



FCC Test Report

Test report
On Behalf of
AOZORA WIRELESS INC.
For
Rugged Tablet
Model No.: K8 Active, K8
FCC ID: 2BNQ8-K8ACTIVE

Prepared For : **AOZORA WIRELESS INC.**
8605 Santa Monica Blvd 30327, West Hollywood California 90069 United States

Prepared By : **Shenzhen HUAKE Testing Technology Co., Ltd.**
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Date of Test: **Feb. 11, 2025 ~ Mar. 28, 2025**

Date of Report: **Mar. 28, 2025**

Report Number: **HK2502110488-6E**



TEST RESULT CERTIFICATION

Applicant's name : AOZORA WIRELESS INC.
Address : 8605 Santa Monica Blvd 30327, West Hollywood California 90069
United States
Manufacturer's Name : AOZORA WIRELESS INC.
Address : 8605 Santa Monica Blvd 30327, West Hollywood California 90069
United States
Product description
Trade Mark : AOZORA
Product name : Rugged Tablet
Model and/or type reference ... : K8 Active, K8
Standards : FCC 47 CFR Part 15 Subpart E

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Date of Test :
Date (s) of performance of tests : Feb. 11, 2025 ~ Mar. 28, 2025
Date of Issue : Mar. 28, 2025
Test Result : Pass

Testing Engineer :

(Len Liao)

Technical Manager :

(Sliver Wan)

Authorized Signatory :

(Jason Zhou)



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**** Modified History ****

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Mar. 28, 2025	Jason Zhou



1. EUT Description

Product Name:	Rugged Tablet			
Model Name:	K8 Active			
Series Models:	K8			
Model Difference:	All model's the function, software and electric circuit are the same, only with model named different. Test sample mode: K8 Active.			
Trade Mark:	AOZORA			
Power Rating	DC 5V From Type-C or DC 3.85V From Battery			
Frequency Range :	Band	Mode	Frequency Range(MHz)	Number of Channels
	Band II UNII-2A	IEEE802.11a mode mode	5250 MHz ~5350 MHz	4
		IEEE802.11 n/ac HT20 mode		4
		IEEE802.11 n/ac HT40 mode		2
		IEEE802.11 ac HT80 mode		1
	Band III UNII-2C	IEEE802.11a mode mode	5470 MHz ~5725 MHz	4
		IEEE802.11 n/ac HT20 mode		4
		IEEE802.11 n/ac HT40 mode		3
		IEEE802.11 ac HT80 mode		2
Modulation Technique:	IEEE802.11a mode: OFDM (6,9,12,18,24,36,48 and 54 Mbps) IEEE802.11 n/ac HT20 mode: OFDM (MCS0~MCS7) IEEE802.11 n/ac HT40 mode: OFDM (MCS0~MCS7) IEEE802.11 ac HT80 mode: OFDM (MCS0~MCS7)			
Antenna Specification:	5.3G: FPC Antenna Antenna:0.95dBi		5.6G: FPC Antenna Antenna:0.65dBi	
Operating Mode:	Client Without Radar Detection			
Note: 1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2. Antenna gain Refer to the antenna specifications. 3. The cable loss data is obtained from the supplier. 4. The test results in the report only apply to the tested sample.				

Remark:

1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.
2. This submittal(s) (test report) is intended for **ECCID: 2BNQ8-K8ACTIVE** filing to comply with FCC Part 15, Subpart E Rules.



2. Test Methodology

The tests documented in this report were performed in accordance with ANSI C63.10:2013 and FCC CFR 47 15.207, 15.209 and 15.407.

2.1 EUT Configuration

The EUT configuration for testing is installed for RF field strength measurement to meet the Commissions requirement, and is operated in a manner intended to generate the maximum emission in a continuous normal application.

2.2 EUT Exercise

The EUT is operated in the engineering mode to fix the Tx frequency for the purposes of measurement.

According to its specifications, the EUT must comply with the requirements of Section 15.407 under the FCC Rules Part 15 Subpart E.

2.3 General Test Procedures

Conducted Emissions

The EUT is placed on the turn table, which is positioned at 0.8 m above the ground plane. According to the requirements in Section 13.3 of ANSI C63.10:2013, the conducted emission from the EUT is measured in the frequency range between 0.15MHz and 30MHz, using the CISPR Quasi-Peak detector mode.

Radiated Emissions

Under 1GHz

The EUT is placed on a turn table, which is 0.8m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.10:2013.

Above 1GHz

The EUT is placed on a turn table, which is 1.5m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.10:2013.



2.4 FCC Part 15.205 Restricted Bands of Operations

Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.50 - 5.15
0.495 - 0.505 ⁽¹⁾	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960.0 - 1240	7.25 - 7.75
4.125 - 4.128	25.50 - 25.67	1300 - 1427	8.025 - 8.500
4.17725 - 4.17775	37.50 - 38.25	1435.0 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73.00 - 74.60	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.80 - 75.20	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108.00 - 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	149.90 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500.0	17.7 - 21.4
8.37625 - 8.38675	156.70 - 156.90	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.1700	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.20	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358.0	36.43 - 36.5 ⁽²⁾
12.57675 - 12.57725	322.0 - 335.4	3600 - 4400	
13.36 - 13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510MHz.

² Above 38.6

Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.



2.5 Description of Test Modes

Description	Modulation Technology	Modulation Type
26dB Bandwidth and 99% bandwidth	OFDM	BPSK
Maximum conducted output power	OFDM	BPSK
Band edges measurement	OFDM	BPSK
Peak Power Spectral Density	OFDM	BPSK
Radiated undesirable emission	OFDM	BPSK
Power line conducted emission	OFDM	BPSK

IEEE802.11a mode:

Channel (5260MHz), Channel (5280MHz), Channel (5320MHz), Channel (5500MHz), Channel (5580MHz)and Channel (5700MHz) with 6Mbps data rate were chosen for full testing.

IEEE802.11n/ac mode:

Channel (5260MHz), Channel (5280MHz), Channel (5320MHz), Channel (5500MHz), Channel (5580MHz)and Channel (5700MHz) with 6Mbps data rate were chosen for full testing.

IEEE802.11n/ac HT40mode:

Channel (5270MHz), Channel (5310MHz), Channel (5510MHz), Channel (5550MHz)and Channel (5670MHz) with 6Mbps data rate were chosen for full testing.

IEEE802.11ac HT80mode:

Channel (5290MHz), Channel (5530MHz), Channel (5610MHz)with MCS0 data rate were chosen for full testing.

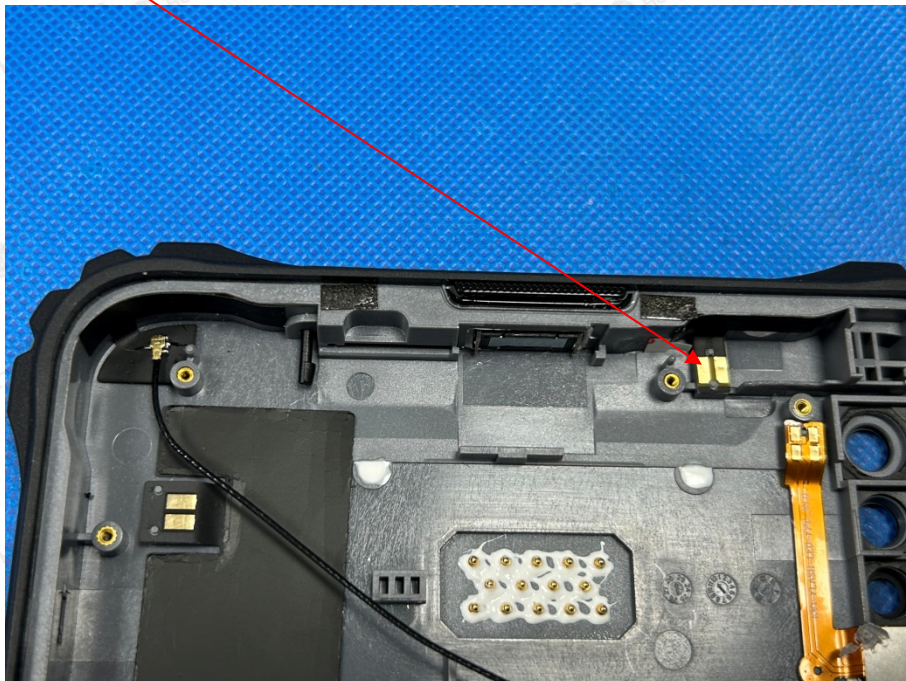


2.6 Antenna Description

an intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached or an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section"

- * the antenna of this EUT is a unique(**FPC Antenna** for WiFi).
- * the EUT complies with the requirement of 15.203.

WIFI ANTENNA





3. Instrument Calibration

The measuring equipment, which was utilized in performing the tests documented here in, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

3.1 Measurement Equipment Used

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	L.I.S.N.	R&S	ENV216	HKE-002	2025/02/19	1 Year
2	L.I.S.N.	R&S	ENV216	HKE-059	2025/02/19	1 Year
3	EMI Test Receiver	R&S	ESR	HKE-005	2025/02/19	1 Year
4	Spectrum analyzer	Agilent	N9020A	HKE-025	2025/02/19	1 Year
5	Spectrum analyzer	R&S	FSV3044	HKE-126	2025/02/19	1 Year
6	Preamplifier	EMCI	EMC051845S	HKE-006	2025/02/19	1 Year
7	Preamplifier	Schwarzbeck	BBV 9743	HKE-016	2025/02/19	1 Year
8	Preamplifier	A.H. Systems	SAS-574	HKE-182	2025/02/19	1 Year
9	6d Attenuator	Pasternack	6db	HKE-184	2025/02/19	1 Year
10	EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	2025/02/19	1 Year
11	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	2024/02/21	2 Year
12	Loop Antenna	COM-POWER	AL-130R	HKE-014	2024/02/21	2 Year
13	Horn Antenna	Schwarzbeck	9120D	HKE-013	2024/02/21	2 Year
14	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
15	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
16	RF Automatic control unit	Tonscend	JS0806-2	HKE-060	2025/02/19	1 Year
17	High pass filter unit	Tonscend	JS0806-F	HKE-055	2025/02/19	1 Year
18	Wireless Communication Test Set	R&S	CMU200	HKE-026	2025/02/19	1 Year
19	Wireless Communication Test Set	R&S	CMW500	HKE-027	2025/02/19	1 Year
20	High-low temperature chamber	Guangke	HT-80L	HKE-118	2024/06/10	1 Year
21	Temperature and humidity meter	Boyang	HTC-1	HKE-075	2024/06/10	1 Year
22	RF Test Software	Tonscend	JS1120-3 Version 3.3.23	HKE-083	/	/
23	10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	2025/02/19	1 Year
24	RSE Test Software	Tonscend	JS36- RSE 5.0.0	HKE-184	/	/

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3.2 Measurement Uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR 100 028-1 [2] and shall correspond to an expansion factor(coverage factor) $k = 1,96$ or $k = 2$ (which provide confidence levels of respectively 95% and 95,45% in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Table 6 is based on such expansion factors.

Table6: Maximum measurement uncertainty

Parameter	UNCERTAINTY
Radio frequency	$\pm 0.8 \times 10^{-7}$
RF power, conducted	$\pm 3.35\text{dB}$
Maximum frequency deviation: -within 300Hz and 6 kHz of audio frequency -within 6 kHz and 25 kHz of audio frequency	1.3% 0.65 dB
Adjacent channel power	0.2054
Conducted spurious emission of transmitter, valid up to 6 GHz	$\pm 2.20\text{dB}$
Conducted emission of receivers	$\pm 0.37\text{dB}$
Radiated emission of transmitter, valid up to 6 GHz	$\pm 3.94\text{ dB}$
Radiated emission of receiver, valid up to 6 GHz	$\pm 3.94\text{ dB}$
RF level uncertainty for a given BER	$\pm 0.3\text{ dB}$
Temperature	$\pm 0.1^{\circ}\text{C}$
Humidity	$\pm 1.0\%$



4. Facilities and Accreditations

4.1 Facilities

All measurement facilities used to collect the measurement data are located at

☒ 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The sites are constructed in conformance with the requirements of ANSI C63.10:2013 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16 1, "Radio Interference Measuring Apparatus and Measurement Methods."

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01.

FCC Designation Number is CN1229.

Canada IC CAB identifier is CN0045.

CNAS Registration Number is L9589.

4.2 Equipment

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with preselectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

4.3 Table of Accreditations and Listings

The test facilities used to perform radiated and conducted emissions tests are accredited by American Association for Laboratory Accreditation Program for the specific scope accreditation under Lab Code: 200581-0 to perform Electromagnetic Interference tests according to FCC Part 15 and CISPR 22 requirements. In addition, the test facilities are listed with USA, Certification and Engineering Bureau, 424105 for 10m chamber, 238958 for 3m chamber.



5. Setup of Equipment Under Test

5.1 Setup Configuration of EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

5.2 Support Equipment

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Trade Mark	Model/Type No.	Specification	Remark
1	Rugged Tablet	AOZORA	K8 Active	N/A	EUT
2	Adapter1	N/A	N/A	Input: AC100-240V, 50/60Hz, 0.75A Output: 5V 2A	Peripheral
3	Adapter2	N/A	MDY-10-EH	Input: 100-240VAC, 50/60Hz, 0.7A Output: 5V 3A/9V 3A/12V 2.25A/20V 1.35A	Peripheral

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 26db Bandwidth and 99% Occupied Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.



6. FCC Part 15 Requirements

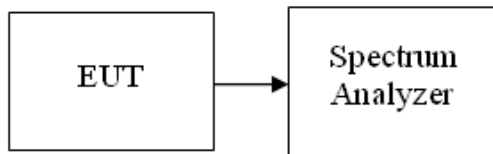
6.1 26 DB Emission Bandwidth

LIMIT

According to §15.403(i), for purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Compliance with the emissions limits is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

Test Configuration

TESTPROCEDURE



1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low-loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzers RBW = approximately 1% of the emission bandwidth, VBW > RBW, Detector = Peak, Span > 26dB bandwidth, and Sweep = auto, Trace mode = max hold.
4. Measure the maximum width of the emission that is 26dB down from the maximum of the emission.
Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
5. Repeat until all the rest channels were investigated.

TESTRESULTS

No non-compliance noted

Test Data

**Testmode:IEEE802.11a mode****5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5260	22.200
Mid	5280	22.240
High	5320	21.320

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5500	22.200
Mid	5580	22.800
High	5700	22.920

Testmode:IEEE802.11n HT20 mode**5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5260	22.760
Mid	5280	22.760
High	5320	22.920

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5500	22.400
Mid	5580	22.520
High	5700	22.840

Testmode:IEEE802.11n HT40 mode**5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5270	41.360
High	5310	41.440

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5510	41.920
Mid	5550	41.280
High	5670	41.120

**Testmode:IEEE802.11ac HT20 mode****5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5260	22.760
Mid	5280	23.200
High	5320	22.880

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5500	23.120
Mid	5580	22.160
High	5700	23.200

Testmode:IEEE802.11ac HT40 mode**5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5270	41.040
High	5310	41.360

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5510	41.760
Mid	5550	41.360
High	5670	41.200

Testmode:IEEE802.11ac HT80 mode**5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
---	5290	84.000

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth(B) (MHz)
Low	5530	83.520
High	5610	83.520



Test Plot

IEEE802.11a mode:

5250~5350MHz

Low Channel



Mid Channel



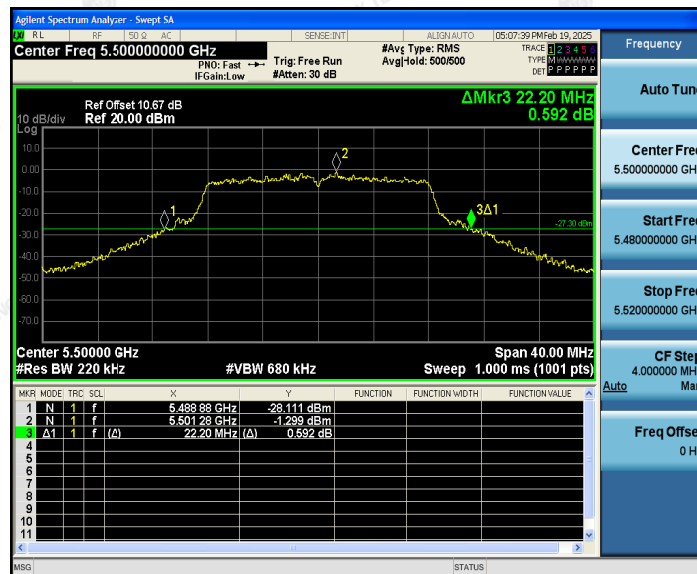


High Channel



5470~5725MHz

Low Channel





Mid Channel



High Channel





High Channel



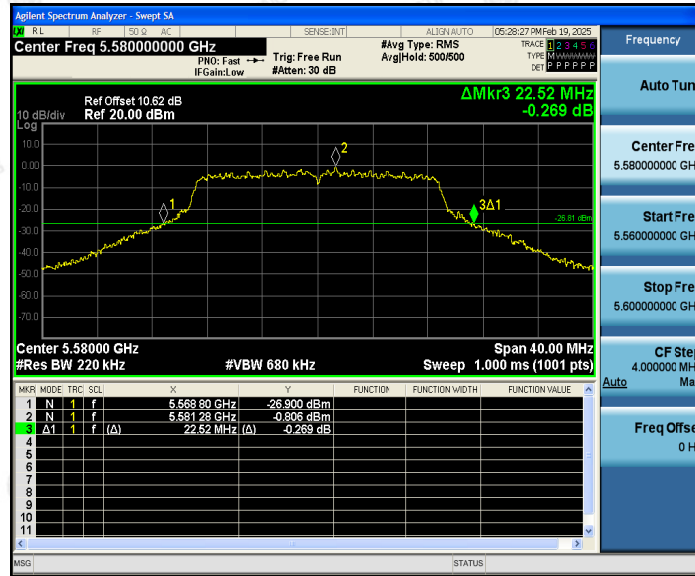
5470~5725MHz

Low Channel





Mid Channel



High Channel

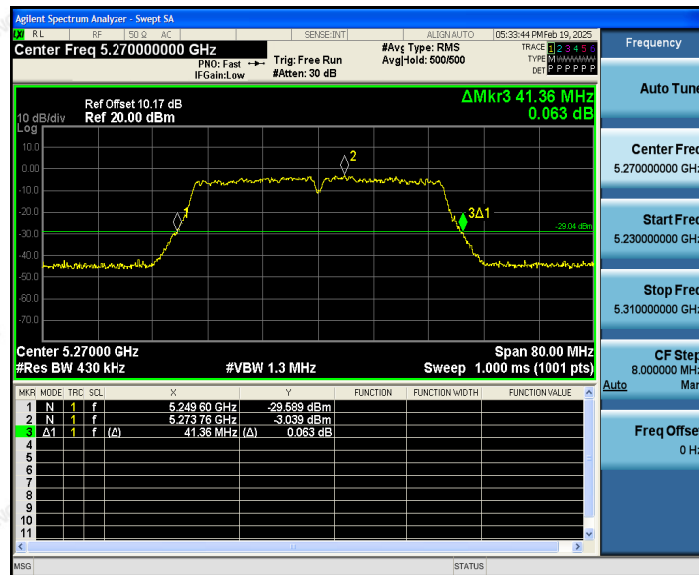




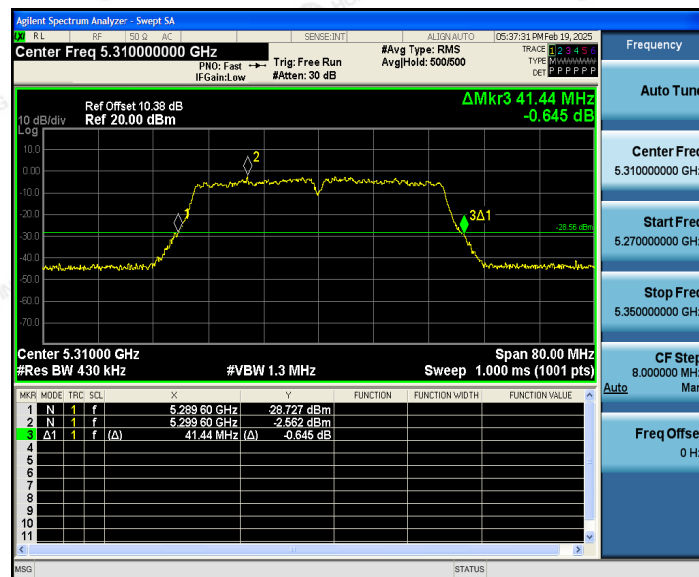
IEEE802.11n HT40 mode

5250~5350MHz

Low Channel



High Channel



5470~5725MHz

Low Channel



Mid Channel



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High Channel



IEEE802.11ac HT20 mode

5250~5350MHz

Low Channel





Mid Channel



High Channel





Low Channel



Mid Channel





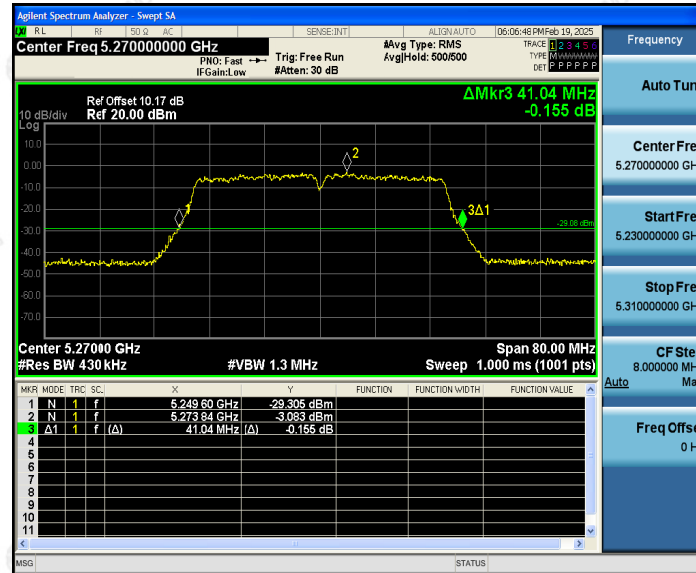
High Channel



IEEE802.11ac HT40 mode

5250~5350MHz

Low Channel





High Channel



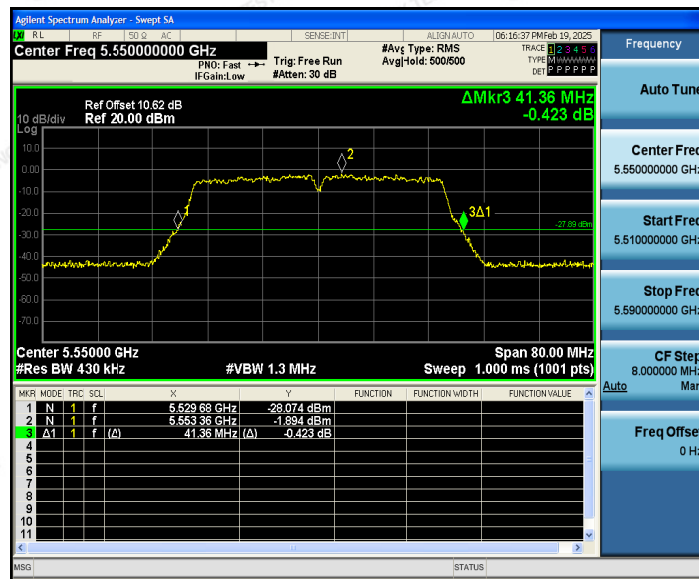
5470~5725MHz

Low Channel





Mid Channel



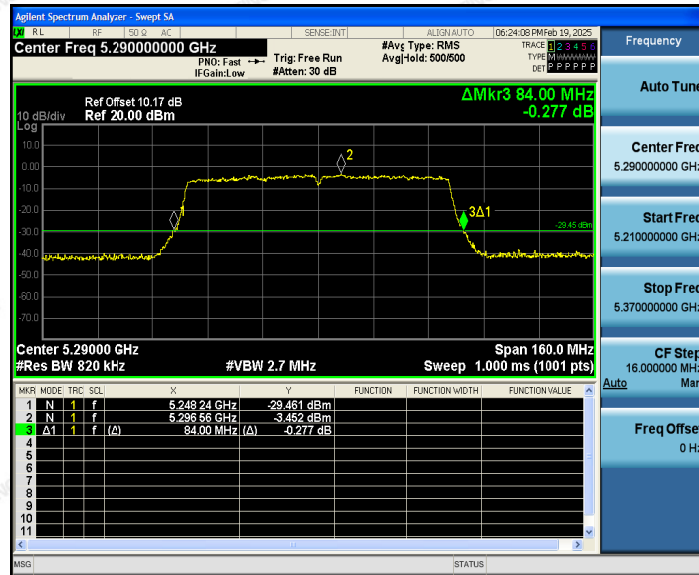
High Channel





IEEE802.11ac HT80 mode

5250-5350MHz



5470-5725MHz

Low Channel





High Channel



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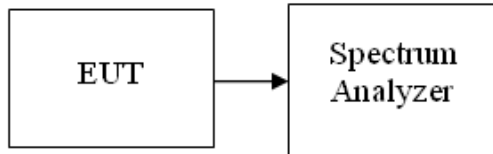


6.2 99% DB Emission Bandwidth

LIMIT

None; for reporting purposes only.

Test Configuration



Test Procedure

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1% to 5 % of the OBW
4. Set VBW $\geq 3 \cdot$ RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).

TEST RESULTS

No non-compliance noted

Test Data

**Testmode:IEEE802.11a mode****5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5260	16.878
Mid	5280	16.890
High	5320	16.879

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5500	16.891
Mid	5580	16.877
High	5700	16.916

Testmode:IEEE802.11n HT20 mode**5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5260	18.079
Mid	5280	18.045
High	5320	18.014

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5500	18.070
Mid	5580	18.037
High	5700	18.064

Testmode:IEEE802.11n HT40 mode**5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5270	36.423
High	5310	36.412

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5510	36.394
Mid	5550	36.452
High	5670	36.369

**Testmode:IEEE802.11ac HT20 mode****5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5260	18.030
Mid	5280	18.064
High	5320	18.025

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5500	18.057
Mid	5580	18.072
High	5700	18.069

Testmode:IEEE802.11ac HT40 mode**5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5270	36.395
High	5310	36.416

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5510	36.362
Mid	5550	36.389
High	5670	36.350

Testmode:IEEE802.11ac HT80 mode**5250~5350MHz**

Channel	Frequency (MHz)	Bandwidth (MHz)
--	5290	75.778

5470~5725MHz

Channel	Frequency (MHz)	Bandwidth (MHz)
Low	5530	75.766
High	5610	75.736

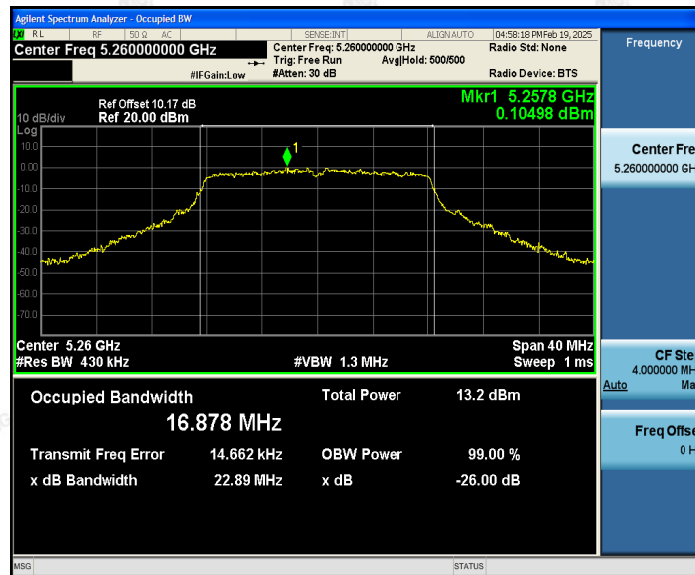


Test Plot

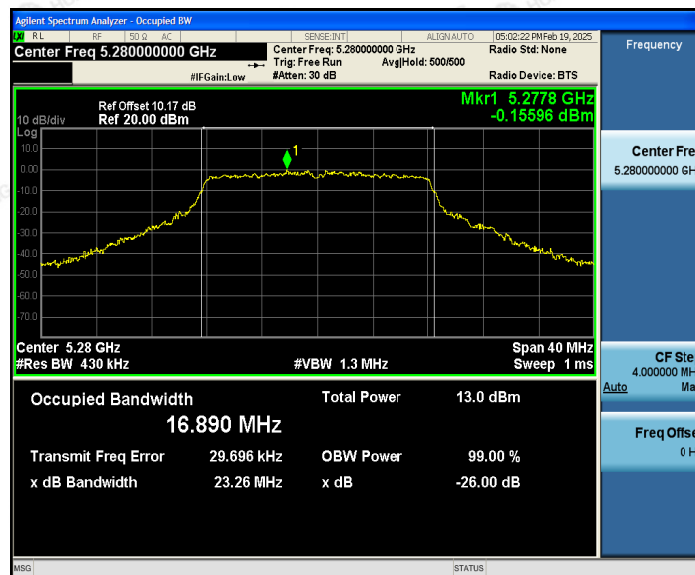
IEEE802.11a mode:

5250~5350MHz

Low Channel



Mid Channel



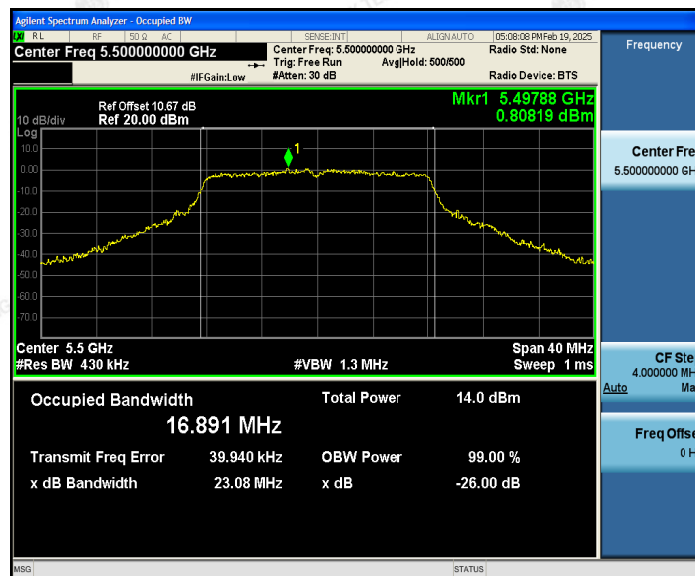


High Channel



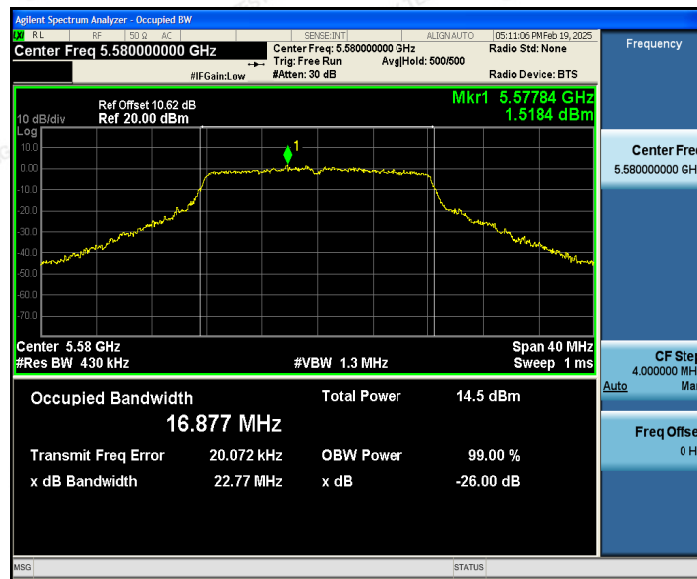
5470~5725MHz

Low Channel

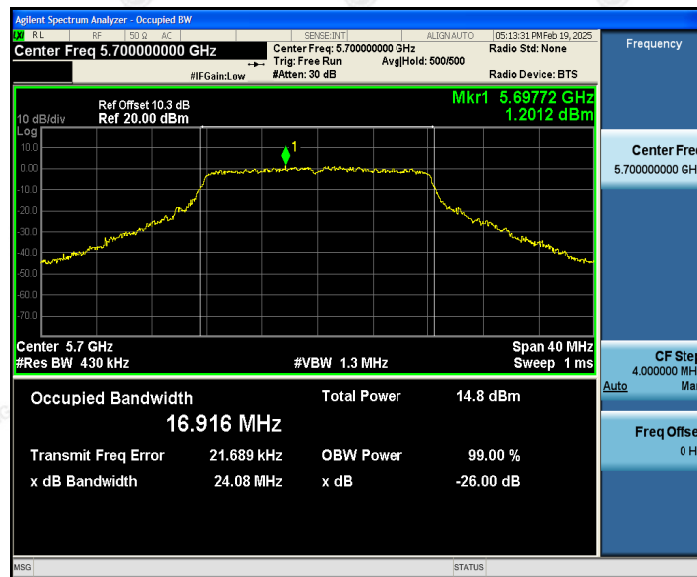




Mid Channel



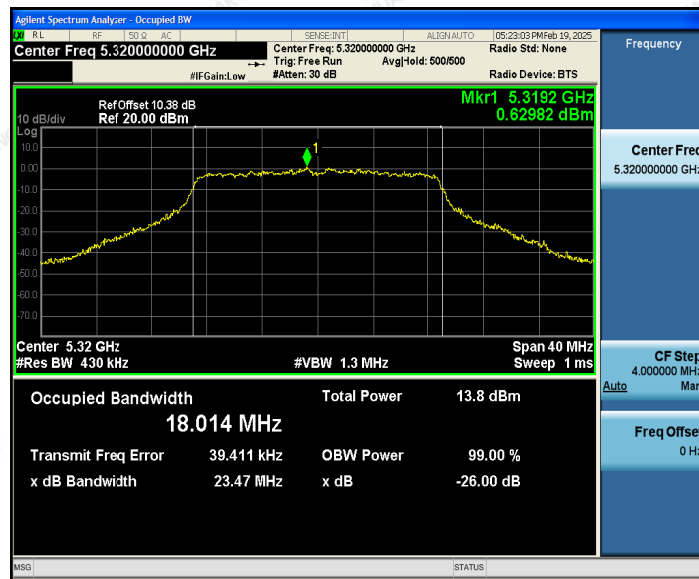
High Channel



**IEEE802.11n HT20 mode****5250~5350MHz****Low Channel****Mid Channel**

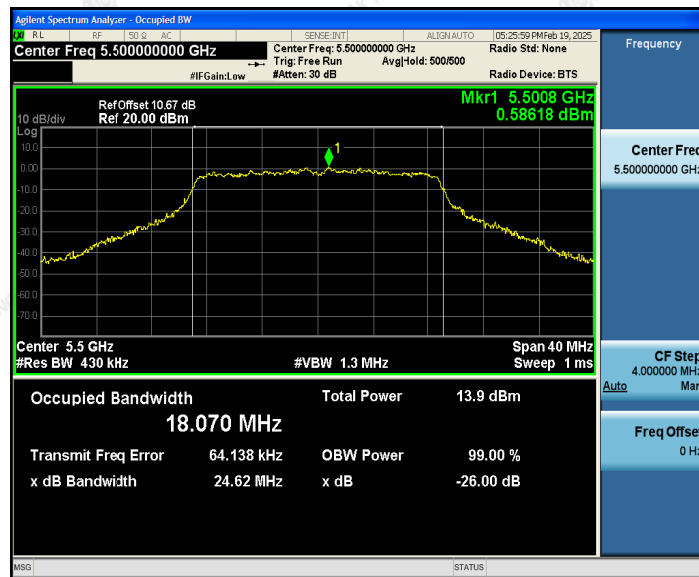


High Channel



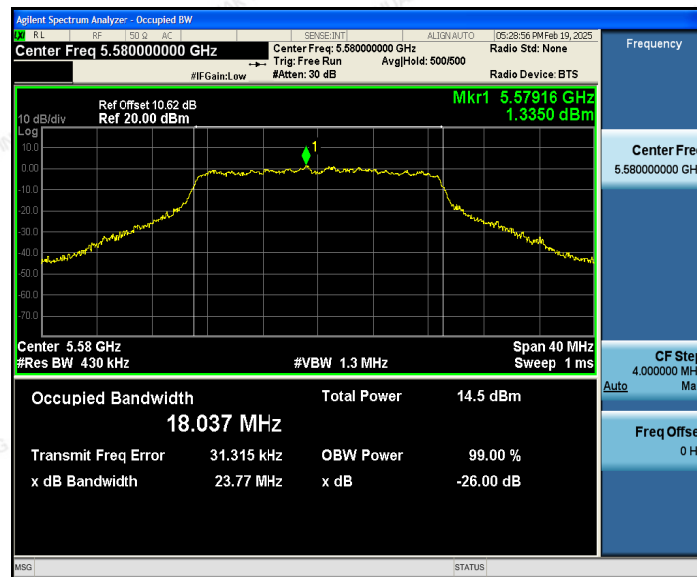
5470~5725MHz

Low Channel

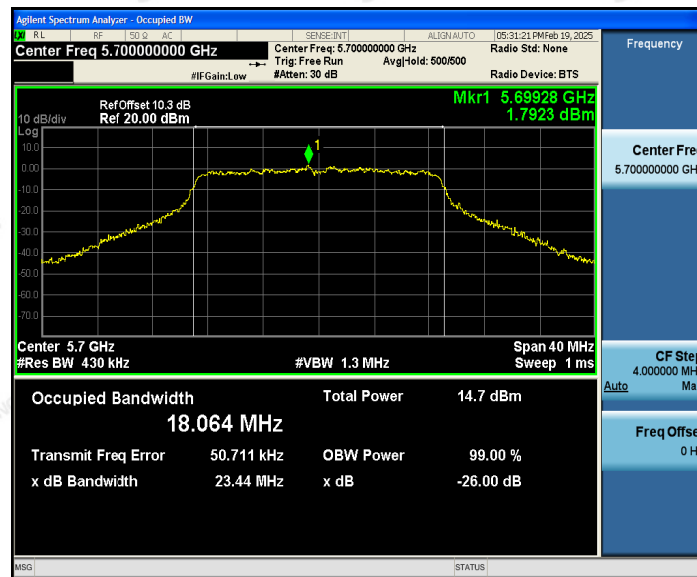


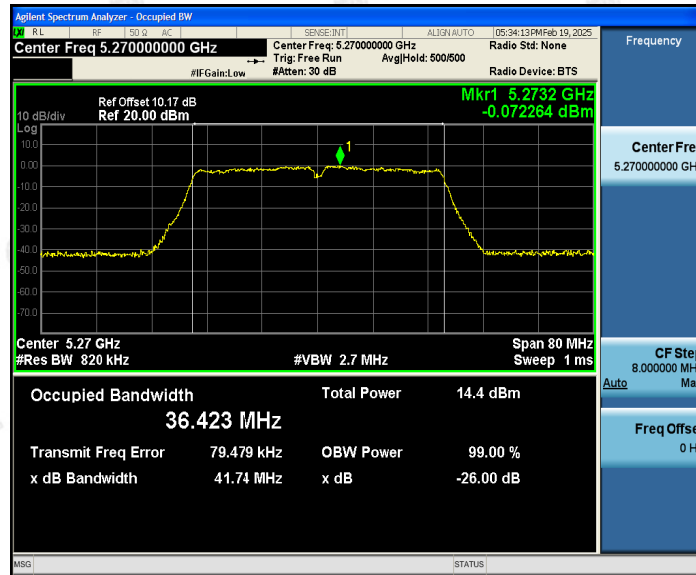
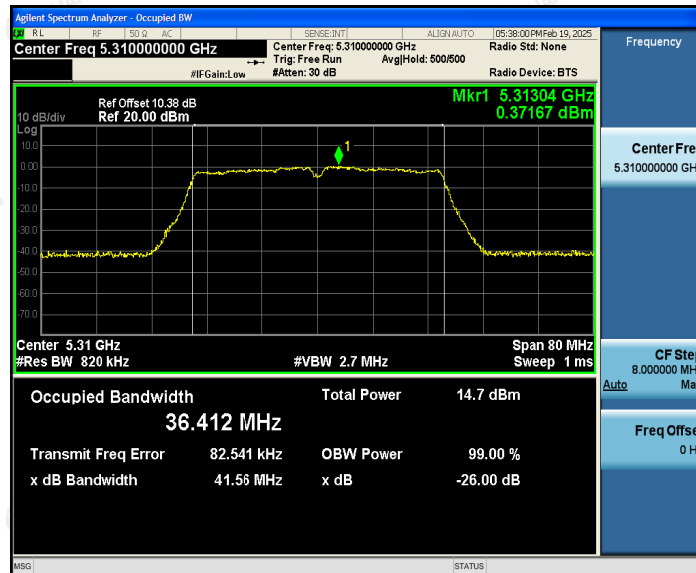


Mid Channel



High Channel

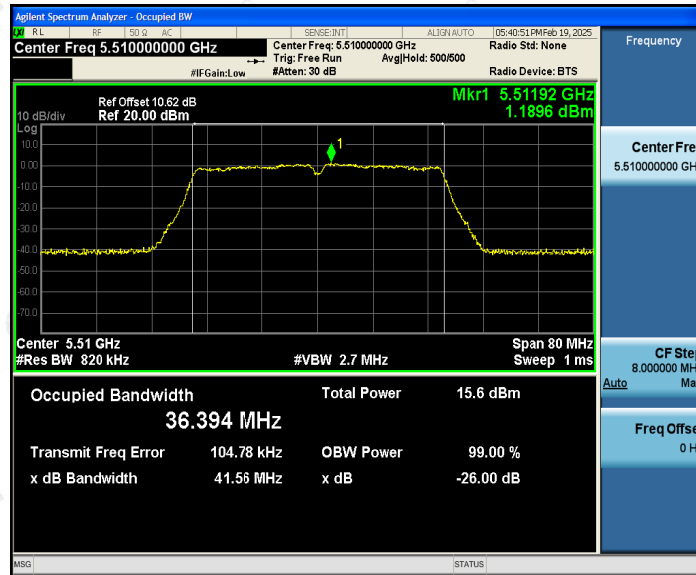


**IEEE802.11n HT40 mode****5250~5350MHz****Low Channel****High Channel**

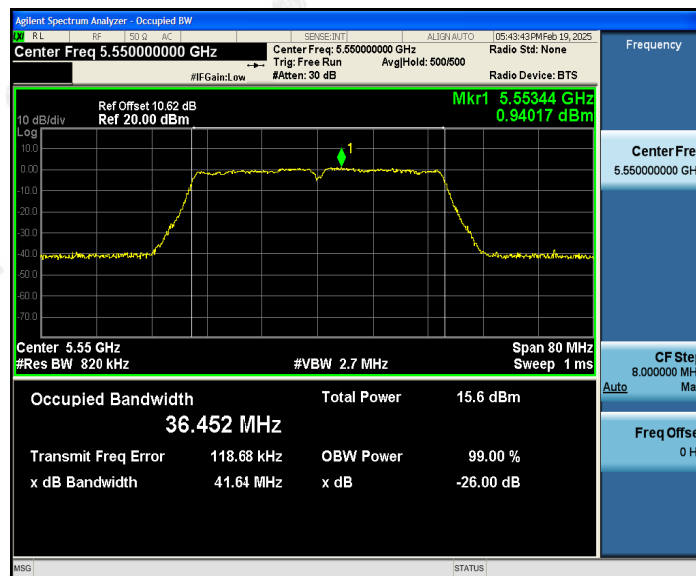


5470~5725MHz

Low Channel

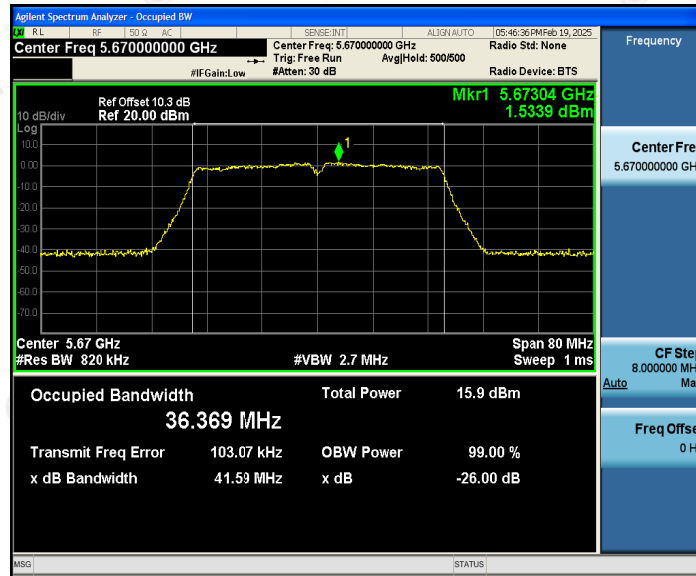


Mid Channel





High Channel



IEEE802.11ac HT20 mode

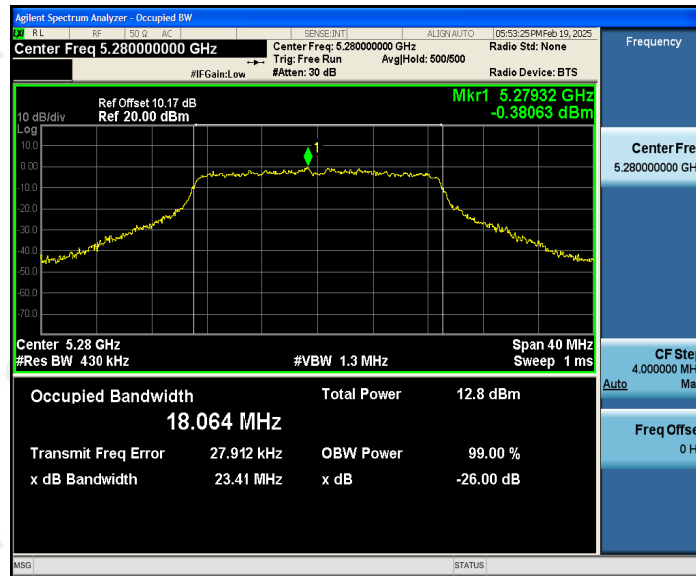
5250~5350MHz

Low Channel

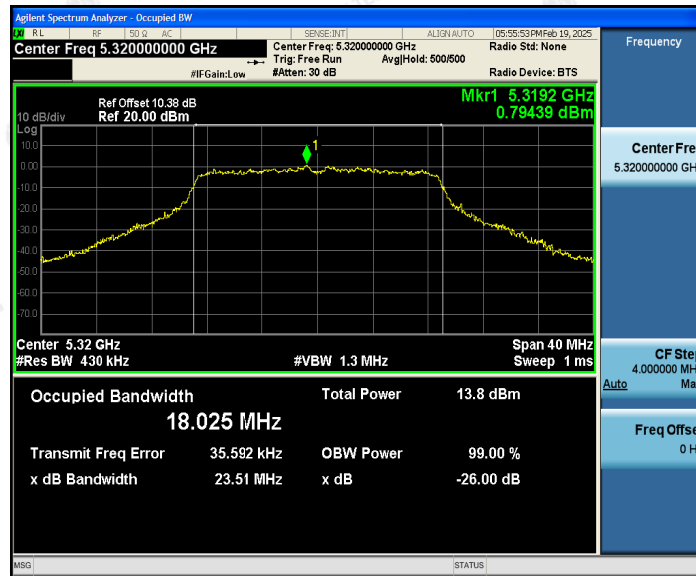




Mid Channel



High Channel



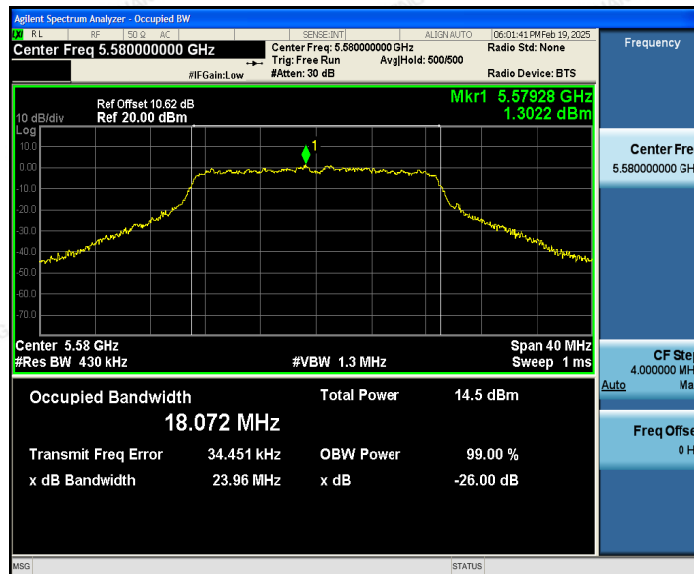


5470~5725MHz

Low Channel

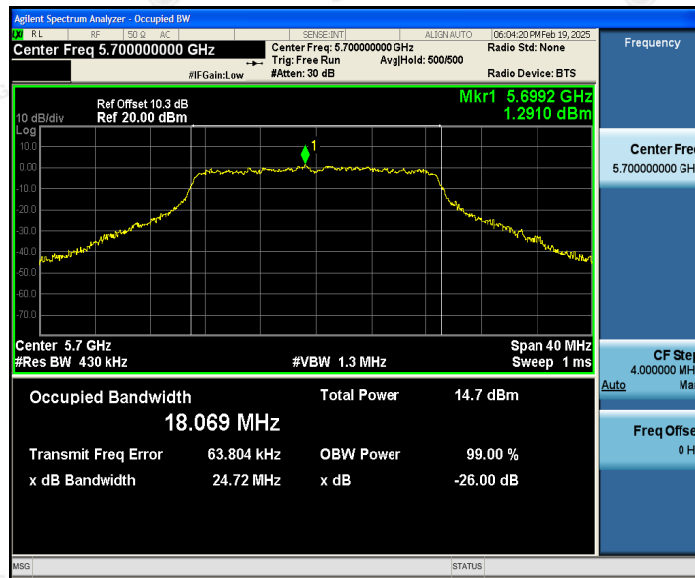


Mid Channel





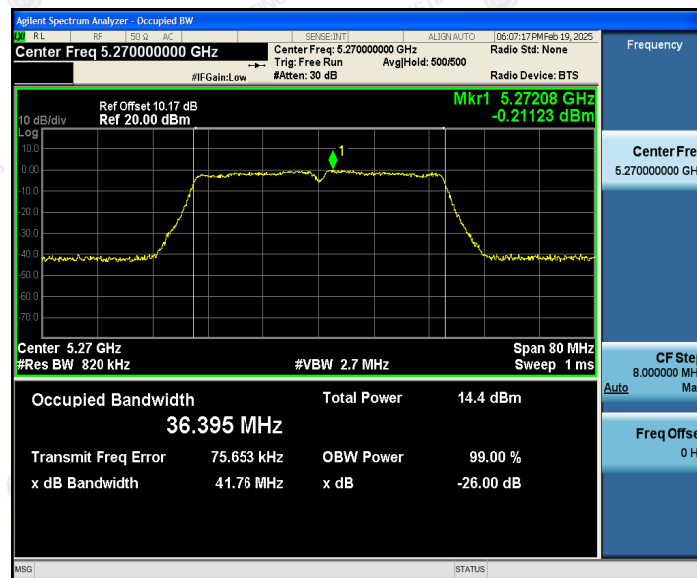
High Channel



IEEE802.11ac HT40 mode

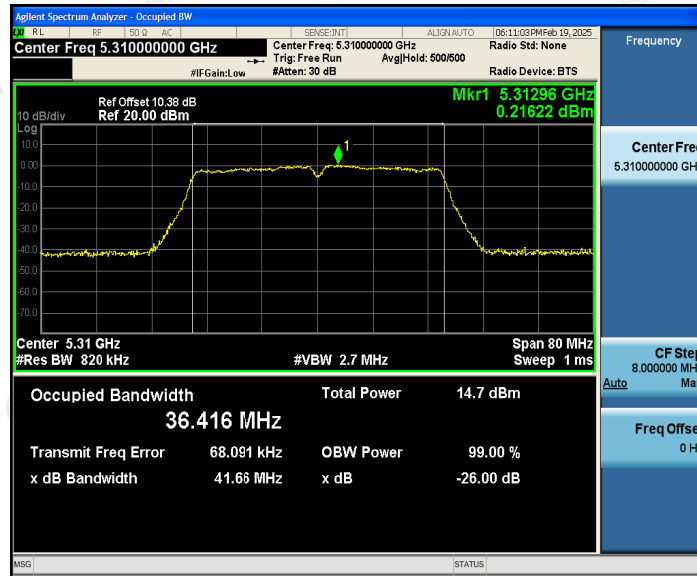
5250~5350MHz

Low Channel





High Channel



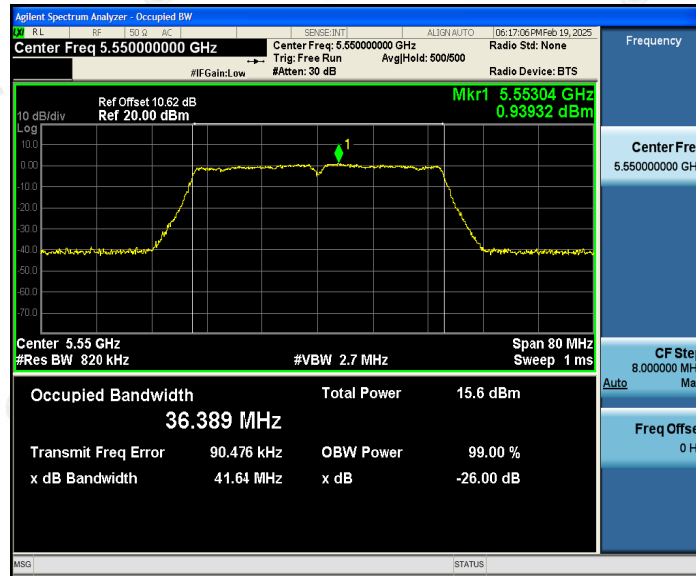
5470~5725MHz

Low Channel

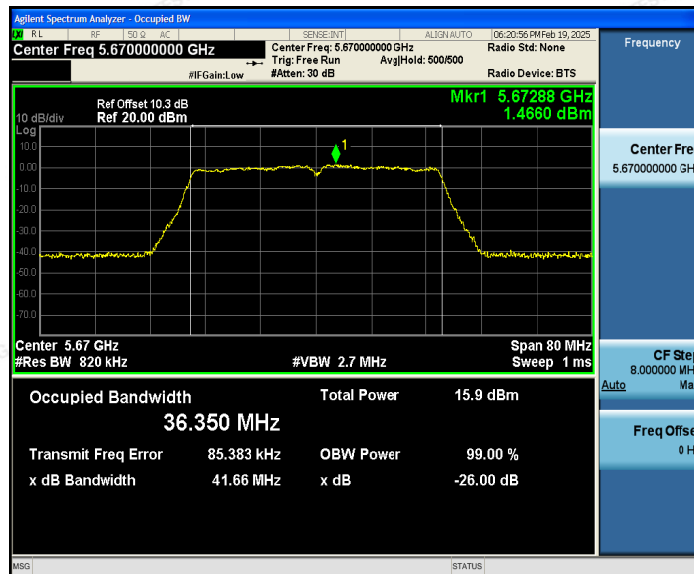


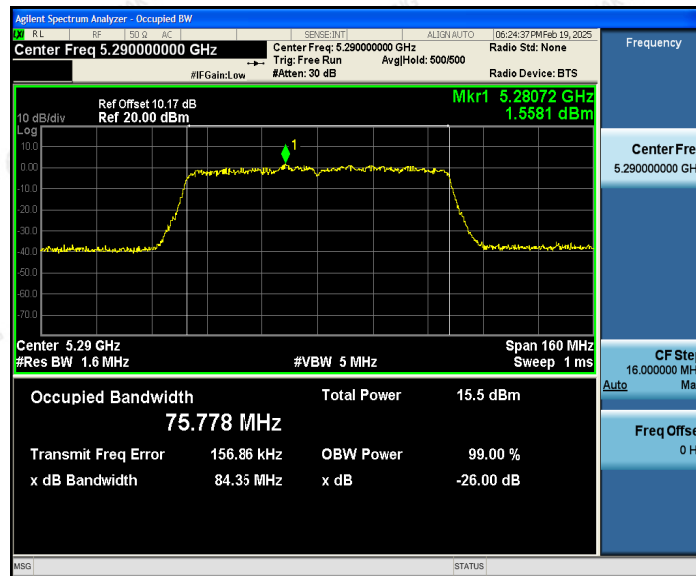
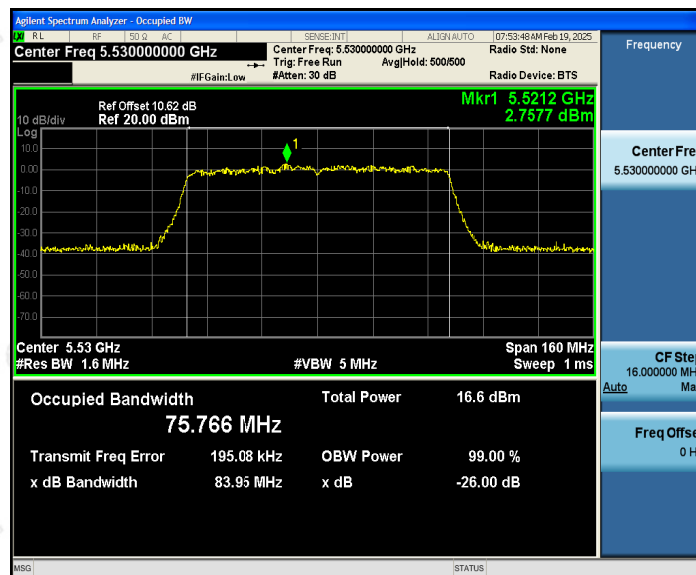


Mid Channel



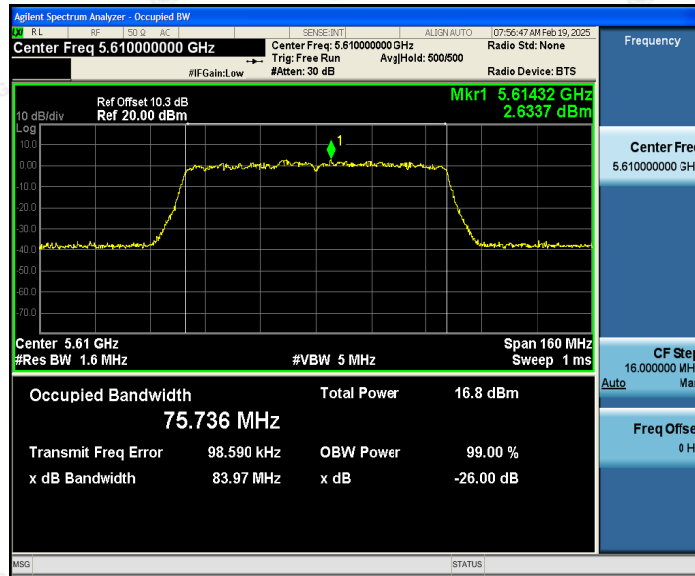
High Channel



**IEEE802.11ac HT80 mode****5250~5350MHz****5470~5725MHz****Low Channel**



High Channel



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Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



6.3 Maximum Conducted Output Power

LIMIT

According to §15.407(a),

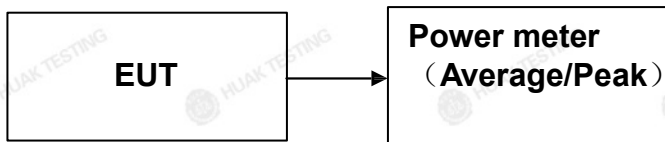
(iv) For the 5.25-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250mW or $11\text{dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

If transmitting antennas of directional gain greater than 6dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W

The peak power shall not exceed the limit as follow:

Test Configuration



The EUT was connected to a spectrum analyzer through a 50Ω RF cable.

TEST PROCEDURE

The testing follows Method PM of FCC KDB789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF peak power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.

TEST RESULTS

No non-compliance noted

TEST RESULTS

No non-compliance noted

**Test Data****Testmode:IEEE802.11a mode****5250~5350MHz**

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5260	6.27	24.00
Mid	5280	6.05	24.00
High	5320	7.06	24.00

5470~5725MHz

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5500	7.05	24.00
Mid	5580	7.59	24.00
High	5700	7.82	24.00

Testmode:IEEE802.11n HT20 mode**5250~5350MHz**

Channel	Frequency(MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5260	6.08	24.00
Mid	5280	5.90	24.00
High	5320	6.79	24.00

5470~5725MHz

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5500	6.93	24.00
Mid	5580	7.45	24.00
High	5700	7.76	24.00

**Testmode:IEEE802.11n HT40 mode****5250~5350MHz**

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5270	6.82	24.00
Mid	5310	7.16	24.00

5470~5725MHz

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5510	7.93	24.00
Mid	5550	7.90	24.00
High	5670	8.26	24.00

Testmode:IEEE802.11ac HT20 mode**5250~5350MHz**

Channel	Frequency(MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5260	6.10	24.00
Mid	5280	5.92	24.00
High	5320	6.90	24.00

5470~5725MHz

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5500	6.84	24.00
Mid	5580	7.43	24.00
High	5700	7.71	24.00

**Testmode:IEEE802.11ac HT40 mode****5250~5350MHz**

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5270	6.78	24.00
Mid	5310	7.15	24.00

5470~5725MHz

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5510	7.93	24.00
Mid	5550	7.85	24.00
High	5670	8.26	24.00

Testmode:IEEE802.11ac HT80 mode**5250~5350MHz**

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
--	5270	6.72	24.00

5470~5725MHz

Channel	Frequency (MHz)	Peak Output Power (dBm)	Limit(dBm)
Low	5510	7.65	24.00
High	5670	7.78	24.00



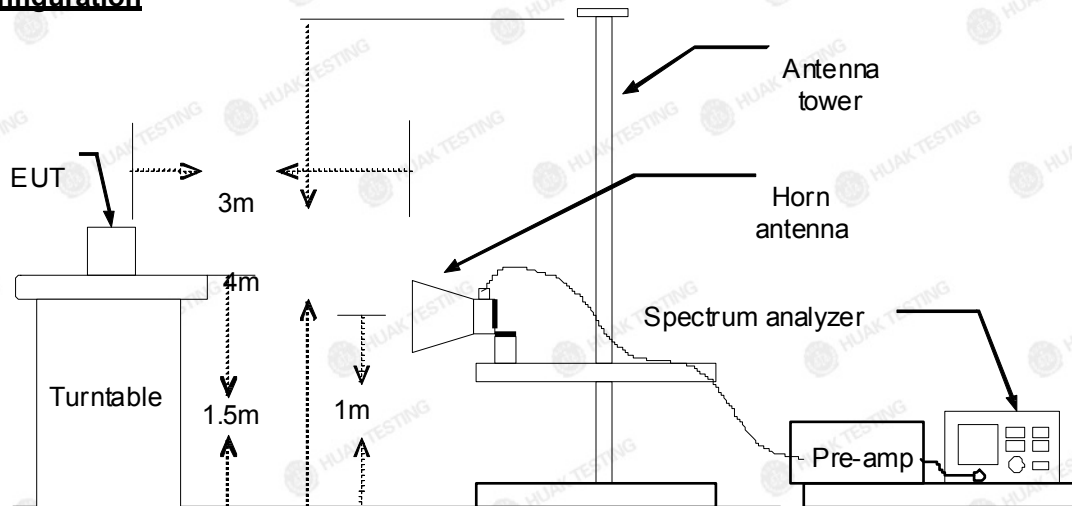
6.4 Band Edges Measurement

LIMIT

According to §15.407(b),

- (1) The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.
- (2) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency block edges as the design of the equipment permits.

Test Configuration



TESTPROCEDURE

1. The EUT is placed on a turntable, which is 1.5m above the ground plane.
2. The turntable shall be rotated for 360degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz / Sweep=AUTO

VBW=10Hz, when duty cycle is no less than 98 percent.

VBW $\geq 1/T$, when duty cycle is less than 98 percent, where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
IEEE 802.11 a	100	-	-	10Hz
IEEE 802.11n/ac HT20	100	-	-	10Hz
IEEE 802.11n/ac HT40	100	-	-	10Hz
IEEE 802.11ac HT80	100	-	-	10Hz

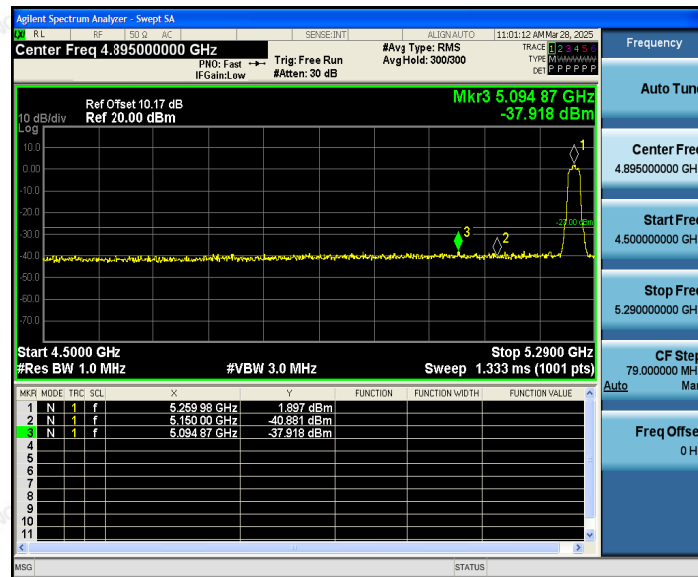
TESTRESULTS

Refer to attach spectrum analyzer data chart.

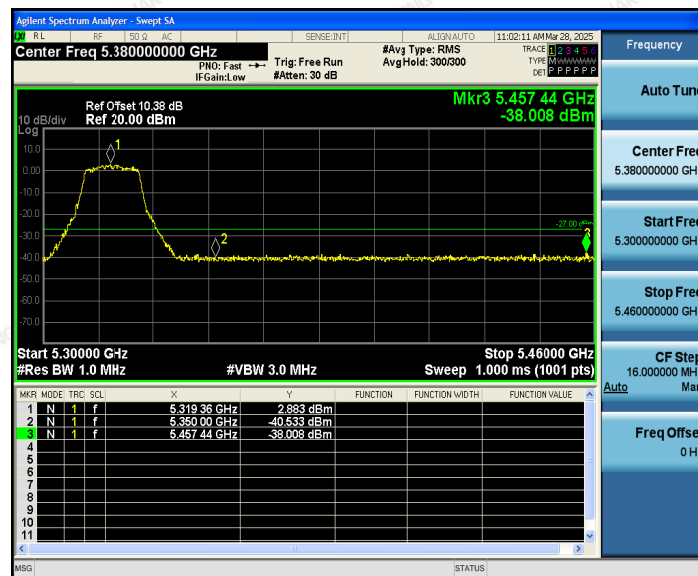


Band Edges(IEEE802.11a mode)

5260MHz

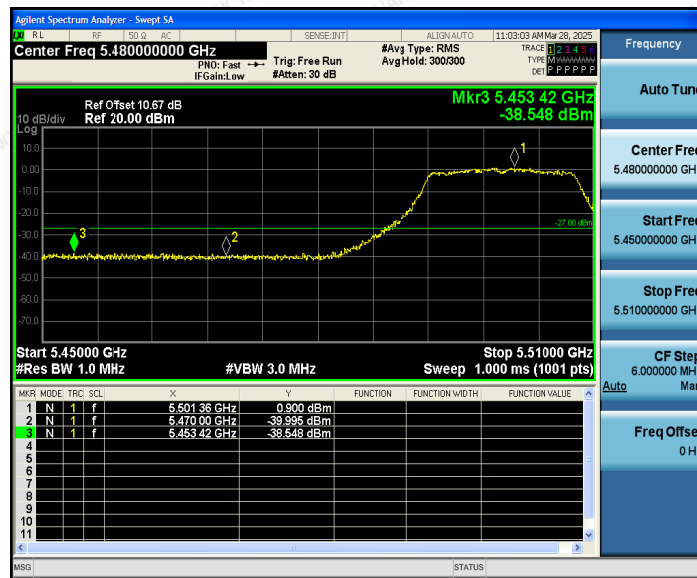


5320MHz





5500MHz



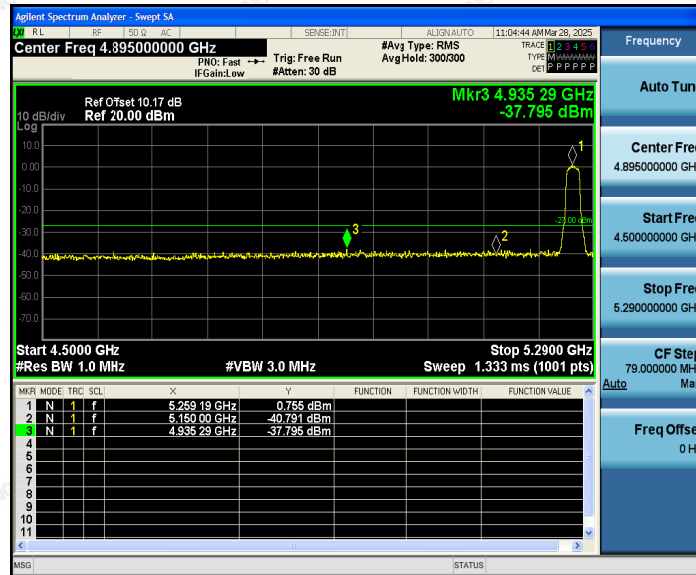
5700MHz



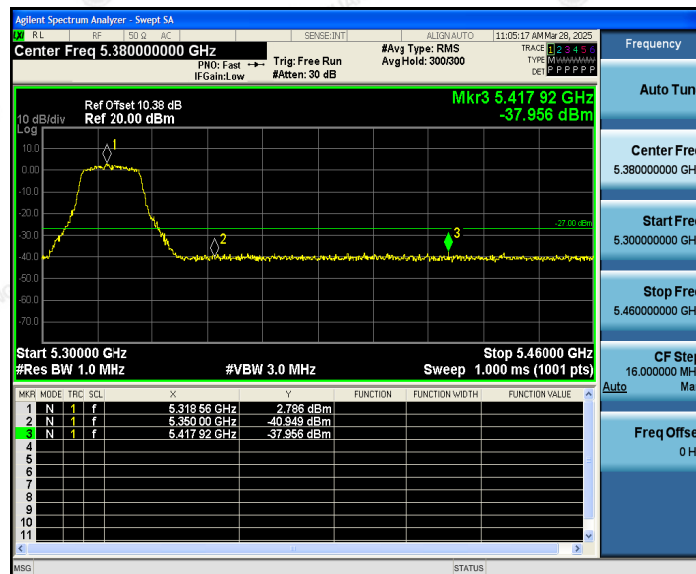


Band Edges(IEEE802.11n HT20 mode)

5260MHz



5320MHz





5500MHz



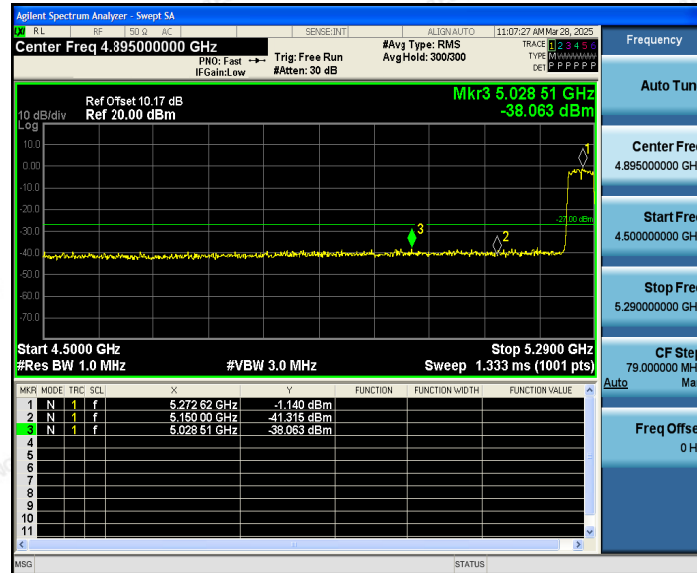
5700MHz





Band Edges(IEEE802.11n HT40 mode)

5270MHz

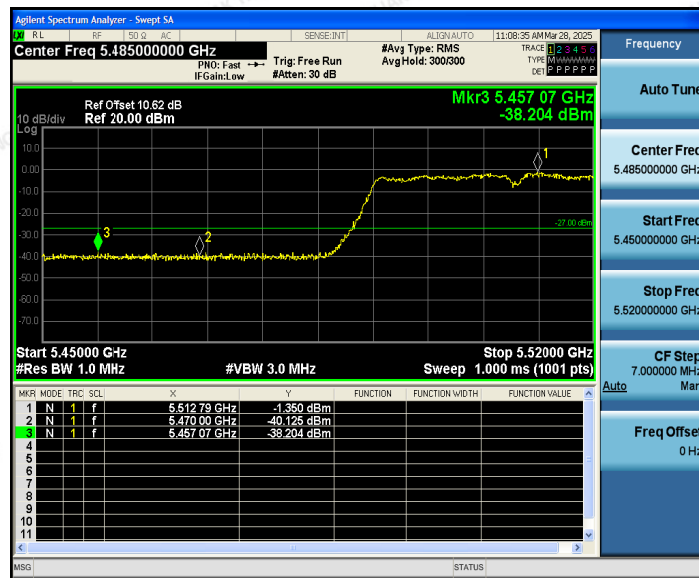


5310MHz

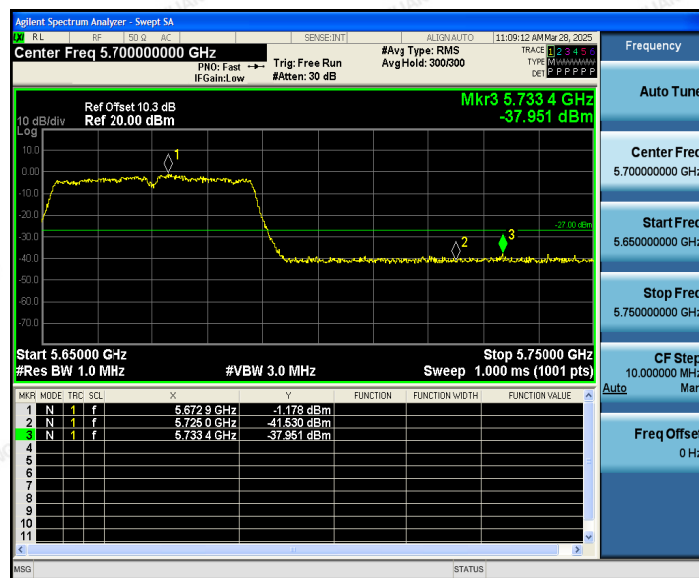




5510MHz



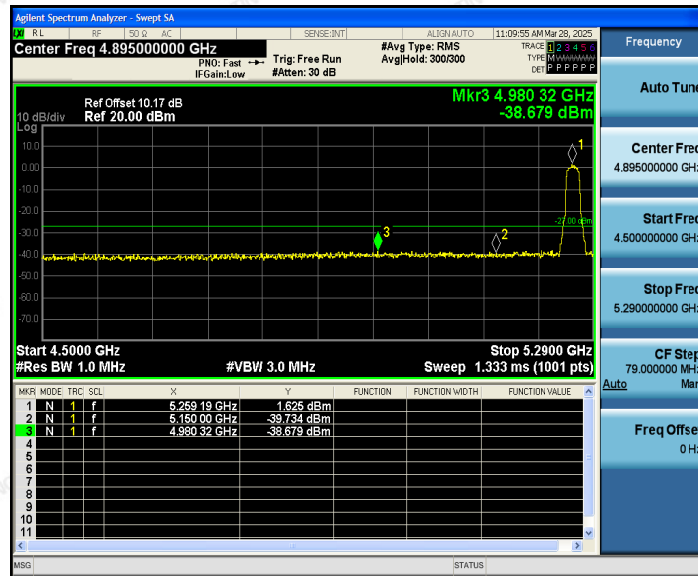
5670MHz



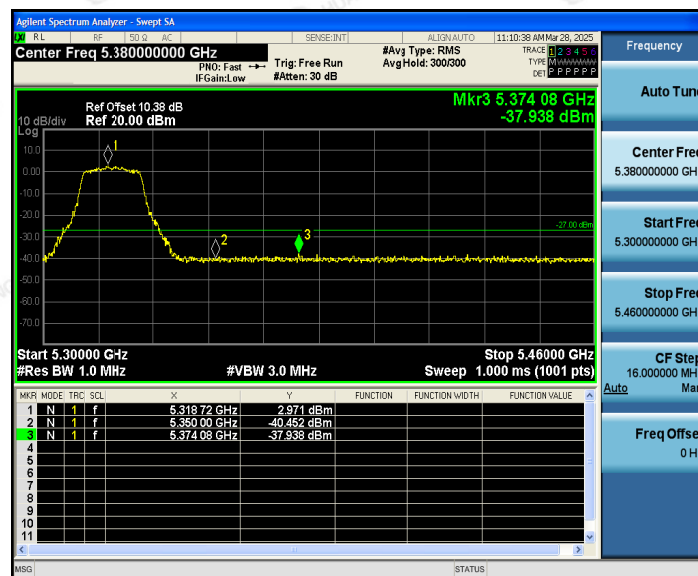


Band Edges(IEEE802.11ac HT20 mode)

5260MHz



5320MHz





5500MHz



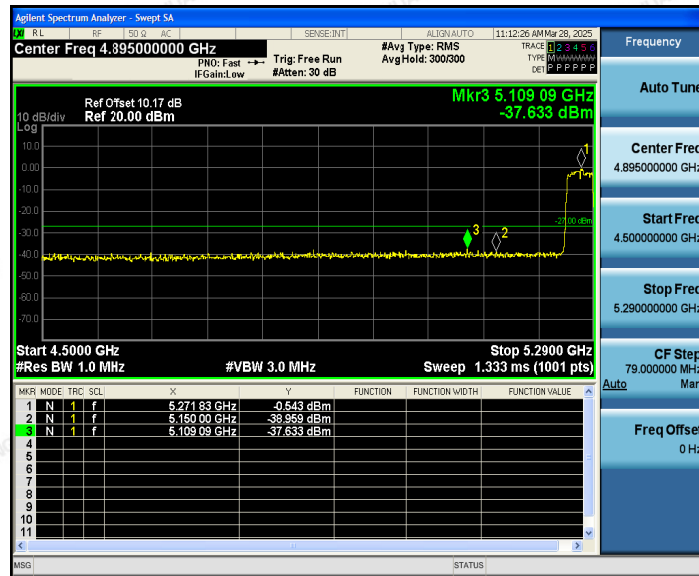
5700MHz



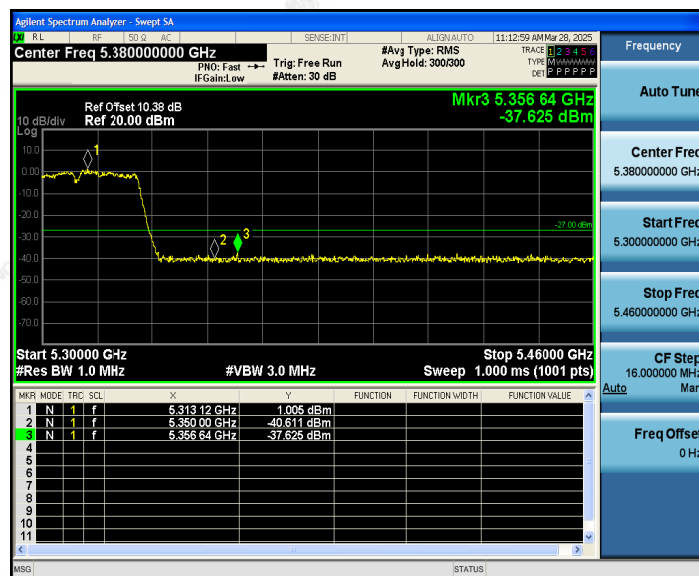


Band Edges(IEEE802.11ac HT40 mode)

5270MHz

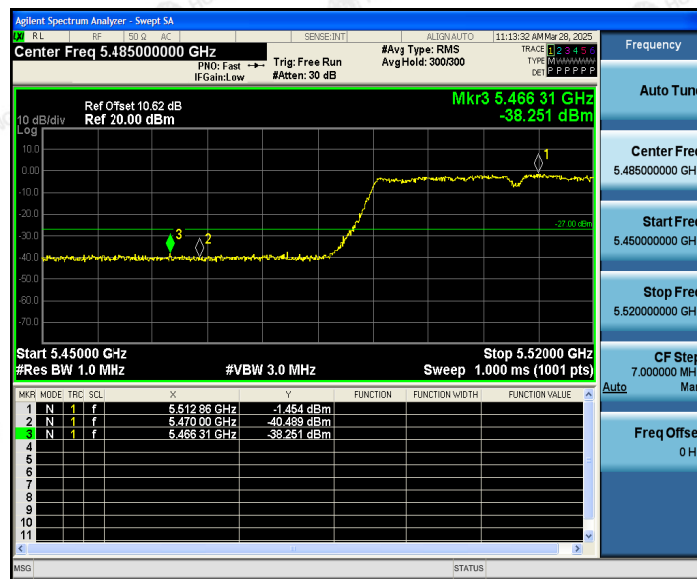


5310MHz





5510MHz



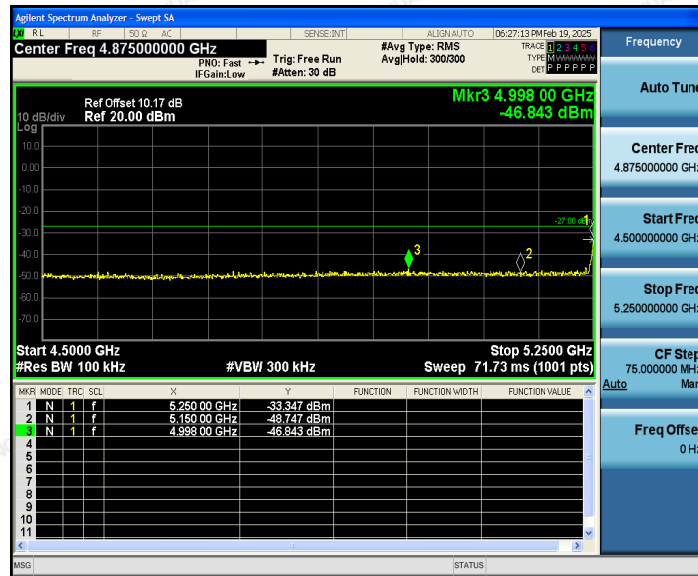
5670MHz



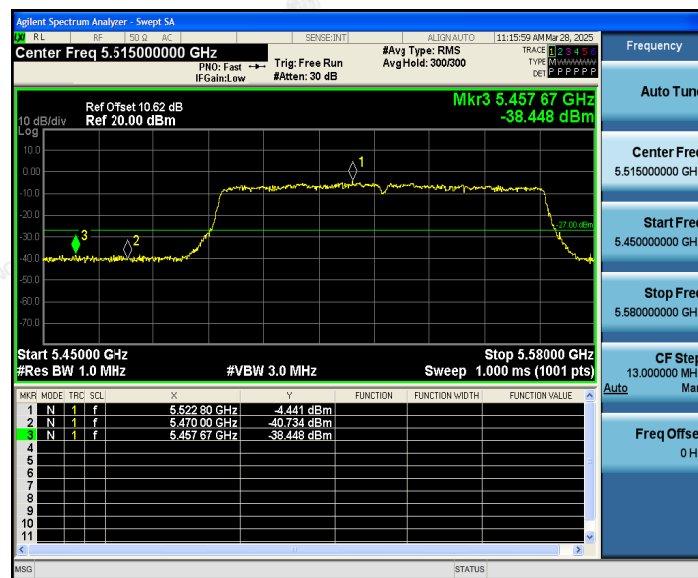


Band Edges(IEEE802.11ac HT80 mode)

5290MHz

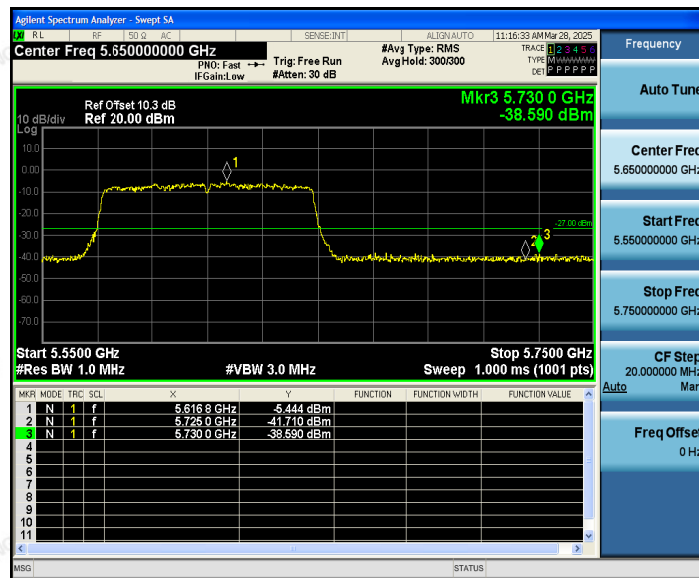


5530MHz





5610MHz





6.5 Maximum Power Spectral Density

LIMIT

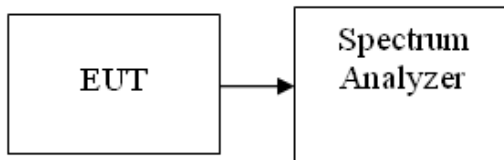
According to §15.407(a),

For mobile and portable client devices in the 5.5-5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the 5.25-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band

If transmitting antennas of directional gain greater than 6dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Test Configuration



TESTPROCEDURE

- Place the EUT on the table and set it in transmitting mode. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- Set the spectrum analyzer as RBW = 1MHz, VBW = 3MHz, Span must be greater than 26dB bandwidth, adjust as necessary, Sweep= auto, Detector RMS
- Record the max. reading.

TESTRESULTS

No non-compliance noted

Test Data

**Testmode:IEEE802.11a mode****5250~5350MHz**

Channel	Frequency (MHz)	PSD(dBm)	Limit(dBm)	Result
Low	5260	-4.04	11	PASS
Mid	5280	-4.30	11	PASS
High	5320	-3.37	11	PASS

5470~5725MHz

Channel	Frequency (MHz)	PSD(dBm)	Limit(dBm)	Result
Low	5500	-3.27	11	PASS
Mid	5580	-2.77	11	PASS
High	5700	-2.51	11	PASS

Testmode:IEEE802.11n HT20 mode**5250~5350MHz**

Channel	Frequency (MHz)	PSD(dBm)	Limit(dBm)	Result
Low	5260	-4.65	11	PASS
Mid	5280	-4.73	11	PASS
High	5320	-3.88	11	PASS

5470~5725MHz

Channel	Frequency (MHz)	PSD(dBm)	Limit(dBm)	Result
Low	5500	-3.55	11	PASS
Mid	5580	-3.33	11	PASS
High	5700	-2.89	11	PASS

Testmode:IEEE802.11n HT40 mode**5250~5350MHz**

Channel	Frequency (MHz)	PSD(dBm)	Limit(dBm)	Result
Low	5270	-6.90	11	PASS
High	5310	-6.57	11	PASS