

# TEST REPORT

Applicant Name: YEALINK(XIAMEN) NETWORK TECHNOLOGY CO.,LTD.  
Address: No.666 Hu'an Rd. Huli District Xiamen City, Fujian, P.R. China  
Report Number: SZ1240201-07392E-RFA  
FCC ID: T2C-SV40  
IC: 10741A-SV40

## Test Standard (s)

FCC PART 15.247; RSS-GEN ISSUE 5, FEBRUARY 2021 AMENDMENT 2;  
RSS-247 ISSUE 3, AUGUST 2023

## Sample Description

Product Type: Video Conferencing Endpoint  
Model No.: SmartVision 40  
Multiple Model(s) No.: N/A  
Trade Mark: **Yealink**  
Date Received: 2024/02/01  
Issue Date: 2024/04/12

|              |                   |
|--------------|-------------------|
| Test Result: | Pass <sup>▲</sup> |
|--------------|-------------------|

▲ In the configuration tested, the EUT complied with the standards above.

## Prepared and Checked By:

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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. Customer model name, addresses, names, trademarks etc. are included.

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**DOCUMENT REVISION HISTORY**

| Revision Number | Report Number        | Description of Revision | Date of Revision |
|-----------------|----------------------|-------------------------|------------------|
| 0               | SZ1240201-07392E-RFA | Original Report         | 2024/04/12       |

## GENERAL INFORMATION

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

|                                     |   |
|-------------------------------------|---|
| HVIN                                | SmartVision 40  |
| FVIN                                | 286.410.254.1312  |
| Product                             | Video Conferencing Endpoint   |
| Tested Model                        | SmartVision 40  |
| Multiple Model(s)                   | N/A   |
| Frequency Range                     | 2412-2462MHz  |
| Maximum Conducted Peak Output Power | Module YL43752: 20.71dBm<br>Module YL43456: 18.17dBm  |
| Modulation Technique                | DSSS, OFDM  |
| Antenna Specification <sup>#</sup>  | Module YL43752 ANT1: 3.08dBi; ANT2: 0.71dBi<br>Module YL43456 ANT: 3.22dBi<br>(It is provided by the applicant) |
| Voltage Range                       | DC 48V from Adapter   |
| Sample serial number                | 2HH0-2 for Conducted and Radiated Emissions Test<br>2HH0-1 for RF Conducted Test (Assigned by BACL, Shenzhen)   |
| Sample/EUT Status                   | Good condition  |
| Adapter Information                 | Model: YLPS480700C<br>Input: AC 100-240~50/60Hz 1.0A<br>Output: DC 48.0V 0.7A 33.6W                             |

### Objective

This report is in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission's rules and RSS-GEN Issue 5, February 2021 Amendment 2 and RSS-247 Issue 3, August 2023 of the Innovation, Science and Economic Development Canada rules.

The tests were performed in order to determine Compliant with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliant Testing of Unlicensed Wireless Devices and RSS-GEN Issue 5, February 2021 Amendment 2 and RSS-247 Issue 3, August 2023.

And KDB 558074 D01 15.247 Meas Guidance v05r02.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

**Measurement Uncertainty**

| Parameter                          |                                      | Uncertainty                             |
|------------------------------------|--------------------------------------|---|
| Occupied Channel Bandwidth         |                                      | ±5%                                     |
| RF Frequency                       |                                      | 213.55 Hz(k=2, 95% level of confidence) |
| RF output power, conducted         |                                      | 0.72 dB(k=2, 95% level of confidence)   |
| Unwanted Emission, conducted       |                                      | 1.75 dB(k=2, 95% level of confidence)   |
| AC Power Lines Conducted Emissions | 9 kHz~150 KHz                        | 3.94dB(k=2, 95% level of confidence)    |
|                                    | 150 kHz ~30MHz                       | 3.84dB(k=2, 95% level of confidence)    |
| Radiated Emissions                 | 9kHz - 30MHz                         | 3.30dB(k=2, 95% level of confidence)    |
|                                    | 30MHz~200MHz (Horizontal)            | 4.48dB(k=2, 95% level of confidence)    |
|                                    | 30MHz~200MHz (Vertical)              | 4.55dB(k=2, 95% level of confidence)    |
|                                    | 200MHz~1000MHz (Horizontal)          | 4.85dB(k=2, 95% level of confidence)    |
|                                    | 200MHz~1000MHz (Vertical)            | 5.05dB(k=2, 95% level of confidence)    |
|                                    | 1GHz - 6GHz                          | 5.35dB(k=2, 95% level of confidence)    |
|                                    | 6GHz - 18GHz                         | 5.44dB(k=2, 95% level of confidence)    |
| 18GHz - 40GHz                      | 5.16dB(k=2, 95% level of confidence) |   |
| Temperature                        |                                      | ±1°C                                    |
| Humidity                           |                                      | ±1%                                     |
| Supply voltages                    |                                      | ±0.4%                                   |

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

**Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, 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. : 715558, the FCC Designation No. : CN5045.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0023.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

For 2.4GHz Wi-Fi mode, total 13channels are provided to testing:

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

For 802.11b, 802.11g, 802.11n20, EUT was tested with Channel 1, 6 and 11.

### Equipment Modifications

No modification was made to the EUT tested.

### EUT Exercise Software

“Authentic Tool \_1.2.24.0”<sup>#</sup> software was used to test and power level as below:

Module YL43752

| Mode         | Data rate | Power Level <sup>#</sup> |                |              |
|--------------|-----------|--------------------------|----------------|--------------|
|              |           | Low Channel              | Middle Channel | High Channel |
| 802.11b      | 1Mbps     | 8                        | 8              | 8            |
| 802.11g      | 6Mbps     | 8                        | 8              | 8            |
| 802.11n-HT20 | MCS0      | 8                        | 8              | 8            |
| 802.11ax20   | MCS0      | 8                        | 8              | 8            |

Note: For this Wi-Fi mode, EUT has two antennas and support SISO/MIMO transmit except for 802.11b/g mode which only support SISO. The MIMO mode was the worst case which select to test. All the antenna ports have the same power level.

Module YL43456

| Mode         | Data rate | Power Level <sup>#</sup> |                |              |
|--------------|-----------|--------------------------|----------------|--------------|
|              |           | Low Channel              | Middle Channel | High Channel |
| 802.11b      | 1Mbps     | 16                       | 16             | 16           |
| 802.11g      | 6Mbps     | 15                       | 15             | 15           |
| 802.11n-HT20 | MCS0      | 15                       | 15             | 15           |

The software and power level was provided by the applicant.

**Support Equipment List and Details**

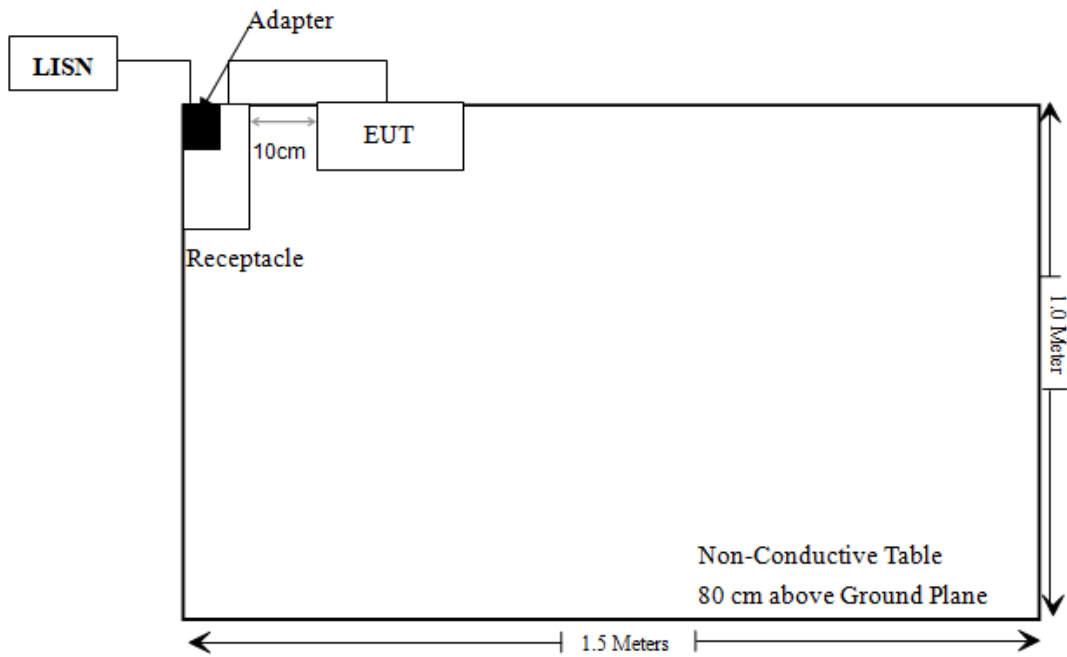
| Manufacturer | Description | Model | Serial Number |
|--------------|-------------|-------|---------------|
| /            | /           | /     | /             |

**External I/O Cable**

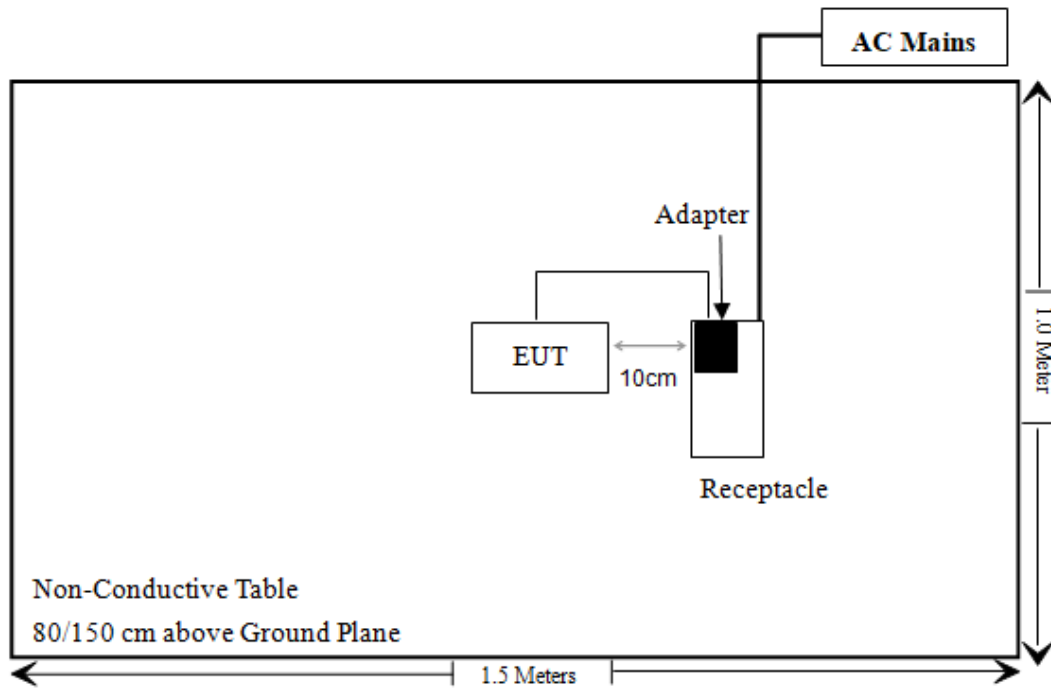
| Cable Description                | Length (m) | From Port | To      |
|----------------------------------|------------|-----------|---------|
| Un-shielding Detachable DC Cable | 1.0        | EUT       | Adapter |

**Block Diagram of Test Setup**

For conducted emission:



For radiated emission:





**SUMMARY OF TEST RESULTS**

| FCC Rules                              | RSS-247 & RSS-Gen Rules           | Description of Test   | Result    | remark   |
|--|-----------------------------------|---|-----------|----------|
| §15.247 (i), §1.1307 (b) (3) & §2.1091 | RSS-102 §2.5.2                    | RF Exposure& Exemption Limits For Routine Evaluation-RF Exposure Evaluation | Compliant | -        |
| §15.203                                | RSS-Gen §6.8                      | Antenna Requirement   | Compliant | -        |
| §15.207 (a)                            | RSS-Gen §8.8                      | AC Line Conducted Emissions   | Compliant | -        |
| §15.205, §15.209, §15.247(d)           | RSS-GEN § 8.10 & RSS-247 § 5.5    | Spurious Emissions  | Compliant | -        |
| §15.247 (a)(2)                         | RSS- Gen§6.7<br>RSS-247 § 5.2 (a) | 99% Occupied Bandwidth & 6 dB Emission Bandwidth                            | -         | See Note |
| §15.247(b)(3)                          | RSS-247 § 5.4(d)                  | Maximum Conducted Output Power  | -         | See Note |
| §15.247(d)                             | RSS-247 § 5.5                     | 100 kHz Bandwidth of Frequency Band Edge                                    | -         | See Note |
| §15.247(e)                             | RSS-247 § 5.2 (b)                 | Power Spectral Density  | -         | See Note |
| -                                      | -                                 | Duty Cycle  | -         | See Note |

**Note :**

- 1: The manufacturer declared two certified WLAN module installed in EUT, model YL43752 (FCC ID: T2C-YL43752, IC: 10741A-YL43752) and model YL43456 (FCC ID: T2C-YL43456, IC: 10741A-YL43456)
- 2: The test data are referred to the module report SZNS220511-19727E-RFB, FCC022022-06244RF1 and IC022022-06245RF1, the cross-reference of each test item and the data of reference module report as below:

| Test item  | Reference data of module report |                    |                   |
|--|---------------------------------|--------------------|-------------------|
|  | SZNS220511-19727E-RFB           | FCC022022-06244RF1 | IC022022-06245RF1 |
| 99% Occupied Bandwidth & 6 dB Emission Bandwidth | Page 58~67                      | Page 66~76         | Page 66~76        |
| Maximum Conducted Output Power                   | Page 68~83                      | Page 77~78         | Page 77~78        |
| 100 kHz Bandwidth of Frequency Band Edge         | Page 78~77                      | Page 79~96         | Page 79~96        |
| Power Spectral Density                           | Page 69~77                      | Page 97~102        | Page 97~102       |
| Duty Cycle                                       | Page 84~86                      | Page 11~12         | Page 11~12        |

- 3: The BACL is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report.

**TEST EQUIPMENT LIST**

| Manufacturer                    | Description             | Model                   | Serial Number          | Calibration Date | Calibration Due Date |
|---------------------------------|-------------------------|-------------------------|------------------------|------------------|----------------------|
| <b>Conducted Emissions Test</b> |                         |                         |                        |                  |                      |
| Rohde & Schwarz                 | EMI Test Receiver       | ESCI                    | 101120                 | 2024/01/16       | 2025/01/15           |
| Rohde & Schwarz                 | LISN                    | ENV216                  | 101613                 | 2024/01/16       | 2025/01/15           |
| Rohde & Schwarz                 | Transient Limiter       | ESH3Z2                  | DE25985                | 2023/08/03       | 2024/08/02           |
| Unknown                         | CE Cable                | CE Cable                | UF A210B-1-0720-504504 | 2023/08/03       | 2024/08/02           |
| Audix                           | EMI Test software       | E3                      | 191218                 | NCR              | NCR                  |
| <b>Radiated Emissions Test</b>  |                         |                         |                        |                  |                      |
| R&S                             | EMI Test Receiver       | ESR3                    | 102455                 | 2024/01/16       | 2025/01/15           |
| Sonoma instrument               | Pre-amplifier           | 310 N                   | 186238                 | 2023/06/08       | 2024/06/07           |
| Sunol Sciences                  | Broadband Antenna       | JB1                     | A040904-1              | 2023/07/20       | 2024/07/19           |
| ETS                             | Passive Loop Antenna    | 6512                    | 29604                  | 2023/07/07       | 2024/07/06           |
| Unknown                         | Cable                   | Chamber Cable 1         | F-03-EM236             | 2023/08/03       | 2024/08/02           |
| Unknown                         | Cable                   | Chamber Cable 4         | EC-007                 | 2023/08/03       | 2024/08/02           |
| Rohde & Schwarz                 | Spectrum Analyzer       | FSV40                   | 101605                 | 2023/04/18       | 2024/04/17           |
| COM-POWER                       | Pre-amplifier           | PA-122                  | 181919                 | 2023/06/29       | 2024/06/28           |
| Schwarzbeck                     | Horn Antenna            | BBHA9120D(1201)         | 1143                   | 2023/07/26       | 2024/07/25           |
| Unknown                         | RF Cable                | KMSE                    | 0735                   | 2023/10/08       | 2024/10/07           |
| Unknown                         | RF Cable                | UFA147                  | 219661                 | 2023/10/08       | 2024/10/07           |
| SNSD                            | 2.4G Band Reject filter | BSF2402-2480MN-0898-001 | 2.4G filter            | 2023/08/03       | 2024/08/02           |
| A.H.System                      | Pre-amplifier           | PAM-1840VH              | 190                    | 2023/08/03       | 2024/08/02           |
| Electro-Mechanics Co            | Horn Antenna            | 3116                    | 9510-2270              | 2023/09/18       | 2026/09/17           |
| Audix                           | EMI Test software       | E3                      | 191218(V9)             | NCR              | NCR                  |

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

## FCC §15.247 (i) & §1.1307 (b) (3) & §2.1091- RF EXPOSURE

### Applicable Standard

According to KDB 447498 D04 Interim General RF Exposure Guidance

MPE-Based Exemption:

An alternative to the SAR-based exemption is provided in § 1.1307(b)(3)(i)(C), for a much wider frequency range, from 300 kHz to 100 GHz, applicable for separation distances greater or equal to  $\lambda/2\pi$ , where  $\lambda$  is the free-space operating wavelength in meters. The MPE-based test exemption condition is in terms of ERP, defined as the product of the maximum antenna gain and the delivered maximum time-averaged power. For this case, a RF source is an RF exempt device if its ERP (watts) is no more than a frequency-dependent value, as detailed tabular form in Appendix B. These limits have been derived based on the basic specifications on Maximum Permissible Exposure (MPE) considered for the FCC rules in § 1.1310(e)(1).

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

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

f = frequency in MHz;

R = minimum separation distance from the body of a nearby person (appropriate units, e.g., m);

For multiple RF sources: Multiple RF sources are exempt if:

in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation:

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

**Result**

**For worst case:**

For Module YL43752:

| Mode       | Frequency (MHz) | Tune up conducted power <sup>#</sup> | Antenna Gain <sup>#</sup> |       | ERP   |       | Evaluation Distance (m) | ERP Limit (mW) |
|------------|-----------------|--------------------------------------|---------------------------|-------|-------|-------|-------------------------|----------------|
|            |                 | (dBm)                                | (dBi)                     | (dBd) | (dBm) | (mW)  |                         |                |
| 2.4G Wi-Fi | 2412-2462       | 18.5                                 | 3.08                      | 0.93  | 19.43 | 87.70 | 0.2                     | 768            |
| 5G Wi-Fi   | 5180-5240       | 12.0                                 | 4.17                      | 2.02  | 14.02 | 25.23 | 0.2                     | 768            |
|            | 5260-5280       | 13.0                                 | 4.17                      | 2.02  | 15.02 | 31.77 | 0.2                     | 768            |
|            | 5500-5700       | 12.0                                 | 4.17                      | 2.02  | 14.02 | 25.23 | 0.2                     | 768            |
|            | 5745-5825       | 14.5                                 | 4.17                      | 2.02  | 16.52 | 44.87 | 0.2                     | 768            |

For Module YL43456:

| Mode       | Frequency (MHz) | Maximum power <sup>#</sup> | Antenna Gain <sup>#</sup> |       | ERP   |        | Evaluation Distance (m) | ERP Limit (mW) |
|------------|-----------------|----------------------------|---------------------------|-------|-------|--------|-------------------------|----------------|
|            |                 | (dBm)                      | (dBi)                     | (dBd) | (dBm) | (mW)   |                         |                |
| 2.4G Wi-Fi | 2412-2462       | 20.71                      | 3.22                      | 1.07  | 21.78 | 150.66 | 0.2                     | 768            |
| 5G Wi-Fi   | 5150-5850       | 16.28                      | 4.17                      | 2.02  | 18.30 | 67.61  | 0.2                     | 768            |

Note 1: The tune-up power was refer the module report  
 Note2: The antenna gain was declared by the applicant.  
 Note 2: 0dBd=2.15dBi.

**Simultaneous transmitting consideration:**

According to applicant, the 2.4G Wi-Fi and 5G Wi-Fi cannot transmit at same time, the two Wi-Fi module cannot transmit as same time.

To maintain compliance with the FCC’s RF exposure guidelines, place the equipment at least 20cm from nearby persons.

**Result: Compliant**

## RSS-102 § 2.5.2 –EXEMPTION LIMITS FOR ROUTINE EVALUATION-RF EXPOSURE EVALUATION

### Applicable Standard

According to RSS-102 § (2.5.2):

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device’s radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $4.49/f^{0.5}$  W (adjusted for tune-up tolerance), where  $f$  is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $1.31 \times 10^{-2} f^{0.6834}$  W (adjusted for tune-up tolerance), where  $f$  is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance). In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the e.i.r.p. was derived.

### Calculated Data:

For Module YL43752:

| Mode       | Frequency (MHz) | Tune up conducted power <sup>#</sup> | Antenna Gain <sup>#</sup> | EIRP  |       | Evaluation Distance (m) | Limit (W) |
|------------|-----------------|--------------------------------------|---------------------------|-------|-------|-------------------------|-----------|
|            |                 | (dBm)                                | (dBi)                     | (dBm) | (W)   |                         |           |
| 2.4G Wi-Fi | 2412-2462       | 18.5                                 | 3.08                      | 21.58 | 0.144 | 0.2                     | 2.68      |
| 5G Wi-Fi   | 5180-5240       | 12.0                                 | 4.17                      | 16.17 | 0.041 | 0.2                     | 4.53      |
|            | 5260-5280       | 13.0                                 | 4.17                      | 17.17 | 0.052 | 0.2                     | 4.57      |
|            | 5500-5700       | 12.0                                 | 4.17                      | 16.17 | 0.041 | 0.2                     | 4.71      |
|            | 5745-5825       | 14.5                                 | 4.17                      | 18.67 | 0.074 | 0.2                     | 4.86      |

For Module YL43456:

| Mode       | Frequency (MHz) | Maximum power <sup>#</sup> | Antenna Gain <sup>#</sup> | EIRP  |       | Evaluation Distance (m) | Limit (W) |
|------------|-----------------|----------------------------|---------------------------|-------|-------|-------------------------|-----------|
|            |                 | (dBm)                      | (dBi)                     | (dBm) | (W)   |                         |           |
| 2.4G Wi-Fi | 2412-2462       | 20.71                      | 3.22                      | 23.93 | 0.247 | 0.2                     | 2.68      |
| 5G Wi-Fi   | 5150-5850       | 16.28                      | 4.17                      | 20.45 | 0.111 | 0.2                     | 4.53      |

Note 1: The tune-up power was refer the module report

Note2: The antenna gain was declared by the applicant.

Note 2: 0dBd=2.15dBi.

### Simultaneous transmitting consideration:

According to applicant, the 2.4G Wi-Fi and 5G Wi-Fi cannot transmit at same time, the two Wi-Fi module cannot transmit as same time.

Note: To maintain compliance with the RF exposure guidelines, place the equipment at least 0.2 m from nearby persons.

### Result: Compliant

## **§15.203 & RSS-Gen §6.8 ANTENNA REQUIREMENT**

### **Applicable Standard**

According to § 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 user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine Compliant with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
  - b. Antenna must use a unique type of connector to attach to the EUT.
- Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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 Compliant 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.

**Antenna Connector Construction**

The EUT has three internal antennas arrangement which was permanently attached for Wi-Fi, fulfill the requirement of this section. Please refer to the EUT photos.

| ANT                    | Type     | Antenna Gain <sup>#</sup> | Impedance |
|------------------------|----------|---------------------------|-----------|
| Module YL43752<br>ANT1 | Integral | 3.08dBi                   | 50Ω       |
| Module YL43752<br>ANT2 | Integral | 0.71dBi                   | 50Ω       |
| Module YL43456<br>ANT  | Integral | 3.22dBi                   | 50Ω       |

**Result: Compliant**

**§15.207 (a) & RSS-GEN §8.8 AC LINE CONDUCTED EMISSIONS**

**Applicable Standard**

FCC § 15.207 (a) & RSS-GEN §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 Compliant 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 Lines Conducted Emission Limits |                        |                       |
|--|------------------------|-----------------------|
| Frequency range (MHz)                              | Conducted limit (dBμV) |                       |
|  | Quasi-Peak             | Average               |
| 0.15 – 0.5   | 66 to 56 <sup>1</sup>  | 56 to 46 <sup>1</sup> |
| 0.5 – 5  | 56                     | 46                    |
| 5 – 30   | 60                     | 50                    |

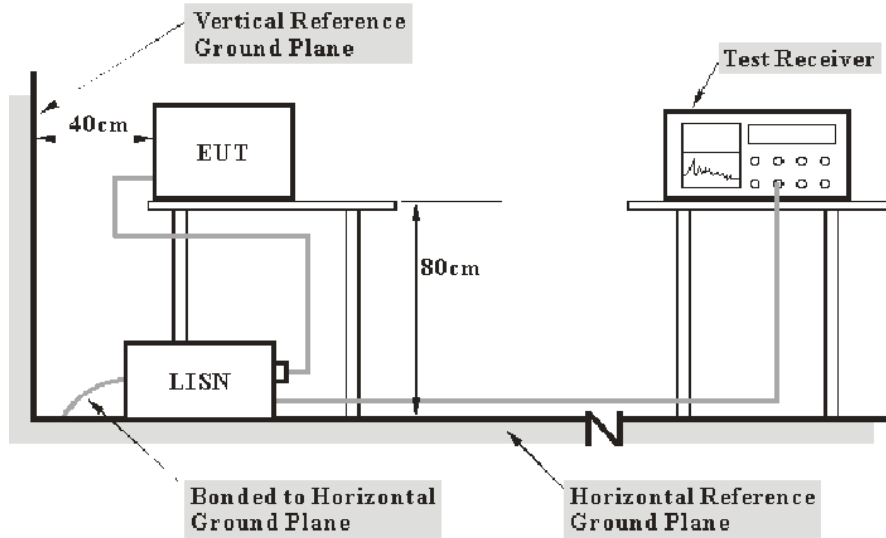
**Note 1:** The level decreases linearly with the logarithm of the frequency.

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 Compliant 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 Compliant 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.



**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 other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 & RSS-247/RSS-Gen limits.

The spacing between the peripherals was 10 cm.

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

**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  |

**Test Procedure**

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

## Factor & Over Limit Calculation

The factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

$$\text{Factor} = \text{LISN VDF} + \text{Cable Loss}$$

The “**Over limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

$$\begin{aligned}\text{Over Limit} &= \text{Level} - \text{Limit} \\ \text{Level} &= \text{Read Level} + \text{Factor}\end{aligned}$$

Note: The term "cable loss" refers to the combination of a cable and a 10dB transient limiter (attenuator).

## Test Data

### Environmental Conditions

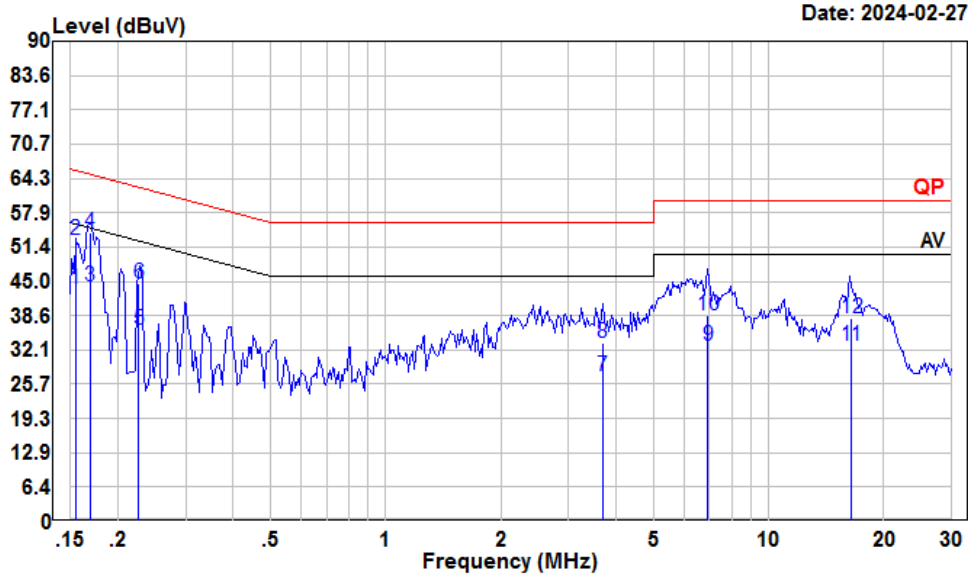
|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 23 °C     |
| <b>Relative Humidity:</b> | 42 %      |
| <b>ATM Pressure:</b>      | 101.0 kPa |

*The testing was performed by Macy Shi on 2024-02-27.*

*EUT operation mode: Transmitting (maximum output power mode)*

For Module YL43752

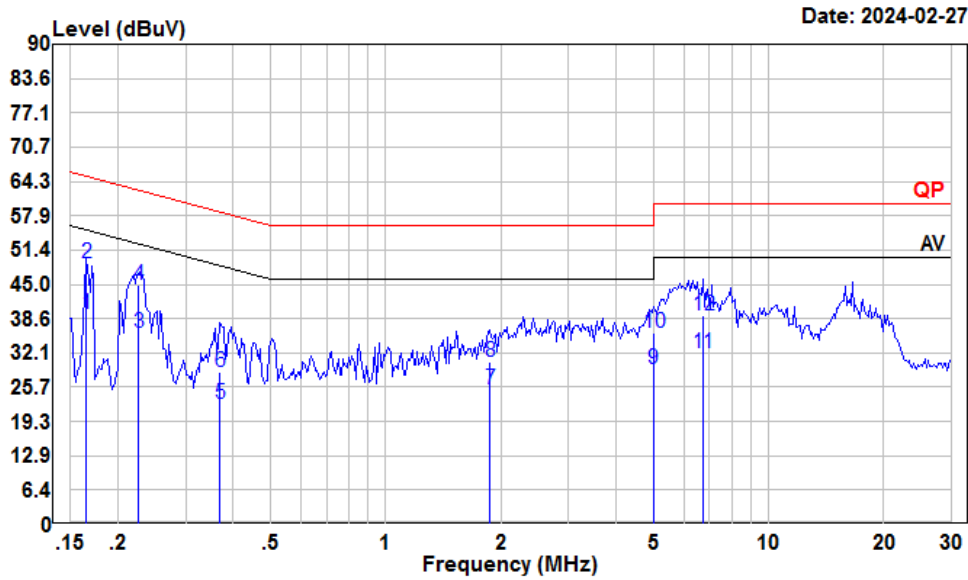
AC 120V/60 Hz, Line



Condition: Line  
 Project : SZ1240201-07392E-RF  
 Tester : Macy shi  
 Note : 2.4G WIFI

|    | Read Freq | Read Level | LISN Level | LISN Factor | Cable Loss | Limit Line | Over Limit | Remark  |
|----|-----------|------------|------------|-------------|------------|------------|------------|---------|
|    | MHz       | dBuV       | dBuV       | dB          | dB         | dBuV       | dB         |         |
| 1  | 0.15      | 23.00      | 43.55      | 10.40       | 10.15      | 55.74      | -12.19     | Average |
| 2  | 0.15      | 32.30      | 52.85      | 10.40       | 10.15      | 65.74      | -12.89     | QP      |
| 3  | 0.17      | 23.48      | 44.03      | 10.40       | 10.15      | 55.03      | -11.00     | Average |
| 4  | 0.17      | 33.62      | 54.17      | 10.40       | 10.15      | 65.03      | -10.86     | QP      |
| 5  | 0.23      | 15.26      | 35.78      | 10.37       | 10.15      | 52.57      | -16.79     | Average |
| 6  | 0.23      | 24.06      | 44.58      | 10.37       | 10.15      | 62.57      | -17.99     | QP      |
| 7  | 3.68      | 6.46       | 27.11      | 10.39       | 10.26      | 46.00      | -18.89     | Average |
| 8  | 3.68      | 12.92      | 33.57      | 10.39       | 10.26      | 56.00      | -22.43     | QP      |
| 9  | 6.95      | 12.03      | 32.85      | 10.60       | 10.22      | 50.00      | -17.15     | Average |
| 10 | 6.95      | 17.80      | 38.62      | 10.60       | 10.22      | 60.00      | -21.38     | QP      |
| 11 | 16.40     | 12.41      | 32.93      | 10.42       | 10.10      | 50.00      | -17.07     | Average |
| 12 | 16.40     | 17.61      | 38.13      | 10.42       | 10.10      | 60.00      | -21.87     | QP      |

AC 120V/60 Hz, Neutral



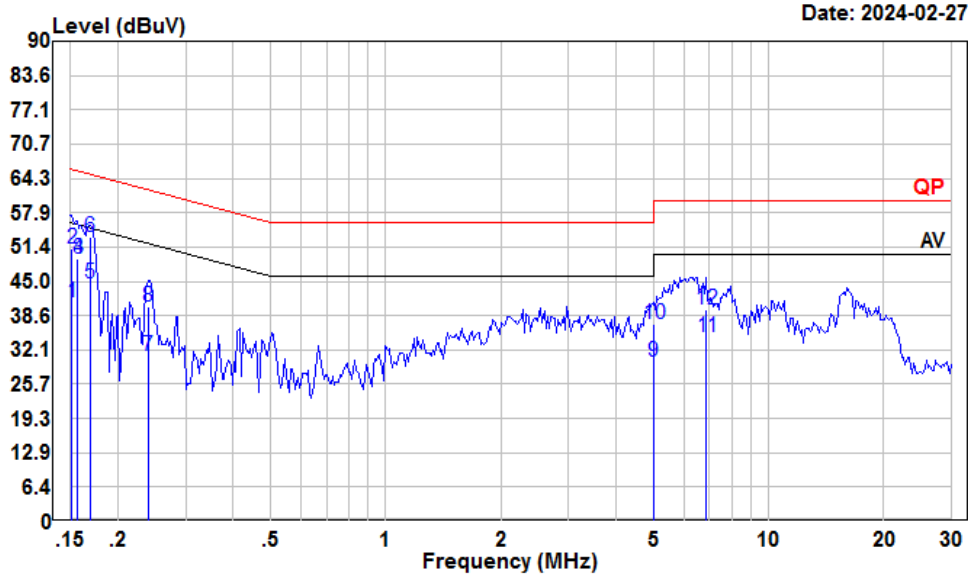
Date: 2024-02-27

Condition: Neutral  
 Project : SZ1240201-07392E-RF  
 Tester : Macy shi  
 Note : 2.4G WIFI

|    | Read Freq | Read Level | LISN Level | LISN Factor | Cable Loss | Limit Line | Over Limit | Remark  |
|----|-----------|------------|------------|-------------|------------|------------|------------|---------|
|    | MHz       | dBuV       | dBuV       | dB          | dB         | dBuV       | dB         |         |
| 1  | 0.17      | 19.09      | 39.57      | 10.33       | 10.15      | 55.21      | -15.64     | Average |
| 2  | 0.17      | 28.55      | 49.03      | 10.33       | 10.15      | 65.21      | -16.18     | QP      |
| 3  | 0.23      | 15.04      | 35.82      | 10.63       | 10.15      | 52.57      | -16.75     | Average |
| 4  | 0.23      | 24.23      | 45.01      | 10.63       | 10.15      | 62.57      | -17.56     | QP      |
| 5  | 0.37      | 1.69       | 22.60      | 10.73       | 10.18      | 48.52      | -25.92     | Average |
| 6  | 0.37      | 7.55       | 28.46      | 10.73       | 10.18      | 58.52      | -30.06     | QP      |
| 7  | 1.87      | 4.92       | 25.20      | 10.12       | 10.16      | 46.00      | -20.80     | Average |
| 8  | 1.87      | 10.23      | 30.51      | 10.12       | 10.16      | 56.00      | -25.49     | QP      |
| 9  | 5.01      | 8.35       | 28.97      | 10.40       | 10.22      | 50.00      | -21.03     | Average |
| 10 | 5.01      | 15.16      | 35.78      | 10.40       | 10.22      | 60.00      | -24.22     | QP      |
| 11 | 6.73      | 11.46      | 32.08      | 10.40       | 10.22      | 50.00      | -17.92     | Average |
| 12 | 6.73      | 18.49      | 39.11      | 10.40       | 10.22      | 60.00      | -20.89     | QP      |

For Module YL43456

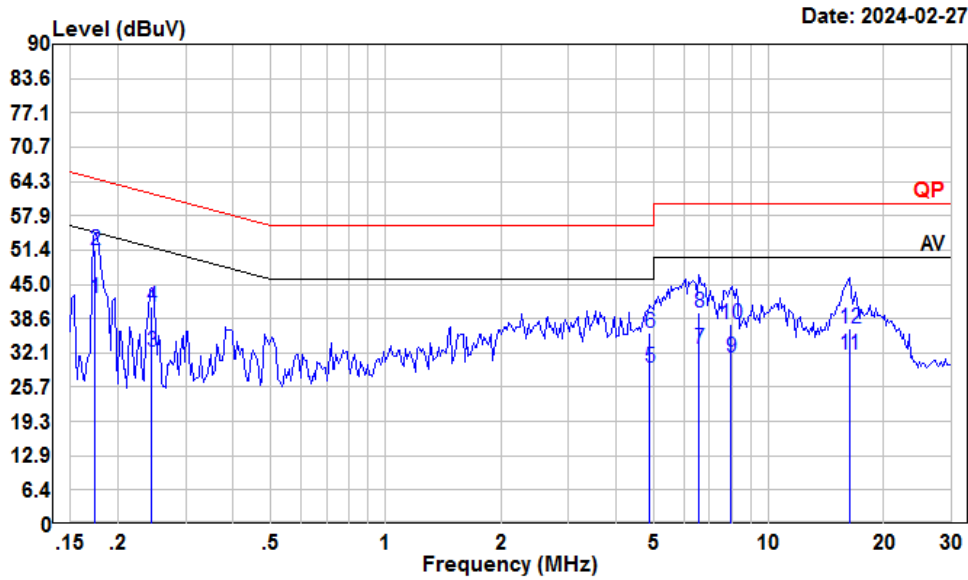
AC 120V/60 Hz, Line



Condition: Line  
 Project : SZ1240201-07392E-RF  
 Tester : Macy shi  
 Note : 2.4G WIFI

|    | Read Freq | Read Level | LISN Level | LISN Factor | Cable Loss | Limit Line | Over Limit | Remark  |
|----|-----------|------------|------------|-------------|------------|------------|------------|---------|
|    | MHz       | dBuV       | dBuV       | dB          | dB         | dBuV       | dB         |         |
| 1  | 0.15      | 20.42      | 40.97      | 10.40       | 10.15      | 55.91      | -14.94     | Average |
| 2  | 0.15      | 30.69      | 51.24      | 10.40       | 10.15      | 65.91      | -14.67     | QP      |
| 3  | 0.16      | 28.60      | 49.15      | 10.40       | 10.15      | 55.65      | -6.50      | Average |
| 4  | 0.16      | 28.70      | 49.25      | 10.40       | 10.15      | 65.65      | -16.40     | QP      |
| 5  | 0.17      | 24.10      | 44.65      | 10.40       | 10.15      | 55.03      | -10.38     | Average |
| 6  | 0.17      | 32.70      | 53.25      | 10.40       | 10.15      | 65.03      | -11.78     | QP      |
| 7  | 0.24      | 10.42      | 30.96      | 10.36       | 10.18      | 52.13      | -21.17     | Average |
| 8  | 0.24      | 19.77      | 40.31      | 10.36       | 10.18      | 62.13      | -21.82     | QP      |
| 9  | 5.01      | 9.19       | 29.89      | 10.48       | 10.22      | 50.00      | -20.11     | Average |
| 10 | 5.01      | 16.33      | 37.03      | 10.48       | 10.22      | 60.00      | -22.97     | QP      |
| 11 | 6.88      | 13.61      | 34.42      | 10.59       | 10.22      | 50.00      | -15.58     | Average |
| 12 | 6.88      | 18.86      | 39.67      | 10.59       | 10.22      | 60.00      | -20.33     | QP      |

AC 120V/60 Hz, Neutral



Condition: Neutral  
 Project : SZ1240201-07392E-RF  
 Tester : Macy shi  
 Note : 2.4G WIFI

|    | Read Freq | Read Level | LISN Level | LISN Factor | Cable Loss | Limit Line | Over Limit | Remark  |
|----|-----------|------------|------------|-------------|------------|------------|------------|---------|
|    | MHz       | dBuV       | dBuV       | dB          | dB         | dBuV       | dB         |         |
| 1  | 0.17      | 21.92      | 42.47      | 10.41       | 10.14      | 54.77      | -12.30     | Average |
| 2  | 0.17      | 30.77      | 51.32      | 10.41       | 10.14      | 64.77      | -13.45     | QP      |
| 3  | 0.24      | 11.56      | 32.40      | 10.64       | 10.20      | 51.95      | -19.55     | Average |
| 4  | 0.24      | 19.87      | 40.71      | 10.64       | 10.20      | 61.95      | -21.24     | QP      |
| 5  | 4.90      | 8.85       | 29.47      | 10.40       | 10.22      | 46.00      | -16.53     | Average |
| 6  | 4.90      | 15.25      | 35.87      | 10.40       | 10.22      | 56.00      | -20.13     | QP      |
| 7  | 6.59      | 12.33      | 32.95      | 10.40       | 10.22      | 50.00      | -17.05     | Average |
| 8  | 6.59      | 19.13      | 39.75      | 10.40       | 10.22      | 60.00      | -20.25     | QP      |
| 9  | 7.98      | 10.71      | 31.41      | 10.47       | 10.23      | 50.00      | -18.59     | Average |
| 10 | 7.98      | 16.71      | 37.41      | 10.47       | 10.23      | 60.00      | -22.59     | QP      |
| 11 | 16.23     | 11.50      | 31.95      | 10.35       | 10.10      | 50.00      | -18.05     | Average |
| 12 | 16.23     | 16.40      | 36.85      | 10.35       | 10.10      | 60.00      | -23.15     | QP      |

## §15.205, §15.209, §15.247(d) & RSS-GEN § 8.10 & RSS-247 § 5.5 SPURIOUS EMISSIONS

### Applicable Standard

FCC §15.247 (d); §15.209; §15.205;

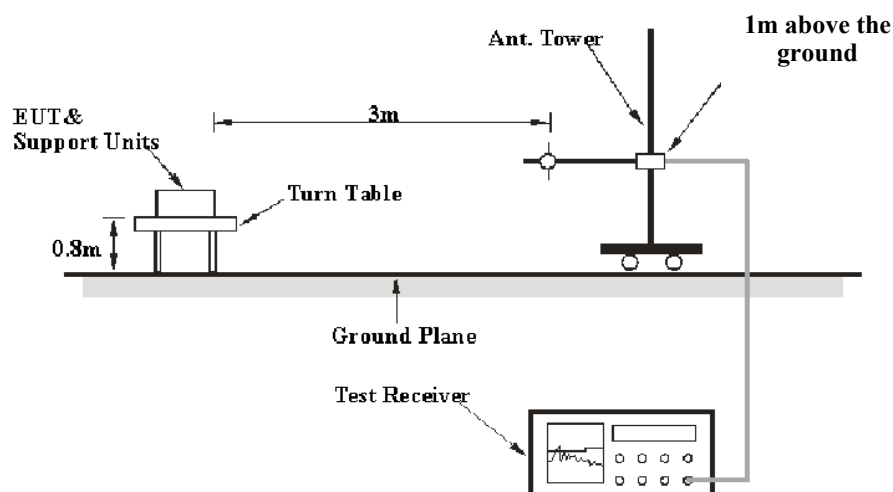
According to RSS-GEN § 8.10 & RSS-247 § 5.5

Restricted frequency bands, identified in table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government uses. Except where otherwise indicated, the following conditions related to the restricted frequency bands apply:(a) The transmit frequency, including fundamental components of modulation, of licence-exempt radio apparatus shall not fall within the restricted frequency bands listed in table 7 except for apparatus compliant with RSS-287, Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD).(b) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.(c) Unwanted emissions that do not fall within the restricted frequency bands listed in table 7 shall comply either with the limits specified in the applicable RSS or with those specified in table 5 and table 6.

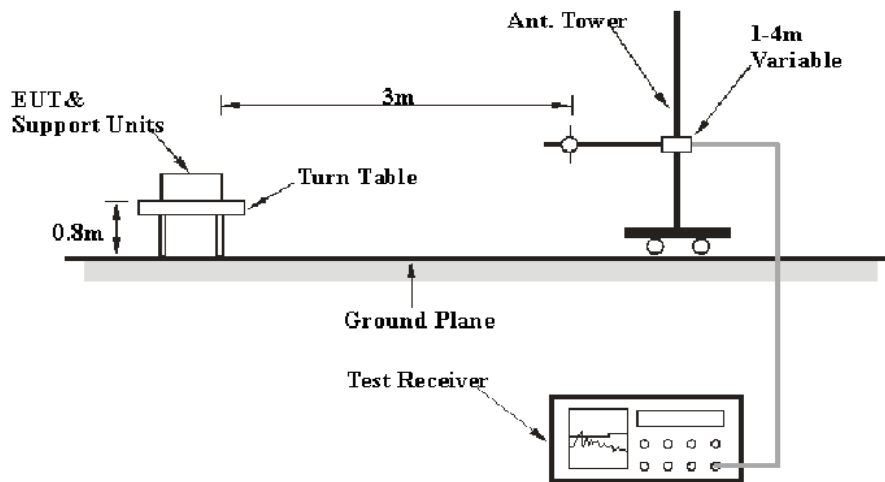
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates Compliant 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.

### EUT Setup

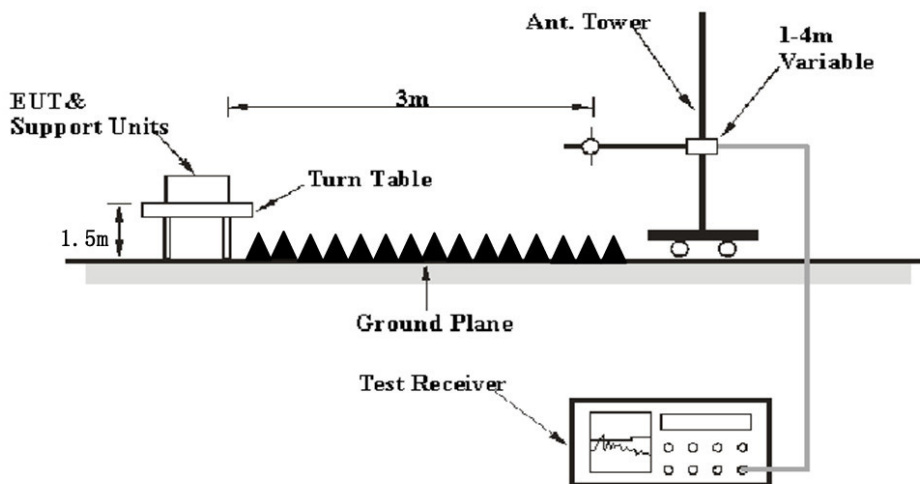
9 kHz-30MHz:



**30MHz-1GHz:**



**Above 1GHz:**



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2013 & RSS-Gen. The specification used was the FCC 15.209, and FCC 15.247 & 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.



**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:

9 kHz-1GHz:

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

1-25GHz:

| Measurement | Duty cycle | RBW  | Video B/W |
|-------------|------------|------|-----------|
| PK          | Any        | 1MHz | 3 MHz     |
| AV          | >98%       | 1MHz | 10 Hz     |
|             | <98%       | 1MHz | ≥1/T      |

Note: T is minimum transmission duration

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

**Test Procedure**

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

All final data was recorded in Quasi-peak detection mode except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, average detection modes for frequency bands 9–90 kHz and 110–490 kHz, peak and average detection modes for frequencies above 1 GHz.

For 9 kHz-30MHz, the report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground-parallel) unless the margin is greater than 20 dB.

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

## Factor & Over Limit/Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Over Limit/Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

$$\begin{aligned} \text{Over Limit/Margin} &= \text{Level/Corrected Amplitude} - \text{Limit} \\ \text{Level / Corrected Amplitude} &= \text{Read Level} + \text{Factor} \end{aligned}$$

## Test Data

### Environmental Conditions

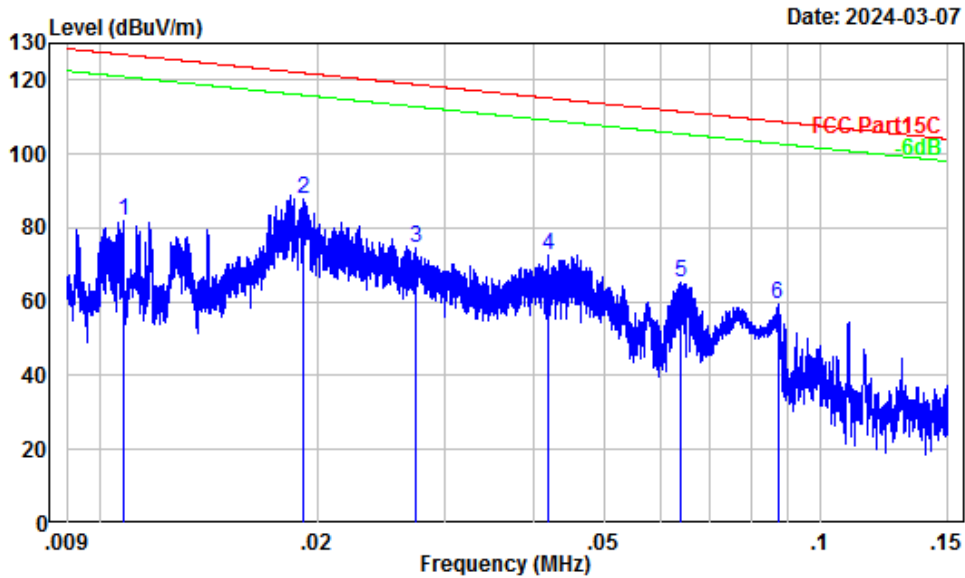
|                           |            |
|---------------------------|------------|
| <b>Temperature:</b>       | 22~24.5 °C |
| <b>Relative Humidity:</b> | 50~54 %    |
| <b>ATM Pressure:</b>      | 101.0 kPa  |

*The testing was performed by Anson Su on 2024-03-07 for below 1GHz and Tyler Wu on 2024-03-13 and 2024-03-17 for above 1GHz.*

*EUT operation mode: Transmitting*

For Module YL43752

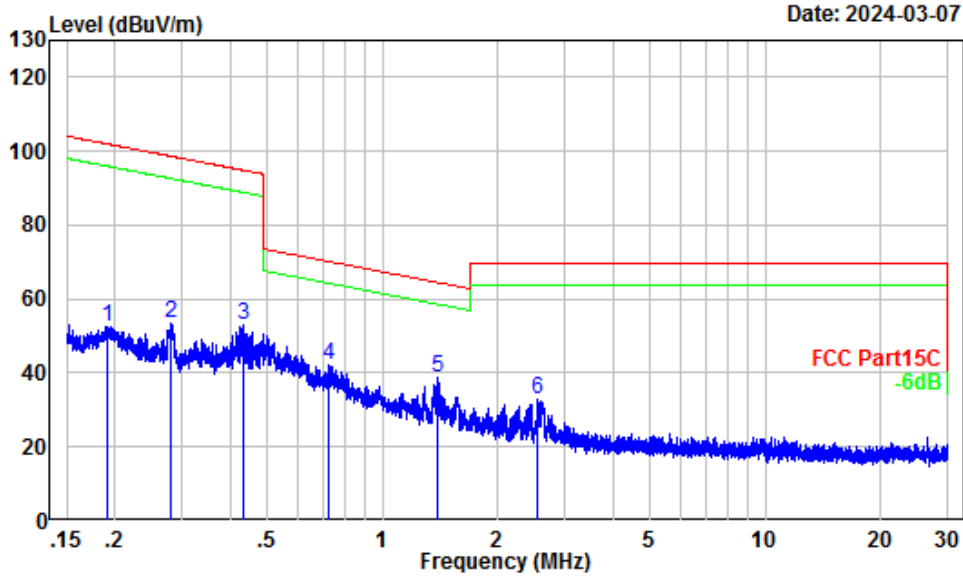
9 kHz-30MHz: (maximum output power mode)



Date: 2024-03-07

Site : Chamber A  
 Condition : 3m  
 Project Number: SZ1240201-07392E-RF  
 Note : 2.4G WIFI  
 Tester : Anson Su

|   | Freq | Factor | Read Level | Limit Level | Over Line | Over Limit | Remark |
|---|------|--------|------------|-------------|-----------|------------|--------|
|   | MHz  | dB/m   | dBuV       | dBuV/m      | dBuV/m    | dB         |        |
| 1 | 0.01 | 53.07  | 28.75      | 81.82       | 126.94    | -45.12     | Peak   |
| 2 | 0.02 | 50.49  | 37.32      | 87.81       | 121.95    | -34.14     | Peak   |
| 3 | 0.03 | 47.94  | 26.80      | 74.74       | 118.83    | -44.09     | Peak   |
| 4 | 0.04 | 43.49  | 29.29      | 72.78       | 115.16    | -42.38     | Peak   |
| 5 | 0.06 | 39.11  | 26.15      | 65.26       | 111.51    | -46.25     | Peak   |
| 6 | 0.09 | 35.91  | 23.47      | 59.38       | 108.80    | -49.42     | Peak   |

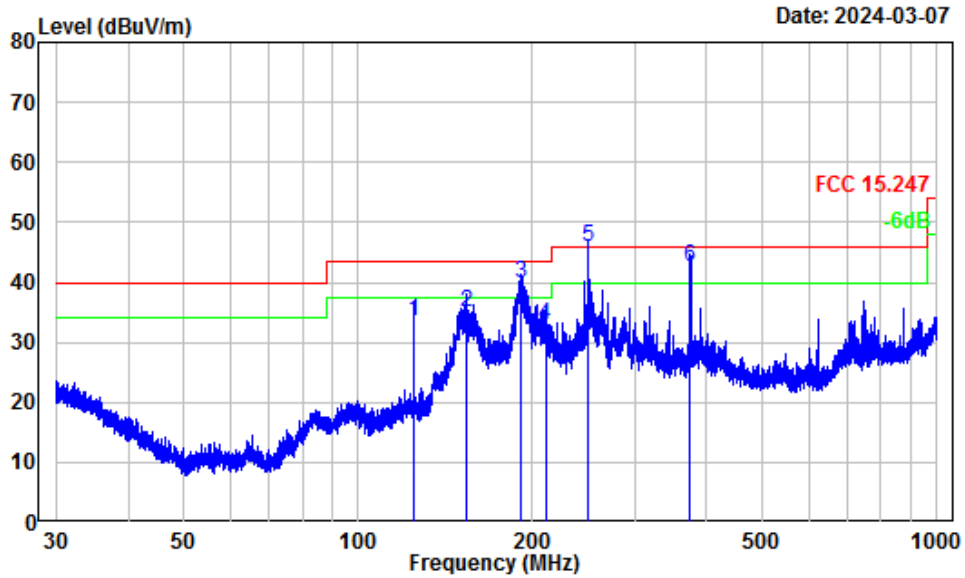


Site : Chamber A  
 Condition : 3m  
 Project Number: SZ1240201-07392E-RF  
 Note : 2.4G WIFI  
 Tester : Anson Su

|      | Read  | Limit | Over   |        |        |        |      |
|------|-------|-------|--------|--------|--------|--------|------|
| Freq | Level | Level | Limit  | Remark |        |        |      |
| MHz  | dB/m  | dBuV  | dBuV/m | dB     |        |        |      |
| 1    | 0.19  | 29.45 | 22.94  | 52.39  | 101.98 | -49.59 | Peak |
| 2    | 0.28  | 26.13 | 27.25  | 53.38  | 98.65  | -45.27 | Peak |
| 3    | 0.43  | 21.90 | 30.87  | 52.77  | 94.90  | -42.13 | Peak |
| 4    | 0.73  | 17.88 | 24.28  | 42.16  | 70.30  | -28.14 | Peak |
| 5    | 1.40  | 13.48 | 25.27  | 38.75  | 64.51  | -25.76 | Peak |
| 6    | 2.54  | 9.18  | 23.81  | 32.99  | 69.54  | -36.55 | Peak |

30 MHz~1 GHz: (maximum output power mode)

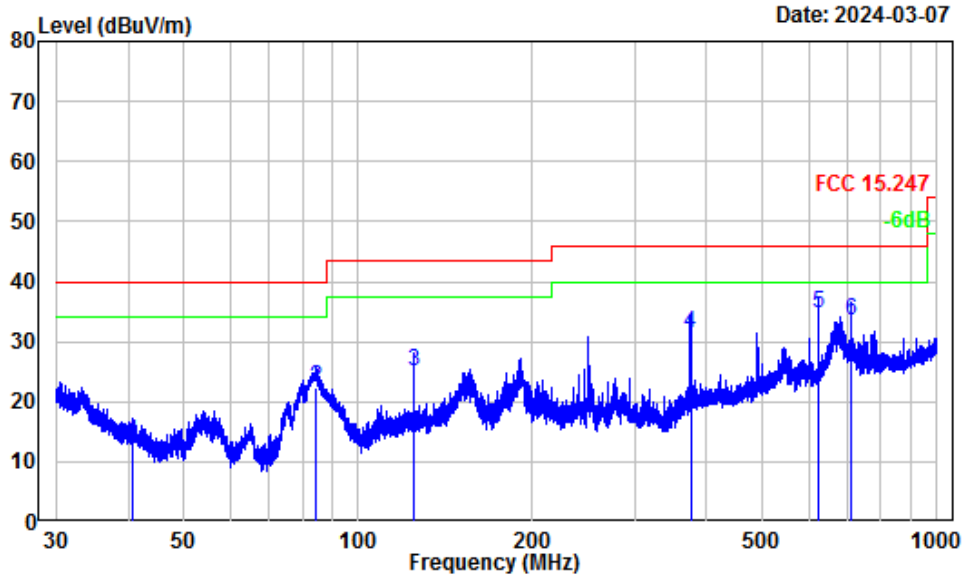
Horizontal



Site : Chamber A  
 Condition : 3m Horizontal  
 Project Number: SZ1240201-07392E-RF  
 Note : 2.4G WIFI  
 Tester : Anson

|   | Freq   | Factor | Read Level | Limit Level | Limit Line | Over Limit | Remark |
|---|--------|--------|------------|-------------|------------|------------|--------|
|   | MHz    | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |        |
| 1 | 125.01 | -10.32 | 43.81      | 33.49       | 43.50      | -10.01     | QP     |
| 2 | 153.33 | -11.52 | 46.59      | 35.07       | 43.50      | -8.43      | QP     |
| 3 | 190.49 | -12.25 | 52.00      | 39.75       | 43.50      | -3.75      | QP     |
| 4 | 210.51 | -11.20 | 44.00      | 32.80       | 43.50      | -10.70     | QP     |
| 5 | 249.97 | -11.85 | 57.70      | 45.85       | 46.00      | -0.15      | QP     |
| 6 | 374.95 | -8.61  | 51.10      | 42.49       | 46.00      | -3.51      | QP     |

**Vertical**

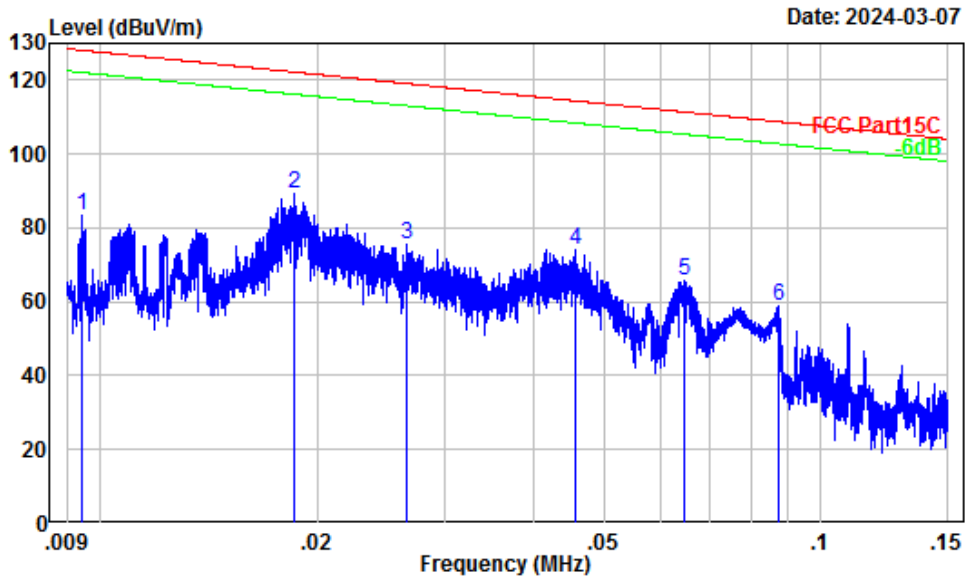


Site : Chamber A  
 Condition : 3m Vertical  
 Project Number: SZ1240201-07392E-RF  
 Note : 2.4G WIFI  
 Tester : Anson

|      | Read   | Limit  | Over   |        |       |        |    |
|------|--------|--------|--------|--------|-------|--------|----|
| Freq | Level  | Line   | Limit  | Remark |       |        |    |
| MHz  | dB/m   | dBuV   | dBuV/m | dB     |       |        |    |
| 1    | 40.76  | -12.32 | 25.50  | 13.18  | 40.00 | -26.82 | QP |
| 2    | 84.55  | -17.29 | 39.60  | 22.31  | 40.00 | -17.69 | QP |
| 3    | 125.01 | -10.77 | 35.84  | 25.07  | 43.50 | -18.43 | QP |
| 4    | 375.12 | -8.85  | 40.33  | 31.48  | 46.00 | -14.52 | QP |
| 5    | 625.08 | -3.65  | 38.26  | 34.61  | 46.00 | -11.39 | QP |
| 6    | 710.12 | -1.96  | 35.51  | 33.55  | 46.00 | -12.45 | QP |

For Module YL43456

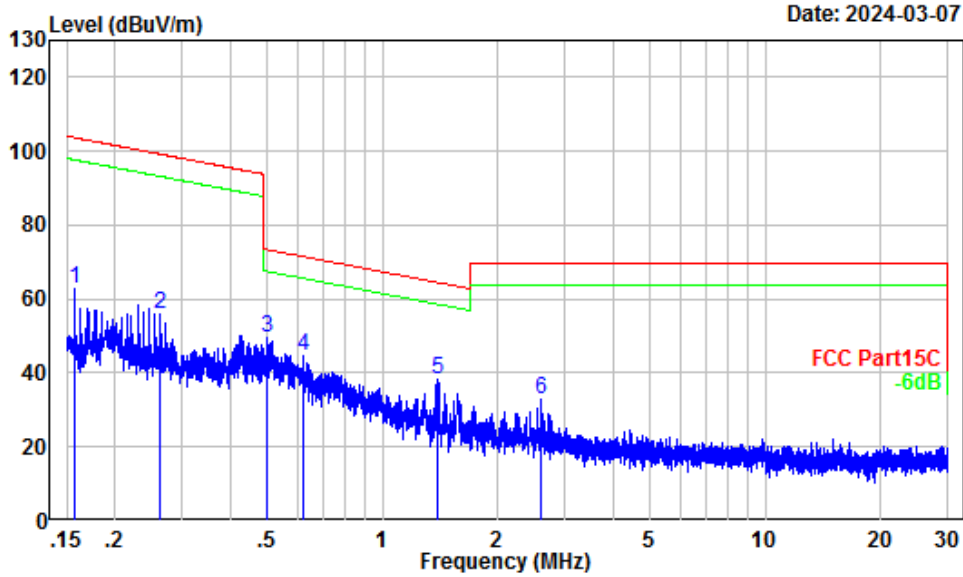
9 kHz-30MHz: (maximum output power mode)



Date: 2024-03-07

Site : Chamber A  
 Condition : 3m  
 Project Number: SZ1240201-07392E-RF  
 Note : 2.4G WIFI  
 Tester : Anson Su

|   | Freq | Factor | Read Level | Limit Level | Over Line | Limit Remark |
|---|------|--------|------------|-------------|-----------|--------------|
|   | MHz  | dB/m   | dBuV       | dBuV/m      | dBuV/m    | dB           |
| 1 | 0.01 | 53.45  | 30.09      | 83.54       | 128.10    | -44.56 Peak  |
| 2 | 0.02 | 50.66  | 38.60      | 89.26       | 122.22    | -32.96 Peak  |
| 3 | 0.03 | 48.17  | 27.53      | 75.70       | 119.07    | -43.37 Peak  |
| 4 | 0.05 | 42.33  | 31.81      | 74.14       | 114.41    | -40.27 Peak  |
| 5 | 0.06 | 38.98  | 26.55      | 65.53       | 111.38    | -45.85 Peak  |
| 6 | 0.09 | 35.89  | 22.95      | 58.84       | 108.79    | -49.95 Peak  |



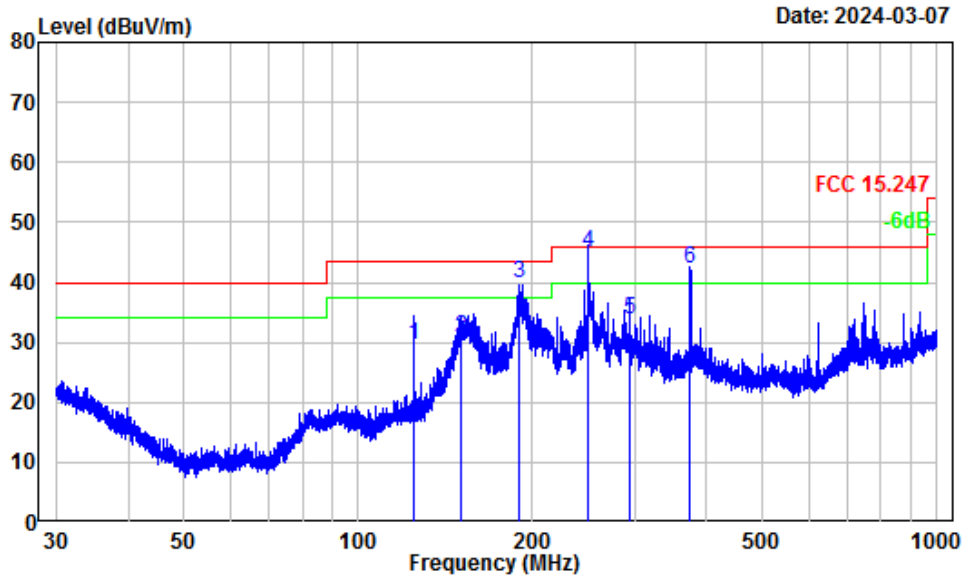
Site : Chamber A  
 Condition : 3m  
 Project Number: SZ1240201-07392E-RF  
 Note : 2.4G WIFI  
 Tester : Anson Su

|   | Freq | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|------|--------|------------|--------|------------|------------|--------|
|   | MHz  | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 0.16 | 31.18  | 31.58      | 62.76  | 103.66     | -40.90     | Peak   |
| 2 | 0.26 | 26.72  | 29.36      | 56.08  | 99.19      | -43.11     | Peak   |
| 3 | 0.50 | 20.97  | 28.36      | 49.33  | 73.65      | -24.32     | Peak   |
| 4 | 0.62 | 19.40  | 25.44      | 44.84  | 71.72      | -26.88     | Peak   |
| 5 | 1.39 | 13.52  | 24.75      | 38.27  | 64.56      | -26.29     | Peak   |
| 6 | 2.59 | 9.08   | 23.65      | 32.73  | 69.54      | -36.81     | Peak   |



30 MHz~1 GHz: (maximum output power mode)

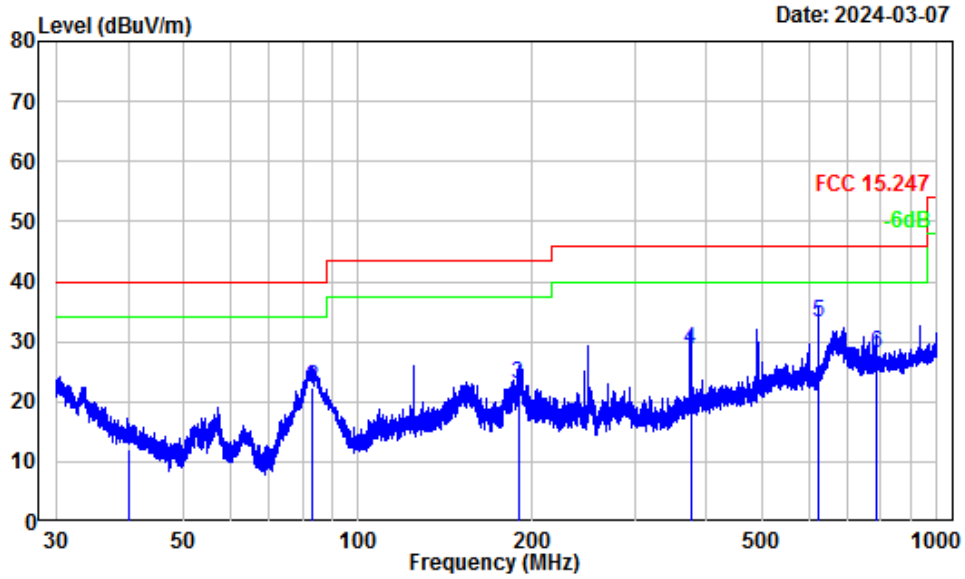
Horizontal



Site : Chamber A  
 Condition : 3m Horizontal  
 Project Number: SZ1240201-07392E-RF  
 Note : 2.4G WIFI  
 Tester : Anson

|   | Freq   | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|--------|--------|------------|--------|------------|------------|--------|
|   | MHz    | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 125.01 | -10.32 | 40.01      | 29.69  | 43.50      | -13.81     | QP     |
| 2 | 150.67 | -11.39 | 42.20      | 30.81  | 43.50      | -12.69     | QP     |
| 3 | 189.82 | -12.31 | 52.30      | 39.99  | 43.50      | -3.51      | QP     |
| 4 | 249.97 | -11.85 | 56.90      | 45.05  | 46.00      | -0.95      | QP     |
| 5 | 294.89 | -10.15 | 44.00      | 33.85  | 46.00      | -12.15     | QP     |
| 6 | 374.95 | -8.61  | 51.00      | 42.39  | 46.00      | -3.61      | QP     |

Vertical



Site : Chamber A  
 Condition : 3m Vertical  
 Project Number: SZ1240201-07392E-RF  
 Note : 2.4G WIFI  
 Tester : Anson

|   | Freq   | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|--------|--------|------------|--------|------------|------------|--------|
|   | MHz    | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 40.13  | -11.97 | 24.13      | 12.16  | 40.00      | -27.84     | QP     |
| 2 | 83.49  | -17.26 | 39.57      | 22.31  | 40.00      | -17.69     | QP     |
| 3 | 188.91 | -12.88 | 35.86      | 22.98  | 43.50      | -20.52     | QP     |
| 4 | 375.12 | -8.85  | 37.48      | 28.63  | 46.00      | -17.37     | QP     |
| 5 | 625.08 | -3.65  | 36.73      | 33.08  | 46.00      | -12.92     | QP     |
| 6 | 785.44 | -1.09  | 29.18      | 28.09  | 46.00      | -17.91     | QP     |

**1 GHz-25 GHz:**

**For Module YL43752**

| Frequency (MHz)        | Receiver       |        | Polar (H/V) | Factor (dB/m) | Corrected Amplitude (dBμV/m) | Limit (dBμV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBμV) | PK/Ave |             |               |                              |                |             |
| <b>802.11b</b>         |                |        |             |               |                              |                |             |
| <b>ANT1</b>            |                |        |             |               |                              |                |             |
| Low Channel 2412MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 46.12          | PK     | H           | 2.45          | 48.57                        | 74             | -25.43      |
| 4824.00                | 31.98          | AV     | H           | 2.45          | 34.43                        | 54             | -19.57      |
| 4824.00                | 46.37          | PK     | V           | 2.45          | 48.82                        | 74             | -25.18      |
| 4824.00                | 32.45          | AV     | V           | 2.45          | 34.90                        | 54             | -19.10      |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 46.07          | PK     | H           | 2.56          | 48.63                        | 74             | -25.37      |
| 4874.00                | 31.92          | AV     | H           | 2.56          | 34.48                        | 54             | -19.52      |
| 4874.00                | 46.54          | PK     | V           | 2.56          | 49.10                        | 74             | -24.90      |
| 4874.00                | 32.36          | AV     | V           | 2.56          | 34.92                        | 54             | -19.08      |
| High Channel 2462MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 46.03          | PK     | H           | 2.63          | 48.66                        | 74             | -25.34      |
| 4924.00                | 31.89          | AV     | H           | 2.63          | 34.52                        | 54             | -19.48      |
| 4924.00                | 46.72          | PK     | V           | 2.63          | 49.35                        | 74             | -24.65      |
| 4924.00                | 32.15          | AV     | V           | 2.63          | 34.78                        | 54             | -19.22      |
| <b>ANT2</b>            |                |        |             |               |                              |                |             |
| Low Channel 2412MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 46.15          | PK     | H           | 2.45          | 48.60                        | 74             | -25.40      |
| 4824.00                | 35.62          | AV     | H           | 2.45          | 38.07                        | 54             | -15.93      |
| 4824.00                | 46.98          | PK     | V           | 2.45          | 49.43                        | 74             | -24.57      |
| 4824.00                | 36.01          | AV     | V           | 2.45          | 38.46                        | 54             | -15.54      |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 46.09          | PK     | H           | 2.56          | 48.65                        | 74             | -25.35      |
| 4874.00                | 35.27          | AV     | H           | 2.56          | 37.83                        | 54             | -16.17      |
| 4874.00                | 46.78          | PK     | V           | 2.56          | 49.34                        | 74             | -24.66      |
| 4874.00                | 35.82          | AV     | V           | 2.56          | 38.38                        | 54             | -15.62      |
| High Channel 2462MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 46.02          | PK     | H           | 2.63          | 48.65                        | 74             | -25.35      |
| 4924.00                | 34.67          | AV     | H           | 2.63          | 37.30                        | 54             | -16.70      |
| 4924.00                | 46.59          | PK     | V           | 2.63          | 49.22                        | 74             | -24.78      |
| 4924.00                | 35.18          | AV     | V           | 2.63          | 37.81                        | 54             | -16.19      |

| Frequency (MHz)        | Receiver       |        | Polar (H/V) | Factor (dB/m) | Corrected Amplitude (dBμV/m) | Limit (dBμV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBμV) | PK/Ave |             |               |                              |                |             |
| <b>802.11g</b>         |                |        |             |               |                              |                |             |
| <b>ANT1</b>            |                |        |             |               |                              |                |             |
| Low Channel 2412MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 45.92          | PK     | H           | 2.45          | 48.37                        | 74             | -25.63      |
| 4824.00                | 32.67          | AV     | H           | 2.45          | 35.12                        | 54             | -18.88      |
| 4824.00                | 46.06          | PK     | V           | 2.45          | 48.51                        | 74             | -25.49      |
| 4824.00                | 32.89          | AV     | V           | 2.45          | 35.34                        | 54             | -18.66      |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 46.23          | PK     | H           | 2.56          | 48.79                        | 74             | -25.21      |
| 4874.00                | 32.64          | AV     | H           | 2.56          | 35.20                        | 54             | -18.80      |
| 4874.00                | 46.12          | PK     | V           | 2.56          | 48.68                        | 74             | -25.32      |
| 4874.00                | 32.58          | AV     | V           | 2.56          | 35.14                        | 54             | -18.86      |
| High Channel 2462MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 46.43          | PK     | H           | 2.63          | 49.06                        | 74             | -24.94      |
| 4924.00                | 32.56          | AV     | H           | 2.63          | 35.19                        | 54             | -18.81      |
| 4924.00                | 46.19          | PK     | V           | 2.63          | 48.82                        | 74             | -25.18      |
| 4924.00                | 32.51          | AV     | V           | 2.63          | 35.14                        | 54             | -18.86      |
| <b>ANT2</b>            |                |        |             |               |                              |                |             |
| Low Channel 2412MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 46.03          | PK     | H           | 2.45          | 48.48                        | 74             | -25.52      |
| 4824.00                | 32.52          | AV     | H           | 2.45          | 34.97                        | 54             | -19.03      |
| 4824.00                | 46.78          | PK     | V           | 2.45          | 49.23                        | 74             | -24.77      |
| 4824.00                | 33.14          | AV     | V           | 2.45          | 35.59                        | 54             | -18.41      |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 45.97          | PK     | H           | 2.56          | 48.53                        | 74             | -25.47      |
| 4874.00                | 32.59          | AV     | H           | 2.56          | 35.15                        | 54             | -18.85      |
| 4874.00                | 46.34          | PK     | V           | 2.56          | 48.90                        | 74             | -25.10      |
| 4874.00                | 33.01          | AV     | V           | 2.56          | 35.57                        | 54             | -18.43      |
| High Channel 2462MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 45.28          | PK     | H           | 2.63          | 47.91                        | 74             | -26.09      |
| 4924.00                | 32.63          | AV     | H           | 2.63          | 35.26                        | 54             | -18.74      |
| 4924.00                | 46.17          | PK     | V           | 2.63          | 48.80                        | 74             | -25.20      |
| 4924.00                | 32.91          | AV     | V           | 2.63          | 35.54                        | 54             | -18.46      |

| Frequency (MHz)        | Receiver       |        | Polar (H/V) | Factor (dB/m) | Corrected Amplitude (dBμV/m) | Limit (dBμV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBμV) | PK/Ave |             |               |                              |                |             |
| <b>802.11n20 MIMO</b>  |                |        |             |               |                              |                |             |
| Low Channel 2412MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 46.17          | PK     | H           | 2.45          | 48.62                        | 74             | -25.38      |
| 4824.00                | 32.53          | AV     | H           | 2.45          | 34.98                        | 54             | -19.02      |
| 4824.00                | 46.32          | PK     | V           | 2.45          | 48.77                        | 74             | -25.23      |
| 4824.00                | 32.86          | AV     | V           | 2.45          | 35.31                        | 54             | -18.69      |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 46.09          | PK     | H           | 2.56          | 48.65                        | 74             | -25.35      |
| 4874.00                | 32.51          | AV     | H           | 2.56          | 35.07                        | 54             | -18.93      |
| 4874.00                | 46.28          | PK     | V           | 2.56          | 48.84                        | 74             | -25.16      |
| 4874.00                | 32.67          | AV     | V           | 2.56          | 35.23                        | 54             | -18.77      |
| High Channel 2462MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 46.07          | PK     | H           | 2.63          | 48.70                        | 74             | -25.30      |
| 4924.00                | 32.41          | AV     | H           | 2.63          | 35.04                        | 54             | -18.96      |
| 4924.00                | 46.23          | PK     | V           | 2.63          | 48.86                        | 74             | -25.14      |
| 4924.00                | 32.59          | AV     | V           | 2.63          | 35.22                        | 54             | -18.78      |
| <b>802.11ax20 MIMO</b> |                |        |             |               |                              |                |             |
| Low Channel 2422MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 46.07          | PK     | H           | 2.45          | 48.52                        | 74             | -25.48      |
| 4824.00                | 32.56          | AV     | H           | 2.45          | 35.01                        | 54             | -18.99      |
| 4824.00                | 46.25          | PK     | V           | 2.45          | 48.70                        | 74             | -25.30      |
| 4824.00                | 33.03          | AV     | V           | 2.45          | 35.48                        | 54             | -18.52      |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 45.83          | PK     | H           | 2.56          | 48.39                        | 74             | -25.61      |
| 4874.00                | 32.47          | AV     | H           | 2.56          | 35.03                        | 54             | -18.97      |
| 4874.00                | 46.15          | PK     | V           | 2.56          | 48.71                        | 74             | -25.29      |
| 4874.00                | 32.81          | AV     | V           | 2.56          | 35.37                        | 54             | -18.63      |
| High Channel 2452MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 45.06          | PK     | H           | 2.63          | 47.69                        | 74             | -26.31      |
| 4924.00                | 32.37          | AV     | H           | 2.63          | 35.00                        | 54             | -19.00      |
| 4924.00                | 45.78          | PK     | V           | 2.63          | 48.41                        | 74             | -25.59      |
| 4924.00                | 32.74          | AV     | V           | 2.63          | 35.37                        | 54             | -18.63      |

**For Module YL43456**

| Frequency (MHz)        | Receiver       |        | Polar (H/V) | Factor (dB/m) | Corrected Amplitude (dBμV/m) | Limit (dBμV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBμV) | PK/Ave |             |               |                              |                |             |
| <b>802.11b</b>         |                |        |             |               |                              |                |             |
| Low Channel 2412MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 50.78          | PK     | H           | 2.45          | 53.23                        | 74             | -20.77      |
| 4824.00                | 43.12          | AV     | H           | 2.45          | 45.57                        | 54             | -8.43       |
| 4824.00                | 50.13          | PK     | V           | 2.45          | 52.58                        | 74             | -21.42      |
| 4824.00                | 42.65          | AV     | V           | 2.45          | 45.10                        | 54             | -8.90       |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 51.16          | PK     | H           | 2.56          | 53.72                        | 74             | -20.28      |
| 4874.00                | 43.61          | AV     | H           | 2.56          | 46.17                        | 54             | -7.83       |
| 4874.00                | 50.83          | PK     | V           | 2.56          | 53.39                        | 74             | -20.61      |
| 4874.00                | 42.87          | AV     | V           | 2.56          | 45.43                        | 54             | -8.57       |
| High Channel 2462MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 51.87          | PK     | H           | 2.63          | 54.50                        | 74             | -19.50      |
| 4924.00                | 45.12          | AV     | H           | 2.63          | 47.75                        | 54             | -6.25       |
| 4924.00                | 51.13          | PK     | V           | 2.63          | 53.76                        | 74             | -20.24      |
| 4924.00                | 44.86          | AV     | V           | 2.63          | 47.49                        | 54             | -6.51       |
| <b>802.11g</b>         |                |        |             |               |                              |                |             |
| Low Channel 2412MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 49.79          | PK     | H           | 2.45          | 52.24                        | 74             | -21.76      |
| 4824.00                | 36.08          | AV     | H           | 2.45          | 38.53                        | 54             | -15.47      |
| 4824.00                | 49.23          | PK     | V           | 2.45          | 51.68                        | 74             | -22.32      |
| 4824.00                | 35.47          | AV     | V           | 2.45          | 37.92                        | 54             | -16.08      |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 50.63          | PK     | H           | 2.56          | 53.19                        | 74             | -20.81      |
| 4874.00                | 36.35          | AV     | H           | 2.56          | 38.91                        | 54             | -15.09      |
| 4874.00                | 49.74          | PK     | V           | 2.56          | 52.30                        | 74             | -21.70      |
| 4874.00                | 35.81          | AV     | V           | 2.56          | 38.37                        | 54             | -15.63      |
| High Channel 2462MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 51.47          | PK     | H           | 2.63          | 54.10                        | 74             | -19.90      |
| 4924.00                | 36.56          | AV     | H           | 2.63          | 39.19                        | 54             | -14.81      |
| 4924.00                | 50.83          | PK     | V           | 2.63          | 53.46                        | 74             | -20.54      |
| 4924.00                | 36.19          | AV     | V           | 2.63          | 38.82                        | 54             | -15.18      |

| Frequency (MHz)        | Receiver       |        | Polar (H/V) | Factor (dB/m) | Corrected Amplitude (dBμV/m) | Limit (dBμV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBμV) | PK/Ave |             |               |                              |                |             |
| <b>802.11n20</b>       |                |        |             |               |                              |                |             |
| Low Channel 2412MHz    |                |        |             |               |                              |                |             |
| 4824.00                | 49.72          | PK     | H           | 2.45          | 52.17                        | 74             | -21.83      |
| 4824.00                | 35.85          | AV     | H           | 2.45          | 38.30                        | 54             | -15.70      |
| 4824.00                | 48.56          | PK     | V           | 2.45          | 51.01                        | 74             | -22.99      |
| 4824.00                | 34.17          | AV     | V           | 2.45          | 36.62                        | 54             | -17.38      |
| Middle Channel 2437MHz |                |        |             |               |                              |                |             |
| 4874.00                | 50.15          | PK     | H           | 2.56          | 52.71                        | 74             | -21.29      |
| 4874.00                | 36.02          | AV     | H           | 2.56          | 38.58                        | 54             | -15.42      |
| 4874.00                | 49.37          | PK     | V           | 2.56          | 51.93                        | 74             | -22.07      |
| 4874.00                | 35.28          | AV     | V           | 2.56          | 37.84                        | 54             | -16.16      |
| High Channel 2462MHz   |                |        |             |               |                              |                |             |
| 4924.00                | 50.31          | PK     | H           | 2.63          | 52.94                        | 74             | -21.06      |
| 4924.00                | 36.25          | AV     | H           | 2.63          | 38.88                        | 54             | -15.12      |
| 4924.00                | 49.82          | PK     | V           | 2.63          | 52.45                        | 74             | -21.55      |
| 4924.00                | 35.46          | AV     | V           | 2.63          | 38.09                        | 54             | -15.91      |

**Note:**

Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

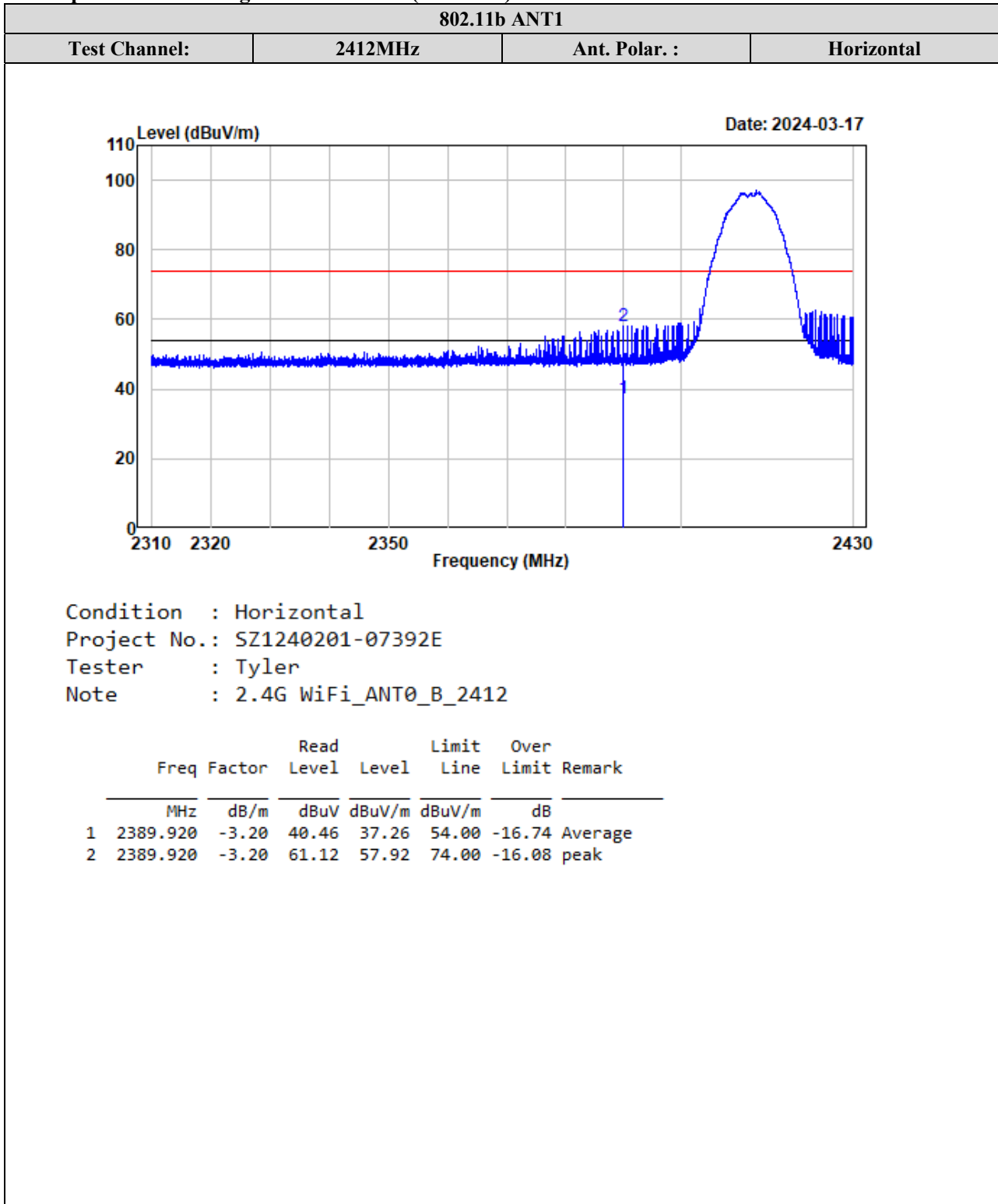
Corrected Amplitude = Factor + Reading

Margin = Corrected. Amplitude - Limit

The other spurious emission which is in the noise floor level was not recorded.

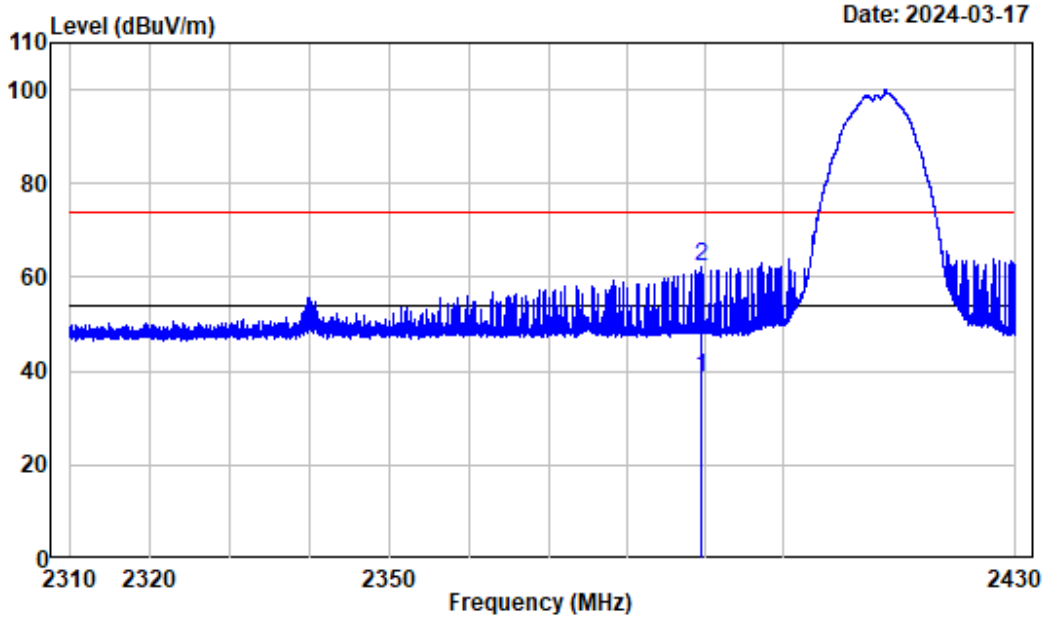
**For module YL43752**

**Test plots for Band Edge Measurements (Radiated):**





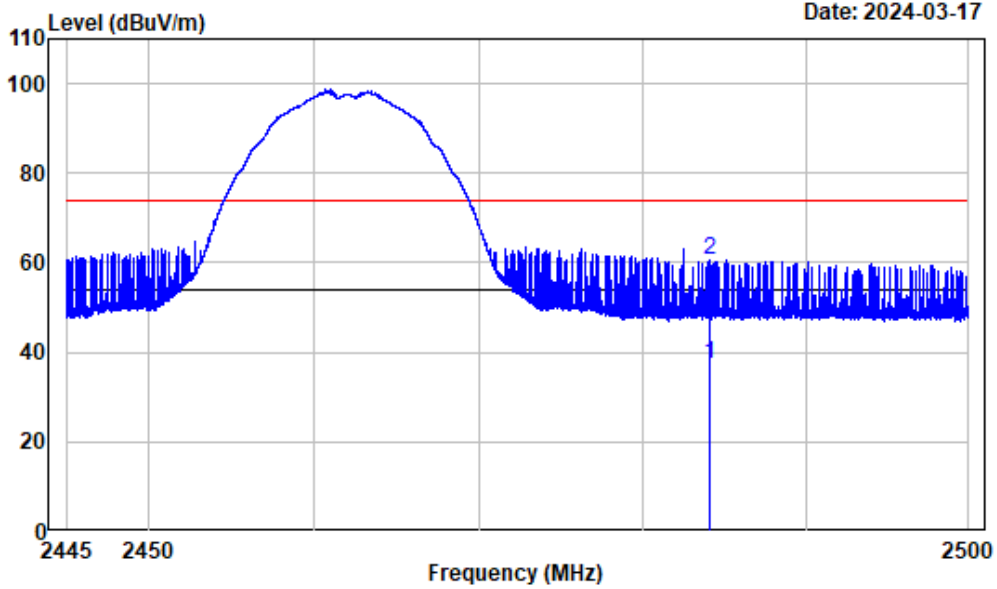
| 802.11b ANT1  |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT0\_B\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2389.365 | -3.20  | 41.68      | 38.48  | 54.00      | -15.52     | Average |
| 2 | 2389.365 | -3.20  | 65.43      | 62.23  | 74.00      | -11.77     | peak    |

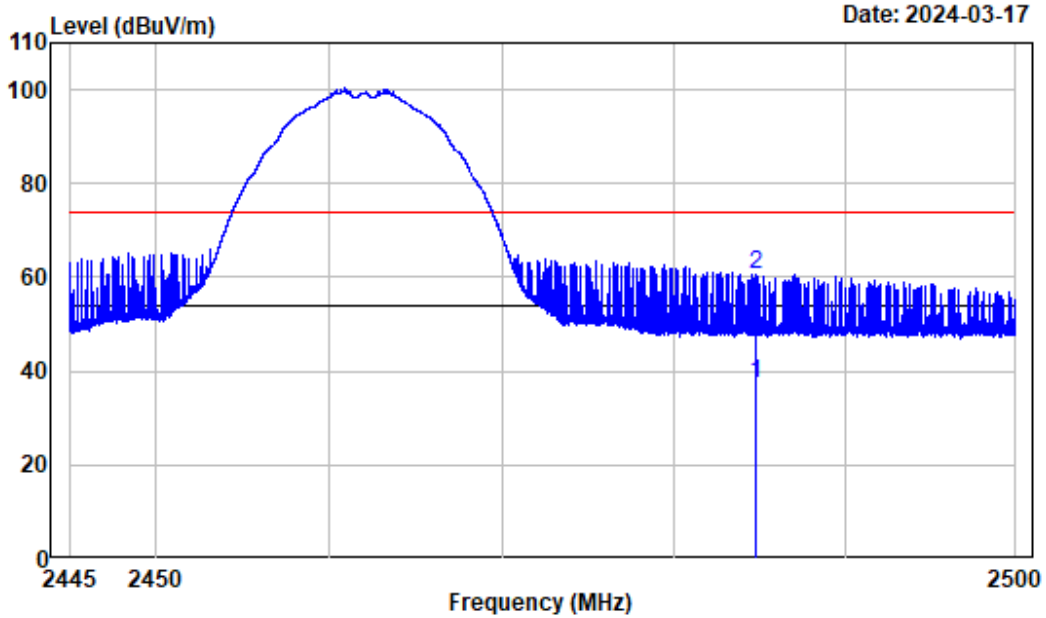
| 802.11b ANT1  |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2462MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT0\_B\_2462

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark  |
|---|----------|--------|-------|--------|--------|--------|---------|
|   |          |        | Level | Level  |        |        |         |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1 | 2484.119 | -3.17  | 40.47 | 37.30  | 54.00  | -16.70 | Average |
| 2 | 2484.119 | -3.17  | 63.80 | 60.63  | 74.00  | -13.37 | peak    |

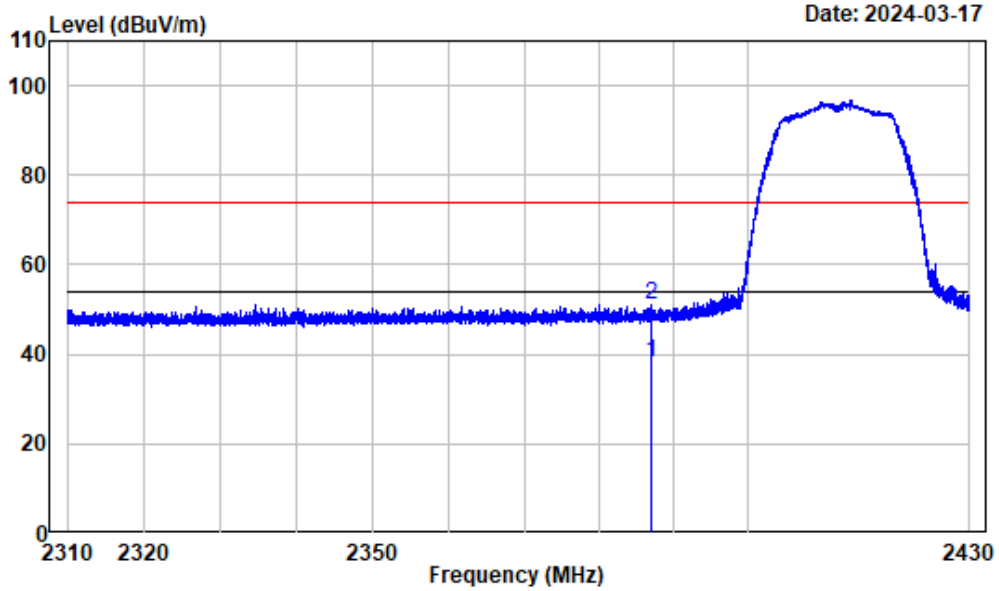
| 802.11b ANT1  |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT0\_B\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2484.786 | -3.17  | 40.61      | 37.44  | 54.00      | -16.56     | Average |
| 2 | 2484.786 | -3.17  | 63.77      | 60.60  | 74.00      | -13.40     | peak    |

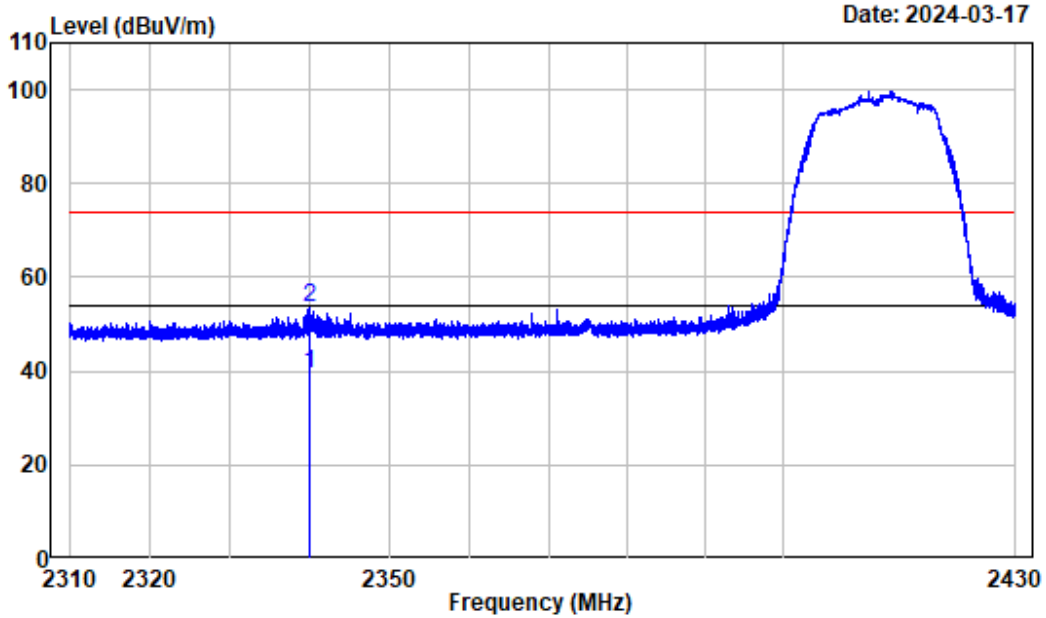
| 802.11g ANT1  |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2412MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT0\_G\_2412

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark  |
|---|----------|--------|-------|--------|--------|--------|---------|
|   |          |        | Level | Level  |        |        |         |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1 | 2386.890 | -3.19  | 41.41 | 38.22  | 54.00  | -15.78 | Average |
| 2 | 2386.890 | -3.19  | 54.39 | 51.20  | 74.00  | -22.80 | peak    |

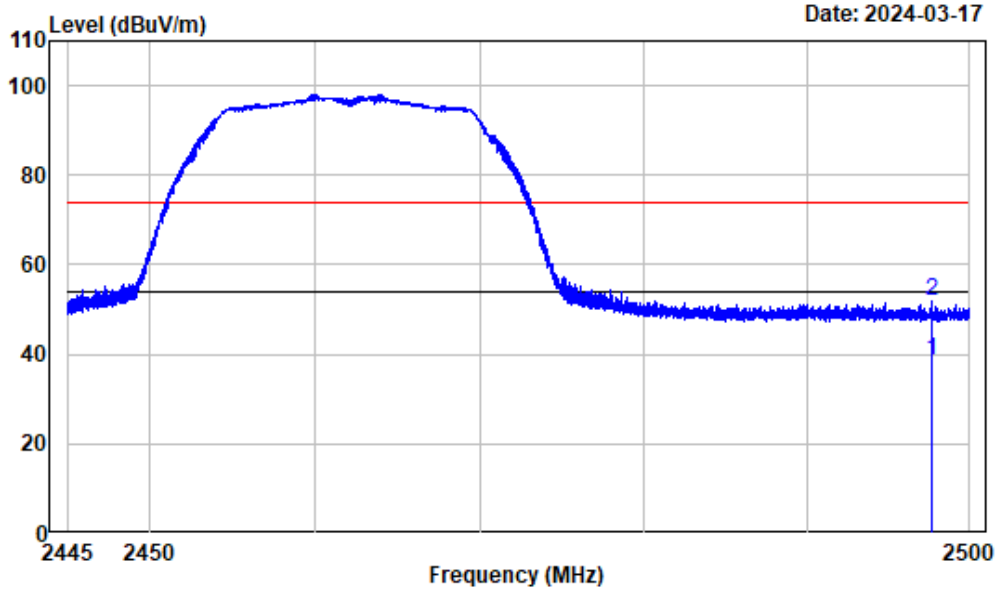
| 802.11g ANT1  |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT0\_G\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2340.000 | -3.14  | 42.63      | 39.49  | 54.00      | -14.51     | Average |
| 2 | 2340.000 | -3.14  | 56.85      | 53.71  | 74.00      | -20.29     | peak    |

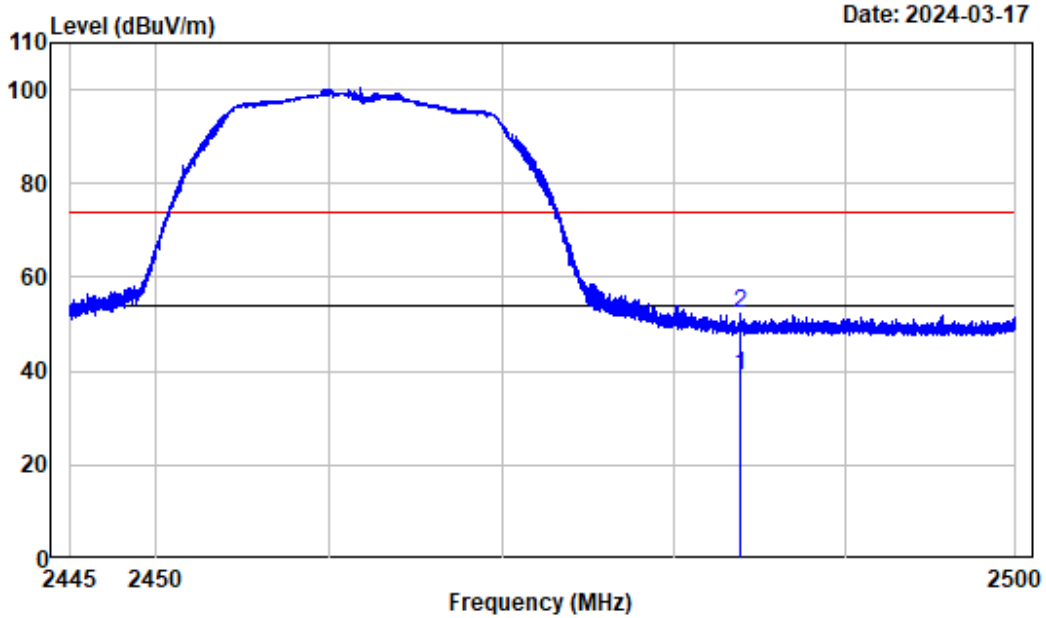
| 802.11g ANT1  |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2462MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT0\_G\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2497.642 | -3.20  | 41.62      | 38.42  | 54.00      | -15.58     | Average |
| 2 | 2497.642 | -3.20  | 54.95      | 51.75  | 74.00      | -22.25     | peak    |

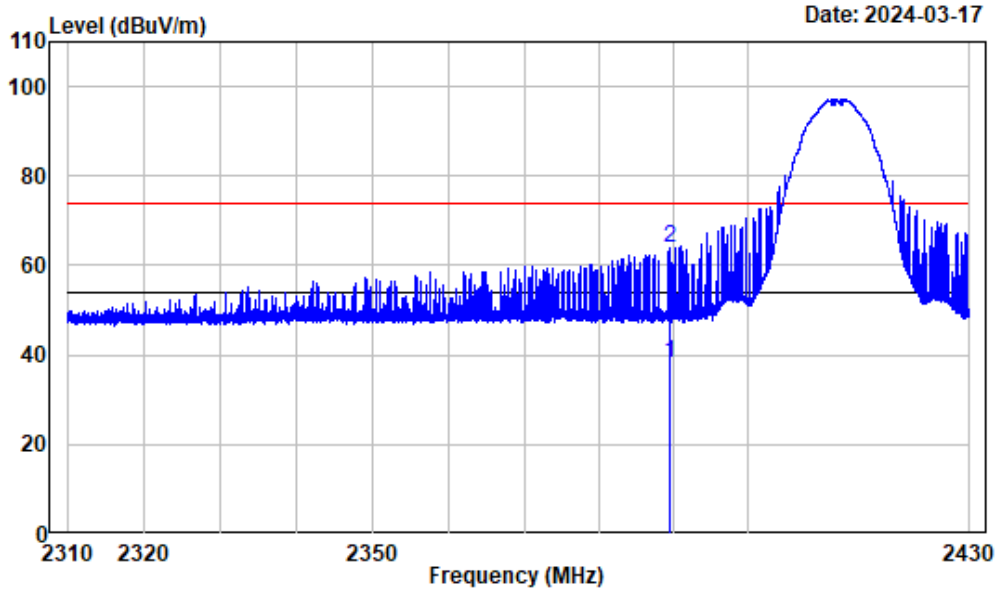
| 802.11g ANT1  |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT0\_G\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2483.919 | -3.17  | 42.15      | 38.98  | 54.00      | -15.02     | Average |
| 2 | 2483.919 | -3.17  | 55.33      | 52.16  | 74.00      | -21.84     | peak    |

| 802.11b ANT2  |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2412MHz | Ant. Polar. : | Horizontal |

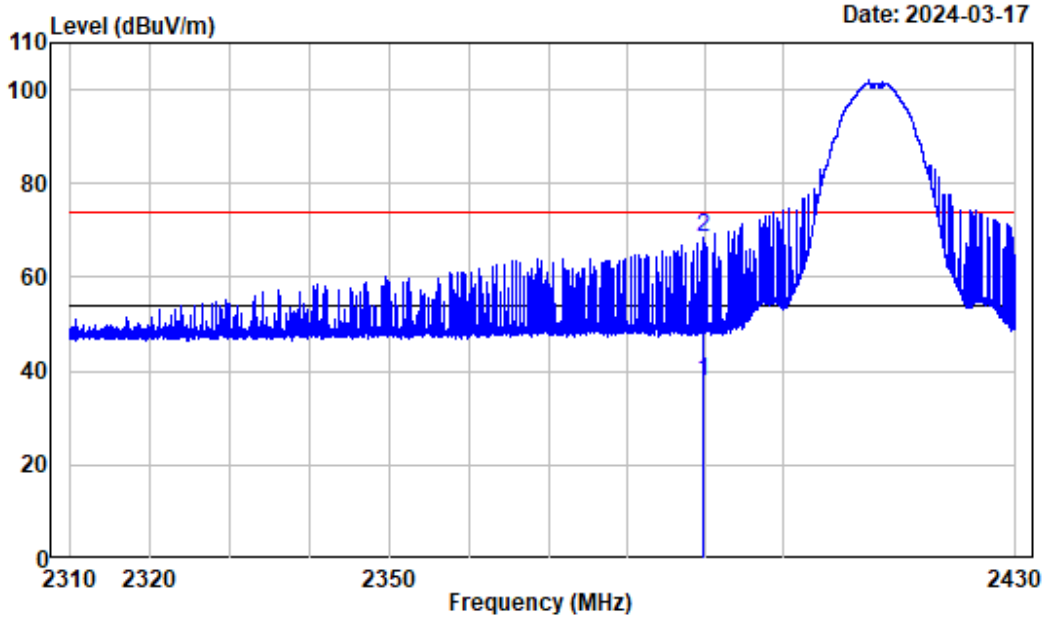


Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT1\_B\_2412

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark  |
|---|----------|--------|-------|--------|--------|--------|---------|
|   |          |        | Level | Level  |        |        |         |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1 | 2389.485 | -3.20  | 41.32 | 38.12  | 54.00  | -15.88 | Average |
| 2 | 2389.485 | -3.20  | 66.99 | 63.79  | 74.00  | -10.21 | peak    |



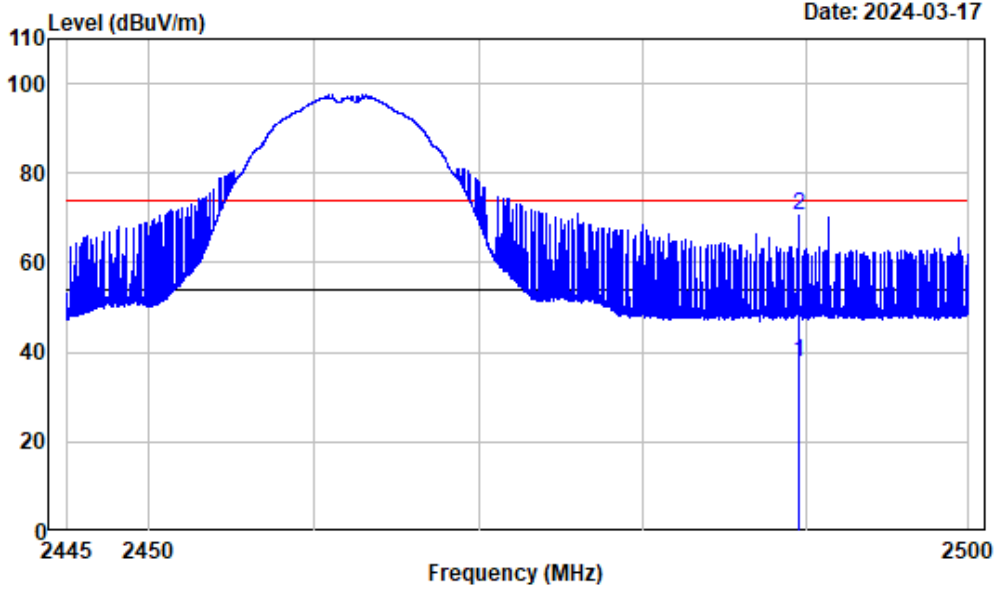
| 802.11b ANT2  |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT1\_B\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2389.800 | -3.20  | 41.17      | 37.97  | 54.00      | -16.03     | Average |
| 2 | 2389.800 | -3.20  | 71.61      | 68.41  | 74.00      | -5.59      | peak    |

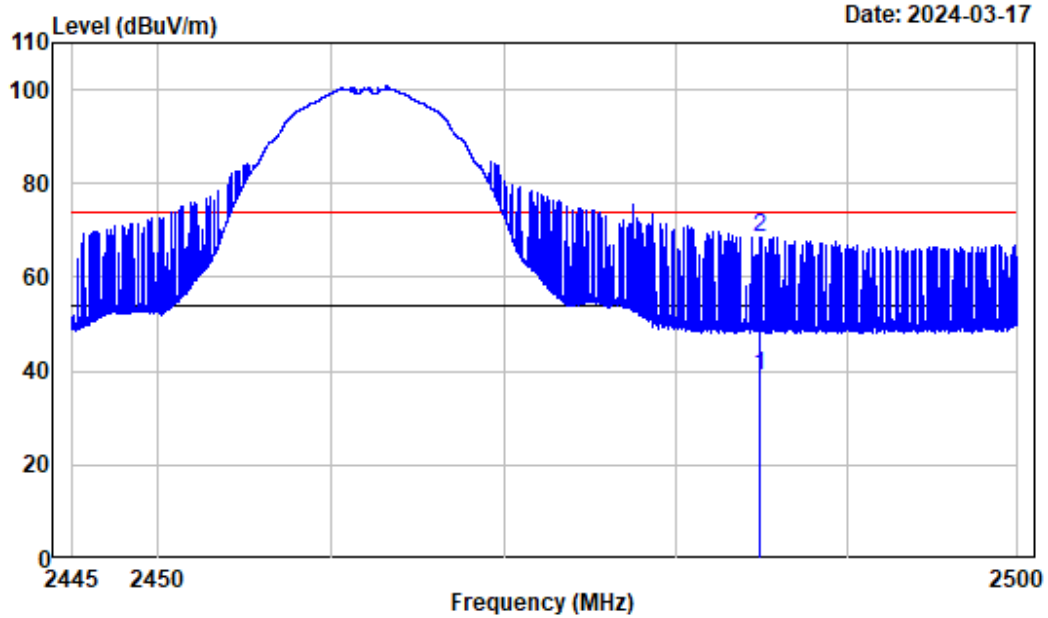
| 802.11b ANT2  |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2462MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT1\_B\_2462

|   | Freq     | Factor | Read Level | Level  | Limit  | Over   | Remark  |
|---|----------|--------|------------|--------|--------|--------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m | dB     |         |
| 1 | 2489.577 | -3.18  | 40.83      | 37.65  | 54.00  | -16.35 | Average |
| 2 | 2489.577 | -3.18  | 73.91      | 70.73  | 74.00  | -3.27  | peak    |

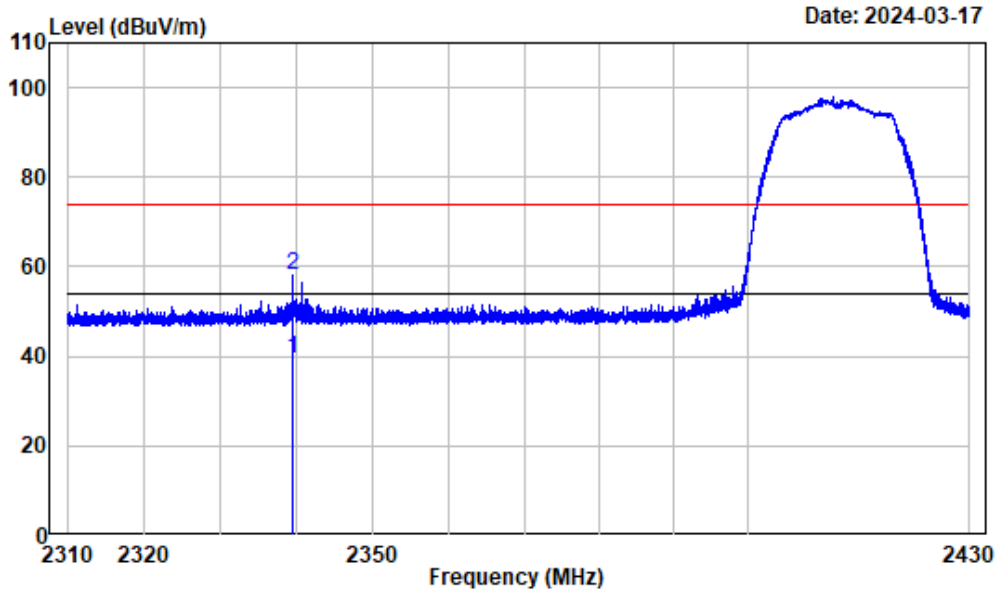
| 802.11b ANT2  |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT1\_B\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2484.944 | -3.17  | 42.18      | 39.01  | 54.00      | -14.99     | Average |
| 2 | 2484.944 | -3.17  | 71.86      | 68.69  | 74.00      | -5.31      | peak    |

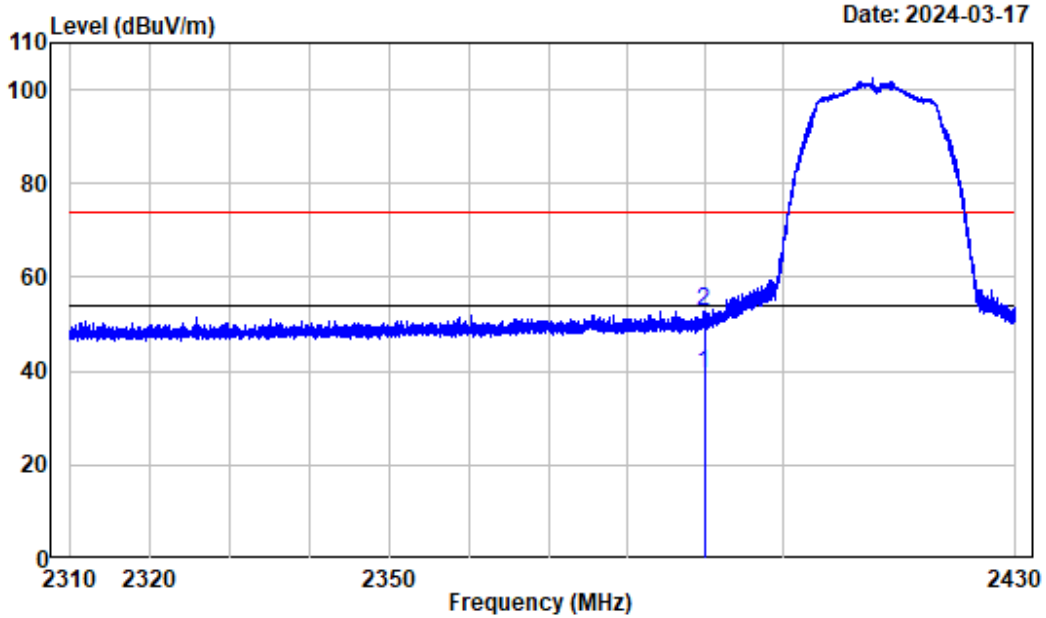
| 802.11g ANT2  |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2412MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT1\_G\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2339.505 | -3.14  | 42.41      | 39.27  | 54.00      | -14.73     | Average |
| 2 | 2339.505 | -3.14  | 61.22      | 58.08  | 74.00      | -15.92     | peak    |

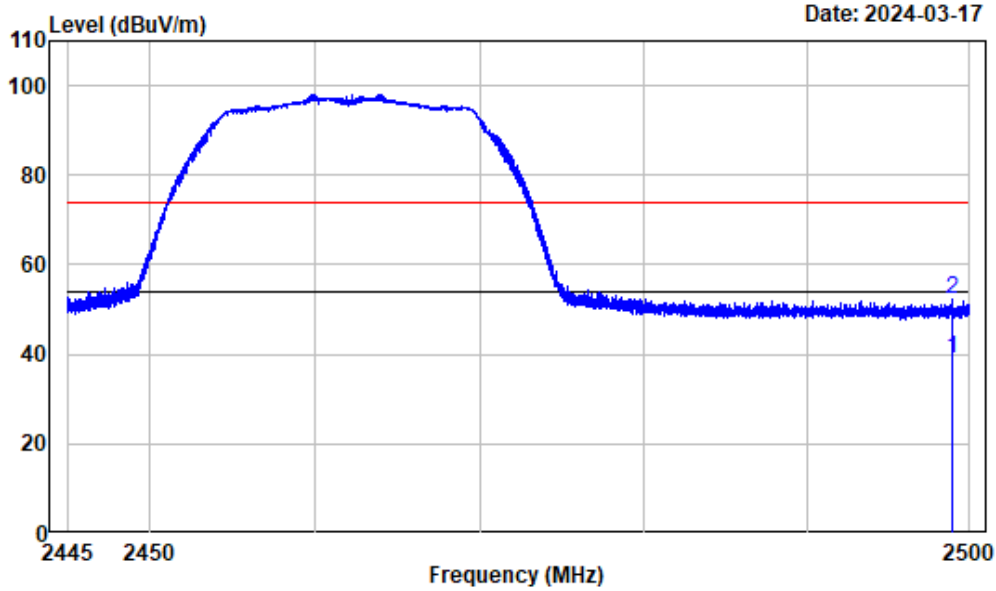
| 802.11g ANT2  |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT1\_G\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2389.845 | -3.20  | 42.73      | 39.53  | 54.00      | -14.47     | Average |
| 2 | 2389.845 | -3.20  | 55.94      | 52.74  | 74.00      | -21.26     | peak    |

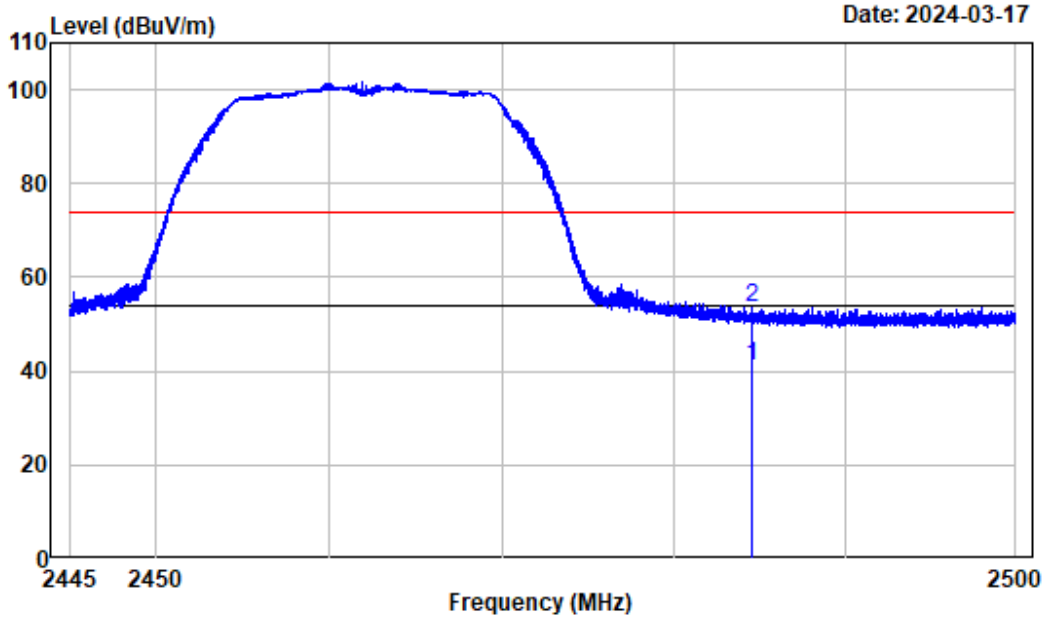
| 802.11g ANT2  |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2462MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT1\_G\_2462

|   | Freq     | Factor | Read Level | Level  | Limit  | Over   | Remark  |
|---|----------|--------|------------|--------|--------|--------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m | dB     |         |
| 1 | 2498.982 | -3.20  | 42.18      | 38.98  | 54.00  | -15.02 | Average |
| 2 | 2498.982 | -3.20  | 55.55      | 52.35  | 74.00  | -21.65 | peak    |

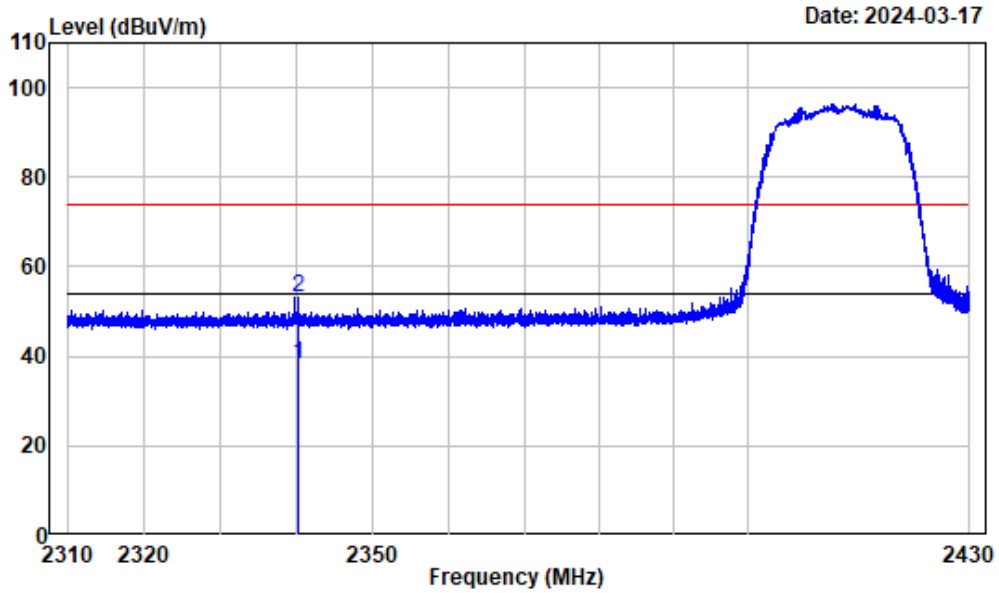
| 802.11g ANT2  |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_ANT1\_G\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2484.559 | -3.17  | 44.19      | 41.02  | 54.00      | -12.98     | Average |
| 2 | 2484.559 | -3.17  | 56.83      | 53.66  | 74.00      | -20.34     | peak    |

| 802.11n20 MIMO |         |               |            |
|----------------|---------|---------------|------------|
| Test Channel:  | 2412MHz | Ant. Polar. : | Horizontal |

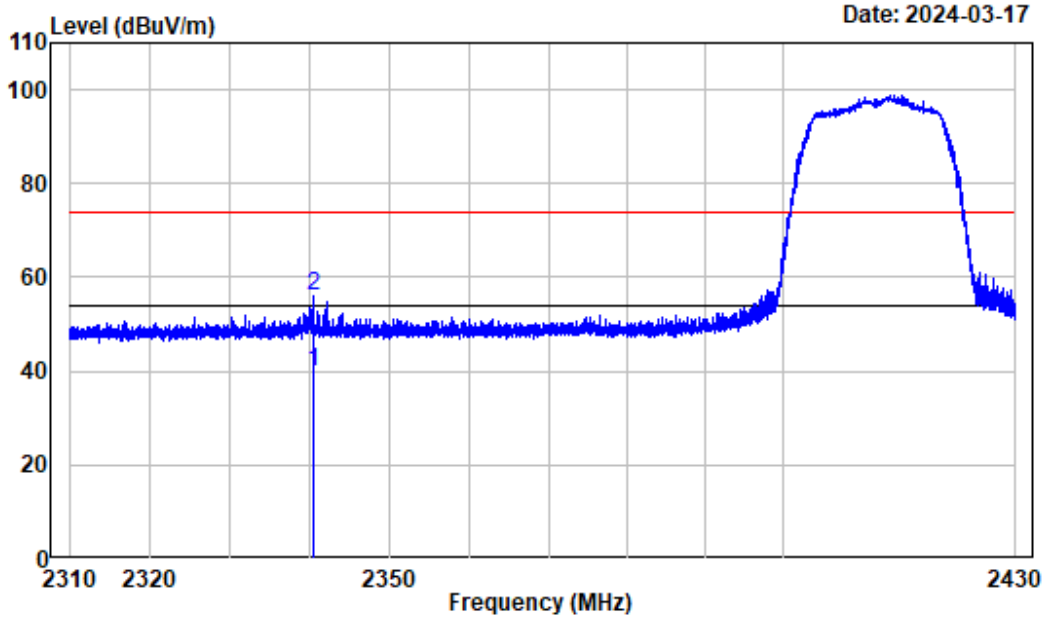


Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_N20\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2340.135 | -3.14  | 41.25      | 38.11  | 54.00      | -15.89     | Average |
| 2 | 2340.135 | -3.14  | 56.09      | 52.95  | 74.00      | -21.05     | peak    |



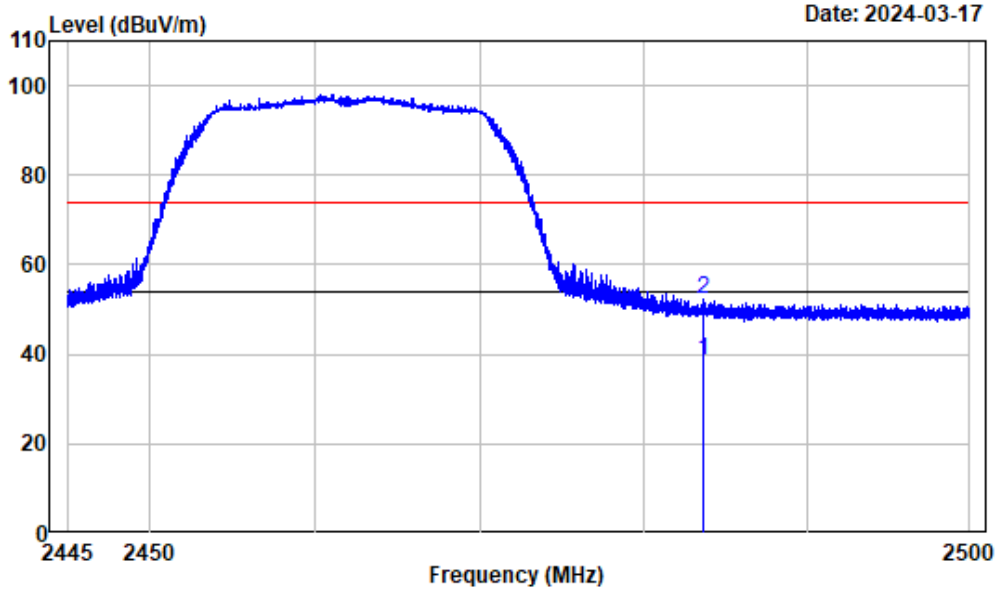
| 802.11n20 MIMO |         |               |          |
|----------------|---------|---------------|----------|
| Test Channel:  | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_N20\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2340.300 | -3.14  | 42.85      | 39.71  | 54.00      | -14.29     | Average |
| 2 | 2340.300 | -3.14  | 59.03      | 55.89  | 74.00      | -18.11     | peak    |

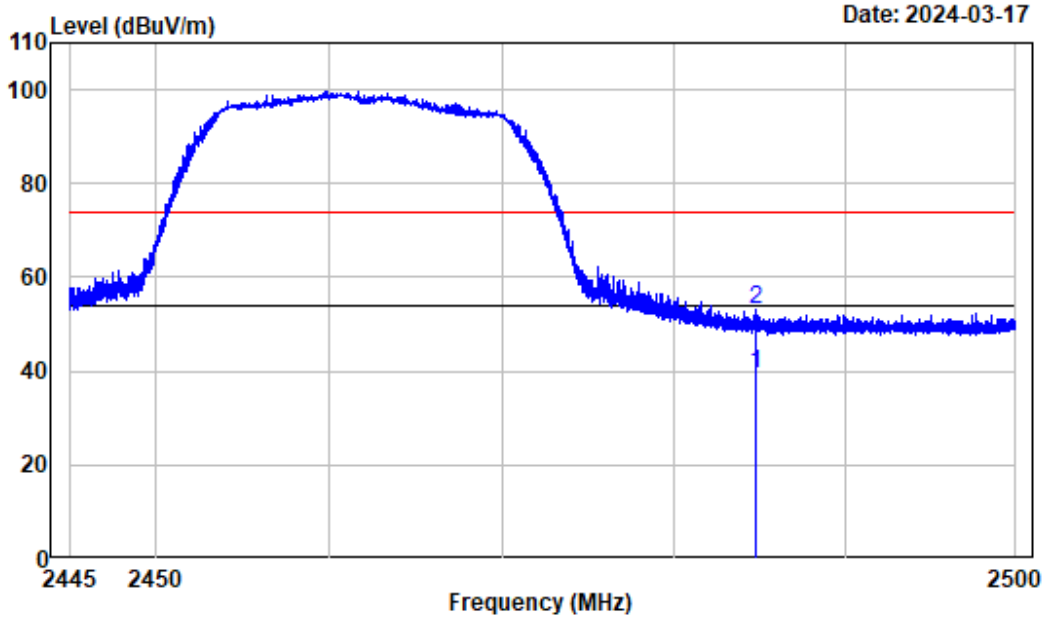
| 802.11n20 MIMO |         |               |            |
|----------------|---------|---------------|------------|
| Test Channel:  | 2462MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_N20\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2483.596 | -3.17  | 41.96      | 38.79  | 54.00      | -15.21     | Average |
| 2 | 2483.596 | -3.17  | 55.62      | 52.45  | 74.00      | -21.55     | peak    |

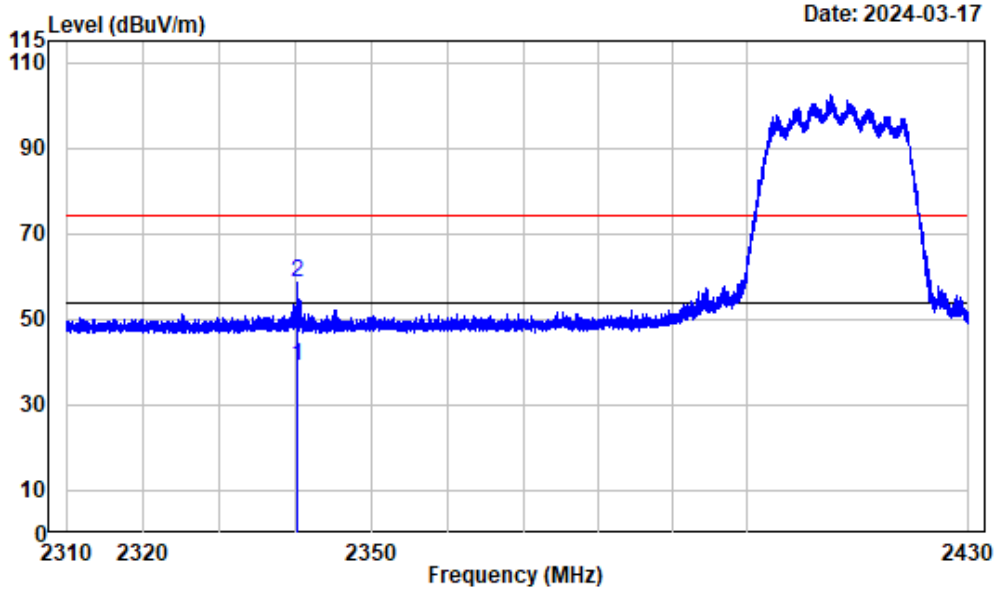
| 802.11n20 MIMO |         |               |          |
|----------------|---------|---------------|----------|
| Test Channel:  | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_N20\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2484.827 | -3.17  | 42.53      | 39.36  | 54.00      | -14.64     | Average |
| 2 | 2484.827 | -3.17  | 56.50      | 53.33  | 74.00      | -20.67     | peak    |

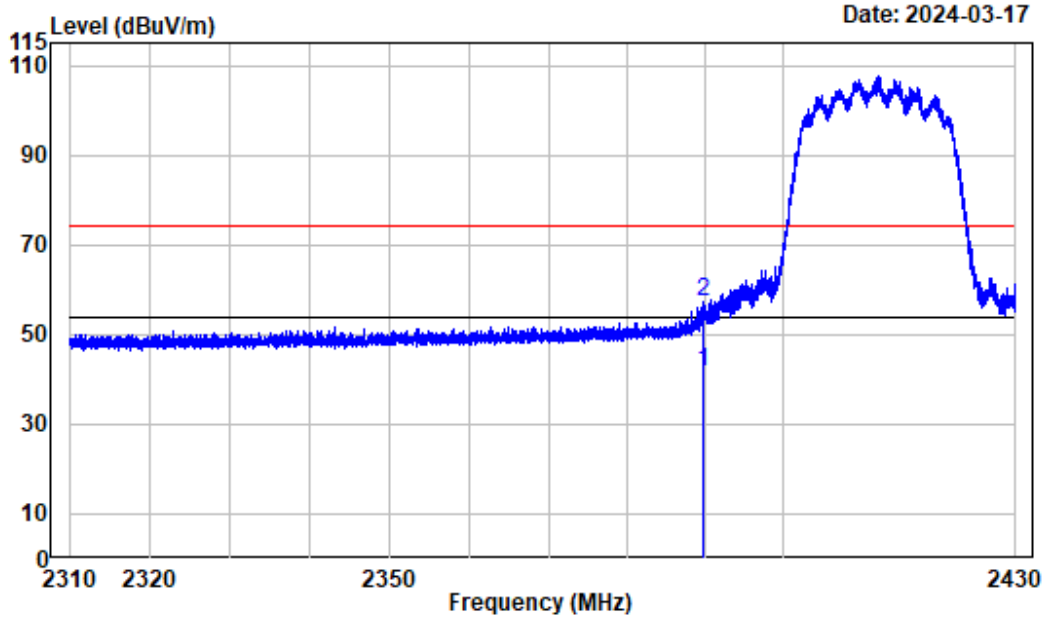
| 802.11ax20 MIMO |         |               |            |
|-----------------|---------|---------------|------------|
| Test Channel:   | 2412MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_AX20\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2340.060 | -3.14  | 42.21      | 39.07  | 54.00      | -14.93     | Average |
| 2 | 2340.060 | -3.14  | 61.67      | 58.53  | 74.00      | -15.47     | peak    |

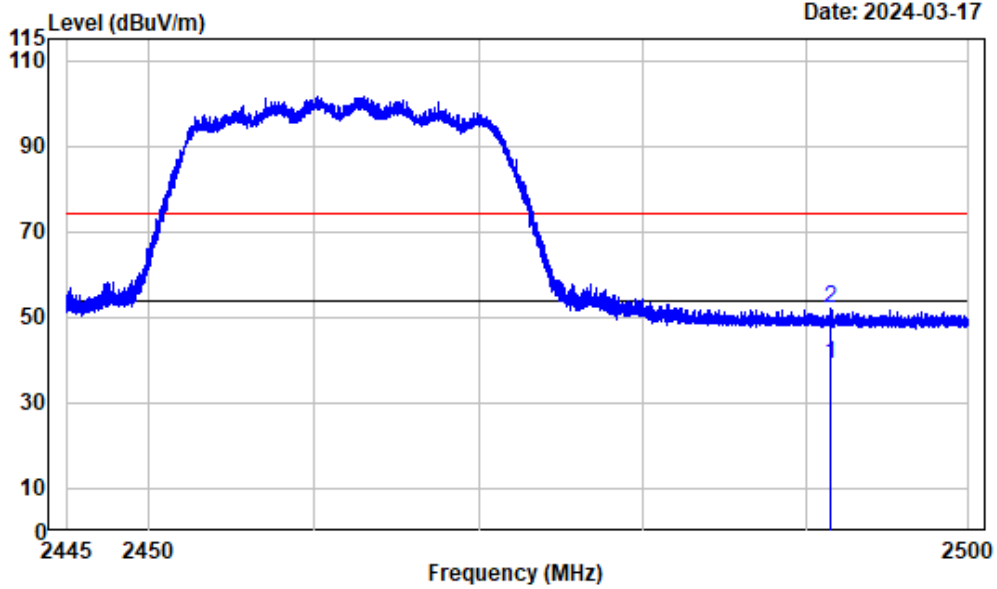
| 802.11ax20 MIMO |         |               |          |
|-----------------|---------|---------------|----------|
| Test Channel:   | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_AX20\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2389.605 | -3.20  | 44.85      | 41.65  | 54.00      | -12.35     | Average |
| 2 | 2389.605 | -3.20  | 60.28      | 57.08  | 74.00      | -16.92     | peak    |

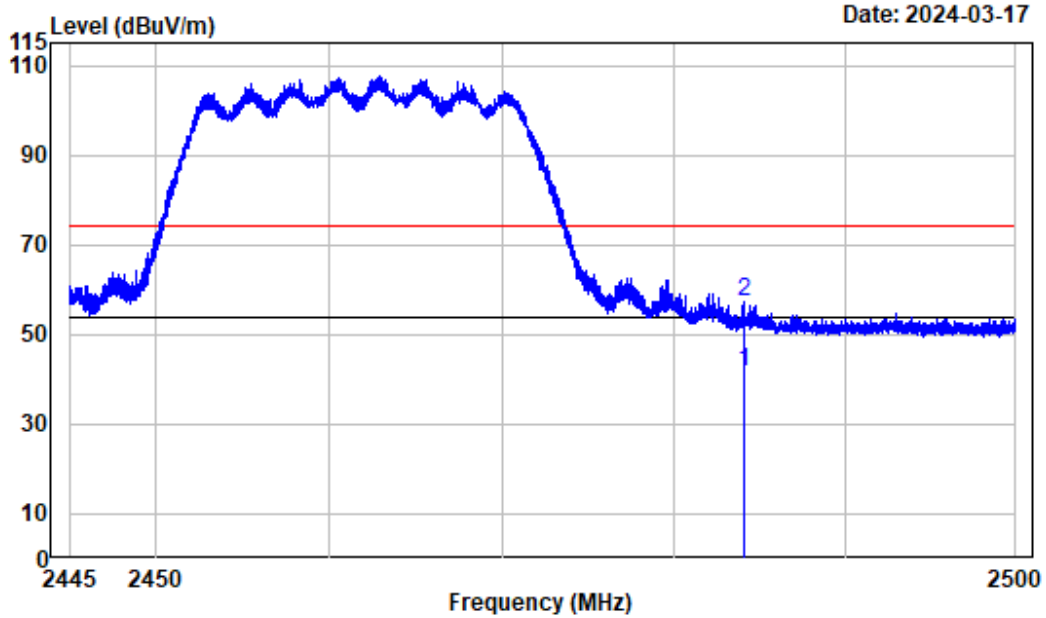
| 802.11ax20 MIMO |         |               |            |
|-----------------|---------|---------------|------------|
| Test Channel:   | 2462MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_AX20\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2491.502 | -3.18  | 42.03      | 38.85  | 54.00      | -15.15     | Average |
| 2 | 2491.502 | -3.18  | 55.21      | 52.03  | 74.00      | -21.97     | peak    |

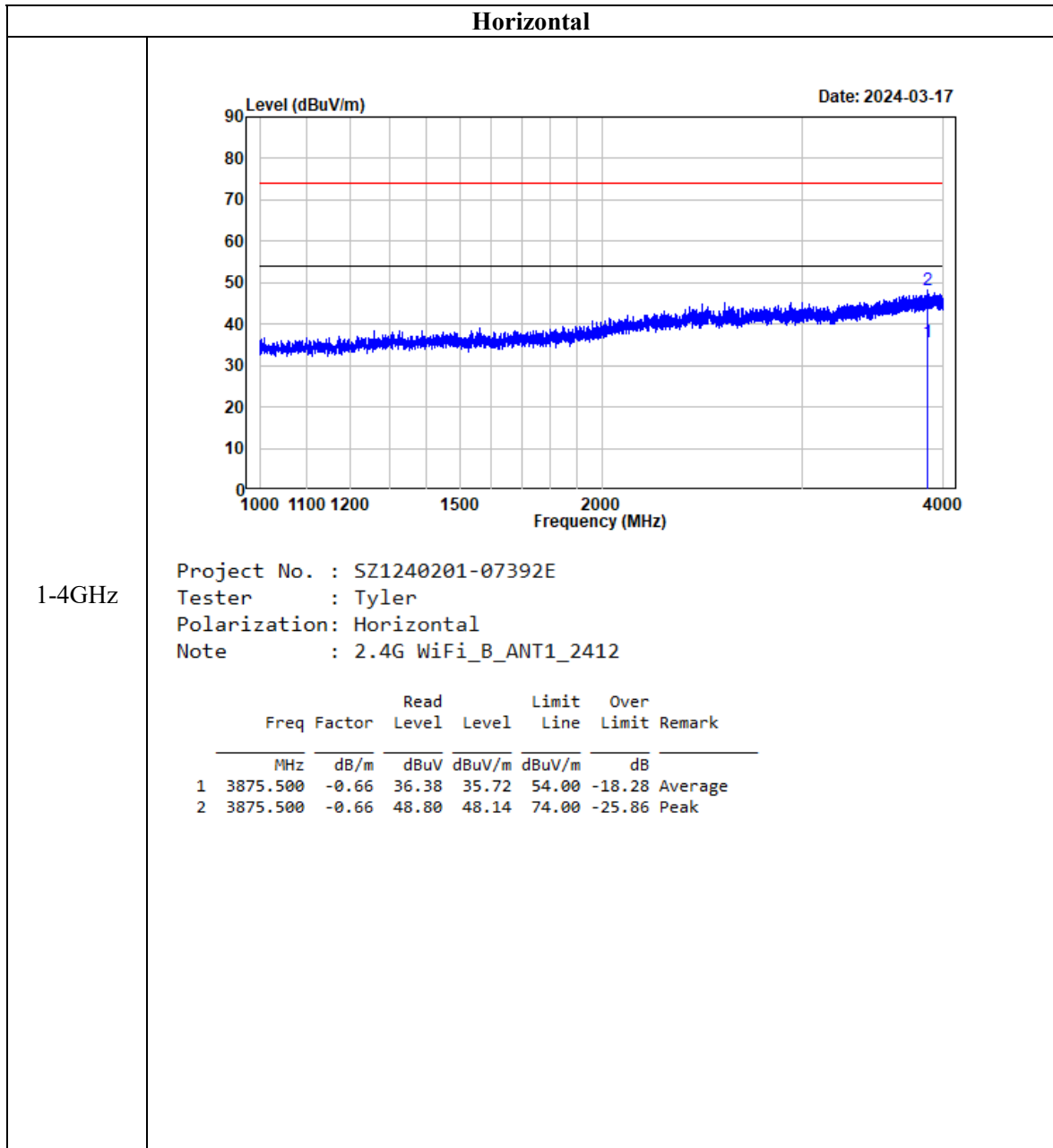
| 802.11ax20 MIMO |         |               |          |
|-----------------|---------|---------------|----------|
| Test Channel:   | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_AX20\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2484.119 | -3.17  | 44.93      | 41.76  | 54.00      | -12.24     | Average |
| 2 | 2484.119 | -3.17  | 60.64      | 57.47  | 74.00      | -16.53     | peak    |

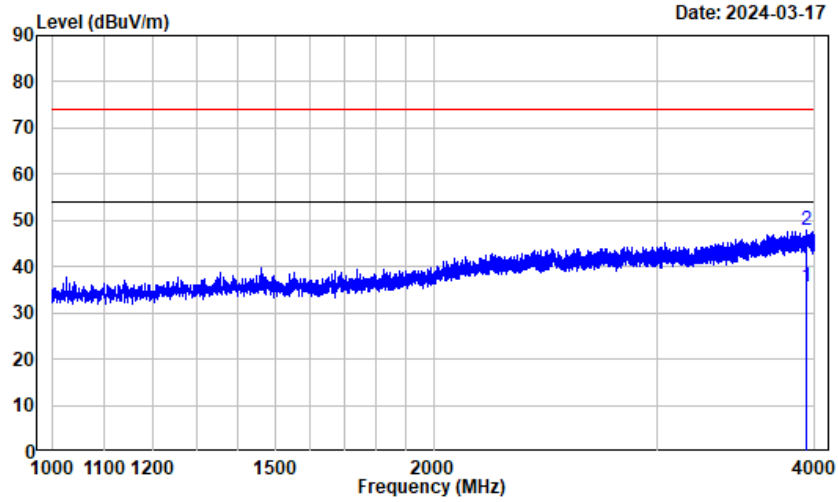
Listed with the worst harmonic margin test plot:





**Vertical**

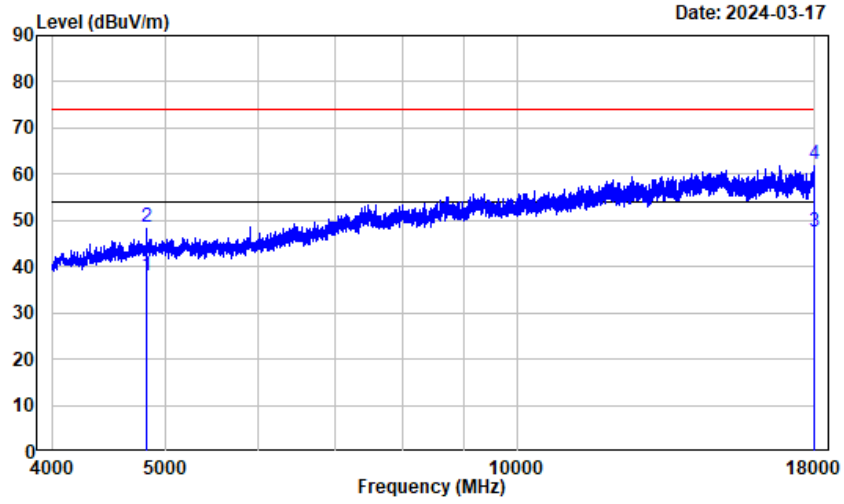
1-4GHz



Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 2.4G WiFi\_B\_ANT1\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 3937.375 | -0.26  | 35.91      | 35.65  | 54.00      | -18.35     | Average |
| 2 | 3937.375 | -0.26  | 47.99      | 47.73  | 74.00      | -26.27     | Peak    |

**Horizontal**

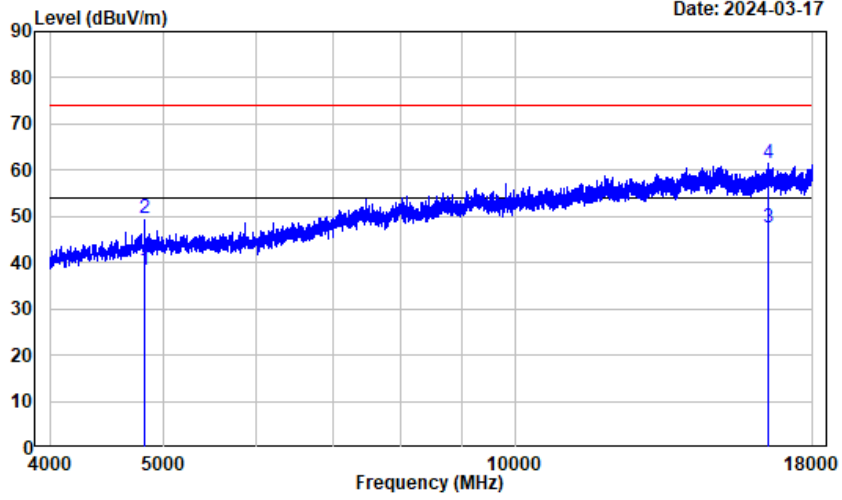


4-18GHz

Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Horizontal  
 Note : 2.4G WiFi\_B\_ANT1\_2412

|   | Freq      | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|-----------|--------|------------|--------|------------|------------|---------|
|   | MHz       | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 4824.000  | 2.45   | 35.62      | 38.07  | 54.00      | -15.93     | Average |
| 2 | 4824.000  | 2.45   | 46.15      | 48.60  | 74.00      | -25.40     | Peak    |
| 3 | 18000.000 | 24.62  | 22.97      | 47.59  | 54.00      | -6.41      | Average |
| 4 | 18000.000 | 24.62  | 37.50      | 62.12  | 74.00      | -11.88     | Peak    |

**Vertical**



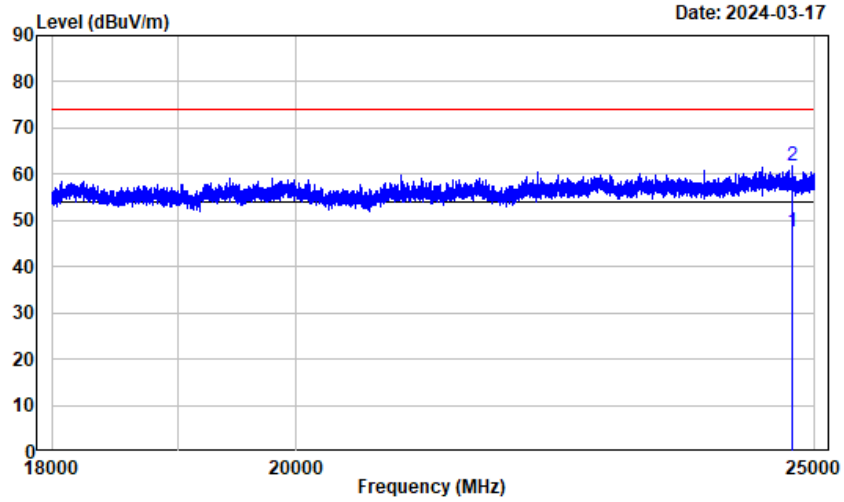
4-18GHz

Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 2.4G WiFi\_B\_ANT1\_2412

|             | Read  | Limit | Over   |                      |
|-------------|-------|-------|--------|----------------------|
| Freq        | Level | Line  | Limit  | Remark               |
| MHz         | dB/m  | dBuV  | dBuV/m | dB                   |
| 1 4824.000  | 2.45  | 36.01 | 38.46  | 54.00 -15.54 Average |
| 2 4824.000  | 2.45  | 46.98 | 49.43  | 74.00 -24.57 Peak    |
| 3 16488.000 | 15.69 | 31.83 | 47.52  | 54.00 -6.48 Average  |
| 4 16488.000 | 15.69 | 45.69 | 61.38  | 74.00 -12.62 Peak    |

**Horizontal**

18-25GHz

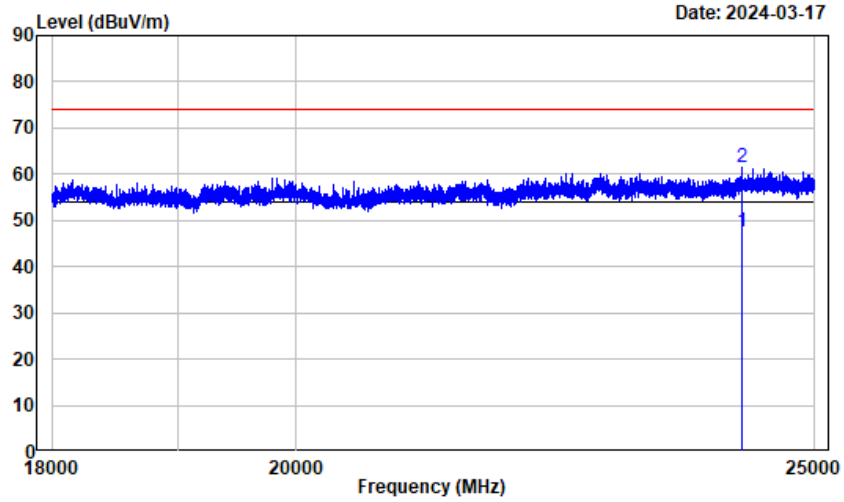


Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Horizontal  
 Note : 2.4G WiFi\_B\_ANT1\_2412

|   | Freq      | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|-----------|--------|------------|--------|------------|------------|---------|
|   | MHz       | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 24755.000 | 18.68  | 28.94      | 47.62  | 54.00      | -6.38      | Average |
| 2 | 24755.000 | 18.68  | 42.99      | 61.67  | 74.00      | -12.33     | Peak    |

**Vertical**

18-25GHz



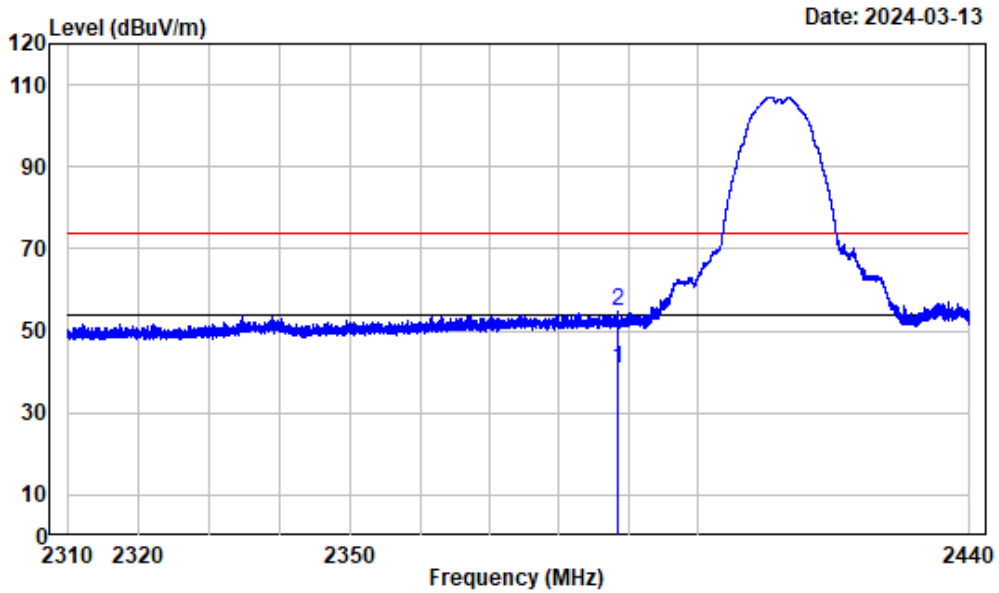
Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 2.4G WiFi\_B\_ANT1\_2412

|   | Freq      | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|-----------|--------|------------|--------|------------|------------|---------|
|   | MHz       | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 24235.250 | 18.37  | 29.20      | 47.57  | 54.00      | -6.43      | Average |
| 2 | 24235.250 | 18.37  | 43.03      | 61.40  | 74.00      | -12.60     | Peak    |

For module YL43456

Test plots for Band Edge Measurements (Radiated):

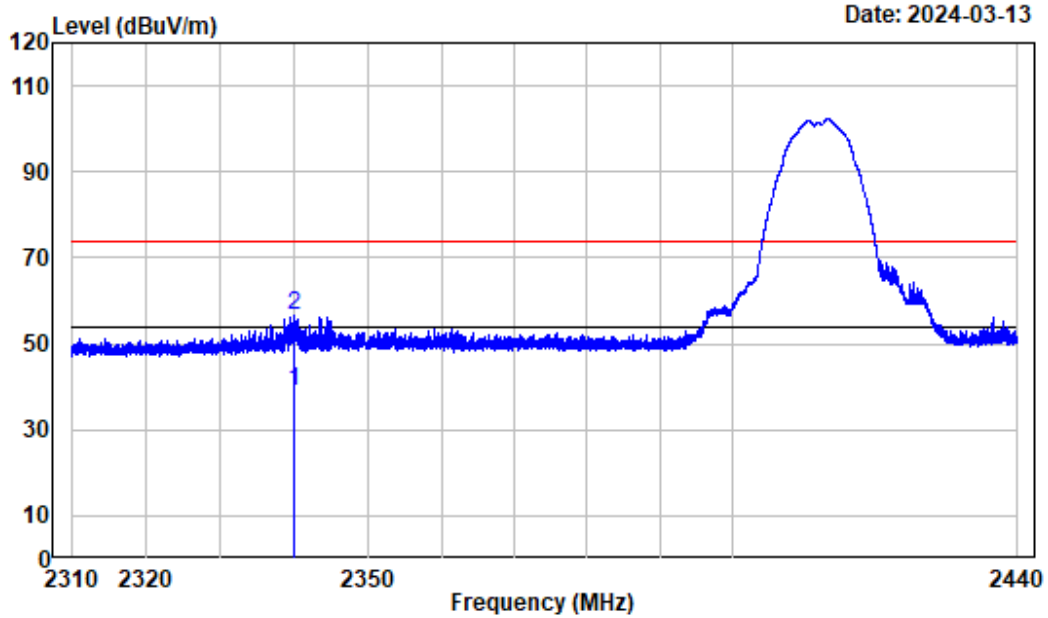
| 802.11b       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2412MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_B\_2412

|   | Freq     | Factor | Read Level | Level  | Limit  | Over   | Remark  |
|---|----------|--------|------------|--------|--------|--------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m | dB     |         |
| 1 | 2388.520 | -3.20  | 44.06      | 40.86  | 54.00  | -13.14 | Average |
| 2 | 2388.520 | -3.20  | 58.07      | 54.87  | 74.00  | -19.13 | peak    |

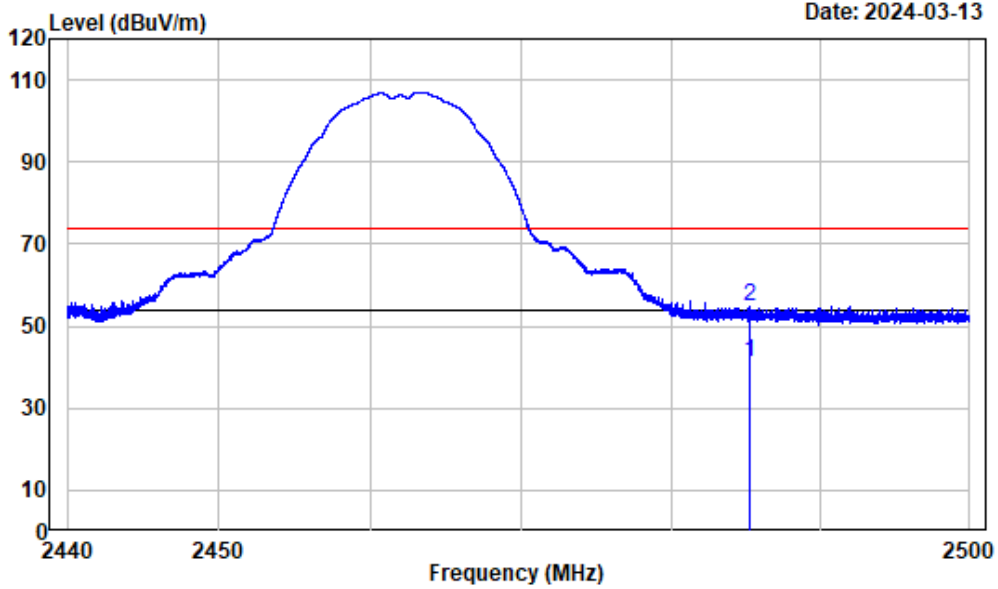
| 802.11b       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_B\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2339.851 | -3.14  | 42.13      | 38.99  | 54.00      | -15.01     | Average |
| 2 | 2339.851 | -3.14  | 59.67      | 56.53  | 74.00      | -17.47     | peak    |

| 802.11b       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2462MHz | Ant. Polar. : | Horizontal |

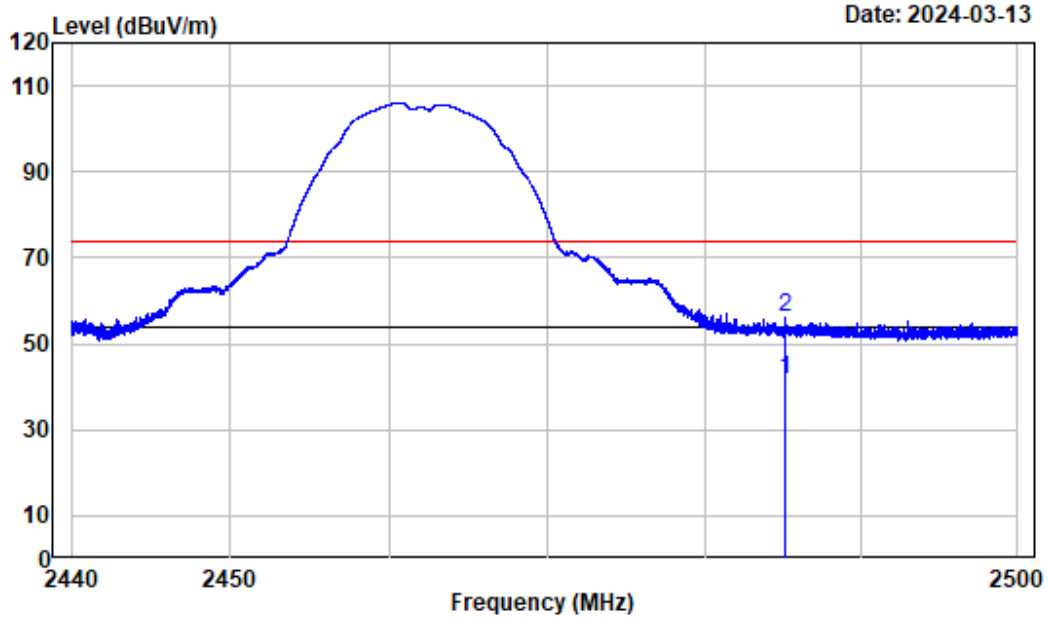


Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_B\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2485.255 | -3.17  | 44.37      | 41.20  | 54.00      | -12.80     | Average |
| 2 | 2485.255 | -3.17  | 57.88      | 54.71  | 74.00      | -19.29     | peak    |



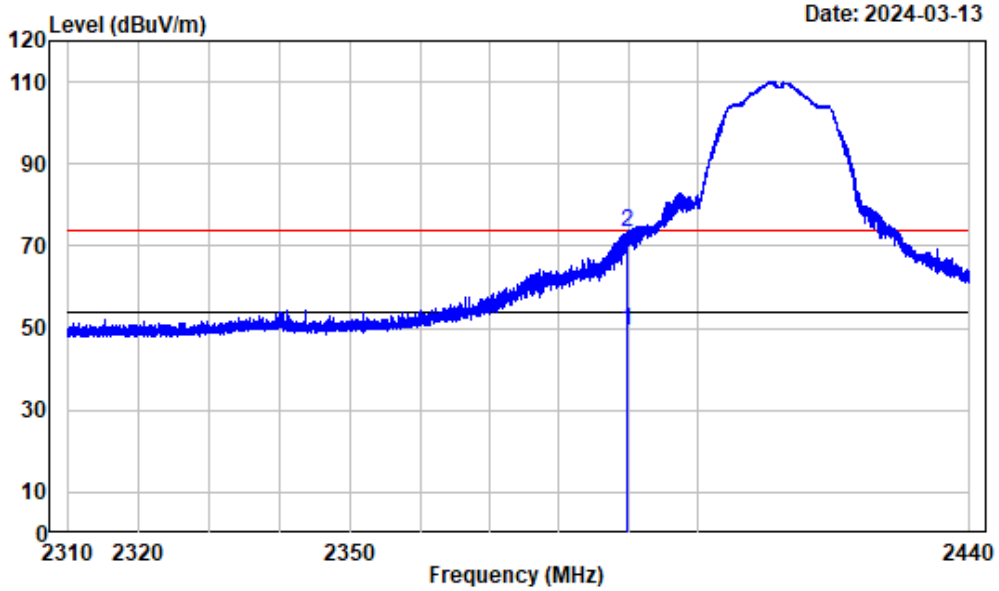
| 802.11b       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_B\_2462

|      | Read     | Limit | Over   |        |       |        |         |
|------|----------|-------|--------|--------|-------|--------|---------|
| Freq | Factor   | Level | Level  | Line   |       |        |         |
| MHz  | dB/m     | dBuV  | dBuV/m | dBuV/m |       |        |         |
| 1    | 2485.113 | -3.17 | 44.78  | 41.61  | 54.00 | -12.39 | Average |
| 2    | 2485.113 | -3.17 | 59.15  | 55.98  | 74.00 | -18.02 | peak    |

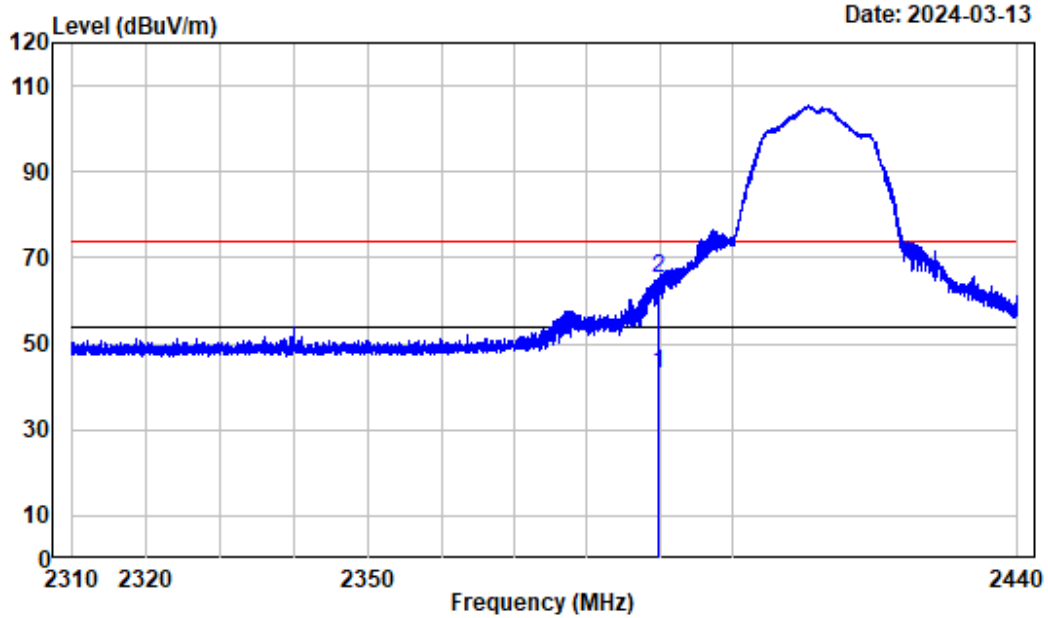
| 802.11g       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2412MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_G\_2412

|   | Freq     | Factor | Read  |        | Limit  | Over  | Remark  |
|---|----------|--------|-------|--------|--------|-------|---------|
|   |          |        | Level | Level  |        |       |         |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB    |         |
| 1 | 2389.934 | -3.20  | 52.63 | 49.43  | 54.00  | -4.57 | Average |
| 2 | 2389.934 | -3.20  | 76.50 | 73.30  | 74.00  | -0.70 | peak    |

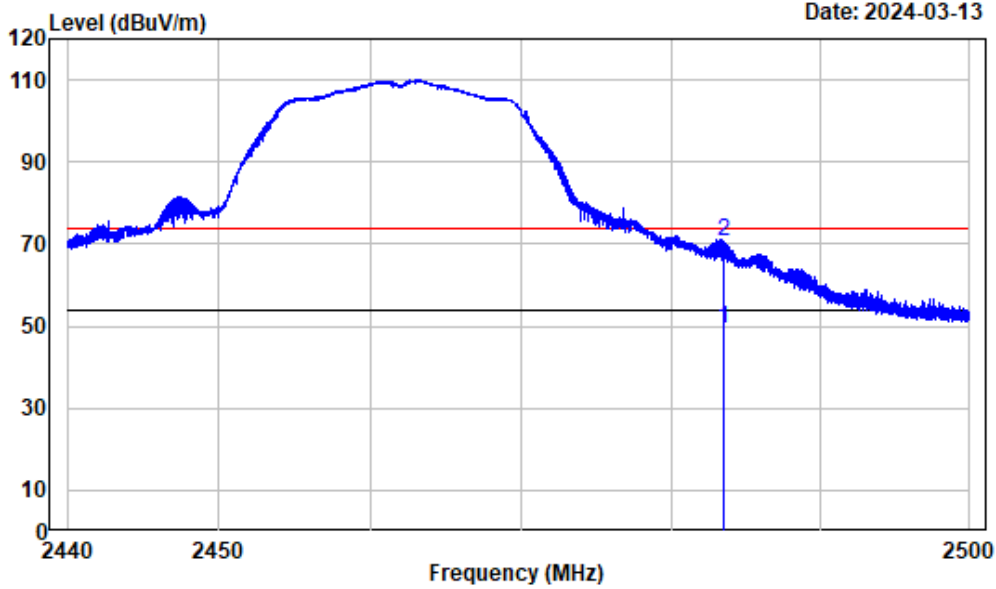
| 802.11g       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_G\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2389.739 | -3.20  | 46.31      | 43.11  | 54.00      | -10.89     | Average |
| 2 | 2389.739 | -3.20  | 68.29      | 65.09  | 74.00      | -8.91      | peak    |

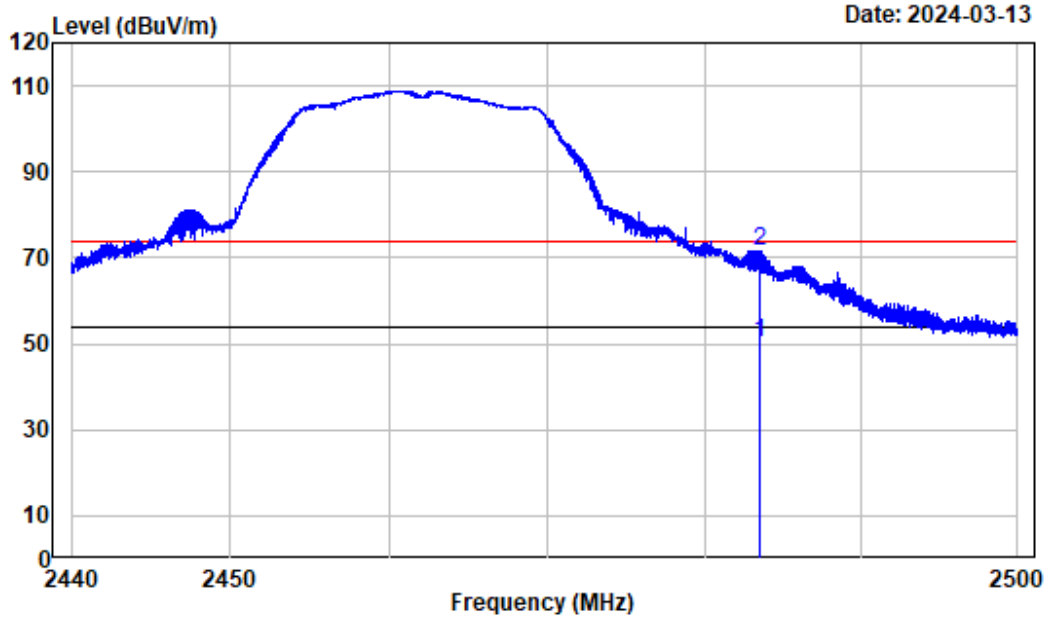
|                      |                |                      |                   |
|----------------------|----------------|----------------------|-------------------|
| <b>802.11g</b>       |                |                      |                   |
| <b>Test Channel:</b> | <b>2462MHz</b> | <b>Ant. Polar. :</b> | <b>Horizontal</b> |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_G\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2483.567 | -3.17  | 52.57      | 49.40  | 54.00      | -4.60      | Average |
| 2 | 2483.567 | -3.17  | 73.83      | 70.66  | 74.00      | -3.34      | peak    |

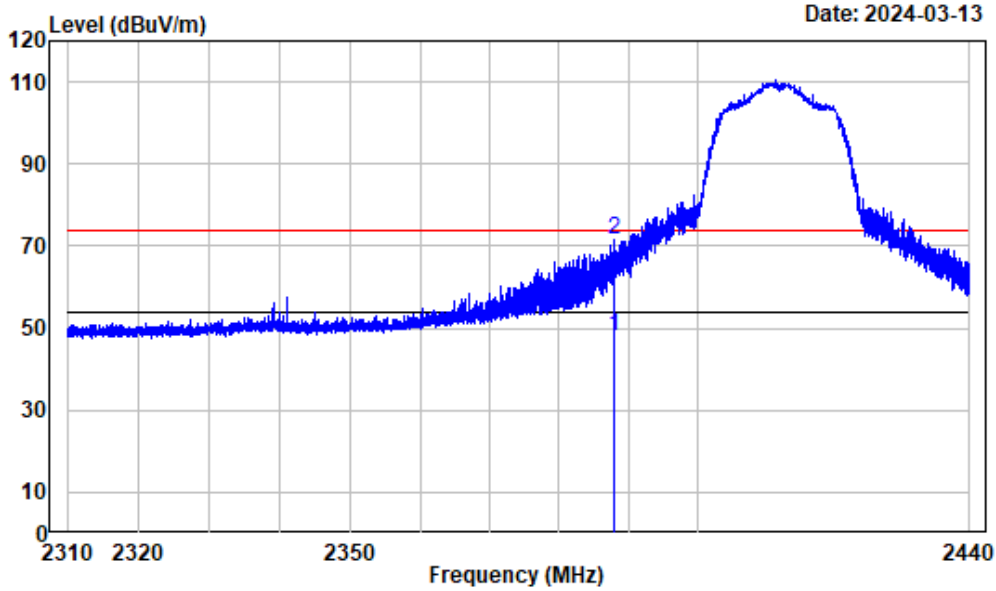
| 802.11g       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_G\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2483.530 | -3.17  | 53.34      | 50.17  | 54.00      | -3.83      | Average |
| 2 | 2483.530 | -3.17  | 74.65      | 71.48  | 74.00      | -2.52      | peak    |

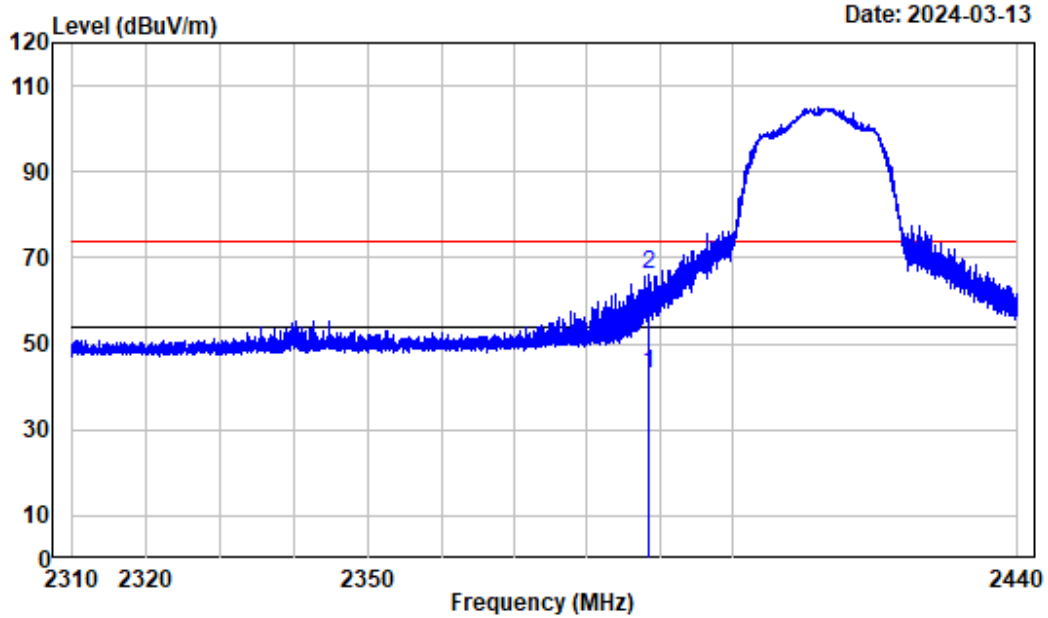
| 802.11n20     |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2412MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_N20\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2387.984 | -3.20  | 51.29      | 48.09  | 54.00      | -5.91      | Average |
| 2 | 2387.984 | -3.20  | 74.93      | 71.73  | 74.00      | -2.27      | peak    |

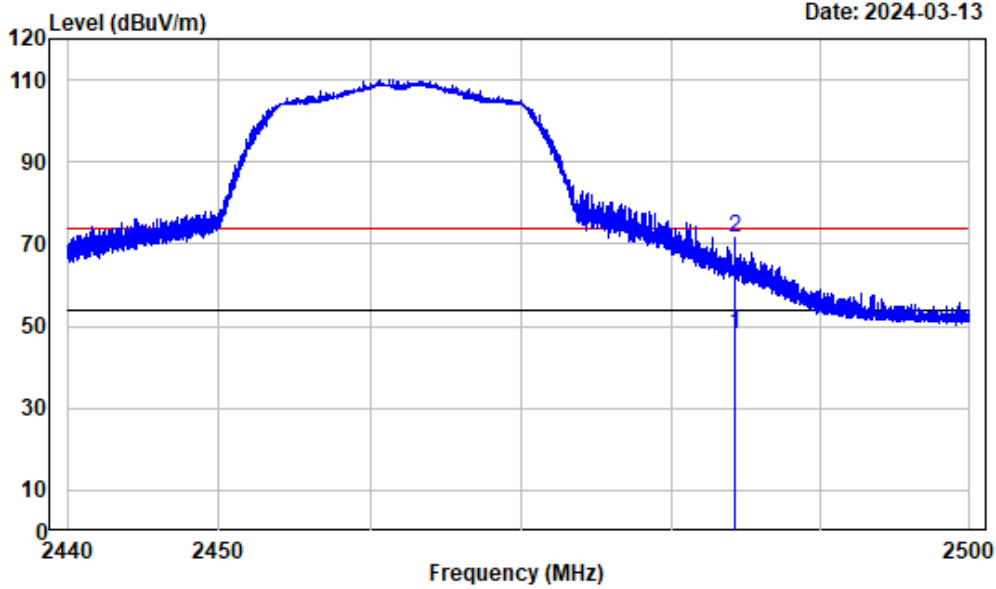
| 802.11n20     |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2412MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_N20\_2412

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2388.601 | -3.20  | 46.13      | 42.93  | 54.00      | -11.07     | Average |
| 2 | 2388.601 | -3.20  | 69.21      | 66.01  | 74.00      | -7.99      | peak    |

| 802.11n20     |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 2462MHz | Ant. Polar. : | Horizontal |

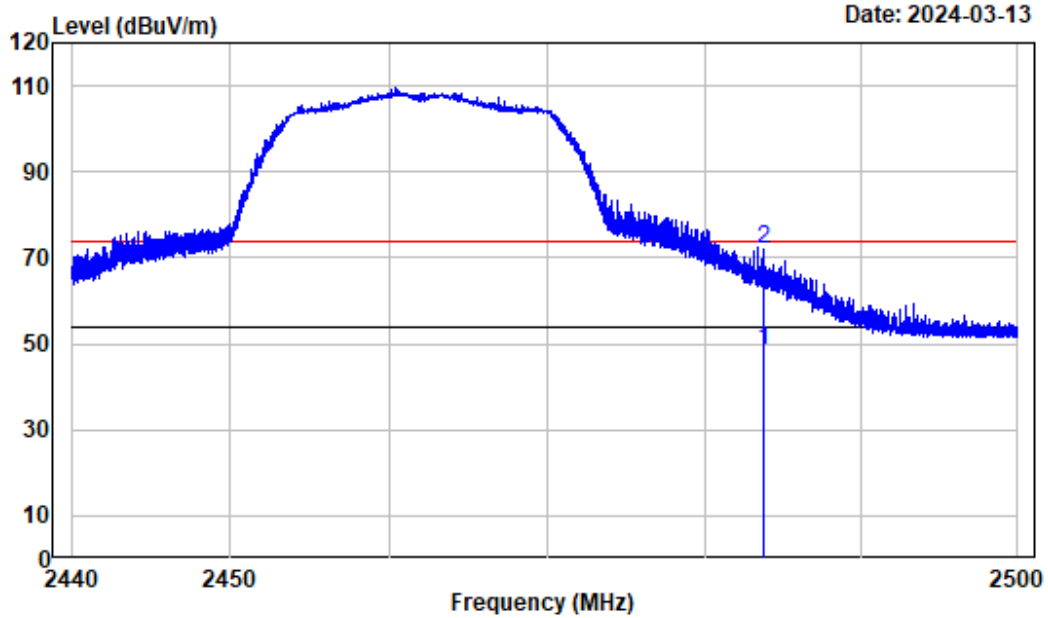


Condition : Horizontal  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_N20\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2484.302 | -3.17  | 51.28      | 48.11  | 54.00      | -5.89      | Average |
| 2 | 2484.302 | -3.17  | 74.89      | 71.72  | 74.00      | -2.28      | peak    |



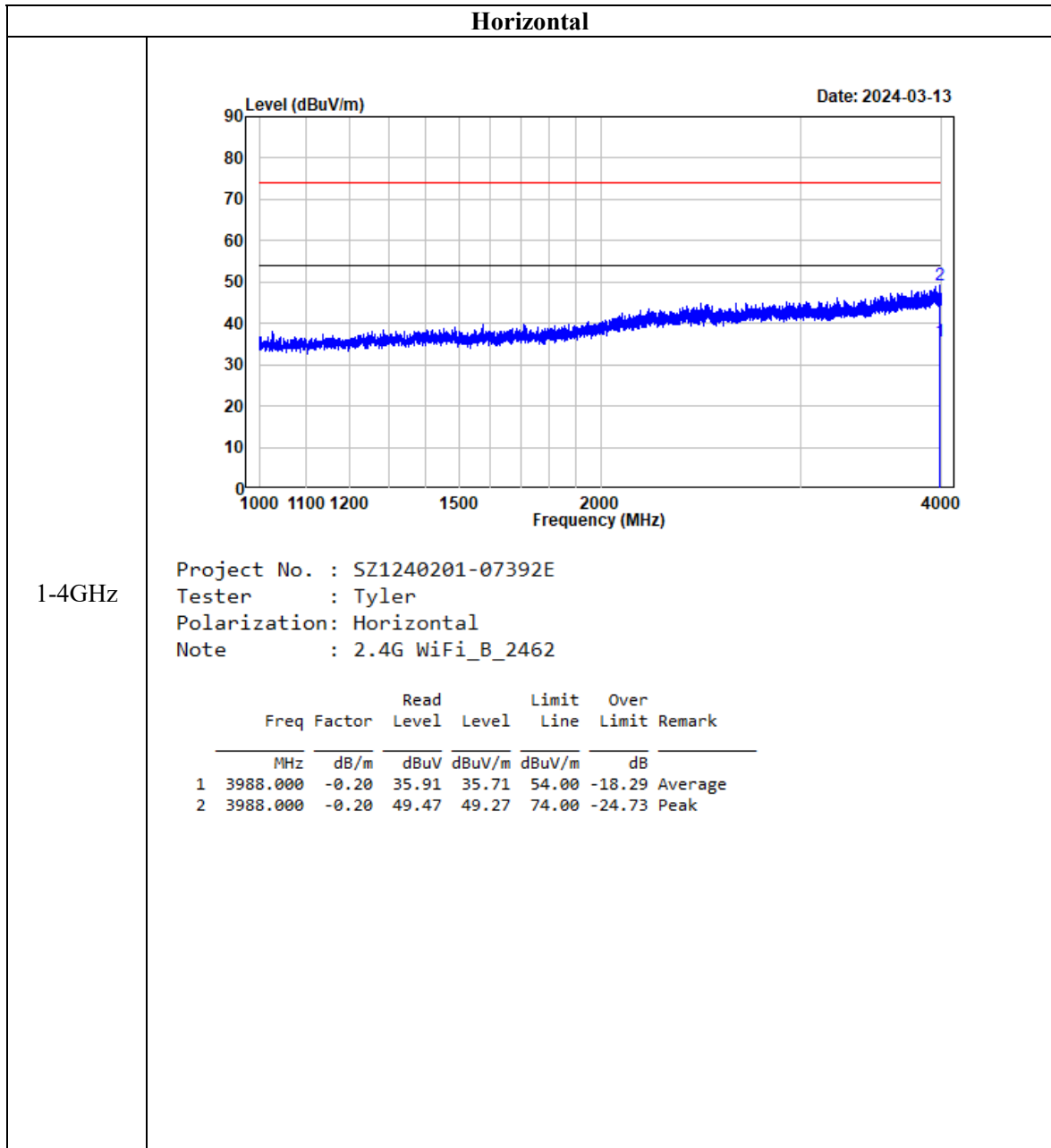
| 802.11n20     |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 2462MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1240201-07392E  
 Tester : Tyler  
 Note : 2.4G WiFi\_N20\_2462

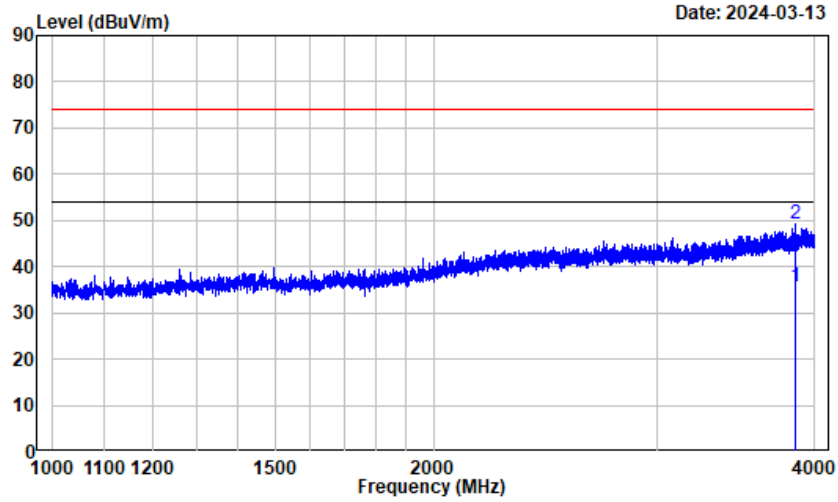
|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 2483.800 | -3.17  | 51.72      | 48.55  | 54.00      | -5.45      | Average |
| 2 | 2483.800 | -3.17  | 75.18      | 72.01  | 74.00      | -1.99      | peak    |

Listed with the worst harmonic margin test plot:



**Vertical**

1-4GHz

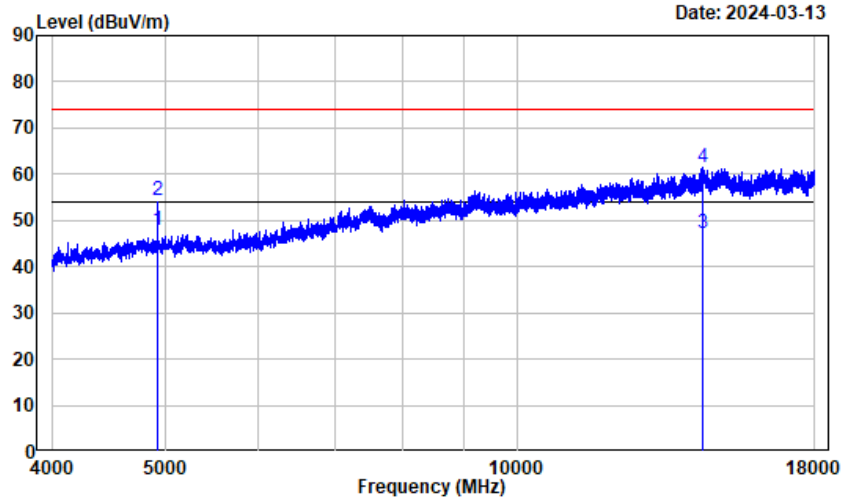


Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 2.4G WiFi\_B\_2462

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 3863.875 | -0.71  | 36.39      | 35.68  | 54.00      | -18.32     | Average |
| 2 | 3863.875 | -0.71  | 49.94      | 49.23  | 74.00      | -24.77     | Peak    |

**Horizontal**

4-18GHz

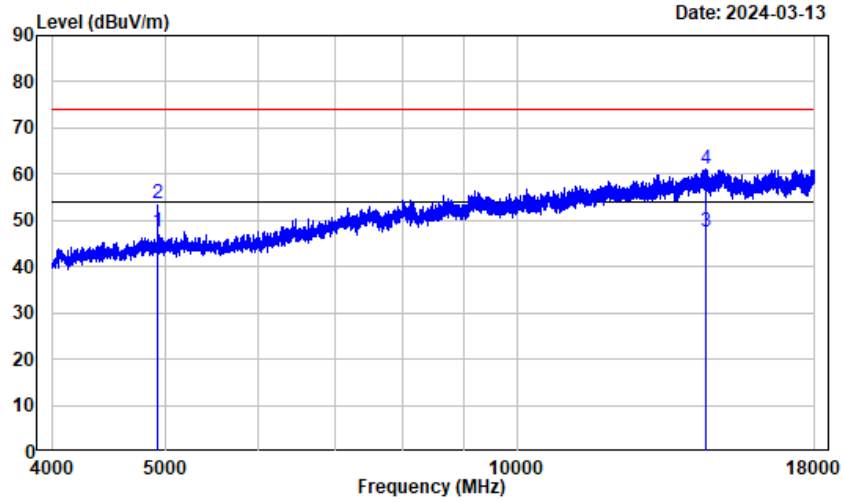


Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Horizontal  
 Note : 2.4G WiFi\_B\_2462

|   | Freq      | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|-----------|--------|------------|--------|------------|------------|---------|
|   | MHz       | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 4924.000  | 2.63   | 45.12      | 47.75  | 54.00      | -6.25      | Average |
| 2 | 4924.000  | 2.63   | 51.87      | 54.50  | 74.00      | -19.50     | Peak    |
| 3 | 14437.000 | 17.33  | 30.03      | 47.36  | 54.00      | -6.64      | Average |
| 4 | 14437.000 | 17.33  | 43.97      | 61.30  | 74.00      | -12.70     | Peak    |

**Vertical**

4-18GHz

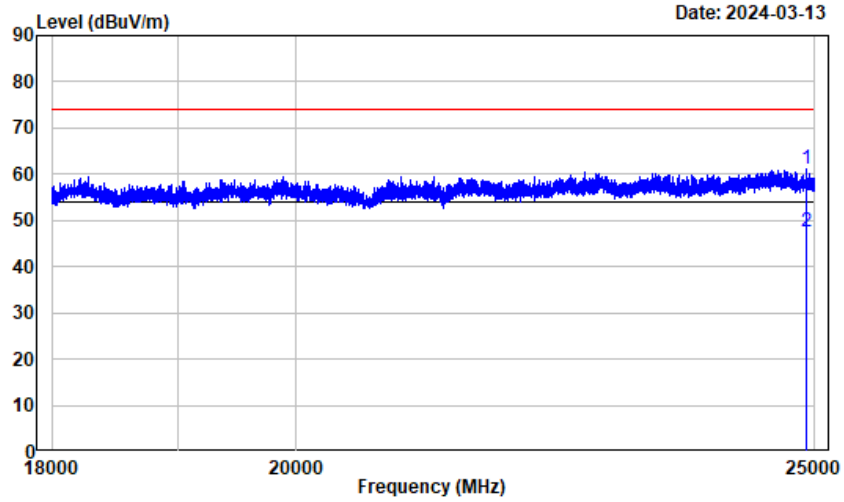


Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 2.4G WiFi\_B\_2462

|   | Freq      | Factor | Read Level | Read Level | Limit Line | Over Limit | Remark  |
|---|-----------|--------|------------|------------|------------|------------|---------|
|   | MHz       | dB/m   | dBuV       | dBuV/m     | dBuV/m     | dB         |         |
| 1 | 4924.000  | 2.63   | 44.86      | 47.49      | 54.00      | -6.51      | Average |
| 2 | 4924.000  | 2.63   | 51.13      | 53.76      | 74.00      | -20.24     | Peak    |
| 3 | 14543.750 | 17.38  | 30.08      | 47.46      | 54.00      | -6.54      | Average |
| 4 | 14543.750 | 17.38  | 43.67      | 61.05      | 74.00      | -12.95     | Peak    |

**Horizontal**

18-25GHz

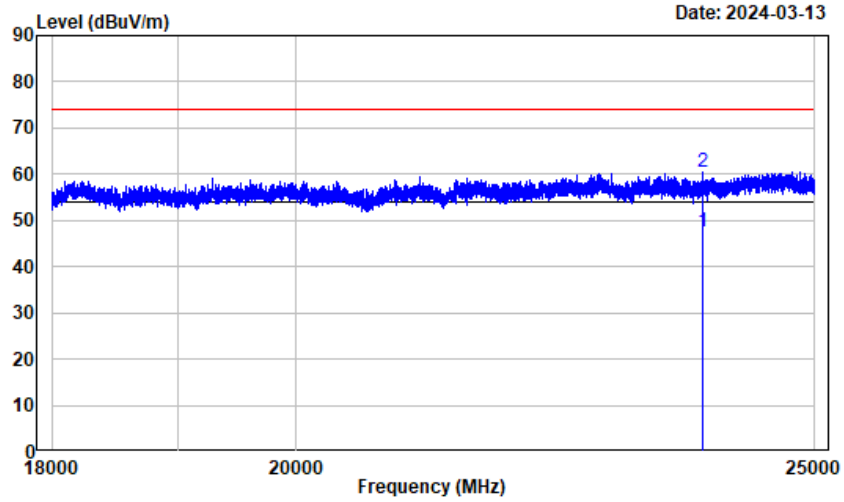


Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Horizontal  
 Note : 2.4G WiFi\_B\_2462

|      | Read      | Limit | Over   |        |       |        |         |
|------|-----------|-------|--------|--------|-------|--------|---------|
| Freq | Factor    | Level | Level  | Line   |       |        |         |
| MHz  | dB/m      | dBuV  | dBuV/m | dBuV/m |       |        |         |
| 1    | 24916.880 | 18.48 | 42.61  | 61.09  | 74.00 | -12.91 | Peak    |
| 2    | 24916.880 | 18.48 | 29.13  | 47.61  | 54.00 | -6.39  | Average |

**Vertical**

18-25GHz



Project No. : SZ1240201-07392E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 2.4G WiFi\_B\_2462

|   | Freq      | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|-----------|--------|------------|--------|------------|------------|---------|
|   | MHz       | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 23820.500 | 17.68  | 29.90      | 47.58  | 54.00      | -6.42      | Average |
| 2 | 23820.500 | 17.68  | 42.87      | 60.55  | 74.00      | -13.45     | Peak    |

## **EUT PHOTOGRAPHS**

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Please refer to the attachment SZ1240201-07392E-RF External photo and SZ1240201-07392E-RF Internal photo.



## **TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment SZ1240201-07392E-RF Test Setup photo.

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