中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

TEST REPORT

Applicant: **Telepower Communication Co., Ltd.**

Address: 5 Bld, Zone A, Hantian Technology Town No.17 ShenHai RD, Nanhai District Foshan China

FCC ID: **2AJ2B-K8**

Product Name: **Self-Service Kiosk**

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: **CR231062479-00D**

Date Of Issue: **2024/3/14**

Reviewed By: **Calvin Chen**

Title: RF Engineer

Approved By: **Sun Zhong**

Title: Manager

Test Laboratory: **China Certification ICT Co., Ltd (Dongguan)**
No. 113, Pingkang Road, Dalang Town, Dongguan,
Guangdong, China
Tel: +86-769-82016888

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.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR231062479-00D	Original Report	2024/3/14

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

1.1.1 General:

EUT Name:	Self-Service Kiosk
Trade Name:	Telpo
EUT Model:	K8
Operation Frequency:	5745-5825 MHz (802.11a/n ht20/ac vht20) 5755-5795 MHz(802.11n ht40/ac vht40) 5775 MHz(802.11ac vht80)
Maximum Average Output Power (Conducted):	13.68dBm (5725-5850 MHz)
Modulation Type:	802.11a/n/ac: OFDM-BPSK, QPSK, 16QAM, 64QAM,256QAM
Rated Input Voltage:	DC 24V from adapter
Serial Number:	2CPG-1 for RF test 2CPG-2 for CE&RE test
EUT Received Date:	2023/10/27
EUT Received Status:	Good

1.1.2 Operation Frequency Detail:

For 802.11a/n ht20/ac vht20:

5725-5850MHz Band	
Channel	**Frequency (MHz)**
149	5745
153	5765
157	5785
161	5805
165	5825
Per section 15.31(m), the below frequencies were performed the test as below:	
149	5745
157	5785
165	5825

For 802.11n ht40/ac vht40:

5725-5850MHz Band	
Channel	**Frequency (MHz)**
151	5755
159	5795
Per section 15.31(m), the below frequencies were performed the test as below:	
151	5755
159	5795

For 802.11ac vht80:

5725-5850MHz Band	
Channel	**Frequency (MHz)**
155	5775
Per section 15.31(m), the below frequencies were performed the test as below:	
155	5775

1.1.3 Antenna Information Detail▲:

Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain (dBi)
FPC	50	5.725-5.85GHz	3.95

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	Parameters
Adapter	GVE	GM130-2400500-F	Input: AC 100-240V, 50/60Hz, 2.5A Output: DC 24.0V, 5.0A, 120.0W

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:	cmd

The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer▲:

5725-5850 MHz Band:

Test Modes	Test Frequency	Test Channel	Data rate	Power Level Setting
802.11a	5745	5745	6Mbps	50
	5785	5785	6Mbps	50
	5825	5825	6Mbps	50
802.11ac vht20	5745	5745	MCS0	56
	5785	5785	MCS0	56
	5825	5825	MCS0	56
802.11ac vht40	5755	5755	MCS0	58
	5795	5795	MCS0	58
802.11ac vht80	5775	5775	MCS0	63

Note:
1. The system support 802.11a/n ht20/n ht40/ac vht20/ac vht40, the n ht20/n ht40 were reduced since the identical parameters with 802.11ac vht20/ac 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.

1.2.2 Support Equipment List and Details

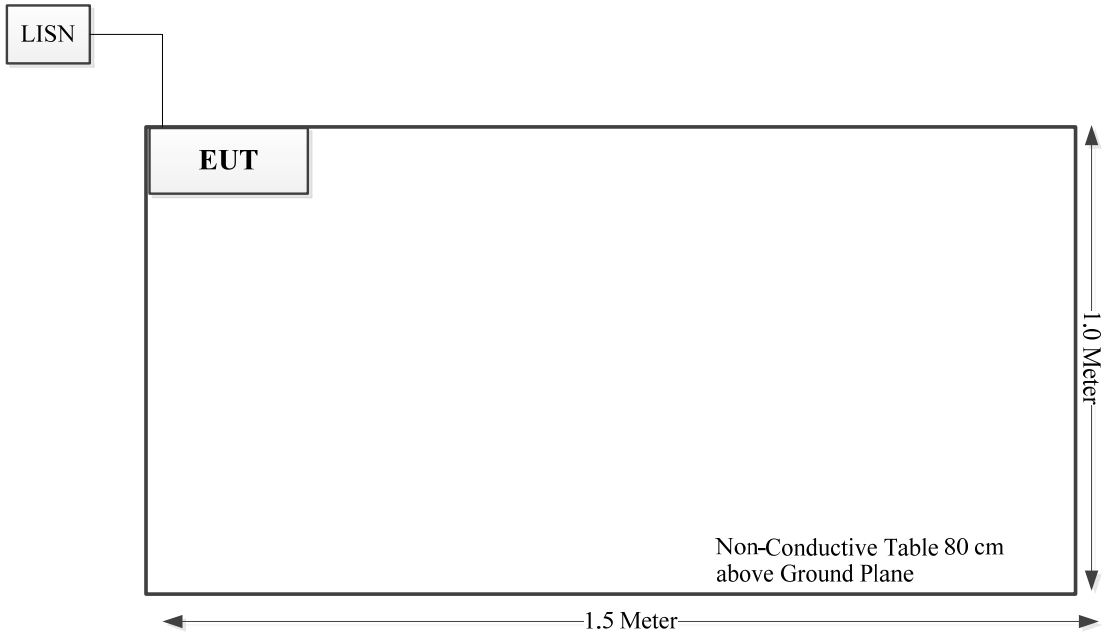
Manufacturer	Description	Model	Serial Number
Unknown	Receptacle	Unknown	Unknown

1.2.3 Support Cable List and Details

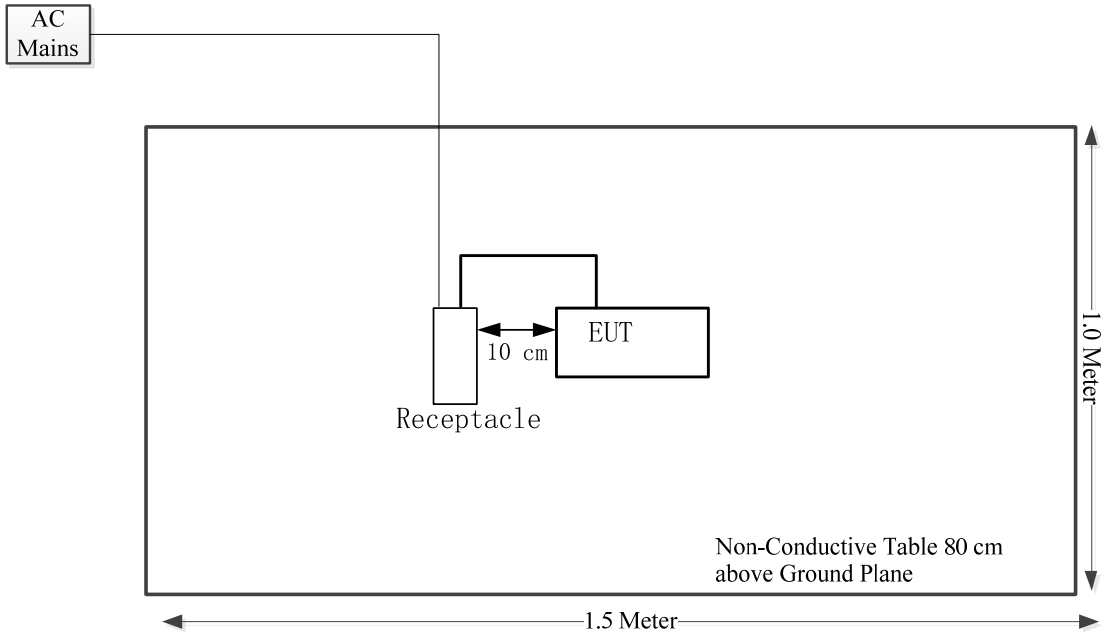
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Unknown	Receptacle	Unknown	Unknown	Unknown	Receptacle

1.2.4 Block Diagram of Test Setup

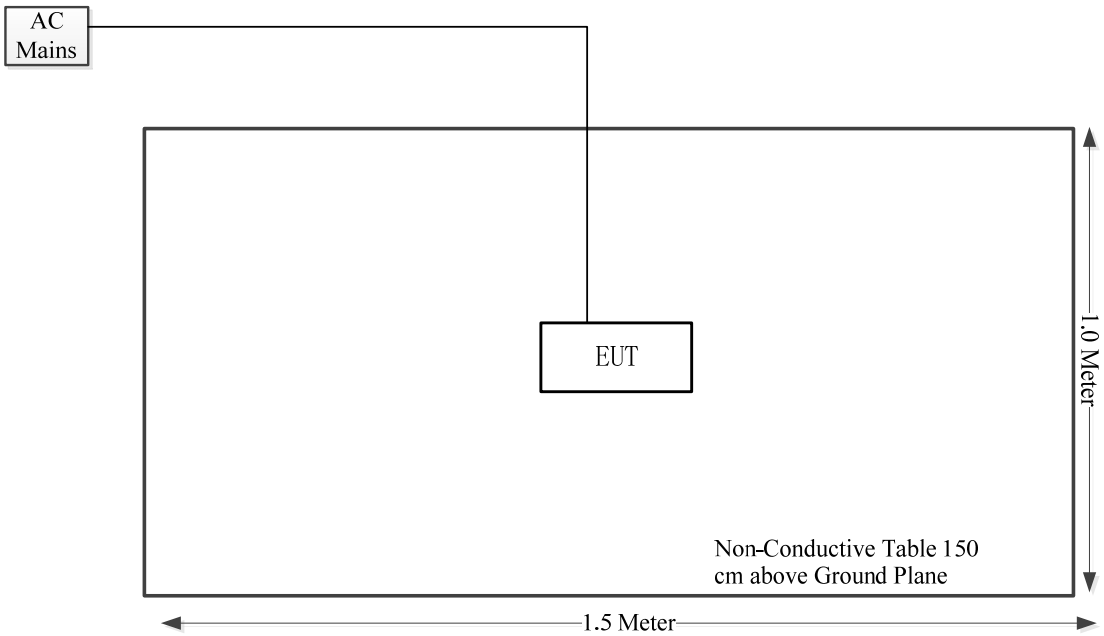
AC Line Conducted Emissions:



Radiated Spurious Emissions (below 1GHz):



Radiated Spurious Emissions (above 1GHz):



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	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 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	±1.26 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±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 μH/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.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	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:

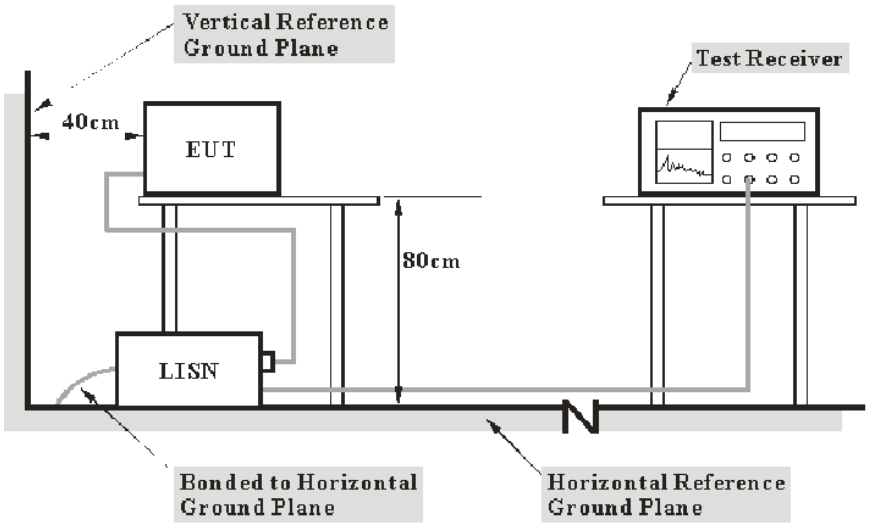
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/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, obtainig 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

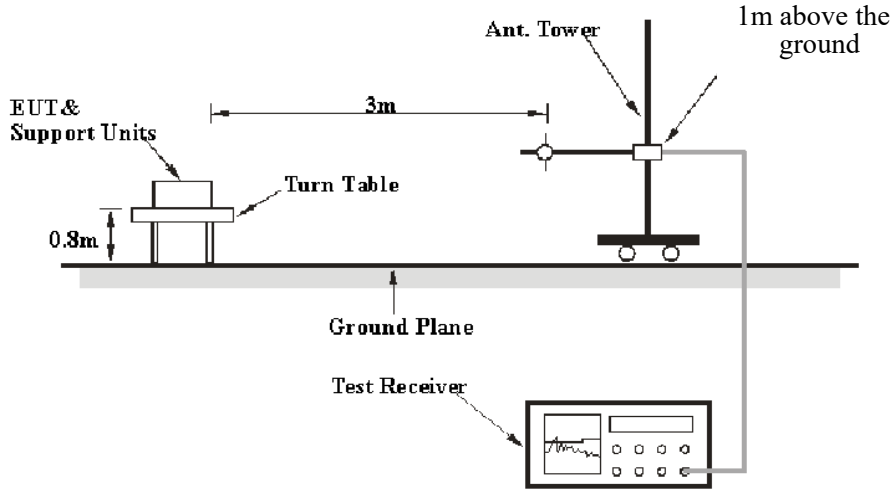
3.2.1 Applicable Standard

FCC §15.407 (b);

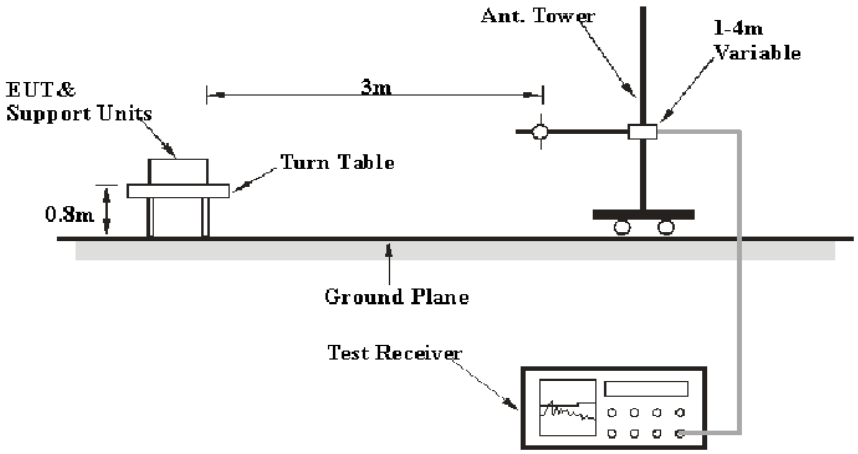
Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 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

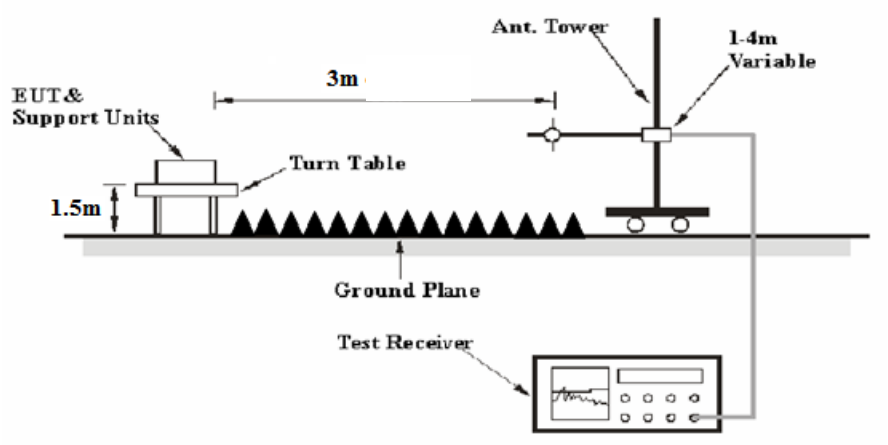
9 kHz-30MHz:



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 9 kHz to 40 GHz.

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

9 kHz -1000 MHz:

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

1GHz- 40GHz:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>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 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
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

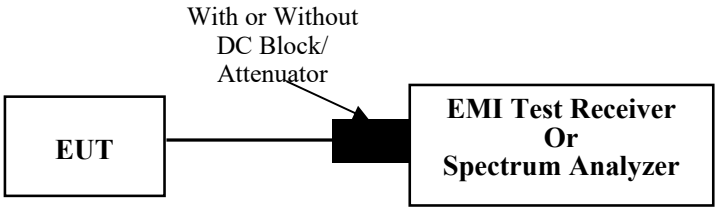
3.3 Emission Bandwidth

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

6 dB emission bandwidth:

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

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) 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.

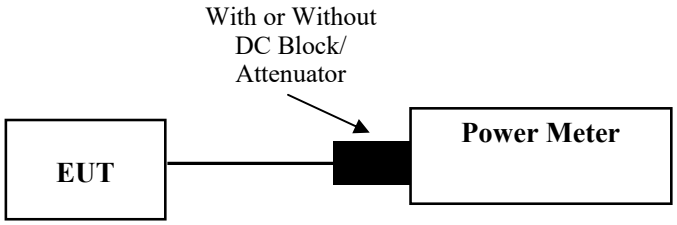
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
d) Step 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) (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

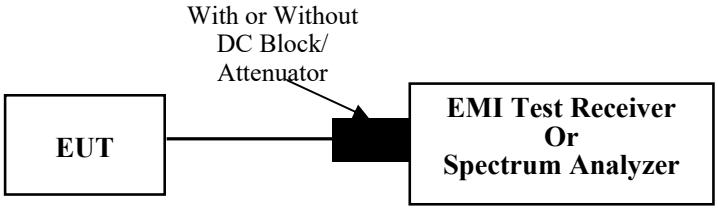
Method PM-G is measurement using a gated RF average power meter.
Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement 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) (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 ≥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 ±2%

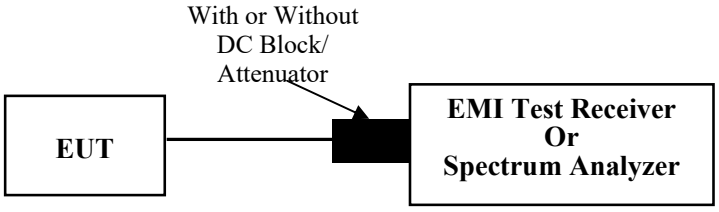
KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-2 should be applied.

Duty cycle <98%, duty cycle variations exceed ±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 ≥ OBW if possible; otherwise, set RBW to the largest available value.
3) Set VBW ≥ 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 ≤ 16.7 μs.)

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:	2CPG-2	Test Date:	2023/12/18
Test Site:	CE	Test Mode:	Transmitting(maximum output power mode 802.11ac vht80,5775 MHz)
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	24.1	Relative Humidity: (%)	35	ATM Pressure: (kPa)	101.8

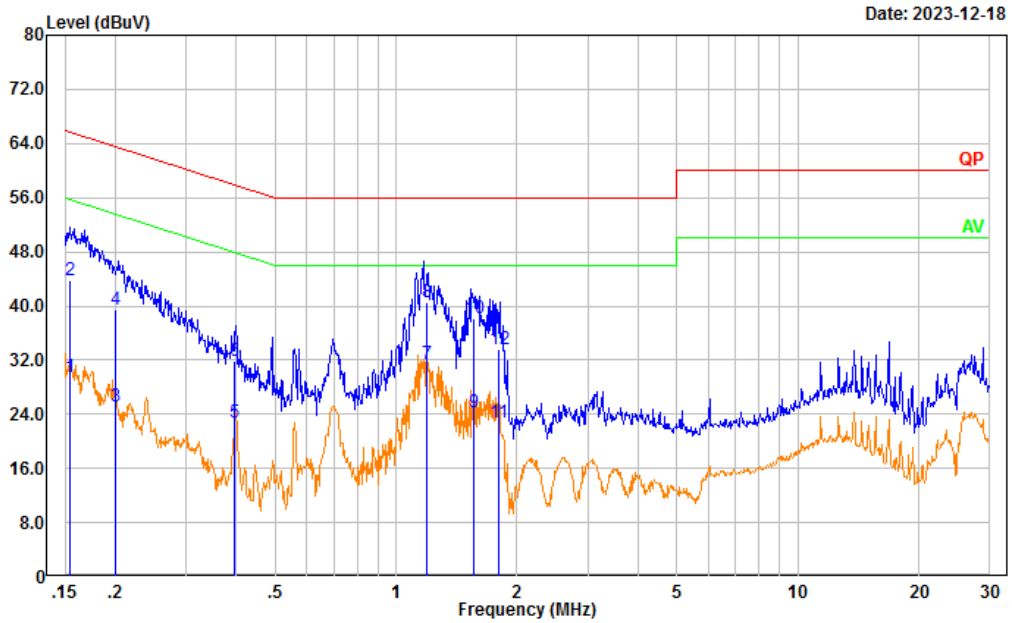
Test Equipment List and Details:

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).*

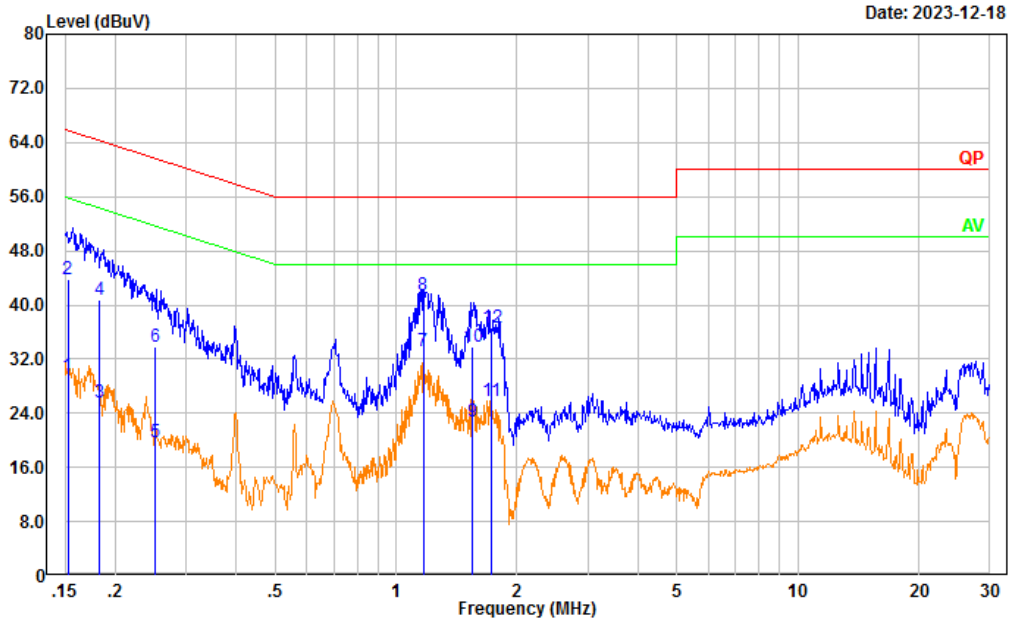
Test Data:

Project No.: CR231062479-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	0.154	19.85	9.61	29.46	55.78	26.32	Average
2	0.154	34.09	9.61	43.70	65.78	22.08	QP
3	0.200	15.50	9.61	25.11	53.61	28.50	Average
4	0.200	29.79	9.61	39.40	63.61	24.21	QP
5	0.397	13.14	9.61	22.75	47.92	25.17	Average
6	0.397	22.16	9.61	31.77	57.92	26.15	QP
7	1.192	21.73	9.62	31.35	46.00	14.65	Average
8	1.192	31.02	9.62	40.64	56.00	15.36	QP
9	1.561	14.66	9.63	24.29	46.00	21.71	Average
10	1.561	28.46	9.63	38.09	56.00	17.91	QP
11	1.803	13.18	9.63	22.81	46.00	23.19	Average
12	1.803	24.04	9.63	33.67	56.00	22.33	QP

Project No.: CR231062479-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	0.152	19.93	9.61	29.54	55.86	26.32	Average
2	0.152	34.25	9.61	43.86	65.86	22.00	QP
3	0.182	15.94	9.61	25.55	54.38	28.83	Average
4	0.182	31.10	9.61	40.71	64.38	23.67	QP
5	0.251	10.17	9.61	19.78	51.71	31.93	Average
6	0.251	24.15	9.61	33.76	61.71	27.95	QP
7	1.167	23.49	9.62	33.11	46.00	12.89	Average
8	1.167	31.71	9.62	41.33	56.00	14.67	QP
9	1.552	13.10	9.63	22.73	46.00	23.27	Average
10	1.552	24.09	9.63	33.72	56.00	22.28	QP
11	1.720	16.24	9.63	25.87	46.00	20.13	Average
12	1.720	26.94	9.63	36.57	56.00	19.43	QP

4.2 Radiation Spurious Emissions

Serial Number:	2CPG-2	Test Date:	Below 1G :2024/1/12 Above 1G :2023/12/05
Test Site:	966-2, 966-1	Test Mode:	Transmitting
Tester:	Vic Du, Tao Zhu	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.1~25.4	Relative Humidity: (%)	42~53	ATM Pressure: (kPa)	101.3~101.4

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Below 1G					
Sunol Sciences	Antenna	JB6	A082520-5	2023/12/1	2026/11/30
BACL	Loop Antenna	1313-1A	3110611	2023/12/4	2026/12/3
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0300-01	2024/1/11	2025/1/10
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0500-01	2024/1/11	2025/1/10
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 1G					
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
Audix	Test Software	E3	201021 (V9)	N/A	N/A
PASTERNACK	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
PASTERNACK	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:

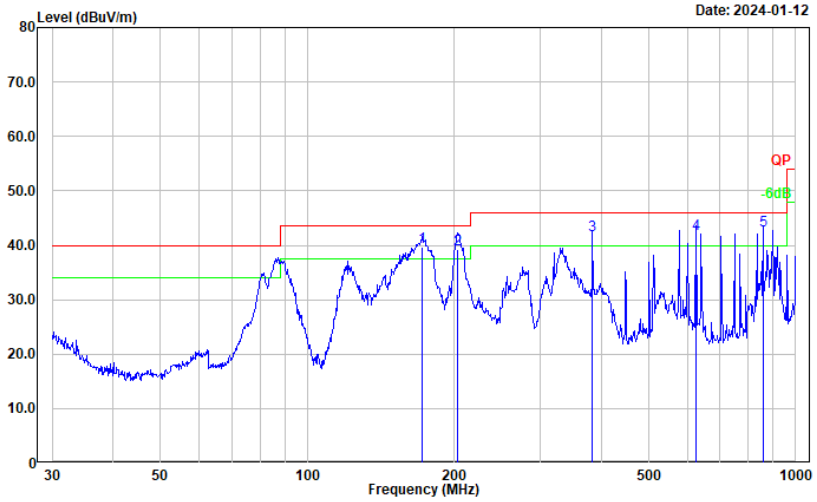
Please refer to the below table and plots.

1) 9k-30MHz

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

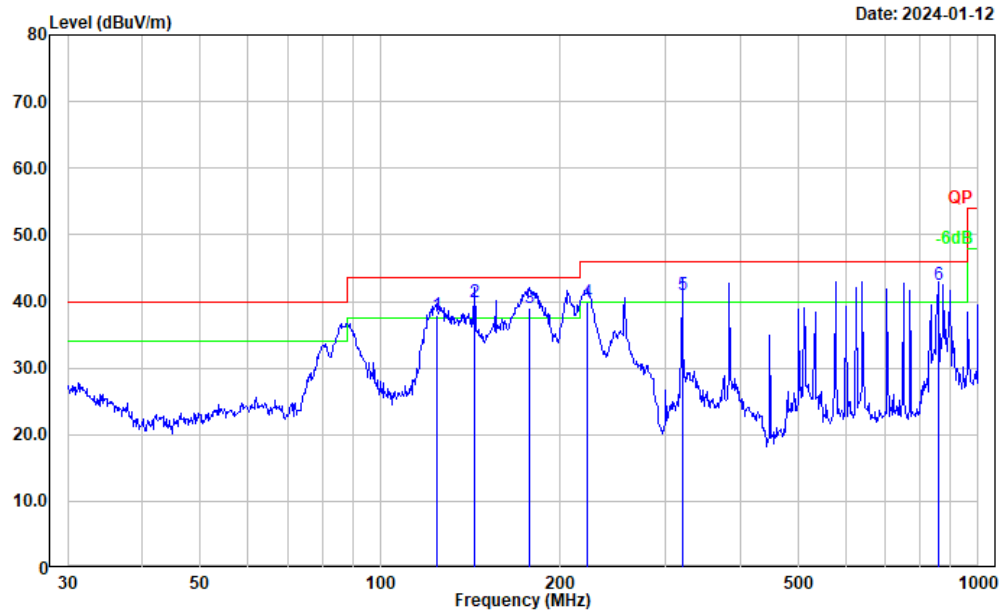
2) 30MHz-1GHz (Maximum Conducted Output Power mode 802.11ac vht80 ,5775 MHz)

Project No.: CR231062479-RF
Tester: Vic Du
Polarization: horizontal
Note: Transmitting(5G WIFI)



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	171.393	52.45	-12.76	39.69	43.50	3.81	QP
2	202.810	52.12	-12.87	39.25	43.50	4.25	QP
3	383.932	50.51	-8.61	41.90	46.00	4.10	QP
4	625.078	46.55	-4.41	42.14	46.00	3.86	QP
5	857.025	43.30	-0.59	42.71	46.00	3.29	QP

Project No.: CR231062479-RF
Tester: Vic Du
Polarization: vertical
Note: Transmitting(5G WIFI)



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	124.133	48.86	-10.90	37.96	43.50	5.54	QP
2	143.830	52.04	-12.07	39.97	43.50	3.53	QP
3	177.509	52.26	-13.25	39.01	43.50	4.49	QP
4	222.170	53.45	-13.57	39.88	46.00	6.12	QP
5	319.937	51.00	-10.07	40.93	46.00	5.07	QP
6	857.025	43.08	-0.59	42.49	46.00	3.51	QP

2) 1GHz-40GHz:
5725-5850MHz
802.11a 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	41.21	PK	H	21.49	62.70	74.00	11.30
11490.000	29.20	AV	H	21.49	50.69	54.00	3.31
11490.000	40.47	PK	V	21.49	61.96	74.00	12.04
11490.000	28.74	AV	V	21.49	50.23	54.00	3.77
Middle Channel: 5785 MHz							
11570.000	40.90	PK	H	21.71	62.61	74.00	11.39
11570.000	27.83	AV	H	21.71	49.54	54.00	4.46
11570.000	39.91	PK	V	21.71	61.62	74.00	12.38
11570.000	27.69	AV	V	21.71	49.40	54.00	4.60
High Channel: 5825 MHz							
11650.000	40.31	PK	H	22.04	62.35	74.00	11.65
11650.000	27.79	AV	H	22.04	49.83	54.00	4.17
11650.000	39.13	PK	V	22.04	61.17	74.00	12.83
11650.000	27.27	AV	V	22.04	49.31	54.00	4.69

802.11ac vht20 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	40.21	PK	H	21.49	61.70	74.00	12.30
11490.000	28.98	AV	H	21.49	50.47	54.00	3.53
11490.000	39.48	PK	V	21.49	60.97	74.00	13.03
11490.000	28.17	AV	V	21.49	49.66	54.00	4.34
Middle Channel: 5785 MHz							
11570.000	42.27	PK	H	21.71	63.98	74.00	10.02
11570.000	28.84	AV	H	21.71	50.55	54.00	3.45
11570.000	41.96	PK	V	21.71	63.67	74.00	10.33
11570.000	27.77	AV	V	21.71	49.48	54.00	4.52
High Channel: 5825 MHz							
11650.000	42.54	PK	H	22.04	64.58	74.00	9.42
11650.000	28.64	AV	H	22.04	50.68	54.00	3.32
11650.000	41.52	PK	V	22.04	63.56	74.00	10.44
11650.000	27.55	AV	V	22.04	49.59	54.00	4.41

802.11ac vht40 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	42.16	PK	H	21.48	63.64	74.00	10.36
11510.000	28.86	AV	H	21.48	50.34	54.00	3.66
11510.000	40.98	PK	V	21.48	62.46	74.00	11.54
11510.000	28.07	AV	V	21.48	49.55	54.00	4.45
High Channel: 5795 MHz							
11590.000	41.65	PK	H	21.78	63.43	74.00	10.57
11590.000	28.64	AV	H	21.78	50.42	54.00	3.58
11590.000	41.39	PK	V	21.78	63.17	74.00	10.83
11590.000	28.16	AV	V	21.78	49.94	54.00	4.06

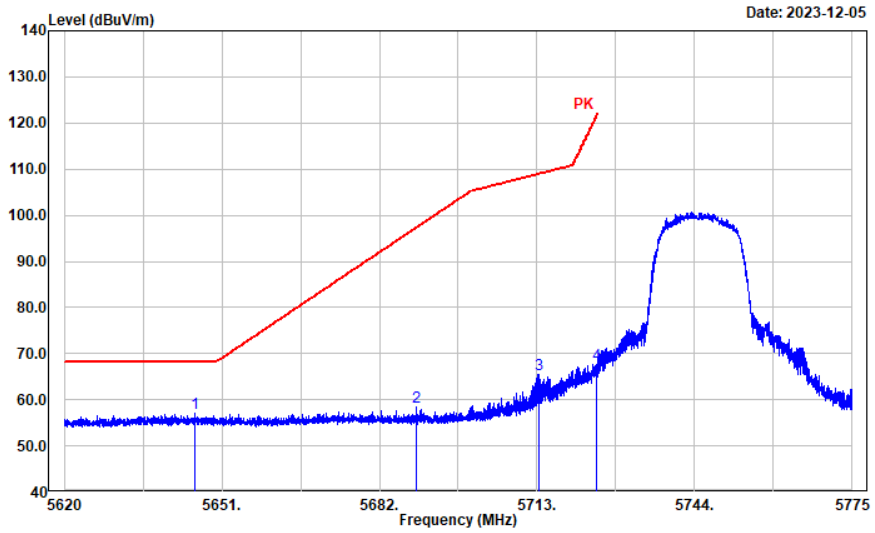
802.11ac vht80 Mode:

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	41.37	PK	H	21.63	63.00	74.00	11.00
11550.000	28.78	AV	H	21.63	50.41	54.00	3.59
11550.000	40.54	PK	V	21.63	62.17	74.00	11.83
11550.000	28.35	AV	V	21.63	49.98	54.00	4.02

Test plots for Band Edge Measurements (Radiated)

802.11a			
Test Channel:	**5745MHz**	**Ant. Polar. :**	**Horizontal**

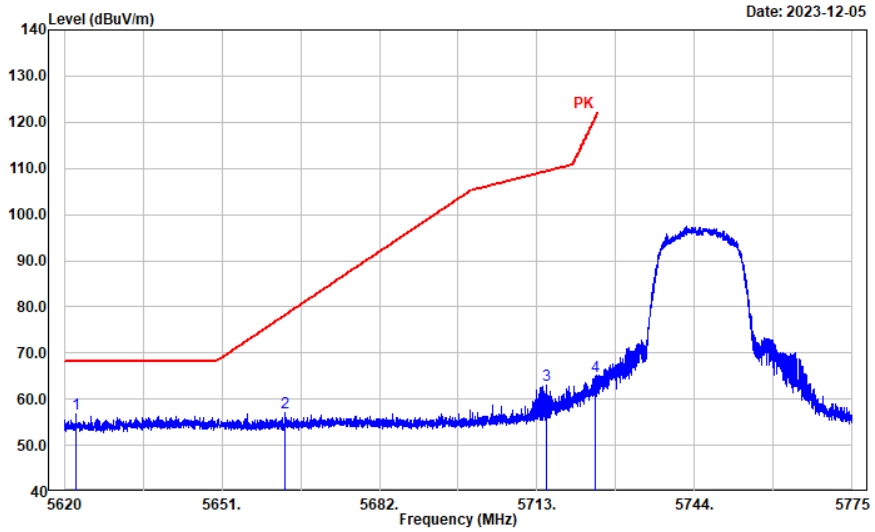
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5645.673	44.65	12.29	56.94	68.20	11.26	Peak
2	5689.237	45.80	12.50	58.30	97.26	38.96	Peak
3	5713.298	52.91	12.56	65.47	108.93	43.46	Peak
4	5724.739	55.14	12.57	67.71	121.60	53.89	Peak

802.11a			
Test Channel:	**5745MHz**	**Ant. Polar. :**	**Vertical**

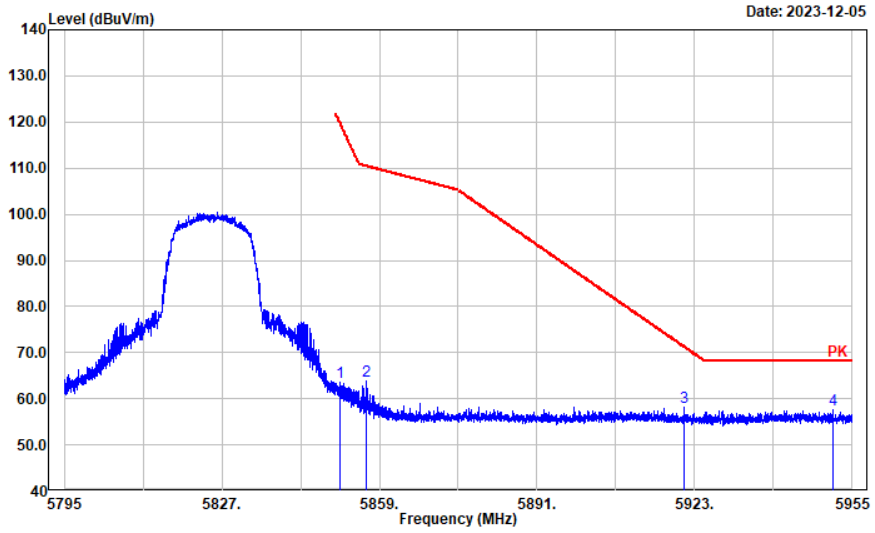
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5622.232	44.54	12.17	56.71	68.20	11.49	Peak
2	5663.439	44.80	12.38	57.18	78.18	21.00	Peak
3	5714.910	50.54	12.56	63.10	109.38	46.28	Peak
4	5724.367	52.45	12.57	65.02	120.76	55.74	Peak

802.11a			
Test Channel:	**5825MHz**	**Ant. Polar. :**	**Horizontal**

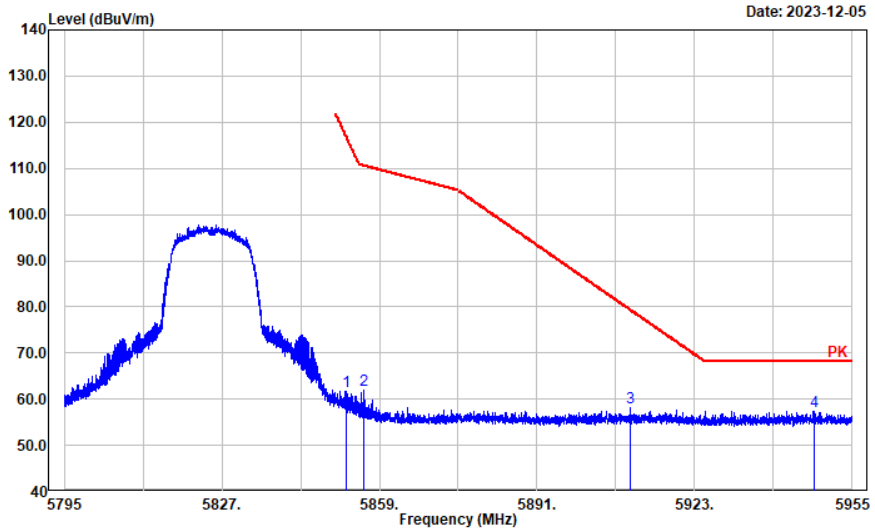
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5850.883	50.72	12.77	63.49	120.19	56.70	Peak
2	5856.292	51.04	12.81	63.85	110.44	46.59	Peak
3	5920.817	45.10	13.02	58.12	71.28	13.16	Peak
4	5951.127	44.67	13.04	57.71	68.20	10.49	Peak

802.11a			
Test Channel:	**5825MHz**	**Ant. Polar. :**	**Vertical**

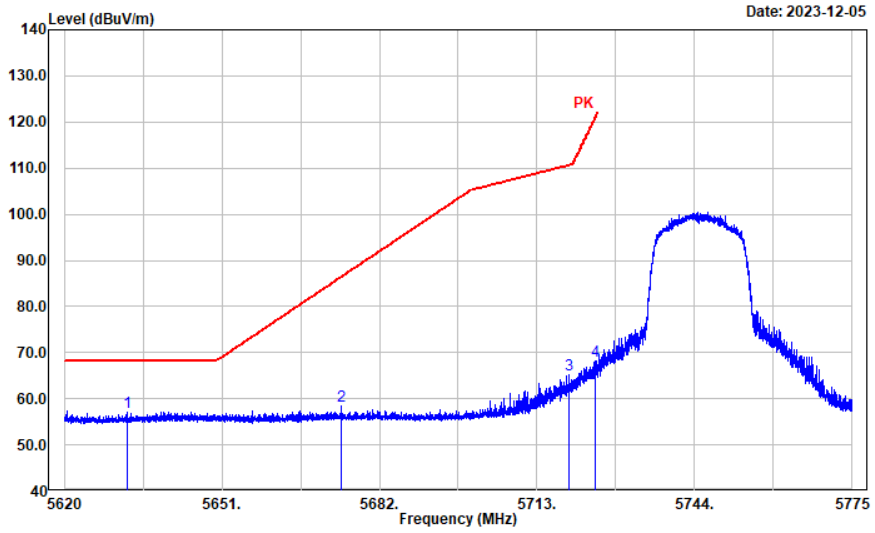
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5852.164	48.87	12.78	61.65	117.27	55.62	Peak
2	5855.716	49.20	12.80	62.00	110.60	48.60	Peak
3	5909.839	45.27	13.02	58.29	79.39	21.10	Peak
4	5947.287	44.36	13.03	57.39	68.20	10.81	Peak

802.11ac vht20			
Test Channel:	**5745MHz**	**Ant. Polar. :**	**Horizontal**

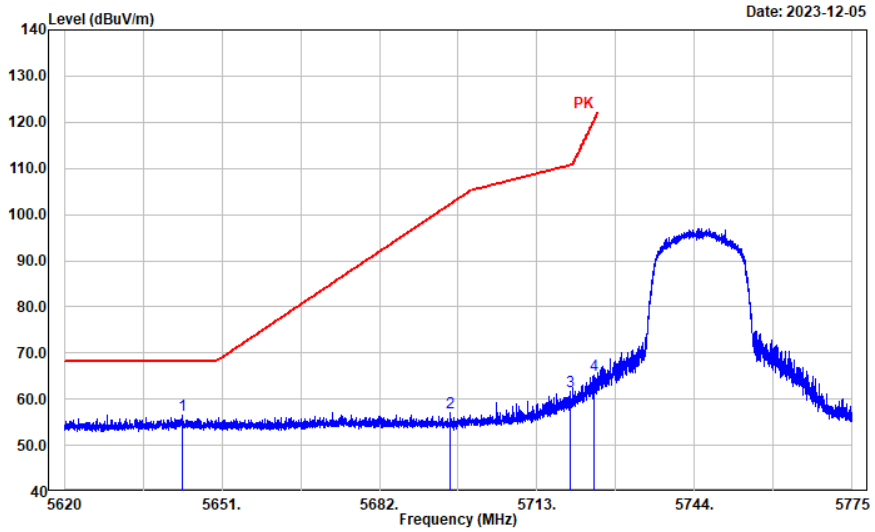
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5632.372	44.96	12.22	57.18	68.20	11.02	Peak
2	5674.416	45.90	12.44	58.34	86.31	27.97	Peak
3	5719.189	52.69	12.57	65.26	110.57	45.31	Peak
4	5724.367	55.52	12.57	68.09	120.76	52.67	Peak

802.11ac vht20			
Test Channel:	**5745MHz**	**Ant. Polar. :**	**Vertical**

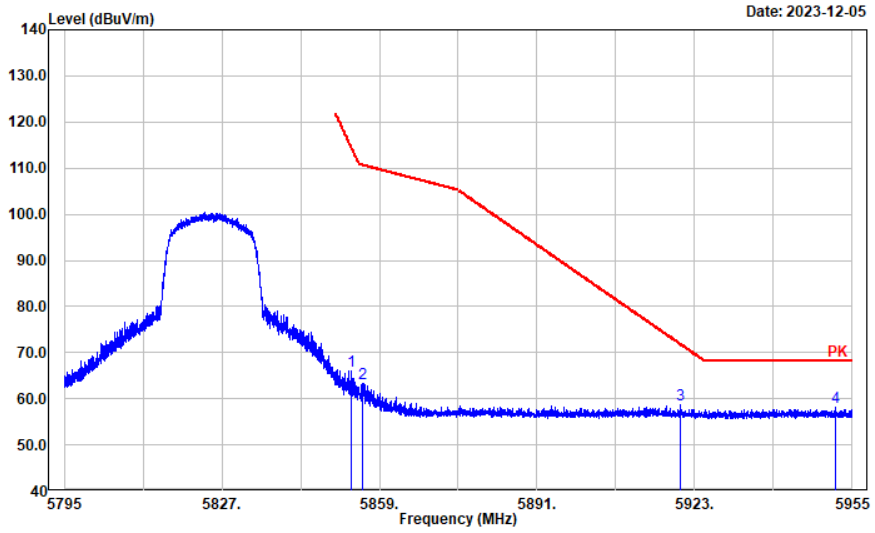
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5643.286	44.24	12.29	56.53	68.20	11.67	Peak
2	5695.996	44.47	12.53	57.00	102.25	45.25	Peak
3	5719.530	49.20	12.57	61.77	110.67	48.90	Peak
4	5724.212	52.75	12.57	65.32	120.40	55.08	Peak

802.11ac vht20			
Test Channel:	**5825MHz**	**Ant. Polar. :**	**Horizontal**

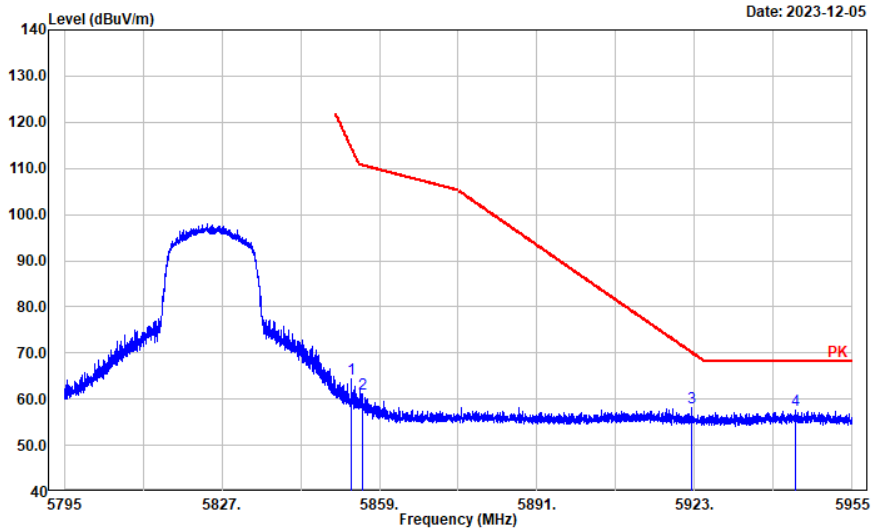
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5853.348	53.29	12.79	66.08	114.57	48.49	Peak
2	5855.492	50.56	12.80	63.36	110.66	47.30	Peak
3	5920.017	45.59	13.02	58.61	71.87	13.26	Peak
4	5951.671	45.02	13.04	58.06	68.20	10.14	Peak

802.11ac vht20			
Test Channel:	**5825MHz**	**Ant. Polar. :**	**Vertical**

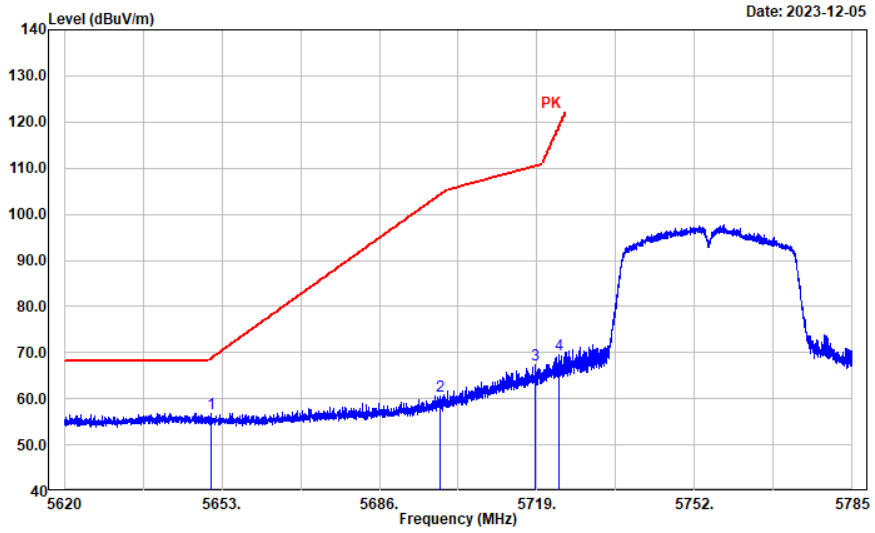
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5853.251	51.70	12.79	64.49	114.79	50.30	Peak
2	5855.460	48.21	12.80	61.01	110.67	49.66	Peak
3	5922.481	45.07	13.03	58.10	70.06	11.96	Peak
4	5943.350	44.50	13.03	57.53	68.20	10.67	Peak

802.11ac vht40			
Test Channel:	**5755MHz**	**Ant. Polar. :**	**Horizontal**

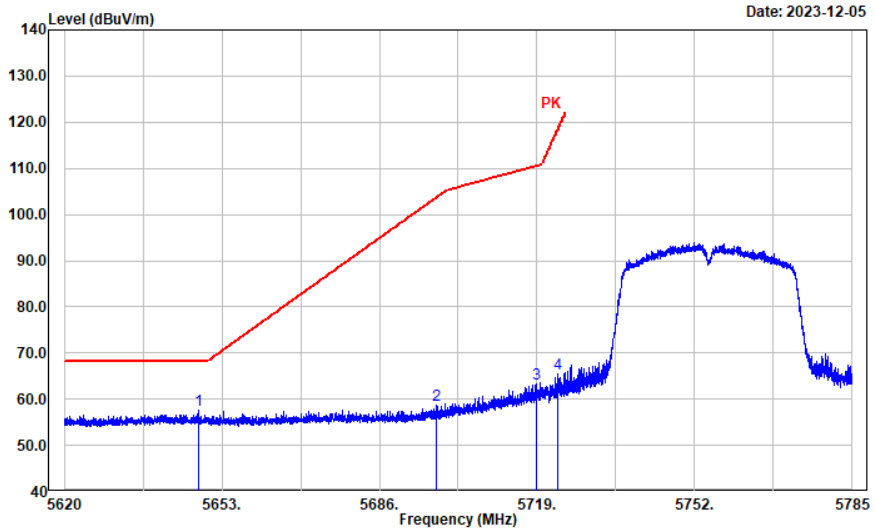
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5650.795	44.49	12.33	56.82	68.79	11.97	Peak
2	5698.688	48.17	12.55	60.72	104.23	43.51	Peak
3	5718.558	54.69	12.57	67.26	110.40	43.14	Peak
4	5723.608	56.88	12.57	69.45	119.03	49.58	Peak

802.11ac vht40			
Test Channel:	**5755MHz**	**Ant. Polar. :**	**Vertical**

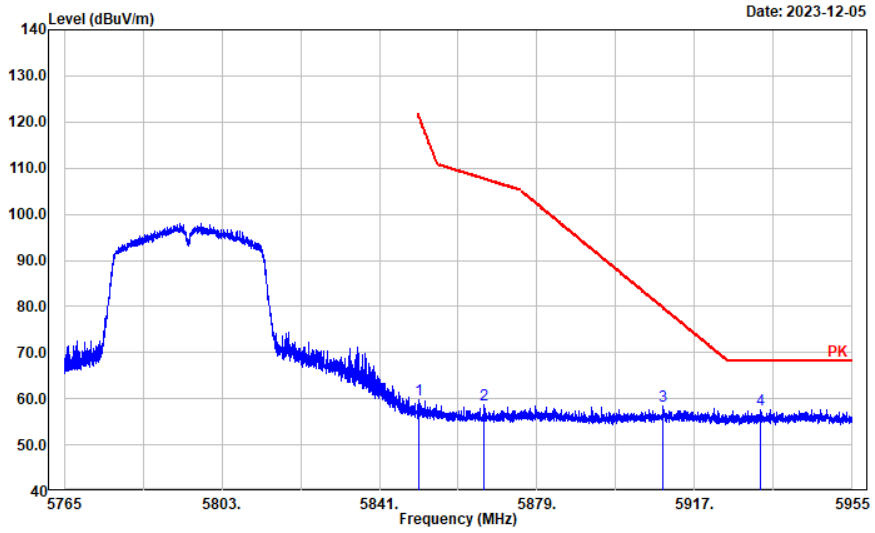
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5648.221	45.23	12.32	57.55	68.20	10.65	Peak
2	5697.995	46.04	12.54	58.58	103.72	45.14	Peak
3	5718.855	50.69	12.57	63.26	110.48	47.22	Peak
4	5723.376	52.96	12.57	65.53	118.50	52.97	Peak

802.11ac vht40			
Test Channel:	**5795MHz**	**Ant. Polar. :**	**Horizontal**

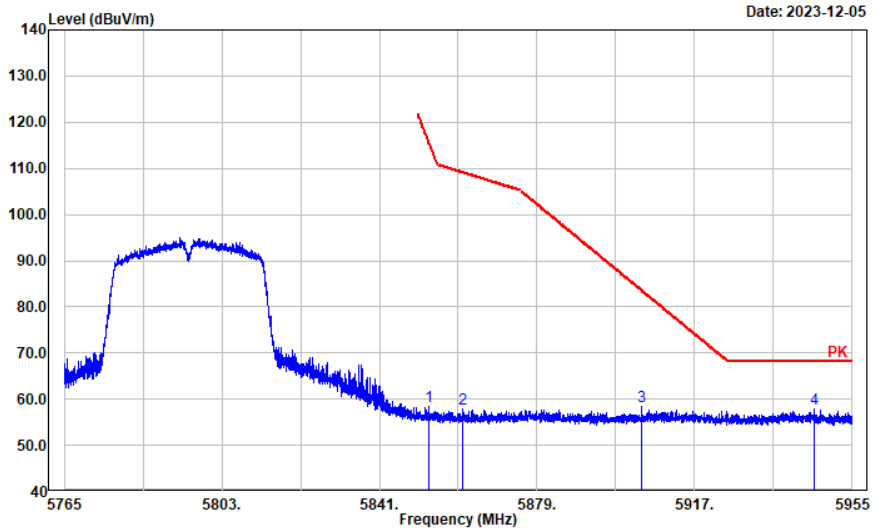
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5850.441	47.10	12.77	59.87	121.19	61.32	Peak
2	5866.252	45.70	12.86	58.56	107.65	49.09	Peak
3	5909.353	45.45	13.01	58.46	79.75	21.29	Peak
4	5932.766	44.68	13.03	57.71	68.20	10.49	Peak

802.11ac vht40			
Test Channel:	**5795MHz**	**Ant. Polar. :**	**Vertical**

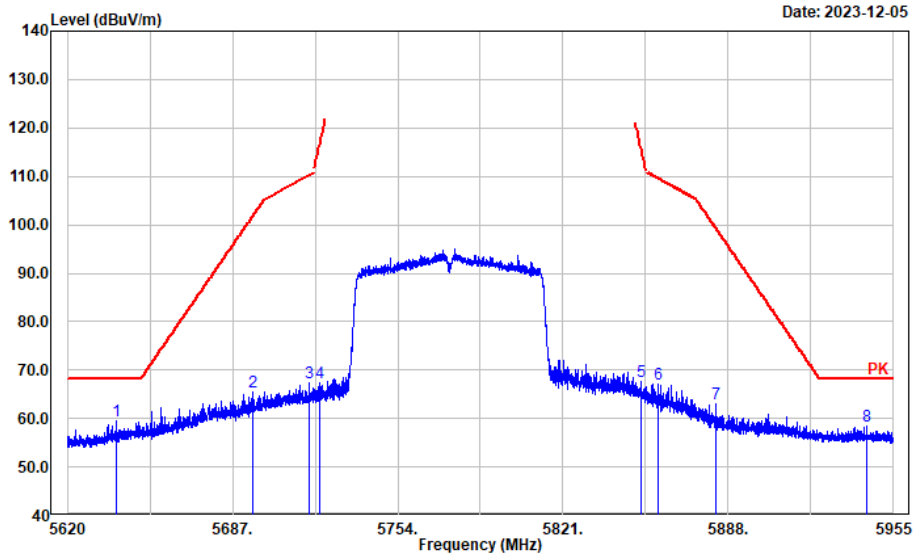
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5852.950	45.58	12.78	58.36	115.47	57.11	Peak
2	5861.045	45.16	12.82	57.98	109.11	51.13	Peak
3	5904.298	45.36	13.02	58.38	83.48	25.10	Peak
4	5945.878	44.94	13.03	57.97	68.20	10.23	Peak

802.11ac vht80			
Test Channel:	**5775MHz**	**Ant. Polar. :**	**Horizontal**

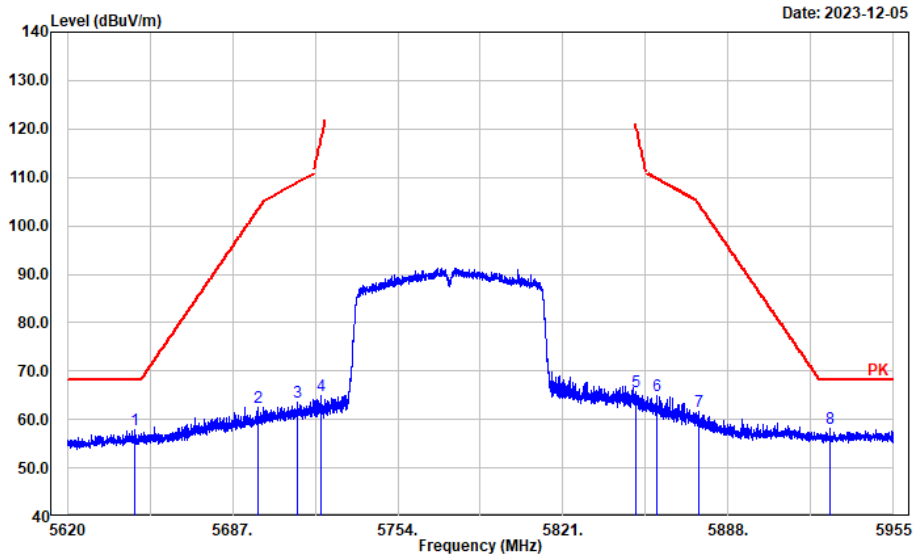
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5639.769	47.28	12.27	59.55	68.20	8.65	Peak
2	5694.988	52.86	12.53	65.39	101.51	36.12	Peak
3	5717.907	54.93	12.57	67.50	110.21	42.71	Peak
4	5722.128	54.84	12.57	67.41	115.65	48.24	Peak
5	5852.604	54.75	12.78	67.53	116.26	48.73	Peak
6	5859.372	54.37	12.81	67.18	109.57	42.39	Peak
7	5883.028	50.11	12.93	63.04	99.24	36.20	Peak
8	5944.345	45.31	13.03	58.34	68.20	9.86	Peak

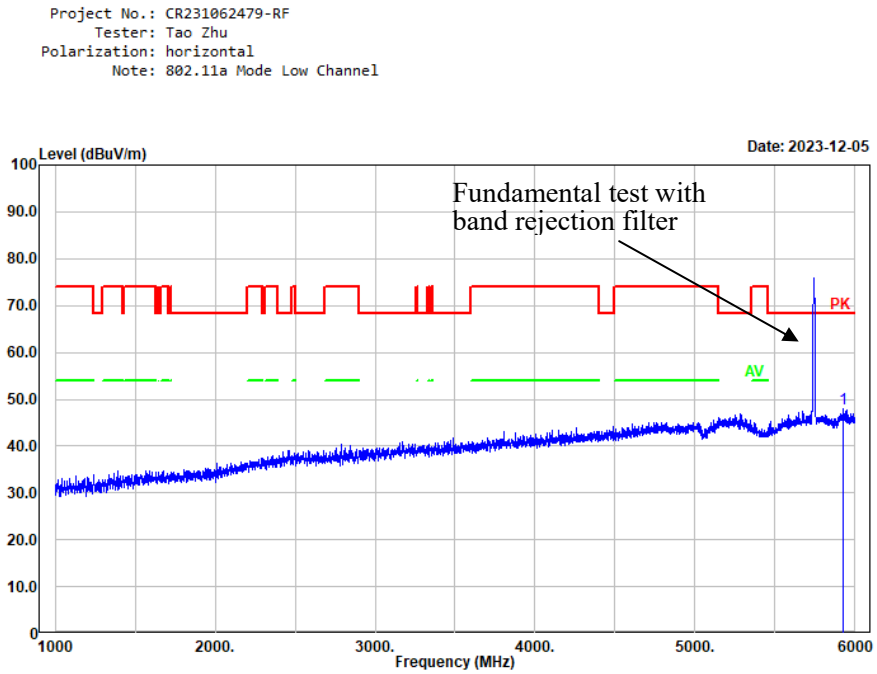
802.11ac vht80			
Test Channel:	**5775MHz**	**Ant. Polar. :**	**Vertical**

Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5647.542	45.66	12.32	57.98	68.20	10.22	Peak
2	5697.132	49.91	12.54	62.45	103.09	40.64	Peak
3	5713.216	50.99	12.56	63.55	108.90	45.35	Peak
4	5722.665	52.37	12.57	64.94	116.88	51.94	Peak
5	5850.392	52.88	12.77	65.65	121.31	55.66	Peak
6	5858.903	52.10	12.81	64.91	109.71	44.80	Peak
7	5876.326	48.80	12.90	61.70	104.21	42.51	Peak
8	5929.133	45.11	13.03	58.14	68.20	10.06	Peak

Listed with the worst harmonic margin test plot (802.11 a, Low channel)

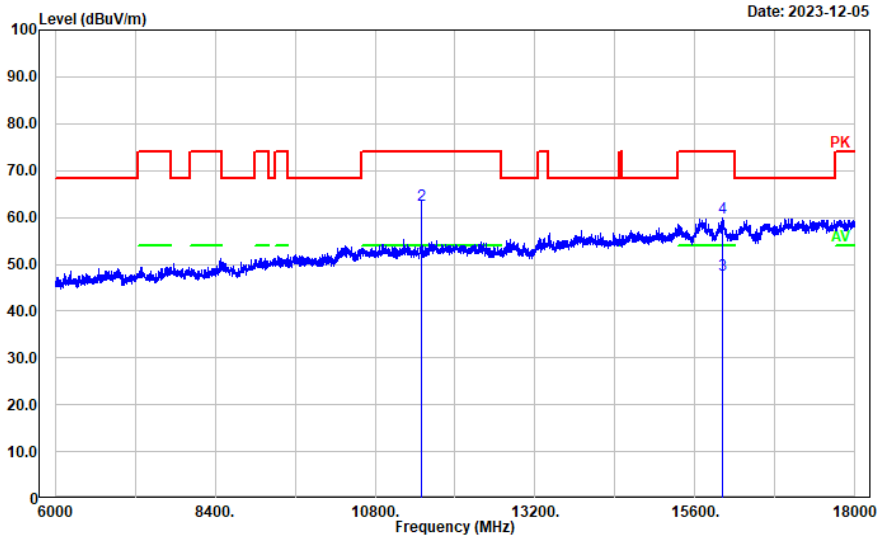
	Horizontal
1-6GHz	

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5928.986	34.83	13.03	47.86	68.20	20.34	Peak

Horizontal

6-18GHz

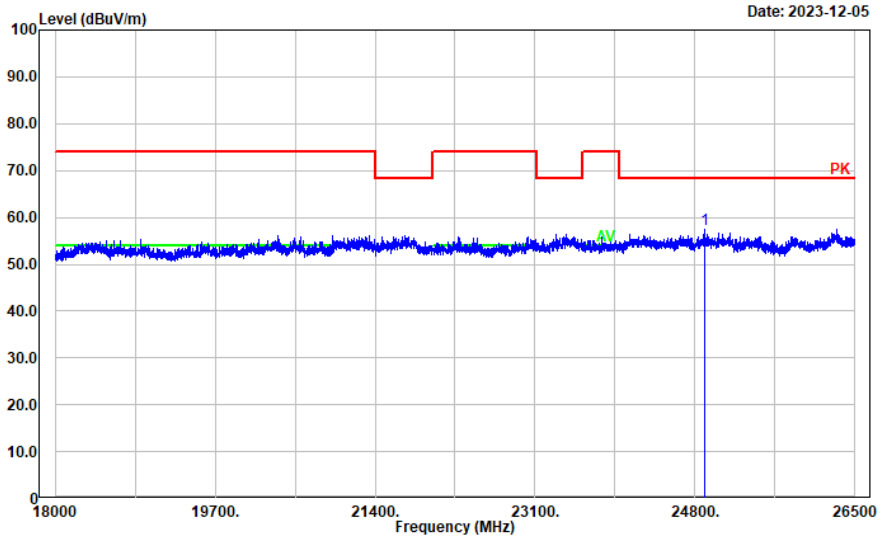
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: horizontal
Note: 802.11a Mode Low Channel



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	11490.000	29.20	21.49	50.69	54.00	3.31	Average
2	11490.000	41.21	21.49	62.70	74.00	11.30	Peak
3	16019.600	22.44	25.23	47.67	54.00	6.33	Average
4	16019.600	34.61	25.23	59.84	74.00	14.16	Peak

Horizontal	
18-26.5GHz	

Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note: 802.11a Mode Low Channel

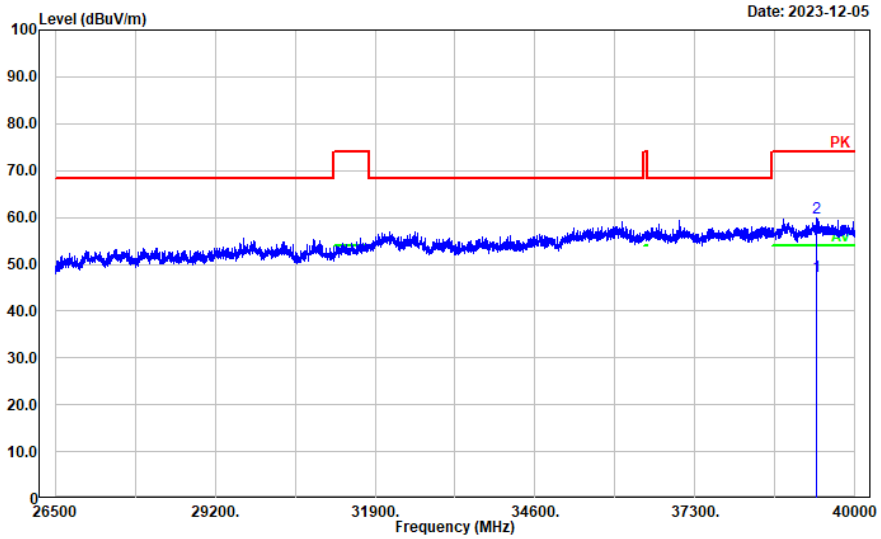


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	24901.680	51.32	6.26	57.58	68.20	10.62	Peak

Horizontal

26.5-40GHz

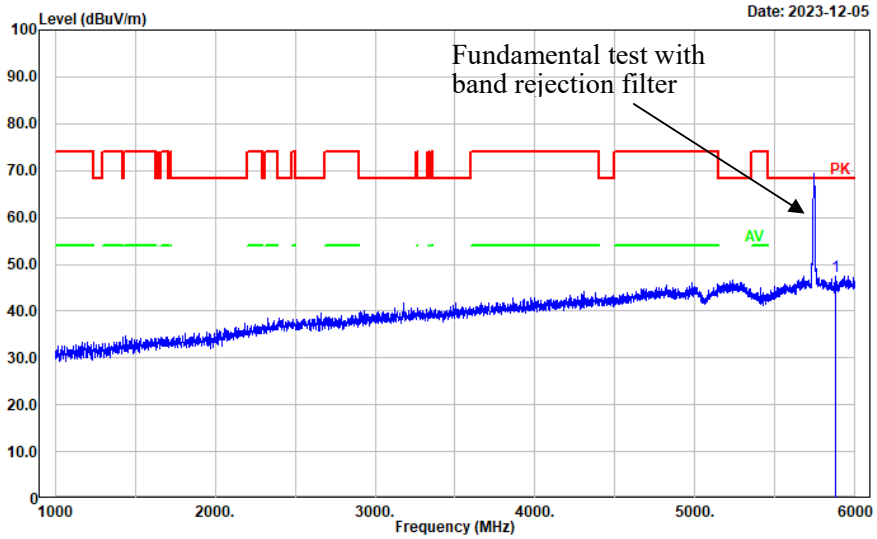
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Horizontal
Note: 802.11a Mode Low Channel



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	39357.270	37.36	10.18	47.54	54.00	6.46	Average
2	39357.270	49.65	10.18	59.83	74.00	14.17	Peak

Vertical	
1-6GHz	

Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: vertical
Note: 802.11a Mode Low Channel

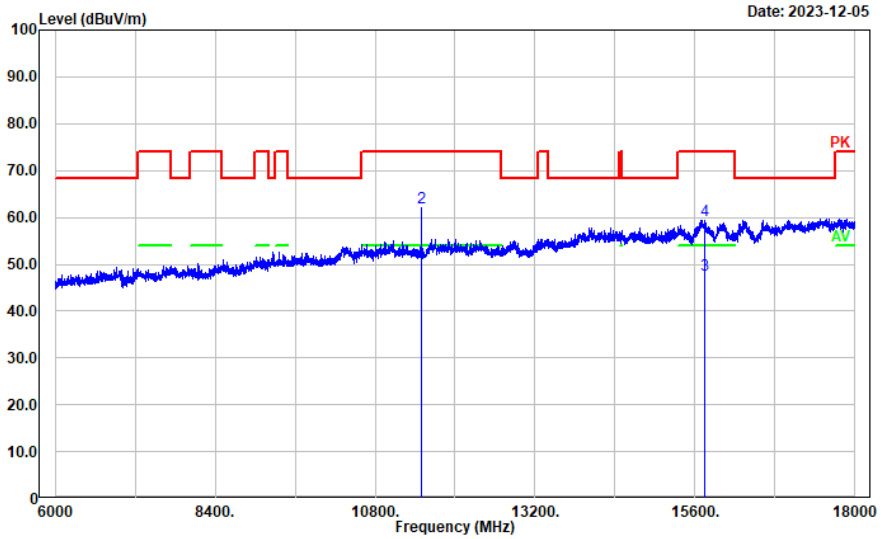


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5877.976	34.48	12.90	47.38	68.20	20.82	Peak

Vertical

6-18GHz

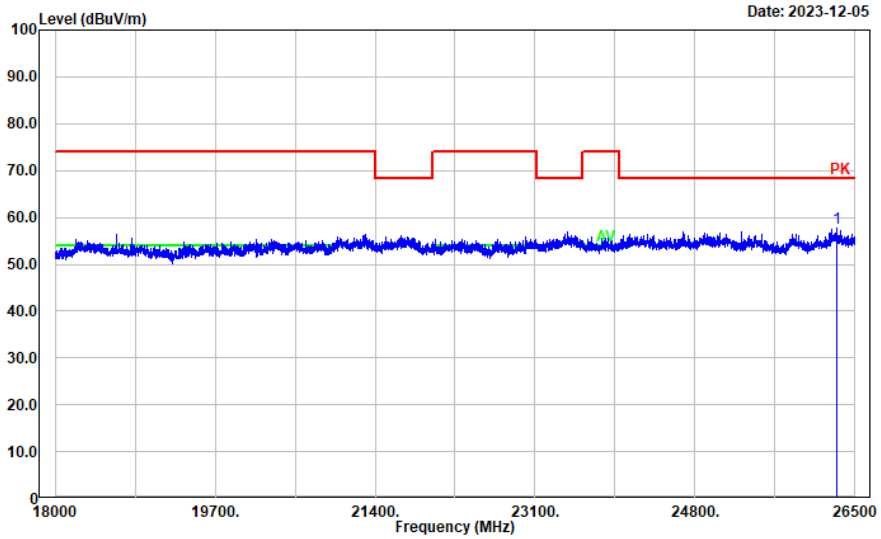
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: vertical
Note: 802.11a Mode Low Channel



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	11490.000	28.74	21.49	50.23	54.00	3.77	Average
2	11490.000	40.47	21.49	61.96	74.00	12.04	Peak
3	15743.550	22.72	24.86	47.58	54.00	6.42	Average
4	15743.550	34.59	24.86	59.45	74.00	14.55	Peak

Vertical	
18-26.5GHz	

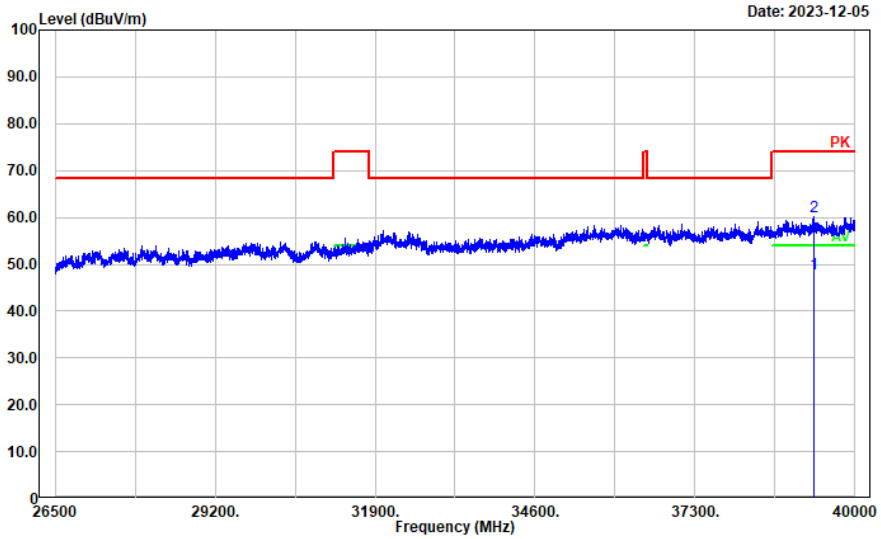
Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: vertical
Note: 802.11a Mode Low Channel



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	26307.860	50.86	6.90	57.76	68.20	10.44	Peak

Vertical	
26.5-40GHz	

Project No.: CR231062479-RF
Tester: Tao Zhu
Polarization: Vertical
Note: 802.11a Mode Low Channel



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	39314.060	37.69	10.18	47.87	54.00	6.13	Average
2	39314.060	50.00	10.18	60.18	74.00	13.82	Peak

4.3 Emission Bandwidth:

Serial Number:	2CPG-1	Test Date:	2023-12-04
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ken Tang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.2

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40-N	102259	2023/4/18	2024/4/17
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060302	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).*

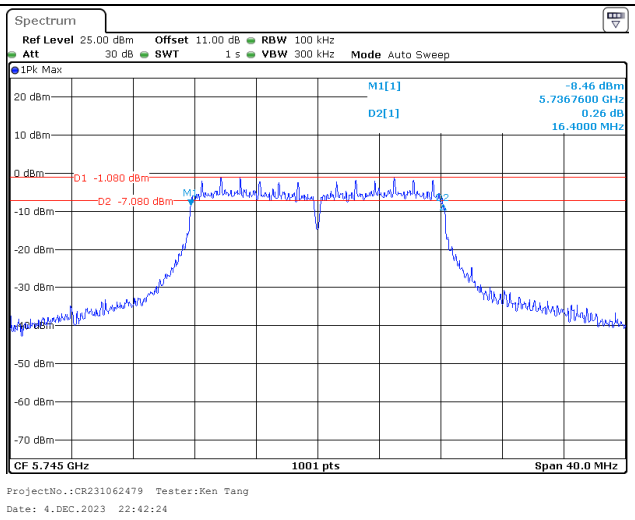
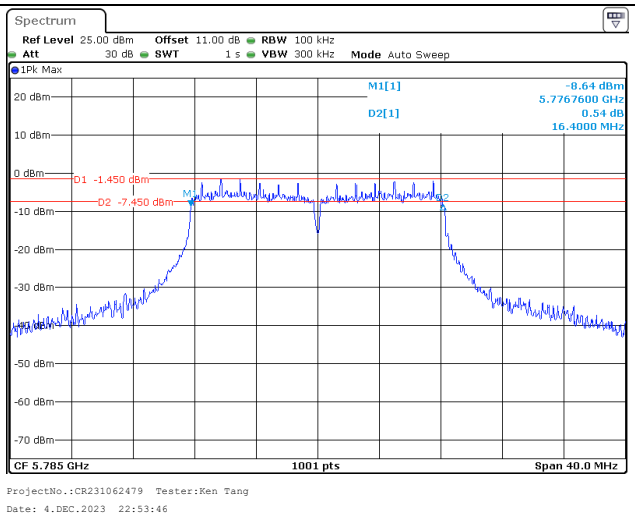
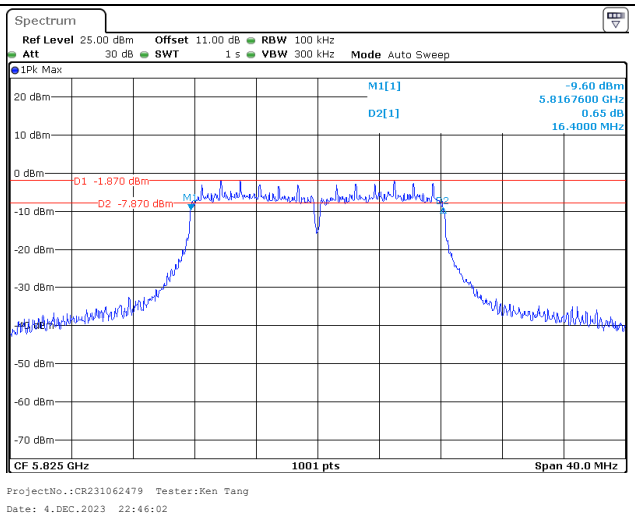
Test Data:

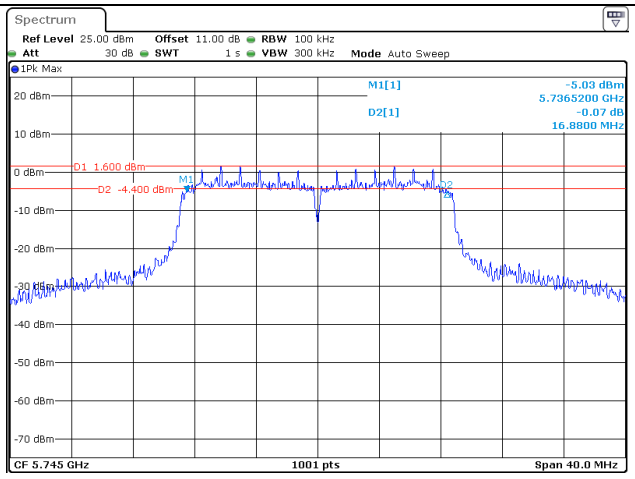
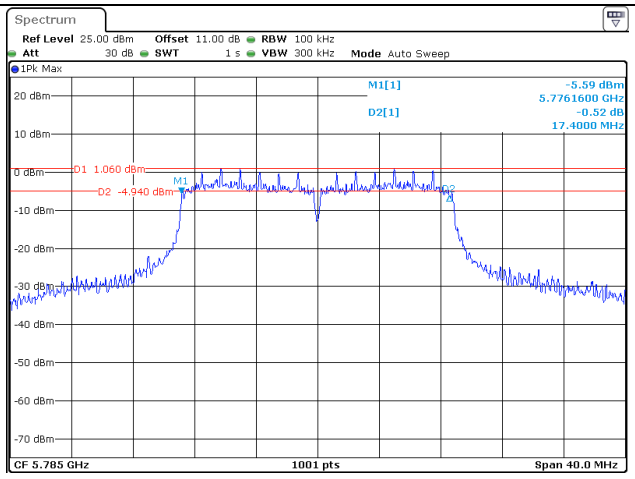
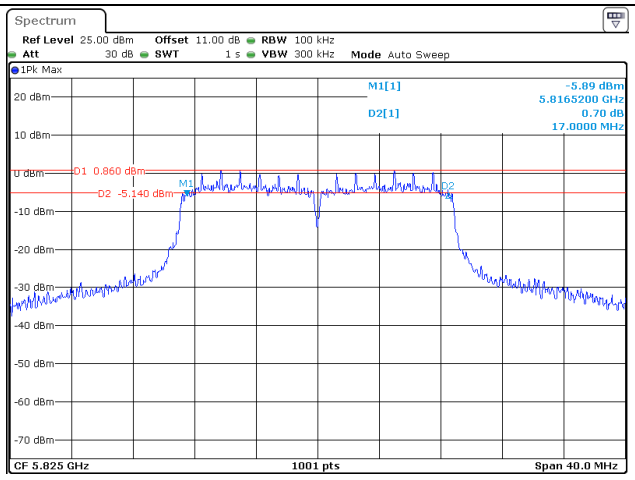
5725-5850 MHz:

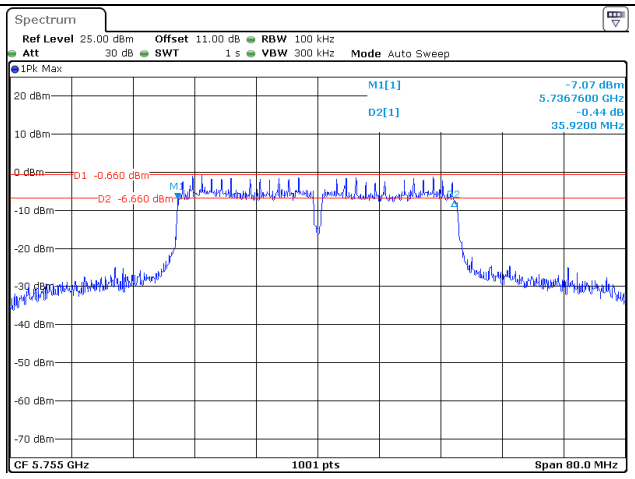
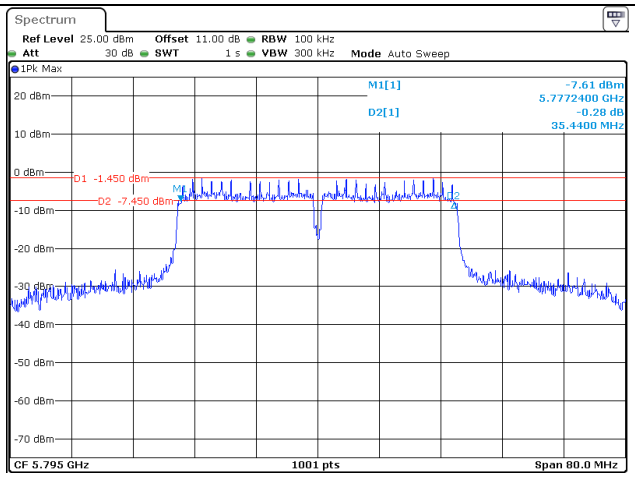
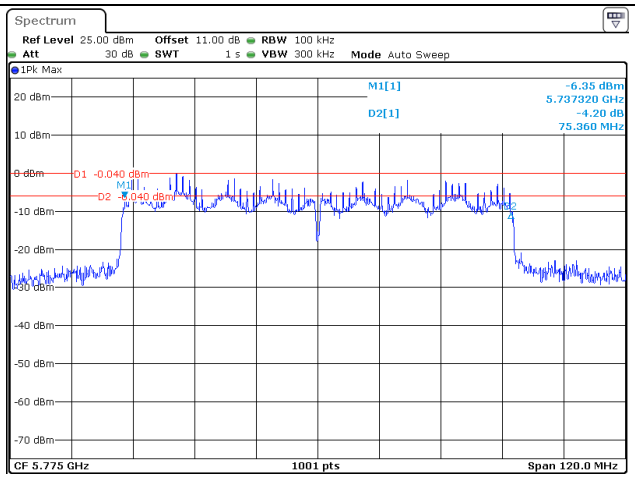
Test Modes	Test Frequency (MHz)	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5745	16.40	16.943
	5785	16.40	17.103
	5825	16.40	16.783
802.11ac vht20	5745	16.88	18.182
	5785	17.40	18.342
	5825	17.00	18.062
802.11ac vht40	5755	35.92	37.483
	5795	35.44	37.163
802.11ac vht80	5775	75.36	80.400

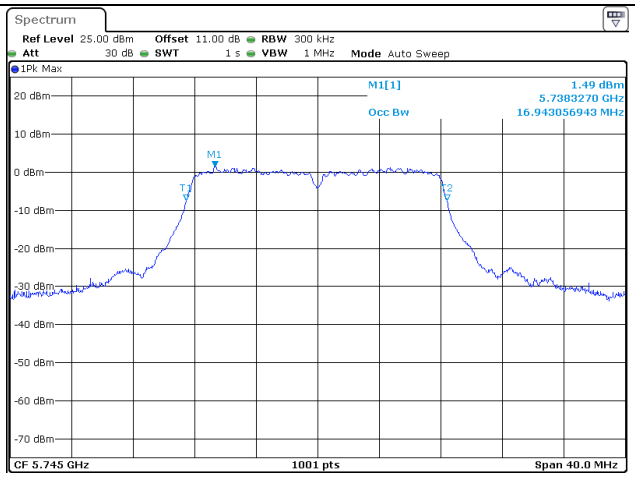
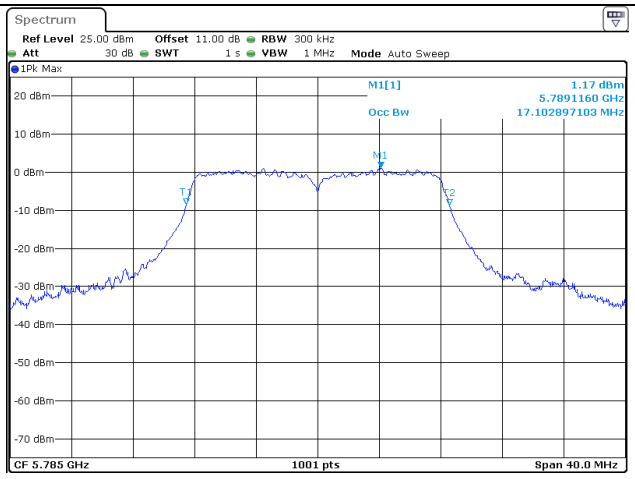
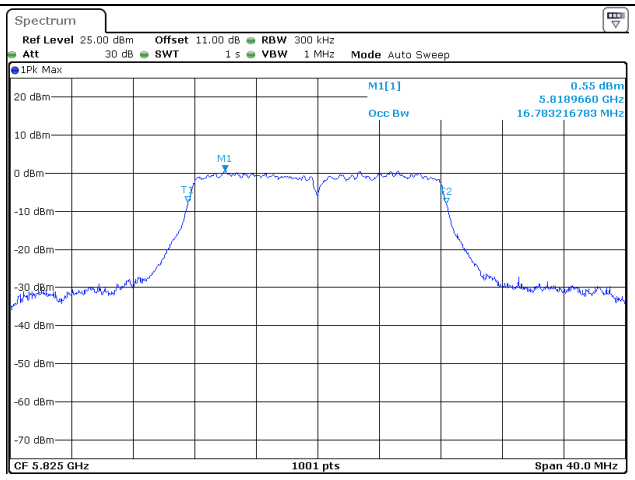
Note:
1. 6dB Emission Bandwidth Limit: ⩾0.5 MHz
2. The 99% Occupied Bandwidth have not fall into the band 5470-5725MHz, please refer to the test plots of 99% Occupied Bandwidth.

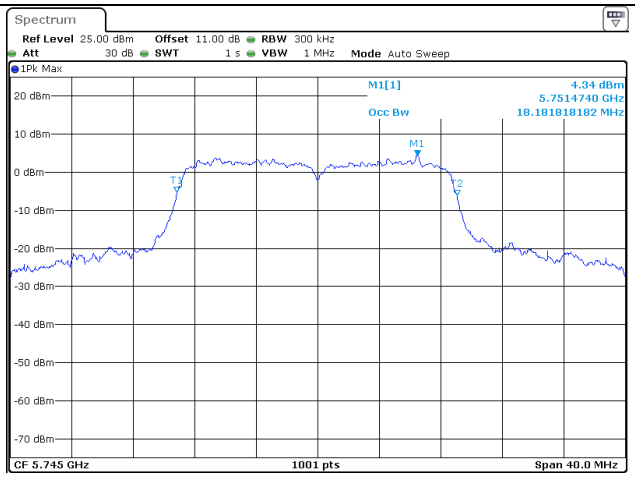
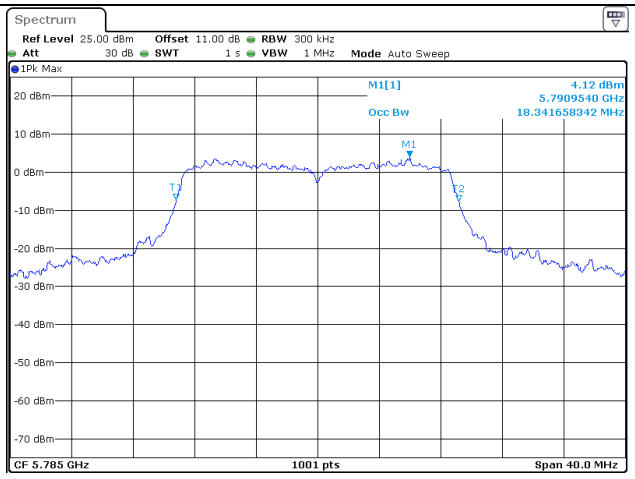
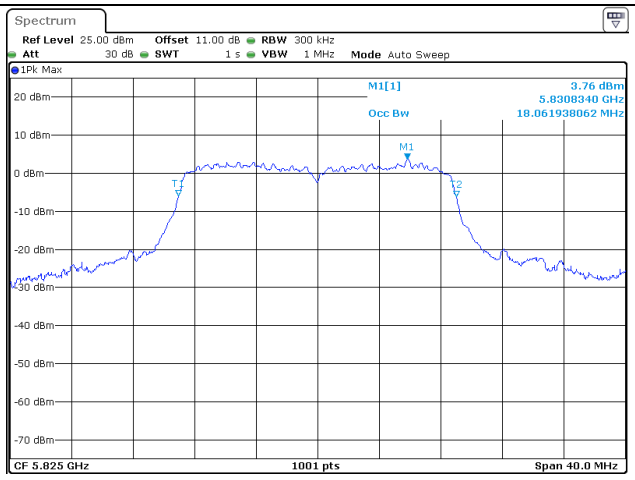
5725-5850MHz:

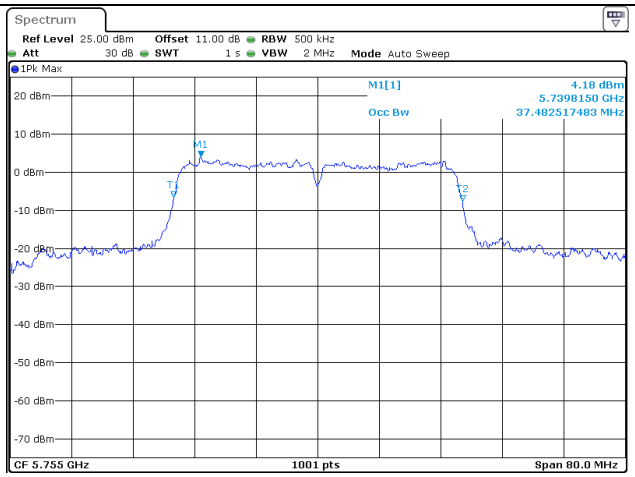
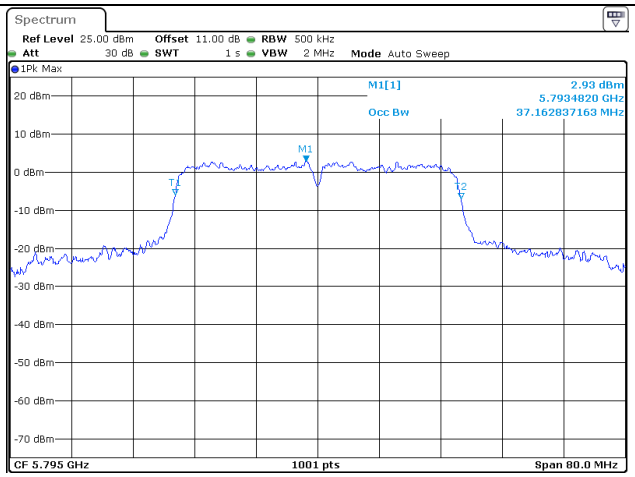
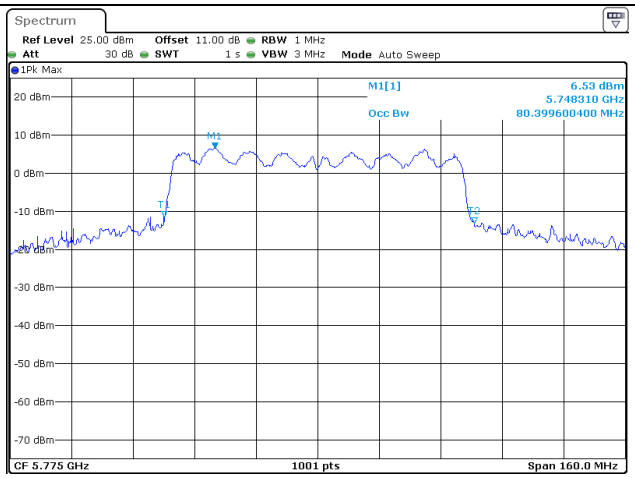
6dB Emission Bandwidth	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

6dB Emission Bandwidth	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

6dB Emission Bandwidth	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

99% Emission Bandwidth	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

99% Emission Bandwidth	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

99% Emission Bandwidth	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht20 Middle Channel	

4.4 Maximum Conducted Output Power:

Serial Number:	2CPG-1	Test Date:	2023-12-04
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ken Tang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.2

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060302	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

** 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:

5725-5850 MHz:

Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power(dBm)	
		Result	Limit
802.11a	5745	9.68	30
	5785	9.38	30
	5825	8.84	30
802.11ac vht20	5745	12.17	30
	5785	11.65	30
	5825	11.48	30
802.11ac vht40	5755	12.65	30
	5795	12.13	30
802.11ac vht80	5775	13.68	30

4.5 Maximum power spectral density:

Serial Number:	2CPG-1	Test Date:	2023-12-04
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ken Tang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.2

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40-N	102259	2023-04-18	2024-04-17
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060302	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).*

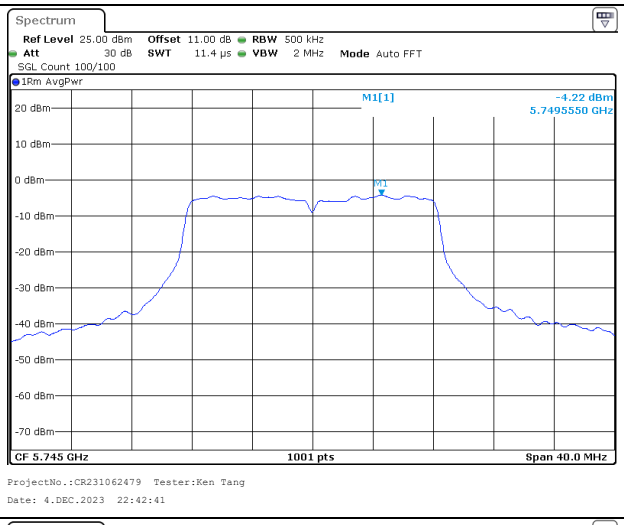
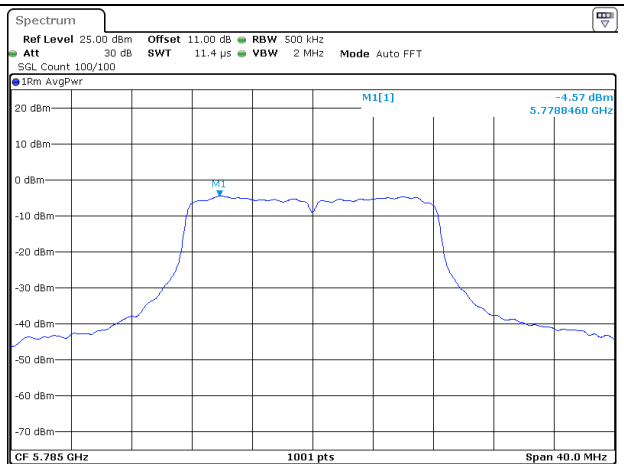
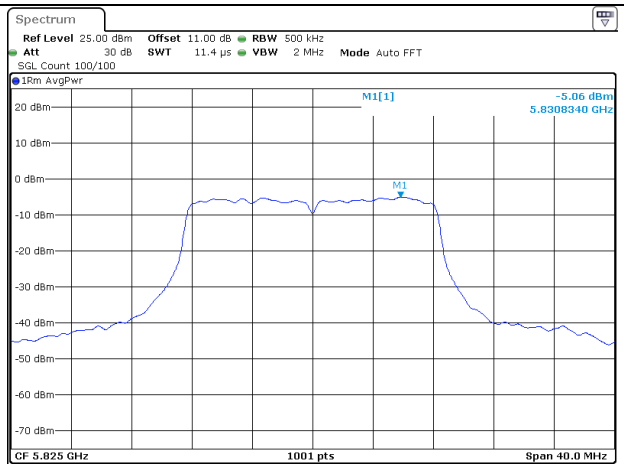
Test Data:

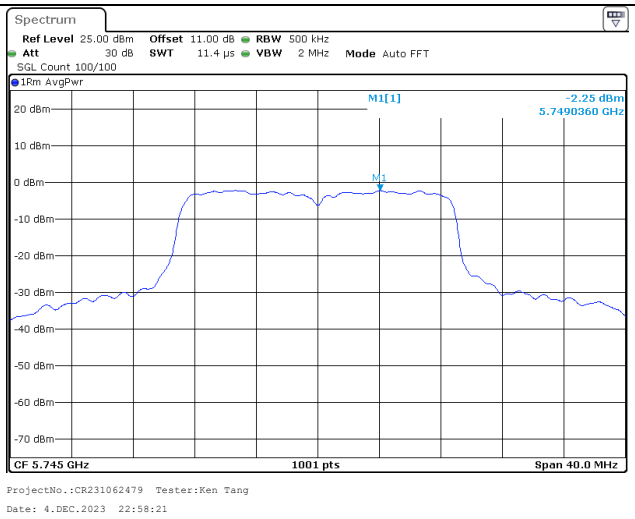
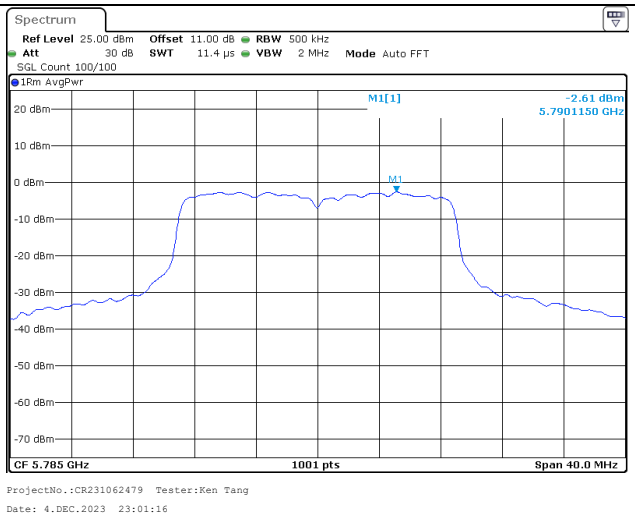
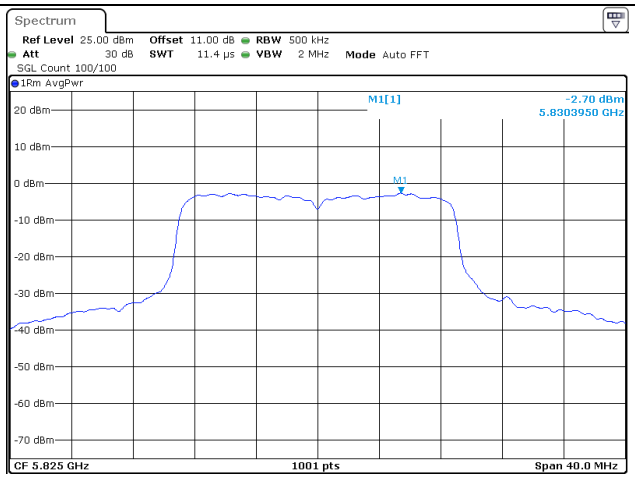
5725-5850 MHz:

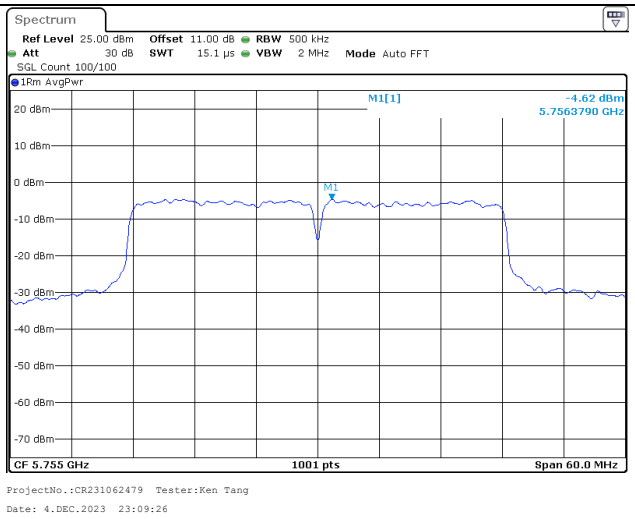
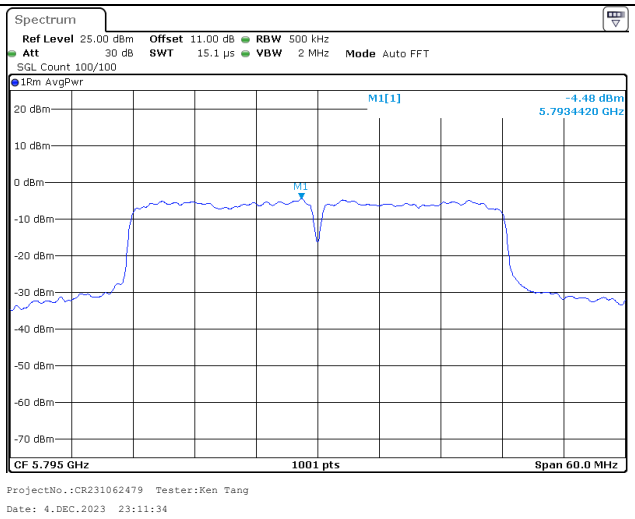
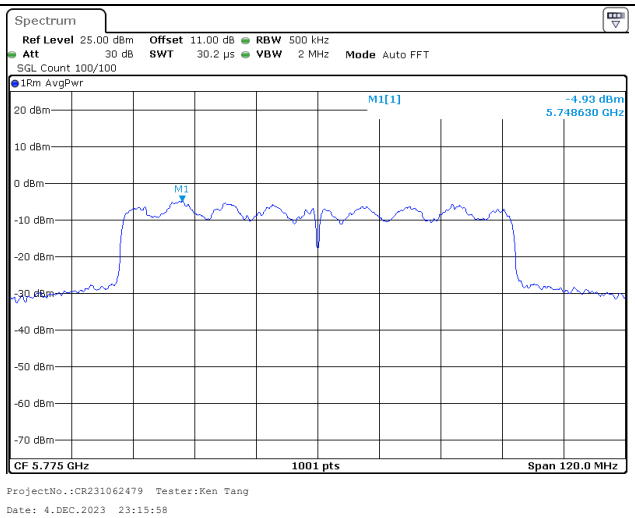
Test Modes	Test Frequency (MHz)	Reading (dBm/500kHz)	Duty Cycle Factor (dB)	Maximum Power Spectral Density (dBm/500kHz)	
				Result	Limit
802.11a	5745	-4.22	0.22	-4.00	30
	5785	-4.57	0.22	-4.35	30
	5825	-5.06	0.22	-4.84	30
802.11ac vht20	5745	-2.25	0.10	-2.15	30
	5785	-2.61	0.10	-2.51	30
	5825	-2.70	0.10	-2.60	30
802.11ac vht40	5755	-4.62	0.41	-4.21	30
	5795	-4.48	0.41	-4.07	30
802.11ac vht80	5775	-4.93	0.76	-4.17	30

Note:
Duty cycle <98%, and duty cycle variations are less than ±2%,method ANSI C63.10-2013 Section 12.3.2.4was used.
For Duty cycle<98%, and Duty cycle be considered to be constant(variations are less than ±2%), the duty cycle factor was added into the result.

5725-5850MHz

Maximum power spectral density	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

Maximum power spectral density	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

Maximum power spectral density	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

4.6 Duty Cycle:

Serial Number:	2CPG-1	Test Date:	2023-12-07
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ken Tang	Test Result:	N/A

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.2

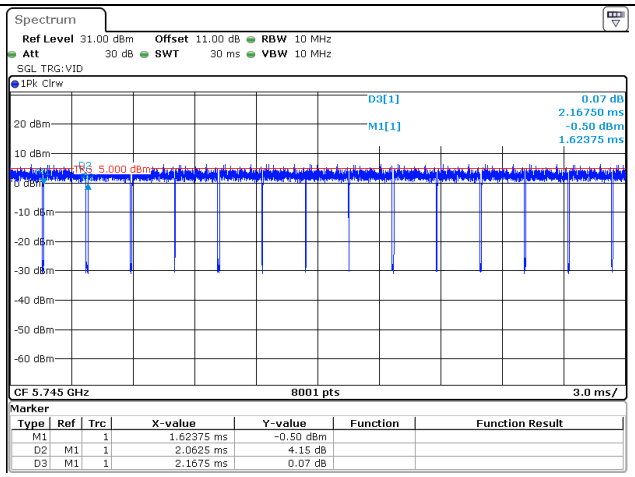
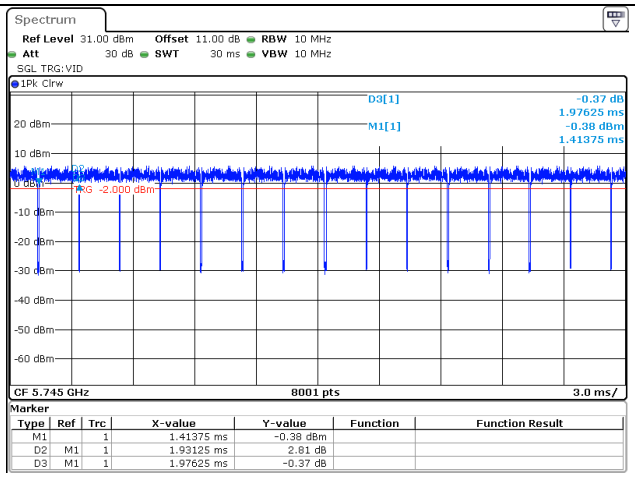
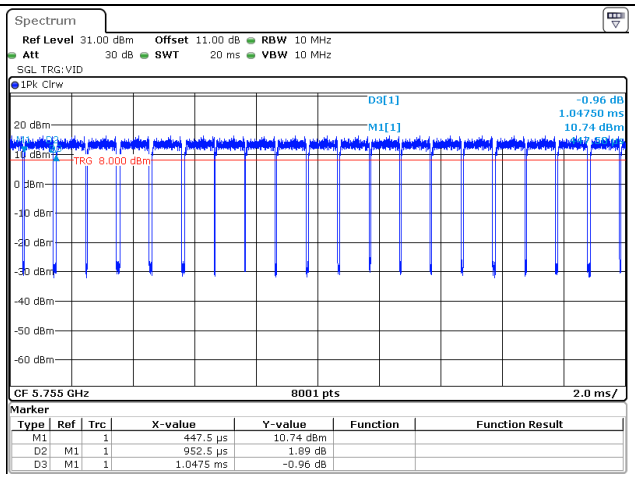
Test Equipment List and Details:

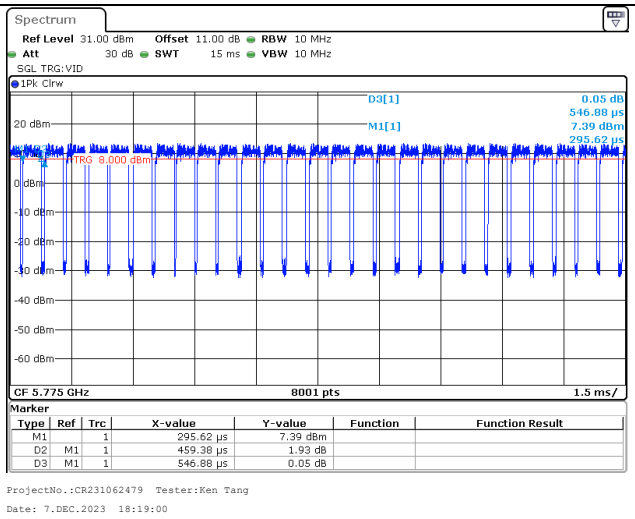
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40-N	102259	2023-04-18	2024-04-17
zhuoxiang	Coaxial Cable	SMA-178	211003	Each time	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060302	Each time	N/A

** 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 (Hz)
802.11a	2.063	2.168	95.16	485	0.22	500
802.11ac vht20	1.931	1.976	97.72	518	0.10	1000
802.11ac vht40	0.953	1.048	90.94	1049	0.41	3000
802.11ac vht80	0.459	0.547	83.91	2179	0.76	3000

Duty Cycle	
802.11a	
802.11ac vht20	
802.11ac vht40	

Duty Cycle	
802.11ac vht80	

5. EUT PHOTOGRAPHS

Please refer to the attachment CR231062479-EXP EUT EXTERNAL PHOTOGRAPHS and CR231062479-INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR231062479-00D-TSP TEST SETUP PHOTOGRAPHS.

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