



中认信通

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



TEST REPORT

Applicant: Evolve 3 Holdings Pty Ltd

Address: PO BOX 6222, NARRAWEENA, NSW, Australia

FCC ID: 2AWLG-EVOXSV1

Product Name: Cloud Gaming console

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: CR230956606-00D

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Test Facility

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

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

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

Declarations

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

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR230956606-00D	Original Report	2023/11/27

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

1.1.1 General:

EUT Name:	Cloud Gaming console
EUT Model:	EVOXSV1
Trade Name:	Evolve III
Operation Frequency:	5180-5240 MHz (802.11a/n ht20/ac vht20) 5190-5230 MHz (802.11n ht40/ac vht40) 5210 MHz (802.11ac vht80) 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):	12.23dBm (5150-5250 MHz) 12.13dBm (5725-5850 MHz)
Modulation Type:	802.11a/n/ac: OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM,
Rated Input Voltage:	DC 19V from AC/DC Adapter
Serial Number:	2BQ8-1
EUT Received Date:	2023/9/25
EUT Received Status:	Good

1.1.2 Operation Frequency Detail:

For 802.11a/n ht20/ac vht20:

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 above frequencies which bold indicated were performed to test.			

For 802.11n ht40/ac vht40:

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 above frequencies which bold indicated were performed to test.			

For 802.11ac vht80:

5150-5250MHz Band		5725-5850MHz Band	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	155	5775
Per section 15.31(m), the above frequencies which bold indicated were performed to test.			

1.1.3 Antenna Information Detail▲:

Antenna	Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Antenna 1 (Support BT+WLAN)	FPC Antenna	50	2.4~2.5GHz	2.28dBi
			5.15~5.85GHz	2.95dBi
Antenna 2 (Support WLAN)	FPC Antenna	50	2.4~2.5GHz	2.83dBi
			5.15~5.85GHz	2.98dBi

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
AC/DC Adapter	Shenzhen Jihongda Power Co., Ltd.	JHD-AP045U-190236-AF	Input: 100-240V~50/60Hz1.5A Output: 19V = 2360mA
HDMI Cable	/	/	shielded without ferrite, 1.2 Meter

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:			DRTU.exe		
The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer ▲ :					
5150-5250 MHz Band:					
Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 1
802.11a	Lowest	5180	6Mbps	13	13
	Middle	5200	6Mbps	13	13
	Highest	5240	6Mbps	13	13
802.11n ht20	Lowest	5180	MCS8	13	13
	Middle	5200	MCS8	13	13
	Highest	5240	MCS8	13	13
802.11n ht40	Lowest	5190	MCS8	13	13
	Highest	5230	MCS8	13	13
802.11ac vht80	Middle	5210	MCS8	13	13
5725-5850 MHz Band:					
Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 1
802.11a	Lowest	5745	6Mbps	13	13
	Middle	5785	6Mbps	13	13
	Highest	5825	6Mbps	13	13
802.11n ht20	Lowest	5745	MCS8	13	13
	Middle	5785	MCS8	13	13
	Highest	5825	MCS8	13	13
802.11n ht40	Lowest	5755	MCS8	13	13
	Highest	5795	MCS8	13	13
802.11ac vht80	Middle	5775	MCS8	13	13
Note: 1. The system support 802.11a/n ht20/n ht40/ac vht20/vht40/vht80, the vht20/vht40 were reduced since the identical parameters with 802.11n ht20 and ht40. 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. 3. The device supports SISO in all modes, and MIMO 2T2R in 802.11n/ac modes, per pretest, 2T2R mode was the worst mode and reported for 802.11n/ac modes.					

1.2.2 Support Equipment List and Details

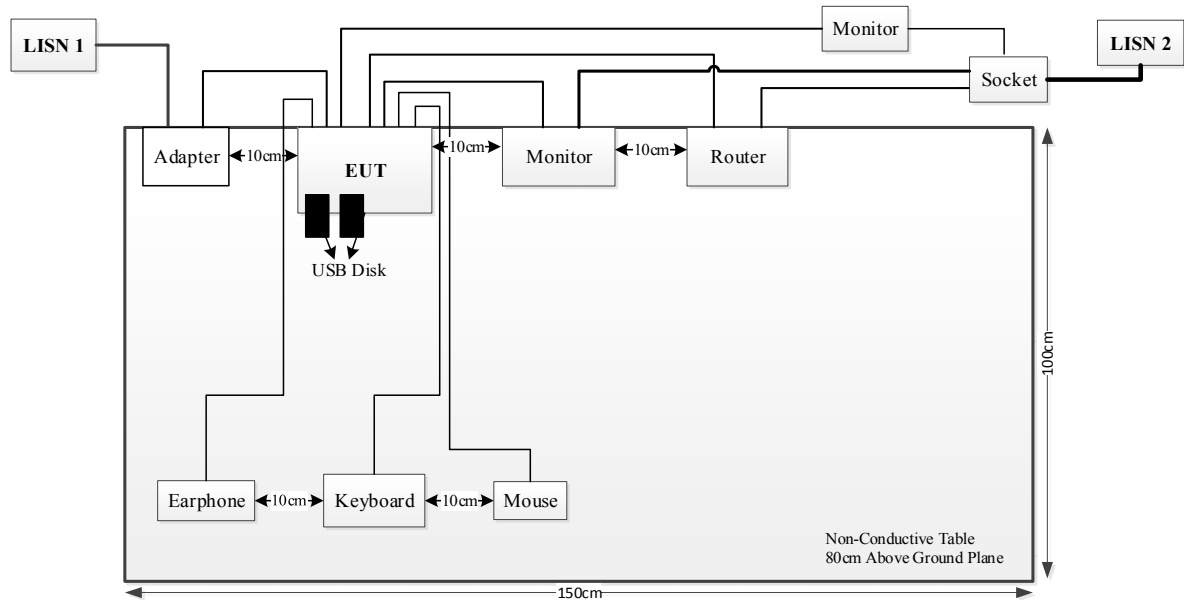
Manufacturer	Description	Model	Serial Number
TOTO LINK	Router	X5000R	X5000RK9T0560
PHILIPS	Mouse	SPK7214	M214BQ210411615
PHILIPS	Keyboard	SPT6234	K234210510742
HP	USB Disk	HPFD206W-32	PAA6918477
HP	USB Disk	HPFD206W-32	PAA6902271
CLC	Earphone	Whiteview5.0	EP21107125
PHILIPS	Monitor1	24PFF5595/T3	XM2A2124000343
AOC	Monitor2	24M2	OHWL5YA000130 H7

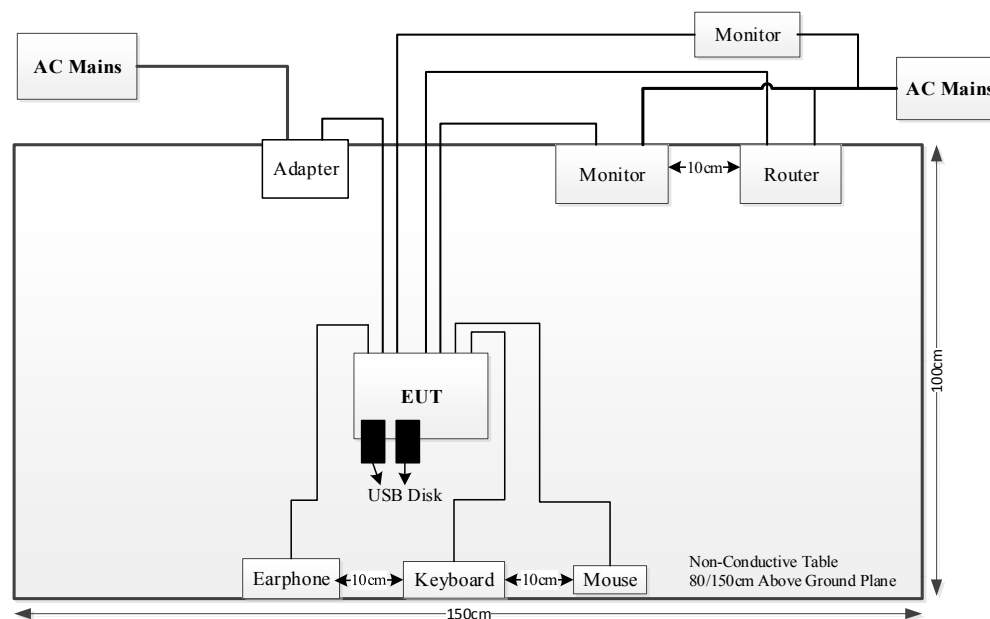
1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
RJ45 Cable	No	No	1.5	EUT	Router
Mouse Cable	No	No	1.2	EUT	Mouse
Keyboard Cable	No	No	1.2	EUT	Keyboard
Earphone Cable	No	No	0.8	EUT	Earphone
HDMI Cable	No	No	3	Monitor	EUT

1.2.4 Block Diagram of Test Setup

AC line conducted emissions:



Radiation 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	30M~200MHz: 4.15 dB, 200M~1GHz: 5.61 dB, 1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB, 18G~26.5G: 5.47 dB, 26.5G~40G: 5.63 dB
Unwanted Emissions, conducted	$\pm 1.26\text{ dB}$
Temperature	$\pm 1^\circ\text{C}$
Humidity	$\pm 5\%$
DC and low frequency voltages	$\pm 0.4\%$
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Test Items	Result
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)	Conducted Transmitter Output Power	Compliant
FCC§15.407 (a)	Power Spectral Density	Compliant
FCC§15.407 (g)	Frequency Stability	Compliant**
FCC§15.203	Antenna Requirement	Compliant
§15.407 (f) & §1.1307 & §2.1091	RF Exposure Evaluation	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:

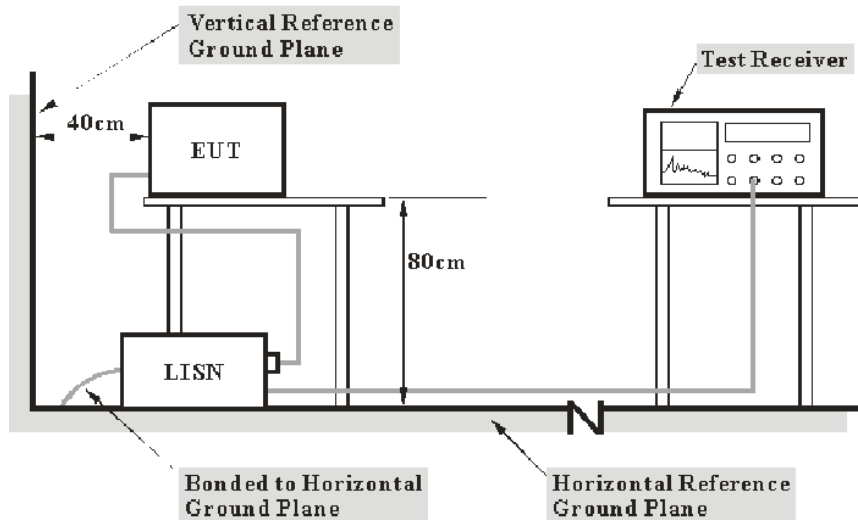
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(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);

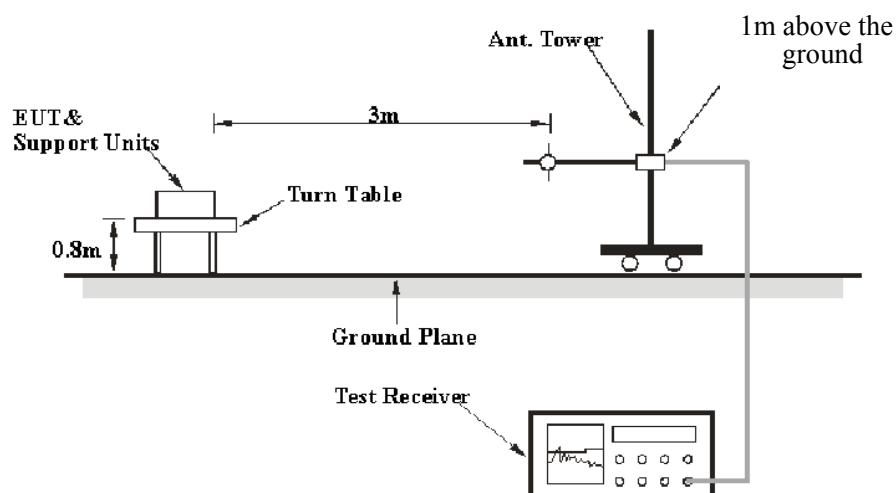
Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (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.

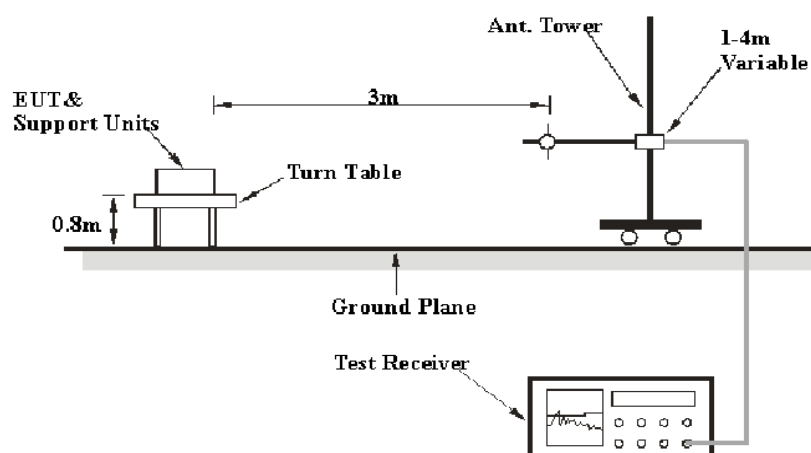
(c) The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies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

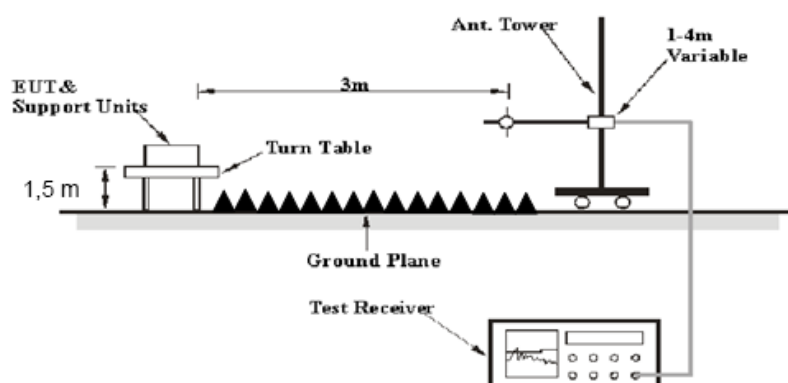
9kHz~30MHz:



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:

Factor = Antenna Factor + Cable Loss- Amplifier Gain

For 30MHz-1GHz:

Result = Reading + Factor

For 1GHz-40GHz

Result = Reading + Factor-Distance extrapolation 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)

(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.

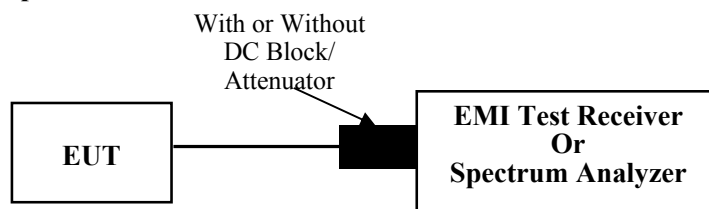
FCC §15.407 (e)

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.

FCC §15.407 (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.

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

- 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) (1)

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

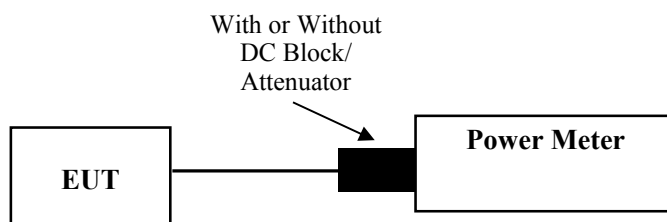
FCC §15.407(a) (2)

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

FCC §15.407(a) (3)(i)

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

3.4.2 EUT Setup



3.4.3 Test Procedure

According to ANSI C63.10-2013 Section 12.3.3.2

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

3.5 Maximum Power Spectral Density:

3.5.1 Applicable Standard

FCC §15.407(a) (1)

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

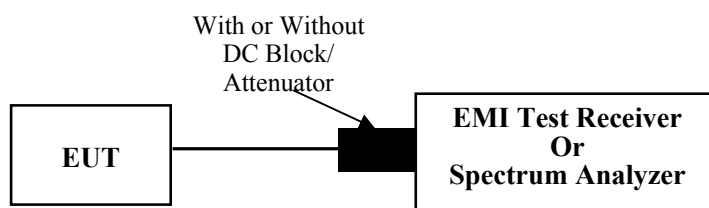
FCC §15.407(a) (2)

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 **Alternative** should be applied.

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

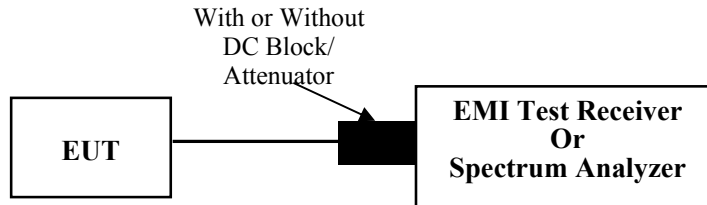
KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-2 **Alternative** should be applied.

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:	2BQ8-1	Test Date:	2023/10/07
Test Site:	CE	Test Mode:	Transmitting (Tested at maximum output power mode 802.11n ht20 5180MHz)
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.4	Relative Humidity: (%)	55	ATM Pressure: (kPa)	100.5
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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

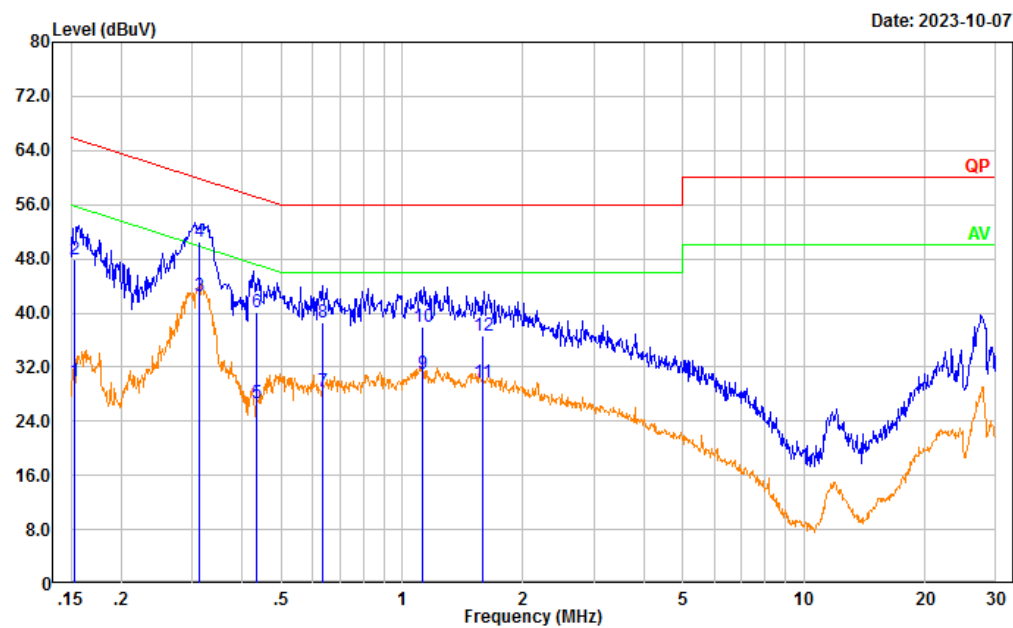
* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Project No.: CR230956606-RF

Tester: David Huang

Port: Line

Note:



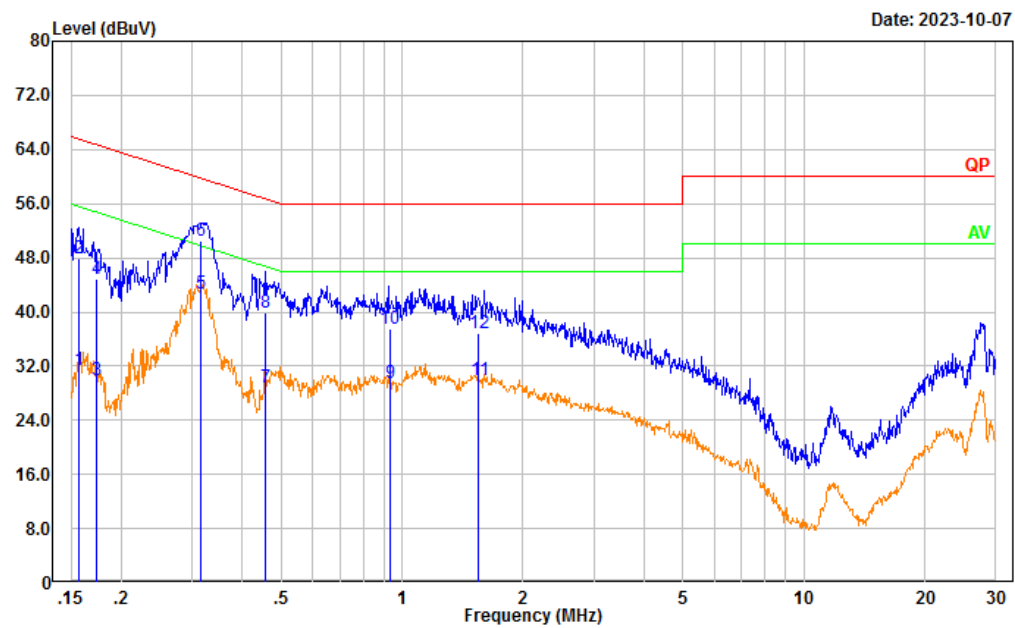
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.153	20.39	9.61	30.00	55.86	25.86	Average
2	0.153	38.36	9.61	47.97	65.86	17.89	QP
3	0.313	32.94	9.61	42.55	49.89	7.34	Average
4	0.313	40.88	9.61	50.49	59.89	9.40	QP
5	0.433	16.99	9.61	26.60	47.20	20.60	Average
6	0.433	30.43	9.61	40.04	57.20	17.16	QP
7	0.633	18.85	9.62	28.47	46.00	17.53	Average
8	0.633	29.05	9.62	38.67	56.00	17.33	QP
9	1.128	21.29	9.62	30.91	46.00	15.09	Average
10	1.128	28.27	9.62	37.89	56.00	18.11	QP
11	1.586	20.12	9.63	29.75	46.00	16.25	Average
12	1.586	27.09	9.63	36.72	56.00	19.28	QP

Project No.: CR230956606-RF

Tester: David Huang

Port: neutral

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.157	21.77	9.61	31.38	55.60	24.22	Average
2	0.157	38.25	9.61	47.86	65.60	17.74	QP
3	0.173	20.33	9.61	29.94	54.81	24.87	Average
4	0.173	35.26	9.61	44.87	64.81	19.94	QP
5	0.316	33.16	9.61	42.77	49.81	7.04	Average
6	0.316	40.90	9.61	50.51	59.81	9.30	QP
7	0.458	19.27	9.61	28.88	46.72	17.84	Average
8	0.458	30.25	9.61	39.86	56.72	16.86	QP
9	0.931	19.88	9.62	29.50	46.00	16.50	Average
10	0.931	27.86	9.62	37.48	56.00	18.52	QP
11	1.553	20.38	9.63	30.01	46.00	15.99	Average
12	1.553	27.31	9.63	36.94	56.00	19.06	QP

4.2 Radiation Spurious Emissions

Serial Number:	2BQ8-1	Test Date:	2023/10/9~2023/11/27
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Jeff Luo, coco Tian	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1~26.3	Relative Humidity: (%)	55~62	ATM Pressure: (kPa)	100.7~101.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiation Spurious Emissions 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
Radiation Spurious Emissions 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	2023/11/8	2024/11/7
Audix	Test Software	E3	201021 (V9)	N/A	N/A
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2023/9/15	2024/9/14
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2023/8/6	2024/8/5
E-Microwave	Band Rejection Filter	5150-5850MHz	OE01902423	2023/8/6	2024/8/5
Mini Circuits	High Pass Filter	VHF-6010+	31119	2023/8/6	2024/8/5
PASTERNAK	Horn Antenna	PE9850/2F-20	072001	2021/2/5	2024/2/4

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

Test Data:

Please refer to the below table and plots.

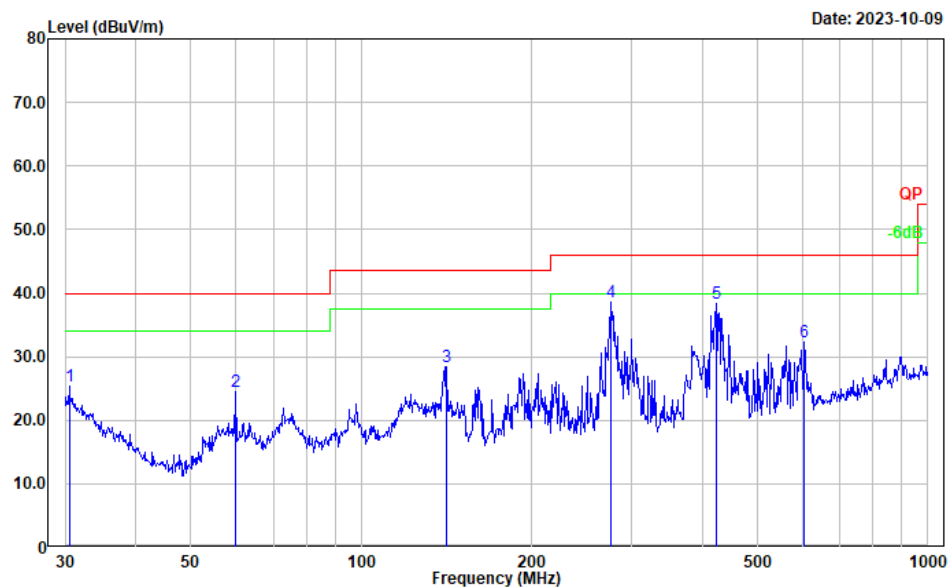
1) Radiation Spurious Emissions Test Data (9kHz~30MHz)

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

2) Radiation Spurious Emissions Test Data (30MHz-1GHz)

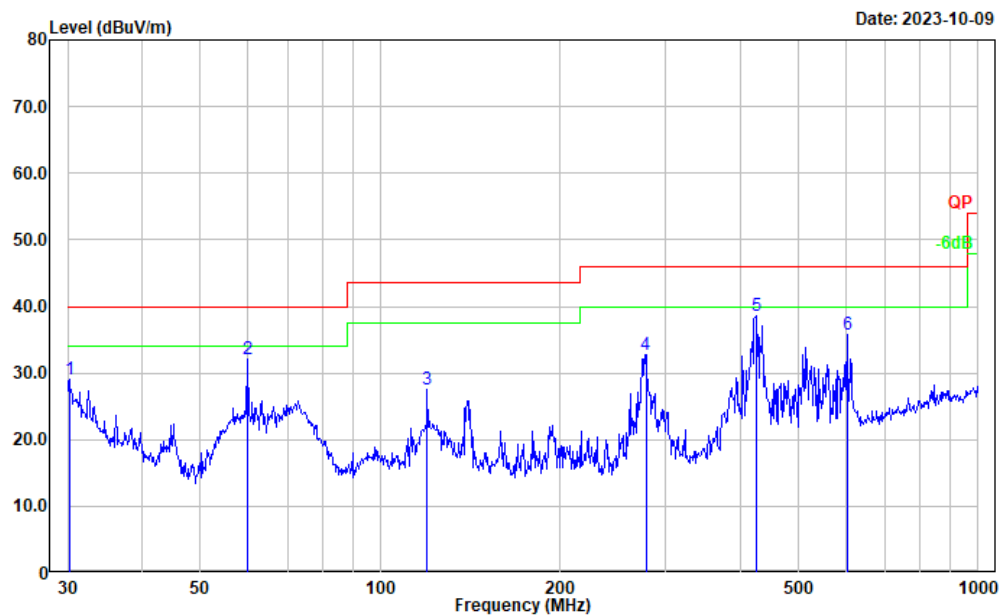
(Tested at maximum output power mode 802.11n ht20 5180MHz)

Project No.: CR230956606-RF
Tester: Jeff
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.531	29.42	-4.00	25.42	40.00	14.58	Peak
2	60.069	41.99	-17.40	24.59	40.00	15.41	Peak
3	141.330	40.39	-11.93	28.46	43.50	15.04	Peak
4	276.124	50.45	-11.84	38.61	46.00	7.39	Peak
5	423.540	46.10	-7.77	38.33	46.00	7.67	Peak
6	605.659	37.20	-4.84	32.36	46.00	13.64	Peak

Project No.: CR230956606-RF
Tester: Jeff
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.211	32.78	-3.76	29.02	40.00	10.98	Peak
2	59.859	49.60	-17.41	32.19	40.00	7.81	Peak
3	119.856	39.07	-11.45	27.62	43.50	15.88	Peak
4	278.067	44.47	-11.75	32.72	46.00	13.28	Peak
5	425.028	46.23	-7.71	38.52	46.00	7.48	Peak
6	603.539	40.68	-4.91	35.77	46.00	10.23	Peak

3) Radiation Spurious Emissions Test Data (1GHz-40GHz)**5150-5250MHz****802.11a Chain 0:**

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
10360.000	32.63	PK	H	20.47	53.10	68.20	15.10
10360.000	32.54	PK	V	20.47	53.01	68.20	15.19
15540.000	34.38	PK	H	24.62	59.00	74.00	15.00
15540.000	21.26	AV	H	24.62	45.88	54.00	8.12
15540.000	35.39	PK	V	24.62	60.01	74.00	13.99
15540.000	21.28	AV	V	24.62	45.90	54.00	8.10
Middle Channel: 5200 MHz							
10400.000	32.26	PK	H	20.54	52.80	68.20	15.40
10400.000	32.31	PK	V	20.54	52.85	68.20	15.35
15600.000	36.21	PK	H	24.71	60.92	74.00	13.08
15600.000	23.15	AV	H	24.71	47.86	54.00	6.14
15600.000	36.29	PK	V	24.71	61.00	74.00	13.00
15600.000	23.51	AV	V	24.71	48.22	54.00	5.78
High Channel: 5240 MHz							
10480.000	32.56	PK	H	20.42	52.98	68.20	15.22
10480.000	32.05	PK	V	20.42	52.47	68.20	15.73
15720.000	36.72	PK	H	24.82	61.54	74.00	12.46
15720.000	23.62	AV	H	24.82	48.44	54.00	5.56
15720.000	35.61	PK	V	24.82	60.43	74.00	13.57
15720.000	22.73	AV	V	24.82	47.55	54.00	6.45

802.11a Chain 1:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
10360.000	32.63	PK	H	20.47	53.10	68.20	15.10
10360.000	32.54	PK	V	20.47	53.01	68.20	15.19
15540.000	34.58	PK	H	24.62	59.20	74.00	14.80
15540.000	21.58	AV	H	24.62	46.20	54.00	7.80
15540.000	34.72	PK	V	24.62	59.34	74.00	14.66
15540.000	21.58	AV	V	24.62	46.20	54.00	7.80
Middle Channel: 5200 MHz							
10400.000	32.61	PK	H	14.52	47.13	68.20	21.07
10400.000	32.59	PK	V	20.54	53.13	68.20	15.07
15600.000	35.26	PK	H	24.71	59.97	74.00	14.03
15600.000	22.97	AV	H	24.71	47.68	54.00	6.32
15600.000	36.12	PK	V	24.71	60.83	74.00	13.17
15600.000	23.02	AV	V	24.71	47.73	54.00	6.27
High Channel: 5240 MHz							
10480.000	32.69	PK	H	20.42	53.11	68.20	15.09
10480.000	32.38	PK	V	20.42	52.80	68.20	15.40
15720.000	37.52	PK	H	24.82	62.34	74.00	11.66
15720.000	24.06	AV	H	24.82	48.88	54.00	5.12
15720.000	37.64	PK	V	24.82	62.46	74.00	11.54
15720.000	24.15	AV	V	24.82	48.97	54.00	5.03

802.11n ht20 MIMO:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
10360.000	33.64	PK	H	20.47	54.11	68.20	14.09
10360.000	33.75	PK	V	20.47	54.22	68.20	13.98
15540.000	36.54	PK	H	24.62	61.16	74.00	12.84
15540.000	23.57	AV	H	24.62	48.19	54.00	5.81
15540.000	36.64	PK	V	24.62	61.26	74.00	12.74
15540.000	23.58	AV	V	24.62	48.20	54.00	5.80
Middle Channel: 5200 MHz							
10400.000	32.67	PK	H	20.54	53.21	68.20	14.99
10400.000	32.69	PK	V	20.54	53.23	68.20	14.97
15600.000	36.54	PK	H	24.71	61.25	74.00	12.75
15600.000	23.57	AV	H	24.71	48.28	54.00	5.72
15600.000	36.69	PK	V	24.71	61.40	74.00	12.60
15600.000	23.51	AV	V	24.71	48.22	54.00	5.78
High Channel: 5240 MHz							
10480.000	33.15	PK	H	20.42	53.57	68.20	14.63
10480.000	32.97	PK	V	20.42	53.39	68.20	14.81
15720.000	36.59	PK	H	24.82	61.41	74.00	12.59
15720.000	23.44	AV	H	24.82	48.26	54.00	5.74
15720.000	37.24	PK	V	24.82	62.06	74.00	11.94
15720.000	24.11	AV	V	24.82	48.93	54.00	5.07

802.11n ht40 MIMO:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190 MHz							
10380.000	33.16	PK	H	20.51	53.67	68.20	14.53
10380.000	33.27	PK	V	20.51	53.78	68.20	14.42
15570.000	35.25	PK	H	24.67	59.92	74.00	14.08
15570.000	22.47	AV	H	24.67	47.14	54.00	6.86
15570.000	35.69	PK	V	24.67	60.36	74.00	13.64
15570.000	22.61	AV	V	24.67	47.28	54.00	6.72
High Channel: 5230 MHz							
10460.000	32.97	PK	H	20.45	53.42	68.20	14.78
10460.000	32.47	PK	V	20.45	52.92	68.20	15.28
15690.000	37.02	PK	H	24.77	61.79	74.00	12.21
15690.000	24.03	AV	H	24.77	48.80	54.00	5.20
15690.000	37.12	PK	V	24.77	61.89	74.00	12.11
15690.000	23.15	AV	V	24.77	47.92	54.00	6.08

802.11ac vht80 MIMO:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5210 MHz							
10420.000	32.68	PK	H	20.51	53.19	68.20	15.01
10420.000	32.75	PK	V	20.51	53.26	68.20	14.94
15630.000	36.62	PK	H	24.73	61.35	74.00	12.65
15630.000	23.52	AV	H	24.73	48.25	54.00	5.75
15630.000	36.61	PK	V	24.73	61.34	74.00	12.66
15630.000	23.73	AV	V	24.73	48.46	54.00	5.54

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

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	32.89	PK	H	21.49	54.38	74.00	19.62
11490.000	19.76	AV	H	21.49	41.25	54.00	12.75
11490.000	32.84	PK	V	21.49	54.33	74.00	19.67
11490.000	19.88	AV	V	21.49	41.37	54.00	12.63
17235.000	32.79	PK	H	28.71	61.50	68.20	6.70
17235.000	32.86	PK	V	28.71	61.57	68.20	6.63
Middle Channel: 5785 MHz							
11570.000	32.84	PK	H	21.71	54.55	74.00	19.45
11570.000	19.71	AV	H	21.71	41.42	54.00	12.58
11570.000	32.76	PK	V	21.71	54.47	74.00	19.53
11570.000	19.89	AV	V	21.71	41.60	54.00	12.40
17355.000	32.58	PK	H	29.35	61.93	68.20	6.27
17355.000	32.67	PK	V	29.35	62.02	68.20	6.18
High Channel: 5825 MHz							
11650.000	32.76	PK	H	22.04	54.80	74.00	19.20
11650.000	19.56	AV	H	22.04	41.60	54.00	12.40
11650.000	32.73	PK	V	22.04	54.77	74.00	19.23
11650.000	19.67	AV	V	22.04	41.71	54.00	12.29
17475.000	32.52	PK	H	29.89	62.41	68.20	5.79
17475.000	32.49	PK	V	29.89	62.38	68.20	5.82

802.11a Chain 1:

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	32.86	PK	H	21.49	54.35	74.00	19.65
11490.000	19.97	AV	H	21.49	41.46	54.00	12.54
11490.000	32.68	PK	V	21.49	54.17	74.00	19.83
11490.000	19.82	AV	V	21.49	41.31	54.00	12.69
17235.000	32.67	PK	H	28.71	61.38	68.20	6.82
17235.000	32.89	PK	V	28.71	61.60	68.20	6.60
Middle Channel: 5785 MHz							
11570.000	32.94	PK	H	21.71	54.65	74.00	19.35
11570.000	19.76	AV	H	21.71	41.47	54.00	12.53
11570.000	32.85	PK	V	21.71	54.56	74.00	19.44
11570.000	19.60	AV	V	21.71	41.31	54.00	12.69
17355.000	32.88	PK	H	29.35	62.23	68.20	5.97
17355.000	32.91	PK	V	29.35	62.26	68.20	5.94
High Channel: 5825 MHz							
11650.000	32.79	PK	H	22.04	54.83	74.00	19.17
11650.000	19.86	AV	H	22.04	41.90	54.00	12.10
11650.000	32.76	PK	V	22.04	54.80	74.00	19.20
11650.000	19.54	AV	V	22.04	41.58	54.00	12.42
17475.000	32.37	PK	H	29.89	62.26	68.20	5.94
17475.000	32.86	PK	V	29.89	62.75	68.20	5.45

802.11n ht20 MIMO:

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	32.87	PK	H	21.49	54.36	74.00	19.64
11490.000	19.54	AV	H	21.49	41.03	54.00	12.97
11490.000	32.56	PK	V	21.49	54.05	74.00	19.95
11490.000	19.64	AV	V	21.49	41.13	54.00	12.87
17235.000	32.69	PK	H	28.71	61.40	68.20	6.80
17235.000	32.73	PK	V	28.71	61.44	68.20	6.76
Middle Channel: 5785 MHz							
11570.000	32.84	PK	H	21.71	54.55	74.00	19.45
11570.000	19.67	AV	H	21.71	41.38	54.00	12.62
11570.000	32.93	PK	V	21.71	54.64	74.00	19.36
11570.000	19.87	AV	V	21.71	41.58	54.00	12.42
17355.000	32.38	PK	H	29.35	61.73	68.20	6.47
17355.000	32.74	PK	V	29.35	62.09	68.20	6.11
High Channel: 5825 MHz							
11650.000	32.70	PK	H	22.04	54.74	74.00	19.26
11650.000	19.54	AV	H	22.04	41.58	54.00	12.42
11650.000	32.98	PK	V	22.04	55.02	74.00	18.98
11650.000	19.75	AV	V	22.04	41.79	54.00	12.21
17475.000	32.97	PK	H	29.89	62.86	68.20	5.34
17475.000	33.09	PK	V	29.89	62.98	68.20	5.22

802.11n ht40 MIMO:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5755 MHz							
11510.000	32.89	PK	H	21.48	54.37	74.00	19.63
11510.000	20.03	AV	H	21.48	41.51	54.00	12.49
11510.000	33.01	PK	V	21.48	54.49	74.00	19.51
11510.000	22.07	AV	V	21.48	43.55	54.00	10.45
17265.000	33.10	PK	H	28.79	61.89	68.20	6.31
17265.000	33.21	PK	V	28.79	62.00	68.20	6.20
High Channel: 5795 MHz							
11590.000	32.37	PK	H	21.78	54.15	74.00	19.85
11590.000	20.17	AV	H	21.78	41.95	54.00	12.05
11590.000	33.38	PK	V	21.78	55.16	74.00	18.84
11590.000	20.15	AV	V	21.78	41.93	54.00	12.07
17385.000	33.32	PK	H	29.59	62.91	68.20	5.29
17385.000	33.47	PK	V	29.59	63.06	68.20	5.14

802.11ac vht80 MIMO:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5775 MHz							
11550.000	33.13	PK	H	21.63	54.76	74.00	19.24
11550.000	20.12	AV	H	21.63	41.75	54.00	12.25
11550.000	33.36	PK	V	21.63	54.99	74.00	19.01
11550.000	20.23	AV	V	21.63	41.86	54.00	12.14
17325.000	32.97	PK	H	29.11	62.08	68.20	6.12
17325.000	33.12	PK	V	29.11	62.23	68.20	5.97

Note:

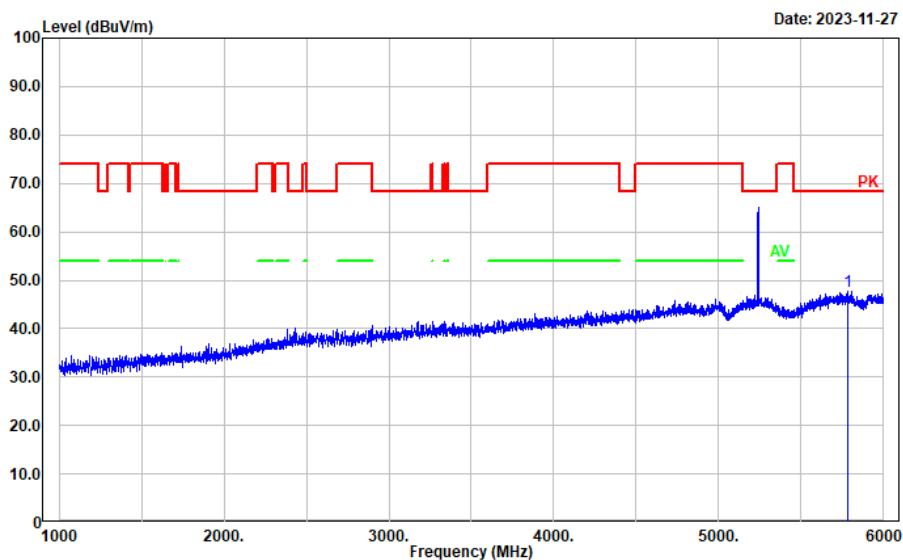
Result = Reading + Factor- Distance extrapolation Factor

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

4) Listed with the worst radiation spurious emissions margin test plots
(802.11n ht20 Mode 5240MHz was the worst)

1-6GHz Horizontal

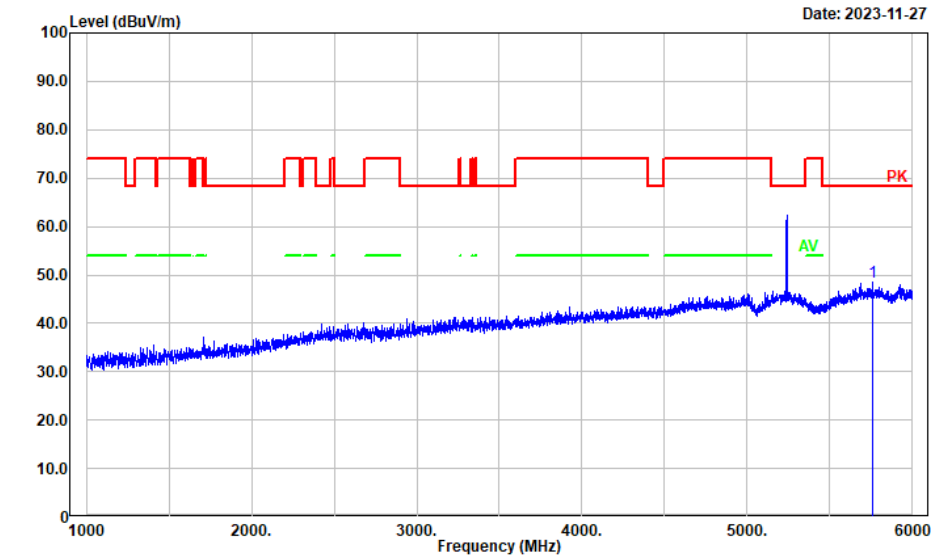
Project No.: CR230956606-RF
Tester: coco Tian
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5781.957	35.13	12.64	47.77	68.20	20.43	Peak

1-6GHz Vertical

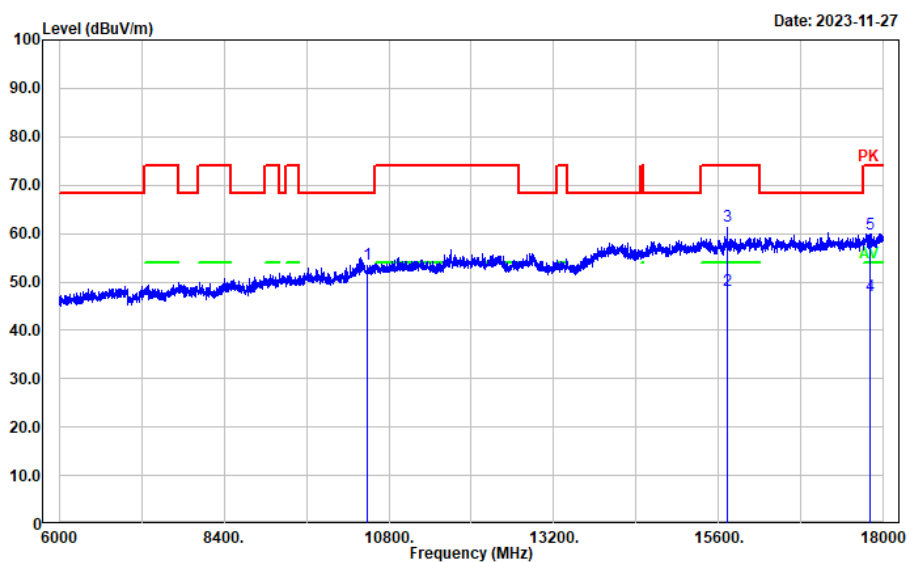
Project No.: CR230956606-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5755.951	35.88	12.61	48.49	68.20	19.71	Peak

6-18GHz Horizontal

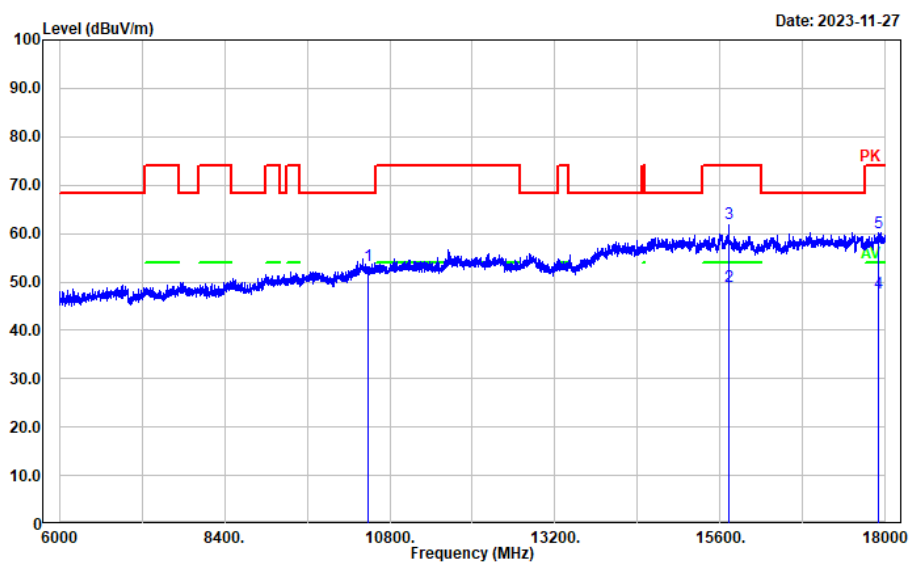
Project No.: CR230956606-RF
Tester: coco Tian
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10480.000	33.15	20.42	53.57	68.20	14.63	Peak
2	15720.000	23.44	24.82	48.26	54.00	5.74	Average
3	15720.000	36.59	24.82	61.41	74.00	12.59	Peak
4	17800.760	15.50	31.62	47.12	54.00	6.88	Average
5	17800.760	28.27	31.62	59.89	74.00	14.11	Peak

6-18GHz Vertical

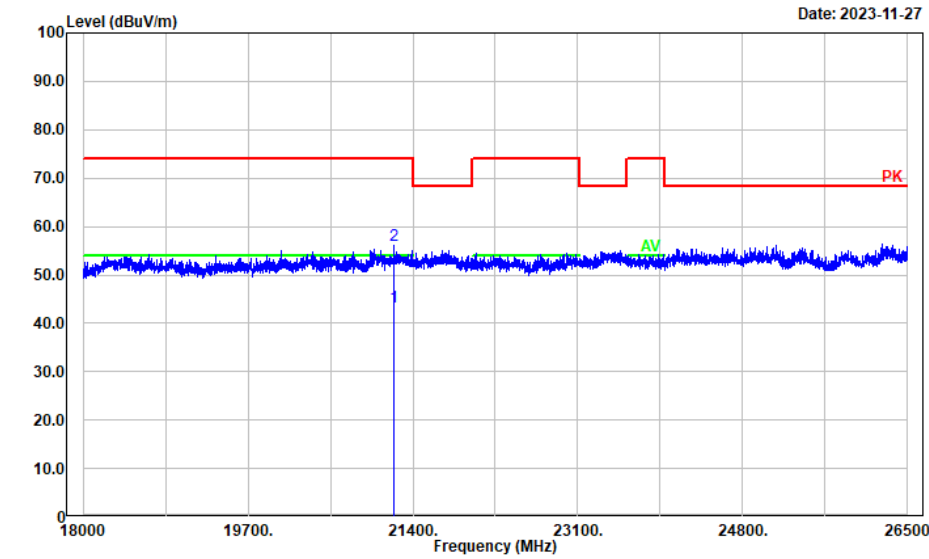
Project No.: CR230956606-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10480.000	32.97	20.42	53.39	68.20	14.81	Peak
2	15720.000	24.11	24.82	48.93	54.00	5.07	Average
3	15720.000	37.24	24.82	62.06	74.00	11.94	Peak
4	17896.780	15.47	32.18	47.65	54.00	6.35	Average
5	17896.780	27.97	32.18	60.15	74.00	13.85	Peak

18-26.5GHz Horizontal

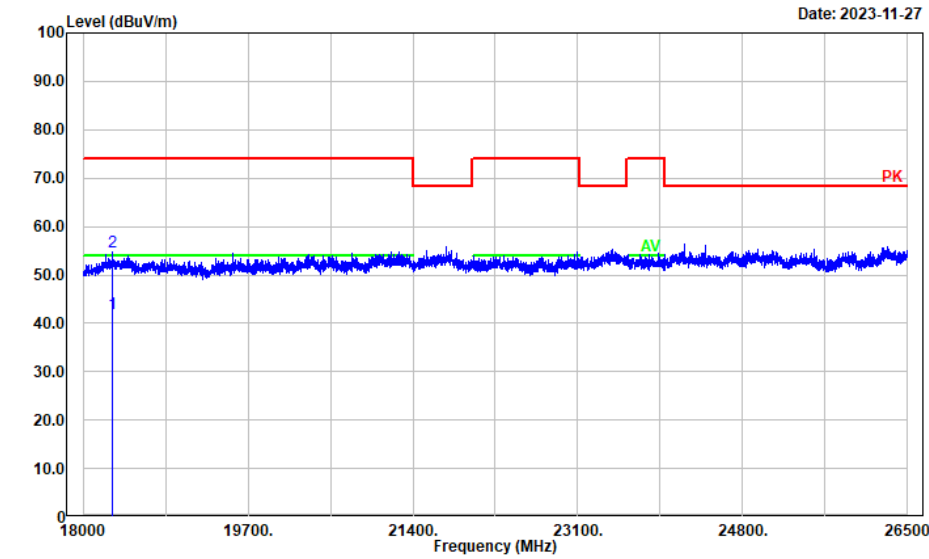
Project No.: CR230956606-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	21200.040	38.54	4.81	43.35	54.00	10.65	Average
2	21200.040	51.24	4.81	56.05	74.00	17.95	Peak

18-26.5GHz Vertical

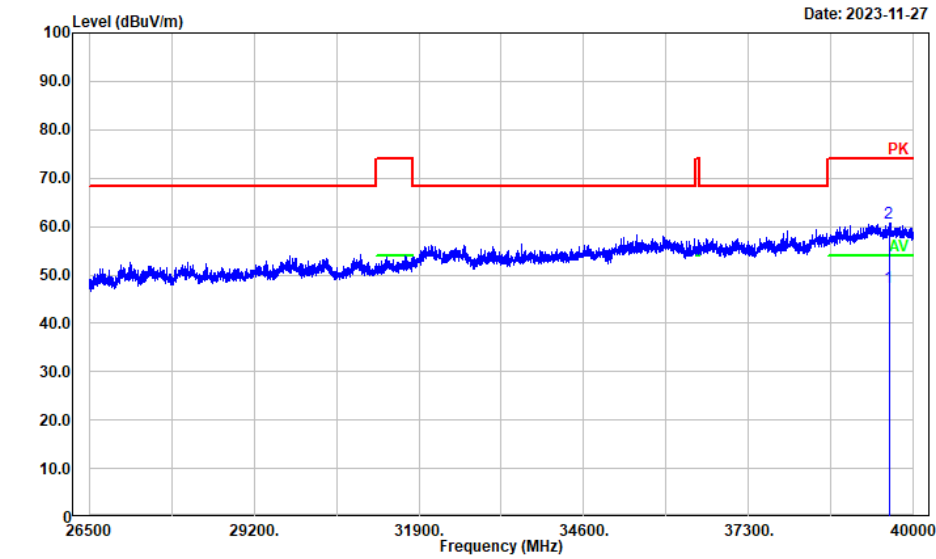
Project No.: CR230956606-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	18307.760	37.41	4.46	41.87	54.00	12.13	Average
2	18307.760	50.35	4.46	54.81	74.00	19.19	Peak

26.5-40GHz Horizontal

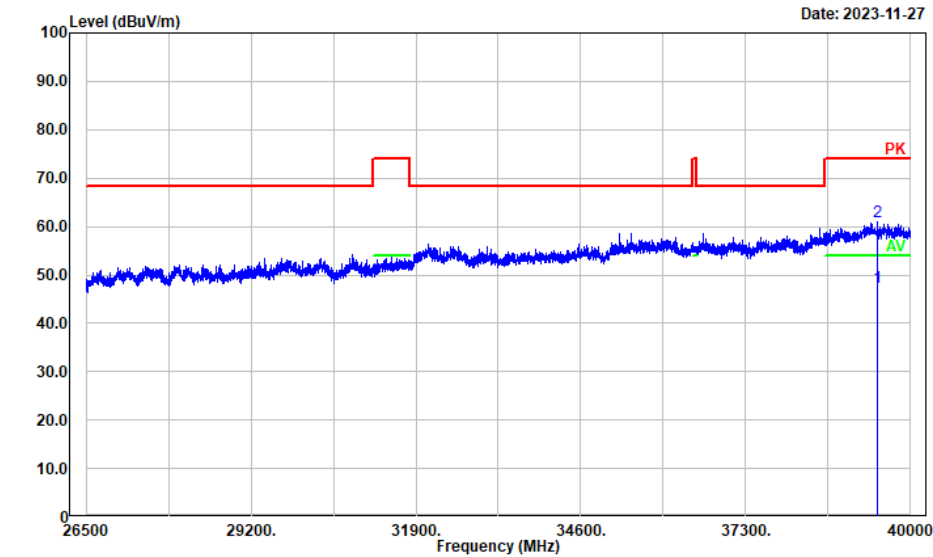
Project No.: CR230956606-RF
Tester: coco Tian
Polarization: Horizontal
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	39594.920	37.58	9.77	47.35	54.00	6.65	Average
2	39594.920	50.85	9.77	60.62	74.00	13.38	Peak

26.5-40GHz Vertical

Project No.: CR230956606-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	39457.190	37.35	10.18	47.53	54.00	6.47	Average
2	39457.190	50.75	10.18	60.93	74.00	13.07	Peak

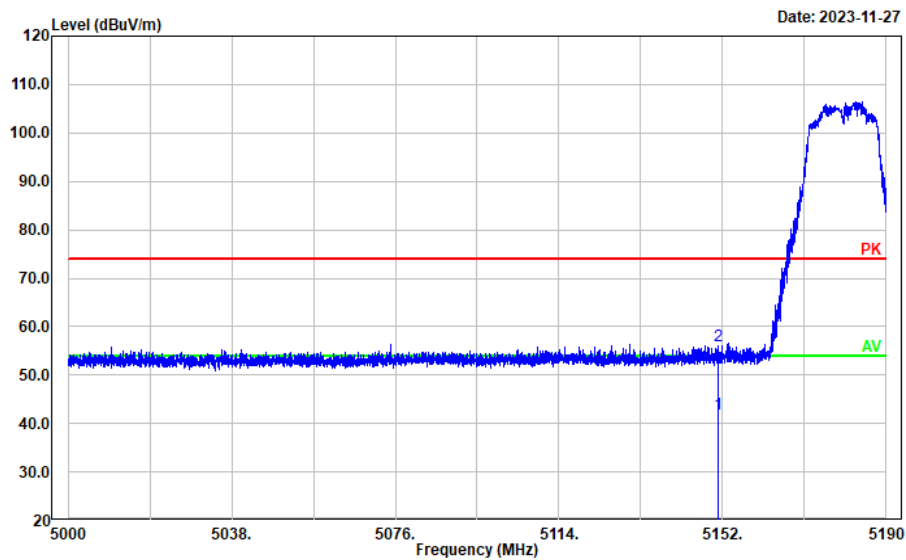
5) Band Edge Measurements (Radiated)
5150~5250MHz**802.11a Chain 0****Test Channel:****5180MHz****Ant. Polar. :****Horizontal**

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5150.928	30.37	11.67	42.04	54.00	11.96	Average
2	5150.928	44.49	11.67	56.16	74.00	17.84	Peak

802.11a Chain 0

Test Channel:

5180MHz

Ant. Polar. :

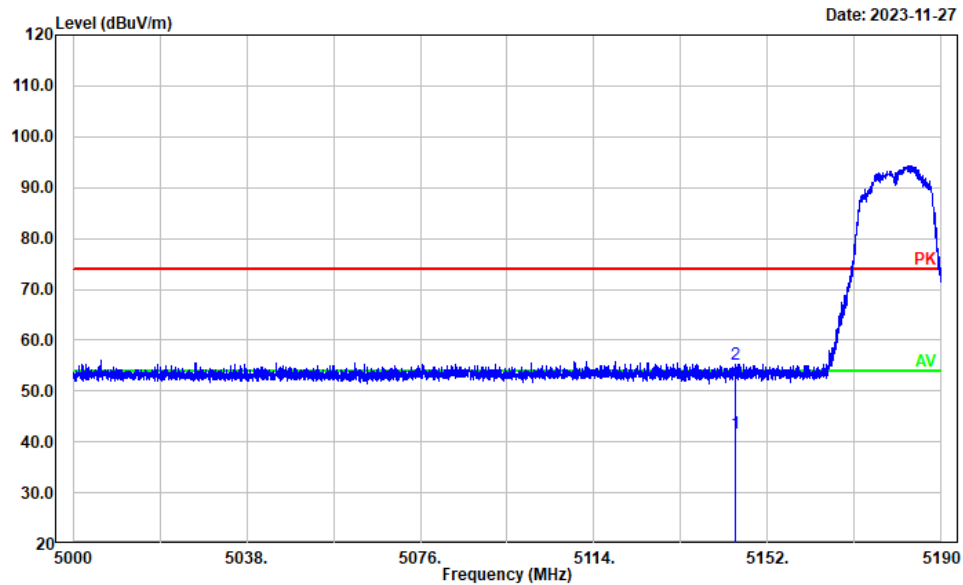
Vertical

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5145.037	29.88	11.67	41.55	54.00	12.45	Average
2	5145.037	43.69	11.67	55.36	74.00	18.64	Peak

802.11a Chain 0

Test Channel:

5240MHz

Ant. Polar. :

Horizontal

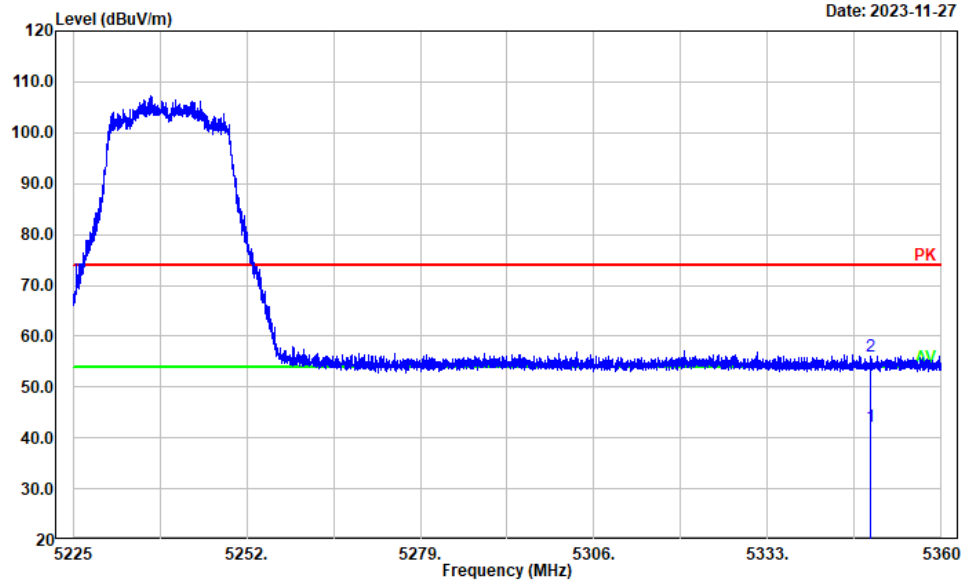
Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5348.955	30.36	11.94	42.30	54.00	11.70	Average
2	5348.955	44.12	11.94	56.06	74.00	17.94	Peak

802.11a Chain 0

Test Channel:

5240MHz

Ant. Polar. :

Vertical

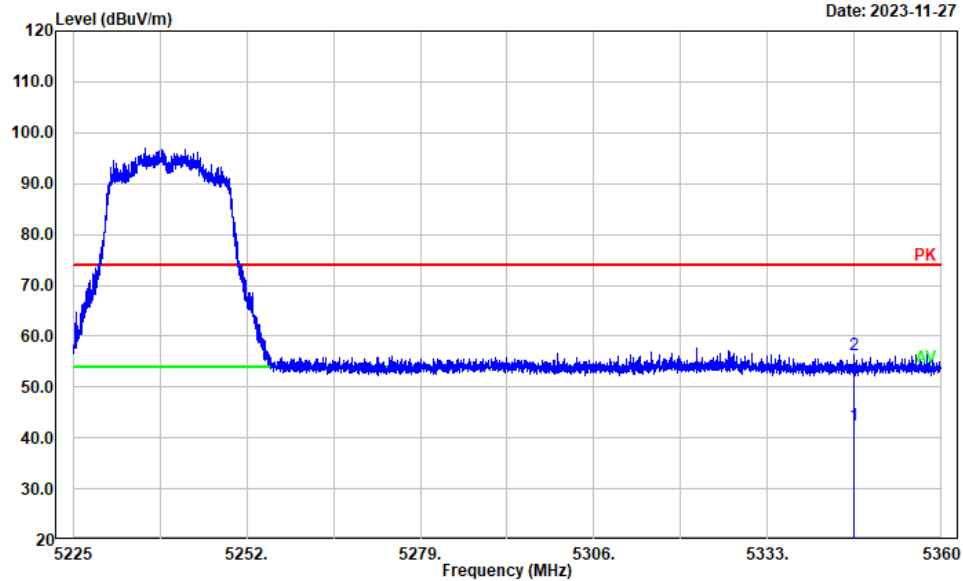
Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5346.497	30.67	11.94	42.61	54.00	11.39	Average
2	5346.497	44.36	11.94	56.30	74.00	17.70	Peak

802.11a _ Chain 1

Test Channel:

5180MHz

Ant. Polar. :

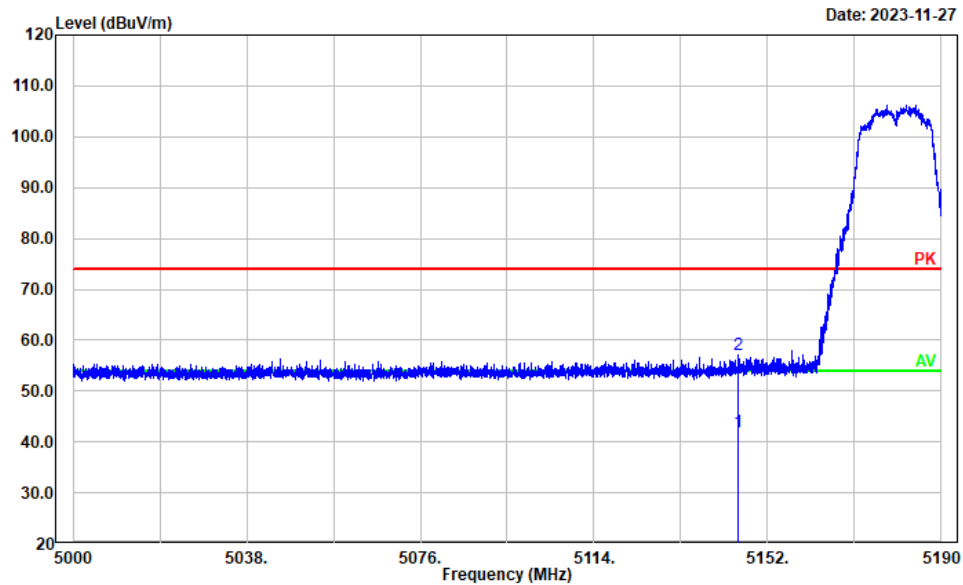
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5145.493	30.36	11.67	42.03	54.00	11.97	Average
2	5145.493	45.42	11.67	57.09	74.00	16.91	Peak

802.11a _ Chain 1

Test Channel:

5180MHz

Ant. Polar. :

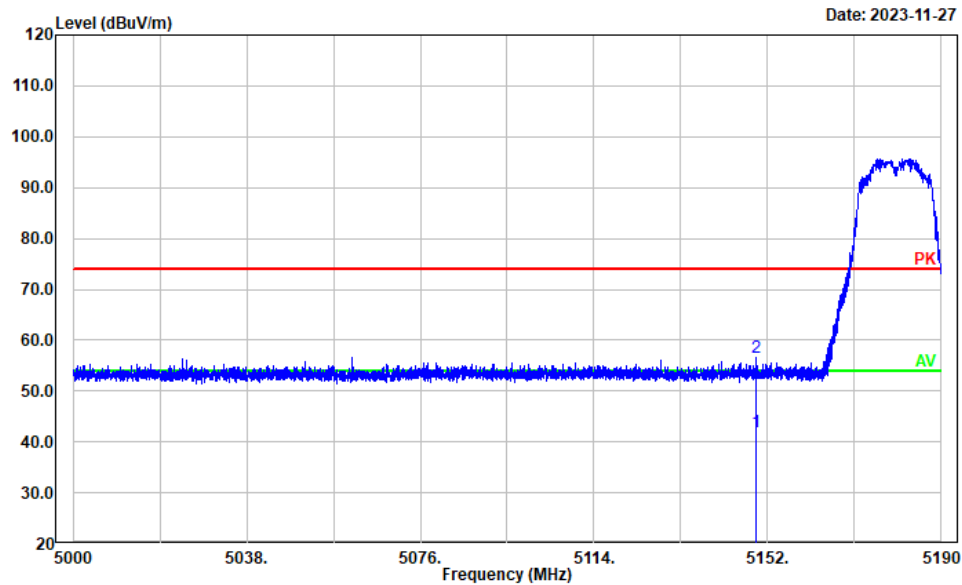
Vertical

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5149.332	30.28	11.67	41.95	54.00	12.05	Average
2	5149.332	44.78	11.67	56.45	74.00	17.55	Peak

802.11a Chain 1

Test Channel:

5240MHz

Ant. Polar. :

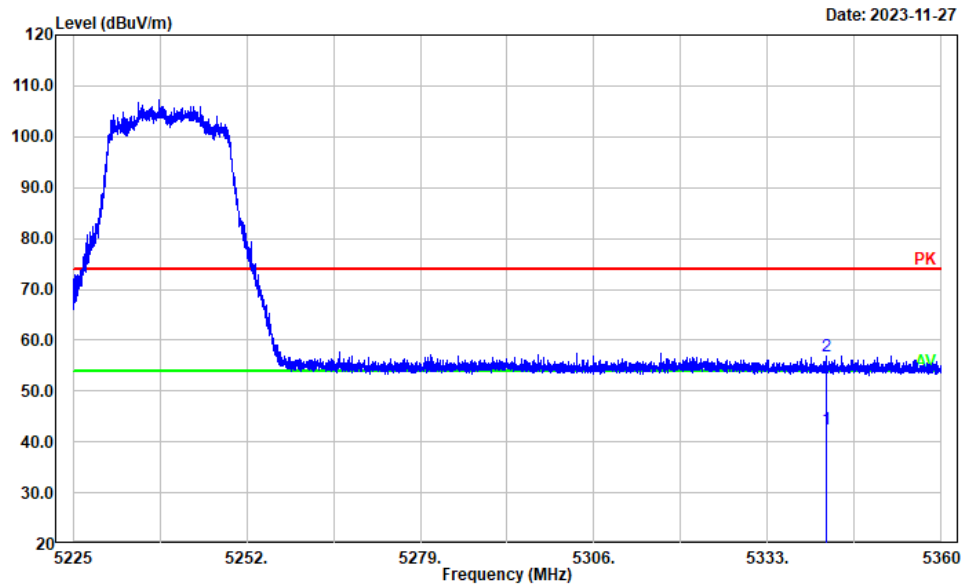
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5342.095	30.44	11.95	42.39	54.00	11.61	Average
2	5342.095	45.03	11.95	56.98	74.00	17.02	Peak

802.11a Chain 1

Test Channel:

5240MHz

Ant. Polar. :

Vertical

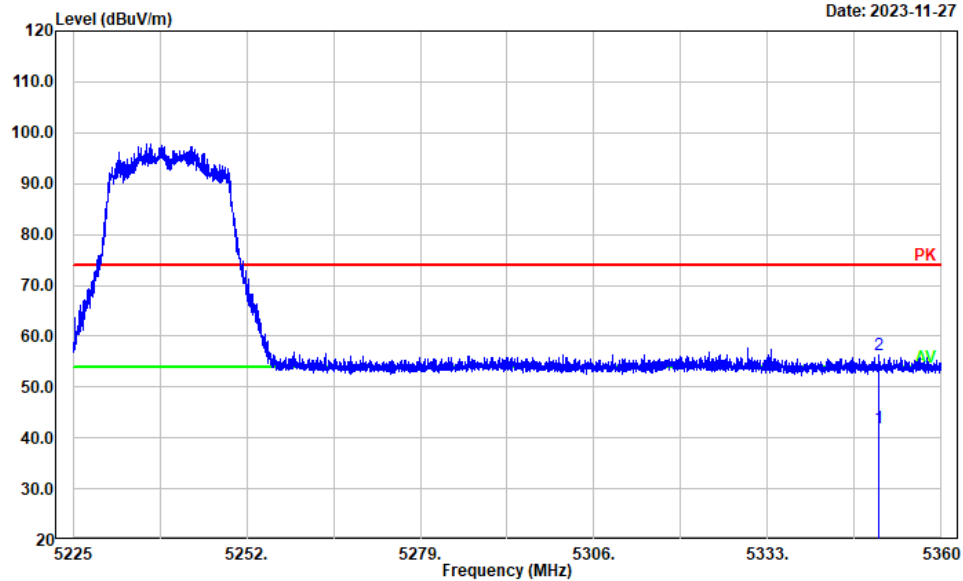
Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Vertical

Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5350.197	30.06	11.95	42.01	54.00	11.99	Average
2	5350.197	44.29	11.95	56.24	74.00	17.76	Peak

802.11n ht20_MIMO

Test Channel:

5180MHz

Ant. Polar. :

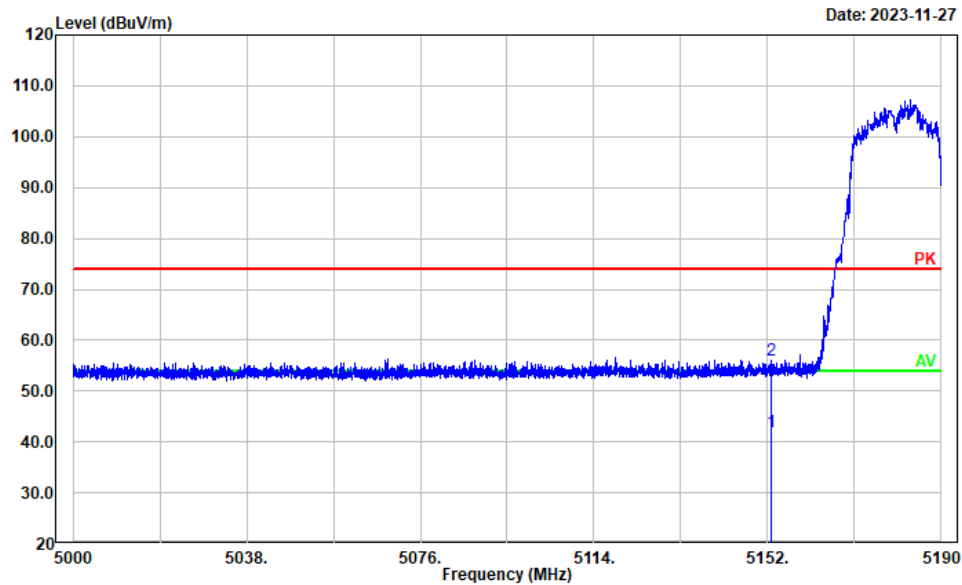
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5152.905	30.37	11.67	42.04	54.00	11.96	Average
2	5152.905	44.42	11.67	56.09	74.00	17.91	Peak

802.11n ht20_MIMO

Test Channel:

5180MHz

Ant. Polar. :

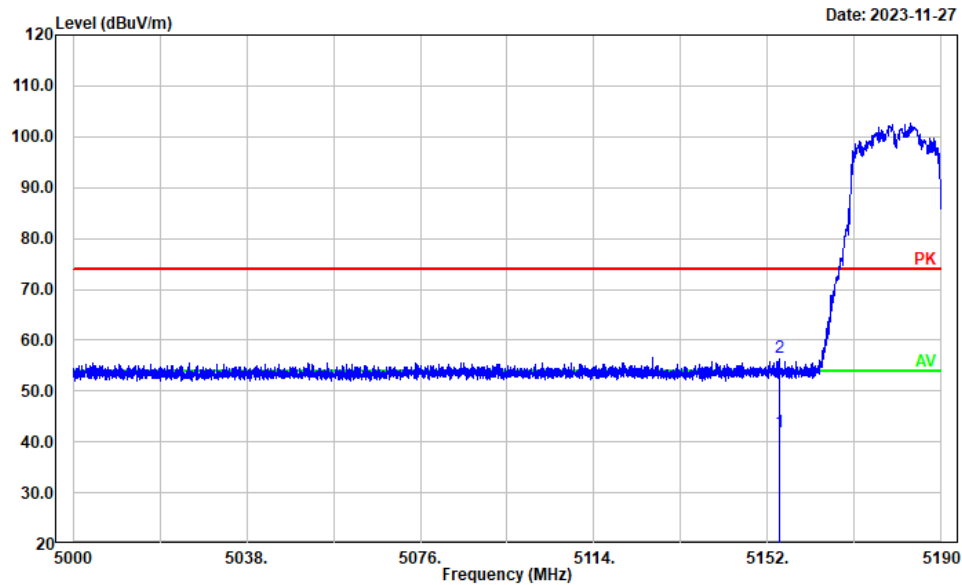
Vertical

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5154.691	30.31	11.68	41.99	54.00	12.01	Average
2	5154.691	44.77	11.68	56.45	74.00	17.55	Peak

802.11n ht20_MIMO

Test Channel:

5240MHz

Ant. Polar. :

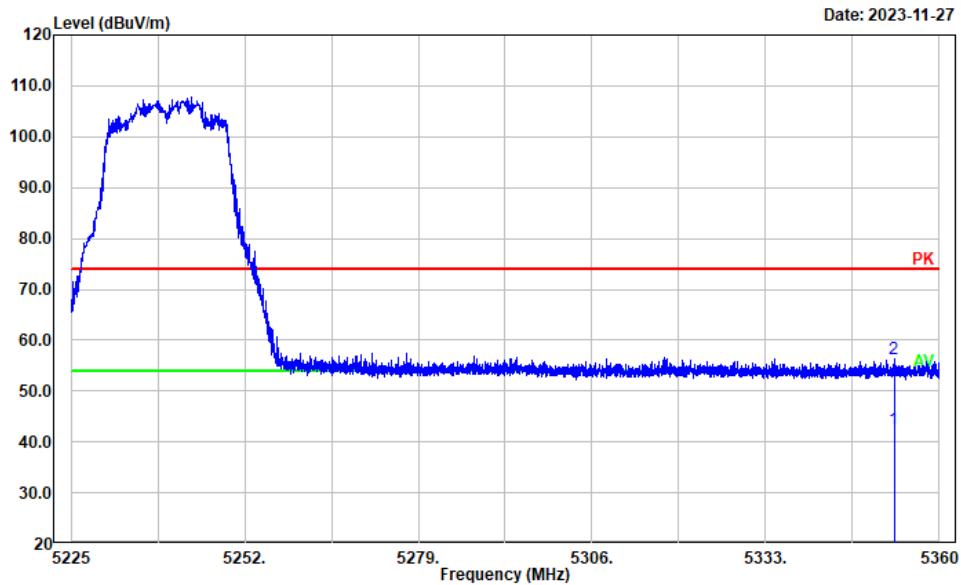
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5352.952	30.53	11.95	42.48	54.00	11.52	Average
2	5352.952	44.38	11.95	56.33	74.00	17.67	Peak

802.11n ht20_MIMO

Test Channel:

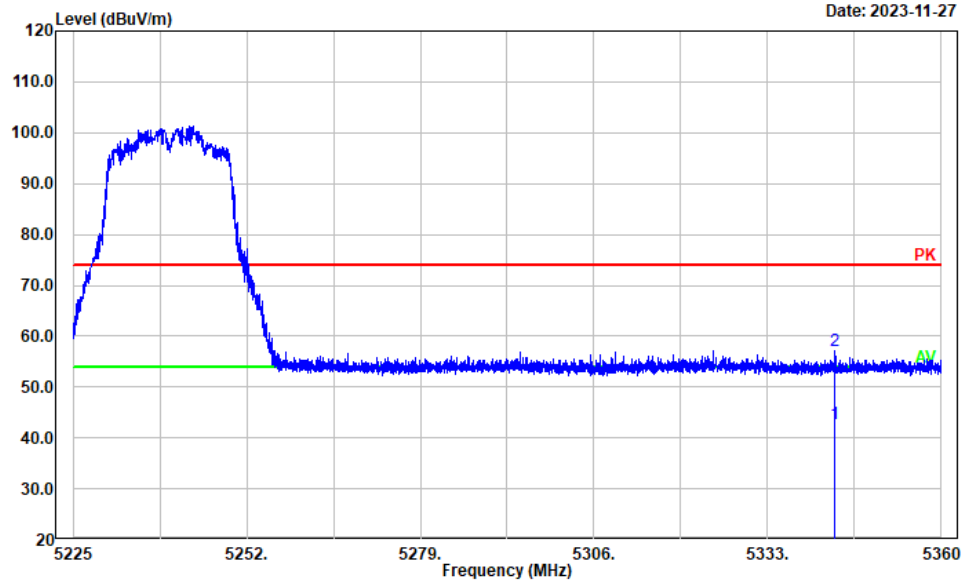
5240MHz

Ant. Polar. :

Vertical

Project No.: CR230956606-RF
Tester: coco Tian
Polarization: vertical
Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5343.500	30.87	11.95	42.82	54.00	11.18	Average
2	5343.500	45.16	11.95	57.11	74.00	16.89	Peak

802.11n ht40_MIMO

Test Channel:

5190MHz

Ant. Polar. :

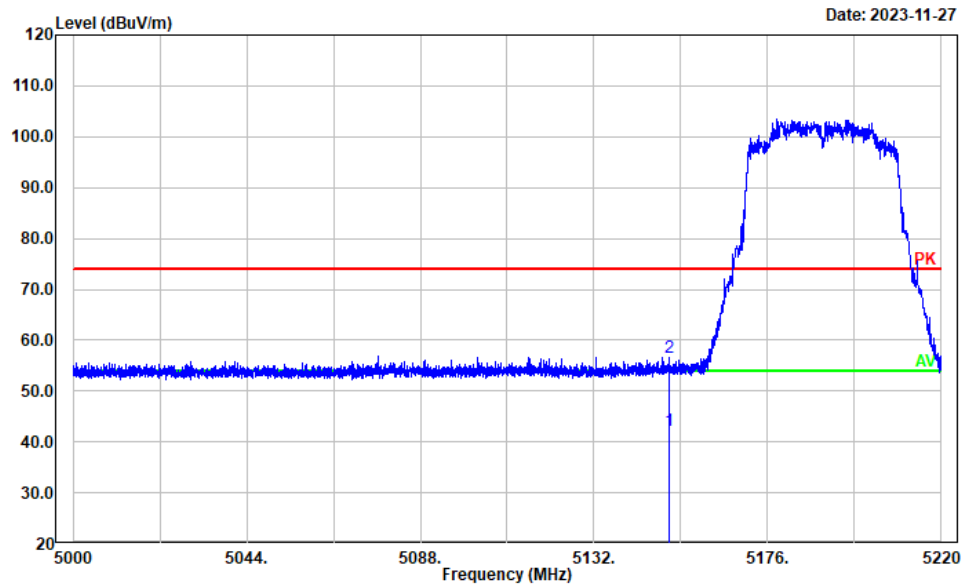
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5151.082	30.65	11.67	42.32	54.00	11.68	Average
2	5151.082	44.98	11.67	56.65	74.00	17.35	Peak

802.11n ht40_MIMO

Test Channel:

5190MHz

Ant. Polar. :

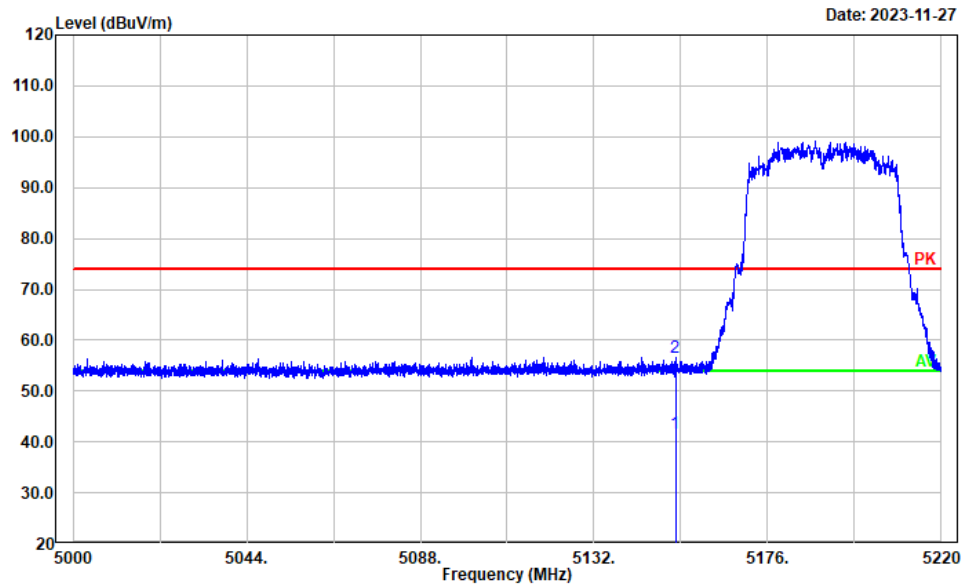
Vertical

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5152.623	30.12	11.67	41.79	54.00	12.21	Average
2	5152.623	44.79	11.67	56.46	74.00	17.54	Peak

802.11n ht40_MIMO

Test Channel:

5230MHz

Ant. Polar. :

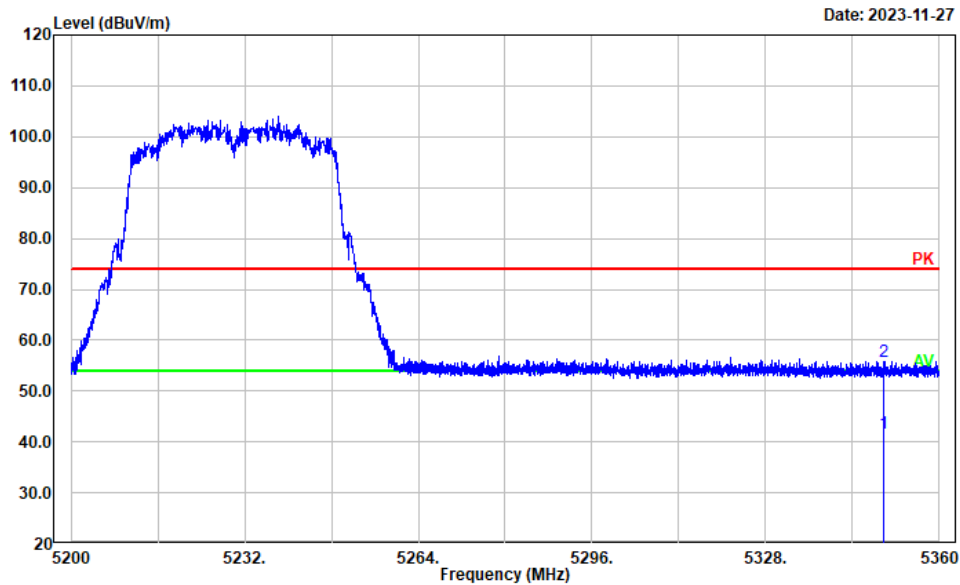
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5349.854	29.75	11.94	41.69	54.00	12.31	Average
2	5349.854	43.87	11.94	55.81	74.00	18.19	Peak

802.11n ht40_MIMO

Test Channel:

5230MHz

Ant. Polar. :

Vertical

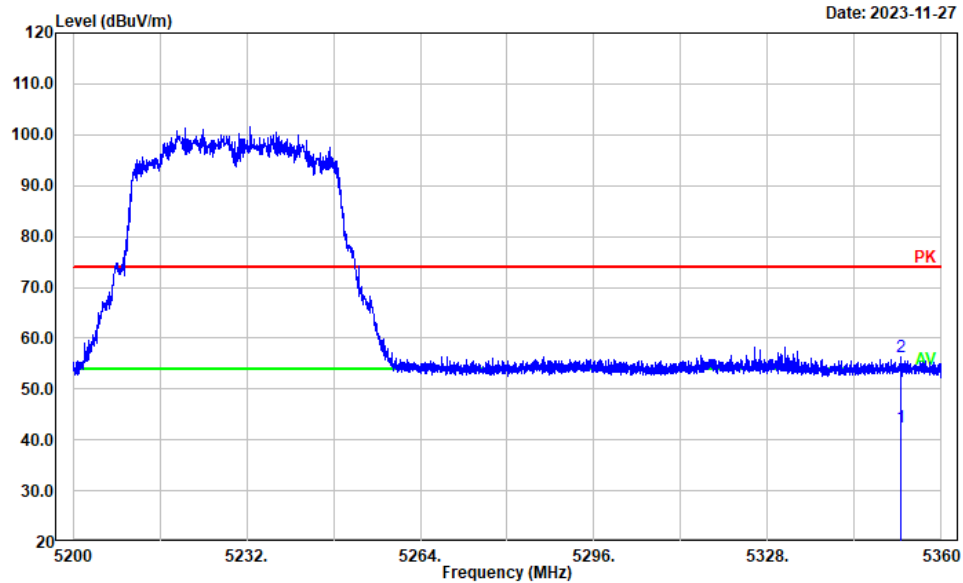
Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5352.606	30.58	11.95	42.53	54.00	11.47	Average
2	5352.606	44.32	11.95	56.27	74.00	17.73	Peak

802.11ac vht80_MIMO

Test Channel:

5210MHz

Ant. Polar. :

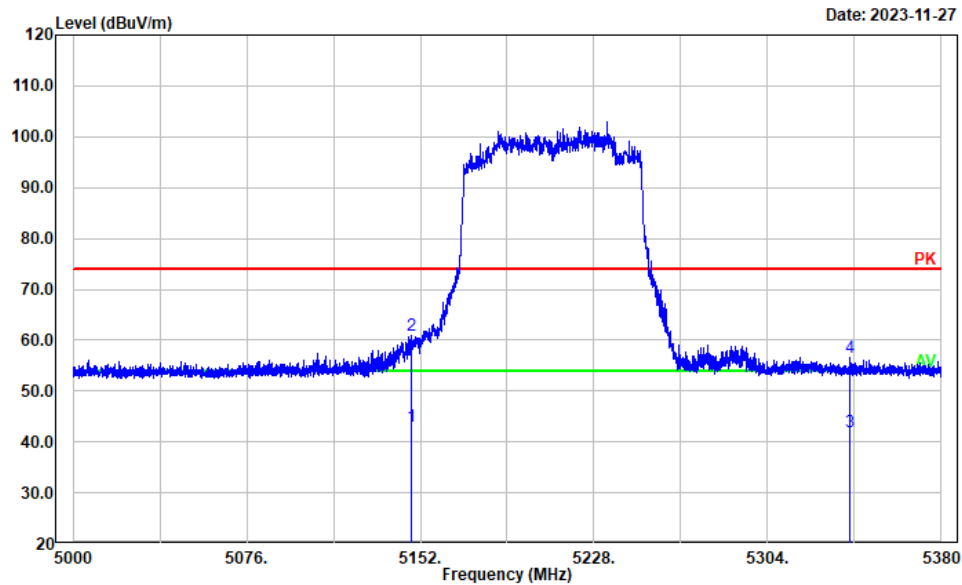
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5147.850	31.23	11.68	42.91	54.00	11.09	Average
2	5147.850	49.19	11.68	60.87	74.00	13.13	Peak
3	5340.092	30.04	11.95	41.99	54.00	12.01	Average
4	5340.092	44.62	11.95	56.57	74.00	17.43	Peak

802.11ac vht80_MIMO

Test Channel:

5210MHz

Ant. Polar. :

Vertical

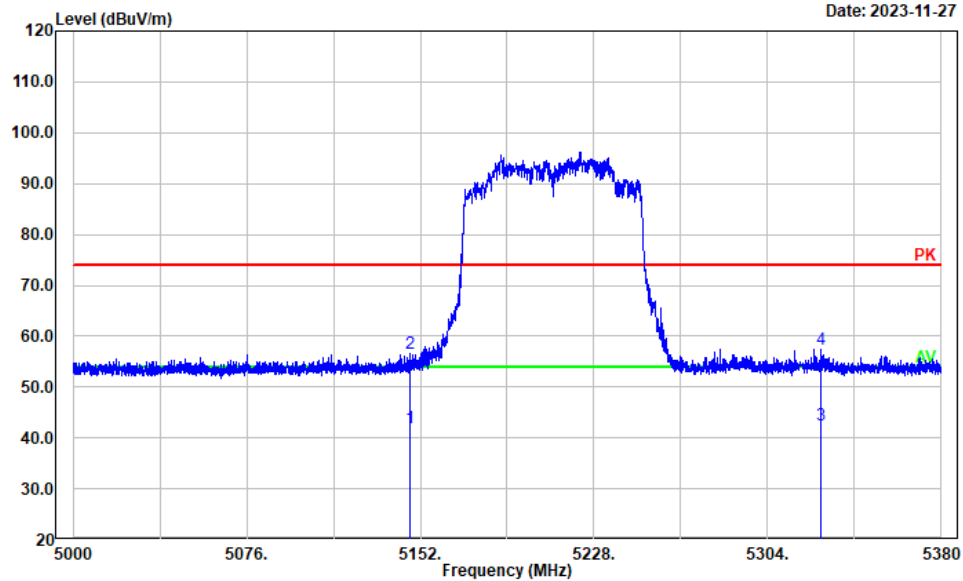
Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5147.622	30.35	11.68	42.03	54.00	11.97	Average
2	5147.622	44.80	11.68	56.48	74.00	17.52	Peak
3	5327.474	30.66	11.95	42.61	54.00	11.39	Average
4	5327.474	45.47	11.95	57.42	74.00	16.58	Peak

5725~5850MHz:

802.11a_Chain 0

Test Channel:

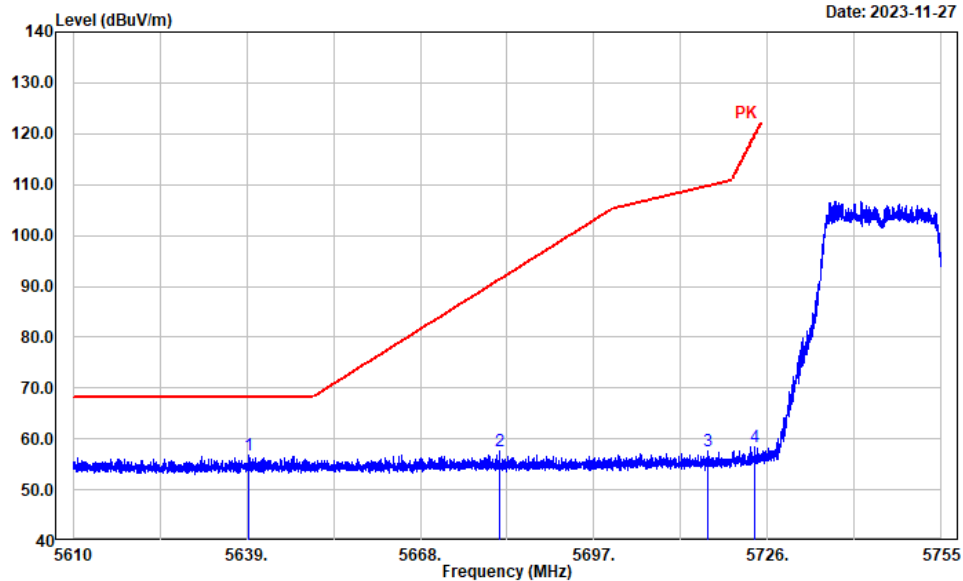
5745MHz

Ant. Polar. :

Horizontal

Project No.: CR230956606-RF
Tester: coco Tian
Polarization: Horizontal
Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5639.412	44.49	12.26	56.75	68.20	11.45	Peak
2	5681.238	45.24	12.47	57.71	91.35	33.64	Peak
3	5716.016	44.94	12.56	57.50	109.69	52.19	Peak
4	5723.761	45.96	12.57	58.53	119.38	60.85	Peak

802.11a Chain 0

Test Channel:

5745MHz

Ant. Polar. :

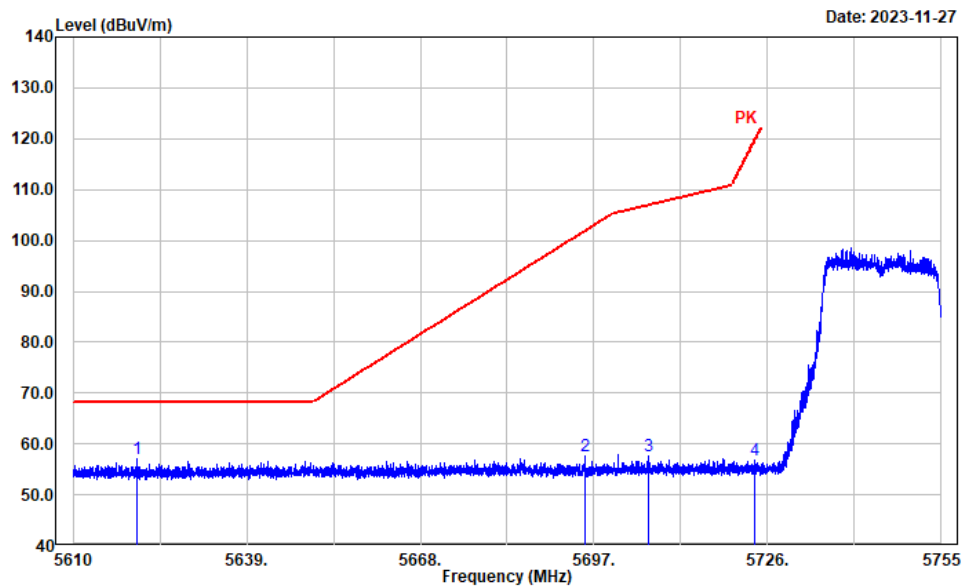
Vertical

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5620.587	44.84	12.15	56.99	68.20	11.21	Peak
2	5695.538	45.12	12.53	57.65	101.91	44.26	Peak
3	5706.009	45.05	12.56	57.61	106.88	49.27	Peak
4	5723.877	44.35	12.57	56.92	119.64	62.72	Peak

802.11a Chain 0

Test Channel:

5825MHz

Ant. Polar. :

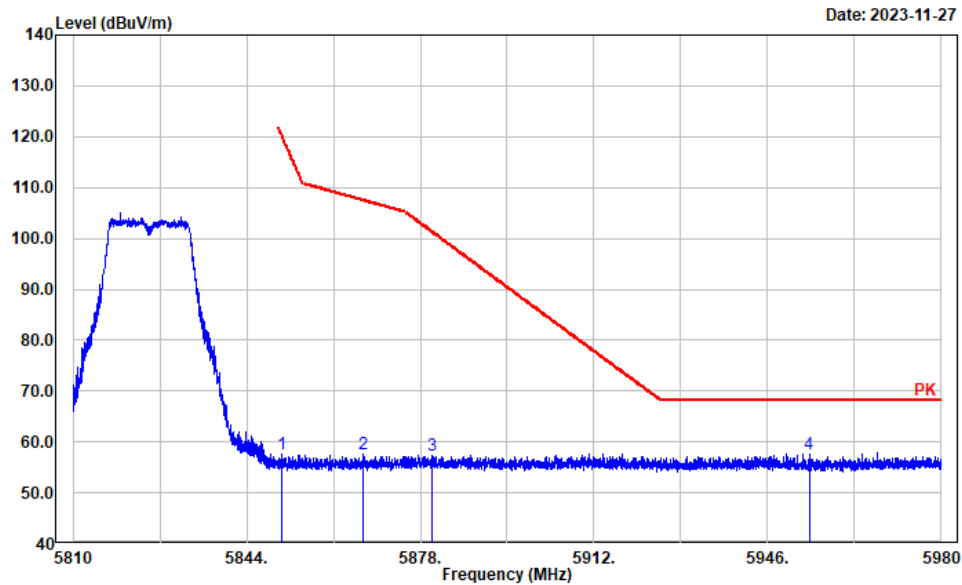
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5850.910	44.73	12.77	57.50	120.12	62.62	Peak
2	5866.723	44.64	12.86	57.50	107.52	50.02	Peak
3	5880.224	44.54	12.92	57.46	101.32	43.86	Peak
4	5954.121	44.53	13.06	57.59	68.20	10.61	Peak

802.11a Chain 0

Test Channel:

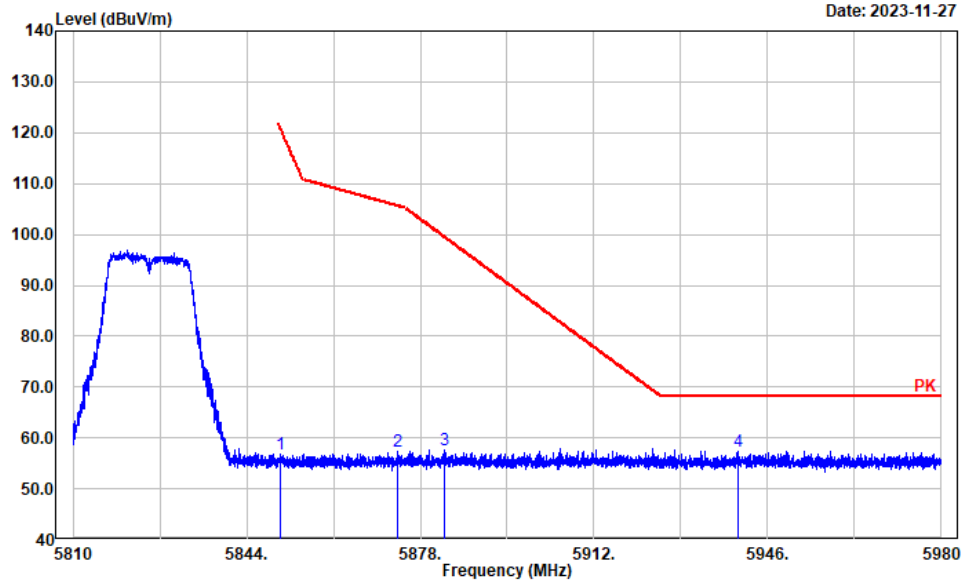
5825MHz

Ant. Polar. :

Vertical

Project No.: CR230956606-RF
Tester: coco Tian
Polarization: vertical
Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5850.638	43.97	12.77	56.74	120.74	64.00	Peak
2	5873.525	44.52	12.89	57.41	105.61	48.20	Peak
3	5882.604	44.64	12.93	57.57	99.55	41.98	Peak
4	5940.178	44.44	13.03	57.47	68.20	10.73	Peak

802.11a Chain 1

Test Channel:

5745MHz

Ant. Polar. :

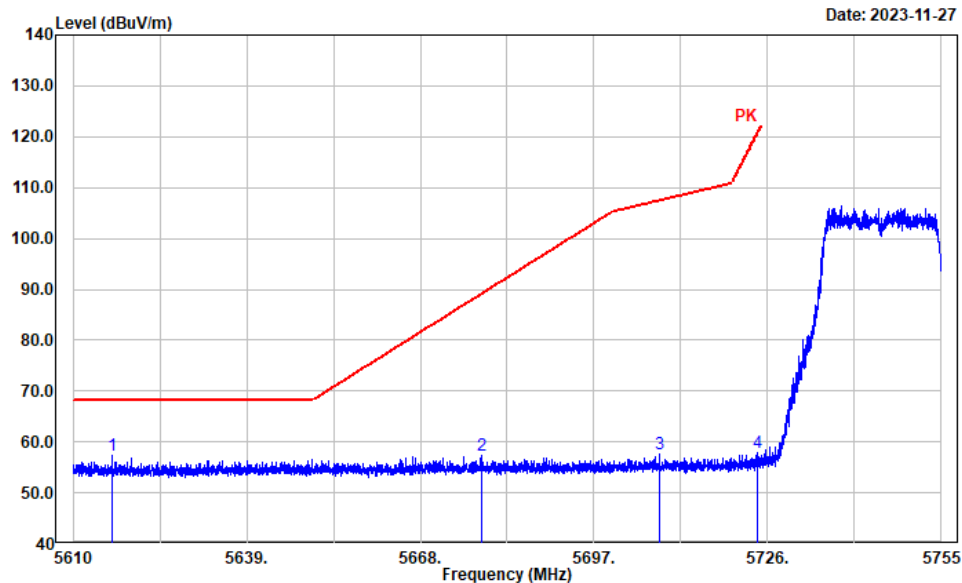
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5616.526	45.19	12.14	57.33	68.20	10.87	Peak
2	5678.164	44.97	12.46	57.43	89.08	31.65	Peak
3	5707.924	44.93	12.56	57.49	107.42	49.93	Peak
4	5724.254	45.44	12.57	58.01	120.50	62.49	Peak

802.11a Chain 0

Test Channel:

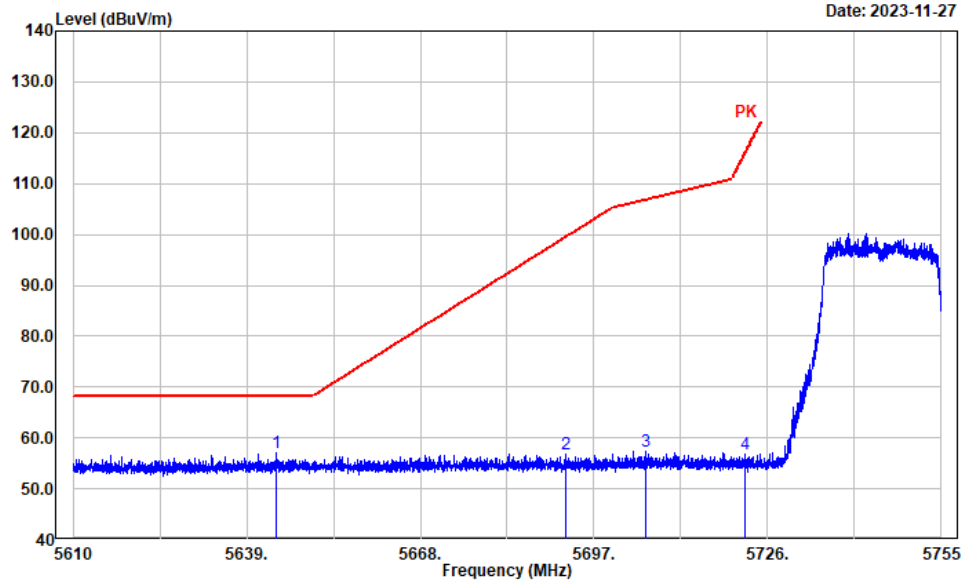
5745MHz

Ant. Polar. :

Vertical

Project No.: CR230956606-RF
Tester: coco Tian
Polarization: vertical
Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5643.966	44.69	12.29	56.98	68.20	11.22	Peak
2	5692.203	44.35	12.52	56.87	99.45	42.58	Peak
3	5705.661	44.88	12.56	57.44	106.79	49.35	Peak
4	5722.252	44.28	12.57	56.85	115.94	59.09	Peak

802.11a Chain 0

Test Channel:

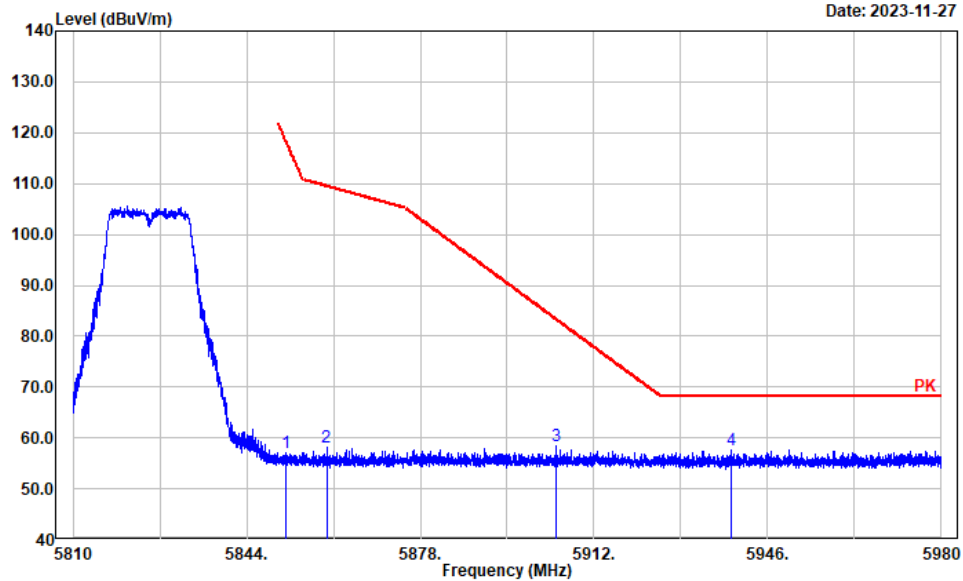
5825MHz

Ant. Polar. :

Horizontal

Project No.: CR230956606-RF
Tester: coco Tian
Polarization: Horizontal
Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5851.556	44.34	12.78	57.12	118.65	61.53	Peak
2	5859.650	45.21	12.82	58.03	109.50	51.47	Peak
3	5904.641	45.34	13.02	58.36	83.23	24.87	Peak
4	5938.784	44.56	13.03	57.59	68.20	10.61	Peak

802.11a Chain 0

Test Channel:

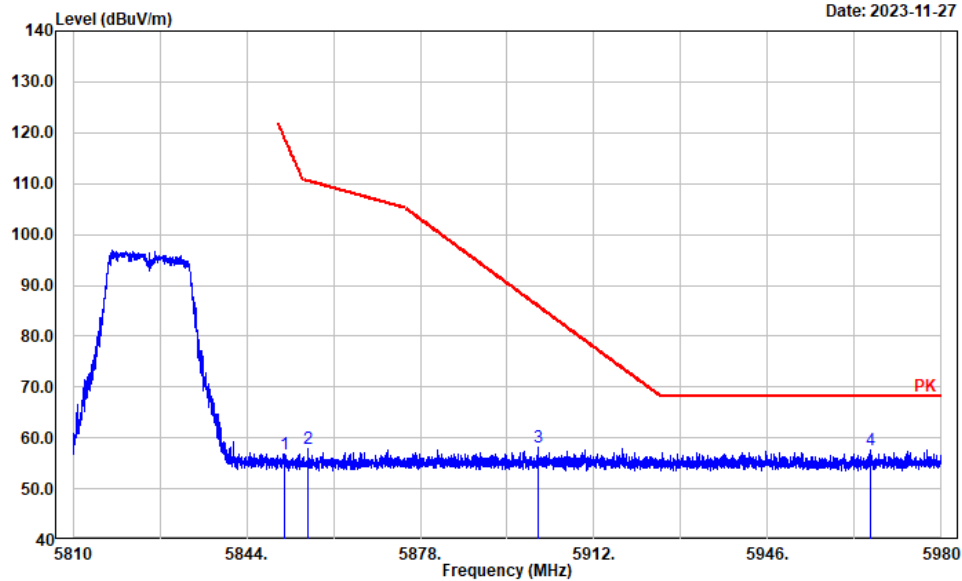
5825MHz

Ant. Polar. :

Vertical

Project No.: CR230956606-RF
Tester: coco Tian
Polarization: vertical
Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5851.522	44.06	12.78	56.84	118.73	61.89	Peak
2	5855.977	44.95	12.80	57.75	110.53	52.78	Peak
3	5900.968	45.16	13.02	58.18	85.94	27.76	Peak
4	5966.023	44.57	13.10	57.67	68.20	10.53	Peak

802.11n ht20_MIMO

Test Channel:

5745MHz

Ant. Polar. :

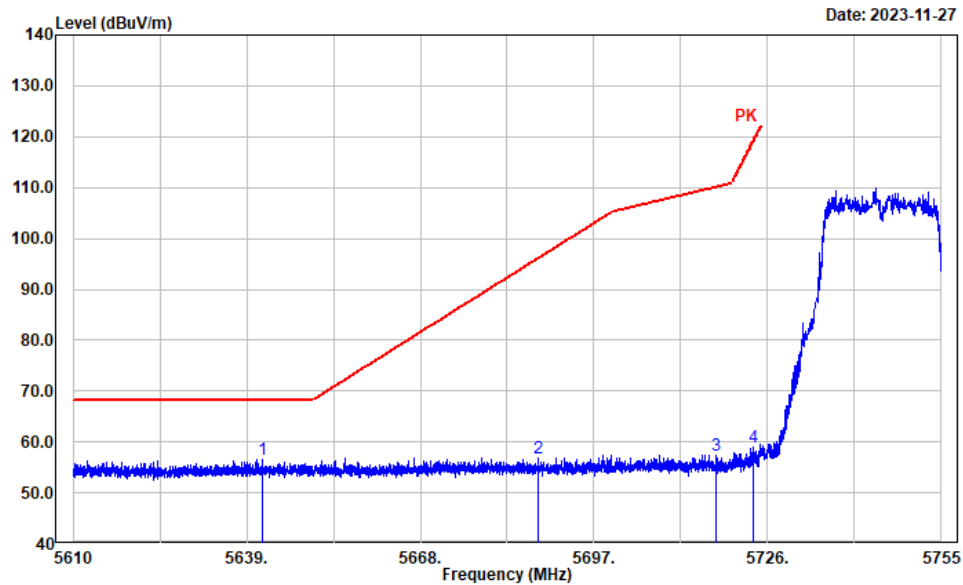
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5641.703	44.26	12.28	56.54	68.20	11.66	Peak
2	5687.678	44.41	12.49	56.90	96.11	39.21	Peak
3	5717.438	44.88	12.57	57.45	110.08	52.63	Peak
4	5723.529	46.44	12.57	59.01	118.85	59.84	Peak

802.11n ht20_MIMO

Test Channel:

5745MHz

Ant. Polar. :

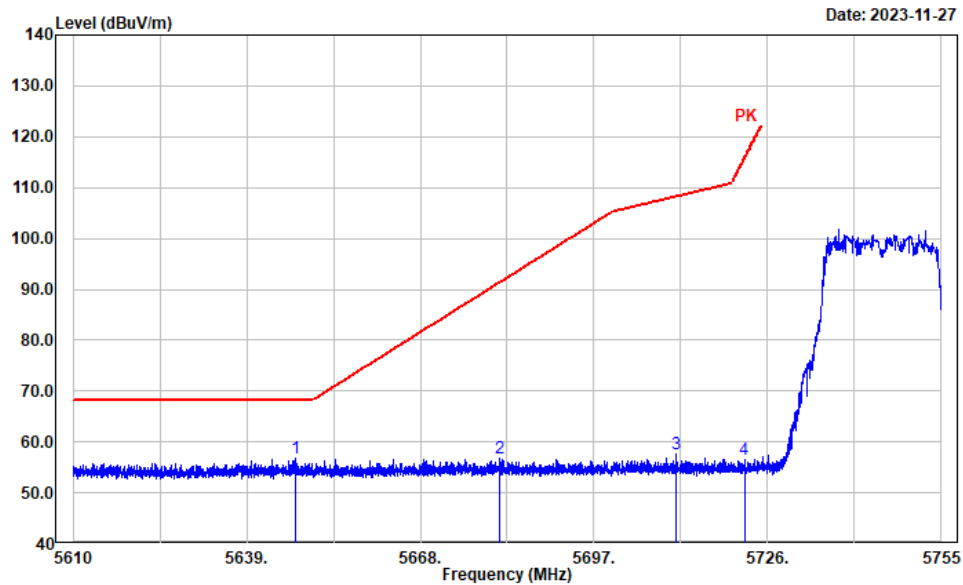
Vertical

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5647.099	44.36	12.32	56.68	68.20	11.52	Peak
2	5681.151	44.31	12.47	56.78	91.29	34.51	Peak
3	5710.708	45.01	12.56	57.57	108.20	50.63	Peak
4	5722.107	44.08	12.57	56.65	115.61	58.96	Peak

802.11n ht20_MIMO

Test Channel:

5825MHz

Ant. Polar. :

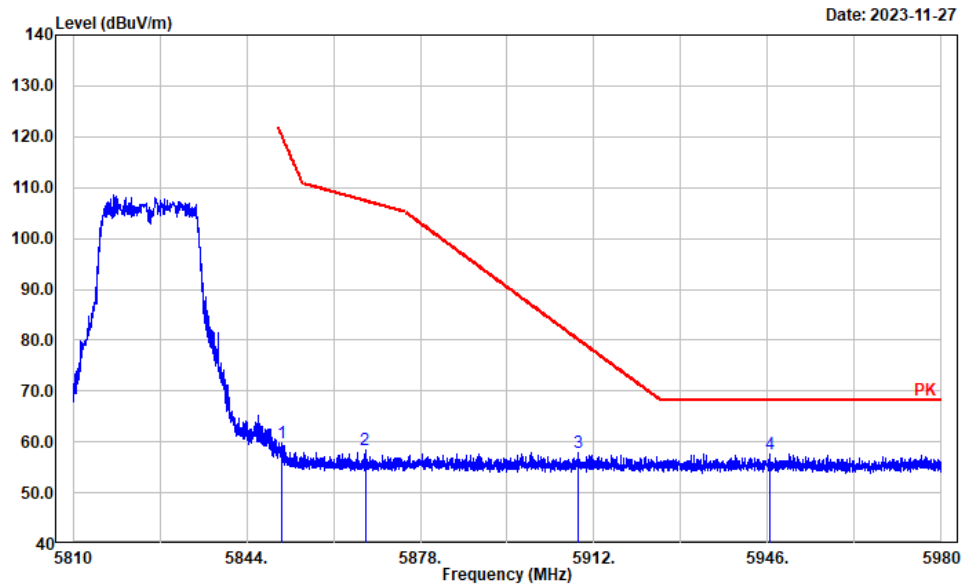
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5850.808	46.97	12.77	59.74	120.36	60.62	Peak
2	5867.199	45.46	12.86	58.32	107.38	49.06	Peak
3	5908.960	44.87	13.01	57.88	80.04	22.16	Peak
4	5946.299	44.56	13.03	57.59	68.20	10.61	Peak

802.11n ht20_MIMO

Test Channel:

5825MHz

Ant. Polar. :

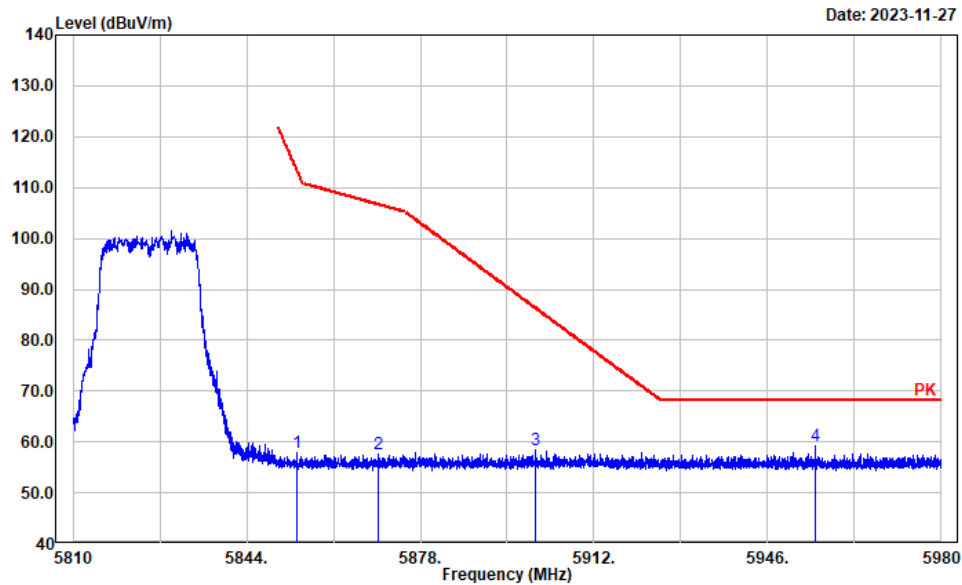
Vertical

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5853.801	45.19	12.80	57.99	113.53	55.54	Peak
2	5869.886	44.70	12.87	57.57	106.63	49.06	Peak
3	5900.492	45.38	13.02	58.40	86.30	27.90	Peak
4	5955.311	46.23	13.06	59.29	68.20	8.91	Peak

802.11n ht40_MIMO

Test Channel:

5755MHz

Ant. Polar. :

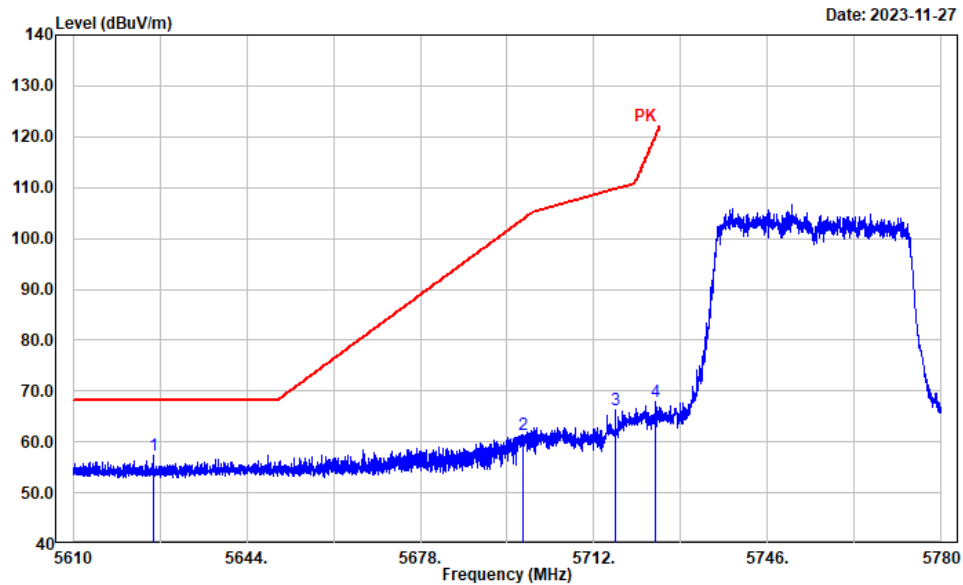
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5625.745	45.09	12.18	57.27	68.20	10.93	Peak
2	5698.078	48.98	12.54	61.52	103.78	42.26	Peak
3	5716.101	53.61	12.56	66.17	109.71	43.54	Peak
4	5723.957	55.33	12.57	67.90	119.82	51.92	Peak

802.11n ht40_MIMO

Test Channel:

5755MHz

Ant. Polar. :

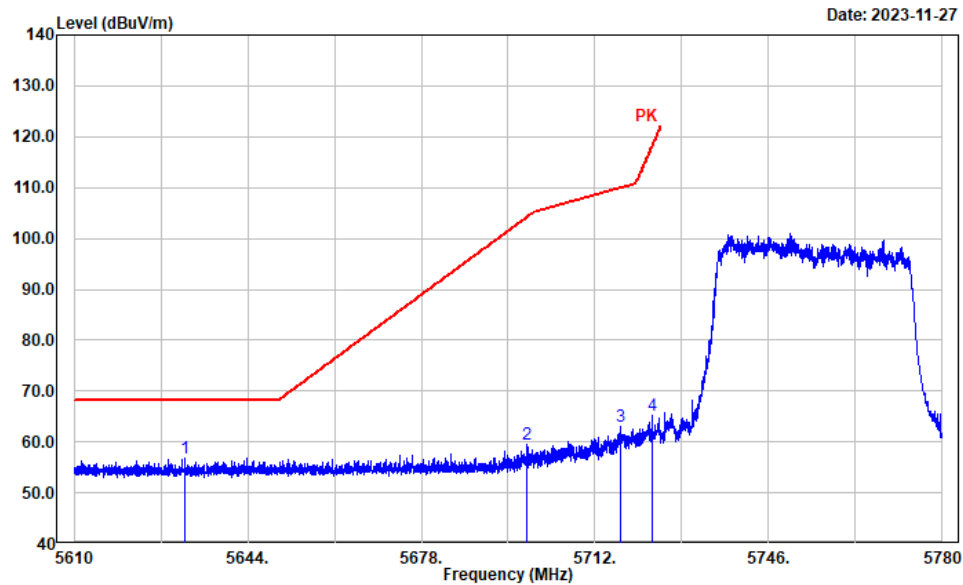
Vertical

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5631.764	44.49	12.22	56.71	68.20	11.49	Peak
2	5698.724	46.94	12.55	59.49	104.26	44.77	Peak
3	5717.020	50.36	12.57	62.93	109.97	47.04	Peak
4	5723.277	52.62	12.57	65.19	118.27	53.08	Peak

802.11n ht40_MIMO

Test Channel:

5795MHz

Ant. Polar. :

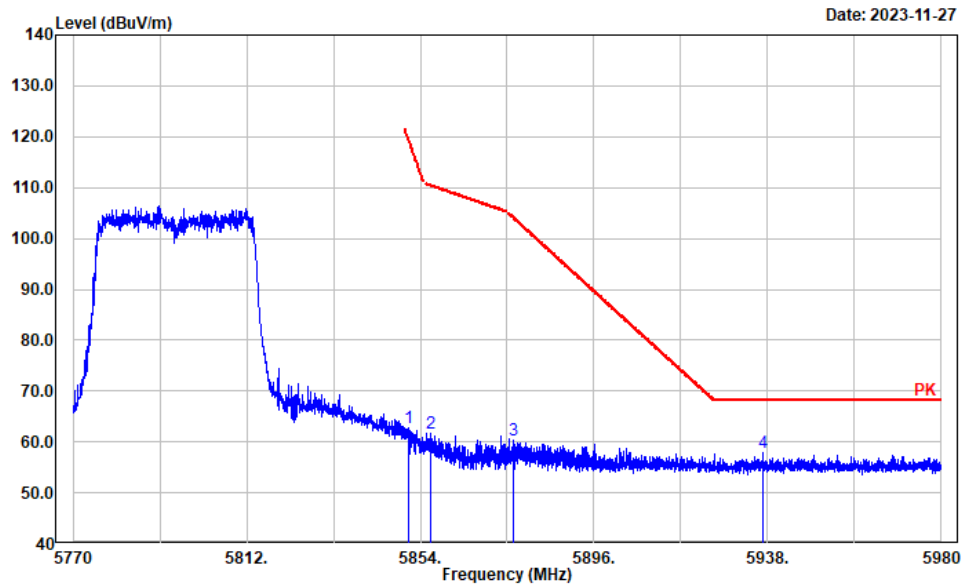
Horizontal

Project No.: CR230956606-RF

Tester: coco Tian

Polarization: Horizontal

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5851.286	49.90	12.78	62.68	119.27	56.59	Peak
2	5856.537	48.80	12.81	61.61	110.37	48.76	Peak
3	5876.617	47.33	12.90	60.23	104.00	43.77	Peak
4	5936.899	44.91	13.03	57.94	68.20	10.26	Peak

802.11n ht40_MIMO

Test Channel:

5795MHz

Ant. Polar. :

Vertical

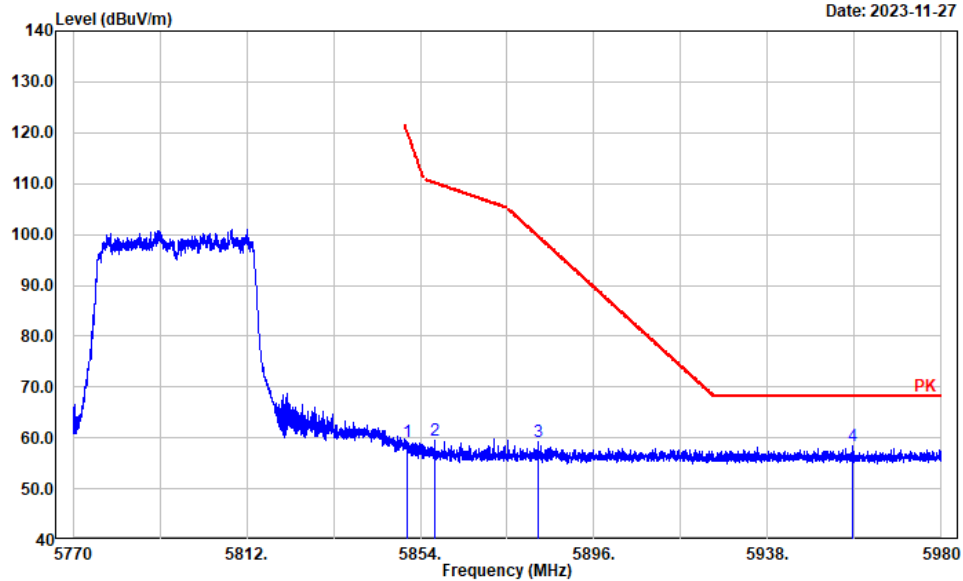
Project No.: CR230956606-RF

Tester: coco Tian

Polarization: vertical

Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5850.866	46.40	12.77	59.17	120.22	61.05	Peak
2	5857.461	46.67	12.81	59.48	110.11	50.63	Peak
3	5882.667	46.28	12.93	59.21	99.51	40.30	Peak
4	5958.492	45.44	13.07	58.51	68.20	9.69	Peak

802.11ac vht80_MIMO

Test Channel:

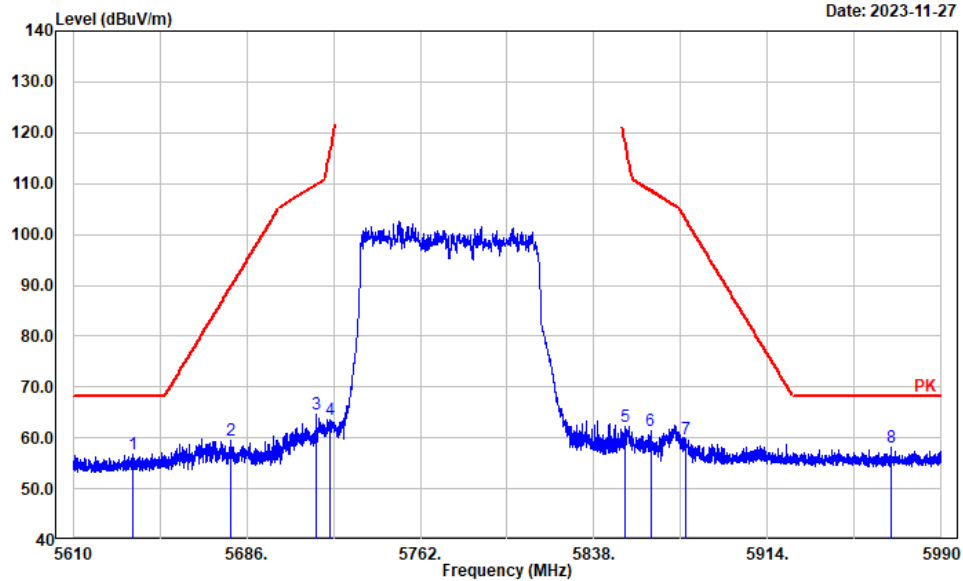
5775MHz

Ant. Polar. :

Horizontal

Project No.: CR230956606-RF
Tester: coco Tian
Polarization: Horizontal
Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5635.921	44.56	12.24	56.80	68.20	11.40	Peak
2	5679.098	47.16	12.46	59.62	89.77	30.15	Peak
3	5716.649	52.01	12.56	64.57	109.86	45.29	Peak
4	5722.730	50.92	12.57	63.49	117.03	53.54	Peak
5	5851.348	49.37	12.78	62.15	119.13	56.98	Peak
6	5862.750	48.55	12.83	61.38	108.63	47.25	Peak
7	5878.030	46.92	12.90	59.82	102.95	43.13	Peak
8	5968.032	45.11	13.11	58.22	68.20	9.98	Peak

802.11ac vht80_MIMO

Test Channel:

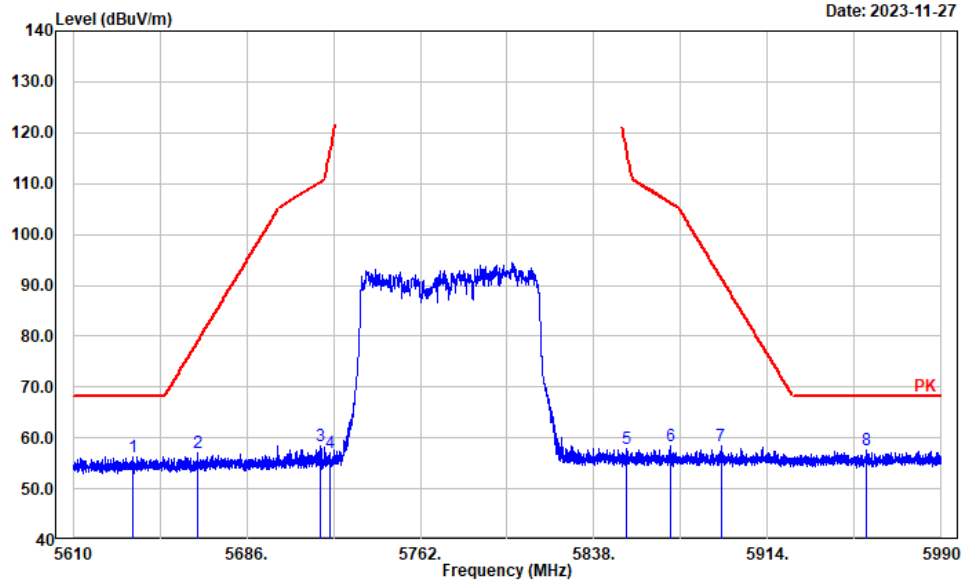
5775MHz

Ant. Polar. :

Vertical

Project No.: CR230956606-RF
 Tester: coco Tian
 Polarization: vertical
 Note:

Date: 2023-11-27



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	5636.453	44.12	12.25	56.37	68.20	11.83	Peak
2	5664.579	44.73	12.39	57.12	79.02	21.90	Peak
3	5718.169	45.94	12.57	58.51	110.29	51.78	Peak
4	5722.274	44.45	12.57	57.02	115.99	58.97	Peak
5	5852.260	45.08	12.78	57.86	117.05	59.19	Peak
6	5871.645	45.45	12.88	58.33	106.14	47.81	Peak
7	5893.537	45.50	12.98	58.48	91.45	32.97	Peak
8	5957.313	44.47	13.06	57.53	68.20	10.67	Peak

4.3 Emission Bandwidth

Serial Number:	2BQ8-1	Test Date:	2023/10/10
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1	Relative Humidity: (%)	56	ATM Pressure: (kPa)	101
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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	2023-03-31	2024-03-30
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	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	22.80	16.88
	5200	23.44	16.72
	5240	23.44	16.72
802.11n ht20	5180	22.32	19.12
	5200	22.24	19.04
	5240	22.08	19.12
802.11n ht40	5190	40.80	37.92
	5230	41.60	37.92
802.11ac vht80	5210	84.80	76.48

Note:

1. Pre-scan all antennas, worst case (Chain 0) was reported.
2. The 99% Occupied Bandwidth have not fall into the band 5250-5350MHz, please refer to the test plots of 99% Occupied Bandwidth

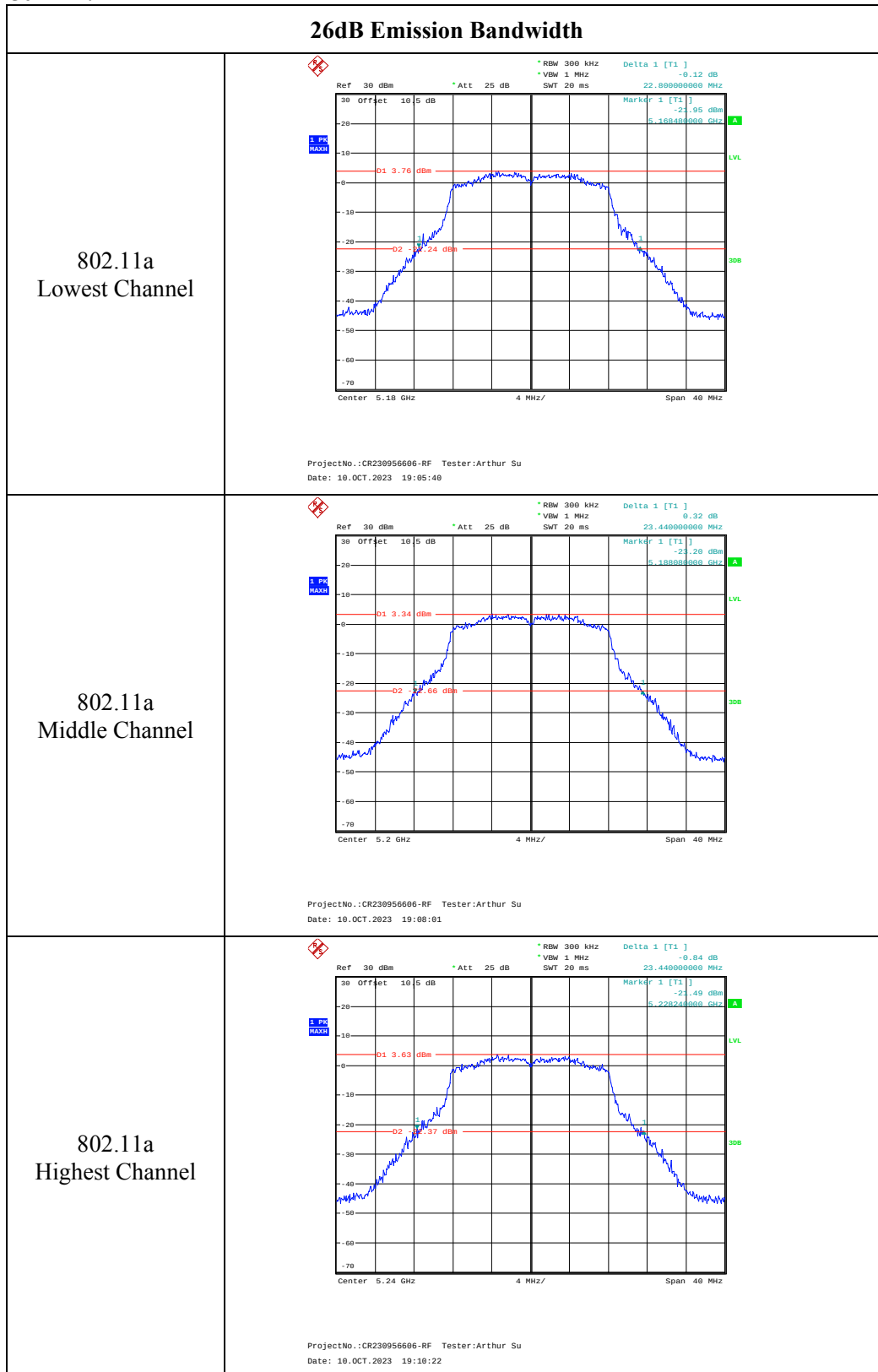
5725-5850 MHz:

Test Modes	Test Frequency (MHz)	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5745	16.40	17.12
	5785	16.40	17.12
	5825	16.40	17.12
802.11n ht20	5745	18.24	19.04
	5785	18.64	19.12
	5825	18.96	19.12
802.11n ht40	5755	37.92	37.92
	5795	37.92	37.92
802.11ac vht80	5775	76.48	76.48

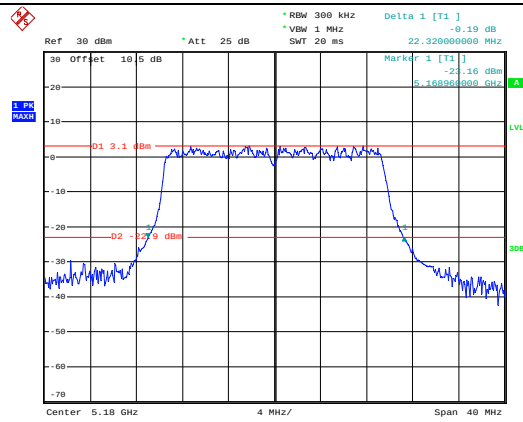
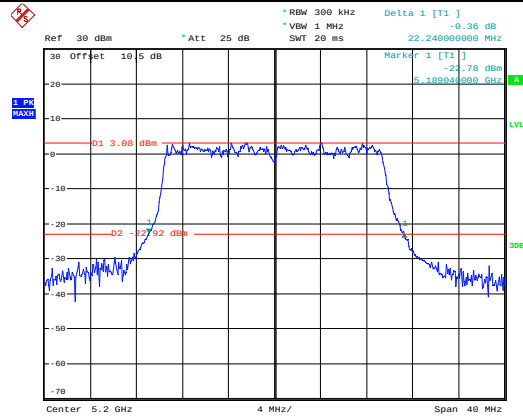
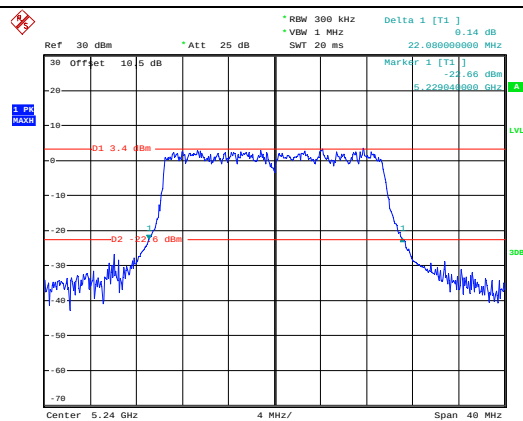
Note:

1. 6dB Emission Bandwidth Limit: ≥ 0.5 MHz
2. Pre-scan all antennas, worst case (Chain 0) was reported.
3. the 99% Occupied Bandwidth have not fall into the band 5470-5725MHz, please refer to the test plots of 99% Occupied Bandwidth.

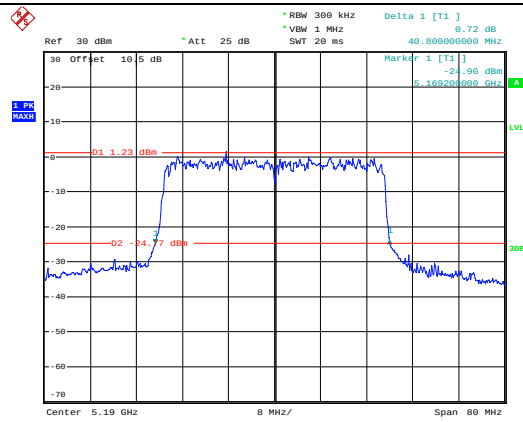
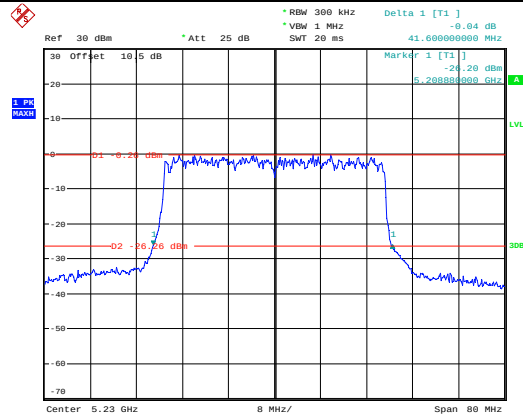
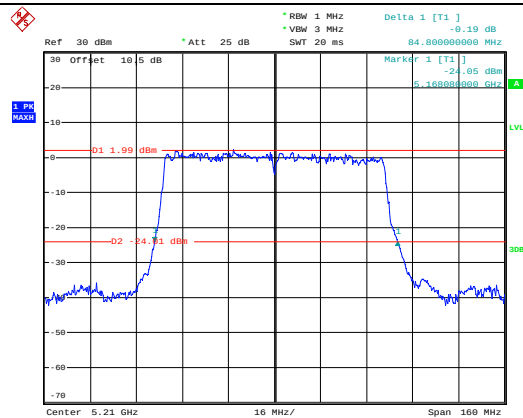
5150-5250MHz:



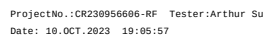
26dB Emission Bandwidth

802.11n ht20
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:34:44802.11n ht20
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:37:10802.11n ht20
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:39:30

26dB Emission Bandwidth

802.11n ht40
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:50:18802.11n ht40
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:52:26802.11ac ht80
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:01:38

802.11a
Lowest Channel



ProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:08:18

ProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:10:35

6dB Emission Bandwidth

Ref 30 dBm Att 25 dB RBW 100 kHz Delta 1 [T1] -0.27 dB
 VBW 300 kHz SWT 20 ms 16.40000000 MHz
 Marker 1 [T1] -5.73 dBm 5.73676000 GHz
 1. Pk MAX
 01 -0.00 dBm
 02 -5.03 dBm
 Center 5.745 GHz 4 MHz/
 Span 40 MHz

The screenshot displays a spectrum analyzer interface. The main plot area shows a blue trace of a signal with a 4 MHz span, centered at 5.785 GHz. The vertical axis represents power in dBm, ranging from -70 to -20. The horizontal axis represents frequency in MHz. Two horizontal red lines indicate specific power levels: -0.31 dBm and -5.89 dBm. The signal trace shows a sharp peak at the center frequency, with a noise floor around -50 dBm. The interface includes various control buttons and readouts: 'Ref 30 dBm', 'Att 25 dB', 'SWT 20 ms', 'RBM 100 kHz', 'VBM 300 kHz', 'Delta 1 [T2] 0.58 dB', '16.400000000 MHz', 'Marker 1 [T1] -4.46 dBm', '5.776750000 GHz', '1.95 MAX', 'Center 5.785 GHz', '4 MHz/', 'Span 40 MHz', and '30 dB'.

Ref 30 dBm Att 25 dB RBW 100 kHz Delta 1 [T2] -0.01 dB
 SWF 20 ms 16.400000000 MHz
 Marker 1 [F1] -4.93 dBm
 5.816766888 GHz

1 P1 MAX

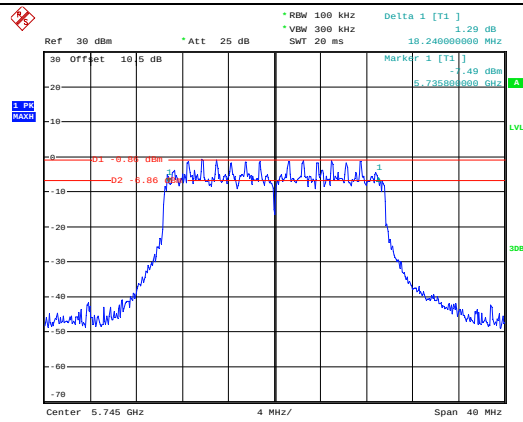
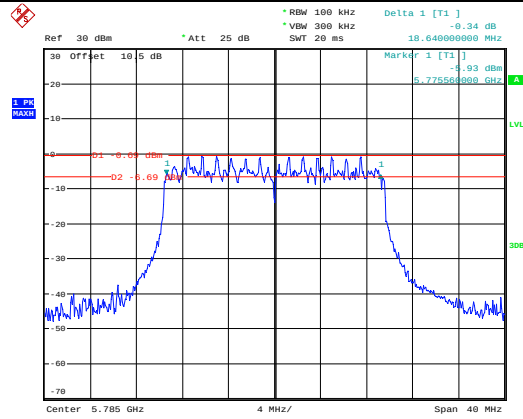
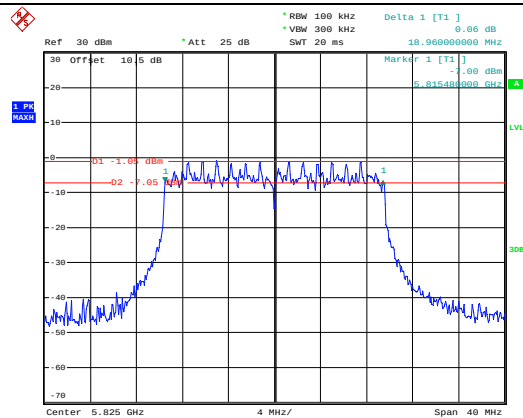
LVL1

30dB

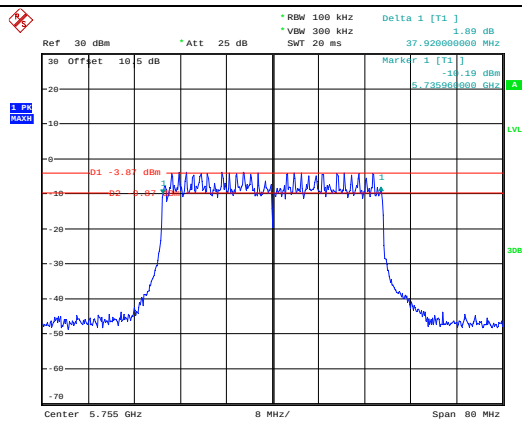
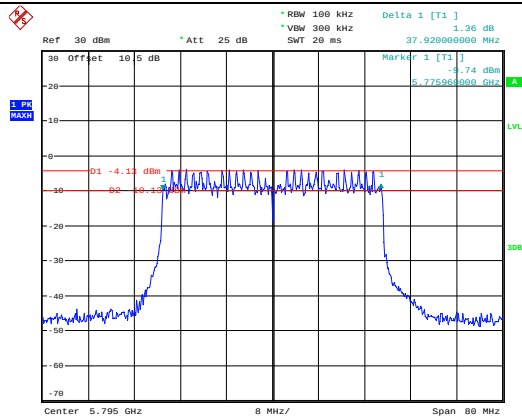
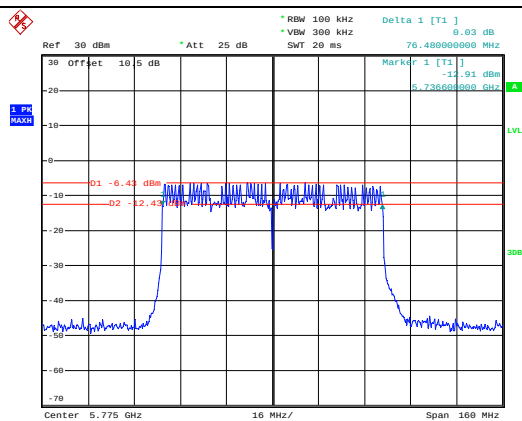
Center 5.825 GHz 4 MHz / Span 40 MHz

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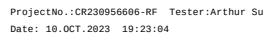
6dB Emission Bandwidth

802.11n ht20
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:41:54802.11n ht20
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:44:34802.11n ht20
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:47:16

6dB Emission Bandwidth

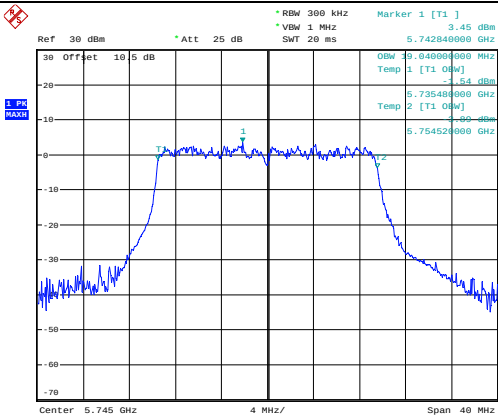
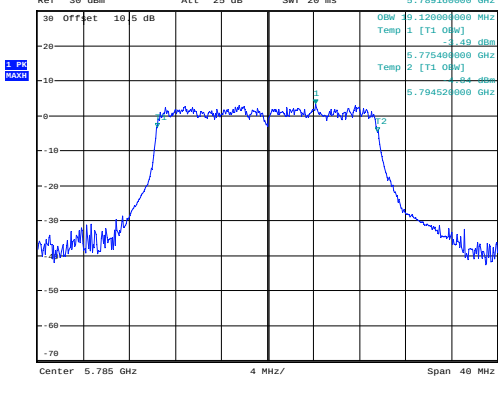
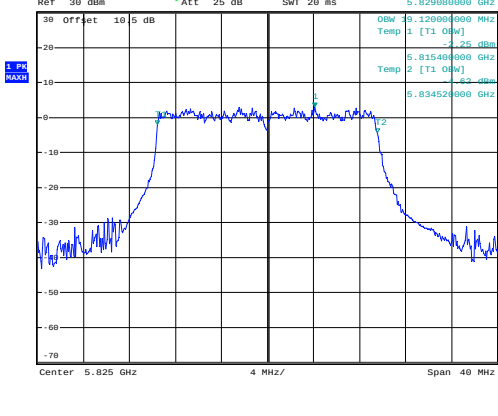
802.11n ht40
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:54:52802.11n ht40
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:57:54802.11ac ht80
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:04:00

802.11a
Lowest Channel

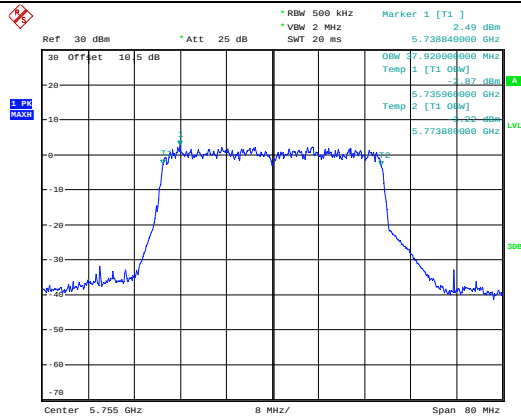
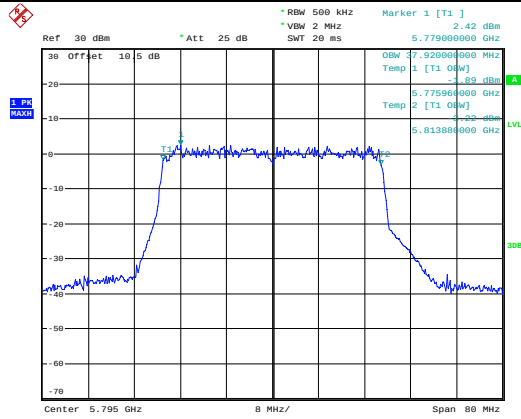
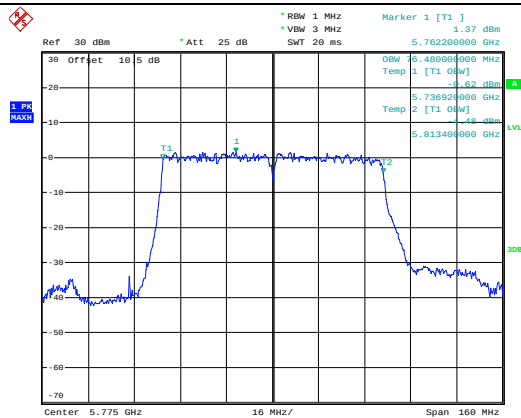


ProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:26:27

ProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:28:37

802.11n ht20 Lowest Channel	99% Emission Bandwidth  ProjectNo.:CR230956606-RF Tester:Arthur Su Date: 10.OCT.2023 19:42:11
802.11n ht20 Middle Channel	 ProjectNo.:CR230956606-RF Tester:Arthur Su Date: 10.OCT.2023 19:44:50
802.11n ht20 Highest Channel	 ProjectNo.:CR230956606-RF Tester:Arthur Su Date: 10.OCT.2023 19:47:33

99% Emission Bandwidth

802.11n ht40
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:55:08802.11n ht40
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:58:10802.11ac ht80
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:04:14

4.4 Maximum Conducted Output Power

Serial Number:	2BQ8-1	Test Date:	2023-09-27
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.6	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.5
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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
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	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:**5150-5250 MHz:**

Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power (dBm)			
		Chain 0	Chain 1	Total	Limit
802.11a	5180	10.43	11.24	/	24
	5200	10.45	10.43	/	24
	5240	10.39	10.45	/	24
802.11n ht20	5180	8.95	9.47	12.23	24
	5200	8.85	9.2	12.04	24
	5240	8.89	9.08	12.00	24
802.11n ht40	5190	8.71	9.38	12.07	24
	5230	8.58	9.02	11.82	24
802.11ac vht80	5210	8.48	9.21	11.87	24

Note:

- The device is a client device.
- The total Average output power = $10 \cdot \log [(10^{\text{Chain 0 Average output power}/10}) + (10^{\text{Chain 1 Average output power}/10})]$
- The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:
Array Gain = 0 dB (i.e., no array gain) for $\text{NANT} \leq 4$;
Directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 2.98\text{dBi} < 6\text{ dBi}$;
So, the maximum output power limit does not need to be reduced.

5725-5850 MHz:

Test Modes	Test Frequency(MHz)	Max. Conducted Average Output Power(dBm)			
		Chain 0	Chain 1	Total	Limit
802.11a	5745	9.93	10.47	/	30
	5785	10.05	10.41	/	30
	5825	9.63	9.94	/	30
802.11n ht20	5745	8.72	9.37	12.07	30
	5785	8.86	9.37	12.13	30
	5825	8.53	9.1	11.83	30
802.11n ht40	5755	8.36	8.91	11.65	30
	5795	8.26	8.92	11.61	30
802.11ac vht80	5775	8.48	9.23	11.88	30

Note:

1. The total Average output power = $10 \cdot \log [(10^{\text{Chain 0 Average output power}/10}) + (10^{\text{Chain 1 Average output power}/10})]$

2. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$;

Directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 2.98\text{dBi} < 6\text{ dBi}$;

So, the maximum output power limit does not need to be reduced.

4.5 Maximum Power Spectral Density

Serial Number:	2BQ8-1	Test Date:	2023/10/10
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1	Relative Humidity: (%)	56	ATM Pressure: (kPa)	101
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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	2023-03-31	2024-03-30
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A

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

Test Data:**5150-5250 MHz:**

Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)			
		Chain 0	Chain 1	Total	Limit
802.11a	5180	0.84	1.76	/	11
	5200	1.29	1.42	/	11
	5240	1.41	1.57	/	11
802.11n ht20	5180	-0.01	0.58	3.31	11
	5200	0.03	0.47	3.27	11
	5240	-0.02	0.35	3.18	11
802.11n ht40	5190	-3.17	-2.38	0.25	11
	5230	-3.08	-2.56	0.20	11
802.11ac vht80	5210	-6.19	-5.35	-2.74	11

Note:

1. The device is a client device.

2. The total Power Spectral Density = $10 \cdot \log [(10^{\text{Chain 0 Power Spectral Density}/10}) + (10^{\text{Chain 1 Power Spectral Density}/10})]$

3. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on IEEE 802.11 devices, the Array Gain = $10 \log (N_{\text{ANT}}/N_{\text{SS}})$ dB;

So, the Directional gain = $G_{\text{ANT MAX}} + 10 \log (N_{\text{ANT}}/N_{\text{SS}}) = 2.98 + 10 \log (2/1) = 5.98 \text{ dBi} < 6 \text{ dBi}$.

So, the power spectral density (PSD) limit does not need to be reduced.

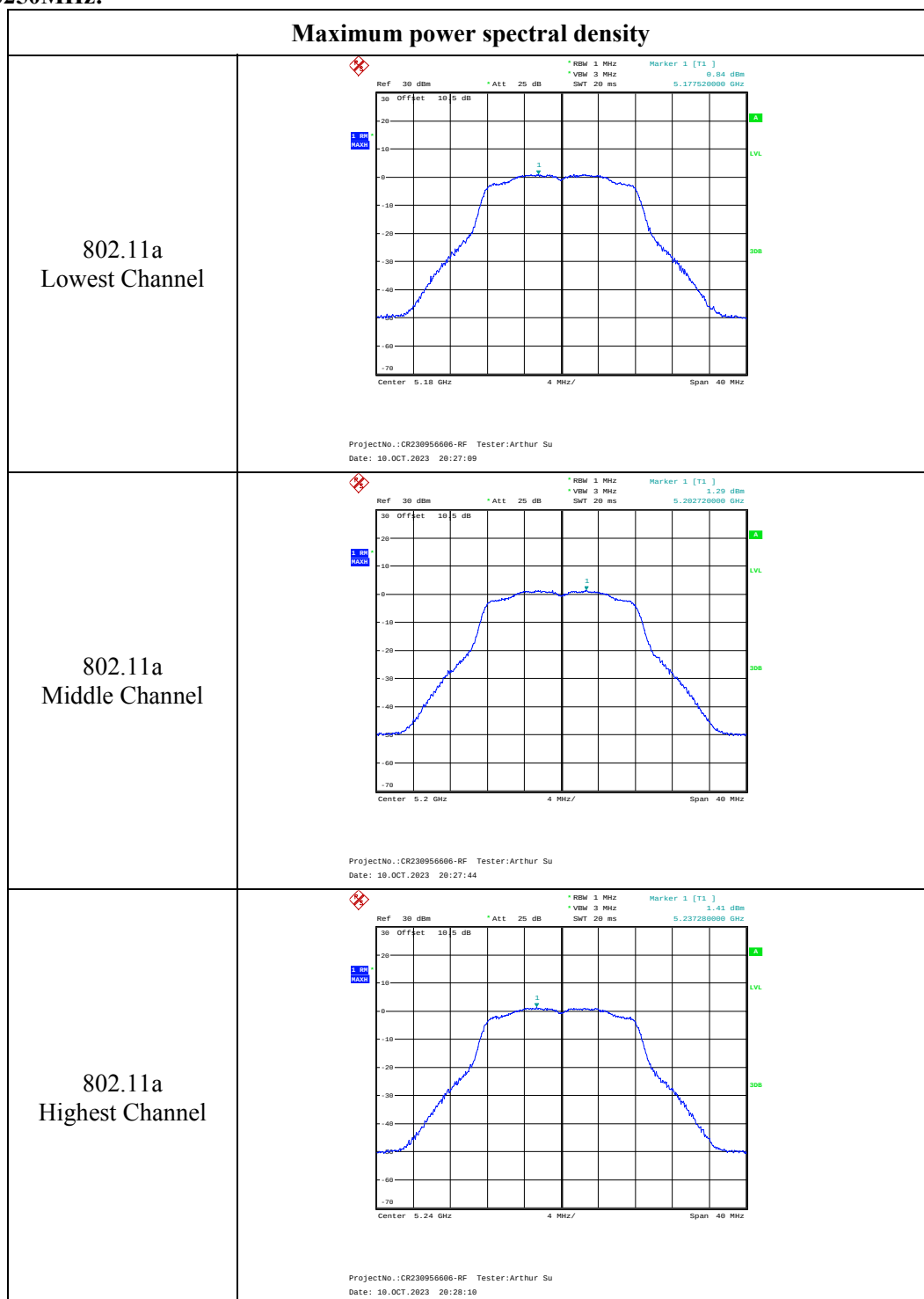
4. for the Duty cycle <98%, and duty cycle variations exceed $\pm 2\%$, KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 was performed to the PSD test.

5725-5850 MHz:

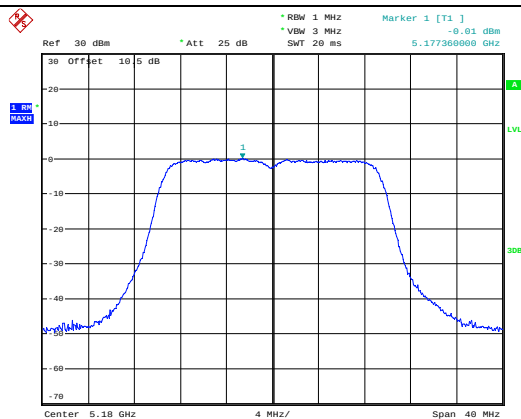
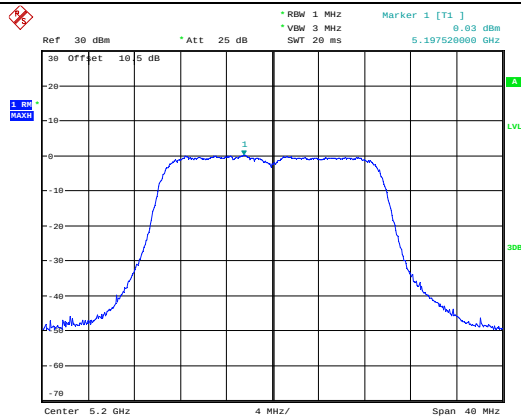
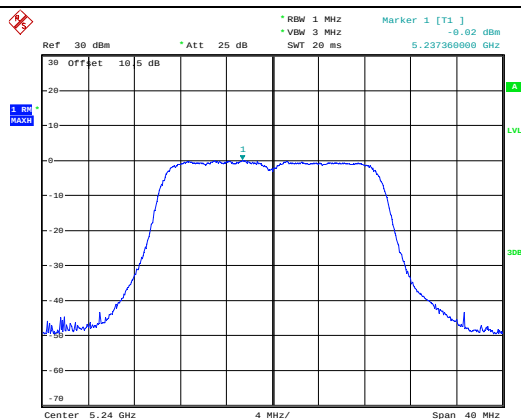
Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/500kHz)			
		Chain 0	Chain 1	Total	Limit
802.11a	5745	-1.55	-0.93	/	30
	5785	-1.56	-1.13	/	30
	5825	-2.05	-1.55	/	30
802.11n ht20	5745	-2.25	-1.49	1.16	30
	5785	-2.02	-1.49	1.26	30
	5825	-2.41	-1.8	0.92	30
802.11n ht40	5755	-5.21	-4.65	-1.91	30
	5795	-5.56	-4.71	-2.10	30
802.11ac vht80	5775	-7.74	-6.95	-4.32	30

Note:

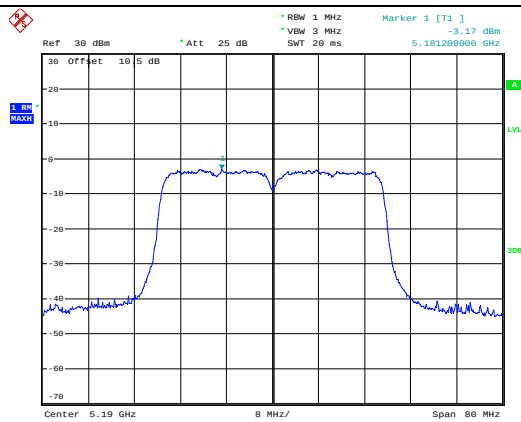
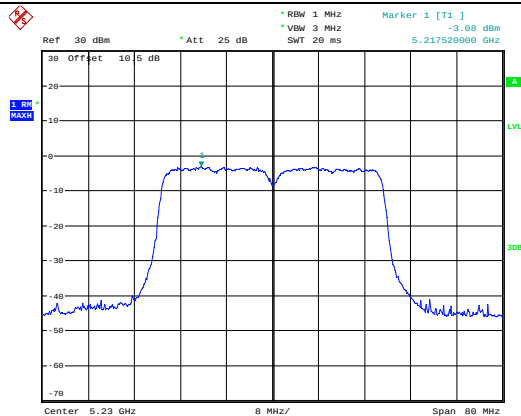
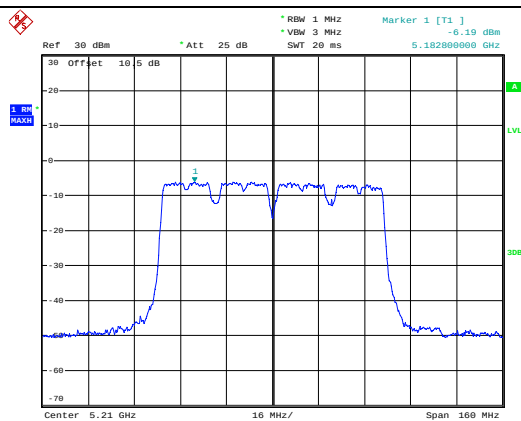
- The total Power Spectral Density = $10 \cdot \log [(10^{\text{Chain 0 Power Spectral Density}/10}) + (10^{\text{Chain 1 Power Spectral Density}/10})]$
- The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on IEEE 802.11 devices, the Array Gain = $10 \log (N_{\text{ANT}}/N_{\text{SS}})$ dB;
So, the Directional gain = $G_{\text{ANT MAX}} + 10 \log (N_{\text{ANT}}/N_{\text{SS}}) = 2.98 + 10 \log (2/1) = 5.98 \text{ dBi} < 6 \text{ dBi}$.
So, the power spectral density (PSD) limit does not need to be reduced.
- for the Duty cycle <98%, and duty cycle variations exceed $\pm 2\%$, KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 was performed to the PSD test.

Chain 0:
5150-5250MHz:

Maximum power spectral density

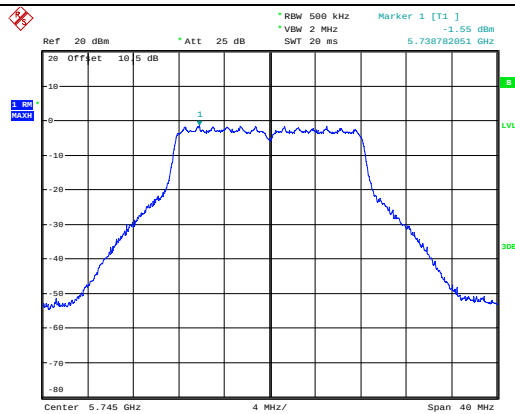
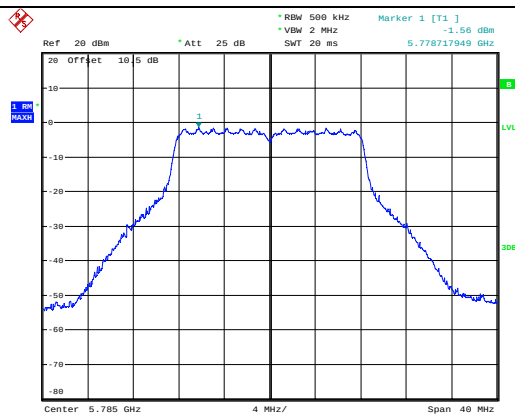
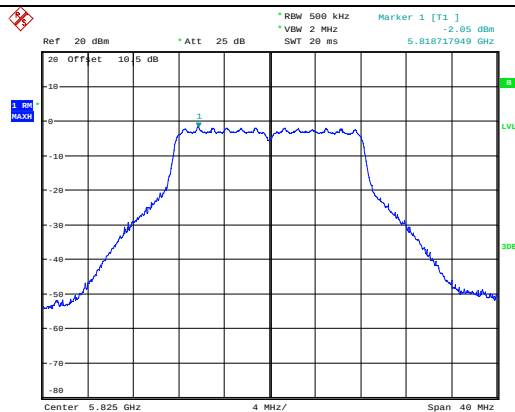
802.11n ht20
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:30:05802.11n ht20
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:29:39802.11n ht20
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:28:49

Maximum power spectral density

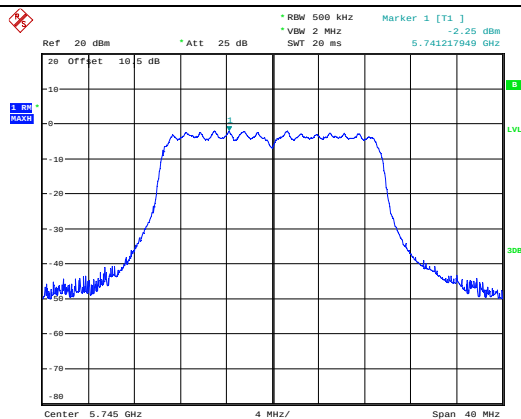
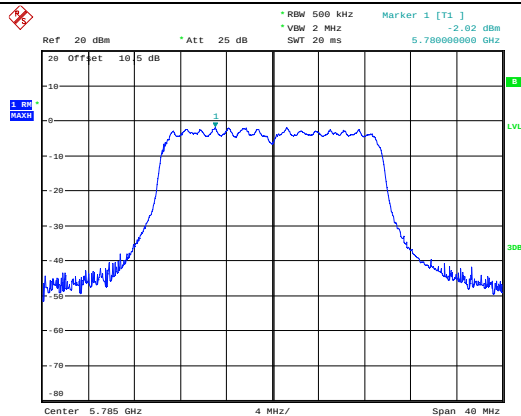
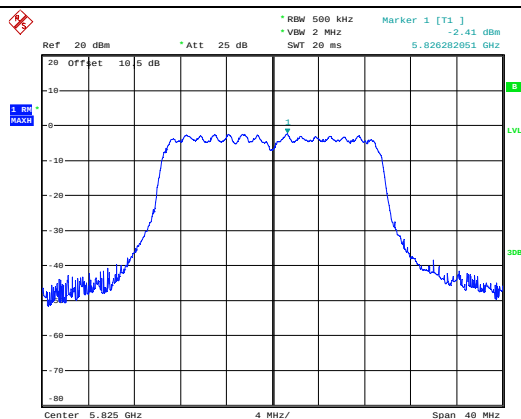
802.11n ht40
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:30:38802.11n ht40
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:31:03802.11ac ht80
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:31:39

5725-5850MHz

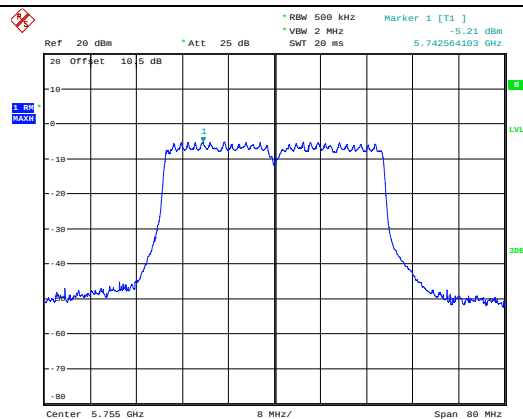
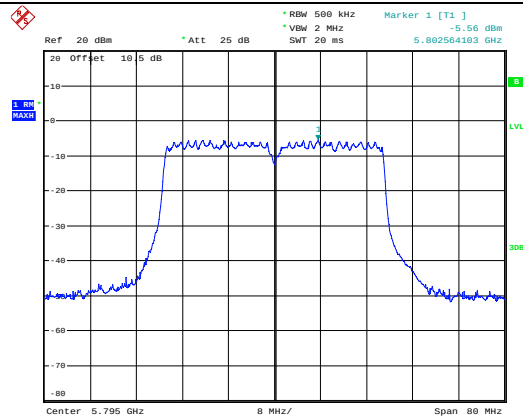
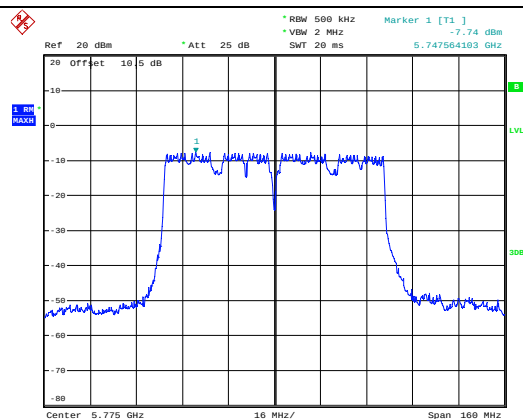
Maximum power spectral density

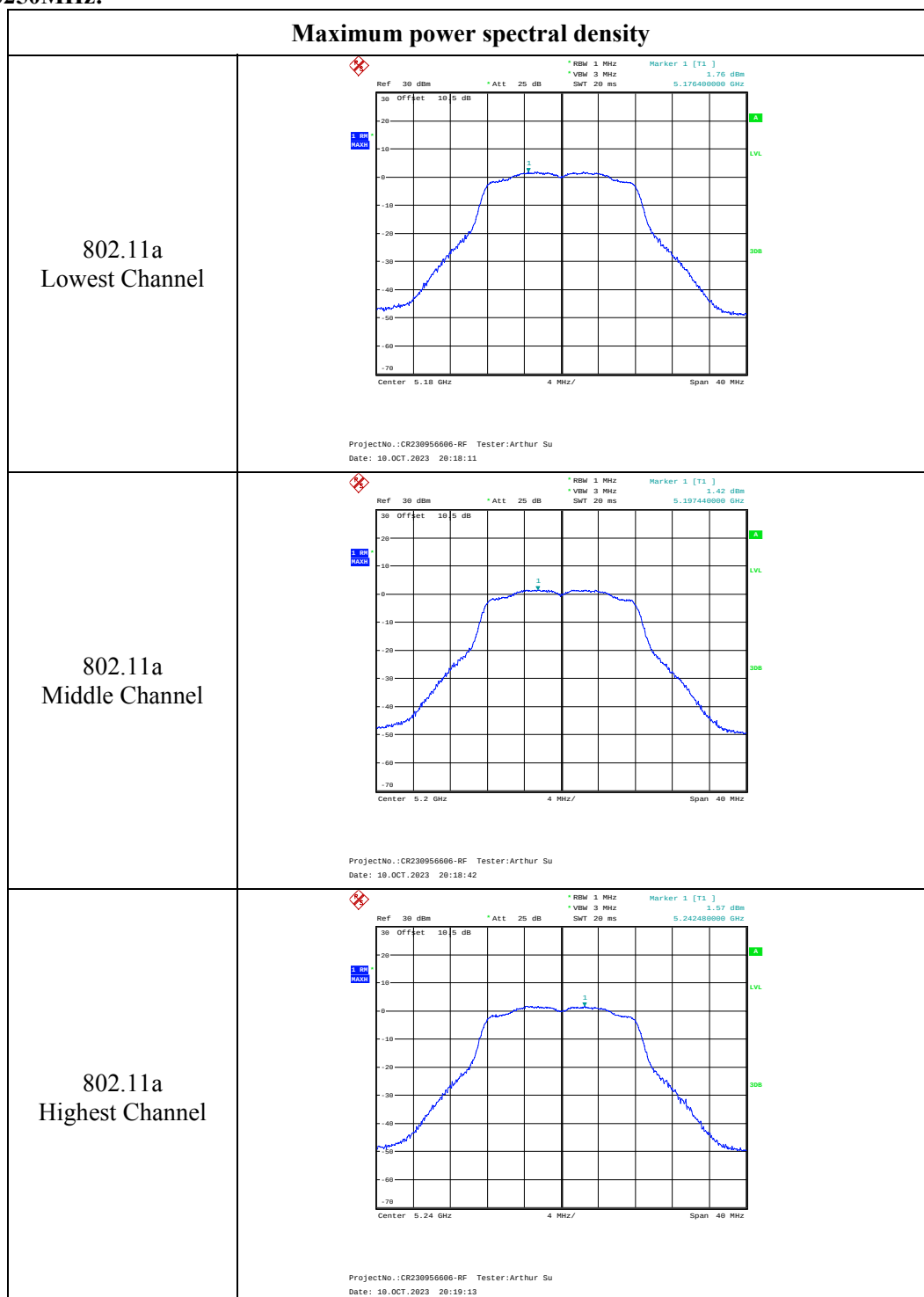
802.11a
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:33:10802.11a
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:32:38802.11a
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:31:55

Maximum power spectral density

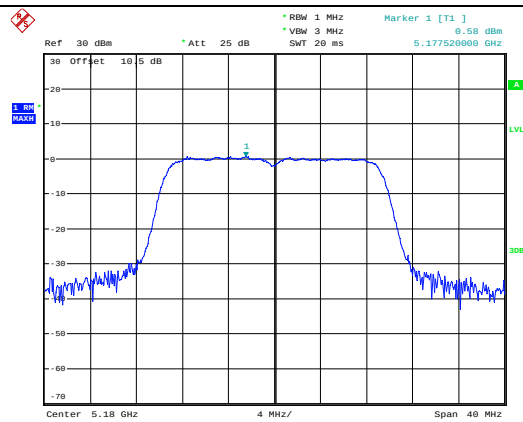
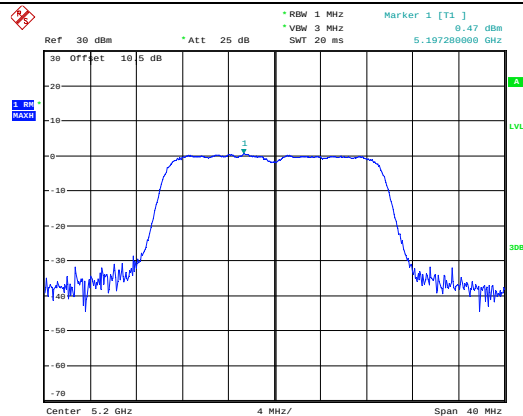
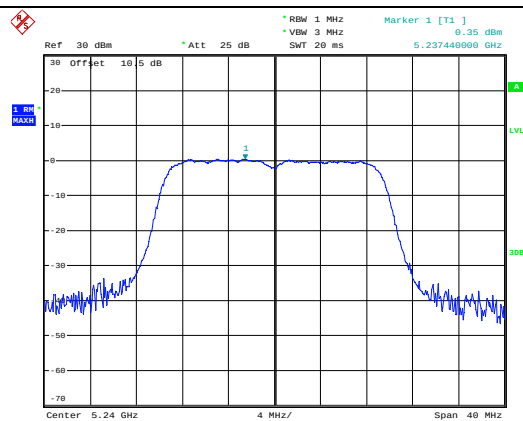
802.11n ht20
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:43:55802.11n ht20
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:46:32802.11n ht20
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:49:19

Maximum power spectral density

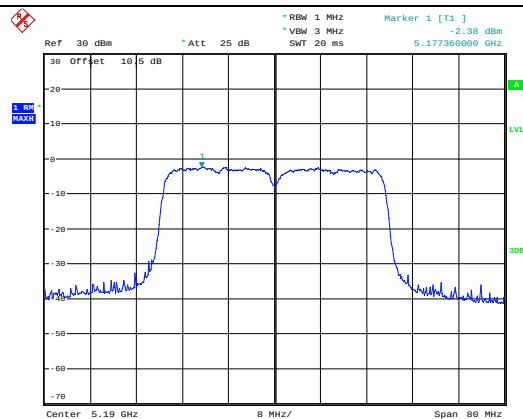
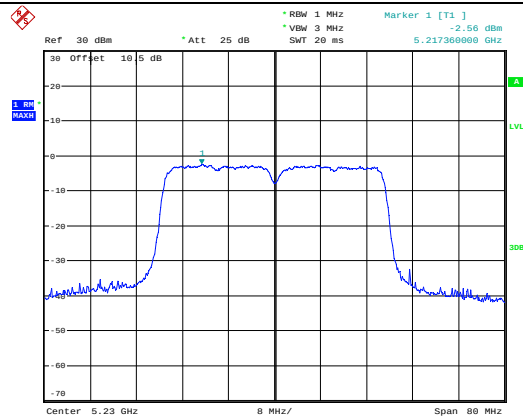
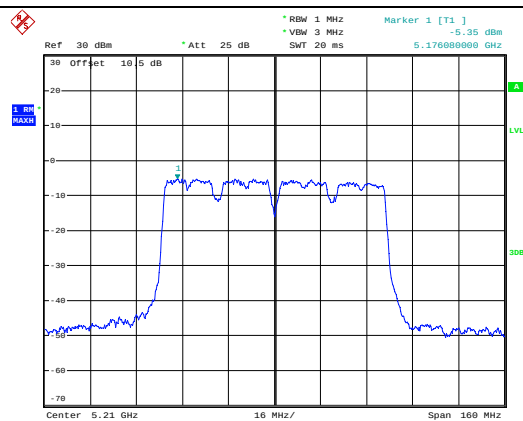
802.11n ht40
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:57:02802.11n ht40
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 19:59:52802.11ac ht80
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:05:59

Chain 1:
5150-5250MHz:

Maximum power spectral density

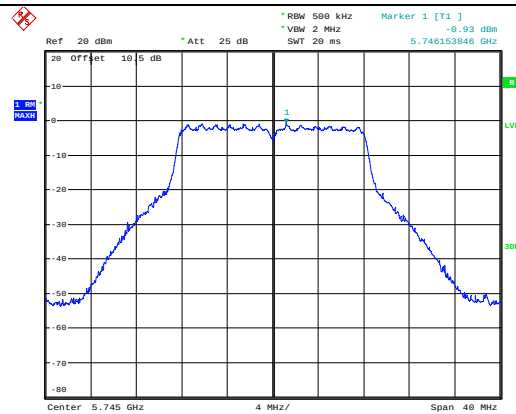
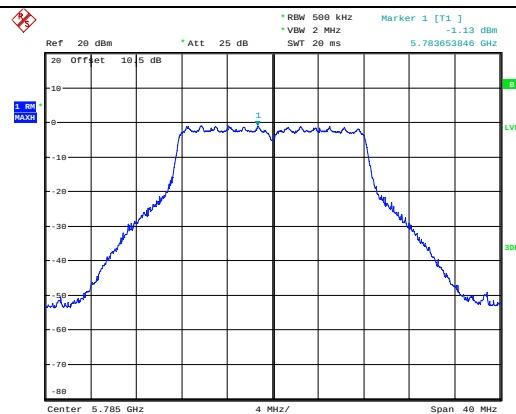
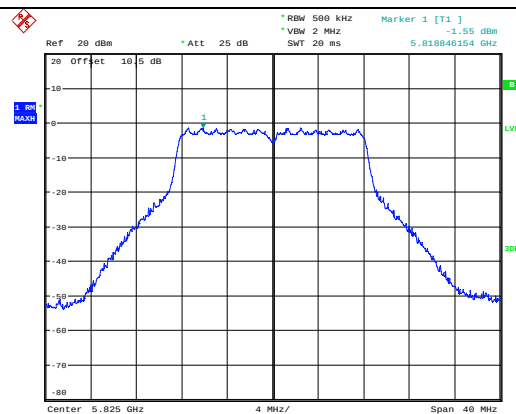
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Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:13:31802.11n ht20
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:14:05802.11n ht20
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:14:36

Maximum power spectral density

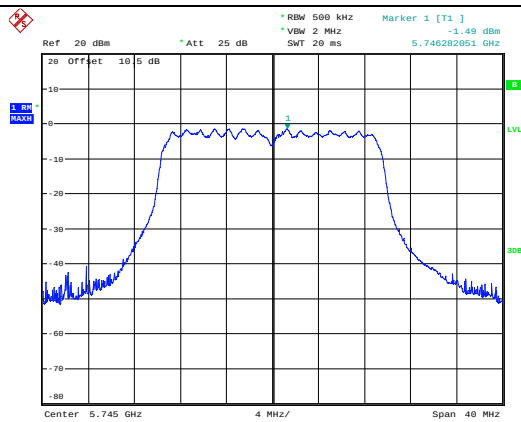
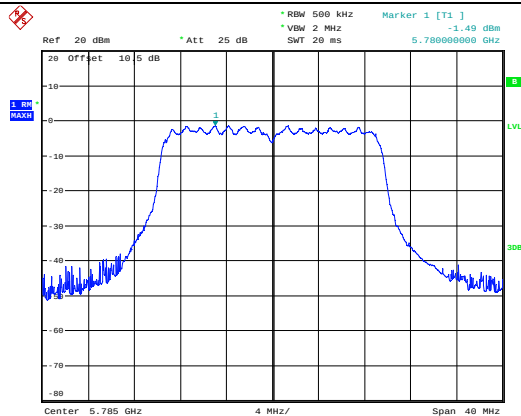
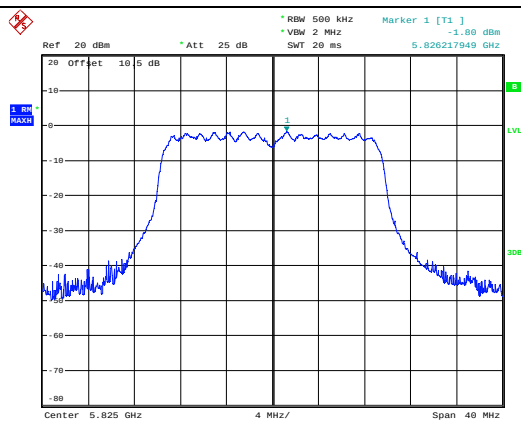
802.11n ht40
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:10:16802.11n ht40
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:10:41802.11ac ht80
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:09:28

5725-5850MHz

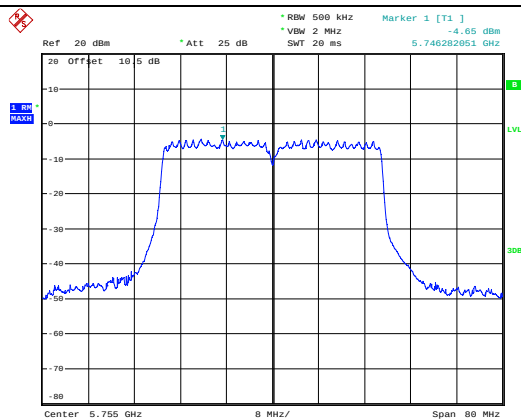
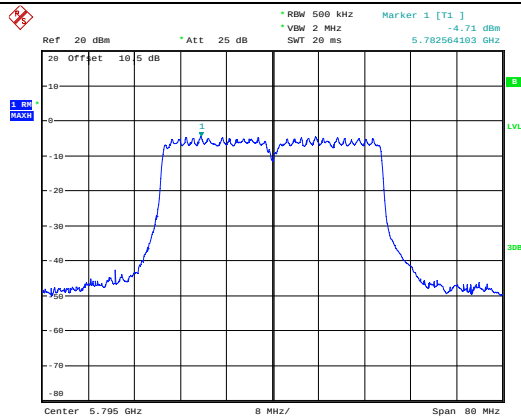
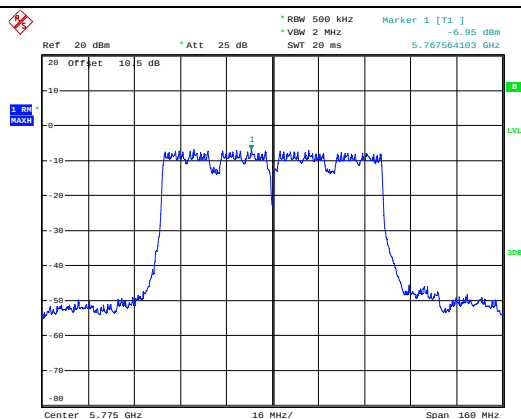
Maximum power spectral density

802.11a
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:20:01802.11a
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:20:39802.11a
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:21:18

Maximum power spectral density

802.11n ht20
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:15:28802.11n ht20
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:16:02802.11n ht20
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:16:55

Maximum power spectral density

802.11n ht40
Lowest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:12:03802.11n ht40
Highest ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:12:43802.11ac ht80
Middle ChannelProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 10.OCT.2023 20:08:32

4.6 Duty Cycle

Serial Number:	2BQ8-1	Test Date:	2023/11/24
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.5	Relative Humidity: (%)	54	ATM Pressure: (kPa)	101.1
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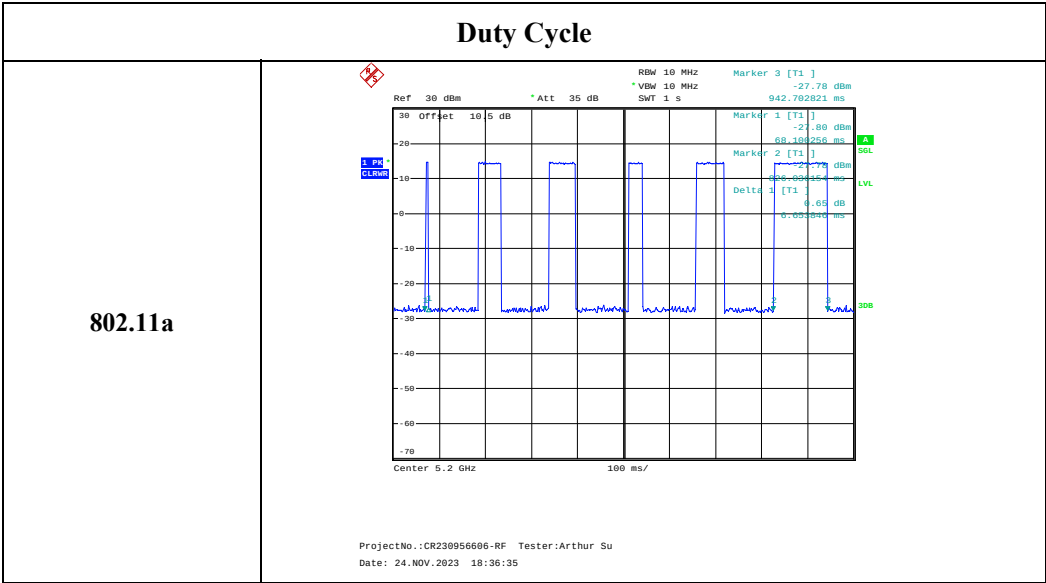
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023-03-31	2024-03-30
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A

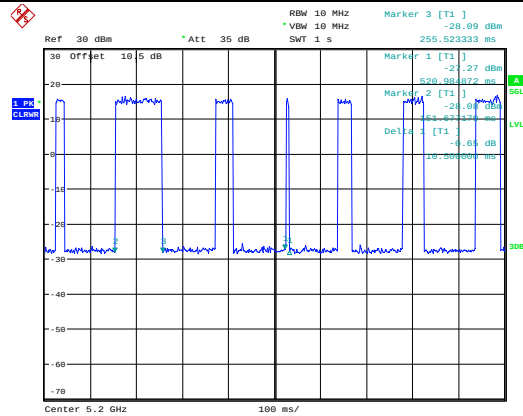
* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

Test Modes	Maximum Ton (ms)	Ton+off (ms)	Duty Cycle (%)	1/T (Hz)	Duty Cycle Factor (dB)
802.11a	6.654	/	Not constant	150	/
802.11n ht20	10.500	/	Not constant	95	/
802.11n ht40	13.705	/	Not constant	73	/
802.11ac vht80	15.308	/	Not constant	65	/

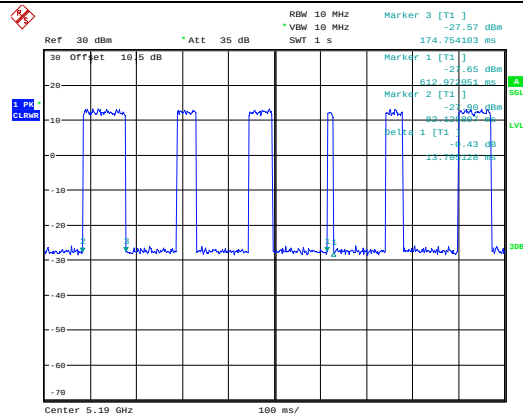


802.11n ht20



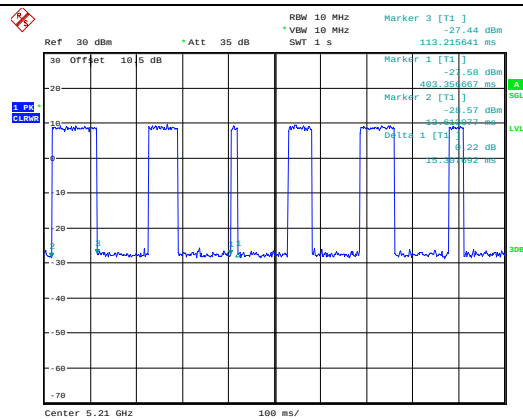
ProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 24.NOV.2023 18:39:36

802.11n ht40



ProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 24.NOV.2023 18:42:18

802.11ac vht80



ProjectNo.:CR230956606-RF Tester:Arthur Su
Date: 24.NOV.2023 18:44:07

5. MPE Based Exemption

5.1 Applicable Standard

According to §1.1307(b)(3)(i)

(C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

5.2 Measurement Result

Radio	Frequency (MHz)	$\lambda/2\pi$ (mm)	Distance (mm)	Exemption ERP (mW)	Maximum Conducted Power including Tune-up Tolerance (dBm)	Antenna Gain (dBi)	ERP		MPE-Based Exemption
							dBm	mW	
2.4GHz WLAN	2412-2462	19.81	200	768	23	2.83	23.68	233.35	Compliant
BLE	2402-2480	19.89	200	768	1	2.28	1.13	1.30	Compliant
BT 3.0	2402-2480	19.89	200	768	5	2.28	5.13	3.26	Compliant
5.2GHz WLAN	5180-5240	9.22	200	768	12.5	2.98	13.33	21.53	Compliant
5.8GHz WLAN	5745-5825	8.32	200	768	12.5	2.98	13.33	21.53	Compliant

Note:

1. The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.
2. WLAN and Bluetooth can't simultaneously transmit.
3. ERP= Maximum Conducted Power including Tune-up Tolerance + Antenna Gain -2.15.

Result: The device compliant the MPE-Based Exemption at 20cm distances.

6. EUT PHOTOGRAPHS

Please refer to the attachment CR230956606-EXP EUT EXTERNAL PHOTOGRAPHS and CR230956606-INP EUT INTERNAL PHOTOGRAPHS

7. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR230956606-00D-TSP TEST SETUP PHOTOGRAPHS.

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