



中认信通

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



TEST REPORT

Applicant: TECNO MOBILE LIMITED

Address: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25
SHAN MEI STREET FOTAN NT HONGKONG

FCC ID: 2ADYY-CL9

Product Name: Mobile Phone

Standard(s): 47 CFR Part 15, Subpart E(15.407)
ANSI C63.10-2013
KDB 789033 D02 General U-NII Test Procedures New
Rules v02r01

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: CR231165634-00D

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR231165634-00D	Original Report	2024/1/12

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

1.1.1 General:

EUT Name:	Mobile Phone
Trade Name:	Tecno
EUT Model:	CL9
Operation Frequency:	5180-5240 MHz (802.11a/n ht20/ac vht20/ax he20) 5190-5230 MHz(802.11n ht40/ac vht40/ax he40) 5210 MHz(802.11ac vht80/ax he80) 5745-5825 MHz (802.11a/n ht20/ac vht20/ax he20) 5755-5795 MHz(802.11n ht40/ac vht40/ax he40) 5775 MHz(802.11ac vht80/ax he80)
Maximum Average Output Power (Conducted):	15.76 dBm (5150-5250 MHz) 17.24 dBm (5725-5850 MHz)
Modulation Type:	802.11a/n/ac:OFDM-BPSK,QPSK,16QAM,64QAM,256QAM 802.11ax: OFDMA- BPSK,QPSK,16QAM,64QAM,256QAM,1024QAM
Rated Input Voltage:	DC 3.91V from battery or DC 5.0-20.0V from adapter
Serial Number:	AC line conducted emissions and Radiated Spurious Emissions:2BD2-5 RF Conducted:2BD2-1
EUT Received Date:	2023/11/8
EUT Received Status:	Good

1.1.2 Operation Frequency Detail: For 802.11a/n ht20/ac vht20/ax he20:

5150-5250MHz Band		5725-5850MHz Band	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	149	5745
40	5200	153	5765
44	5220	157	5785
48	5240	161	5805
/	/	165	5825
Per section 15.31(m), the below frequencies were performed the test as below:			
36	5180	149	5745
40	5200	157	5785
48	5240	165	5825

For 802.11n ht40/ac vht40/ax he40:

5150-5250MHz Band		5725-5850MHz Band	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	151	5755
46	5230	159	5795
Per section 15.31(m), the below frequencies were performed the test as below:			
38	5190	151	5755
46	5230	159	5795

For 802.11ac vht80/ax he80:

5150-5250MHz Band		5725-5850MHz Band	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	155	5775
Per section 15.31(m), the below frequencies were performed the test as below:			
42	5210	58	5290

1.1.3 Antenna Information Detail▲:

Antenna	Antenna Manufacturer	Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Chain 0 (ANT 13)	Shangyuan Technology (China) Co,Ltd.	LDS	50	5.15~5.25GHz	-6.5 dBi
Chain 1 (ANT 14)				5.725~5.85GHz	-4.6 dBi

The Method of §15.203 Compliance:

- ☒ Antenna was permanently attached to the unit.
☐ Antenna use a unique type of connector to attach to the EUT.
☐ Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

Note:

The system supports 2T2R at 802.11n/ac/ax modes.

Per KDB 662911 D01 Multiple Transmitter Output v02r01:

For power measurements:

CDD Mode:

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$
 directional gain=-6.5 dBi for 5150-5250MHz
 directional gain=-4.6 dBi for 5725-5850MHz

For power spectral density (PSD) measurements:

Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

directional gain=-6.5 dBi+3dB=-3.5 dBi for 5150-5250MHz

directional gain=-4.6 dBi+3dB=-1.6 dBi for 5725-5850MHz

1.1.4 Accessory Information:

Accessory Description	Manufacturer	Model	Parameters
Adapter	Unknown	U700TSA	Input: 100-240Vac 50/60Hz 2.0A Output: 5.0Vdc 3.0A 15.0W or 5.0-10.0Vdc 7.0A MAX or 11.0Vdc 6.4A MAX or 4.0-20.0Vdc 3.5A 70.0W MAX

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation Mode:			The system was configured for testing in Engineering Mode, which was provided by the manufacturer.		
Equipment Modifications:			No		
EUT Exercise Software:			Engineering mode		
The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer ▲:					
5150-5250 MHz Band:					
Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 1
802.11a	Lowest	5180	6Mbps	15	15
	Middle	5200	6Mbps	15	15
	Highest	5240	6Mbps	15	15
802.11n ht20	Lowest	5180	MCS8	15	15
	Middle	5200	MCS8	15	15
	Highest	5240	MCS8	15	15
802.11n ht40	Lowest	5190	MCS8	17	17
	Highest	5230	MCS8	17	17
802.11ac vht80	Middle	5210	MCS8	17	17
802.11ax he20	Lowest	5180	MCS8	16	16
	Middle	5200	MCS8	16	16
	Highest	5240	MCS8	16	16
802.11ax he40	Lowest	5190	MCS8	17	17
	Highest	5230	MCS8	17	17
802.11ax he80	Middle	5210	MCS8	17	17
5725-5850 MHz Band:					
Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 1
802.11a	Lowest	5745	6Mbps	12	12
	Middle	5785	6Mbps	12	12
	Highest	5825	6Mbps	12	12
802.11n ht20	Lowest	5745	MCS8	13	13
	Middle	5785	MCS8	13	13
	Highest	5825	MCS8	13	13
802.11n ht40	Lowest	5755	MCS8	16	16
	Highest	5795	MCS8	16	16
802.11ac vht80	Middle	5775	MCS8	18	18
802.11ax he20	Lowest	5745	MCS8	18	18
	Middle	5785	MCS8	18	18
	Highest	5825	MCS8	18	18
802.11ax he40	Lowest	5755	MCS8	18	18
	Highest	5795	MCS8	18	18
802.11ax he80	Middle	5775	MCS8	18	18

Note:

1. The system support 802.11a/n ht20/n ht40/ac vht20/vht40/vht80/ax he20/ he 40/ he 80, the 802.11n ht20/n ht40 were reduced since the identical parameters with 802.11ac vht20 and vht40.
2. The above are the worst-case data rates, which are determined for each mode based upon investigations by measuring the average power and PSD across all data rates, bandwidths, and modulations.
The device supports SISO in all modes, and MIMO 2T2R in 802.11n /ac/ax modes, per pretest, 2T2R mode was the worst mode and reported for 802.11n /ac/ax modes.
3. For 802.11 ax mode, the device only supports full-RU.

1.2.2 Support Equipment List and Details

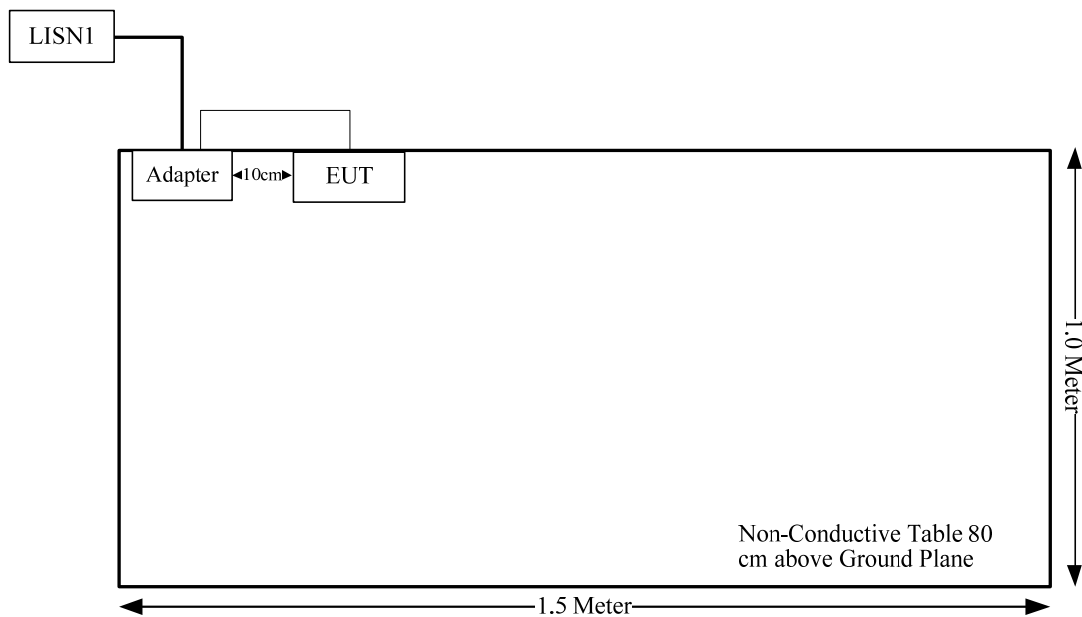
Manufacturer	Description	Model	Serial Number
/	/	/	/

1.2.3 Support Cable List and Details

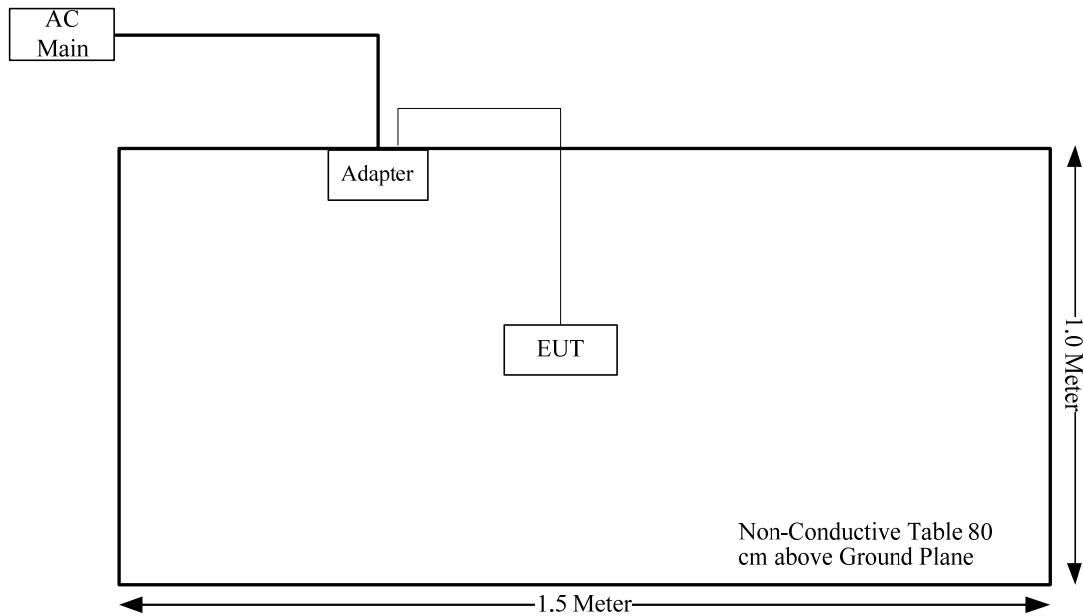
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
USB Cable	No	No	0.8	Adapter	EUT

1.2.4 Block Diagram of Test Setup

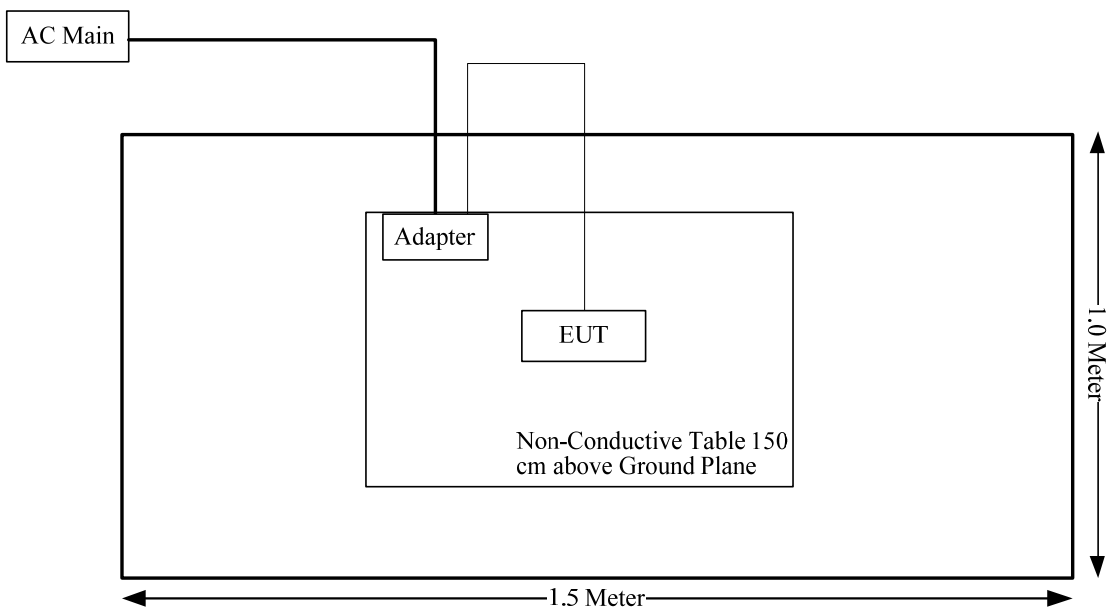
AC line conducted emissions:



Radiated Spurious Emissions:
Below 1G:



Above 1G:



1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	$\pm 5\%$
RF output power, conducted	$\pm 0.61\text{dB}$
Power Spectral Density, conducted	$\pm 0.61\text{ dB}$
Unwanted Emissions, radiated	9kHz~30MHz: 4.12dB, 30M~200MHz: 4.15 dB, 200M~1GHz: 5.61 dB, 1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB, 18G~26.5G: 5.47 dB, 26.5G~40G: 5.63 dB
Unwanted Emissions, conducted	$\pm 1.26\text{ dB}$
Temperature	$\pm 1^\circ\text{C}$
Humidity	$\pm 5\%$
DC and low frequency voltages	$\pm 0.4\%$
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Test Items	Result
§15.207(a)	AC line conducted emissions	Compliant
FCC§15.205& §15.209 &§15.407(b)	Radiated Spurious Emissions	Compliant
FCC§15.407(a) (e)	Emission Bandwidth	Compliant
FCC§15.407(a)	Maximum Conducted Output Power	Compliant
FCC§15.407 (a)	Power Spectral Density	Compliant
§15.203	Antenna Requirement	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	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.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

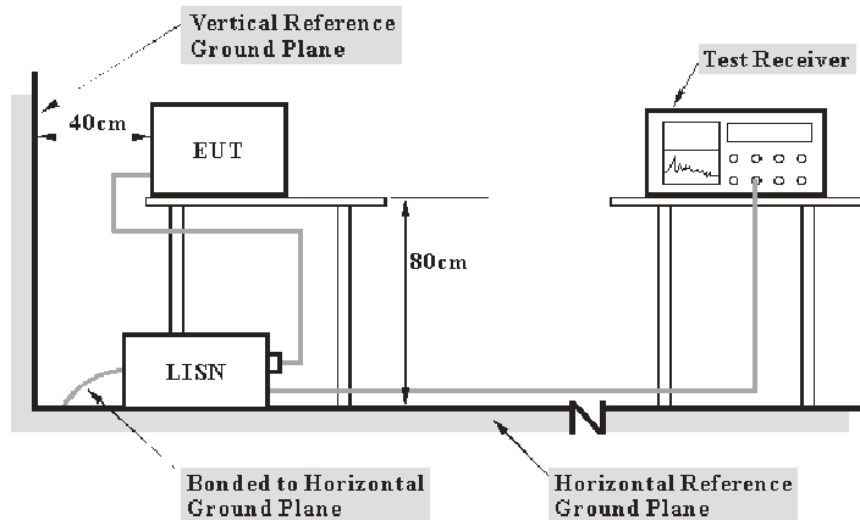
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μ V within the frequency band 535-1705 kHz, as measured using a 50 μ H/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

3.1.2 EUT Setup



Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter or EUT was connected to the main LISN with a 120 V/60 Hz AC power source.

3.1.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

3.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase (“hot”) line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor

Factor = attenuation caused by cable loss + voltage division factor of AMN

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

3.2 Radiation Spurious Emissions

3.2.1 Applicable Standard

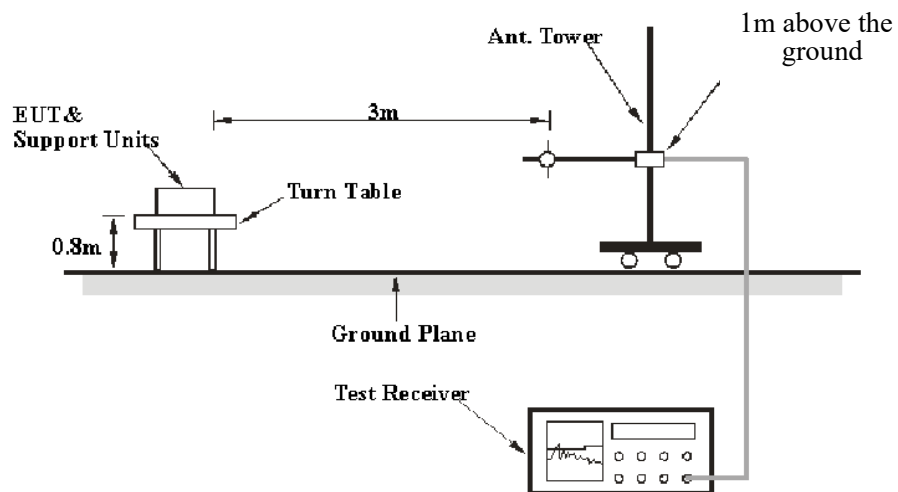
FCC §15.407 (b);

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

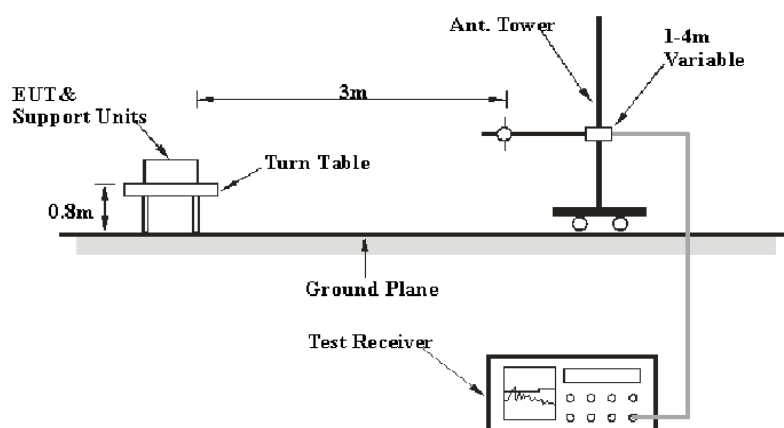
- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of - 27 dBm/MHz.
 - (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of - 27 dBm/MHz.
 - (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of - 27 dBm/MHz.
 - (4) For transmitters operating solely in the 5.725-5.850 GHz band:
 - (i) All emissions shall be limited to a level of - 27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
 - (ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in § 15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in § 15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.
 - (8) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
 - (9) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in § 15.207.
 - (10) The provisions of § 15.205 apply to intentional radiators operating under this section.
 - (11) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.
- (c) The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

3.2.2 EUT Setup

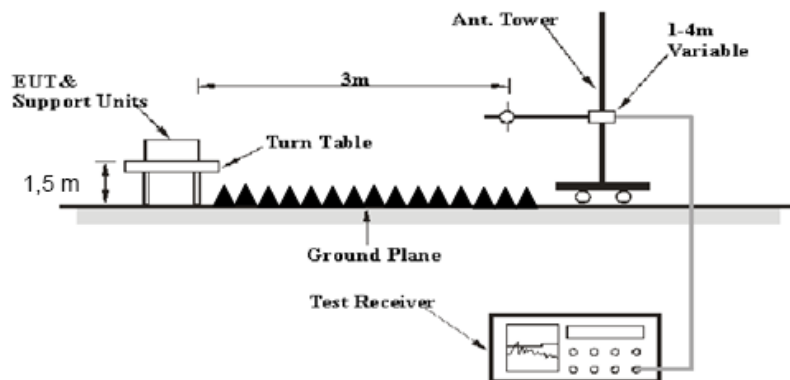
9kHz~30MHz:



30MHz~1GHz:



1-40 GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was FCC 15.209, FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9kHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9kHz-1000MHz:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	300 Hz	1 kHz	200 Hz	QP/AV
150 kHz – 30 MHz	10 kHz	30 kHz	9 kHz	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP

1GHz- 40GHz:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
AV	>98%	1MHz	10 Hz
	<98%	1MHz	$\geq 1/T$

Note: T is minimum transmission duration

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

3.2.4 Test Procedure

During the radiated emission test, the adapter was connected to the first AC floor outlet.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1 GHz except 9 – 90 kHz, 110 – 490 kHz, employing an average detector, peak and Average detection modes for frequencies above 1 GHz.

All emissions under the average limit and under the noise floor have not recorded in the report.

3.2.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

3.3 Emission Bandwidth

3.3.1 Applicable Standard

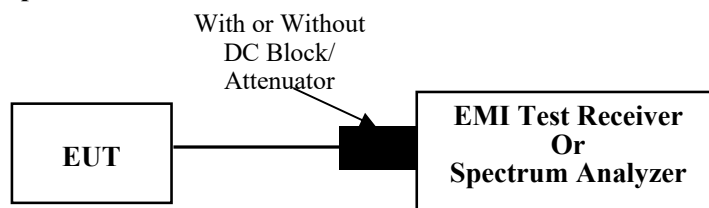
FCC §15.407 (a),(h)

(h)(2) Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating with any part of its 26 dB emission bandwidth in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems.

FCC §15.407 (e)

Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.3.2 EUT Setup



3.3.3 Test Procedure

26dB Emission Bandwidth:

According to ANSI C63.10-2013 Section 12.4.1

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = peak.
- Trace mode = max hold
- Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

6 dB emission bandwidth:

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

- Set RBW = 100 kHz.
 - Set the video bandwidth (VBW) ≥ 3 RBW.
 - Detector = Peak.
 - Trace mode = max hold.
 - Sweep = auto couple.
 - Allow the trace to stabilize.
 - 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 in this section. For devices that use channel aggregation refer to III.A and III.C for determining emission bandwidth.

99% Occupied Bandwidth:

According to ANSI C63.10-2013 Section 12.4.2&6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) 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.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

3.4 Maximum Conducted Output Power

3.4.1 Applicable Standard

FCC §15.407(a) (1)(iv)

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.

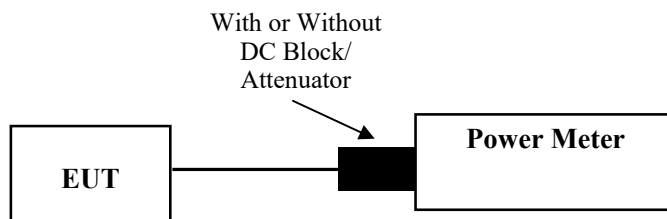
FCC §15.407(a) (2)

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

FCC §15.407(a) (3)(i)

For the band 5.725-5.850 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

3.4.2 EUT Setup



3.4.3 Test Procedure

According to ANSI C63.10-2013 Section 12.3.3.2

Method PM-G is measurement using a gated RF average power meter.

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.5 Maximum Power Spectral Density

3.5.1 Applicable Standard

FCC §15.407(a) (1)(iv)

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.

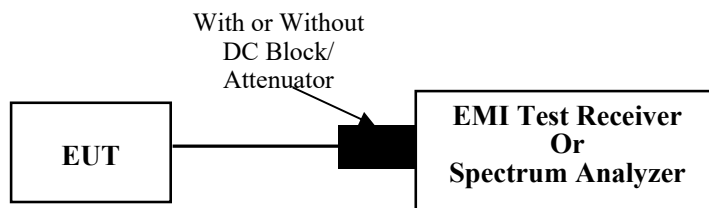
FCC §15.407(a) (2)

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

FCC §15.407(a) (3)(i)

For the band 5.725-5.850 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

3.5.2 EUT Setup



3.5.3 Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Duty cycle $\geq 98\%$

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-1 should be applied.

Duty cycle $< 98\%$, duty cycle variations are less than $\pm 2\%$

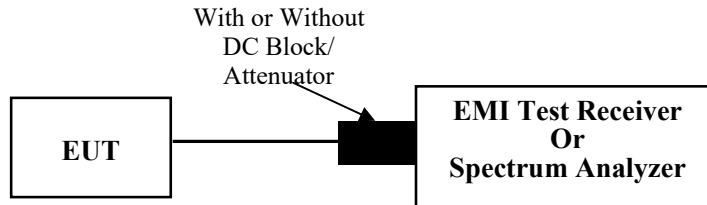
KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-2 should be applied.

Duty cycle $< 98\%$, duty cycle variations exceed $\pm 2\%$

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 should be applied.

3.7 Duty Cycle

3.7.1 EUT Setup



3.7.2 Test Procedure

According to ANSI C63.10-2013 Section 12.2

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

- 1) Set the center frequency of the instrument to the center frequency of the transmission.
- 2) Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value.
- 3) Set $VBW \geq RBW$. Set detector = peak or average.
- 4) The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if $T \leq 16.7 \mu s$.)

3.8 Antenna Requirement

3.8.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.8.2 Judgment

Result: Compliant. Please refer to the Antenna Information detail in Section 1.

4. Test DATA AND RESULTS

4.1 AC Line Conducted Emissions

Serial Number:	2BD2-5	Test Date:	2023/12/12
Test Site:	CE	Test Mode:	Transmitting (maximum output power mode(802.11 ax he20 Middle channel) was tested)
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	27.5	Relative Humidity: (%)	59	ATM Pressure: (kPa)	100.8
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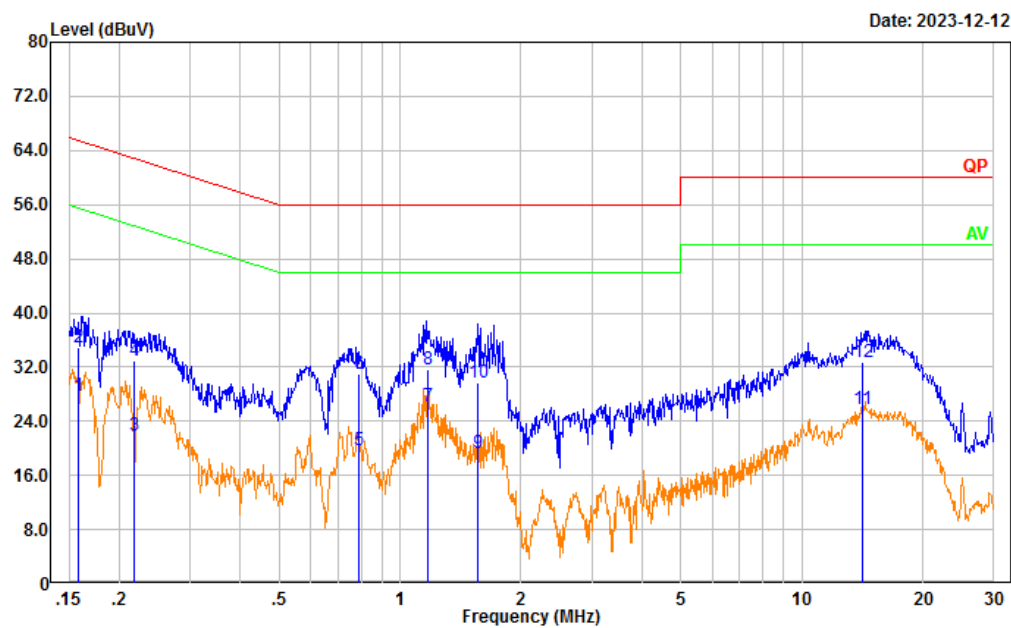
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101134	2023/3/31	2024/3/30
R&S	EMI Test Receiver	ESR3	102726	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2023/8/6	2024/8/5
Audix	Test Software	E3	190306 (V9)	N/A	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

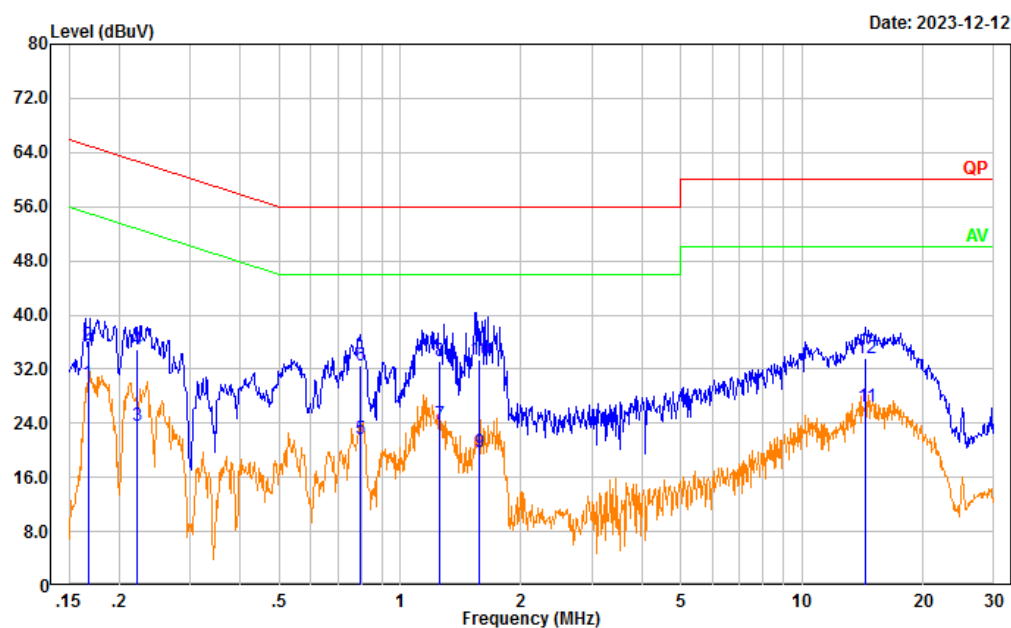
Test Data:

Project No.: CR231165634-RF
 Tester: David Huang
 Port: Line
 Note: Transmitting(5G WIFI)



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.158	18.06	9.61	27.67	55.58	27.91	Average
2	0.158	25.35	9.61	34.96	65.58	30.62	QP
3	0.218	12.37	9.61	21.98	52.89	30.91	Average
4	0.218	23.37	9.61	32.98	62.89	29.91	QP
5	0.790	10.21	9.62	19.83	46.00	26.17	Average
6	0.790	21.45	9.62	31.07	56.00	24.93	QP
7	1.169	16.70	9.62	26.32	46.00	19.68	Average
8	1.169	22.00	9.62	31.62	56.00	24.38	QP
9	1.560	9.70	9.63	19.33	46.00	26.67	Average
10	1.560	20.03	9.63	29.66	56.00	26.34	QP
11	14.140	16.18	9.68	25.86	50.00	24.14	Average
12	14.140	23.15	9.68	32.83	60.00	27.17	QP

Project No.: CR231165634-RF
 Tester: David Huang
 Port: neutral
 Note: Transmitting(5G WIFI)



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.167	20.39	9.61	30.00	55.10	25.10	Average
2	0.167	25.91	9.61	35.52	65.10	29.58	QP
3	0.222	13.98	9.61	23.59	52.74	29.15	Average
4	0.222	25.24	9.61	34.85	62.74	27.89	QP
5	0.795	12.01	9.62	21.63	46.00	24.37	Average
6	0.795	22.83	9.62	32.45	56.00	23.55	QP
7	1.253	14.32	9.62	23.94	46.00	22.06	Average
8	1.253	23.63	9.62	33.25	56.00	22.75	QP
9	1.578	10.00	9.63	19.63	46.00	26.37	Average
10	1.578	23.74	9.63	33.37	56.00	22.63	QP
11	14.426	16.66	9.68	26.34	50.00	23.66	Average
12	14.426	23.98	9.68	33.66	60.00	26.34	QP

4.2 Radiation Spurious Emissions

Serial Number:	2BD2-5	Test Date:	2023/12/20~2023/12/22
Test Site:	966-2,966-1	Test Mode:	Transmitting
Tester:	Jeff Luo, coco Tian	Test Result:	Pass

Environmental Conditions:					
Temperature: (°C)	25.2~25.8	Relative Humidity: (%)	41~54	ATM Pressure: (kPa)	101.8~102.6

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-6	2023/9/18	2026/9/17
BACL	Loop Antenna	1313-1P	3092721	2023/10/20	2026/10/19
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
Audix	Test Software	E3	201021 (V9)	N/A	N/A
AH	Double Ridge Guide Horn Antenna	SAS-571	1394	2023/2/22	2026/2/21
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2023/8/6	2024/8/5
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2023/11/8	2024/11/7
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2023/9/15	2024/9/14
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2023/8/6	2024/8/5
E-Microwave	Band Rejection Filter	5150-5850MHz	OE01902423	2023/8/6	2024/8/5
Mini Circuits	High Pass Filter	VHF-6010+	31119	2023/8/6	2024/8/5
PASTERNAK	Horn Antenna	PE9850/2F-20	072001	2021/2/5	2024/2/4

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

Please refer to the below table and plots.

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

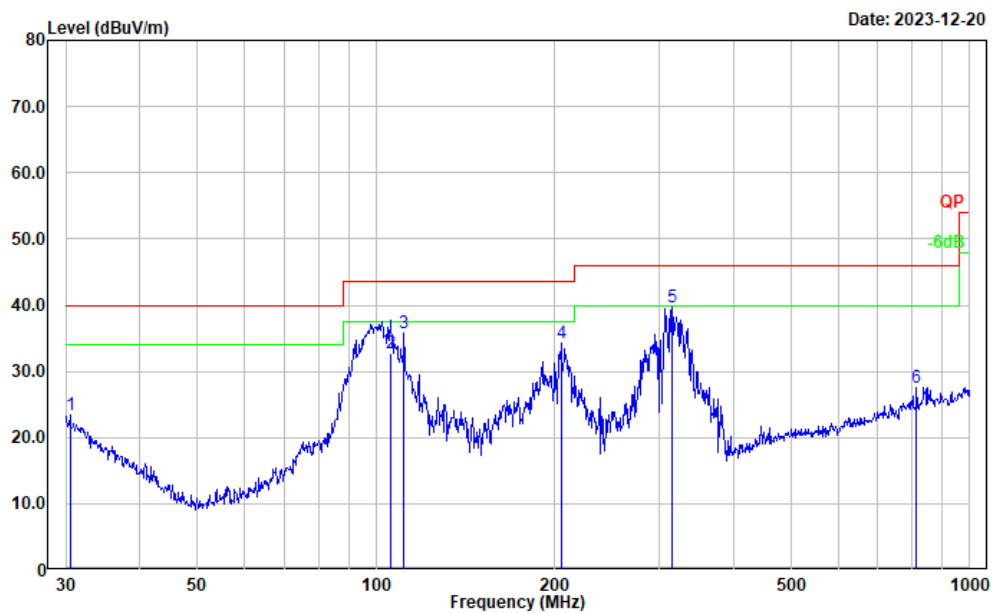
1) 9kHz~30MHz

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

2) 30MHz-1GHz (tested at maximum output power mode)

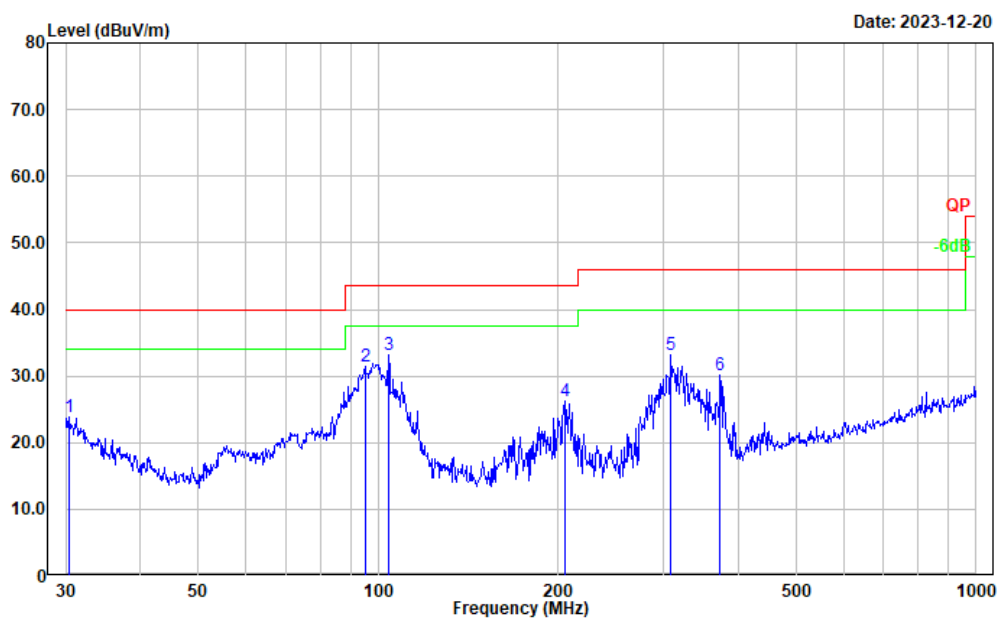
5150-5250MHz: 802.11 n ht40 2TX mode 5190MHz

Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: horizontal
Note: Transmitting(5G WIFI(5150-5250MHz))



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.531	27.85	-4.53	23.32	40.00	16.68	Peak
2	105.642	46.31	-13.54	32.77	43.50	10.73	QP
3	111.347	48.41	-12.57	35.84	43.50	7.66	Peak
4	204.955	47.19	-12.84	34.35	43.50	9.15	Peak
5	314.377	50.62	-10.89	39.73	46.00	6.27	Peak
6	813.112	29.82	-2.23	27.59	46.00	18.41	Peak

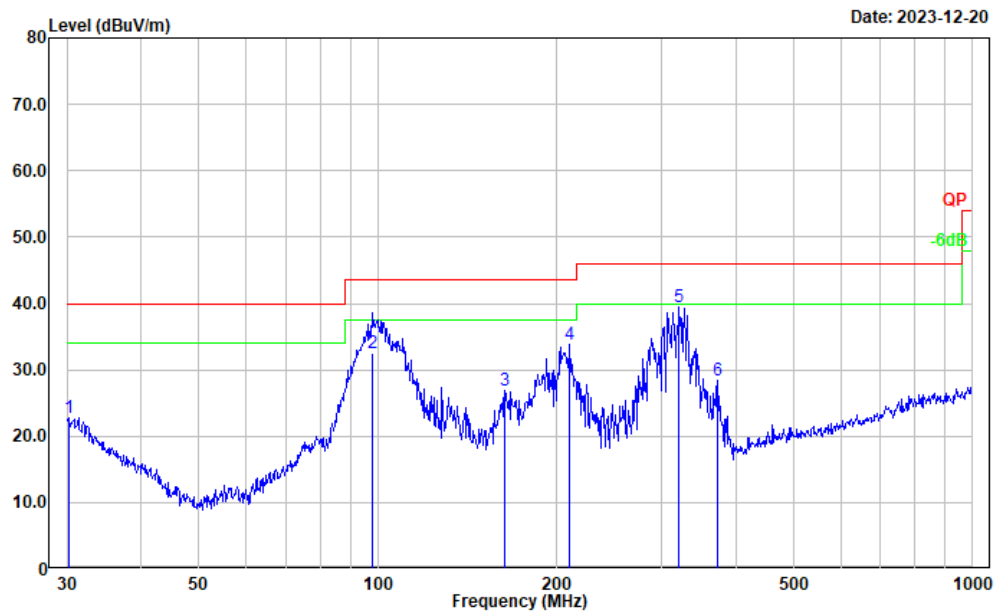
Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: vertical
Note: Transmitting(5G WIFI(5150-5250MHz))



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.424	28.34	-4.45	23.89	40.00	16.11	Peak
2	95.093	47.37	-15.91	31.46	43.50	12.04	Peak
3	103.806	46.96	-13.87	33.09	43.50	10.41	Peak
4	205.675	39.02	-12.85	26.17	43.50	17.33	Peak
5	308.913	44.19	-10.92	33.27	46.00	12.73	Peak
6	373.311	39.95	-9.77	30.18	46.00	15.82	Peak

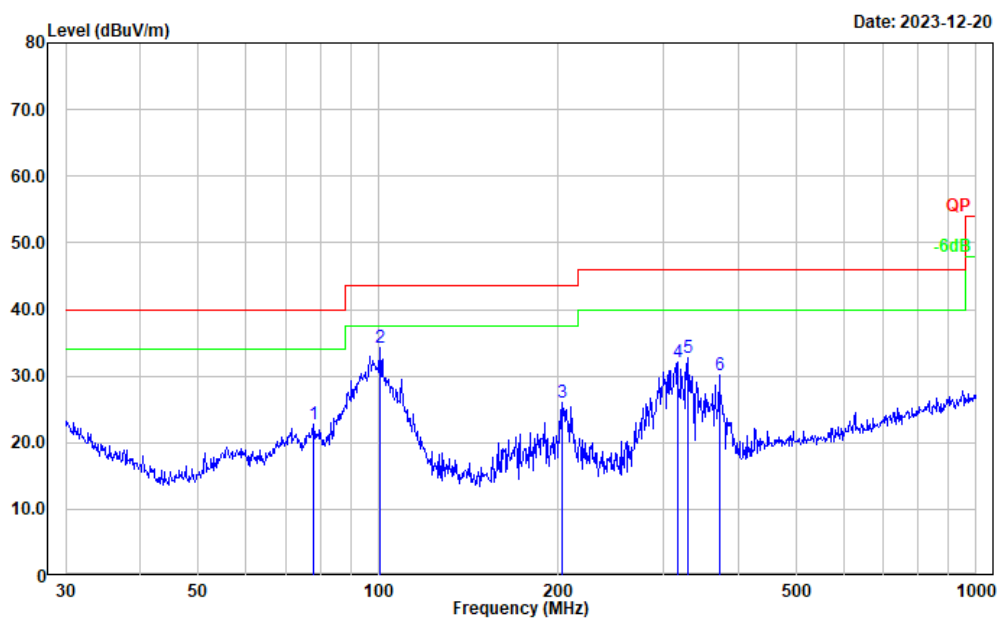
5150-5250MHz: 802.11 n ht40 2TX mode 5230MHz:

Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: horizontal
Note: Transmitting(5G WIFI(5150-5250MHz))



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.317	27.04	-4.36	22.68	40.00	17.32	Peak
2	98.142	47.62	-15.06	32.56	43.50	10.94	QP
3	163.755	39.60	-12.67	26.93	43.50	16.57	Peak
4	210.048	46.71	-12.93	33.78	43.50	9.72	Peak
5	321.061	50.20	-10.78	39.42	46.00	6.58	Peak
6	372.005	38.27	-9.80	28.47	46.00	17.53	Peak

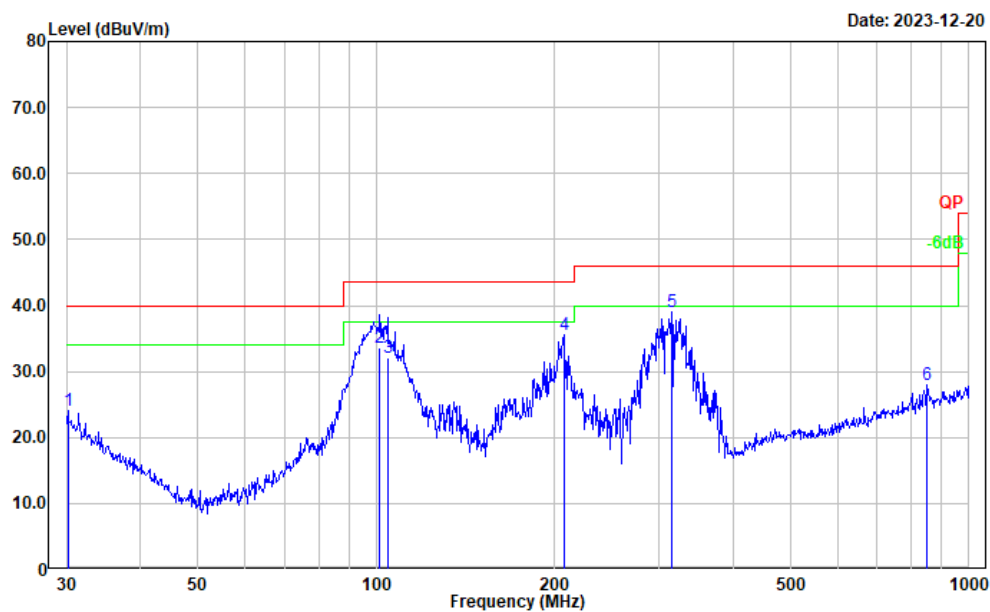
Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: vertical
Note: Transmitting(5G WIFI(5150-5250MHz))



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	77.865	40.30	-17.63	22.67	40.00	17.33	Peak
2	100.581	48.80	-14.49	34.31	43.50	9.19	Peak
3	203.523	38.67	-12.76	25.91	43.50	17.59	Peak
4	316.589	42.89	-10.86	32.03	46.00	13.97	Peak
5	330.195	43.31	-10.55	32.76	46.00	13.24	Peak
6	372.005	39.92	-9.80	30.12	46.00	15.88	Peak

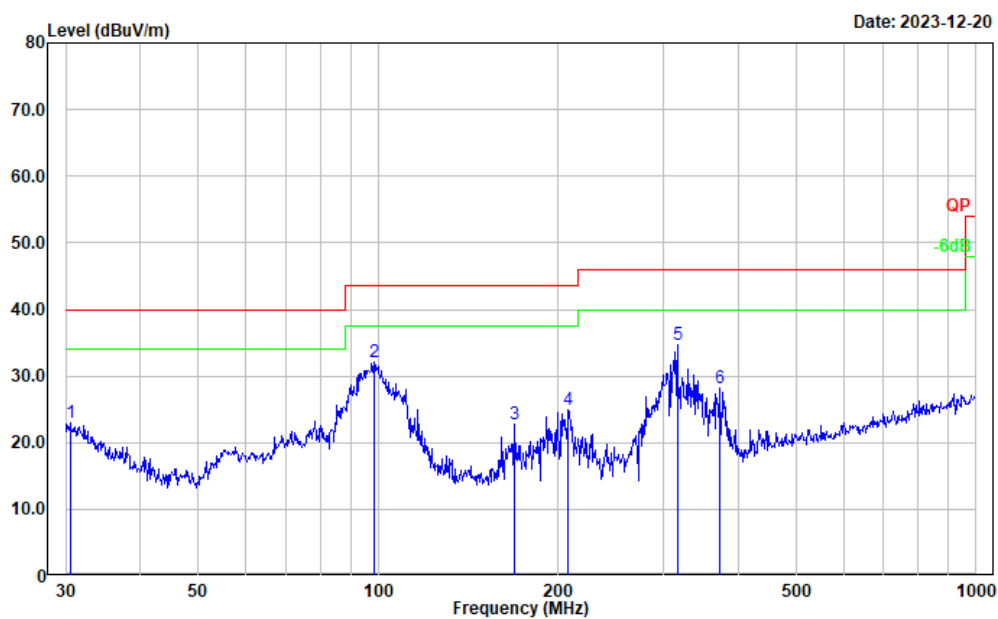
5725-5850MHz: 802.11ax he20 2TX mode 5745MHz

Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: horizontal
Note: Transmitting(5G WIFI(5725-5850MHz))



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.211	28.26	-4.28	23.98	40.00	16.02	Peak
2	101.289	48.04	-14.36	33.68	43.50	9.82	QP
3	104.536	45.84	-13.73	32.11	43.50	11.39	QP
4	207.123	48.46	-12.87	35.59	43.50	7.91	Peak
5	314.377	49.92	-10.89	39.03	46.00	6.97	Peak
6	851.035	29.76	-1.73	28.03	46.00	17.97	Peak

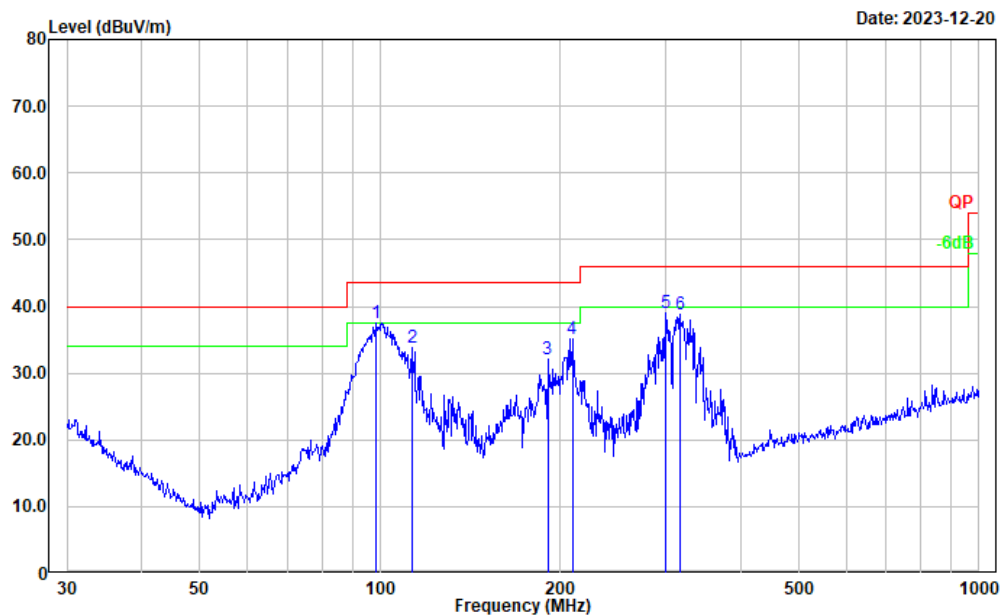
Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: vertical
Note: Transmitting(5G WIFI(5725-5850MHz))



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.531	27.58	-4.53	23.05	40.00	16.95	Peak
2	98.487	47.11	-14.97	32.14	43.50	11.36	Peak
3	169.005	35.86	-13.10	22.76	43.50	20.74	Peak
4	207.850	37.84	-12.90	24.94	43.50	18.56	Peak
5	316.589	45.54	-10.86	34.68	46.00	11.32	Peak
6	373.311	37.86	-9.77	28.09	46.00	17.91	Peak

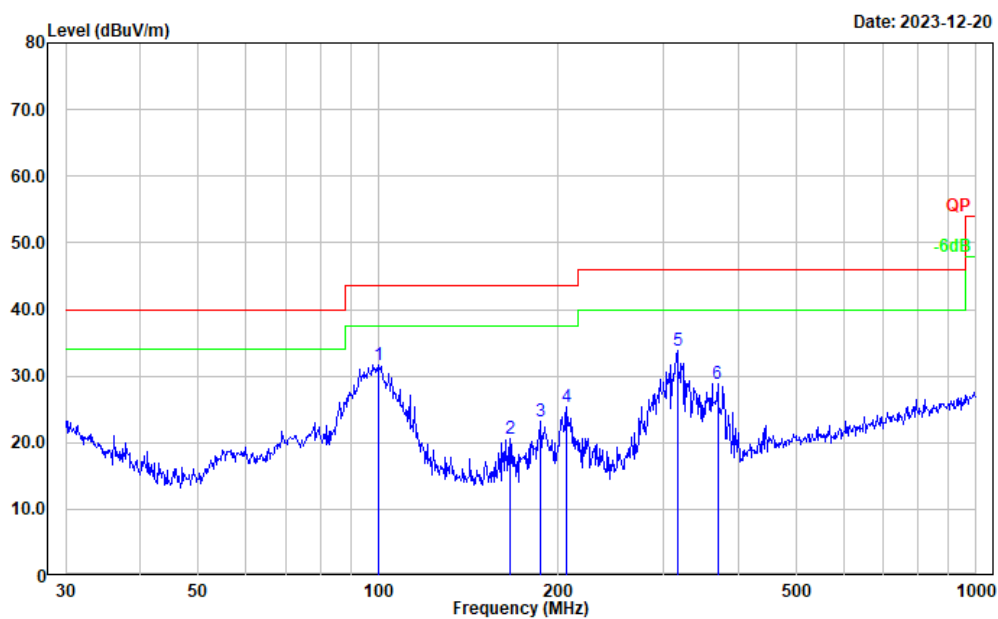
5725-5850MHz: 802.11ax he20 2TX mode 5785MHz

Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: horizontal
Note: Transmitting(5G WIFI(5725-5850MHz))



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	98.487	52.43	-14.97	37.46	43.50	6.04	Peak
2	112.920	46.16	-12.42	33.74	43.50	9.76	Peak
3	190.405	45.92	-13.74	32.18	43.50	11.32	Peak
4	209.313	48.09	-12.92	35.17	43.50	8.33	Peak
5	300.367	50.06	-11.05	39.01	46.00	6.99	Peak
6	316.589	49.72	-10.86	38.86	46.00	7.14	Peak

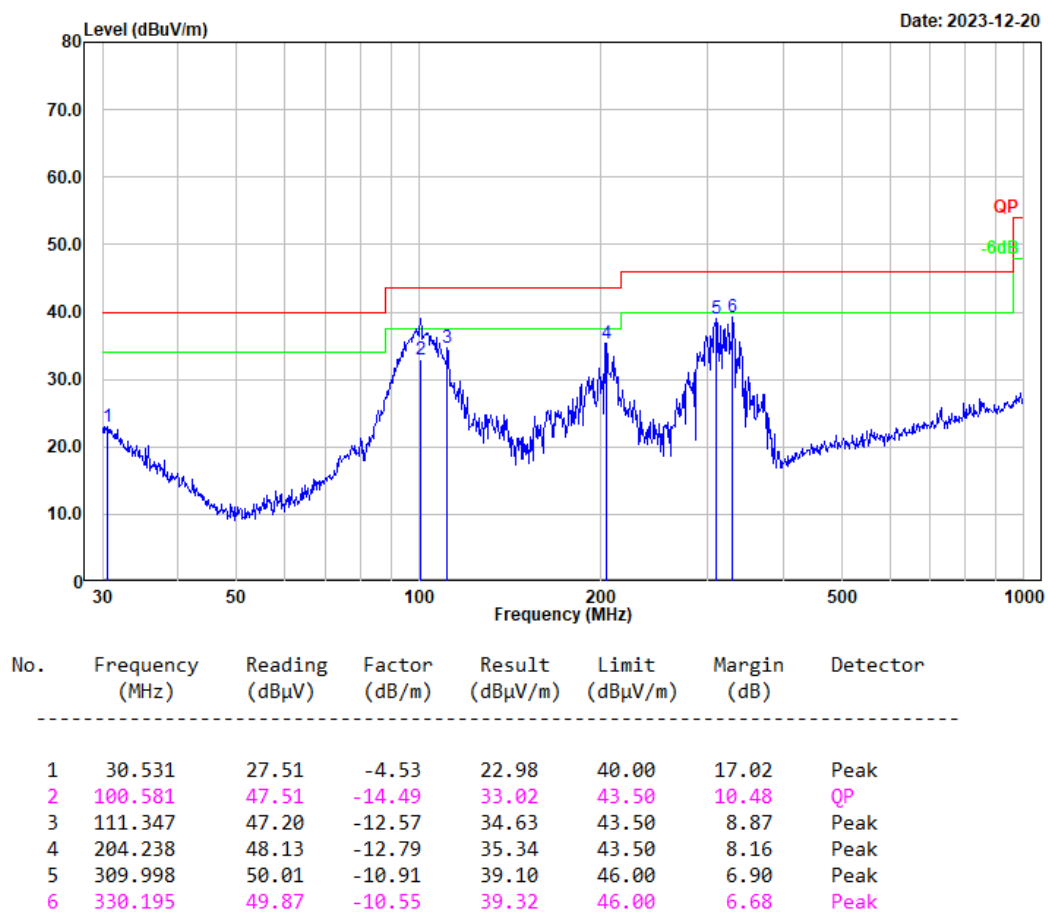
Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: vertical
Note: Transmitting(5G WIFI(5725-5850MHz))



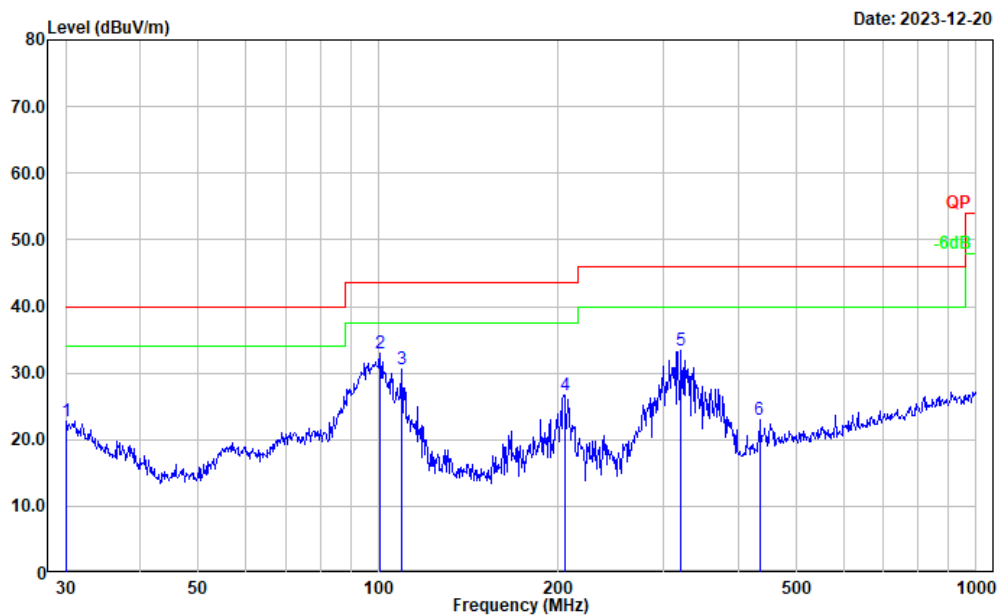
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	99.878	46.33	-14.66	31.67	43.50	11.83	Peak
2	166.068	33.44	-12.80	20.64	43.50	22.86	Peak
3	187.096	36.98	-13.85	23.13	43.50	20.37	Peak
4	206.398	38.26	-12.86	25.40	43.50	18.10	Peak
5	316.589	44.74	-10.86	33.88	46.00	12.12	Peak
6	369.405	38.76	-9.85	28.91	46.00	17.09	Peak

5725-5850MHz: 802.11ax he20 2TX mode 5825MHz

Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: horizontal
Note: Transmitting(5G WIFI(5725-5850MHz))



Project No.: CR231165634-RF
Tester: Jeff Luo
Polarization: vertical
Note: Transmitting(5G WIFI(5725-5850MHz))



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.105	26.97	-4.20	22.77	40.00	17.23	Peak
2	100.581	47.50	-14.49	33.01	43.50	10.49	Peak
3	109.412	43.46	-12.78	30.68	43.50	12.82	Peak
4	204.955	39.51	-12.84	26.67	43.50	16.83	Peak
5	321.061	44.14	-10.78	33.36	46.00	12.64	Peak
6	434.065	30.81	-7.80	23.01	46.00	22.99	Peak

3) 1GHz-40GHz:**5150-5250MHz:****802.11a Mode Chain 0:**

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel:				5180	MHz		
5150.000	50.04	PK	H	11.67	61.71	74.00	12.29
5150.000	39.04	AV	H	11.67	50.71	54.00	3.29
5150.000	51.40	PK	V	11.67	63.07	74.00	10.93
5150.000	39.14	AV	V	11.67	50.81	54.00	3.19
10360.000	41.47	PK	H	20.47	61.94	68.20	6.26
10360.000	44.27	PK	V	20.47	64.74	68.20	3.46
15540.000	34.28	PK	H	24.62	58.90	74.00	15.10
15540.000	21.35	AV	H	24.62	45.97	54.00	8.03
15540.000	34.57	PK	V	24.62	59.19	74.00	14.81
15540.000	21.39	AV	V	24.62	46.01	54.00	7.99
Middle Channel:				5200	MHz		
10400.000	42.21	PK	H	20.54	62.75	68.20	5.45
10400.000	43.81	PK	V	20.54	64.35	68.20	3.85
15600.000	34.23	PK	H	24.71	58.94	74.00	15.06
15600.000	20.94	AV	H	24.71	45.65	54.00	8.35
15600.000	34.71	PK	V	24.71	59.42	74.00	14.58
15600.000	21.37	AV	V	24.71	46.08	54.00	7.92
High Channel:				5240	MHz		
5350.000	51.81	PK	H	11.94	63.75	74.00	10.25
5350.000	38.70	AV	H	11.94	50.64	54.00	3.36
5350.000	50.31	PK	V	11.94	62.25	74.00	11.75
5350.000	38.43	AV	V	11.94	50.37	54.00	3.63
10480.000	39.80	PK	H	20.42	60.22	68.20	7.98
10480.000	44.58	PK	V	20.42	65.00	68.20	3.20
15720.000	34.30	PK	H	24.82	59.12	74.00	14.88
15720.000	21.81	AV	H	24.82	46.63	54.00	7.37
15720.000	34.27	PK	V	24.82	59.09	74.00	14.91
15720.000	21.63	AV	V	24.82	46.45	54.00	7.55

802.11a Mode Chain 1:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180 MHz							
5150.000	50.79	PK	H	11.67	62.46	74.00	11.54
5150.000	39.50	AV	H	11.67	51.17	54.00	2.83
5150.000	50.83	PK	V	11.67	62.50	74.00	11.50
5150.000	39.52	AV	V	11.67	51.19	54.00	2.81
10360.000	36.12	PK	H	20.47	56.59	68.20	11.61
10360.000	43.70	PK	V	20.47	64.17	68.20	4.03
15540.000	34.60	PK	H	24.62	59.22	74.00	14.78
15540.000	22.12	AV	H	24.62	46.74	54.00	7.26
15540.000	34.95	PK	V	24.62	59.57	74.00	14.43
15540.000	21.63	AV	V	24.62	46.25	54.00	7.75
Middle Channel: 5200 MHz							
10400.000	47.31	PK	H	14.52	61.83	68.20	6.37
10400.000	43.74	PK	V	20.54	64.28	68.20	3.92
15600.000	35.06	PK	H	24.71	59.77	74.00	14.23
15600.000	21.20	AV	H	24.71	45.91	54.00	8.09
15600.000	35.04	PK	V	24.71	59.75	74.00	14.25
15600.000	21.52	AV	V	24.71	46.23	54.00	7.77
High Channel: 5240 MHz							
5350.000	51.76	PK	H	11.94	63.70	74.00	10.30
5350.000	38.79	AV	H	11.94	50.73	54.00	3.27
5350.000	51.43	PK	V	11.94	63.37	74.00	10.63
5350.000	38.68	AV	V	11.94	50.62	54.00	3.38
10480.000	39.28	PK	H	20.42	59.70	68.20	8.50
10480.000	43.31	PK	V	20.42	63.73	68.20	4.47
15720.000	34.24	PK	H	24.82	59.06	74.00	14.94
15720.000	21.25	AV	H	24.82	46.07	54.00	7.93
15720.000	34.98	PK	V	24.82	59.80	74.00	14.20
15720.000	21.49	AV	V	24.82	46.31	54.00	7.69

802.11n ht20 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180 MHz							
5150.000	51.08	PK	H	11.67	62.75	74.00	11.25
5150.000	39.18	AV	H	11.67	50.85	54.00	3.15
5150.000	51.77	PK	V	11.67	63.44	74.00	10.56
5150.000	39.16	AV	V	11.67	50.83	54.00	3.17
10360.000	40.37	PK	H	20.47	60.84	68.20	7.36
10360.000	44.01	PK	V	20.47	64.48	68.20	3.72
15540.000	34.68	PK	H	24.62	59.30	74.00	14.70
15540.000	21.63	AV	H	24.62	46.25	54.00	7.75
15540.000	34.87	PK	V	24.62	59.49	74.00	14.51
15540.000	21.68	AV	V	24.62	46.30	54.00	7.70
Middle Channel: 5200 MHz							
10400.000	41.77	PK	H	20.54	62.31	68.20	5.89
10400.000	44.60	PK	V	20.54	65.14	68.20	3.06
15600.000	35.08	PK	H	24.71	59.79	74.00	14.21
15600.000	21.89	AV	H	24.71	46.60	54.00	7.40
15600.000	34.90	PK	V	24.71	59.61	74.00	14.39
15600.000	21.51	AV	V	24.71	46.22	54.00	7.78
High Channel: 5240 MHz							
5350.000	52.13	PK	H	11.94	64.07	74.00	9.93
5350.000	38.66	AV	H	11.94	50.60	54.00	3.40
5350.000	51.58	PK	V	11.94	63.52	74.00	10.48
5350.000	38.54	AV	V	11.94	50.48	54.00	3.52
10480.000	42.19	PK	H	20.42	62.61	68.20	5.59
10480.000	44.32	PK	V	20.42	64.74	68.20	3.46
15720.000	35.01	PK	H	24.82	59.83	74.00	14.17
15720.000	21.71	AV	H	24.82	46.53	54.00	7.47
15720.000	34.47	PK	V	24.82	59.29	74.00	14.71
15720.000	21.52	AV	V	24.82	46.34	54.00	7.66

802.11n ht40 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190 MHz							
5150.000	53.97	PK	H	11.67	65.64	74.00	8.36
5150.000	39.35	AV	H	11.67	51.02	54.00	2.98
5150.000	52.16	PK	V	11.67	63.83	74.00	10.17
5150.000	39.11	AV	V	11.67	50.78	54.00	3.22
10380.000	41.26	PK	H	20.51	61.77	68.20	6.43
10380.000	44.02	PK	V	20.51	64.53	68.20	3.67
15570.000	35.25	PK	H	24.67	59.92	74.00	14.08
15570.000	21.72	AV	H	24.67	46.39	54.00	7.61
15570.000	35.42	PK	V	24.67	60.09	74.00	13.91
15570.000	21.33	AV	V	24.67	46.00	54.00	8.00
High Channel: 5230 MHz							
5350.000	52.74	PK	H	11.94	64.68	74.00	9.32
5350.000	38.76	AV	H	11.94	50.70	54.00	3.30
5350.000	50.90	PK	V	11.94	62.84	74.00	11.16
5350.000	38.51	AV	V	11.94	50.45	54.00	3.55
10460.000	37.77	PK	H	20.45	58.22	68.20	9.98
10460.000	44.19	PK	V	20.45	64.64	68.20	3.56
15690.000	35.25	PK	H	24.77	60.02	74.00	13.98
15690.000	21.54	AV	H	24.77	46.31	54.00	7.69
15690.000	34.88	PK	V	24.77	59.65	74.00	14.35
15690.000	21.47	AV	V	24.77	46.24	54.00	7.76

802.11ax he20 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180 MHz							
5150.000	52.63	PK	H	11.67	64.30	74.00	9.70
5150.000	39.29	AV	H	11.67	50.96	54.00	3.04
5150.000	51.13	PK	V	11.67	62.80	74.00	11.20
5150.000	39.03	AV	V	11.67	50.70	54.00	3.30
10360.000	42.70	PK	H	20.47	63.17	68.20	5.03
10360.000	44.41	PK	V	20.47	64.88	68.20	3.32
15540.000	34.94	PK	H	24.62	59.56	74.00	14.44
15540.000	21.44	AV	H	24.62	46.06	54.00	7.94
15540.000	35.07	PK	V	24.62	59.69	74.00	14.31
15540.000	21.69	AV	V	24.62	46.31	54.00	7.69
Middle Channel: 5200 MHz							
10400.000	42.86	PK	H	20.54	63.40	68.20	4.80
10400.000	44.59	PK	V	20.54	65.13	68.20	3.07
15600.000	35.66	PK	H	24.71	60.37	74.00	13.63
15600.000	21.90	AV	H	24.71	46.61	54.00	7.39
15600.000	34.61	PK	V	24.71	59.32	74.00	14.68
15600.000	21.64	AV	V	24.71	46.35	54.00	7.65
High Channel: 5240 MHz							
5350.000	51.86	PK	H	11.94	63.80	74.00	10.20
5350.000	38.72	AV	H	11.94	50.66	54.00	3.34
5350.000	50.86	PK	V	11.94	62.80	74.00	11.20
5350.000	38.61	AV	V	11.94	50.55	54.00	3.45
10480.000	41.21	PK	H	20.42	61.63	68.20	6.57
10480.000	43.41	PK	V	20.42	63.83	68.20	4.37
15720.000	34.76	PK	H	24.82	59.58	74.00	14.42
15720.000	21.32	AV	H	24.82	46.14	54.00	7.86
15720.000	34.86	PK	V	24.82	59.68	74.00	14.32
15720.000	21.45	AV	V	24.82	46.27	54.00	7.73

802.11ax he40 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190 MHz							
5150.000	52.74	PK	H	11.67	64.41	74.00	9.59
5150.000	39.44	AV	H	11.67	51.11	54.00	2.89
5150.000	50.83	PK	V	11.67	62.50	74.00	11.50
5150.000	39.22	AV	V	11.67	50.89	54.00	3.11
10380.000	43.71	PK	H	20.51	64.22	68.20	3.98
10380.000	44.02	PK	V	20.51	64.53	68.20	3.67
15570.000	34.92	PK	H	24.67	59.59	74.00	14.41
15570.000	21.72	AV	H	24.67	46.39	54.00	7.61
15570.000	34.81	PK	V	24.67	59.48	74.00	14.52
15570.000	21.68	AV	V	24.67	46.35	54.00	7.65
High Channel: 5230 MHz							
5350.000	46.36	PK	H	11.94	58.30	74.00	15.70
5350.000	32.70	AV	H	11.94	44.64	54.00	9.36
5350.000	44.72	PK	V	11.94	56.66	74.00	17.34
5350.000	32.61	AV	V	11.94	44.55	54.00	9.45
10460.000	37.85	PK	H	20.45	58.30	68.20	9.90
10460.000	37.73	PK	V	20.45	58.18	68.20	10.02
15690.000	33.47	PK	H	24.77	58.24	74.00	15.76
15690.000	20.64	AV	H	24.77	45.41	54.00	8.59
15690.000	33.62	PK	V	24.77	58.39	74.00	15.61
15690.000	20.17	AV	V	24.77	44.94	54.00	9.06

802.11ac80 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel:				5210	MHz		
5150.000	52.94	PK	H	11.67	64.61	74.00	9.39
5150.000	39.38	AV	H	11.67	51.05	54.00	2.95
5150.000	51.16	PK	V	11.67	62.83	74.00	11.17
5150.000	39.12	AV	V	11.67	50.79	54.00	3.21
5350.000	52.01	PK	H	11.94	63.95	74.00	10.05
5350.000	38.73	AV	H	11.94	50.67	54.00	3.33
5350.000	52.04	PK	V	11.94	63.98	74.00	10.02
5350.000	38.44	AV	V	11.94	50.38	54.00	3.62
10420.000	39.40	PK	H	20.51	59.91	68.20	8.29
10420.000	42.40	PK	V	20.51	62.91	68.20	5.29
15630.000	35.20	PK	H	24.73	59.93	74.00	14.07
15630.000	21.91	AV	H	24.73	46.64	54.00	7.36
15630.000	34.39	PK	V	24.73	59.12	74.00	14.88
15630.000	21.44	AV	V	24.73	46.17	54.00	7.83

802.11ax he80 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5210 MHz							
5150.000	52.94	PK	H	11.67	64.61	74.00	9.39
5150.000	39.29	AV	H	11.67	50.96	54.00	3.04
5150.000	51.22	PK	V	11.67	62.89	74.00	11.11
5150.000	39.10	AV	V	11.67	50.77	54.00	3.23
5350.000	52.45	PK	H	11.94	64.39	74.00	9.61
5350.000	38.71	AV	H	11.94	50.65	54.00	3.35
5350.000	50.27	PK	V	11.94	62.21	74.00	11.79
5350.000	38.43	AV	V	11.94	50.37	54.00	3.63
10420.000	40.30	PK	H	20.51	60.81	68.20	7.39
10420.000	43.91	PK	V	20.51	64.42	68.20	3.78
15630.000	34.97	PK	H	24.73	59.70	74.00	14.30
15630.000	21.53	AV	H	24.73	46.26	54.00	7.74
15630.000	34.35	PK	V	24.73	59.08	74.00	14.92
15630.000	21.65	AV	V	24.73	46.38	54.00	7.62

5725-5850MHz**802.11a Mode Chain 0:**

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel:				5745	MHz		
11490.000	45.73	PK	H	21.49	67.22	74.00	6.78
11490.000	31.16	AV	H	21.49	52.65	54.00	1.35
11490.000	41.44	PK	V	21.49	62.93	74.00	11.07
11490.000	28.60	AV	V	21.49	50.09	54.00	3.91
17235.000	32.78	PK	H	28.71	61.49	68.20	6.71
17235.000	32.64	PK	V	28.71	61.35	68.20	6.85
Middle Channel:				5785	MHz		
11570.000	44.93	PK	H	21.71	66.64	74.00	7.36
11570.000	30.68	AV	H	21.71	52.39	54.00	1.61
11570.000	42.14	PK	V	21.71	63.85	74.00	10.15
11570.000	29.25	AV	V	21.71	50.96	54.00	3.04
17355.000	34.36	PK	H	29.35	63.71	68.20	4.49
17355.000	34.25	PK	V	29.35	63.60	68.20	4.60
High Channel:				5825	MHz		
11650.000	45.03	PK	H	22.04	67.07	74.00	6.93
11650.000	30.20	AV	H	22.04	52.24	54.00	1.76
11650.000	44.22	PK	V	22.04	66.26	74.00	7.74
11650.000	29.07	AV	V	22.04	51.11	54.00	2.89
17475.000	33.69	PK	H	29.89	63.58	68.20	4.62
17475.000	34.35	PK	V	29.89	64.24	68.20	3.96

802.11a Mode Chain 1:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel:				5745	MHz		
11490.000	41.81	PK	H	21.49	63.30	74.00	10.70
11490.000	26.87	AV	H	21.49	48.36	54.00	5.64
11490.000	39.59	PK	V	21.49	61.08	74.00	12.92
11490.000	25.52	AV	V	21.49	47.01	54.00	6.99
17235.000	33.41	PK	H	28.71	62.12	68.20	6.08
17235.000	33.62	PK	V	28.71	62.33	68.20	5.87
Middle Channel:				5785	MHz		
11570.000	41.49	PK	H	21.71	63.20	74.00	10.80
11570.000	28.26	AV	H	21.71	49.97	54.00	4.03
11570.000	38.66	PK	V	21.71	60.37	74.00	13.63
11570.000	26.08	AV	V	21.71	47.79	54.00	6.21
17355.000	33.73	PK	H	29.35	63.08	68.20	5.12
17355.000	33.49	PK	V	29.35	62.84	68.20	5.36
High Channel:				5825	MHz		
11650.000	41.91	PK	H	22.04	63.95	74.00	10.05
11650.000	27.37	AV	H	22.04	49.41	54.00	4.59
11650.000	38.82	PK	V	22.04	60.86	74.00	13.14
11650.000	25.37	AV	V	22.04	47.41	54.00	6.59
17475.000	33.39	PK	H	29.89	63.28	68.20	4.92
17475.000	33.10	PK	V	29.89	62.99	68.20	5.21

802.11n ht20 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel:				5745	MHz		
11490.000	45.28	PK	H	21.49	66.77	74.00	7.23
11490.000	31.48	AV	H	21.49	52.97	54.00	1.03
11490.000	41.62	PK	V	21.49	63.11	74.00	10.89
11490.000	27.45	AV	V	21.49	48.94	54.00	5.06
17235.000	33.39	PK	H	28.71	62.10	68.20	6.10
17235.000	33.51	PK	V	28.71	62.22	68.20	5.98
Middle Channel:				5785	MHz		
11570.000	45.48	PK	H	21.71	67.19	74.00	6.81
11570.000	30.54	AV	H	21.71	52.25	54.00	1.75
11570.000	41.14	PK	V	21.71	62.85	74.00	11.15
11570.000	26.82	AV	V	21.71	48.53	54.00	5.47
17355.000	33.39	PK	H	29.35	62.74	68.20	5.46
17355.000	33.41	PK	V	29.35	62.76	68.20	5.44
High Channel:				5825	MHz		
11650.000	45.36	PK	H	22.04	67.40	74.00	6.60
11650.000	30.83	AV	H	22.04	52.87	54.00	1.13
11650.000	41.28	PK	V	22.04	63.32	74.00	10.68
11650.000	27.71	AV	V	22.04	49.75	54.00	4.25
17475.000	33.69	PK	H	29.89	63.58	68.20	4.62
17475.000	33.42	PK	V	29.89	63.31	68.20	4.89

802.11n ht40 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel:				5755	MHz		
11510.000	47.81	PK	H	21.48	69.29	74.00	4.71
11510.000	31.72	AV	H	21.48	53.20	54.00	0.80
11510.000	44.09	PK	V	21.48	65.57	74.00	8.43
11510.000	28.23	AV	V	21.48	49.71	54.00	4.29
17265.000	33.40	PK	H	28.79	62.19	68.20	6.01
17265.000	32.25	PK	V	28.79	61.04	68.20	7.16
High Channel:				5795	MHz		
11590.000	45.46	PK	H	21.78	67.24	74.00	6.76
11590.000	30.87	AV	H	21.78	52.65	54.00	1.35
11590.000	43.18	PK	V	21.78	64.96	74.00	9.04
11590.000	27.68	AV	V	21.78	49.46	54.00	4.54
17385.000	33.61	PK	H	29.59	63.20	68.20	5.00
17385.000	33.21	PK	V	29.59	62.80	68.20	5.40

802.11ax he20 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel:				5745	MHz		
11490.000	51.20	PK	H	21.49	72.69	74.00	1.31
11490.000	29.92	AV	H	21.49	51.41	54.00	2.59
11490.000	45.27	PK	V	21.49	66.76	74.00	7.24
11490.000	23.99	AV	V	21.49	45.48	54.00	8.52
17235.000	34.31	PK	H	28.71	63.02	68.20	5.18
17235.000	33.55	PK	V	28.71	62.26	68.20	5.94
Middle Channel:				5785	MHz		
11570.000	50.22	PK	H	21.71	71.93	74.00	2.07
11570.000	29.93	AV	H	21.71	51.64	54.00	2.36
11570.000	48.18	PK	V	21.71	69.89	74.00	4.11
11570.000	27.32	AV	V	21.71	49.03	54.00	4.97
17355.000	34.69	PK	H	29.35	64.04	68.20	4.16
17355.000	34.35	PK	V	29.35	63.70	68.20	4.50
High Channel:				5825	MHz		
11650.000	49.47	PK	H	22.04	71.51	74.00	2.49
11650.000	28.71	AV	H	22.04	50.75	54.00	3.25
11650.000	46.95	PK	V	22.04	68.99	74.00	5.01
11650.000	26.62	AV	V	22.04	48.66	54.00	5.34
17475.000	34.62	PK	H	29.89	64.51	68.20	3.69
17475.000	34.36	PK	V	29.89	64.25	68.20	3.95

802.11ax he40 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel:				5755	MHz		
11510.000	50.42	PK	H	21.48	71.90	74.00	2.10
11510.000	26.65	AV	H	21.48	48.13	54.00	5.87
11510.000	46.80	PK	V	21.48	68.28	74.00	5.72
11510.000	23.22	AV	V	21.48	44.70	54.00	9.30
17265.000	33.41	PK	H	28.79	62.20	68.20	6.00
17265.000	33.96	PK	V	28.79	62.75	68.20	5.45
High Channel:				5795	MHz		
11590.000	49.76	PK	H	21.78	71.54	74.00	2.46
11590.000	25.87	AV	H	21.78	47.65	54.00	6.35
11590.000	46.71	PK	V	21.78	68.49	74.00	5.51
11590.000	23.16	AV	V	21.78	44.94	54.00	9.06
17385.000	33.37	PK	H	29.59	62.96	68.20	5.24
17385.000	33.58	PK	V	29.59	63.17	68.20	5.03

802.11ac vht80 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel:				5775	MHz		
11550.000	46.08	PK	H	21.63	67.71	74.00	6.29
11550.000	21.82	AV	H	21.63	43.45	54.00	10.55
11550.000	43.63	PK	V	21.63	65.26	74.00	8.74
11550.000	20.34	AV	V	21.63	41.97	54.00	12.03
17325.000	33.46	PK	H	29.11	62.57	68.20	5.63
17325.000	33.69	PK	V	29.11	62.80	68.20	5.40

802.11ax he80 Mode(MIMO):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel:				5775	MHz		
11550.000	47.23	PK	H	21.63	68.86	74.00	5.14
11550.000	22.61	AV	H	21.63	44.24	54.00	9.76
11550.000	43.35	PK	V	21.63	64.98	74.00	9.02
11550.000	20.18	AV	V	21.63	41.81	54.00	12.19
17325.000	33.69	PK	H	29.11	62.80	68.20	5.40
17325.000	33.41	PK	V	29.11	62.52	68.20	5.68

Test plots for 5.8G Band Edge Measurements (Radiated)

Chain 0:

802.11a

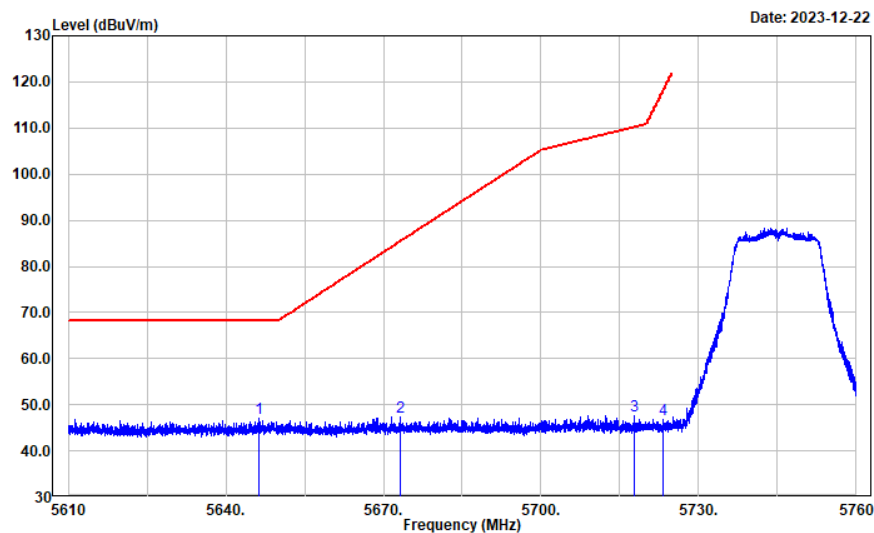
Test Channel:

5745MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5646.277	34.84	12.30	47.14	68.20	21.06	Peak
2	5673.252	34.88	12.43	47.31	85.45	38.14	Peak
3	5717.691	35.18	12.57	47.75	110.15	62.40	Peak
4	5723.212	34.33	12.57	46.90	118.13	71.23	Peak

802.11a

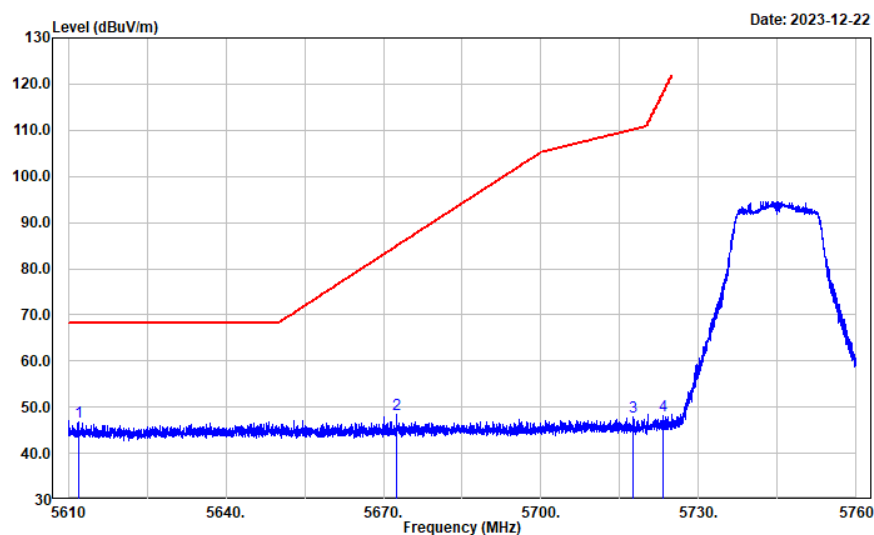
Test Channel:

5745MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5611.920	34.66	12.10	46.76	68.20	21.44	Peak
2	5672.502	36.12	12.43	48.55	84.89	36.34	Peak
3	5717.602	35.40	12.57	47.97	110.13	62.16	Peak
4	5723.212	35.58	12.57	48.15	118.13	69.98	Peak

802.11a

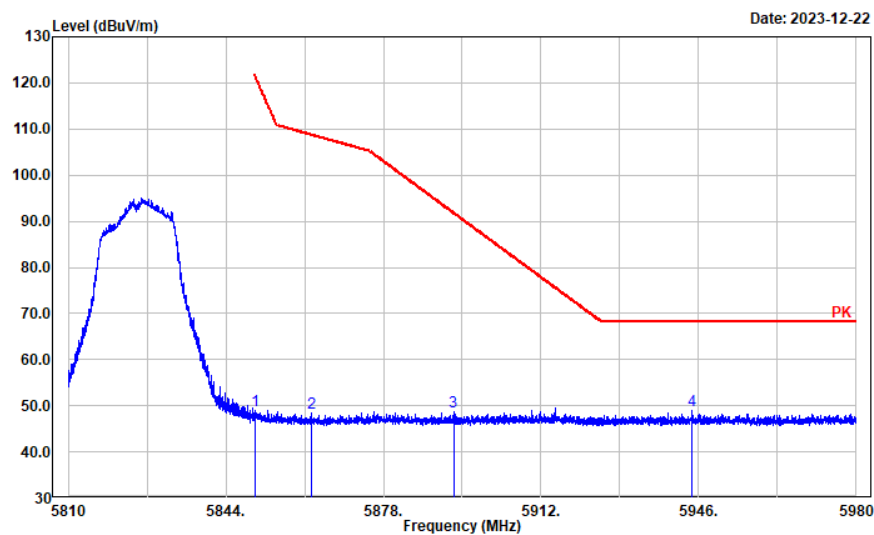
Test Channel:

5825MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5850.400	36.32	12.77	49.09	121.29	72.20	Peak
2	5862.473	35.59	12.83	48.42	108.71	60.29	Peak
3	5893.113	35.83	12.98	48.81	91.76	42.95	Peak
4	5944.633	35.96	13.03	48.99	68.20	19.21	Peak

802.11a

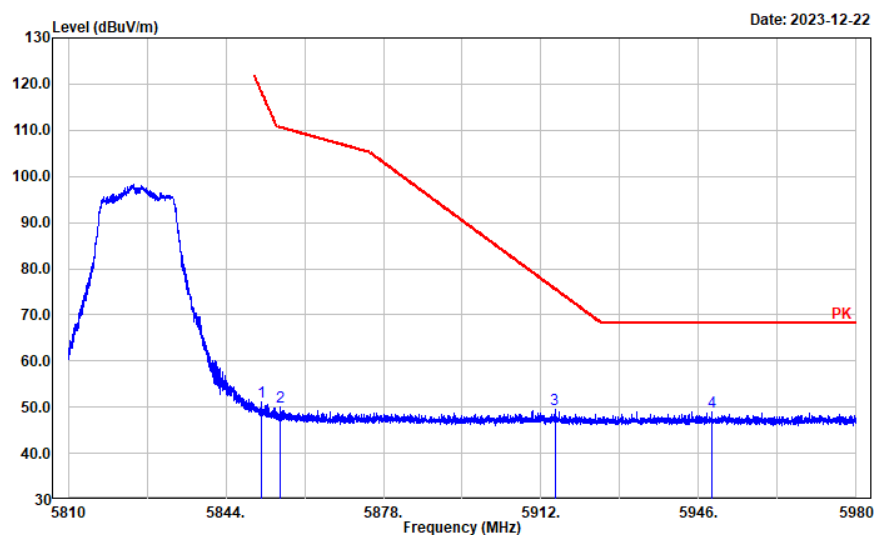
Test Channel:

5825MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5851.625	38.37	12.78	51.15	118.50	67.35	Peak
2	5855.841	37.13	12.80	49.93	110.56	60.63	Peak
3	5914.979	36.36	13.02	49.38	75.59	26.21	Peak
4	5948.816	36.06	13.03	49.09	68.20	19.11	Peak

Chain 1:

802.11a

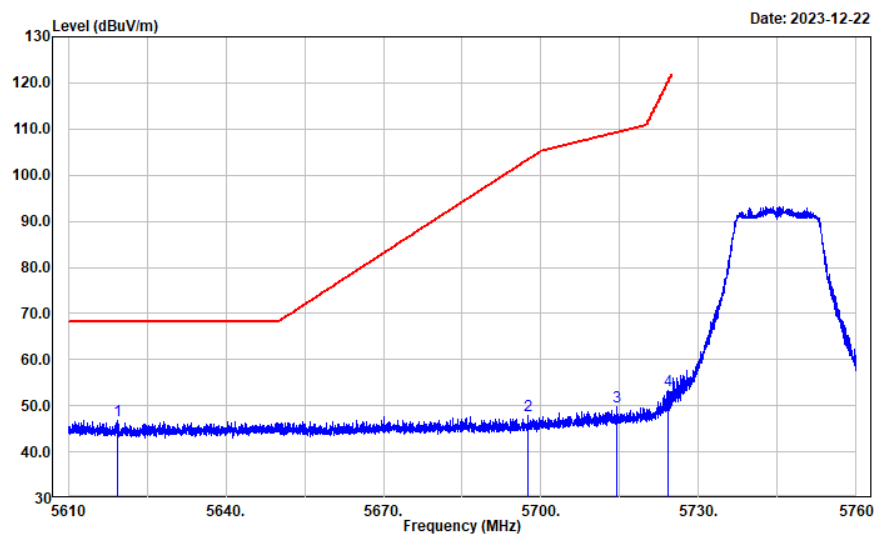
Test Channel:

5745MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5619.482	34.55	12.15	46.70	68.20	21.50	Peak
2	5697.498	35.32	12.54	47.86	103.36	55.50	Peak
3	5714.481	37.21	12.56	49.77	109.26	59.49	Peak
4	5724.173	40.72	12.57	53.29	120.31	67.02	Peak

802.11a

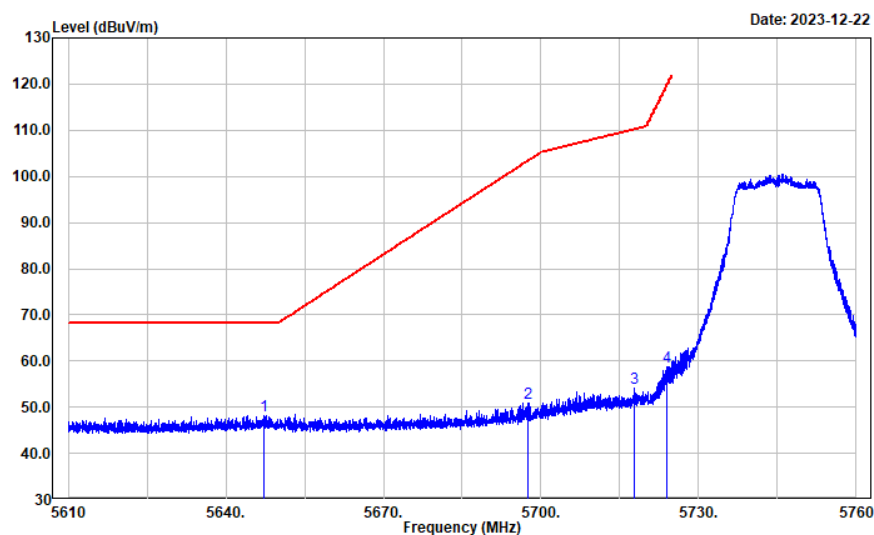
Test Channel:

5745MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5647.237	35.94	12.32	48.26	68.20	19.94	Peak
2	5697.587	38.32	12.54	50.86	103.42	52.56	Peak
3	5717.812	41.47	12.57	54.04	110.19	56.15	Peak
4	5723.933	46.24	12.57	58.81	119.77	60.96	Peak

802.11a

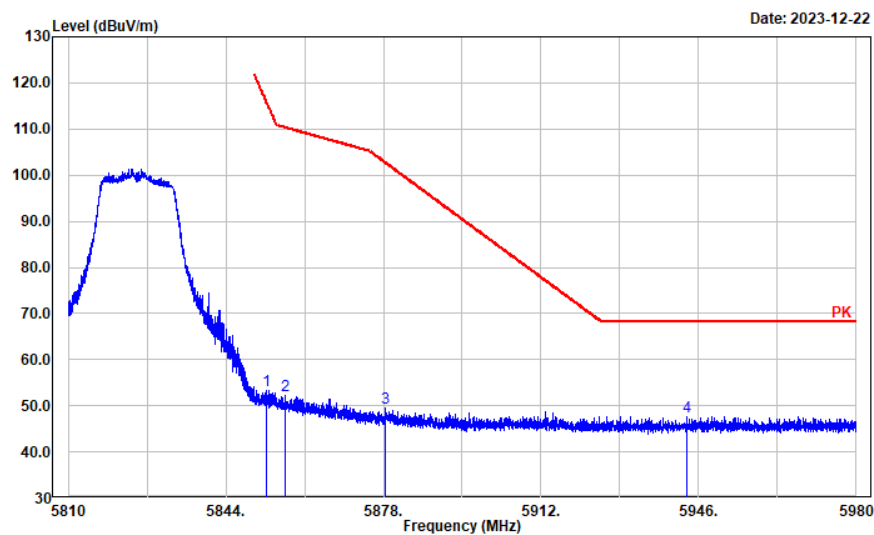
Test Channel:

5825MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5852.747	40.65	12.78	53.43	115.94	62.51	Peak
2	5856.896	39.30	12.81	52.11	110.27	58.16	Peak
3	5878.422	36.63	12.91	49.54	102.66	53.12	Peak
4	5943.341	34.70	13.03	47.73	68.20	20.47	Peak

802.11a

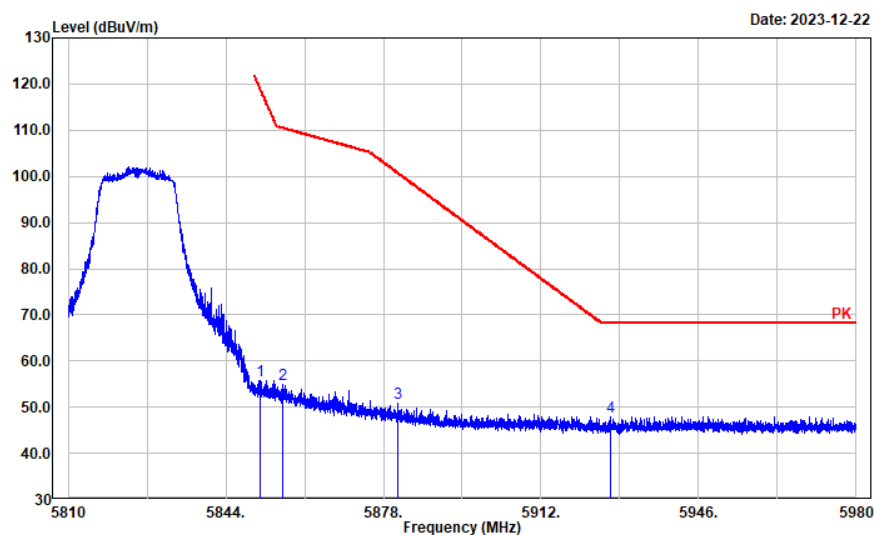
Test Channel:

5825MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5851.352	42.89	12.78	55.67	119.12	63.45	Peak
2	5856.351	42.25	12.81	55.06	110.42	55.36	Peak
3	5881.210	37.82	12.92	50.74	100.59	49.85	Peak
4	5926.983	34.84	13.02	47.86	68.20	20.34	Peak

802.11n ht20

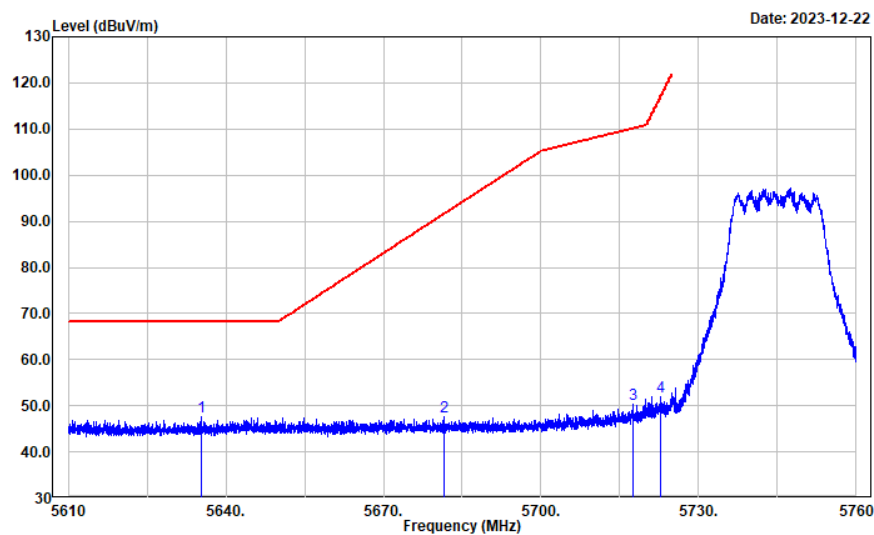
Test Channel:

5745MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5635.295	35.36	12.24	47.60	68.20	20.60	Peak
2	5681.594	35.09	12.47	47.56	91.62	44.06	Peak
3	5717.542	37.72	12.57	50.29	110.11	59.82	Peak
4	5722.853	39.45	12.57	52.02	117.31	65.29	Peak

802.11n ht20

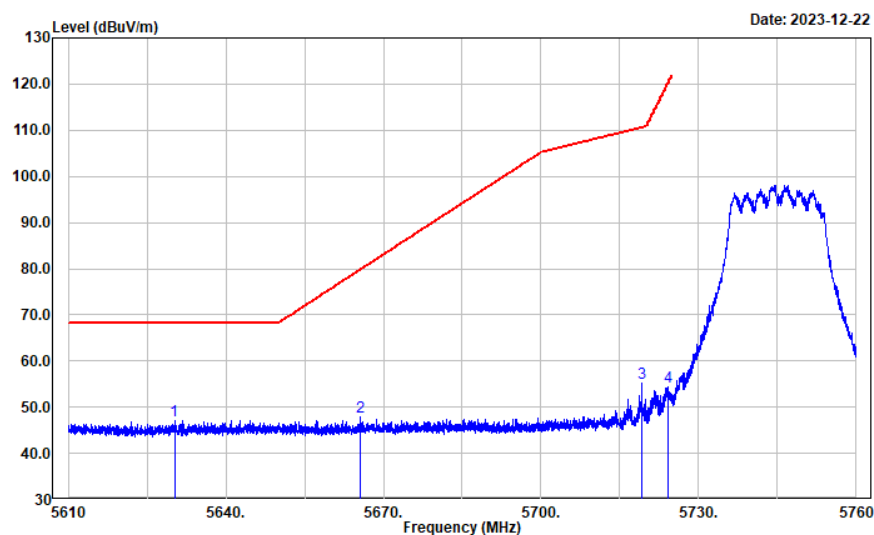
Test Channel:

5745MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5630.224	34.98	12.22	47.20	68.20	21.00	Peak
2	5665.541	35.38	12.39	47.77	79.74	31.97	Peak
3	5719.102	42.54	12.57	55.11	110.55	55.44	Peak
4	5724.263	41.90	12.57	54.47	120.52	66.05	Peak

802.11n ht20

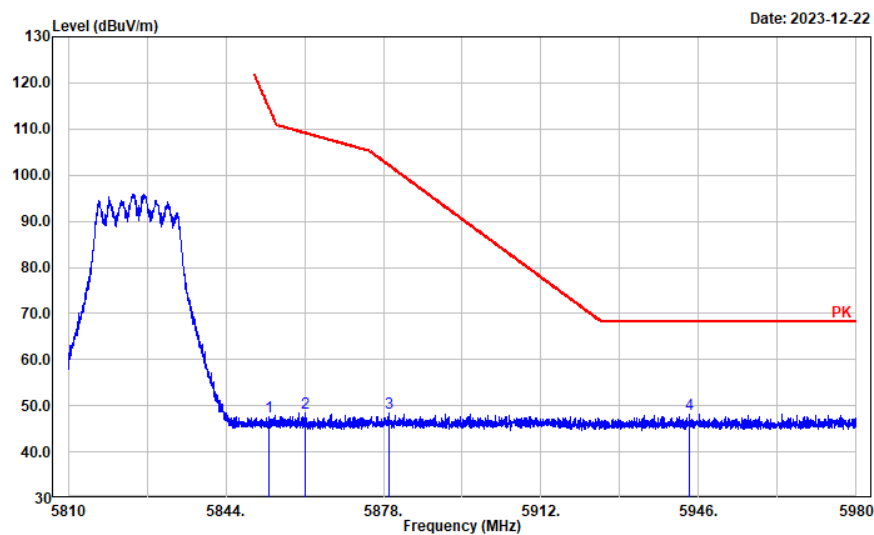
Test Channel:

5825MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5853.359	34.77	12.79	47.56	114.54	66.98	Peak
2	5861.146	35.67	12.82	48.49	109.08	60.59	Peak
3	5879.170	35.38	12.92	48.30	102.10	53.80	Peak
4	5944.089	35.25	13.03	48.28	68.20	19.92	Peak

802.11n ht20

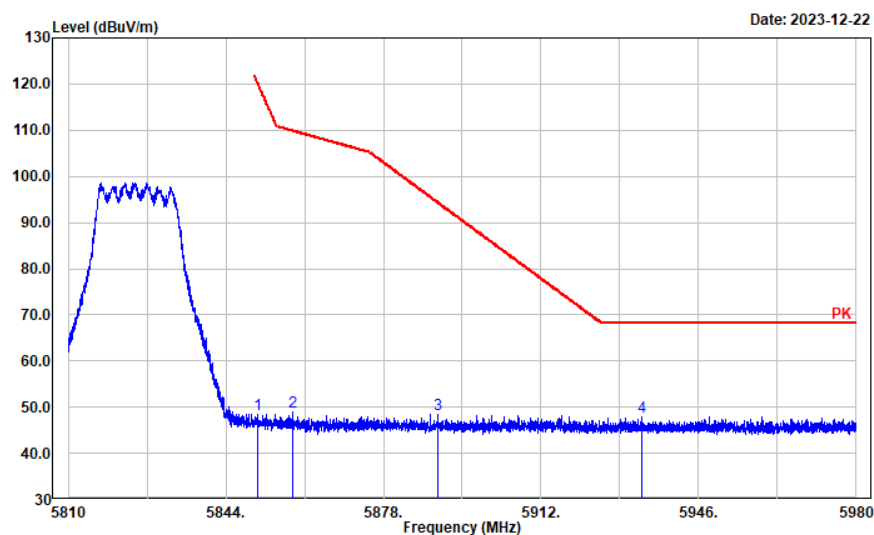
Test Channel:

5825MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5850.774	35.71	12.77	48.48	120.43	71.95	Peak
2	5858.426	36.10	12.80	48.90	109.84	60.94	Peak
3	5889.814	35.51	12.97	48.48	94.20	45.72	Peak
4	5933.853	34.96	13.03	47.99	68.20	20.21	Peak

802.11n ht40

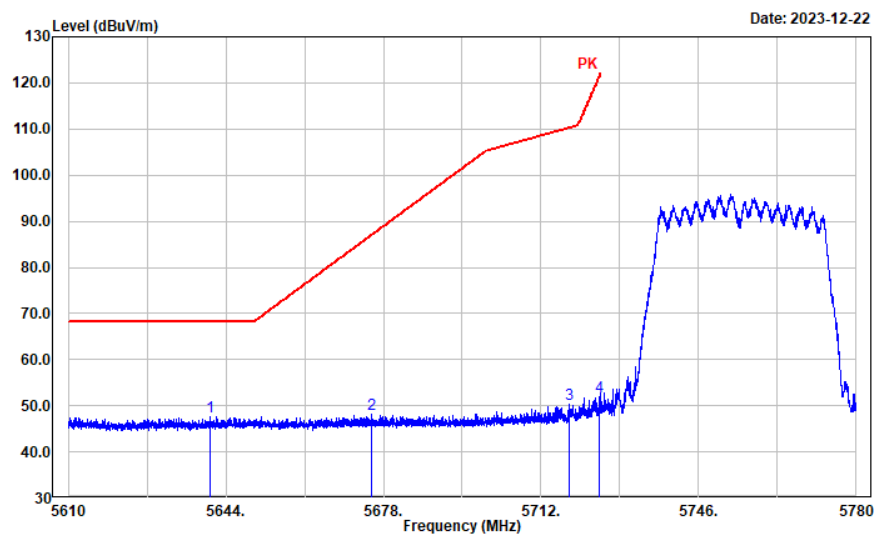
Test Channel:

5755MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5640.742	35.33	12.28	47.61	68.20	20.59	Peak
2	5675.361	35.77	12.44	48.21	87.01	38.80	Peak
3	5718.040	37.67	12.57	50.24	110.25	60.01	Peak
4	5724.569	39.32	12.57	51.89	121.22	69.33	Peak

802.11n ht40

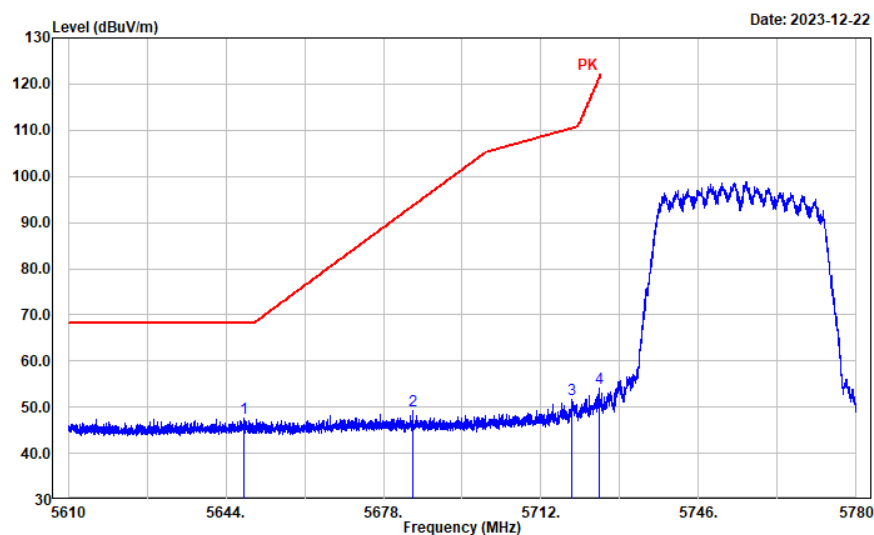
Test Channel:

5755MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5647.782	35.30	12.32	47.62	68.20	20.58	Peak
2	5684.407	36.73	12.48	49.21	93.70	44.49	Peak
3	5718.652	39.18	12.57	51.75	110.42	58.67	Peak
4	5724.467	41.59	12.57	54.16	120.98	66.82	Peak

802.11n ht40

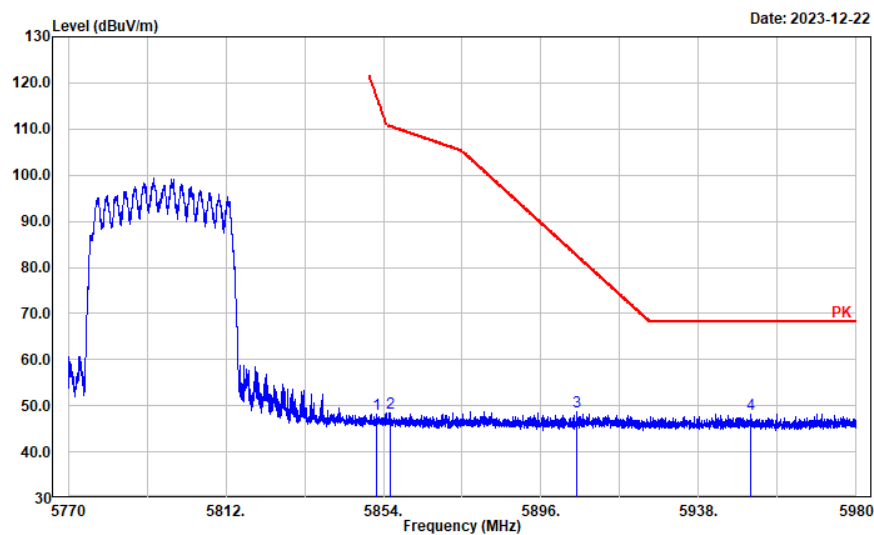
Test Channel:

5795MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5852.210	35.39	12.78	48.17	117.16	68.99	Peak
2	5855.949	35.68	12.80	48.48	110.53	62.05	Peak
3	5905.645	35.69	13.02	48.71	82.49	33.78	Peak
4	5952.022	35.14	13.04	48.18	68.20	20.02	Peak

802.11n ht40

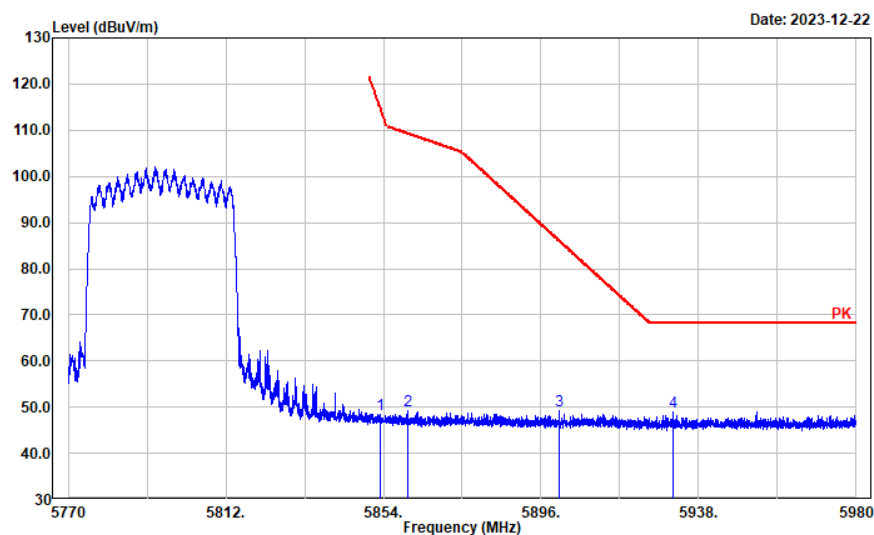
Test Channel:

5795MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5853.093	35.71	12.78	48.49	115.15	66.66	Peak
2	5860.360	36.31	12.82	49.13	109.30	60.17	Peak
3	5900.940	36.12	13.02	49.14	85.96	36.82	Peak
4	5931.144	35.94	13.03	48.97	68.20	19.23	Peak

802.11ac vht80

Test Channel:

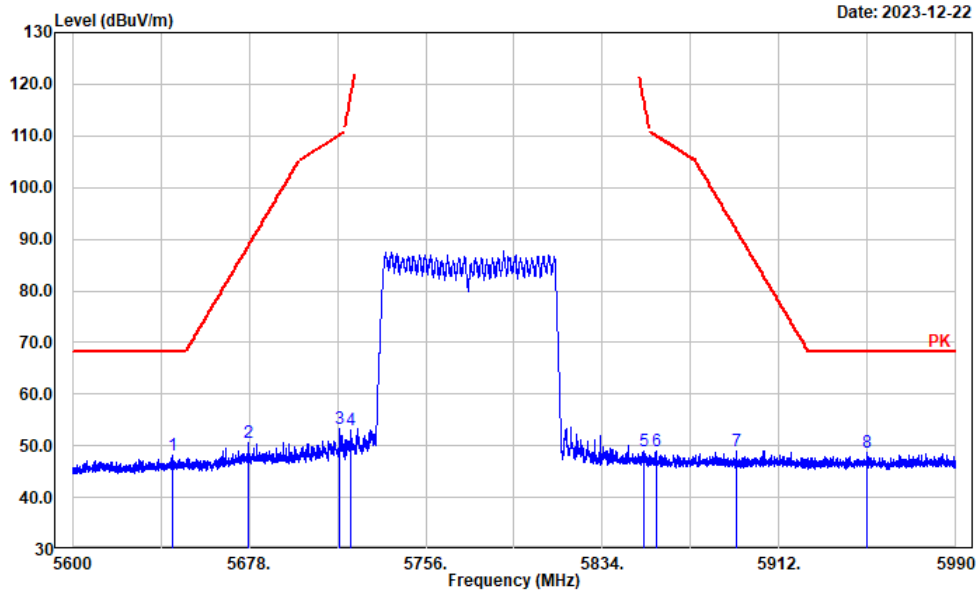
5775MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
 Tester: coco Tian
 Polarization: Horizontal
 Note:

Date: 2023-12-22



No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	5644.079	35.96	12.29	48.25	68.20	19.95	Peak
2	5677.547	38.23	12.44	50.67	88.63	37.96	Peak
3	5718.116	40.69	12.57	53.26	110.27	57.01	Peak
4	5722.875	40.51	12.57	53.08	117.36	64.28	Peak
5	5852.302	36.17	12.78	48.95	116.95	68.00	Peak
6	5858.076	36.03	12.81	48.84	109.94	61.10	Peak
7	5893.026	36.02	12.98	49.00	91.82	42.82	Peak
8	5950.758	35.75	13.04	48.79	68.20	19.41	Peak

802.11ac vht80

Test Channel:

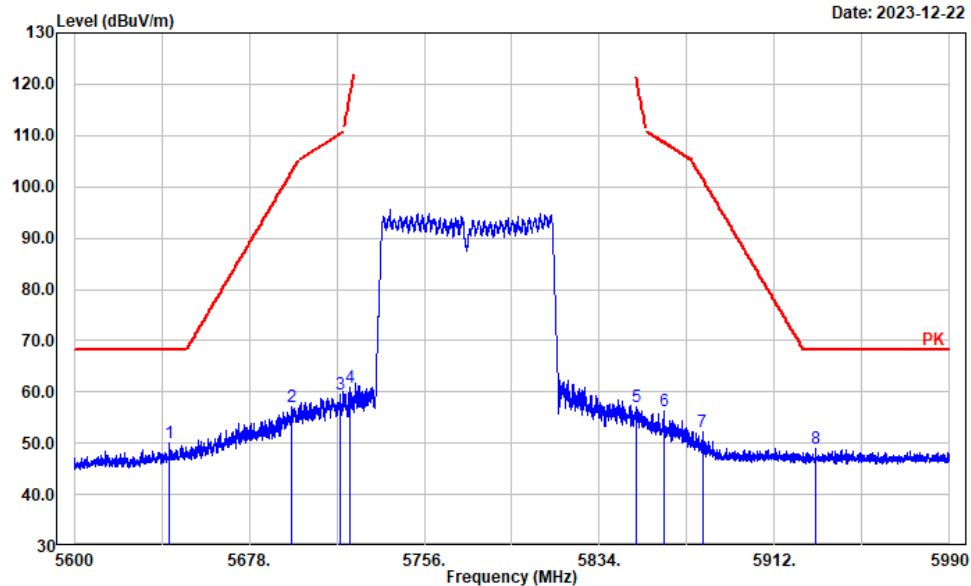
5775MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
 Tester: coco Tian
 Polarization: vertical
 Note:

Date: 2023-12-22



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5642.519	37.70	12.28	49.98	68.20	18.22	Peak
2	5696.661	44.59	12.53	57.12	102.74	45.62	Peak
3	5718.506	46.98	12.57	59.55	110.38	50.83	Peak
4	5722.796	48.42	12.57	60.99	117.18	56.19	Peak
5	5850.664	44.27	12.77	57.04	120.69	63.65	Peak
6	5862.679	43.47	12.83	56.30	108.65	52.35	Peak
7	5879.842	39.19	12.92	52.11	101.60	49.49	Peak
8	5930.396	35.90	13.04	48.94	68.20	19.26	Peak

802.11ax he20

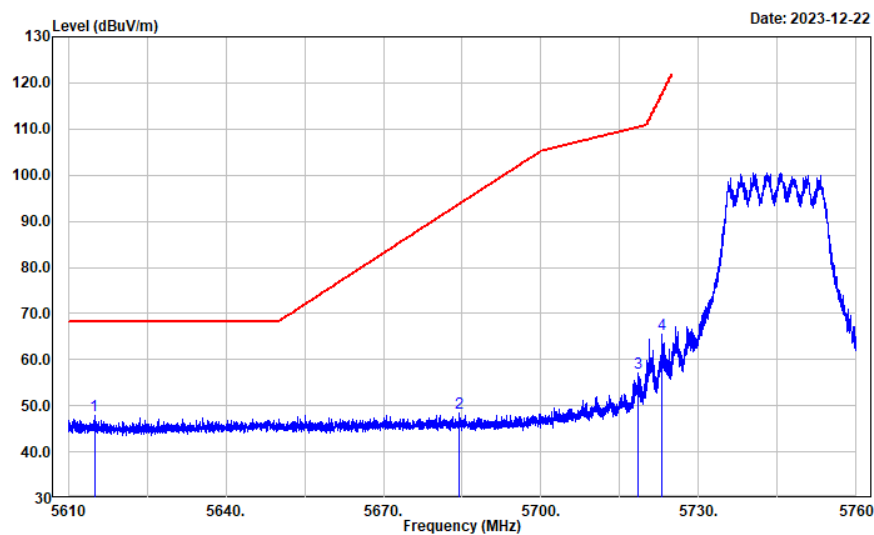
Test Channel:

5745MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5614.981	35.88	12.12	48.00	68.20	20.20	Peak
2	5684.505	35.83	12.49	48.32	93.77	45.45	Peak
3	5718.442	44.66	12.57	57.23	110.36	53.13	Peak
4	5723.093	53.03	12.57	65.60	117.85	52.25	Peak

802.11ax he20

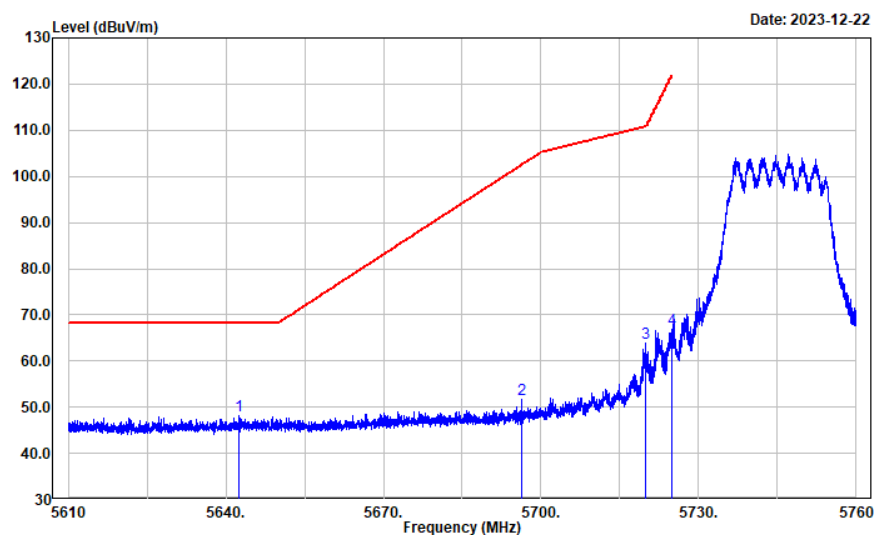
Test Channel:

5745MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5642.437	35.78	12.28	48.06	68.20	20.14	Peak
2	5696.207	39.04	12.53	51.57	102.40	50.83	Peak
3	5719.792	51.40	12.57	63.97	110.74	46.77	Peak
4	5724.863	54.20	12.57	66.77	121.89	55.12	Peak

802.11ax he20

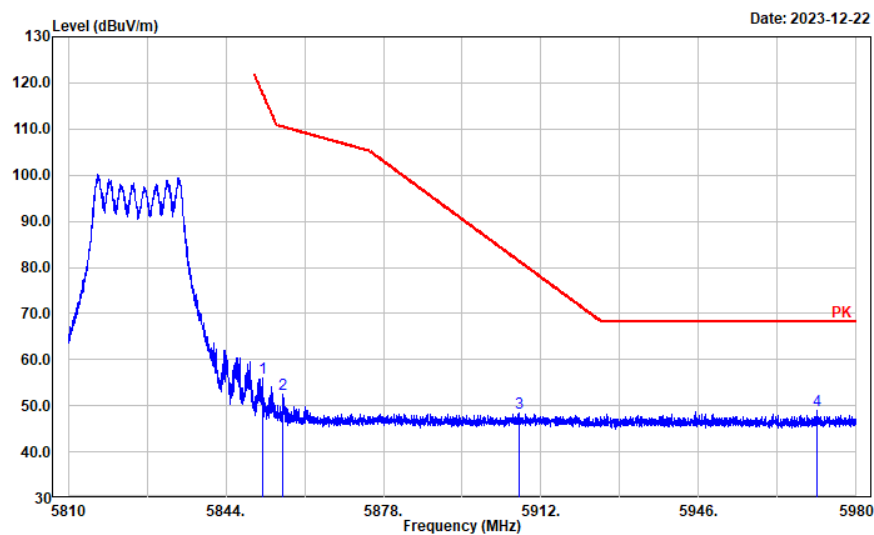
Test Channel:

5825MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5851.862	43.17	12.78	55.95	117.95	62.00	Peak
2	5856.385	39.68	12.81	52.49	110.41	57.92	Peak
3	5907.396	35.35	13.02	48.37	81.19	32.82	Peak
4	5971.600	35.73	13.12	48.85	68.20	19.35	Peak

802.11ax he20

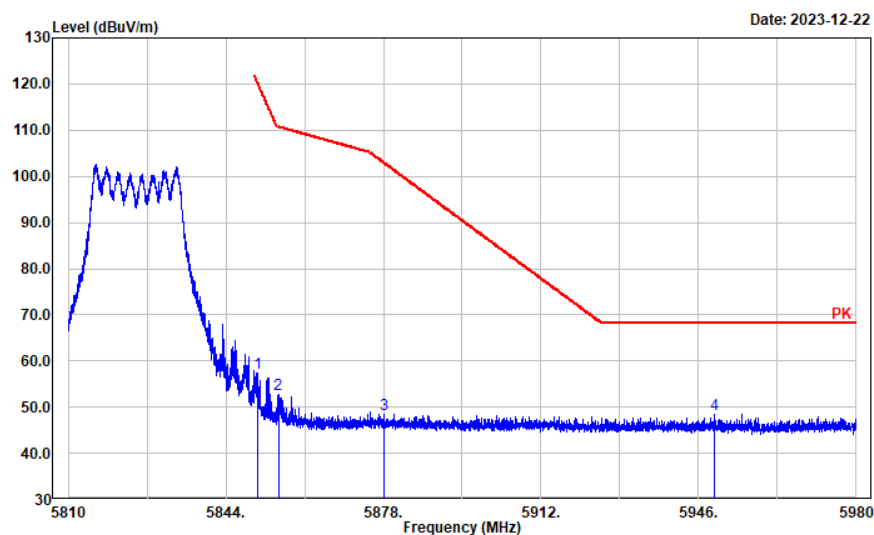
Test Channel:

5825MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5850.876	44.63	12.77	57.40	120.20	62.80	Peak
2	5855.331	40.04	12.80	52.84	110.71	57.87	Peak
3	5878.149	35.63	12.91	48.54	102.86	54.32	Peak
4	5949.360	35.49	13.03	48.52	68.20	19.68	Peak

802.11ax he40

Test Channel:

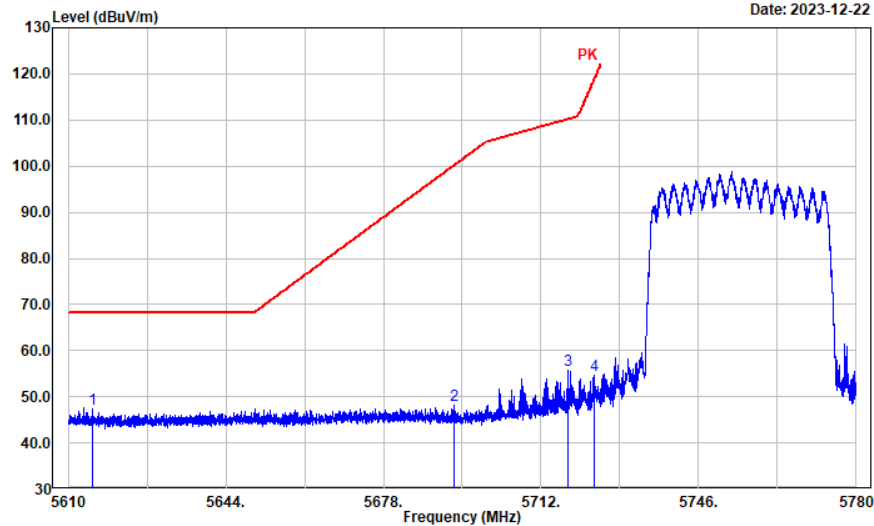
5755MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:

Date: 2023-12-22



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5615.271	35.23	12.12	47.35	68.20	20.85	Peak
2	5693.351	35.52	12.52	48.04	100.30	52.26	Peak
3	5717.768	43.05	12.57	55.62	110.18	54.56	Peak
4	5723.515	42.12	12.57	54.69	118.81	64.12	Peak

802.11ax he40

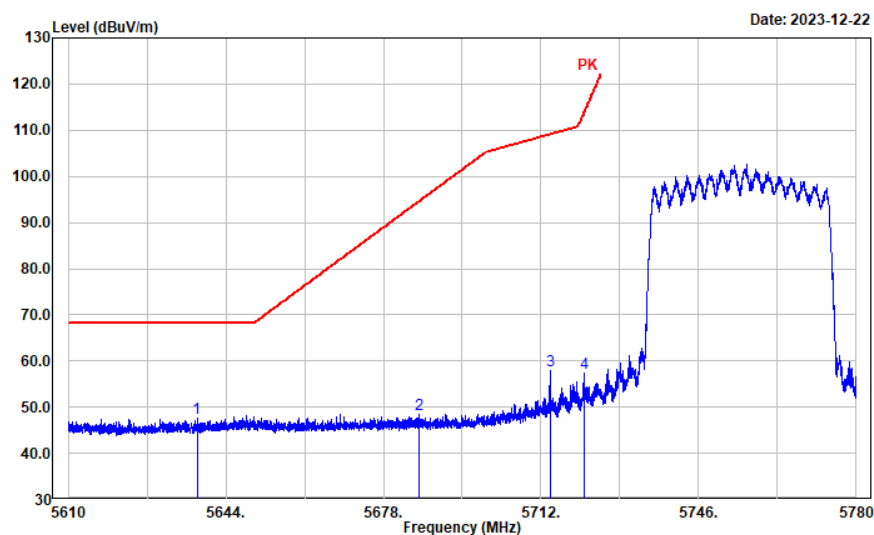
Test Channel:

5755MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5637.784	35.25	12.26	47.51	68.20	20.69	Peak
2	5685.699	36.00	12.49	48.49	94.65	46.16	Peak
3	5714.061	45.28	12.56	57.84	109.14	51.30	Peak
4	5721.338	44.76	12.57	57.33	113.85	56.52	Peak

802.11ax he40

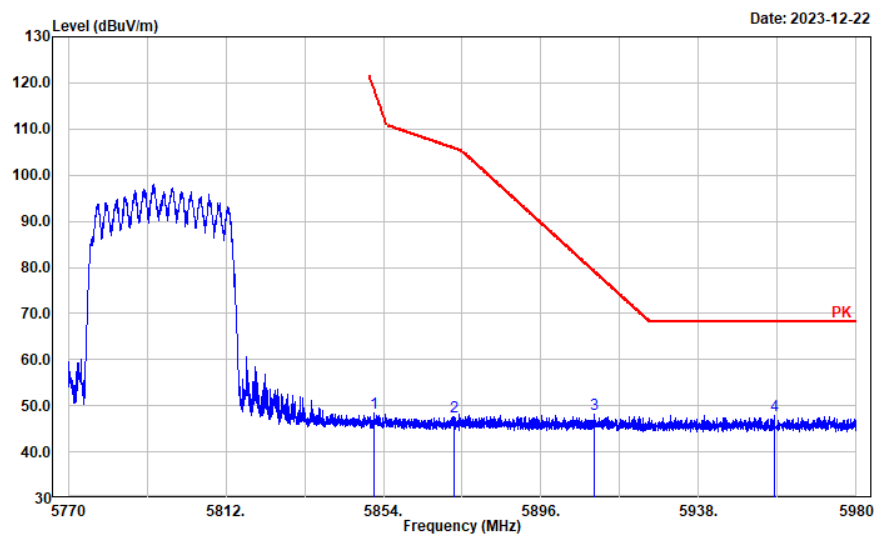
Test Channel:

5795MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5851.412	35.55	12.78	48.33	118.98	70.65	Peak
2	5872.836	34.74	12.89	47.63	105.80	58.17	Peak
3	5910.056	35.12	13.03	48.15	79.23	31.08	Peak
4	5958.114	34.82	13.07	47.89	68.20	20.31	Peak

802.11ax he40

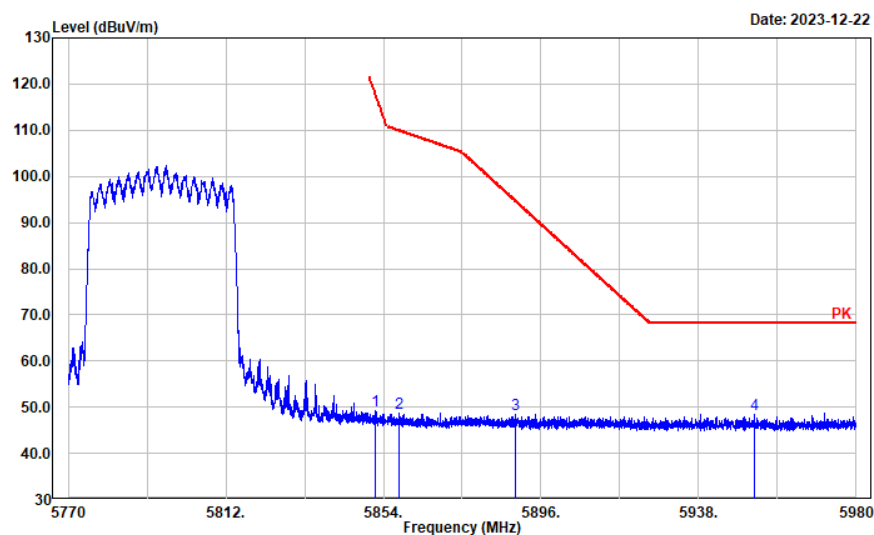
Test Channel:

5795MHz

Ant. Polar. :

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5851.749	36.55	12.78	49.33	118.21	68.88	Peak
2	5858.218	35.90	12.81	48.71	109.90	61.19	Peak
3	5889.304	35.57	12.97	48.54	94.58	46.04	Peak
4	5952.947	35.51	13.05	48.56	68.20	19.64	Peak

802.11ax he80

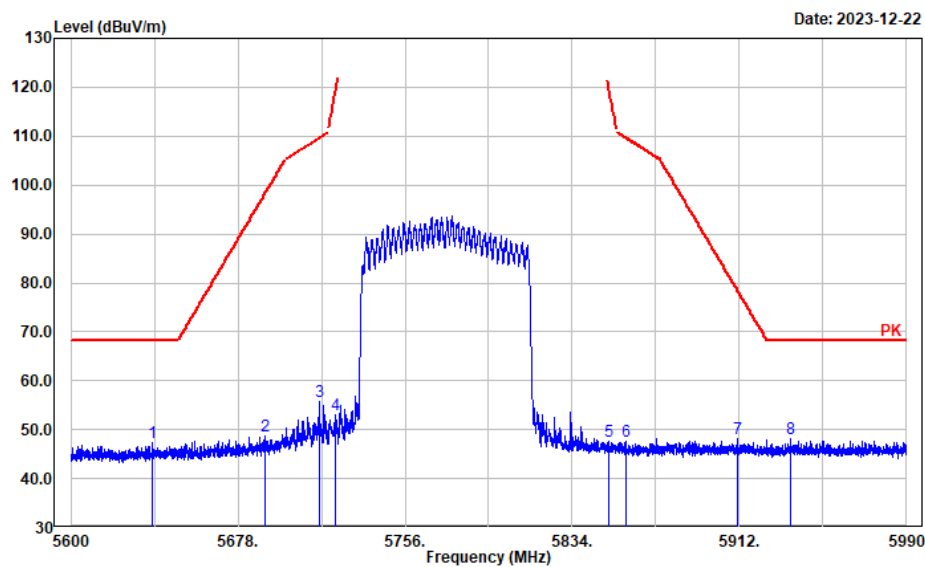
Test Channel:

5775MHz

Ant. Polar. :

Horizontal

Project No.: CR231165634-RF
 Tester: coco Tian
 Polarization: Horizontal
 Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5637.994	35.03	12.26	47.29	68.20	20.91	Peak
2	5690.966	36.18	12.51	48.69	98.54	49.85	Peak
3	5716.087	43.26	12.56	55.82	109.71	53.89	Peak
4	5723.733	40.53	12.57	53.10	119.31	66.21	Peak
5	5851.054	34.80	12.77	47.57	119.80	72.23	Peak
6	5858.856	34.86	12.81	47.67	109.72	62.05	Peak
7	5911.048	35.03	13.03	48.06	78.49	30.43	Peak
8	5935.857	35.01	13.04	48.05	68.20	20.15	Peak

802.11ax he80

Test Channel:

5775MHz

Ant. Polar. :

Vertical

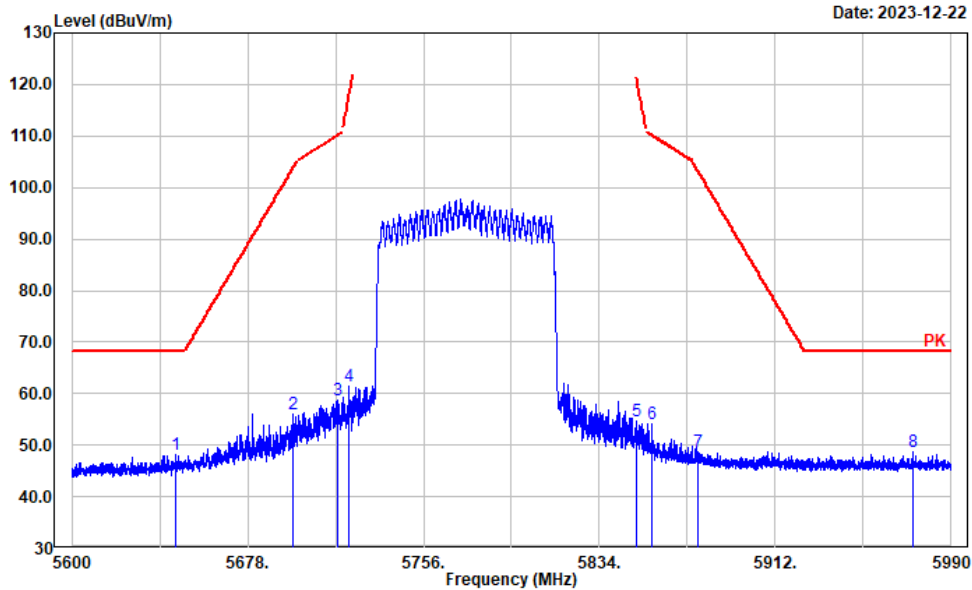
Project No.: CR231165634-RF

Tester: coco Tian

Polarization: vertical

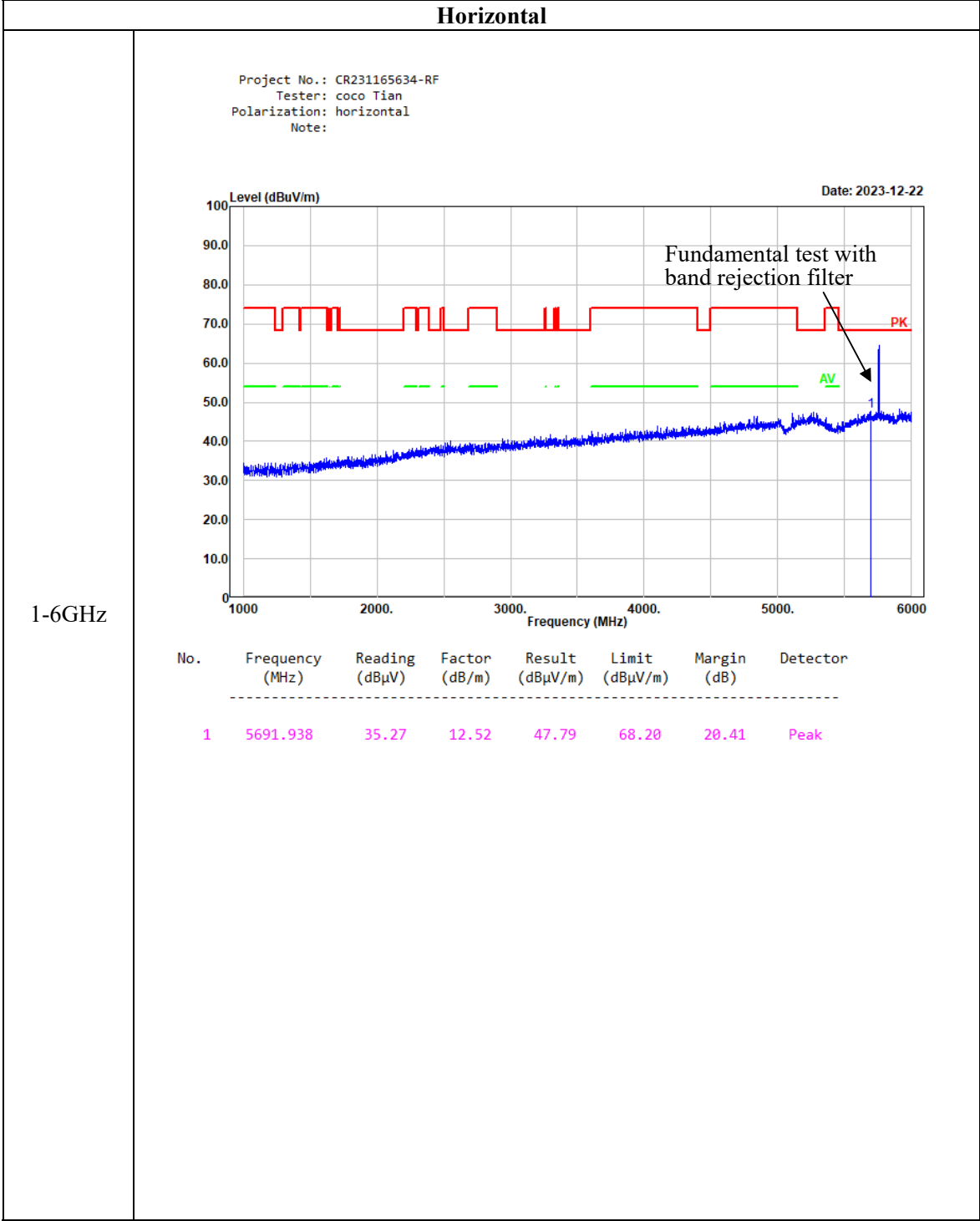
Note:

Date: 2023-12-22



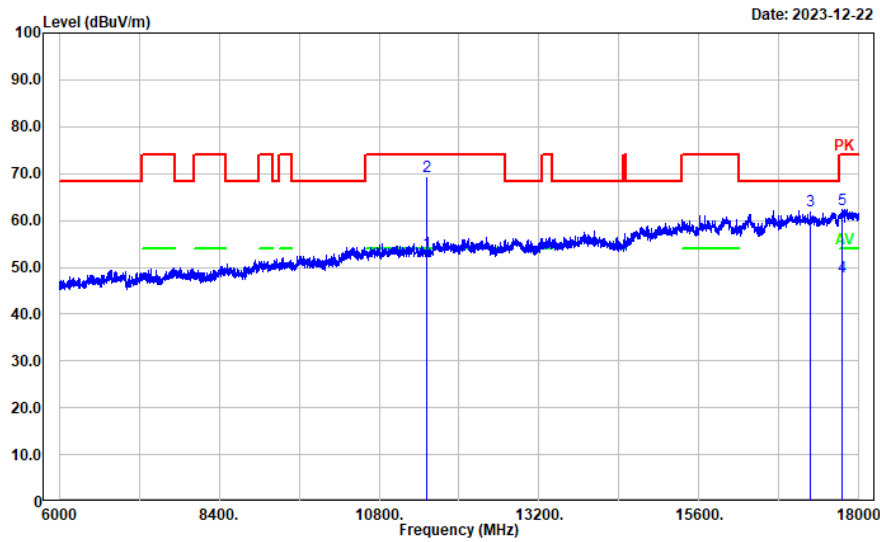
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5646.029	35.87	12.30	48.17	68.20	20.03	Peak
2	5698.222	43.54	12.54	56.08	103.89	47.81	Peak
3	5717.881	46.14	12.57	58.71	110.21	51.50	Peak
4	5722.953	48.93	12.57	61.50	117.53	56.03	Peak
5	5850.664	41.91	12.77	54.68	120.69	66.01	Peak
6	5857.295	41.26	12.81	54.07	110.16	56.09	Peak
7	5877.970	35.67	12.90	48.57	102.99	54.42	Peak
8	5973.227	35.60	13.14	48.74	68.20	19.46	Peak

Listed with the worst harmonic margin test plot (802.11a 5825MHz)



Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: horizontal
Note:

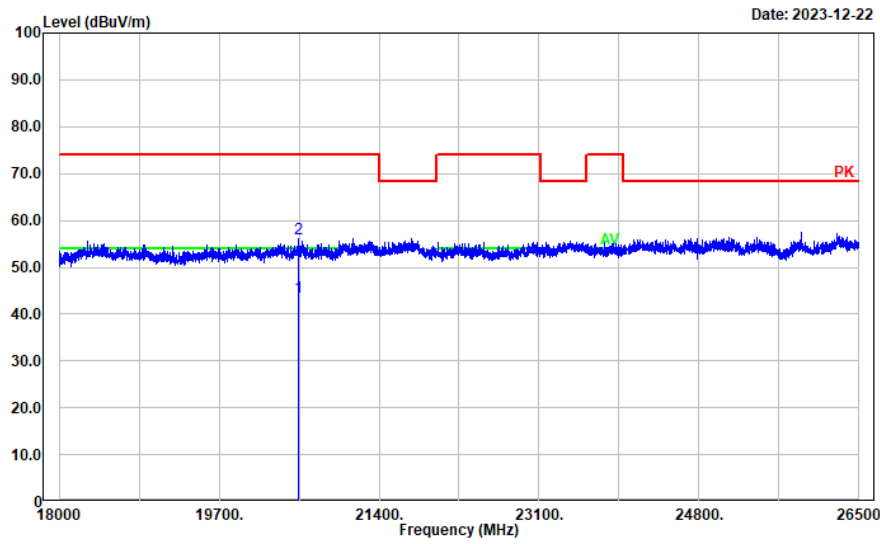


6-18GHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	11510.000	31.72	21.48	53.20	54.00	0.80	Average
2	11510.000	47.81	21.48	69.29	74.00	4.71	Peak
3	17265.000	33.40	28.79	62.19	68.20	6.01	Peak
4	17745.550	16.57	31.42	47.99	54.00	6.01	Average
5	17745.550	30.94	31.42	62.36	74.00	11.64	Peak

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:

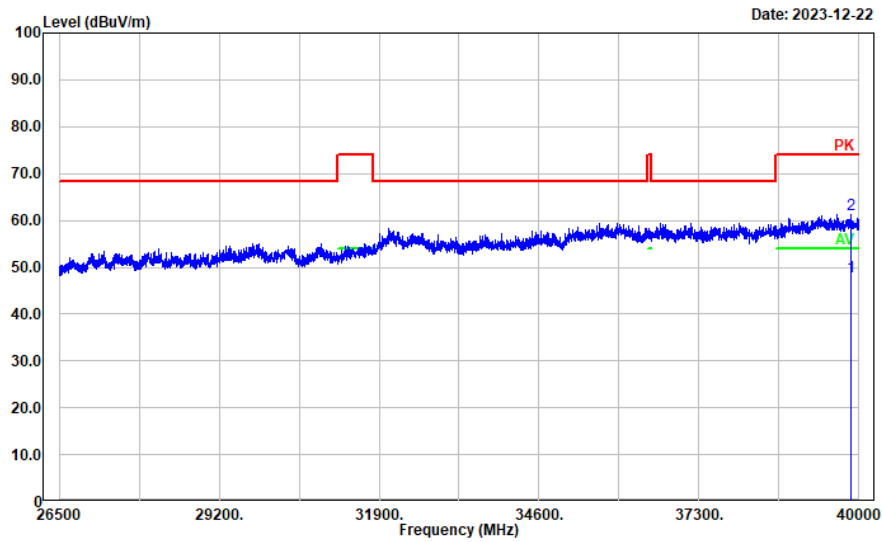


18-26.5GHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	20536.910	38.73	4.90	43.63	54.00	10.37	Average
2	20536.910	51.17	4.90	56.07	74.00	17.93	Peak

Horizontal

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: Horizontal
Note:



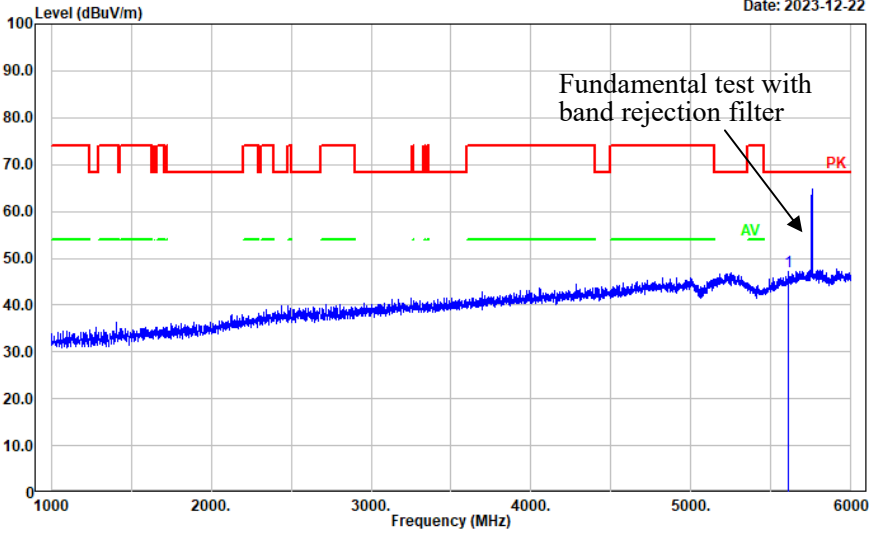
26.5-40GHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	39859.570	39.26	8.60	47.86	54.00	6.14	Average
2	39859.570	52.52	8.60	61.12	74.00	12.88	Peak

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:

Date: 2023-12-22

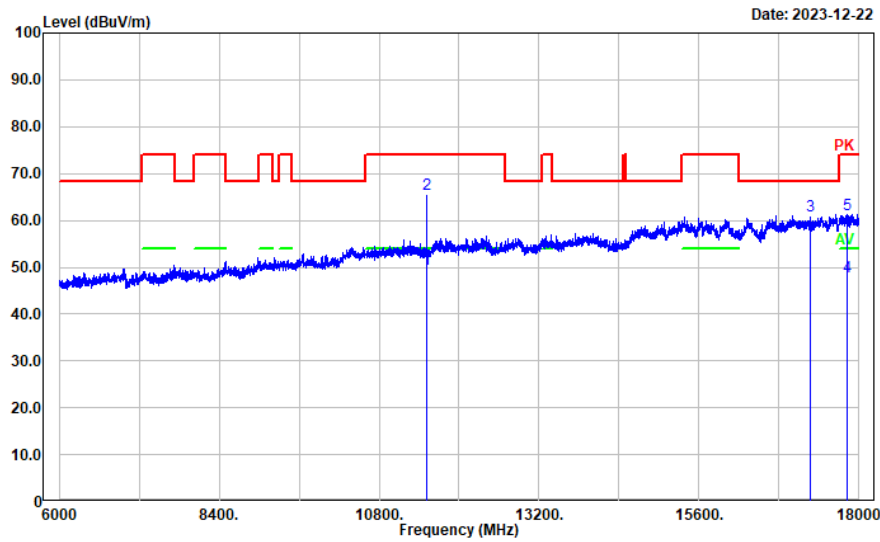


1-6GHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5604.921	35.22	12.07	47.29	68.20	20.91	Peak

Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:

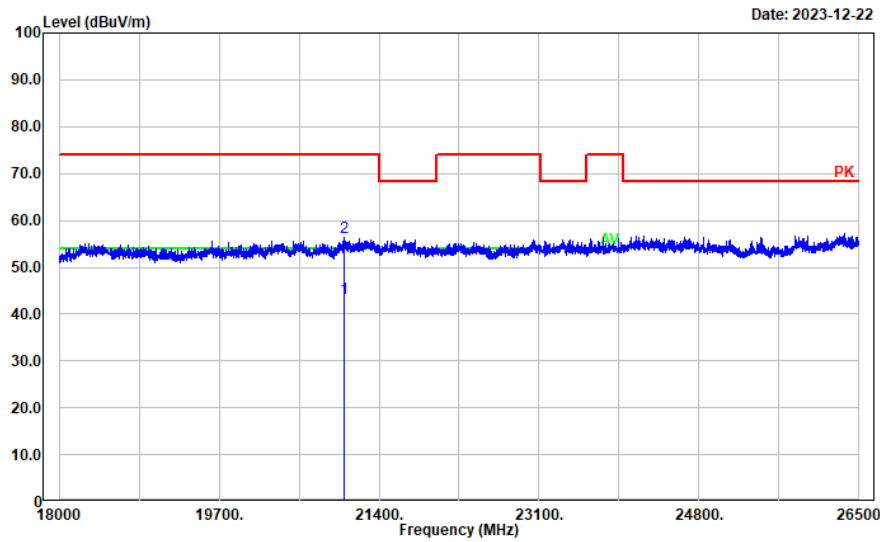


6-18GHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	11510.000	28.23	21.48	49.71	54.00	4.29	Average
2	11510.000	44.09	21.48	65.57	74.00	8.43	Peak
3	17265.000	32.25	28.79	61.04	68.20	7.16	Peak
4	17817.560	16.15	31.72	47.87	54.00	6.13	Average
5	17817.560	29.59	31.72	61.31	74.00	12.69	Peak

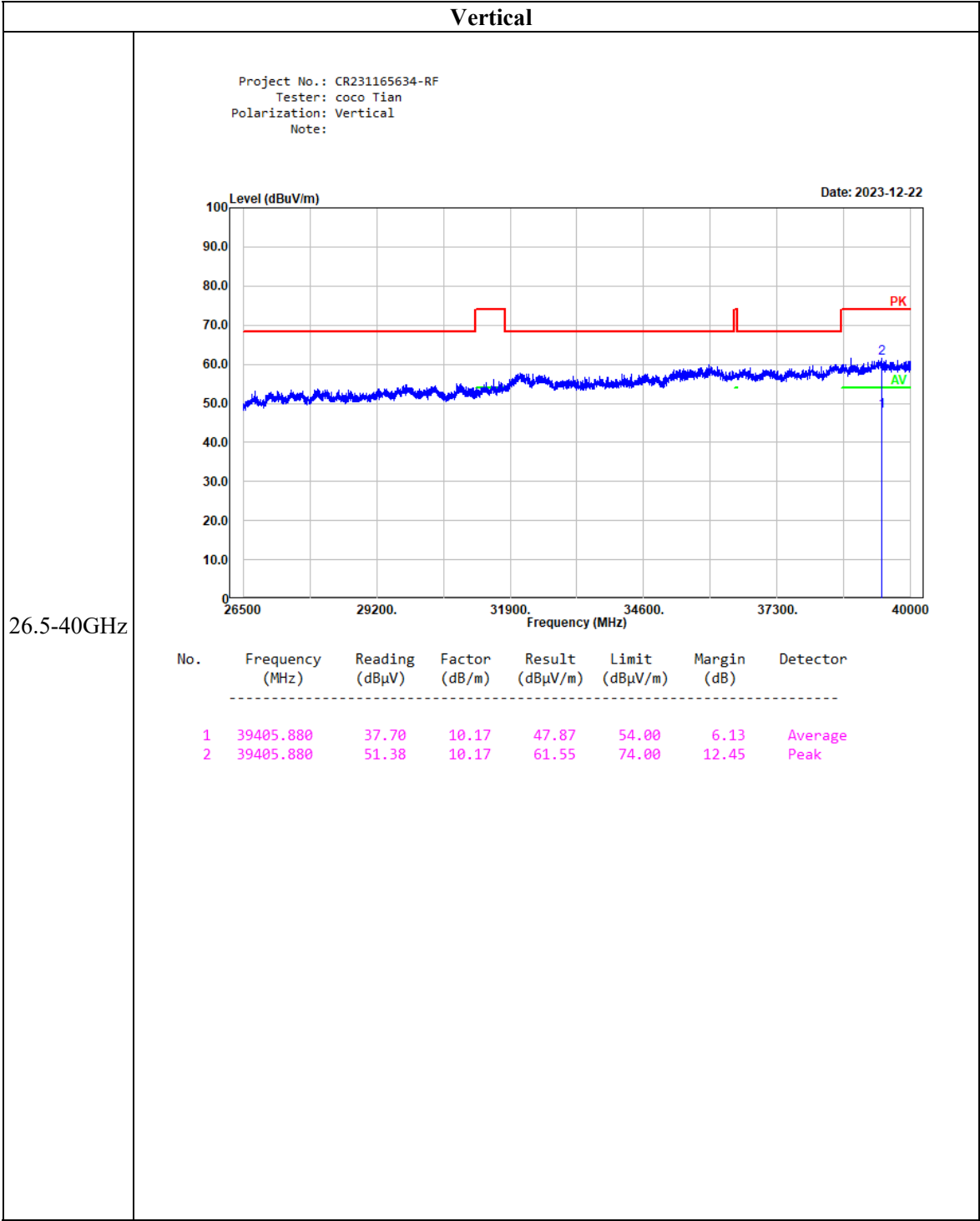
Vertical

Project No.: CR231165634-RF
Tester: coco Tian
Polarization: vertical
Note:



18-26.5GHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	21033.410	38.74	4.61	43.35	54.00	10.65	Average
2	21033.410	51.76	4.61	56.37	74.00	17.63	Peak



4.3 Emission Bandwidth:

Serial Number:	2BD2-1	Test Date:	2023/12/20-2023/12/22
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	19.9-20.1	Relative Humidity: (%)	31-38	ATM Pressure: (kPa)	101.8-102.6
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

5150-5250 MHz:

Test Modes	Test Frequency (MHz)	26 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5180	20.912	16.687
	5200	20.912	16.687
	5240	21.274	16.687
802.11n ht20	5180	21.563	17.725
	5200	21.997	17.804
	5240	21.997	17.804
802.11n ht40	5190	40.810	36.567
	5230	40.230	36.886
802.11ac vht80	5210	81.010	75.689
802.11ax he20	5180	22.069	18.922
	5200	21.852	18.922
	5240	21.780	18.922
802.11ax he40	5190	39.510	37.844
	5230	39.510	37.685
802.11ax he80	5210	81.010	77.605
Note: Test only was performed at Chain 0. The 99% Occupied Bandwidth have not fall into the band 5250-5350MHz, please refer to the test plots of 99% Occupied Bandwidth.			

5725-5850 MHz:

Test Modes	Test Frequency(MHz)	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5745	15.44	16.607
	5785	15.44	16.607
	5825	15.36	16.687
802.11n ht20	5745	15.44	17.804
	5785	15.44	17.804
	5825	15.44	17.804
802.11n ht40	5755	35.36	36.886
	5795	35.68	36.727
802.11ac vht80	5775	76.48	75.689
802.11ax he20	5745	17.48	18.922
	5785	18.45	18.922
	5825	18.18	18.922
802.11ax he40	5755	36.48	37.685
	5795	37.12	37.844
802.11ax he80	5775	78.08	77.285
Note: 6dB Emission Bandwidth Limit: ≥ 0.5 MHz Test only was performed at Chain 0. The 99% Occupied Bandwidth have not fall into the band 5470-5725MHz, please refer to the test plots of 99% Occupied Bandwidth.			

5150-5250MHz:

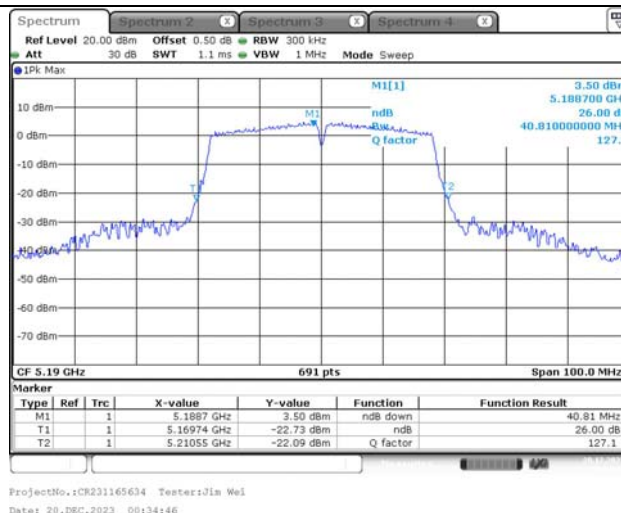
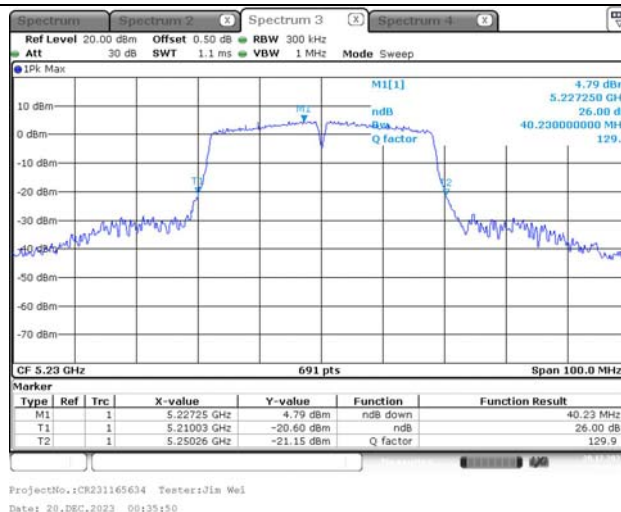
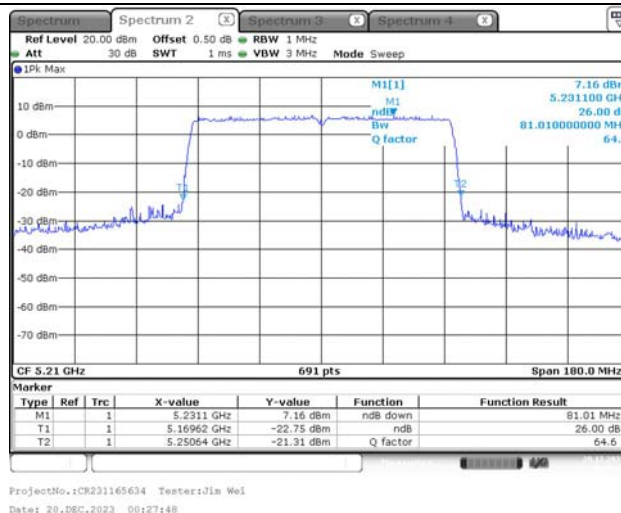
26dB Emission Bandwidth

802.11a
Lowest Channel802.11a
Middle Channel802.11a
Highest Channel

26dB Emission Bandwidth

802.11n ht20
Lowest Channel802.11n ht20
Middle Channel802.11n ht20
Highest Channel

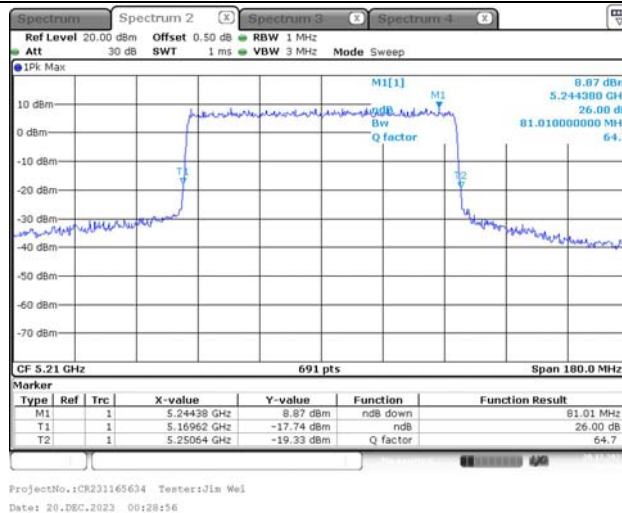
26dB Emission Bandwidth

802.11n ht40
Lowest Channel802.11n ht40
Highest Channel802.11ac vht80
Middle Channel

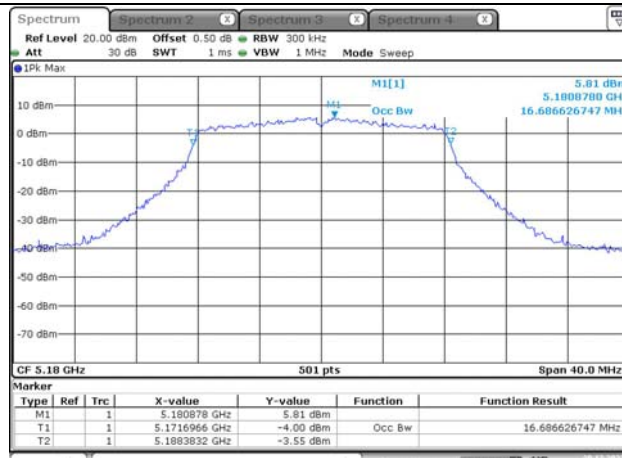
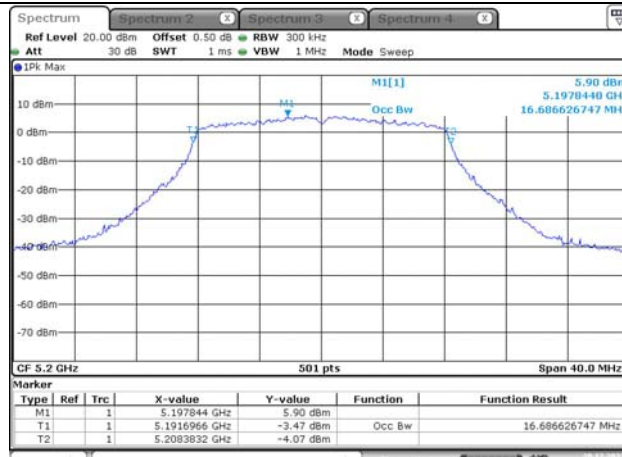
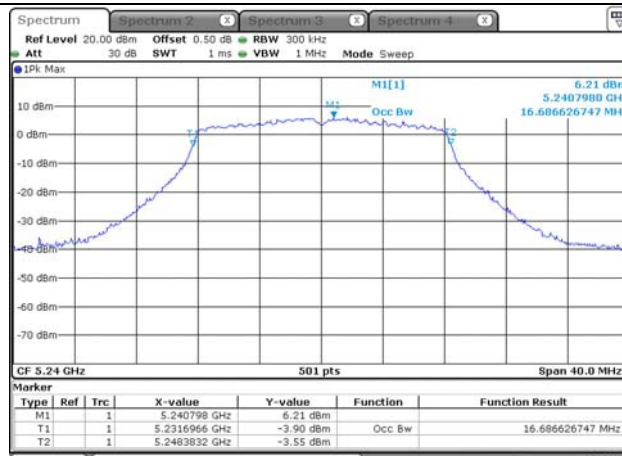
26dB Emission Bandwidth

802.11ax he20
Lowest Channel802.11ax he20
Middle Channel802.11ax he20
Highest Channel

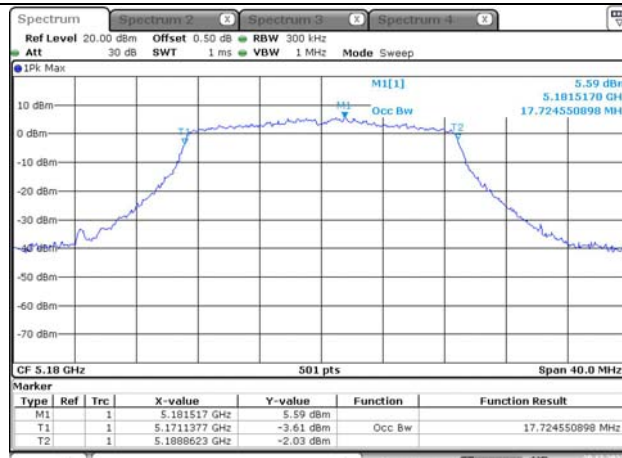
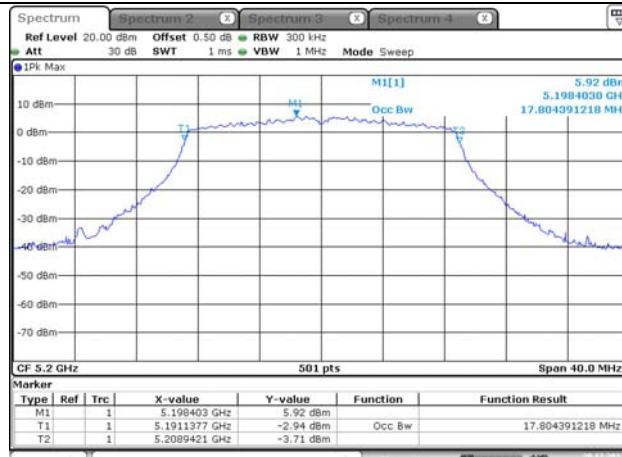
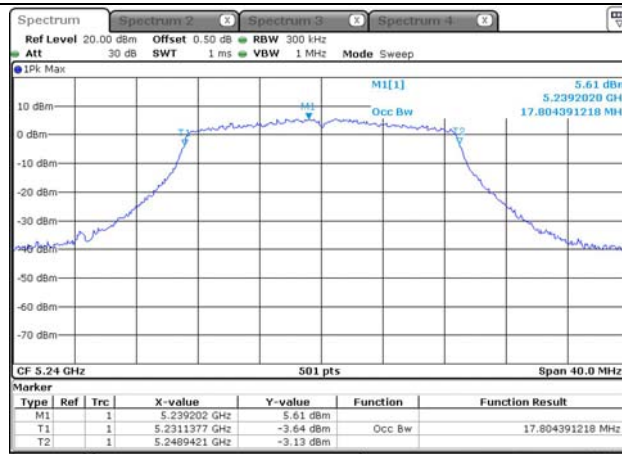
26dB Emission Bandwidth

802.11ax he40
Lowest Channel802.11ax he40
Highest Channel802.11ax he80
Middle Channel

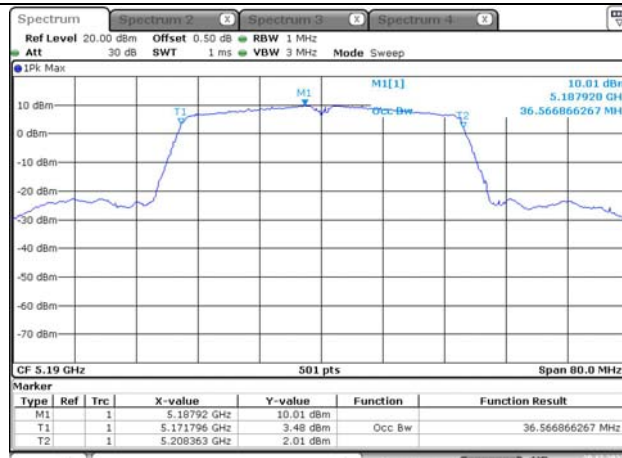
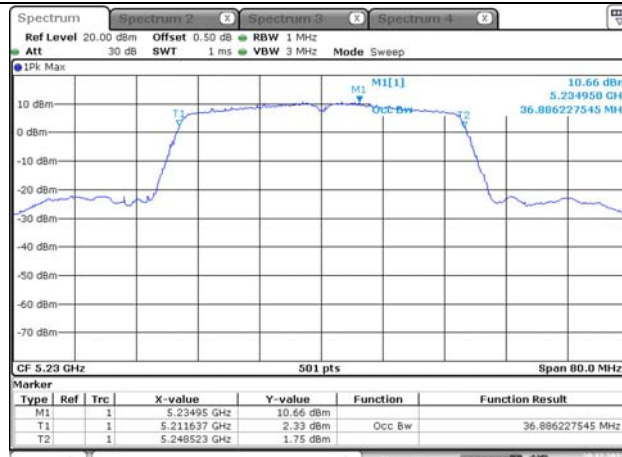
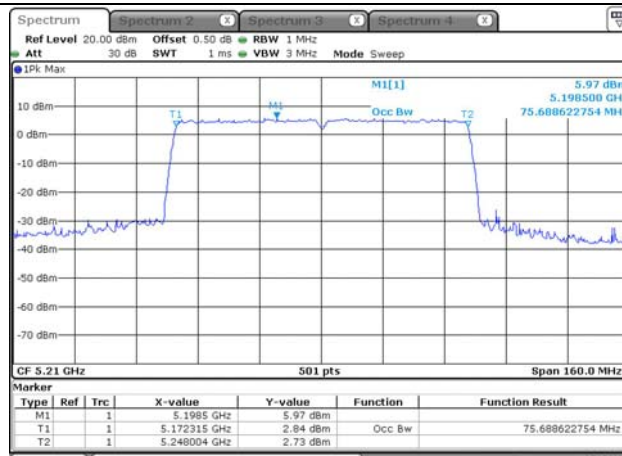
99% Emission Bandwidth

802.11a
Lowest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 22:21:05802.11a
Middle ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 22:22:36802.11a
Highest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 22:28:16

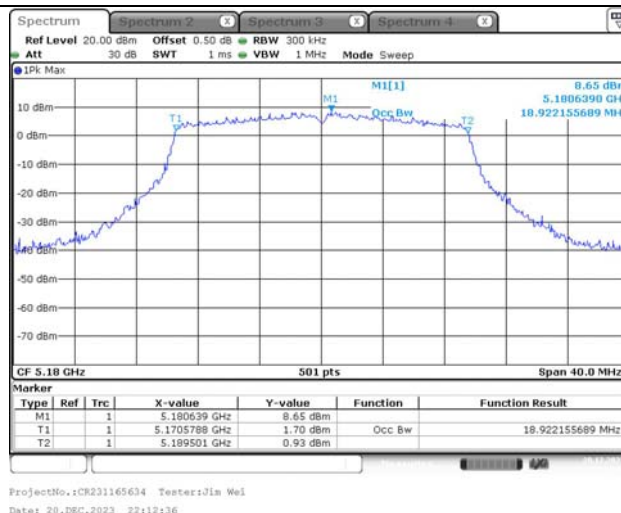
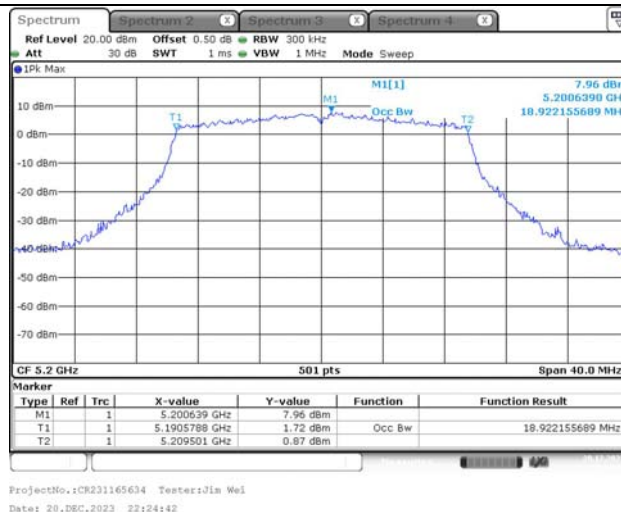
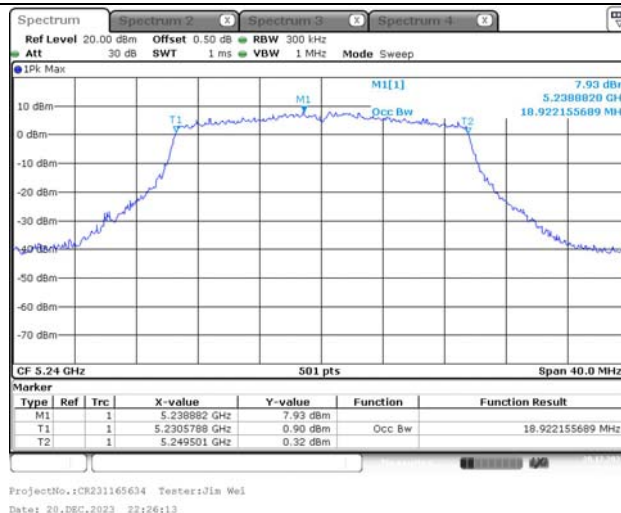
99% Emission Bandwidth

802.11 n ht20
Lowest ChannelProjectNo.:CR231165634 Testers:Jim Wei
Date: 20.DEC.2023 22:18:33802.11 n ht20
Middle ChannelProjectNo.:CR231165634 Testers:Jim Wei
Date: 20.DEC.2023 22:23:21802.11 n ht20
Highest ChannelProjectNo.:CR231165634 Testers:Jim Wei
Date: 20.DEC.2023 22:27:03

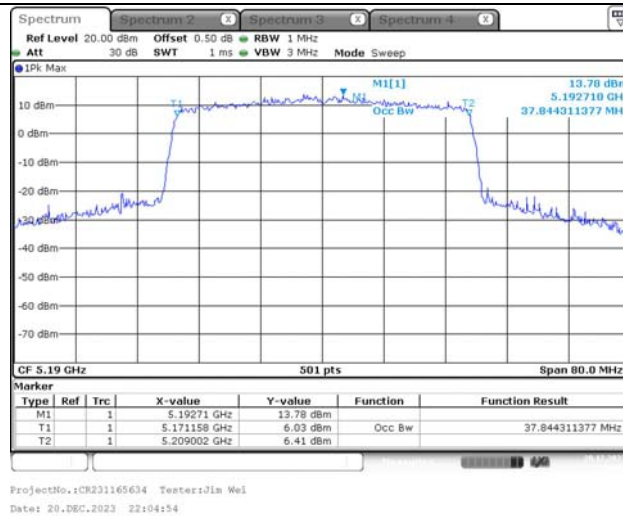
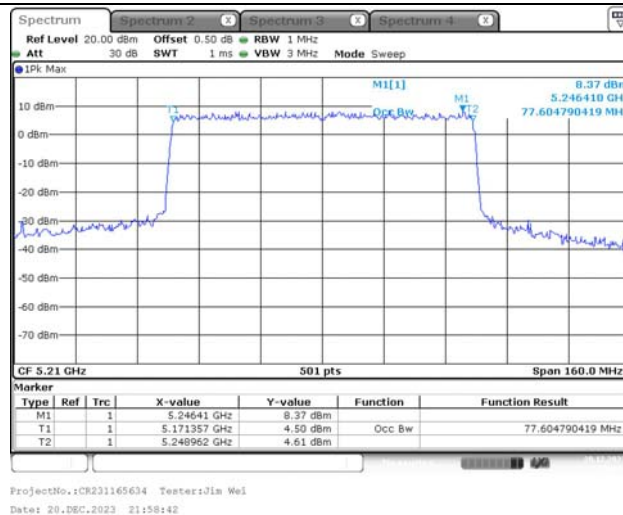
99% Emission Bandwidth

802.11 n ht40
Lowest Channel802.11 n ht40
Highest Channel802.11ac vht80
Middle Channel

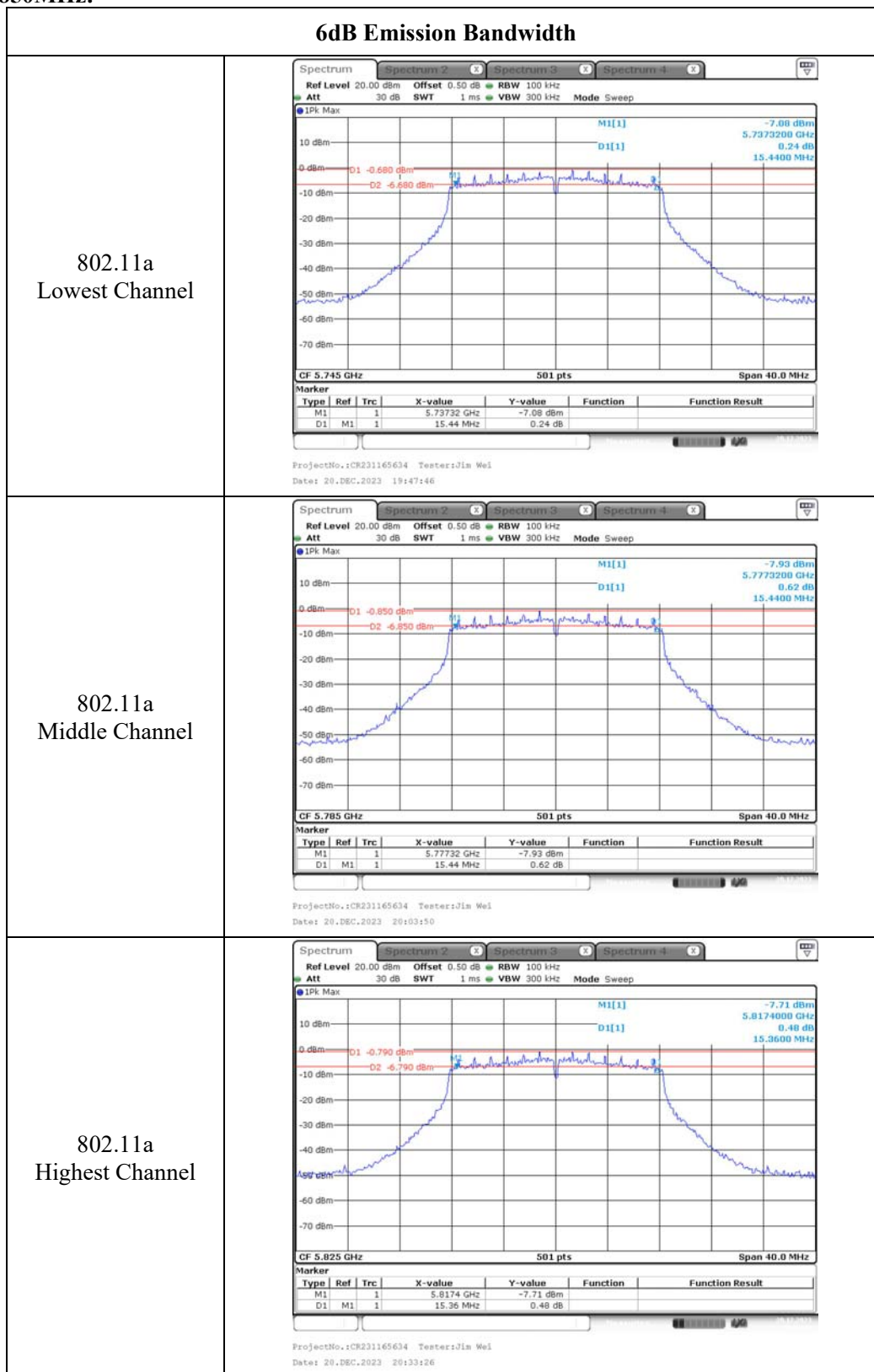
99% Emission Bandwidth

802.11ax he20
Lowest Channel802.11ax he20
Middle Channel802.11ax he20
Highest Channel

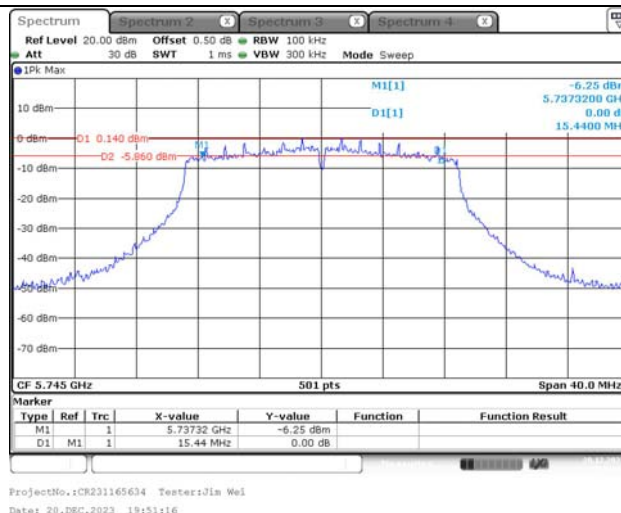
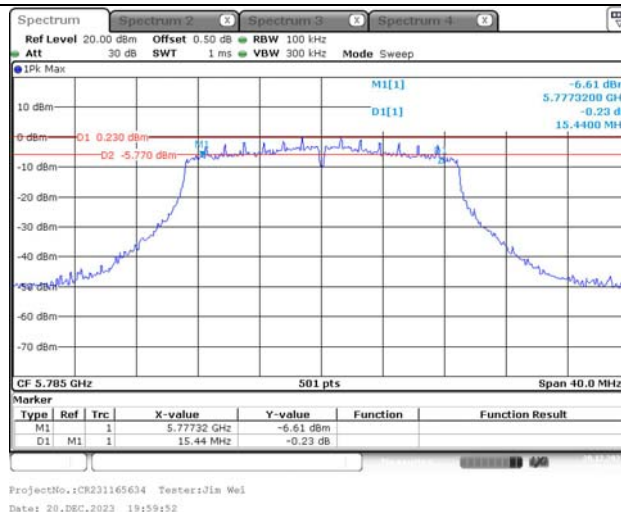
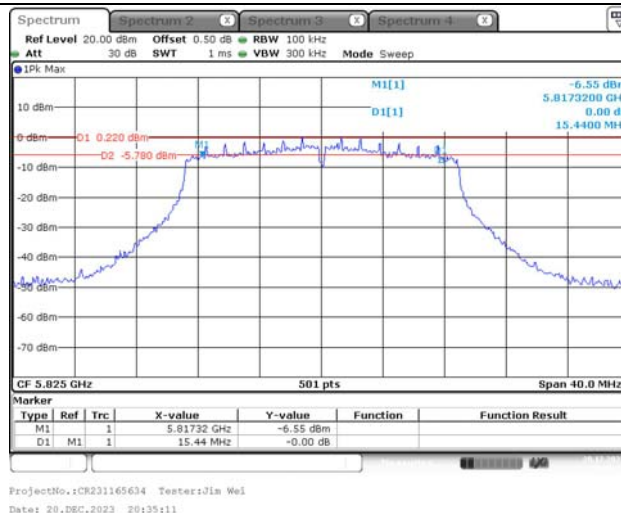
99% Emission Bandwidth

802.11ax he40
Lowest Channel802.11ax he40
Highest Channel802.11ax he80
Middle Channel

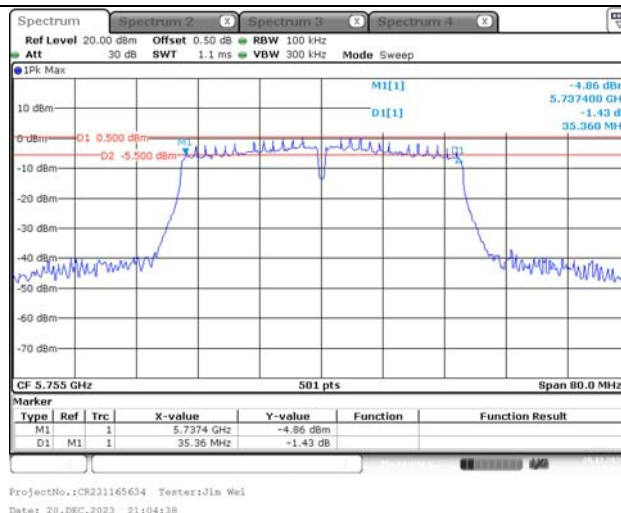
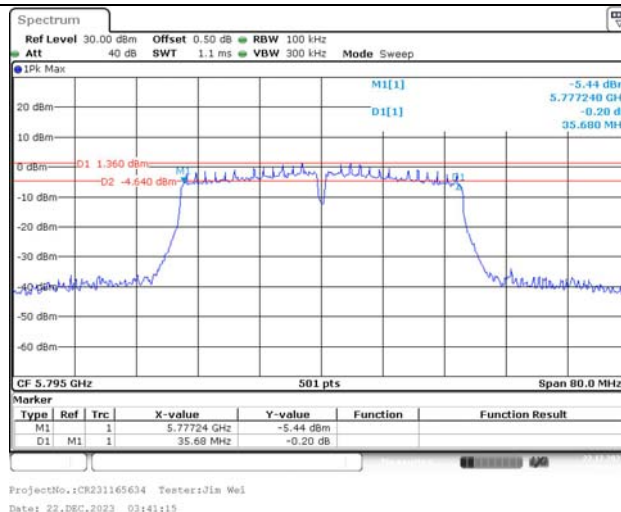
5725-5850MHz:



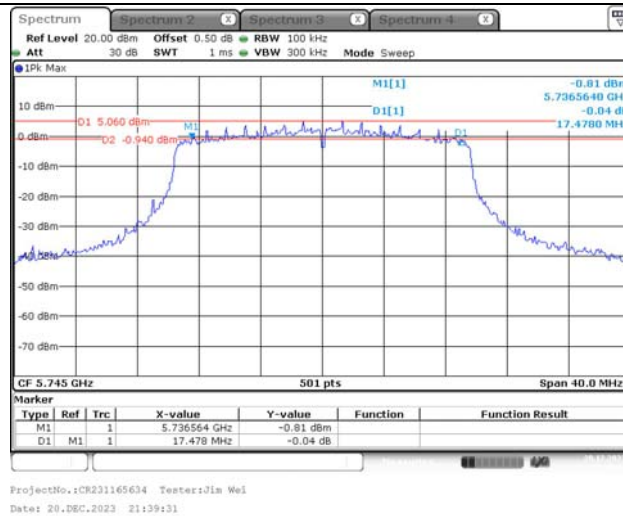
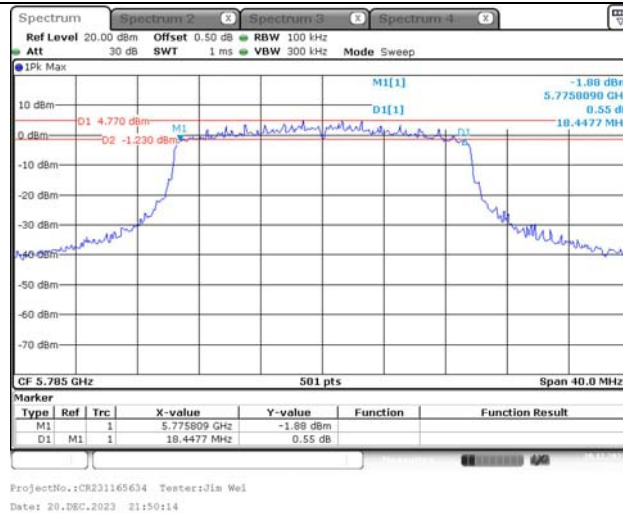
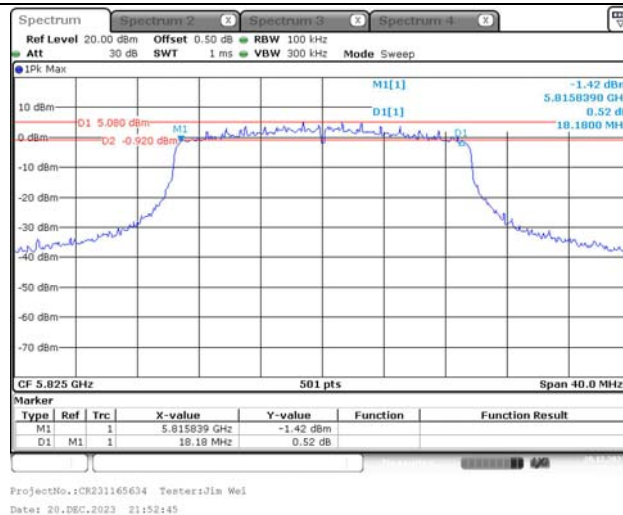
6dB Emission Bandwidth

802.11 n ht20
Lowest Channel802.11 n ht20
Middle Channel802.11 n ht20
Highest Channel

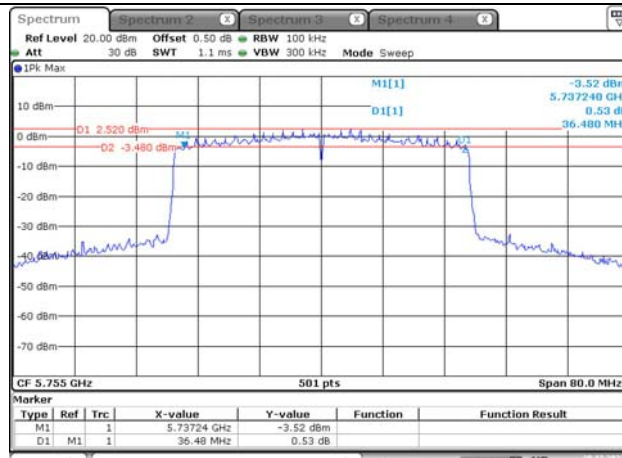
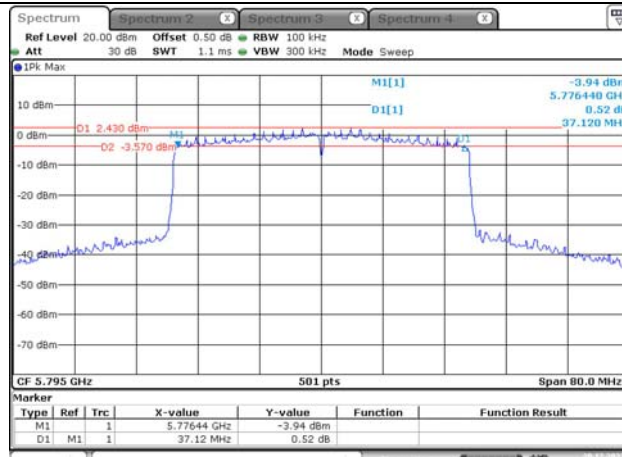
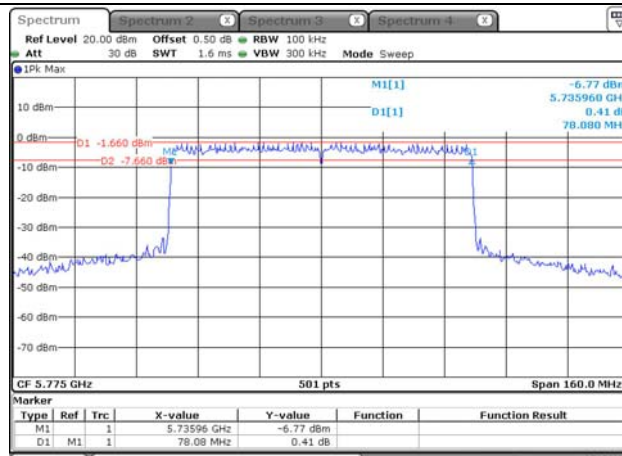
6dB Emission Bandwidth

802.11 n ht40
Lowest Channel802.11 n ht40
Highest Channel802.11ac vht80
Middle Channel

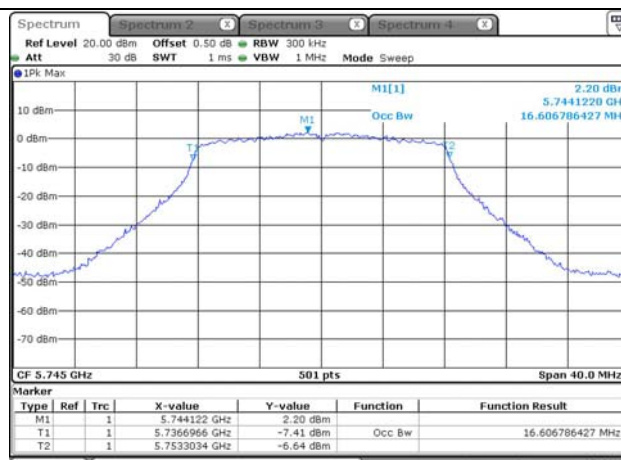
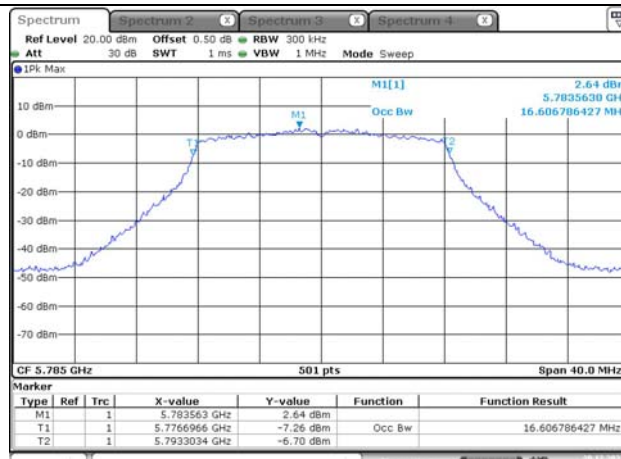
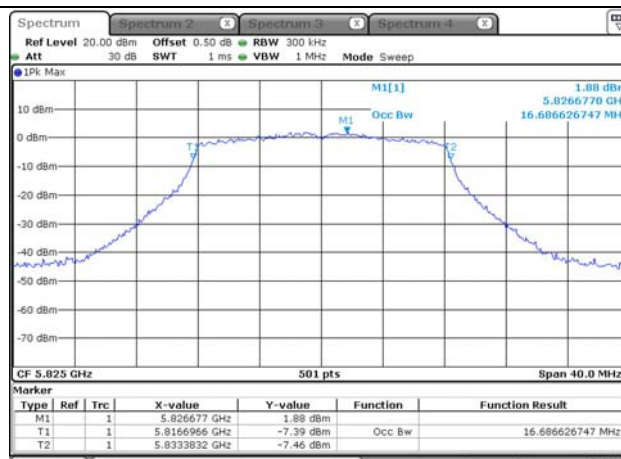
6dB Emission Bandwidth

802.11 ax he20
Lowest Channel802.11 ax he20
Middle Channel802.11 ax he20
Highest Channel

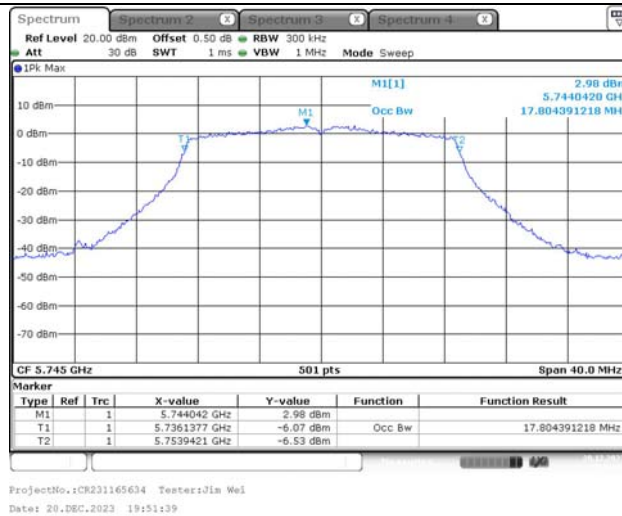
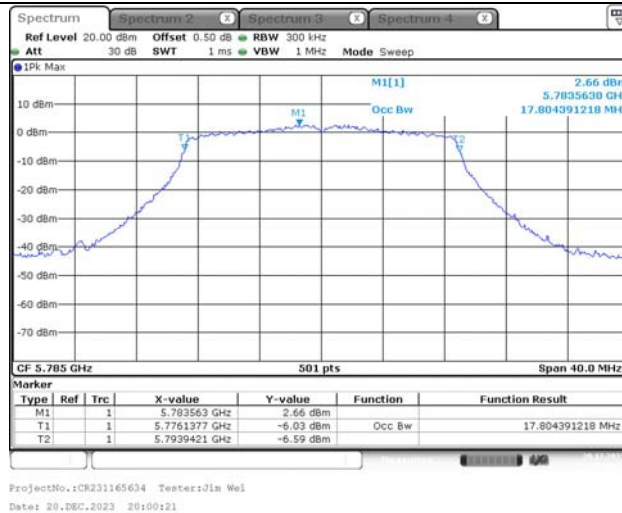
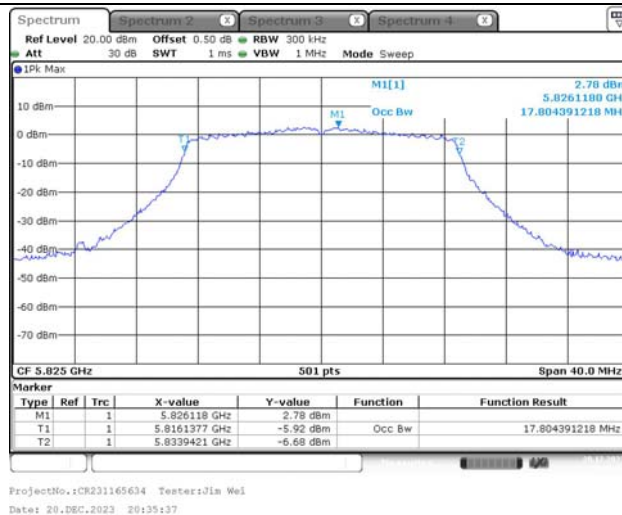
6dB Emission Bandwidth

802.11ax he40
Lowest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 21:07:33802.11 ax he40
Highest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 21:09:38802.11ax he80
Middle ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 20:52:09

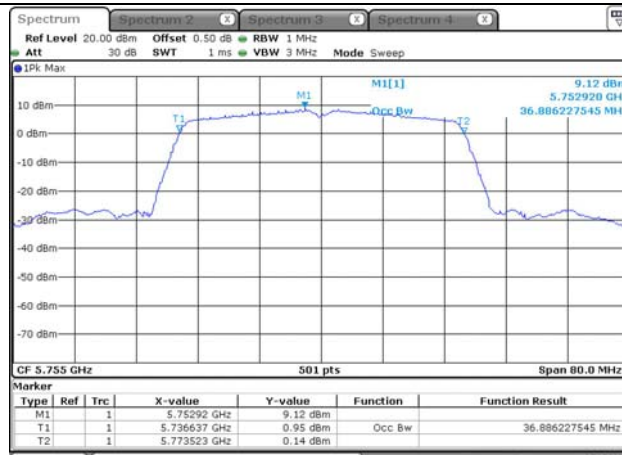
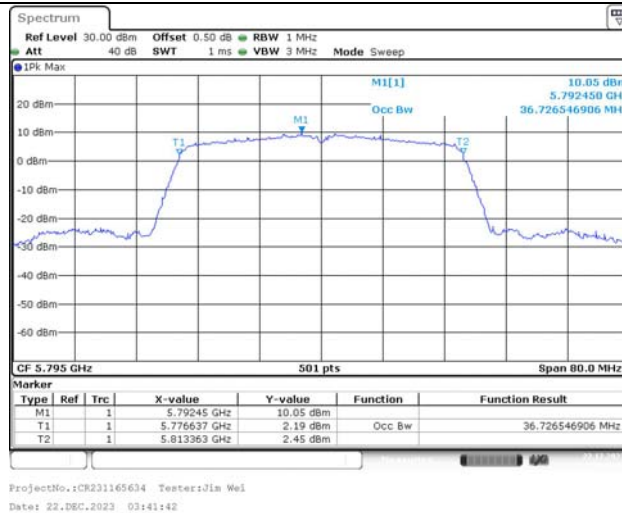
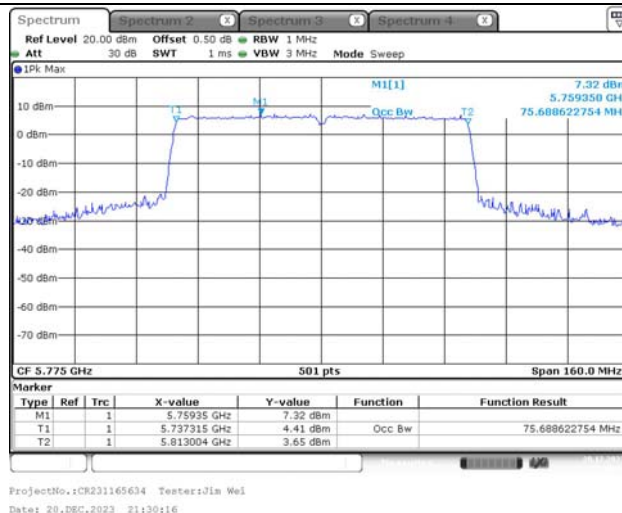
99% Emission Bandwidth

802.11a
Lowest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 19:48:09802.11a
Middle ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 20:04:16802.11a
Highest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 20:33:43

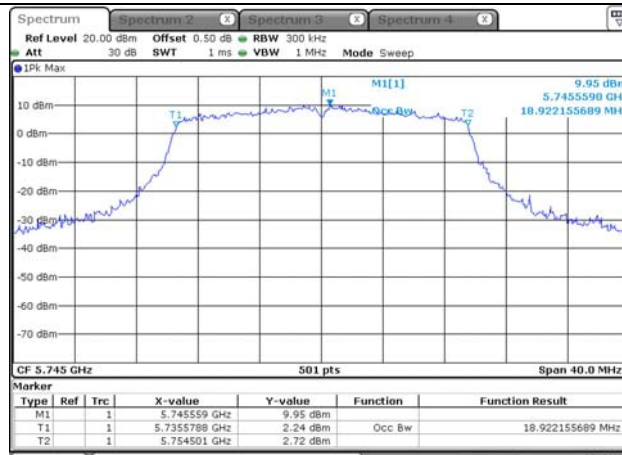
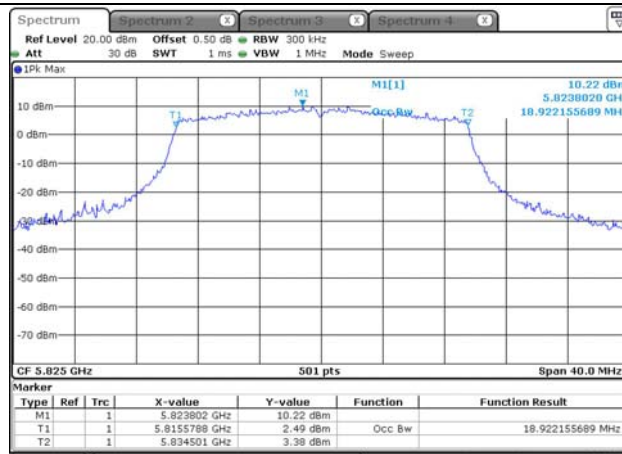
99% Emission Bandwidth

802.11n ht20
Lowest Channel802.11n ht20
Middle Channel802.11n ht20
Highest Channel

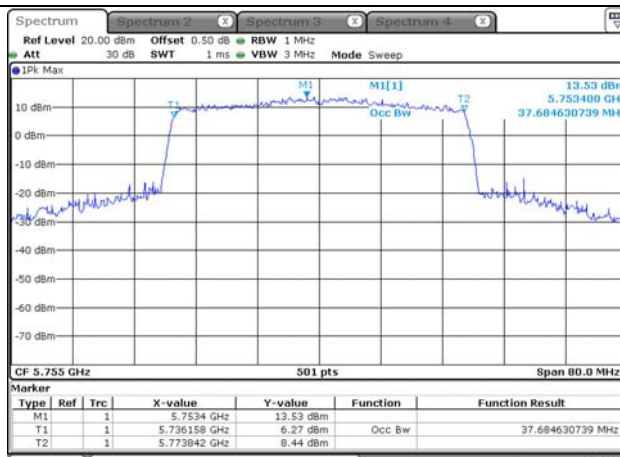
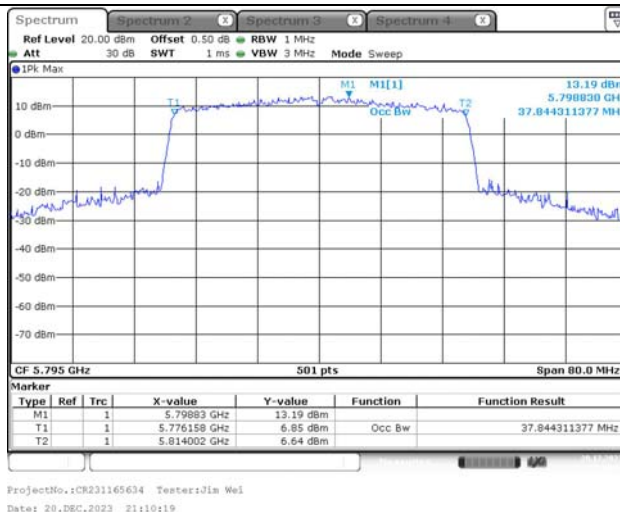
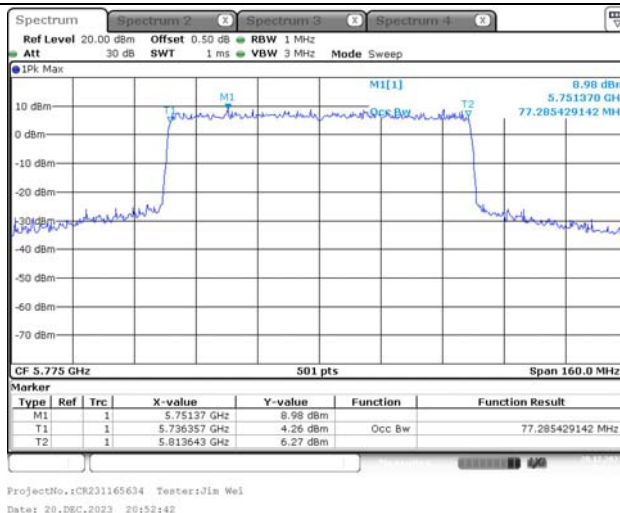
99% Emission Bandwidth

802.11n ht40
Lowest Channel802.11n ht40
Highest Channel802.11ac vht80
Middle Channel

99% Emission Bandwidth

802.11ax he20
Lowest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 21:32:26802.11ax he20
Middle ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 19:58:34802.11ax he20
Highest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 20.DEC.2023 20:43:24

99% Emission Bandwidth

802.11ax he40
Lowest Channel802.11ax he40
Highest Channel802.11ax he80
Middle Channel

4.4 Maximum Conducted Output Power:

Serial Number:	2BD2-1	Test Date:	2023/12/19
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23.4	Relative Humidity: (%)	40	ATM Pressure: (kPa)	101.7
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	USB Average Power Sensor	U2001H	MY50000380	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

5150-5250 MHz:

Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power (dBm)			
		Chain 0	Chain 1	Total	Limit
802.11a	5180	11.81	12.01	/	24
	5200	12.13	11.84	/	24
	5240	11.92	11.98	/	24
802.11n ht20	5180	11.53	11.67	14.61	24
	5200	11.03	11.59	14.33	24
	5240	11.48	11.03	14.27	24
802.11n ht40	5190	12.83	12.67	15.76	24
	5230	12.26	12.53	15.41	24
802.11ac vht80	5210	9.88	9.94	12.92	24
802.11ax he20	5180	12.19	12.23	15.22	24
	5200	12.54	12.61	15.59	24
	5240	12.63	12.43	15.54	24
802.11ax he40	5190	11.99	12.69	15.36	24
	5230	12.67	12.73	15.71	24
802.11ax he80	5210	10.01	9.89	12.96	24
Note: The device is a client device.					

5725-5850 MHz:

Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power (dBm)			
		Chain 0	Chain 1	Total	Limit
802.11a	5745	8.96	8.73	/	30
	5785	8.86	8.91	/	30
	5825	8.64	8.76	/	30
802.11n ht20	5745	10.97	10.61	13.80	30
	5785	10.72	10.79	13.77	30
	5825	10.83	10.56	13.71	30
802.11n ht40	5755	13.14	13.04	16.10	30
	5795	13.26	13.43	16.36	30
802.11ac vht80	5775	10.93	11.59	14.28	30
802.11ax he20	5745	14.21	14.13	17.18	30
	5785	14.09	14.36	17.24	30
	5825	13.99	14.29	17.15	30
802.11ax he40	5755	13.73	13.43	16.59	30
	5795	13.66	13.34	16.51	30
802.11ax he80	5775	10.61	10.79	13.71	30

4.5 Maximum power spectral density:

Serial Number:	2BD2-1	Test Date:	2024/1/12
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	21.9-23.4	Relative Humidity: (%)	38-40	ATM Pressure: (kPa)	101.7-101.8
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

5150-5250 MHz:

Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)			
		Chain 0	Chain 1	Total	Limit
802.11a	5180	1.69	1.42	/	11
	5200	2.32	1.79	/	11
	5240	2.15	1.91	/	11
802.11n ht20	5180	1.92	1.50	4.73	11
	5200	2.12	1.53	4.85	11
	5240	2.53	1.86	5.22	11
802.11n ht40	5190	1.17	1.28	4.24	11
	5230	1.47	1.51	4.50	11
802.11ac vht80	5210	-3.46	-3.21	-0.32	11
802.11ax he20	5180	2.65	2.11	5.40	11
	5200	2.94	2.32	5.65	11
	5240	2.56	2.56	5.57	11
802.11ax he40	5190	1.04	1.41	4.24	11
	5230	1.28	1.88	4.60	11
802.11ax he80	5210	-3.48	-3.20	-0.33	11

Note:

The device is a client device.

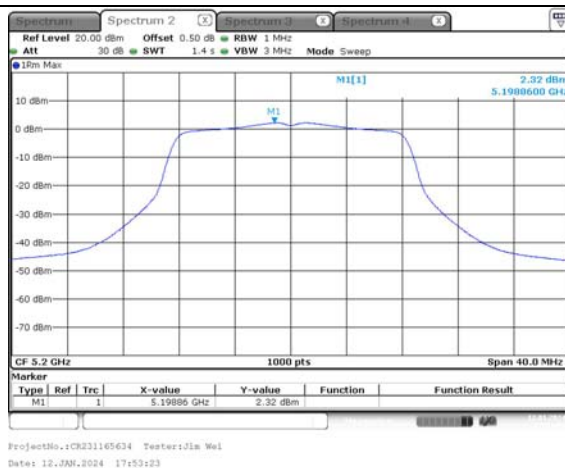
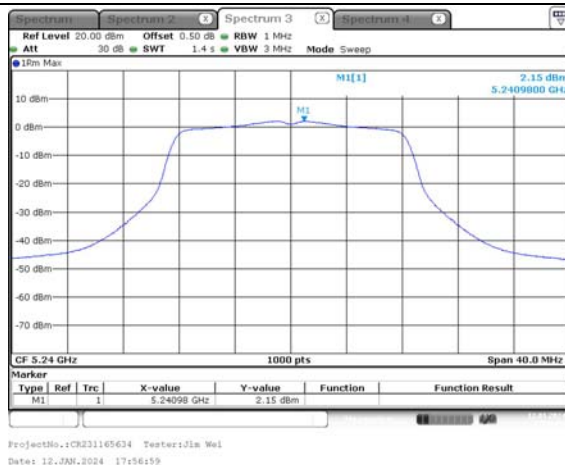
Duty cycle <98%, and duty cycle variations exceed $\pm 2\%$, KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 should be applied.

5725-5850 MHz:

Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/500kHz)			
		Chain 0	Chain 1	Total	Limit
802.11a	5745	-4.39	-4.75	/	30
	5785	-4.53	-5.16	/	30
	5825	-4.73	-5.08	/	30
802.11n ht20	5745	-2.59	-2.68	0.38	30
	5785	-3.05	-3.01	-0.02	30
	5825	-3.21	-3.00	-0.09	30
802.11n ht40	5755	-2.88	-3.30	-0.07	30
	5795	-3.09	-3.40	-0.23	30
802.11ac vht80	5775	-4.49	-5.55	-1.98	30
802.11ax he20	5745	1.62	0.92	4.29	30
	5785	1.21	0.57	3.91	30
	5825	1.07	0.74	3.92	30
802.11ax he40	5755	-1.87	-1.87	1.14	30
	5795	-2.22	-2.06	0.87	30
802.11ax he80	5775	-5.36	-5.55	-2.44	30

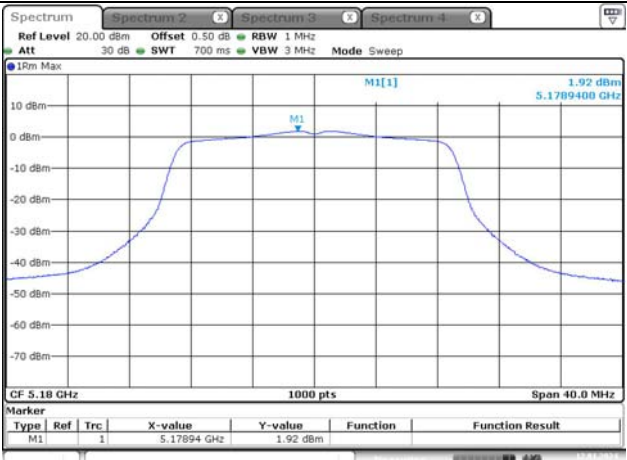
Note:

Duty cycle <98%, and duty cycle variations exceed $\pm 2\%$, KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 should be applied.

Chain 0 5150-5250MHz:**Maximum power spectral density**802.11a
Lowest Channel802.11a
Middle Channel802.11a
Highest Channel

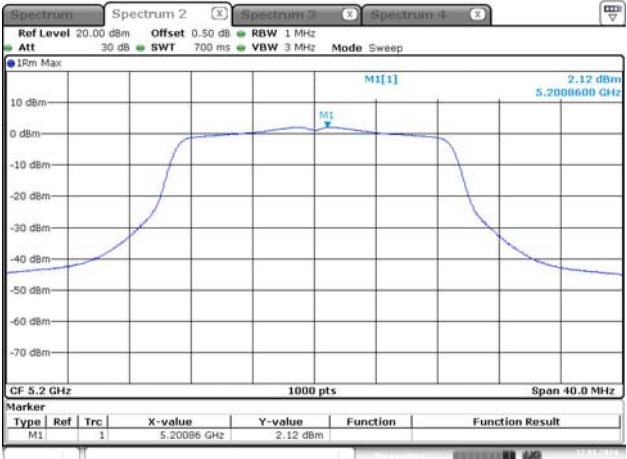
Maximum power spectral density

802.11n ht20
Lowest Channel



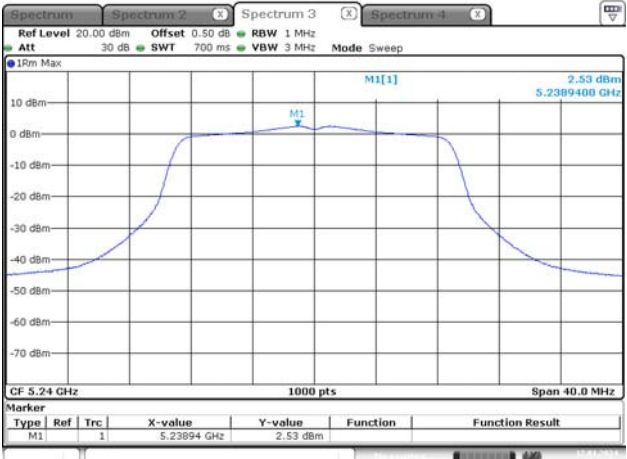
ProjectNo.:CR231165634 Testers:Jim Wei
Date: 12.JAN.2024 19:22:03

802.11n ht20
Middle Channel



ProjectNo.:CR231165634 Testers:Jim Wei
Date: 12.JAN.2024 19:23:12

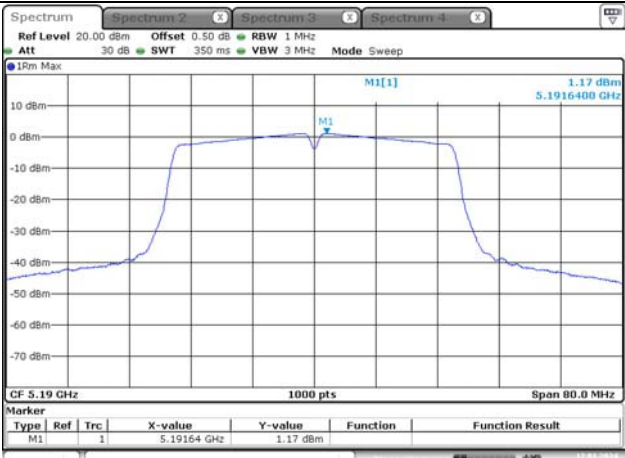
802.11n ht20
Highest Channel



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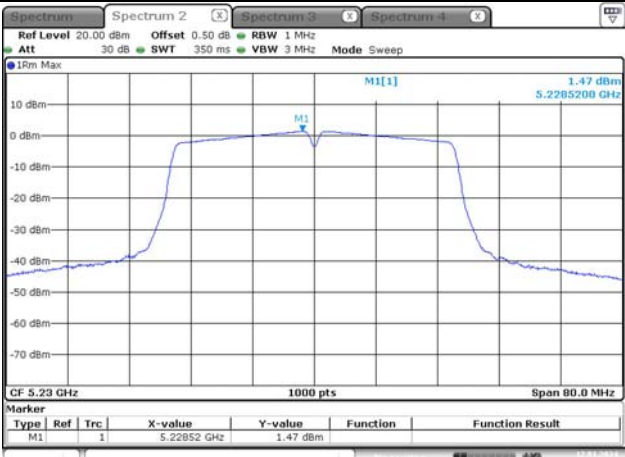
Maximum power spectral density

802.11n ht40
Lowest Channel



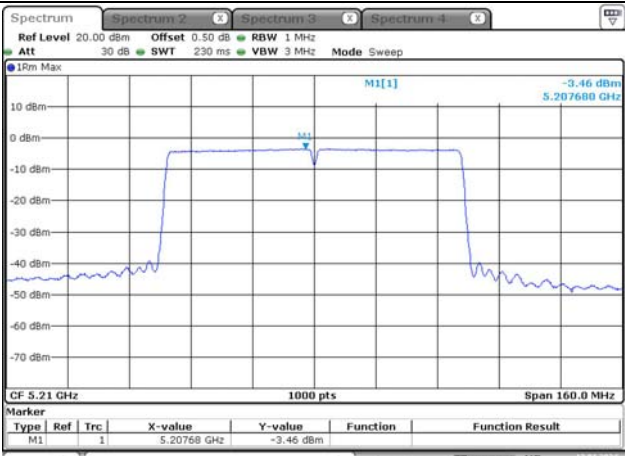
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Date: 12.JAN.2024 20:33:16

802.11n ht40
Highest Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:34:25

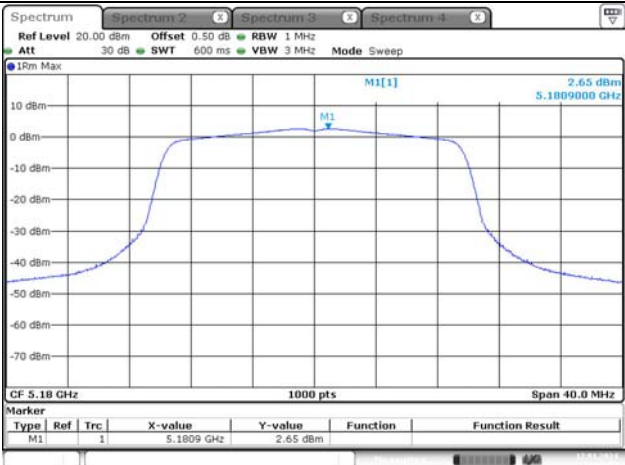
802.11ac vht80
Middle Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:21:07

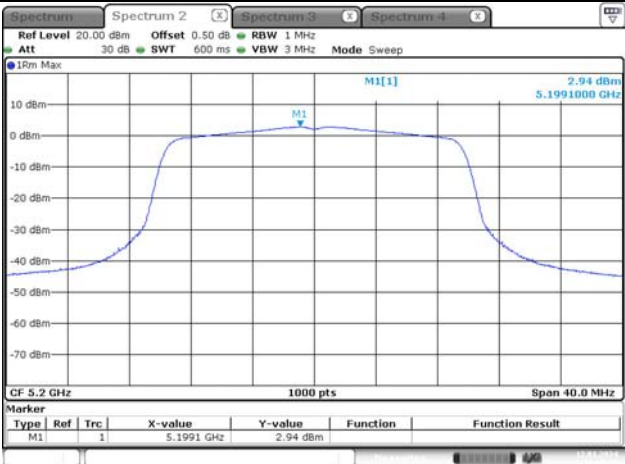
Maximum power spectral density

802.11ax hew20
Lowest Channel



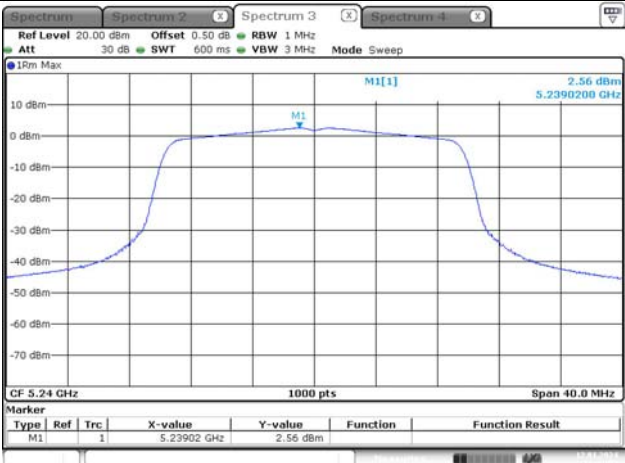
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Date: 12.JAN.2024 19:30:58

802.11ax hew20
Middle Channel



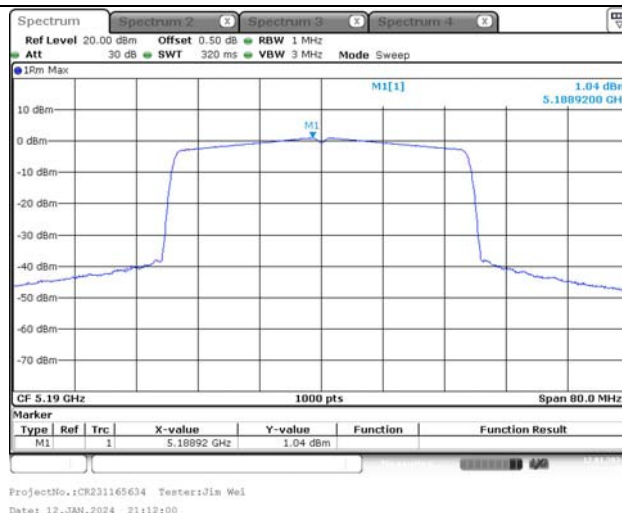
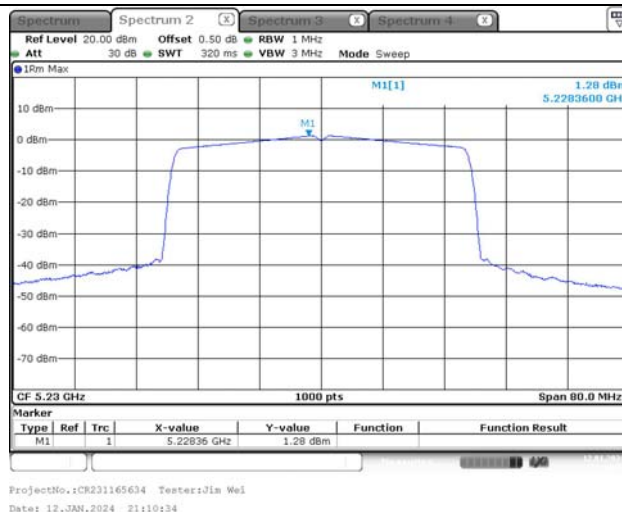
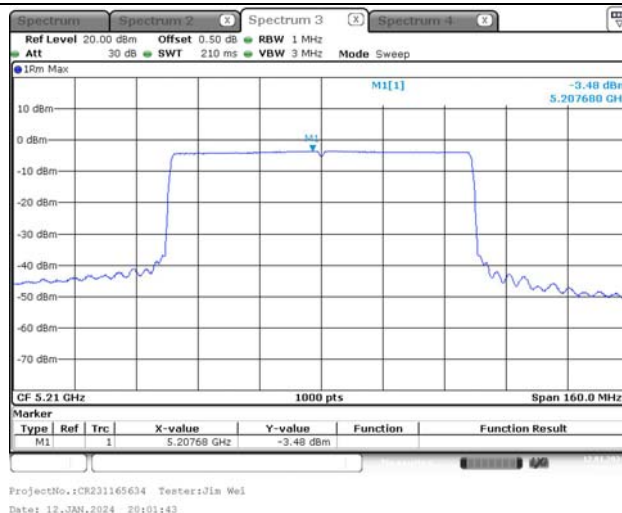
ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:29:11

802.11ax hew20
Highest Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:26:58

Maximum power spectral density

802.11ax hew40
Lowest Channel802.11ax hew40
Highest Channel802.11ax hew80
Middle Channel

Chain 1,5150-5250MHz:**Maximum power spectral density**

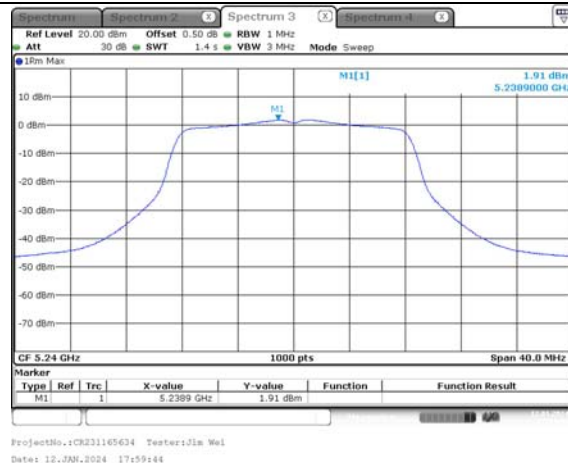
802.11a
Lowest Channel



802.11a
Middle Channel

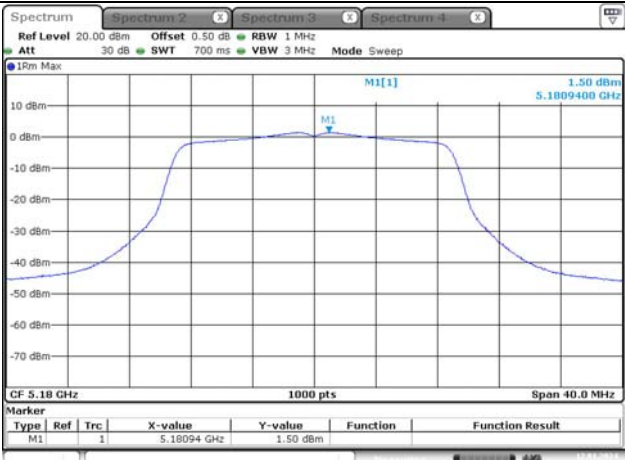


802.11a
Highest Channel



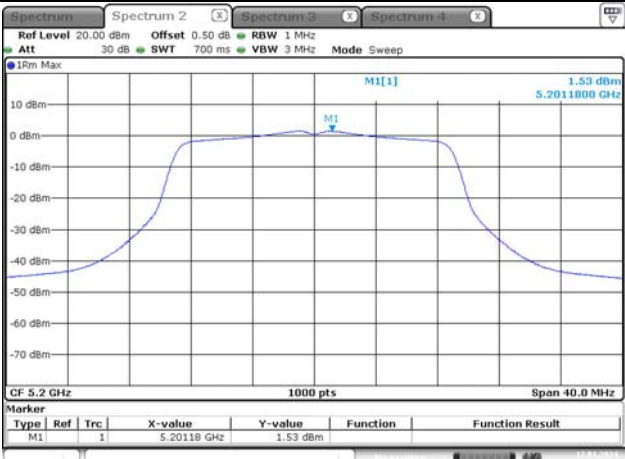
Maximum power spectral density

802.11n ht20
Lowest Channel



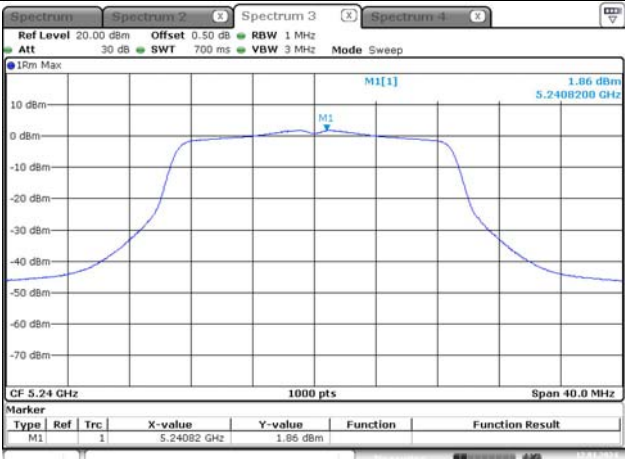
ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:19:08

802.11n ht20
Middle Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:17:39

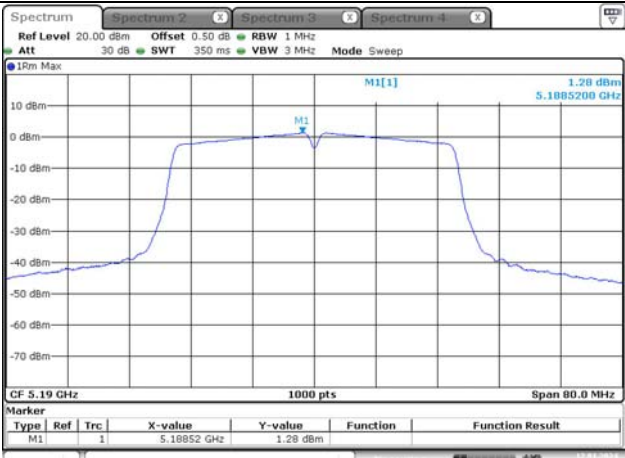
802.11n ht20
Highest Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:15:26

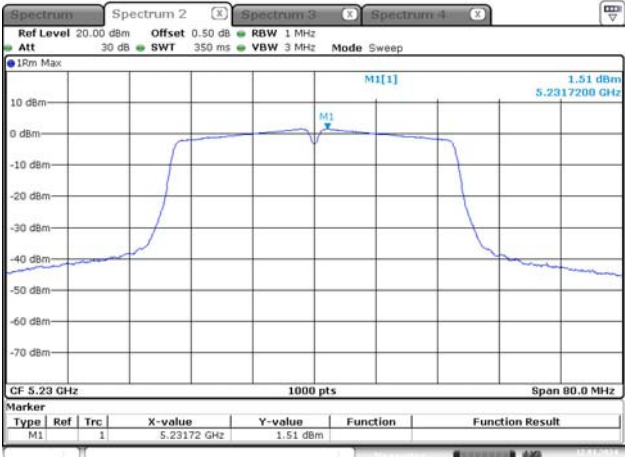
Maximum power spectral density

802.11n ht40
Lowest Channel



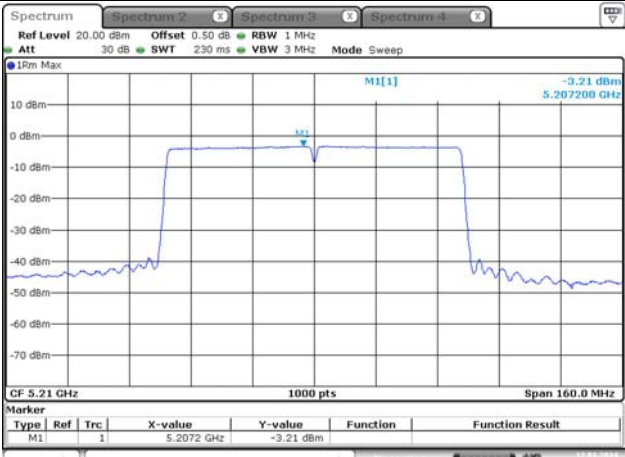
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Date: 12.JAN.2024 20:57:03

802.11n ht40
Highest Channel



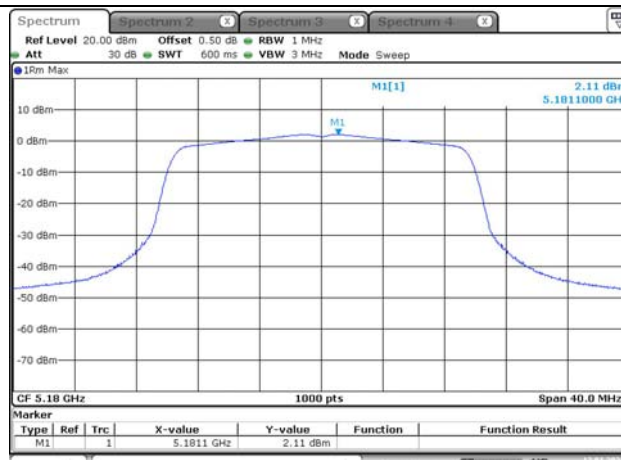
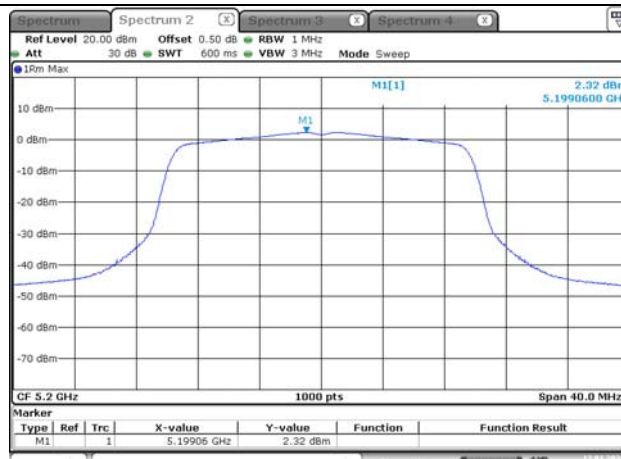
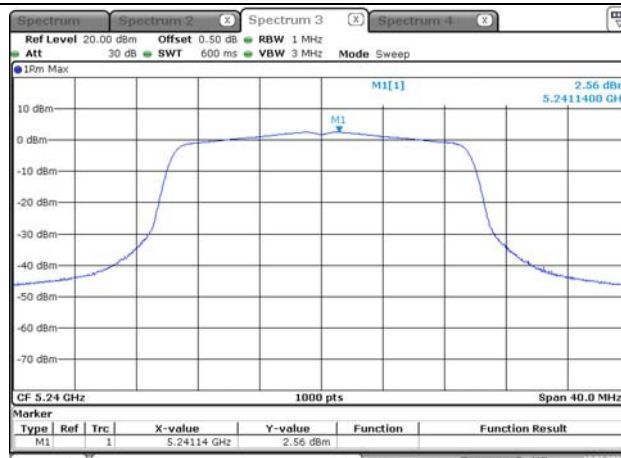
ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:53:15

802.11ac vht80
Middle Channel



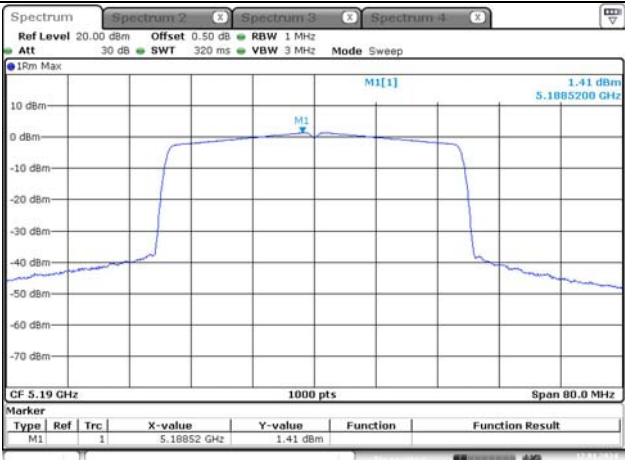
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Date: 12.JAN.2024 20:14:13

Maximum power spectral density

802.11ax hew20
Lowest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:32:26802.11ax hew20
Middle ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:38:39802.11ax hew20
Highest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:40:44

Maximum power spectral density

802.11ax hew40
Lowest Channel



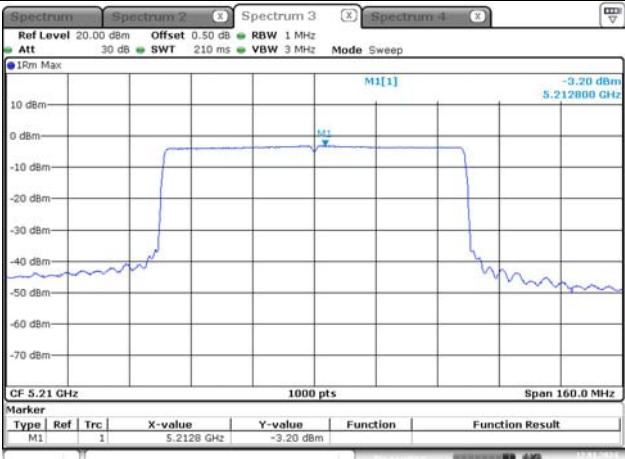
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Date: 12.JAN.2024 21:00:45

802.11ax hew40
Highest Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 21:02:02

802.11ax hew80
Middle Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:10:39

Chain 0,5725-5850MHz

Maximum power spectral density

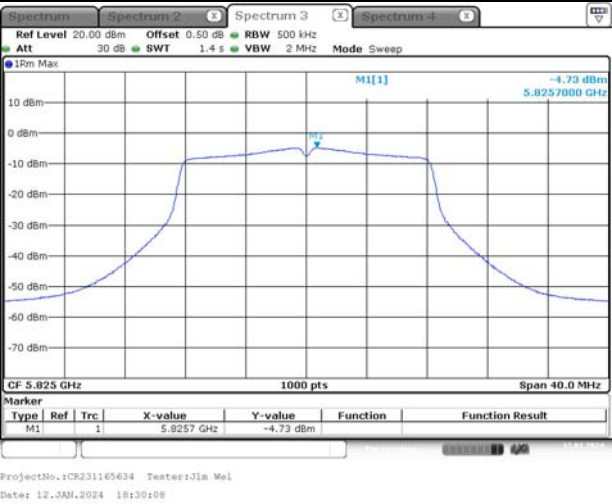
802.11a
Lowest Channel



802.11a
Middle Channel



802.11a
Highest Channel



Maximum power spectral density

802.11n ht20
Lowest Channel



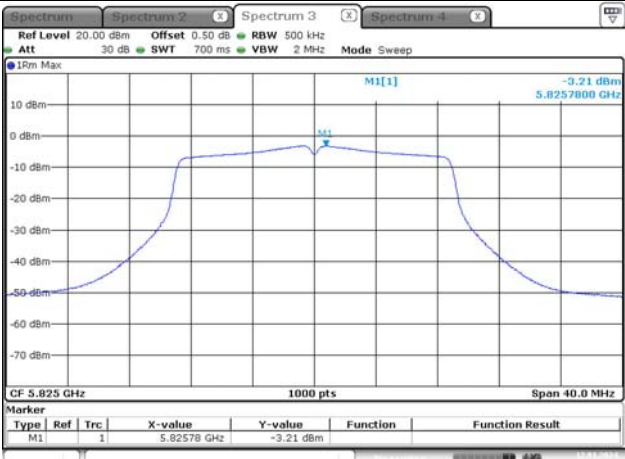
ProjectNo.:CR231165634 Testers:Jim Wei
Date: 12.JAN.2024 18:39:37

802.11n ht20
Middle Channel



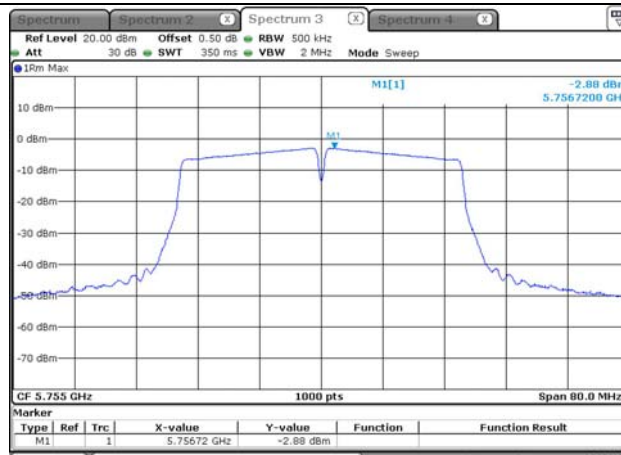
ProjectNo.:CR231165634 Testers:Jim Wei
Date: 12.JAN.2024 19:03:21

802.11n ht20
Highest Channel

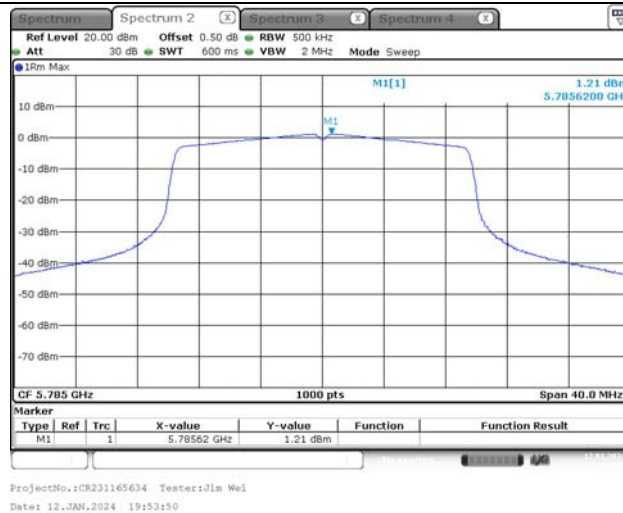


ProjectNo.:CR231165634 Testers:Jim Wei
Date: 12.JAN.2024 19:04:40

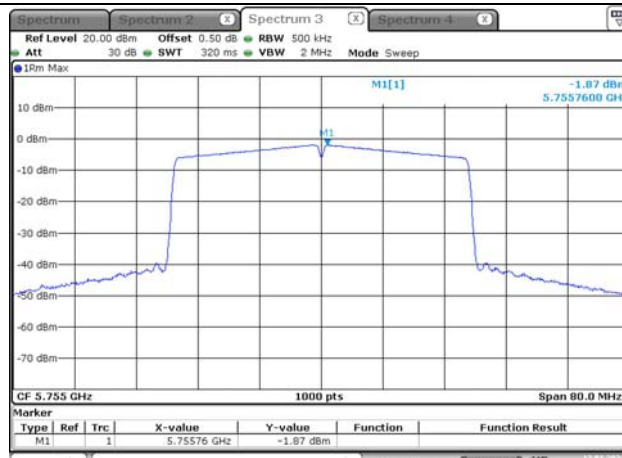
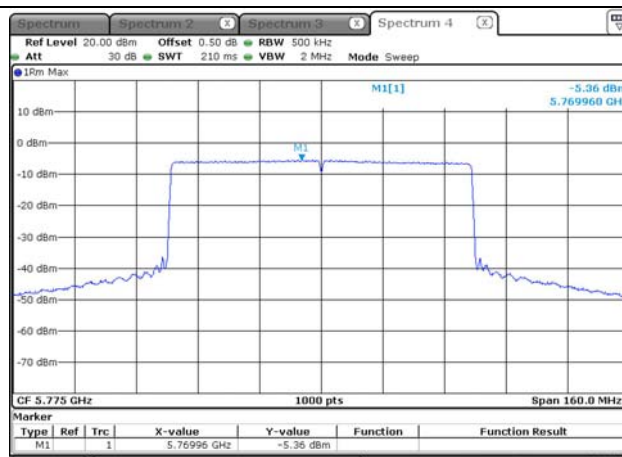
Maximum power spectral density

802.11n ht40
Lowest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:35:49802.11n ht40
Highest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:41:34802.11ac vht80
Middle ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:18:50

Maximum power spectral density

802.11ax hew20
Lowest Channel802.11ax hew20
Middle Channel802.11ax hew20
Highest Channel

Maximum power spectral density

802.11ax hew40
Lowest Channel802.11ax hew40
Highest Channel802.11ax hew80
Middle Channel

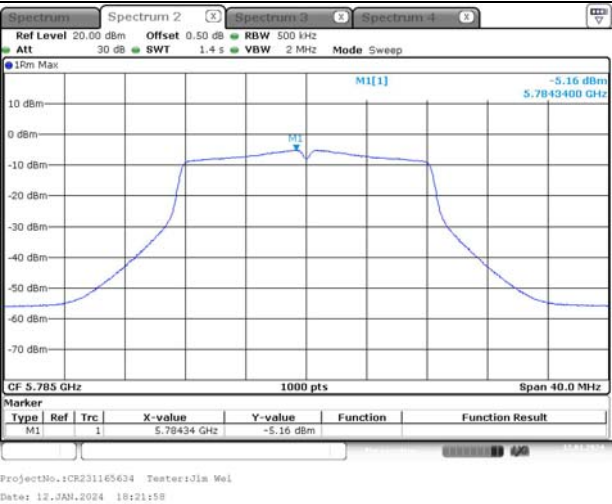
Chain 1,5725-5850MHz

Maximum power spectral density

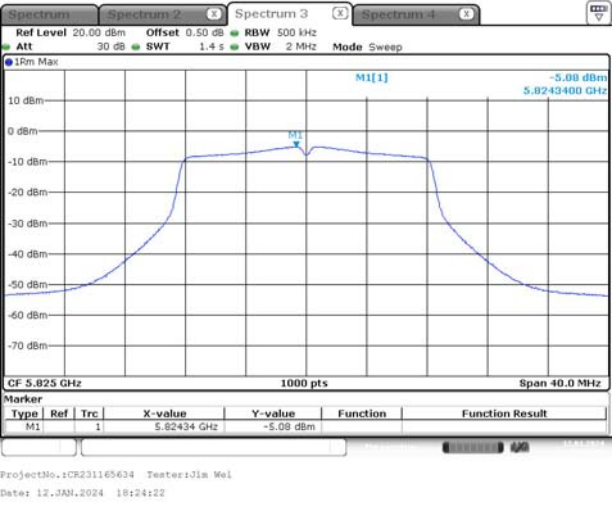
802.11a
Lowest Channel



802.11a
Middle Channel

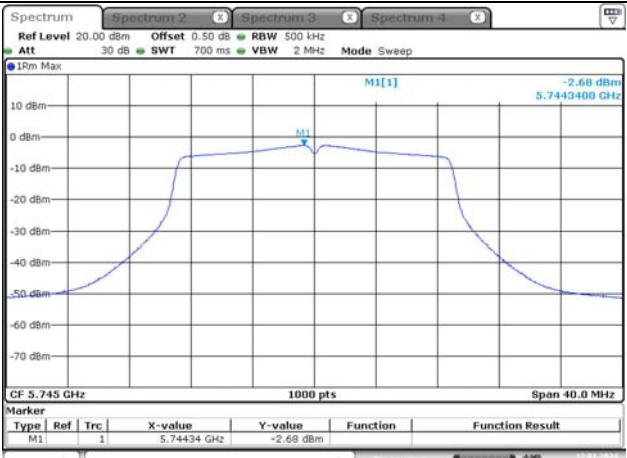


802.11a
Highest Channel



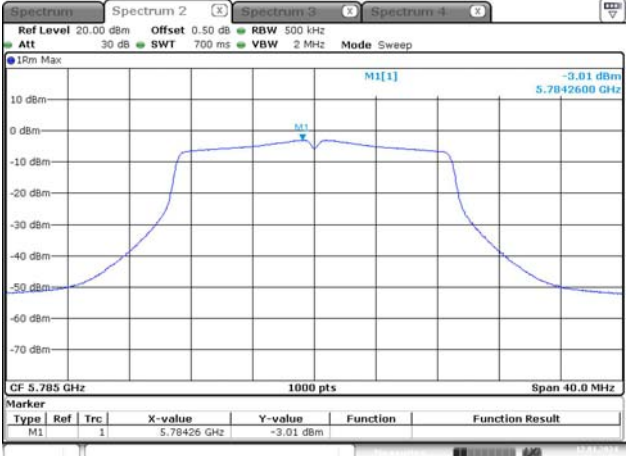
Maximum power spectral density

802.11n ht20
Lowest Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:12:39

802.11n ht20
Middle Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:10:34

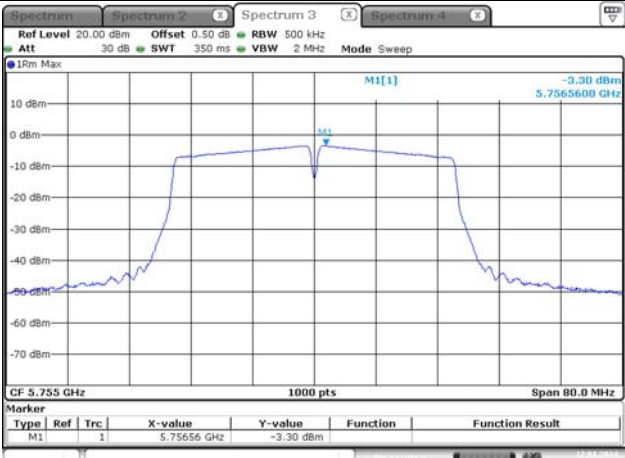
802.11n ht20
Highest Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:06:51

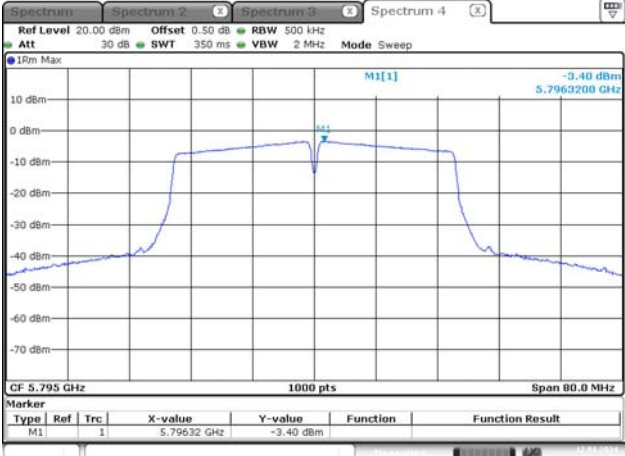
Maximum power spectral density

802.11n ht40
Lowest Channel



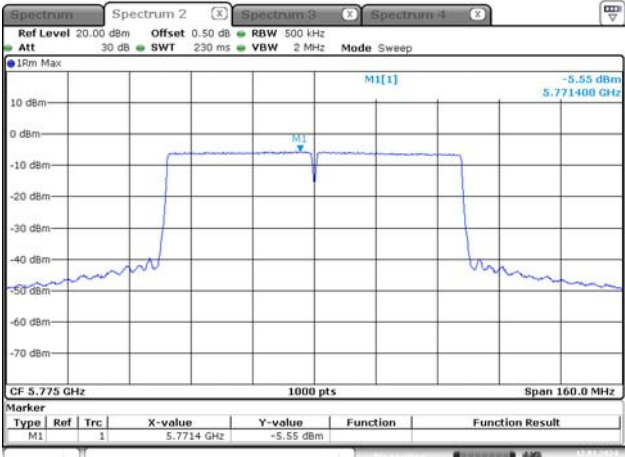
ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:49:39

802.11n ht40
Highest Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:47:31

802.11ac vht80
Middle Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:16:05

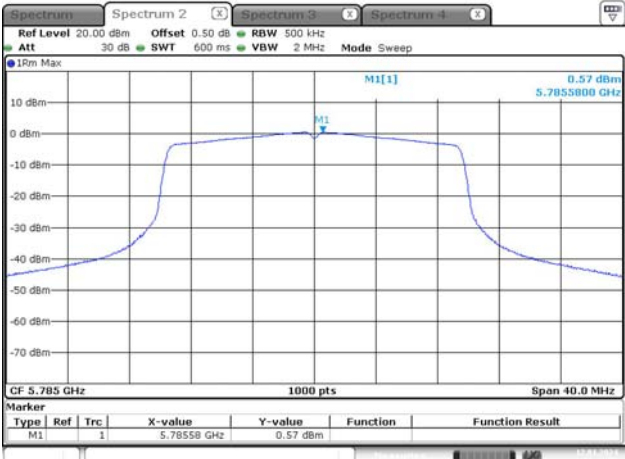
Maximum power spectral density

802.11ax hew20
Lowest Channel



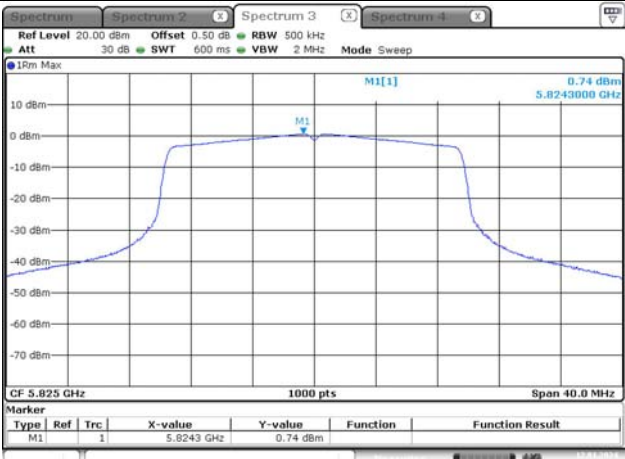
ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:44:05

802.11ax hew20
Middle Channel



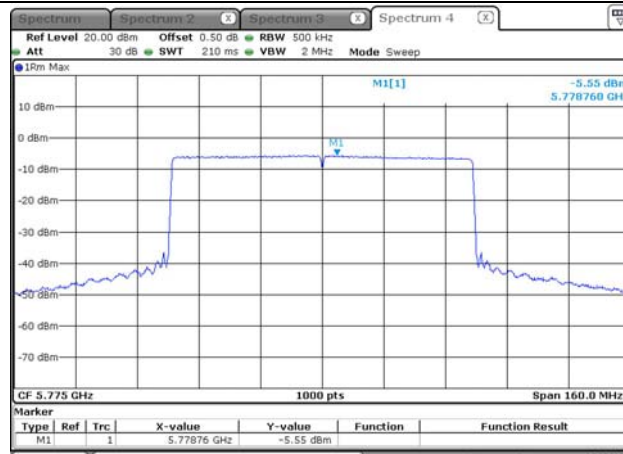
ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:46:51

802.11ax hew20
Highest Channel



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 19:48:18

Maximum power spectral density

802.11ax hew40
Lowest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 21:03:45802.11ax hew40
Highest ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 21:04:51802.11ax hew80
Middle ChannelProjectNo.:CR231165634 Tester:Jim Wei
Date: 12.JAN.2024 20:08:52

4.6 Duty Cycle:

Serial Number:	2BD2-1	Test Date:	2023/12/19
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	N/A

Environmental Conditions:

Temperature: (°C)	23.4	Relative Humidity: (%)	40	ATM Pressure: (kPa)	101.7
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A

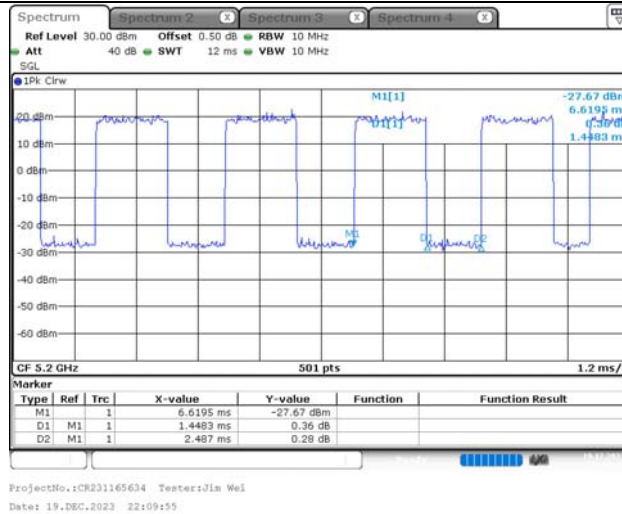
* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

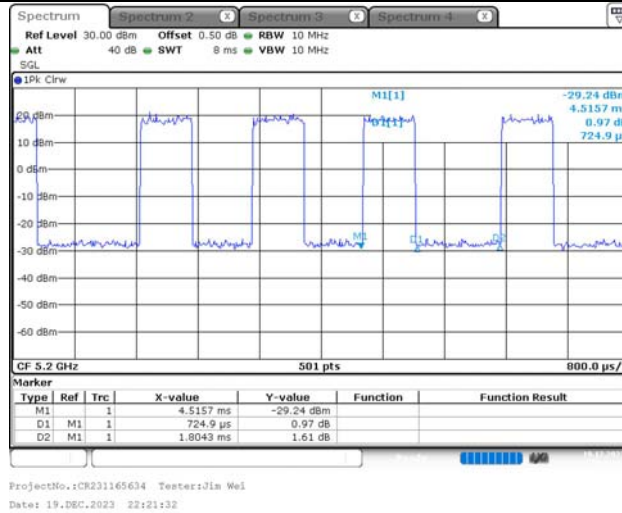
Test Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)	1/T (Hz)	VBW Setting (kHz)
802.11a	1.448	/	Not constant	691	1
802.11n ht20	0.725	/	Not constant	1379	2
802.11n ht40	0.390	/	Not constant	2564	3
802.11ac vht80	0.235	/	Not constant	4255	5
802.11ax he20	0.578	/	Not constant	1730	2
802.11ax he40	0.337	/	Not constant	2967	3
802.11ax he80	0.220	/	Not constant	4545	5

Duty Cycle

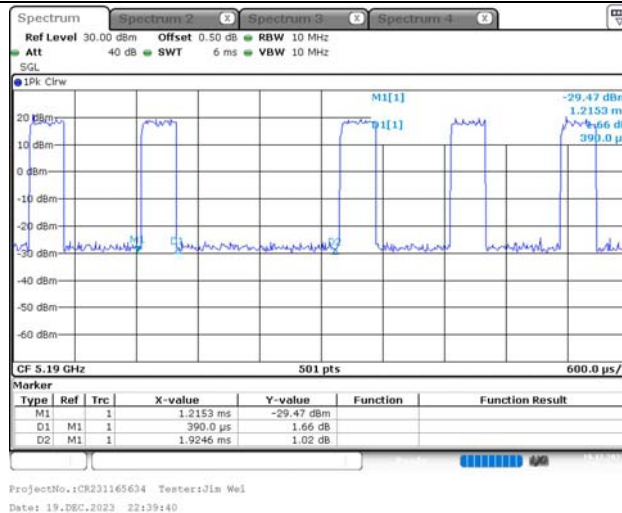
802.11a



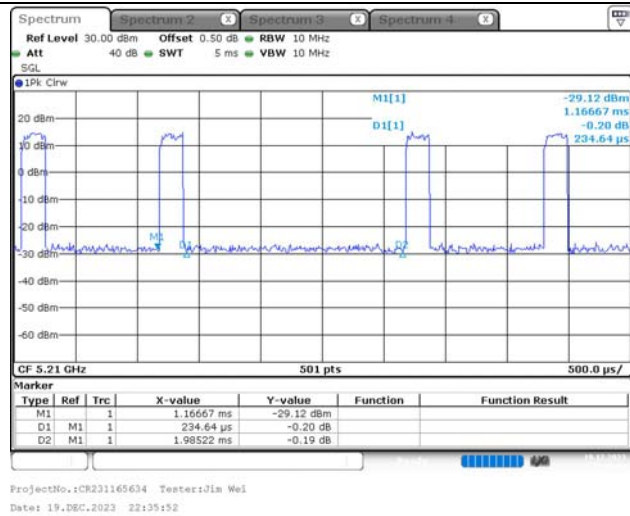
802.11n ht20



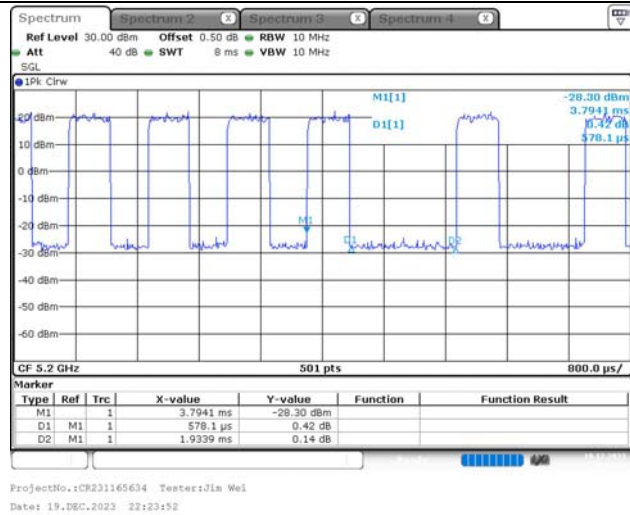
802.11n ht40



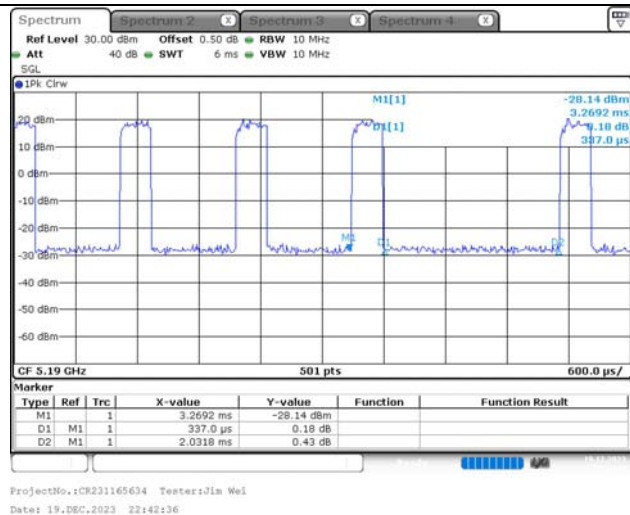
802.11ac vht80



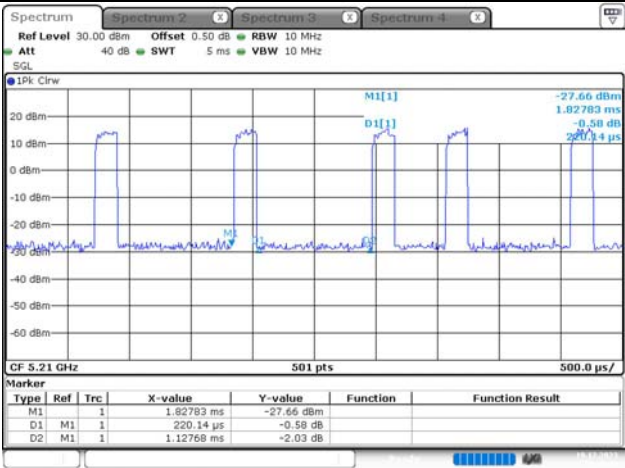
802.11ax he20



802.11ax he40



802.11ax he80



ProjectNo.:CR231165634 Tester:Jim Wei
Date: 19.DEC.2023 22:28:39

5. EUT PHOTOGRAPHS

Please refer to the attachment CR231165634-EXP EUT EXTERNAL PHOTOGRAPHS and CR231165634-INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR231165634-00D-TSP TEST SETUP PHOTOGRAPHS.

===== END OF REPORT =====