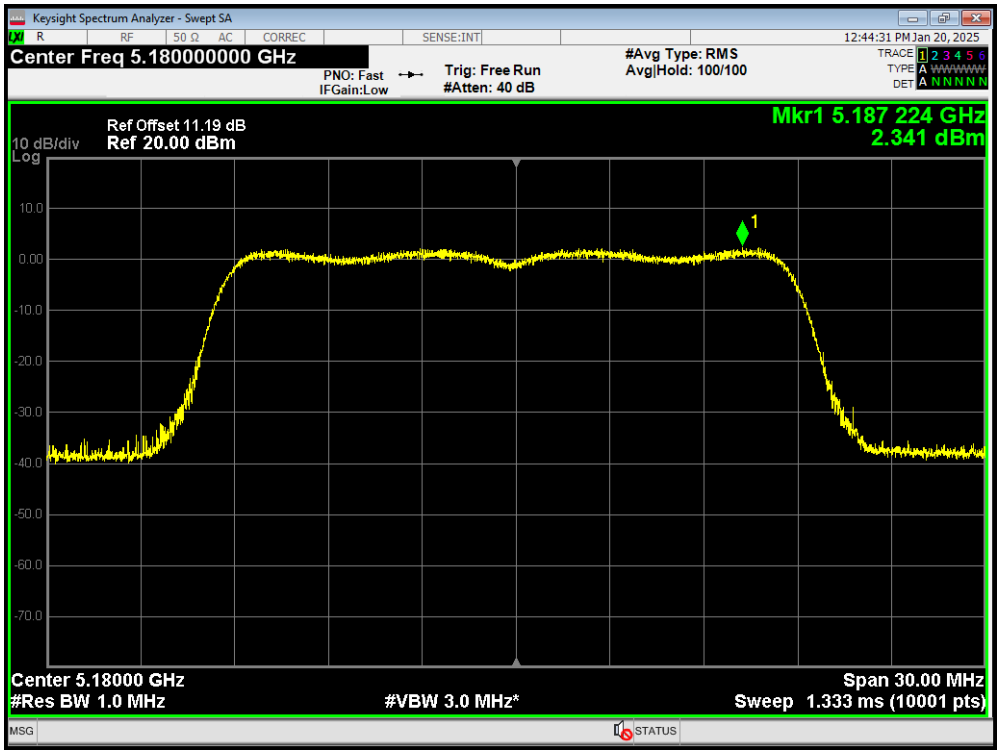
PSD 802.11ac(VHT80) 5210MHz



PSD 802.11n(HT20) 5180MHz



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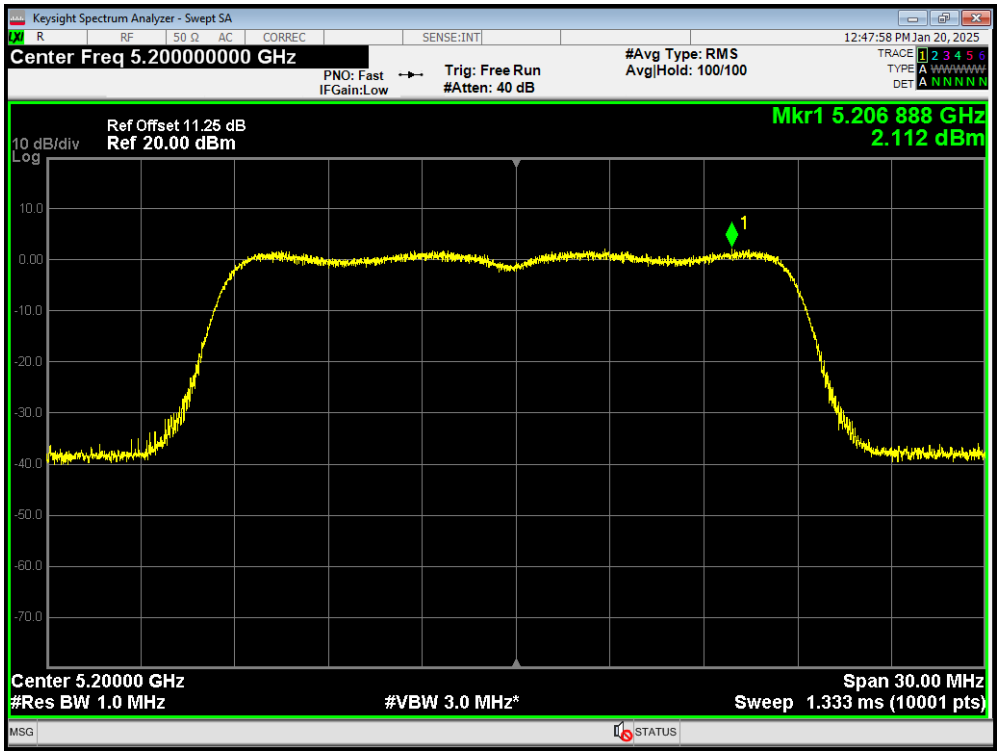
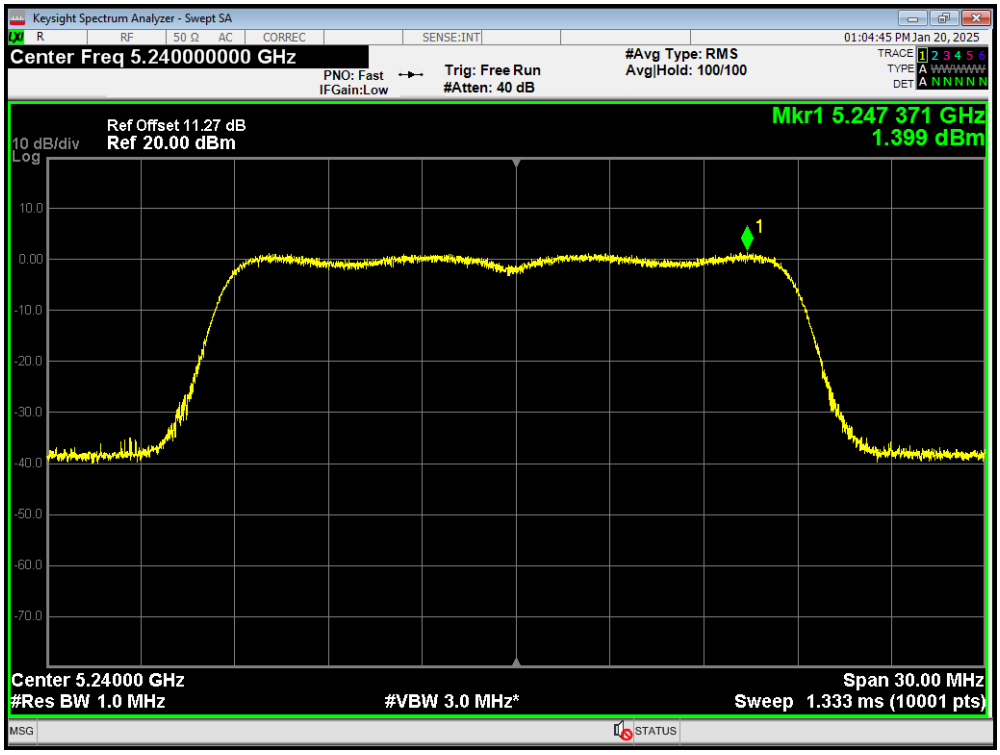
PSD 802.11n(HT20) 5200MHz



PSD 802.11n(HT20) 5240MHz



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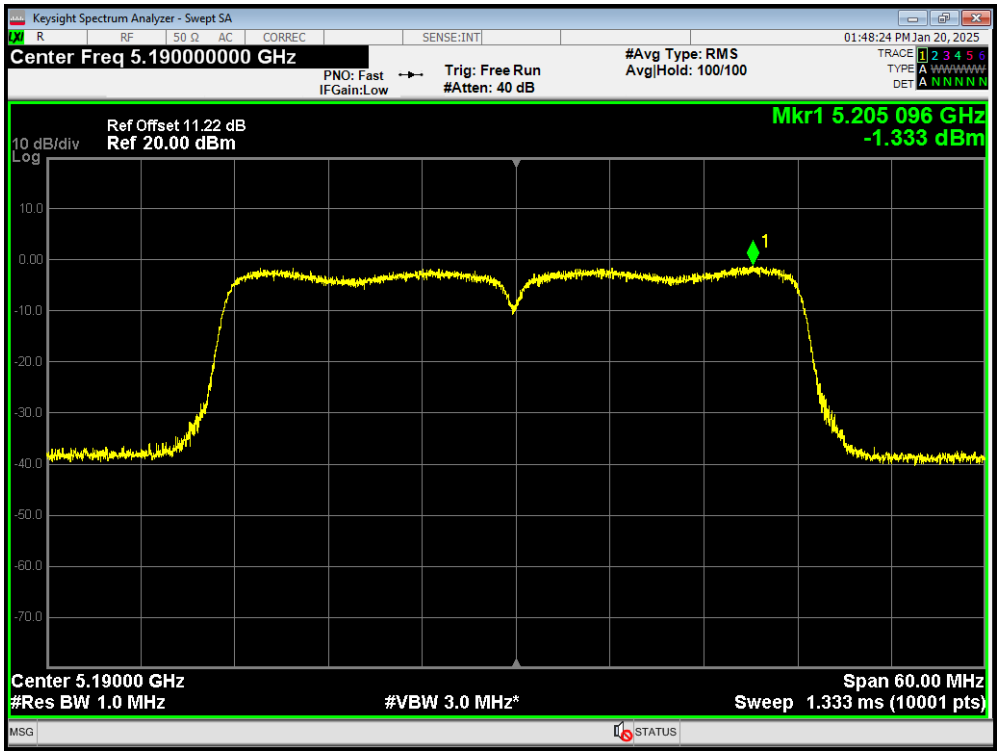
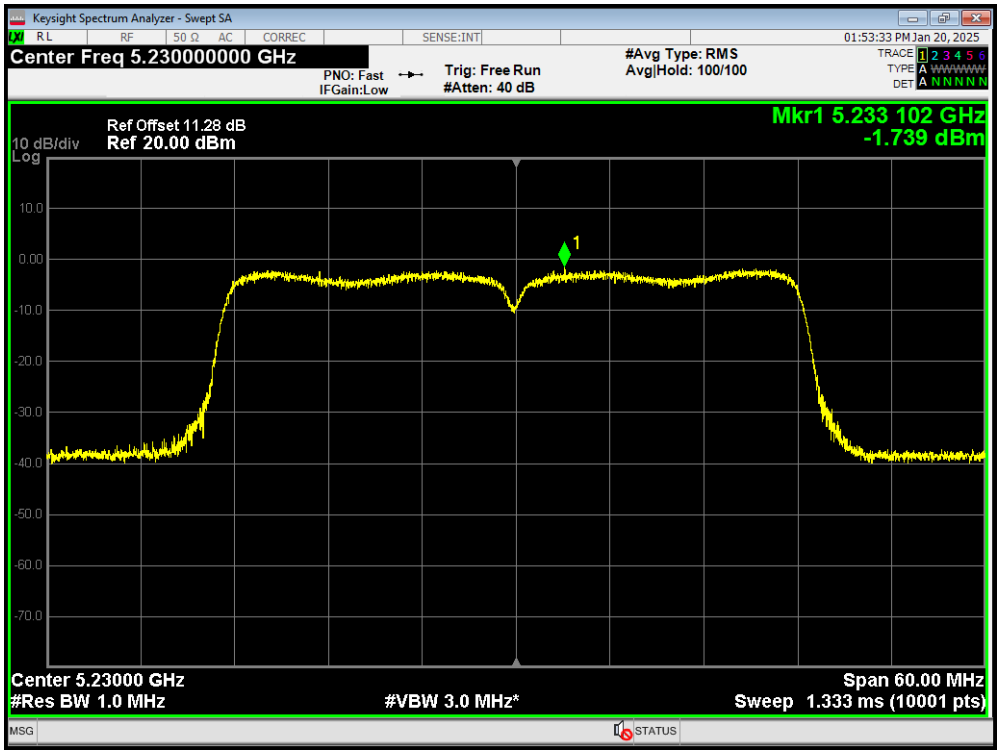
PSD 802.11n(HT40) 5190MHz



PSD 802.11n(HT40) 5230MHz



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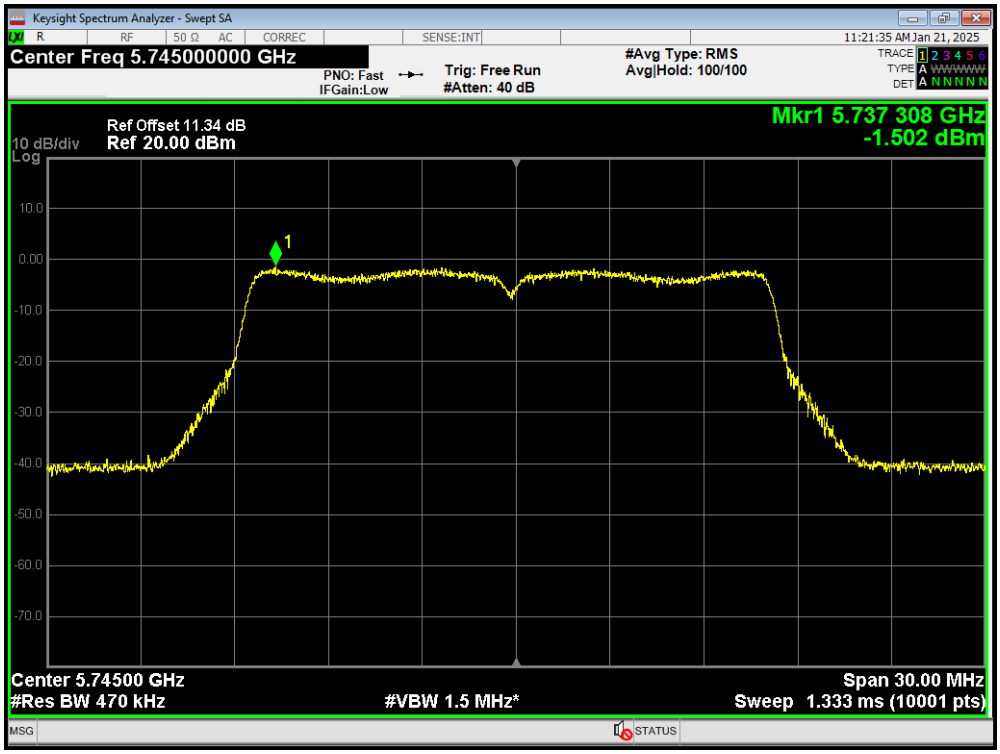
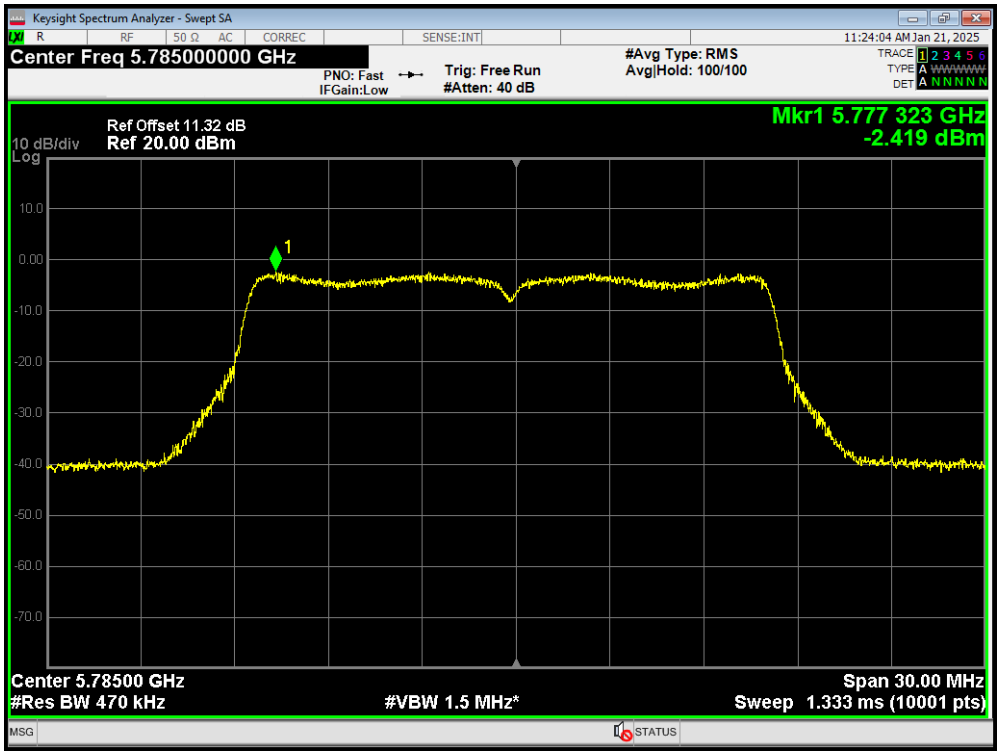
PSD 802.11a 5745MHz



PSD 802.11a 5785MHz



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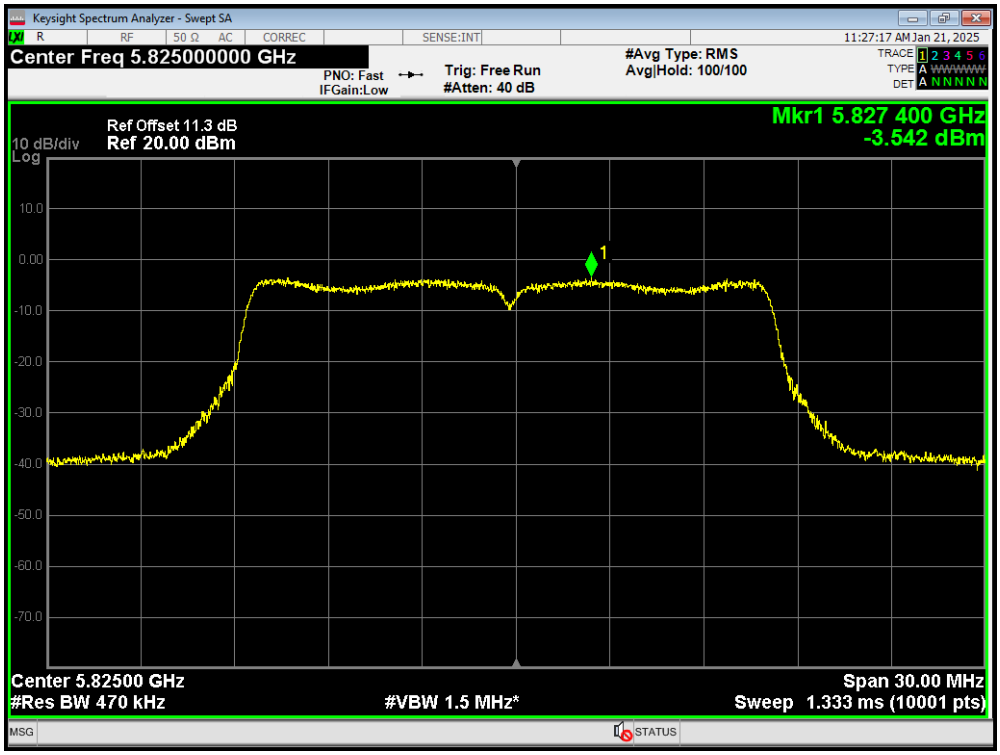
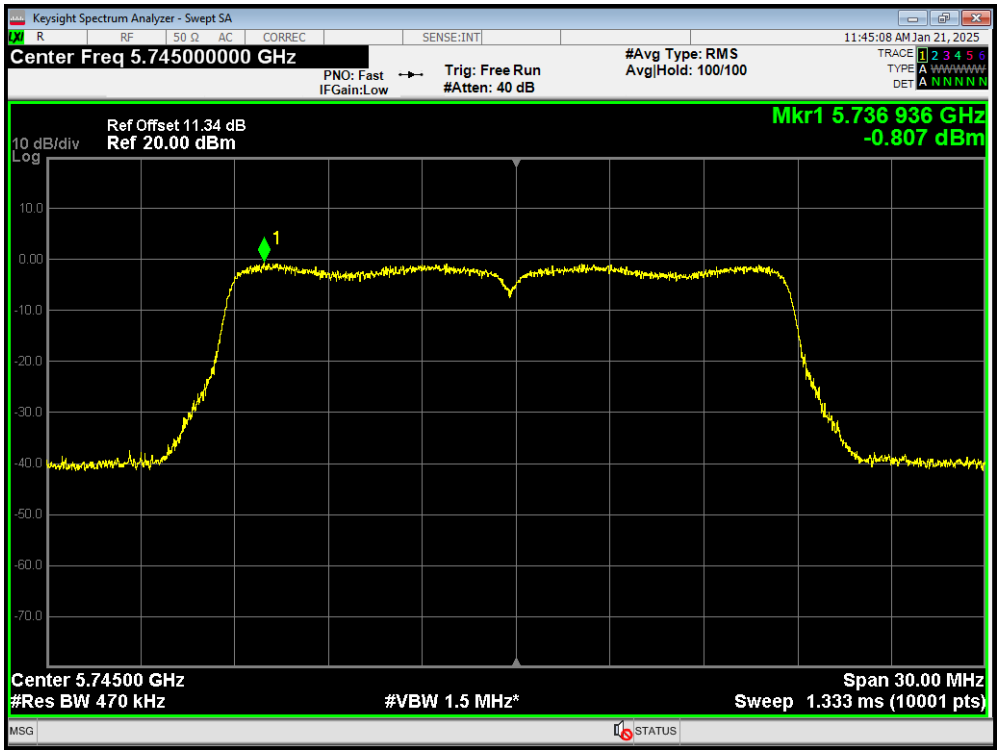
PSD 802.11a 5825MHz



PSD 802.11ac(VHT20) 5745MHz



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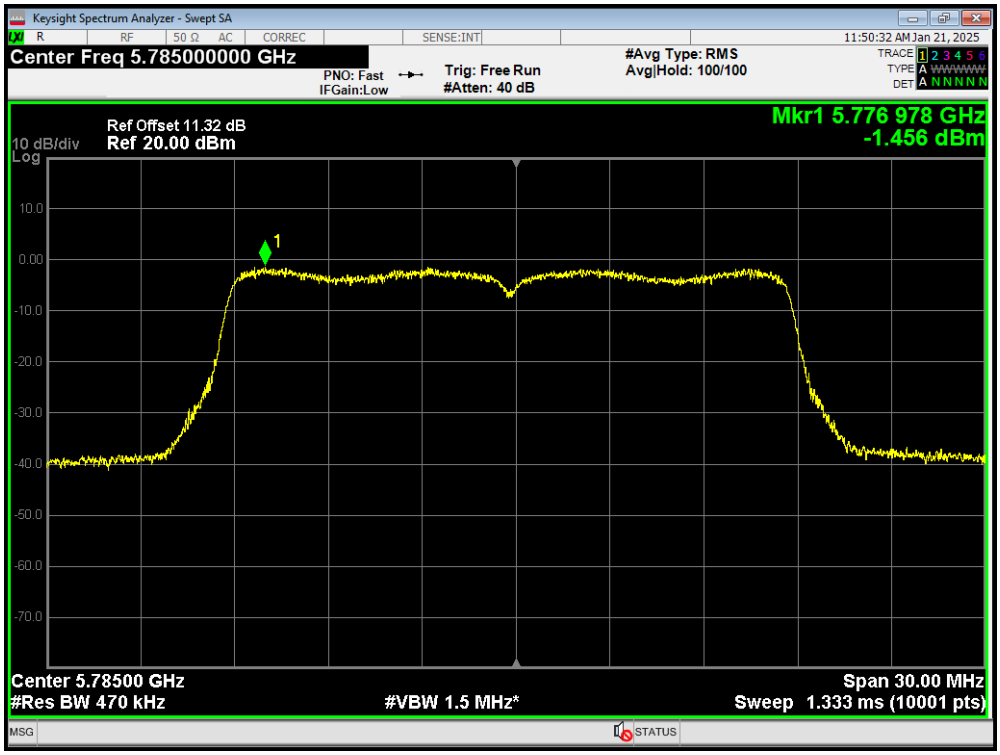
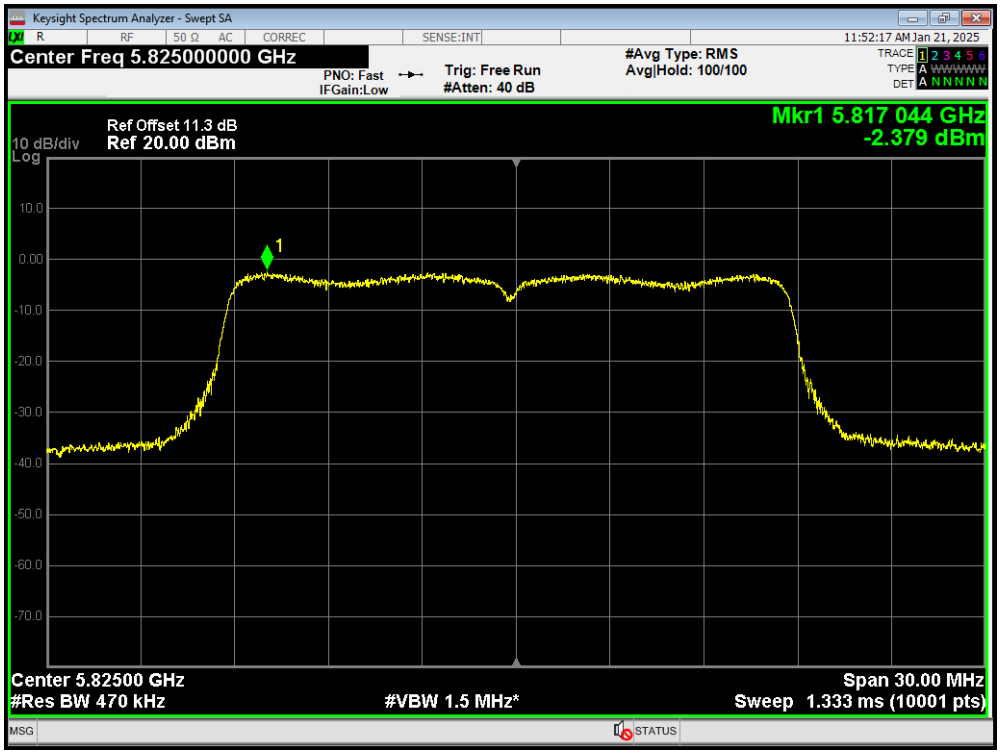
PSD 802.11ac(VHT20) 5785MHz



PSD 802.11ac(VHT20) 5825MHz



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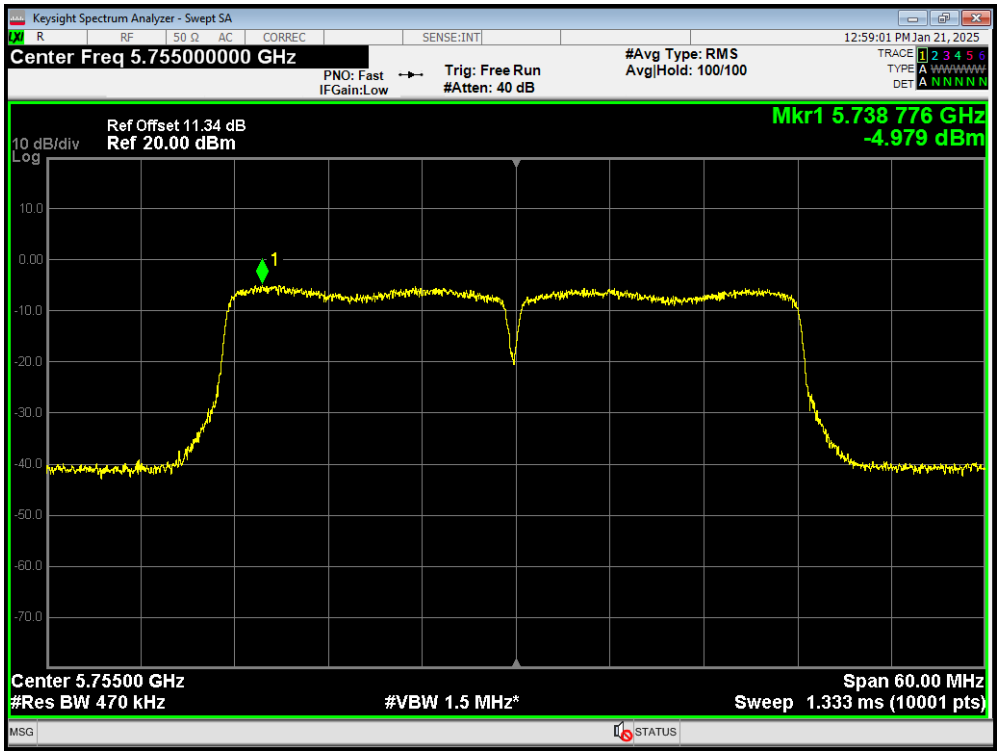
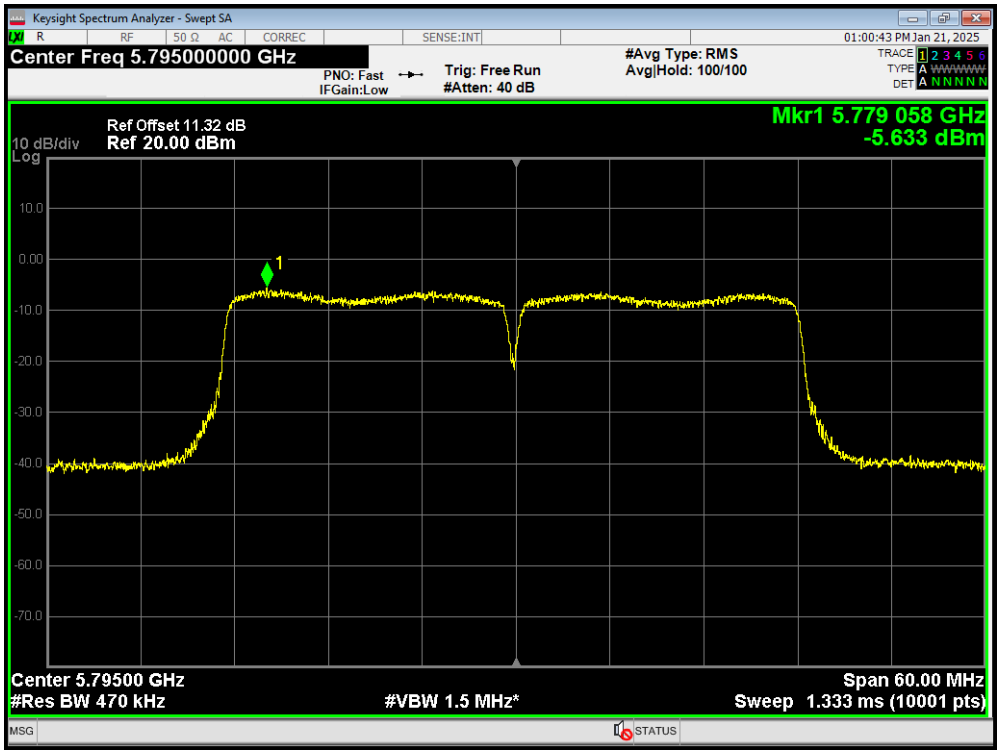
PSD 802.11ac(VHT40) 5755MHz



PSD 802.11ac(VHT40) 5795MHz



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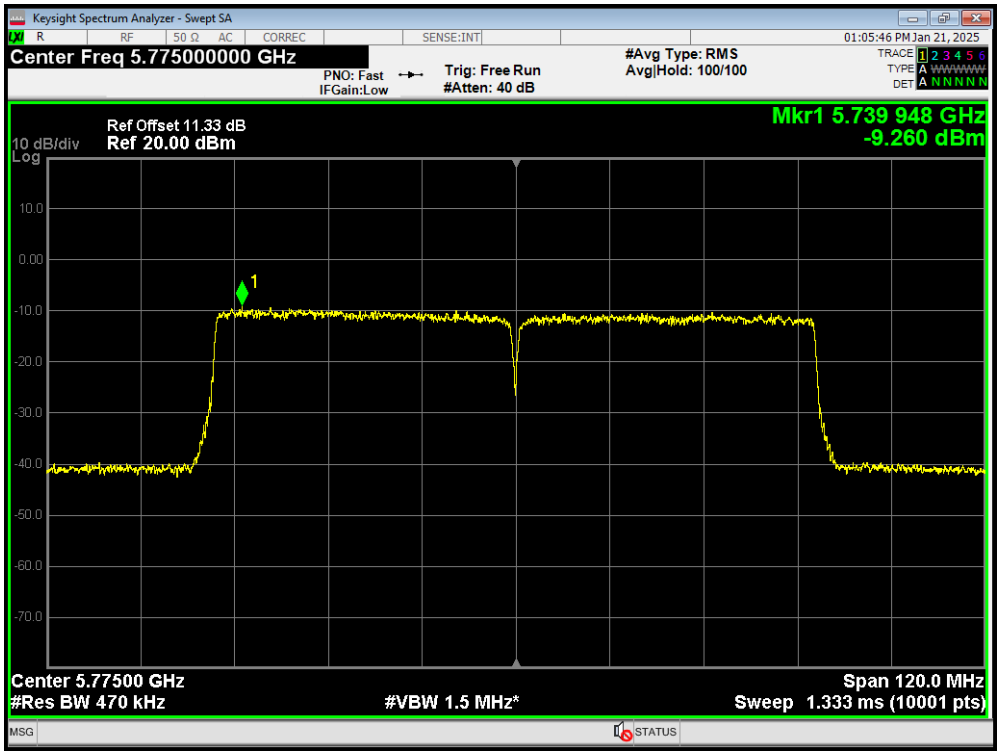
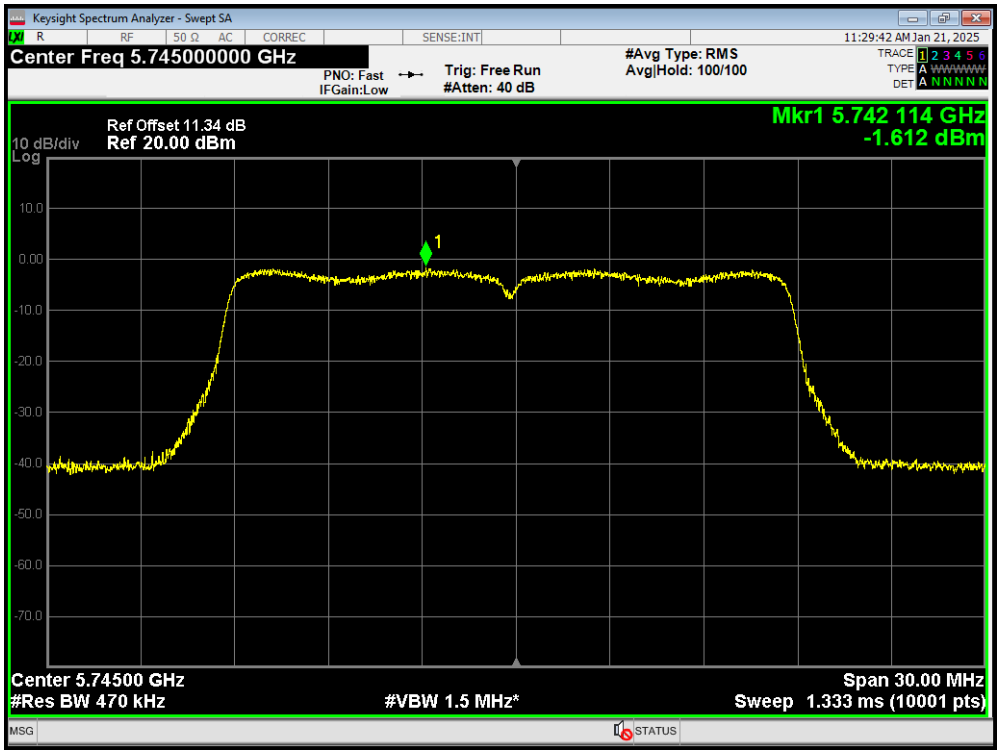
PSD 802.11ac(VHT80) 5775MHz



PSD 802.11n(HT20) 5745MHz



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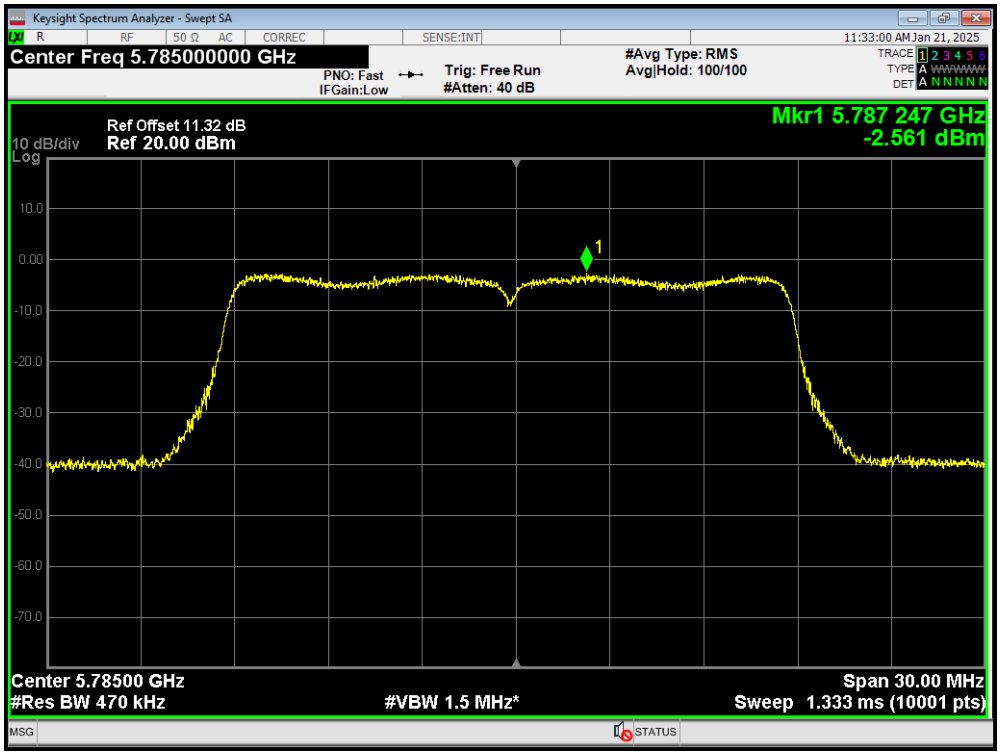
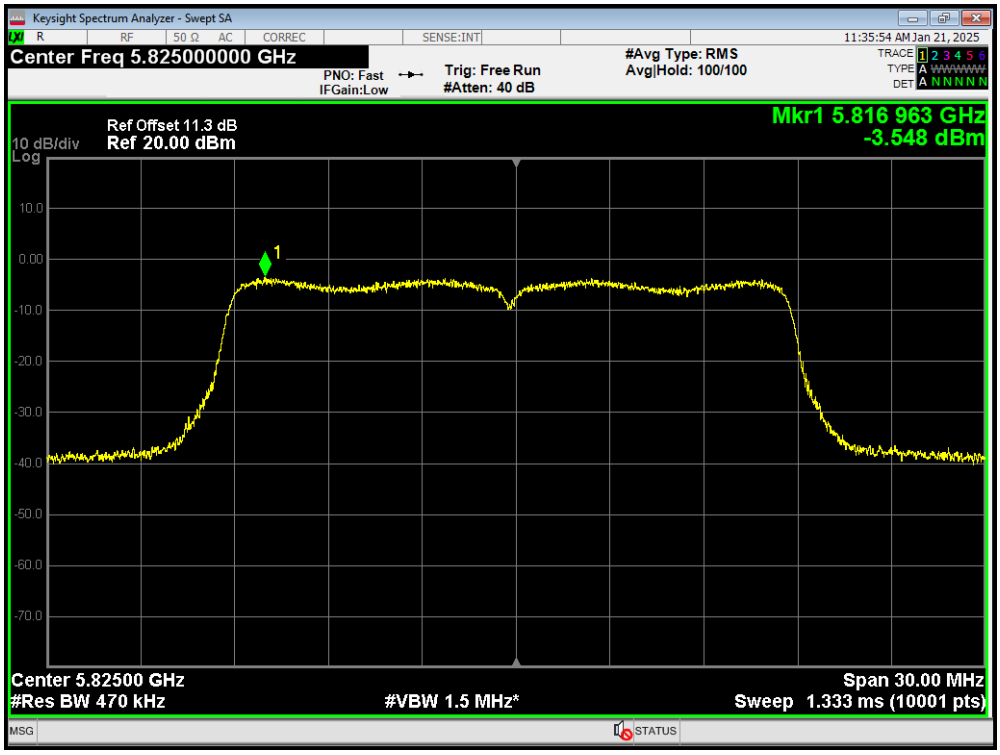
PSD 802.11n(HT20) 5785MHz



PSD 802.11n(HT20) 5825MHz



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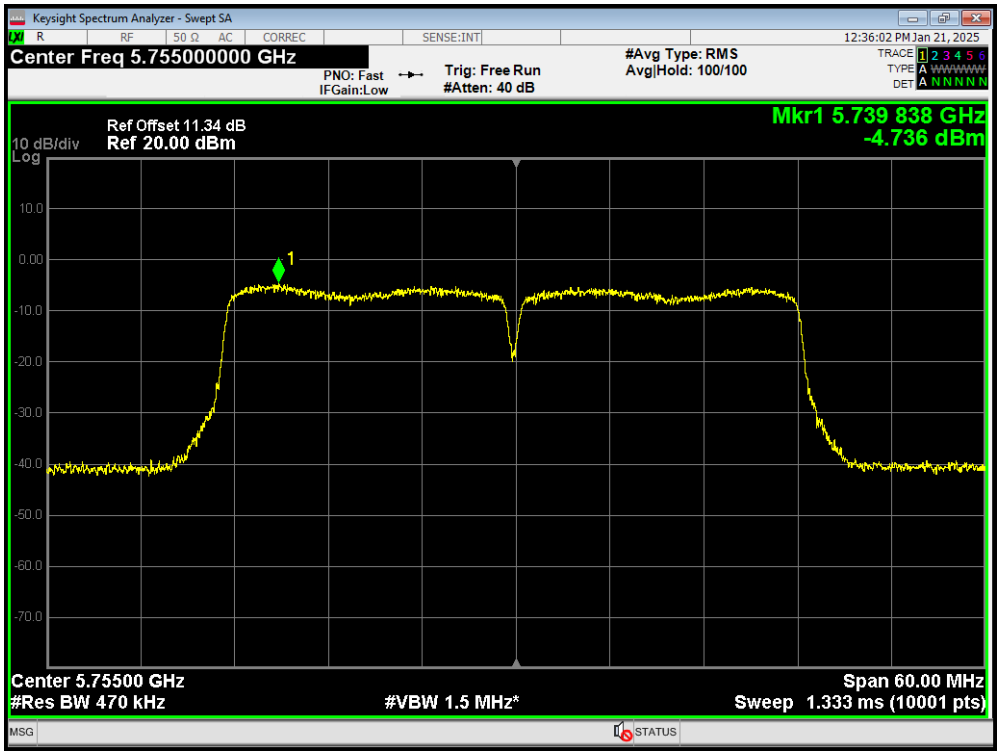
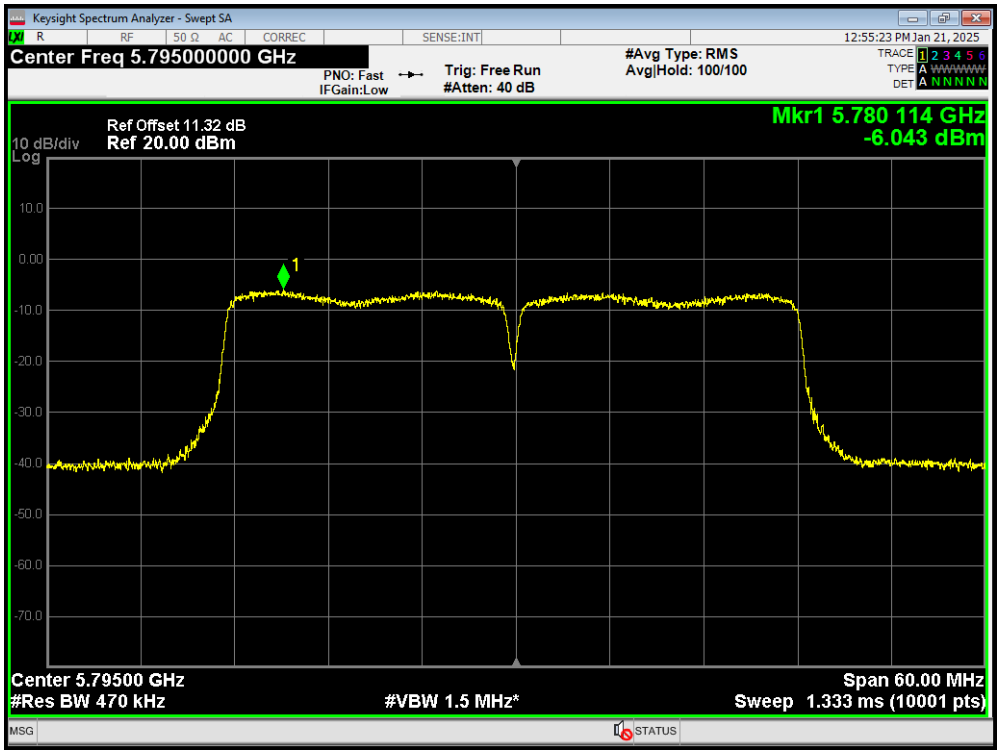
PSD 802.11n(HT40) 5755MHz



PSD 802.11n(HT40) 5795MHz



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5.5. Unwanted Emission

Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

The test set-up was made in accordance to the general provisions of ANSI C63.10. The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration.
Sweep the whole frequency band range from 9kHz to the 10th harmonic of the carrier, and the emissions less than 20 dB below the permissible value are reported.

During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.
Set the spectrum analyzer in the following:
9kHz~150 kHz
RBW=200Hz, VBW=1kHz/ Sweep=AUTO
150 kHz~30MHz
RBW=9kHz, VBW=30kHz,/ Sweep=AUTO
Below 1GHz
RBW=100kHz / VBW=300kHz / Sweep=AUTO
a) Peak emission levels are measured by setting the instrument as follows:
Above 1GHz
PEAK: RBW=1MHz VBW=3MHz/ Sweep=AUTO
b) Average emission levels are measured by setting the instrument as follows:
Above 1GHz
AVERAGE: RBW=1MHz / VBW=3MHz / Sweep=AUTO
c) Detector: The measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.
d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)
e) Sweep time = auto.
f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and

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OFF with the transmit cycle, at least 100 traces shall be averaged.)
g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:
1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is [10 log (1 / D)], where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.
2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is [20 log (1 / D)], where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.
3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission.

Reduce the video bandwidth until no significant variations in the displayed signal are observed in subsequent traces, provided the video bandwidth is no less than 1 Hz. For regulatory requirements that specify averaging only over the transmit duration (e.g., digital transmission system [DTS] and Unlicensed National Information Infrastructure [U-NII]), the video bandwidth shall be greater than [1 / (minimum transmitter on time)] and no less than 1 Hz.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the loop antenna is vertical, others antenna are vertical and horizontal.

The test is in transmitting mode.

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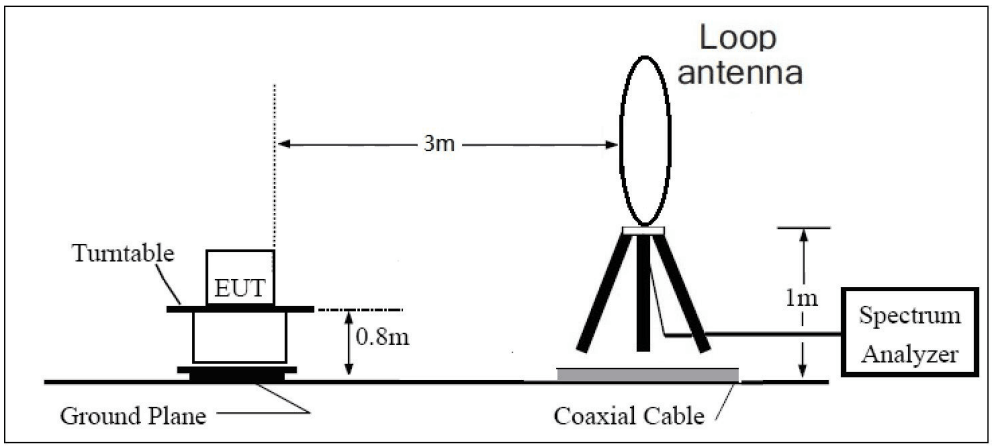
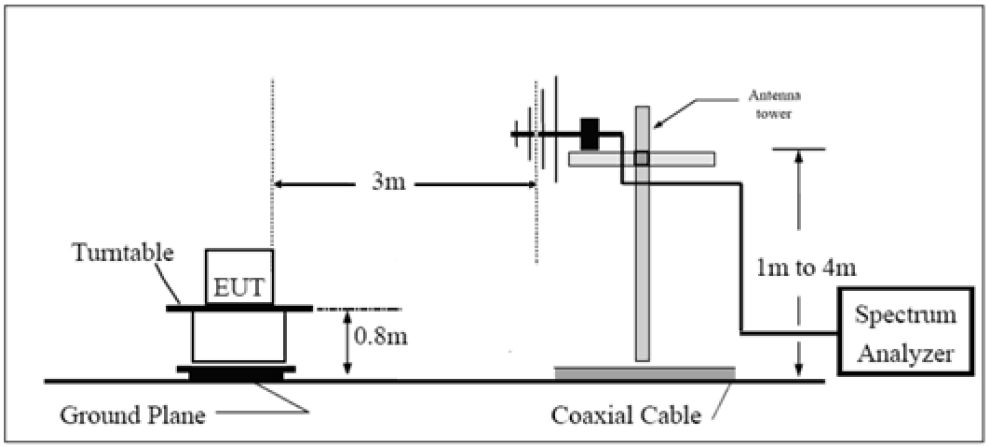
Test setup

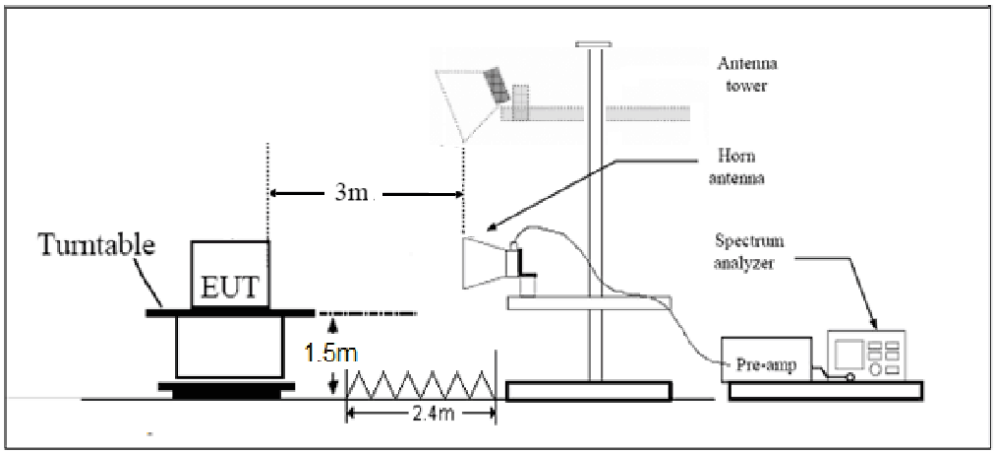
9kHz~ 30MHz



30MHz~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

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Limits

(1) For transmitters operating in the 5725-5850 MHz band: 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.

(2) 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(68.2dBμV/m).

Note: the following formula is used to convert the EIRP to field strength

§1、E[dBμV/m] = EIRP[dBm] - 20 log(d[meters]) + 104.77, where E = field strength and

d = distance at which field strength limit is specified in the rules;

§2、E[dBμV/m] = EIRP[dBm] + 95.2, for d = 3 meters

(3) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table.

Frequency of emission (MHz)	Field strength(μV/m)	Field strength(dBμV/m)
0.009–0.490	2400/F(kHz)	/
0.490–1.705	24000/F(kHz)	/
1.705–30.0	30	/
30-88	100	40
88-216	150	43.5
216-960	200	46
Above960	500	54

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MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41			

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96.

Frequency	Uncertainty
9kHz-30MHz	3.55 dB
30MHz-200MHz	4.17 dB
200MHz-1GHz	4.84 dB
1-18GHz	4.35 dB
18-26.5GHz	5.90 dB
26.5GHz~40GHz	5.92 dB

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Test Results:

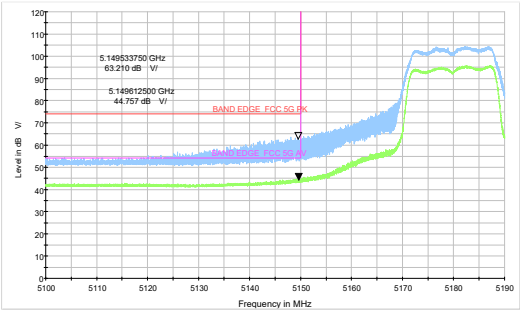
The following graphs display the maximum values of horizontal and vertical by software.
Blue trace uses the peak detection, Green trace uses the average detection.

The modulation and bandwidth are similar for 802.11n mode for 20MHz/40MHz and 802.11ac mode for V20MHz/V40MHz, therefore investigated worst case to representative mode in test report.
A symbol (dB V/) in the test plot below means (dBμV/m)

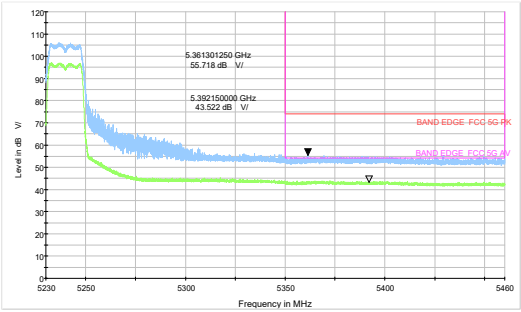
The signal beyond the limit is carrier.

U-NII-1

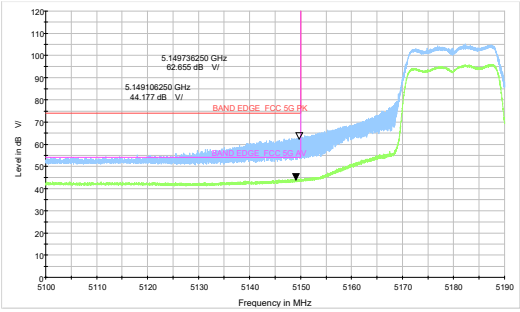
802.11a-Channel 36: Peak + Average



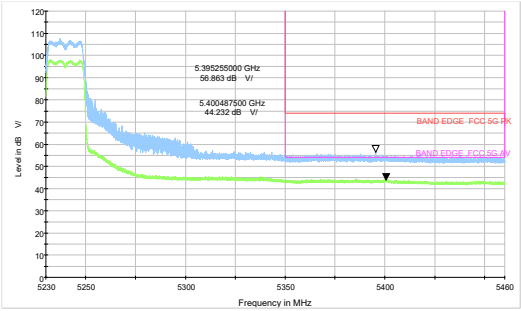
802.11a-Channel 48: Peak + Average



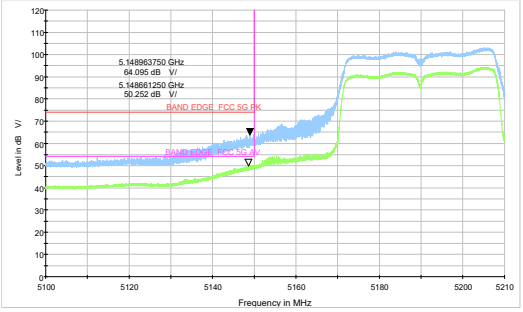
802.11n HT20-Channel 36: Peak + Average



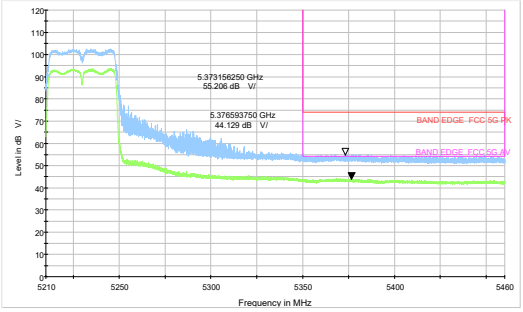
802.11n HT20-Channel 48: Peak + Average



802.11n HT40-Channel 38: Peak + Average



802.11n HT40-Channel 46: Peak + Average



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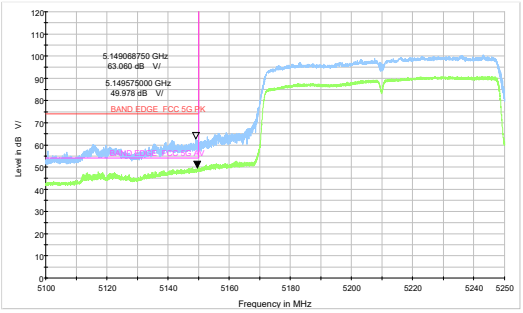
802.11ac VHT80 –Channel 42: Peak + Average



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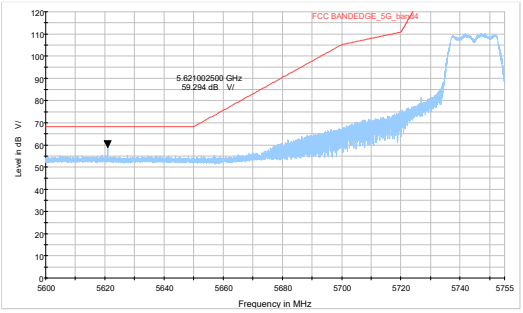
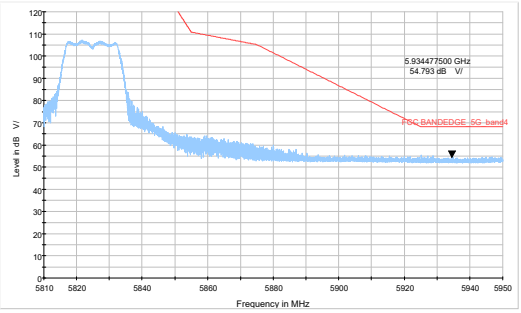
U-NII-3

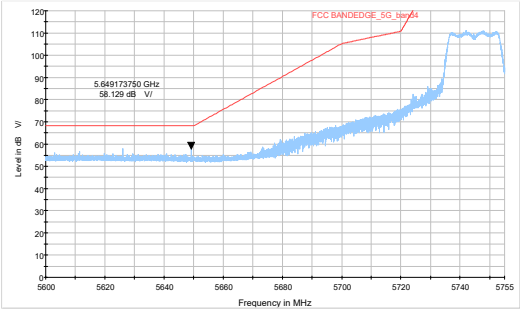
802.11a-Channel 149: Peak



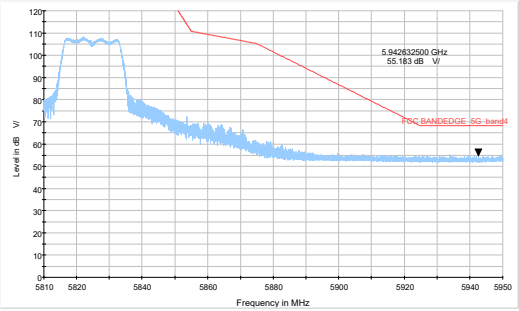
802.11a-Channel 165: Peak



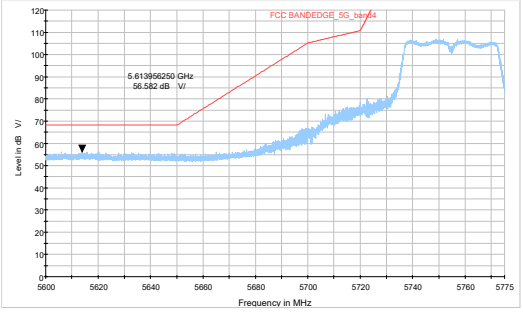
802.11n HT20-Channel 149: Peak



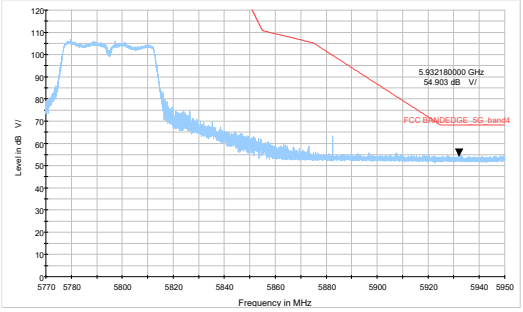
802.11n HT20-Channel 165: Peak



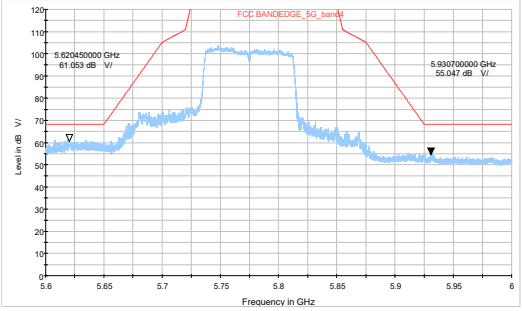
802.11n HT40-Channel 151: Peak



802.11n HT40-Channel 159: Peak



802.11ac VHT80- Channel 155: Peak



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Result of RE

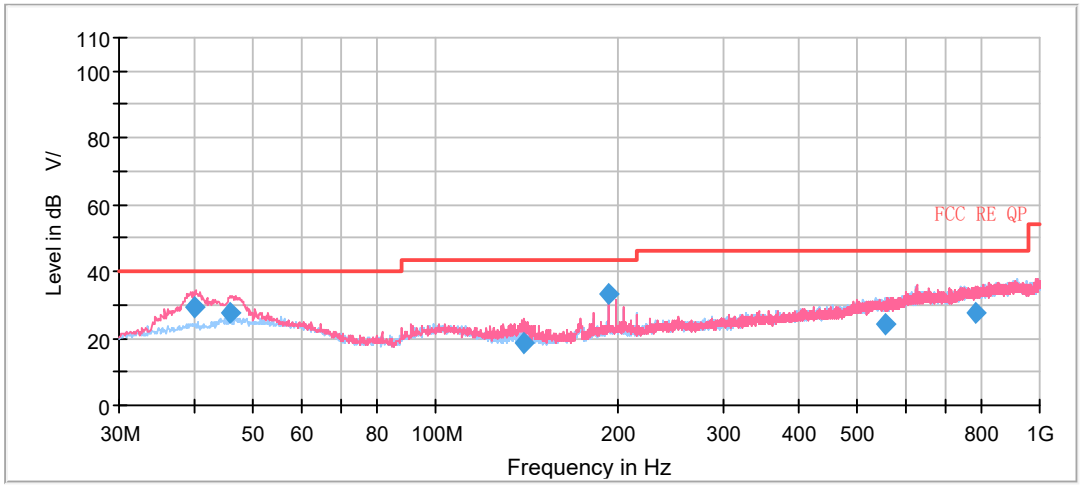
Test result

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the Emissions in the frequency band 9kHz-30MHz are more than 20dB below the limit are not reported.

A symbol (dB V/) in the test plot below means (dBμV/m)

During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes with all channels, 802.11ac (VHT20) CH157 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Continuous TX mode:



Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
39.985000	29.20	40.00	10.80	100.0	V	90.0	19.9
45.883750	27.39	40.00	12.61	110.0	V	39.0	21.1
139.98000	18.74	43.50	24.76	100.0	V	82.0	15.5
193.84875	33.31	43.50	10.19	100.0	V	4.0	18.9
555.01500	24.07	46.00	21.93	184.0	H	77.0	26.1
782.22875	27.50	46.00	18.50	100.0	V	10.0	29.3

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Margin = Limit – Quasi-Peak

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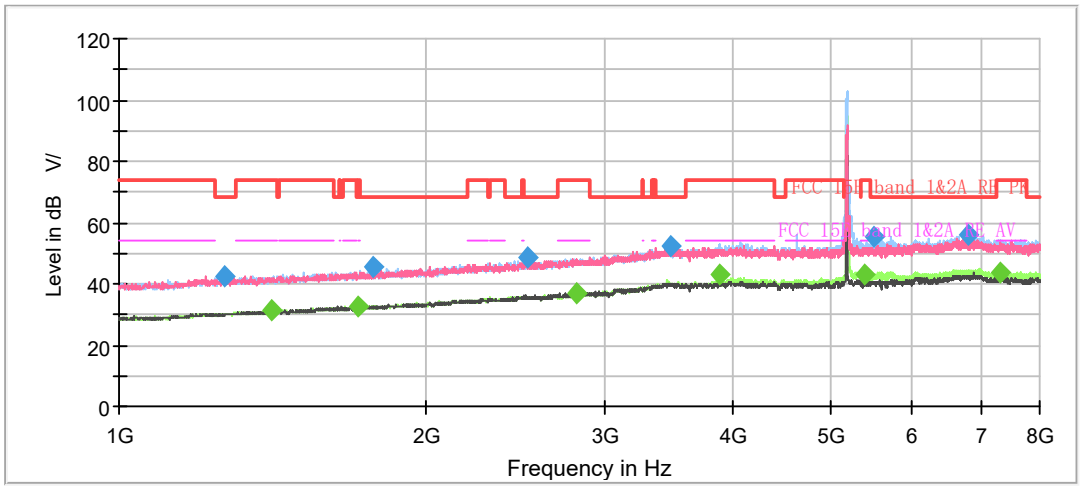
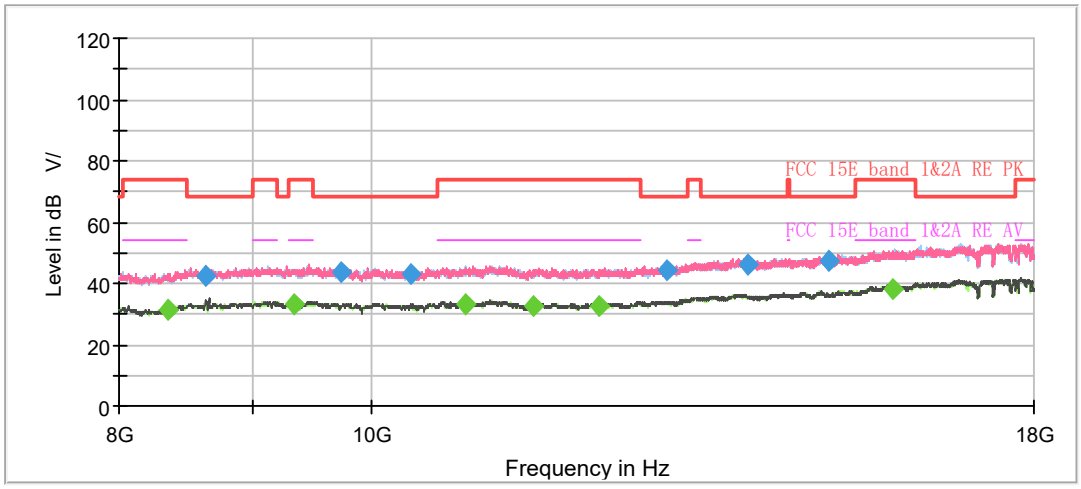
802.11a CH36



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1266.875000	42.48	---	68.20	25.72	500.0	200.0	H	9.0	-8.5
1412.125000	---	31.36	54.00	22.64	500.0	200.0	H	108.0	-7.5
1719.250000	---	32.65	54.00	21.35	500.0	100.0	H	118.0	-5.9
1777.875000	45.63	---	68.20	22.57	500.0	200.0	H	4.0	-5.6
2521.625000	48.48	---	68.20	19.72	500.0	200.0	V	109.0	-2.2
2814.750000	---	37.09	54.00	16.91	500.0	100.0	V	0.0	-1.2
3471.000000	52.40	---	68.20	15.80	500.0	200.0	H	0.0	1.6
3887.500000	---	43.13	54.00	10.87	500.0	200.0	H	4.0	2.6
5380.250000	---	42.83	54.00	11.17	500.0	200.0	H	15.0	5.1
5496.625000	55.53	---	68.20	12.67	500.0	200.0	H	4.0	5.5
6795.125000	55.94	---	68.20	12.26	500.0	200.0	H	4.0	6.8
7325.375000	---	43.97	54.00	10.03	500.0	200.0	H	4.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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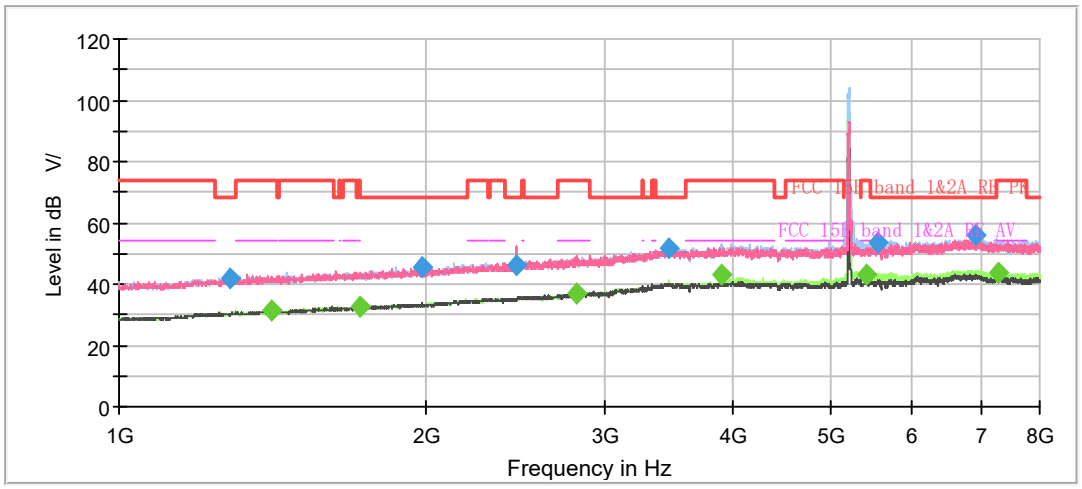
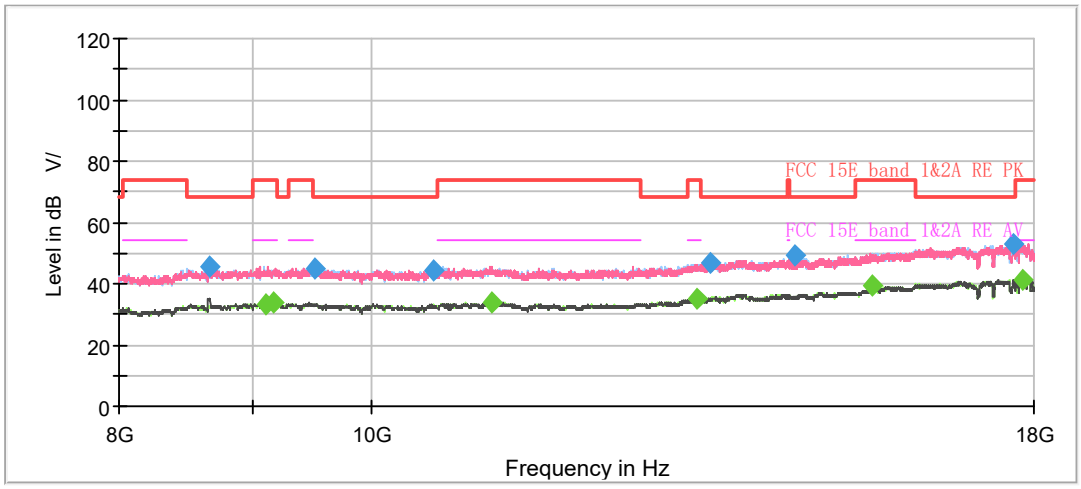
802.11a CH40



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1283.500000	42.05	---	68.20	26.15	500.0	200.0	V	324.0	-8.3
1411.250000	---	31.15	54.00	22.85	500.0	100.0	H	295.0	-7.5
1721.000000	---	32.66	54.00	21.34	500.0	100.0	V	162.0	-5.9
1980.875000	45.77	---	68.20	22.43	500.0	100.0	V	129.0	-4.7
2451.625000	45.86	---	68.20	22.34	500.0	100.0	H	295.0	-2.3
2812.125000	---	36.91	54.00	17.09	500.0	100.0	V	14.0	-1.2
3460.500000	51.84	---	68.20	16.36	500.0	200.0	H	36.0	1.6
3902.375000	---	42.84	54.00	11.16	500.0	200.0	H	41.0	2.6
5411.750000	---	42.82	54.00	11.18	500.0	200.0	H	0.0	5.1
5538.625000	53.78	---	68.20	14.42	500.0	200.0	H	0.0	5.3
6935.125000	55.71	---	68.20	12.49	500.0	200.0	H	0.0	7.0
7296.500000	---	43.92	54.00	10.08	500.0	200.0	H	0.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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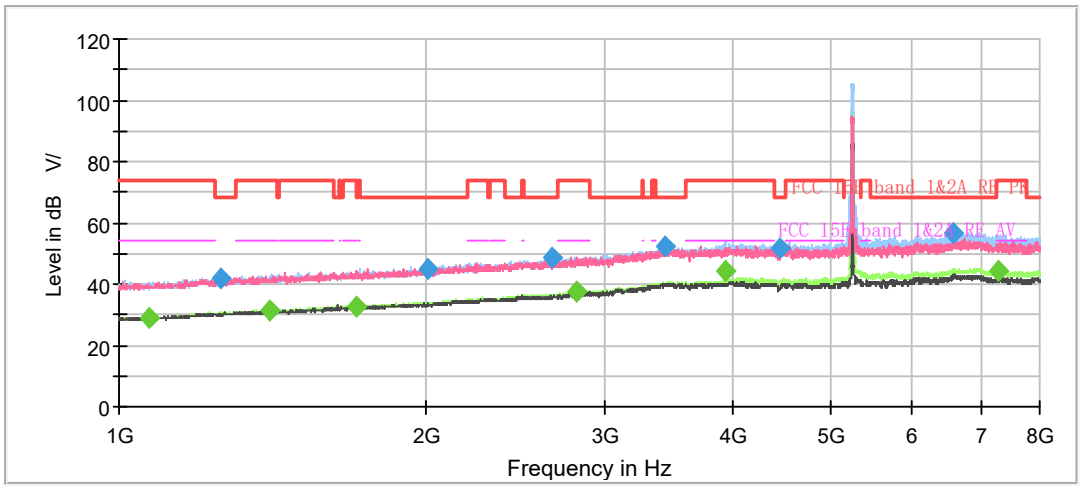
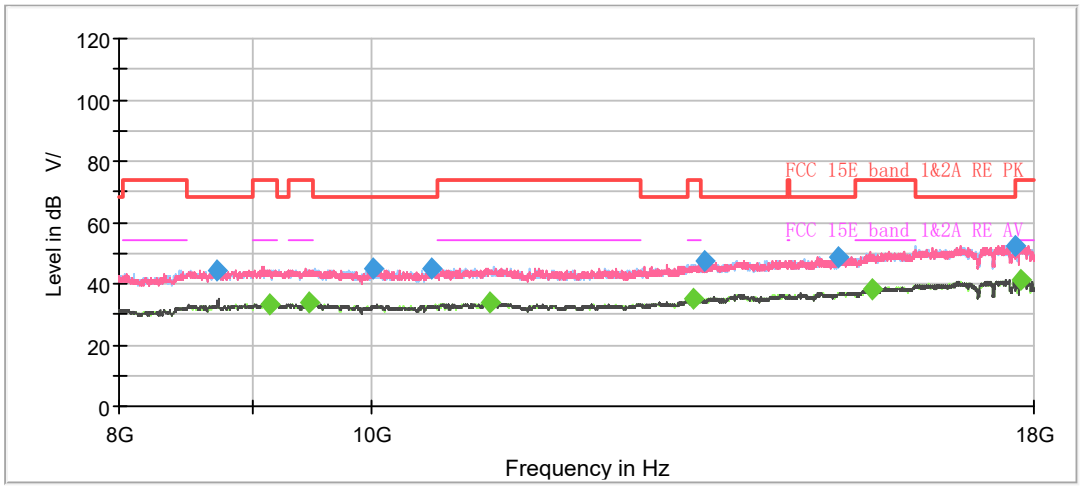
802.11a CH48



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1069.125000	---	28.94	54.00	25.06	500.0	200.0	H	126.0	-10.3
1255.500000	42.14	---	68.20	26.06	500.0	200.0	H	353.0	-8.6
1406.875000	---	31.54	54.00	22.46	500.0	200.0	H	322.0	-7.5
1709.625000	---	32.56	54.00	21.44	500.0	200.0	H	56.0	-5.9
2012.375000	44.92	---	68.20	23.28	500.0	200.0	H	340.0	-4.4
2659.875000	48.61	---	68.20	19.59	500.0	200.0	H	208.0	-1.9
2807.750000	---	37.41	54.00	16.59	500.0	200.0	H	281.0	-1.2
3431.625000	52.29	---	68.20	15.91	500.0	200.0	H	290.0	1.5
3937.375000	---	44.02	54.00	9.98	500.0	200.0	H	37.0	2.7
4453.625000	51.52	---	68.20	16.68	500.0	200.0	H	340.0	3.5
6583.375000	56.73	---	68.20	11.47	500.0	200.0	H	23.0	6.6
7295.625000	---	44.23	54.00	9.77	500.0	200.0	H	344.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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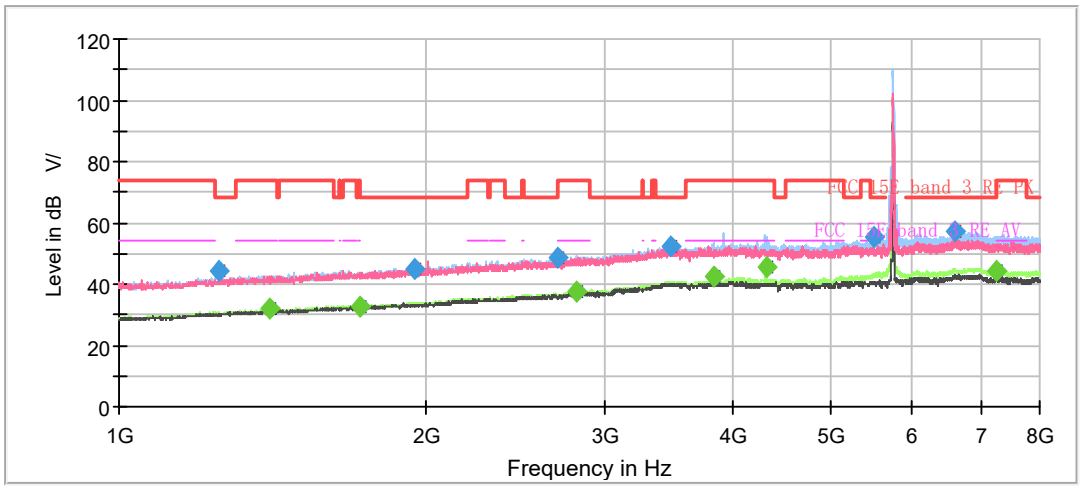
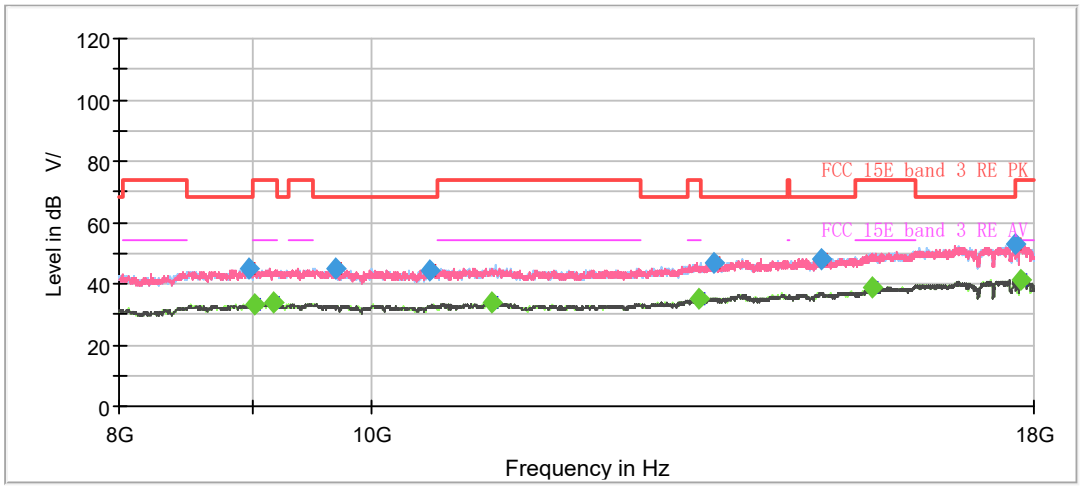
802.11a CH149



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1253.750000	44.13	---	68.20	24.07	500.0	100.0	H	103.0	-8.6
1406.875000	---	31.85	54.00	22.15	500.0	200.0	H	249.0	-7.5
1720.125000	---	32.66	54.00	21.34	500.0	200.0	H	249.0	-5.9
1950.250000	45.01	---	68.20	23.19	500.0	200.0	V	69.0	-4.7
2689.625000	48.45	---	68.20	19.75	500.0	200.0	H	319.0	-1.7
2815.625000	---	37.32	54.00	16.68	500.0	200.0	H	292.0	-1.2
3474.500000	52.21	---	68.20	15.99	500.0	100.0	H	125.0	1.7
3829.750000	---	42.50	54.00	11.50	500.0	200.0	H	14.0	2.4
4311.000000	---	45.63	54.00	8.37	500.0	200.0	H	337.0	3.6
5495.750000	55.15	---	68.20	13.05	500.0	200.0	H	0.0	5.5
6601.750000	57.21	---	68.20	10.99	500.0	200.0	H	296.0	6.7
7264.125000	---	44.17	54.00	9.83	500.0	200.0	H	230.0	7.1

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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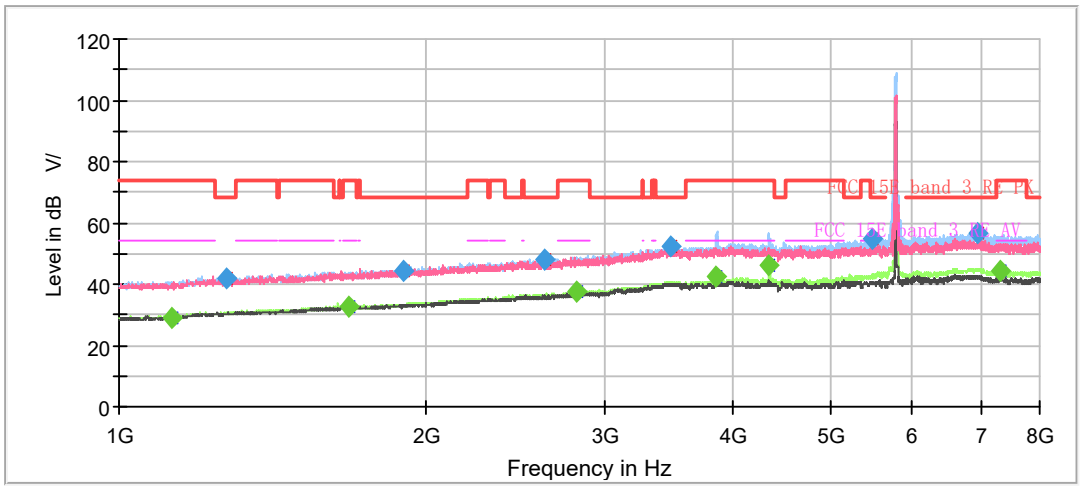
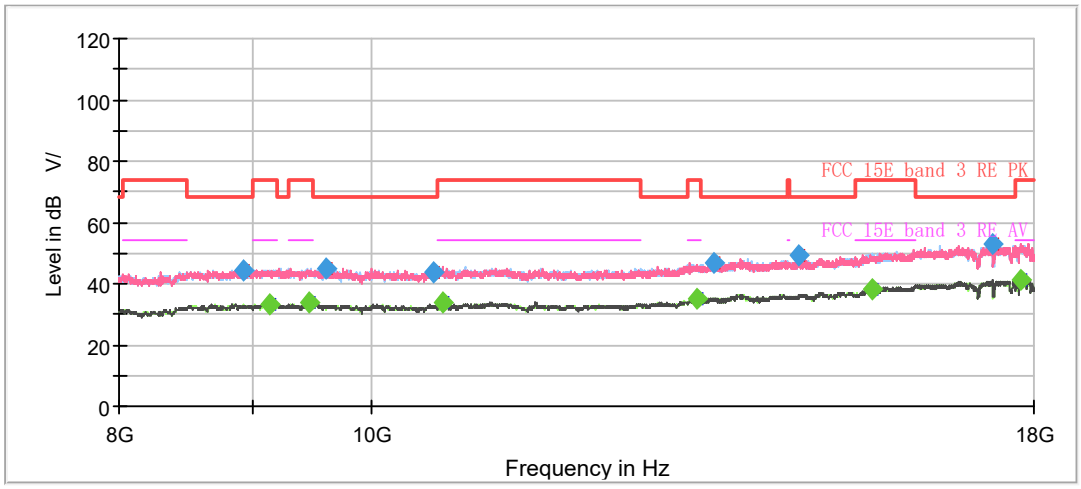
802.11a CH157



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1128.625000	---	28.92	54.00	25.08	500.0	100.0	H	85.0	-9.9
1273.000000	41.87	---	68.20	26.33	500.0	200.0	V	171.0	-8.4
1677.250000	---	32.85	54.00	21.15	500.0	200.0	H	337.0	-6.1
1899.500000	44.29	---	68.20	23.91	500.0	100.0	H	126.0	-5.0
2609.125000	48.07	---	68.20	20.13	500.0	100.0	H	89.0	-2.0
2809.500000	---	37.46	54.00	16.54	500.0	200.0	H	229.0	-1.2
3483.250000	52.19	---	68.20	16.01	500.0	100.0	H	95.0	1.7
3853.375000	---	42.46	54.00	11.54	500.0	200.0	H	47.0	2.5
4336.375000	---	46.17	54.00	7.83	500.0	200.0	H	12.0	3.5
5473.000000	54.61	---	68.20	13.59	500.0	200.0	H	351.0	5.4
6957.875000	56.51	---	68.20	11.69	500.0	200.0	H	192.0	7.1
7321.000000	---	44.36	54.00	9.64	500.0	200.0	H	122.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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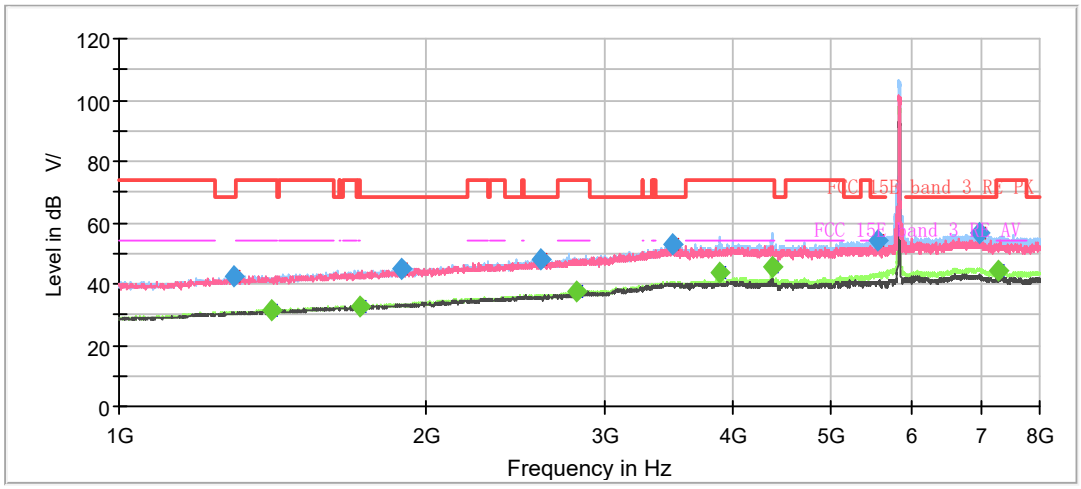
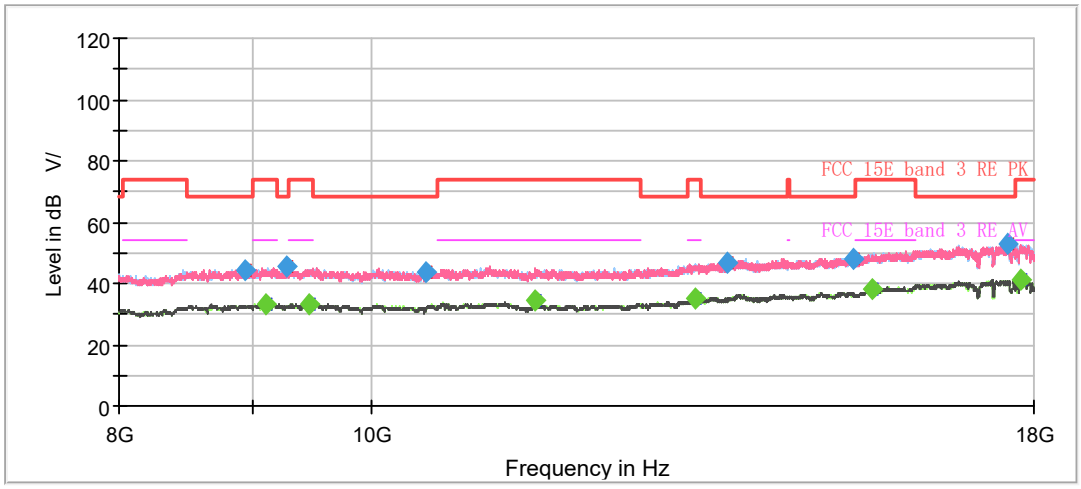
802.11a CH165



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μV/m)	Average (dB μV/m)	Limit (dB μV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1296.625000	42.20	---	68.20	26.00	500.0	100.0	V	111.0	-8.2
1413.875000	---	31.48	54.00	22.52	500.0	200.0	H	347.0	-7.5
1720.125000	---	32.79	54.00	21.21	500.0	200.0	H	262.0	-5.9
1890.750000	45.10	---	68.20	23.10	500.0	200.0	H	356.0	-5.1
2588.125000	48.11	---	68.20	20.09	500.0	200.0	V	143.0	-2.0
2806.875000	---	37.26	54.00	16.74	500.0	200.0	H	305.0	-1.2
3492.000000	52.65	---	68.20	15.55	500.0	100.0	H	48.0	1.8
3883.125000	---	43.69	54.00	10.31	500.0	200.0	H	0.0	2.6
4371.375000	---	45.66	54.00	8.34	500.0	200.0	H	324.0	3.6
5555.250000	54.42	---	68.20	13.78	500.0	200.0	H	0.0	5.4
6970.125000	56.36	---	68.20	11.84	500.0	200.0	H	300.0	7.1
7287.750000	---	44.21	54.00	9.79	500.0	200.0	H	295.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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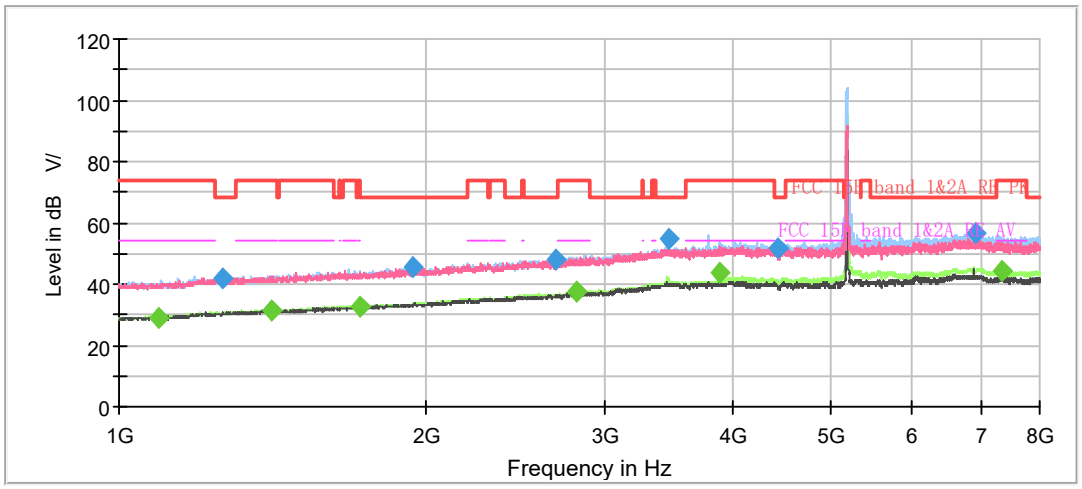
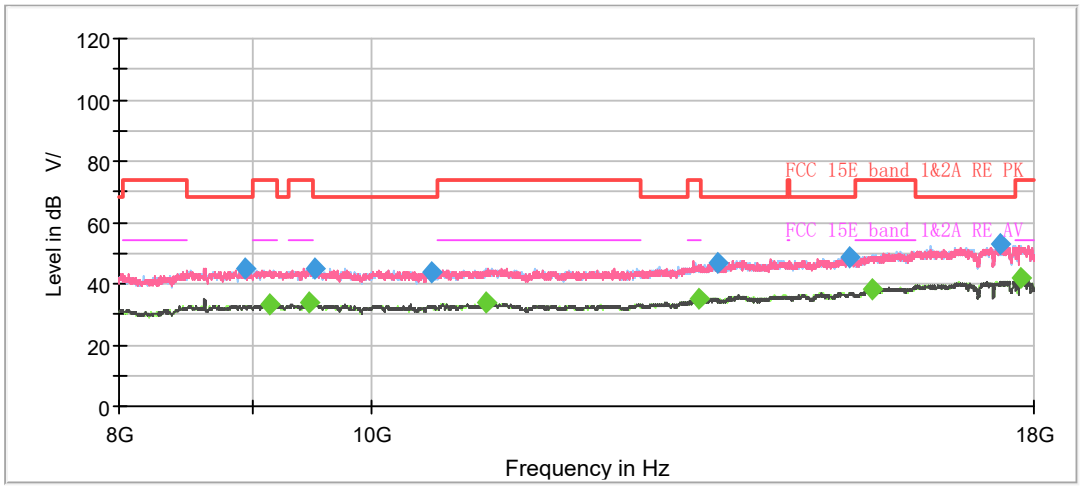
802.11ac (VHT20) CH36



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1091.875000	---	28.84	54.00	25.16	500.0	100.0	H	17.0	-10.2
1263.375000	42.15	---	68.20	26.05	500.0	100.0	V	262.0	-8.5
1410.375000	---	31.43	54.00	22.57	500.0	200.0	H	227.0	-7.5
1721.000000	---	32.78	54.00	21.22	500.0	200.0	H	86.0	-5.9
1940.625000	45.77	---	68.20	22.43	500.0	100.0	H	98.0	-4.7
2679.125000	48.10	---	68.20	20.10	500.0	100.0	V	3.0	-1.8
2811.250000	---	37.24	54.00	16.76	500.0	200.0	H	342.0	-1.2
3464.000000	54.51	---	68.20	13.69	500.0	100.0	H	30.0	1.6
3883.125000	---	43.40	54.00	10.60	500.0	200.0	H	311.0	2.6
4427.375000	51.73	---	68.20	16.47	500.0	200.0	H	325.0	3.5
6918.500000	56.57	---	68.20	11.63	500.0	200.0	H	136.0	6.9
7343.750000	---	44.34	54.00	9.66	500.0	200.0	H	311.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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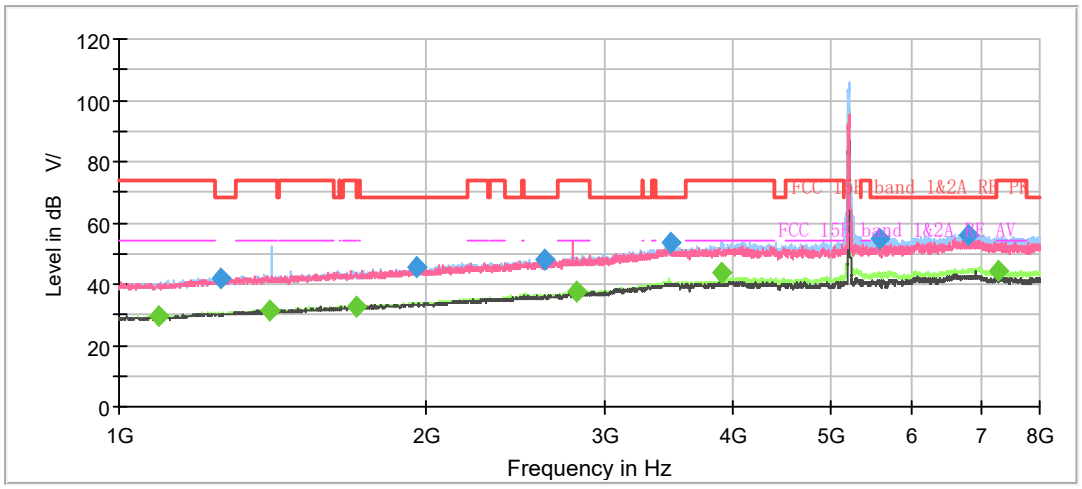
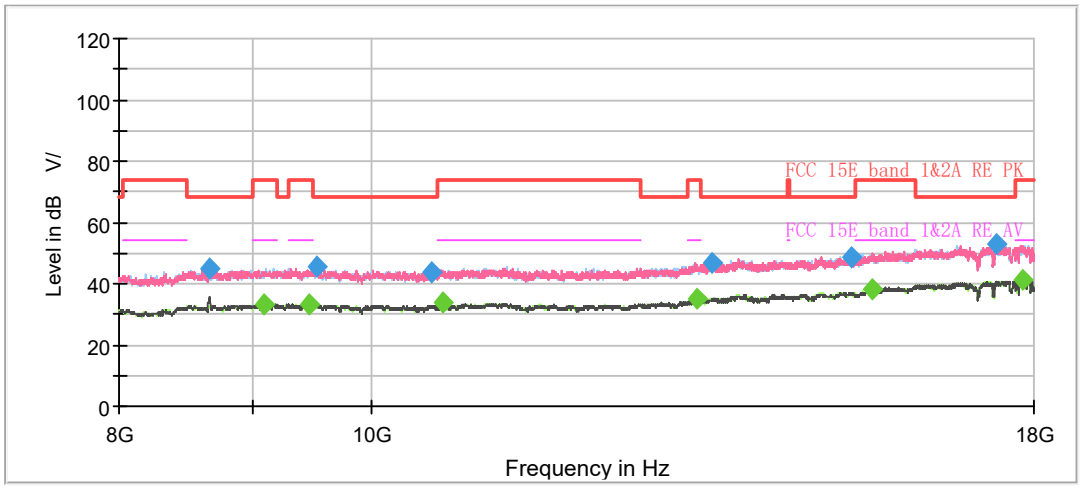
802.11ac (VHT20) CH40



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1092.750000	---	29.38	54.00	24.62	500.0	200.0	H	117.0	-10.2
1259.875000	41.59	---	68.20	26.61	500.0	200.0	H	148.0	-8.5
1402.500000	---	31.64	54.00	22.36	500.0	200.0	H	41.0	-7.6
1705.250000	---	32.78	54.00	21.22	500.0	200.0	H	184.0	-6.0
1957.250000	45.25	---	68.20	22.95	500.0	200.0	V	248.0	-4.7
2614.375000	48.16	---	68.20	20.04	500.0	200.0	H	27.0	-2.0
2810.375000	---	37.60	54.00	16.40	500.0	200.0	H	27.0	-1.2
3470.125000	53.54	---	68.20	14.66	500.0	200.0	H	13.0	1.6
3906.750000	---	43.75	54.00	10.25	500.0	200.0	H	37.0	2.6
5581.500000	54.71	---	68.20	13.49	500.0	200.0	H	32.0	5.6
6813.500000	56.15	---	68.20	12.05	500.0	200.0	H	98.0	6.8
7282.500000	---	44.38	54.00	9.62	500.0	200.0	H	239.0	7.1

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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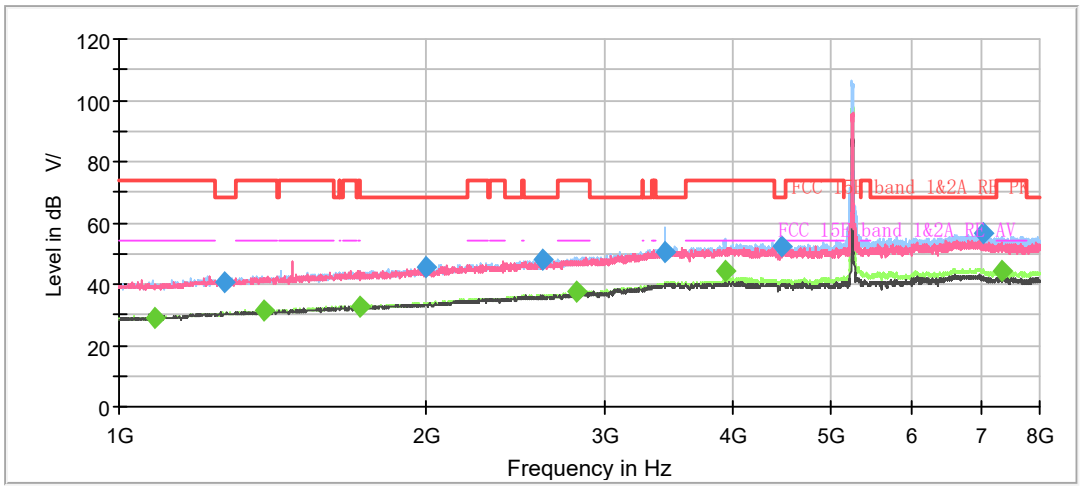
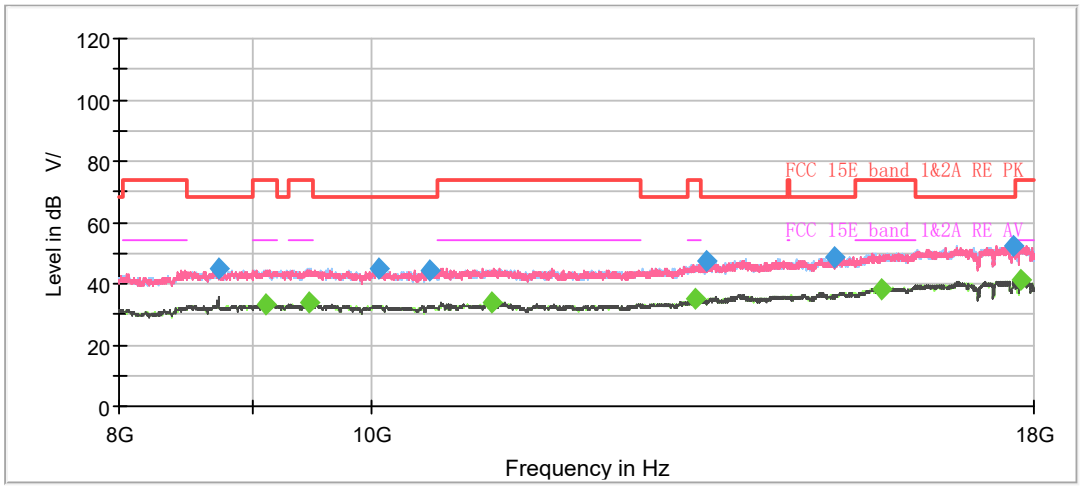
802.11ac (VHT20) CH48



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1082.250000	---	28.92	54.00	25.08	500.0	200.0	H	30.0	-10.3
1266.875000	40.88	---	68.20	27.32	500.0	200.0	H	221.0	-8.5
1387.625000	---	31.41	54.00	22.59	500.0	200.0	H	127.0	-7.7
1721.000000	---	32.65	54.00	21.35	500.0	200.0	H	208.0	-5.9
1996.625000	45.48	---	68.20	22.72	500.0	200.0	H	230.0	-4.6
2607.375000	48.14	---	68.20	20.06	500.0	200.0	V	193.0	-2.0
2810.375000	---	37.26	54.00	16.74	500.0	200.0	V	358.0	-1.2
3428.125000	50.37	---	68.20	17.83	500.0	200.0	H	284.0	1.5
3933.000000	---	44.37	54.00	9.63	500.0	200.0	H	40.0	2.7
4473.750000	52.25	---	68.20	15.95	500.0	200.0	H	95.0	3.7
7039.250000	56.91	---	68.20	11.29	500.0	200.0	H	44.0	6.9
7343.750000	---	44.31	54.00	9.69	500.0	200.0	H	72.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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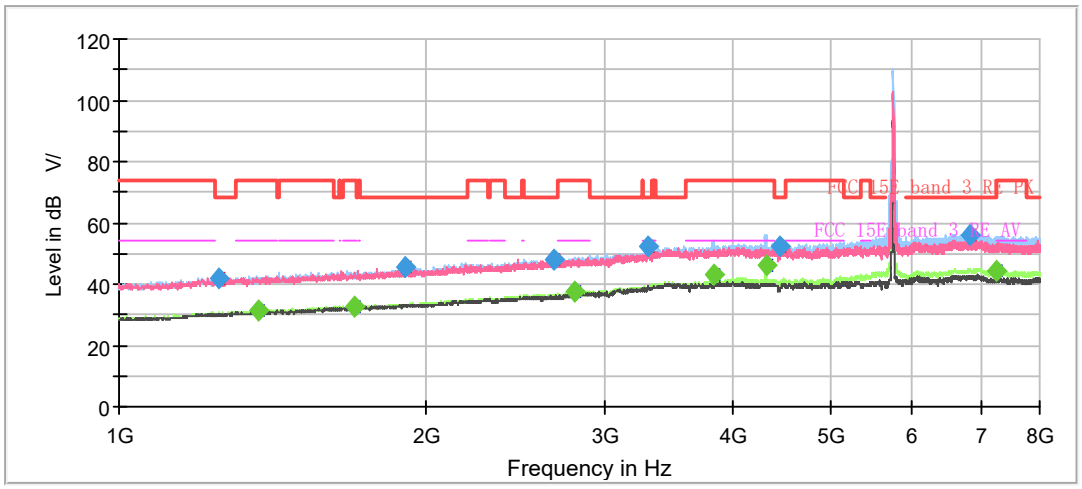
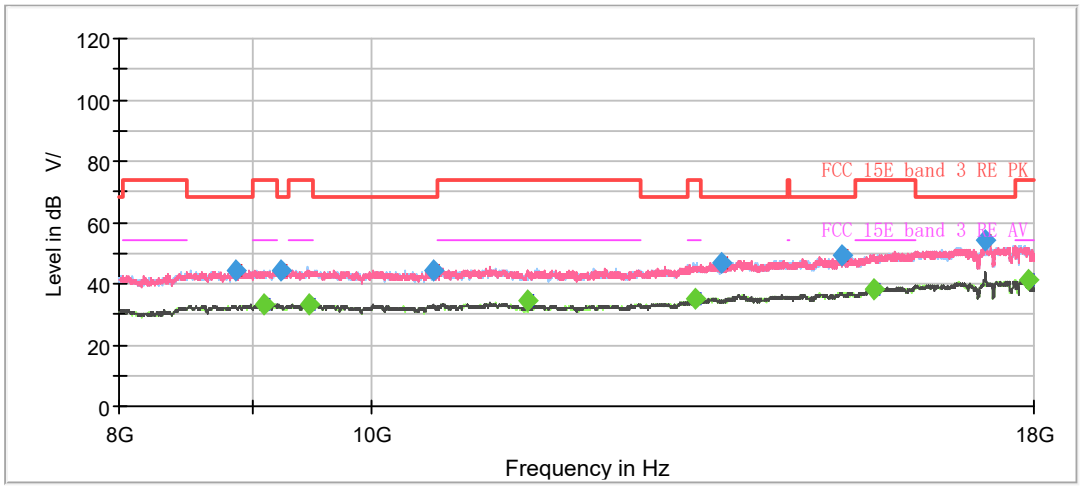
802.11ac (VHT20) CH149



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1252.000000	41.89	---	68.20	26.31	500.0	200.0	H	113.0	-8.6
1369.250000	---	31.30	54.00	22.70	500.0	100.0	H	341.0	-7.7
1699.125000	---	32.62	54.00	21.38	500.0	100.0	H	325.0	-6.0
1906.500000	45.25	---	68.20	22.95	500.0	200.0	H	94.0	-5.0
2673.000000	47.95	---	68.20	20.25	500.0	200.0	H	244.0	-1.8
2796.375000	---	37.29	54.00	16.71	500.0	100.0	H	261.0	-1.3
3303.000000	52.22	---	68.20	15.98	500.0	100.0	V	233.0	0.9
3829.750000	---	43.18	54.00	10.82	500.0	200.0	H	38.0	2.4
4310.125000	---	46.26	54.00	7.74	500.0	200.0	H	34.0	3.6
4454.500000	52.01	---	68.20	16.19	500.0	200.0	H	69.0	3.6
6843.250000	56.29	---	68.20	11.91	500.0	100.0	H	354.0	6.8
7250.125000	---	44.46	54.00	9.54	500.0	100.0	H	140.0	7.1

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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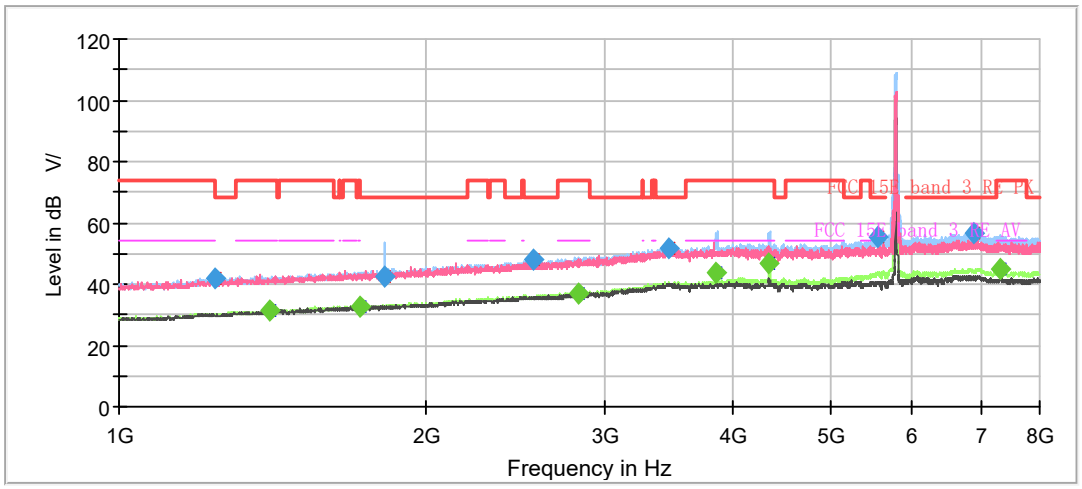
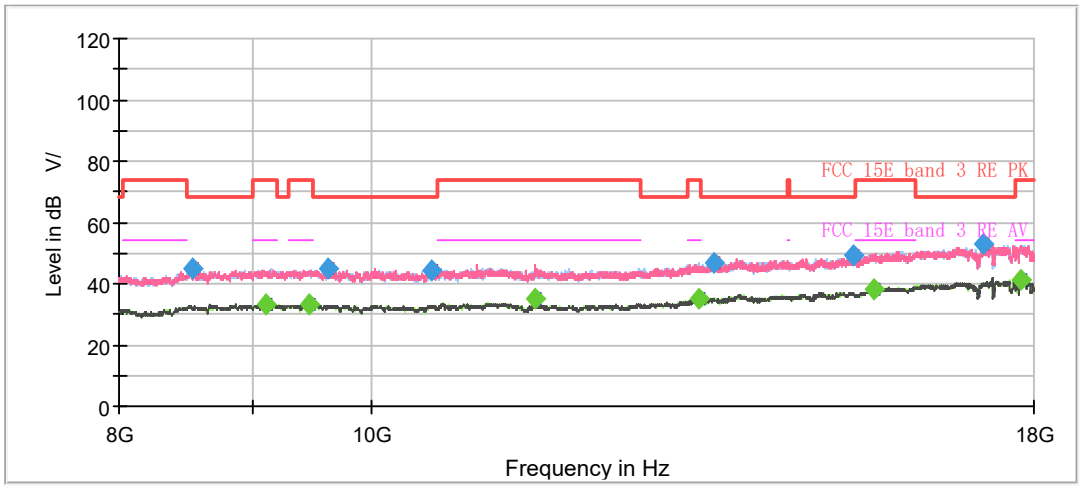
802.11ac (VHT20) CH157



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μV/m)	Average (dB μV/m)	Limit (dB μV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1244.125000	42.06	---	68.20	26.14	500.0	200.0	H	240.0	-8.6
1404.250000	---	31.32	54.00	22.68	500.0	200.0	H	190.0	-7.6
1721.000000	---	32.47	54.00	21.53	500.0	200.0	H	195.0	-5.9
1820.750000	42.68	---	68.20	25.52	500.0	200.0	V	115.0	-5.3
2545.250000	48.02	---	68.20	20.18	500.0	100.0	H	185.0	-2.1
2816.500000	---	37.15	54.00	16.85	500.0	200.0	H	80.0	-1.2
3467.500000	51.84	---	68.20	16.36	500.0	200.0	V	260.0	1.6
3856.875000	---	43.79	54.00	10.21	500.0	200.0	H	36.0	2.6
4340.750000	---	46.68	54.00	7.32	500.0	200.0	H	326.0	3.5
5553.500000	55.33	---	68.20	12.87	500.0	100.0	H	0.0	5.4
6895.750000	56.79	---	68.20	11.41	500.0	100.0	H	135.0	6.7
7321.000000	---	44.67	54.00	9.33	500.0	100.0	H	212.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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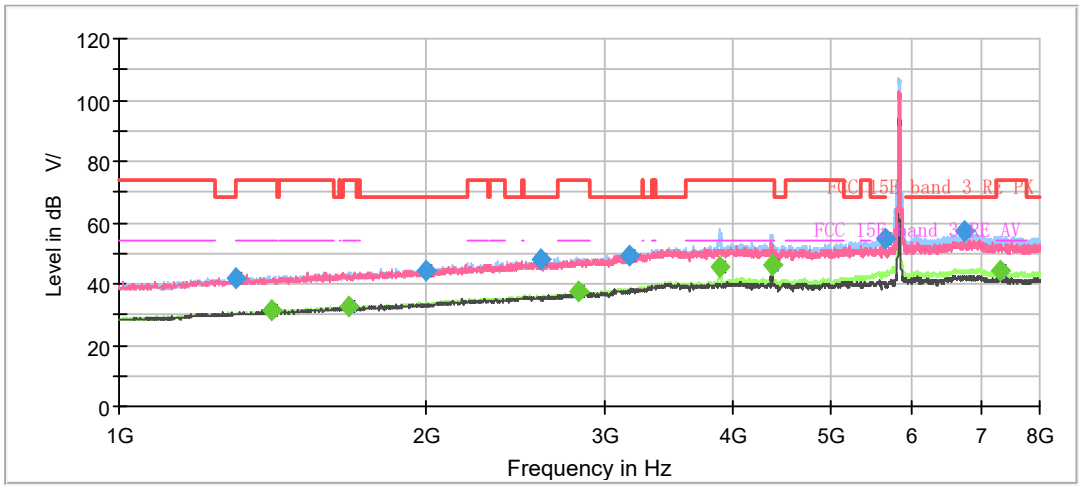
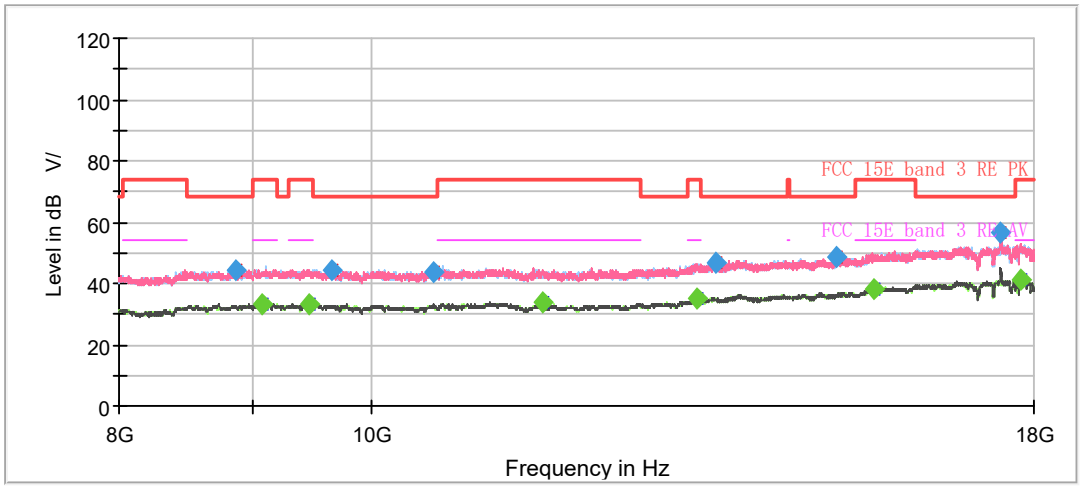
802.11ac (VHT20) CH165



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1299.250000	41.76	---	68.20	26.44	500.0	200.0	H	321.0	-8.2
1410.375000	---	31.14	54.00	22.86	500.0	200.0	H	240.0	-7.5
1683.375000	---	32.68	54.00	21.32	500.0	200.0	H	263.0	-6.0
2001.000000	44.37	---	68.20	23.83	500.0	200.0	V	213.0	-4.5
2593.375000	48.22	---	68.20	19.98	500.0	100.0	V	134.0	-2.0
2820.000000	---	37.34	54.00	16.66	500.0	200.0	H	308.0	-1.2
3160.375000	49.09	---	68.20	19.11	500.0	200.0	H	155.0	-0.2
3883.125000	---	45.36	54.00	8.64	500.0	200.0	H	37.0	2.6
4372.250000	---	46.23	54.00	7.77	500.0	200.0	H	344.0	3.6
5634.000000	54.50	---	68.20	13.70	500.0	200.0	H	2.0	5.5
6761.875000	56.99	---	68.20	11.21	500.0	200.0	H	20.0	6.6
7304.375000	---	44.36	54.00	9.64	500.0	200.0	H	272.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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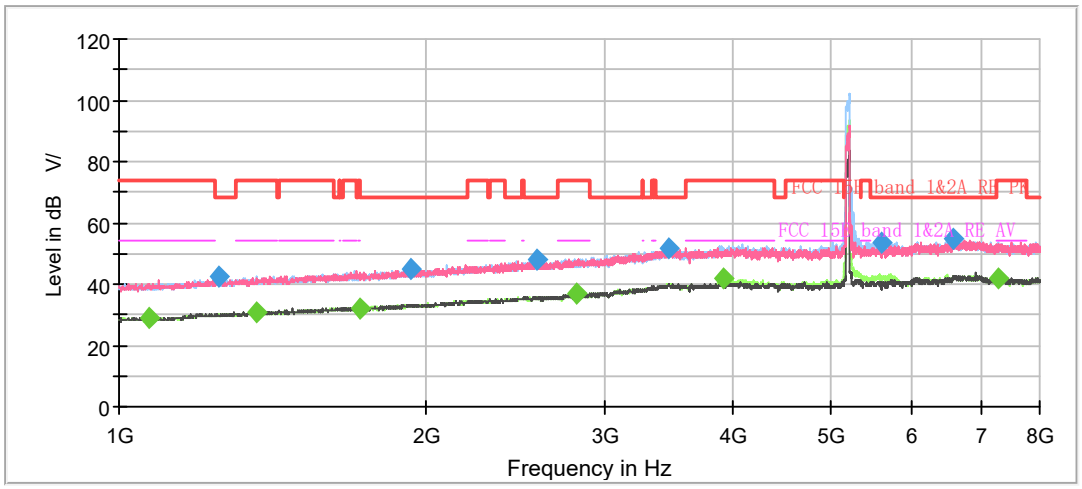
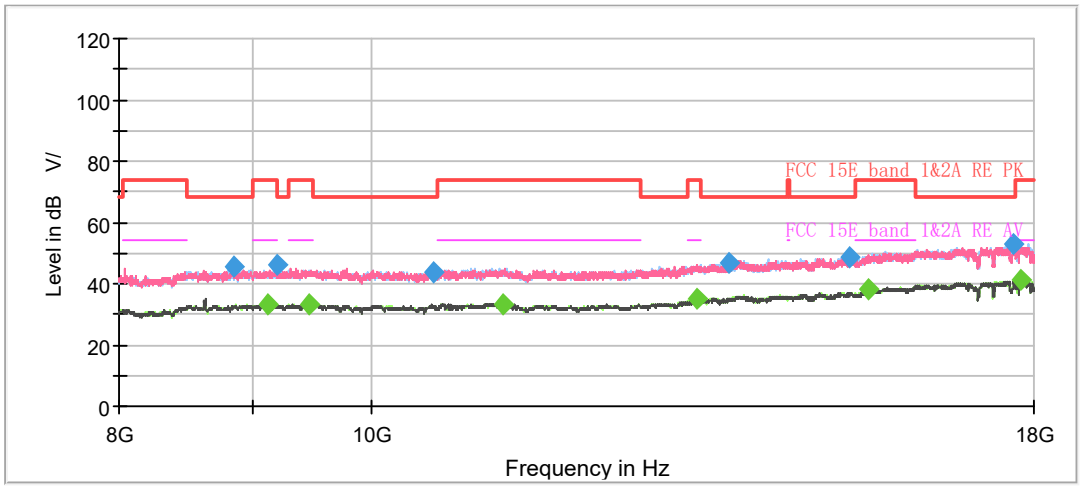
802.11ac (VHT40) CH38



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1071.750000	---	28.64	54.00	25.36	500.0	100.0	H	259.0	-10.3
1253.750000	42.75	---	68.20	25.45	500.0	100.0	V	328.0	-8.6
1363.125000	---	30.85	54.00	23.15	500.0	200.0	H	37.0	-7.7
1721.875000	---	32.23	54.00	21.77	500.0	100.0	V	260.0	-5.9
1931.875000	44.73	---	68.20	23.47	500.0	200.0	H	249.0	-4.8
2570.625000	47.71	---	68.20	20.49	500.0	200.0	H	70.0	-2.0
2809.500000	---	36.67	54.00	17.33	500.0	200.0	H	150.0	-1.2
3455.250000	51.95	---	68.20	16.25	500.0	100.0	H	0.0	1.6
3908.500000	---	41.55	54.00	12.45	500.0	200.0	H	46.0	2.6
5605.125000	53.73	---	68.20	14.47	500.0	200.0	H	0.0	5.6
6575.500000	54.77	---	68.20	13.43	500.0	100.0	H	339.0	6.6
7290.375000	---	41.91	54.00	12.09	500.0	100.0	V	86.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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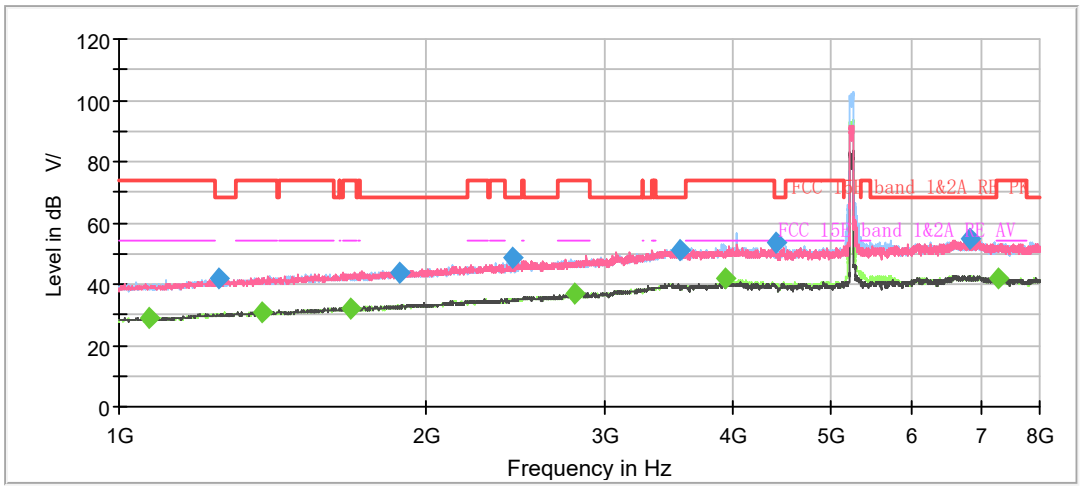
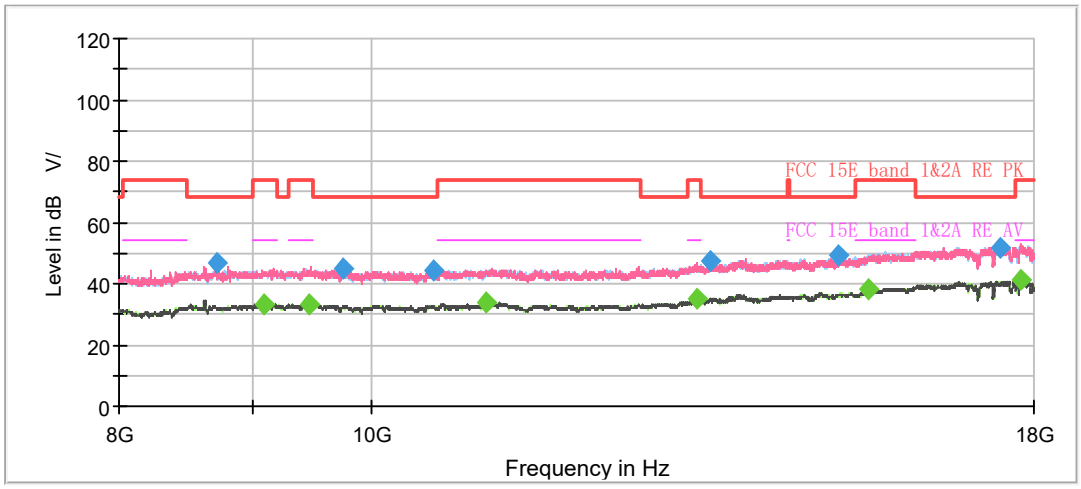
802.11ac (VHT40) CH46



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1069.125000	---	28.86	54.00	25.14	500.0	100.0	V	50.0	-10.3
1254.625000	41.78	---	68.20	26.42	500.0	100.0	V	55.0	-8.6
1381.500000	---	30.97	54.00	23.03	500.0	100.0	V	92.0	-7.7
1687.750000	---	32.16	54.00	21.84	500.0	100.0	V	166.0	-6.0
1887.250000	43.68	---	68.20	24.52	500.0	100.0	H	252.0	-5.1
2430.625000	48.86	---	68.20	19.34	500.0	100.0	H	219.0	-2.5
2792.875000	---	36.75	54.00	17.25	500.0	200.0	H	152.0	-1.3
3548.875000	51.21	---	68.20	16.99	500.0	200.0	H	148.0	1.7
3938.250000	---	42.02	54.00	11.98	500.0	200.0	H	46.0	2.7
4409.875000	53.79	---	68.20	14.41	500.0	100.0	V	355.0	3.6
6822.250000	54.47	---	68.20	13.73	500.0	100.0	H	315.0	6.8
7299.125000	---	41.72	54.00	12.28	500.0	200.0	H	163.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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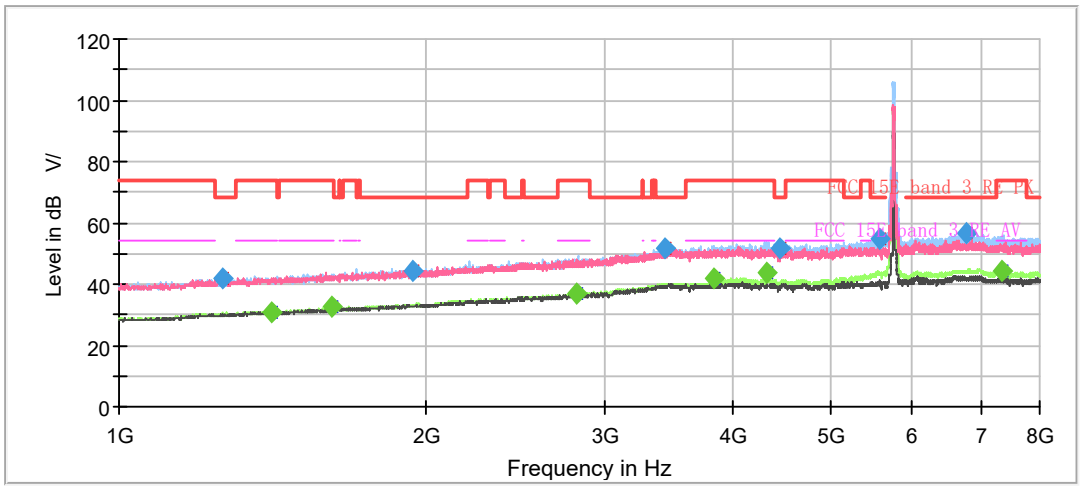
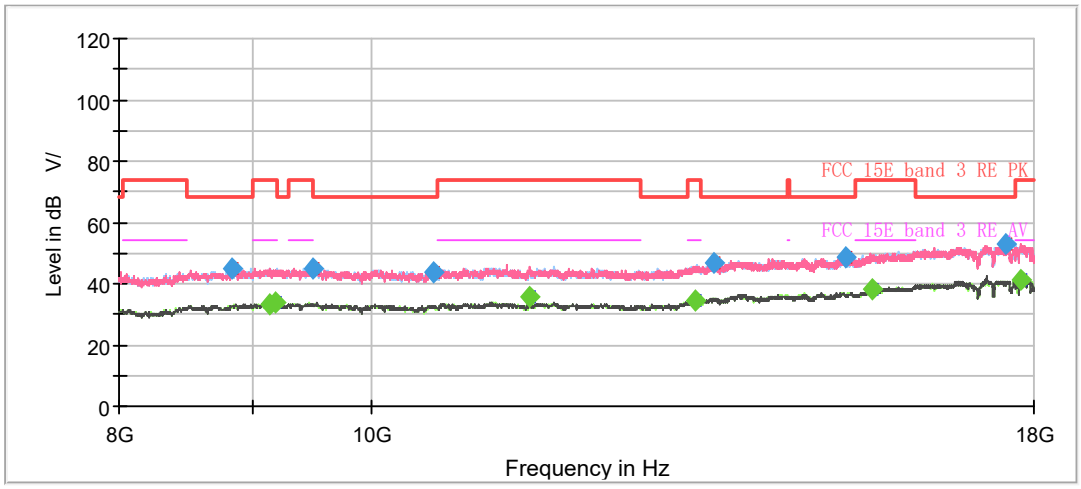
802.11ac (VHT40) CH151



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1263.375000	41.83	---	68.20	26.37	500.0	200.0	H	87.0	-8.5
1411.250000	---	30.87	54.00	23.13	500.0	200.0	H	29.0	-7.5
1619.500000	---	32.46	54.00	21.54	500.0	200.0	H	128.0	-6.3
1938.000000	44.45	---	68.20	23.75	500.0	200.0	H	64.0	-4.8
2814.750000	---	37.02	54.00	16.98	500.0	200.0	H	20.0	-1.2
3429.000000	51.93	---	68.20	16.27	500.0	200.0	H	0.0	1.5
3836.750000	---	41.68	54.00	12.32	500.0	200.0	H	335.0	2.4
4311.000000	---	43.75	54.00	10.25	500.0	200.0	H	20.0	3.6
4456.250000	51.70	---	68.20	16.50	500.0	200.0	H	64.0	3.6
5584.125000	54.90	---	68.20	13.30	500.0	200.0	H	0.0	5.6
6773.250000	56.63	---	68.20	11.57	500.0	200.0	H	167.0	6.6
7335.000000	---	44.41	54.00	9.59	500.0	200.0	H	11.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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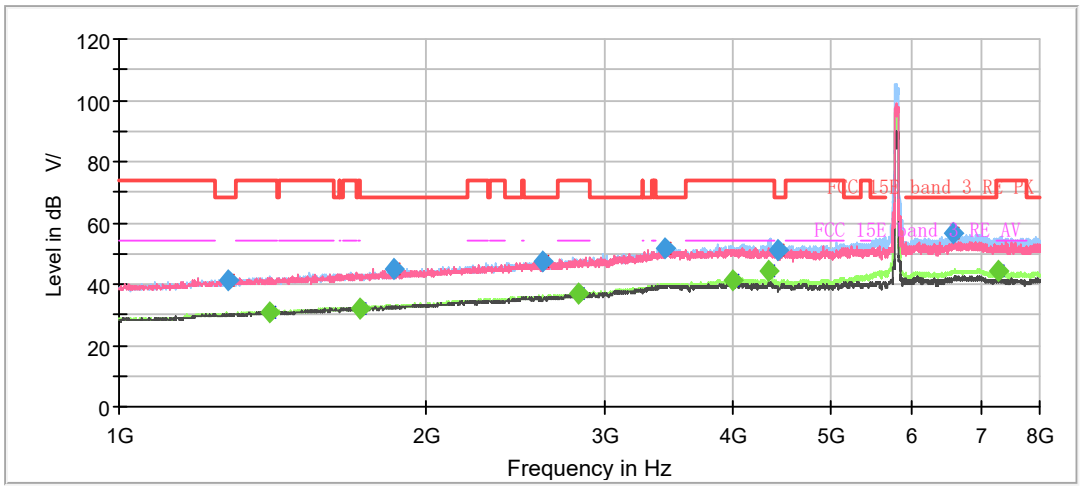
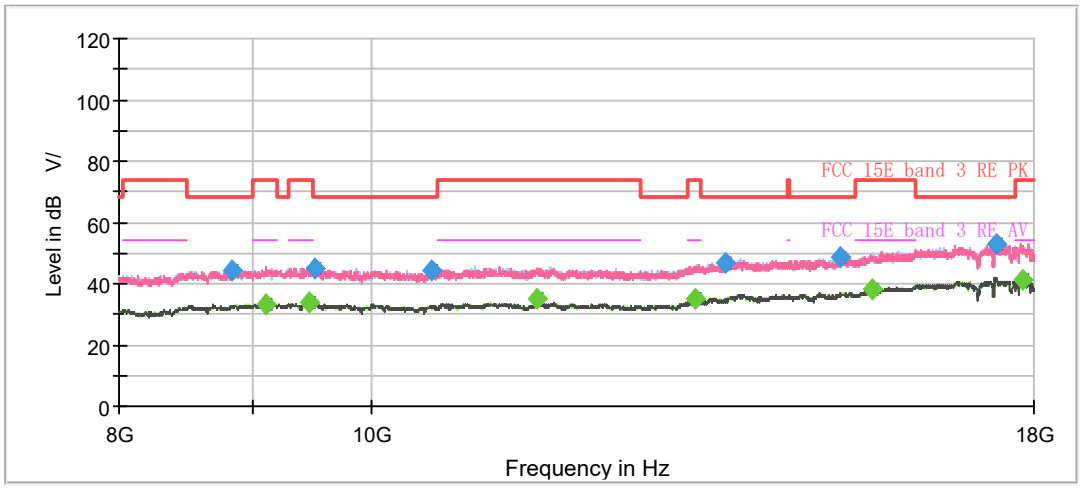
802.11ac (VHT40) CH159



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1280.875000	41.14	---	68.20	27.06	500.0	100.0	V	337.0	-8.3
1405.125000	---	31.01	54.00	22.99	500.0	200.0	H	157.0	-7.6
1721.875000	---	32.23	54.00	21.77	500.0	200.0	V	357.0	-5.9
1857.500000	45.13	---	68.20	23.07	500.0	100.0	V	60.0	-5.2
2607.375000	47.52	---	68.20	20.68	500.0	100.0	V	28.0	-2.0
2818.250000	---	36.89	54.00	17.11	500.0	200.0	H	81.0	-1.2
3430.750000	51.64	---	68.20	16.56	500.0	200.0	H	290.0	1.5
3997.750000	---	41.52	54.00	12.48	500.0	200.0	H	0.0	3.2
4330.250000	---	44.32	54.00	9.68	500.0	200.0	H	23.0	3.5
4432.625000	51.32	---	68.20	16.88	500.0	200.0	H	37.0	3.5
6586.000000	56.43	---	68.20	11.77	500.0	200.0	H	108.0	6.6
7291.250000	---	44.04	54.00	9.96	500.0	200.0	H	13.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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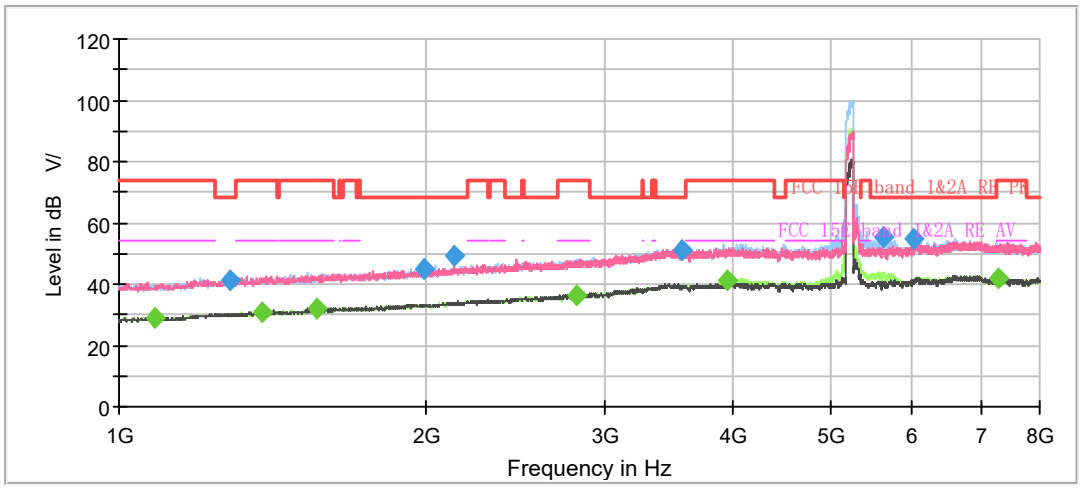
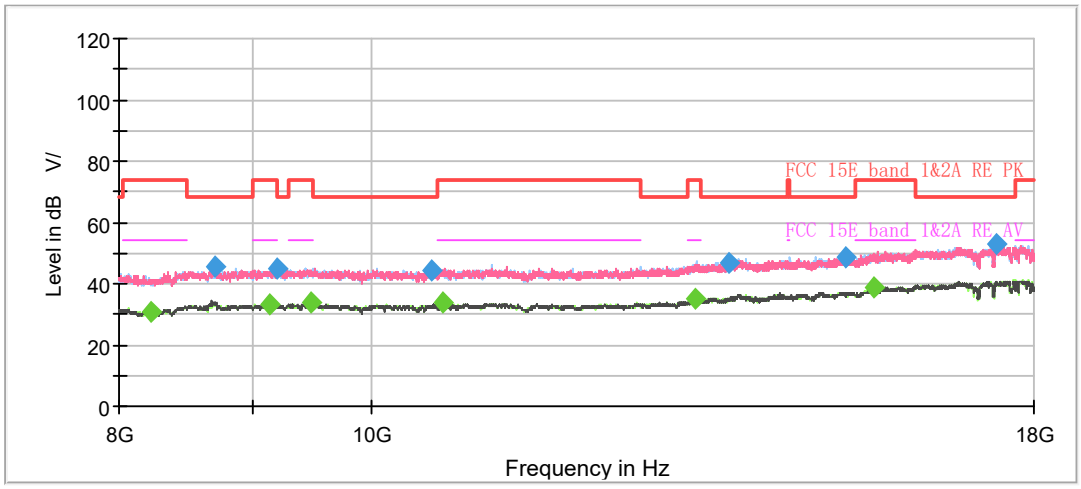
802.11ac (VHT80) CH42



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1085.750000	---	29.08	54.00	24.92	500.0	100.0	H	107.0	-10.2
1286.125000	41.50	---	68.20	26.70	500.0	200.0	H	299.0	-8.3
1379.750000	---	30.77	54.00	23.23	500.0	200.0	V	147.0	-7.7
1564.375000	---	32.12	54.00	21.88	500.0	200.0	H	58.0	-6.6
1995.750000	44.99	---	68.20	23.21	500.0	100.0	V	2.0	-4.6
2130.500000	49.38	---	68.20	18.82	500.0	200.0	V	213.0	-3.6
2810.375000	---	36.50	54.00	17.50	500.0	100.0	H	266.0	-1.2
3568.125000	51.32	---	68.20	16.88	500.0	100.0	H	347.0	1.7
3942.625000	---	41.29	54.00	12.71	500.0	200.0	H	30.0	2.8
5620.000000	55.25	---	68.20	12.95	500.0	200.0	H	359.0	5.5
6004.125000	54.79	---	68.20	13.41	500.0	200.0	V	13.0	5.5
7289.500000	---	41.68	54.00	12.32	500.0	100.0	V	174.0	7.0

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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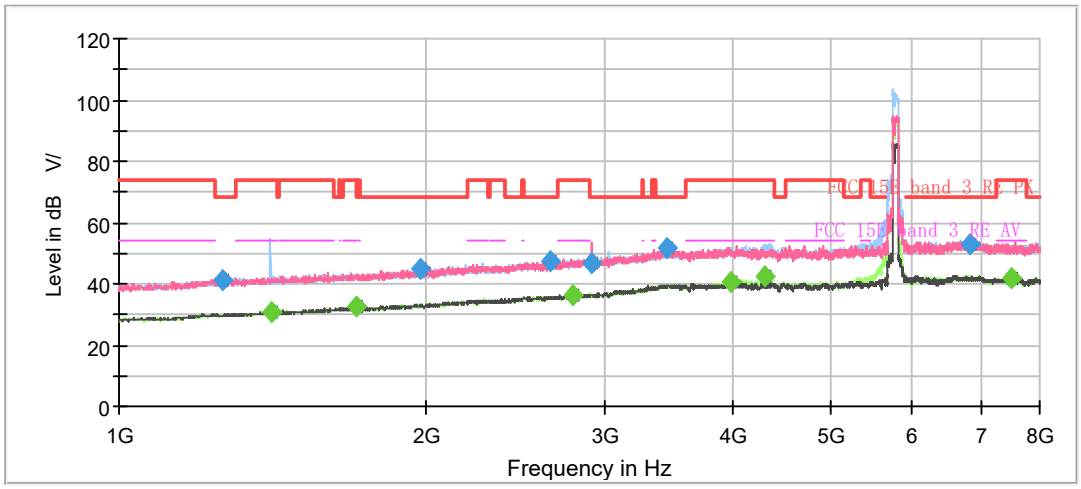
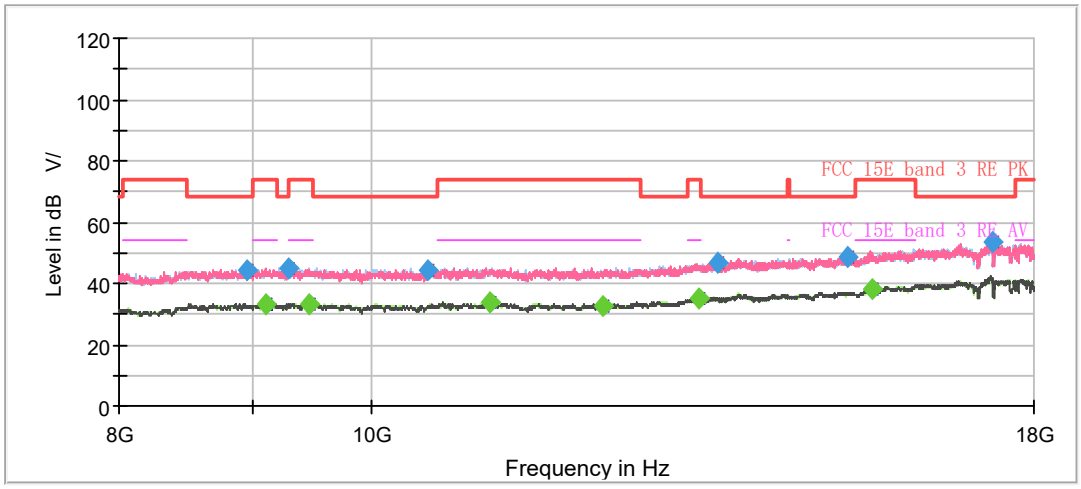
802.11ac (VHT80) CH155



Radiates Emission from 1GHz to 8GHz



Note: The signal beyond the limit is carrier.

Radiates Emission from 8GHz to 18GHz

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Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1262.500000	41.15	---	68.20	27.05	500.0	100.0	H	293.0	-8.5
1413.000000	---	30.96	54.00	23.04	500.0	100.0	V	28.0	-7.5
1707.000000	---	32.48	54.00	21.52	500.0	200.0	H	164.0	-5.9
1973.875000	44.73	---	68.20	23.47	500.0	100.0	H	225.0	-4.7
2650.250000	47.62	---	68.20	20.58	500.0	200.0	V	117.0	-2.0
2791.125000	---	36.41	54.00	17.59	500.0	100.0	H	166.0	-1.3
2910.125000	47.03	---	68.20	21.17	500.0	200.0	H	227.0	-1.0
3453.500000	51.47	---	68.20	16.73	500.0	200.0	V	329.0	1.6
3989.000000	---	40.86	54.00	13.14	500.0	200.0	H	38.0	3.2
4302.250000	---	42.52	54.00	11.49	500.0	200.0	H	51.0	3.6
6828.375000	52.82	---	68.20	15.38	500.0	200.0	H	173.0	6.8
7497.750000	---	41.90	54.00	12.10	500.0	100.0	H	166.0	6.9

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit –MAX Peak/ Average

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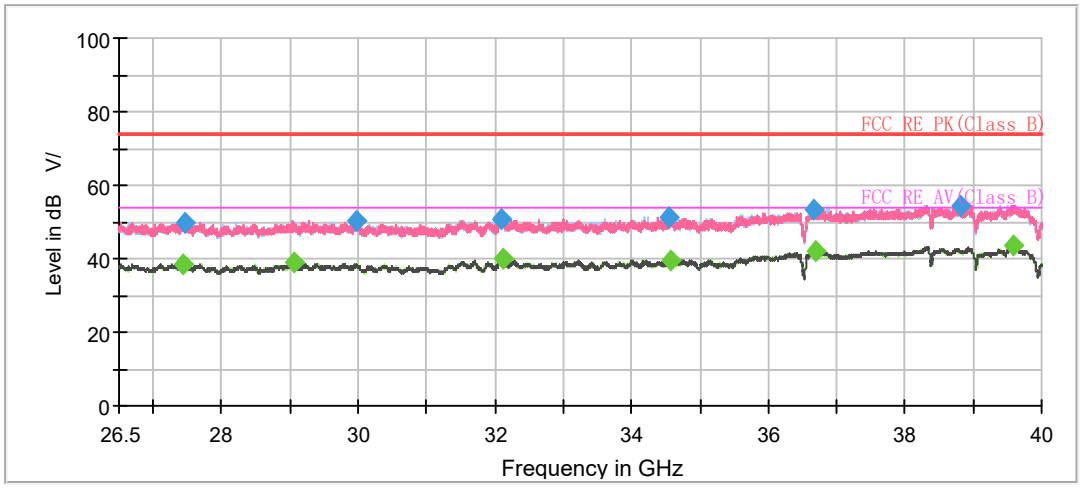
During the test, the Radiates Emission from 18GHz to 40GHz was performed in all modes with all channels, 802.11ac (VHT20) CH157 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
27431.500000	---	38.61	54.00	15.39	500.0	200.0	V	53.0	-0.4
27465.250000	49.92	---	74.00	24.08	500.0	200.0	H	86.0	-0.3
29051.500000	---	39.05	54.00	14.95	500.0	100.0	V	64.0	0.1
29984.687500	50.39	---	74.00	23.61	500.0	100.0	V	166.0	-0.8
32099.125000	50.76	---	74.00	23.24	500.0	100.0	V	83.0	-0.9
32119.375000	---	39.81	54.00	14.19	500.0	200.0	H	1.0	-0.9
34557.812500	51.38	---	74.00	22.62	500.0	200.0	H	284.0	0.9
34576.375000	---	39.72	54.00	14.28	500.0	100.0	V	313.0	0.9
36675.625000	53.49	---	74.00	20.51	500.0	200.0	H	344.0	4.2
36685.750000	---	42.05	54.00	11.95	500.0	100.0	V	120.0	4.2
38810.312500	54.52	---	74.00	19.48	500.0	100.0	V	199.0	4.1
39584.875000	---	43.45	54.00	10.55	500.0	100.0	H	333.0	4.5

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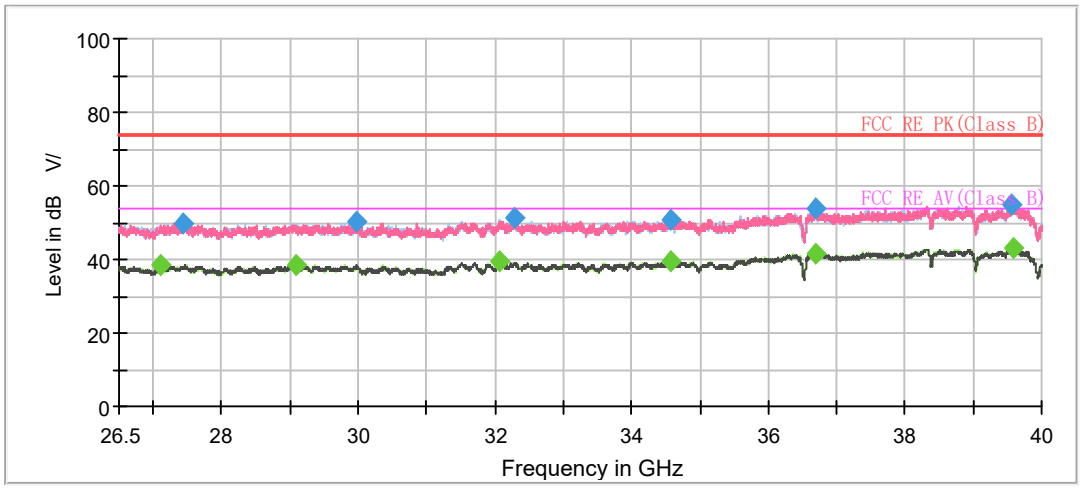

Radiates Emission from 26.5GHz to 40GHz

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
27095.687500	---	38.53	54.00	15.47	500.0	200.0	H	0.0	-0.8
27441.625000	49.88	---	74.00	24.12	500.0	100.0	V	101.0	-0.3
29076.812500	---	38.50	54.00	15.50	500.0	100.0	V	50.0	0.1
29972.875000	50.06	---	74.00	23.94	500.0	100.0	H	297.0	-0.8
32078.875000	---	39.27	54.00	14.73	500.0	100.0	V	176.0	-0.9
32286.437500	51.03	---	74.00	22.97	500.0	100.0	V	17.0	-1.1
34574.687500	---	39.35	54.00	14.65	500.0	200.0	H	249.0	0.9
34583.125000	50.98	---	74.00	23.02	500.0	200.0	H	0.0	0.9
36684.062500	---	41.75	54.00	12.25	500.0	100.0	V	260.0	4.2
36695.875000	53.99	---	74.00	20.01	500.0	200.0	H	74.0	4.2
39571.375000	54.94	---	74.00	19.06	500.0	100.0	V	50.0	4.6
39573.062500	---	43.18	54.00	10.82	500.0	100.0	V	0.0	4.6

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit-MAX Peak/ Average

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5.6. Conducted Emission

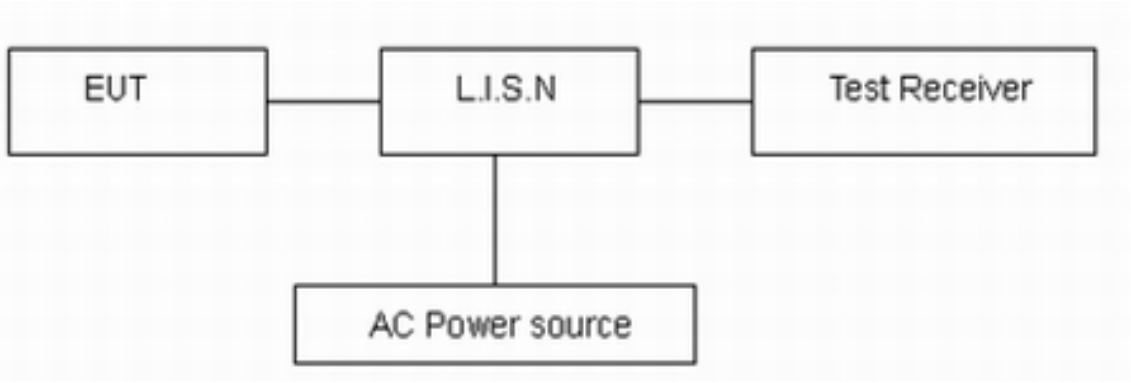
Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Methods of Measurement

The EUT IS placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.10.Connect the AC power line of the EUT to the LISN Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9kHz, VBW is set to 30kHz The measurement result should include both L line and N line.
The test is in transmitting mode.

Test Setup



Note: AC Power source is used to change the voltage 110V/60Hz.

Limits

Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U= 2.69 dB.

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Test Results:

The equipment is not connected to the public network, so test items do not apply.

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6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Power Sensor	R&S	NRP18S	101954	2024-05-07	2025-05-06
Signal Analyzer	KEYSIGHT	N9020A	MY51330870	2024-05-07	2025-05-06
DC Power Supply	UNI-T	UTP1306S +	2205D0517426	2024-12-02	2025-12-01
Climate Chamber	ESPEC	SU-242	93000506	2024-12-02	2025-12-01
Unwanted Emissions					
EMI Test Receiver	R&S	ESCI3	100948	2024-05-07	2025-05-06
Signal Analyzer	R&S	FSV40	101186	2024-05-07	2025-05-06
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	1023	2023-07-14	2026-07-13
Horn Antenna	SCHWARZBECK	BBHA 9120D	430	2024-07-18	2027-07-17
Horn Antenna	ETS-Lindgren	3160-09	00102643	2024-09-24	2027-09-23
Software	R&S	EMC32	9.26.01	/	/

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ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

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ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.

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

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