

## TEST REPORT

**Applicant:** Shenzhen Xinguodu Technology Co., Ltd.

**Address:** 17B JinSong Mansion, Terra Industrial & Trade Park  
Chegongmiao, Futian District, Shenzhen, Guangdong, China.

**Product Name:** POS terminal

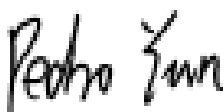
**FCC ID:** XDQN92-01

**Standard(s):** 47 CFR Part 15, Subpart C(15.247)  
ANSI C63.10-2013  
KDB 558074 D01 15.247 Meas Guidance v05r02

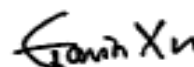
**Report Number:** 2402V85163E-RF-00CA1

**Report Date:** 2025/4/17

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:** Pedro Yun  
Title: **Project Engineer**



**Approved By:** Gavin Xu  
Title: **RF Supervisor**

---

**Bay Area Compliance Laboratories Corp. (Dongguan)**  
No.12, Pulong East 1<sup>st</sup> Road, Tangxia Town, Dongguan, Guangdong, China

Tel: +86-769-86858888

Fax: +86-769-86858891

[www.baclcorp.com.cn](http://www.baclcorp.com.cn)

Note: The information marked ▲ is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report cannot be reproduced except in full, without prior written approval of the Company. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0. This report may contain data that are not covered by the accreditation scope and shall be marked with ★. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government. Each test item follows the test standard(s) without deviation.

## CONTENTS

<b>DOCUMENT REVISION HISTORY</b>	<b>4</b>
<b>1. GENERAL INFORMATION</b>	<b>5</b>
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	5
1.2 ANTENNA INFORMATION DETAIL▲	6
1.3 EQUIPMENT MODIFICATIONS	6
<b>2. SUMMARY OF TEST RESULTS</b>	<b>7</b>
<b>3. DESCRIPTION OF TEST CONFIGURATION</b>	<b>8</b>
3.1 OPERATION FREQUENCY DETAIL	8
3.2 EUT OPERATION CONDITION	8
3.3 SUPPORT EQUIPMENT LIST AND DETAILS	8
3.4 SUPPORT CABLE LIST AND DETAILS	9
3.5 BLOCK DIAGRAM OF TEST SETUP	10
3.6 TEST FACILITY	11
3.7 MEASUREMENT UNCERTAINTY	11
<b>4. REQUIREMENTS AND TEST PROCEDURES</b>	<b>12</b>
4.1 AC LINE CONDUCTED EMISSIONS	12
4.1.1 Applicable Standard	12
4.1.2 EUT Setup	13
4.1.3 EMI Test Receiver Setup	13
4.1.4 Test Procedure	14
4.1.5 Corrected Amplitude & Margin Calculation	14
4.1.6 Test Result	14
4.2 RADIATION SPURIOUS EMISSIONS	15
4.2.1 Applicable Standard	15
4.2.2 EUT Setup	15
4.2.3 EMI Test Receiver & Spectrum Analyzer Setup	17
4.2.4 Test Procedure	17
4.2.5 Corrected Result& Margin Calculation	18
4.2.6 Test Result	18
4.3 MAXIMUM CONDUCTED OUTPUT POWER	19
4.3.1 Applicable Standard	19
4.3.2 EUT Setup	19
4.3.3 Test Procedure	19
4.3.4 Test Result	19
4.4 DUTY CYCLE	20
4.4.1 EUT Setup	20
4.4.2 Test Procedure	20
4.4.3 Judgment	20
4.5 ANTENNA REQUIREMENT	21
4.5.1 Applicable Standard	21
4.5.2 Judgment	21
<b>5. Test DATA AND RESULTS</b>	<b>22</b>

<b>5.1 AC LINE CONDUCTED EMISSIONS</b>	<b>22</b>
<b>5.2 RADIATION SPURIOUS EMISSIONS</b>	<b>25</b>
<b>5.3 SPOT CHECK WITH MAXIMUM CONDUCTED OUTPUT POWER</b>	<b>48</b>
<b>5.4 DUTY CYCLE</b>	<b>49</b>
<b>EXHIBIT A - EUT PHOTOGRAPHS</b>	<b>50</b>
<b>EXHIBIT B - TEST SETUP PHOTOGRAPHS</b>	<b>51</b>

## DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2402V85163E-RF-00C	Original Report	2024/10/25
2.0	2402V85163E-RF-00CA1	CIIPC Report	2025/4/17

Note: This is a CIIPC report application which was based on the original report. The differences between them as following:

1. Antenna changes(Bluetooth & wifi & GPS antenna).
2. Minor circuitry for non-transmitter portions.
  - a. Added a secondary screen , Back camera(200W) and Top camera (200W).
  - b. Deleted Fingerprint module , Audio jack and related circuits.
  - c. Added eMMC and LPDDR4X.
- 3.Added a Battery(Model: GX11).

The changes between the previous device and the current one is stated and guaranteed by the Applicant, the differences between them will affect the test items, we will change the test data, test photos , and the EUT photos.

## 1. GENERAL INFORMATION

### 1.1 Product Description for Equipment under Test (EUT)

<b>EUT Name:</b>	POS terminal
<b>EUT Model:</b>	N92
<b>Operation Frequency:</b>	2412-2462MHz (802.11b/g/n ht20) 2422-2452MHz(802.11n ht40)
<b>Maximum Peak Output Power (Conducted) ▲:</b>	24.03dBm
<b>Modulation Type:</b>	802.11b:DSSS-DBPSK, DQPSK, CCK 802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM
<b>Rated Input Voltage:</b>	DC 7.2V from battery or DC 5V from adapter or DC 5V from Charging Base
<b>Serial Number:</b>	For Radiated Spurious Emission Below 1G Test: 2ZYH-2 (Configuration 3#) For RF Conducted /AC Line Conducted Emissions /Radiated Spurious Emission Above 1G Tests: 2ZYH-1 (Configuration 2#)
<b>EUT Received Date:</b>	2025/3/19
<b>EUT Received Status:</b>	Good

Accessory Description	Manufacturer	Model	Parameters
Adapter	SHENZHEN RUIJING INDUSTRIAL CO.,LTD	STC-A520A-Z	Input: 100-240Vac~50/60Hz 400mA Output: 5.0Vdc 2000mA
Battery 1#	Zhengzhou BAK Battery Co.,Ltd	GX12	Typical Capacity:3300mAh Rated Capacity:3200mAh Typical Energy:23.76Wh Nominal Energy:23.04Wh Output: DC 7.2V
Battery 2# (new)	Zhengzhou BAK Battery Co.,Ltd	GX11	Typical Capacity:2600mAh Rated Capacity:2500mAh Typical Energy:18.72Wh Nominal Energy:18Wh Output: DC 7.2V

Note: Battery 1# and battery 2# are available in all configurations.

### Optional Material:

Material Description	Manufacturer	Parameter
Back Camera 1	/	500W
Back Camera 2	/	200W
Front Camera	/	200W
Top Camera	/	200W
eMMC 1	SAMSUNG	KLMBG2JETD-B041(32GB)
eMMC 2	FORESEE	FEMDNN032G-C9A55(32GB)
LPDDR4X 1	SAMSUNG	K4U6E3S4AB-MGCL(2GB)
LPDDR4X 2	ChangXin	CXDB4CBAM-MK-A(2GB)
Battery 1#	Zhengzhou BAK Battery Co.,Ltd	3300mAh
Battery 2#	Zhengzhou BAK Battery Co.,Ltd	2600mAh

**EUT Information:**

The following Configuration were select to test:

Items	Configuration 1# (old)	Configuration 2# (new)	Configuration 3# (new)
Front Camera	200W	200W	×
Back camera	500W	200W	200W
Top Camera	×	×	200W
Secondary screen	×	√	√
Fingerprint module	√	×	×
Audio jack	√	×	×
Flash lamp	√	×	√
Printer	√	×	×
Battery	Battery 1#	Battery 2#	Battery 1#
eMMC	SAMSUNG	FORESEE	FORESEE
LPDDR4X	SAMSUNG	ChangXin	ChangXin

**1.2 Antenna Information Detail▲**

Antenna Manufacturer	Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Shenzhen Xinguodu Technology Co., Ltd.	FPC	50	2400-2500MHz	-0.26dBi
<b>The design of compliance with §15.203:</b>				
<input checked="" type="checkbox"/> Unit uses a permanently attached antenna. <input type="checkbox"/> Unit uses a unique coupling to the intentional radiator. <input type="checkbox"/> Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.				

**1.3 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)	AC Line Conducted Emissions	Compliant
§15.205, §15.209, §15.247(d)	Radiated Spurious Emissions	Compliant
§15.247 (a)(2)	Minimum 6 dB Bandwidth	Compliant*
§15.247(b)(3)	Maximum Conducted Output Power	Reporting
§15.247(d)	100 kHz Bandwidth Of Frequency Band Edge	Compliant*
§15.247(e)	Power Spectral Density	Compliant*
§15.203	Antenna Requirement	Compliant
<p>Note 1: For AC line conducted emissions and Radiated Spurious Emissions 9kHz~1GHz and 18~25GHz, the maximum output power mode and channel was tested.</p> <p>Note 2: Per BT report, Powered by Adapter was the worst, so only performed it.</p> <p>Note 3: Per BLE report, for AC Line Conducted Emissions , Configuration 2# &amp; Battery 2# was the worst, and for Radiated Spurious Emissions Below 1G, Configuration 3# &amp; Battery 1# was the worst, so only performed it.</p> <p>Note 4: Compliant*: The change of the EUT does not affect the test result, please refer to the original report: 2402V85163E-RF-00C<sup>▲</sup>.</p>		

### 3. DESCRIPTION OF TEST CONFIGURATION

#### 3.1 Operation Frequency Detail

For 802.11b/g/n ht20:

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

For 802.11n ht40:

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

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:

<b>EUT Exercise Software:</b>		WIFI Tool for MT3031.exe		
The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer▲:				
Test Modes	Data Rate	Power Level Setting		
		Lowest Channel	Middle Channel	Highest Channel
802.11b	1Mbps	20	20	20
802.11g	6Mbps	17	17	17
802.11n ht20	MCS0	17	17	17
802.11n ht40	MCS0	15	15	15
The above are the worst-case data rates, which are determined for each mode based upon investigations by measuring the average power and PSD across all data rates, bandwidths, and modulations.				

#### 3.3 Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
/	/	/	/

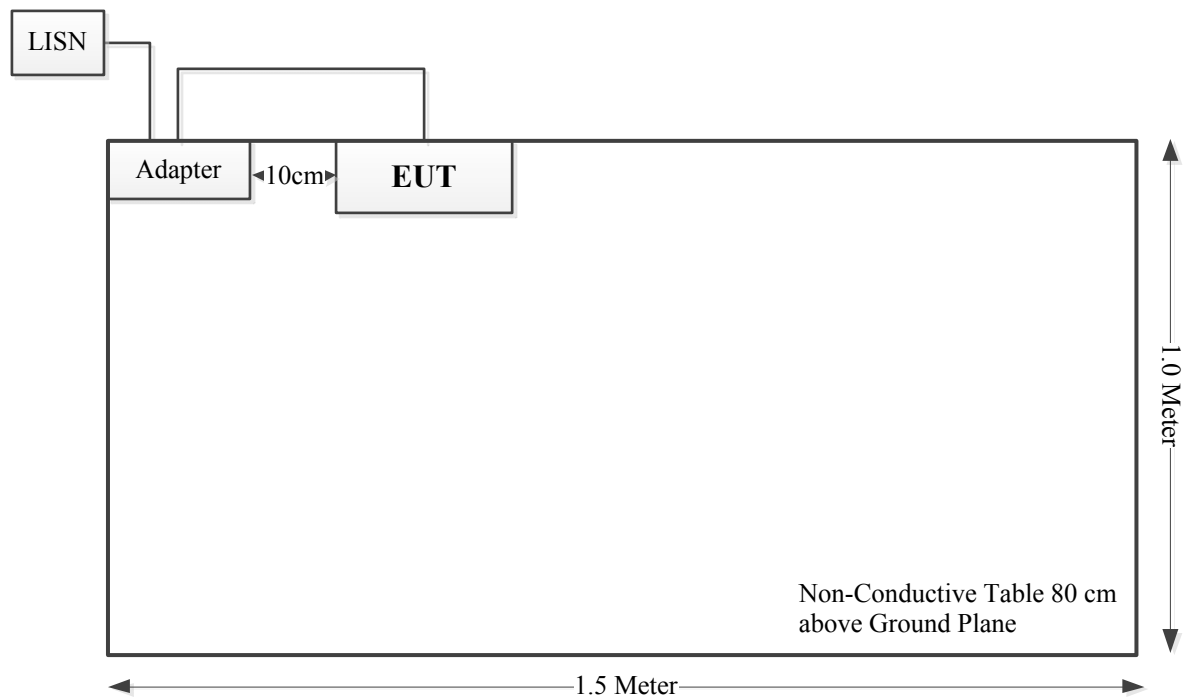


### 3.4 Support Cable List and Details

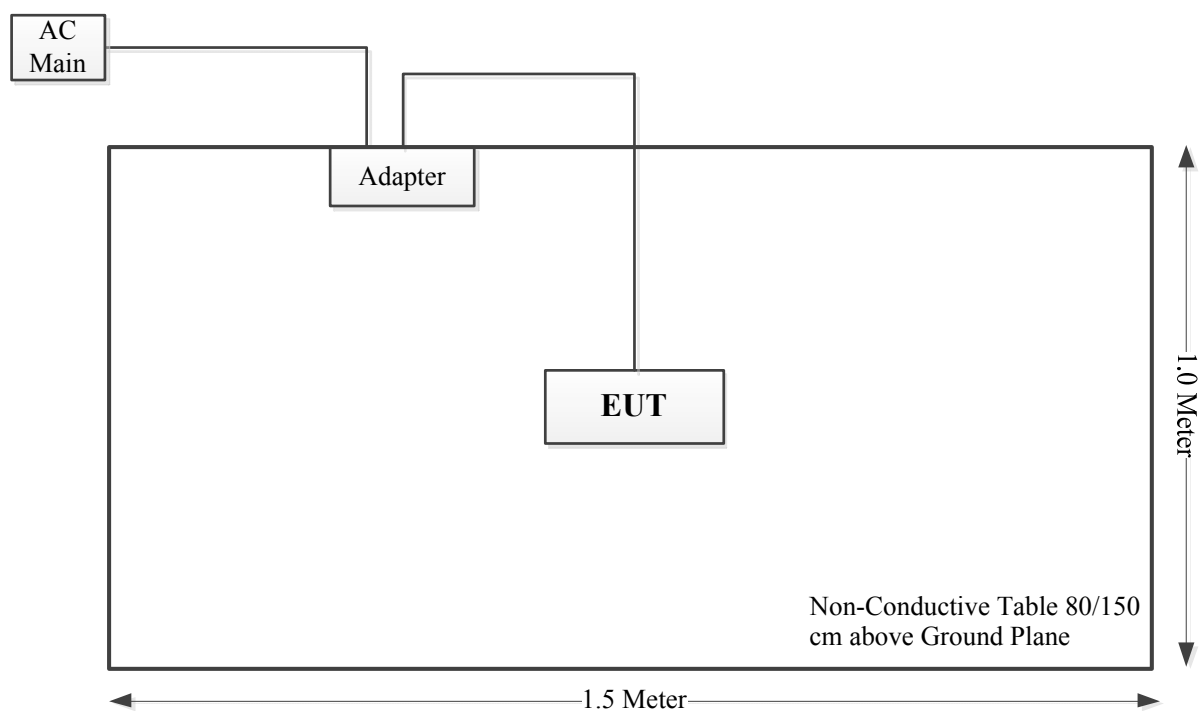
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
USB Cable	no	no	1.5	Adapter	EUT

### 3.5 Block Diagram of Test Setup

AC Line Conducted Emissions:



Radiated Spurious Emission:



### 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 °C
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  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

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

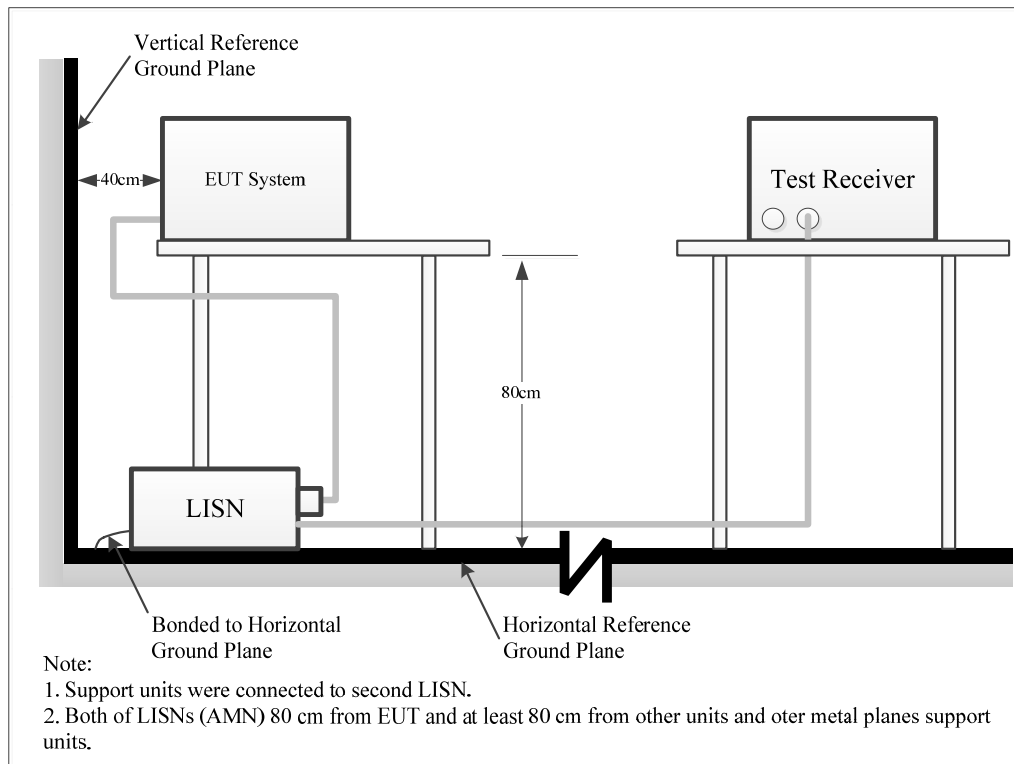
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

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

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

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

#### 4.1.2 EUT Setup



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

The spacing between the peripherals was 10cm.

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 30MHz.

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

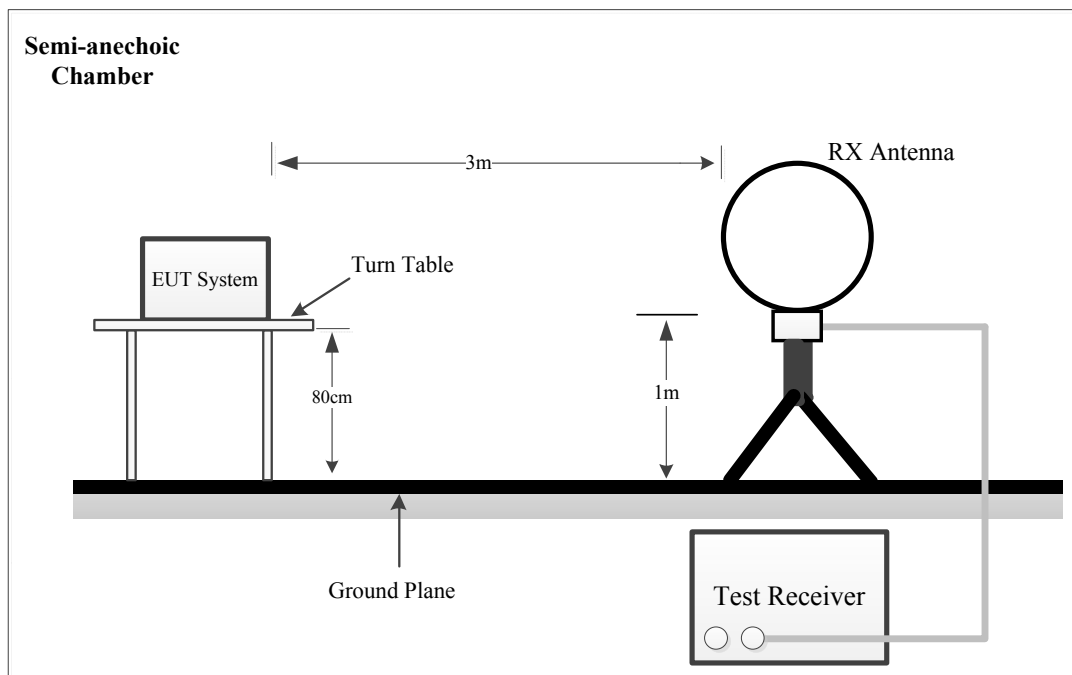
### 4.2.1 Applicable Standard

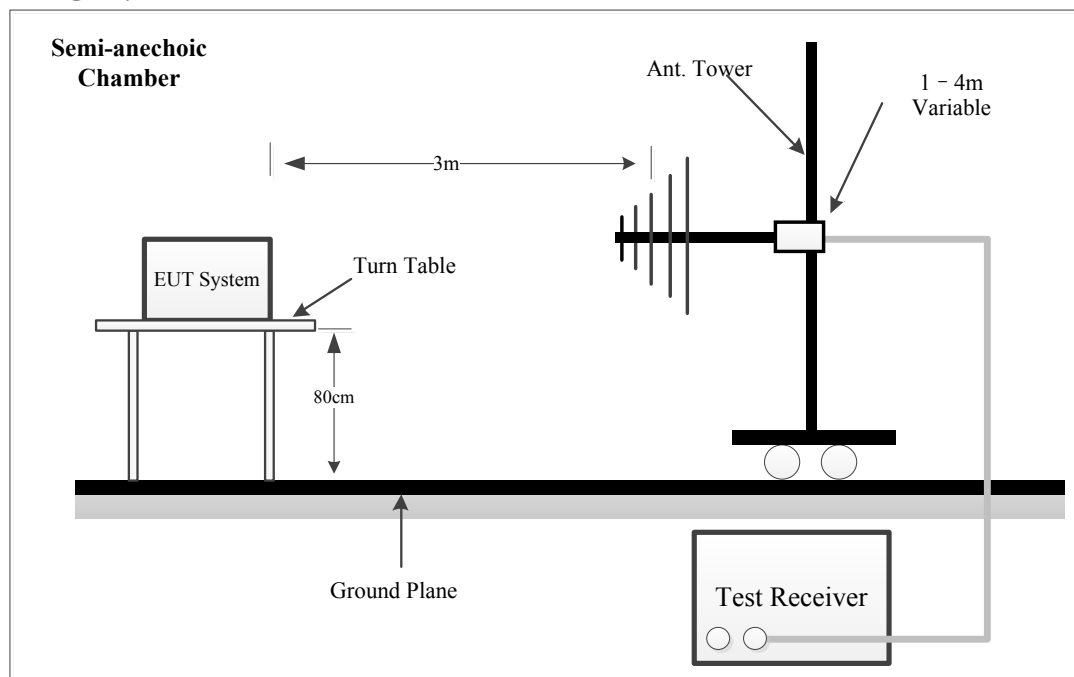
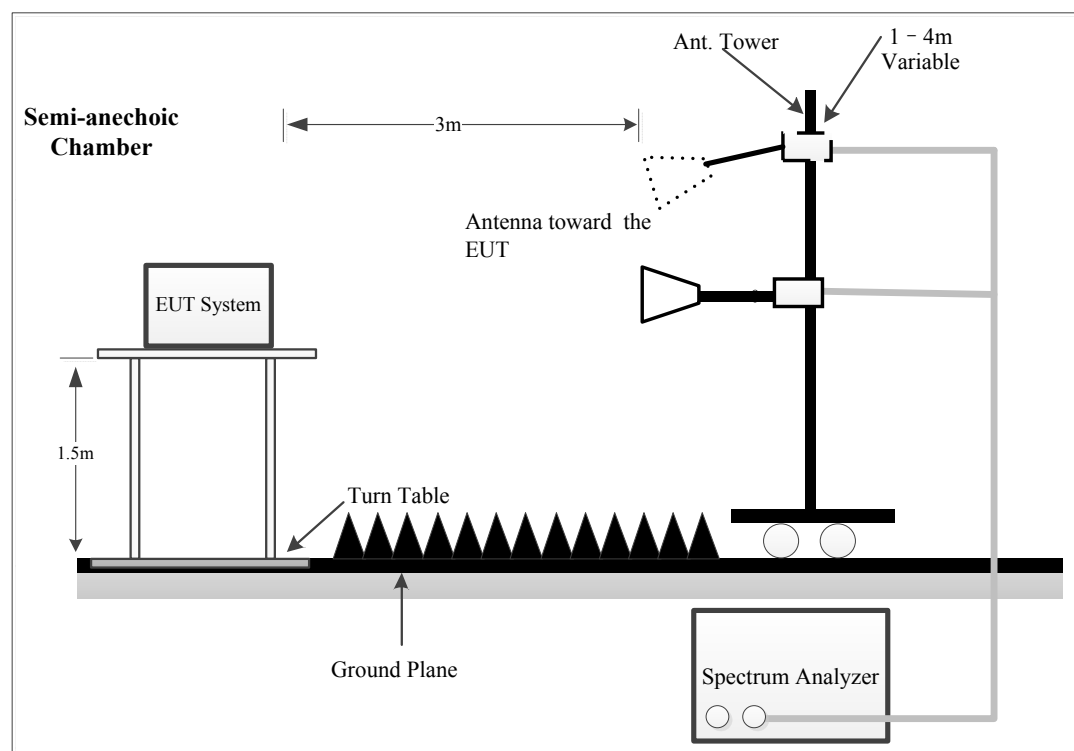
FCC §15.247 (d);

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)).

### 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 limits.

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

The spacing between the peripherals was 10cm.



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	Detector
9 kHz – 150 kHz	QP/AV	300Hz	1 kHz	200 Hz	QP/AV
150 kHz – 30 MHz	QP/AV	10 kHz	30 kHz	9 kHz	QP/AV
30MHz – 1000 MHz	PK	100 kHz	300 kHz	/	PK
	QP	/	/	120kHz	QP

1GHz- 25GHz:

Pre-scan:

Frequency Range	Measurement	RBW	Video B/W	Detector
Above 1 GHz	Peak	1MHz	3 MHz	PK
	AV	1MHz	5kHz	PK

Final measurement for emission identified during the pre-scan:

Frequency Range	Measurement	RBW	Video B/W	Detector
Above 1 GHz	Peak	1MHz	3 MHz	PK
	AV	1MHz	$\geq 1/T$	PK

Note: T is minimum transmission duration

#### 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.

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.

#### 4.2.5 Corrected Result& 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

#### 4.2.6 Test Result

Please refer to section 5.2.

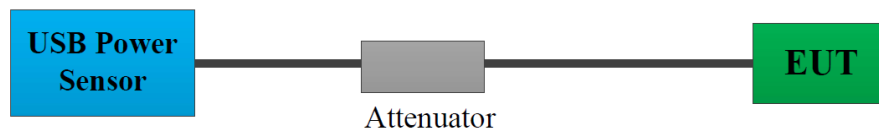
### 4.3 Maximum Conducted Output Power

#### 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.

#### 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 insert loss of this RF cable/attenuator was offset into the setting of test equipment.

#### 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.

- Set the EUT in transmitting mode.
- Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to test equipment.
- Add a correction factor to the display.
- 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.

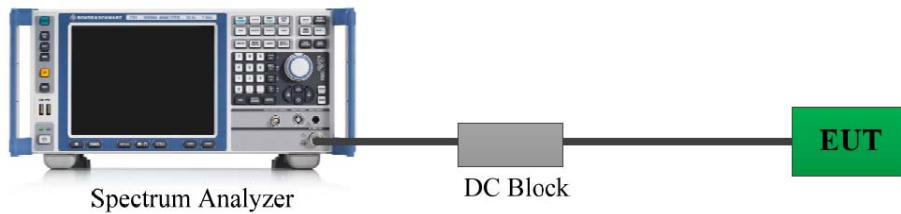
Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, 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. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

### 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 OFFtimes of the transmitted signal:

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

### 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.

### **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:	2ZYH-1	Test Date:	2025/04/01
Test Site:	CE	Test Mode:	Transmitting
Tester:	Yukin Qiu	Test Result:	Pass

#### Environmental Conditions:

Temperature: (°C)	21.4	Relative Humidity: (%)	41	ATM Pressure: (kPa)	101.4
----------------------	------	------------------------------	----	------------------------	-------

#### Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101614	2024/9/5	2025/9/4
MICRO-COAX	Coaxial Cable	C-NJNJ-50	C-0200-01	2024/9/5	2025/9/4
R&S	EMI Test Receiver	ESCI	101121	2024/9/5	2025/9/4
Audix	Test Software	E3	191218 V9	N/A	N/A

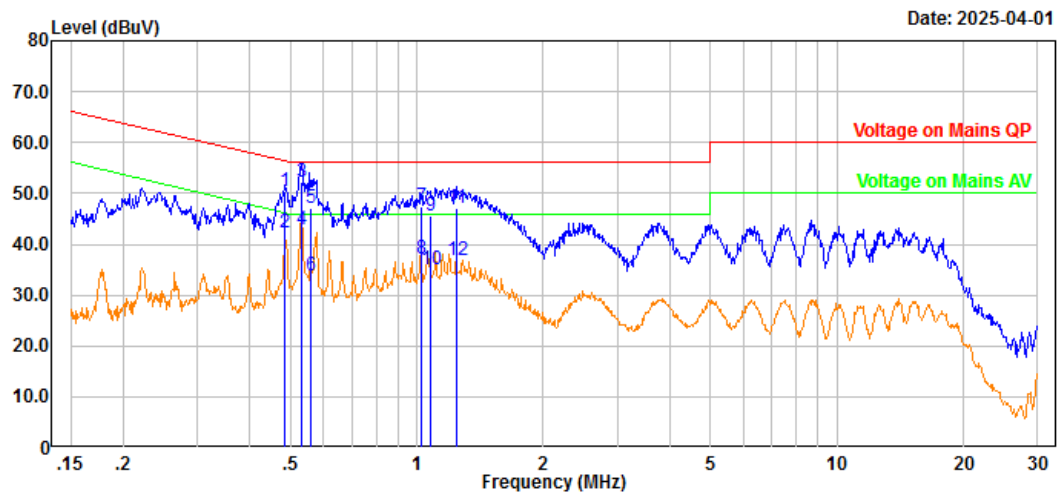
*\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

#### Test Data:

*Note: 802.11b Middle channel was tested.*

Project No.: 2402V85163E-RF-A1  
Port: Line  
Test Mode: Transmitting  
IF B/W 9KHz PK/AV

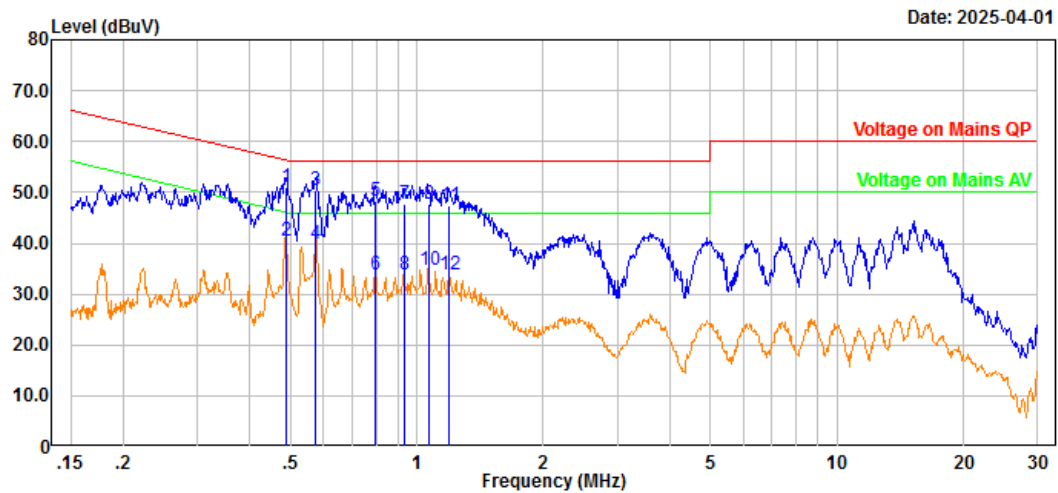
Serial No.: 2ZYH-1  
Tester: Yukin Qiu



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Measurement
1	0.49	39.57	10.84	50.41	56.23	5.82	QP
2	0.49	31.31	10.84	42.15	46.23	4.08	Average
3	0.53	41.45	10.83	52.28	56.00	3.72	QP
4	0.53	31.92	10.83	42.75	46.00	3.25	Average
5	0.56	36.12	10.83	46.95	56.00	9.05	QP
6	0.56	22.85	10.83	33.68	46.00	12.32	Average
7	1.02	36.50	10.85	47.35	56.00	8.65	QP
8	1.02	26.39	10.85	37.24	46.00	8.76	Average
9	1.07	34.80	10.85	45.65	56.00	10.35	QP
10	1.07	24.19	10.85	35.04	46.00	10.96	Average
11	1.24	36.23	10.84	47.07	56.00	8.93	QP
12	1.24	25.92	10.84	36.76	46.00	9.24	Average

Project No.: 2402V85163E-RF-A1  
Port: neutral  
Test Mode: Transmitting  
IF B/W 9KHz PK/AV

Serial No.: 2ZYH-1  
Tester: Yukin Qiu



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Measurement
1	0.49	40.16	10.74	50.90	56.20	5.30	QP
2	0.49	29.60	10.74	40.34	46.20	5.86	Average
3	0.57	39.65	10.73	50.38	56.00	5.62	QP
4	0.57	29.09	10.73	39.82	46.00	6.18	Average
5	0.80	37.46	10.78	48.24	56.00	7.76	QP
6	0.80	23.06	10.78	33.84	46.00	12.16	Average
7	0.93	36.77	10.84	47.61	56.00	8.39	QP
8	0.93	23.02	10.84	33.86	46.00	12.14	Average
9	1.07	36.85	10.86	47.71	56.00	8.29	QP
10	1.07	23.75	10.86	34.61	46.00	11.39	Average
11	1.20	36.52	10.86	47.38	56.00	8.62	QP
12	1.20	22.91	10.86	33.77	46.00	12.23	Average



## 5.2 Radiation Spurious Emissions

### 1)9kHz - 1GHz

Serial Number:	2ZYH-2	Test Date:	2025/3/29
Test Site:	Chamber10m	Test Mode:	Transmitting
Tester:	Willem Qiu	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	23.8	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101.3
----------------------	------	---------------------------	----	---------------------------	-------

**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EMCO	Passive Loop Antenna	6512	9706-1206	2023/10/25	2026/10/24
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	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2024/7/1	2025/6/30
Sonoma	Amplifier	310N	185914	2024/8/26	2025/8/25
R&S	EMI Test Receiver	ESCI	100224	2024/8/26	2025/8/25
Audix	Test Software	E3	191218 V9	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.

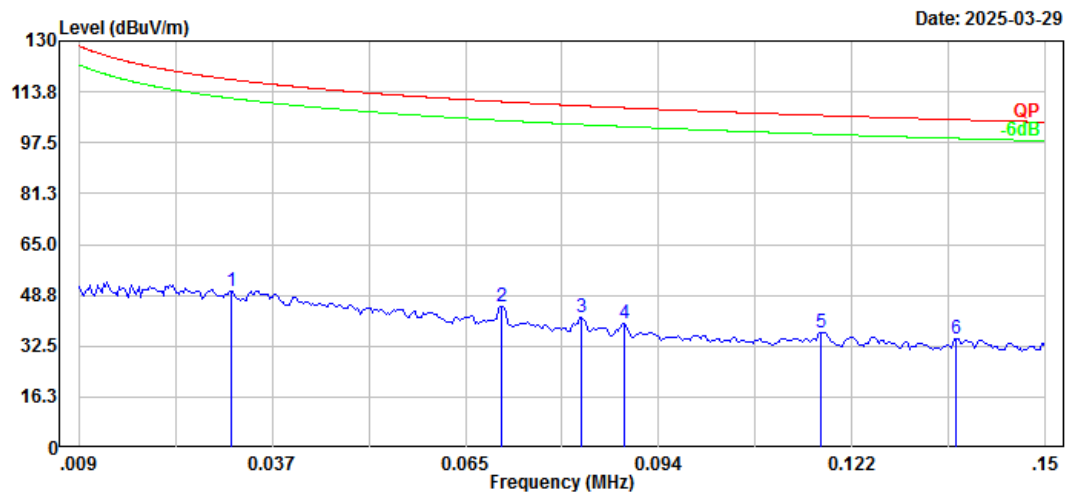
*Note: 802.11b Middle channel was tested.*

**9kHz~30MHz**

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

Project No.: 2402V85163E-RF-A1  
Polarization: Parallel  
Test Mode: Transmitting  
Note:  
RBW:300Hz VBW:1kHz

Serial No.: 2ZYH-2  
Tester: Willem Qiu

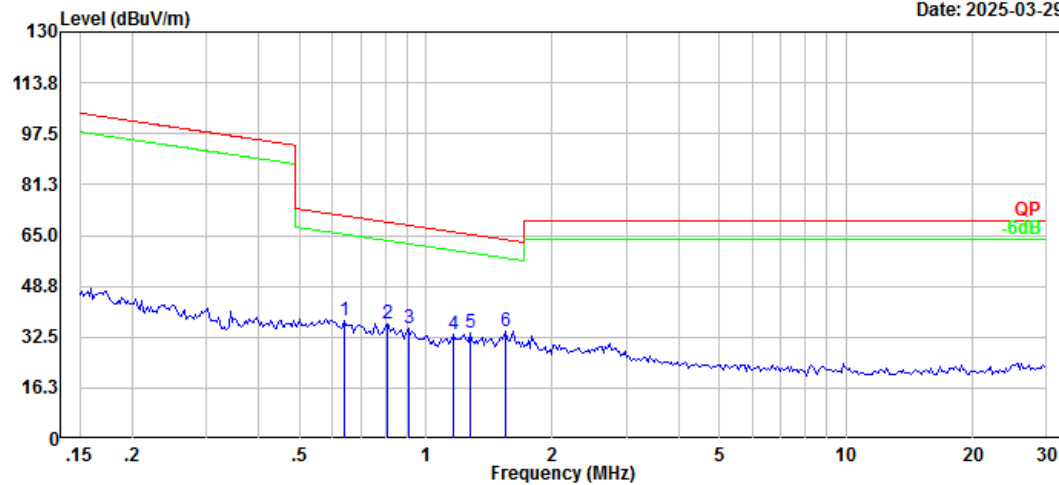


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	0.031	2.95	47.32	50.27	117.70	67.43	Peak
2	0.071	4.61	40.46	45.07	110.61	65.54	Peak
3	0.082	3.17	38.51	41.68	109.29	67.61	Peak
4	0.089	2.27	37.40	39.67	108.66	68.99	Peak
5	0.117	2.52	34.44	36.96	106.22	69.26	Peak
6	0.137	1.67	33.35	35.02	104.87	69.85	Peak

Project No.: 2402V85163E-RF-A1  
Polarization: Parallel  
Test Mode: Transmitting  
Note:  
RBW:10kHz VBW:30kHz

Serial No.: 2ZYH-2  
Tester: Willem Qiu

Date: 2025-03-29

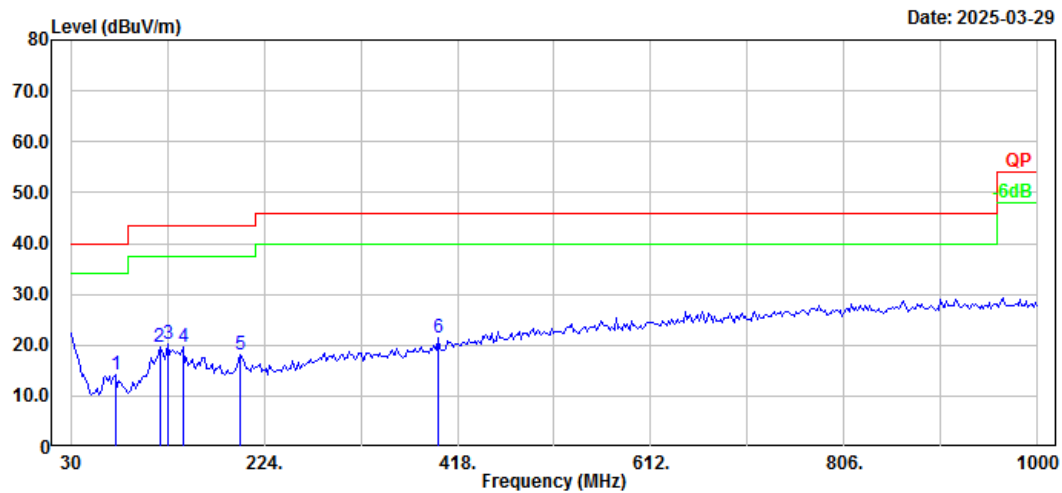


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	0.641	15.70	22.06	37.76	71.42	33.66	Peak
2	0.809	16.22	20.38	36.60	69.36	32.76	Peak
3	0.909	16.71	18.39	35.10	68.32	33.22	Peak
4	1.160	17.39	15.85	33.24	66.16	32.92	Peak
5	1.276	18.68	15.34	34.02	65.31	31.29	Peak
6	1.544	20.22	14.14	34.36	63.62	29.26	Peak

**30MHz-1GHz**

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note:  
RBW:100kHz VBW:300kHz

Serial No.: 2ZYH-2  
Tester: Willem Qiu



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	74.62	30.22	-16.14	14.08	40.00	25.92	Peak
2	119.24	29.72	-10.05	19.67	43.50	23.83	Peak
3	127.00	30.13	-9.89	20.24	43.50	23.26	Peak
4	142.52	30.28	-10.61	19.67	43.50	23.83	Peak
5	200.72	29.70	-11.60	18.10	43.50	25.40	Peak
6	398.60	28.37	-7.01	21.36	46.00	24.64	Peak

Project No.: 2402V85163E-RF-A1

Serial No.: 2ZYH-2

Polarization: Vertical

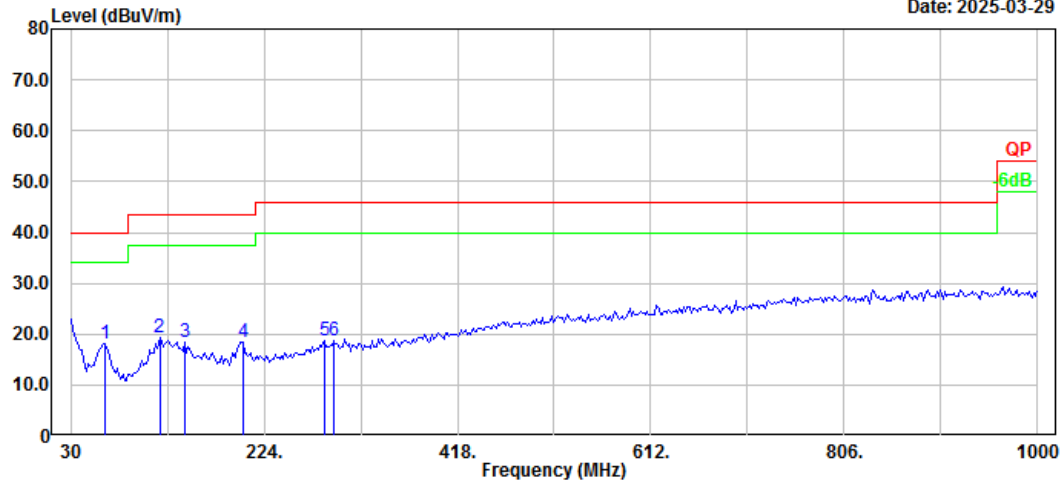
Tester: Willem Qiu

Test Mode: Transmitting

Note:

RBW:100kHz VBW:300kHz

Date: 2025-03-29



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	64.92	34.67	-16.50	18.17	40.00	21.83	Peak
2	119.24	29.45	-10.05	19.40	43.50	24.10	Peak
3	144.46	29.03	-10.73	18.30	43.50	25.20	Peak
4	202.66	30.34	-11.80	18.54	43.50	24.96	Peak
5	284.14	28.39	-9.67	18.72	46.00	27.28	Peak
6	293.84	28.34	-9.56	18.78	46.00	27.22	Peak

**2) 1-25GHz:**

Serial Number:	2ZYH-1	Test Date:	2025/4/3~2025/4/16
Test Site:	Chamber B	Test Mode:	Transmitting
Tester:	Ted Wang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	21.2~25.6	Relative Humidity: (%)	48~66	ATM Pressure: (kPa)	100.1~101.5
----------------------	-----------	---------------------------	-------	---------------------------	-------------

**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
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2023/2/22	2026/2/21
Xinhang Macrowave	Coaxial Cable	XH750A-N/J-SMA/J-10M	20231117004 #0001	2024/11/17	2025/11/16
Xinhang Macrowave	Coaxial Cable	XH360A-2.92/J-2.92/J-6M-A	20231208001 #0001	2024/12/9	2025/12/8
AH	Preamplifier	PAM-0118P	469	2024/4/15	2025/4/14
AH	Preamplifier	PAM-0118P	469	2025/4/11	2026/4/10
AH	Preamplifier	PAM-1840VH	191	2024/9/5	2025/9/4
R&S	Spectrum Analyzer	FSV40	101944	2024/9/6	2025/9/5
Audix	Test Software	E3	191218 V9	N/A	N/A
Decentest	Multiplex Switch Test Control Set & Filter Switch Unit	DT7220SCU & DT7220FCU	DC79902 & DC79905	2024/8/27	2025/8/26

\* 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).

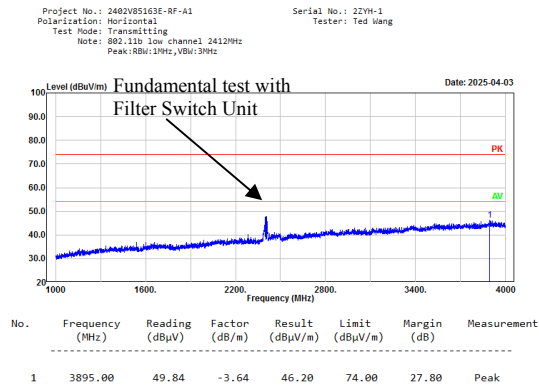
**Test Data:**

Please refer to the below table and plots.

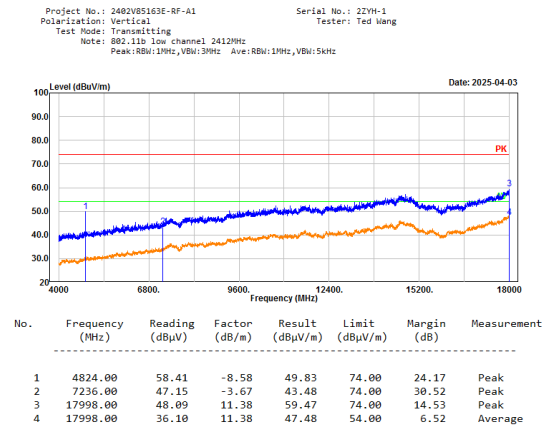
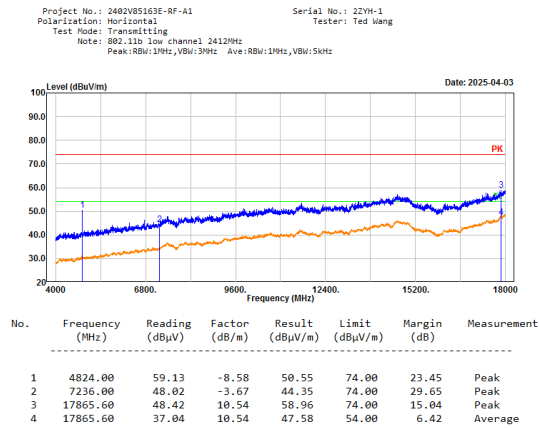
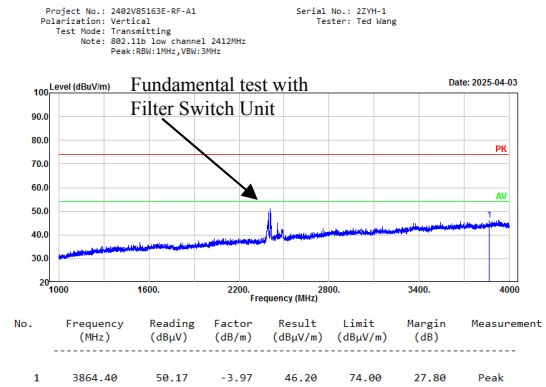
After pre-scan in the X, Y and Z axes of orientation, the worst case is refer to table and plots.

## 1-18GHz:

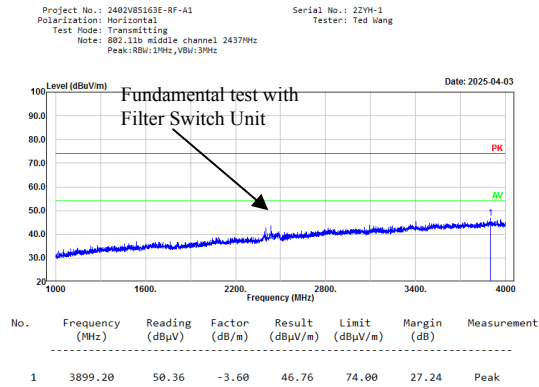
## 802.11b, Low Channel, Horizontal



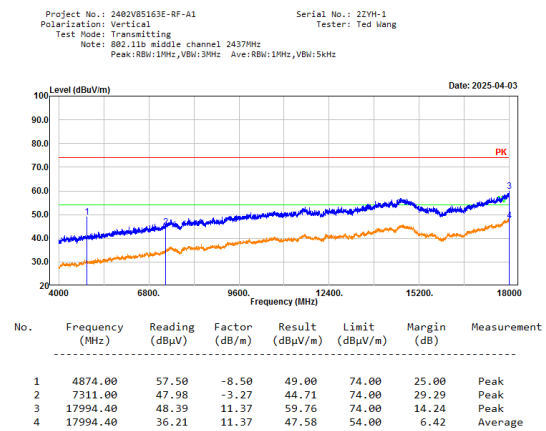
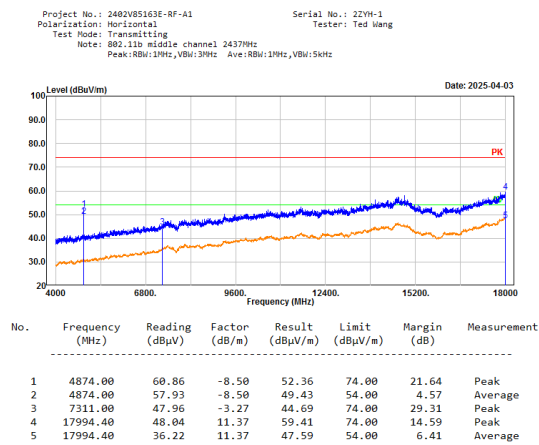
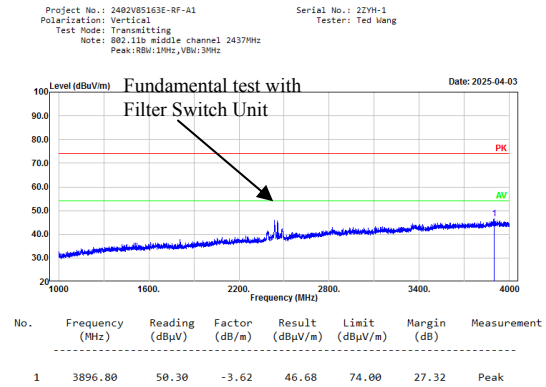
## 802.11b, Low Channel, Vertical



## 802.11b, Middle Channel, Horizontal

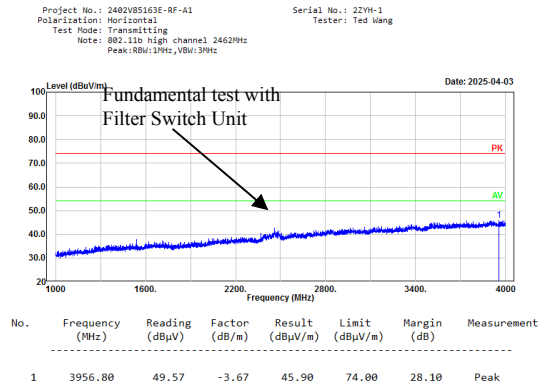


## 802.11b, Middle Channel, Vertical

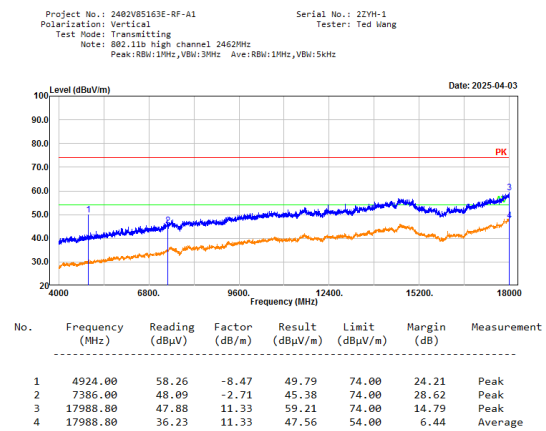
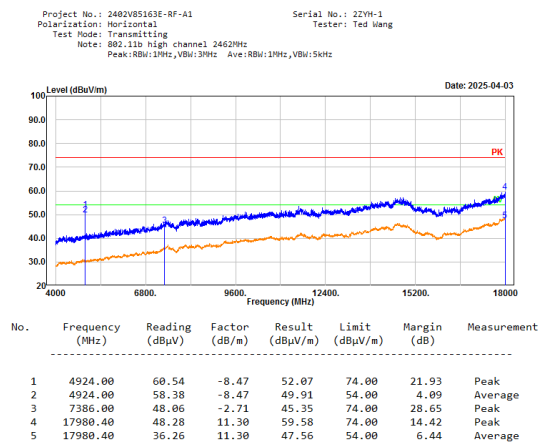
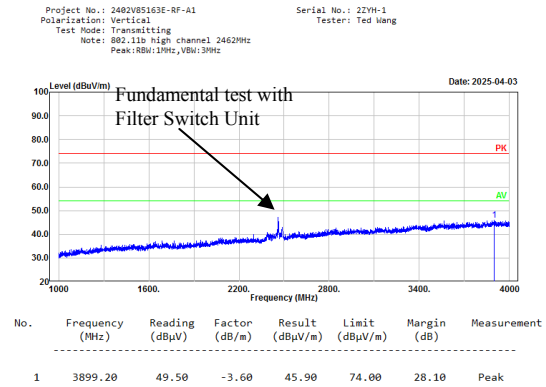




## 802.11b, High Channel, Horizontal



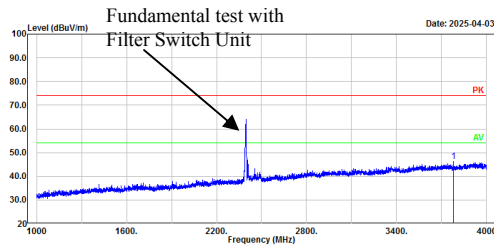
## 802.11b, High Channel, Vertical



## 802.11g, Low Channel, Horizontal

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11g low channel 2412MHz  
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 22YH-1  
Tester: Ted Wang

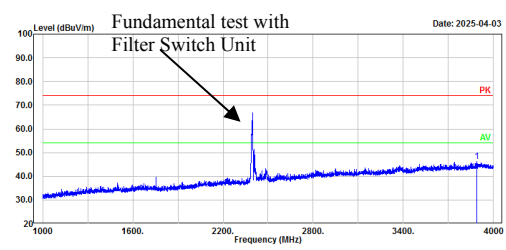


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	3779.80	50.47	-4.28	46.19	74.00	27.81	Peak

## 802.11g, Low Channel, Vertical

Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11g low channel 2412MHz  
Peak:RBW:1MHz,VBW:3MHz

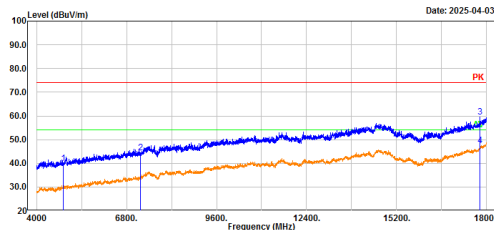
Serial No.: 22YH-1  
Tester: Ted Wang



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	3886.60	49.93	-3.81	46.12	74.00	27.88	Peak

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11g low channel 2412MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

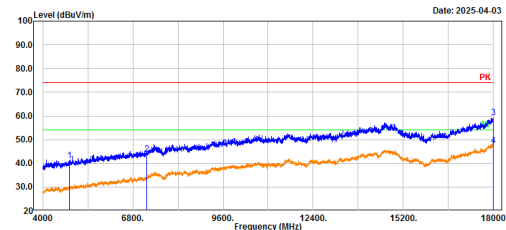
Serial No.: 22YH-1  
Tester: Ted Wang



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	4824.00	48.46	-8.58	39.88	74.00	34.12	Peak
2	7236.00	48.20	-3.67	44.53	74.00	29.47	Peak
3	17792.00	49.47	9.96	59.43	74.00	14.57	Peak
4	17792.00	37.49	9.96	47.45	54.00	6.55	Average

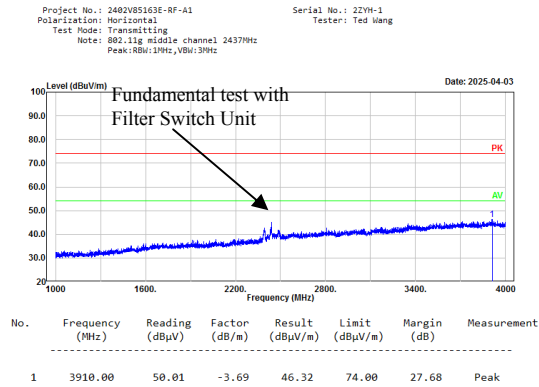
Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11g low channel 2412MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 22YH-1  
Tester: Ted Wang

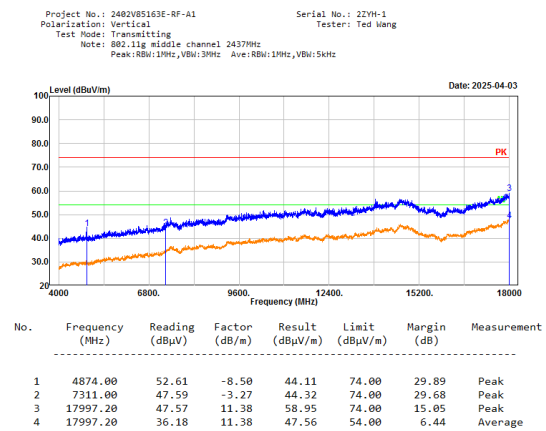
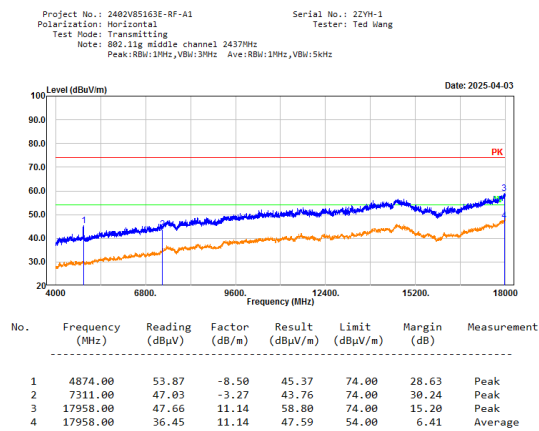
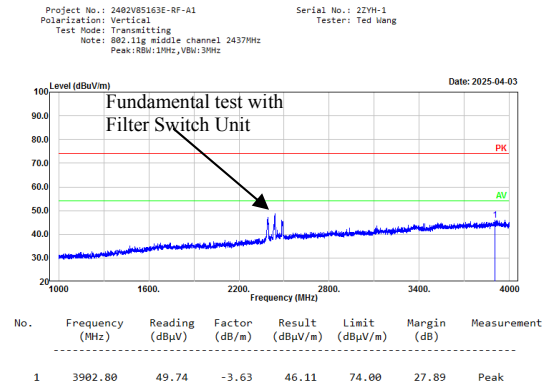


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	4824.00	49.64	-8.58	41.06	74.00	32.94	Peak
2	7236.00	47.41	-3.67	43.74	74.00	30.26	Peak
3	17792.00	47.88	11.38	59.26	74.00	14.74	Peak
4	17792.00	35.98	11.38	47.36	54.00	6.64	Average

## 802.11g, Middle Channel, Horizontal



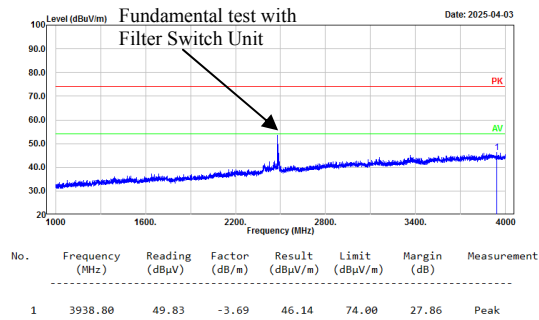
## 802.11g, Middle Channel, Vertical



## 802.11g, High Channel, Horizontal

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11g high channel 2462MHz  
Peak:RBW:1MHz,VBW:3MHz

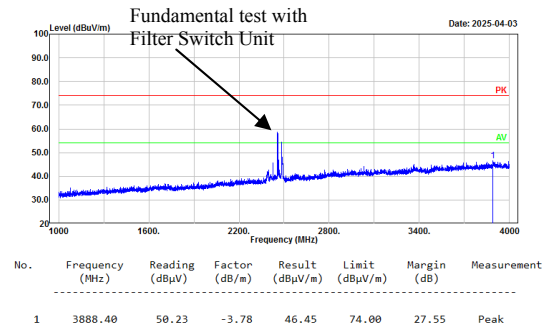
Serial No.: 22VH-1  
Tester: Ted Wang



## 802.11g, High Channel, Vertical

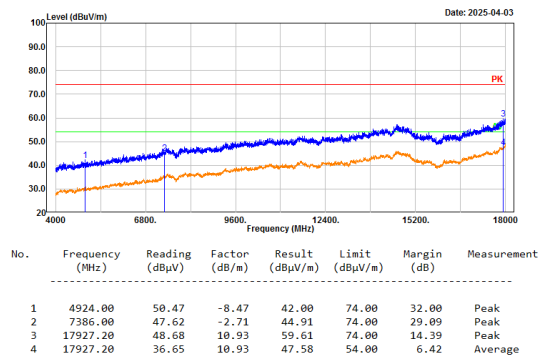
Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11g high channel 2462MHz  
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 22VH-1  
Tester: Ted Wang



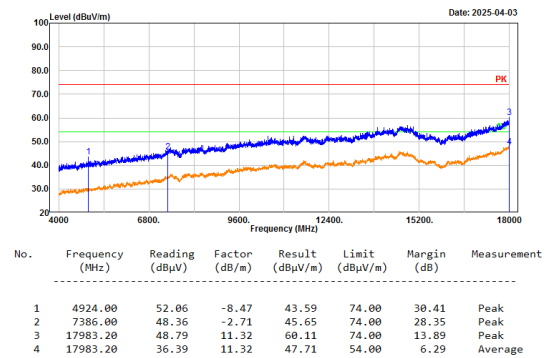
Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11g high channel 2462MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 22VH-1  
Tester: Ted Wang



Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11g high channel 2462MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

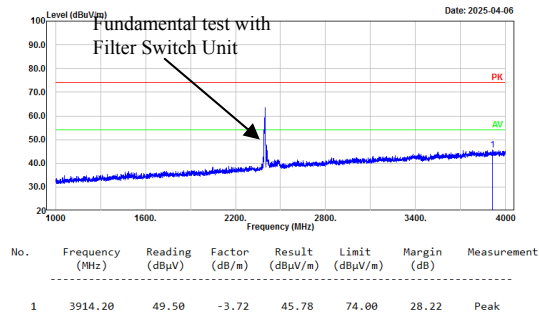
Serial No.: 22VH-1  
Tester: Ted Wang



## 802.11n20, Low Channel, Horizontal

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11n20 low channel 2412MHz  
Peak:RBW:1MHz,VBW:3MHz

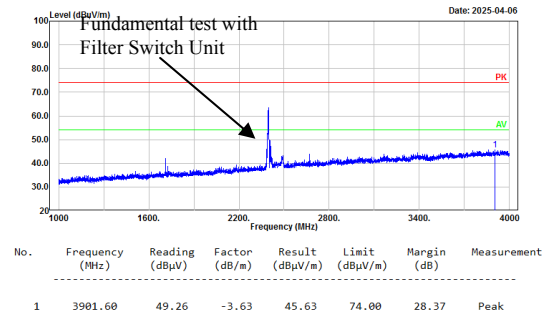
Serial No.: 22VH-1  
Tester: Ted Wang



## 802.11n20, Low Channel, Vertical

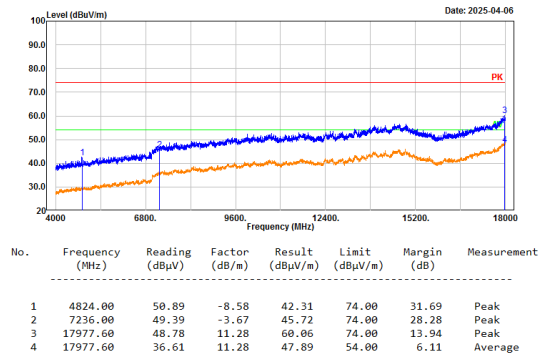
Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11n20 low channel 2412MHz  
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 22VH-1  
Tester: Ted Wang



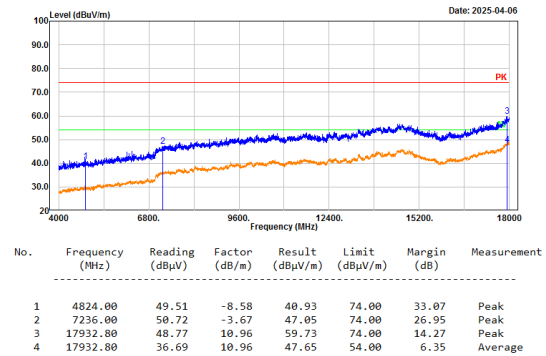
Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11n20 low channel 2412MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 22VH-1  
Tester: Ted Wang



Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11n20 low channel 2412MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 22VH-1  
Tester: Ted Wang

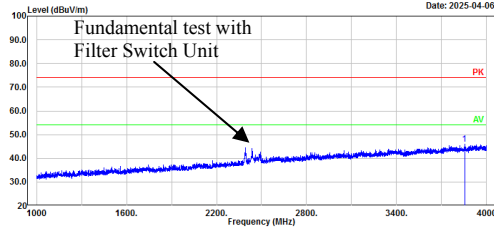


## 802.11n20, Middle Channel, Horizontal

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11n20 middle channel 2437MHz  
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-06



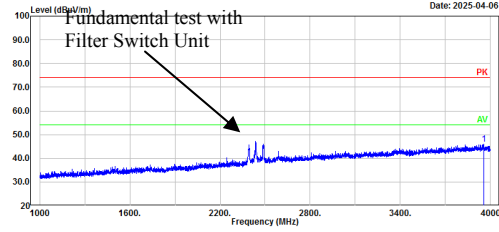
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	3853.00	49.96	-3.90	46.06	74.00	27.94	Peak

## 802.11n20, Middle Channel, Vertical

Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11n20 middle channel 2437MHz  
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-06

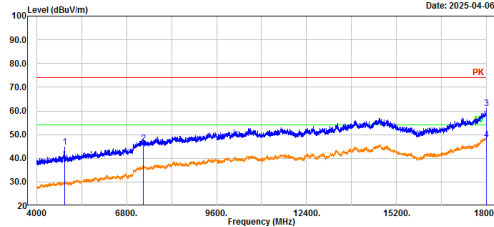


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	3956.80	49.55	-3.67	45.88	74.00	28.12	Peak

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11n20 middle channel 2437MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-06

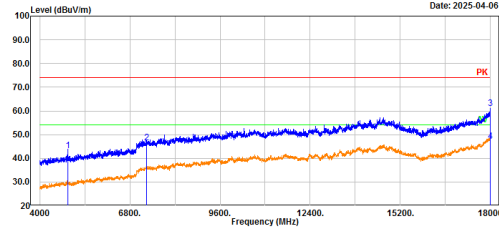


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	4874.00	53.27	-8.50	44.77	74.00	29.23	Peak
2	7311.00	49.57	-3.27	46.30	74.00	27.70	Peak
3	17988.80	49.60	11.33	60.93	74.00	13.07	Peak
4	17988.80	36.52	11.33	47.85	54.00	6.15	Average

Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11n20 middle channel 2437MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

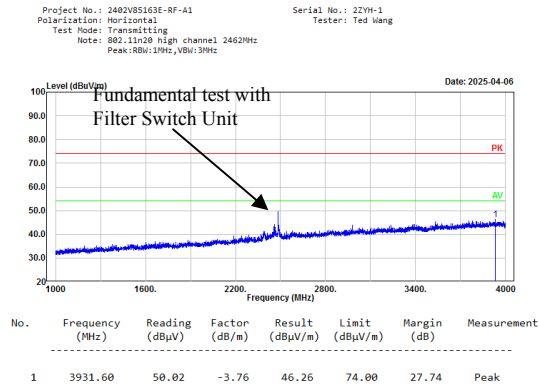
Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-06

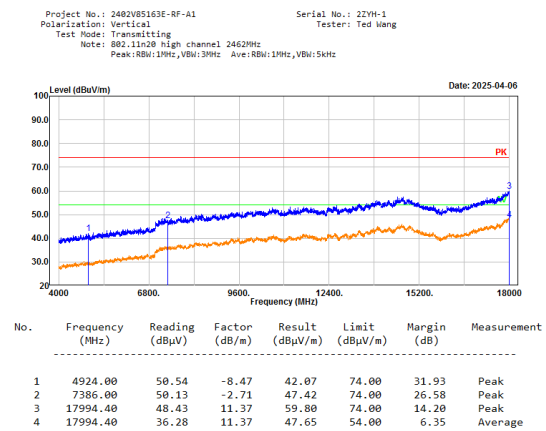
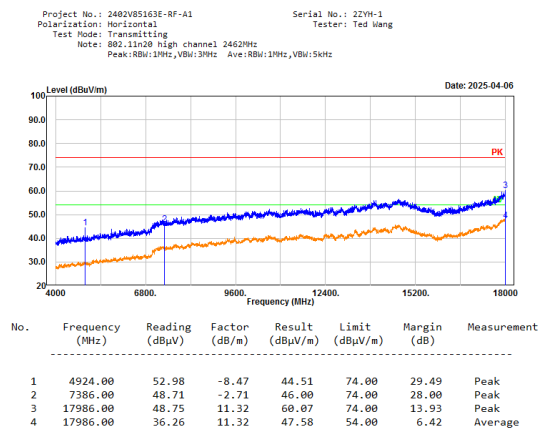
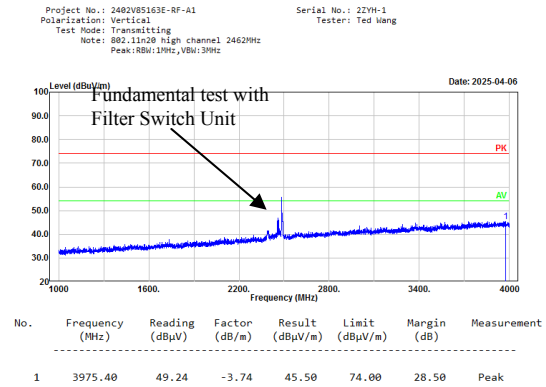


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	4874.00	51.78	-8.50	43.28	74.00	30.72	Peak
2	7311.00	49.72	-3.27	46.45	74.00	27.55	Peak
3	17983.20	49.67	11.32	60.99	74.00	13.01	Peak
4	17983.20	35.99	11.32	47.31	54.00	6.69	Average

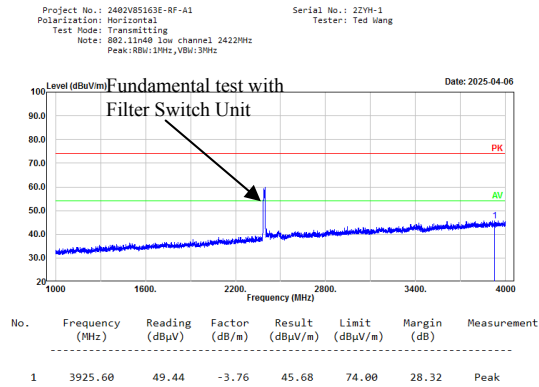
## 802. 11n20, High Channel, Horizontal



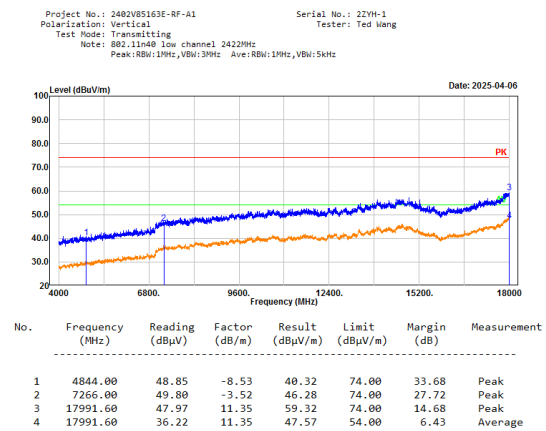
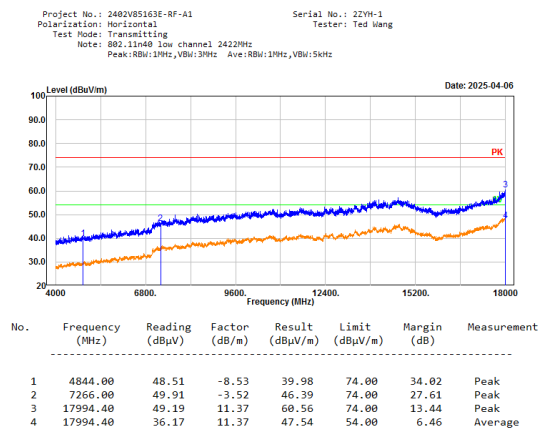
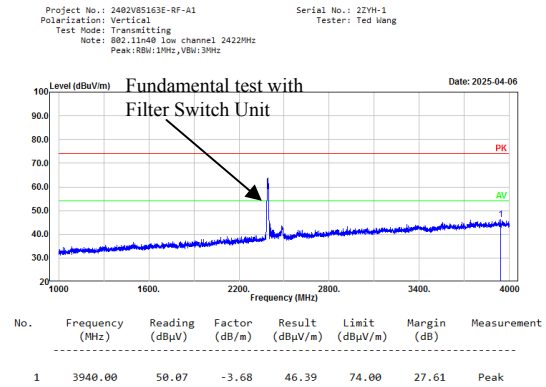
## 802. 11n20, High Channel, Vertical



## 802. 11n40, Low Channel, Horizontal



## 802. 11n40, Low Channel, Vertical

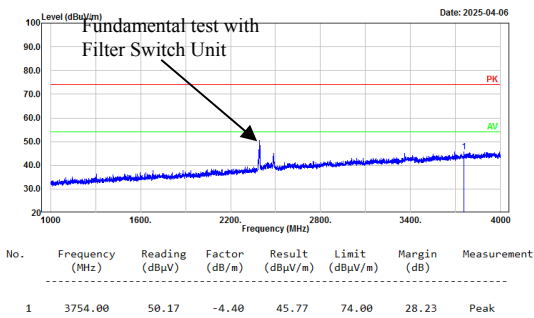




## 802. 11n40, Middle Channel, Horizontal

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11n40 middle channel 2437MHz  
Peak:RBW:1MHz,VBW:3MHz

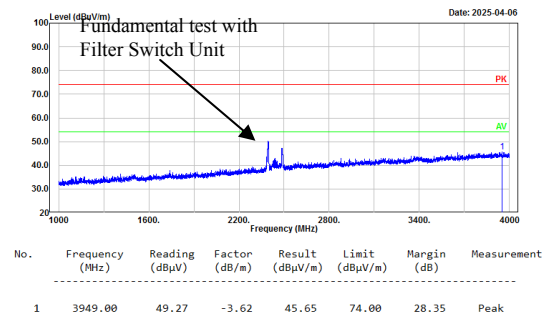
Serial No.: 22YH-1  
Tester: Ted Wang



## 802. 11n40, Middle Channel, Vertical

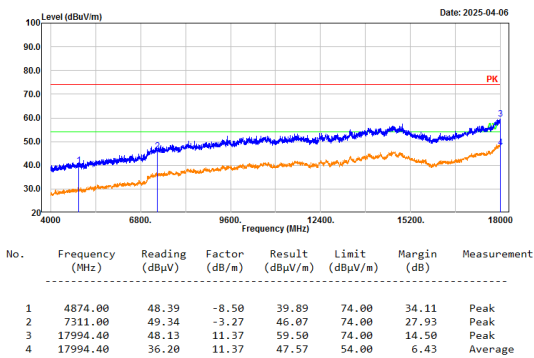
Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11n40 middle channel 2437MHz  
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 22YH-1  
Tester: Ted Wang



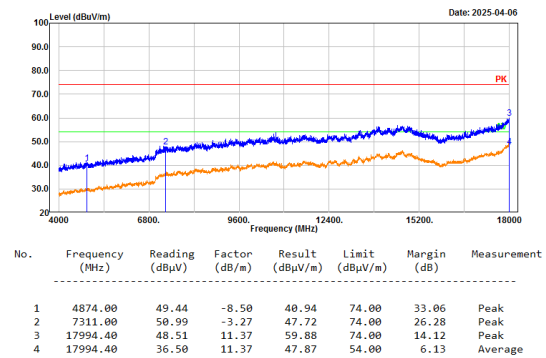
Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11n40 middle channel 2437MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 22YH-1  
Tester: Ted Wang



Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11n40 middle channel 2437MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

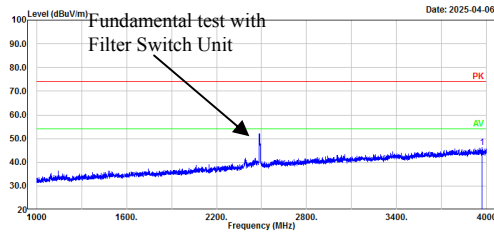
Serial No.: 22YH-1  
Tester: Ted Wang



## 802. 11n40, High Channel, Horizontal

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11n40 high channel 2452MHz  
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 22YH-1  
Tester: Ted Wang

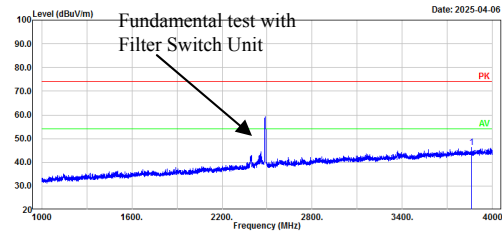


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	3968.80	49.92	-3.73	46.19	74.00	27.81	Peak

## 802. 11n40, High Channel, Vertical

Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11n40 high channel 2452MHz  
Peak:RBW:1MHz,VBW:3MHz

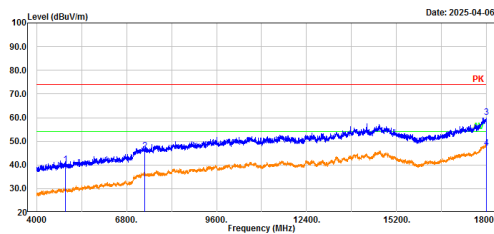
Serial No.: 22YH-1  
Tester: Ted Wang



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	3860.20	50.08	-3.94	46.14	74.00	27.86	Peak

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11n40 high channel 2452MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

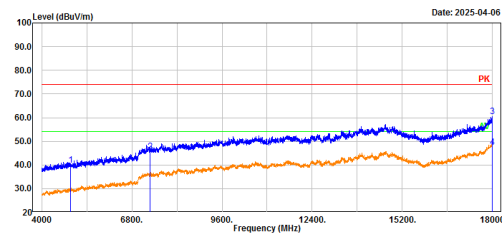
Serial No.: 22YH-1  
Tester: Ted Wang



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	4904.00	48.74	-8.46	40.28	74.00	33.72	Peak
2	7356.00	48.82	-2.92	45.90	74.00	28.10	Peak
3	17998.00	48.67	11.38	60.05	74.00	13.95	Peak
4	17998.00	35.90	11.38	47.28	54.00	6.72	Average

Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11n40 high channel 2452MHz  
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 22YH-1  
Tester: Ted Wang



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	4904.00	48.41	-8.46	39.95	74.00	34.05	Peak
2	7356.00	48.71	-2.92	45.79	74.00	28.21	Peak
3	17983.20	49.19	11.32	60.51	74.00	13.49	Peak
4	17983.20	36.20	11.32	47.52	54.00	6.48	Average

**18-25GHz:**

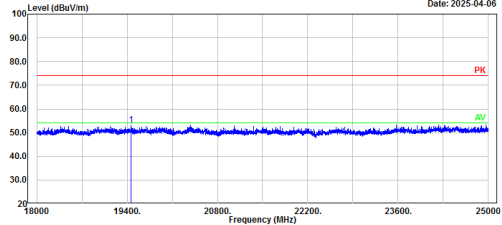
No Emission was detected in the range 18-25GHz, test was performed on the mode and channel which with the maximum power.

**802.11b, Middle Channel, Horizontal**

Project No.: 2402V85163E-RF-A1  
Polarisation: Horizontal  
Test Mode: Transmitting  
Note: 802.11b middle channel 2437MHz  
Peak: 19Hz, 30Hz

Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-06



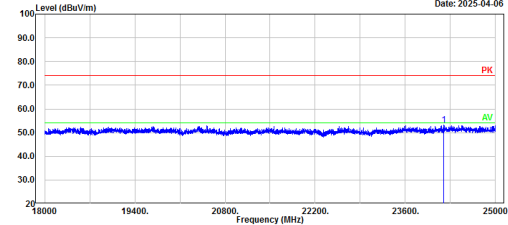
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	19464.40	48.15	5.15	53.30	74.00	20.70	Peak

**802.11b, Middle Channel, Vertical**

Project No.: 2402V85163E-RF-A1  
Polarisation: Vertical  
Test Mode: Transmitting  
Note: 802.11b middle channel 2437MHz  
Peak: 19Hz, 30Hz

Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-06



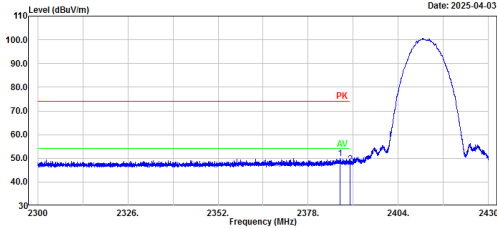
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	24199.20	43.89	9.40	53.29	74.00	20.71	Peak

**Bandedge:****802.11b, Low Channel, Bandedge, Horizontal**

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11b low channel 2412MHz  
Peak:RBW:1MHz,VBW:30Hz

Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-03



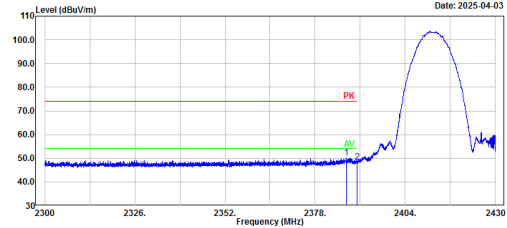
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	2387.10	50.48	-0.51	49.97	74.00	24.03	Peak
2	2390.00	47.96	-0.49	47.47	74.00	26.53	Peak

**802.11b, Low Channel, Bandedge, Vertical**

Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11b low channel 2412MHz  
Peak:RBW:1MHz,VBW:30Hz

Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-03



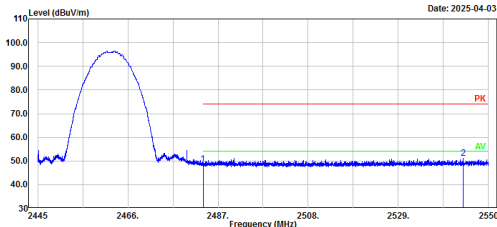
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	2386.92	50.63	-0.51	50.12	74.00	23.88	Peak
2	2390.00	48.99	-0.49	48.50	74.00	25.50	Peak

**802.11b, High Channel, Bandedge, Horizontal**

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Note: 802.11b high channel 2462MHz  
Peak:RBW:1MHz,VBW:30Hz

Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-03



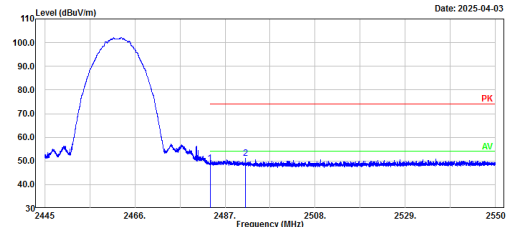
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	2483.50	48.84	-0.05	48.79	74.00	25.21	Peak
2	2544.06	50.91	0.30	51.21	74.00	22.79	Peak

**802.11b, High Channel, Bandedge, Vertical**

Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Note: 802.11b high channel 2462MHz  
Peak:RBW:1MHz,VBW:30Hz

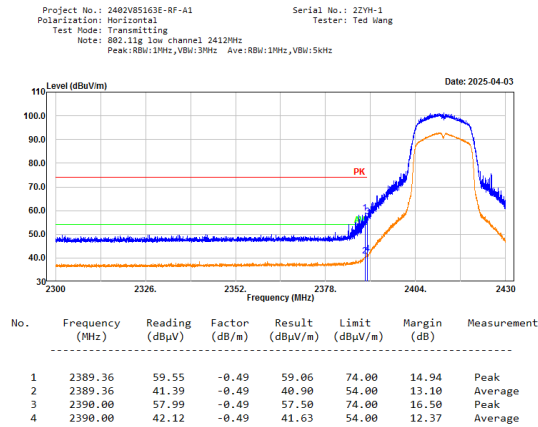
Serial No.: 22YH-1  
Tester: Ted Wang

Date: 2025-04-03

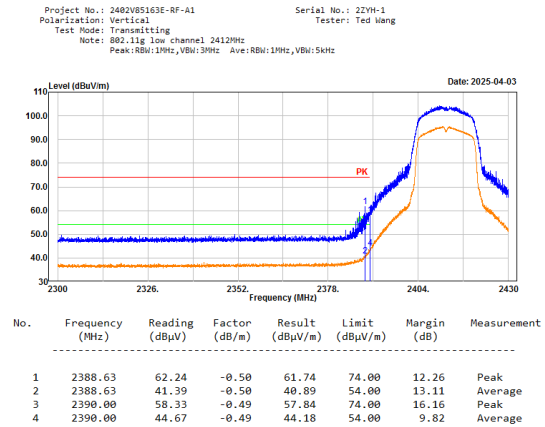


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement
1	2483.50	49.02	-0.05	48.97	74.00	25.03	Peak
2	2491.73	51.15	0.00	51.15	74.00	22.85	Peak

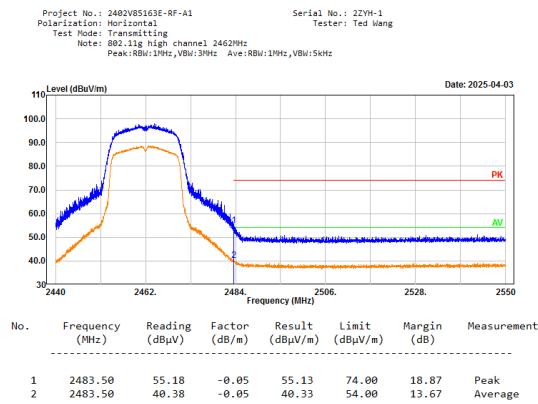
## 802.11g, Low Channel, Bandedge, Horizontal



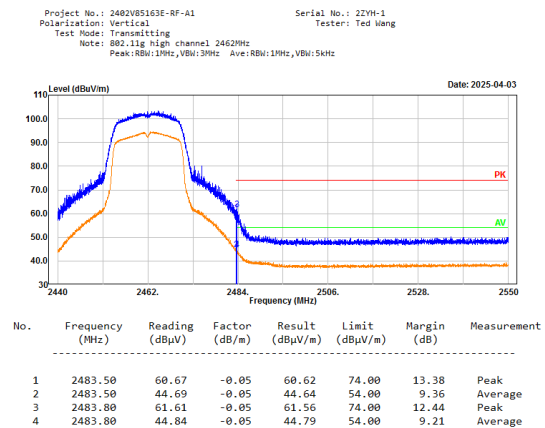
## 802.11g, Low Channel, Bandedge, Vertical



## 802.11g, High Channel, Bandedge, Horizontal

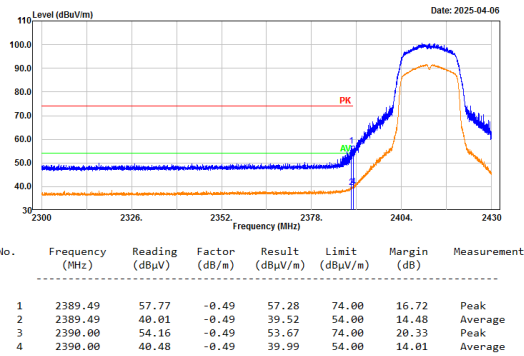


## 802.11g, High Channel, Bandedge, Vertical

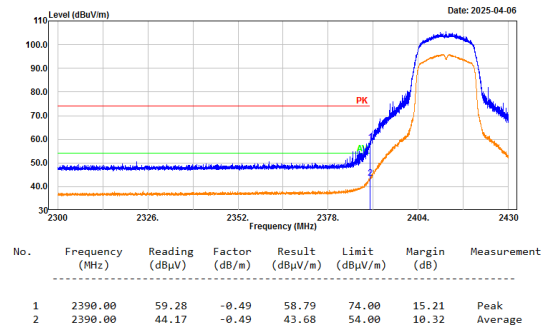


**802.11n20, Low Channel, Bandedge, Horizontal**

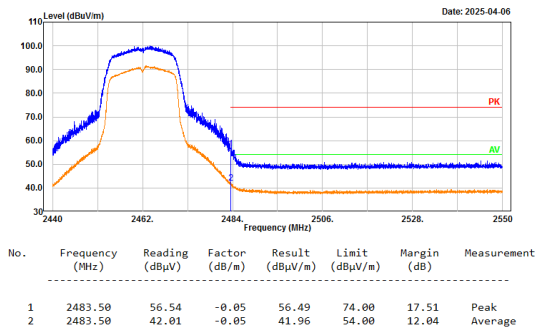
Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Serial No.: 22YH-1  
Tester: Ted Wang  
Note: 802.11n20 low channel 2412MHz  
Peak: RBW:1MHz, VBW:3MHz Ave: RBW:1MHz, VBW:5kHz

**802.11n20, Low Channel, Bandedge, Vertical**

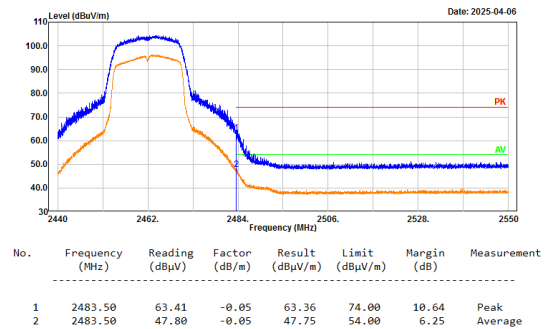
Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Serial No.: 22YH-1  
Tester: Ted Wang  
Note: 802.11n20 low channel 2412MHz  
Peak: RBW:1MHz, VBW:3MHz Ave: RBW:1MHz, VBW:5kHz

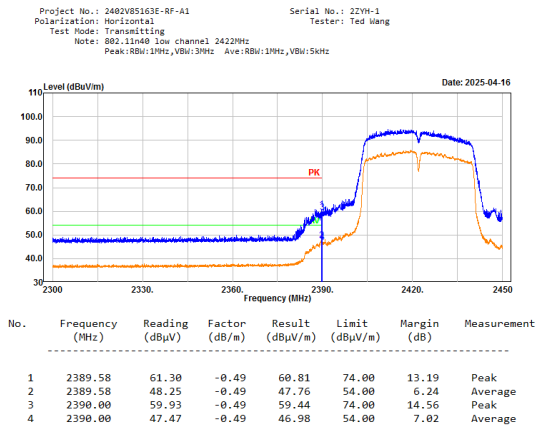
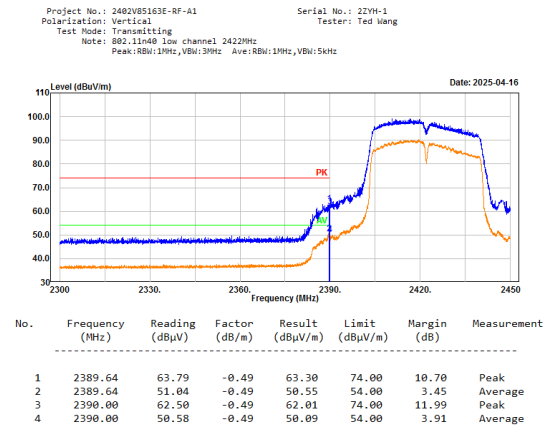
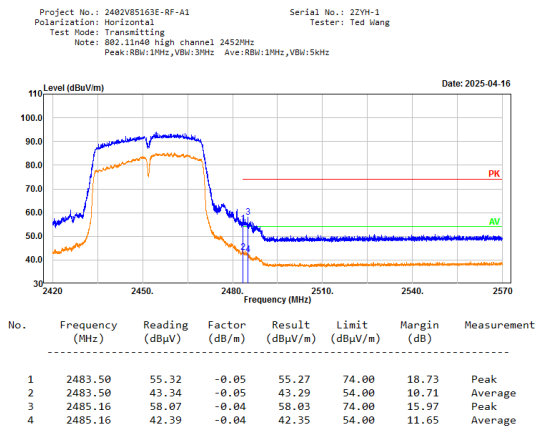
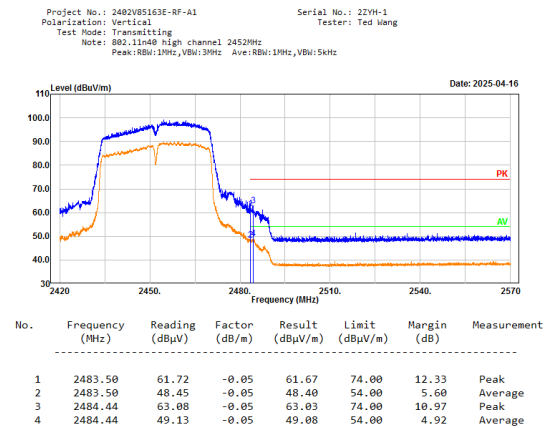
**802.11n20, High Channel, Bandedge, Horizontal**

Project No.: 2402V85163E-RF-A1  
Polarization: Horizontal  
Test Mode: Transmitting  
Serial No.: 22YH-1  
Tester: Ted Wang  
Note: 802.11n20 high channel 2462MHz  
Peak: RBW:1MHz, VBW:3MHz Ave: RBW:1MHz, VBW:5kHz

**802.11n20, High Channel, Bandedge, Vertical**

Project No.: 2402V85163E-RF-A1  
Polarization: Vertical  
Test Mode: Transmitting  
Serial No.: 22YH-1  
Tester: Ted Wang  
Note: 802.11n20 high channel 2462MHz  
Peak: RBW:1MHz, VBW:3MHz Ave: RBW:1MHz, VBW:5kHz



**802. 11n40, Low Channel, Bandedge, Horizontal****802. 11n40, Low Channel, Bandedge, Vertical****802. 11n40, High Channel, Bandedge, Horizontal****802. 11n40, High Channel, Bandedge, Vertical**

**5.3 Spot Check With Maximum Conducted Output Power**

<b>Serial No.:</b>	2ZYH-1	<b>Test Date:</b>	2025/04/12
<b>Test Site:</b>	RF	<b>Test Mode:</b>	Transmitting
<b>Tester:</b>	Tower Qing	<b>Test Result:</b>	Pass

**Environmental Conditions:**

<b>Temperature:</b> (°C)	24.5	<b>Relative Humidity:</b> (%)	66	<b>ATM Pressure:</b> (kPa)	100.7
-----------------------------	------	----------------------------------	----	-------------------------------	-------

**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Coaxial Attenuator	10dB	F-08-EM512	2024/06/13	2025/06/12
Anritsu	Microwave Peak Power Sensor	MA24418A	12618	2024/08/27	2025/08/26

*\* 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	Antenna	Test Frequency (MHz)	Peak Output Power (dBm)	Average Output Power (dBm)	Limit (dBm)	Verdict
802.11b	Chain 0	2412	20.36	17.56	30	Pass
		2437	20.88	17.72	30	Pass
		2462	20.47	17.59	30	Pass

Note: The Spot Check data were similar to the original data.



## 5.4 Duty Cycle

Serial No.:	2ZYH-1	Test Date:	2025/04/12
Test Site:	RF	Test Mode:	Transmitting
Tester:	Tower Qing	Test Result:	/

## Environmental Conditions:

Temperature: (°C)	24.5	Relative Humidity: (%)	66	ATM Pressure: (kPa)	100.7
----------------------	------	------------------------------	----	------------------------	-------

## Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Coaxial Attenuator	10dB	F-08-EM512	2024/06/13	2025/06/12
R&S	Spectrum Analyzer	FSV40	101589	2024/09/05	2025/09/04

\* 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).

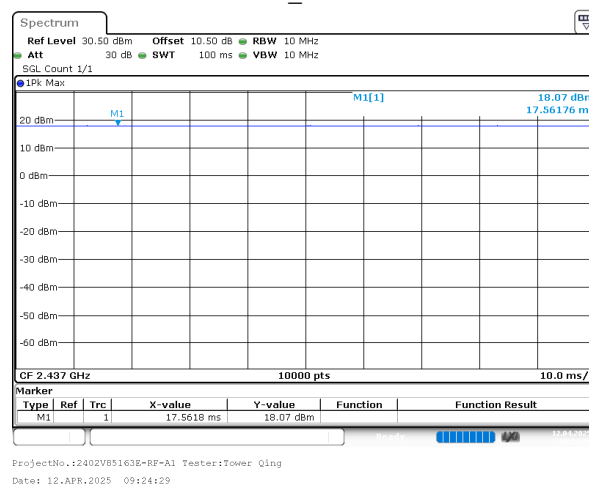
## Test Data:

Mode	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
802.11b	2437	100	100	100	0	NA	0.010

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

## 2.4G

802.11b\_2437MHz



## **EXHIBIT A - EUT PHOTOGRAPHS**

---

Please refer to the attachment 2402V85163E-RF-A1-EXP EUT EXTERNAL PHOTOGRAPHS and 2402V85163E-RF-A1-INP EUT INTERNAL PHOTOGRAPHS.

## **EXHIBIT B - TEST SETUP PHOTOGRAPHS**

---

Please refer to the attachment 2402V85163E-RF-00CA1-TSP TEST SETUP PHOTOGRAPHS.

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