NVLAP TESTING
NVLAP LAB CODE 600341-0

BACL Bay Area Compliance Labs Corp.

TEST REPORT

Applicant:	**8devices**
Address:	**FCC: Antakalnio 17 - 6 Vilnius Lithuania** **IC: Antakalnio g. 17-6 Vilnius Vilnius County LT-10312 Lithuania**
Product Name:	**Wireless Access Board**
FCC ID:	**Z9WMAN**
IC:	**11468A-MAN**
HVIN:	**KIT-100-02-4-CC**
Standard(s):	**47 CFR Part 15, Subpart C(15.247)** **RSS-247 Issue 3, August 2023** **RSS-Gen, Issue 5, February 2021 Amendment 2** **ANSI C63.10-2013** **KDB 558074 D01 15.247 Meas Guidance v05r02**
Report Number:	**2402U80231E-RF-00AA1**
Report Date:	**2024/11/9**

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

Reviewed By: Gavin Xu	**Approved By:** Ivan Cao
Title: RF Engineer	Title: EMC Manager

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CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2402U80231E-RF-00AA1	Original Report	2024/11/9

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Wireless Access Board
EUT Model:	KIT-100-02-4-CC
Operation Frequency:	2412-2462 MHz(802.11b/g/n ht20/ax he20), 2422-2452 MHz(802.11n ht40/ax he40)
Maximum Peak Output Power (Conducted):	29.24dBm(802.11b/g/n/ax)
Modulation Type:	802.11b:DSSS-DBPSK, DQPSK, CCK 802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM 802.11ax: OFDMA- BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Rated Input Voltage:	DC 3.3V from Host
Serial Number:	2MQ4-1 (For RF Conducted Test) 2MQ4-2 (For RE/CE Test)
EUT Received Date:	2024/6/8
EUT Received Status:	Good

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
/	/	/	/

1.3 Antenna Information Detail▲

Antenna	Antenna Manufacturer	Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Chain 0& Chain 1	ABRACON	PCB	50	2.4~2.4835GHz	2.1dBi
Note: The system supports 2T2R at 802.11n /ax modes. Per KDB 662911 D01 Multiple Transmitter Output v02r01: For power measurements: Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$ directional gain=2.1 dBi. For power spectral density (PSD) measurements: Array Gain = 10 log(N_{ANT}/N_{SS}) dB. directional gain=2.1dBi+3dB=5.1dBi.					
The design of compliance with §15.203:					
☐ Unit uses a permanently attached antenna.					
☒ Unit uses a unique coupling to the intentional radiator.					
☐ Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.					

1.4 Equipment Modifications

No modifications are made to the EUT during all test items.

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Test Items	Result
§15.207(a) RSS-Gen Clause 8.8	AC Line Conducted Emissions	Compliant
§15.205, §15.209, §15.247(d) RSS-Gen Clause 8.10	Spurious Emissions	Compliant
§15.247 (a)(2) RSS-247 Clause 5.2 a)	Minimum 6 dB Bandwidth	Note*
RSS-Gen Clause 6.7	99% Occupied Bandwidth	Note*
§15.247(b)(3) RSS-247 Clause 5.4 d)	Maximum Conducted Output Power	Reporting
§15.247(d) RSS-247 Clause5.5	100 kHz Bandwidth Of Frequency Band Edge	Note*
§15.247(e) RSS-247 Clause5.2 b)	Power Spectral Density	Note*
FCC §15.203 RSS-Gen Clause 6.8	Antenna Requirement	Compliant
Note 1: For AC line conducted emissions, the maximum output power mode and channel was tested. Note 2: For Radiated Spurious Emissions 9kHz~ 1GHz and 18-25GHz, the maximum output power mode and channel was tested. Note*: Base on the Description of change, the change do not affect the test results, the test results please refer to report No.: CR22010029-00A that was issued by China Certification ICT Co., Ltd (Dongguan) on 2022/12/26.		

Description of change:

The device once certified, please refer to report No.: CR22010029-00A▲, issued by China Certification ICT Co., Ltd (Dongguan), which was provided by the manufacturer▲. Differences between the previous device and the current one are stated and guaranteed by the manufacturer, as following:

1. Changed the model name to **KIT-100-02-4-CC.**
2. Changed the product name to **Wireless Access Board.**
3. Change the memory chipset.
4. Software open 5250-5350MHz and 5470-5725MHz, meanwhile open Master mechanism, and the power is constant.
5. Change Whip antenna to PCB antenna.
6. Delete Chip Antenna.
7. Change the RF Chip model to QCN5152 (RF characteristics don't affect).
8. Changed the HVIN to KIT-100-02-4-CC.
9. Changed the FVIN to v1.2.2.

The Bay Area Compliance Laboratories Corp. (Dongguan) is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report.

3. DESCRIPTION OF TEST CONFIGURATION

3.1 Operation Frequency Detail

For 802.11b/g/n ht20/ax he20:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	**2412**	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	**2462**
6	**2437**	/	/

For 802.11n ht40/ax he40:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	**2422**	7	2442
4	2427	8	2447
5	2432	9	**2452**
6	**2437**	/	/

Note: The above frequencies in bold were performed the test.

3.2 EUT Operation Condition

The EUT was configured for testing in Engineering Mode, which was provided by the manufacturer. The EUT configuration as below:

EUT Exercise Software:	QRCT4

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

Test Modes	Test Channels	Test Frequency	Data rate	Power Level Setting	
				Chain 0	Chain 1
802.11b	Lowest	2412	1Mbps	18	18
	Middle	2437	1Mbps	18	18
	Highest	2462	1Mbps	18	18
802.11g	Lowest	2412	6Mbps	21	21
	Middle	2437	6Mbps	22	22
	Highest	2462	6Mbps	22	22
802.11n ht20	Lowest	2412	MCS8	21	21
	Middle	2437	MCS8	22	22
	Highest	2462	MCS8	22	22
802.11n ht40	Lowest	2422	MCS8	21	21
	Middle	2437	MCS8	22	22
	Highest	2452	MCS8	22	22

Test Modes	Test Frequency	Data rate	RU Config.	Power Level Setting	
				Chain 0	Chain 1
802.11ax he20	2412	MCS8	26/0	15	15
			52/37	15	15
			106/53	18	18
			242/61	22	22
	2437	MCS8	26/0	14	14
			52/37	15	15
			106/53	17	17
			242/61	20	20
	2462	MCS8	26/8	14	14
			52/40	15	15
			106/54	17	17
			242/61	20	20
802.11ax he40	2422	MCS8	26/0	10	10
			52/37	11	11
			106/53	13	13
			242/61	15	15
			484/65	18	18
	2437	MCS8	26/0	10	10
			52/37	11	11
			106/53	13	13
			242/61	15	15
			484/65	18	18
	2452	MCS8	26/8	10	10
			52/40	10	10
			106/54	12	12
			242/61	15	15
			484/65	18	18

Note:
1. 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.
2. The device supports SISO in all modes, and MIMO 2T2R in 802.11n/ax modes, per pretest, 2T2R mode was the worst mode and reported for 802.11n/ax modes.
3. The device supports part of RU.

3.3 Support Equipment List and Details

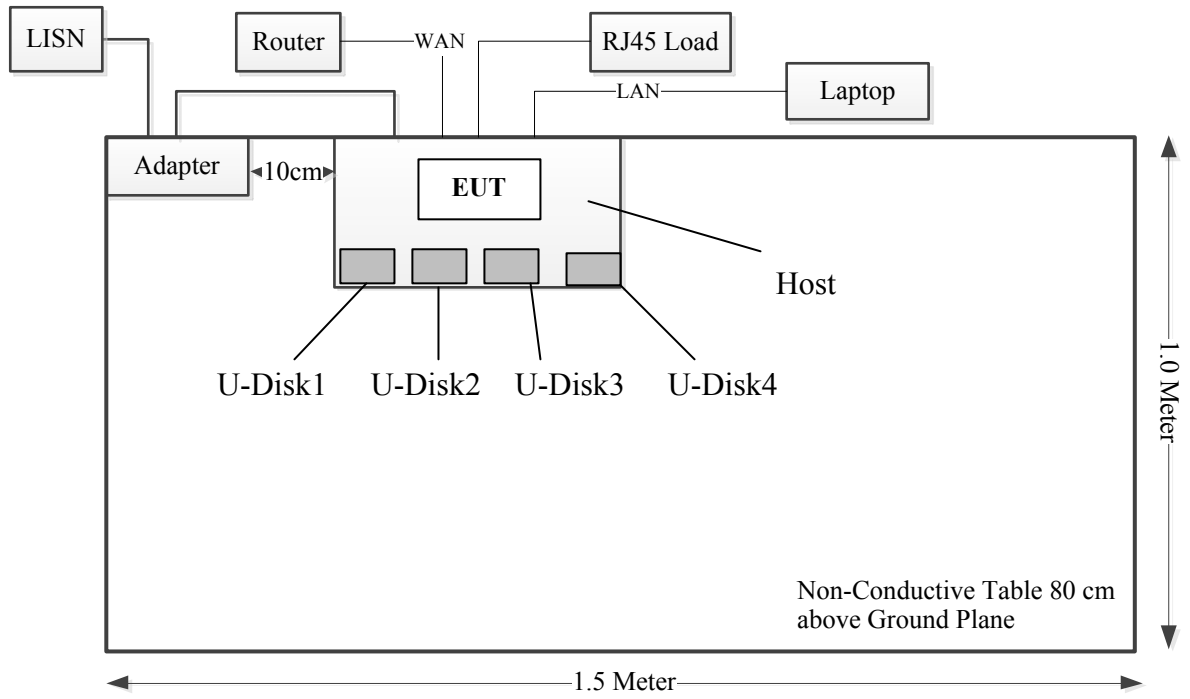
Manufacturer	Description	Model	Serial Number
ULLpower	Adapter	SAW30-240-1000	SAW30-240-1000
Lenovo	Laptop	G510	CB30920865
Kingston	U-Disk1	32G	EMZBUD21103001
SANDisk	U-Disk2	16G	BL201026115 B
SANDisk	U-Disk3	16G	BL201026331
SANDisk	U-Disk4	16G	BL201111386N
Bacl	RJ45 Load	RJ45X8	F-EM-PHRJ45X8002
ZIONCOM	Router	MB-R210-00	EMZBWR21103002
8devices	Host	KIT_100	2MQ4-4

3.4 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
DC Cable	No	No	1	Adapter	Host
RJ45 Cable	No	No	10	Router	Host
RJ45 Cable	No	No	10	Laptop	Host
RJ45 Cable	No	No	10	RJ45 Load	Host

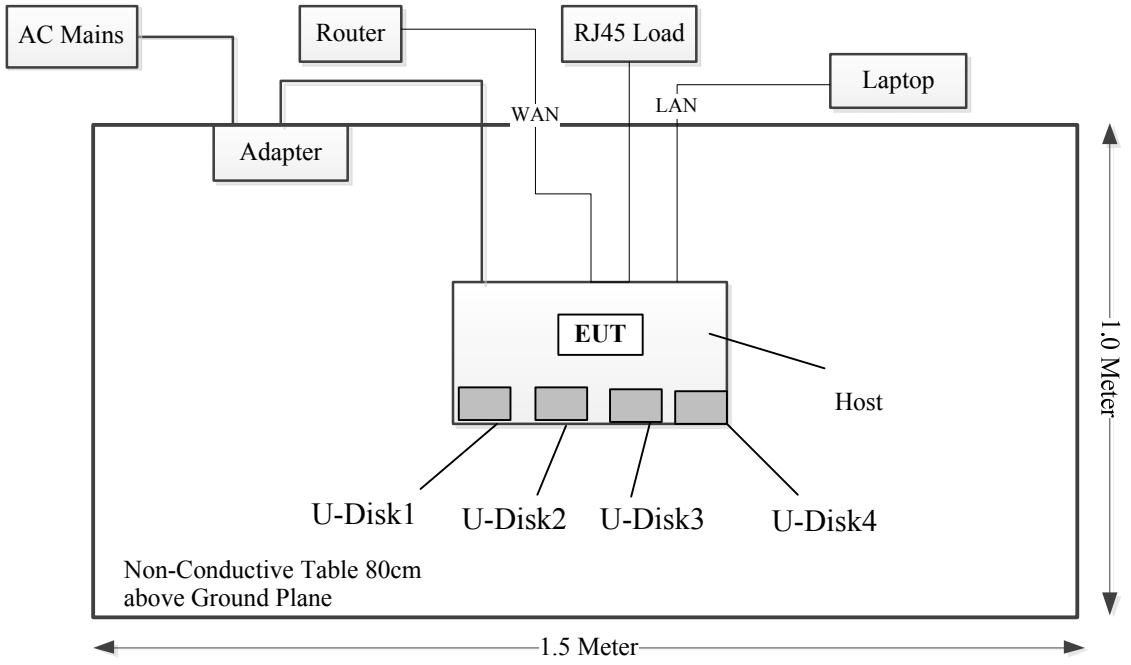
3.5 Block Diagram of Test Setup

AC line conducted emissions:

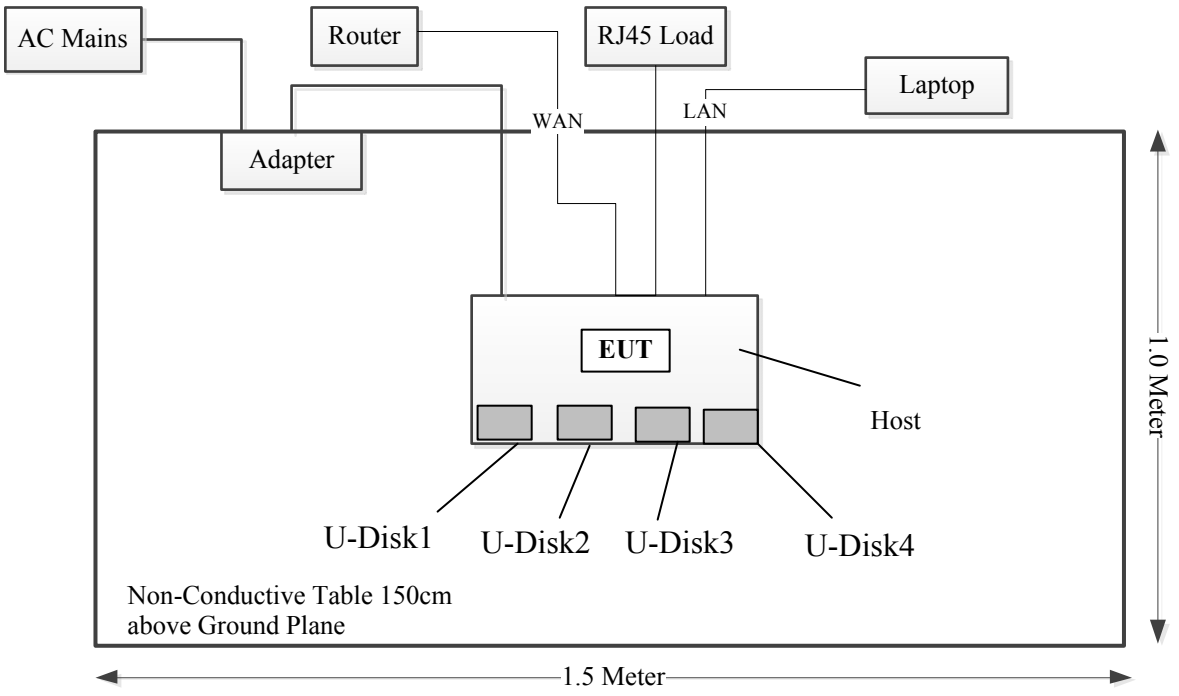


Spurious Emissions:

Below 1GHz:



Above 1GHz:


AC Mains
Router
RJ45 Load
Laptop
WAN
LAN
Adapter
EUT
Host
1.0 Meter
U-Disk1
U-Disk2
U-Disk3
U-Disk4
Non-Conductive Table 150cm
above Ground Plane
1.5 Meter

3.6 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia 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. : 829273, the FCC Designation No. : CN5044.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

3.7 Measurement Uncertainty

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

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	9kHz~30MHz: 3.3dB, 30MHz~200MHz: 4.55 dB, 200MHz~1GHz: 5.92 dB, 1GHz~6GHz: 4.98 dB, 6GHz~18GHz: 5.89 dB, 18GHz~26.5GHz:5.47 dB, 26.5GHz~40GHz:5.63 dB
Unwanted Emissions, conducted	±2.47 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	3.11 dB (150 kHz to 30 MHz)

4. REQUIREMENTS AND TEST PROCEDURES

4.1 AC Line Conducted Emissions

4.1.1 Applicable Standard

FCC§15.207(a).

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

	Conducted limit (dBμV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

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

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

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

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

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

RSS-Gen Clause 8.8

Unless stated otherwise in the applicable RSS, for radio apparatus that are designed to be connected to the public utility AC power network, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the range 150 kHz to 30 MHz shall not exceed the limits in table 4, as measured using a 50 µH / 50 Ω line impedance stabilization network. This requirement applies for the radio frequency voltage measured between each power line and the ground terminal of each AC power-line mains cable of the EUT.
For an EUT that connects to the AC power lines indirectly, through another device, the requirement for compliance with the limits in table 4 shall apply at the terminals of the AC power-line mains cable of a representative support device, while it provides power to the EUT. The lower limit applies at the boundary between the frequency ranges. The device used to power the EUT shall be representative of typical applications.

Table 4 – AC power-line conducted emissions limits

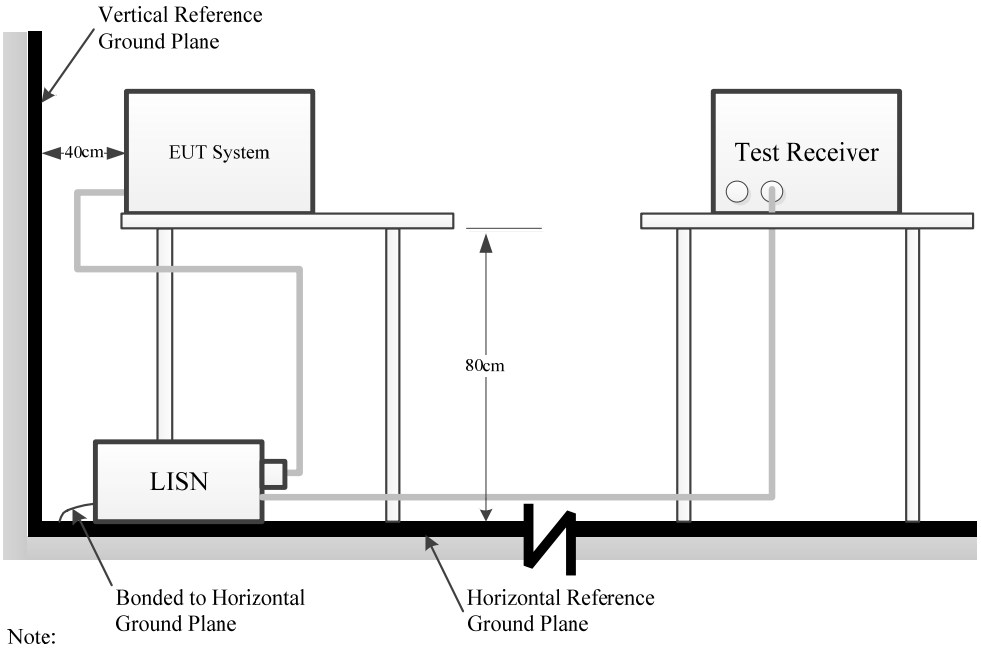
Frequency (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56[1]	56 to 46[1]
0.5 – 5	56	46
5 – 30	60	50

Note 1: The level decreases linearly with the logarithm of the frequency.

For an EUT with a permanent or detachable antenna operating between 150 kHz and 30 MHz, the AC power-line conducted emissions must be measured using the following configurations:
(a) Perform the AC power-line conducted emissions test with the antenna connected to determine compliance with the limits of table 4 outside the transmitter's fundamental emission band.

(b) Retest with a dummy load instead of the antenna to determine compliance with the limits of table 4 within the transmitter's fundamental emission band. For a detachable antenna, remove the antenna and connect a suitable dummy load to the antenna connector. For a permanent antenna, remove the antenna and terminate the RF output with a dummy load or network that simulates the antenna in the fundamental frequency band.

4.1.2 EUT Setup



Note:
1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at least 80 cm from other units and oter 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 ,RSS-Gen 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.

4.1.3 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

4.1.4 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.

4.1.5 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

4.1.6 Test Result

Please refer to section 5.1.

4.2 Radiation Spurious Emissions

4.2.1 Applicable Standard

FCC §15.247 (d);

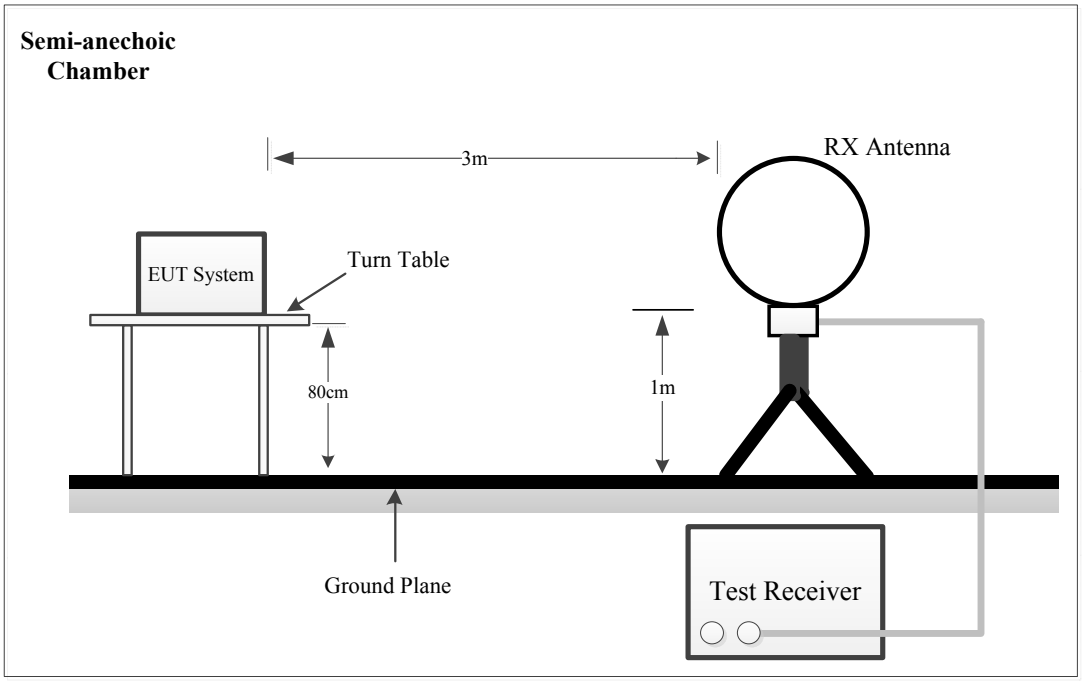
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

RSS-247 Clause 5.5

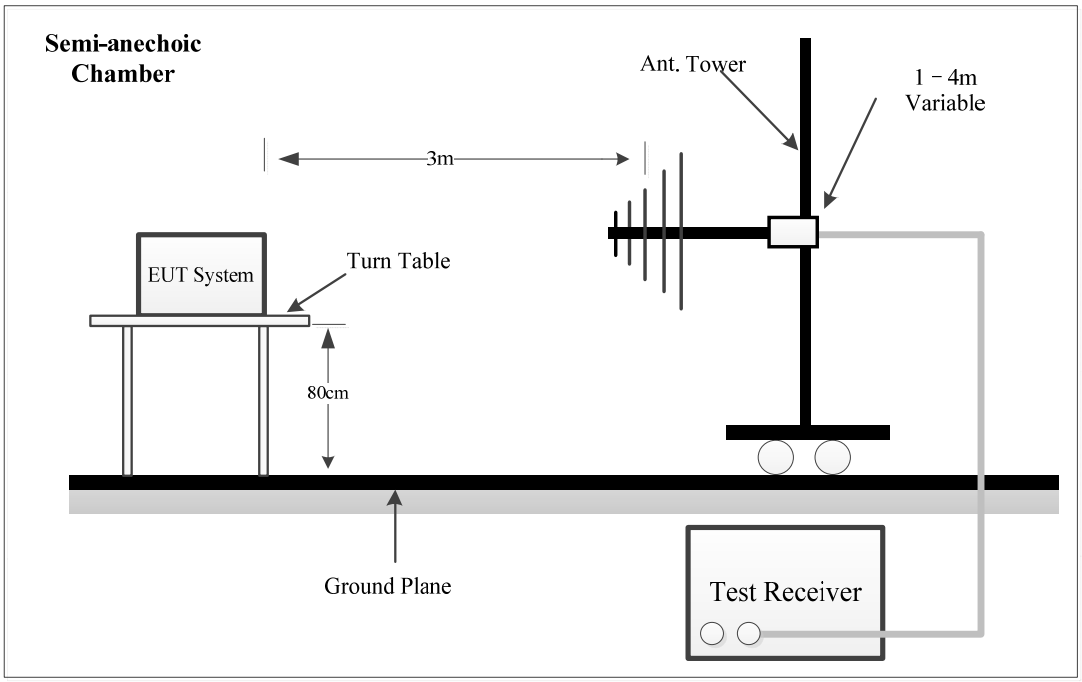
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required

4.2.2 EUT Setup

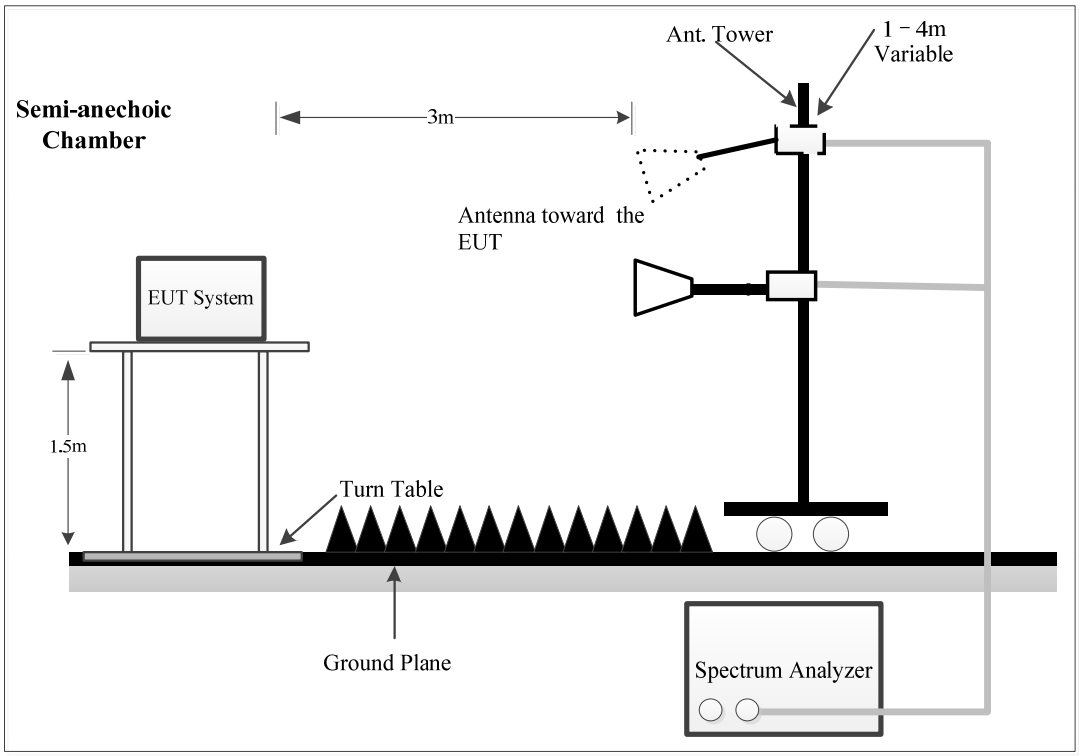
9kHz~30MHz:



30MHz~1GHz:



Above 1GHz:



The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247,RSS-247,RSS-Gen 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.

4.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 25 GHz.

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

9kHz-1000MHz:

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

1GHz- 25GHz:
Pre-scan:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>98%	1MHz	5kHz
	<98%	1MHz	1/T, not less than 5kHz

Final measurement for emission identified during the pre-scan:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>98%	1MHz	10 Hz
	<98%	1MHz	1/T

Note: T is minimum transmission duration

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

4.2.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

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

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

4.2.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = Antenna Factor + Cable Loss- Amplifier Gain

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

Margin = Limit – Result

For the spurious emission below 30MHz, the limit was convert from dBμA/m to dBμV/m by adding 51.5 dB.

4.2.6 Test Result

Please refer to section 5.2.

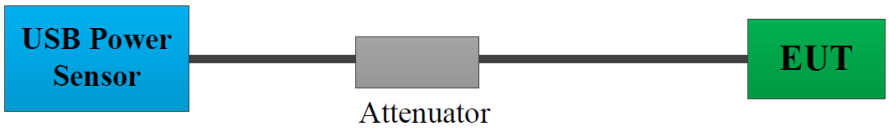
4.3 Maximum Conducted Output Power

4.3.1 Applicable Standard

FCC §15.247 (b)(3)
For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

RSS-247 Clause 5.4 d
For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

4.3.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The cable loss of this RF cable was offset into the setting of test equipment, which was provided by manufacturer▲.

4.3.3 Test Procedure

According to ANSI C63.10-2013 Section 11.9.1.3

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

a) Set the EUT in transmitting mode.
b) Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to test equipment.
c) Add a correction factor to the display.
d) Set the power meter to test peak output power, record the result.

According to ANSI C63.10-2013 Section 11.9.2.3.2

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

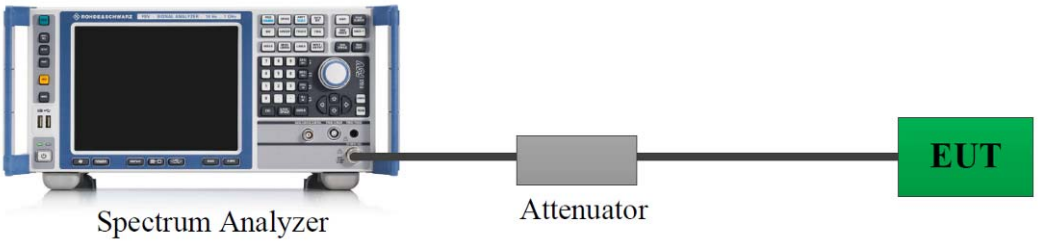
Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter,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

4.3.4 Test Result

Please refer to section 5.3.

4.4 Duty Cycle

4.4.1 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer.

4.4.2 Test Procedure

According to ANSI C63.10-2013 Section 11.6

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
1) Set the center frequency of the instrument to the center frequency of the transmission.
2) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.
3) Set VBW ≥ RBW. Set detector = peak or average.
4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if T ≤ 16.7 μs.)

4.4.3 Judgment

Report Only. Please refer to section 5.4.

4.5 Antenna Requirement

4.5.1 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.

RSS-Gen Clause 6.8

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).
When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.
The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.
For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:
This radio transmitter [enter the device's ISED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

4.5.2 Judgment

Compliant. Please refer to the Antenna Information detail in Section 1.3.

5. Test DATA AND RESULTS

5.1 AC Line Conducted Emissions

Serial Number:	2MQ4-2	Test Date:	2024/6/24
Test Site:	CE	Test Mode:	Transmitting
Tester:	Wright Lai	Test Result:	Pass

Environmental Conditions:

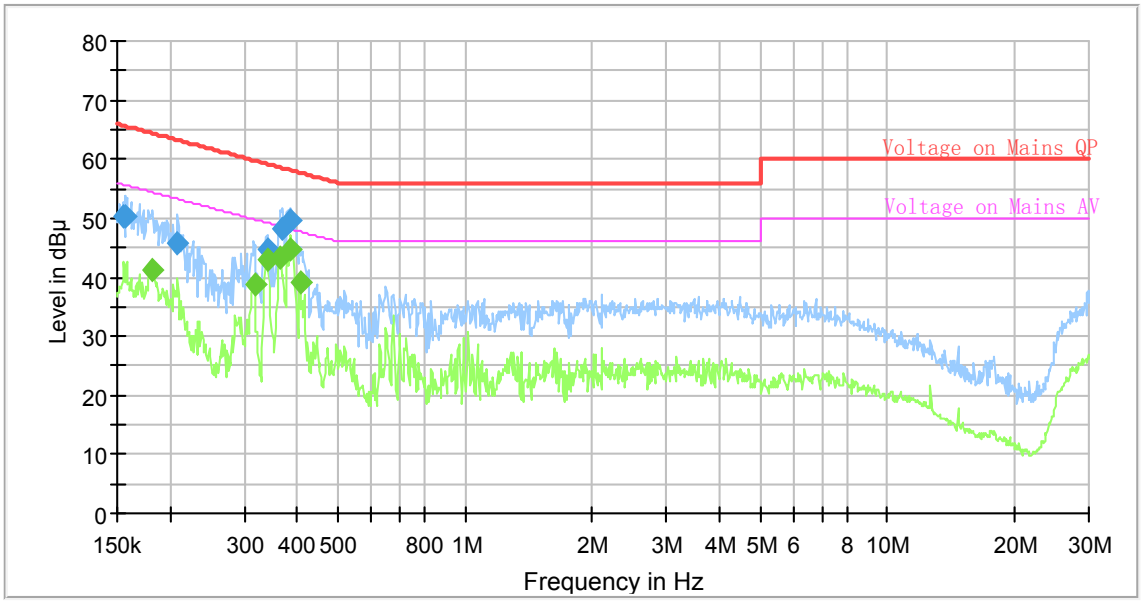
Temperature: (℃)	25.2	Relative Humidity: (%)	62	ATM Pressure: (kPa)	100.7

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101614	2023/10/18	2024/10/17
MICRO-COAX	Coaxial Cable	C-NJNJ-50	C-0200-01	2023/9/5	2024/9/4
R&S	EMI Test Receiver	ESCI	100035	2023/8/18	2024/8/17
R&S	Test Software	EMC32	V9.10.00	N/A	N/A

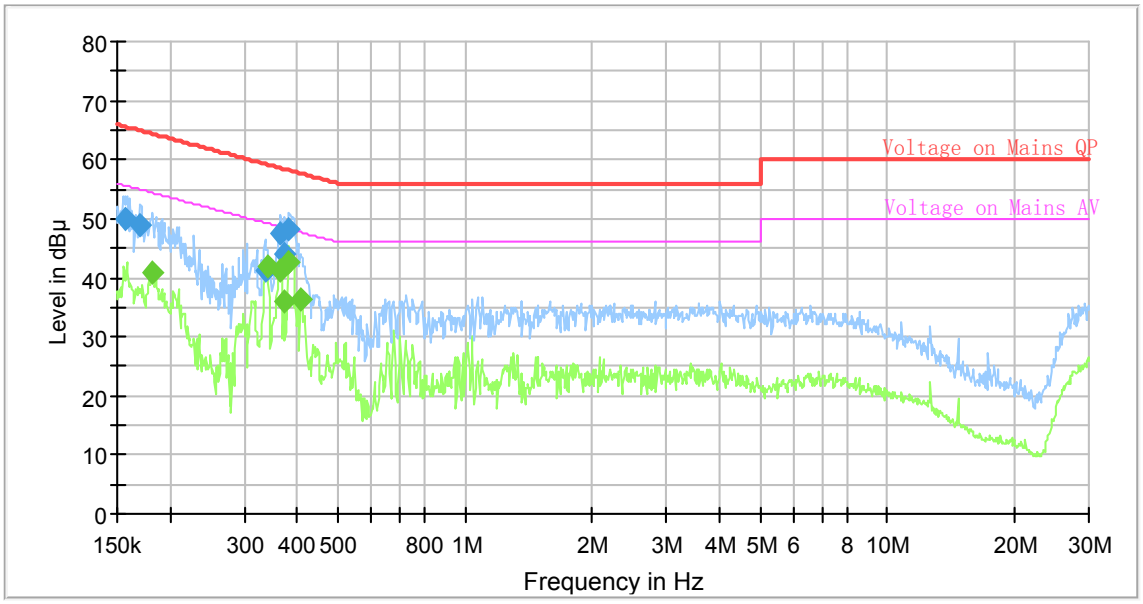
** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Project No:	2402U80231E-RF-A1
Test Engineer:	Wright Lai
Test Date:	2024-6-24
Port:	L
Test Mode:	Transmitting
Power Source:	AC 120V/60Hz
Note:	802.11n ht40 Middle channel



Frequency (MHz)	QuasiPeak (dB µ V)	Average (dB µ V)	Limit (dB µ V)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.155329	50.33	---	65.71	15.38	9.000	L1	10.8
0.156887	50.37	---	65.63	15.26	9.000	L1	10.8
0.181302	---	41.36	54.43	13.07	9.000	L1	10.8
0.208474	45.60	---	63.27	17.67	9.000	L1	10.8
0.316957	---	38.69	49.79	11.10	9.000	L1	10.8
0.339880	---	42.86	49.21	6.35	9.000	L1	10.8
0.339880	44.80	---	59.21	14.41	9.000	L1	10.8
0.364460	---	43.38	48.63	5.25	9.000	L1	10.8
0.369955	48.30	---	58.50	10.20	9.000	L1	10.8
0.386939	---	44.87	48.13	3.26	9.000	L1	10.8
0.386939	49.49	---	58.13	8.64	9.000	L1	10.8
0.406728	---	39.26	47.71	8.45	9.000	L1	10.8

Project No:	2402U80231E-RF-A1
Test Engineer:	Wright Lai
Test Date:	2024-6-24
Port:	N
Test Mode:	Transmitting
Power Source:	AC 120V/60Hz
Note:	802.11n ht40 Middle channel



Frequency (MHz)	QuasiPeak (dB µ V)	Average (dB µ V)	Limit (dB µ V)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.156106	50.09	---	65.67	15.58	9.000	N	10.9
0.169919	48.87	---	64.96	16.09	9.000	N	10.9
0.182208	---	41.04	54.38	13.34	9.000	N	10.9
0.336506	41.16	---	59.29	18.13	9.000	N	10.8
0.339880	---	41.91	49.21	7.30	9.000	N	10.8
0.366283	---	41.16	48.58	7.42	9.000	N	10.8
0.366283	47.59	---	58.58	10.99	9.000	N	10.8
0.371804	---	36.07	48.46	12.39	9.000	N	10.8
0.371804	44.09	---	58.46	14.37	9.000	N	10.8
0.383099	---	42.55	48.21	5.66	9.000	N	10.8
0.383099	48.16	---	58.21	10.05	9.000	N	10.8
0.408761	---	36.34	47.67	11.33	9.000	N	10.8

5.2 Radiation Spurious Emissions

1)9kHz - 1GHz

Serial Number:	2MQ4-2	Test Date:	2024/6/16
Test Site:	Chamber10m	Test Mode:	Transmitting
Tester:	Leesin Xiang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.8	Relative Humidity: (%)	61	ATM Pressure: (kPa)	100

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EMCO	Passive Loop Antenna	6512	9706-1206	2023/10/21	2026/10/20
Sunol Sciences	Hybrid Antenna	JB3	A060611-1	2023/9/6	2026/9/5
Narda	Coaxial Attenuator	779-6dB	04269	2023/9/6	2026/9/5
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2023/8/1	2024/7/31
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2023/8/1	2024/7/31
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2023/8/1	2024/7/31
Sonoma	Amplifier	310N	185914	2023/8/1	2024/7/31
R&S	EMI Test Receiver	ESCI	100224	2023/8/18	2024/8/17
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

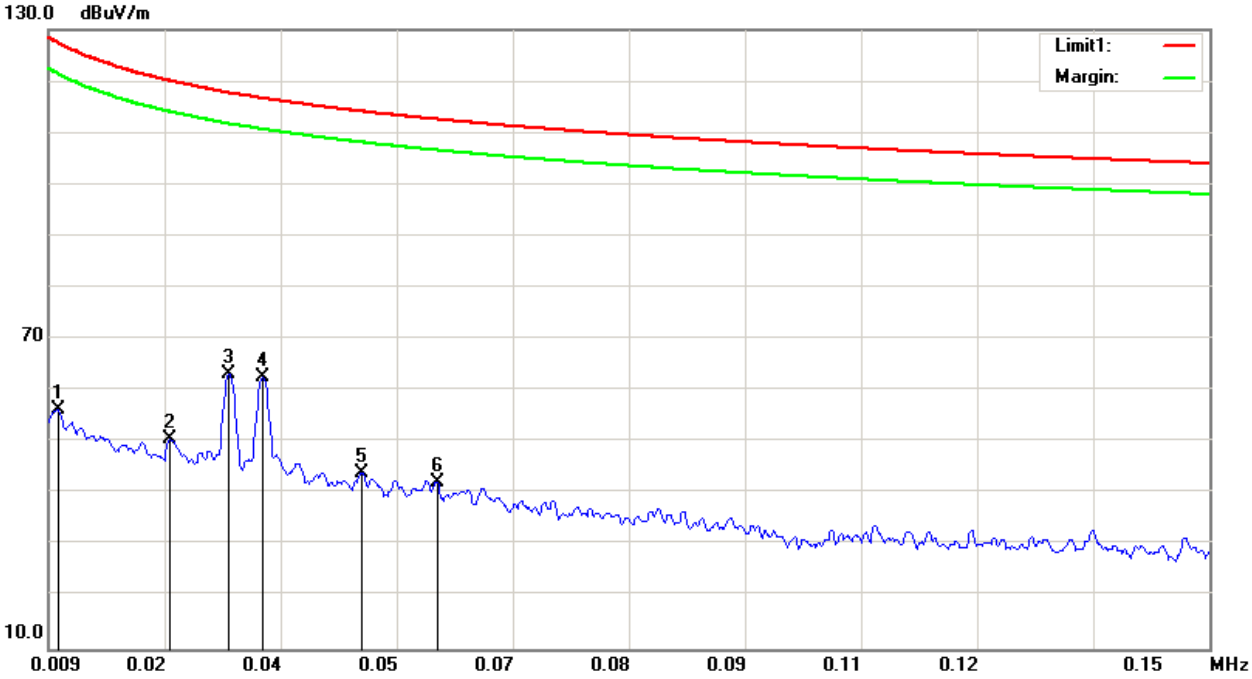
Test Data:

Please refer to the below table and plots.
After pre-scan in the X, Y and Z axes of orientation, the worst case is refer to table and plots.

9kHz~30MHz

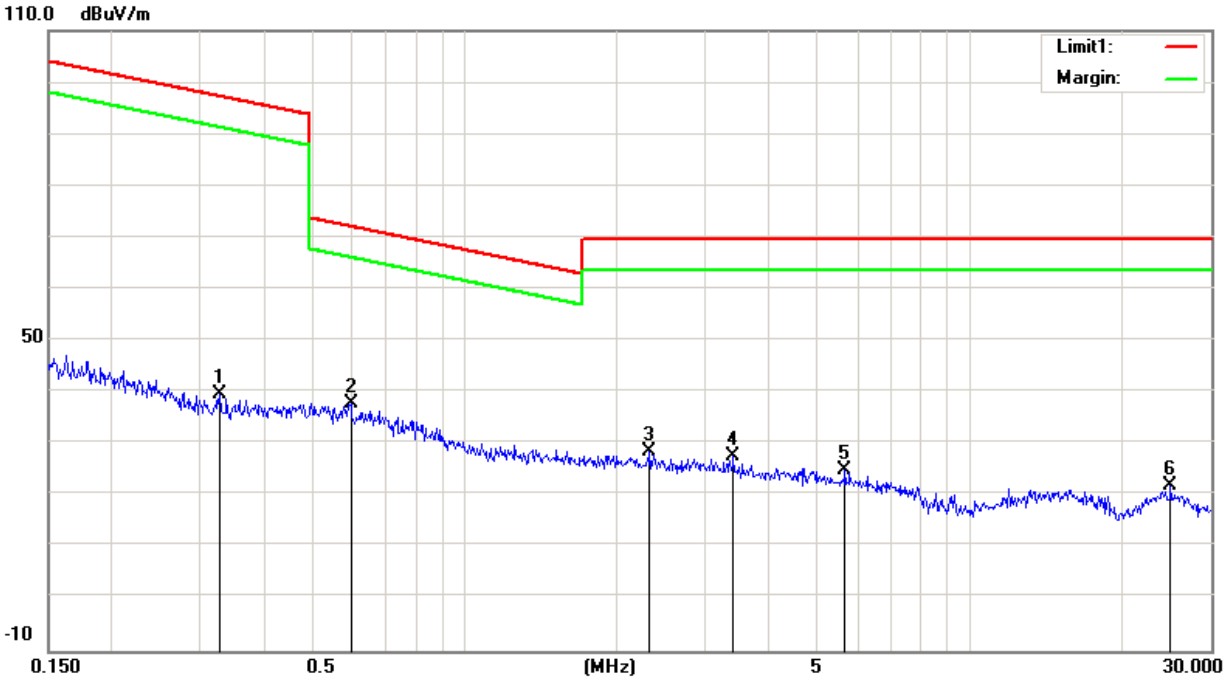
Three antenna orientations (parallel, perpendicular, and ground-parallel) was measured, the worst orientations was below:

Project No:	2402U80231E-RF-A1
Test Engineer:	Leesin Xiang
Test Date:	2024-6-16
Polarization:	Parallel
Test Mode:	Transmitting
Power Source:	AC 120V/60Hz
Note:	802.11n ht40 Middle channel



No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)
1	0.0101	3.63	peak	52.83	56.46	127.52	71.06
2	0.0237	1.58	peak	49.12	50.70	120.11	69.41
3	0.0310	15.81	peak	47.37	63.18	117.78	54.60
4	0.0351	16.09	peak	46.64	62.73	116.70	53.97
5	0.0471	-0.40	peak	44.54	44.14	114.14	70.00
6	0.0561	-0.66	peak	43.00	42.34	112.62	70.28

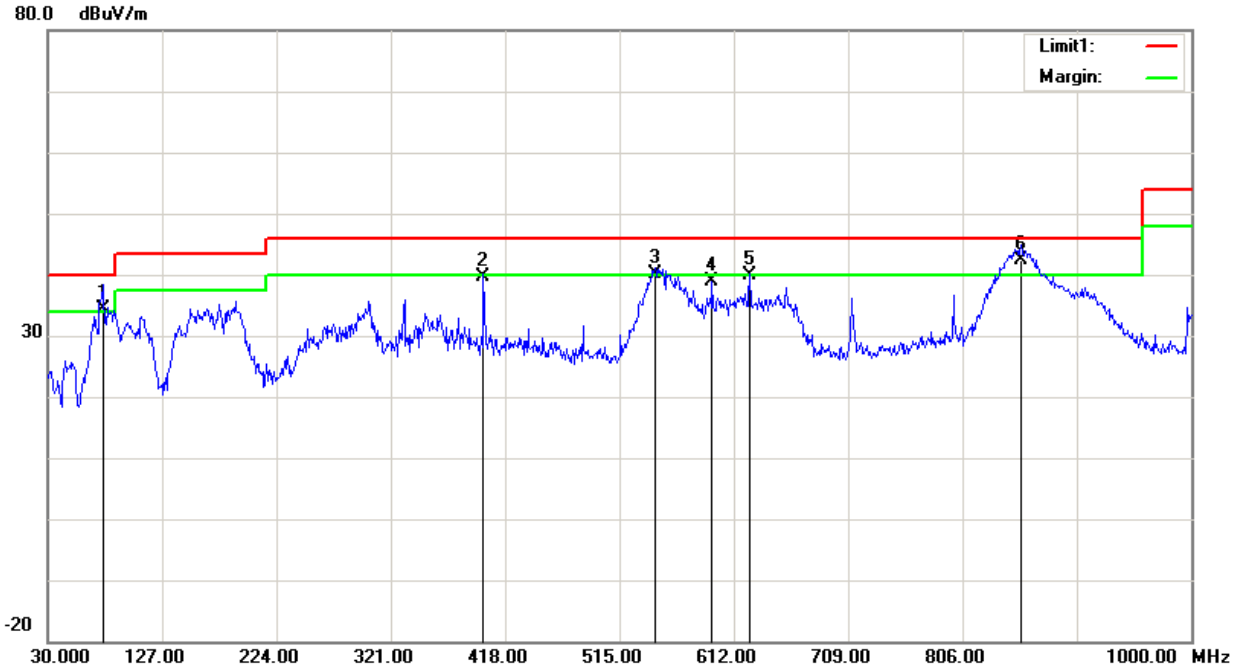
Project No:	2402U80231E-RF-A1
Test Engineer:	Leesin Xiang
Test Date:	2024-6-16
Polarization:	Parallel
Test Mode:	Transmitting
Power Source:	AC 120V/60Hz
Note:	802.11n ht40 Middle channel



No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)
1	0.3268	15.47	peak	24.07	39.54	97.32	57.78
2	0.5948	15.38	peak	22.52	37.90	72.11	34.21
3	2.3213	17.22	peak	11.39	28.61	69.54	40.93
4	3.3994	18.67	peak	8.97	27.64	69.54	41.90
5	5.6532	18.75	peak	6.13	24.88	69.54	44.66
6	24.9221	17.66	peak	4.19	21.85	69.54	47.69

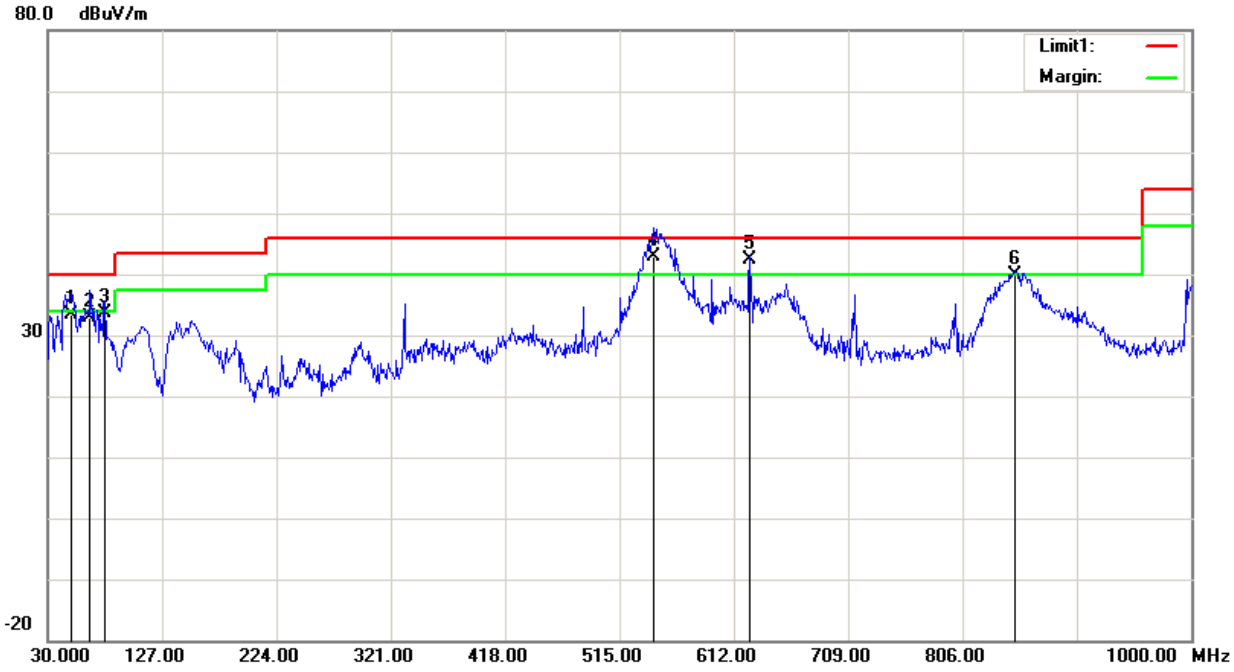
2) 30MHz-1GHz

Project No:	2402U80231E-RF-A1
Test Engineer:	Leesin Xiang
Test Date:	2024-6-16
Polarization:	Horizontal
Test Mode:	Transmitting
Power Source:	AC 120V/60Hz
Note:	802.11n ht40 Middle channel



No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)
1	76.5600	50.75	QP	-16.25	34.50	40.00	5.50
2	399.5700	46.69	QP	-6.99	39.70	46.00	6.30
3	545.0700	43.77	QP	-3.67	40.10	46.00	5.90
4	593.5700	41.89	peak	-3.00	38.89	46.00	7.11
5	625.5800	42.14	QP	-2.24	39.90	46.00	6.10
6	855.4700	41.38	QP	1.02	42.40	46.00	3.60

Project No:	2402U80231E-RF-A1
Test Engineer:	Leesin Xiang
Test Date:	2024-6-16
Polarization:	Vertical
Test Mode:	Transmitting
Power Source:	AC 120V/60Hz
Note:	802.11n ht40 Middle channel



No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)
1	50.3700	49.97	QP	-16.47	33.50	40.00	6.50
2	65.8900	49.30	QP	-16.50	32.80	40.00	7.20
3	78.5000	50.06	QP	-16.36	33.70	40.00	6.30
4	544.1000	46.48	QP	-3.68	42.80	46.00	3.20
5	625.5800	44.74	QP	-2.24	42.50	46.00	3.50
6	850.6200	38.90	QP	0.90	39.80	46.00	6.20

2) 1-25GHz:

Serial Number:	2MQ4-2	Test Date:	2024/10/26~2024/11/3
Test Site:	Chamber B	Test Mode:	Transmitting
Tester:	Colin Yang	Test Result:	Pass

Environmental Conditions:

Temperature: (℃)	25.5~27.8	Relative Humidity: %	34~46	ATM Pressure: (kPa)	100.8~101.8

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
ETS-Lindgren	Horn Antenna	3115	000 527 35	2023/9/7	2026/9/6
R&S	Spectrum Analyzer	FSV40	101944	2024/9/6	2025/9/5
Xinhang Macrowave	Coaxial Cable	XH750A-N/J-SMA/J-10M	20231117004 #0001	2023/11/17	2024/11/16
Audix	Test Software	E3	191218 (V9)	N/A	N/A
AH	Preamplifier	PAM-0118P	469	2024/4/15	2025/4/14
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-03 1304	2023/2/22	2026/2/21
Xinhang Macrowave	Coaxial Cable	XH360A-2.92/J-2.92/J-6M-A	20231208001 #0001	2023/12/11	2024/12/10
AH	Preamplifier	PAM-1840VH	191	2024/9/5	2025/9/4
E-Microwave	Band Rejection Filter	OBSF-2400-2483.5-S	OE01601525	2024/2/21	2025/2/20
Micro-tronics	High Pass Filter	HPM50111	G217	2023/12/1	2024/11/30

** Statement of Traceability: Bay Area Compliance Laboratories Corp.(Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

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

802.11b
Chain 0

Frequency	Reading	Detector	Polar	Factor	Corrected Amplitude	Limit	Margin
MHz	dBµV	PK/QP/AV	H/V	dB/m	dBµV/m	dBµV/m	dB
Low channel 2412 MHz							
2390.00	27.10	PK	H	28.57	55.67	74.00	18.33
2390.00	17.85	AV	H	28.57	46.42	54.00	7.58
2390.00	28.48	PK	V	28.57	57.05	74.00	16.95
2390.00	17.49	AV	V	28.57	46.06	54.00	7.94
2387.14	32.86	PK	H	28.56	61.42	74.00	12.58
2387.14	23.14	AV	H	28.56	51.70	54.00	2.30
2387.04	29.40	PK	V	28.56	57.96	74.00	16.04
2387.04	19.35	AV	V	28.56	47.91	54.00	6.09
4824.00	57.89	PK	H	-10.09	47.80	74.00	26.20
4824.00	52.81	AV	H	-10.09	42.72	54.00	11.28
4824.00	61.74	PK	V	-10.09	51.65	74.00	22.35
4824.00	57.50	AV	V	-10.09	47.41	54.00	**6.59**
7236.00	49.94	PK	H	-5.38	44.56	74.00	29.44
7236.00	43.27	AV	H	-5.38	37.89	54.00	16.11
7236.00	52.87	PK	V	-5.38	47.49	74.00	26.51
7236.00	47.32	AV	V	-5.38	41.94	54.00	12.06
Middle channel 2437 MHz							
4874.00	57.69	PK	H	-10.02	47.67	74.00	26.33
4874.00	52.61	AV	H	-10.02	42.59	54.00	11.41
4874.00	61.64	PK	V	-10.02	51.62	74.00	22.38
4874.00	57.33	AV	V	-10.02	47.31	54.00	6.69
7311.00	49.96	PK	H	-5.05	44.91	74.00	29.09
7311.00	43.37	AV	H	-5.05	38.32	54.00	15.68
7311.00	52.97	PK	V	-5.05	47.92	74.00	26.08
7311.00	47.52	AV	V	-5.05	42.47	54.00	11.53
High channel 2462 MHz							
2483.50	26.51	PK	H	28.95	55.46	74.00	18.54
2483.50	16.68	AV	H	28.95	45.63	54.00	8.37
2483.50	28.05	PK	V	28.95	57.00	74.00	17.00
2483.50	16.97	AV	V	28.95	45.92	54.00	8.08
2488.66	31.26	PK	H	28.97	60.23	74.00	13.77
2488.66	22.62	AV	H	28.97	51.59	54.00	2.41
2488.66	30.51	PK	V	28.97	59.48	74.00	14.52
2488.66	23.11	AV	V	28.97	52.08	54.00	1.92
4924.00	57.41	PK	H	-9.99	47.42	74.00	26.58
4924.00	52.51	AV	H	-9.99	42.52	54.00	11.48
4924.00	61.88	PK	V	-9.99	51.89	74.00	22.11
4924.00	57.39	AV	V	-9.99	47.40	54.00	6.60
7386.00	49.86	PK	H	-4.74	45.12	74.00	28.88
7386.00	43.17	AV	H	-4.74	38.43	54.00	15.57
7386.00	52.77	PK	V	-4.74	48.03	74.00	25.97
7386.00	47.72	AV	V	-4.74	42.98	54.00	11.02

802.11b
Chain 1

Frequency	Reading	Detector	Polar	Factor	Corrected Amplitude	Limit	Margin
MHz	dBµV	PK/QP/AV	H/V	dB/m	dBµV/m	dBµV/m	dB
Low channel 2412 MHz							
2390.00	27.29	PK	H	28.57	55.86	74.00	18.14
2390.00	16.92	AV	H	28.57	45.49	54.00	8.51
2390.00	27.30	PK	V	28.57	55.87	74.00	18.13
2390.00	17.46	AV	V	28.57	46.03	54.00	7.97
2385.58	30.70	PK	H	28.55	59.25	74.00	14.75
2385.58	19.62	AV	H	28.55	48.17	54.00	5.83
2386.77	31.58	PK	V	28.55	60.13	74.00	13.87
2386.77	23.70	AV	V	28.55	52.25	54.00	1.75
4824.00	60.51	PK	H	-10.09	50.42	74.00	23.58
4824.00	55.63	AV	H	-10.09	45.54	54.00	8.46
4824.00	58.79	PK	V	-10.09	48.70	74.00	25.30
4824.00	55.50	AV	V	-10.09	45.41	54.00	8.59
7236.00	55.55	PK	H	-5.38	50.17	74.00	23.83
7236.00	49.46	AV	H	-5.38	44.08	54.00	9.92
7236.00	58.88	PK	V	-5.38	53.50	74.00	20.50
7236.00	53.32	AV	V	-5.38	47.94	54.00	6.06
Middle channel 2437 MHz							
4874.00	60.01	PK	H	-10.02	49.99	74.00	24.01
4874.00	55.43	AV	H	-10.02	45.41	54.00	8.59
4874.00	58.90	PK	V	-10.02	48.88	74.00	25.12
4874.00	55.52	AV	V	-10.02	45.50	54.00	8.50
7311.00	55.15	PK	H	-5.05	50.10	74.00	23.90
7311.00	49.56	AV	H	-5.05	44.51	54.00	9.49
7311.00	58.58	PK	V	-5.05	53.53	74.00	20.47
7311.00	53.48	AV	V	-5.05	48.43	54.00	5.57
High channel 2462 MHz							
2483.50	28.77	PK	H	28.95	57.72	74.00	16.28
2483.50	16.58	AV	H	28.95	45.53	54.00	8.47
2483.50	27.29	PK	V	28.95	56.24	74.00	17.76
2483.50	16.53	AV	V	28.95	45.48	54.00	8.52
2490.03	30.05	PK	H	28.98	59.03	74.00	14.97
2490.03	19.32	AV	H	28.98	48.30	54.00	5.70
2488.84	31.63	PK	V	28.97	60.60	74.00	13.40
2488.84	22.31	AV	V	28.97	51.28	54.00	2.72
4924.00	60.21	PK	H	-9.99	50.22	74.00	23.78
4924.00	55.63	AV	H	-9.99	45.64	54.00	8.36
4924.00	58.99	PK	V	-9.99	49.00	74.00	25.00
4924.00	55.12	AV	V	-9.99	45.13	54.00	8.87
7386.00	55.15	PK	H	-4.74	50.41	74.00	23.59
7386.00	49.06	AV	H	-4.74	44.32	54.00	9.68
7386.00	58.78	PK	V	-4.74	54.04	74.00	19.96
7386.00	53.58	AV	V	-4.74	48.84	54.00	**5.16**

802.11g
Chain 0

Frequency	Reading	Detector	Polar	Factor	Corrected Amplitude	Limit	Margin
MHz	dBµV	PK/QP/AV	H/V	dB/m	dBµV/m	dBµV/m	dB
Low channel 2412 MHz							
2390.00	42.67	PK	H	28.57	71.24	74.00	2.76
2390.00	24.13	AV	H	28.57	52.70	54.00	1.30
2390.00	39.55	PK	V	28.57	68.12	74.00	5.88
2390.00	22.16	AV	V	28.57	50.73	54.00	3.27
4824.00	52.70	PK	H	-10.09	42.61	74.00	31.39
4824.00	42.75	AV	H	-10.09	32.66	54.00	21.34
4824.00	55.61	PK	V	-10.09	45.52	74.00	28.48
4824.00	44.75	AV	V	-10.09	34.66	54.00	19.34
7236.00	49.74	PK	H	-5.38	44.36	74.00	29.64
7236.00	39.69	AV	H	-5.38	34.31	54.00	19.69
7236.00	53.64	PK	V	-5.38	48.26	74.00	25.74
7236.00	41.68	AV	V	-5.38	36.30	54.00	17.70
Middle channel 2437 MHz							
4874.00	52.76	PK	H	-10.02	42.74	74.00	31.26
4874.00	42.65	AV	H	-10.02	32.63	54.00	21.37
4874.00	55.11	PK	V	-10.02	45.09	74.00	28.91
4874.00	44.75	AV	V	-10.02	34.73	54.00	19.27
7311.00	49.44	PK	H	-5.05	44.39	74.00	29.61
7311.00	39.50	AV	H	-5.05	34.45	54.00	19.55
7311.00	53.74	PK	V	-5.05	48.69	74.00	25.31
7311.00	41.38	AV	V	-5.05	36.33	54.00	17.67
High channel 2462 MHz							
2483.50	36.08	PK	H	28.95	65.03	74.00	8.97
2483.50	22.45	AV	H	28.95	51.40	54.00	2.60
2483.50	34.92	PK	V	28.95	63.87	74.00	10.13
2483.50	20.77	AV	V	28.95	49.72	54.00	4.28
4924.00	52.96	PK	H	-9.99	42.97	74.00	31.03
4924.00	42.45	AV	H	-9.99	32.46	54.00	21.54
4924.00	55.31	PK	V	-9.99	45.32	74.00	28.68
4924.00	44.55	AV	V	-9.99	34.56	54.00	19.44
7386.00	49.24	PK	H	-4.74	44.50	74.00	29.50
7386.00	39.59	AV	H	-4.74	34.85	54.00	19.15
7386.00	53.50	PK	V	-4.74	48.76	74.00	25.24
7386.00	41.48	AV	V	-4.74	36.74	54.00	**17.26**

802.11g
Chain 1

Frequency	Reading	Detector	Polar	Factor	Corrected Amplitude	Limit	Margin
MHz	dBµV	PK/QP/AV	H/V	dB/m	dBµV/m	dBµV/m	dB
Low channel 2412 MHz							
2390.00	34.65	PK	H	28.57	63.22	74.00	10.78
2390.00	19.32	AV	H	28.57	47.89	54.00	6.11
2390.00	37.77	PK	V	28.57	66.34	74.00	7.66
2390.00	20.43	AV	V	28.57	49.00	54.00	5.00
4824.00	55.59	PK	H	-10.09	45.50	74.00	28.50
4824.00	44.78	AV	H	-10.09	34.69	54.00	19.31
4824.00	55.86	PK	V	-10.09	45.77	74.00	28.23
4824.00	44.87	AV	V	-10.09	34.78	54.00	19.22
7236.00	51.66	PK	H	-5.38	46.28	74.00	27.72
7236.00	40.49	AV	H	-5.38	35.11	54.00	18.89
7236.00	53.46	PK	V	-5.38	48.08	74.00	25.92
7236.00	42.88	AV	V	-5.38	37.50	54.00	16.50
Middle channel 2437 MHz							
4874.00	54.59	PK	H	-10.02	44.57	74.00	29.43
4874.00	43.78	AV	H	-10.02	33.76	54.00	20.24
4874.00	55.46	PK	V	-10.02	45.44	74.00	28.56
4874.00	44.57	AV	V	-10.02	34.55	54.00	19.45
7311.00	51.26	PK	H	-5.05	46.21	74.00	27.79
7311.00	40.69	AV	H	-5.05	35.64	54.00	18.36
7311.00	53.56	PK	V	-5.05	48.51	74.00	25.49
7311.00	42.48	AV	V	-5.05	37.43	54.00	16.57
High channel 2462 MHz							
2483.50	37.80	PK	H	28.95	66.75	74.00	7.25
2483.50	22.74	AV	H	28.95	51.69	54.00	2.31
2483.50	38.89	PK	V	28.95	67.84	74.00	6.16
2483.50	23.12	AV	V	28.95	52.07	54.00	1.93
4924.00	54.39	PK	H	-9.99	44.40	74.00	29.60
4924.00	43.68	AV	H	-9.99	33.69	54.00	20.31
4924.00	55.36	PK	V	-9.99	45.37	74.00	28.63
4924.00	44.77	AV	V	-9.99	34.78	54.00	19.22
7386.00	51.46	PK	H	-4.74	46.72	74.00	27.28
7386.00	40.29	AV	H	-4.74	35.55	54.00	18.45
7386.00	53.26	PK	V	-4.74	48.52	74.00	25.48
7386.00	42.38	AV	V	-4.74	37.64	54.00	**16.36**

802.11n20(MIMO)

Frequency	Reading	Detector	Polar	Factor	Corrected Amplitude	Limit	Margin
MHz	dBµV	PK/QP/AV	H/V	dB/m	dBµV/m	dBµV/m	dB
Low channel 2412 MHz							
2390.00	34.73	PK	H	28.57	63.30	74.00	10.70
2390.00	18.87	AV	H	28.57	47.44	54.00	6.56
2390.00	38.75	PK	V	28.57	67.32	74.00	6.68
2390.00	20.56	AV	V	28.57	49.13	54.00	4.87
4824.00	51.63	PK	H	-10.09	41.54	74.00	32.46
4824.00	41.40	AV	H	-10.09	31.31	54.00	22.69
4824.00	52.27	PK	V	-10.09	42.18	74.00	31.82
4824.00	42.58	AV	V	-10.09	32.49	54.00	21.51
7236.00	49.76	PK	H	-5.38	44.38	74.00	29.62
7236.00	39.61	AV	H	-5.38	34.23	54.00	19.77
7236.00	51.41	PK	V	-5.38	46.03	74.00	27.97
7236.00	39.70	AV	V	-5.38	34.32	54.00	19.68
Middle channel 2437 MHz							
4874.00	51.50	PK	H	-10.02	41.48	74.00	32.52
4874.00	41.41	AV	H	-10.02	31.39	54.00	22.61
4874.00	52.40	PK	V	-10.02	42.38	74.00	31.62
4874.00	42.28	AV	V	-10.02	32.26	54.00	21.74
7311.00	49.46	PK	H	-5.05	44.41	74.00	29.59
7311.00	39.31	AV	H	-5.05	34.26	54.00	19.74
7311.00	51.23	PK	V	-5.05	46.18	74.00	27.82
7311.00	39.47	AV	V	-5.05	34.42	54.00	19.58
High channel 2462 MHz							
2483.50	36.23	PK	H	28.95	65.18	74.00	8.82
2483.50	21.29	AV	H	28.95	50.24	54.00	3.76
2483.50	36.62	PK	V	28.95	65.57	74.00	8.43
2483.50	21.68	AV	V	28.95	50.63	54.00	3.37
4924.00	51.57	PK	H	-9.99	41.58	74.00	32.42
4924.00	41.03	AV	H	-9.99	31.04	54.00	22.96
4924.00	52.46	PK	V	-9.99	42.47	74.00	31.53
4924.00	42.10	AV	V	-9.99	32.11	54.00	21.89
7386.00	49.66	PK	H	-4.74	44.92	74.00	29.08
7386.00	39.01	AV	H	-4.74	34.27	54.00	19.73
7386.00	51.03	PK	V	-4.74	46.29	74.00	27.71
7386.00	39.32	AV	V	-4.74	34.58	54.00	**19.42**

802.11n40(MIMO)

Frequency	Reading	Detector	Polar	Factor	Corrected Amplitude	Limit	Margin
MHz	dBµV	PK/QP/AV	H/V	dB/m	dBµV/m	dBµV/m	dB
Low channel 2422 MHz							
2390.00	32.25	PK	H	28.57	60.82	74.00	13.18
2390.00	21.02	AV	H	28.57	49.59	54.00	4.41
2390.00	36.32	PK	V	28.57	64.89	74.00	9.11
2390.00	22.91	AV	V	28.57	51.48	54.00	2.52
2384.96	33.97	PK	H	28.55	62.52	74.00	11.48
2384.96	20.86	AV	H	28.55	49.41	54.00	4.59
2387.42	37.07	PK	V	28.56	65.63	74.00	8.37
2387.42	22.47	AV	V	28.56	51.03	54.00	2.97
4844.00	51.64	PK	H	-10.05	41.59	74.00	32.41
4844.00	41.42	AV	H	-10.05	31.37	54.00	22.63
4844.00	52.51	PK	V	-10.05	42.46	74.00	31.54
4844.00	42.63	AV	V	-10.05	32.58	54.00	21.42
7266.00	49.78	PK	H	-5.25	44.53	74.00	29.47
7266.00	39.69	AV	H	-5.25	34.44	54.00	19.56
7266.00	50.43	PK	V	-5.25	45.18	74.00	28.82
7266.00	39.77	AV	V	-5.25	34.52	54.00	19.48
Middle channel 2437 MHz							
4874.00	51.84	PK	H	-10.02	41.82	74.00	32.18
4874.00	41.22	AV	H	-10.02	31.20	54.00	22.80
4874.00	52.71	PK	V	-10.02	42.69	74.00	31.31
4874.00	42.53	AV	V	-10.02	32.51	54.00	21.49
7311.00	49.48	PK	H	-5.05	44.43	74.00	29.57
7311.00	39.52	AV	H	-5.05	34.47	54.00	19.53
7311.00	50.49	PK	V	-5.05	45.44	74.00	28.56
7311.00	39.59	AV	V	-5.05	34.54	54.00	19.46
High channel 2452 MHz							
2483.50	36.84	PK	H	28.95	65.79	74.00	8.21
2483.50	23.15	AV	H	28.95	52.10	54.00	1.90
2483.50	36.99	PK	V	28.95	65.94	74.00	8.06
2483.50	23.44	AV	V	28.95	52.39	54.00	1.61
4904.00	50.84	PK	H	-9.99	40.85	74.00	33.15
4904.00	40.22	AV	H	-9.99	30.23	54.00	23.77
4904.00	52.51	PK	V	-9.99	42.52	74.00	31.48
4904.00	42.13	AV	V	-9.99	32.14	54.00	21.86
7356.00	49.68	PK	H	-4.87	44.81	74.00	29.19
7356.00	39.42	AV	H	-4.87	34.55	54.00	19.45
7356.00	50.45	PK	V	-4.87	45.58	74.00	28.42
7356.00	39.50	AV	V	-4.87	34.63	54.00	**19.37**

802.11ax20(MIMO):Full RU

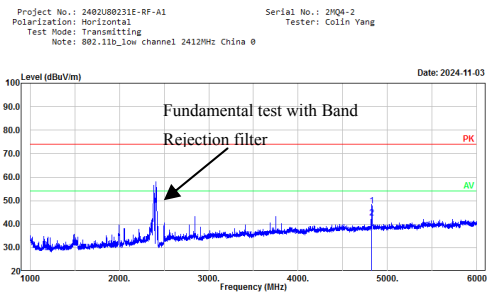
Frequency	Reading	Detector	Polar	Factor	Corrected Amplitude	Limit	Margin
MHz	dBµV	PK/QP/AV	H/V	dB/m	dBµV/m	dBµV/m	dB
Low channel 2412 MHz							
2390.00	29.15	PK	H	28.57	57.72	74.00	16.28
2390.00	17.85	AV	H	28.57	46.42	54.00	7.58
2390.00	30.76	PK	V	28.57	59.33	74.00	14.67
2390.00	18.01	AV	V	28.57	46.58	54.00	7.42
4824.00	52.75	PK	H	-10.09	42.66	74.00	31.34
4824.00	41.64	AV	H	-10.09	31.55	54.00	22.45
4824.00	52.77	PK	V	-10.09	42.68	74.00	31.32
4824.00	41.48	AV	V	-10.09	31.39	54.00	22.61
7236.00	50.96	PK	H	-5.38	45.58	74.00	28.42
7236.00	39.70	AV	H	-5.38	34.32	54.00	19.68
7236.00	49.77	PK	V	-5.38	44.39	74.00	29.61
7236.00	39.76	AV	V	-5.38	34.38	54.00	19.62
Middle channel 2437 MHz							
4874.00	52.65	PK	H	-10.02	42.63	74.00	31.37
4874.00	41.38	AV	H	-10.02	31.36	54.00	22.64
4874.00	52.79	PK	V	-10.02	42.77	74.00	31.23
4874.00	41.40	AV	V	-10.02	31.38	54.00	22.62
7311.00	50.66	PK	H	-5.05	45.61	74.00	28.39
7311.00	39.50	AV	H	-5.05	34.45	54.00	19.55
7311.00	49.87	PK	V	-5.05	44.82	74.00	29.18
7311.00	39.46	AV	V	-5.05	34.41	54.00	19.59
High channel 2462 MHz							
2483.50	32.43	PK	H	28.95	61.38	74.00	12.62
2483.50	19.49	AV	H	28.95	48.44	54.00	5.56
2483.50	31.00	PK	V	28.95	59.95	74.00	14.05
2483.50	19.26	AV	V	28.95	48.21	54.00	5.79
4924.00	51.65	PK	H	-9.99	41.66	74.00	32.34
4924.00	40.55	AV	H	-9.99	30.56	54.00	23.44
4924.00	52.72	PK	V	-9.99	42.73	74.00	31.27
4924.00	41.54	AV	V	-9.99	31.55	54.00	22.45
7386.00	50.11	PK	H	-4.74	45.37	74.00	28.63
7386.00	39.31	AV	H	-4.74	34.57	54.00	**19.43**
7386.00	49.59	PK	V	-4.74	44.85	74.00	29.15
7386.00	39.11	AV	V	-4.74	34.37	54.00	19.63

802.11ax40(MIMO):Full RU

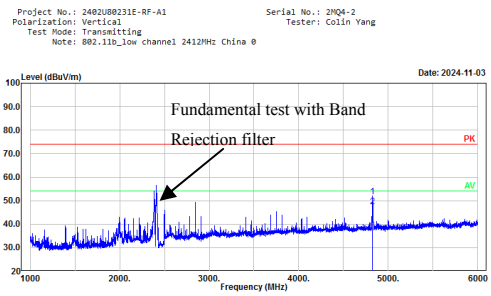
Frequency	Reading	Detector	Polar	Factor	Corrected Amplitude	Limit	Margin
MHz	dBµV	PK/QP/AV	H/V	dB/m	dBµV/m	dBµV/m	dB
Low channel 2422 MHz							
2390.00	35.33	PK	H	28.57	63.90	74.00	10.10
2390.00	21.11	AV	H	28.57	49.68	54.00	4.32
2390.00	37.34	PK	V	28.57	65.91	74.00	8.09
2390.00	22.98	AV	V	28.57	51.55	54.00	2.45
4844.00	51.79	PK	H	-10.05	41.74	74.00	32.26
4844.00	41.42	AV	H	-10.05	31.37	54.00	22.63
4844.00	53.79	PK	V	-10.05	43.74	74.00	30.26
4844.00	43.55	AV	V	-10.05	33.50	54.00	20.50
7266.00	49.48	PK	H	-5.25	44.23	74.00	29.77
7266.00	39.52	AV	H	-5.25	34.27	54.00	19.73
7266.00	48.56	PK	V	-5.25	43.31	74.00	30.69
7266.00	39.18	AV	V	-5.25	33.93	54.00	20.07
Middle channel 2437 MHz							
4874.00	51.49	PK	H	-10.02	41.47	74.00	32.53
4874.00	41.22	AV	H	-10.02	31.20	54.00	22.80
4874.00	53.49	PK	V	-10.02	43.47	74.00	30.53
4874.00	43.15	AV	V	-10.02	33.13	54.00	20.87
7311.00	49.30	PK	H	-5.05	44.25	74.00	29.75
7311.00	39.42	AV	H	-5.05	34.37	54.00	19.63
7311.00	48.76	PK	V	-5.05	43.71	74.00	30.29
7311.00	39.08	AV	V	-5.05	34.03	54.00	19.97
High channel 2452 MHz							
2483.50	36.36	PK	H	28.95	65.31	74.00	8.69
2483.50	23.51	AV	H	28.95	52.46	54.00	1.54
2483.50	35.29	PK	V	28.95	64.24	74.00	9.76
2483.50	23.39	AV	V	28.95	52.34	54.00	1.66
4904.00	51.63	PK	H	-9.99	41.64	74.00	32.36
4904.00	41.29	AV	H	-9.99	31.30	54.00	22.70
4904.00	53.44	PK	V	-9.99	43.45	74.00	30.55
4904.00	43.50	AV	V	-9.99	33.51	54.00	20.49
7356.00	49.39	PK	H	-4.87	44.52	74.00	29.48
7356.00	39.22	AV	H	-4.87	34.35	54.00	**19.65**
7356.00	48.76	PK	V	-4.87	43.89	74.00	30.11
7356.00	39.11	AV	V	-4.87	34.24	54.00	19.76

Worst Channel Test plots:
1-18GHz:

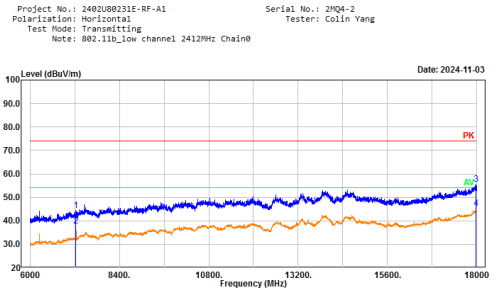
802.11b, Low Channel, Chain 0,Horizontal	802.11b, Low Channel, Chain 0, Vertical



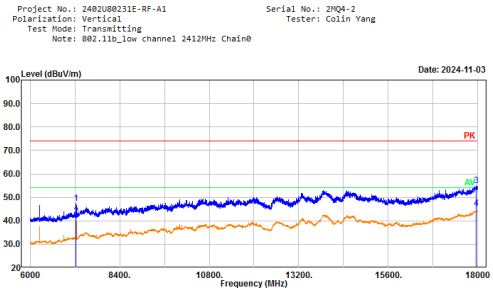
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4824.00	57.89	-10.09	47.80	74.00	26.20	Peak
2	4824.00	52.81	-10.09	42.72	54.00	11.28	Average



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4824.00	61.74	-10.09	51.65	74.00	22.35	Peak
2	4824.00	57.50	-10.09	47.41	54.00	6.59	Average

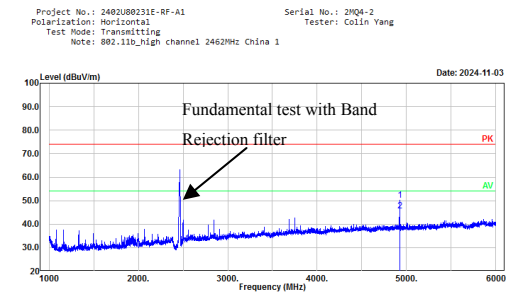


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7236.00	49.94	-5.38	44.56	74.00	29.44	Peak
2	7236.00	43.27	-5.38	37.89	54.00	16.11	Average
3	17980.80	47.69	8.00	55.69	74.00	18.31	Peak
4	17980.80	37.26	8.00	45.26	54.00	8.74	Average



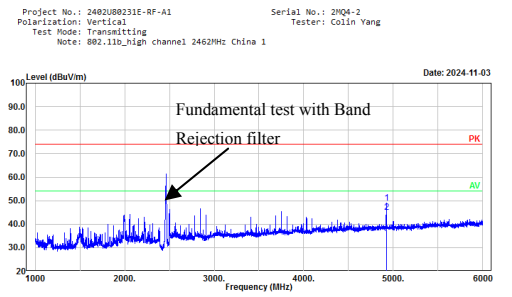
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7236.00	52.87	-5.38	47.49	74.00	26.51	Peak
2	7236.00	47.32	-5.38	41.94	54.00	12.06	Average
3	17947.20	47.41	7.75	55.16	74.00	18.84	Peak
4	17947.20	37.58	7.75	45.33	54.00	8.67	Average

802.11b, High Channel, Chain 1,Horizontal

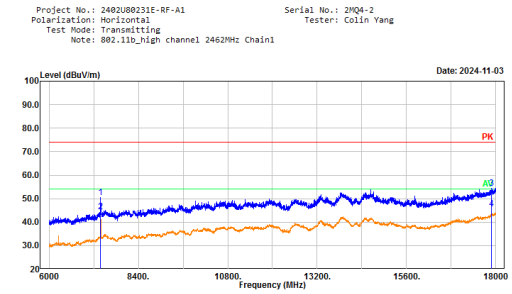


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.00	60.21	-9.99	50.22	74.00	23.78	Peak
2	4924.00	55.63	-9.99	45.64	54.00	8.36	Average

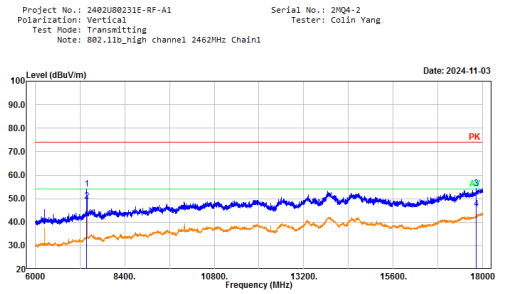
802.11b, High Channel, Chain 1, Vertical



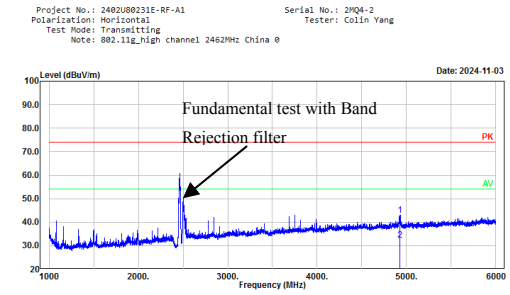
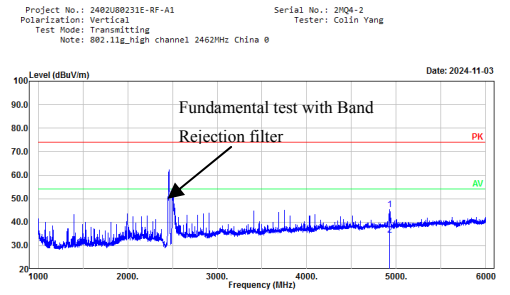
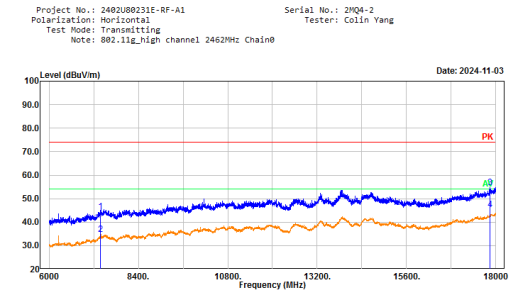
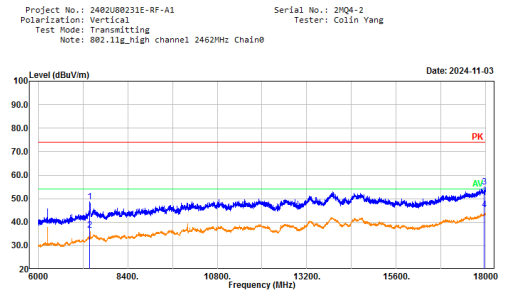
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.00	58.99	-9.99	49.00	74.00	25.00	Peak
2	4924.00	55.12	-9.99	45.13	54.00	8.87	Average



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7386.00	55.15	-4.74	50.41	74.00	23.59	Peak
2	7386.00	49.06	-4.74	44.32	54.00	9.68	Average
3	17880.00	47.16	7.29	54.45	74.00	19.55	Peak
4	17880.00	38.38	7.29	45.67	54.00	8.33	Average



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7386.00	58.78	-4.74	54.04	74.00	19.96	Peak
2	7386.00	53.58	-4.74	48.84	54.00	5.16	Average
3	17827.20	47.46	6.91	54.37	74.00	19.63	Peak
4	17827.20	38.77	6.91	45.68	54.00	8.32	Average

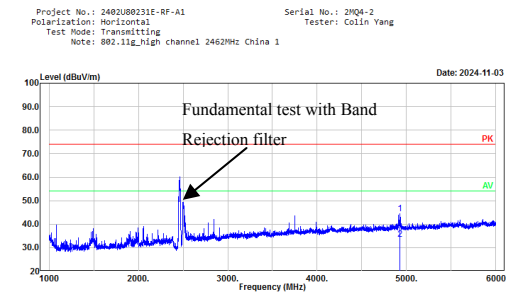
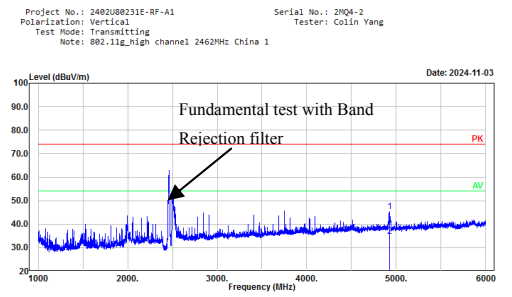
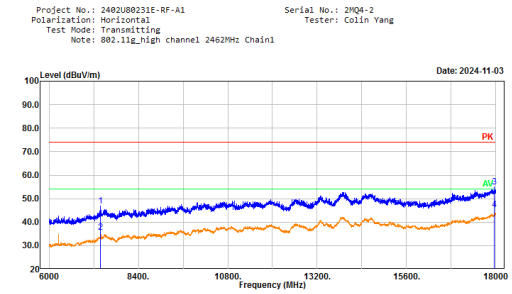
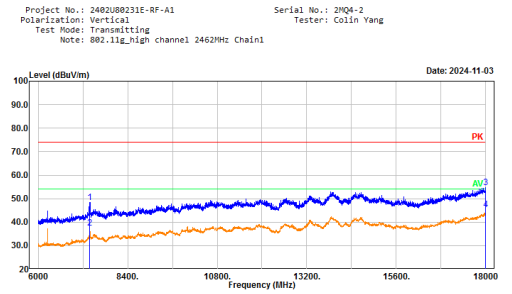
802.11g, High Channel, Chain 0,Horizontal	802. 11g, High Channel, Chain 0, Vertical
	
	

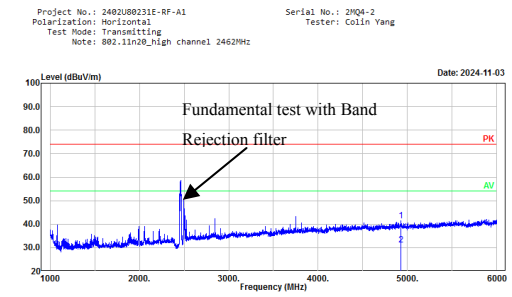
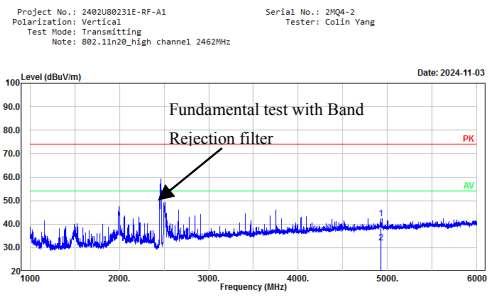
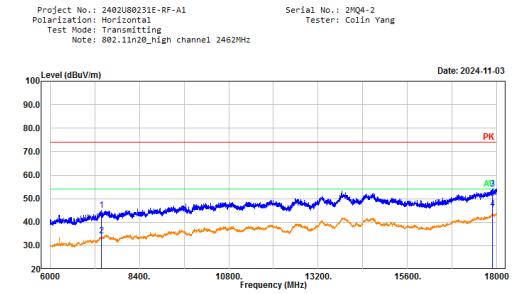
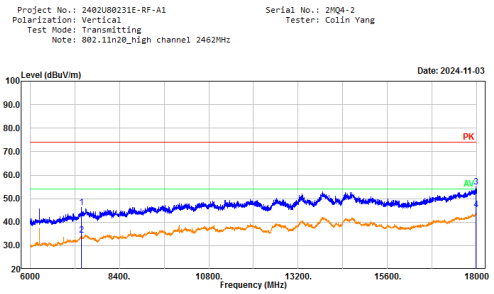
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.00	52.96	-9.99	42.97	74.00	31.03	Peak
2	4924.00	42.45	-9.99	32.46	54.00	21.54	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.00	55.31	-9.99	45.32	74.00	28.68	Peak
2	4924.00	44.55	-9.99	34.56	54.00	19.44	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7386.00	49.24	-4.74	44.50	74.00	29.50	Peak
2	7386.00	39.59	-4.74	34.85	54.00	19.15	Average
3	17841.60	47.77	7.01	54.78	74.00	19.22	Peak
4	17841.60	38.26	7.01	45.27	54.00	8.73	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7386.00	53.50	-4.74	48.76	74.00	25.24	Peak
2	7386.00	41.48	-4.74	36.74	54.00	17.26	Average
3	17954.40	47.30	7.81	55.11	74.00	18.89	Peak
4	17954.40	37.66	7.81	45.47	54.00	8.53	Average

802. 11g, High Channel, Chain 1,Horizontal	802. 11g, High Channel, Chain 1, Vertical
	
No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 4924.00 54.39 -9.99 44.40 74.00 29.60 Peak 2 4924.00 43.68 -9.99 33.69 54.00 20.31 Average	No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 4924.00 55.36 -9.99 45.37 74.00 28.63 Peak 2 4924.00 44.77 -9.99 34.78 54.00 19.22 Average
	
No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 7386.00 51.46 -4.74 46.72 74.00 27.28 Peak 2 7386.00 40.29 -4.74 35.55 54.00 18.45 Average 3 17949.60 47.12 7.78 54.90 74.00 19.10 Peak 4 17949.60 37.63 7.78 45.41 54.00 8.59 Average	No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 7386.00 53.26 -4.74 48.52 74.00 25.48 Peak 2 7386.00 42.38 -4.74 37.64 54.00 16.36 Average 3 17985.60 46.60 8.03 54.63 74.00 19.37 Peak 4 17985.60 37.25 8.03 45.28 54.00 8.72 Average

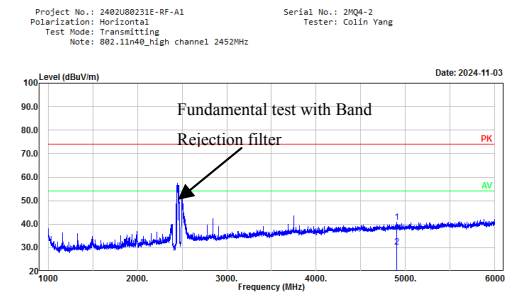
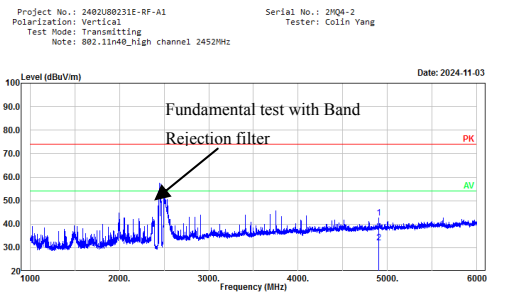
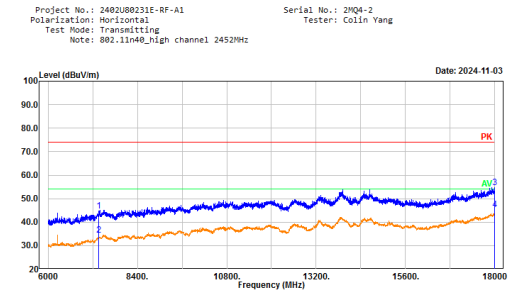
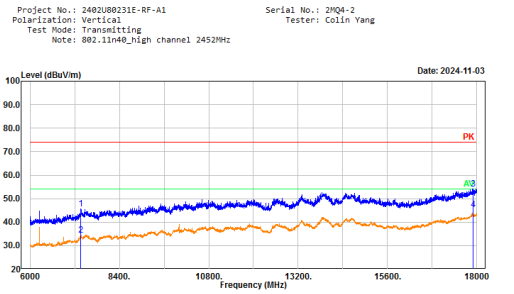
802.11n20, High Channel, MIMO,Horizontal	802. 11n20, High Channel, MIMO, Vertical
	
	

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.00	51.57	-9.99	41.58	74.00	32.42	Peak
2	4924.00	41.03	-9.99	31.04	54.00	22.96	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.00	52.46	-9.99	42.47	74.00	31.53	Peak
2	4924.00	42.10	-9.99	32.11	54.00	21.89	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7386.00	49.66	-4.74	44.92	74.00	29.08	Peak
2	7386.00	39.01	-4.74	34.27	54.00	19.73	Average
3	17884.80	46.82	7.32	54.14	74.00	19.86	Peak
4	17884.80	38.21	7.32	45.53	54.00	8.47	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7386.00	51.03	-4.74	46.29	74.00	27.71	Peak
2	7386.00	39.32	-4.74	34.58	54.00	19.42	Average
3	17980.80	46.89	8.00	54.89	74.00	19.11	Peak
4	17980.80	37.37	8.00	45.37	54.00	8.63	Average

802.11n40, High Channel, MIMO, Horizontal	802. 11n40, High Channel, MIMO, Vertical
	
	

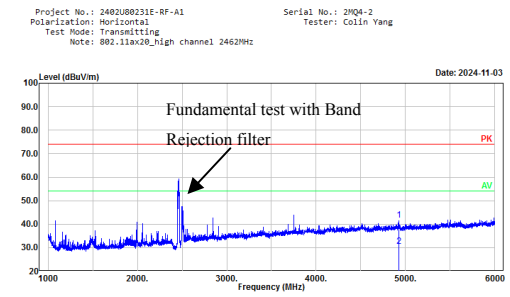
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4904.00	50.84	-9.99	40.85	74.00	33.15	Peak
2	4904.00	40.22	-9.99	30.23	54.00	23.77	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4904.00	52.51	-9.99	42.52	74.00	31.48	Peak
2	4904.00	42.13	-9.99	32.14	54.00	21.86	Average

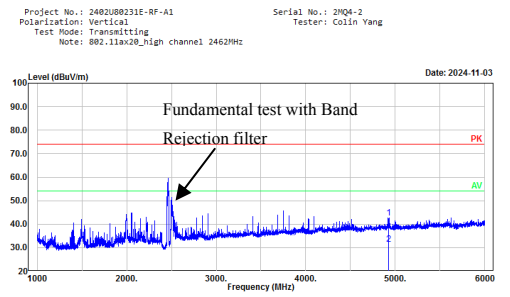
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7356.00	49.68	-4.87	44.81	74.00	29.19	Peak
2	7356.00	39.42	-4.87	34.55	54.00	19.45	Average
3	17990.40	46.63	8.06	54.69	74.00	19.31	Peak
4	17990.40	37.38	8.06	45.44	54.00	8.56	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7356.00	50.45	-4.87	45.58	74.00	28.42	Peak
2	7356.00	39.50	-4.87	34.63	54.00	19.37	Average
3	17889.60	46.90	7.35	54.25	74.00	19.75	Peak
4	17889.60	38.14	7.35	45.49	54.00	8.51	Average

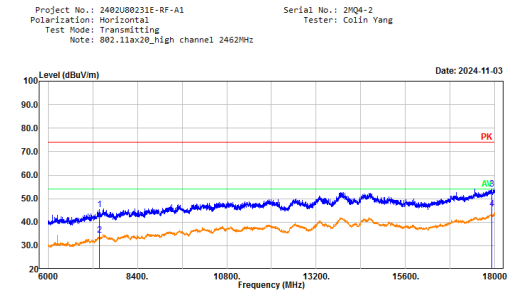
802. 11ax20, High Channel, MIMO, Horizontal	802. 11ax20, High Channel, MIMO, Vertical



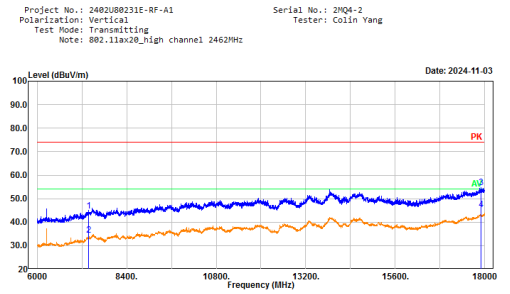
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.00	51.65	-9.99	41.66	74.00	32.34	Peak
2	4924.00	40.55	-9.99	30.56	54.00	23.44	Average



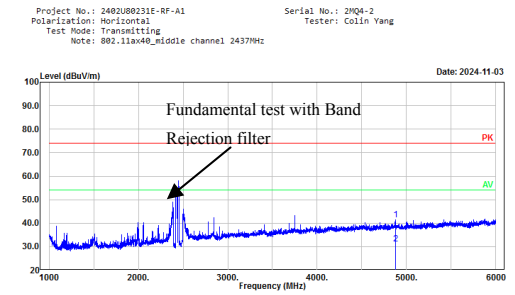
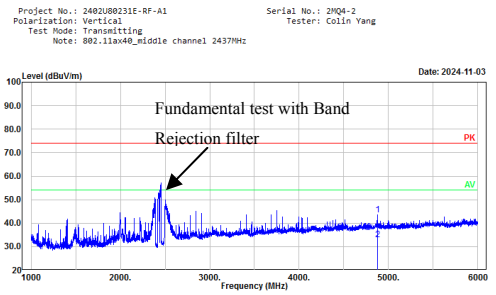
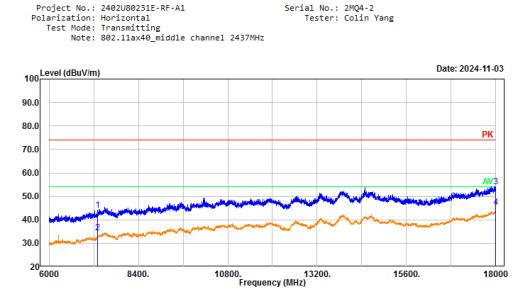
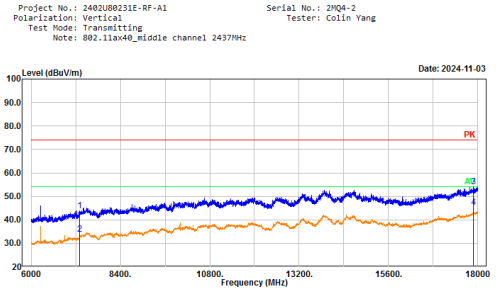
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.00	52.72	-9.99	42.73	74.00	31.27	Peak
2	4924.00	41.54	-9.99	31.55	54.00	22.45	Average



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7386.00	50.11	-4.74	45.37	74.00	28.63	Peak
2	7386.00	39.31	-4.74	34.57	54.00	19.43	Average
3	17920.80	46.53	7.57	54.10	74.00	19.90	Peak
4	17920.80	38.10	7.57	45.67	54.00	8.33	Average



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7386.00	49.59	-4.74	44.85	74.00	29.15	Peak
2	7386.00	39.11	-4.74	34.37	54.00	19.63	Average
3	17889.60	47.47	7.35	54.82	74.00	19.18	Peak
4	17889.60	38.02	7.35	45.37	54.00	8.63	Average

802.11ax40, Middle Channel, MIMO, Horizontal	802. 11ax40, Middle Channel, MIMO, Vertical
	
	

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4874.00	51.49	-10.02	41.47	74.00	32.53	Peak
2	4874.00	41.22	-10.02	31.20	54.00	22.80	Average

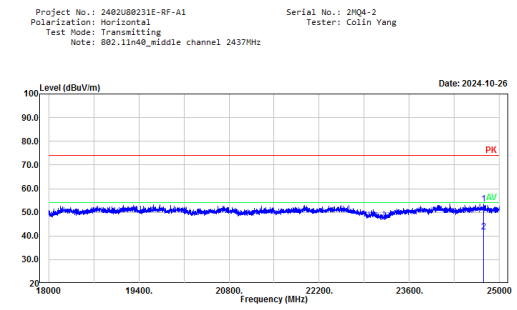
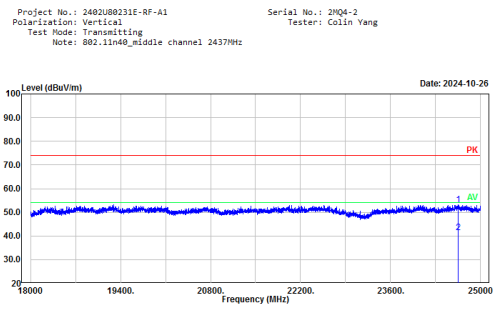
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4874.00	53.49	-10.02	43.47	74.00	30.53	Peak
2	4874.00	43.15	-10.02	33.13	54.00	20.87	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7311.00	49.30	-5.05	44.25	74.00	29.75	Peak
2	7311.00	39.42	-5.05	34.37	54.00	19.63	Average
3	17985.60	46.12	8.03	54.15	74.00	19.85	Peak
4	17985.60	37.35	8.03	45.38	54.00	8.62	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	7311.00	48.76	-5.05	43.71	74.00	30.29	Peak
2	7311.00	39.08	-5.05	34.03	54.00	19.97	Average
3	17880.00	46.79	7.29	54.08	74.00	19.92	Peak
4	17880.00	37.92	7.29	45.21	54.00	8.79	Average

18-25GHz:

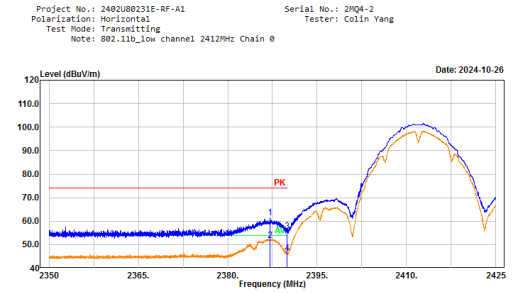
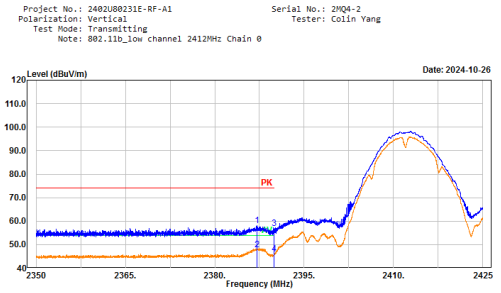
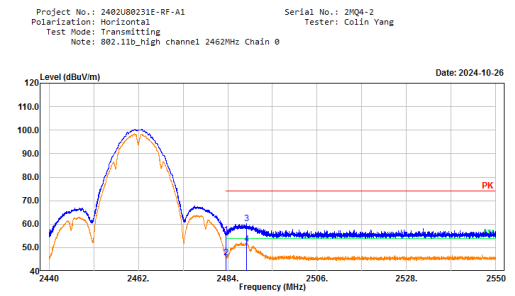
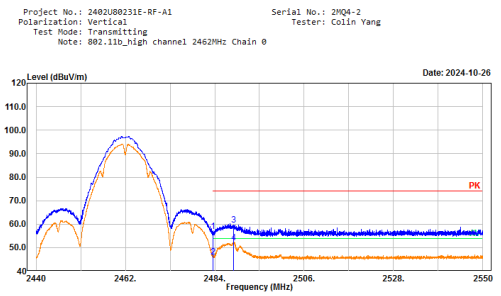
No Emission was detected in the range 18-25GHz, test was performed on the mode and channel which with the maximum power:

802.11n40, Middle Channel, MIMO, Horizontal	802.11n40, Middle Channel, MIMO, Vertical
	

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	24750.80	44.11	9.34	53.45	74.00	20.55	Peak
2	24750.80	32.35	9.34	41.69	54.00	12.31	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	24647.20	44.02	9.23	53.25	74.00	20.75	Peak
2	24647.20	32.11	9.23	41.34	54.00	12.66	Average

Bandedge:

802.11b, Low Channel, Chain 0,Bandedge, Horizontal	802.11b, Low Channel, Chain 0,Bandedge, Vertical
	
	

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2387.14	32.86	28.56	61.42	74.00	12.58	Peak
2	2387.14	23.14	28.56	51.70	54.00	2.30	Average
3	2390.00	27.10	28.57	55.67	74.00	18.33	Peak
4	2390.00	17.85	28.57	46.42	54.00	7.58	Average

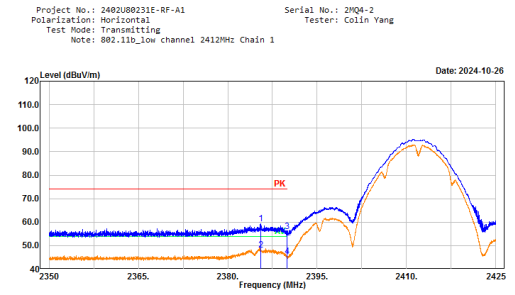
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2387.04	29.40	28.56	57.96	74.00	16.04	Peak
2	2387.04	19.35	28.56	47.91	54.00	6.09	Average
3	2390.00	28.48	28.57	57.05	74.00	16.95	Peak
4	2390.00	17.49	28.57	46.06	54.00	7.94	Average

802.11b, High Channel, Chain 0,Bandedge, Horizontal	802.11b, High Channel, Chain 0,Bandedge, Vertical

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2483.50	26.51	28.95	55.46	74.00	18.54	Peak
2	2483.50	16.68	28.95	45.63	54.00	8.37	Average
3	2488.66	31.26	28.97	60.23	74.00	13.77	Peak
4	2488.66	22.62	28.97	51.59	54.00	2.41	Average

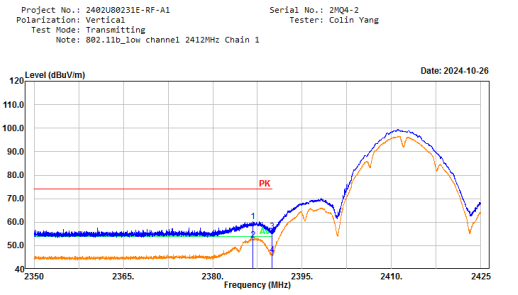
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2483.50	28.05	28.95	57.00	74.00	17.00	Peak
2	2483.50	16.97	28.95	45.92	54.00	8.08	Average
3	2488.66	30.51	28.97	59.48	74.00	14.52	Peak
4	2488.66	23.11	28.97	52.08	54.00	1.92	Average

802.11b, Low Channel, Chain 1,Bandedge, Horizontal



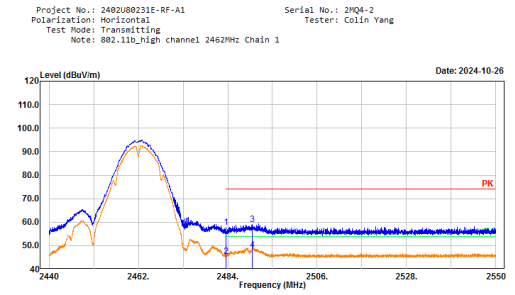
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2385.58	30.70	28.55	59.25	74.00	14.75	Peak
2	2385.58	19.62	28.55	48.17	54.00	5.83	Average
3	2390.00	27.29	28.57	55.86	74.00	18.14	Peak
4	2390.00	16.92	28.57	45.49	54.00	8.51	Average

802.11b, Low Channel, Chain 1,Bandedge, Vertical



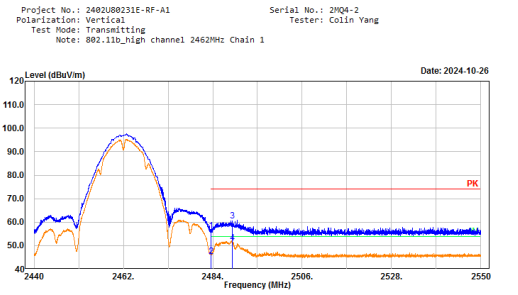
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2386.77	31.58	28.55	60.13	74.00	13.87	Peak
2	2386.77	23.70	28.55	52.25	54.00	1.75	Average
3	2390.00	27.30	28.57	55.87	74.00	18.13	Peak
4	2390.00	17.46	28.57	46.03	54.00	7.97	Average

802.11b, High Channel, Chain 1,Bandedge, Horizontal

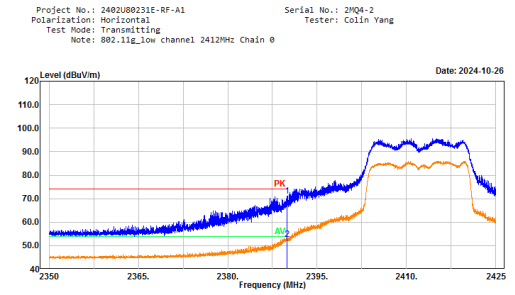
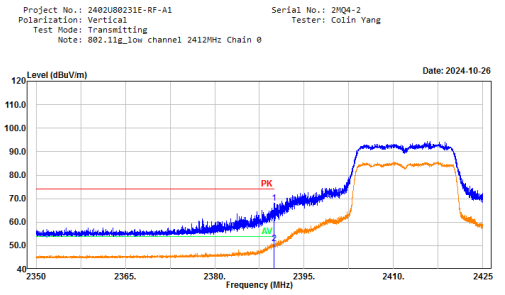
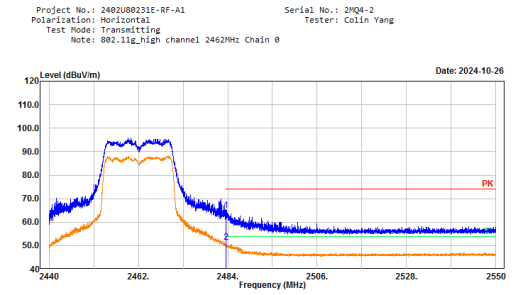
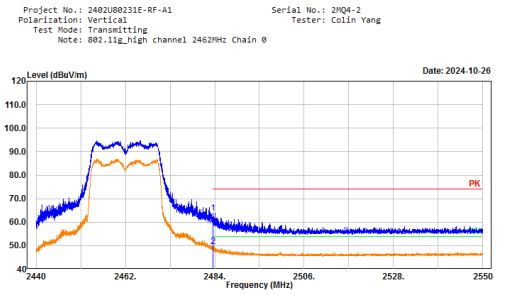


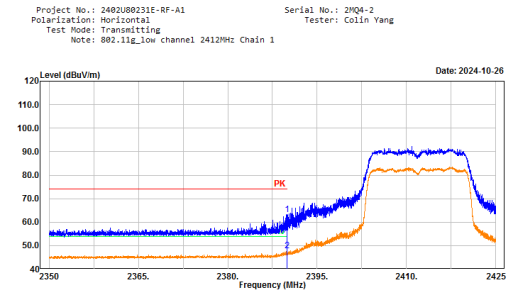
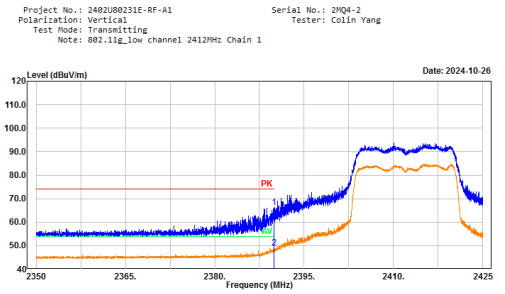
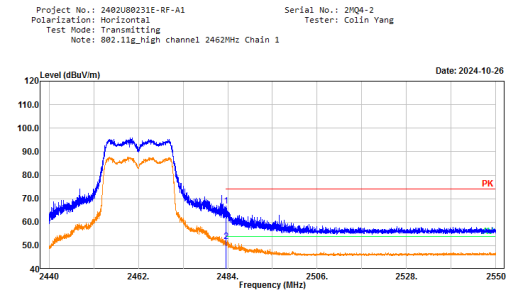
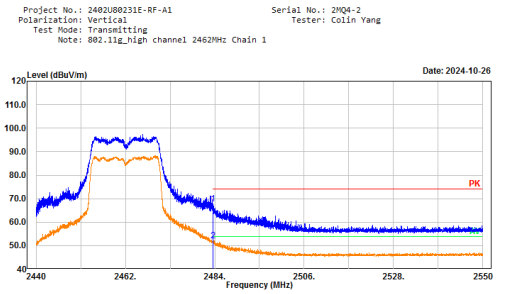
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2483.50	28.77	28.95	57.72	74.00	16.28	Peak
2	2483.50	16.58	28.95	45.53	54.00	8.47	Average
3	2490.03	30.05	28.98	59.03	74.00	14.97	Peak
4	2490.03	19.32	28.98	48.30	54.00	5.70	Average

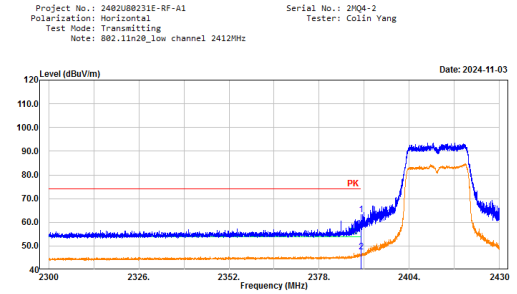
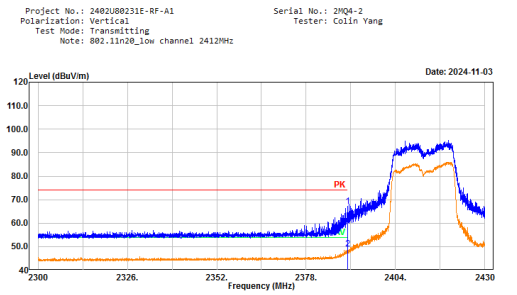
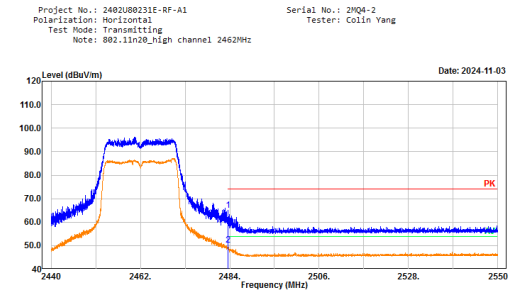
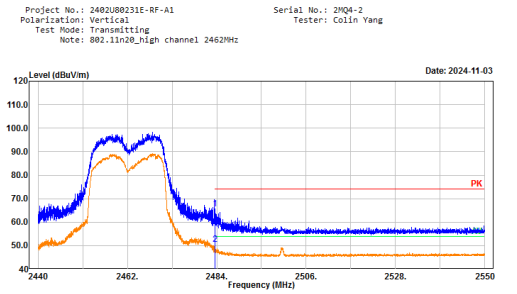
802.11b, High Channel, Chain 1,Bandedge, Vertical

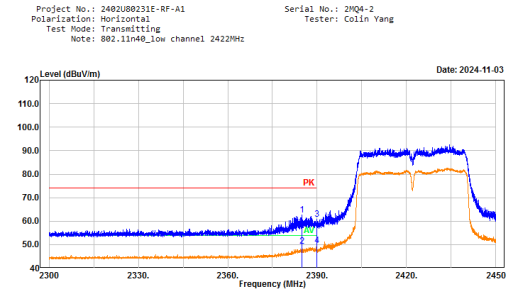
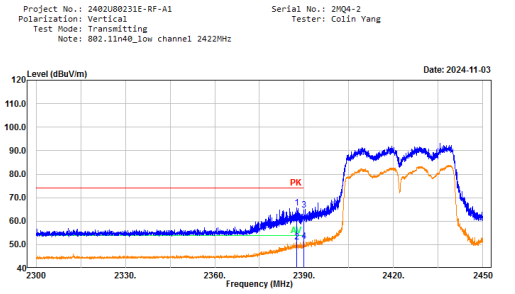
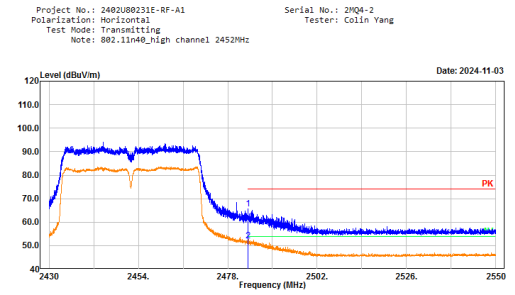
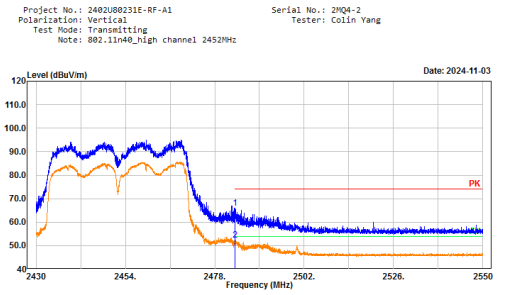


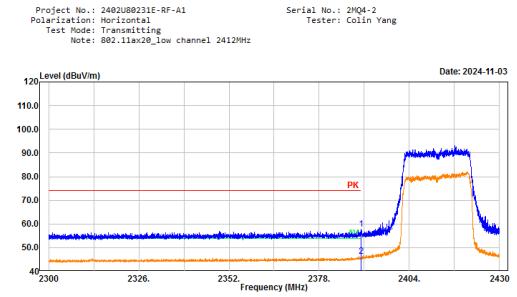
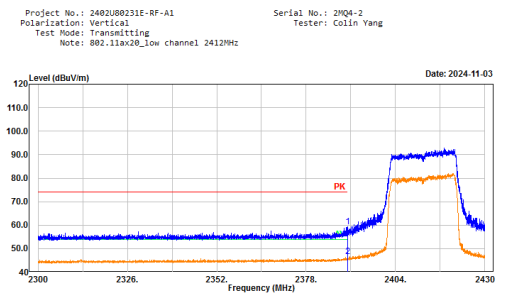
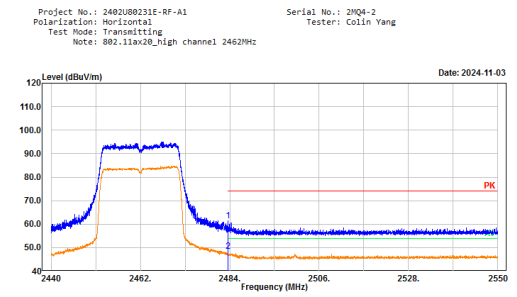
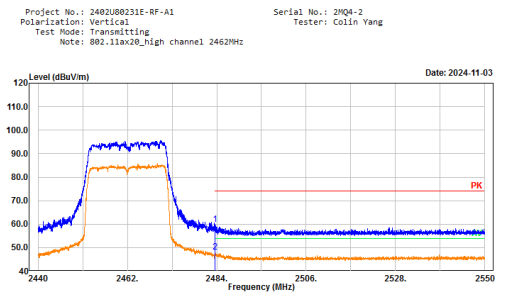
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2483.50	27.29	28.95	56.24	74.00	17.76	Peak
2	2483.50	16.53	28.95	45.48	54.00	8.52	Average
3	2488.84	31.63	28.97	60.60	74.00	13.40	Peak
4	2488.84	22.31	28.97	51.28	54.00	2.72	Average

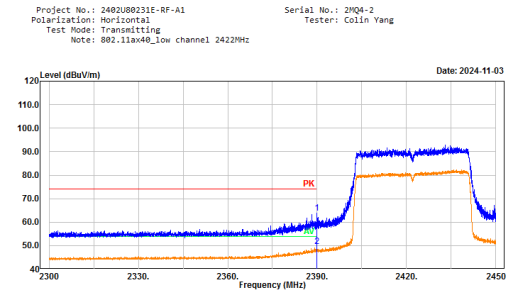
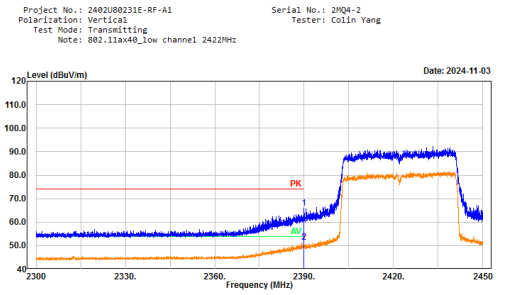
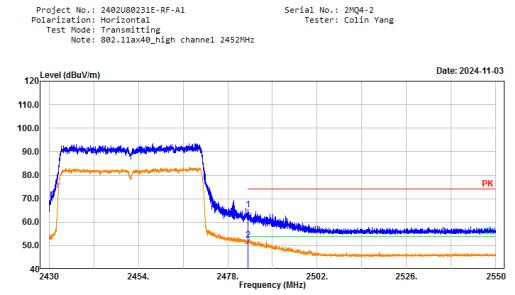
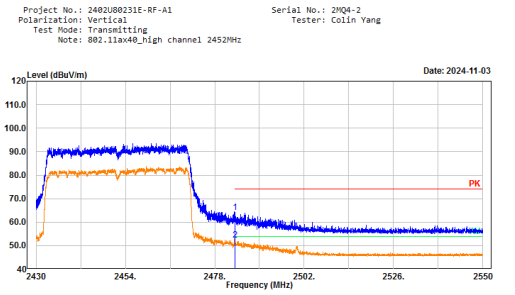
802.11g, Low Channel, Chain 0,Bandedge, Horizontal	802. 11g, Low Channel, Chain 0,Bandedge, Vertical
	
No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 42.67 28.57 71.24 74.00 2.76 Peak 2 2390.00 24.13 28.57 52.70 54.00 1.30 Average	No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 39.55 28.57 68.12 74.00 5.88 Peak 2 2390.00 22.16 28.57 50.73 54.00 3.27 Average
802. 11g, High Channel, Chain 0,Bandedge, Horizontal	**802. 11g, High Channel, Chain 0,Bandedge, Vertical**
	
No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 36.08 28.95 65.03 74.00 8.97 Peak 2 2483.50 22.45 28.95 51.40 54.00 2.60 Average	No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 34.92 28.95 63.87 74.00 10.13 Peak 2 2483.50 20.77 28.95 49.72 54.00 4.28 Average

802.11g, Low Channel, Chain 1,Bandedge, Horizontal	802. 11g, Low Channel, Chain 1,Bandedge, Vertical
	
No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 34.65 28.57 63.22 74.00 10.78 Peak 2 2390.00 19.32 28.57 47.89 54.00 6.11 Average	No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 37.77 28.57 66.34 74.00 7.66 Peak 2 2390.00 20.43 28.57 49.00 54.00 5.00 Average
802. 11g, High Channel, Chain 1,Bandedge, Horizontal	**802. 11g, High Channel, Chain 1,Bandedge, Vertical**
	
No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 37.80 28.95 66.75 74.00 7.25 Peak 2 2483.50 22.74 28.95 51.69 54.00 2.31 Average	No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 38.89 28.95 67.84 74.00 6.16 Peak 2 2483.50 23.12 28.95 52.07 54.00 1.93 Average

802.11n20, Low Channel, MIMO, Bandedge, Horizontal	802. 11n20, Low Channel, MIMO, Bandedge, Vertical
 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 34.73 28.57 63.30 74.00 10.70 Peak 2 2390.00 18.87 28.57 47.44 54.00 6.56 Average	 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 38.75 28.57 67.32 74.00 6.68 Peak 2 2390.00 20.56 28.57 49.13 54.00 4.87 Average
802. 11n20, High Channel, MIMO, Bandedge, Horizontal	**802. 11n20, High Channel, MIMO, Bandedge, Vertical**
 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 36.23 28.95 65.18 74.00 8.82 Peak 2 2483.50 21.29 28.95 50.24 54.00 3.76 Average	 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 36.62 28.95 65.57 74.00 8.43 Peak 2 2483.50 21.68 28.95 50.63 54.00 3.37 Average

802. 11n40, Low Channel, MIMO, Bandedge, Horizontal	802. 11n40, Low Channel, MIMO, Bandedge, Vertical
 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2384.96 33.97 28.55 62.52 74.00 11.48 Peak 2 2384.96 20.86 28.55 49.41 54.00 4.59 Average 3 2390.00 32.25 28.57 60.82 74.00 13.18 Peak 4 2390.00 21.02 28.57 49.59 54.00 4.41 Average	 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2387.42 37.07 28.56 65.63 74.00 8.37 Peak 2 2387.42 22.47 28.56 51.03 54.00 2.97 Average 3 2390.00 36.32 28.57 64.89 74.00 9.11 Peak 4 2390.00 22.91 28.57 51.48 54.00 2.52 Average
802. 11n40, High Channel, MIMO, Bandedge, Horizontal	**802. 11n40, High Channel, MIMO, Bandedge, Vertical**
 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 36.84 28.95 65.79 74.00 8.21 Peak 2 2483.50 23.15 28.95 52.10 54.00 1.90 Average	 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 36.99 28.95 65.94 74.00 8.06 Peak 2 2483.50 23.44 28.95 52.39 54.00 1.61 Average

802.11ax20, Low Channel, MIMO, Bandedge, Horizontal	802. 11ax20, Low Channel, MIMO, Bandedge, Vertical
 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 29.15 28.57 57.72 74.00 16.28 Peak 2 2390.00 17.85 28.57 46.42 54.00 7.58 Average	 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 30.76 28.57 59.33 74.00 14.67 Peak 2 2390.00 18.01 28.57 46.58 54.00 7.42 Average
802. 11ax20, High Channel, MIMO, Bandedge, Horizontal	**802. 11ax20, High Channel, MIMO, Bandedge, Vertical**
 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 32.43 28.95 61.38 74.00 12.62 Peak 2 2483.50 19.49 28.95 48.44 54.00 5.56 Average	 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 31.00 28.95 59.95 74.00 14.05 Peak 2 2483.50 19.26 28.95 48.21 54.00 5.79 Average

802. 11ax40, Low Channel, MIMO, Bandedge, Horizontal	802. 11ax40, Low Channel, MIMO, Bandedge, Vertical
 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 35.33 28.57 63.90 74.00 10.10 Peak 2 2390.00 21.11 28.57 49.68 54.00 4.32 Average	 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2390.00 37.34 28.57 65.91 74.00 8.09 Peak 2 2390.00 22.98 28.57 51.55 54.00 2.45 Average
802. 11ax40, High Channel, MIMO, Bandedge, Horizontal	**802. 11ax40, High Channel, MIMO, Bandedge, Vertical**
 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 36.36 28.95 65.31 74.00 8.69 Peak 2 2483.50 23.51 28.95 52.46 54.00 1.54 Average	 No. Frequency (MHz) Reading (dBµV) Factor (dB/m) Result (dBµV/m) Limit (dBµV/m) Margin (dB) Detector 1 2483.50 35.29 28.95 64.24 74.00 9.76 Peak 2 2483.50 23.39 28.95 52.34 54.00 1.66 Average

5.3 Spot Check With Maximum Conducted Output Power

Serial No.:	2MQ4-1	**Test Date:**	2024/6/24
Test Site:	RF	**Test Mode:**	Transmitting
Tester:	Roy Xiao	**Test Result:**	Pass

Environmental Conditions:

Temperature: (°C)	27.6	**Relative Humidity: (%)**	47	**ATM Pressure: (kPa)**	100.7

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Anritsu	Microwave Peak Power Sensor	MA24418A	12618	2023/9/4	2024/9/3
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM488	2023/9/10	2024/9/9

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Modes	Test Frequency (MHz)	RU Config.	Maximum Conducted Peak Output Power (dBm)			Limit (dBm)
			Chain 0	Chain 1	Total	
802.11b	2412	/	18.43	18.72	/	30
	2437	/	18.21	18.81	/	30
	2462	/	18.13	19.12	/	30
802.11g	2412	/	26.07	26.17	/	30
	2437	/	26.22	26.21	/	30
	2462	/	25.96	26.16	/	30
802.11n ht20	2412	/	25.95	26.14	29.06	30
	2437	/	25.83	26.04	28.95	30
	2462	/	25.92	26.01	28.98	30
802.11n ht40	2422	/	25.95	26.14	29.06	30
	2437	/	26.13	26.32	**29.24**	30
	2452	/	26.02	26.11	29.08	30
802.11ax he20	2412	26/0	20.81	20.53	23.68	30
		52/37	21.21	21.34	24.29	30
		106/53	23.04	22.94	26.00	30
		242/61	23.87	23.89	26.89	30
	2437	26/0	19.95	20.12	23.05	30
		52/37	21.84	21.90	24.88	30
		106/53	23.25	23.15	26.21	30
		242/61	23.98	23.83	26.92	30
	2462	26/8	20.34	20.00	23.18	30
		52/40	20.99	20.91	23.96	30
		106/54	22.95	22.79	25.88	30
		242/61	23.61	23.11	26.38	30
802.11ax h40	2422	26/0	17.31	17.03	20.18	30
		52/37	18.21	18.04	21.14	30
		106/53	20.24	19.94	23.10	30
		242/61	22.04	21.94	25.00	30
		484/65	23.67	23.50	26.60	30
	2437	26/0	16.95	17.15	20.06	30
		52/37	18.24	17.98	21.12	30
		106/53	20.55	19.75	23.18	30
		242/61	22.04	21.94	25.00	30
		484/65	23.78	23.63	26.72	30
	2452	26/8	16.89	16.53	19.72	30
		52/40	17.99	17.81	20.91	30
		106/54	19.35	19.59	22.48	30
		242/61	23.04	22.94	26.00	30
		484/65	23.61	23.51	26.57	30
Note: 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 $N_{ANT} \leqslant 4$						
Antenna Gain:	2.10	dBi	Directional gain:	2.10	dBi	
Maximum EIRP	31.34	dBm	EIRP Limit for RSS-247	36	dBm	

Note:
The Spot Check data were similar to the original data, so this report can reuse data.

5.4 Duty Cycle:

Serial No.:	2MQ4-1	**Test Date:**	2024/09/18
Test Site:	RF	**Test Mode:**	Transmitting
Tester:	Roy Xiao	**Test Result:**	/

Environmental Conditions:

Temperature: (°C):	26.1	**Relative Humidity: (%)**	51	**ATM Pressure: (kPa)**	99.8

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101589	2023/10/18	2024/10/17
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM503	2024/06/07	2025/06/07

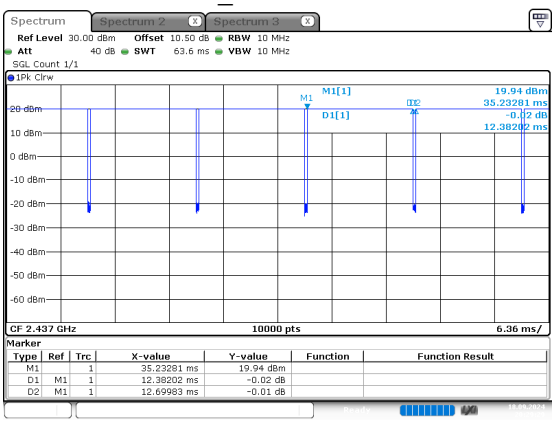
** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	1/Ton (Hz)	VBW Setting (kHz)
b_2437MHz	12.382	12.700	97.50	81	0.100
g_2437MHz	1.975	2.056	96.06	506	1.000
n20_2437MHz	5.419	6.765	80.10	185	0.200
n40_2437MHz	5.427	6.775	80.10	184	0.200
ax20_2437MHz_RU_Full	5.442	6.788	80.17	184	0.200
ax40_2437MHz_RU_Full	5.440	6.795	80.06	184	0.200

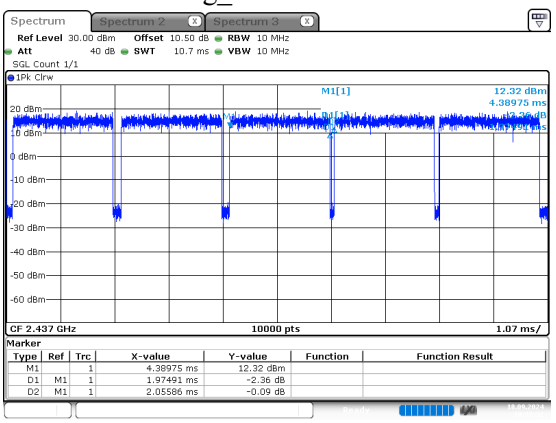
Duty Cycle = Ton/(Ton+Toff)*100%

b_2437MHz



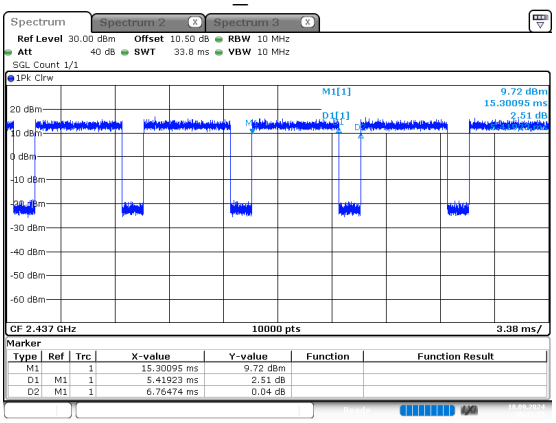
ProjectNo.:2402U80231E-RF-A1 Tester:Roy Xiao
Date: 18.SEP.2024 20:29:29

g_2437MHz



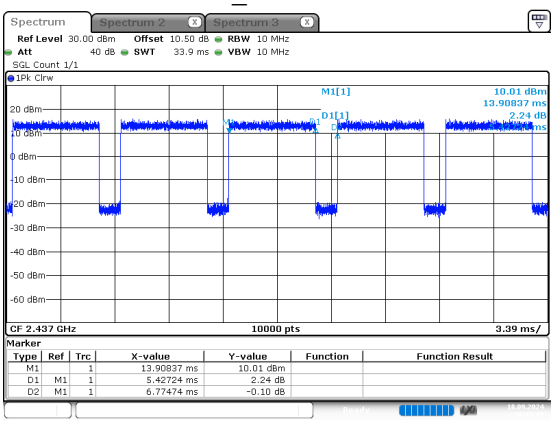
ProjectNo.:2402U80231E-RF-A1 Tester:Roy Xiao
Date: 18.SEP.2024 20:32:32

n20_2437MHz



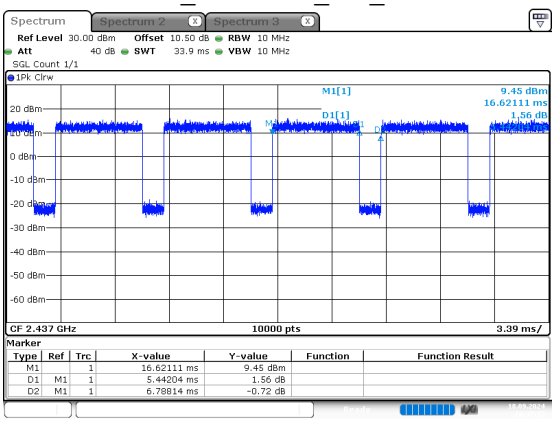
ProjectNo.:2402U80231E-RF-A1 Tester:Roy Xiao
Date: 18.SEP.2024 20:33:55

n40_2437MHz



ProjectNo.:2402U80231E-RF-A1 Tester:Roy Xiao
Date: 18.SEP.2024 20:35:17

ax20_2437MHz_RU_Full



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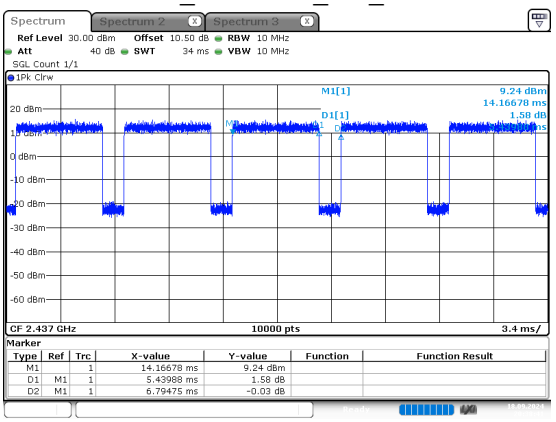
Date: 18.SEP.2024 20:37:16

ax40_2437MHz_RU_Full



ProjectNo.:2402U80231E-RF-A1 Tester:Roy Xiao
Date: 18.SEP.2024 20:38:41

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2402U80231E-RF-A1-EXP EUT EXTERNAL PHOTOGRAPHS and 2402U80231E-RF-A1-INP EUT INTERNAL PHOTOGRAPHS.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2402U80231E-RF-00AA1-TSP TEST SETUP PHOTOGRAPHS.

******* END OF REPORT *******