



中认信通

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



TEST REPORT

Applicant: CHITECH SHENZHEN TECHNOLOGY CO.,LTD

Address: 101,NO.48,Xiashijia Road,Gongming Town,Guangming
Dist.,Shenzhen,China

FCC ID: 2AXUI-CT1001

Product Name: Tablet PC

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: CR230955186-00D

Date Of Issue: 2023/10/30

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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	CR230955186-00D	Original Report	2023/10/30

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

1.1.1 General:

EUT Name:	Tablet PC
Trade:	YYSWIE
EUT Model:	CT1001
Multiple Model(s):	Z10, M10, G10, K10, F108W, E200
Operation Frequency:	5180-5240 MHz (802.11a/n ht20/ac vht20/ax hew20) 5190-5230 MHz (802.11n ht40/ac vht40/ax hew40) 5745-5825 MHz (802.11a/n ht20/ac vht20/ax hew20) 5755-5795 MHz (802.11n ht40/ac vht40/ax hew40)
Maximum Average Output Power (Conducted):	13.86dBm (5150-5250 MHz) 12.96dBm (5725-5850 MHz)
Modulation Type:	802.11a/n/ac/ax: OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 256QAM, 1024QAM
Rated Input Voltage:	DC 5V from adapter or DC 3.8V from battery
Serial Number:	2BFJ-3(For Conducted Emissions and Radiated Spurious Emissions) 2BFJ-1(For RF Conducted)
EUT Received Date:	2023/9/20
EUT Received Status:	Good

Note: The Multiple models are electrically identical with the test model. Please refer to the declaration letter for more detail, which was provided by manufacturer.

1.1.2 Operation Frequency Detail: For 802.11a/n ht20/ac vht20/ax hew20:

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 hew40:

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

1.1.3 Antenna Information Detail▲:

Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
FPC	50	5.15~5.25GHz	1.42dBi
		5.725~5.85GHz	1.55dBi
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.			

1.1.4 Accessory Information:

Accessory Description	Manufacturer	Model
Adapter	Shenzhen Fangxin Technology Co.,Ltd.	FX18U-050300U1

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

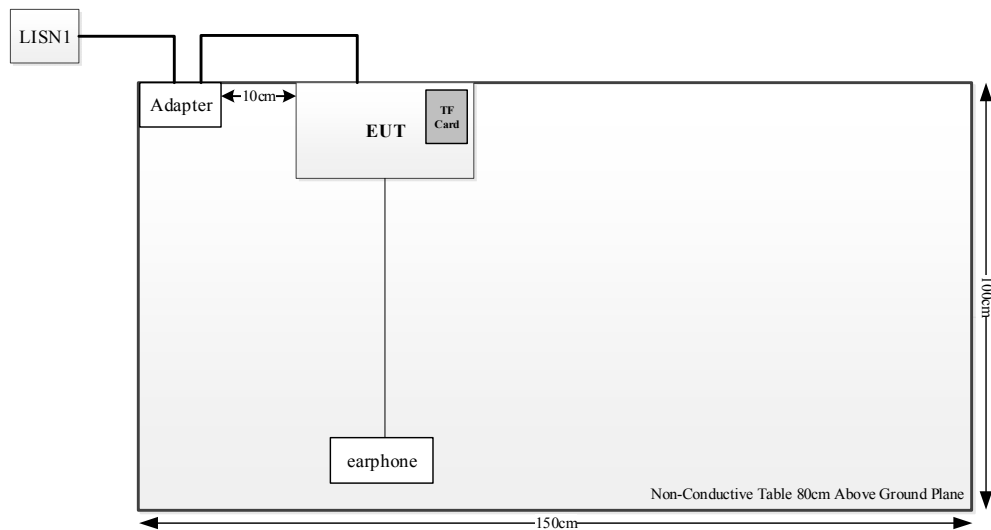
EUT Operation Mode:			The system was configured for testing in Engineering Mode, which was provided by the manufacturer.	
Equipment Modifications:			No	
EUT Exercise Software:			ADB	
The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer ▲:				
5150-5250 MHz Band:				
Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting
802.11a	Lowest	5180	6Mbps	10
	Middle	5200	6Mbps	10
	Highest	5240	6Mbps	10
802.11n ht20	Lowest	5180	MCS0	10
	Middle	5200	MCS0	10
	Highest	5240	MCS0	10
802.11n ht40	Lowest	5190	MCS0	10
	Highest	5230	MCS0	10
802.11ax hew20	Lowest	5180	MCS0	10
	Middle	5200	MCS0	10
	Highest	5240	MCS0	10
802.11ax hew40	Lowest	5190	MCS0	10
	Highest	5230	MCS0	10
5725-5850 MHz Band:				
Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting
802.11a	Lowest	5745	6Mbps	8
	Middle	5785	6Mbps	10
	Highest	5825	6Mbps	10
802.11n ht20	Lowest	5745	MCS0	8
	Middle	5785	MCS0	10
	Highest	5825	MCS0	10
802.11n ht40	Lowest	5755	MCS0	10
	Highest	5795	MCS0	10
802.11ax hew20	Lowest	5745	MCS0	10
	Middle	5785	MCS0	10
	Highest	5825	MCS0	10
802.11ax hew40	Lowest	5755	MCS0	10
	Highest	5795	MCS0	10
Note: The system support 802.11a/n ht20/n ht40/ac vht20/vht40/ax hew20/ax hew40, the vht20/vht40 were reduced since the identical parameters with 802.11n ht20 and ht40. 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.				

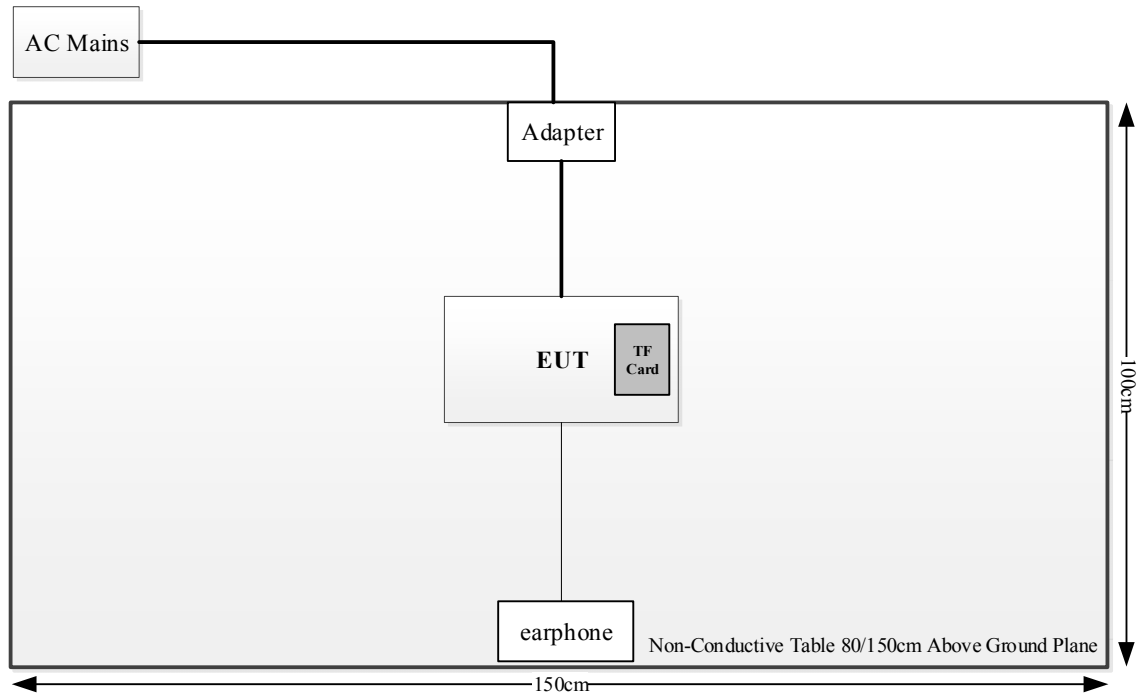
1.2.2 Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
I PRO	Earphone	Phonenix 5.0s	EP221126001
SanDisk	TF Card	16 GB	1183DRECV11N

1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
USB Cable	No	No	1	EUT	Adapter
Earphone Cable	No	No	1.5	EUT	Earphone

1.2.4 Block Diagram of Test Setup**AC Line Conducted Emissions:**

Radiated Spurious Emissions:**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, 30MHz~200MHz: 4.15 dB, 200MHz~1GHz: 5.61 dB, 1GHz~6GHz: 5.14 dB, 6GHz~18GHz: 5.93 dB, 18GHz~26.5GHz: 5.47 dB, 26.5GHz~40GHz: 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
FCC§15.207(a)	AC line conducted emissions	Compliant
FCC§15.205& §15.209 &§15.407(b)	Radiated Spurious Emissions	Compliant
FCC§15.407 (c)	Automatically Discontinue Transmission	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
FCC§15.407 (g)	Frequency Stability	Compliant**
§15.203	Antenna Requirement	Compliant

Note:

Compliant*: During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. the EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

Compliant:** Grantee ensure that the product meets e-CFR Title 47 section 15.407(g) and KDB 789033 D02v02r01 frequency stability such that the emissions are maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

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.

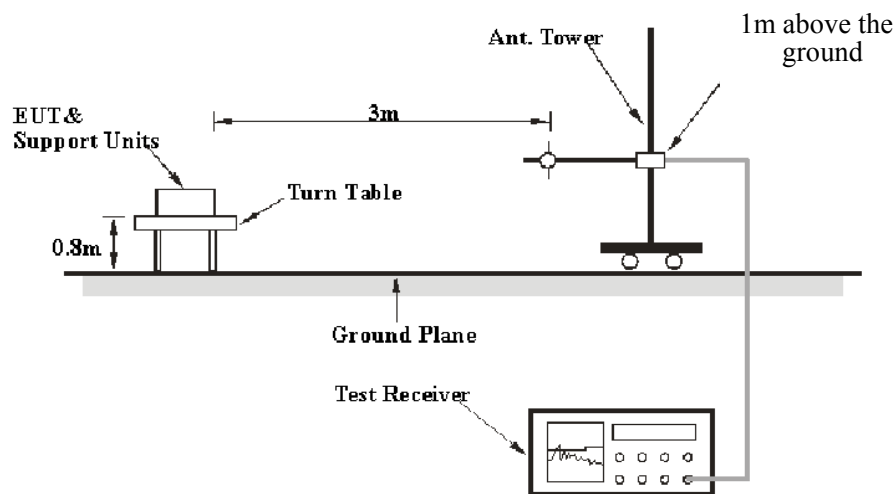
(10) The provisions of § 15.205 apply to intentional radiators operating under this section.

(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.

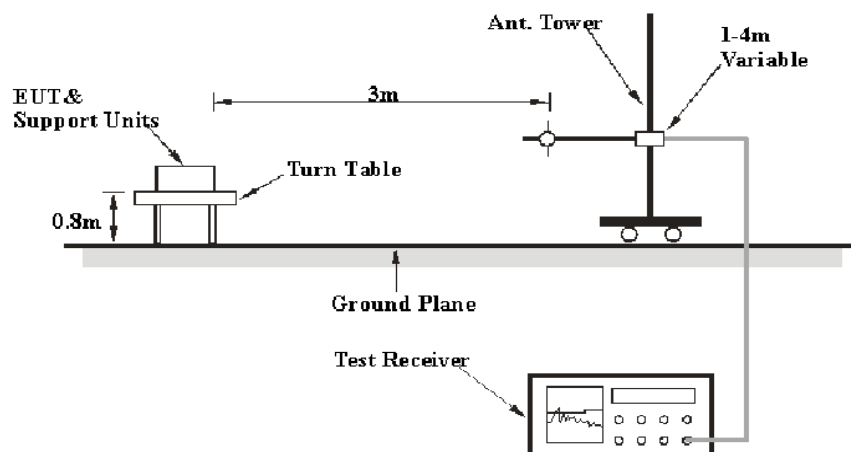
(c) The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies 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

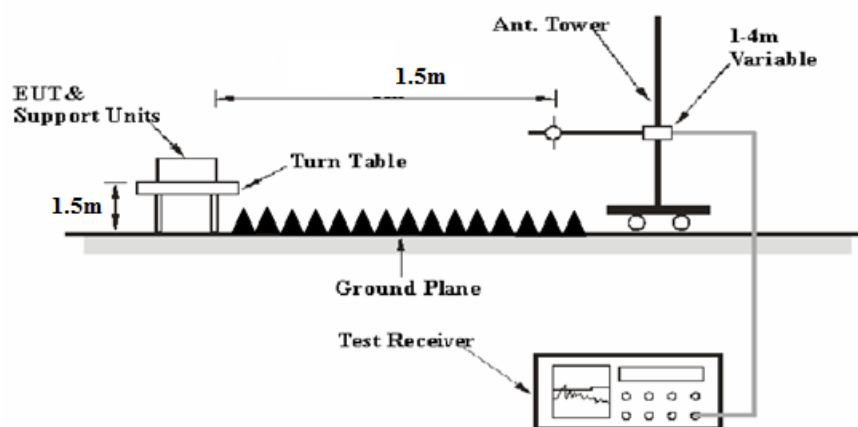
9kHz~30MHz:



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	≥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 30 MHz-1GHz, peak and Average detection modes for frequencies above 1GHz.

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, emission shall be computed as: $E [dB\mu V/m] = EIRP[dBm] + 95.2$, for $d = 3$ meters.

According to C63.10, the above 1G test result shall be extrapolated to the specified distance using an extrapolation Factor of 20dB/decade from 3m to 1.5m

Distance extrapolation Factor = $20 \log (\text{specific distance } [3m] / \text{test distance } [1.5m])$ dB = 6.02 dB

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:

For 30MHz-1GHz:

Factor = Antenna Factor + Cable Loss- Amplifier Gain

For 1GHz-40GHz

Factor = Antenna Factor + Cable Loss- Amplifier Gain -Distance extrapolation Factor

Result = Reading + Factor

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

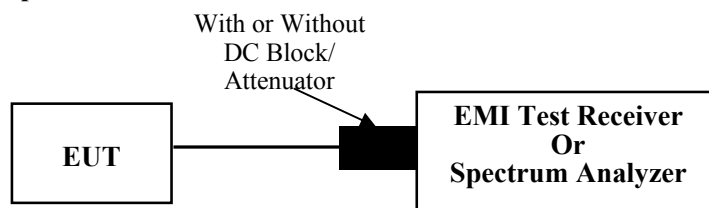
FCC §15.407 (a),(h)

(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.

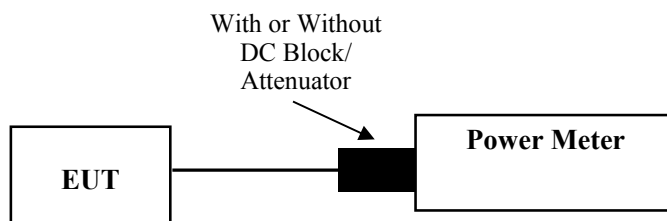
FCC §15.407(a) (2)

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 12.3.3.1

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.

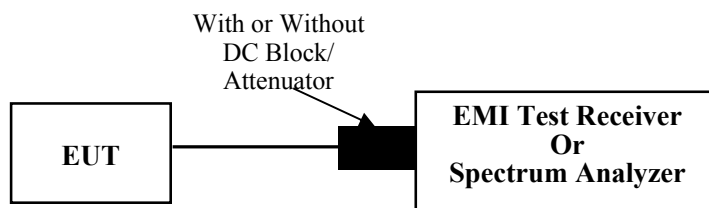
FCC §15.407(a) (2)

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 $\pm 2\%$

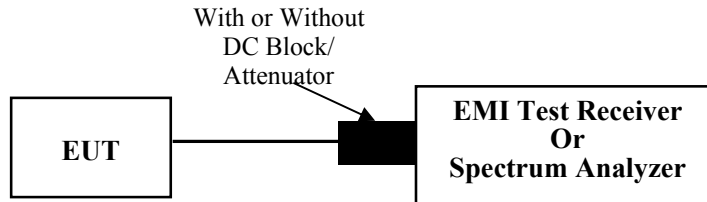
KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-2 should be applied.

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:	2BFJ-3	Test Date:	2023/9/23
Test Site:	CE	Test Mode:	Transmitting (Maximum Conducted Output Power Mode 802.11n ht20 Mode 5240MHz)
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.5	Relative Humidity: (%)	54	ATM Pressure: (kPa)	100.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101134	2023/03/31	2024/03/30
R&S	EMI Test Receiver	ESR3	102726	2023/03/31	2024/03/30
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2023/08/06	2024/08/05
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).

15-30MHz (Maximum Conducted Output Power 802.11n ht20 Mode High Channel):

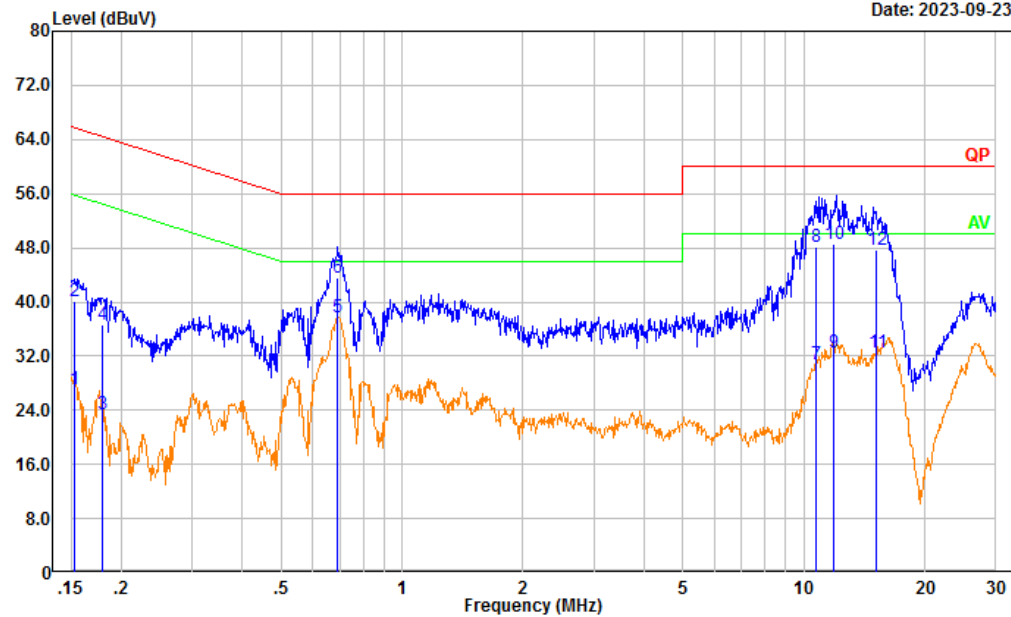
Project No.: CR230955186-RF

Tester: David Huang

Port: Line

Note:

Date: 2023-09-23



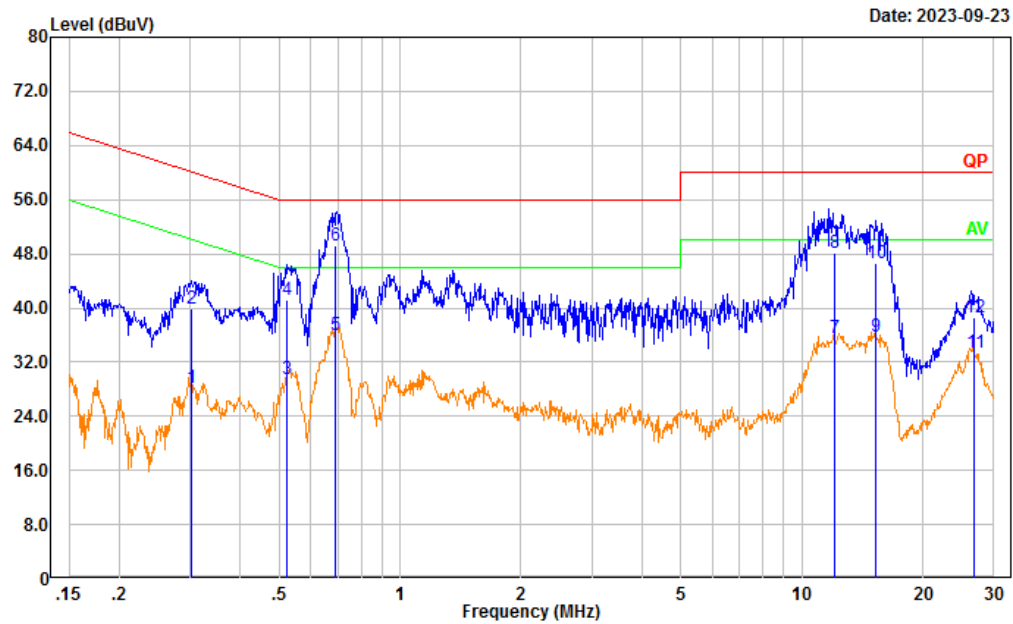
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.153	17.52	9.61	27.13	55.84	28.71	Average
2	0.153	30.44	9.61	40.05	65.84	25.79	QP
3	0.180	13.84	9.61	23.45	54.49	31.04	Average
4	0.180	26.95	9.61	36.56	64.49	27.93	QP
5	0.691	28.06	9.62	37.68	46.00	8.32	Average
6	0.691	33.91	9.62	43.53	56.00	12.47	QP
7	10.700	21.09	9.67	30.76	50.00	19.24	Average
8	10.700	38.36	9.67	48.03	60.00	11.97	QP
9	11.893	22.95	9.67	32.62	50.00	17.38	Average
10	11.893	38.82	9.67	48.49	60.00	11.51	QP
11	15.180	22.89	9.69	32.58	50.00	17.42	Average
12	15.180	38.11	9.69	47.80	60.00	12.20	QP

Project No.: CR230955186-RF

Tester: David Huang

Port: neutral

Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.303	18.67	9.61	28.28	50.17	21.89	Average
2	0.303	30.20	9.61	39.81	60.17	20.36	QP
3	0.521	19.92	9.61	29.53	46.00	16.47	Average
4	0.521	31.68	9.61	41.29	56.00	14.71	QP
5	0.687	26.28	9.62	35.90	46.00	10.10	Average
6	0.687	39.67	9.62	49.29	56.00	6.71	QP
7	12.020	25.81	9.67	35.48	50.00	14.52	Average
8	12.020	38.36	9.67	48.03	60.00	11.97	QP
9	15.267	25.99	9.69	35.68	50.00	14.32	Average
10	15.267	36.94	9.69	46.63	60.00	13.37	QP
11	26.845	23.48	9.80	33.28	50.00	16.72	Average
12	26.845	28.81	9.80	38.61	60.00	21.39	QP

4.2 Radiation Spurious Emissions

Serial Number:	2BFJ-3	Test Date:	Below 1GHz: 2023/9/22 Above 1GHz: 2023/10/19
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Carl Xue, Coco Tian, Mack Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.2~25.9	Relative Humidity: (%)	58~59	ATM Pressure: (kPa)	100.1~100.4
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Below 1GHz					
EMCO	Passive Loop Antenna	6512	9706-1209	2023/02/15	2026/02/14
Sunol Sciences	Antenna	JB6	A082520-5	2020/10/19	2023/10/18
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
Above 1GHz					
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	2022/11/9	2023/11/8
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:

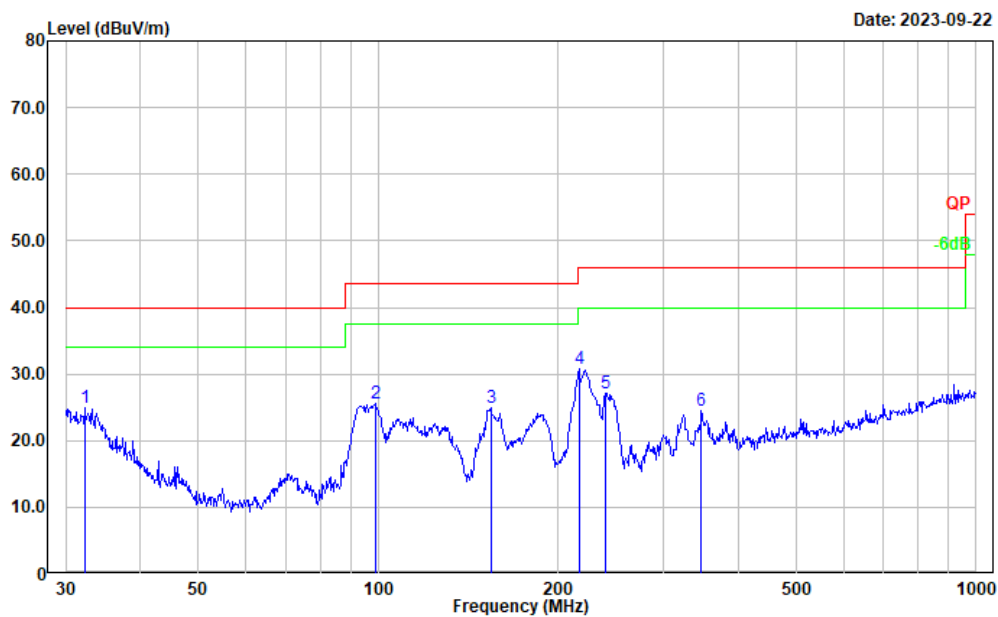
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

1) 9kHz~30MHz

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

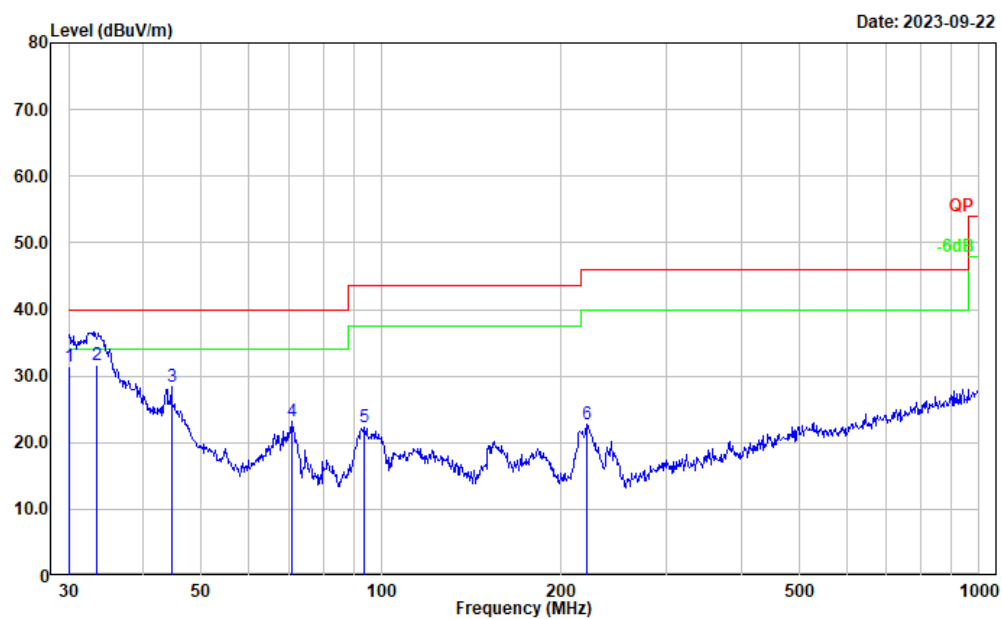
2) 30MHz-1GHz (Tested at Maximum Conducted Output Power 802.11n ht20 Mode 5240MHz)

Project No.: CR230955186-RF
Tester: Carl Xue
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	32.293	30.29	-5.36	24.93	40.00	15.07	Peak
2	98.833	40.14	-14.59	25.55	43.50	17.95	Peak
3	154.279	36.90	-12.03	24.87	43.50	18.63	Peak
4	216.783	43.42	-12.68	30.74	46.00	15.26	Peak
5	239.987	40.09	-13.02	27.07	46.00	18.93	Peak
6	346.809	34.49	-10.03	24.46	46.00	21.54	Peak

Project No.: CR230955186-RF
Tester: Carl Xue
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.105	35.08	-3.68	31.40	40.00	8.60	QP
2	33.386	37.79	-6.21	31.58	40.00	8.42	QP
3	44.587	42.33	-14.00	28.33	40.00	11.67	Peak
4	70.832	39.65	-16.55	23.10	40.00	16.90	Peak
5	93.440	38.29	-16.05	22.24	43.50	21.26	Peak
6	220.617	35.69	-12.83	22.86	46.00	23.14	Peak

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

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5150.000	29.88	PK	H	32.83	62.71	74.00	11.29
5150.000	16.74	AV	H	32.83	49.57	54.00	4.43
5150.000	29.15	PK	V	32.83	61.98	74.00	12.02
5150.000	16.07	AV	V	32.83	48.90	54.00	5.10
10360.000	31.45	PK	H	14.45	45.90	68.20	22.30
10360.000	30.78	PK	V	14.45	45.23	68.20	22.97
15540.000	33.45	PK	H	18.60	52.05	74.00	21.95
15540.000	20.68	AV	H	18.60	39.28	54.00	14.72
15540.000	32.76	PK	V	18.60	51.36	74.00	22.64
15540.000	19.54	AV	V	18.60	38.14	54.00	15.86
Middle Channel: 5200 MHz							
10400.000	31.76	PK	H	14.52	46.28	68.20	21.92
10400.000	30.85	PK	V	14.52	45.37	68.20	22.83
15600.000	33.68	PK	H	18.69	52.37	74.00	21.63
15600.000	20.45	AV	H	18.69	39.14	54.00	14.86
15600.000	33.39	PK	V	18.69	52.08	74.00	21.92
15600.000	20.42	AV	V	18.69	39.11	54.00	14.89
High Channel: 5240 MHz							
5350.000	30.12	PK	H	32.70	62.82	74.00	11.18
5350.000	16.54	AV	H	32.70	49.24	54.00	4.76
5350.000	29.73	PK	V	32.70	62.43	74.00	11.57
5350.000	16.47	AV	V	32.70	49.17	54.00	4.83
10480.000	31.67	PK	H	14.40	46.07	68.20	22.13
10480.000	30.96	PK	V	14.40	45.36	68.20	22.84
15720.000	34.62	PK	H	18.80	53.42	74.00	20.58
15720.000	21.64	AV	H	18.80	40.44	54.00	13.56
15720.000	33.87	PK	V	18.80	52.67	74.00	21.33
15720.000	20.96	AV	V	18.80	39.76	54.00	14.24

802.11n ht20:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5150.000	29.84	PK	H	32.83	62.67	74.00	11.33
5150.000	16.75	AV	H	32.83	49.58	54.00	4.42
5150.000	29.11	PK	V	32.83	61.94	74.00	12.06
5150.000	16.35	AV	V	32.83	49.18	54.00	4.82
10360.000	32.64	PK	H	14.45	47.09	68.20	21.11
10360.000	32.31	PK	V	14.45	46.76	68.20	21.44
15540.000	33.45	PK	H	18.60	52.05	74.00	21.95
15540.000	20.69	AV	H	18.60	39.29	54.00	14.71
15540.000	33.18	PK	V	18.60	51.78	74.00	22.22
15540.000	20.43	AV	V	18.60	39.03	54.00	14.97
Middle Channel: 5200 MHz							
10400.000	32.47	PK	H	14.52	46.99	68.20	21.21
10400.000	32.39	PK	V	14.52	46.91	68.20	21.29
15600.000	33.79	PK	H	18.69	52.48	74.00	21.52
15600.000	20.58	AV	H	18.69	39.27	54.00	14.73
15600.000	33.67	PK	V	18.69	52.36	74.00	21.64
15600.000	20.84	AV	V	18.69	39.53	54.00	14.47
High Channel: 5240 MHz							
5350.000	29.84	PK	H	32.70	62.54	74.00	11.46
5350.000	16.54	AV	H	32.70	49.24	54.00	4.76
5350.000	29.03	PK	V	32.70	61.73	74.00	12.27
5350.000	16.11	AV	V	32.70	48.81	54.00	5.19
10480.000	32.66	PK	H	14.40	47.06	68.20	21.14
10480.000	32.51	PK	V	14.40	46.91	68.20	21.29
15720.000	34.75	PK	H	18.80	53.55	74.00	20.45
15720.000	21.62	AV	H	18.80	40.42	54.00	13.58
15720.000	34.83	PK	V	18.80	53.63	74.00	20.37
15720.000	21.22	AV	V	18.80	40.02	54.00	13.98

802.11n ht40:

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	31.71	PK	H	32.83	64.54	74.00	9.46
5150.000	17.17	AV	H	32.83	50.00	54.00	4.00
5150.000	30.58	PK	V	32.83	63.41	74.00	10.59
5150.000	16.88	AV	V	32.83	49.71	54.00	4.29
10380.000	34.20	PK	H	14.49	48.69	68.20	19.51
10380.000	33.69	PK	V	14.49	48.18	68.20	20.02
15570.000	34.93	PK	H	18.65	53.58	74.00	20.42
15570.000	22.46	AV	H	18.65	41.11	54.00	12.89
15570.000	34.78	PK	V	18.65	53.43	74.00	20.57
15570.000	22.39	AV	V	18.65	41.04	54.00	12.96
High Channel: 5230 MHz							
5350.000	29.47	PK	H	32.70	62.17	74.00	11.83
5350.000	16.59	AV	H	32.70	49.29	54.00	4.71
5350.000	29.11	PK	V	32.70	61.81	74.00	12.19
5350.000	16.74	AV	V	32.70	49.44	54.00	4.56
10460.000	33.86	PK	H	14.43	48.29	68.20	19.91
10460.000	34.10	PK	V	14.43	48.53	68.20	19.67
15690.000	38.23	PK	H	18.75	56.98	74.00	17.02
15690.000	26.41	AV	H	18.75	45.16	54.00	8.84
15690.000	38.53	PK	V	18.75	57.28	74.00	16.72
15690.000	26.11	AV	V	18.75	44.86	54.00	9.14

802.11ax20 Mode:

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	30.02	PK	H	32.83	62.85	74.00	11.15
5150.000	16.71	AV	H	32.83	49.54	54.00	4.46
5150.000	31.01	PK	V	32.83	63.84	74.00	10.16
5150.000	16.58	AV	V	32.83	49.41	54.00	4.59
10360.000	35.45	PK	H	14.45	49.90	68.20	18.30
10360.000	35.11	PK	V	14.45	49.56	68.20	18.64
15540.000	34.24	PK	H	18.60	52.84	74.00	21.16
15540.000	22.30	AV	H	18.60	40.90	54.00	13.10
15540.000	34.78	PK	V	18.60	53.38	74.00	20.62
15540.000	22.64	AV	V	18.60	41.24	54.00	12.76
Middle Channel: 5200 MHz							
10400.000	33.25	PK	H	14.52	47.77	68.20	20.43
10400.000	34.41	PK	V	14.52	48.93	68.20	19.27
15600.000	36.87	PK	H	18.69	55.56	74.00	18.44
15600.000	24.12	AV	H	18.69	42.81	54.00	11.19
15600.000	35.97	PK	V	18.69	54.66	74.00	19.34
15600.000	23.63	AV	V	18.69	42.32	54.00	11.68
High Channel: 5240 MHz							
5350.000	29.78	PK	H	32.70	62.48	74.00	11.52
5350.000	16.22	AV	H	32.70	48.92	54.00	5.08
5350.000	30.20	PK	V	32.70	62.90	74.00	11.10
5350.000	16.34	AV	V	32.70	49.04	54.00	4.96
10480.000	34.12	PK	H	14.40	48.52	68.20	19.68
10480.000	33.79	PK	V	14.40	48.19	68.20	20.01
15720.000	38.84	PK	H	18.80	57.64	74.00	16.36
15720.000	26.43	AV	H	18.80	45.23	54.00	8.77
15720.000	38.10	PK	V	18.80	56.90	74.00	17.10
15720.000	26.37	AV	V	18.80	45.17	54.00	8.83

802.11ax40 Mode:

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	29.95	PK	H	32.83	62.78	74.00	11.22
5150.000	16.87	AV	H	32.83	49.70	54.00	4.30
5150.000	30.01	PK	V	32.83	62.84	74.00	11.16
5150.000	16.93	AV	V	32.83	49.76	54.00	4.24
10380.000	34.97	PK	H	14.49	49.46	68.20	18.74
10380.000	35.48	PK	V	14.49	49.97	68.20	18.23
15570.000	34.88	PK	H	18.65	53.53	74.00	20.47
15570.000	22.44	AV	H	18.65	41.09	54.00	12.91
15570.000	34.64	PK	V	18.65	53.29	74.00	20.71
15570.000	22.08	AV	V	18.65	40.73	54.00	13.27
High Channel: 5230 MHz							
5350.000	29.25	PK	H	32.70	61.95	74.00	12.05
5350.000	16.52	AV	H	32.70	49.22	54.00	4.78
5350.000	29.57	PK	V	32.70	62.27	74.00	11.73
5350.000	16.78	AV	V	32.70	49.48	54.00	4.52
10460.000	33.10	PK	H	14.43	47.53	68.20	20.67
10460.000	33.25	PK	V	14.43	47.68	68.20	20.52
15690.000	38.47	PK	H	18.75	57.22	74.00	16.78
15690.000	26.24	AV	H	18.75	44.99	54.00	9.01
15690.000	38.50	PK	V	18.75	57.25	74.00	16.75
15690.000	26.25	AV	V	18.75	45.00	54.00	9.00

5725-5850MHz:**802.11a:**

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
11490.000	41.55	PK	H	15.47	57.02	74.00	16.98
11490.000	29.28	AV	H	15.47	44.75	54.00	9.25
11490.000	38.12	PK	V	15.47	53.59	74.00	20.41
11490.000	26.05	AV	V	15.47	41.52	54.00	12.48
17235.000	34.14	PK	H	22.69	56.83	68.20	11.37
17235.000	33.78	PK	V	22.69	56.47	68.20	11.73
Middle Channel: 5785 MHz							
11570.000	37.07	PK	H	15.69	52.76	74.00	21.24
11570.000	25.14	AV	H	15.69	40.83	54.00	13.17
11570.000	34.78	PK	V	15.69	50.47	74.00	23.53
11570.000	22.16	AV	V	15.69	37.85	54.00	16.15
17355.000	33.45	PK	H	23.33	56.78	68.20	11.42
17355.000	33.45	PK	V	23.33	56.78	68.20	11.42
High Channel: 5825 MHz							
11650.000	37.50	PK	H	16.02	53.52	74.00	20.48
11650.000	25.32	AV	H	16.02	41.34	54.00	12.66
11650.000	35.10	PK	V	16.02	51.12	74.00	22.88
11650.000	23.74	AV	V	16.02	39.76	54.00	14.24
17475.000	34.35	PK	H	23.87	58.22	68.20	9.98
17475.000	34.69	PK	V	23.87	58.56	68.20	9.64

802.11n ht20:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
11490.000	40.63	PK	H	15.47	56.10	74.00	17.90
11490.000	28.33	AV	H	15.47	43.80	54.00	10.20
11490.000	37.14	PK	V	15.47	52.61	74.00	21.39
11490.000	25.23	AV	V	15.47	40.70	54.00	13.30
17235.000	34.31	PK	H	22.69	57.00	68.20	11.20
17235.000	33.55	PK	V	22.69	56.24	68.20	11.96
Middle Channel: 5785 MHz							
11570.000	38.46	PK	H	15.69	54.15	74.00	19.85
11570.000	26.13	AV	H	15.69	41.82	54.00	12.18
11570.000	36.02	PK	V	15.69	51.71	74.00	22.29
11570.000	24.11	AV	V	15.69	39.80	54.00	14.20
17355.000	34.58	PK	H	23.33	57.91	68.20	10.29
17355.000	34.23	PK	V	23.33	57.56	68.20	10.64
High Channel: 5825 MHz							
11650.000	36.73	PK	H	16.02	52.75	74.00	21.25
11650.000	24.43	AV	H	16.02	40.45	54.00	13.55
11650.000	35.74	PK	V	16.02	51.76	74.00	22.24
11650.000	23.66	AV	V	16.02	39.68	54.00	14.32
17475.000	34.58	PK	H	23.87	58.45	68.20	9.75
17475.000	34.10	PK	V	23.87	57.97	68.20	10.23

802.11n ht40:

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	37.80	PK	H	15.46	53.26	74.00	20.74
11510.000	25.42	AV	H	15.46	40.88	54.00	13.12
11510.000	34.78	PK	V	15.46	50.24	74.00	23.76
11510.000	22.35	AV	V	15.46	37.81	54.00	16.19
17265.000	34.55	PK	H	22.77	57.32	68.20	10.88
17265.000	34.35	PK	V	22.77	57.12	68.20	11.08
High Channel: 5795 MHz							
11590.000	35.74	PK	H	15.76	51.50	74.00	22.50
11590.000	23.44	AV	H	15.76	39.20	54.00	14.80
11590.000	35.26	PK	V	15.76	51.02	74.00	22.98
11590.000	23.17	AV	V	15.76	38.93	54.00	15.07
17385.000	33.79	PK	H	23.57	57.36	68.20	10.84
17385.000	34.01	PK	V	23.57	57.58	68.20	10.62

802.11ax ht20 Mode:

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	39.34	PK	H	15.47	54.81	74.00	19.19
11490.000	27.12	AV	H	15.47	42.59	54.00	11.41
11490.000	36.58	PK	V	15.47	52.05	74.00	21.95
11490.000	24.46	AV	V	15.47	39.93	54.00	14.07
17235.000	34.56	PK	H	22.69	57.25	68.20	10.95
17235.000	34.11	PK	V	22.69	56.80	68.20	11.40
Middle Channel: 5785 MHz							
11570.000	37.46	PK	H	15.69	53.15	74.00	20.85
11570.000	25.46	AV	H	15.69	41.15	54.00	12.85
11570.000	35.78	PK	V	15.69	51.47	74.00	22.53
11570.000	23.36	AV	V	15.69	39.05	54.00	14.95
17355.000	34.50	PK	H	23.33	57.83	68.20	10.37
17355.000	34.23	PK	V	23.33	57.56	68.20	10.64
High Channel: 5825 MHz							
11650.000	37.14	PK	H	16.02	53.16	74.00	20.84
11650.000	25.02	AV	H	16.02	41.04	54.00	12.96
11650.000	35.55	PK	V	16.02	51.57	74.00	22.43
11650.000	23.24	AV	V	16.02	39.26	54.00	14.74
17475.000	34.52	PK	H	23.87	58.39	68.20	9.81
17475.000	34.23	PK	V	23.87	58.10	68.20	10.10

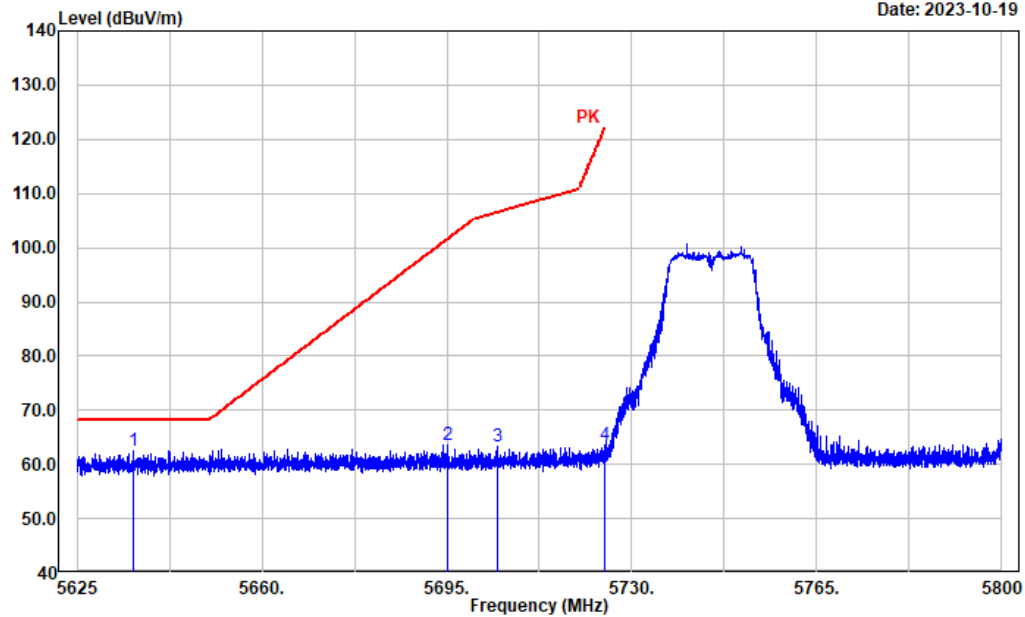
802.11ax ht40 Mode:

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	37.41	PK	H	15.46	52.87	74.00	21.13
11510.000	25.24	AV	H	15.46	40.70	54.00	13.30
11510.000	35.66	PK	V	15.46	51.12	74.00	22.88
11510.000	23.31	AV	V	15.46	38.77	54.00	15.23
17265.000	34.69	PK	H	22.77	57.46	68.20	10.74
17265.000	34.78	PK	V	22.77	57.55	68.20	10.65
High Channel: 5795 MHz							
11590.000	37.01	PK	H	15.76	52.77	74.00	21.23
11590.000	25.22	AV	H	15.76	40.98	54.00	13.02
11590.000	35.63	PK	V	15.76	51.39	74.00	22.61
11590.000	23.12	AV	V	15.76	38.88	54.00	15.12
17385.000	34.12	PK	H	23.57	57.69	68.20	10.51
17385.000	34.69	PK	V	23.57	58.26	68.20	9.94

5725-5850MHz Band edge Test plots**802.11a Low Channel**

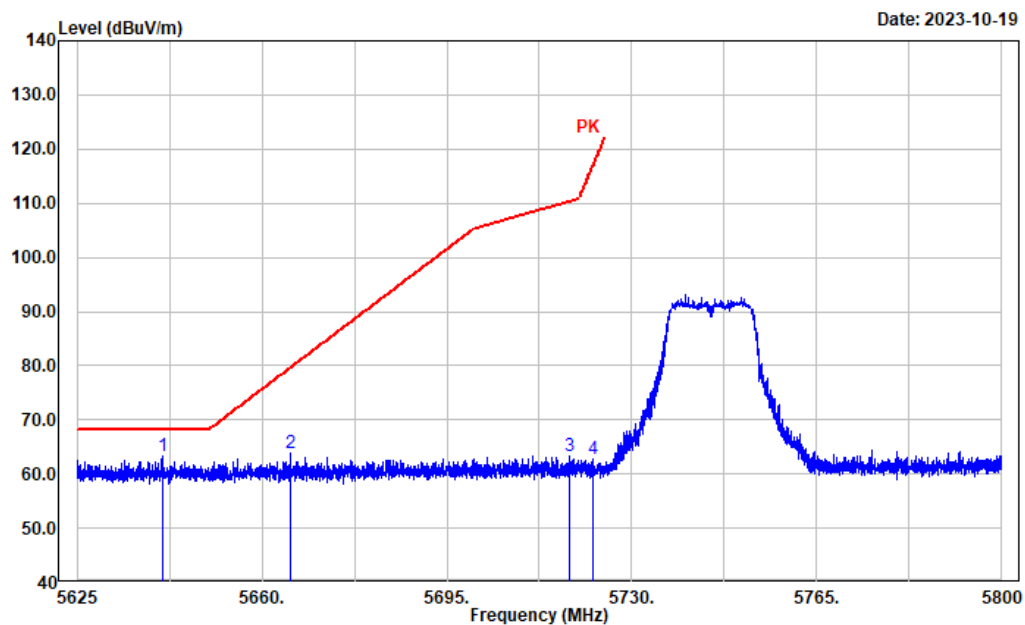
Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5635.572	29.56	32.91	62.47	68.20	5.73	Peak
2	5695.154	30.52	33.02	63.54	101.63	38.09	Peak
3	5704.501	30.33	33.03	63.36	106.46	43.10	Peak
4	5724.770	30.56	33.03	63.59	121.68	58.09	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

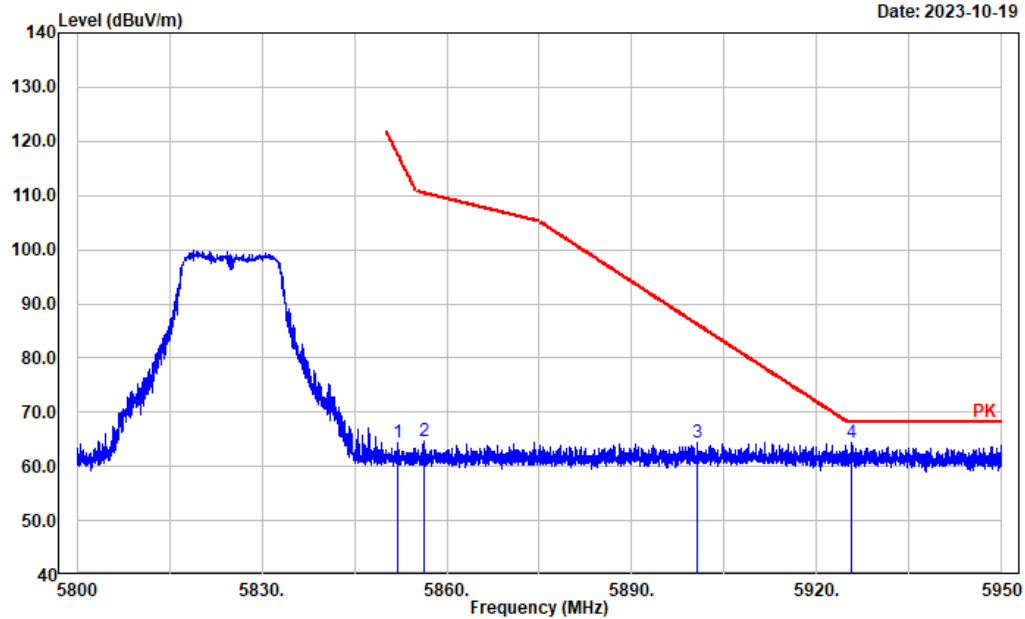


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5641.348	30.27	32.93	63.20	68.20	5.00	Peak
2	5665.398	30.82	32.97	63.79	79.63	15.84	Peak
3	5718.259	30.31	33.03	63.34	110.31	46.97	Peak
4	5722.600	29.74	33.03	62.77	116.73	53.96	Peak

802.11a High Channel:

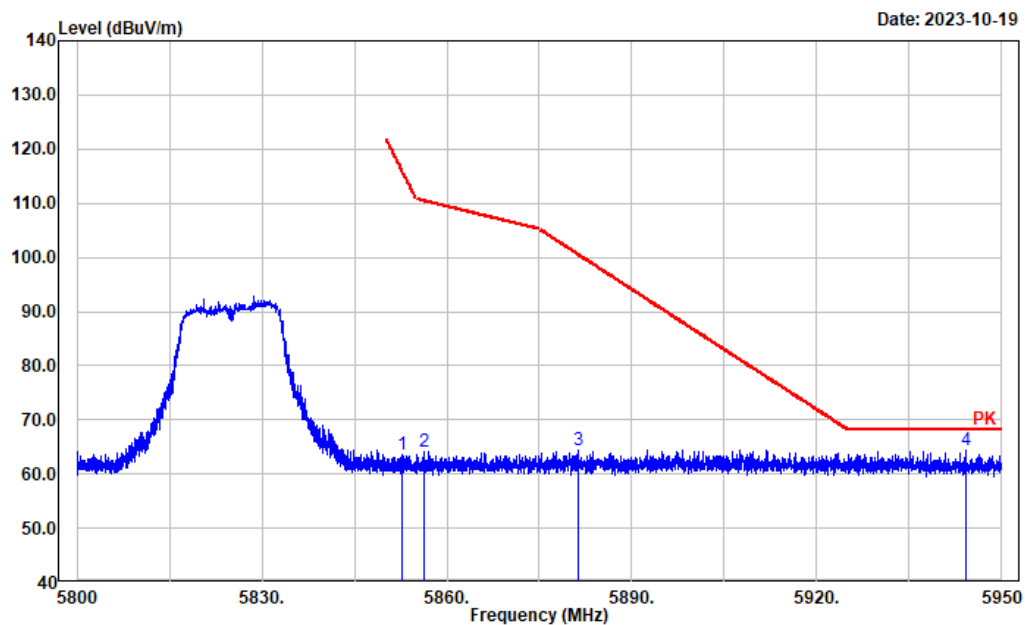
Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	5852.000	31.14	33.20	64.34	117.64	53.30	Peak
2	5856.321	31.51	33.23	64.74	110.43	45.69	Peak
3	5900.610	30.92	33.47	64.39	86.21	21.82	Peak
4	5925.575	30.82	33.46	64.28	68.20	3.92	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

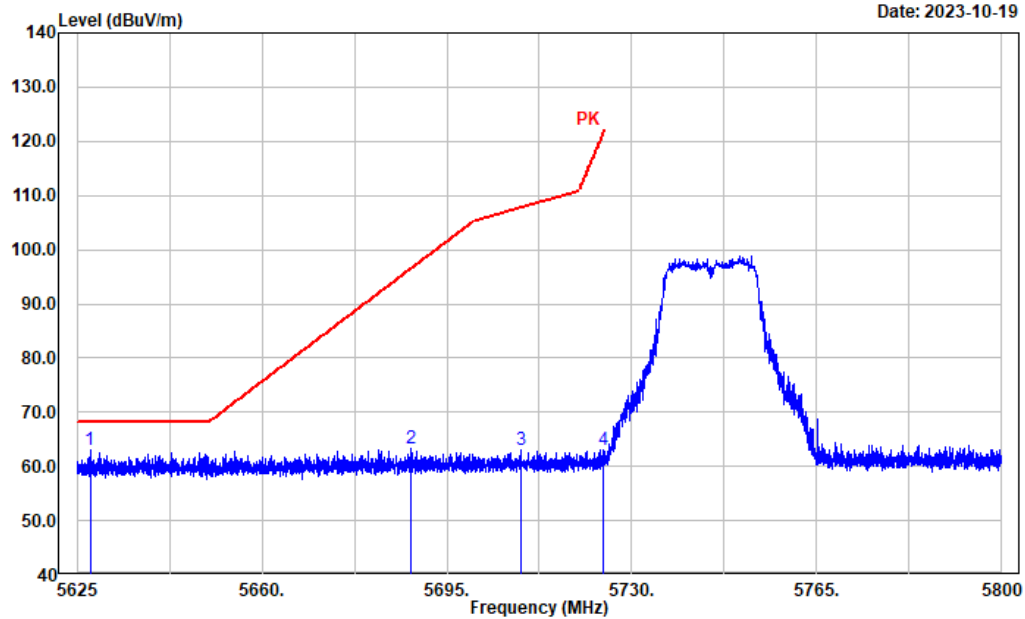


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5852.661	30.25	33.20	63.45	116.13	52.68	Peak
2	5856.321	30.96	33.23	64.19	110.43	46.24	Peak
3	5881.376	31.15	33.37	64.52	100.46	35.94	Peak
4	5944.209	30.82	33.46	64.28	68.20	3.92	Peak

802.11n ht20 Low Channel:

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

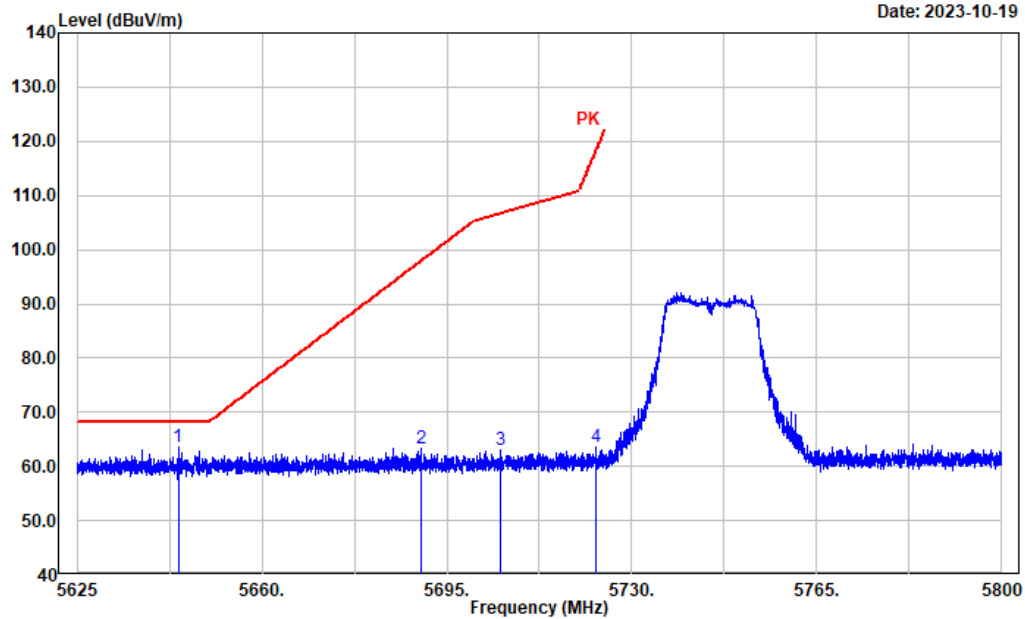
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5627.485	30.27	32.88	63.15	68.20	5.05	Peak
2	5688.083	30.39	33.01	63.40	96.41	33.01	Peak
3	5709.017	30.01	33.03	63.04	107.73	44.69	Peak
4	5724.630	29.97	33.03	63.00	121.36	58.36	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19

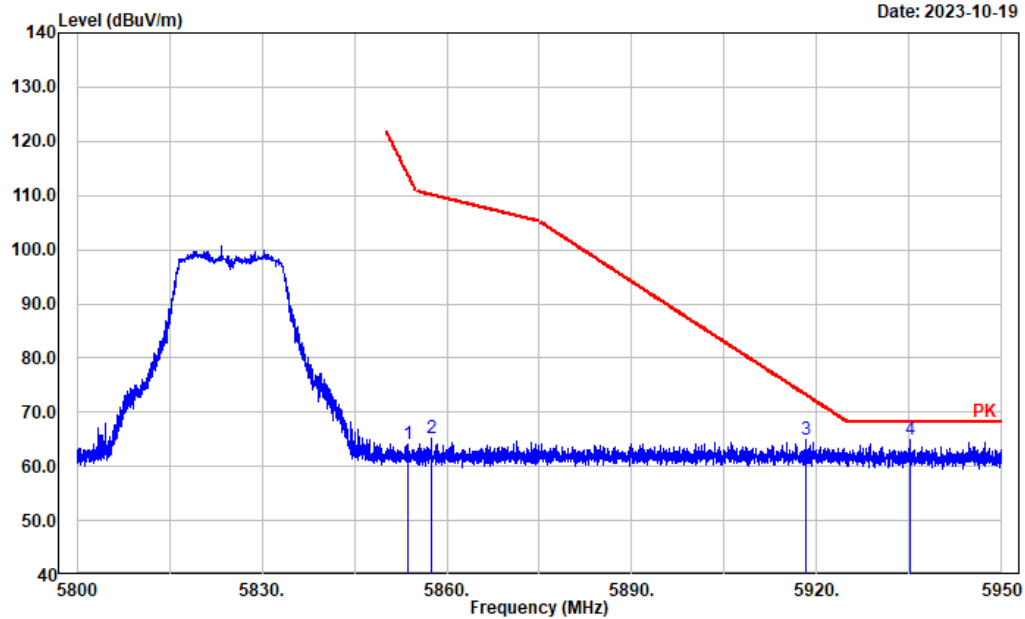


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5644.149	30.65	32.93	63.58	68.20	4.62	Peak
2	5690.043	30.23	33.01	63.24	97.86	34.62	Peak
3	5705.201	29.90	33.03	62.93	106.66	43.73	Peak
4	5723.125	30.47	33.03	63.50	117.93	54.43	Peak

802.11n ht20 High Channel:

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

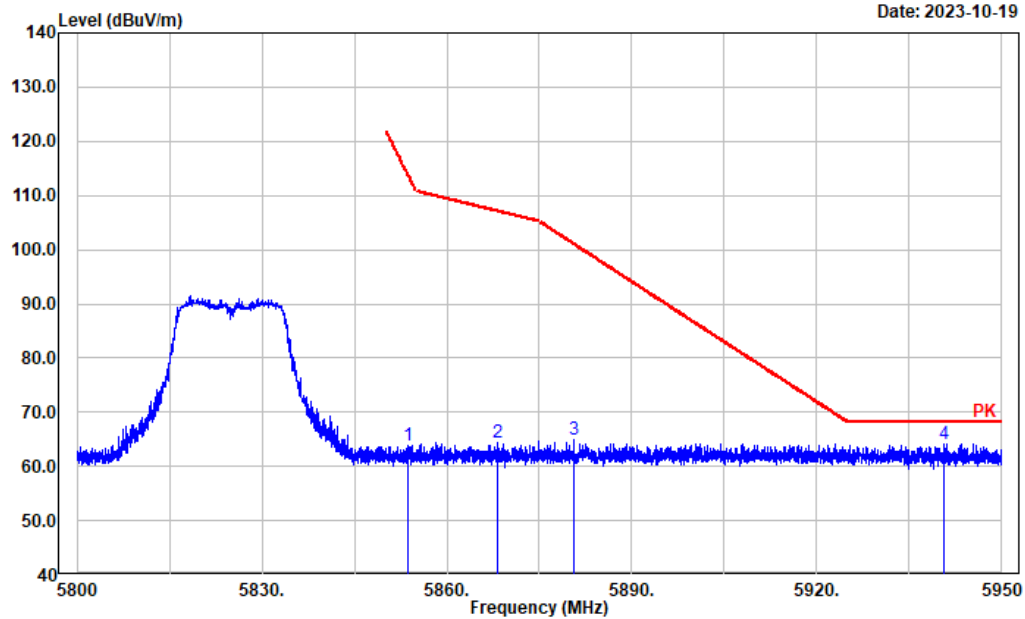
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5853.771	30.92	33.22	64.14	113.60	49.46	Peak
2	5857.582	32.01	33.23	65.24	110.08	44.84	Peak
3	5918.344	31.42	33.47	64.89	73.11	8.22	Peak
4	5935.117	31.36	33.47	64.83	68.20	3.37	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19

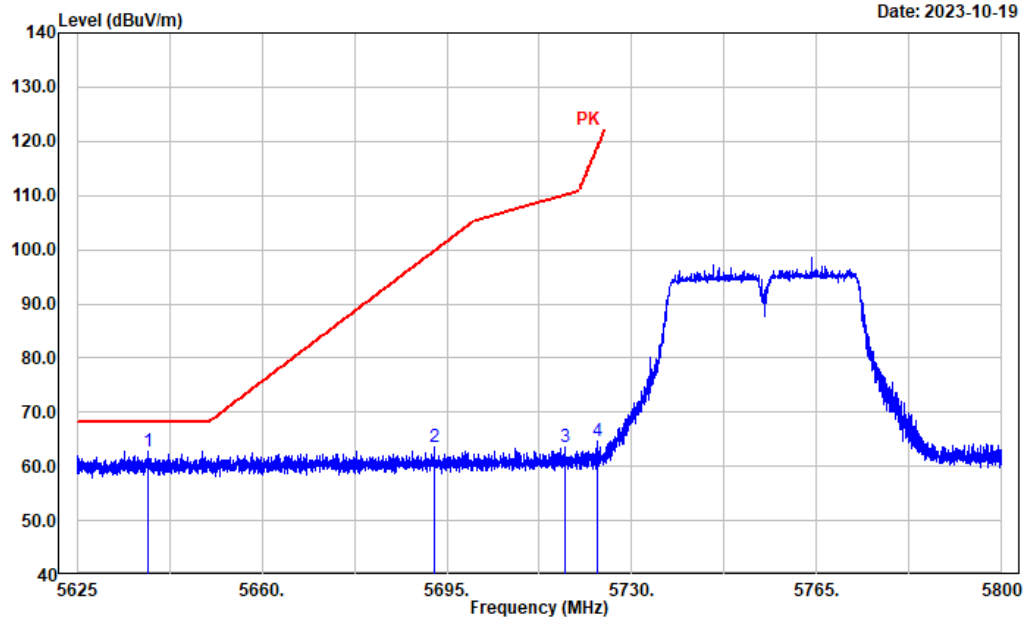


No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	5853.591	30.67	33.21	63.88	114.01	50.13	Peak
2	5868.114	31.21	33.29	64.50	107.13	42.63	Peak
3	5880.626	31.47	33.36	64.83	101.02	36.19	Peak
4	5940.638	30.65	33.47	64.12	68.20	4.08	Peak

802.11n ht40 Low Channel:

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

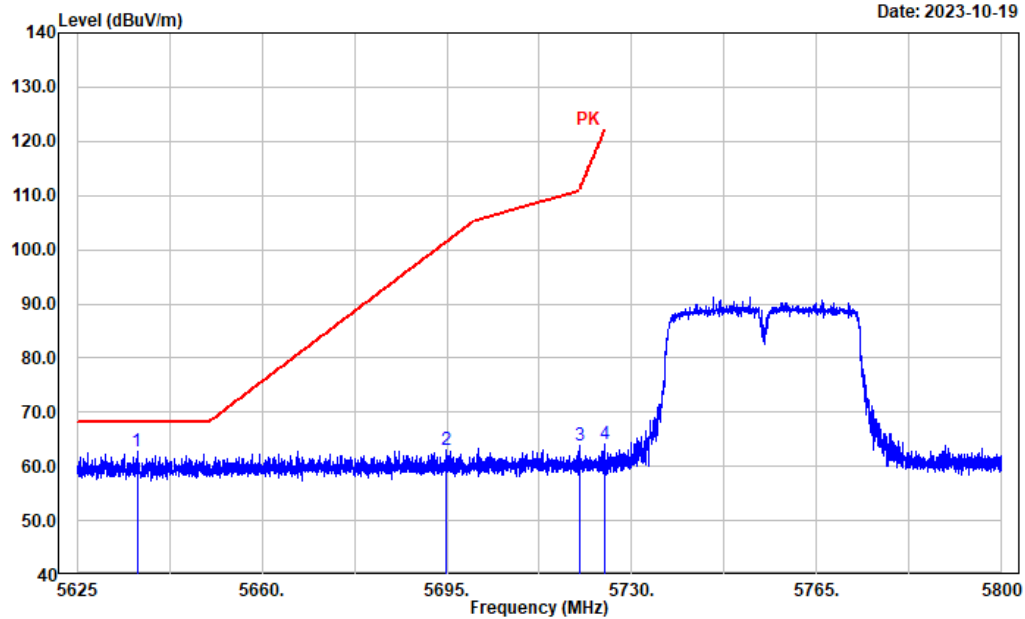
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5638.513	29.86	32.92	62.78	68.20	5.42	Peak
2	5692.668	30.46	33.02	63.48	99.80	36.32	Peak
3	5717.454	30.44	33.03	63.47	110.09	46.62	Peak
4	5723.475	31.69	33.03	64.72	118.72	54.00	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19

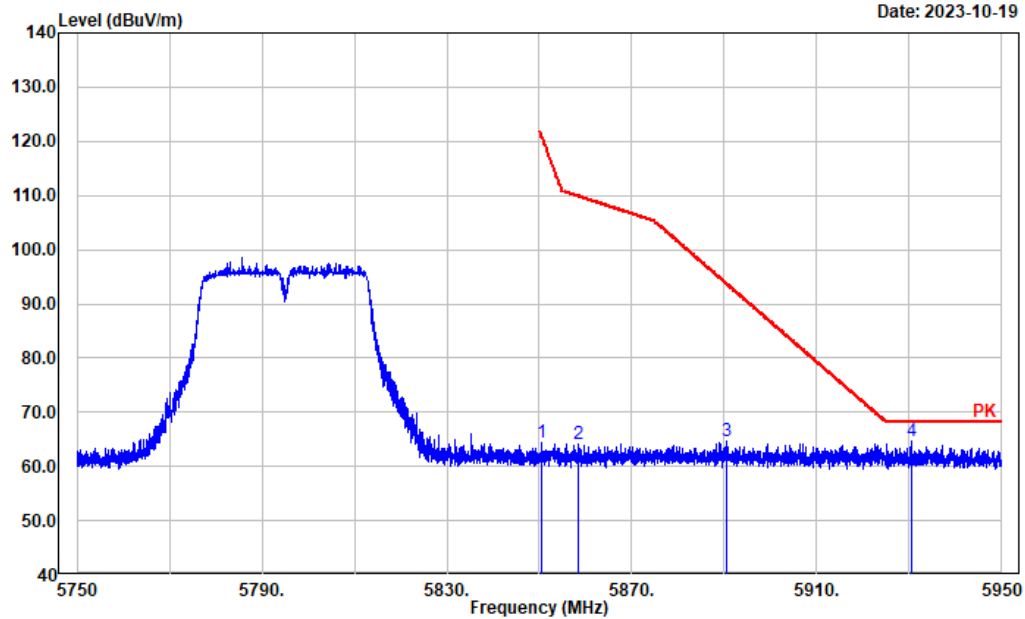


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5636.377	29.79	32.91	62.70	68.20	5.50	Peak
2	5694.874	29.97	33.02	62.99	101.42	38.43	Peak
3	5720.114	30.85	33.03	63.88	111.06	47.18	Peak
4	5724.805	31.17	33.03	64.20	121.76	57.56	Peak

802.11n ht40 High Channel:

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

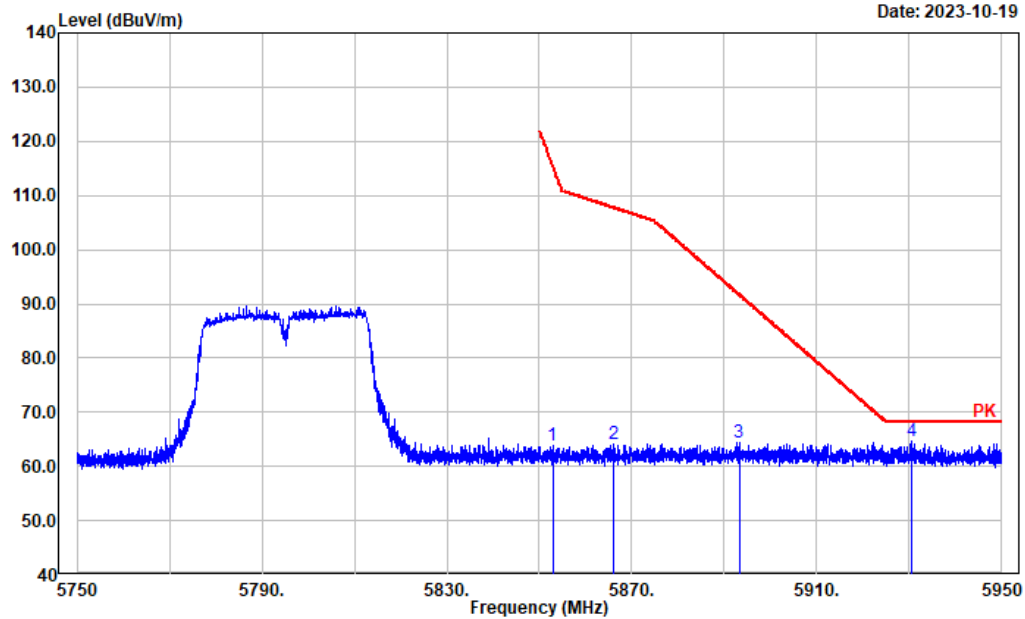
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5850.460	31.14	33.19	64.33	121.15	56.82	Peak
2	5858.501	30.87	33.23	64.10	109.82	45.72	Peak
3	5890.628	31.18	33.42	64.60	93.60	29.00	Peak
4	5930.516	31.09	33.47	64.56	68.20	3.64	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19

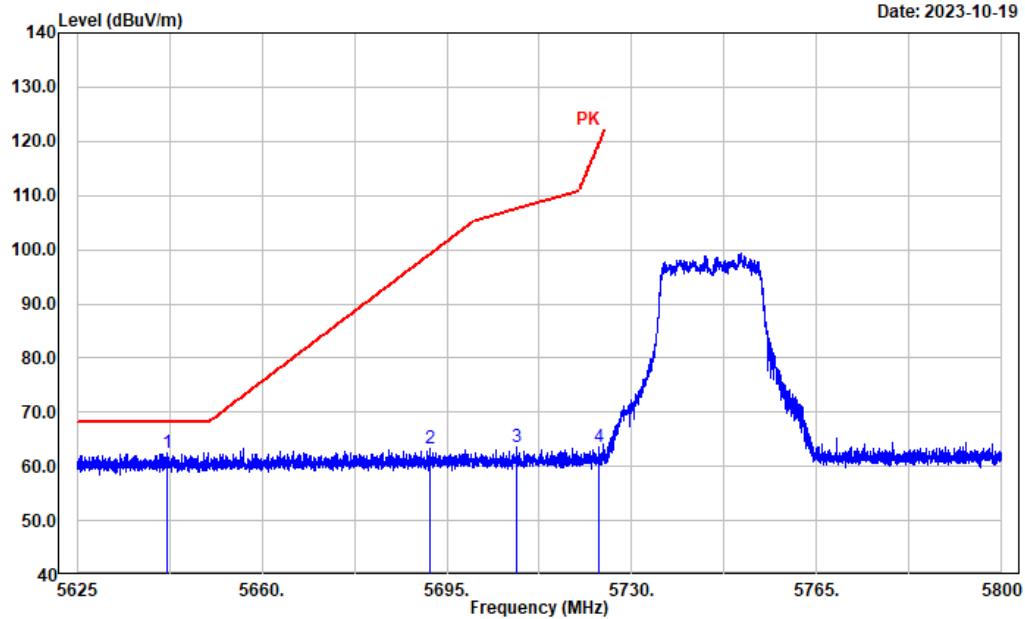


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5852.860	30.52	33.20	63.72	115.68	51.96	Peak
2	5866.023	30.79	33.28	64.07	107.71	43.64	Peak
3	5893.188	31.02	33.43	64.45	91.70	27.25	Peak
4	5930.636	31.33	33.46	64.79	68.20	3.41	Peak

802.11ax hew20 Low Channel:

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

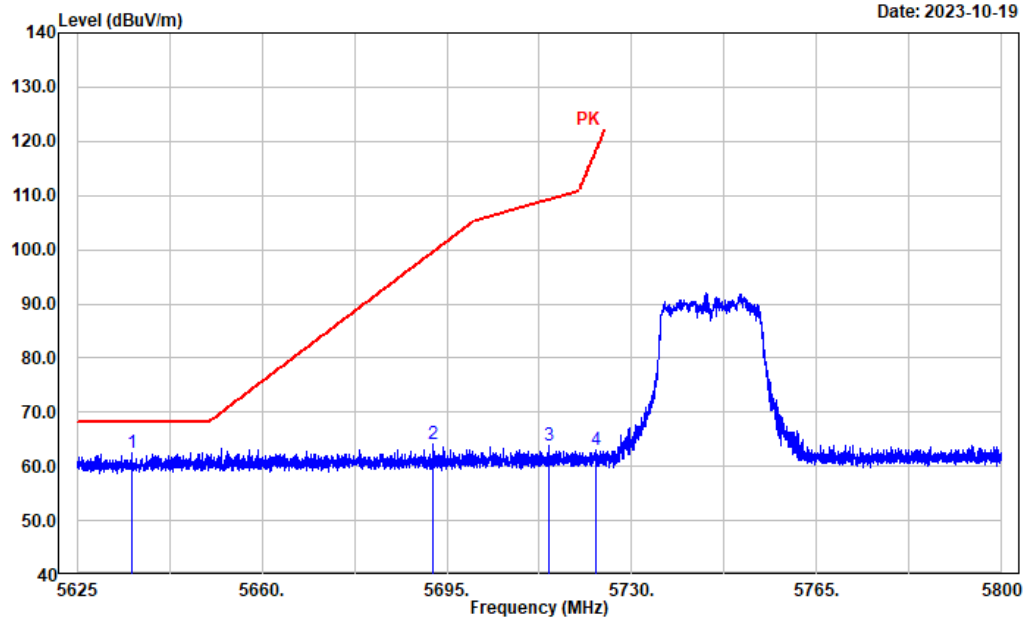
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5641.979	29.53	32.93	62.46	68.20	5.74	Peak
2	5691.758	30.31	33.02	63.33	99.12	35.79	Peak
3	5708.106	30.62	33.03	63.65	107.47	43.82	Peak
4	5723.720	30.56	33.03	63.59	119.28	55.69	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19

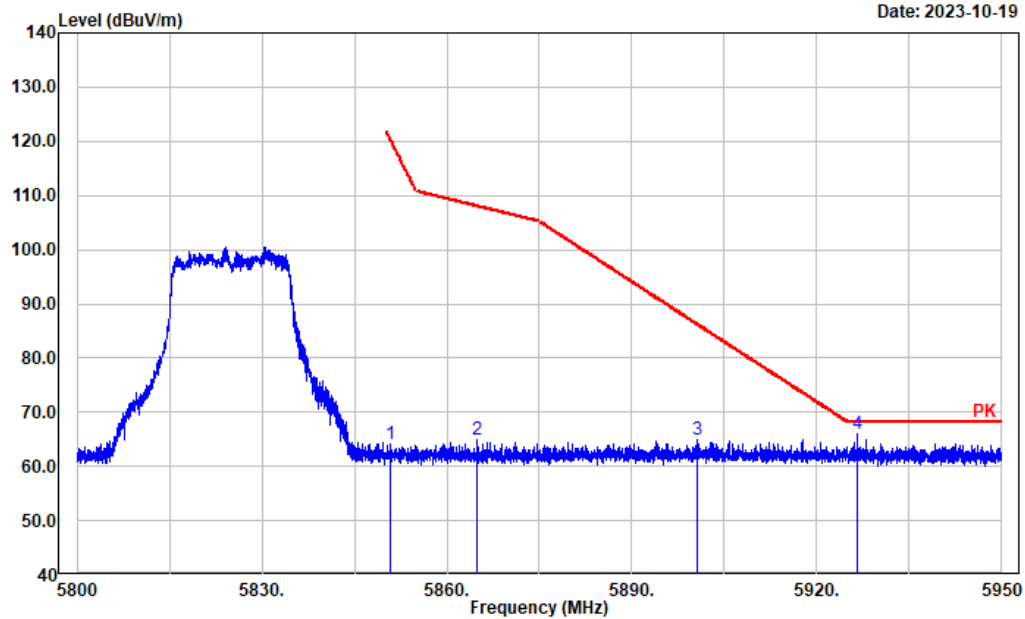


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5635.432	29.54	32.91	62.45	68.20	5.75	Peak
2	5692.494	31.17	33.02	64.19	99.67	35.48	Peak
3	5714.338	30.75	33.03	63.78	109.22	45.44	Peak
4	5723.229	29.91	33.03	62.94	118.16	55.22	Peak

802.11ax hew20 High Channel:

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

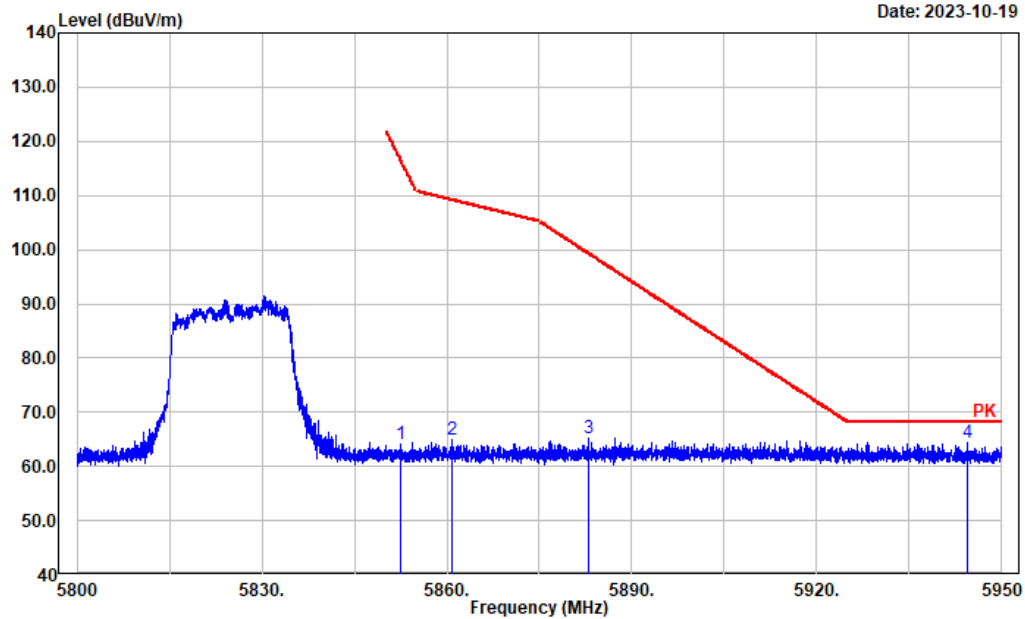
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	5850.800	30.94	33.19	64.13	120.37	56.24	Peak
2	5864.993	31.68	33.27	64.95	108.00	43.05	Peak
3	5900.640	31.51	33.47	64.98	86.19	21.21	Peak
4	5926.475	32.45	33.46	65.91	68.20	2.29	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19

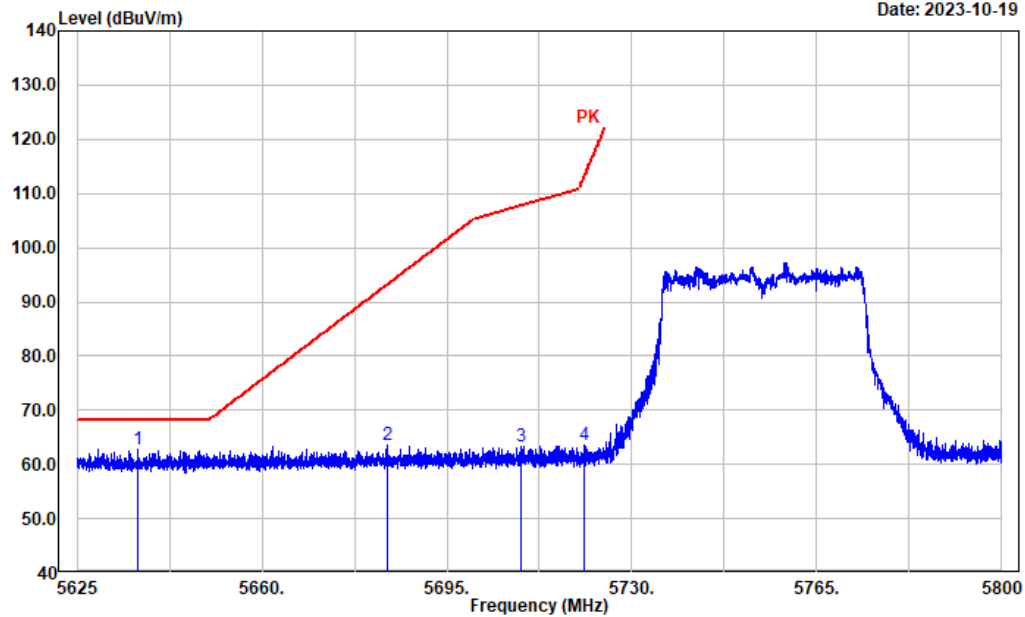


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5852.451	30.82	33.20	64.02	116.61	52.59	Peak
2	5860.762	31.60	33.25	64.85	109.18	44.33	Peak
3	5882.967	31.78	33.37	65.15	99.28	34.13	Peak
4	5944.359	30.86	33.46	64.32	68.20	3.88	Peak

802.11ax hew40 Low Channel:

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

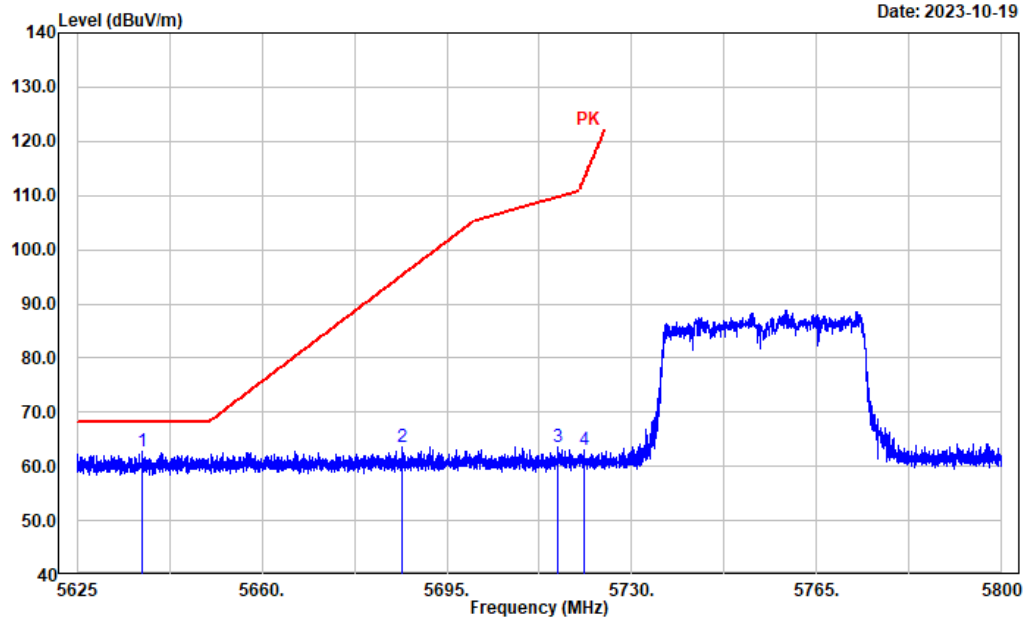
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5636.447	29.84	32.91	62.75	68.20	5.45	Peak
2	5683.707	30.68	33.00	63.68	93.18	29.50	Peak
3	5709.087	30.36	33.03	63.39	107.75	44.36	Peak
4	5720.954	30.46	33.03	63.49	112.98	49.49	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19

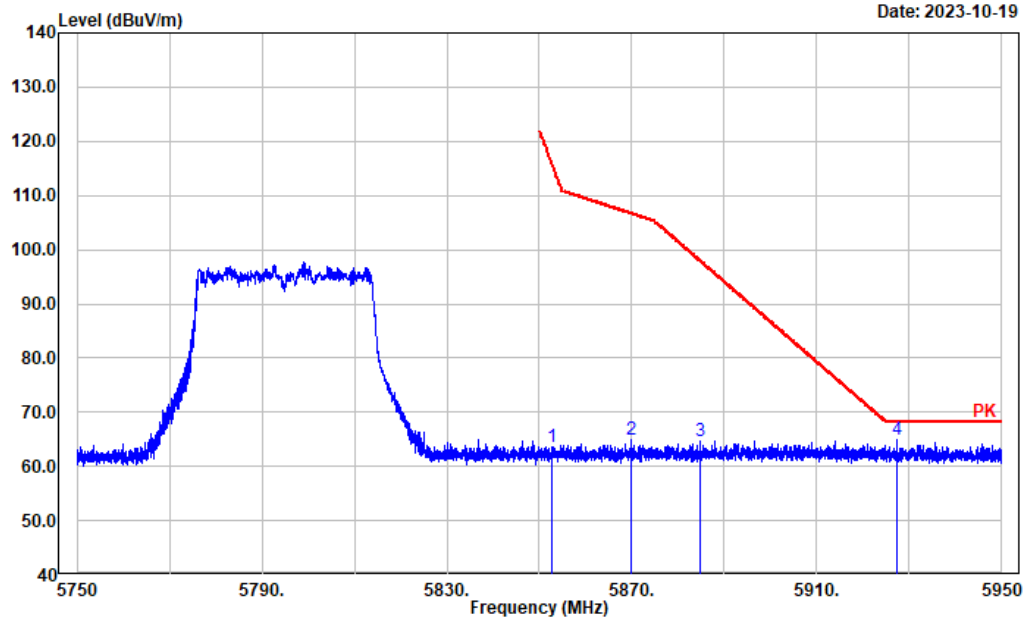


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5637.427	29.90	32.91	62.81	68.20	5.39	Peak
2	5686.542	30.61	33.01	63.62	95.27	31.65	Peak
3	5716.088	30.60	33.03	63.63	109.71	46.08	Peak
4	5720.919	29.96	33.03	62.99	112.90	49.91	Peak

802.11ax hew40 High Chanel:

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:

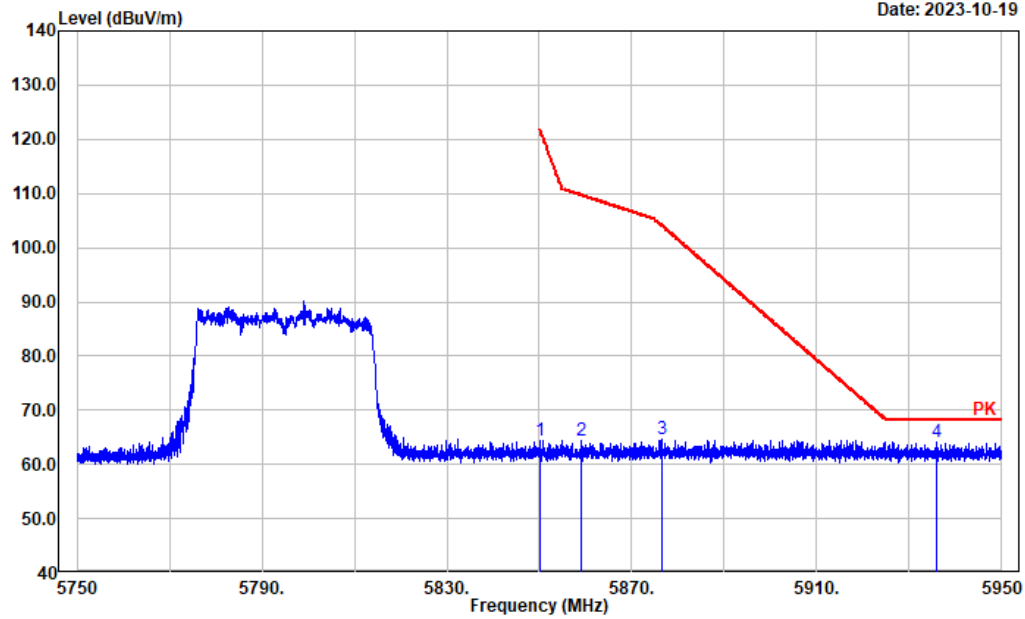
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5852.781	30.38	33.20	63.58	115.86	52.28	Peak
2	5869.744	31.57	33.30	64.87	106.67	41.80	Peak
3	5884.707	31.37	33.39	64.76	97.99	33.23	Peak
4	5927.235	31.57	33.46	65.03	68.20	3.17	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19

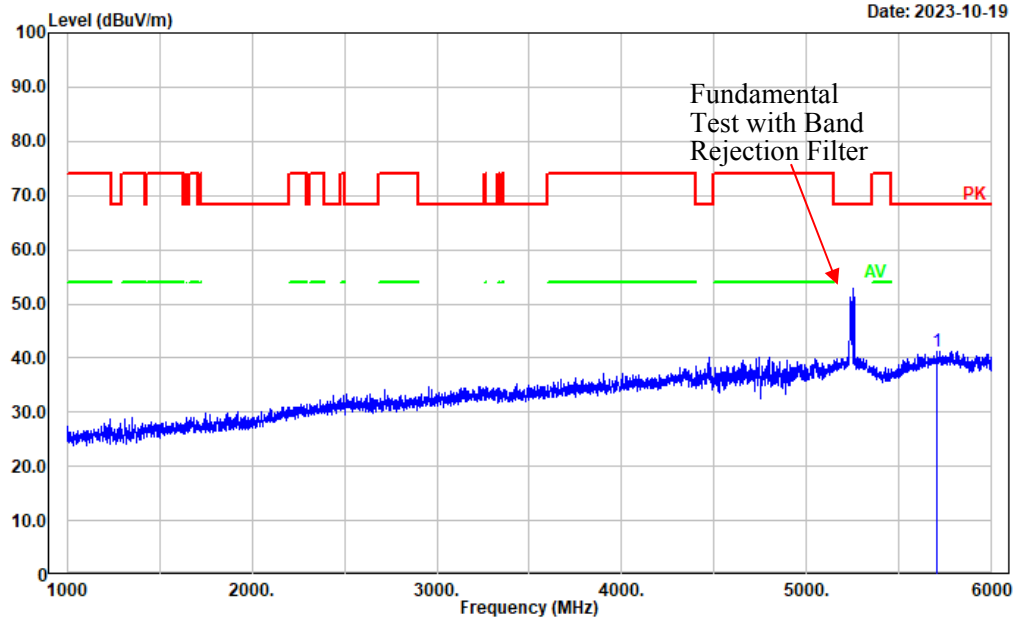


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5850.140	31.32	33.19	64.51	121.88	57.37	Peak
2	5859.182	31.18	33.24	64.42	109.63	45.21	Peak
3	5876.465	31.37	33.34	64.71	104.11	39.40	Peak
4	5935.837	30.72	33.47	64.19	68.20	4.01	Peak

Worst Radiation Spurious Emissions Margin Test plots (802.11ax hew20 5240 MHz)

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: horizontal
Note:

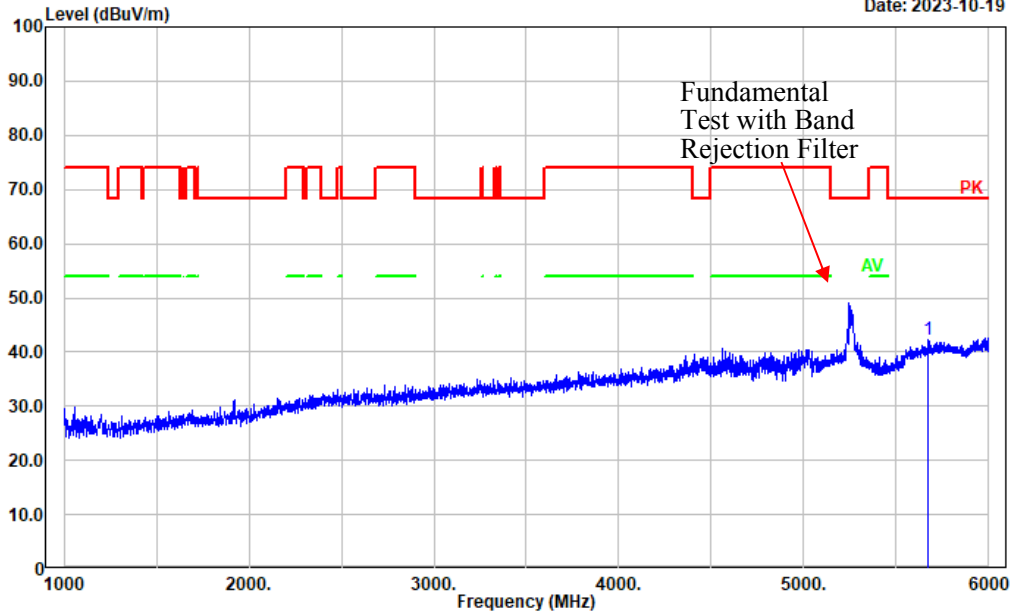
Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5703.941	34.74	6.53	41.27	68.20	26.93	Peak

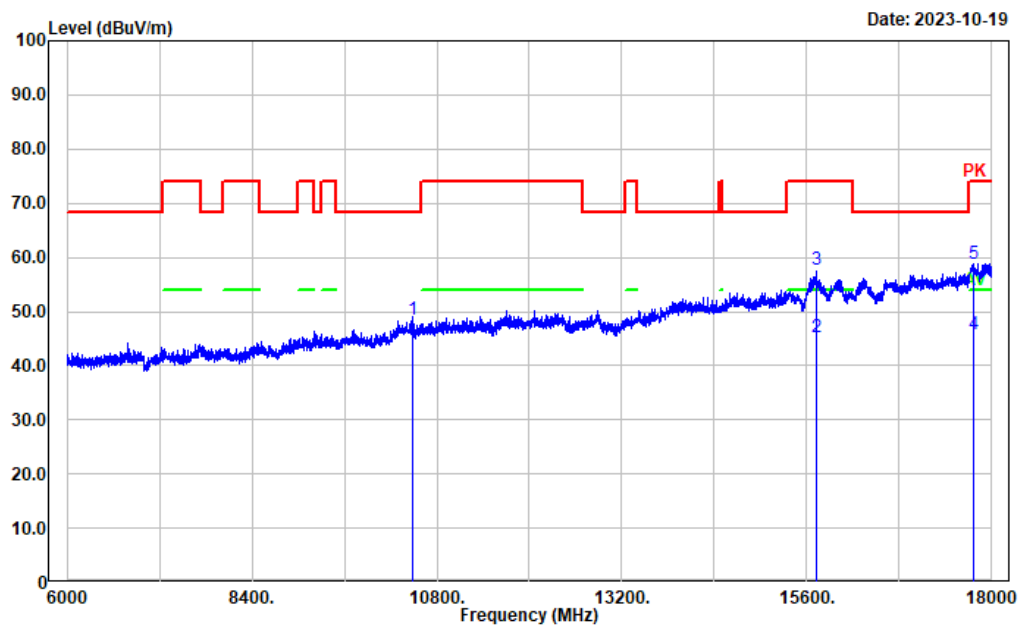
Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19



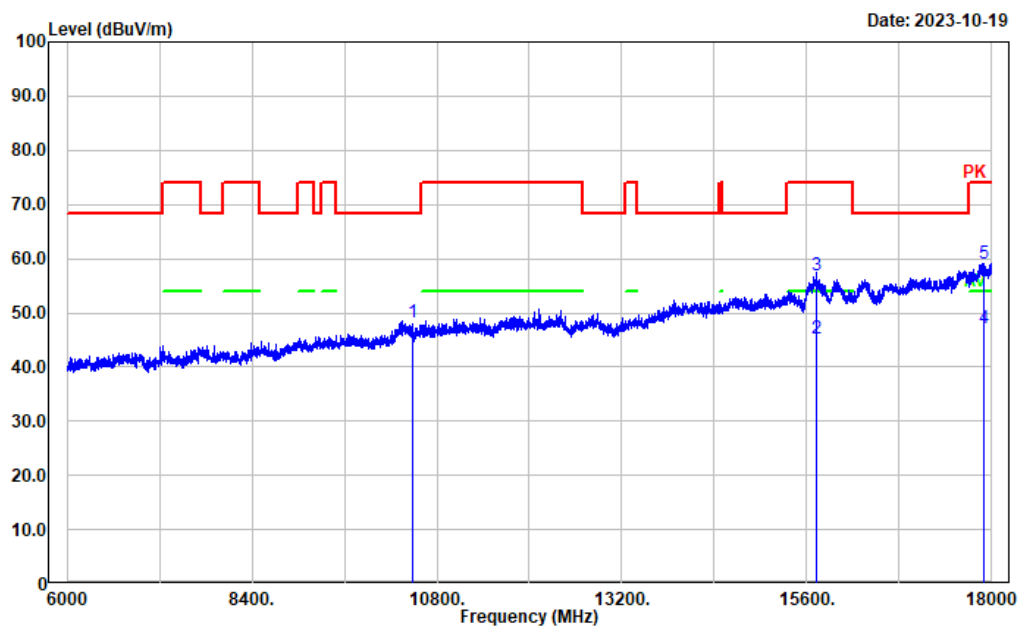
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5670.934	35.82	6.40	42.22	68.20	25.98	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: horizontal
Note:



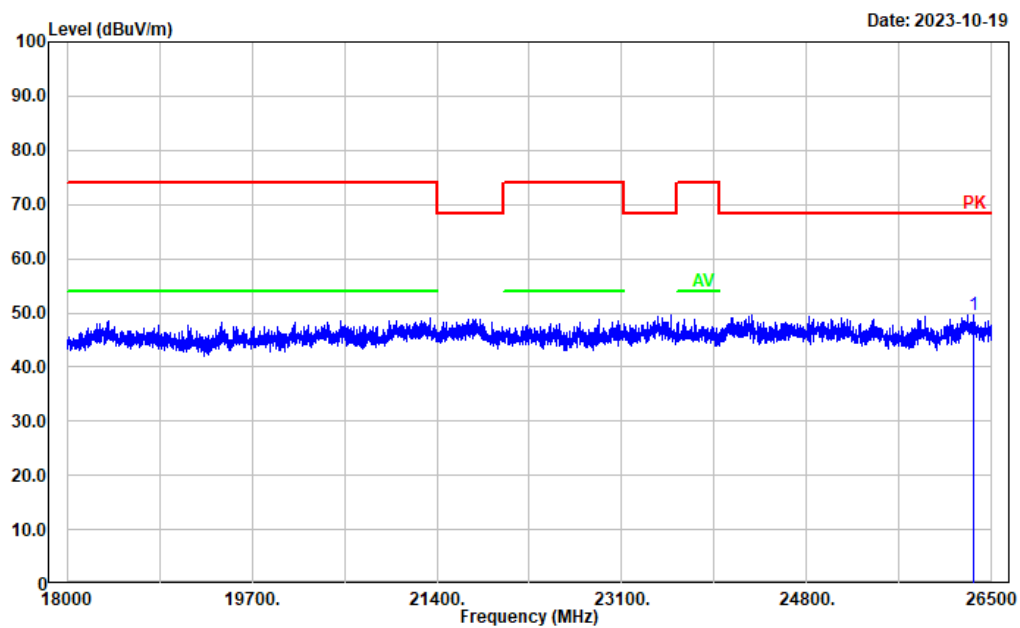
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	10480.000	34.12	14.40	48.52	68.20	19.68	Peak
2	15720.000	26.43	18.80	45.23	54.00	8.77	Average
3	15720.000	38.84	18.80	57.64	74.00	16.36	Peak
4	17764.750	20.21	25.47	45.68	54.00	8.32	Average
5	17764.750	33.40	25.47	58.87	74.00	15.13	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:



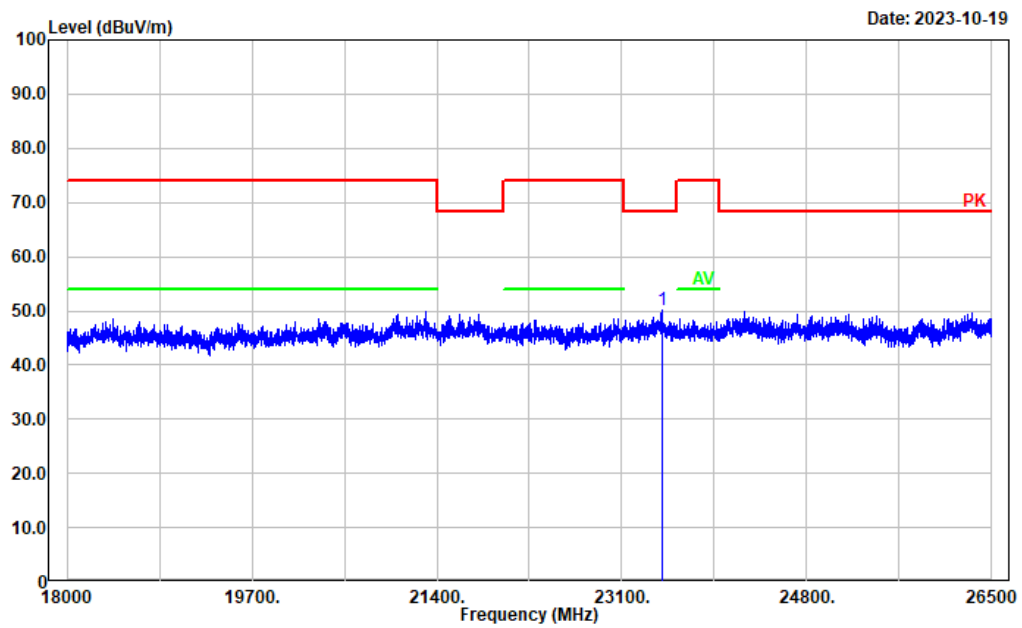
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	10480.000	33.79	14.40	48.19	68.20	20.01	Peak
2	15720.000	26.37	18.80	45.17	54.00	8.83	Average
3	15720.000	38.10	18.80	56.90	74.00	17.10	Peak
4	17889.580	20.99	26.11	47.10	54.00	6.90	Average
5	17889.580	33.09	26.11	59.20	74.00	14.80	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:



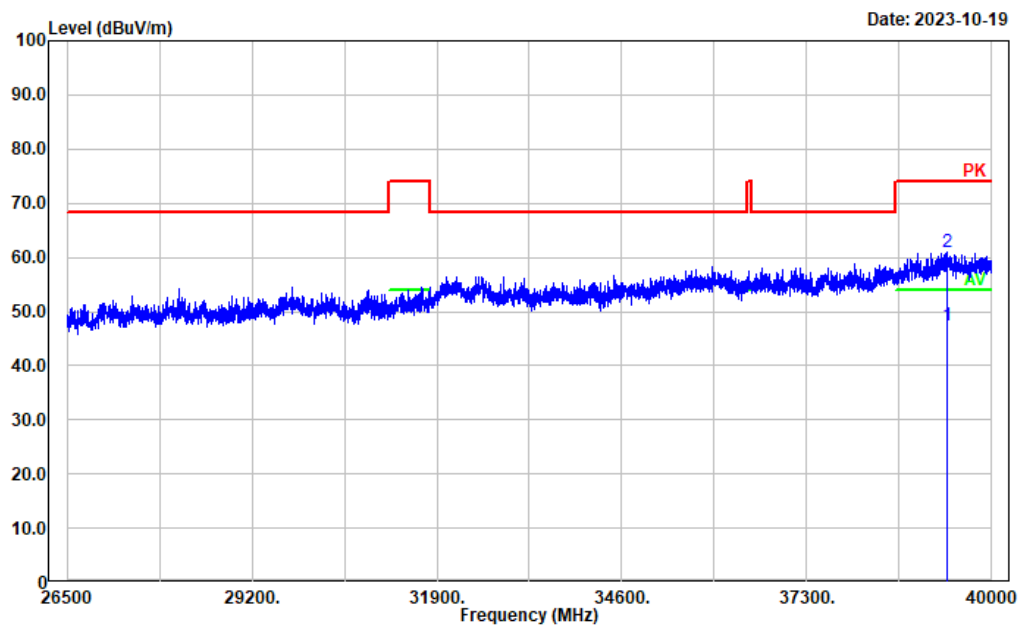
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	26336.770	48.70	0.84	49.54	68.20	18.66	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	23466.590	50.64	-0.62	50.02	68.20	18.18	Peak

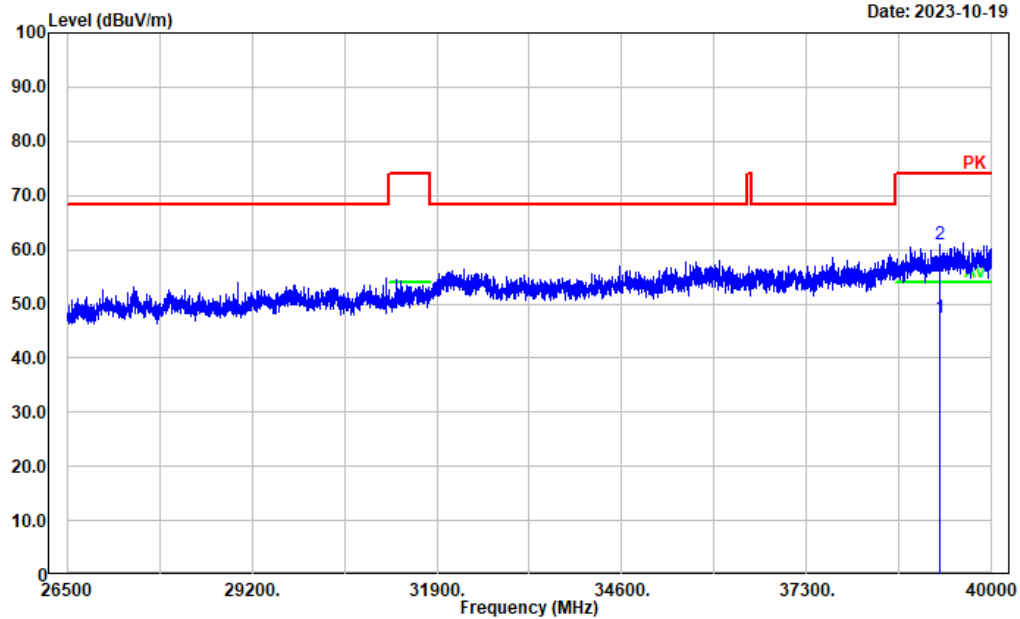
Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	39341.070	37.29	10.19	47.48	54.00	6.52	Average
2	39341.070	50.70	10.19	60.89	74.00	13.11	Peak

Project No.: CR230955186-RF
Tester: Mack Huang
Polarization: vertical
Note:

Date: 2023-10-19



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	39241.150	37.20	10.21	47.41	54.00	6.59	Average
2	39241.150	50.66	10.21	60.87	74.00	13.13	Peak

4.3 Emission Bandwidth

Serial Number:	2BFJ-1	Test Date:	2023/10/12
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.4	Relative Humidity: (%)	57	ATM Pressure: (kPa)	101.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	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)	26 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5180	20.56	16.56
	5200	20.8	16.56
	5240	20.72	16.56
802.11n ht20	5180	22.00	17.68
	5200	22.00	17.68
	5240	21.84	17.68
802.11n ht40	5190	42.08	36.48
	5230	42.08	36.48
802.11ax hew20	5180	21.60	18.80
	5200	21.52	18.88
	5240	21.68	18.88
802.11ax hew40	5190	41.28	37.76
	5230	40.96	37.6

Note: 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:

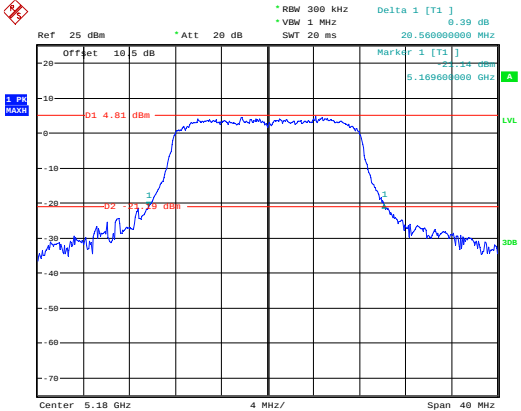
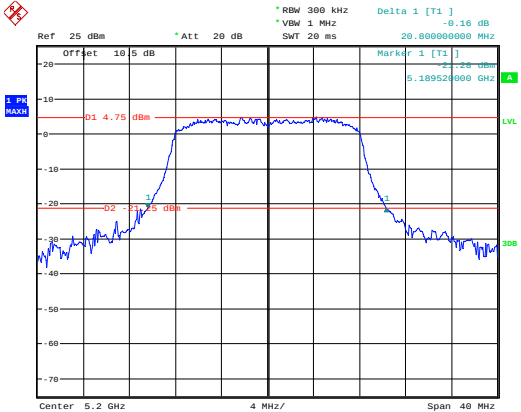
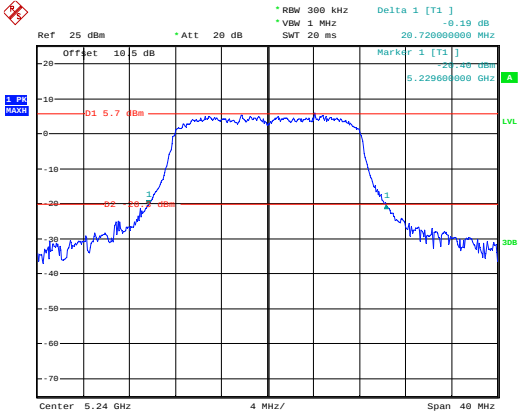
Test Modes	Test Frequency (MHz)	26 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5745	15.44	16.64
	5785	15.20	16.56
	5825	15.44	16.56
802.11n ht20	5745	15.36	17.68
	5785	15.20	17.68
	5825	15.52	17.68
802.11n ht40	5755	35.68	36.32
	5795	35.52	36.32
802.11ax hew20	5745	16.16	18.8
	5785	16.32	18.8
	5825	16.16	18.8
802.11ax hew40	5755	36.48	37.6
	5795	35.68	37.6

Note:

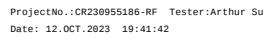
6dB Emission Bandwidth Limit: ≥ 0.5 MHz.

The 99% Occupied Bandwidth have not fall into the band 5470-5725MHz, please refer to the test plots of 99% Occupied Bandwidth.

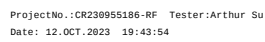
5150-5250MHz:

26dB Emission Bandwidth	
802.11a Lowest Channel	 Ref: 25 dBm, Att: 20 dB, RBW: 300 kHz, VSW: 1 MHz, SWT: 20 ms, Delta 1 [T1]: 0.39 dB, 20.56000000 MHz Marker 1 [T1]: 5.16960000 GHz, -21.44 dBm Offset: 10.5 dB, 1. PK MAX, D1: 4.81 dBm, D2: -20.00 dBm, LVL, 30B Center: 5.18 GHz, 4 MHz/, Span: 40 MHz ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 19:25:08
802.11a Middle Channel	 Ref: 25 dBm, Att: 20 dB, RBW: 300 kHz, VSW: 1 MHz, SWT: 20 ms, Delta 1 [T1]: -0.16 dB, 20.60000000 MHz Marker 1 [T1]: 5.18952000 GHz, -21.28 dBm Offset: 10.5 dB, 1. PK MAX, D1: 4.75 dBm, D2: -20.00 dBm, LVL, 30B Center: 5.2 GHz, 4 MHz/, Span: 40 MHz ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 19:25:54
802.11a Highest Channel	 Ref: 25 dBm, Att: 20 dB, RBW: 300 kHz, VSW: 1 MHz, SWT: 20 ms, Delta 1 [T1]: -0.19 dB, 20.72000000 MHz Marker 1 [T1]: 5.22960000 GHz, -20.46 dBm Offset: 10.5 dB, 1. PK MAX, D1: 5.7 dBm, D2: -20.00 dBm, LVL, 30B Center: 5.24 GHz, 4 MHz/, Span: 40 MHz ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 19:28:07

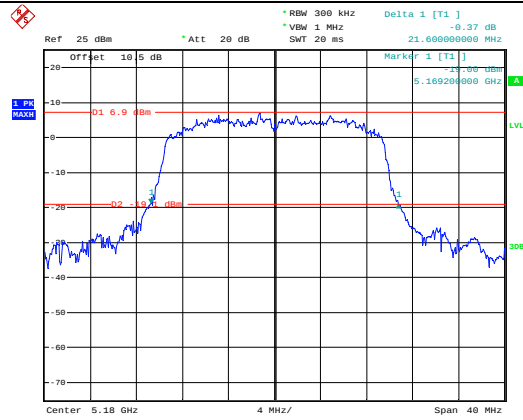
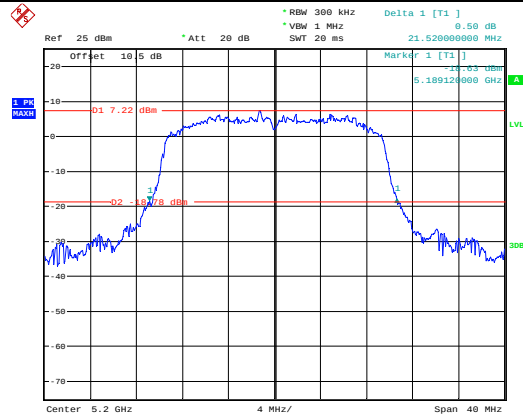
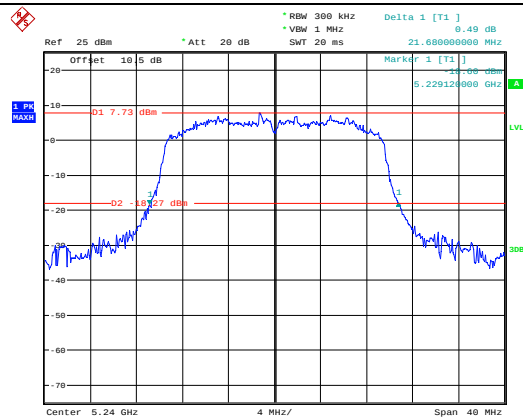
802.11n ht40
Lowest Channel

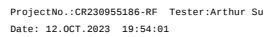


802.11n ht40
Highest Channel



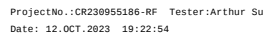
26dB Emission Bandwidth

802.11ax hew20
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:46:37802.11ax hew20
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:49:16802.11ax hew20
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:51:34

802.11ax hew40
Lowest Channel

ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:56:10

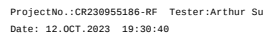
802.11a
Lowest Channel



ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:26:10

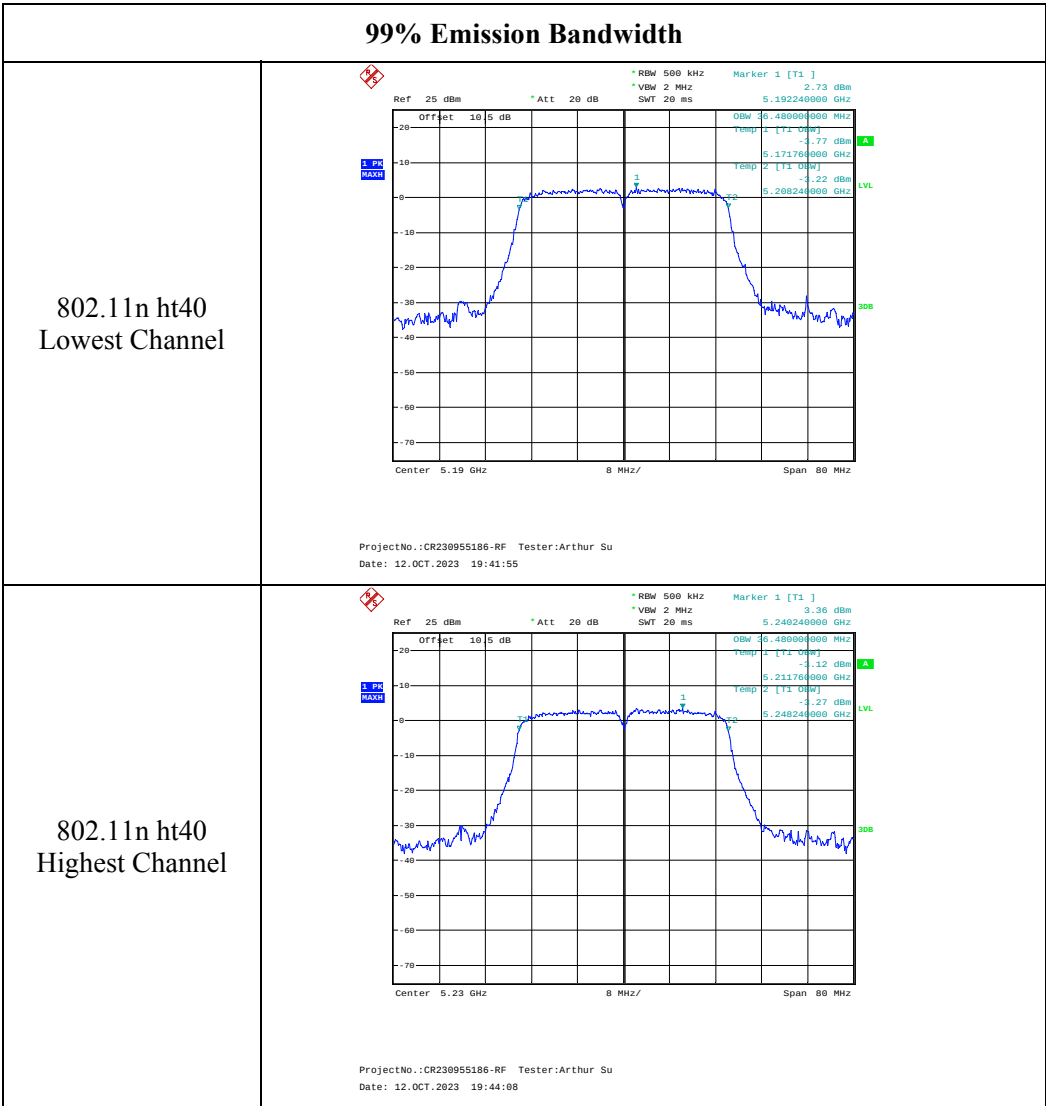
ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:28:23

802.11n ht20
Lowest Channel

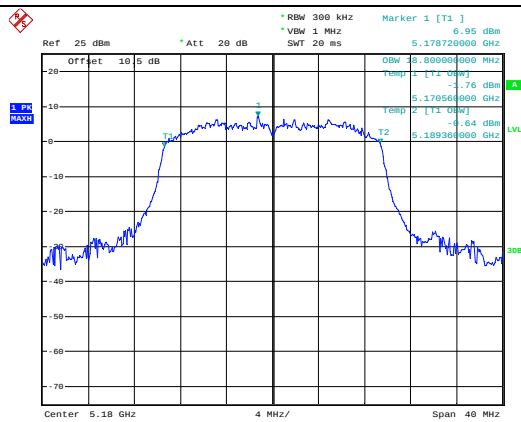
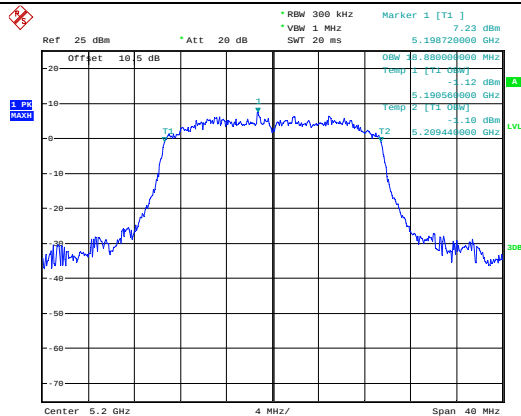
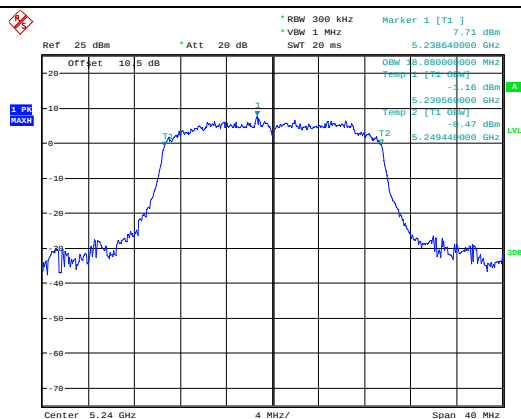


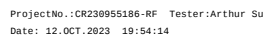
ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:32:59

ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:35:11



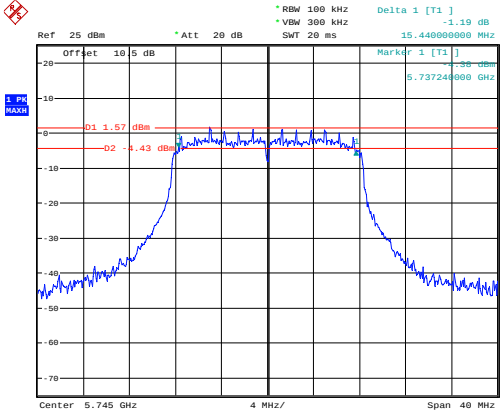
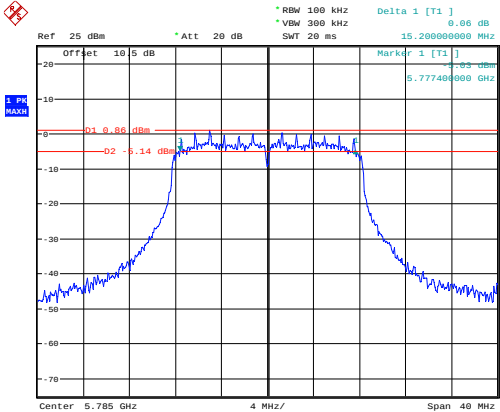
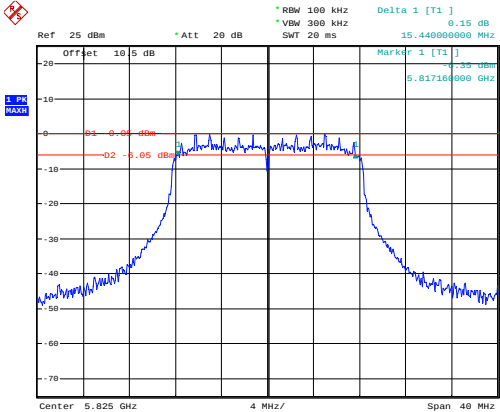
99% Emission Bandwidth

802.11ax hew20
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:46:56802.11ax hew20
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:49:32802.11ax hew20
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:51:54

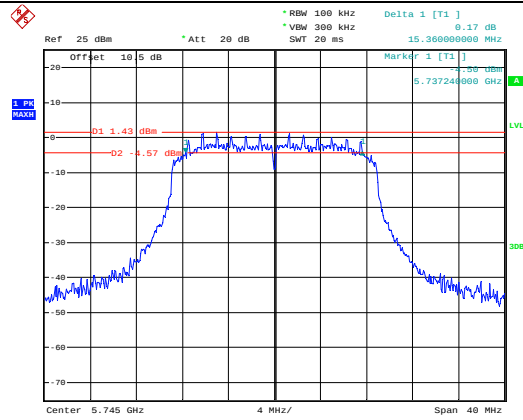
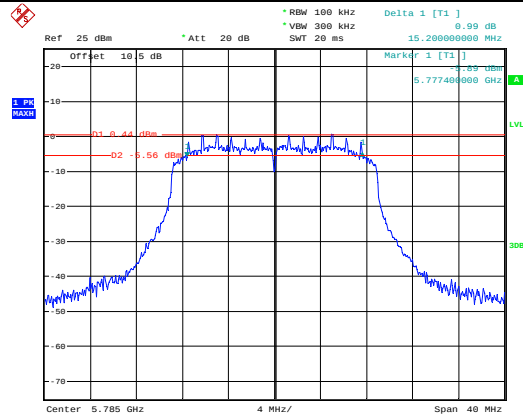
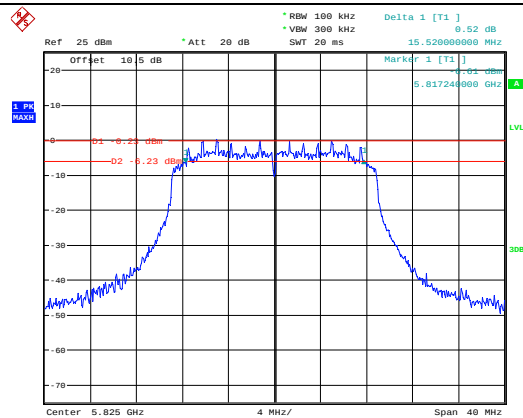
802.11ax hew40
Lowest Channel

ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:56:27

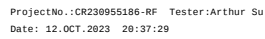
5725-5850MHz:

6dB Emission Bandwidth	
802.11a Lowest Channel	 Ref: 25 dBm, Att: 20 dB, RBW: 100 kHz, VSW: 300 kHz, SWT: 20 ms, Delta: 1 [T1], 15.440000000 MHz, -1.19 dB, Marker: 1 [T1], -1.57 dBm, 5.737240000 GHz, LVL, 300, Span: 40 MHz, Center: 5.745 GHz, 4 MHz/ ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 19:59:49
802.11a Middle Channel	 Ref: 25 dBm, Att: 20 dB, RBW: 100 kHz, VSW: 300 kHz, SWT: 20 ms, Delta: 1 [T1], 15.200000000 MHz, 0.06 dB, Marker: 1 [T1], -1.88 dBm, 5.777400000 GHz, LVL, 300, Span: 40 MHz, Center: 5.785 GHz, 4 MHz/ ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 20:03:39
802.11a Highest Channel	 Ref: 25 dBm, Att: 20 dB, RBW: 100 kHz, VSW: 300 kHz, SWT: 20 ms, Delta: 1 [T1], 15.440000000 MHz, 0.15 dB, Marker: 1 [T1], -0.00 dBm, 5.817160000 GHz, LVL, 300, Span: 40 MHz, Center: 5.825 GHz, 4 MHz/ ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 20:06:20

6dB Emission Bandwidth

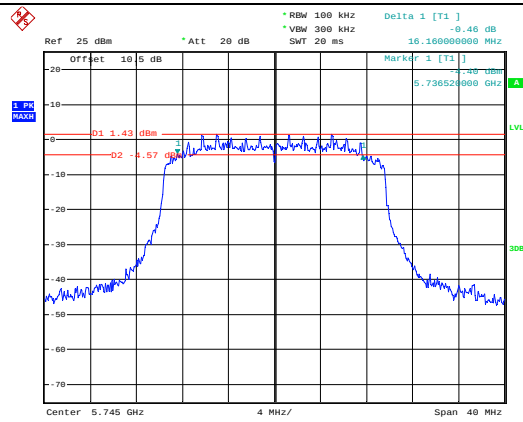
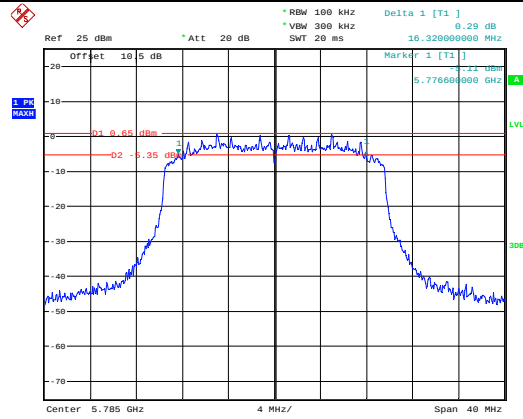
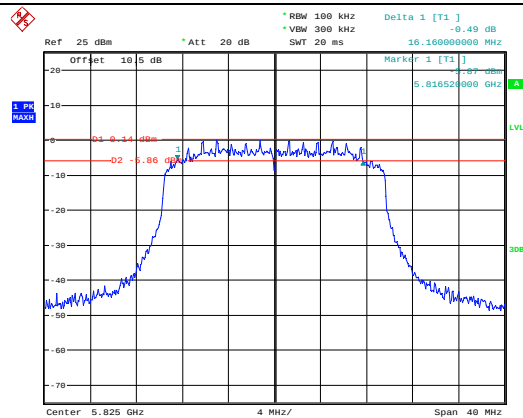
802.11n ht20
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:08:35802.11n ht20
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:12:20802.11n ht20
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:15:16

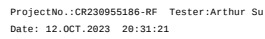
802.11n ht40
Lowest Channel



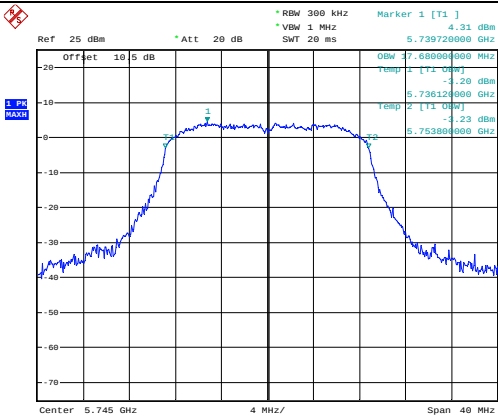
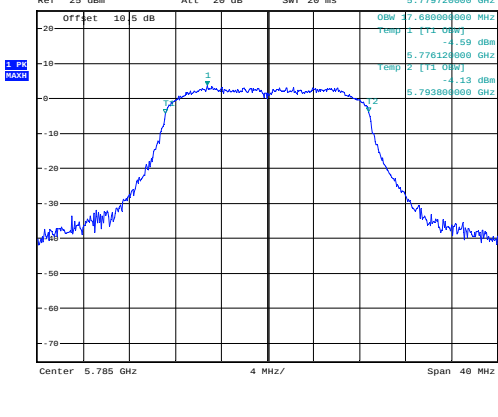
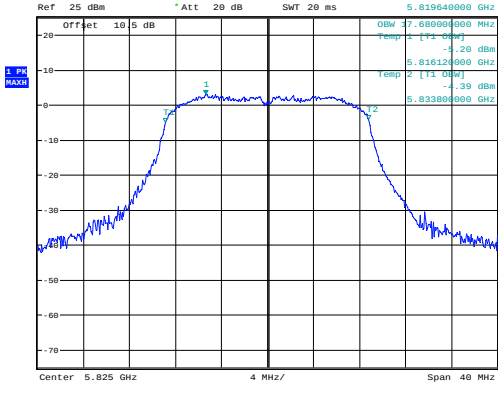
ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:40:12

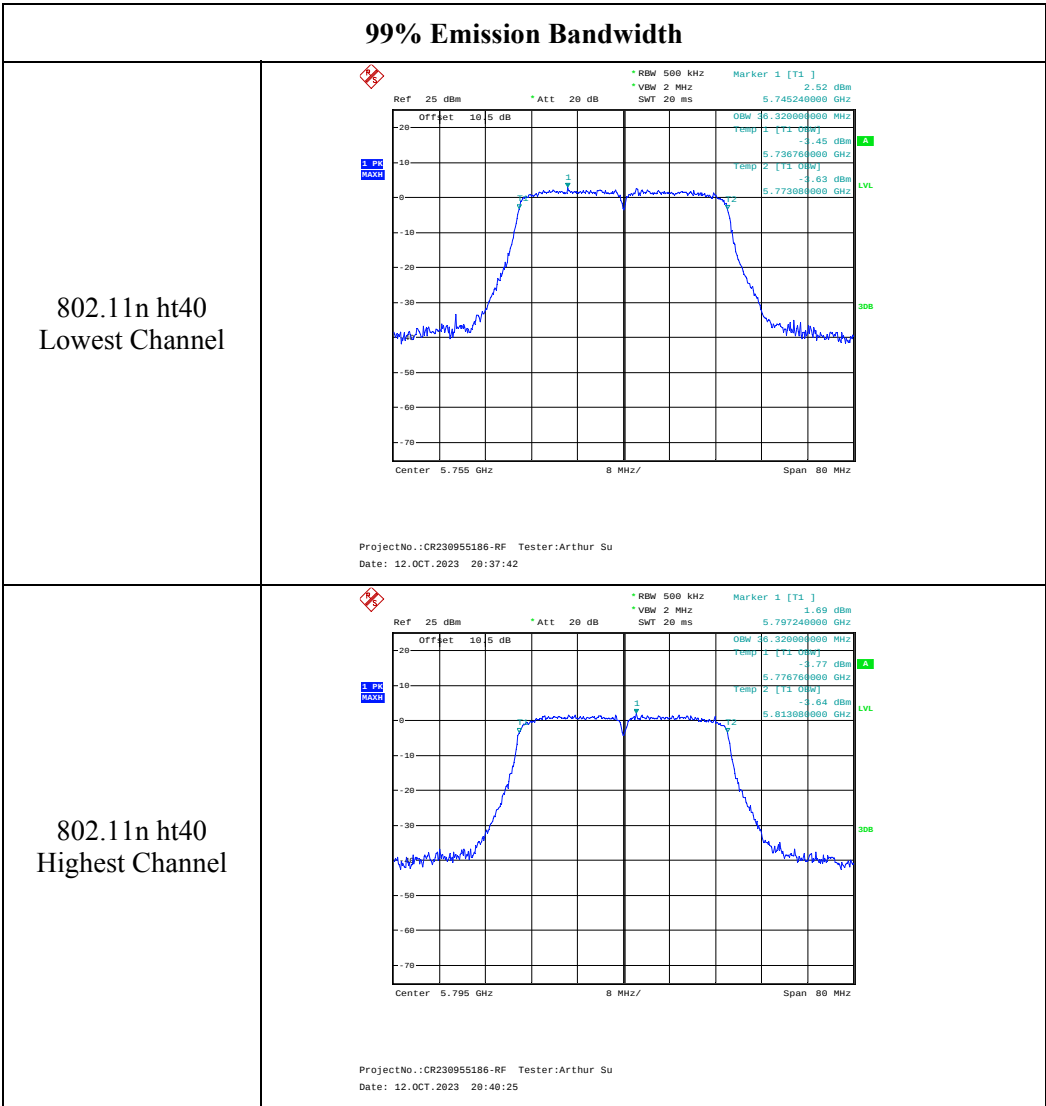
6dB Emission Bandwidth

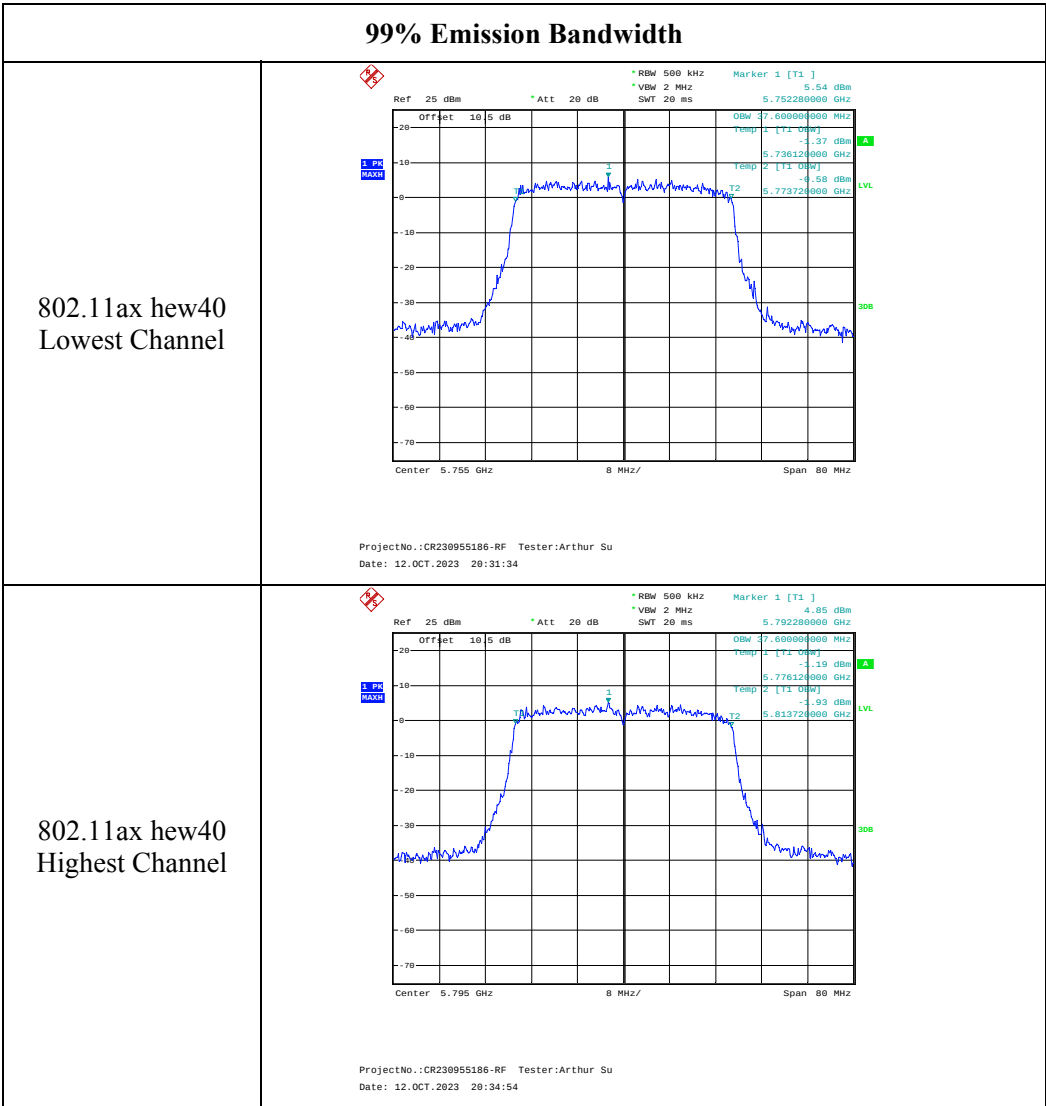
802.11ax hew20
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:19:35802.11ax hew20
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:23:01802.11ax hew20
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:28:10

802.11ax hew40
Lowest Channel

ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:34:37

802.11n ht20 Lowest Channel	99% Emission Bandwidth  ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 20:08:52
802.11n ht20 Middle Channel	 ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 20:12:36
802.11n ht20 Highest Channel	 ProjectNo.:CR230955186-RF Tester:Arthur Su Date: 12.OCT.2023 20:15:33





4.4 Maximum Conducted Output Power

Serial Number:	2BFJ-1	Test Date:	2023/10/12
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.4	Relative Humidity: (%)	57	ATM Pressure: (kPa)	101.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Anritsu	Power Meter	ML2495A	1106009	2023/8/4	2024/8/3
Anritsu	Pulse Power Sensor	MA2411A	10780	2023/8/4	2024/8/3
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)	
		Result	Limit
802.11a	5180	12.91	24
	5200	13.16	24
	5240	13.70	24
802.11n ht20	5180	13.08	24
	5200	13.32	24
	5240	13.86	24
802.11n ht40	5190	12.35	24
	5230	13.03	24
802.11ax hew20	5180	12.91	24
	5200	13.16	24
	5240	13.71	24
802.11ax hew40	5190	12.45	24
	5230	13.01	24
Note: The device is a client device.			

5725-5850 MHz:

Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power(dBm)	
		Result	Limit
802.11a	5745	12.04	30
	5785	12.13	30
	5825	11.68	30
802.11n ht20	5745	12.06	30
	5785	12.27	30
	5825	11.77	30
802.11n ht40	5755	12.01	30
	5795	11.31	30
802.11ax hew20	5745	12.96	30
	5785	12.15	30
	5825	11.64	30
802.11ax hew40	5755	12.02	30
	5795	11.34	30

4.5 Maximum Power Spectral Density

Serial Number:	2BFJ-1	Test Date:	2023/10/12
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.4	Relative Humidity: (%)	57	ATM Pressure: (kPa)	101.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	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 Modes	Test Frequency (MHz)	Reading (dBm/MHz)	Duty Cycle Factor (dB)	Maximum Power Spectral Density (dBm/MHz)	
				Result	Limit
802.11a	5180	1.95	/	1.95	11
	5200	2.27	/	2.27	11
	5240	2.77	/	2.77	11
802.11n ht20	5180	2.07	/	2.07	11
	5200	2.45	/	2.45	11
	5240	2.68	/	2.68	11
802.11n ht40	5190	-1.59	/	-1.59	11
	5230	-1.19	/	-1.19	11
802.11ax hew20	5180	2.07	/	2.07	11
	5200	1.99	/	1.99	11
	5240	2.82	/	2.82	11
802.11ax hew40	5190	-1.63	/	-1.63	11
	5230	-1.17	/	-1.17	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 was used.

5725-5850 MHz:

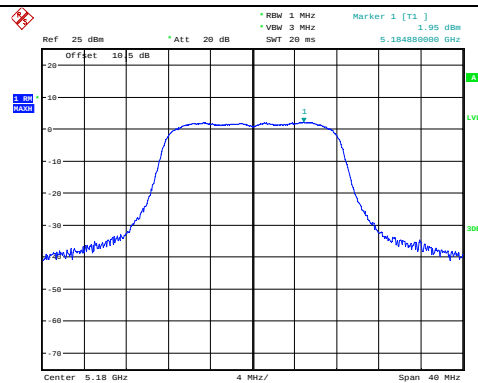
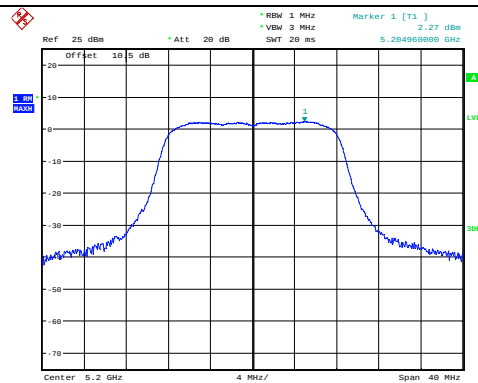
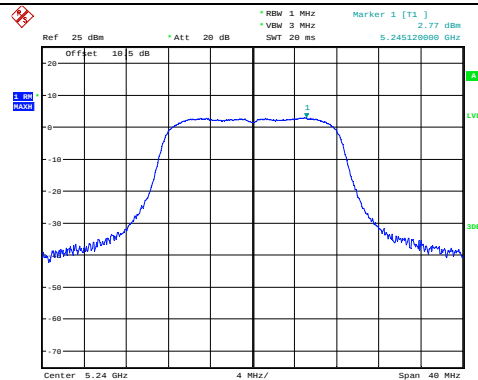
Test Modes	Test Frequency (MHz)	Reading (dBm/500kHz)	Duty Cycle Factor (dB)	Maximum Power Spectral Density (dBm/500kHz)	
				Result	Limit
802.11a	5745	-0.13	/	-0.13	30
	5785	-1.13	/	-1.13	30
	5825	-1.77	/	-1.77	30
802.11n ht20	5745	-0.02	/	-0.02	30
	5785	-0.79	/	-0.79	30
	5825	-1.29	/	-1.29	30
802.11n ht40	5755	-3.67	/	-3.67	30
	5795	-4.39	/	-4.39	30
802.11ax hew20	5745	0.19	/	0.19	30
	5785	-0.51	/	-0.51	30
	5825	-0.95	/	-0.95	30
802.11ax hew40	5755	-3.56	/	-3.56	30
	5795	-4.38	/	-4.38	30

Note:

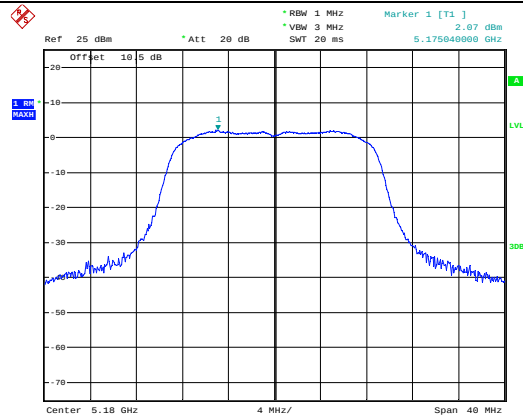
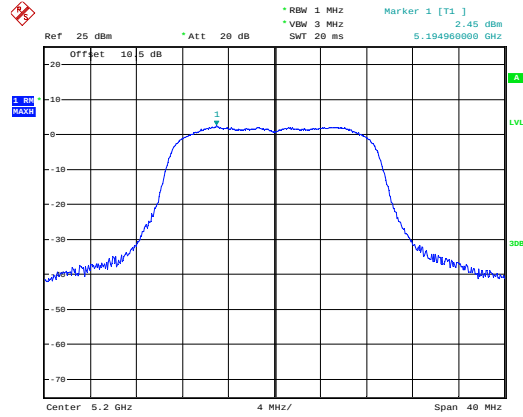
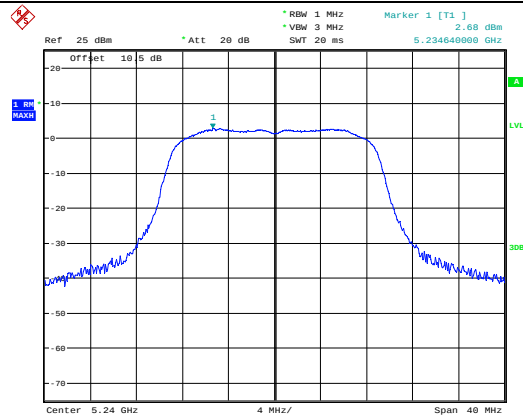
Duty cycle <98%, and duty cycle variations exceed $\pm 2\%$, KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 was used.

5150-5250MHz:

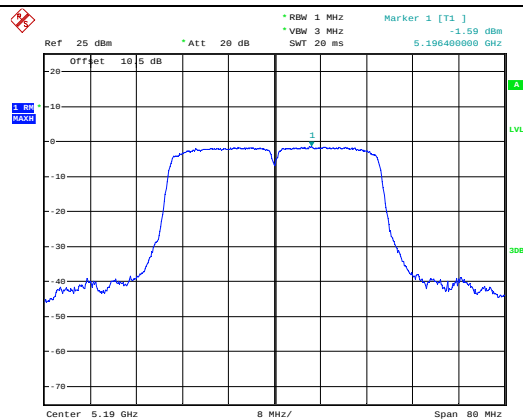
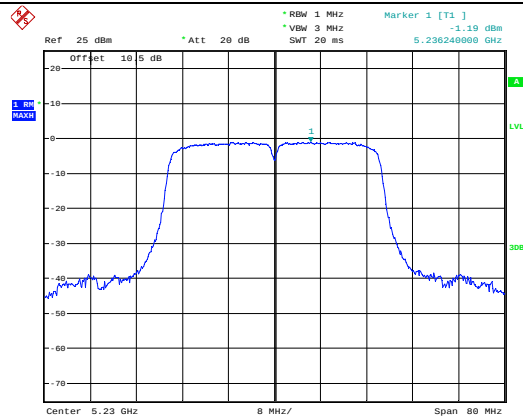
Maximum power spectral density

802.11a
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:24:13802.11a
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:27:29802.11a
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:29:42

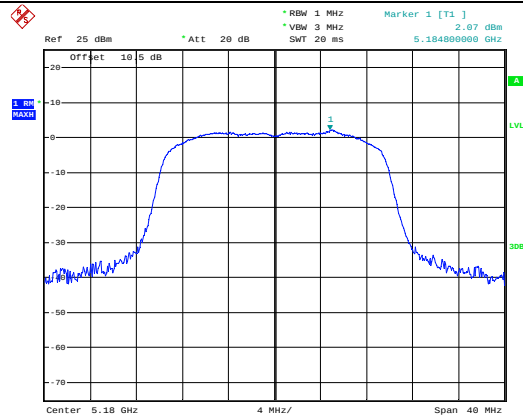
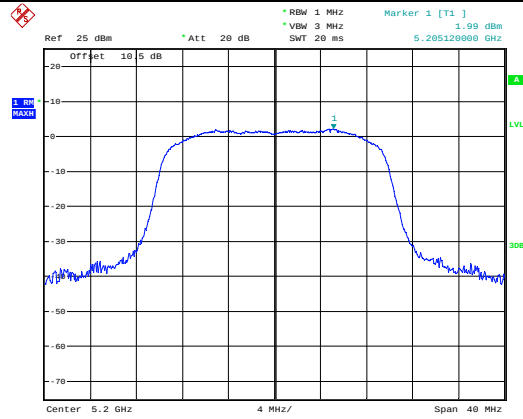
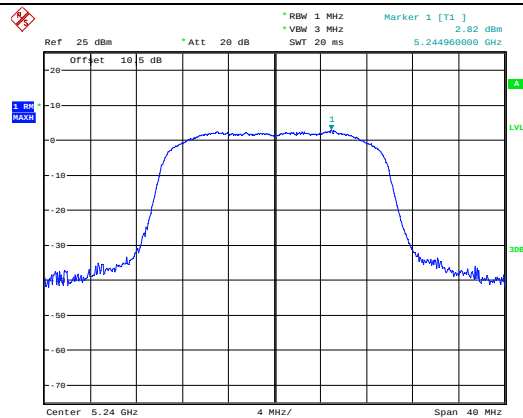
Maximum power spectral density

802.11n ht20
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:32:00802.11n ht20
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:34:19802.11n ht20
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:36:31

Maximum power spectral density

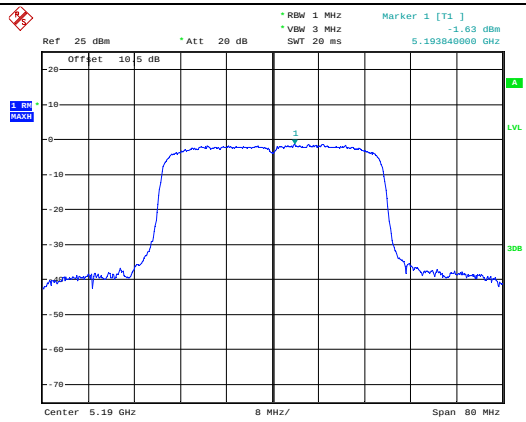
802.11n ht40
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:43:14802.11n ht40
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:45:27

Maximum power spectral density

802.11ax ht20
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:48:15802.11ax ht20
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:50:53802.11ax ht20
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:53:14

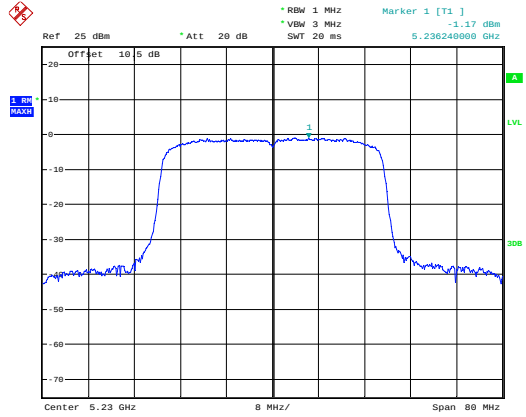
Maximum power spectral density

802.11ax ht40
Lowest Channel



ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:55:33

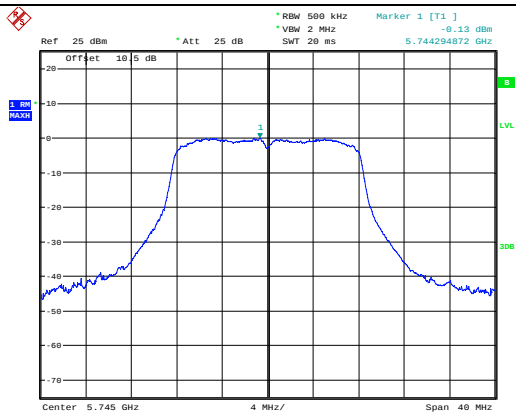
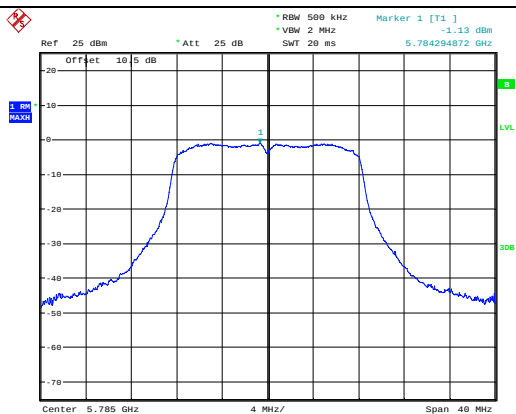
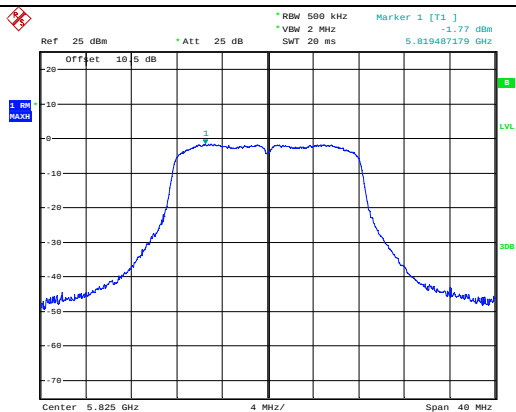
802.11ax ht40
Highest Channel



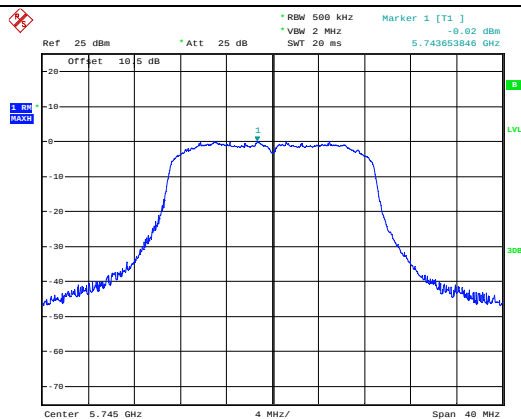
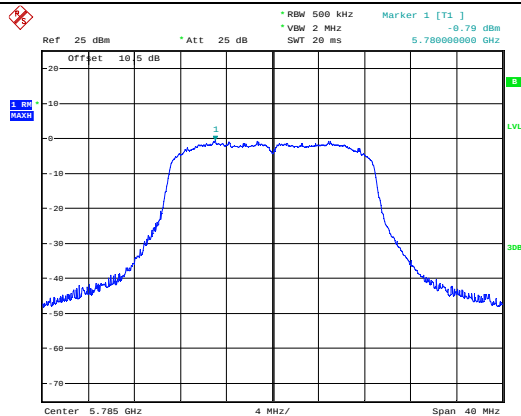
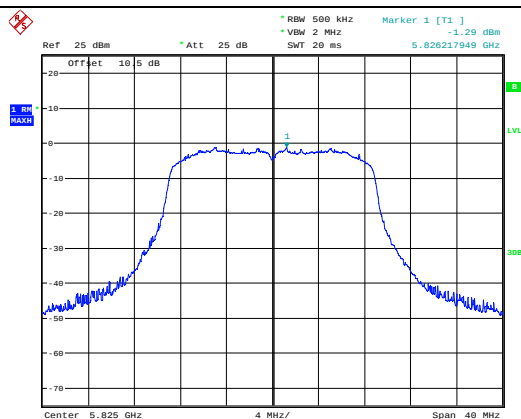
ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 19:57:46

5725-5850MHz

Maximum power spectral density

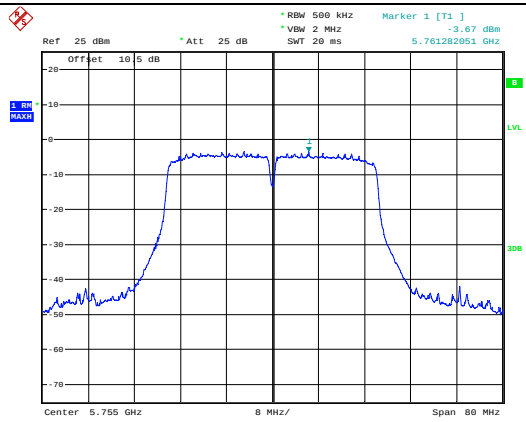
802.11a
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:02:52802.11a
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:05:35802.11a
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:11:33

Maximum power spectral density

802.11n ht20
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:10:49802.11n ht20
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:14:13802.11n ht20
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:17:33

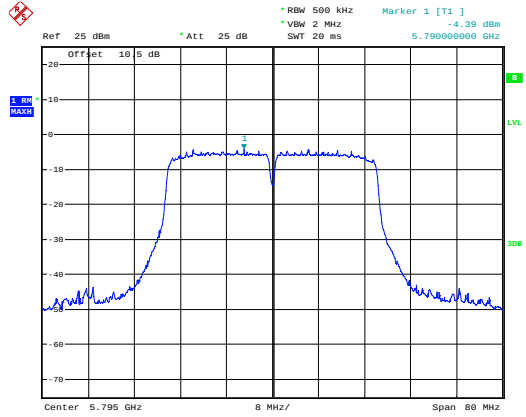
Maximum power spectral density

802.11n ht40
Lowest Channel



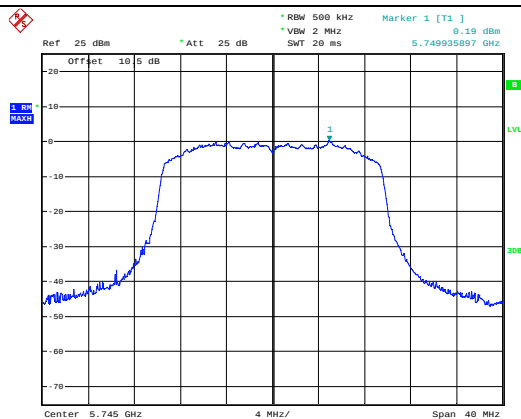
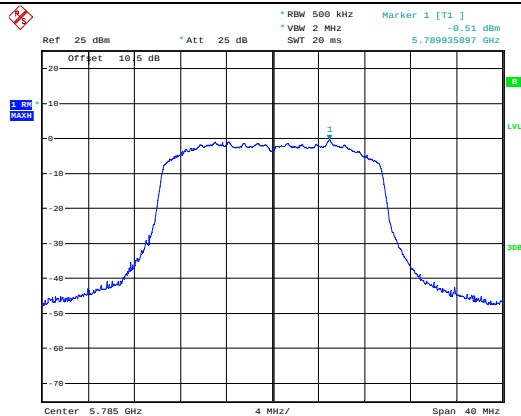
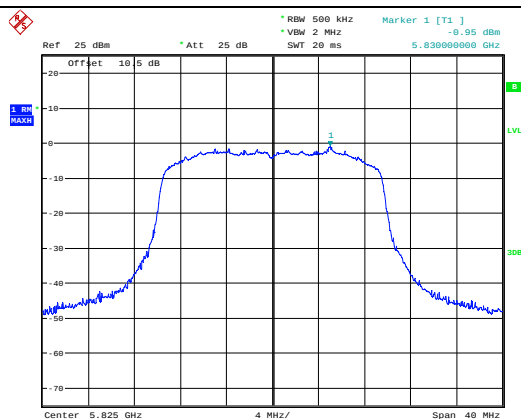
ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:39:31

802.11n ht40
Highest Channel

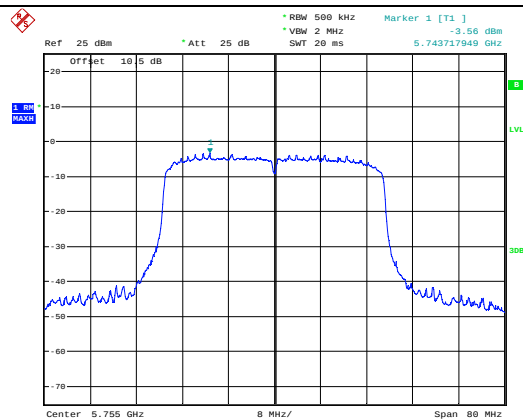
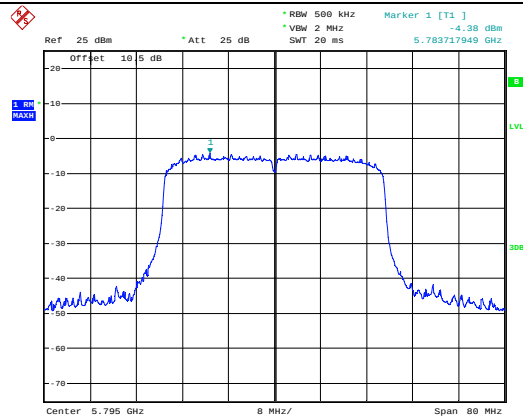


ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:42:05

Maximum power spectral density

802.11ax ht20
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:22:06802.11ax ht20
Middle ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:25:13802.11ax ht20
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:30:02

Maximum power spectral density

802.11ax ht40
Lowest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:33:50802.11ax ht40
Highest ChannelProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 20:36:26

4.6 Duty Cycle

Serial Number:	2BFJ-1	Test Date:	2023/10/12
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	pass

Environmental Conditions:

Temperature: (°C)	25.4	Relative Humidity: (%)	57	ATM Pressure: (kPa)	101.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	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

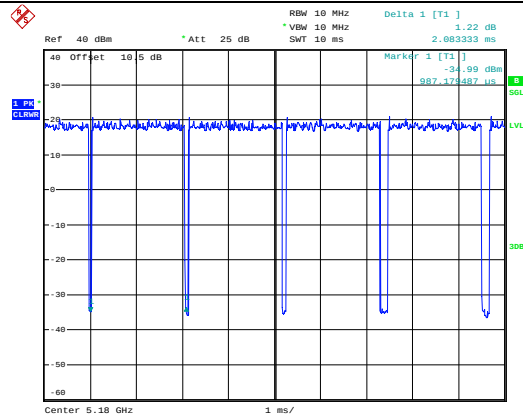
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)	1/T (Hz)	Duty Cycle Factor (dB)	VBW Setting (kHz)
802.11a	2.083	/	Not constant	480	/	0.5
802.11n ht20	1.939	/	Not constant	516	/	1
802.11n ht40	0.958	/	Not constant	1044	/	2
802.11ax hew20	1.498	/	Not constant	668	/	1
802.11ax hew40	0.763	/	Not constant	1311	/	2

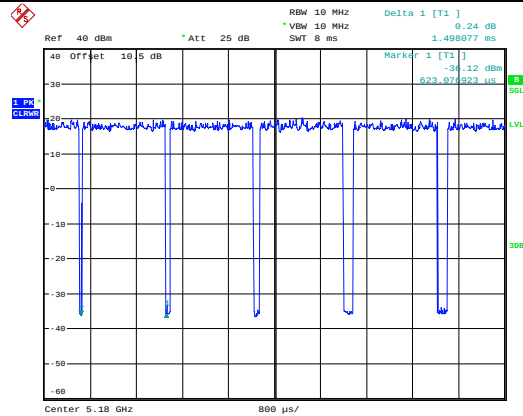
Duty Cycle

802.11a



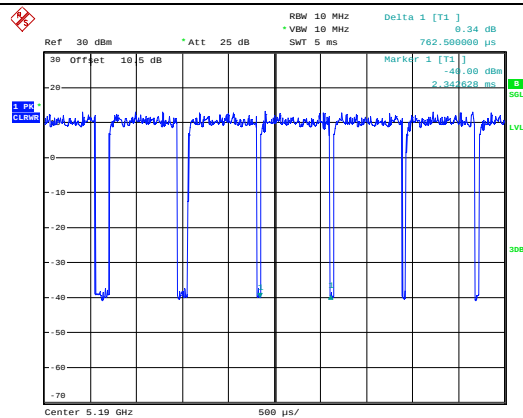
ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 18:41:32

802.11ax hew20



ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 18:46:21

802.11ax hew40



ProjectNo.:CR230955186-RF Tester:Arthur Su
Date: 12.OCT.2023 18:58:01

5. EUT PHOTOGRAPHS

Please refer to the attachment CR230955186-EXP EUT EXTERNAL PHOTOGRAPHS and
CR230955186-INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR230955186-00D-TSP TEST SETUP PHOTOGRAPHS.

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